

**Appendix D3:  
Heritage Specialist Report**

Heritage Scoping report with preliminary impact assessments  
Fibre optic data cable: Graaf-Reinet to Yzerfontein

Prepared for SRK Consulting SA (Pty) Ltd  
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## ***Executive summary***

This report has been commissioned by SRK Consulting (SA) Pty Ltd on behalf of FibreCo Telecommunications<sup>1</sup> and forms part of their Basic Assessment process. It covers the portion of the proposed fibre optic data cable network which extends from Graaff-Reinet to Yzerfontein. The exact location of the cable trench within the road reserve has not yet been finalized. For the purpose of the study, a 50m band including the N2 road reserve is being covered. The trench is to be excavated to a maximum depth of 1 metre. After the laying of the cable, the trench will be backfilled and the land returned to its original condition. Round man-holes (600x800mm) are to be placed every 4km along the route. Large manholes (1.8 x 2m) are to be installed at major junction points and at the repeater sites (approximated every 80 – 100km).

Palaeontological resources are the subject of an independent study and are not included here.

### ***Stone Age Archaeology***

It is unlikely that undisturbed Stone Age archaeological material are to be found within the road reserve or the areas immediately adjacent to the road reserve. It is possible that unmarked burials may be disturbed during the course of the excavation of the proposed cable trench.

The proposed deviation route for the repeater station to the north of Yzerfontein traverses an area known to have a high degree of archaeological sensitivity. It is highly likely that intact shell middens will be impacted.

**Mitigation:** Should burials be disturbed accidentally, all work in that area must cease immediately and SAHRA and/or HWC notified.

An archaeological impact assessment is recommended for the section of the route along the salt pans to the repeater to the north of Yzerfontein.

### ***Historical archaeology***

The proposed cable trench traverses historic town cores; Cape Town and Graaff-Reinet. It is possible that some archaeological features may be uncovered/disturbed during the course of the excavation of the cable trenches. The proposed cable trench through Malmesbury and Darling, although these are historic towns, bypasses the historic cores (SHSG 2009). The proposed deviation trench at Swellendam follows Swellengrebel Street into Berg Street. The former is particularly sensitive from a historical and architectural perspective. The oak trees along Swellengrebel Street are provincial heritage sites.

**Mitigation:** The trenches through the historic towns should be monitored by an archaeologist. Full time monitoring is not required, but should intact archaeological features be uncovered e.g. leiwater furrows, an archaeologist should be asked to assess the situation and the cable trench located so as to minimise the impact on the fabric of these features.

### ***Built environment***

Two lime kilns are located just outside the road reserve on the R315 outside Yzerfontein are declared provincial heritage sites.

The proposed trench traverses parts of five historic towns. As long as the cable trench remains within the road reserve it is highly unlikely that any built environment heritage sites will be impacted and no mitigation is required.

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<sup>1</sup> Clidet No 993 Pty Ltd trading as FibreCo

**Mitigation:** The cable trench needs to be located so as to avoid the lime kilns. The protected area in terms of the declaration, extends 3 metres from the walls of the kilns. The sites should be cordoned off in order to avoid accidental damage by machinery or construction crew.

### ***Cultural landscape***

There will be no permanent impact on the cultural landscape, as the proposed cable is located underground. Care must, however be taken to avoid damage to the historic tree avenues at both entrances to Darling as well as the oak avenue in Swellengrebel Street, Swellendam.

### ***Graves, Burials and memorials***

Although there are no marked graves and cemeteries within the road reserve, or close to the road reserve, it is possible that unmarked/informal graves may be disturbed.

A number of informal memorials are visible along the road's edge and are associated with road deaths. Although a recent phenomenon, these memorials are considered to part of the living heritage. Care should be taken to avoid accidental damage of beacons and commemorative monuments during the construction period.

**Mitigation:** Should burials be disturbed accidentally, all work in that area must cease immediately and SAHRA and/or HWC notified.

In the case of memorials, care must be taken to treat these with respect.

There are no reasons, from a heritage point of view, that the excavation of the proposed cable trench cannot take place.

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## 1. Introduction

This report has been commissioned by SRK Consulting (SA) Pty Ltd on behalf of FibreCo Telecommunications<sup>2</sup> and forms part of their Basic Assessment process. This report covers the portion of the proposed fibre optic data cable network which extends from Graaff-Reinet to Yzerfontein. (Figure 1)

### 1.2. Project description

The exact location of the cable trench within the road reserve has not yet been finalized. For the purpose of this study, a 50m band including the N2 road reserve is being covered. The trench is to be excavated to a maximum depth of 1 metre. After the laying of the cable, the trench will be backfilled and the land returned to its original condition. Round man-holes (600x800mm) are to be placed every 4km along the route. Large manholes (1.8 x 2m) are to be installed at major junction points and at the repeater sites (approximated every 80 – 100km). There will be 13 repeater sites, approximately 80 – 100km apart along the route. Each repeater site will have a footprint of 10m x 10m and will be enclosed by a palisade fence.

## 2. Terms of Reference

This report describes the pre-colonial and colonial heritage of the landscape through which the proposed cable trench traverses. The purpose of the overview is to identify possible problem areas, or hotspots. A preliminary assessment of the potential impacts has been undertaken in order to recommend the necessary mitigations.

## 3. Study area

This section of the fibre optic data cable follows the alignment of the N12 (R57) from Graaff-Reinet through Aberdeen, Uniondale and Willowmore before joining the N9 (R62), over the Outeniqua Pass to George. From George, the alignment follows the N2 all the way – bypassing towns such as Mossel Bay, Albertinia, Riversdale and Heidelberg before entering the City of Cape Town. The approach into Cape Town is along Eastern Boulevard, along northern end of Adderley Street, west into Riebeeck Street to lower Buitengracht Street. A second section of the cable route, continues from the lower end of Buitengracht Street, along the N1, linking to the N7, to Malmesbury. From Malmesbury, the route follows the R315 westwards, through Darling to Yzerfontein (Figure 1). A number of deviations on the route to repeater stations are also considered. For the most part these follow existing routes with the repeater located near existing communications infrastructure. Deviation routes also pass through parts of Malmesbury, Darling and Swellendam.

## 4. Legal framework

The National Heritage Resources Act (NHRA), Act 25 of 1999 aims to promote the good management of the national estate. To further this goal, the NHRA (Section 38.1) has identified a number of activities which requires that the relevant heritage authorities are notified of the intent to develop: in this case, *the construction of a ...pipeline, canal or other similar form of linear development ...exceeding 300m in length.*

Cultural heritage resources are defined by the NHRA Section 3, which also includes guidelines in assigning significance. Cultural heritage resources include:

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- Places, structures and buildings older than 60 years
- Places where oral traditions are attached, or associated with living heritage
- Historical settlements and townscapes
- Cultural landscapes
- Archaeological, palaeontological and geological sites

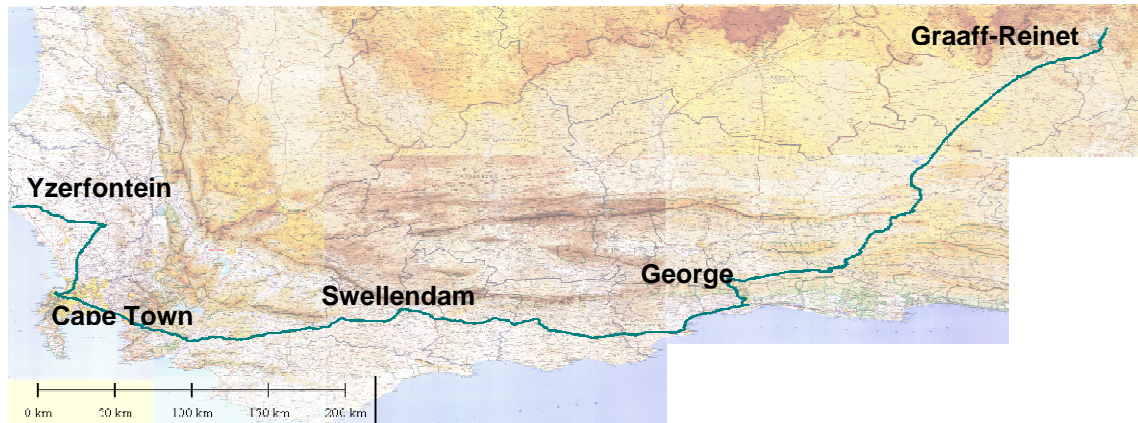


Figure 1: Location map showing extent of proposed Graaff-Reinet – Yzerfontein data cable trench.

## 5. Methodology

A desktop study of the current state of the study area forms the basis of this report. The following sources were consulted:

- Environmental constraints overview Phase 1 (SRK report 416871, 2010)
- SAHRA's APM Mapping project: a database of archaeological impact assessments which have been undertaken in the RSA up to and including 2009.
- IZIKO SA Museum's archaeological site record database<sup>3</sup>.
- Hans Fransen's *A Guide to old buildings of the Cape*, 2004. A fairly comprehensive survey of built heritage sites, rural and urban, in the former Cape Colony (previously the Western Cape Province).
- SAHRA's list of Provincial Heritage Sites (2000; <http://196.35.231.29/sahra/default.aspx>).
- Overstrand and Swartland Heritage Surveys (in terms of Section 30 of the NHRA, Act 25 of 1999).

### 5.1 Review of information/data

No large scale, systematic archaeological surveys have taken place in South Africa. The available information on the distribution of archaeological sites is determined by academic research programmes and archaeological impact assessments (AIA) driven by development.

There has been an academic bias toward the excavation of deep archaeological sequences in coastal caves along the southern Cape (i.e. Die Kelders, Blombos Cave and Robberg) in order to establish a chronological sequence for the region. Similarly, caves and rock shelters in the mountainous areas have attracted attention because of good preservation of organic remains as

<sup>3</sup> For details of sites falling within the study area (excl West Coast), see Appendix 1.



well as potential rock art. IZIKO's site record database largely reflects the distribution of archaeological surveys and work, but has not consistently been updated post the 1980s.

Archaeological Impact Assessments (AIA) tend to cluster closer to the metropolitan areas; the further away from these centres, the sparser the available information. Impact assessments associated with energy infrastructure, in recent years, have made inroads into these un-surveyed areas, but information remains relatively sparse.

Although the NHRA Act 25 of 1999 requires the compilation and maintenance of a heritage register, which includes a heritage inventory compiled at municipal level, the inventories have been slow to materialize. Within the study area, the Overstrand (OHSG 2009/2010) and Swartland (SHSG 2009) municipal heritage surveys have been completed and the City of Cape Town maintains its own heritage inventory (pers comm. David Hart). Currently, Fransen's 2004 *A guide to old buildings of the Cape* is the closest to a comprehensive built environment survey. Fransen (2004) is limited in that it does not include buildings built post 1910 and it does not comply with the grading system, designating significance, prescribed in the NHRA, Act 25 of 1999.

Conservation studies have been undertaken for Swellendam (NMC 1985a), Mossel Bay (NMC 1985b), Caledon (NMC 1986), Uniondale (Frescura, 1987), Aberdeen (Heroldt 1990) and Graaff-Reinet (Japha et al 1989). The findings of these reports are included in Fransen 2004. One of the shortcomings of these reports is that they predate the NHRA and do not necessarily match the criteria designating heritage significance as laid out in the NHRA, Act 25 of 1999.

## **5.2 Site visits**

A survey of the N7 to Malmesbury, along the R315 to Darling and Yzerfontein was undertaken on 22 February 2011. The route from Cape Town, along the N2 to Graaff-Reinet was similarly surveyed 3-4 March 2011. The West Coast repeater sites and deviation routes were inspected on 16 March 2011.

## **5.3 Impact assessment methodology**

The impact assessment methodology has been prescribed by SRK Consulting (SA) Pty Ltd.

## **5.4 Limitations and assumptions**

- The proposed cable trench is situated within the road reserve, although the exact alignment has not yet been finalised.
- Palaeontological resources are not included in this report and are being dealt with in a separate study.
- Archaeological surveys are limited to those areas where research-based surveys have taken place, or surveys associated with archaeological impact assessments.
- Lack of comprehensive, recent built environment surveys along the extent of the route.
- Heritage resources are defined by the NHRA, Act 25 of 1999.

## 6. Description of the receiving environment

### 6.1. Historical overview<sup>4</sup>

Southern Africa has a long history of human occupation, spanning more than a million years. Fossil footprints of early human ancestors have been found near Langebaan (McRae 1999). Early Stone Age<sup>5</sup> (ESA) and Middle Stone Age (MSA)<sup>6</sup> artefacts are found widely distributed across the landscape, usually in disturbed contexts. Archaeological sites at Duinefontein near Koeberg (Klein 1976) have yielded MSA remains in association with bones of extinct animals.

The MSA is associated with the emergence of anatomically modern humans as well as the emergence of modern (symbolic) human behaviour. MSA cave sites with well preserved archaeological deposits are of great scientific significance. MSA sites near Yzerfontein (Klein et al 2004) and along Pinnacle Point (Marean 2007), near Mossel Bay have been the focus of international academic research in recent years.

Later Stone Age (LSA)<sup>7</sup> sites, associated with hunter-gatherers or San, occur within the 5km cordon from the coast as shell middens or artefact scatters and extend along most of the South Western and Southern Cape coastline. Inland from the coast, archaeological sites are preserved on rocky outcrops, sometimes with rock shelters or caves. Within the Cape Fold Belt Mountains, LSA deposits can also be found in association with rock art.

The last 2000 years saw the expansion of herders (Khoekhoe<sup>8</sup>) into the Western Cape. Generally, the presence of domesticated stock and pottery together with a relatively larger ostrich eggshell bead size, has been attributed to herder occupation. Archaeologically speaking, herder sites have been very difficult to find. This has been attributed to the high degree of mobility of the herders as well as that traditional grazing lands (as described in the early historic records of the VOC<sup>9</sup> at the Cape) are now under cultivation or have been stock farms for centuries: the West Coast plains, Darling hills and the plains of the Overberg and beyond. Place names such as Gantouw, Outeniqua, Karoo and Camdeboo all have their origins in Khoisan place names.

In 1652, a refreshment station was established at the Cape of Good Hope. Initially the settlement was restricted to the Table valley (the area between Table Mountain and Table Bay), but soon expanded to include the Liesbeeck valley. A number of VOC outposts were established to protect VOC (commercial) interests e.g. cattle outposts at Saldanha and Geelbek and wood cutting posts at Outeniqua (Mossel Bay). The outpost Keert de Koe was situated on the outskirts of the settlement on the main route to Saldanha to monitor and guard movement of Khoekhoe and freeburghers alike (Sleigh 2004). Rock art spans a wide time range and more recent paintings also depict the incursion of European stock farms into the region. In some panels the violent nature of the interactions between Khoisan and European settlers are evident (Hesse 1966).

First and second generation freeburgher stock farmers expanded northwards and eastwards, reaching beyond Graaff-Reinet by the end of the 18<sup>th</sup> century (Beinart 2003; Gilliomee 1982). Drostdys were established in an attempt to provide some manner of control on the stock farmers.

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<sup>4</sup> For more detail see Appendix 2.

<sup>5</sup> The archaeology of the Stone Age between 2 million - 250 000 years ago.

<sup>6</sup> The archaeology of the Stone Age between 20-300 000 years ago associated with early modern humans.

<sup>7</sup> The archaeology of the Stone Age, dating from the last 20 000 years associated with fully modern people

<sup>8</sup> In historical writings, the hunter-gatherers are referred to as Bushmen and the herders as Hottentots/Khoekhoe. The terms Bushmen and Hottentot are seen to be derogatory. There is much debate archaeologically as to the identity of these groups as reflected in the archaeological record and rock art. The term Khoisan refers to early indigenous inhabitants of the Cape, who may be either hunter-gatherer and/or herder.

<sup>9</sup> 17<sup>th</sup> and 18<sup>th</sup> century acronym commonly used to refer to the Dutch East India Company.

The establishment of drostdys at Swellendam in 1743, Graaff-Reinet in 1785 and subsequently at Beaufort West in 1818 illustrates the rate of expansion of the stock farmers. The extreme remoteness of the Graaff-Reinet area is further illustrated by the declaration of independence of Graaff-Reinet in 1795 under the leadership of Adriaan Jaarsveld (Fransen 2006). Ten years earlier, in 1786, Swellendam farmers also rebelled against the control exerted from the Cape.

Under the British administration of the Cape, expansion of the colony was actively encouraged. The mid 19<sup>th</sup> century saw a boom in the establishment of church towns. This trend was facilitated by improvements in the road network and the construction of the railway line in 1870.

The World War II period saw an overall improvement in roads and transport infrastructure. Improvements in agricultural and irrigation techniques (e.g. boreholes) lead to increased subdivision and development of farms.

## **6.2. Heritage Resources**

Few heritage resources are located within the road reserve. However, heritage resources, such as memorials, graves, portions of old wagon route networks and structures *may* be situated within the 50m band, and are included in this study.

### **6.2.1. Cultural Landscapes**

Cultural landscapes are the product of the interaction and response of human intervention to the natural environment. A number of continuing, evolving cultural landscapes associated with historic agricultural settlements are present in the study area e.g. the Darling Hills and the Swellendam wheatfields. Relic cultural landscapes are also present, represented by the spatial distribution of archaeological sites and rock art sites. The West Coast National Park contains elements of a relic landscape in terms of the 18<sup>th</sup> and 19<sup>th</sup> century stock farms which are no longer functioning.

The cultural landscapes per se will not be impacted on permanently by the proposed data cable. The repeater stations for the most part, are to be located close to existing infrastructure., However, depending on their height and location e.g. at Melkbosstrand, these stations may have a visual impact. As, in this particular case, it is not a heritage concern, it will not be discussed further.

Features within the cultural landscape, such as archaeological sites, graves/memorials and built environment resources (e.g. historic towns, associated historic routes) which may potentially be impacted, are discussed below.

#### ***Historical avenues of trees***

Historical avenues of trees are features of the cultural landscape which are often found in association with historic homesteads and old routes.

Tree avenues line both entrances/exit points to Darling. The tree avenue at the western exit of the town is set back from the road (a more recent road upgrade deviated slightly from the original route). The Darling cemetery is situated to the east of this entry/exit point. The eastern most entry/exit point still has tree avenues on both side of the road.



Figure 2: Eastern and western exit/entrance point to Darling, respectively. Note the trees on both sides of the road (in the far ground) at the eastern exit/entrance.

The oak trees along Swellengrebel Street in Swellendam are declared heritage sites. In terms of the declaration, all oak trees on both sides of Swellengrebel Street are protected as provincial heritage sites (<http://196.35.231.29/sahra/HeritageSitesDetail.aspx?id=13302>).

### **Bridges**

Along the N12 there are a number of bridges dating to the early 1950s (when the road was upgraded). These bridges are not protected by the NHRA Act 25 of 1999 as they are not yet older than 60 years.

### **6.2.2. Archaeological Resources**

Archaeological resources cover a time range which includes stone age implements, shell middens, rock art, deposits associated with historic buildings and the remains of early industrial sites. Within the study area, predominantly Stone Age (ESA, MSA and LSA) and historical archaeological resources occur. Stone Age archaeology refers to the study of the period of human occupation in which people predominantly used stone as a raw material for tools.

Historical archaeology refers to the archaeology of recorded history (written records). In the South African context, there is an overlap between the later LSA and the early historic period, where there is contact between the literate VOC representatives and the indigenous groups.

The proposed cable route traverses a number of distinct areas. In order to facilitate the presentation of information, archaeological resources along the proposed cable route will be dealt with in the following subsections of the route:

- A) Graaff-Reinet, Uniondale to the start of the Outeniqua Pass
- B) Coastal/Southern Cape: Mossel Bay and George (incl the Outeniqua pass)
- C) Wheatfields of the Swellendam district.
- D) Grabouw Basin, Houwhoek Pass to end of Sir Lowry's Pass.
- E) Cape Town metropolitan area (including N2 past Somerset West and City of Cape Town)
- F) West Coast and Swartland

#### **A) Graaff-Reinet, Uniondale to the start of the Outeniqua Pass**

This area has rich and significant archaeological resources. Graaff-Reinet is surrounded on three sides by the Camdeboo National Park (previously the Karoo Nature Reserve). Portions of the reserve around the Valley of Desolation were proclaimed a Scenic National Monument in 1935. Webley and Binneman (1995/6) undertook a survey in the Karoo Nature Reserve. They reported

historical graves some 100m from the boundary fence of the N9 to Aberdeen, at the 38km road marker. There are also reports of ruined structures in this area. Elsewhere in the reserve they recorded the ruins of 19<sup>th</sup> century structures, graves and kraals. Rock paintings were recorded in small shelters on higher ground. In parts of the Karoo rock engravings may be found on dolerite boulders on the scree slopes of hills. It is unlikely that any rock engravings will be affected along this section of the route as the geology is not favourable.

The proposed cable trench passes through the historic core of Graaff-Reinet. The town has been the subject of a conservation study, undertaken by the National Monuments Council in the 1980s, but no historical archaeology has been done. Historical archaeological features such as leiwater furrows may be impacted during the excavation of the proposed cable trench.

Excavations undertaken at a rock shelter near Uniondale (Leslie 1989) uncovered LSA material which greatly contributed towards a better understanding of early settlement into the Eastern Cape after 5 000 BP. A number of stylistic markers were identified in this particular excavation, e.g. the Kasouga flake, which were shown to have a limited or restricted geographic range.

### ***B) Coastal/Southern Cape: Mossel Bay and George (incl the Outeniqua Pass)***

The southern Cape has extremely high archaeological potential. As early as 1946, Goodwin stated that “the southern Cape, from Port Elizabeth to Swellendam, is by far the most important archaeological area in Southern Africa ...here South Africa has evidence of value to the world of prehistory and it is essential that it should be protected so far as it is humanly possible” (Goodwin 1946:105-106; 116).

An archaeological impact assessment prior to the upgrade of the Outeniqua pass in the 1990s, recorded at least seven archaeological sites which would be directly impacted by the road upgrade and another six sites were close enough to the road to be potentially impacted. All the sites were on the Waboomskraal side of the pass. Three of the sites contained rock panels, one a shelter with deposit and a stone walled structure, possibly a kraal. The remaining three sites consisted of ESA and MSA scatters (Kaplan 1991). It is unlikely that any of these sites would be impacted by the proposed cable trench.

The identification of a number of Type Sites is associated with the archaeology of the southern Cape coast: the Still Bay Industry of the MSA was first recorded on the coast just south of Riversdale (Deacon 1979); the ‘Mossel Bay’ variation of the Middle Stone Age was first identified at Cape St Blaize (Deacon 1979) and the sea cave at Pinnacle Point (PP13B) with its extensive MSA deposit and multiple occupation layers may have the earliest evidence of shellfish exploitation and use of ochre (Marean *et al* 2007).

A number of AIAs in the area (Nilsen and Yates 2007; Nilsen 2009; Webley and Orton 2009) have indicated distributions of ESA and MSA artefacts across the landscape, from Albertinia, Heidelberg and Mossel Bay. Inland and coastal plain occurrences of ESA and MSA are common, but rarely in undisturbed contexts. Ephemeral LSA stone scatters have been recorded in this area, as well as two silcrete outcrops (used as raw material quarries) near Albertinia (Nilsen and Yates 2007).

### ***C) Wheatfields of the Swellendam district.***

ESA and MSA occurrences have been observed on a number of farms between Botrivier and Caledon, but rarely in undisturbed contexts (Kaplan 1990; Webley 2010; Webley 2011). While identified in historical records as part of the traditional grazing lands of the Khoekhoe, agricultural

practices and development during the last 200 years have largely destroyed the context of these sites. The remains of a historic wagon track, dating to at least 1848 was recorded in the Bontebok National Park to the south of Swellendam (Orton 2005).

The proposed deviation to the repeater station leaves the N2 and follows Swellengrebel and Berg Streets. Swellengrebel Street is one of the oldest streets in Swellendam and a number of historic buildings, some of which are provincial heritage sites (e.g. the old drostdy, gaol, Zandrift homestead) are situated along this street. It is possible that there may be historical archaeological material present.

#### ***D) Grabouw Basin, Houwhoek Pass to end of Sir Lowry's Pass.***

ESA and MSA occurrences have been observed on the Cape Flats and Somerset West areas, but rarely in undisturbed contexts. While identified in historical records as part of the traditional grazing lands of the Khoekhoe, agricultural practices of the last 200 years have largely destroyed the context of these sites. Archaeological surveys in the vicinity of the Sir Lowry's Pass village reported a single artefact (Finnegan and Orton 2011).

The Hottentots Holland Kloof (later to be renamed Sir Lowry's Pass) was the most important access point into the Overberg and was first crossed by explorers and travellers in the 18<sup>th</sup> century. There were outspan areas, an inn and also an early toll house on the route (Heap 1977) along the wagon track known as the Roodehoogte, now almost completely overgrown. The ruts made by the wagon wheels on the stone may still be seen to the north of the present pass. Historic tree plantings are visible along the original route through Sir Lowry's Pass village (Finnegan and Orton 2011). It is unlikely that excavations in the road reserve will impact on elements of the early heritage of the pass, but the developers need to be alert to this possibility.

Rock art sites have been recorded in the Hottentotsholland mountains but further to the north of the pass and are unlikely to be impacted.

#### ***E) Cape Town metropolitan area (including N2 past Somerset West and City of Cape Town)***

The proposed cable runs through part of the historic city of Cape Town, associated with the old Table Bay harbour and the subsequent land/harbour reclamation. Excavations associated with the upgrade of the Cape Town Station uncovered portion of a wall, and a well, associated with the early 19<sup>th</sup> century jetty or causeway (Halkett 2010). These archaeological findings were more than 2 metres below the present city street level.



Figure 3: Photograph of the wooden jetty (Central jetty) at the end of Adderley Street c1902 (Picard 1969:118). The central jetty was constructed in the 1850s and became the central hub of harbour activities. In 1907 the jetty was extended to create a central pier and promenade. The pier was demolished in 1938 to make way for the Foreshore Reclamation Scheme (Patrick et al 2010).



Figure 4: View from the 20<sup>th</sup> century Pier towards Adderley Street (ACO collection, provenance unknown).

The proposed cable trench will cross the 20<sup>th</sup> century Pier which extended northwards from the Station, down part of Adderley Street. The present Adderley Street incorporated the southern remains of the Pier.

The archaeological monitoring of fibre optic cables laid in the city centre in 2010, confirmed the historic continuity of the city roads and no archaeological features were disturbed (Clift 2010). The section of the proposed cable line running along Riebeeck Street, may have archaeological potential as this street roughly marks the old coastline and was the location of Roggebaai.

#### ***F) West Coast and Swartland.***

ESA and MSA occurrences have been widely reported across the wheatlands of the region, but rarely in undisturbed contexts. While identified in historical records as traditional grazing lands of Khoekhoe, agricultural practices of the last 200 years have largely destroyed the context of these sites. Isolated LSA scatters do occur, but again in disturbed contexts (Orton 2010; Webley and Schietekatte 2010).

The proposed deviation to the repeater site to the north of Yzerfontein, however, passes through a relatively undisturbed coastal dune system with associated salt pans (Rooipan). In 1968 a large midden-covered area situated 2 km to the north of Yzerfontein 'capping a ridge of consolidated dunes running parallel between the sea and a salt-pan' was recorded by Rudner (1968:492). At least 22 clay pots (Cape coastal ware) associated with Khoekhoe pastoralists were recovered from these middens. This area was resurveyed in 1994 (Avery 1994a). The middens contained combinations of marine shell (black and white mussels, limpets and whelks). In some middens bone, pottery and shale and silcrete stone artefacts were noted. Avery rated these middens as having medium significance representing evidence of a shell midden settlement along an inland salt pan. These sites are relatively uncommon and it was recommended that some of these middens should be preserved *insitu*.

During a brief site visit undertaken on 16 March 2011 (and largely limited to the proposed deviation trench along the dirt roads) a number of middens were noted on the proposed trench line situated to the west of the salt pan. It appeared as if the middens were bisected by the road, with material pushed to the sides when the road was flattened. The midden material appeared ashy with black and white mussels and whelks present. No stone, bone or pottery was observed.

To the north of the salt pan a large midden (again bisected by the road) was noted. It contained stone flakes on shale, a number of smooth cobbles which may have been used as grindstones or hammerstones.

A single lens *insitu* midden was noted on top of the dune along the West Coast National Park fence. It contained black mussel, limpets and Ostrich eggshell. The remainder of the route along the Park fence was not inspected, but it is highly likely that shell middens will occur in this area.

### 6.2.3. Built Environment Resources

A number of historic towns are situated along the proposed cable trench. Cape Town, Malmesbury, Sellendam and Graaf-Reinet are the oldest, having their origins in the 17<sup>th</sup> and 18<sup>th</sup> centuries. Most of the remaining towns are mid 19<sup>th</sup> century towns and are associated with the expansion of the Cape Colony under the British administration and the need for religious support.

For the most part, the proposed cable trench by-passes historical towns, with the exception of Graaff-Reinet and Cape Town (see section above). It is not anticipated that the proposed cable trench will have any impact on the urban built environment. The proposed cable trench through both Darling (Figure 5) and Malmesbury (Figure 6) do not pass through historically sensitive parts of the town. Again, as the proposed cable is situated in the road reserve, it will have no effect on the built environment.

The significance of these towns in terms of their built environment can be gauged by the number of provincial heritage sites present. As the process of municipal heritage surveys has not yet been completed (see limitations) it is very likely that the numbers of conservation worthy buildings will be much higher. Table 1 summarises the historic towns along the proposed cable trench as well as their origin.

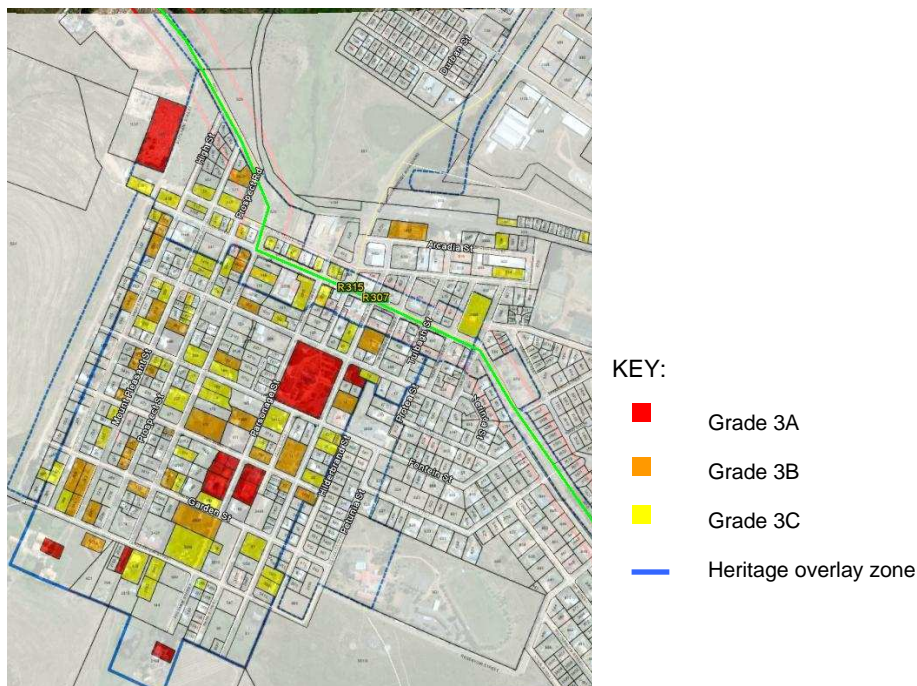


Figure 5: Overlay of heritage sites identified in Darling. The proposed cable line, shown in green bypasses the historic core of the town (SHSG 2009).





Figure 6: Proposed deviation to repeater (green line) in Wesbank, Malmesbury. The area shaded purple has been identified in the Swartland Heritage Survey as a Special Area and is associated with the development of Wesbank as a suburb of Malmesbury during the Apartheid era. The proposed cable in the road reserve will not impact on any buildings (SHSG 2009).

Table 1: Summary of the historic towns along the proposed cable route. The number of Provincial heritage sites (previous National Monuments) give an indication of the heritage significance of the towns as a whole. Under the NHRA, Act 25 of 1999, the number of conservation worthy structures would be much higher.

<b>Town</b>	<b>Date of establishment</b>	<b>Origin</b>	<b>No of Provincial Heritage Sites</b>
Cape Town	1652	Refreshment station Defence	108 excl Woodstock, District 6 Bo-Kaap is 1 entry.
Malmesbury	1743	Church	5
Swellendam	1752	Administrative (Drostdy)	42
Graaff-Reinet	1785/1803	Administrative	<250
Mamre	1807	Moravian mission	2
Caledon	1811	Administrative	5
Suurbraak	1812	Mission station (LMS)	-
George	1812		7
Mossel Bay	1822	Harbour Earlier VOC outpost: Outeniqua	15 Incl Cape St Blaize Cave
Riversdale	1837	Church	2
Darling	1853	Church	-
Groot Brak	1844	Outspan	-
Heidelberg	1855	Church	1
Aberdeen	1855	Church	1
Philadelphia	1856	Church	1
Uniondale	1856	Church	7
Yzerfontein	1911	Harbour	-

While not strictly speaking 'built environment' heritage resources, monuments, memorials and cemeteries sometimes occur near the road or even within the road reserve. These are discussed below. Provincial heritage sites (previous National Monuments) occurring within the road reserve are also included here.

#### **Roadside Graves/Cemeteries**

A number of cemeteries are situated along the N2, but none within approximately 3-5m from the fence-line of the road reserve. A potential concern would be old farm cemeteries with associated unmarked graves (belonging to e.g. farm workers) situated outside the formal enclosed section of

the cemetery. Should burials be accidentally disturbed, work in that area must cease immediately and SAHRA and/or Heritage Western Cape be notified.

### **Memorials**

Modern memorials associated with road deaths have become a common feature along South African roads. These memorials are generally not permanent (with the exception of the memorial to the members of SAPS who died just outside Albertinia in 1998).

While these memorials are not protected by the NHRA, Act 25 of 1999, they do form part of a cultural tradition and may be seen as part of our intangible/living heritage. These memorials must be treated with respect and not vandalized nor destroyed during the course of excavation of the cable trench. If these memorials on the route of the proposed line, they may be removed but should be replaced in the same position afterwards. Comment from SAHRA and HWC need to draw up guidelines for the treatment and management of these memorials.



Figure 7: Examples of memorials along the N2. From left to right, these are located as follows: Near Paardekloof (33°48'11.61"S 22°34'34.59"E ); near the Herold turnoff (33°50'3.22"S 22°26'53.74"E ), SAPS memorial outside Albertinia (34°11'8.65"S 21°25'58.64" E).

### **Beacons and commemorative monuments**

Beacons and commemorative monuments located at the side of the road are potentially at risk of accidental damage and vandalism by construction crews during the course of the excavation of the cable trench.



Figure 8: Beacons. A stone cairn outside Graaff-Reinet, commemorating the 1938 celebration of the Groot Trek (left). The monument commemorating the exploration of Robert Jacob Gordon (32°26'20.70"S 24°7'42.33"E ), who passed this way in 1770 on his exploration of the north on route to the Orange River (right).

### **Provincial heritage sites (previous National Monuments)**

Two lime kilns outside Yzerfontein are situated close to the road reserve. Both these structures are PHS and according to their declaration a 3 metre 'buffer' measured from the walls of the structure are included in the declaration. The cable trench should not encroach into this 3m buffer.



Figure 9: Lime kilns along the R315 to Yzerfontein and are within the 50m band. The kilns are situated a few metres from the road at 33°20'10.09"S 18°12'58.64"E and 33°20'10.33"S 18°12'38.70"E respectively.

The oak trees along Swellengrebel Street, Swellendam, are also provincial heritage sites. They have been discussed under Cultural Landscapes: Historic avenues of trees.

### **7. Project activities that could impact the receiving environment**

Observations along the N1 where fibre optic cables are in the process of being laid, has shown that the impact of the trench excavation activities is much wider than the proposed maximum width of the trench, approximately 750mm. The introduction of heavy machinery, construction crews and rehabilitation attempts results in an area several metres wide being affected during the course of the excavation of the proposed cable trench.

The recovery of significant archaeological sites within the road reserve is unlikely, although one may anticipate finding ESA and MSA implements along the road side, in disturbed contexts. No rocky outcrops on which rock engravings may be found have been identified during the course of the survey of the proposed cable trench.

Monuments, memorials and provincial heritage sites along side the road should be considered as no-go areas and the utmost care taken not to cause accidental damage.

### **8. Assessment of impacts**

The excavation of the proposed cable trench may affect heritage resources above and below the ground. Until the alignment of the cable trench is finalised, it is not possible to predict which sites will be negatively impacted and the preliminary impacts can only take the form of if/then scenarios.

#### **8.1 During the construction phase**

It is very unlikely that *in situ* archaeological resources are found within the road reserve (or in the areas immediately adjacent). These areas have been heavily disturbed by road construction and past and present agricultural practices. The exception in this case is the proposed deviation to the repeater site to the north of Yzerfontein. Evidence of disturbed shell middens is clearly visible

along the edges of the dirt track closest to the coast, as well as along the boundary fence with the West Coast National Park where the proposed deviation heads towards the shoreline.

The likelihood of the proposed deviation trench of disturbing intact coastal shell middens is high. Damage to shell middens would be permanent, but confined to the footprint of the project. With mitigation the severity of the impact can be reduced as the location of the shell middens would be recorded and a reasonable sample collected for future reference. The impact rating can therefore be reduced from (Medium)-High to Low through mitigation.

Table 2: Potential impact on coastal archaeology (north of Yzerfontein)

<b>Coastal shell middens</b>						
	<b>CONSEQUENCE</b>			<b>LIKELIHOOD</b>		<b>RATING</b>
	<b>Severity</b>	<b>Spatial scope</b>	<b>Duration</b>	<b>Frequency of activity</b>	<b>Frequency of impact</b>	
Without mitigation	5	2	5	1	5	
<b>RATING</b>	<b>12</b>			<b>6</b>		<b>Medium-High</b>
Essential mitigation measures:						
<ul style="list-style-type: none"> <li>• A full AIA would be required for the extent of the proposed deviation along the boundary fence of the West Coast National Park to the shoreline with full time monitoring of the trench during construction.</li> <li>• Full time archaeological monitoring for the proposed deviation trench along on either sides of the salt pans.</li> </ul>						
With mitigation	2	2	5	1	2	
<b>RATING</b>	<b>9</b>			<b>3</b>		<b>Low</b>

A number of cemeteries and individual graves are situated close to the N2, but few within the actual road reserve or near to the road reserve. Marked graves and cemeteries could be easily avoided. It is very unlikely that burials will be found within the road reserve, but it may occur when the proposed cable leaves the road reserve. The potential impact of the proposed cable trench on a burial or grave would be great and the scope of impact will be confined to the project footprint and of permanent duration. The impact rating is therefore Low. The likelihood of encountering a burial is relatively low, but the damage to the burial will be permanent. Mitigation will reduce the severity of the impact, but not the significance. Owing to the low probability of finding burials, the significance rating remains Low (Table 3).

Table 3: Potential impact on unmarked graves and prehistoric burials

<b>Burials</b>						
	<b>CONSEQUENCE</b>			<b>LIKELIHOOD</b>		<b>RATING</b>
	<b>Severity</b>	<b>Spatial scope</b>	<b>Duration</b>	<b>Frequency of activity</b>	<b>Frequency of impact</b>	
Without mitigation	5	2	5	1	2	
<b>RATING</b>	<b>10</b>			<b>3</b>		<b>Low</b>
Essential mitigation measures:						
<ul style="list-style-type: none"> <li>• Rerouting proposed cable trench to avoid any marked graves and cemeteries</li> <li>• Should any human remains be discovered accidentally, all work in that area must <b>CEASE IMMEDIATELY</b> and SAHRA and HWC informed. Should the remains be archaeological, a burials permit needs to be applied for.</li> <li>• After the exhumation (if required) and recording of the remains by a professional archaeologist accredited to undertake exhumations, work may resume.</li> </ul>						

<b>Burials</b>						
	<b>CONSEQUENCE</b>			<b>LIKELIHOOD</b>		<b>RATING</b>
	<b>Severity</b>	<b>Spatial scope</b>	<b>Duration</b>	<b>Frequency of activity</b>	<b>Frequency of impact</b>	
With mitigation	1	2	5	1	2	
<b>RATING</b>	<b>9</b>			<b>3</b>		<b>Low</b>

Within the urban context i.e. Cape Town, Graaff-Reinet and Swellendam, there is a possibility that the proposed cable trench may impact historic features associated with an earlier phase in the town development e.g. leiwater furrows. The potential impact on historical archaeological features in the historic cores would have a significant impact confined to the footprint of the project, and of permanent duration (should the sites be destroyed) resulting in a Low impact. With mitigation, the proposed impact may be reduced to Low (Table 4).

Table 4: Potential impact on historical archaeological resources

<b>Historical archaeology: Cape Town and Graaff-Reinet</b>						
	<b>CONSEQUENCE</b>			<b>LIKELIHOOD</b>		<b>RATING</b>
	<b>Severity</b>	<b>Spatial scope</b>	<b>Duration</b>	<b>Frequency of activity</b>	<b>Frequency of impact</b>	
Without mitigation	3	2	5	1	4	
<b>RATING</b>	<b>10</b>			<b>5</b>		<b>Low</b>
Essential mitigation measures:						
<ul style="list-style-type: none"> <li>Archaeological monitoring of the areas within the historic cores of Graaff Reinet (Caledon and Church Streets), Swellendam (Swellengrebel Street) and Cape Town (Heerengracht – Buitengracht Streets) in order to record archaeological features should they occur.</li> <li>Should intact archaeological features be uncovered care must be taken to position the cable trench in such a manner as to avoid further damaging the features as far as possible. For example, should a leiwater furrow be uncovered, the cable trench should be located within the fill area of the furrow, rather than digging through the walls of the furrow edges.</li> </ul>						
With mitigation	1	2	5	1	4	
<b>RATING</b>	<b>8</b>			<b>5</b>		<b>Low</b>

Provincial heritage sites and/or monuments located at the side of the road, or within the road reserve,. These need to be considered no-go areas and care should be taken that these structures are not accidentally damaged during the construction phase by crew members or machinery. Should heritage resources be damaged during the course of the construction, the damage would have a significant impact on the resource, but be activity specific. Although it would be possible to repair the damage, the destruction of the original fabric would be permanent. As it is possible that some damage to the resource will occur without mitigation, the potential impact is Low. With appropriate mitigation, the potential impact may be reduced to Low (Table 5).

Table 5: Potential impact on built environment resources

<b>Built structures within the road reserve (e.g. lime kilns outside Yzerfontein)</b>						
	<b>CONSEQUENCE</b>			<b>LIKELIHOOD</b>		<b>RATING</b>
	<b>Severity</b>	<b>Spatial scope</b>	<b>Duration</b>	<b>Frequency of activity</b>	<b>Frequency of impact</b>	
Without mitigation	3	1	5	1	4	
<b>RATING</b>	<b>9</b>			<b>5</b>		<b>Low</b>
Essential mitigation measures:						
<ul style="list-style-type: none"> <li>Avoid laying the cable trench close to heritage resources</li> <li>Appropriately cordon or fence off the heritage resource to avoid accidental damage by</li> </ul>						

<b>Built structures within the road reserve (e.g. lime kilns outside Yzerfontein)</b>						
	<b>CONSEQUENCE</b>			<b>LIKLIHOOD</b>		<b>RATING</b>
	<b>Severity</b>	<b>Spatial scope</b>	<b>Duration</b>	<b>Frequency of activity</b>	<b>Frequency of impact</b>	
machinery or crew						
With mitigation	1	1	5	1	4	
<b>RATING</b>	<b>7</b>			<b>5</b>		<b>Low</b>

## 8.2 During the operational phase

No additional measures will be required during the operational phase.

## 8.3 Closure

No additional measures will be required at closure. If the data cable is to be removed, care should be taken to avoid damage to all known heritage resources in the project area.

## 9. Management measures for all project phases (include measures for potential impacts in sensitive environments/geographic locations)

Managers of construction crews need to be informed about procedures which should be followed in the case of human remains being uncovered during the excavation of the trench:

- All work on that section of the trench must cease immediately
- SAHRA and HWC need to be informed of the finding, and the age of the burial needs to be accessed.
- Should the burial be recent, SAPS needs to be notified.
- An emergency burials permit will need to be applied for from SAHRA Burials Unit prior to the excavation and exhumation of the burial.

Care must be taken to avoid the accidental damage of memorials, beacons, avenues of trees during the course of the excavation of the cable trenches. If necessary, an appropriate fence or cordon needs to be placed around the sites at risk.

Memorials associated with road accident deaths should be treated with respect.

## 10. Reasoned opinion as to whether the activity should or should not be authorized and any conditions that should be made

There are no heritage issues which would prevent the activity from occurring, as long as the appropriate mitigations are adhered to.

## 11. Sources

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Mr David Hart, City of Cape Town, Heritage Section

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**Appendix 1: IZIKO data record sheets (Andrew Smith, 2011).**

Map Sheet	Site/Closest location	Types of archaeological occurrences
3323 AD	Skilpadbeen Shelter (Modderfontein), 11 miles out of Willowmore on road to Willowdale	paintings
	Rooiklip	paintings
3323 CA	Rietfontein	paintings, pottery, OES, quartz tools
3322 CD	Wolvedans	paintings
	Doornrivier (Herold Kopjie), 10 miles from George near Campher siding	paintings
	Campherskloof	paintings
3322 DC	Ezelsjagte Poort (E. of Farm Herold)	paintings
	Kleinplaat cave (Outeniqua Mtns)[Kammanasie] 22°39.45:33°15.10	paintings, stone tools, pottery, OES
	Matjiesdrif (George/Uniondale Rd, 12 miles from junction with Outdshoorn Rd)	paintings
	Ebb & Flow Campsite 33°59:22°37	stone tools, shell , bone, pottery
	Groenkop State Forest	paintings
	Rondervlei (between George & Knysna)	shell, stone, pottery, fishbone
	Glentyre Cave (between George & Knysna)	pottery, shell, stone
3422 AA	Rooiheuvel (Klein Brak) 34°03.22:22°09.15	stone tools (ESA), shell
	Cape St Blaize Cave (Schulpegat) 34°11.15:22°09.25	stone tools, shell
	Mossel Bay War Memorial Beach 34°11.15:22°09.25	midden
	Homestead (Klein Brak) 34°03.40:22°07.50At	Stone tools, shell
	Riverside Farm, next to Homestead	Many human skeletons
	Donaldhoogte	stone tools (ESA)
3422 AB	Herolds Bay Cave	stone tools
3422 BB	Goukamma Game Reserve, Sedgfield 34°04:22°55 (100m from sea)	midden deposit, fauna
	Platbank	surface scatter
	W. bank Goukamma R.	shell midden
	Keytersnek Station	stone tools (ESA)
3421 AA	Riversdale Airfield 34°06.30:21°15.15	stone tools
	Piensaarsrivier 34°09.45:21°07.40	stone tools (ESA)
3421 AB	Ligtenbos (Hoekraal) 34°10.10:21°22.45	stone tools (ESA)
	Soetmelksrivier 34°07.45:21°15.55	stone tools (ESA )
	Skoongelee 34°10.10:21°19.05	stone tools (ESA/MSA)
3421 BB	Duinzicht 34°13:21°58	stone tools, shell, fauna
3420 AB	Ou Werf	stone tools (ESA)
3420 BB	Grootvadersbosch	paintings, stone tools (LSA), pottery, human skeleton
3419 AA	Lubourne	ESA handaxe
	Theewaterskloof Dam 34°01:19°11	ESA handaxe
3418 BA	Swartklip	shell midden, stone tools
3418 BB	Gordon's Bay Midden	shell midden (LSA)
	Sparks Bay	shell midden, stone tools (LSA)
	Breakfast Rock, Sneekop Gorge, Hottentots Holland 34°02.30:18°58.05	paintings
	Paarlvallei Rd (Aberdeen Rd), Somerset West	ESA hand axes

## Appendix 1: Chronology of events

Period	Role/Theme/ Characteristics	Associations/ People/Events Activities/Elements/Buildings	Nature of significance	Material evidence Physical/Documentary
Geological		Occurrence of fossils especially high in area between Yzerfontein and Saldanha Bay. Early hominid remains found near Hopefield	Rarity and scientific value Occupation of landscape by early human ancestors spanning from 300 000 yrs BP	West Coast Fossil Park Fossil human footprints found at West Coast National Park (Macrae 1999)
Precolonial	Traditional hunting and grazing territory for indigenous groups	The study area has a long history of human occupation. Stone artefacts dating to the Early Stone Age (700 000 years ago) and the Middle Stone Age (150 000 – 30 000 years ago) have been found in agricultural fields, along river banks and mountain slopes.		
		From 30 000 years ago the area was populated by people who lived in caves and shelters and hunted wild animals and gathered wild plant foods (Bushmen or San).		
		At about 2000 years ago, Khoekhoe or herders moved into the region. The Khoekhoen herds competed directly with the wild game for grazing and gradually the Bushmen were displaced, moving to mountainous areas unsuited to the Khoekhoe and their herds.	The tension between groups of indigenous people is indicative of the competition for natural resources.	The tension between the Bushmen and the Khoekhoe is illustrated by the collective name given to the Bushmen by the Khoekhoe, San, which is a derogative term <sup>10</sup> .
	Portuguese age of exploration	1488 Bartholomeus Dias anchored in Mossel Bay. The bay was well frequented by Khoekhoe and their herds of cattle.		The Post Office Tree used for centuries to hide correspondence for passing ships.
Dutch 17 <sup>th</sup> century	Establishment of refreshment station at Cape of Good Hope  Traditional grazing land of Khoekhoe. Arena for stock trading between Khoekhoe and VOC and (illegal) freeburghers	1652 Dutch East India (VOC) established refreshment station at the Cape ( <b>Cape Town</b> ). Trade expeditions into the interior to source cattle and sheep from local Khoekhoe tribes.  VOC outposts established along the boundaries of the settlement at the Cape. While outposts had a range of functions, some were predominantly stock outposts, while others had defensive functions (Sleigh 2004).  The VOC outpost Keert de Koe established in 1659 at the mouth of the Salt River on the route used by the Khoekhoe to move stock between grazing grounds at	Outposts established to facilitate trade with local Khoekhoe and to control illegal trade between freeburghers and Khoekhoe. Appear to be situated at 'gateways' or entry points into the settlement.	VOC outpost established at Waveren in 1699 – the exact location is not known, but appears to have been situated at the foot of the Roodezand kloof (Fransen 2004).

<sup>10</sup> The relationship between the Dutch and the Bushmen was marked with mutual aggression. The Bushmen, already under environmental pressure from the Khoekhoen herds, fiercely defended what was increasing becoming their last strongholds. When the stock farmers started encroaching into the interior, they were attacked and their cattle stolen. During much of the 18<sup>th</sup> century commandos were organised by freeburghers, to punish (effectively massacre) Bushmen groups that were seen to be harassing farming settlements.

Period	Role/Theme/ Characteristics	Associations/ People/Events Activities/Elements/Buildings	Nature of significance	Material evidence Physical/Documentary
		Saldanah and trade centre at Table Bay.		
	Transport networks	Route over the Hottentotsholland mountains into the Overberg interior 'formalised' by c1700. The tollhouse at the base of the mountain dates to the 1740s (Ross 2003:15).	Use of Khoisan tracks as routes into the interior.	Old name for the Hottentotsholland pass was 'T'kana Ouwe'/ <i>Gantouw</i> or Elandspad. Wagon ruts visible in the relic of the old road.
		Initially settlement at the Cape confined to Table and Liesbeeck River valleys. Expansion northwards into Drakenstein and Stellenbosch Districts in late 17 <sup>th</sup> century.	Discrete villages established at Stellenbosch (1685), Paarl/Simondium (1699) and Franschhoek (predominantly a rural settlement until 1833)	Archival, street layouts, old buildings
Dutch 18 <sup>th</sup> century	Moving boundaries of Dutch interest as farmers move further away from Cape Town	By the early 1700s most of the outposts on the outskirts of Cape Town were defunct and the outposts regranted as farms to freeburghers. VOC outposts were granted further afield.  The route between Cape Town and Saldanah Bay, originally a traditional Khoekhoe grazing route, became the main route along which the VOC moved cattle grazed in the Saldanah Bay area to the Castle. By 1732 this road is well established and is indicated on title deeds	Local Khoekhoe no longer has significant herds of cattle and were not considered to be a military threat to the settlement at the Cape.	c1700 VOC outposts established at Groenekloof (Mamre), Ganzekraal, and Riebeeck Kasteel. The purpose of these outposts were (i) acquire cattle and stock from Khoekhoe and supply the refreshment station at the Cape (ii) to defend the settlements from possible attacks. The West Coast outposts were largely cattle outposts, although salt collection took place at the natural pans near Geelbek and Yserfontein (Sleigh 2004) .
		Expansion of the VOC interests into the Overberg: VOC outpost established at <i>Rietvallei aan de Buffeljagtsrivier</i> in 1734 (Fransen 2006:88).		Robert Gordon (Commander of the Cape garrison between 1780 and 1795) undertook numerous explorations in the interior. In 1777 he travelled through the interior towards Graaff-Reinet. He overnighted at the farm Brakkefontein (on which Aberdeen was established). A memorial commemorates his journey and marks the location of the kopjie from which he drew his panorama of the Sneeuberg and surrounding plains ( <a href="http://web.uct.ac.za/depts/age/people/Gordon/frameset.htm">http://web.uct.ac.za/depts/age/people/Gordon/frameset.htm</a> )
		Ferdinand Appel acquired grazing rights to pastures close to the hot water springs just outside present day Caledon in 1708. Accommodation for visitors was made available and Appel charged for the privilege to use the hot springs (Fransen 2006:155).		
Dutch: 18 <sup>th</sup> century	Expansion of settlement and trek	<b>Malmesbury</b> , according to Fransen (2006) is one of the oldest founded settlements at the Cape: originating as	The town itself only developed during the 19 <sup>th</sup>	Plan of the town c1800 by JW Wernich showing a small settlement consisting of the church and

Period	Role/Theme/ Characteristics	Associations/ People/Events Activities/Elements/Buildings	Nature of significance	Material evidence Physical/Documentary
	farmers into the interior	a church town dating to 1743. It was recommended that a church be erected in the Swartland to service the needs of the farmers of the outlying areas.  The church was built in 1745 along the banks of the Diep Rivier (Atwell 2008). For much of the 18th century, the settlement remained small and centred around the Church.	century (Fransen 2006:97).	parsonage with its associated agricultural lands and 4 other dwellings and proposed erven (In Fransen 2006:98).
		<b>Swellendam</b> was established as an administrative centre in 1745. Better control was required over stock farmers who had expanded over the Hottentotsholland into the interior. The Drostdy was erected on the old wagon route into the interior where it crossed the Koorlands River (currently part of the Swellendam Museum complex). In 1795, Swellendam rebelled and declared itself a Republic. The republic lasted 5 months (Hart 2006).	A church at Swellendam only established in 1798. This was a cause of great dissatisfaction with the local farmers and led to a rebellion against the VOC in 1795 (Fransen 2006:88).	The expansion of the town is associated with the establishment of a church in 1798. During the 19 <sup>th</sup> century, Swellendam became the seat of the trading firm Barry & Nephews.
First British Occupation 1795-1803		<b>Graaff-Reinet</b> was established in 1785 as an administrative centre.  In 1803 a proper Drostdy was constructed and Andries Stockenstrom was appointed as Landdrost. The Drostdy was designed by LM Thibault	Church Street is one of the oldest streets in G-R. Very little is known about the early appearance of the town. According to Fransen (2006:112) the church dates to 1796.	Graaff-Reinet proclaimed itself a republic after an armed uprising in 1795 led by Adriaan van Jaarsveld. The rebellious nature of the Graaff-Reinet inhabitants were finally stilled in 1803, after a visit by the then Governor, General Janssens (after whom Jansenville is named) (Fransen 2006:112).
		A VOC outpost was established at Mossel Bay in 1787.		
Second British Occupation 1806-1814	Alienation from land and resources result in loss of independence of the indigenous Khoekhoe and absorption into colonial society as itinerant labourers.	<b>Mamre</b> , established in 1807, is the second oldest Moravian mission in the Western Cape and was established at the old VOC outpost of Groenekloof (also known as Kleine Post) The mission consisted of the farm Groenekloof, A Khoe reserve, Louwplaats and Crujwagenskraal (Fransen 2006:128). The mission station retained the name Groenekloof until 1854, when it was changed to Mamre.		Although not much of the original character survives in the surrounding residential area of Mamre, the historical core is a heritage resource of great significance.
	Abolition of slave trade and emancipation of slaves.	1807 Abolition of the Slave Trade in Britain. Slaves at the Cape were only liberated in 1838		1808 slave and Khoe rebellion instigated by Louis of Mauritius (who lived and worked in Cape Town). The 'march' on Cape Town started from farm Vogelgezang to the north of Malmesbury. Slaves and Khoe servants joined the 'freedom' march, 340 men in total. ( <a href="http://www.iziko.org.za/iziko/press/20081023.html">http://www.iziko.org.za/iziko/press/20081023.html</a> )

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		In 1810 it was decided to establish a sub-drostdy just over the Hottentotsholland pass. A portion of the farm Klein Swartberg was acquired. The town was named <b>Caledon</b> , in honour of the then Governor, the Earl of Caledon (Fransen 2006:155).		
		<b>George</b> has its roots in the VOC timber outpost (Outeniqua land) established there in 1777. In 1811 Drostdy was established and the town surveyed (Fransen 2006).	George was on the main route eastwards and was situated roughly halfway between Swellendam and Graaff-Reinet (Fransen 2006:162).	
		The London Missionary Society established a mission station at <b>Suurbraak</b> in 1812 at the request of Hans Moos, who identified himself as a Khoe captain. The emancipation of the slaves swelled the number of inhabitants at the mission station and in 1858, Governor George Grey allocated additional land to the mission (Fransen 2006:140).		Pacaltsdorp is another mission station, close to George, of a similar vintage as Suurbraak, also established at the request of a Khoe captain, Dikkop (Fransen 2006:143).
		Settlement established at towns at Hopedale, near present day Uniondale, around Church and school, dating to 1843.. Predominantly 'Coloured" and "Basters" (Fransen 2006:305).	Nearby Lyon, had a predominantly white population (Fransen 2006:305)	
British colony 1814-1901	British colonial expansion	The town and harbour of <b>Mossel Bay</b> originated in 1822. It was officially declared a town in 1848. The development of export trade in the form of wool, wheat, ochre etc resulted in the development of a good harbour and the town grew apace. A jetty was constructed at Varkens Bay in 1864 (Fransen 2006:269).		
	Formalisation of the road network	In 1828 Charles Mitchell was appointed as Superintendent of Works. One of his tasks was to improve the road over the Hottentotsholland. The new pass was opened in 1830 and facilitated the use of the much faster horse drawn vehicles. Houhoek pass was completed in 1831 (Ross 2003:77).		The number of wagons crossing the Hottentotsholland pass in 1821, is an indication of the traffic from the Cape into the interior: more than 4500 wagons per year crossed the pass and 20% of those were damaged as a result of the poor condition (Ross 2003:17)
		<b>Riversdale</b> was established as a church town as early as 1837 on a portion of the farm <i>Doornkraal aan de Vetterivier</i> . The town was named in honour of the then Landrost of Swellendam, Henry Rivers (Fransen 2006:214).		
		<b>Groot Brak Rivier</b> had its origins in an outspan at the point where the road eastwards crossed the Groot Brak		Richard Searle, toll keeper from 1852 onwards, together with his brother, opened the Temperance

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		River. A bridge was built over the river in 1844 with an associated toll house (Fransen 2006:333).		Hotel and also started a woolwashery and shoe factory (in 1886) (Fransen 2006:334).
	Era of Bain road engineering	In 1846 Andrew Bain rebuilt the Houhoek Pass		
	Boom in town/village development	<b>Darling</b> was founded in 1853 on part of the farm <i>Langefontein</i>	Named in honour of the acting Governor at the Cape at the time, Sir Charles Henry Darling (Fransen 2006:226)	
		In 1855, the town of <b>Aberdeen</b> was established as a church town on the farm <i>Brakkefontein</i> . The closest DR Church was at Willowmore (Nell 2008:133).	Named in honour of the birthplace of Rev Andrew Murray.	
		<b>Heidelberg</b> , 50 km outside Swellendam, was established as a church town in 1855. It was established on the farm <i>Doornboom</i> , which was established as early as 1733 (Fransen 2006:202-203).		
		<b>Philadelphia</b> has its origins in a church built on the a portion of the farm <i>Dassenvallei</i> in 1858. The parish was finally given permission to cede from the Durbanville parish in 1863 (Fransen 2006:199).		
		Mineral Baths known as Die Bron established on the vegetable gardens of the original Church grounds at Malmesbury. Land and buildings leased to Garibaldo Toucher in 1895 for a period of 50 years. The mineral spring was included in the lease. Baths would appear to have been built between 1841 and 1895.	Spring and stream shown on plan c1840 – Bathhouse and old boarding house demolished 1960s.	In 1922 the Malmesbury Municipality acquired the lease to the mineral baths. The then holder of the lease, Mr Zeff continued to use the bath house (ACO 1995)
First half 20 <sup>th</sup> century		<b>Uniondale</b> had its roots in two towns, Lyon and Hopedale, which were linked in 1856. Two separate grids associated with its separate beginnings are clearly visible (Fransen 2006:305).	Once well-known wagon building centre	
1900 – end of WWII		A harbour was built in 1911 at <b>Yzerfontein</b> exclusively for the transport of salt to Cape Town (Burden 2006).		
		During the Second World War a fishing canning factory with Jetty was built at Yzerfontein, but this was not successful (Bulpin 2001:119).		
WWII	Earlier grazing migration patterns between the interior and the coast, transformed into	The settlement of Yzerfontein only formally laid out in 1937 by the <b>Yzerfontein</b> Seaside estates, which was founded by Abraham Katz of Malmesbury. Prior to the formal establishment of the seaside resort town, Yzerfontein was a popular camping destination for		Similar patterns exist elsewhere eg between Hermanus/Onrus and Caledon farmers; Melkbosstrand and Durbanville/Tygerberg farmers; The Strand and Stellenbosch farms.



Period	Role/Theme/ Characteristics	Associations/ People/Events Activities/Elements/Buildings	Nature of significance	Material evidence Physical/Documentary
	tradition of coastal holiday destinations.	Malmesbury farmers (Burden 2006). As with elsewhere in the country there is a long historical association between farmers in the interior and the coast (an association which may even have its roots in the Khoekhoen migration patterns of moving cattle between coastal and interior grazing fields).		
	Modernisation of the road network	1930s, Sir Lowry's Pass was widened and tarred Upgraded and improved again in the 1950s. Houhoek pass was improved. (Ross 2003:21, 80). The construction of the new road between Mossel Bay and George, through Groot Brak also dates to the 1950s (Ross 2003:172).		
		The Outeniqua Pass was constructed in 1942 and used Italian prisoners of war as labour.		
		In 1955 Darling became a municipality as is particularly well known for its dairy produce, as well as pulse crops, grapes and wool as well as flowers (Bulpin 2001:118).		
Apartheid Era	Separate urban nodes for different racial groups	Proclamation of the Group Areas Act		
		The Houwhoek pass was upgraded again in the 1970s (Ross 2003:80). Construction of the new road between Mossel Bay and George, through Groot Brak, also dates to this period.		
		The development of Yzerfontein as a coastal residential area as opposed to a holiday resort town dates to the 1980s and is clearly reflected in the architecture of the town.		
Post Apartheid		This period is characterized by the establishment of RDP housing on the outskirts of towns effectively forming labour pools populated by people brought in from poorer provinces.		