

# CHAPMANS PEAK DRIVE - HERITAGE IMPACT ASSESSMENT OF PROPOSED LOCATIONS OF TOLL PLAZAS

Prepared for

**Ninham Shand Consulting Services**

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## **EXECUTIVE SUMMARY**

The Archaeology Contracts Office of the University of Cape Town was appointed by Ninham Shand Consulting to conduct a heritage impact assessment (HIA) as part of the EIA of 4 proposed toll structure sites on Chapman's Peak Drive. The 4 potential sites, eliminated from 11 possibilities, were selected on the basis of overall environmental and heritage concerns. While no protected material was identified on the 4 sites, indirect impacts may affect East Fort as well as traditional uses of the route. Impacts to landscape are also identified as an issue that will need to be addressed through sensitive design of the preferred tolling structure.

Low impact sensing methods such as number plate recognition are favoured, however, creation of a single toll plaza at sites C or E will allow traditional access to picnic places and less changes to the landscape.

# 1 Introduction

The Archaeology Contracts Office of the University of Cape Town was appointed by Ninham Shand Consulting Services to undertake a Heritage Impact Assessment of 4 proposed toll plaza sites and realignment of Chapman's Peak Drive (Monkey Valley).

Chapman's Peak Drive is a significant tourist and commuter route between Noordhoek and Hout Bay. It is a highly popular scenic drive on account of its spectacular views, mountain scenery and tortuous bends hewn into the side of the Constantiaberg. Rock falls and other maintenance problems, which required remediation over the years, have plagued the route, which was completed in 1922. Over time the soft shale cuttings above the road have weathered resulting in an increase in rock falls exacerbated by serious mountain fires, which have led to further erosion and destabilization. The road was closed to the public in 2000 after a falling boulder struck a vehicle causing a fatality.

The current rehabilitation of Chapman's Peak Drive is being accomplished by a provincial government private sector partnership – Entabeni Concessions (Pty) Ltd in conjunction with PAWC. This has involved extensive measures to make the route safe from rock falls and make good damaged and eroded areas, the costs of which will be funded in part by an access toll. Since the rehabilitation did not represent a scheduled activity in terms of the Environment Conservation Act, it was not subject to a full Environmental Impact Assessment (EIA) although Arcus Gibb conducted a scoping exercise. The construction of the toll plazas and the proposed realignment at Noordhoek are construed to be upgrading as opposed to maintenance and therefore require approval. Despite the fact that Chapman's Peak Drive is a Heritage Site as defined by the 60 year clause of the National Heritage Resources Act, no heritage impact assessment has been carried out to evaluate the envisaged changes, apart from this report, that evaluates the proposed construction of the toll plazas and the Monkey Valley and Noordhoek realignments.

## 1.1 Terms of reference

The Archaeology Contracts Office was required to

- Provide an overview of the local and regional heritage context of the study area
- The sites/aspects of heritage/cultural significance identified at the screened alternative locations for the tolling structures and road alignment.
- Any unique or significant sites encountered
- A description and assessment of the significance of the impacts of the proposed activities on the heritage resources (on a nominal scale of very low, low, medium, high, very high): and detailed guideline measures to manage and mitigate any impacts, particularly during the construction phase, and an assessment of their likely effectiveness. The guidelines should include appropriate recommendations for ultimate design and layout of the tolling structures.

## 2 Description of the affected environment

Chapman's Peak Drive is a double lane road that links Hout Bay with Noordhoek via a tortuous mountainside pass. The road ascends fairly gently from Hout Bay until it reaches the lookout point at Chapman's Peak where in a significant early work of engineering, it is incised into the soft sedimentary layer making use of the interface between soft shales and underlying granites. It is here that some of the best exposures of the geological history of the Cape Peninsula are to be seen. The narrow road then descends towards Noordhoek and the Fish Hoek valley. The pass is scenically spectacular allowing the traveler sight of some of the finest views that the Cape Peninsula has to offer. Picnics at a number of formal picnic sites along Chapman's Peak drive have been a long local tradition, furthermore a number of

hiking trails depart from the roadside to various localities on the Constantiaberg and Silvermine. Not only is Chapman's Peak Drive a popular tourist route, but it remains an integral link in the South Peninsula circuit system. It is used as a commuter route from Hout Bay to Noordhoek, and even used as an alternate route to the city by residents of the south Peninsula. Its recent closure due to safety concerns has been a loss to both locals and visitors alike.

In future, the concession holders will be responsible for the maintenance of the picnic sites within the road reserve, while the mountainside and coast falls under the control of the Cape Peninsula National Park. Several significant heritage sites lie in the immediate vicinity of the route, - the most important of which is East Fort, an 18<sup>th</sup> century fortification and associated ruined structures, which are currently classified as a *grade 2* provincial heritage site.

## **2.1 General history**

Chapman's Peak gained its name from an event that took place well before permanent European settlement took place at the Cape. In 1607, John Chapman, aboard the English boat, the "Consent" was sent into the bay in the ships pinnace to establish if it was a suitable anchorage – his observations are recorded in the ships log. The name "Chapman" stuck to the area.

Hout Bay was not a very accessible place to early colonists – parts of the Nek area and valley were vegetated with dense forests and were fairly impassable for wagons. Local Khoekhoen groups utilized the valley on a seasonal basis, occasionally bringing in herds of sheep and at times using the area as a refuge when the complex politics between Khoekhoen groups and the Dutch colonists resulted in conflict. Easiest access to the area was by ship, the bay providing an excellent anchorage. The farm Kronendal was granted in the late 17<sup>th</sup> century.

The first permanent European settlement of any consequence took place in the mid-late 18<sup>th</sup> century when French Troops arrived at the Cape in alliance with the Dutch East India Company. The French commander, Colonel Conway identified Hout Bay as a strategic underbelly and set about strengthening local fortifications. This included building a redoubt and signal station at Constantia Nek, as well as the construction of two gun batteries at the east and west entrances to the bay. Elements of all three of these sites have survived, however the remains of East Fort which is bisected by Chapman's Peak Drive, are the most appealing and celebrated by local heritage organisations. The military significance of Hout Bay declined in the early 1800's at which time the forts were virtually abandoned until interested citizens initiated conservation measures for the ruins in the early 20<sup>th</sup> century. The Chapman's Peak Drive area saw renewed activity after the turn of the 19<sup>th</sup>/20<sup>th</sup> century with the discovery of marginally viable manganese deposits in the Constantiaberg. This was mined for a short period from 1909 to 1911 – excavated ore was loaded into a shoot and transported by gravity to a jetty built from the coast just north of East Fort. The ore was then loaded into lighters and transferred to steamers anchored in the bay. Supports for the ore jetty and access path to the mine have survived. During the Second World War the Hout Bay forts were re-armed with quick firing Hotchkiss guns (West Fort and Klein Gibraltar) while a Forward Observation Post (FOP) and barracks were built at the lower battery at East Fort. The mountainside between Koeël Bay and Hout Bay village was used for forestry. This has since been removed and indigenous vegetation permitted to proliferate. The remains of a number of forestry tracks still exist on the mountainside.

For many years Hout Bay remained a rural farming and fishing community, with residential development of the area only really accelerating after in the second half of the 20<sup>th</sup> century.

## **2.2 History of Chapman's Peak Drive**

The road infrastructure to Hout Bay was initially driven by the Dutch East India Company who opened up Constantia Nek to harvest the indigenous forests which grew in the area. In the 18<sup>th</sup> century the roads were extended with the need to transport equipment and troops to and from four military installations in the Valley. East Fort and Klein Gibraltar batteries were accessed via a military road along the edge of Constantiaberg that extended as far as East Fort. Parts of this old road still exist however; much of it lay on the present alignment of Chapman's Peak Drive. An informal track may have continued along the mountainside southwards to the only privately owned land on Chapman's Peak – a small quitrent farm known as *Helsdingen* granted in 1815. There was no formal linkage to Noordhoek, however, the paths over the Constantiaberg to Tokai via Blackburn ravine may have been used for hundreds of years.

In 1913 the Cape Government put forward the concept of an "All Round the Cape Peninsula Road" suitable for motorcars (which were becoming increasingly common in South Africa). Finance for this idea was provided by the Ministry of Finance in compensation for the capital of the country being moved to Pretoria. The Government at no charge provided convict labour. Initial construction work commenced on De Waal Drive and the Miller's Point, Plateaux Road and Cape Point link. Work on Chapman's Peak commenced in 1915 after the necessary surveys had been completed. The work force, which consisted of some 700 convicts, excavated away the soft shales that overlay the harder Cape granites, creating a platform on which to lay the road. Much of the rock breaking was done by hand with minimal use of explosives. In 1922 the 11 km of road was completed at cost of £20 000. From the time of completion of the road it was recognized that rock falls would occur from time to time, and provision had to be made in terms of management of the road for periodic clearing of the route, however it is quite clear that the designers of the road did not envisage the degree of weathering of the newly broken shales and the disasters that this would lead to 80 years later.

## **2.3 Heritage sites associated with Chapman's Peak Drive**

### **2.3.1 Geological and Palaeontological sites**

Good examples of cross-bedding in the waterborne sedimentary rock are visible at the lookout point. The cuttings of Chapman's Peak Drive have provided an outstanding opportunity to view the geological history of the Cape Peninsula. The sequence consists of the underlying Cape Granite formations, the soft shales and mudstones of the Graafwater formation overlain by Table Mountain Sandstones. Generations of geography scholars and university geology students have visited the area as part of their outdoor education.

### **2.3.2 Pre-colonial sites**

There are unconfirmed reports of possible shell middens on the coastline below Chapman's Peak Drive although none have been formally recorded. Some large complexes of shell middens have been recorded and sampled in the Hout Bay valley, Llandudno and Sandy Bay. No sites have been observed within that Chapman's Peak road reserve or immediate vicinity.

### **2.3.3 Colonial period military site**

Chapman's Peak Drive cuts directly through the East Fort complex separating the blockhouse, mess and kitchen area from the gun battery below Chapman's Peak Drive. This is considered to be a very unfortunate impact to the historic precinct. The Hout Bay Llandudno Heritage Trust informally but conscientiously looks after East Fort. They have maintained the site, restored cannons to working order and in agreement with Cape Peninsula National Park, are about to embark on the creation of a living

museum at the site. East Fort has a fascinating history and is considered to be a very important heritage place. Application has been made to SAHRA to have it declared a grade 1 or National Heritage Site.

### **2.3.4 Industrial heritage site**

The remains of the manganese ore jetty are visible on the shore close to East Fort. On the mountainside above, is the mined crevasse, access path, and in places the alignment of the chute used to transport the ore down to the jetty. Today the site forms the focus of a hiking trail. Special tours and presentations on the subject are offered by the Hout Bay Museum that also has a good collection of photographs and documents.

## **3 Method**

Method of evaluation has been through site inspection, combined with a sound familiarity with the general heritage of the area in terms of the local conservation bodies and their perspective in terms of Chapman's Peak Drive (the Archaeology Contracts Office has over the years completed several projects in the Hout Bay Valley, in Llandudno, at Koeël Bay and recently, an extensive study of East Fort and other related military sites). A serious problem in completing this assessment, is the fact that there is no general heritage assessment completed for the rehabilitation of Chapman's Peak Drive, which means that assessment of the tolling options has to take place in isolation and without reference to a broader conservation strategy for the area.

## **4 Evaluation of the impact of Toll Plazas and Monkey Valley re-alignment**

It is within the above-described historical context that this report evaluates the relative impacts of 4 proposed toll plaza sites and realignment of a section of the route close to Noordhoek. While none of the proposed sites will physically impact or disturb any heritage material as defined by the National Heritage Resources Act 25 of 1999, the difficulty lies in defining the intangible heritage qualities that that will be affected by the proposal. By this we refer to the ambience of the place, its traditional use and the values that people associate with it. Furthermore, the situation is made more difficult by the fact that there is no baseline heritage status evaluation of Chapman's Peak Drive as a whole to act as a benchmark against which we can evaluate the proposal. The kinds of heritage issues that are definable mesh closely with those of other disciplines – especially aesthetic and social issues relating to the appearance of the proposed Toll Plazas and the way they could affect the traditional use of Chapman's Peak Drive and its associated amenities.

Thus, possible heritage impacts are defined as follows:

- Changes to traditional use of Chapman's Peak Drive
- Changes to the appearance of Chapman's Peak Drive – ie landscape identity
- Changes to accessibility of associated heritage sites and hiking trails
- Indirect impacts to associated heritage sites
- Direct physical impacts to heritage

## **4.1 Comparative evaluation of tolling structure localities**

The proposed tolling structures are fairly extensive in size in that they have been designed to eliminate bottlenecks during peak traffic periods – holidays and high tourist season. It is proposed that each toll plaza will require up to 6 separate lanes and associated facilities for staff. Under these circumstances there is a high risk of visual impacts (dealt with by another consultant), not only in terms of infrastructure but also the amount of cut and fill excavating that will be required. In general terms, a sound guideline of modern heritage conservation, which can be applied to any kind of heritage asset, is “change as much as is necessary but as little as possible” (one of the provisions of the ICOMOS Burra Charter on conservation). Taking this into account the 4 locations (indicated on Figure 1) are evaluated against each other. Table 1 evaluates the impacts of combinations of options for the tolling structures.

### **4.1.1 Site A (East Fort)**

This site will require substantial widening of the road and a significant cut and fill operation to create a platform for the toll plaza. It is an exposed site, which will impact the landscape qualities. It will exclude a number of picnic areas from easy public access. The most profound long-term impact will be to concentrate fee avoiding picnickers and day visitors to the lower Chapman’s Peak Drive – East Fort area. This will substantially increase the concentration of people around the highly sensitive East Fort site along with a higher incidence of social mischief and vandalism. This will place a heavy burden on the authority managing East Fort as the site will have to be secured.

### **4.1.2 Site C (beyond Koeël Bay)**

This site is associated with an already existing substantial cutting into the mountainside. It is more favourable in terms of impacts to landscape as the tolling structures can make use of the already existing cutting – an accepted and established element of the Chapman’s Peak landscape. Although it will exclude some picnic sites, its position does render more of Chapman’s Peak Drive available to picnickers and hikers. The site is more acceptable than site A in terms of the principle of minimal intervention.

### **4.1.3 Site E (Picnic site)**

Site E is associated with a major established picnic area close to the Chapman’s Peak lookout point. Again, use of this locality represents minimal intervention in the landscape of Chapman’s Peak, and furthermore there is suitable space to create berms and vegetation screens to minimize sight of the structures and queuing vehicles from Hout Bay and surrounds. It also leaves most of the hiking nodes and picnic areas available. The establishment of a permanent presence at this site would be welcome, as at times the adjacent picnic area is heavily used and rowdy, which impacts the visitors experience of the area.

### **4.1.4 Site H (Monkey Valley Noordhoek re-alignment, Noordhoek side)**

This site will require substantial intervention in term of earthworks and thus represents maximum disturbance to the landscape. It will however leave the majority of lookout points and picnic sites available from the Hout Bay side.



## 5 Conclusion

In terms of impacts to heritage, the most desirable option is that which leaves the least physical impact on the landscape of Chapman's Peak Drive – the no toll plaza option with some form of remote sensing/number plate recognition or electronic toll system. Failing the viability of this, the next desirable option is to establish a single toll plaza, as low key as possible at either sites E or C. Reuse of the established and accepted landscapes of Chapman's Peak Drive is strongly encouraged as this will minimize new changes and have the least impact on the entire route as a heritage place. Sighting of a tolling structure as far up the pass as possible will allow public access from Hout Bay to traditional picnic sites, and alleviate the potential congestion that could occur at East Fort.

### 5.1 Recommendations

It is difficult to indicate management measures that can be put in place during and after construction activities as there is no heritage review of the status of Chapman's Peak Drive, and no guidelines or heritage conservation philosophy in place to guide the rehabilitation process at large. Nevertheless we would like to identify some basic guidelines that could be applied:

- The principle of minimal intervention to the landscape and appearance of the area should be applied at all times.
- Surfaces of geological interest such as the cross bedding at the lookout point must not be used as convenient places to dump rocks and tailings.
- No material should be dumped close to any standing structures at East Fort.
- Visual impacts must be kept to a minimum, and where possible disguised with berms, trees or by use of sympathetic fabric.

## 6 References

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I would like to thank the Hout Bay Llandudno Heritage Trust for their comments.

**TABLE 1**

<b>Impacts of toll plaza options</b>	<b>V. Low</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>V. High</b>
<b>Option 1:</b>					
No toll plaza with tolling by No Plate recognition/ Automatic Number Plate Recognition		x			
<b>Option 2: One toll plaza with six lanes</b>					
Option 2A: Toll plaza at Site A;					x
Option 2B: Toll plaza at Site C;			x		
Option 2C: Toll plaza at Site E;			x		
Option 2D: Toll plaza at Site H.				x	
<b>Option 3: Two toll plazas, six lanes on the Hout Bay side &amp; Four lanes on the Noordhoek side</b>					
Option 3A: Toll plazas at Sites A & H;					x
Option 3B: Toll plazas at Sites C & H;					x
Option 3C: Toll plazas at Sites E & H.				x	
<b>Option 4: Two toll plazas, each with four lanes</b>					
Option 4A: Toll plazas at Sites A & H;				x	
Option 4B: Toll plazas at Sites C & H;				x	
Option 4C: Toll plazas at Sites E & H				x	
<b>Noordhoek re-alignment</b>					
Option 1 No go	x				
Option 2A: realign the road and develop the picnic area;					x
Option A27: realign the road but do not develop the picnic area.					x



**H**

**A to H = alternative sites**

Aerial photograph showing the various feasible alternative locations for the tolling structure(s)

**Fig 1**