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**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT AND HERITAGE REVIEW  
THE PROPOSED N21 (R300) CAPE TOWN RING ROAD TOLL PROJECT**

Prepared for

**CHAND ECOSENSE JOINT VENTURE**

By

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## **Executive Summary**

The proposed R300 Cape Town Ring Road Toll Project is intended as a toll road between Muizenberg and Melkbosstrand, which will be declared as a National Road, the N21.

The proposed project is divided into five Sectors.

### **Sector 1 (Southern Greenfields Section)**

A thin scatter of highly fragmented shellfish remains and two pieces of ostrich eggshell were located on a highly disturbed sand dune alongside Strandfontein Road (M17).

A large section of the proposed route between Vrygrond and the Philippi dune mining area is heavily infested with alien vegetation, resulting in low archaeological visibility.

Remnant dunes in the Philippi dune mining area are also highly degraded and disturbed in places.

### **Sector 5 (Philippi Link)**

No archaeological remains were located in Sector 5.

### **Sector 2 (Existing N21/R300)**

No archaeological remains were located in Sector 2.

### **Sector 3 (Highway Section 6)**

A few Middle Stone Age tools were located in the road reserve between De Bron Road and De Villiers Road (Durbanville). The road reserve between De Bron Road and the proposed Wellington Interchange (R302) is severely altered and modified.

A modern farm shed is located about 250m south of De Bron Road, alongside the Kulis River.

The receiving environment is not considered to be archaeologically sensitive, vulnerable or threatened.

### **Sector 4 (Stellenberg Interchange)**

No archaeological remains were located in Sector 4.

### **Sector 3 (Northern Greenfields Sections)**

Relatively large numbers of Early and Middle Stone Age tools were located between the proposed Wellington Interchange and the N7 (Highway Section 7). The route crosses mainly agricultural lands that have been altered and modified as a result of intensive farming practices. The tools were all found in a severely disturbed context and have been assigned low importance ratings.

The receiving environment is not considered to be archaeologically sensitive, vulnerable or threatened.

Eight farm homesteads occur between the Wellington Interchange (R302) and the N7, of which six are considered to be historically significant.

The proposed route (Highway Section 8) between the N7 and Otto du Plessis Drive is heavily infested with alien vegetation resulting in low archaeological visibility. Some fragmented shellfish remains were located between the West Coast Road and Otto du Plessis Drive, however.

The proposed Table View Alternative (Highway Section 8) crosses the southern portion of the farm Bloubergsveel, site of the historic Battle of Blouberg (1806). A large number of military graves occur in the area, whose precise locations are unknown.

**With mitigation, the overall/cumulative (i.e. the total) impact of the proposed N21 (R300) Cape Town Ring Road Toll Project on archaeological sites is likely to be moderate to low.**

Overall, the receiving environment is not considered to be archaeologically sensitive, vulnerable or threatened.

Construction of Highway Section 7 in Sector 3 will impact on the `sense of rural place' of six historic farm homesteads located near to the proposed route. The proposed road corridor, however, is sited a considerable distance from the farm homesteads, most of which are also completely or partially surrounded by large stands of Bluegum trees, thus minimising the visual impact of the proposed road even further. Large overhead powerlines also cut across the site, which already impact negatively on the `sense of rural place'.

**As a result, the overall impacts of the proposed road on the historic homesteads are likely to be low.**

With regard to the proposed N21 (R300) Cape Town Ring Road Toll Project, the following recommendations are made.

### **Sector 1 (Southern Greenfield Sections)**

- The proposed route (Highway Section 2) should be searched for archaeological remains once the route has been cleared of alien vegetation.
- The Environmental Control Officer (ECO) is to be briefed by a professional archaeologist what to look out for, particularly during vegetation clearing operations and preparation of the site for construction purposes.

Levelling and rehabilitation (including landscaping and reshaping) of dunes, to emulate natural dune systems, for example, may expose buried archaeological and possibly palaeontological (fossil) sites.

- Contractors, staff and plant operators should be briefed what to look out for, particularly during vegetation clearing operations and earthworks.
- Heritage remains uncovered or disturbed during vegetation clearing and earthworks should not be disturbed until inspected by the ECO and verified by a professional archaeologist.
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to a professional archaeologist, or the South African Heritage Resources Agency (SAHRA). Burial remains should be treated sensitively at all times. Human remains should not be removed until inspected by a professional archaeologist.
- Future proposed borrow pits and quarry sites servicing Sector 1 should be inspected for archaeological and palaeontological remains and monitored during construction.
- Trenching and excavations for bulk services should be inspected and monitored by a qualified palaeontologist and archaeologist at regular intervals during implementation of the project.
- The construction EMP should detail reporting procedures to manage the discovery of any heritage artefacts during construction. This would include the recovery or exposure of human burials during construction activities, for example.

#### **Sector 5 (Philippi Link)**

- Future proposed borrow pits and quarry sites should be inspected for archaeological and palaeontological remains and monitored during construction.

#### **Sector 2 (Existing N21/R300)**

- No archaeological mitigation is required.

#### **Sector 4 (Stellenberg Interchange)**

- No archaeological mitigation is required.

#### **Sector 3 (Northern Greenfields Sections)**

- The proposed road should be aligned as far as possible from farm homesteads, especially historically significant homesteads and buildings.
- The proposed road between the Vissershok Interchange and Bloubergsvei Farm (Highway Section 8) should be searched for archaeological remains once the route has been cleared of alien vegetation.

- The proposed road (i.e. Highway Section 8) between the R27 (the West Coast Road) and Otto Du Plessis Drive should be searched for archaeological remains once the route has been cleared of alien vegetation.
  - A buffer of at least 200m should be left to the south of Bloubergsvelei Farm to avoid as far as possible the historic battlefield site.
  - The road corridor between the West Coast Road and Bloubergsvelei Farm should be shifted as far south of the farm as is reasonably possible.
  - The Environmental Control Officer (ECO) is to be briefed by a professional archaeologist what to look out for, particularly during vegetation clearing operations and preparation of the site for construction purposes.
- Levelling and rehabilitation (including landscaping and reshaping) of dunes, to emulate natural dune systems, for example, may expose buried archaeological sites.
- Contractors, staff and plant operators should be briefed what to look out for, particularly during vegetation clearing operations and earthworks.
  - Heritage remains uncovered or disturbed during vegetation clearing and earthworks should not be disturbed until inspected by the ECO and verified by a professional archaeologist.
  - Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to a professional archaeologist, or SAHRA.
- Burial remains should be treated sensitively at all times. Human remains should not be removed until inspected by a professional archaeologist.
- Future proposed borrow pits and quarry sites should be inspected for archaeological sites and monitored during construction.
  - Trenching and excavations for bulk services should be inspected and monitored by a qualified archaeologist at regular intervals during implementation of the project
  - The construction EMP should detail reporting procedures to manage the discovery of any heritage artefacts during construction. This would include the recovery or exposure of human burials during construction activities, for example.

**There is a need for ongoing archaeological and historical input during the planning (design), implementation and construction phases of the proposed project.**

The above recommendations are subject to the approval of the South African Heritage Resources Agency (SAHRA).

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## **1. INTRODUCTION**

### **1.1 Background and brief**

Chand Ecosense Joint Venture has requested the Agency for Cultural Resource Management to undertake a Phase 1 Archaeological Impact Assessment (AIA) and Heritage Review (HR) of the proposed N21 (R300) Cape Town Ring Road Toll Project.

The proposed 68 km R300 Cape Town Ring Road Toll Project is intended as a toll road between Muizenberg and Melkbosstrand, which will be declared as a National Road, the N21.

The aim of the AIA and HR is to locate, identify and map significant archaeological and historical remains that may be negatively impacted by the proposed project, and to propose measures to mitigate against the impact.

### **2. TERMS OF REFERENCE**

The terms of reference for the AIA and HR were:

1. to identify areas of archaeological and historical importance that will be affected by the proposed project;
2. to assess the proposed road design in relation to any site of archaeological and historical importance;
3. to determine the significance of the identified impacts both before and after mitigation; and
4. to make recommendations that would be relevant to the design, construction and operational phases of the proposed project.

### **3. LOCATION AND STUDY AREA**

The location and study area for the proposed project is illustrated in Figures 1-4.

### **4. STUDY APPROACH**

The approach used in the Phase 1 AIA and HR entailed a foot and vehicle survey of the proposed routes, including the proposed interchange and toll plaza sites.

A desktop study was also undertaken.

The consultant briefed cultural historian, Ms Margaret Neethling with regard to heritage review component of the study.



The consultant also met with Ms Kirsten van Tonder of SAHRA regarding the proposed project and the approach followed with regard to the heritage review component of the study.

## **5. CONSTRAINTS AND LIMITATIONS**

The following constraints and limitations apply to the Phase 1 AIA and HR.

- The field study was constrained by a lack of detailed information on the proposed route selection. Aerial photographs with proposed route overlays, for example, would have enabled a more detailed and accurate assessment of the proposed project.
- The field study was severely constrained by thick vegetation cover in Sector 1 (Highway Section 2) and Sector 3 (Highway Section 8), resulting in low archaeological visibility.

## **6. LEGISLATIVE REQUIREMENTS**

### **6.1 The National Heritage Resources Act (Act No. 25 of 1999)**

#### **6.1.1 Structures (Section 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 South African Heritage Resources Agency (SAHRA), or the responsible provincial resources authority.

#### **6.1.2 Archaeology (Section 35 (4))**

No person may, without a permit issued by the SAHRA or the responsible heritage resources authority, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object.

#### **6.1.3 Burial grounds and graves (Section 36 (3))**

No person may, without a permit issued by SAHRA or a provincial heritage authority, destroy, damage, alter, exhume or 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.

## **6.2 Application requirements and procedure**

Permit applications must be made on the official form:

- *Application to destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of a Provincial Heritage Site or demolish a structure 60 years old or more, as protected in terms of the National Heritage Resources Act (Act No. 25 of 1999);*
- *Application for permit to destroy: Archaeological and palaeontological sites and meteorites;*

- *Application for permit: Burial Grounds and Graves.*

Permit application forms are available from SAHRA or any provincial heritage resources authority.

The Proponent (Penway) must submit permit applications to SAHRA or the relevant provincial heritage resources authority<sup>1</sup>.

## **7. IMPACT DESCRIPTION AND ASSESSMENT**

### **7.1 Sector 1 (Southern Greenfields Section)**

#### **7.1.1 Highway Section 1**

No significant archaeological remains were located in Highway Section 1. However, some dumping and infilling occur alongside the Lakeside, where some glass, ceramics, and modern building rubble and items were found.

#### **7.1.2 Highway Section 2**

The proposed route between Vrygrond and the Philippi dune-mining area is heavily infested with alien vegetation, resulting in low archaeological visibility (Figures 5 & 6). The Philippi dune mining area is also severely degraded and altered (Figure 7). Remnant dunes in the Philippi dune mining area are highly degraded and disturbed in places.

An extremely thin scatter of fragmented shellfish remains and two small fragments of ostrich eggshell were located on a sand dune alongside Strandfontein Road (M17). The surrounding dunes are highly degraded and dumping is extensive.

Importance of finds: **low**

Suggested mitigation: **none required**

Archaeological and fossil material may lie exposed and even buried beneath aeolian sands in the proposed route. Fossil material has been found on some sand mines on the Cape Flats e.g. the Anglo Alpha mine near Zandvliet (Halkett & Hart 1997).

An important site, possibly relating to a small trek fishing community in the late 19<sup>th</sup> or early 20<sup>th</sup> century, has been documented among the dunes at Capricorn Park (Halkett & Hart 1997).

According to Mr. Dalton Gibbs (pers. comm.) the reserve manager at the Rondevlei Nature Reserve, one Later Stone Age<sup>2</sup> (LSA) shell midden has been located in the northern portion of the reserve, as well as a single Dutch clay pipe (location unknown).

<sup>1</sup> The consultant can assist/advise the proponent with any necessary permit application requirements.

<sup>2</sup> A term referring to the last 20 000 years of precolonial history in southern Africa.

The overall impact of this proposed project action on archaeological remains in Sector 1 is likely to be moderate to low (Table 1).

Table 1. Assessment of archaeological impacts of the proposed N21 (R300) Cape Town Ring Road Toll Project: Sector 1 (Southern Greenfields Sections).

CRITERIA	IMPACT			
	CONSTRUCTION		OPERATION	
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION
Extent	L	L	L	L
Duration	L-M	L	L	L
Intensity	M-L	M-L	M-L	M-L
Probability	M	L	M	L
Status	N	P	N	P
Consequence	L	L	L	L
<b>Significance</b>	<b>L</b>	<b>M</b>	<b>L</b>	<b>M</b>
Confidence	H	H	H	H
Overall Significance	M-L	M-L	M-L	M-L
Nature of Impact	Minor Impacts	Minor Impacts	Minor Impacts	Minor Impacts
Degree of Confidence	H	H	H	H
Decision Guideline	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision

## 7.2 Sector 5 (Philippi Link)

### 7.2.1 Highway Section 10

No archaeological remains were located in Highway Section 10.

The proposed route between Prince George Drive and Strandfontein Road has been heavily impacted by township development.

The proposed route between Strandfontein Road and Vanguard Drive has also been heavily impacted and altered. Extensive levelling of sand dunes and infilling of wetlands for cultivation purposes in the Philippi agricultural area has occurred. Where this has taken place there is little chance of any archaeological material being preserved.

The Archaeology Contracts Office (University of Cape Town) undertook an archaeological/heritage assessment of the proposed Philippi Link (Hart & Halkett 1997). No conservation-worthy structures within the land envelope were identified, but the report noted that buried historical material may be found associated with older farms in the area such as Frylinck's Poort (Farm 789) (Halkett & Hart 1997:6).

Halkett and Hart (1997:7) note that if the building or the immediate precinct were to be impacted within a 50m radius of the Frylinck's Poort dwelling, a more detailed investigation of the structure and farm would be required (Halkett & Hart 1997:7).

Halkett & Hart (1997:7) also note that should the proposed road alignment change and encroach within a 50m radius of the dwelling house on the farm Vaderlandsche

Rietvallei, then a more focused historical and archaeological study of this site will also be required.

However, according to Mr Chris Manchip of Jeffares & Green Consulting Engineers (pers. comm.), such a study will not be required as the heritage issues have been addressed in the Environmental Impact Assessment report (Jeffares & Green 1998). As a result, the proposed Phillippi Link will not impact on the above-mentioned structures.

The overall impact of this proposed project action on archaeological and historical remains is in Sector 5 is likely to be low (Table 2).

Table 2. Assessment of archaeological impacts of the proposed N21 (R300) Cape Town Ring Road Toll Project: Sector 5 (Phillippi Link).

CRITERIA	IMPACT			
	CONSTRUCTION		OPERATION	
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION
Extent	L	L	L	L
Duration	L	L	L	L
Intensity	L-	L-	L-	L-
Probability	L	L	L	L
Status	P	P	P	P
Consequence	L	L	L	L
<b>Significance</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>L</b>
Confidence	H	H	H	H
Overall Significance	L	L	L	L
Nature of Impacts	Minor	Minor	Minor	Minor
Degree of Confidence	H	H	H	H
Decision Guideline	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision

### 7.3 Sector 2 (Existing N21/R300)

#### 7.3.1 Highway Sections 3-5

No archaeological remains were located in Highway Sections 3-5.

The overall impact of this proposed project action on archaeological remains in Sector 2 is likely to be low (Table 3).

Table 3. Assessment of archaeological impacts of the proposed N21 (R300) Cape Town Ring Road Toll Project: Sector 2 (Existing N21/R300).

CRITERIA	IMPACT			
	CONSTRUCTION		OPERATION	
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION
Extent	L	L	L	L
Duration	L	L	L	L
Intensity	L-	L-	L-	L-
Probability	L	L	L	L
Status	P	P	P	P
Consequence	L	L	L	L
<b>Significance</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>L</b>
Confidence	H	H	H	H
Overall Significance	L-	L-	L-	L-
Nature of Impact	Minor Impact	Minor Impact	Minor Impact	Minor Impact
Degree of Confidence	H	H	H	H
Decision Guideline	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision

#### **7.4. Sector 3**

##### **7.4.1 Highway Section 6**

Eight Middle Stone Age<sup>3</sup> (MSA) tools, comprising four flakes, three chunks and one core, were located in the proclaimed road reserve between De Bron Road and De Villiers Road. The road reserve between the R300/N1 and Wellington Road (R302) is severely modified and altered. The Kulis River corridor, located alongside the road reserve is also highly degraded, but wetlands and reedbeds do occur in places.

Importance of finds: **low**

Suggested mitigation: **none required**

A modern farm shed occurs about 250 m south of De Bron Road, alongside the Kulis River (Figure 8).

Importance of finds: **low**

Suggested mitigation: **none required**

The overall impact of this proposed project action on archaeological and historical remains in Sector 3 is likely to be low (Table 4).

<sup>3</sup> A term referring to the period between 20 000 and 250 000 years ago.

Table 4. Assessment of archaeological impacts of the proposed N21 (R300) Cape Town Ring Road Toll Project: Sector 3.

CRITERIA	IMPACT			
	CONSTRUCTION		OPERATION	
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION
Extent	L	L	L	L
Duration	L	L	L	L
Intensity	L-	L-	L-	L-
Probability	L	L	L	L
Status	P	P	P	P
Consequence	L	L	L	L
<b>Significance</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>L</b>
Confidence	H	H	H	H
Overall Significance	L-	L-	L-	L-
Nature of Impact	Minor Impact	Minor Impact	Minor Impact	Minor Impact
Degree of Confidence	H	H	H	H
Decision Guideline	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision	Impacts are not likely to affect project decision

### 7.5 Sector 4 (Stellenberg Interchange)

#### 7.5.1 Highway Section 9

No archaeological remains were located in Highway Section 9.

The overall impact of this proposed project action on archaeological remains in Sector 4 is likely to be low (Table 5).

Table 5. Assessment of archaeological impacts of the proposed N21 (R300) Cape Town Ring Road Toll Project: Sector 4 (Stellenberg Interchange).

CRITERIA	IMPACT			
	CONSTRUCTION		OPERATION	
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION
Extent	L	L	L	L
Duration	L	L	L	L
Intensity	L-	L-	L-	L-
Probability	L	L	L	L
Status	Negative	Negative	Negative	Negative
Consequence	L	L	L	L
<b>Significance</b>	L	L	L	L
Confidence	H	H	H	H
Overall Significance	L	L	L	L
Nature of Impact	Minor	Minor	Minor	Minor
Degree of Confidence	H	H	H	H
Decision Guideline	Impacts not likely to affect project decision	Impacts not likely to affect project decision	Impacts not likely to affect project decision	Impacts not likely to affect project decision

### 7.6 Sector 3 (Northern Greenfields Sections)

#### 7.6.1 Highway Section 7

ESA<sup>4</sup> and MSA tools are found throughout the Swartland region of the southwestern Cape. Such tools are commonly found in heavily worked agricultural lands, on sheet-washed slopes, in old borrow pits, quarries and dongas, in catchments and close to most water sources such as streams and rivers (Kaplan 2001a,b, 2002a and personal observation).

LSA and pastoralist herder sites occur less frequently in the flat regions of the Swartland, most probably having been destroyed as a result of residential development and intensive farming practices.

When the Dutch colonists arrived to set up a replenishment station at the Cape in 1652, they encountered several Khoekhoen (herder) groups. Some of these groups lived for part of the year on the Cape Peninsula as part of their seasonal round, while the larger groups grazed herds of sheep and cattle in the Tygerberg Hills, Cape Flats and further afield (Du Plessis 1998).

Overall, over a distance of some 12 kms, relatively large numbers of ESA and MSA tools were located in Highway Section 7, between the proposed Wellington Interchange and the N7. The topography of the road reserve in Highway Section 7 is generally flat. The affected environment is a predominantly rural landscape with a strong `sense of rural place'<sup>5</sup>.

<sup>4</sup> A term referring to the period between 250 000 and about 2 million years ago.

<sup>5</sup> `sense of rural place' is defined as the understanding of the environment indicated by use, history, and the surrounding landscape

The tools, comprising a range of modified and unmodified flakes, cores, split cobbles, handaxes, chunks, cleavers and choppers, were all located in heavily worked agricultural fields, in a severely disturbed context. Some tools were also located in dongas and erosion gullies, and in the flood plain close to the Diep River, in the general study area.

The ESA tools are all made on a range of fine to relatively fine grained quartzite river cobbles and can most likely be assigned to the early Acheulean Tradition<sup>6</sup> of the ESA. Quite a number of the tools appeared to be river rolled, suggesting that they were washed/deposited downstream from higher levels in the surrounding hills and mountains.

The generally smaller MSA tools are mostly made on fine-grained quartzite<sup>s</sup>, with some tools also made on fine-grained quartz. A few tools in silcrete were also found.

The tools were all located in a severely disturbed context and have been assigned low importance ratings.

Importance of finds: **low**

Suggested mitigation: **none required**

### **7.6.2 Highway Section 8**

The proposed route between the Vissershok Interchange and Bloubergsvei farm is infested with alien vegetation, resulting in low archaeological visibility.

Numerous LSA and some MSA sites have, however, been located in the surrounding area (Kaplan 1996, 2000a, b, c). LSA quarry sites have also been documented on the farm Groot Oliphantskop alongside the MR43, and north of the Vissershok landfill, alongside the N7 (Kaplan 1996, 2002b).

Although no archaeological remains were located between the Vissershok Interchange and Bloubergsvei Farm, the large numbers of sites that have already been recorded in the general study area, does suggest that additional sites may be located in the proposed route once alien vegetation has been cleared.

The southern portion of the proposed route (Highway Section 8), the Table View Alternative, follows the alignment of the proposed Bloubergstrand East-West arterial (Van den Honert 2001). The archaeological and historical impacts on this portion of the route have been discussed in detail elsewhere (Kaplan 1999).

The Table View Alternative crosses the southern portion of Bloubergsvei Farm, site of the historic Battle of Blouberg. Located to the west of the Vissershok landfill, the battle took place on Bloubergsvei farm on the 6 January 1806. In this battle, the Dutch East India Company (VOC) forces were defeated by a British expeditionary force, heralding the start of the second British occupation of the Cape (Kaplan 1998).

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<sup>6</sup> A term referring to the period roughly between 1.5 million and 250 000 years ago.



Although the main battle was focused around the vlei, opposing troops fought battles all around Blouberg Hill and the Kleinberg, with the defeated Dutch forces eventually retreating south to the Rietvlei (Kaplan 1998).

Buttons, gun flints, metal items, and lead shot have been located on the farm while the now-ruined farm house alongside the vlei was used as an emergency field hospital during the battle (Kaplan 1998 and Gary Thompson pers. comm.).

In addition, at least 120 military graves are known to occur in the area, whose precise locations are unknown (Du Plessis 1998).

Some shellfish remains were located between the West Coast Road (R27) and Otto du Plessis Drive, where the proposed route ends, at km 68.4. The proposed corridor is infested with alien vegetation, resulting in low archaeological visibility<sup>7</sup>.

The overall impact of this proposed project action on archaeological remains in Sector 3 (Northern Greenfields Sections) is likely to be moderate to low (Table 6).

Table 6. Assessment of archaeological impacts of the proposed N21 (R300) Cape Town Ring Road Toll Project: Sector 3 (Northern Greenfields Sections).

CRITERIA	IMPACT			
	CONSTRUCTION		OPERATION	
	WITHOUT MITIGATION	WITH MITIGATION	WITHOUT MITIGATION	WITH MITIGATION
Extent	L	L	L	L
Duration	M	L	M	L
Intensity	M-	L-	M-	L-
Probability	M	M	M	M
Status	Negative	Negative	Negative	Negative
Consequence	L	L	L	L
<b>Significance</b>	<b>M-L</b>	<b>M-L</b>	<b>L</b>	<b>L</b>
Confidence	H	H	H	H
Overall Significance	L	L	L	L
Nature of Impact	Minor	Minor	Minor	Minor
Degree of Confidence	H	H	H	H
Decision Guideline	Impacts not likely to affect project decision	Impacts not likely to affect project decision	Impacts not likely to affect project decision	Impacts not likely to affect project decision

<sup>7</sup> Large numbers of sites occur in the coastal zone between Bloubergstrand and Melkbosstrand (Kaplan 1993, 1998).

### **7.7 Farmsteads - A Brief Overview**

Eight farm homesteads occur in Sector 3 (Highway Section 7), of which six are considered to be of historical importance.

The farms include:

- **Groot Phisantekraal**

According to Franssen and Cook (1980:248), the U-shaped homestead must be older than 1815. It has a plain gable with holboel outline and a small pediment. The house has been much altered, and has been given a slate roof. Some of the original facade casements and the front door with drop-fan were moved to the back when new woodwork was inserted c. 1860. Inside, the original single-panel carved doors, ceilings and Batavian-tile floor survive. All these features point to a date well before 1800, possibly as early as 1759, though the gable may have been added in 1815 (Figure 9).

The long rectangular outbuilding, dated 1767, may provide a representative example of the early longhouses of the North Sea coastal regions of Holland, Denmark and Germany (Figure 10). During the second half of the 18<sup>th</sup> century and possibly even earlier, the longhouse preceded the free standing homestead, and the dwelling of the farmer, his stable, wagon-shed, fowl-house and sometimes the wine cellar, were all housed under the one long roof (Walton 1990:43).

Early travellers to the interior outspanned at Pampoenskraal, which was Durbanville's earliest name. When freehold farms came to be given out in the vicinity, those outspans were carefully left untouched, and it is noticeable in the Durbanville area today how the Company avoided allocating any land within the space left by the farms, one such farm being Phisantekraal (du Plessis 1998).

The homestead is blocked off from the proposed road by a stand of large Bluegum trees. The proposed road will be built about 800 m south of the homestead (Figure 11).

- **Klein Phisantekraal**

During the drought and depression of the mid 1880's, Phisantekraal was split into Groot and Klein Phisantekraal (Du Plessis 1998). While many of surrounding farms were sold off due to bad debt, Phisantekraal weathered the storm and today the two farms exist side by side, separated by fields and a large Eskom overhead powerline.

Although the original homestead at Klein Phisantekraal was demolished in the late 1940's (Mr Boetie Louw pers. comm.), some of the original outbuildings still stand (Figures 12 & 13).

The proposed road will be located about 300 m north of the farm complex (Figure 14).

- **Vrymansfontein**

According to Franssen and Cook (1980:227), the present homestead is undated. It has a hobol gable with the edge mouldings of both the lower, convex curves and the upper, concave ones being extended onto the gable fact in generous scrolls. There is a shell at the top, inserted between the two upper scrolls. This gable probably dates from c. 1780. Shingles has replaced the thatch roof. The house has the shape of an H with the right back wing missing. There is a modern addition where it should have been (Figure 15). The back facade has been altered. A number of old outbuildings occur within the farm complex.

The homestead is blocked off from the proposed road by a stand of large Bluegum trees. The proposed road will pass about one kilometre north of the farm (Figure 16).

- **Welgegund**

According to the current owner of the farm (Mr J. E. Loubser, pers. comm.), the original homestead (Figure 11) and outbuildings were built more than 200 years ago. The main house has not been altered much. The original thatch roof was replaced about 100 years ago.

The homestead is blocked off from the proposed road by a stand of large Bluegum trees. The proposed road will pass about 800 m south of the farm (Figure 18).

- **Kuiperskraal**

According to Franssen and Cook (1980:247), this U-shaped farmhouse is undated. Its courtyard is now built in, and externally, the farmhouse has been Victorianised, with a square and pedimented front gable (Figure 19).

The proposed road will pass about 500 m south of the farm (Figure 20).

- **Welvergenoeqd**

The original homestead, probably older than 100 years, is situated above the banks of the Diep River (Figure 21). The unoccupied farmhouse has been badly vandalised.

The homestead is blocked off from the proposed road by a stand of large Bluegum trees. The proposed road will be built to the north-west of the homestead (Figure 22).

- **Olifantskop**

The front gable of the main house is square with a plain pediment, and is probably mid 19<sup>th</sup> century (Figure 23). The side gables (those at the back are clipped off by the iron roof) date from the same period. The house is T-shaped and is probably older than its gable. It might have been built in 1824, and rethatched c.1855, given its present gables and doors and windows with internal shutters. The house is

surrounded by modernised outbuildings and waf walls (Fransen and Cook 1980:249).

The road will be built a considerable distance to the south of the homestead and the Vissershok Road.

- **Platrug.**

Platrug farm comprises a relatively modern farm building and some modern outbuildings.

The proposed road will pass about one kilometre to the north of the farm.

**None of the historical farmsteads described above will be directly impacted upon by the proposed project.**

Large stands of Bluegum trees partially or completely surround the farmsteads, thus significantly softening and reducing the visual impact of the proposed road.

The proposed road corridor is also located a considerable distance from the farmsteads, thus minimising the visual impact even further.

In addition to the above, large overhead Eskom powerlines currently cross the surrounding rural landscape, already contributing to a negative visual impact on the historical landscape and the 'sense of rural place'

And according to the draft visual impact assessment report, the proposed route in Sector 3 (Highway Section 7) will not impact significantly on the historical landscape of the receiving environment (OVP 2002).

## **8. 'RED FLAG' AREAS**

### **8.1 Sector 1 (Southern Greenfields Sections)**

'Red Flag' areas include the vegetated dunes between Vrygrond and the Phillipi dune mining area.

Stone Age, historical and palaeontological (fossil) sites may be uncovered or exposed during vegetation clearing operations, levelling and rehabilitation (including landscaping and reshaping) of dunes, bulk earthworks and excavations.

Human burials may also be uncovered or exposed during bulk earthworks and excavations.

### **8.2 Sector 3 (Northern Greenfields Sections)**

'Red Flag' areas include the proposed route (Highway Section 8) from the N7 to Otto du Plessis Drive (M14).

Stone Age sites and burials may be uncovered or exposed during vegetation clearing operations, levelling and rehabilitation (including landscaping and reshaping) of dunes and bulk earthworks and excavations.

The proposed Table View Alternative/East-West Arterial may impact on the historic Battle of Blouberg site on the farm Bloubergsvlei.

A number of war graves relating to the battle are also known to occur in the area. The precise locations are, however, unknown.

## **9. 'NO GO' AREAS**

Archaeological impacts would most likely be low if construction of the proposed road does not go ahead.

However, The proposed project presents considerable opportunities and benefits for heritage specialists. These include:

- the opportunity to identify and record previously unknown archaeological and palaeontological sites.
- the opportunity to identify measures to protect and maintain any valuable archaeological, palaeontological and historical sites that may exist in the proposed routes.
- the opportunity to undertake research on previously unknown archaeological and palaeontological sites.

## **9. CUMULATIVE IMPACT**

Based on the desktop and field study, the overall/cumulative impact (i.e. the total impact) of the proposed road on significant archaeological sites is likely to be moderate to low.

With regard to historical resources such as the farm homesteads in Sector 3 (Northern Greenfield Section), the overall/cumulative impact of the proposed project is likely to be low.

## **11. CONCLUSION**

The AIA and HR has shown that the proposed N21 (R300) Cape Town Ring Road Toll Project will, **with mitigation**, have no significantly high negative impacts on archaeological and historical sites.

In general, the receiving environment for the proposed N21 (R300) Cape Town Ring Road Toll Project is not considered to be archaeologically or historically sensitive, vulnerable or threatened.

## **12. RECOMMENDATIONS**

With regard to the proposed N21 (R300) Cape Town Ring Road Toll Project, the following recommendations are made.

### **12.1 Sector 1 (Southern Greenfield Sections)**

- The proposed route (Highway Section 2) should be searched for archaeological remains once the route has been identified and cleared of alien vegetation.
- The Environmental Control Officer (ECO) is to be briefed by a professional archaeologist what to look out for, particularly during vegetation clearing operations and preparation of the site for construction purposes.

Levelling and rehabilitation (including landscaping and reshaping) of dunes to emulate natural dunes systems, for example, may expose buried archaeological and possibly palaeontological (fossil) sites.

- Contractors, staff and plant operators should be briefed what to look out for, particularly during vegetation clearing operations and earthworks.
- Heritage remains uncovered or disturbed during vegetation clearing and earthworks should not be disturbed until inspected by the ECO and verified by a professional archaeologist.
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to a professional archaeologist, or the South African Heritage Resources Agency.

Burial remains should be treated sensitively at all times. Human remains should not be removed until inspected by a professional archaeologist.

- Future proposed borrow pits and quarry sites servicing Sector 1 should be inspected for archaeological and palaeontological remains and monitored during construction.
- Trenching and excavations should be inspected by a qualified palaeontologist at regular intervals.
- The construction EMP should detail reporting procedures to manage the discovery of any heritage artefacts during construction. This would include the recovery or exposure of human burials during construction activities, for example.

#### **12.2 Sector 5 (Philippi Link)**

- Future proposed borrow pits and quarry sites servicing Sector 5 should be inspected for archaeological and palaeontological remains and monitored during construction.

#### **12.3 Sector 2 (Existing N21/R300)**

- No mitigation is required.

#### **12.4 Sector 4 (Stellenberg Interchange)**

- No mitigation is required.

#### **12.5 Sector 3 (Northern Greenfields Sections)**

- The proposed road should be aligned as far as possible from historically significant homesteads and buildings.
- The proposed road between the Vissershok Interchange and Bloubergsvelei Farm (Highway Section 8) should be searched for archaeological remains once the route has been cleared of alien vegetation.
- The proposed road (i.e. Highway Section 8) between Otto Du Plessis Drive and the R27 (West Coast Road) should be searched for archaeological remains once the route has been cleared of alien vegetation.
- A buffer of at least 200m should be left to the south of Bloubergsvelei Farm.
- The road corridor between the West Coast Road and Bloubergsvelei Farm should be shifted as far south of the farm as possible.

- The Environmental Control Officer (ECO) is to be briefed by a professional archaeologist what to look out for, particularly during vegetation clearing operations and preparation of the site for construction purposes.  
Levelling and rehabilitation (including landscaping and reshaping) of dunes to emulate natural dunes systems, for example, may expose buried archaeological and possibly palaeontological (fossil) sites.
- Contractors, staff and plant operators should be briefed what to look out for, particularly during vegetation clearing operations and earthworks.
- Heritage remains uncovered or disturbed during vegetation clearing and earthworks should not be disturbed until inspected by the ECO and verified by a professional archaeologist.
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to a professional archaeologist, or the South African Heritage Resources Agency.  
Burial remains should be treated sensitively at all times. Human remains should not be removed until inspected by a professional archaeologist.
- Future proposed borrow pits and quarry sites should be inspected for archaeological sites/remains and monitored during construction.
- The construction EMP should detail reporting procedures to manage the discovery of any heritage artefacts during construction. This would include the recovery or exposure of human burials during construction activities, for example.

**There is a need for ongoing archaeological and historical input during the planning (design), implementation and construction phases of the proposed project.**

The recommendations are subject to the approval of SAHRA.



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