

ARCHAEOLOGICAL SPECIALIST STUDY

In terms of Section 38(8) of the NHRA for

The Improvement Of National Route R63 Sections 15 And 16 From Bhisho (km 5.8) To The N6 Bridge Intersection (km 1.0)

Prepared by



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In Association with

Terreco

April 2018



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THE INDEPENDENT PERSON WHO COMPILED A SPECIALIST REPORT OR UNDERTOOK A SPECIALIST PROCESS

I Karen van Ryneveld, as the appointed independent specialist hereby declare that I:

- act/ed as the independent specialist in this application;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- have and will not have no vested interest in the proposed activity proceeding;
- have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2010 (specifically in terms of regulation 17 of GN No. R. 543) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- have ensured that the names of all interested and affected parties that participated in terms of the specialist input/study were recorded in the register of interested and affected parties who participated in the public participation process;
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and
- am aware that a false declaration is an offence in terms of regulation 71 of GN No. R. 543.

Signature of the specialist
CTS Heritage and ArchaeoMaps

2018-04-12
Date

EXECUTIVE SUMMARY

REPORT TITLE:

Archaeological specialist study in terms of Section 38(8) of the NHRA for the improvement of National Route R63 Sections 15 And 16 from Bhisho (km 5.8) to the N6 Bridge intersection (km 1.0).

DESCRIPTION OF PROJECT:

This application is for the improvement of National Route R63 Sections 15 and 16 from Bhisho (km 5.8) to the N6 Bridge intersection (km 1.0). The project covers the last 22.7 km of Section 15 of National Route R63 plus the first kilometre of Section 16, i.e. a total length of 23.7 km. This section consists of a single carriageway rural highway. The proposal is to upgrade the existing road using 10 borrow pit / quarry sites (to be established).

SUMMARY OF ARCHAEOLOGICAL RESULTS:

1. Site R63-15-S1 – Colonial Period: Church – S32°41'57.4"; E27°32'52.1"
2. Site R63-15-S2 – Contemporary Period: Border Post – S32°43'07.3"; E27°30'42.5"
3. Site R63-15-S3 – Colonial Period: Farmstead Remains – S32°46'19.3"; E27°23'52.5"
4. Site R63-15-S4 – Later Iron Age: Cemetery – S32° 47'19.0"; E27°29'23.5"
5. Site R63-15-S5 – Contemporary Period: Structure Foundation Remains – S32°47'55.9"; E27°29'28.3"
6. Site R63-15-S6 – Colonial Period: Railway Platform Remains – S32°47'57.3"; E27°29'42.5"

FULL RECOMMENDATIONS:

It is recommended that the proposed improvement of the National Route R63 Sections 15 and 16 from Bhisho (km 5.8) to the N6 Bridge intersection (km 1.0), including the utilization of 10 borrow pit / quarry sites proceeds as applied for provided the developer comply with the below listed heritage recommendations:

- **Road alignment – N6 bridge (S32°41'44.3"; E27°33'49.3") to Bhisho (S32°50'38.8"; E27°26'19.1")**
 - Site R63-15-S1 (S32°41'57.4"; E27°32'52.1") comprises a Colonial Period church, situated along the proposed road alignment. Formal conservation measures, including a permanent fence with access gate are in place. No additional conservation measures are required on behalf of the developer for development purposes.
 - Site R63-15-S2 (S32°43'07.3"; E27°30'42.5") comprises the remains of the former Ciskei – South African border post. Originally constructed in 1981, the site has been demolished



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to floor level. The site does not receive formal protection status for buildings under the NHRA 1999. Based on its demolished state it is inferred that the site holds little to no affectionate significance for the resident community in terms of South Africa's political history. Removal of the demolished structure can proceed without the developer having to comply with additional heritage compliance requirements. It is recommended that the developer constructs a plinth with the wording 'Border Post' as close to the original locale of site to the road as permitted within road legislation and regulations and with cognizance to visibility and safe road usage.

- The developer need not comply with additional heritage compliance requirements prior to impact on culverts, drainage channels or any of the bridges affected.

- **Borrow pits / Quarry sites**

- The Site R63-15-S3 (S32°46'19.3"; E27°23'52.5") situated in close proximity to Quarry 15 comprise Colonial Period farmstead remains including structure and infrastructural remains. No conservation measures are in place. It is recommended that conservation measures, either temporary or permanent, as will be most practical with reference to the duration of use of Quarry 15 be implemented prior to use of the quarry.
- Site R63-15-S4 (S32°47'19.0"; E27°29'23.5") comprises an informal Later Iron Age cemetery, situated on route to Borrow Pit 16. No conservation measures are in place. It is recommended that the site be permanently fenced with an access gate prior to the start of construction, thereby ensuring that heritage conservation measures meet SAHRA / EC PHRA minimum standards for heritage site conservation.
- Site R63-15-S5 (S32°47'55.9"; E27°29'28.3") comprises contemporary structure foundation remains associated with former use of Quarry 3. Foundation remains are not formally protected by the NHRA 1999. Impact thereon by development or proximity thereof to development does not trigger any heritage compliance requirements.
- Site R63-15-S6 (S32°47'57.3"; E27°29'42.5") constitutes the Colonial Period remains of a railway platform in the north-eastern corner of the proposed Quarry 3 site. The Site R63-15-S6 remains are formally protected by the NHRA 1999. The developer should apply for an EC PHRA Built Environment site destruction permit prior to any impact on the railway remains. Alternatively, an approximate 15m conservation barrier should be maintained around these features to ensure their conservation within the development framework. The heritage conservation area should be permanently fenced with an access gate and permanent signage be erected indicating the area as a 'Heritage Site'.



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- No additional heritage compliance requirements pertain to establishment of Quarry 17 (S32°42'01.2"; E27°32'30.9"), Borrow Pit 14 (S32°45'15.5"; E27°29'28.5"), Borrow Pit 13 (S32°45'37.6"; E27°29'16.3"), Borrow Pit 30 (S32°45'31.9"; E27°28'57.3"), Borrow Pit 7 (S32°46'24.9"; E27°27'27.2"), Borrow Pit 6 (S32°47'25.2"; E27°27'21.9"), Borrow Pit 16 (S32°47'38.4"; E27°29'15.0") and Quarry 2 (S32°47'56.2"; E27°29'08.5").



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1. INTRODUCTION

1.1 Background Information on Project

This application is for the improvement of National Route R63 Sections 15 and 16 from Bhisho (km 5.8) to the N6 Bridge intersection (km 1.0). The project covers the last 22.7 km of Section 15 of National Route R63 plus the first kilometre of Section 16, i.e. a total length of 23.7 km. This section consists of a single carriageway rural highway. The proposal is to upgrade the existing road using 10 borrow pit / quarry sites (to be established).

1.2 Description of Property and Affected Environment

The National Route R63 Section 15 and 16 component of the study site comprises an already developed area, while borrow pit / quarry sites are proposed on both greenfields areas and land where borrowing have already taken place.

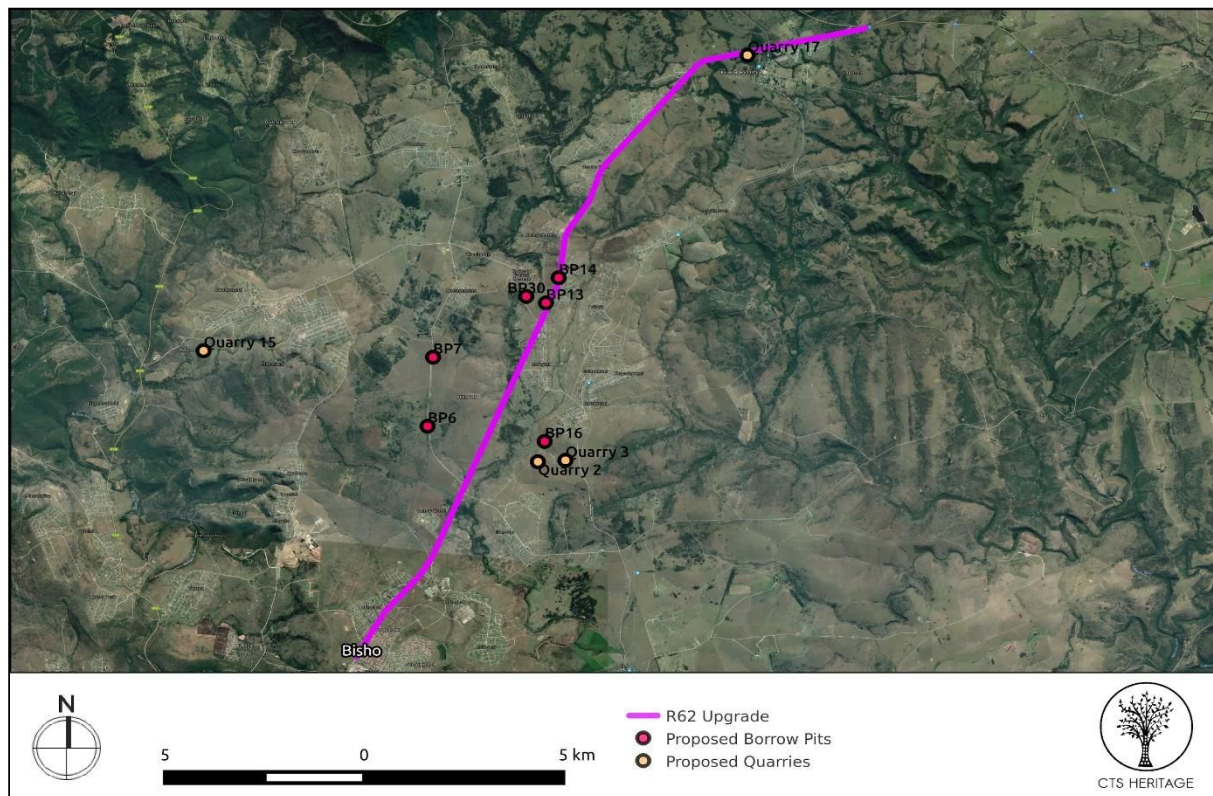


Figure 1: Close up satellite image indicating proposed location of development

2. METHODOLOGY

2.1 Purpose of Archaeological Study

The purpose of this archaeological study is to satisfy the requirements of section 38(8), and therefore section 38(3) of the National Heritage Resources Act (Act 25 of 1999) in terms of impacts to archaeological resources.

2.2 Summary of steps followed

- An archaeologist conducted a survey of the site and its environs on 2018-04-05 and 2018-04-07 to determine what archaeological resources are likely to be impacted by the proposed development.
- The identified resources were assessed to evaluate their heritage significance in terms of the grading system outlined in section 3 of the NHRA (Act 25 of 1999).
- Alternatives and mitigation options were discussed with the Environmental Assessment Practitioner.

3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT

A number of heritage assessments have been conducted in the area (Figures 2a and 2b). Gaigher (2015 NID 356723) gives a summarised archaeological history of the area and notes the possibility of finding Early, Middle and Later Stone Age artefacts, as well as evidence of pastoralist settlements and Iron Age settlements. However, Gaigher's (2015) field assessment of the area directly adjacent to the R63 identified no archaeological resources. He notes that "the area has been subject to severe alteration in the past therefore the occurrence of pre-contact sites that have been obscured by more modern activities should not be dismissed. It is important in this regard that any excavations be monitored". In addition, Gaigher's (2015) field assessment identified a number of structures of historic significance as well as marked and unmarked burial grounds and graves. As the proposed development is simply the upgrading of the existing R63 road, it is envisaged that the bulk of the impact will be located at the proposed borrow pits and quarries. As per Figures 3c and 3d, it can be seen that the proposed development will not directly impact on any of the known heritage resources in the area, however the development may impact on unknown heritage resources. As such, it is recommended that the locations of the proposed borrow pits and quarries be assessed for impacts to archaeological resources as well as historic structures and unmarked burials.



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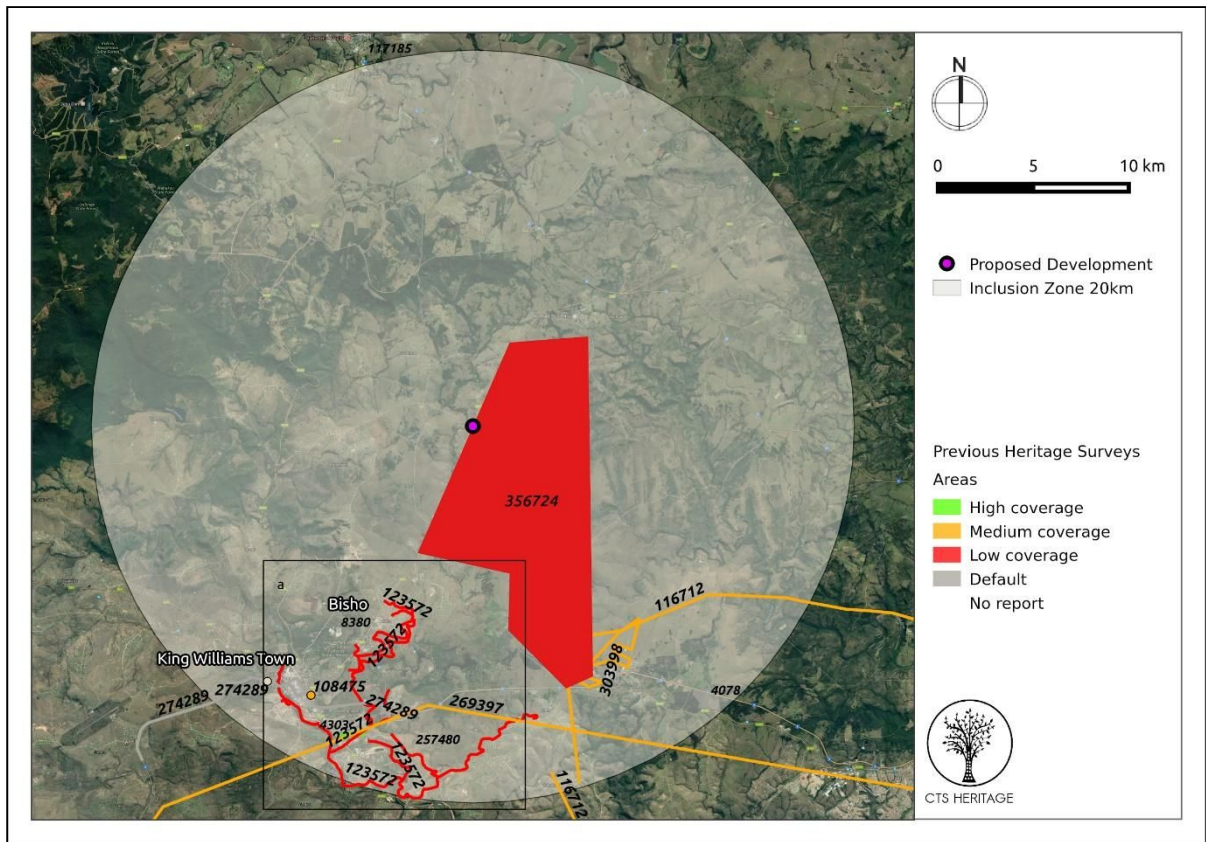


Figure 2: Previous Heritage Studies conducted within 20km of the proposed development area

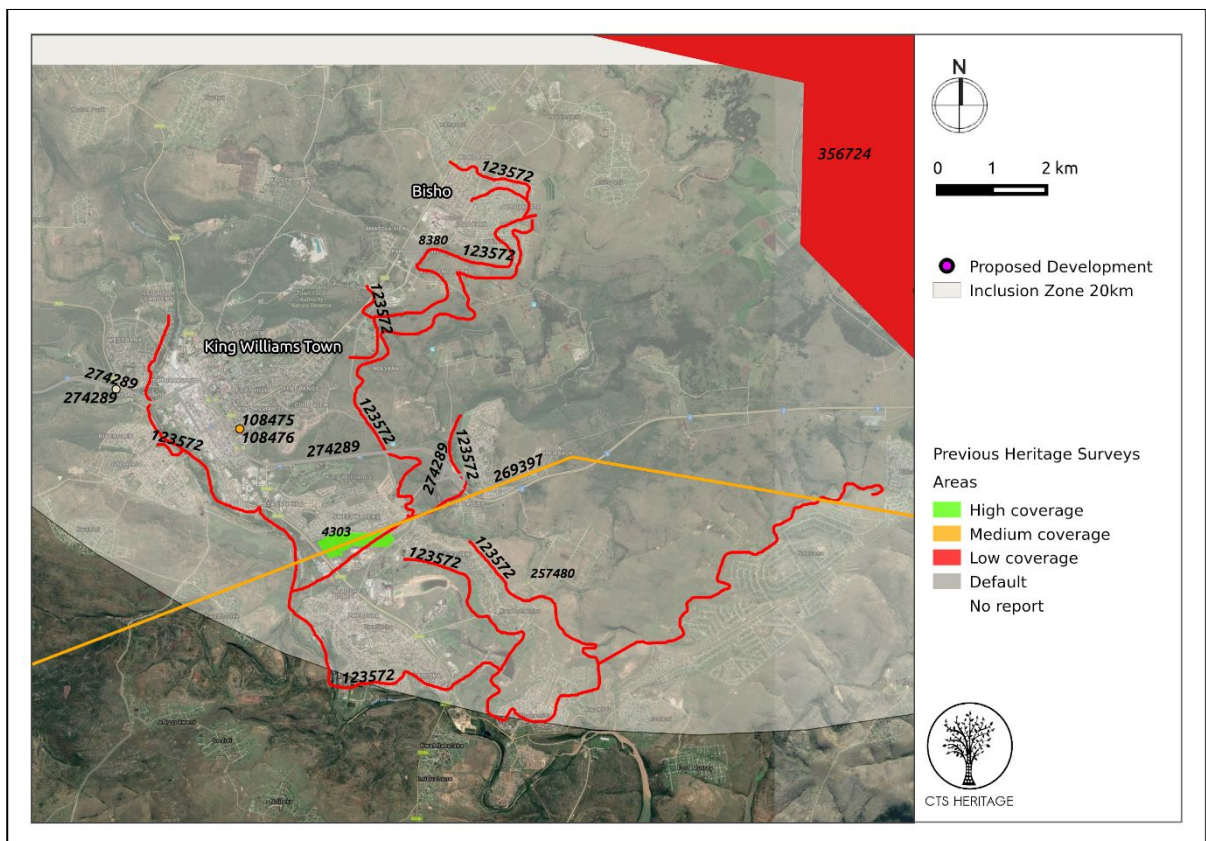


Figure 2a: Inset Map



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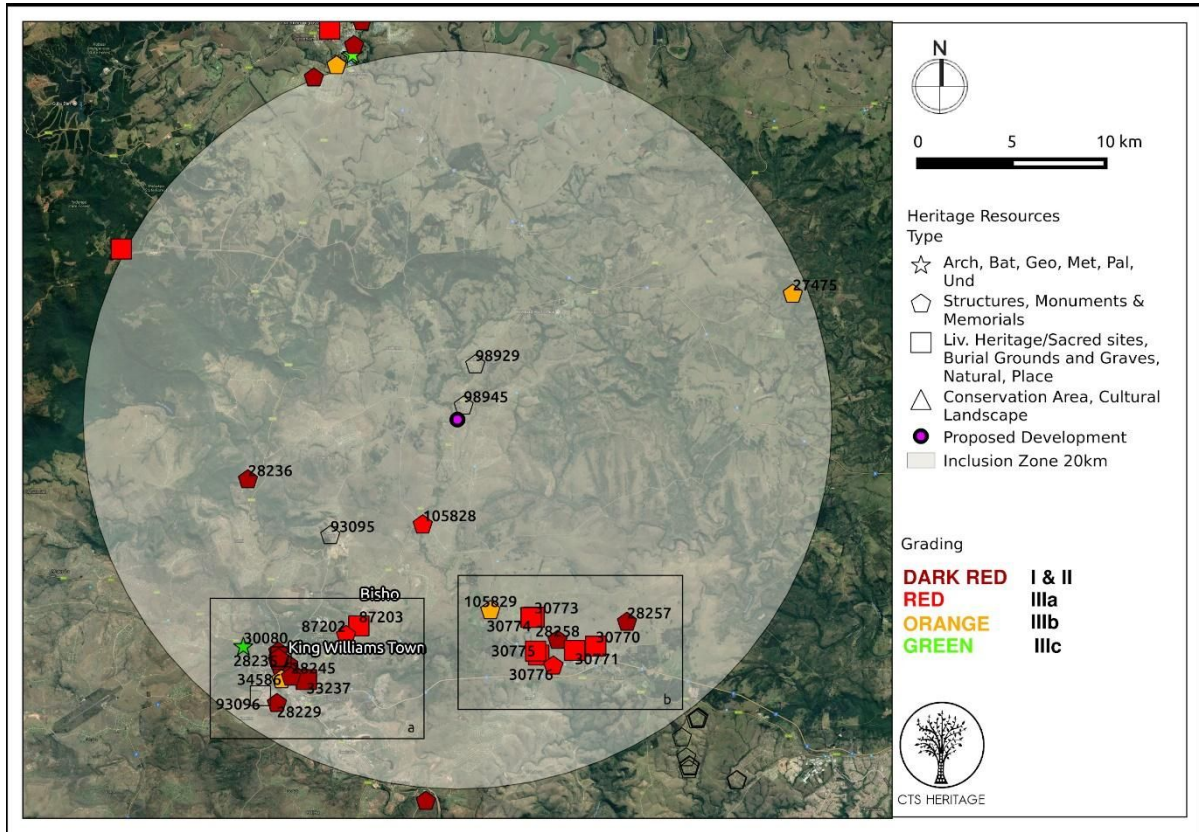


Figure 3: Spatialisation of known heritage resources in the vicinity (20km) of the proposed development

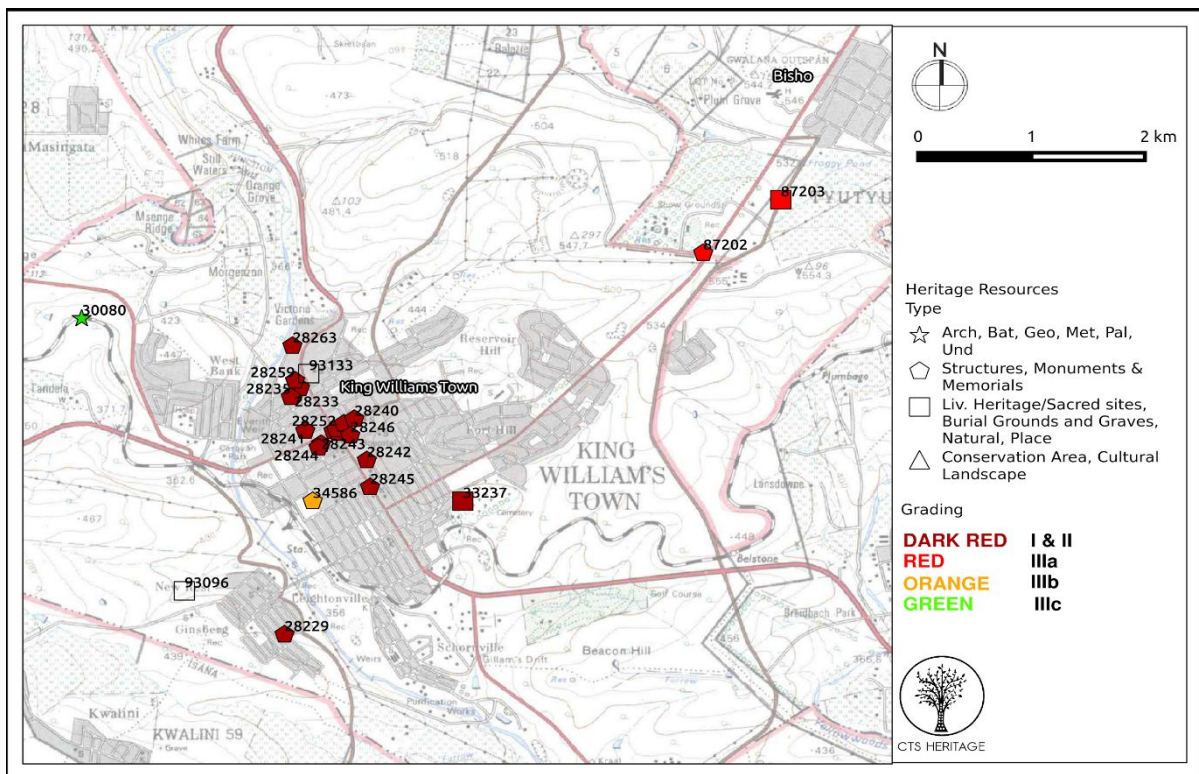


Figure 3a: Inset Map



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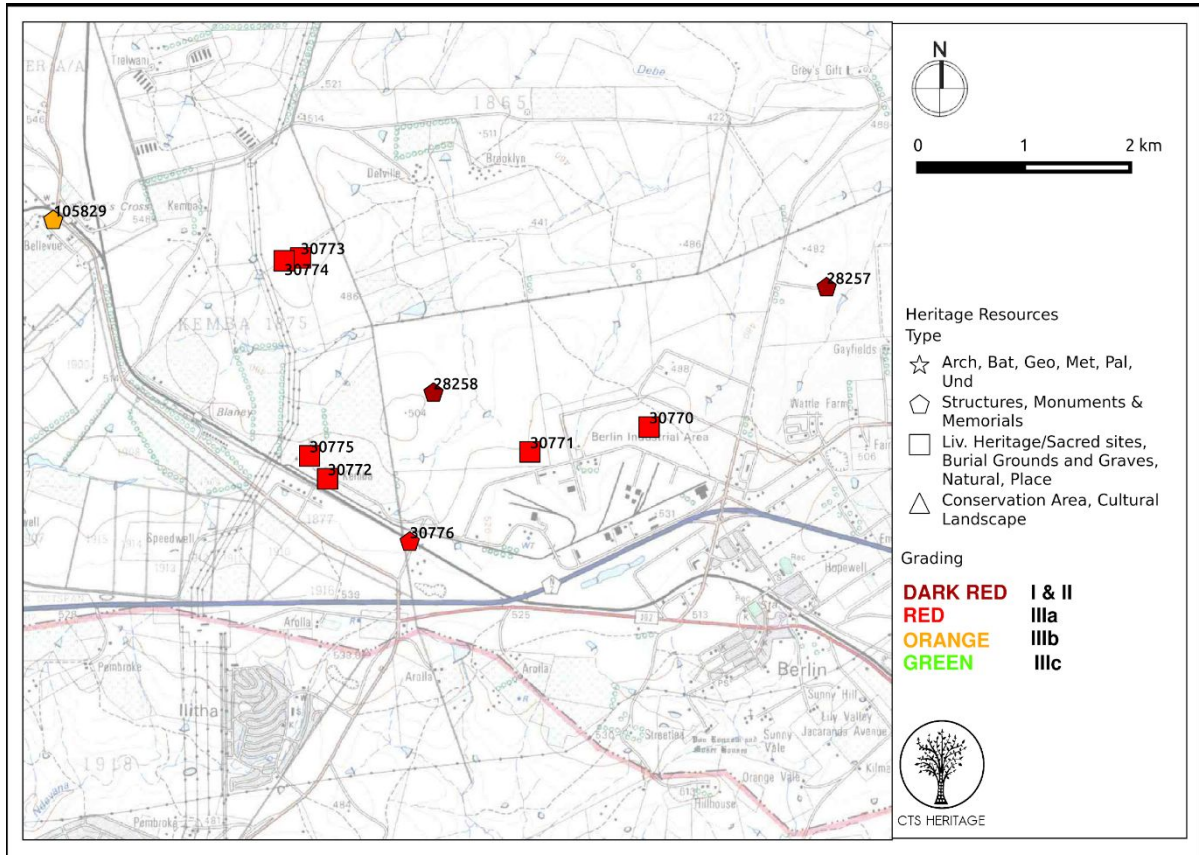


Figure 3b: Inset Map

4. IDENTIFICATION OF HERITAGE RESOURCES

4.1 Field Assessment

- **Road alignment - N6 bridge (S32°41'44.3"; E27°33'49.3") to Bhisho (S32°50'38.8"; E27°26'19.1")**

Two archaeological and cultural heritage sites were identified along the proposed line route, namely Site R63-15-S1 and R63-15-S2. Site R63-15-S1, a Colonial Period church is protected by the NHRA 1999. The site will not be impacted by development and formal conservation measures complying with SAHRA / EC PHRA minimum standards for heritage site conservation are already in place. Site R63-15-S2, the remains of the Contemporary Ciskei – South African border post, is not formally protected by the NHRA 1999. The site is however of heritage sensitivity. Destruction of the remains of the site can proceed without the developer having to apply for an EC PHRA Built Environment destruction permit. However, it is recommended that a plinth with the wording 'Border Post' be constructed as close as possible to the original locale of the site upon completion of road works in the vicinity. [Sites R63-15-S1 and R63-15-S2 are described under 4.2 Archaeological Resources Identified].

Culverts and storm water drainage channels are more than often stone lined, with approximately 90 culverts identified along the length of the line route, thus very similar to findings of the R63 N6 bridge to the N2 intersection east of Komga, immediately adjoining the study site to the east where 140 such culverts and associated drainage channels were identified (Van Ryneveld 2017¹). Although the exact date of construction of these features are not known, the abundance thereof does not suggest heritage significance while evidence of sequential upgrade and maintenance thereto throughout the years have lessened any possible heritage significance. Fair interpretation is vested in the use of stone as local construction material, thus an earlier environmental solution to the construction industry, rather than a reference to heritage with the early use of stone as primary or significant building material.

Proposed upgrade of the said road alignment includes related work to 6 bridges. None of the bridges are of archaeological or cultural heritage significance, as defined and protected by the NHRA 1999. Similar to impact on culverts and drainage channels, bridge reconstruction and upgrades can proceed without the developer having to comply with additional heritage compliance requirements.

- **Quarry 17 – S32°42'01.2"; E27°32'30.9"**

No archaeological or cultural heritage resources were identified on the surface of the study site or within exposed former borrowing sub-surface sections.

- **Borrow Pit 14 – S32°45'15.5"; E27°29'28.5"**

No archaeological or cultural heritage resources were identified on the surface of the study site.

- **Borrow Pit 13 – S32°45'37.6"; E27°29'16.3"**

No archaeological or cultural heritage resources were identified on the surface of the study site or within exposed former borrowing sub-surface sections.

- **Borrow Pit 30 – S32°45'31.9"; E27°28'57.3"**

No archaeological or cultural heritage resources were identified on the surface of the study site or within exposed former borrowing sub-surface sections.

- **Borrow Pit 7 – S32°46'24.9"; E27°27'27.2"**

No archaeological or cultural heritage resources were identified on the surface of the study site or within exposed former borrowing sub-surface sections.

¹ Van Ryneveld, K. 2017. (ArchaeoMaps). Phase 1 Archaeological & Cultural Heritage Impact Assessment – Upgrade of the National Route R63 Section 16 between the N6 Bridge [km 1,00] and the N2 Intersection East of Komga [km 43,64], Great Kei Local Municipality, Eastern Cape.

- **Borrow Pit 6 – S32°47'25.2"; E27°27'21.9"**

No archaeological or cultural heritage resources were identified on the surface of the study site or within exposed former borrowing sub-surface sections.

- **Quarry 15 – S32°46'19.3"; E27°23'45.6"**

No archaeological or cultural heritage resources were identified on the surface of the study site or within exposed former borrowing sub-surface sections. Site R63-15-S3, Colonial Period farmstead remains are situated in close proximity to the Quarry 15 site. No conservation measures are in place. It is recommended that conservation measures, either temporary or permanent, as will be most practical with reference to the duration of use of Quarry 15 be implemented prior to use of the quarry. [The Site R63-15-S3 site features are described under 4.2 Archaeological Resources Identified].

- **Borrow Pit 16 – S32°47'38.4"; E27°29'15.0"**

No archaeological or cultural heritage resources were identified on the surface of the study site or within exposed former borrowing sub-surface sections. A single monolithic stone along the access road to Borrow Pit 16 is a terrain marker and not a grave. Site R63-15-S4, an informal Later Iron Age cemetery is situated along the access road to Borrow Pit 16. No conservation measures are in place. It is recommended that the cemetery be permanently fenced prior to the start of construction. [Site R63-15-S4 is described under 4.2 Archaeological Resources Identified].

- **Quarry 2 – S32°47'56.2"; E27°29'08.5"**

No archaeological or cultural heritage resources were identified on the surface of the study site or within exposed former quarry sub-surface sections.

- **Quarry 3 – S32°47'55.0"; E27°27'35.1"**

Site R63-15-S5 comprising low keyed stone foundation outlines associated with former usage of the quarry is situated immediately to the west of Quarry 3. These features are of no archaeological or cultural heritage significance and proximity to the quarry or impact hereon will not affect compliance to heritage requirements. Site R63-15-S6 constitutes the Colonial Period remains of a railway platform in the north-eastern corner of the proposed Quarry 3 site. The Site R63-15-S6 remains are protected by the NHRA 1999. The developer should apply for an EC PHRA Built Environment site destruction permit prior to any impact on the railway remains. Alternatively, an approximate 15m conservation barrier should be maintained around these features to ensure their conservation within the development framework. The heritage conservation area should be permanently fenced with an access gate and permanent signage be erected indicating the area



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as a 'Heritage Site'. [Sites R63-15-S5 and R63-15-S6 are described under 4.2 Archaeological Resources Identified]

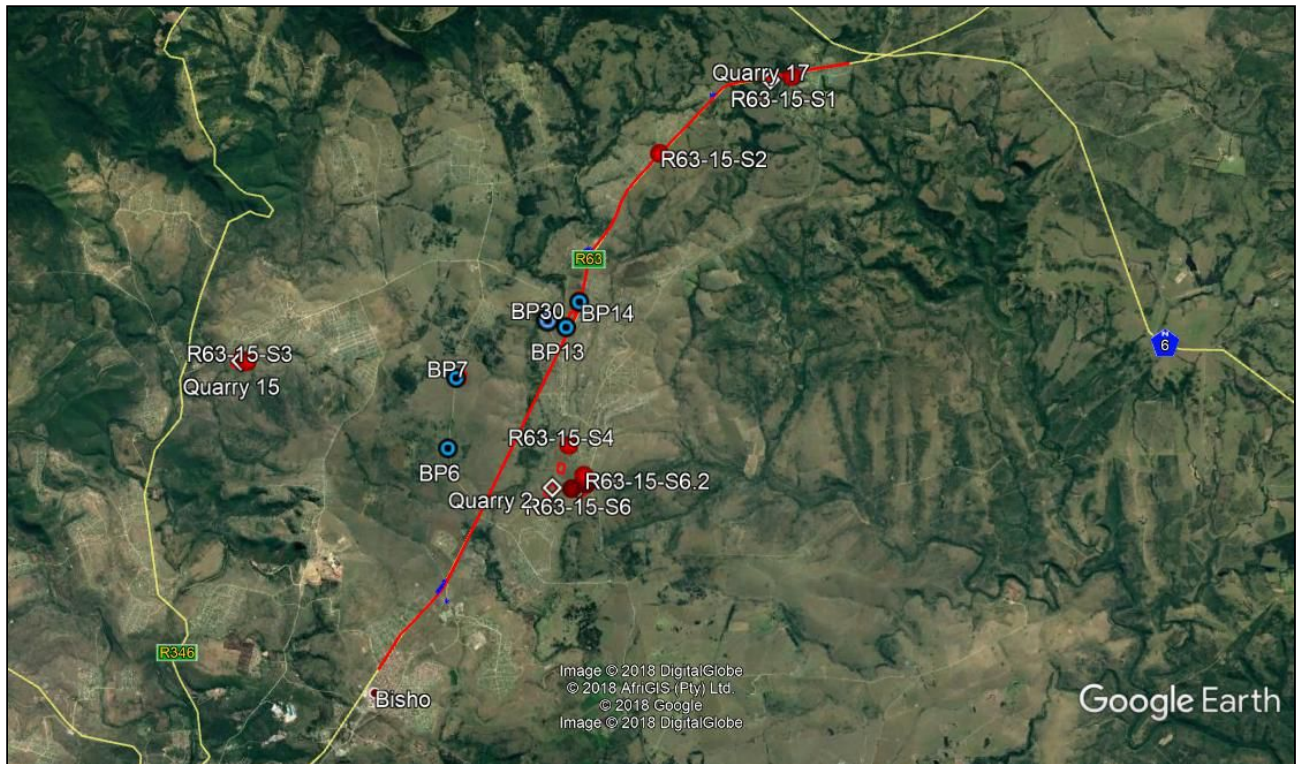


Figure 5: Phase 1 archaeological assessment results



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4.2 Archaeological Resources identified

4.2.1 Site R63-15-S1 – Colonial Period: Church – S32°41'57.4"; E27°32'52.1"

Site R63-15-S1 comprises the Colonial Period Richard Brit Congregational Church. The site is older than 60 years of age, and reasonably inferred to pre-date 100 years, based on corrugated iron having been used as building material. The site is protected by the NHRA 1999. The site is still in use. Current conservation measures comprise a permanent fence with access gate, with these conservation measures complying with SAHRA / EC PHRA minimum standards for heritage site conservation. The site is situated approximately 60-70m from the relevant road alignment.

- **Site Significance and Recommendations:** Site R63-15-S1 receives automatic SAHRA / EC PHRA protection as a site of low local significance (Grade IIIC). Current conservation measures comply with SAHRA / EC PHRA minimum standards for heritage site conservation. It is not necessary for the developer to take additional measures to ensure conservation of the site during the construction phase.

4.2.2 Site R63-15-S2 – Contemporary Period: Border Post – S32°43'07.3"; E27°30'42.5"

Site R63-15-S2 comprise the Contemporary Period remains of the Old Ciskei – South African border post. The Ciskei was the fourth homeland to become independent in 1981, when the border post was constructed. The site is at present demolished to cement floor level. Structure remains are younger than 60 years of age and not protected by the NHRA 1999. However, the remains are of heritage significance. The site will be directly, albeit perhaps only partially impacted by development. Realignment of the road for purposes of site conservation is not recommended.

- **Site Significance and Recommendations:** Site R63-15-S2 does not receive protection under the NHRA 1999. The site is however of heritage sensitivity. Development will directly, albeit perhaps only partially impact on the site remains. Impact on the border post remains are not subject to an EC PHRA Built Environment Permit. It is however recommended that the developer ensures that a plinth be erected with the wording 'Border Post' as close as possible to the original site locale upon completion of road works in the vicinity of the site.

4.2.3 Site R63-15-S3 – Colonial Period: Farmstead Remains – S32°46'19.3"; E27°23'52.5"

Site R63-15-S3 comprises the Colonial Period remains of a farmstead. The main residence, currently in ruins with only partial walling still standing is situated at the site co-ordinate S32°46'19.3"; E27°23'52.5", approximately 90m from the boundary of proposed Quarry 15, while remnants of related period farming infrastructure (R63-15-S3.1) is visible at S32°46'19.7"; E27°23'49.9", approximately 25m from the proposed Quarry 15 boundary. Structure remains are



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reasonably inferred to pre-date 60 years of age and are protected by the NHRA 1999. No conservation measures are in place.

- **Site Significance and Recommendations:** The Site R63-S15-S3 structure remains receives automatic SAHRA / EC PHRA protection as a site of low local significance (Grade IIIC). No conservation measures are in place.
 - o It is recommended that the developer ensures that temporary conservation measures, including a temporary fence, of construction netting or a similar visually clear demarcation be erected around these features for the duration of use of Quarry 15. Temporary signage indicating these features as 'No Entry – Heritage Site' should be attached at intervals along the conservation fences. All temporary conservation measures should be removed upon closure of the quarry. OR
 - o Based on the period of use of the quarry the developer may opt for permanent conservation of the features, including that features be permanently fenced with an access gate. The developer should allow for an approximate 5m conservation buffer between the features and the conservation fence.

4.2.4 Site R63-15-S4 – Later Iron Age: Cemetery – S32°47'17.8"; E27°29'21.6"

Site R63-15-S4 comprises an informal Later Iron Age cemetery, situated along the access road to be used for Borrow Pit 16 (and other study sites). The cemetery boundary is within 25m from the access road to be used. The informal cemetery is formally protected by the NHRA 1999. No formal conservation measures are in place. The cemetery houses 500+ graves of varying grave style including modern style graves, often individually fenced as well as traditional style earth mound, stone outlined, stone cairn and headstone demarcated graves.

- **Site Significance and Recommendations:** The Site R63-S15-S4 cemetery comprises a burial site formally protected by the NHRA 1999. The cemetery boundary is situated within 25m from the proposed access road. The site is graded as having high local significance (Grade IIIA). No conservation measures are in place. The site is ascribed a SAHRA / EC PHRA High / Medium Significance (Grade IIIA).
 - o It is recommended that the developer ensures permanent heritage conservation measures, including a permanent fence with access gate to be in place ensuring compliance with SAHRA / EC PHRA minimum standards for heritage site conservation prior to commencement of construction.

4.2.5 Site R63-15-S5 – Contemporary Period: Structure Foundation Remains – S32°47'55.9"; E27°29'28.3"



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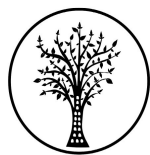
Site R63-15-S5 comprises Contemporary low-keyed structure foundation remains associated with former use of Quarry 3 and in character similar to the former quarry boundary fence remains. These stone outline remains are not formally protected under the NHRA 1999. Impact thereon or proximity thereof to the study site does threaten heritage as defined by the NHRA 1999.

- **Site Significance and Recommendations:** The Site R63-S15-S5 Contemporary stone foundation features are not protected by the NHRA 1999. Proximity to the study site or impact thereon are not subject to heritage compliance requirements.

4.2.6 Site R63-15-S6 - Colonial Period: Railway Platform Remains - S32°47'57.3"; E27°29'42.5"

Site R63-15-S6 comprises the remains of a Colonial Period Railway Platform. The old railway track has been removed in totality with only cement foundations remains of the original platform still visible (situated at the site co-ordinate S32°47'57.3"; E27°29'42.5"). In close proximity are a collection of columns, structural remains directly associated with the railway platform (Site R63-15-S6.1 – S32°47'51.1"; E27°29'44.2"), whilst further associated remains are situated further from the Quarry 3 study site, approximately 200m north thereof (Site R63-15-S6.2 – S32°47'51.3"; E27°29'36.5"). Railway remains pre-date 100 years of age and are protected by the NHRA 1999. The Quarry 3 site will directly impact on the platform remains and the collection of structural columns, situated at S32°47'57.3"; E27°29'42.5" and S32°47'51.3"; E27°29'36.5".

- **Site Significance and Recommendations:** The Site R63-S15-S6 Colonial Period railway platform remains receives automatic SAHRA / EC PHRA protection as a site of low local significance (Grade IIIC). No conservation measures are in place. Quarry 3 will directly impact on selected of the remains including the platform remains and the collection of foundational columns.
 - It is recommended that the developer applies for an EC PHRA Built Environment site destruction permit prior to use of Quarry 3 as currently proposed. Upon the issue of a destruction permit development may legally proceed and the affected heritage structures destroyed. OR
 - The developer should ensure that the heritage structures be formally conserved within the development layout implying a reduction in size of proposed Quarry 3. Heritage structures should be permanently fenced with an access gate. The heritage conservation fence should allow for an approximate 15m conservation buffer between the heritage sites and the Quarry development. Permanent signage indicating the area as a 'heritage Site' should be affixed to the conservation fence.



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4.3 Selected photographic record



Plate 1: General view of Site R63-15-S1, the Colonial Period Richard Brit Congregational Church



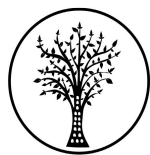
Plate 3: General view of Site R63-15-S2, the Contemporary Ciskei Border Post [2]



Plate 2: General view of Site R63-15-S2, the Contemporary Ciskei Border Post [1]



Plate 4: General view of Site R63-15-S2, the Contemporary Ciskei Border Post [3]



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Plate 5: View of the road alignment at the R63, Section 16 [km 1.0] at the bridge across the N6 to Komga



Plate 8: General view of the road alignment study site [3]



Plate 6: General view of the road alignment study site [1]



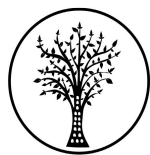
Plate 9: General view of the road alignment study site [4]



Plate 7: General view of the road alignment study site [2]



Plate 10: View of the road alignment at the R63, Section 15 [km 5.8] at Bhisho



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Plate 11: Selected bridges along the road alignment (rail bridge)



Plate 14: Culverts [1]



Plate 12: Selected bridges along the road alignment [1]



Plate 15: Culverts [2]



Plate 13: Selected bridges along the road alignment [1]



Plate 16: Culverts [3]



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Plate 17: Culverts [4]



Plate 20: General view of the Quarry 17 study site [1]



Plate 18: Storm water drainage channels [1]



Plate 21: General view of the Quarry 17 study site [2]



Plate 19: Storm water drainage channels [2]



Plate 22: General view of the Borrow Pit 14 study site [1]



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Plate 23: General view of the Borrow Pit 14 study site
[2]



Plate 26: General view of the Borrow Pit 30 study site
[1]



Plate 24: General view of the Borrow Pit 13 study site
[1]



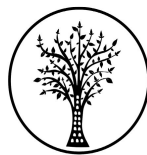
Plate 27: General view of the Borrow Pit 30 study site
[2]



Plate 25: General view of the Borrow Pit 13 study site



Plate 28: General view of the Borrow Pit 7 study site
[1]



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Plate 29: General view of the Borrow Pit 7 study site [2]



Plate 32: General view of the Quarry 15 study site [1]



Plate 30: General view of the Borrow Pit 6 study site [1]



Plate 33: General view of the Quarry 15 study site [2]



Plate 31: General view of the Borrow Pit 6 study site [2]



Plate 34: View of the Site R63-15-S3 Colonial Period structure remains



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Plate 35: View of the Site R63-15-S3.1 Colonial Period farming infrastructure



Plate 38: General view of the access road towards Borrow Pit 16



Plate 36: General view of the Borrow Pit 16 study site



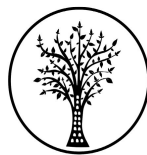
Plate 39: View of the Site R63-15-S4 Later Iron Age cemetery



Plate 37: Borrow Pit 16 with a single monolithic stone, being a terrain marker



Plate 40: General view of the Quarry 2 study site [1]



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Plate 41: General view of the Quarry 2 study site [2]



Plate 44: View of the Site R63-15-S5 Contemporary structure foundation remains



Plate 42: General view of the Quarry 3 study site [1]



Plate 45: View of the Site R63-15-S6 Colonial Period Railway platform remains [1]



Plate 43: General view of the Quarry 3 study site [2]



Plate 46: View of the Site R63-15-S6 Colonial Period Railway platform remains [2]



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Plate 47: View of the Site R63-15-S6.1 Colonial Period
Railway platform remains



Plate 48: View of the Site R63-15-S6.2 Colonial Period
Railway remains from Quarry 3

5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT

5.1 Assessment of impact to Archaeological Resources

(See 4.2 Archaeological Resources Identified).

5.2 Proposed development alternatives

From an archaeological and cultural heritage perspective and based on the findings of the archaeological field assessment consideration of a 'No-go' development option or development alternatives are irrelevant for the proposed development.

6. CONCLUSION AND RECOMMENDATIONS

It is recommended that the proposed improvement of the National Route R63 Sections 15 and 16 from Bhisho (km 5.8) to the N6 Bridge intersection (km 1.0), including the utilization of 10 borrow pit / quarry sites proceeds as applied for provided the developer comply with the below listed heritage recommendations:

- **Road alignment - N6 bridge (S32°41'44.3"; E27°33'49.3") to Bhisho (S32°50'38.8"; E27°26'19.1")**
 - Site R63-15-S1 (S32°41'57.4"; E27°32'52.1") comprises a Colonial Period church, situated along the proposed road alignment. Formal conservation measures, including a permanent fence with access gate are in place. No additional conservation measures are required on behalf of the developer for development purposes.
 - Site R63-15-S2 (S32°43'07.3"; E27°30'42.5") comprises the remains of the former Ciskei - South African border post. Originally constructed in 1981, the site has been demolished to floor level. The site does not receive protection status for buildings under the NHRA 1999. Based on its demolished state it is inferred that the site holds little to no affectionate significance for the resident community in terms of South Africa's political history. Removal of the demolished structure can proceed without the developer



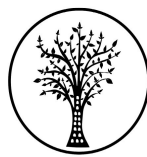
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having to comply with additional heritage compliance requirements. It is recommended that the developer constructs a plinth with the wording 'Border Post' as close to the original locale of site to the road as permitted within road legislation and regulations and with cognizance to visibility and safe road usage.

- The developer need not comply with additional heritage compliance requirements prior to impact on culverts, drainage channels or any of the bridges affected.

- **Borrow pits / Quarry sites**

- The Site R63-15-S3 (S32°46'19.3"; E27°23'52.5") situated in close proximity to Quarry 15 comprise Colonial Period farmstead remains including structure and infrastructural remains. No conservation measures are in place. It is recommended that conservation measures, either temporary or permanent, as will be most practical with reference to the duration of use of Quarry 15 be implemented prior to use of the quarry.
- Site R63-15-S4 (S32°47'19.0"; E27°29'23.5") comprises an informal Later Iron Age cemetery, situated on route to Borrow Pit 16. No conservation measures are in place. It is recommended that the site be permanently fenced with an access gate prior to the start of construction, thereby ensuring that heritage conservation measures meet SAHRA / EC PHRA minimum standards for heritage site conservation.
- Site R63-15-S5 (S32°47'55.9"; E27°29'28.3") comprises contemporary structure foundation remains associated with former use of Quarry 3. Foundation remains are not protected by the NHRA 1999. Impact thereon by development or proximity thereof to development does not trigger any heritage compliance requirements.
- Site R63-15-S6 (S32°47'57.3"; E27°29'42.5") constitutes the Colonial Period remains of a railway platform in the north-eastern corner of the proposed Quarry 3 site. The Site R63-15-S6 remains are protected by the NHRA 1999. The developer should apply for an EC PHRA Built Environment site destruction permit prior to any impact on the railway remains. Alternatively, an approximate 15m conservation barrier should be maintained around these features to ensure their conservation within the development framework. The heritage conservation area should be permanently fenced with an access gate and permanent signage be erected indicating the area as a 'Heritage Site'.
- No additional heritage compliance requirements pertain to establishment of Quarry 17 (S32°42'01.2"; E27°32'30.9"), Borrow Pit 14 (S32°45'15.5"; E27°29'28.5"), Borrow Pit 13 (S32°45'37.6"; E27°29'16.3"), Borrow Pit 30 (S32°45'31.9"; E27°28'57.3"), Borrow Pit 7 (S32°46'24.9"; E27°27'27.2"), Borrow Pit 6 (S32°47'25.2"; E27°27'21.9"), Borrow Pit 16 (S32°47'38.4"; E27°29'15.0") and Quarry 2 (S32°47'56.2"; E27°29'08.5").



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7. REFERENCES

Impact Assessment References				
Nid	Report Type	Author/s	Date	Title
116712	HIA	Johnny Van Schalkwyk	01/04/2011	Heritage Impact Assessment For The Proposed Eskom 400kv Electricity Transmission Line, Neptune To Poseidon Substations, East London To Cookhouse, Eastern Cape Province
269397	AIA	Celeste Booth	2/3/2015	FibreCo Repeater Sites Routes 3 and 4_Heritage_2015 AIA report
356723	HIA	Stefan Gaigher	25/3/2015	Heritage Impact Assessment Report for the Proposed Upgrade and Construction the Kei-Road Water Treatment Works and Conveyance



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APPENDICES

Appendix 1: Specialist CVs

Resumé
Karen van Ryneveld
2017

Name: Karen van Ryneveld
Contact Details: 1) Mobile – 084 871 1064
 2) E-mail – karen@archaeomaps.co.za
 3) Website – www.archaeomaps.co.za
 4) Postal address – Postnet Suite 239, Private Bag X3, Beacon Bay, 5205
Company: ArchaeoMaps cc
Occupation: Archaeologist
Qualification: MSc Archaeology (WITS University – 2003)
Accreditation: 1) Association of Southern African Professional Archaeologists (ASAPA) accredited Cultural Resources Management CRM practitioner [member nr – 163]
 o 2010 – ASAPA CRM Section: Principle Investigator – Stone Age
 o 2005 – ASAPA CRM Section: Field Director – Iron Age & Colonial Period
 2) SAHRA, AMAFA, EC PHRA and HWC listed ASAPA accredited CRM archaeologist

Tertiary Education

2010 **University of South Africa (UNISA), Pretoria** (Project Management 501)
 2006 – 2007 **Nelson Mandela Metropolitan University (NMMU), Port Elizabeth** (Undergraduate Certificate in Geographical Information Systems – GIS)
 2001 – 2003 **University of the Witwatersrand (WITS), Johannesburg** (MSc Archaeology)
 1999 – 2000 **University of Pretoria (UP), Pretoria** (BA Hons. Archaeology)
 1991 – 1993 **University of Pretoria (UP), Pretoria** (BA Archaeology & History of Art)

Employment – Professional Archaeology

2007/04 – Present ArchaeoMaps [Self-employed] (Archaeologist – CRM)
 2006/06 – 2007/03 National Museum, Bloemfontein (Archaeologist – CRM, Dept. of Archaeology)
 2005/04 – 2006/05 McGregor Museum, Kimberley (Archaeologist – CRM / Research, Dept. of Archaeology)
 2004/04 – 2005/01 Amafa aKwaZulu-Natali (HoD: Archaeology, Palaeontology & Meteorites Unit – APM Unit)
 2002/09 – 2004/03 McGregor Museum, Kimberley (Archaeologist – CRM / Research, Dept. of Archaeology)

Employment – Freelance: Ground Penetrating Radar

2015/10 – Present Terra Scan assistant (BCM area, EC) – GPR & underground utilities focussing on petrol retail (oil & gas) industry

Archaeology – Summary

Karen has been involved in CRM archaeology since 2003 and has been the author (including selected co-authored reports) of approximately 550 Phase 1 AIA studies. Phase 1 AIA work is centred in South Africa, focussing on the Northern and Eastern Cape provinces and the Free State. She has also conducted Phase 1 work in Botswana (2006 / 2007). In 2007 she started ArchaeoMaps, an independent archaeological and heritage consultancy. In 2010 she was awarded ASAPA CRM Principle Investigator (PI) status based on large scale Phase 2 Stone Age mitigation work (De Beers Consolidated Mines – Rooipoort, Northern Cape, 2008 / 2009) and has also been involved in a number of other Phase 2 projects including Stone Age, Shell Middens, Grave / Cemetery projects and Iron Age sites.

In addition to CRM archaeology she has been involved in research, including the international collaborations at Maloney's Kloof and Grootkloof, Ghaap Plateau, Northern Cape (2005 / 2006). Archaeological compliance experience includes her position as Head of the Archaeology, palaeontology and Meteorites (APM) Unit at AMAFA aKwaZulu-Natali (2004).

Company Profile

Company Name : ArchaeoMaps cc



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Registration Number : 2005/180719/23
VAT Number : Not VAT Registered
Accountant : AZIMA Financial Services
Members / Shareholders : Karen van Ryneveld (100%)
BBBEE Status : Exempted Micro Enterprise (EME)