

ADDENDUM: ARCHAEOLOGICAL AND HERITAGE INVESTIGATION OF PROPOSED DEVIATIONS AND REPEATER SITES FOR AN ENVIRONMENTAL AUTHORISATION AMENDMENT FOR FIBRECO ROUTE 4 (GEORGE TO PORT ELIZABETH) AND 5 (PORT ELIZABETH TO DURBAN).

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NOTE: The report serves as an addendum to previous Phase 1 Archaeological Impact Assessment conducted for Route 4 (Binneman *et al.* 2011) and Cultural Desktop Assessment for Route 5 (Prins 2011). Currently there are existing and proposed repeater sites belonging to the telecommunication partners that the original routes need to link to. Thus, deviations are necessary from the original route in order to link to these repeater sites. These deviations and proposed repeater sites were not part of the previous scope of study, so it is currently necessary that they get assessed.

The archaeological investigation was conducted as a requirement of the National Heritage Resources Act 25 of 1999 (NHRA), Section 38 (1)(a):

38. (1) Subject to the provisions of subsections (7), (8), and (9), any person who intends to undertake a development categorized as –
- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;

This report follows the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA).

1. EXECUTIVE SUMMARY

1.1. Purpose of the Study

The purpose of the study was to conduct archaeological and heritage investigations for repeater sites / deviations associated with the already authorised FibreCo fibre optic cable installation that were not included in the original assessments conducted in 2011. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimize possible damage to the archaeological heritage.

1.2. Brief Summary of Findings

No archaeological heritage remains were documented during the investigation of repeater sites / deviations along Route 4 and Route 5. However, significant heritage buildings, features and structures occur in several of towns through which the repeater site route deviates.

1.3. Recommendations

The repeater sites surveyed for Route 4 and route 5 surveyed is considered as having a low archaeological significance as observed at the surface. The following recommendations must be considered and implemented in accordance with the various phases of the development activities (see recommendations for each site in section 8):

1. If concentrations of historical and pre-colonial archaeological heritage material and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Albany Museum and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA), the South African Heritage Resources Agency (SAHRA), Heritage Western Cape (HWC) or Amafa Heritage, KwaZulu Natal so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
2. Caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, as they have been in previous excavations of the roads and pavements within the CBD, the appropriate mitigation measures should be followed if such artefacts are exposed.
3. Construction managers/foremen and/or the Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

2. BACKGROUND INFORMATION

FibreCo Telecommunications Ltd (FibreCo) was given environmental authorisations (EA) by the Department of Environmental Affairs in 2011 to construct and operate a fibre optic data cable along national roads between Cape Town and Durban (divided into three routes for assessment and authorisation purposes – routes 3, 4 and 5). An agreement reached between FibreCo and other telecommunication companies regarding the construction of the Cape-Durban route has resulted in changes to the proposed route.

SRK Consulting (Pty) Ltd (SRK) has been appointed by FibreCo to undertake the environmental amendment process, including an amendment of the water use licence application (WULA) based on proposed changes deviations along each route.

Route 4: 8 deviations. Only six other deviations fall outside the previous scope of study.
Route 5: 20 deviations fall outside the area that was not previously assessed.

2.1. Applicant / Developer:

FibreCo Telecommunications Ltd (FibreCo)

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2.3. Terms of reference

The purpose of the study was to conduct archaeological and heritage investigations for repeater sites / deviations associated with already authorised FibreCo fibre optic cable installation that were not included in the original assessments conducted in 2011.

The Terms of Reference (ToR) are as follows:

- Conduct a literature review of known archaeological resources within the area with a view to determining which of these resources are likely to occur within the development footprint;

- Comment on potential impacts on these resources resulting from the development;
- Make recommendations regarding the mitigation of any damage to archaeological resources identified, or that may be identified during the construction phase.

3. HERITAGE LEGISLATIVE REQUIREMENTS

Parts of sections 3(1)(2)(3), 34(1), 35(4), 36(3) and 38(1)(8) of the National Heritage Resources Act 25 of 1999 apply:

S3. National estate

3. (1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

3. (2) Without limiting the generality of subsection (1), the national estate may include –

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including –
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves and victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the Gazette;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including –
 - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and
 - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public

records as defined in section 1(xiv) of the National Archives of South Africa Act (Act No. 43 of 1996).

3. (3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of –

- (a) its importance in the community, or pattern of South Africa's history;
- (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- (i) sites of significance relating to the history of slavery in South Africa.

S34. Structures

34. (1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

S35. Archaeology, palaeontology and meteorites

35 (4) No person may, without a permit issued by the responsible heritage resources authority—

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

S36. Burial grounds and graves

36. (3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

S38. Heritage resources management

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) the construction of a bridge or similar structure exceeding 50 m in length;
- (c) any development or other activity which will change the character of the site –
 - (i) exceeding 5000 m² in extent, or
 - (ii) involving three or more erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
- (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;
- (d) the re-zoning of a site exceeding 10 000 m² in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

4. DESCRIPTION OF THE PROPERTY

4.1. Location data

4.1.1. ROUTE 4: GEORGE TO PORT ELIZABETH

The repeater sites mostly deviate off the N2 national road at Knysna and Plettenberg Bay in the Western Cape and Thornham, Humansdorp, Jeffreys Bay and Port Elizabeth in the Eastern Cape. A more detailed description of individual sites will be given in the archaeological investigation section below.

4.1.2. ROUTE 5: PORT ELIZABETH TO DURBAN

The repeater sites mostly deviate off the N2 national road at Kinkelbos, situated between Colchester and Nanaga, and Grahamstown in the Frontier Country; Peddie, Bhisho / Kind Williams Town and Komga in the former Ciskei; Eagle's Neck situated near Butterworth, eQqukesi situated between Butterworth and Idutywa, Idutywa, Mthatha, Qumbu, and Mqumangwe situated between Mount Frere and Mount Ayliff in the former Transkei; and Kokstad, Harding, Port Shepstone and Scottburgh in KwaZulu Natal. A more detailed description of individual sites will be given in the archaeological investigation section below.

4.2. Maps

1:500 000 Maps (not included in report): 3322 OUDTSHOORN, 3324 PORT ELIZABETH, 3326 GRAHAMSTOWN, 3226 KING WILLIAMS TOWN, 3228 KEI MOUTH, 3128 UMTATA, 3028 KOKSTAD, 3030 PORT SHEPSTONE.

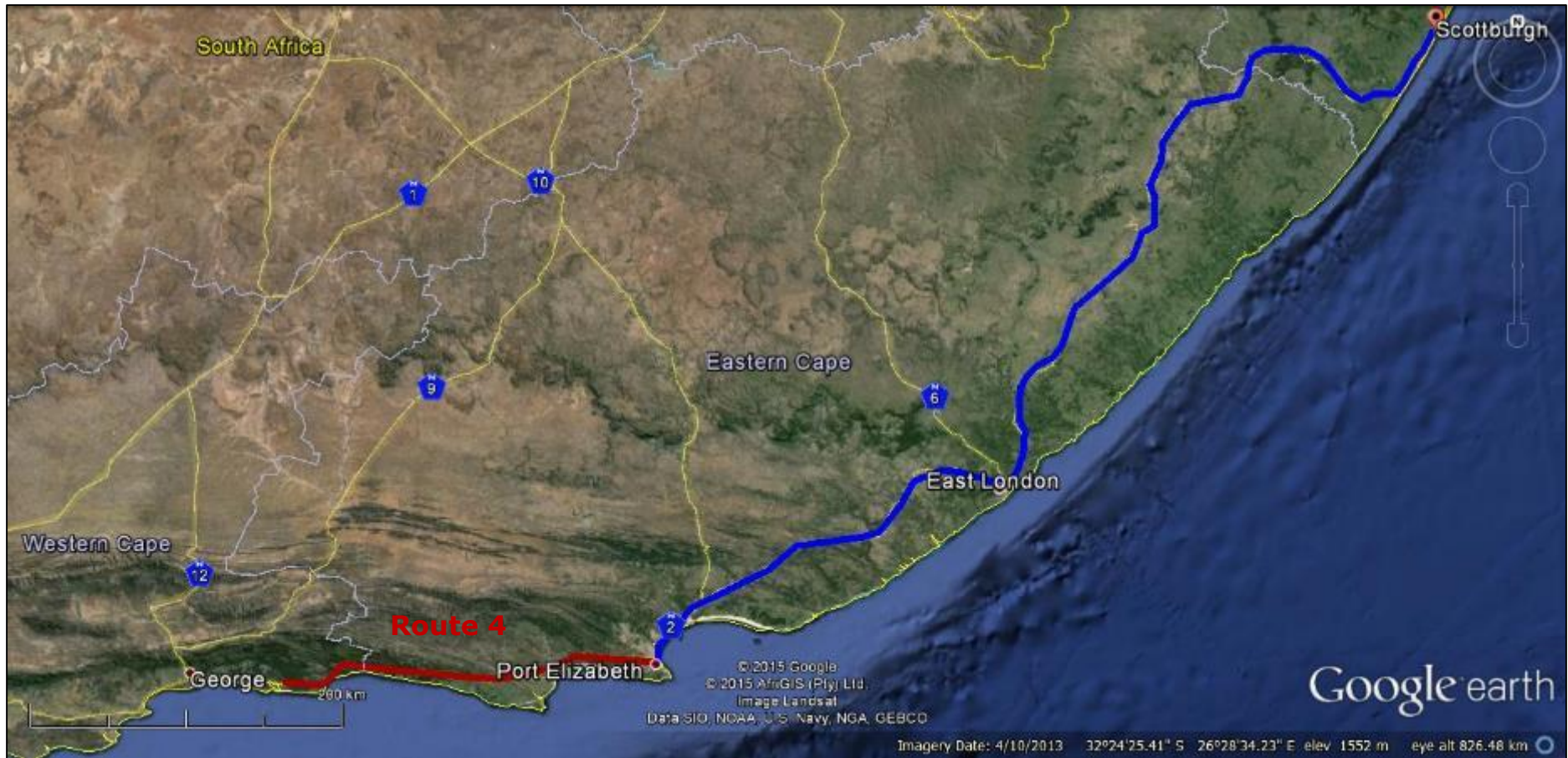


Figure 1. Aerial view showing the extent of the repeater sites along Route 4 (red line) and Route 5 (blue line) on the N2 national road investigated.

5. ARCHAEOLOGICAL INVESTIGATION

5.1. Methodology

The areas demarcated for the repeater site deviations were followed and investigated for possible occurrences of archaeological heritage remains, features and sites, as well as other heritage features and structures. Previous archaeological and cultural heritage assessments conducted for the proposed installation of the fibre optic data cable were studied. GPS readings and photographs were taken using a Garmin Oregon 550 (Table 1). The GPS readings have been plotted on relevant maps. Route 4 and Route 5 will be discussed separately with each individual site being discussed briefly.

5.2. Results of the Archaeological Investigation

5.2.1. ROUTE 4: GEORGE TO PORT ELIZABETH

5.2.1.1. VC Knysna Out (Knysna, Western Cape):

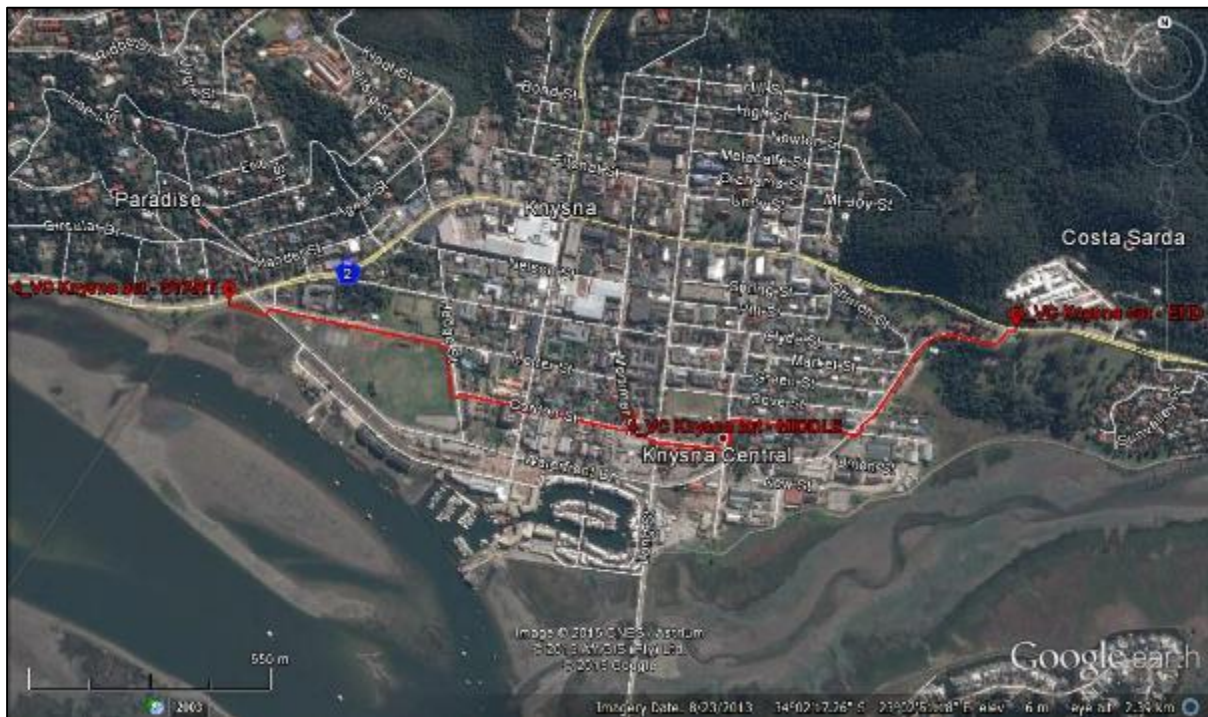


Figure 2. Aerial view of the deviation route for Repeater Site VC Knysna out- running through Knysna Central.

Knysna is situated in the Garden Route, Western Cape and is the most western location for proposed repeater sites situated along Route 4 (George to Port Elizabeth). There are two proposed repeater site deviations in Knysna, the first – VC Knysna Out (Figure 2) – deviation to link to it runs along the road reserve through Knysna Central towards the east off the N2 national road into Trotter Street, south into Hedge Street, east into Gordon Street, north into Queen Street, east into Tide Street and exits north along

Waterfront Drive onto the N2 national road. The deviation is approximately 1.5 km in extent through the southern half of Knysna's CBD (Central Business District).

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation. No archaeological heritage remains were observed on route owing to the heavily developed nature of the Knysna CBD.

It must, however, be noted that Knysna is a historically significant town, therefore caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.

The second repeater site – G2 VC KNY – is discussed below.

5.2.1.2. G2 VC KNY (Knysna, Western Cape):

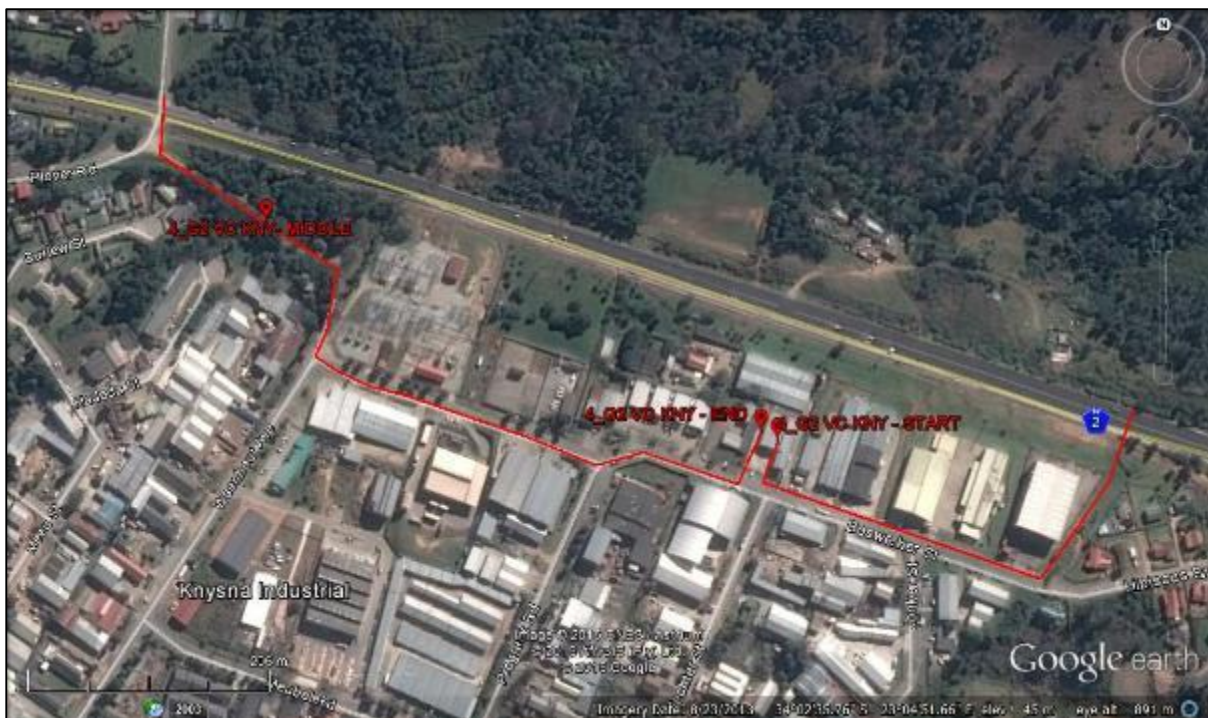


Figure 3. Aerial view of the deviation route for Repeater Site G2 VC KNY located with the Knysna Industrial area.

There are two proposed repeater site deviations in Knysna, the first – VC Kynsna Out – is discussed above, the second repeater site deviation (Figure 3) runs along the road reserve through the Knysna Industrial Area south of the N2 national road. The repeater site deviation turns south off the N2 national road at Plover Road and follows a gravel road that leads into Waenhout Avenue in the Knysna Industrial Area. The route runs east

along Boswerker Street (Figure 4) and joins the N2 before Hibiscus Road. The deviation is approximately 1.6 km in extent.

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation. No archaeological heritage remains were observed on route owing to the heavily developed nature of the Knysna Industrial Area.

Similarly as above, it must be noted that Knysna is a historically significant town, therefore caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.



Figure 4. View of the built-up Knysna Industrial area at the corner of Waenhout Avenue and Boswerker Street.

5.2.1.3. H VC PLE (Plettenberg Bay, Western Cape):



Figure 5. Aerial view of the deviation route for Repeater Site N VC PLE located west of the town of Plettenberg Bay off the N2 national road.

The repeater site deviation N VC PLE (Figure 5) is situated on the western outskirts of Plettenberg Bay, Bitou Local Municipality, Western Cape. The proposed repeater site route turns south off the N2 national road at Piesang Valley Road and is limited to the N2 national road. The route then enters a built-up complex known as Castleton Resort and Holiday Apartments complex (Figure 6). The resort is nestled in top of the Piesang River Valley. The route circumvents eastern portion of the complex up until the first reservoir and location of the repeater tower (Figure 7). The deviation is approximately 850 m in extent.

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation and dense bush vegetation that obscured archaeological visibility. No archaeological heritage remains were observed on route owing to the heavily developed nature of the complex.

It is unlikely that archaeological / historical heritage remains, features and sites may be uncovered during the excavation process.



Figure 6. View of the driveway and dense vegetation cover within the complex proposed for the repeater site.



Figure 7. View of the developed resort / residential area showing the repeater tower and one of the two reservoirs situated within the complex.

5.2.1.4. VC LEE (Thornham, Eastern Cape):

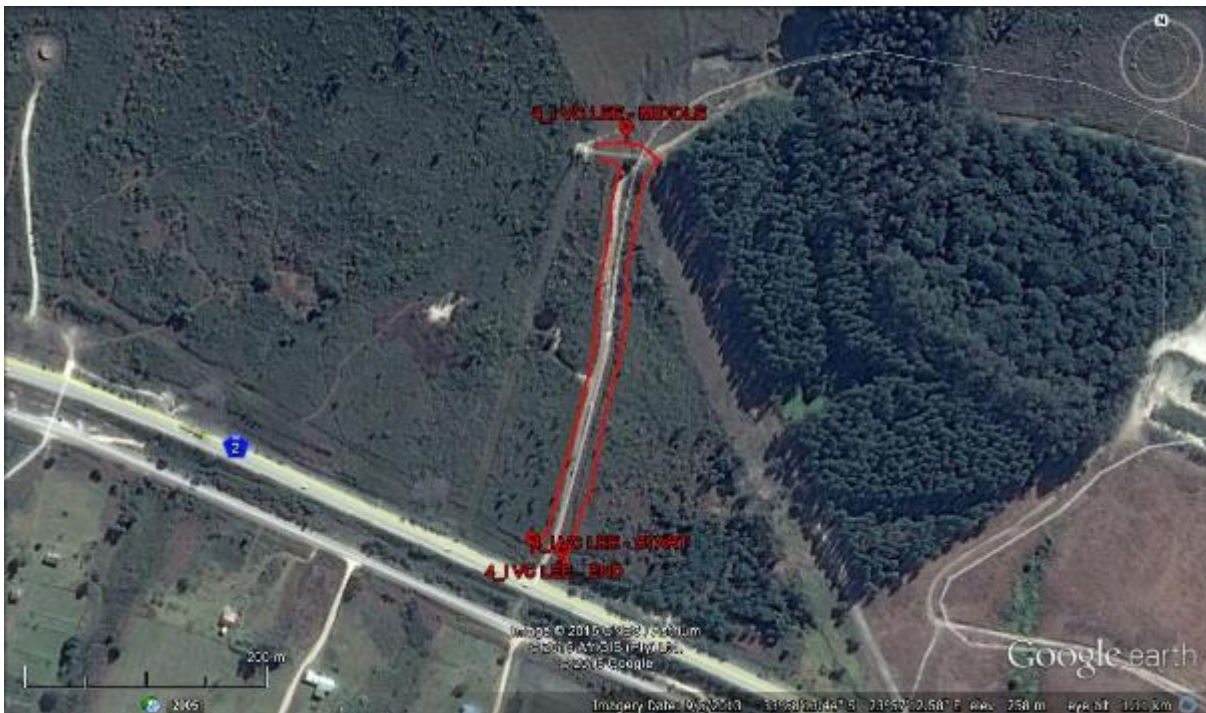


Figure 8. Aerial view of the deviation route for Repeater Site I VC LEE, located opposite Thornham east of the Storms River Bridge, off the N2 national road.

The repeater site deviation I VC LEE (Figure 8) is situated opposite the village of Thornham about 2 km east of the Storms River Bridge in the Tsitsikamma. The proposed repeater route is situated north off the N2 national road onto a forestry gravel road for 350 m up until the existing repeater site and is approximately 750 m in extent on either side of the gravel road.

The route for the repeater deviation is located in an already transformed commercial pine forestry landscape. The dense bush vegetation obscured archaeological visibility and no archaeological heritage remains were identified in the surface disturbed gravel road (Figure 9).

It is unlikely that archaeological / historical heritage remains, features and sites may be uncovered during the excavation process.



Figure 9. View of the dense vegetation and gravel road leading to the repeater site.

5.2.1.5. J1 VC HUM (Humansdorp, Eastern Cape):

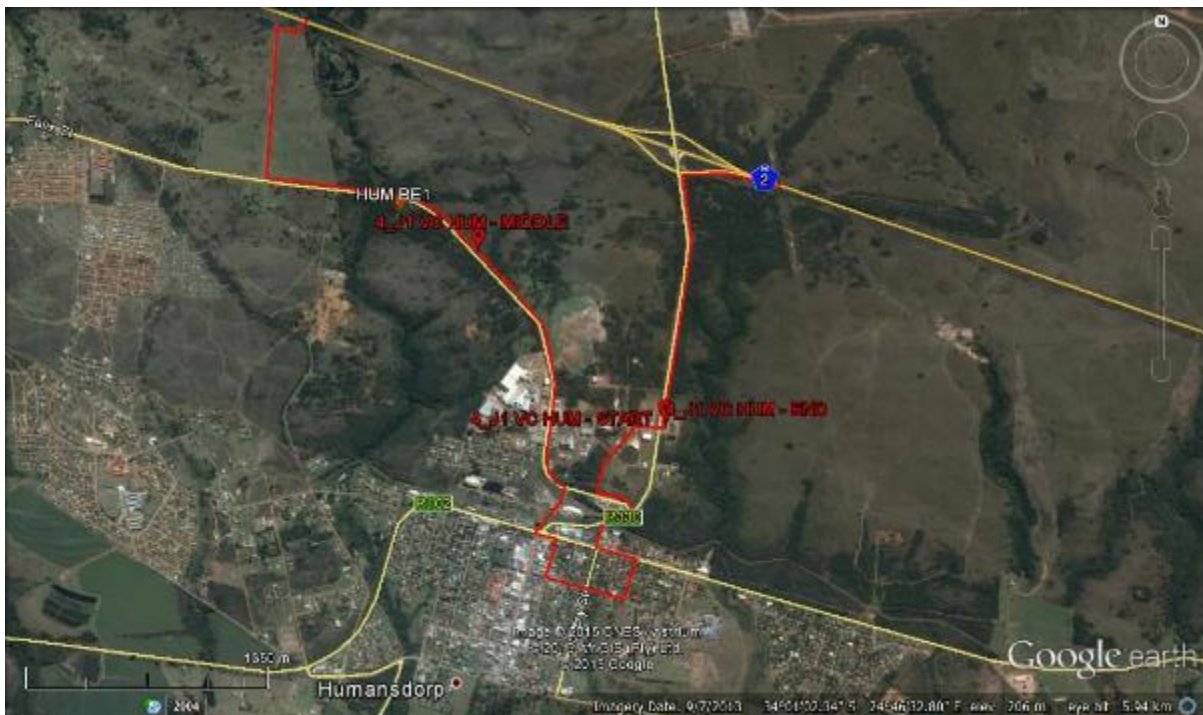


Figure 10. Aerial view of the deviation route for Repeater Site J1 VC HUM, running into the town of Humansdorp from the R330 off the N2 national road and out along Felix Street.

The repeater site deviation J1 VC HUM (Figure 10) runs along the road reserve through the town of Humansdorp, Kouga Local Municipality, Eastern Cape. The repeater site deviation turns south off the N2 national road along the R 330 road that enters into Humansdorp. The repeater route runs west along Bosbok Street, south into Bateleur Street and joins the R 330 road along Felix Street. The repeater route enters Humansdorp's CBD south over an open vegetation cover space into Saffrey Street then runs east along Voortrekker Road, south along Siebert Street, west along Du Plessis Street and joins Voortrekker Street to the north along Bureau Street. The route continues west along Voortrekker Street, turns north between the Humansdorp Cultural Centre and the R 330 road along Station Street and follows Felix Street (Figure 11) gravel road to a road that proceeds north to join the N2 national road. The repeater site deviation is approximately 8.5 km in extent.

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation. No archaeological heritage remains were observed on route owing to the heavily developed nature of the Humansdorp CBD and Industrial areas (Figures 12-13).

The ruins of a previous dwelling (HUM BE1) was recorded along the Felix Street gravel road on the northern outskirts of Humansdorp's Industrial Area (Figure 14). The building was originally built with stone and later covered in plaster. No other heritage remains were identified with the structure.



Figure 11. View of the route for the deviation along the Felix Street gravel road.



Figure 12. Street view of Humansdorp's Industrial area.



Figure 13. Street view of Humansdorp's built-up Industrial area.



Figure 14. Building ruins situated HUM BE1.

5.1.2.6. J2 FC JEF (Jeffreys Bay, Eastern Cape):



Figure 15. Aerial view of the deviation route for Repeater Site J2 FC JEF of the N2 national road.

The repeater site deviation J2 FC JEF (Figure 15) is situated near Jeffreys Bay, Kouga Local Municipality, Eastern Cape. The proposed repeater route is situated north of the town of Jeffreys Bay on the southern ramp off the N2 national road onto the R 102 road that enters Jeffreys Bay. The repeater site is limited to the road reserve along the southern off-ramp. The repeater site deviation is approximately 1.2 km in extent.

The route for the repeater deviation is located in an area disturbed by the construction of the N2 national road (Figure 16). Although the general area is rich in archaeological sites and heritage it is highly unlikely that archaeological / historical heritage remains, features and sites may be uncovered during the excavation process.



Figure 16. View of the off-ramp to Jeffreys Bay and route to the repeater site.

5.1.2.7. K1 VC PE (Port Elizabeth, Eastern Cape):

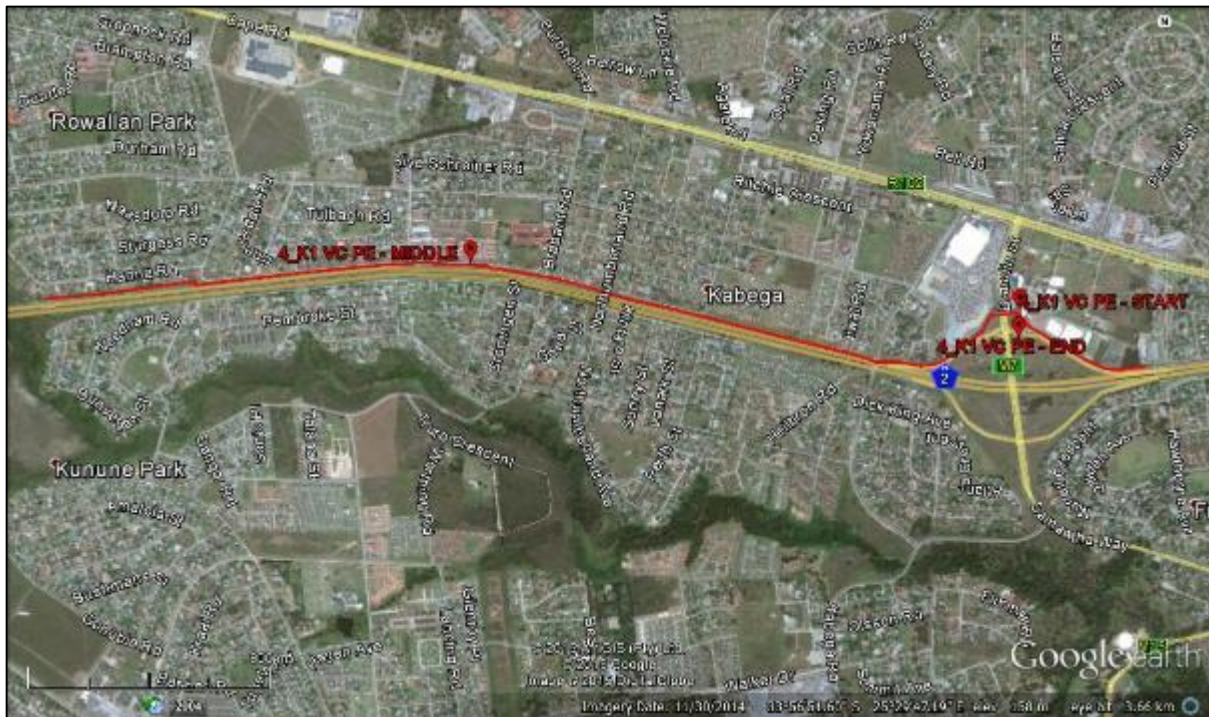


Figure 17. Aerial view of the deviation route for Repeater Site K1 VC PE running along the N2 national road off the ramp into Bramlin Street, Kabega Park and back onto the N2.

The repeater site deviation K1 VC PE (Figure 17) is situated south of the suburbs of Rowallan Park and Kabega Park, Port Elizabeth, Nelson Mandela Bay Municipality. The proposed repeater route is situated immediately north of the N2 national road (Figure 18) limited to the road reserve and follows the off-ramp into Bramlin Street and returning to the N2 national road from Bramlin Road. The repeater site deviation is approximately 4 km in extent.

The route for the repeater deviation is located in an area disturbed by the construction and continued maintenance of the N2 national road and other above and below ground infrastructure. It is highly unlikely that archaeological / historical heritage remains, features and sites may be uncovered during the excavation process



Figure 18. View of road reserve along N2 national road included as a deviation to the repeater site.

The proposed repeater sites on Route 4 between George and Port Elizabeth should not negatively affect any heritage resources as the areas have already been disturbed by the construction and continued maintenance of roads, buildings, suburbs and other above and below ground infrastructure.

To ensure that buildings and structures as well as monuments and other heritage features and structures must be avoided during excavation and construction activities so as not to negatively affect these structures and features. The appropriate mitigation measures (recommendations) must be followed if it is intended that any negative impact will afflict these structures and features.

5.2.2. ROUTE 5: PORT ELIZABETH TO DURBAN

5.2.2.1. LFC KIN (Kinkelbos, Eastern Cape):



Figure 19. Aerial view of the deviation route for Repeater Site LFC KIN, located off the N2 national road the Kinkelbos Traffic Calming Centre.

The repeater site deviation LFC KIN (Figure 19) is situated east of the N2 national road at the Kinkelbos Traffic Calming Centre, Kinkelbos, and Sundays River Municipality. The proposed repeater route is limited to the road reserve and stretches for approximately 100 m to the existing repeater tower (Figure 20). The repeater site deviation is approximately 250 m in extent.

The route for the repeater deviation is located in an area disturbed by the construction and continued maintenance of the N2 national road and other above and below ground infrastructure (Figure 21). It is highly unlikely that archaeological / historical heritage remains, features and sites may be uncovered during the excavation process



Figure 20. View of the repeater site situated at the Kinkelbos Traffic Calming Centre.



Figure 21. View of the deviation route for the repeater site opposite the Kinkelbos Traffic Calming Centre.

5.2.2.2. M1 FC GRA (Grahamstown, Eastern Cape):



Figure 22. Aerial view of the deviation route for Repeater Site M1 FC GRA, located off the N2 national road on the outskirts of Grahamstown at the water works.

The repeater site deviation M1 FC GRA (Figure 22) is situated south of the N2 national road on the eastern outskirts of Grahamstown, Makana Local Municipality, Eastern Cape. The proposed repeater route follows the gravel road that allows access to the Grahamstown Water Works for about 400 m. The repeater site deviation is approximately 900 m in extent.

The route for the repeater deviation is located in an area disturbed by the construction and continued maintenance of the N2 national road the reservoirs and infrastructure associated with Grahamstown Water Works and other above and below ground infrastructure.

The gravel road and other exposed disturbed areas were investigated for possible archaeological remains, however, no such heritage resources were identified within the proposed repeater site area. It is highly unlikely that archaeological / historical heritage remains, features and sites may be uncovered during the excavation process



Figure 23. View of the deviation route at the Grahamstown Water Works.

5.2.2.3. M2 VC GRA (Grahamstown, Eastern Cape):



Figure 24. Aerial view of the deviation route for Repeater Site M2 VC GRA running through Grahamstown's city centre.

The repeater site deviation M2 VC GRA (Figure 24) runs along the road reserve through the Grahamstown, Makana Local Municipality, Eastern Cape. The repeater site deviation turns north off the N2 national road along Grey Street that enters into Grahamstown. The repeater route runs north-west along Somerset Street, north-east into High Street (Figure 25), south into Bathurst Street (Figure 26-27) and east into Beaufort Street. The route continues south into the old Market Square and exits Grahamstown along George Street to link up with the N2 national road. The extent of the repeater deviation is approximately 4 km.

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation. No archaeological heritage remains were observed on route owing to the heavily developed nature of the Grahamstown CBD (Figures 12-13).

Grahamstown is a historically significant town this route passes several historical buildings, monuments and memorials, therefore caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, as they have been in previous excavations of the roads and pavements within the CBD, the appropriate mitigation measures should be followed if such artefacts are exposed.



Figure 25. View of High Street facing west towards the Cathedral.



Figure 26. View of Bathurst Street facing south towards Beaufort Street.



Figure 27. View of George Street facing north into Grahamstown.



Figure 28. View of one of the several monuments and historical structures located along the repeater deviation route (above: memorial to the men who died during the Anglo-Boer War 1899 – 1902 situated at the corner of High and Bathurst Streets).

5.2.2.4. N FC PED (Peddie, Eastern Cape):



Figure 29. Aerial view of the deviation route for Repeater Site N FC PED, located off the N2 national road.

The repeater site deviation N FC PED (Figure 29) is situated west of the N2 national road about 1.2 km north of the town of Peddie, Amathole District Municipality, Eastern Cape. The existing repeater tower is located about 150 m from the N2 road reserve. There is no road that links the existing repeater site to the N2 national road owing to the topography. The repeater site deviation is approximately 350 m in extent.

The route for the repeater deviation is located in less disturbed naturally vegetated area. The area was investigated for possible archaeological heritage remains, sites and features. No such materials or sites were identified during the survey, however, this does not eliminate the possibility of encountering artefacts such as stone tools between the surface and 50 cm /80 cm below ground.



Figure 30. View of the repeater tower and general landscape near Peddie.

5.2.2.5. O2 VC BIS (Bhisho / King Williams Town, Eastern Cape):

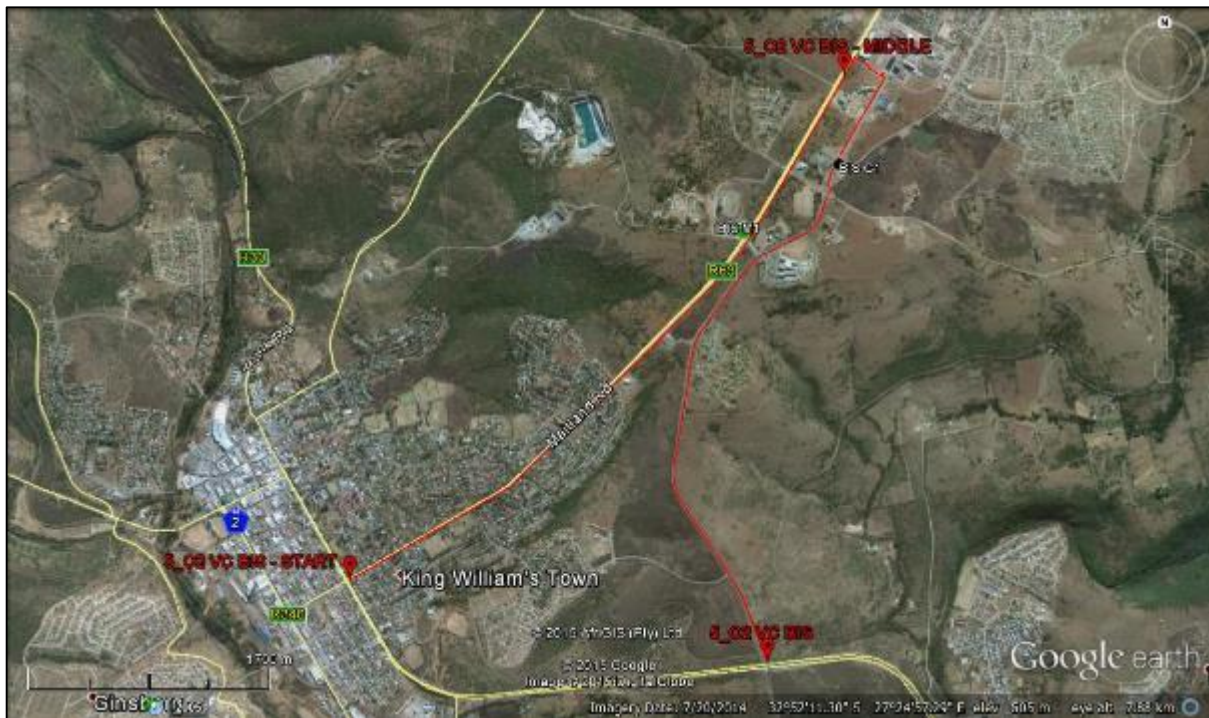


Figure 31. Aerial view of the deviation route for Repeater Site O2 VC BIS, located off the N2 national road along Maitland Road and returning to the N2 along Independence Avenue.

The repeater site deviation O2 VC BIS (Figure 31) runs along the road reserve from King Williams Town to Bhisho, Amathole District Municipality, and back to the N2 national road east of King Williams Town.

The repeater route runs north along Maitland Street from the N2 national road that passes through King Williams Town, and returns along Independence Avenue from Bhisho. The extent of the repeater deviation is approximately 10.5 km.

The route for the repeater deviation passes through residential suburbs at the southern end of Maitland Street and passes open spaces and area that have been disturbed by construction and maintenance activities of the road and other buildings and infrastructure (Figure 32). The Bhisho Massacre Memorial Site (BIS M1) (Figure 33) is located along the Maitland Road. Independence Avenue (Figure 34) passes the Parliament Hill which includes the University of Fort Hare Bhisho Campus and National Key Points such as the Eastern Cape Legislature. A semi fenced-off stone packed feature resembling an informal grave was identified along the road situated on the pavement east of Independence Avenue (Figure 35).

The area for the repeater deviation is mostly developed and already surface disturbed, however, monuments, memorials and significant buildings occur along this route, therefore caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or

demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, as they have been in previous excavations of the roads and pavements within the CBD, the appropriate mitigation measures should be followed if such artefacts are exposed.



Figure 32. View of Maitland Road facing north towards Bhisho.



Figure 33. View of the Bhisho Massacre Memorial site located along Maitlands Road.



Figure 34. View of Independence Avenue facing north towards Bhisho central.



Figure 35. View of a semi-fenced off square stone-packed feature situated alongside Independence Avenue resembling an informal grave.

5.2.2.6. G3 VC KOM (Komga, Eastern Cape):

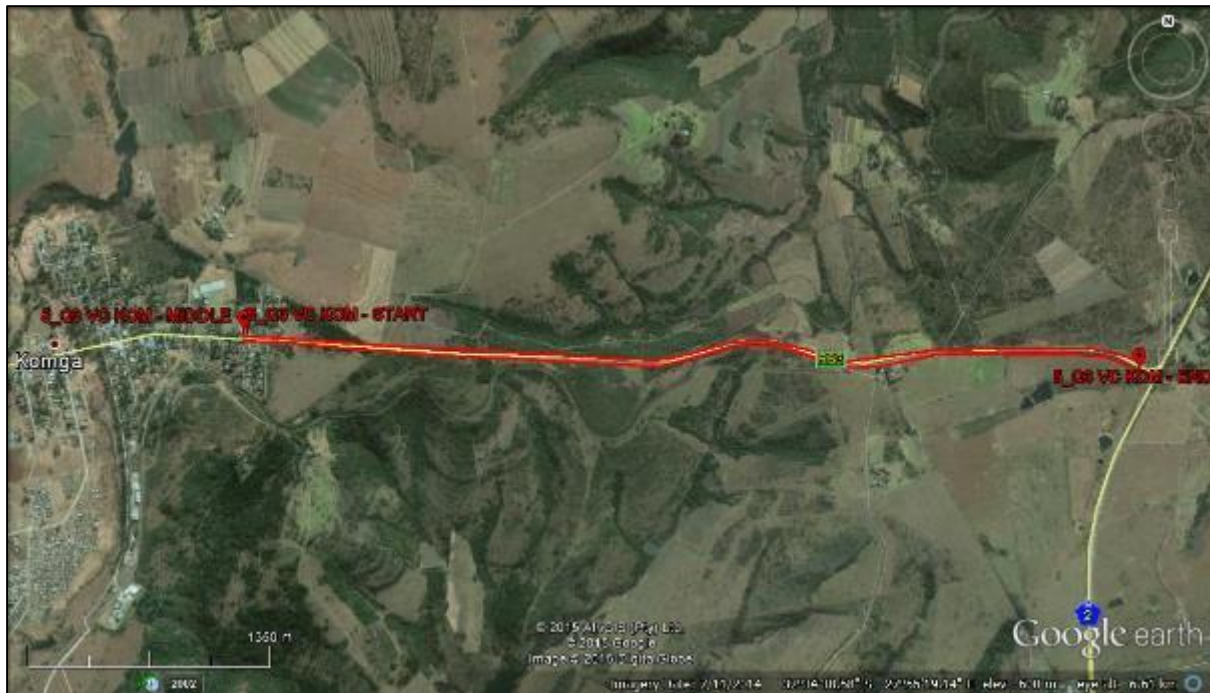


Figure 36. Aerial view of the deviation route for Repeater Site Q3 VC KOM, located off the N2 national road along the R63 route to Komga.

The repeater site deviation Q3 VC KOM (Figure 36) is situated west-east between the N2 national road and the town of Komga along the road reserve of the R63 road. The repeater site deviation is approximately 10.5 km in extent.

The route for the repeater deviation has mostly been disturbed by the construction of the R63 road and associated infrastructure (Figures 37-38) including telephone and power lines. It is unlikely that archaeological heritage remains, features and sites as well as other historical and heritage material will be uncovered during excavation activities.



Figure 37. View of the road reserve between the N2 and Komga along the R63.



Figure 38. View of the road reserve along Main Street Komga at the corner of Seal Street.

5.2.2.7. Q2 FC EAG (Eagle's Neck):



Figure 39. Aerial view of the deviation route for Repeater Site Q2 VC EAG, located off the N2 national road into the village of Eagle's Neck.

The repeater site deviation Q2 VC EAG (Figure 39) is situated west of the N2 national road. The existing repeater tower is located about within the eastern section of the village of Eagle's Neck. The repeater site deviation is approximately 2 km in extent.

The route for the repeater deviation is located within the road reserve of the gravel that leads up to the existing repeater tower. The area has been disturbed by the construction of the road, residential dwellings, the repeater tower area, as well as by natural elements causing water run-off and erosion when it rains. The area between the gravel road and the repeater site is covered in dense grass vegetation that obscured archaeological visibility. The area was investigated for possible archaeological heritage remains, sites and features. No such materials or sites were identified during the survey, however, this does not eliminate the possibility of encountering artefacts such as stone tools between the surface and 50 cm /80 cm below ground.



Figure 40. View of the dense grass cover at the repeater site located in the village of Eagle's Neck.



Figure 41. View of the road leading to the repeater site showing the dense vegetation cover, power lines and fences.

5.2.2.8. R1 VC EMC (between Butterworth and Idutywa, Eastern Cape):



Figure 42. Aerial view of the deviation route for Repeater Site R1 VC EMC, located off the N2 national road.

The repeater site deviation R1 VC EMC (Figure 42) is situated 90 m east off the N2 national road between the towns of Butterworth and Dutywa on the western outskirts of Gqukesi village. The repeater site deviation is approximately 200 m in extent.

The route for the repeater deviation is located alongside the gravel road. The area has been disturbed by the construction activities and diggings (Figure 43). The area was investigated for possible archaeological heritage remains, sites and features. No such materials or sites were identified during the survey, however, this does not eliminate the possibility of encountering artefacts such as stone tools between the surface and 50 cm /80 cm below ground.



Figure 43. View of the repeater site deviation facing west towards the N2 national road.

5.2.2.9. R2 FC IDU (Dutywa, Eastern Cape):



Figure 44. Aerial view of the deviation route for Repeater Site R2 FC IDU, located off the N2 national road.

The repeater site deviation R1 VC IDU (Figure 44) is situated 550 m south off the N2 national road north of Dutywa to the existing repeater tower (Figure 45). The repeater site deviation is approximately 1.2 km in extent.

The route for the repeater deviation is located through the dense grass vegetation cover that obscured archaeological visibility (Figure 46). The area is generally used for grazing of cattle and small domesticated stock. The surface exposed areas and gravel road was investigated for possible archaeological heritage remains, sites and features. No such materials or sites were identified during the survey, however, this does not eliminate the possibility of encountering artefacts such as stone tools between the surface and 50 cm /80 cm below ground.

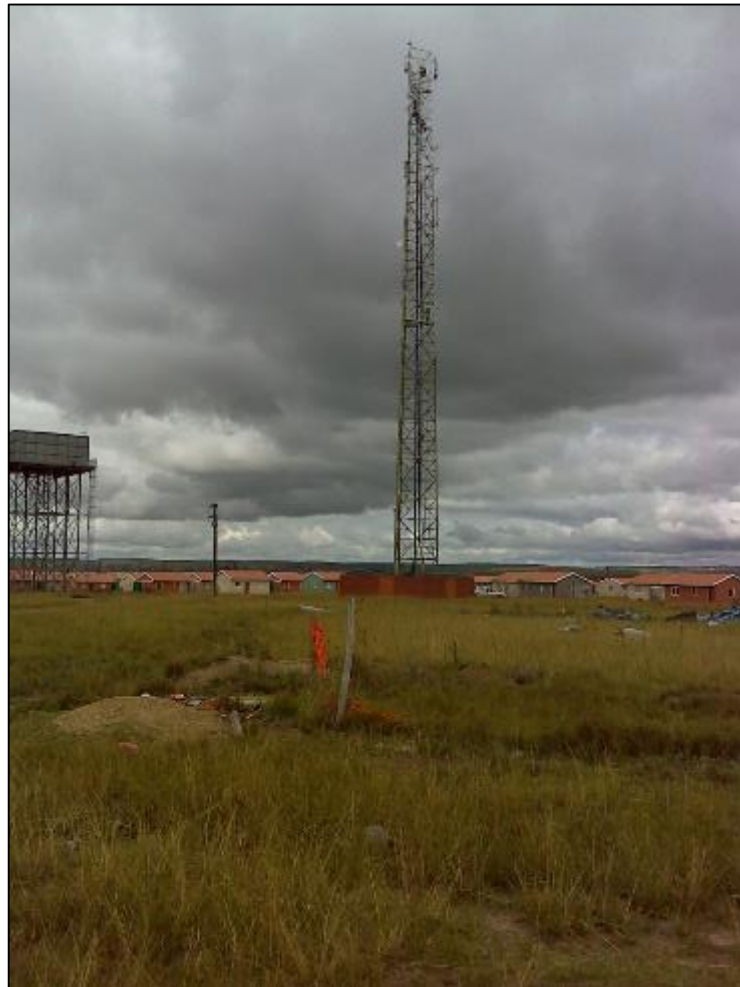


Figure 45. View of the repeater tower located outside Idutywa off the N2 national road.



Figure 46. View of the dense grass vegetation cover that obscured archaeological visibility.

5.2.2.10. S2 VC MTH (Mthatha, Eastern Cape):



Figure 47. Aerial view of the deviation route for Repeater Site S2 VC MTH running through Mthatha from Nelson Mandela Drive up Craister Street and returning along Owen Street.

The repeater site S2 VC MTH runs along the road reserve through Central Mthatha, King Sabata Dalinyebo Local Municipality, deviating north off the N2 national road into Craister Street, east into Leeds Street and exit is onto the N2 national road south along Owen Street. The deviation is approximately 900 m in extent through Mthatha's.

The route for the repeater deviation is located in an already developed area. No archaeological heritage remains were observed on route owing to the heavily developed nature of the Mthatha CBD.

Caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.

5.2.2.11. T FC QUM (Qumbu, Eastern Cape):



Figure 48. Aerial view of the deviation route for Repeater Site T FC QUM between the villages of Lucingweni and eLuqolweni.

The repeater site deviation T FC QUM (Figure 48) is situated west off the N2 national road between the villages of Lucingweni and eLuqolweni. The repeater site deviation is approximately 2.6 km in extent.

The route for the repeater deviation is located on top of the hill between the two villages through the dense grass and vegetation cover that obscured archaeological visibility (Figure 49). The area is generally used for grazing of cattle and small domesticated stock. The area has been disturbed by the construction of the power line and associated service road. The surface exposed areas and gravel road were investigated for possible archaeological heritage remains, sites and features. No such materials or sites were identified during the survey, however, this does not eliminate the possibility of encountering artefacts such as stone tools between the surface and 50 cm /80 cm below ground.

A contemporary grave yard was identified at the bottom of the hill below the area proposed for the repeater deviation (QUM G1) (Figure 50). Negative impact to the graveyard must be avoided.



Figure 49. View of the repeater site running along the top of hill between the villages of Lucingweni and eLuqolweni.



Figure 50. View of the graveyard (QUM G1) situated north from the deviation route at the base of the hill.

5.2.2.12. U1 VC ROD (between Mount Frere and Mount Ayliff):



Figure 51. Aerial view of the deviation route for Repeater Site U1 VC ROD situated off the N2 national road between Mount Frere and Mount Ayliff.

The repeater site deviation U1 VC ROD (Figure 51) is situated south off the N2 national road on the outskirts of the village of Mqgumangwe between Mount Frere and Mount Ayliff. The repeater site deviation is approximately 1 km in extent.

The route for the repeater deviation is mostly located along either side of the gravel road that linked up with the existing repeater tower across dense grass vegetation cover. The area has been disturbed by the construction of the power line and associated service road. The surface exposed areas and gravel road were investigated for possible archaeological heritage remains, sites and features. No such materials or sites were identified during the survey, however, this does not eliminate the possibility of encountering artefacts such as stone tools between the surface and 50 cm /80 cm below ground.

5.2.2.13. U2 FC MOU (Mount Ayliff, Eastern Cape):



Figure 52. Aerial view of the deviation route for Repeater Site U2 FC MOU situated off the N2 national road at Mount Ayliff.

The repeater site U2 FC MOU runs south off the N2 national road into Mount Ayliff, Umzimvubu Local Municipality, Eastern Cape. The deviation is approximately 200 m in extent.

The route for the repeater deviation is located in an already developed area, a road that used to access the N2 national road has been blockaded. No archaeological heritage remains were observed on route owing to the developed and surface disturbed nature of Mount Ayliff.

Caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.

5.2.2.14. V1A VC KOK / V2 FC KOK (Kokstad, KwaZulu Natal):



Figure 53. Aerial view of the deviation route for Repeater Site V1A VC KOK/V2 FC KOK running through the town of Kokstad.

The repeater deviation site V1A VC KOK / V2 FC KOK (Figure 53) runs along the road reserve through Kokstad Central deviating north-west off the N2 national road into the R56 road.

The deviation follows into Kokstad Centre along Hope Street, west into Groom Street, north into Hawthorn Street, east into Barker Street, south into St Johns Street and exits Kokstad west into Railway Street and returns to the N2 national along the R56 road.

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation (Figure 54). No archaeological heritage remains were observed on route owing to the heavily developed nature of the Kokstad CBD.

It must, however, be noted that Kokstad is a historically significant town, therefore caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. This route passes several historical buildings, monuments and memorials, therefore caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.



Figure 54. Street view within the town Kokstad.



Figure 55. First World War Memorial situated in Barker Street.

5.2.2.15. W1 VC HAR and W2 FC HAR (Harding, KwaZulu Natal):



Figure 56. Aerial view of the deviation route for Repeater Sites W1 VC HAR and W2 FC HAR running through the town of Harding.

There are two proposed repeater site deviations in Harding, Ugu District Municipality, W1 VC HAR and W2 FC HAR (Figure 56), both form a continuous route for the repeater deviation through the town of Harding. The deviation is approximately 4.5 km in extent.

The repeater route veers off the N2 national road into Murchinson Street (Figure 57), Harding's main road, then turns north into Hawkins Street, east into Kirk Street, south into Musgrave Streets and exits east along Murchinson Street to link with the N2 national road.

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation. No archaeological heritage remains were observed on route owing to the developed nature of the Harding CBD.

Caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.



Figure 57. Street view of the area that the repeater site deviation will follow through Harding.

5.2.2.16. X1 FC POR (Port Shepstone, KwaZulu Natal):



Figure 58. Aerial view of the deviation route for Repeater Site X1 FC POR situated off the N2 national road on the western outskirts of Port Shepstone.

There are two proposed repeater site deviations in Port Shepstone, the first – X1 FC POR – (Figure 58) deviates north off the N2 national road to within 70 m of the N2 national

road about 6 km west the main town of Port Shepstone. The deviation is approximately 400 m in extent.

The route for the repeater deviation is located in an already developed residential area leading to an area heavily disturbed by the construction of the adjacent bridge (Figure 59). Some informal dumping also occurs within the area. No archaeological heritage remains were observed on route owing to the heavily disturbed nature of the area.

It is unlikely that archaeological heritage remains will occur during the excavation activities.

The second site – X3 VC POR – will be discussed below.



Figure 59. View of the area that the repeater site deviation will follow.

5.2.2.17. X3 VC POR (Port Shepstone, KwaZulu Natal):

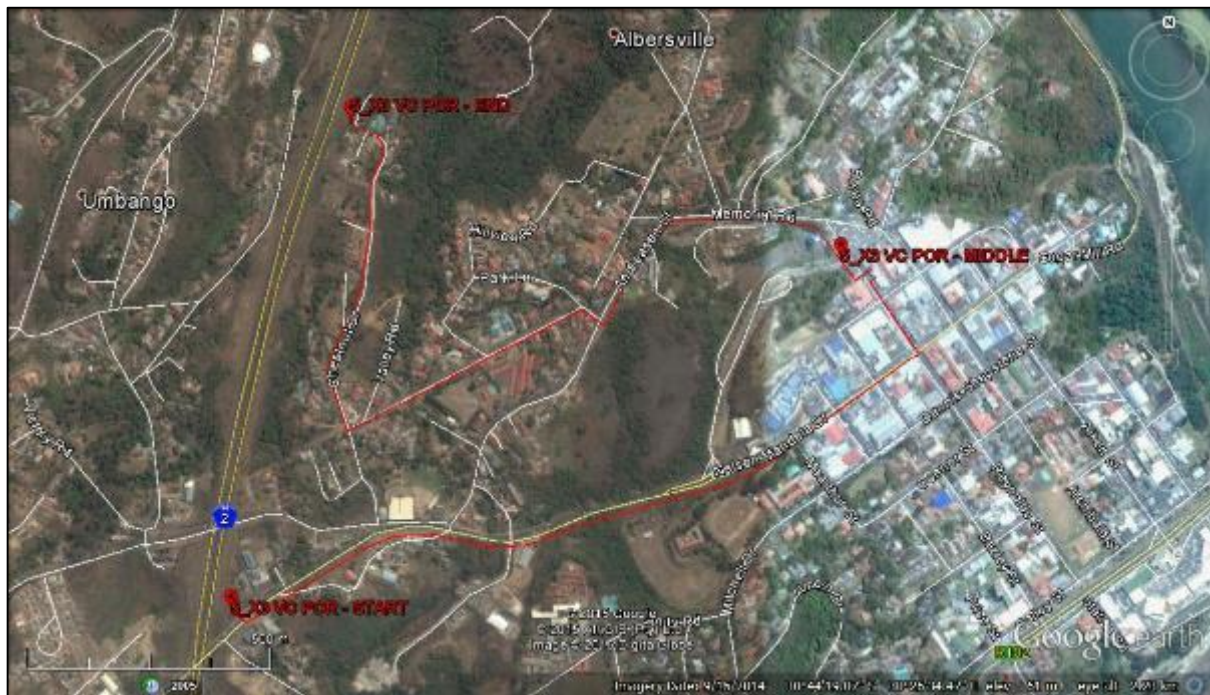


Figure 60. Aerial view of the deviation route for Repeater Site X3 VC POR situated off the N2 national road running through the town of Port Shepstone.

There are two proposed repeater site deviations in Port Shepstone, the first – X1 FC POR – is discussed above, the second repeater site deviation – X3 VC POR - (Figure 60) runs along the road reserve into Port Shepstone along Main Harding Road into Port Shepstone’s Industrial Area. The repeater site veers north-west into Reynolds Street and Memorial Street and south into Andreasen Street. The repeater route then continues south down Valley Road and north into Chestnut Drive. The deviation is approximately 1.6 km in extent.

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation. No archaeological heritage remains were observed on route owing to the heavily developed nature of the Port Shepstone CBD and Industrial Areas.

Caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.

5.2.2.18. V1 VC SCO (Scottburgh, KwaZulu Natal):



Figure 61. Aerial view of the deviation route for Repeater Site Y1 VC SCO situated off the N2 national road running along the R102 into Allen Street.

The repeater site deviation – Y1 VC SCO - (Figure 61) runs along the road reserve into off the N2 national road along the R 102 road into Allen Street. The deviation is approximately 1.2 km in extent.

The route for the repeater deviation is located in an already developed area with open grass spaces comprising mainly of transformed vegetation. No archaeological heritage remains were observed on route owing to the developed nature of the area.

Caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.



Figure 62. Street view of the route that the repeater site deviation will follow.

The proposed repeater sites on Route 5 between Port Elizabeth and Durban should not negatively affect any heritage resources as the areas have already been disturbed by the construction and continued maintenance of roads, buildings, suburbs and other above and below ground infrastructure.

To ensure that buildings and structures as well as monuments and other heritage features and structures must be avoided during excavation and construction activities so as not to negatively affect these structures and features. The appropriate mitigation measures (recommendations) must be followed if it is intended that any negative impact will afflict these structures and features.

6. COORDINATES AND SITES FOR THE FIBRECO ROUTE 4 (GEORGE TO PORT ELIZABETH) AND 5 (PORT ELIZABETH TO DURBAN).

Table 1. Coordinates and sites for the proposed FibreCo Route 4 (George to Port Elizabeth) and 5 (Port Elizabeth to Durban).

REFERENCE AND REPEATER SITE	DESCRIPTION	CO-ORDINATE	HERITAGE GRADING
ROUTE 4			
HUM BE1 (J1 VC HUM)	Ruins of dwelling made with packed stone and covered with plaster.	32°00'42.20"S; 24°46'03.30"	Grade IIIB High significance
ROUTE 5			
BIS M1 (O2 VC BIS)	Bhisho Massacre Memorial situated along Maitland Road.	32°51'42.50"S; 27°25'33.60"	Grade IIIA High significance
BIS G1 (O2 VC BIS)	Semi fenced-off stone packed feature resembling an informal grave along Independence Avenue.	32°51'25.90"S; 27°25'59.90"	Grade IIIA High significance
QUM G1 (T FC QUM)	Contemporary grave yard.	31°03'20.10"S; 28°54'07.90"	Grade IIIA High significance
KOK M1 (V1A VC KOK / V2 FC KOK)	World War 1 memorial along Barker Street.	30°33'04.70"S; 29°25'33.11"	Grade IIIA High significance

6.1. DESCRIPTION OF SITES

6.1.1. ROUTE 4 (PORT ELIZABETH – GEORGE)

6.1.1.2. HUM BE1 (J1 VC HUM):

The ruins are located off the gravel road adjacent to the road reserve and should not be negatively affected by the proposed repeater deviation.

6.1.2. ROUTE 5 (PORT ELIZABETH – DURBAN):

6.1.2.1. BIS M1 (O2 VC BIS):

The Bhisho Massacre Memorial is located adjacent to the road reserve. It is a developed and fenced off area, therefore, the site should not be negatively affected by the proposed repeater deviation.

6.1.2.2. BIS G1 (O2 VC BIS):

Semi fenced-off stone packed feature resembling an informal grave along Independence Avenue is situated within the road reserve and should be avoided during the all phases of the installation process.

6.1.2.3. QUM G1 (T FC QUM):

The contemporary graveyard does not fall within the road reserve and is not expected to be negatively affected by the repeater deviation.

6.1.2.4. KOK M1 (V1A VC KOK / V2 FC KOK):

The World War I memorial is located within a secure fenced off area adjacent to the road reserve and should not be negatively affected by the repeater deviation.

7. CONCLUSION

The phase 1 archaeological impact assessment was conducted according to the National Heritage Resources Act 25 of 1999, Section 38. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimise the possible damage to the archaeological heritage resources. The report follows the minimum standards guidelines required by the South African Heritage Resources Agency (SAHRA).

The areas for the proposed repeater sites along Route 4 (George to Port Elizabeth) and Route 5 (Port Elizabeth to Durban) were assessed in 2011. This report focuses on specific repeater site deviations that were not included or had changed from the original sites proposed.

No archaeological heritage remains were observed during the survey. However, the survey was limited to surface and exposed area observations and does not eliminate the possibility that archaeological heritage remains may occur below the surface. It is possible that stone artefact may occur below the vegetation cover between the surface and 50 – 80 cm below the ground. The potential impact of the proposed development activities on the archaeological heritage remains, sites, and features is regarded as low; however, the recommendations and mitigation measures must be taken into consideration prior to the commencement of the proposed development activities.

Several towns through which the individual sites deviate are historically significant, all measures to avoid negative impact to the buildings, structures, and features should be avoided.

8. RECOMMENDATIONS

The area surveyed is considered as having a varied low to high archaeological significance depending on the location of the individual repeater site deviation. The following recommendations must be considered and implemented in accordance with the various phases of the development activities:

8.1. REPEATER SITES: (Route 4) H VC PLE / VC LEE / J2 FC JEF / K1 VC PE; (Route 5) LFC KIN / N FC PED / Q2 FC EAG / R1 VC EMC / R2 FC IDU / U1 VC ROD / U2 FC MOU / X1 FC POR:

These sites are considered as having a low archaeological / heritage significance rating, the following general recommendations apply:

1. If concentrations of historical and pre-colonial archaeological heritage material and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Albany Museum and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) the South African Heritage Resources Agency (SAHRA), Heritage Western Cape (HWC) or Amafa Heritage, KwaZulu Natal so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
2. Construction managers/foremen and/or the Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

8.2. REPEATER SITES: (Route 4) VC Kynsna Out / G2 VC KNY / J1 VC HUM; (Route 5) M1 FC GRA / M2 VC GRA / O2 VC BIS / Q3 VC KOM / S2 VC MTH / T FC QUM / V1A VC KOK and V2 FC KOK / W1 VC HAR and W2 FC HAR / X3 VC POR / V1 VC SCO:

These sites are considered as having a medium-high archaeological / heritage significance rating, the following general recommendations apply:

1. Informal and formal graves (O2 VC BIS / T FC QUM) must be clearly demarcated during the excavation and rehabilitation process so as to avoid negative impact to the grave sites.
2. Caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings. If buildings are expected to be damaged or demolished the necessary permission (buildings older than 60 years

require a permit from the Eastern Cape Provincial Heritage Resources Agency) must be sought before such destruction occurs. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.

3. If concentrations of historical and pre-colonial archaeological heritage material and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Albany Museum and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) the South African Heritage Resources Agency (SAHRA), Heritage Western Cape (HWC) or Amafa Heritage, KwaZulu Natal so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
4. Construction managers/foremen and/or the Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.

9. REFERENCES

- Binneman, J.; Booth, C. & Higgitt, N. 2011. An Archaeological Desktop Study and Phase 1 Archaeological Impact Assessment (AIA) for the Proposed Clidet Data Cable between Bloemfontein, Orange Free State And Graaff Reinet, Eastern Cape Province; Colesberg, Free State and Port Elizabeth, Eastern Cape Province; George, Western Cape Province and Port Elizabeth, Eastern Cape Province and; Aliwal North And East London, Eastern Cape Province.
- Prins, F. 2011. Cultural Impact Assessment of the Proposed FibreCo Data Cable, Route 5 (including repeater sites).

10. GENERAL REMARKS AND CONDITIONS

NOTE: This report is a phase 1 archaeological impact assessment (AIA) only and does not include or exempt other required specialist assessments as part of the heritage impact assessments (HIAs).

The National Heritage Resources Act (Act No. 25 of 1999, Section 35 [Brief Legislative Requirements]) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources including all places or objects of aesthetics, architectural, historic, scientific, social, spiritual, linguistic, or technological value or significance are protected. Thus any assessment should make provision for the protection of all these heritage components including archaeology, shipwrecks, battlefields, graves, and structures older

than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasized that the conclusions and recommendations expressed in this phase 1 archaeological impact assessment (AIA) are based on the visibility of archaeological remains, features and, sites and may not reflect the true state of affairs. Many archaeological remains, features and, sites may be covered by soil and vegetation and will only be located once this has been removed. In the event of such archaeological heritage being uncovered (such as during any phase of construction activities), archaeologists or the relevant heritage authority must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed. The onus is on the developer to ensure that this agreement is honoured in accordance with the National Heritage Resources Act No. 25 of 1999 (NHRA 25 of 1999).

Archaeological Specialist Reports (desktops and AIA's) will be assessed by the relevant heritage resources authority. The final comment/decision rests with the heritage resources authority that may confirm the recommendations in the archaeological specialist report and grant a permit or a formal letter of permission for the destruction of any cultural sites.

APPENDIX A: GRADING SYSTEM

The NHRA stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act and the South African Heritage Resources Agency:

- National: This site is suggested to be considered of Grade 1 significance and should be nominated as such. Heritage resources with qualities so exceptional that they are of special national significance.
- Provincial: This site is suggested to be considered of Grade II significance and should be nominated as such. Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region
- Local: This site is suggested to be Grade IIIA significance. This site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised.
- Local: This site is suggested to be Grade IIIB significance. It could be mitigated and (part) retained as a heritage register site (High significance).
- 'General' Protection A (Field Rating IV A): This site should be mitigated before destruction (usually High/Medium significance).
- 'General' Protection B (Field Rating IV B): This site should be recorded before destruction (usually Medium significance).
- 'General Protection C (Field Rating IV C): This site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

APPENDIX B: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM COASTAL AND INLAND AREAS: guidelines and procedures for developers

1. Human Skeletal material

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general the remains are buried in a flexed position on their sides, but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.

2. Shell middens

Shell middens can be defined as an accumulation of marine shell deposited by human agents rather than the result of marine activity. The shells are concentrated in a specific locality above the high-water mark and frequently contain stone tools, pottery, bone and occasionally also human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist.

3. Freshwater mussel middens

Freshwater mussels are found in the muddy banks of rivers and streams and were collected by people in the past as a food resource. Freshwater mussel shell middens are accumulations of mussel shell and are usually found close to rivers and streams. These shell middens frequently contain stone tools, pottery, bone, and occasionally human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist.

4. Stone artefacts

These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified

5. Fossil bone

Fossil bones may be found embedded in geological deposits. Any concentrations of bones, whether fossilized or not, should be reported.

6. Large stone features

They come in different forms and sizes, but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters. Others consist of large piles of stones of

different sizes and heights and are known as *isisivane*. They are usually near river and mountain crossings. Their purpose and meaning is not fully understood, however, some are thought to represent burial cairns while others may have symbolic value.

7. Historical artefacts or features

These are easy to identified and include foundations of buildings or other construction features and items from domestic and military activities.