

ADDENDUM: ARCHAEOLOGICAL AND HERITAGE INVESTIGATION OF PROPOSED DEVIATIONS AND REPEATER SITES FOR AN ENVIRONMENTAL AUTHORISATION AMENDMENT FOR ASECTION OF THE FIBRECO ROUTE 3 (GRAAFF-REINET TO YZERFONTEIN).

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NOTE: The report serves as an addendum to the Heritage Scoping Report and impact assessment conducted for Route 3 (Clift & Webley 2011). Currently there are five existing and proposed repeater sites belonging to the telecommunication partners that the original routes need to link. 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 are 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 assessment conducted in 2011. A comprehensive archaeological literature background was compiled as part of the 2011 assessment report (Clift & Webley 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 pre-colonial archaeological heritage sites, features or remains were documented during the investigation of repeater sites / deviations along Route 3. However, significant heritage buildings, features, and resources including Provincial Heritage Sites (PHS), features and structures occur in Somerset West and Swellendam through which the repeater site route deviates.

1.3. Recommendations

The repeater sites surveyed for Route 3 surveyed are considered as having a low archaeological significance as observed at the surface. However, the route passes adjacent to several Provincial Heritage Sites (PHS) through the towns of Somerset West and Swellendam. These heritage resources are considered as having a high provincial significance. 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 9):

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 provincial heritage authority Heritage Western Cape (HWC) (021 483 9598) 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 exposed artefacts and associated archaeological heritage material 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 or other heritage sites, features, resources. If buildings or other heritage sites, features, resources are expected to be damaged the site should be clearly demarcated and cordoned off or if demolished the necessary permission must be sought before such destruction occurs. It is possible that historical artefacts and features may be uncovered during excavation, especially along the roads and pavements within the towns of Somerset West and Swellendam, the appropriate procedures should be followed if such artefacts and features 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 authorisation (EA) by the Department of Environmental Affairs in 2011 to construct and operate a fibre optic data cable along the national road 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 Route 3 (this project). Routes 4 and 5 have been assessed and discussed in a separate report.

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 3 comprises five proposed deviations. Three deviations fall outside the previous scope of study and the other two are fairly outside the previous assessed area.

2.1. Applicant / Developer:

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2.3. Terms of reference

The purpose of the study was to conduct an assessment of archaeological and heritage sites, features and remains along a section of the N2 national road for Route 3 (between Graaff-Reinet and Yzerfontein) for repeater sites / deviations associated with the already authorised FibreCo fibre optic cable installation that were not included in the original assessment 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: GRAAFF-REINET TO YZERFONTEIN

The repeater sites mostly deviate off the N2 national road at Somerset West, Grabouw, Caledon, Swellendam and on the outskirts of Mossel Bay, Western Cape Province. 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): 3317 CAPE TOWN and 3320 OUDTSHOORN.

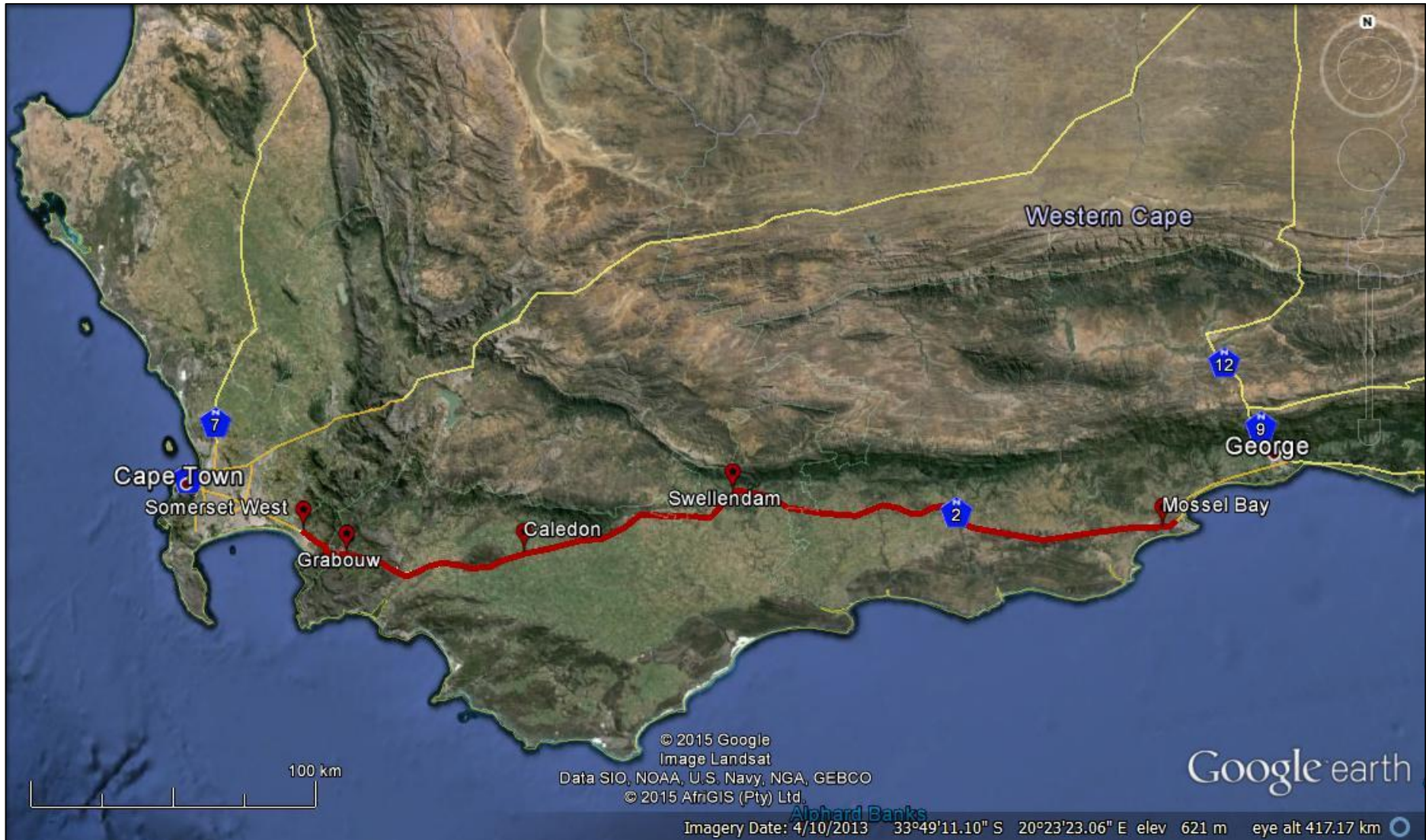


Figure 1. Aerial view showing the extent of the repeater sites along Route 3 between Cape Town and Mossel Bay on the N2 national road investigated (red line along the N2).

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. The original heritage scoping report and archaeological assessment (Clift & Webley 2011) conducted for the proposed installation of the fibre optic data cable was studied. GPS readings and photographs were taken using a Garmin Oregon 550 (Table 1). The GPS readings have been plotted on Google Earth generated maps.

5.2. Results of the Archaeological Investigation: ROUTE 3: GRAAFF REINET TO YZERFONTEIN

5.2.1. A1 VC SOM BTS (Somerset West, Western Cape):

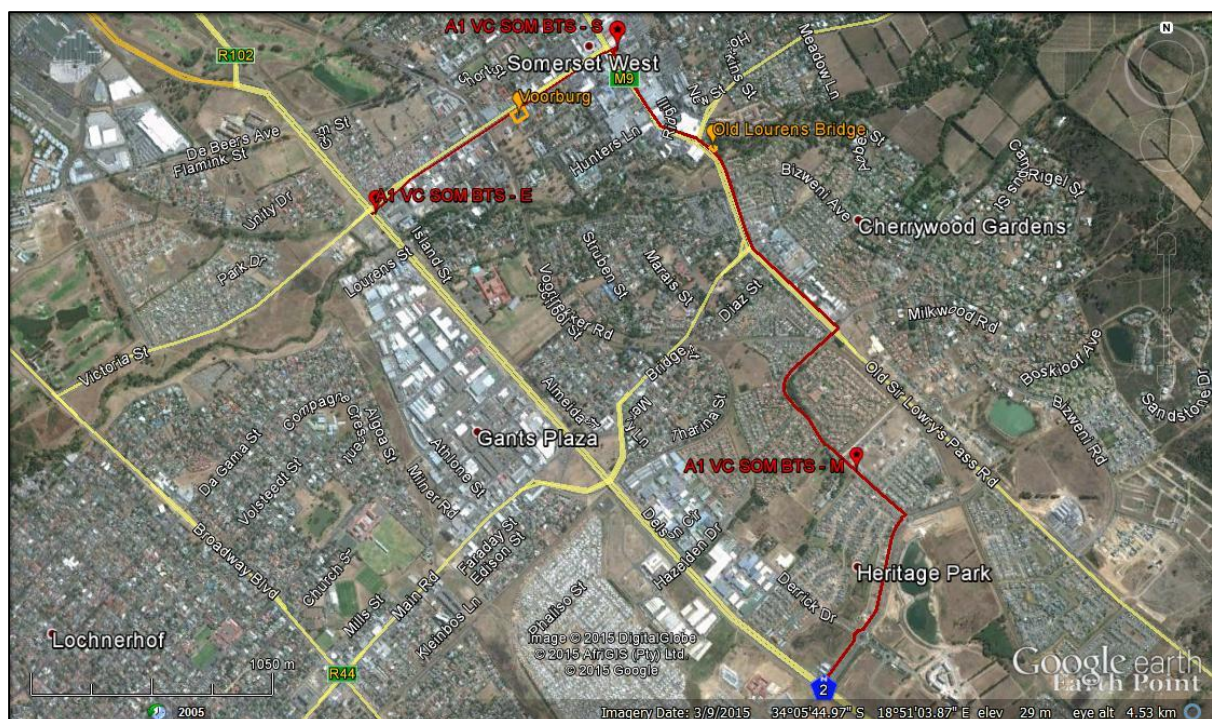


Figure 2. Aerial view of the deviation route for Repeater Site A1 VC SOM BTS running through Somerset West showing historical heritage resources along the route.

Somerset West is located about 40 km east of Cape Town along the N2 national road surrounded by the Hottentots Holland Mountains and the Sir Lowry's Pass. The town's historical significance dates back to its establishment in 1819 and was named after the British Governor, Lord Charles Somerset. The village was referred to as Somerset until 1850 when it became known as Somerset West to avoid confusion with the town of Somerset East in the Eastern Cape.

The repeater deviation route veers off the N2 national road into Victoria Street and follows south-east into Main Street, south-west into Hazeldine Road and exits onto the N2 national road along Main Street linking Somerset West and the Strand (Figure 2). The deviation is approximately 5 km in extent.

The route for the repeater deviation is located in an already developed area (Figure 3). No archaeological heritage remains were observed on the route owing to the heavily developed nature of the Somerset West CBD. However, Middle Stone Age stone artefacts were documented during an archaeological impact assessment (Kaplan 2003) conducted for the development at Heritage Park situated along Hazeldine Street and the Main Street that follows onto the N2 national road within an open space area.

Two Provincial Heritage Sites (PHS's) (SAHRIS database) have been noted to occur adjacent to the proposed repeater site and deviation but away from the road reserve. The Voorburg, a historical gabled house, is situated at the corner of Victoria and Reitz Streets, and its current use is commercial. The Old Lourens Bridge over the Lourens River is located along Main Road.

Somerset West 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 / bridges. If buildings / bridges are expected to be damaged or demolished the necessary procedures must be followed and permission must be sought before such destruction occurs, however, these actions are discouraged. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.



Figure 3. View of the Somerset West Main Road.

5.2.2. A2 FC GRA (Grabouw, Western Cape):



Figure 4. Aerial view of the deviation route for Repeater Site A2 FC GRA located off the N2 national road.

The repeater deviation route is situated off the N2 national road at the western entrance to the town of Grabouw (Figure 4). The deviation does not follow through the town of Grabouw and is only 350 m in extent. The area has been heavily disturbed in past by the construction of the N2 national road and the road linking to Grabouw. A farm stall is located on the eastern side of the Grabouw road link and a Spar / mall has been constructed north of the extent of the repeater deviation route.

No archaeological / historical heritage sites, features or remains were observed along the proposed repeater deviation route.



Figure 5. View of the repeater deviation route for A2 FC GRA facing south towards the N2 national road with a view of the entrance to the farm stall to the east.

5.2.3. B1 FC FAR (Caledon, Western Cape):



Figure 6. Aerial view of the deviation route for Repeater Site B1 FC FAR located off the N2 national road.

The repeater site deviation B1 FC FAR (Figure 6) is situated between Caledon and Riversdale. The proposed repeater route is situated south off the N2 national road onto a gravel road for 395 m up leading to the existing repeater site and is approximately 790 m in extent on either side of the gravel road.

The route for the repeater deviation is located along the already disturbed gravel road. It is unlikely that archaeological / historical heritage remains, features and sites may be uncovered during the excavation process.

5.2.4. C1 VC SWE BSC and C2 FC SWE (Swellendam, Western Cape):

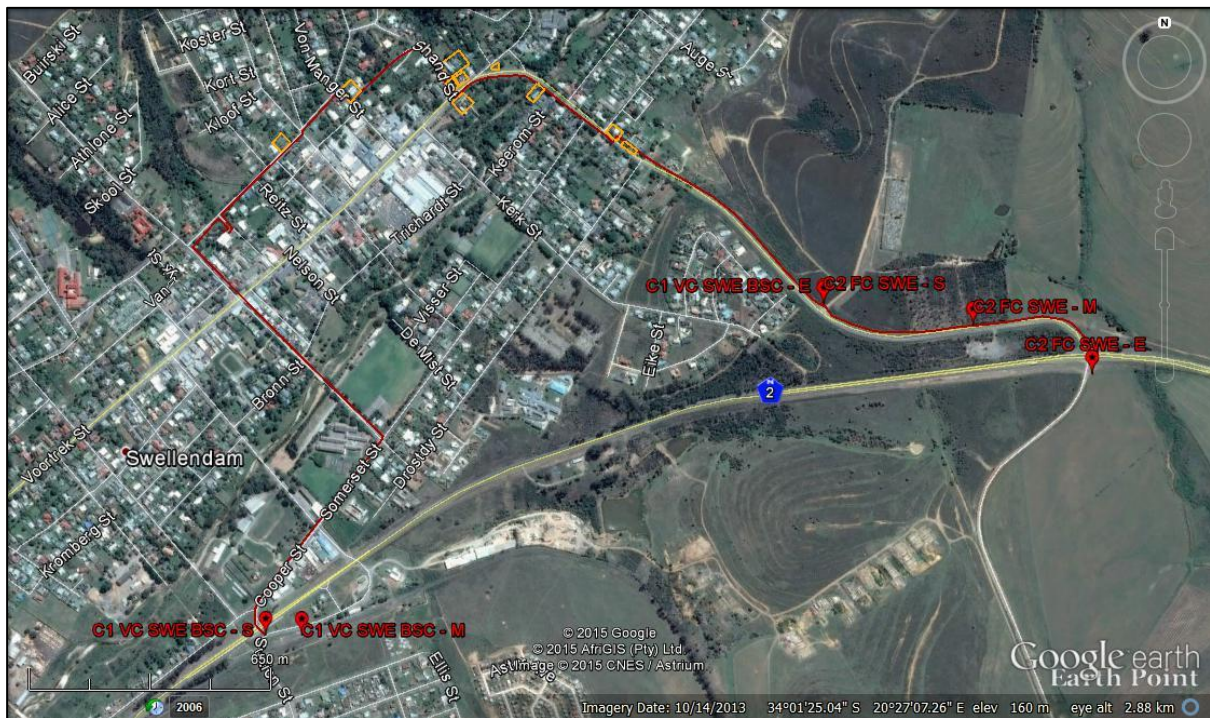


Figure 7. Aerial view of the deviation route for Repeater Sites C1 VC SWE BSC and C2 FC SWE running through the town of Swellendam off the N2 national road.



Figure 8. Close-up view of the Provincial Heritage Sites (PHS's) occurring along the proposed repeater deviation routes C1 VC SWE BSC and C2 FC SWE.

Swellendam is situated about halfway between Cape Town and George off the N2 national road at the foot of the Langeberg Mountains. The town's historical significance dates back to 1745 when the Dutch East India Company founded the town to implement control over independent frontiersmen who migrated over the Hottentots Holland Mountains during the eighteenth century. A Drostdy was built in 1747 to serve as a residence and the official headquarters for the appointed Landdrost (Magistrate). A gaol, house for the secretary, a mill and various outbuildings were later added. In 1846 the government subdivided and sold the Drostdy property and in 1939 the former Drostdy was bought by the government of the Union of South African and established as a museum which it still is today.

The repeater runs approximately 4.5 km through the town of Swellendam. The repeater deviation route veers off the N2 national road into Cooper Street (one of the entrances into Swellendam) and follows through into Somerset Street, turns south-west into Fairburn Street which follows through into Andrew Whyte Street and then north-east into Buitekant Street. The deviation connects to an existing Telkom repeater site in Mitchel Whyte Street. The repeater deviation then continues along Buitekant Street across Veldkornet Street into Kanon Street and then south into Von Manger Street and north-east into Gelderblom Street. A historical dwelling house, declared a Provincial Heritage Site (PHS), is situated at 5 Buitekant Street along the route for the proposed repeater deviation. The Old Powder Magazine is situated at 9 Gelderblom Street along the route for the proposed repeater deviation.

The deviation route follows Gelderblom Street into Shand Street, turns east into Voortrek Street and follows Swellengrebel Street to exit onto the N2 national road. This area covers a section of the historic core of Swellendam. Several Provincial Heritage Sites (PHS's) occur along this section of repeater deviation route (Figure 6) (see Table 1 for individual descriptions).

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

Swellendam 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 / bridges. If buildings / bridges are expected to be damaged or demolished the necessary procedures must be followed and permission must be sought before such destruction occurs, however, these actions are discouraged. It is possible that historical artefacts may be uncovered during excavation, the appropriate mitigation measures should be followed if such artefacts are exposed.



Figure 9. View down Cooper Street, one of the entrances into Swellendam.



Figure 10. View down Buitekant Street.

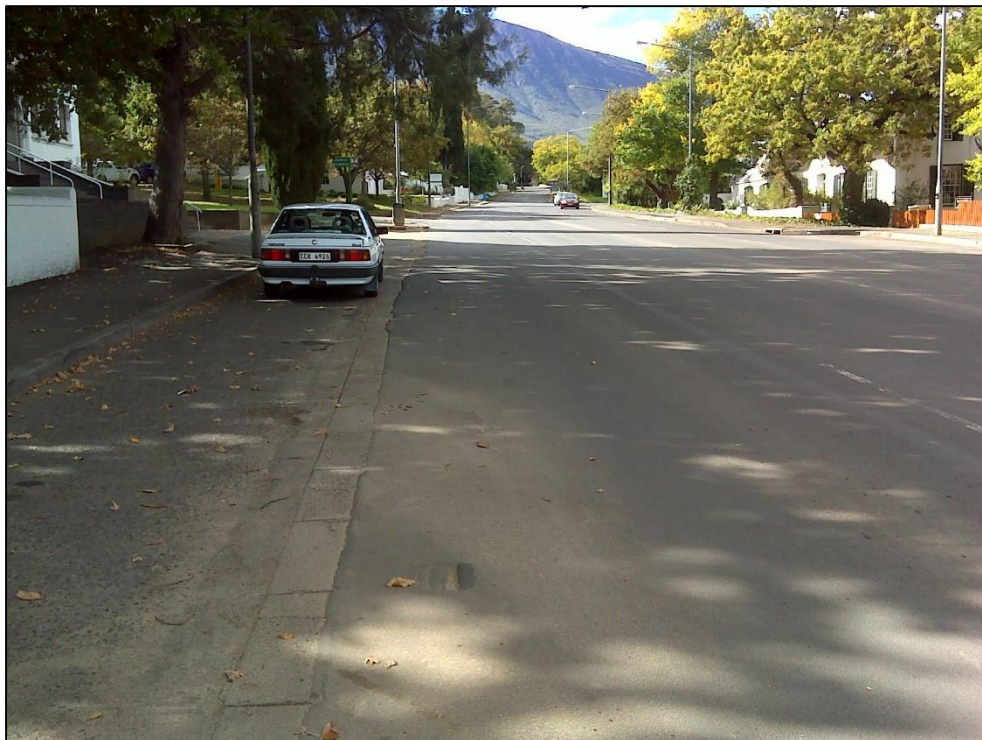


Figure 11. View of the area where Voortrek Street follows into Swellengrebel Street showing a section of the historic core of Swellendam.



Figure 12. View of the dense grass vegetation cover along Swellengrebel Street exiting onto the N2 national road.

5.2.5. E1 FC MSB (Mossel Bay, Western Cape):



Figure 13. Aerial view of the deviation route for Repeater Site E1 FC MSB located west of the town of Mossel Bay off the N2 national Route.

The repeater deviation route is situated off the N2 national road on the western outskirts of Mossel Bay between the Petrosa GTL Refinery, Mossdustria and about 100 m from Total Service Station (Figure 11). The deviation does not follow through the town of Mossel Bay and is only 250 m in extent. The general area has been heavily disturbed in past by the construction and continued maintenance of the N2 national road and the Total Service Station as well as underground piping and telephone lines, and continued farming activities.

No archaeological / historical heritage sites, features or remains were observed along the proposed repeater deviation route. The route for the repeater deviation is located in a mostly developed with open grass spaces comprising mainly of transformed vegetation.



Figure 14. View of the area proposed for the repeater deviation route.

6. COORDINATES AND SITES FOR THE FIBRECO ROUTE 3 (GRAAFF REINET TO YZERFONTEIN).

Table 1. Coordinates and sites for the proposed FibreCo Route 3 (Graaff Reinet to Yzerfontein).

REFERENCE	DESCRIPTION	CO-ORDINATE	HERITAGE GRADING
ROUTE 3			
A1 VC SOM BTS (Somerset West):			
Old Lourens Bridge (9/2/082/0016)	Off Main Road	34°59'59.67"S; 18°50'59.95"	Grade II Provincial Heritage Site (PHS)
Voorburg (9/2/083/0008)	Corner of Victoria and Reitz Streets	34°05'09.59"S; 18°50'48.20"	Grade II Provincial Heritage Site (PHS)
C1 VC SWE BSC and C2 FC SWE (Swellendam):			
5 Buitekant Street	Historic dwelling-house	34°01'06.32"S; 20°26'33.76"	Grade II Provincial Heritage Site (PHS)
9 Gelderblom Street	Old Powder Magazine	34°01'01.90"S; 20°26'40.92"	Grade II Provincial Heritage Site (PHS)
2-4 Shand Street	The Tuishuise, built middle 19 th Century (part of the old Market Square)	34°01'00.49"S; 20°26'51.27"	Grade II Provincial Heritage Site (PHS)
4 Voortrek Street	Auld House, fine old Cape house with interesting associations	34°01'02.90"S; 20°26'52.24"	Grade II Provincial Heritage Site (PHS)
5 Voortrek Street	T-shaped old Cape house, built 1832	34°01'00.82"S; 20°26'52.08"	Grade II Provincial Heritage Site (PHS)
1 Swellengrebel Street	Schoone Oordt	34°01'02.01"S; 20°26'59.38"	Grade II Provincial Heritage Site (PHS)
18 Swellengrebel Street	Georgian Double Story Building, part of original Drostdy property subdivided 1799.	34°01'05.62"S; 20°27'07.16"	Grade II Provincial Heritage Site (PHS)
22 Swellengrebel Street	Old Post Office	34°01'05.62"S; 20°27'07.16"	Grade II Provincial Heritage Site (PHS)

24/26/28 Swellengrebel Street	Old Gaol	34°01'06.61"S; 20°27'08.52"	Grade II Provincial Heritage Site (PHS)
Old Oak Trees	Row of historic oak trees	Swellengrebel Street	Grade II Provincial Heritage Site (PHS)

7. DESCRIPTION OF SITES: ROUTE 3 (GRAAFF REINET TO YZERFONTEIN)

7.1. A1 VC SOM BTS (Somerset West):

7.1.1. Old Lourens Bridge (9/2/082/0016):

The bridge is situated where the main road to the Strand and Sir Lowry's Pass leaves the town of Somerset West and marks an important event in the history of communications in South Africa. In 1845 the Eerste River and Lourens Bridges were constructed, together with the construction of the road over the Hottentots Holland Kloof (Sir Lowry's Pass) for the first time ensured satisfactory communication between Cape and the interior.

7.1.2. Voorburg (9/2/083/0008):

A historic gabled house, situated on a portion of the remainder of Erf 730, Somerset West, in the Municipality of Somerset West, Division of Stellenbosch. Deed of Transfer T35942/1986, dated 11 September 1986.

The sites encountered along the route are of a High Provincial Significance: These sites have been graded Grade II provincial heritage sites (PHS's).

7.2. C1 VC SWE BSC and C2 FC SWE (Swellendam):

7.2.1. 5 Buitekant Street (9/2/092/0049):

The predominantly Victorian Dwelling-house was erected in 1900 by a local builder named Karg. It has a bay window at one end and a veranda stretching on two sides of the building.

7.2.2. 9 Gelderblom Street (9/2/092/0047):

Built in approximately 1850 for the storage of gunpowder.

7.2.3. 2-4 Shand Street (9/2/092/0012):

The Tuishuise (farmers' town houses) and a building referred to as 'The Cottage' are situated on Church Square or the area that was historically the market square. The square has ancient oaks along three sides of it and probably dates from the time when the Dutch Reformed congregation was established in 1798.

7.2.4. 4 Voortrek Street (9/2/092/0022):

The 'Auld House' is a particularly fine old Cape house with interesting associations with the historic Barry family.

7.2.5. 5 Voortrek Street (9/2/092/0040):

'The Cottage' is a worthy T-shaped old Cape house probably built in 1832.

7.2.6. 1 Swellengrebel Street (9/2/092/0031):

Known as Schoone Oordt, a double-storeyed house built in 1853 in the Cape Georgian style and Victorianised in the late nineteenth century by the addition of a cast-iron verandah on both levels.

7.2.7. 18 Swellengrebel Street (9/2/092/0044):

This land formed part of the original Drostdy property which was subdivided in 1799. The house is double-storeyed and is architecturally outstanding.

Drostdy Museum Complex: The building was built in 1747 by the Dutch East India Company as a residence for the Magistrate. Soon afterwards, a jail, a house for the secretary, a mill and various outbuildings were erected. It was bought by the South African Government and established as a Museum in 1939.

7.2.8. 22 Swellengrebel Street (9/2/092/0037):

Old Post Office, a little building that was the residence of the gaoler.

7.2.9. 24/26/28 Swellengrebel Street (9/2/092/0036):

Old Gaol, is the second oldest building in Swellendam after the Drostdy. Various additions were made through the years but may have acquired its present form by 1828.

7.1.2.10. Old Oak Trees (9/2/092/0047):

Swellengrebel Street that passes in front of the Drostdy is part of the original Cape Wagon Road, the route of the earliest expeditions into the interior, which probably already existed when the Drostdy was constructed in 1746. According to an old 1777 drawing a broad footpath leading from the Korenlands River footbridge to the Drostdy is a row of oak trees on the right. The row of oak trees was maintained by planting young trees to replace those that dies and a second row was planted along the opposite site of the street. These oak trees are encountered along the exit route of the proposed repeater site.

The sites encountered along the route are of a High Provincial Significance: These sites have been graded Grade II provincial heritage sites (PHS's).

8. 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 standard guidelines required by the South African Heritage Resources Agency (SAHRA).

The report focuses on the areas for the proposed repeater site deviations along Route 3 (Graaff Reinet to Yzerfontein) that were not included or had changed from the original sites proposed. This report serves as an addendum to the original heritage scoping report and impact assessment report which was considered during the current study.

No pre-colonial archaeological heritage sites, features or 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 during the excavations for the repeater cables / deviation sites. Middle Stone Age stone artefacts were documented at Heritage Park in Somerset West and one Later Stone Age stone artefact during a survey for alternative routes for the Swellendam Link Road. The recommendations below elaborate in the procedures to be followed if concentrations of artefacts are uncovered during excavation.

The potential impact of the repeater site deviations activities on the archaeological heritage remains, sites, and features is regarded as low if caution is taken during the construction processes. It is important that the heritage sites are clearly demarcated and avoided. The footprint of the repeater deviations is relatively small and it is possible for the route to be slightly realigned to avoid damage to heritage resources.

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 implemented.

9. 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:

9.1. A2 FC GRA (Grabouw), B1 FC FAR (Caledon, Western Cape) and E1 FC MSB (Mossel Bay)

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 provincial heritage authority Heritage Western Cape (HWC) (021 483 9598) 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 exposed artefacts and associated archaeological heritage material will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
1. 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.

9.2. A1 VC SOM BTS (Somerset West) and C1 VC SWE BSC and C2 FC SWE:

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

1. Caution must be taken when excavating within the road reserve so as not to negatively affect and damage any buildings or other heritage sites, features, resources. If buildings or other heritage sites, features, resources are expected to be damaged the site should be clearly demarcated and cordoned off or in the case of demolition the necessary permission must be sought before such destruction occurs. The latter is however discouraged as the footprint of the repeater deviations are relatively small and it is possible that the deviation could be slightly rerouted. It is possible that historical artefacts and features may be uncovered during excavation, especially along the roads and pavements within the towns of Somerset West and more especially Swellendam, the appropriate mitigation measures should be followed if such artefacts and features are exposed.
2. It is highly likely that historical features and artefacts may be uncovered along the deviation route running through the historic core of Swellendam. Therefore, archaeological monitoring through the historic core of Swellendam beginning at Buitekant Street, following to Gelderblom Street, Shand Street, Voortrek Street and Swellengrebel is suggested. The presence of an archaeologist would also assist in the protection of these heritage resources as they are exposed as well as those along the encountered along the route.
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.

4. The Developer/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.
5. Provincial Heritage Sites and monuments located at the side of the road or within the road reserve must be considered no-go areas and care should be taken during the construction phase by crew members or machinery. The Developer/Construction Managers/Foremen and/or the Environmental Control Officer (ECO) should identify and cordon off the heritage resources that may have the potential to be negatively impacted along the route.

10. REFERENCES

- Clift, H. & Webley, L. 2011. Heritage Scoping Report with preliminary impact assessments Fibre Optic Cable: Graaff-Reinet to Yzerfontein.
- Deacon, H.J. 2009. Archaeology-Heritage Impact Assessment – Alternative Routes for the Swellendam Link Road.
- Kaplan, J. 2003. Archaeology Study Heritage Park, Somerset West.
- South African Heritage Resources Agency (SAHRA) SAHRIS Database of heritage sites.

11. GENERAL REMARKS AND CONDITIONS

NOTE: This report 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.