

# COMMENTS ON THE REUSE OF THE HEX RAILWAY PASS "HEXPAS EXPRESS"

Prepared for

**Ninham Shand Consulting**

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Prepared by  
Tim Hart

**Archaeology Contracts Office**

Department of Archaeology

University of Cape Town

Private Bag

Rondebosch

7701

Phone (021) 650 2357

Fax (021) 650 2352

Email [TJG@age.uct.ac.za](mailto:TJG@age.uct.ac.za)

# 1 Introduction

In 1998 Ninham Shand (Pty) Ltd was commissioned by Transnet to undertake an assessment of a stretch of railway line passing through the Hex River Mountains of the Cape. The track was no longer in use and Transnet wished to remove the permanent way material. The National Monuments Council, concerned that the track was of historic significance asked that an assessment be commissioned to establish the significance and conservation-worthiness of the railway before a final decision was made to remove it. Ninham Shand, together with the ACO (Archaeology Contracts Office) who were brought on board as specialist consultants, then made a physical examination of the railway and undertook archival and historical research to establish the role it played in the past, and to identify some of its unique elements.

The study showed that by 1865 some small independent railway companies had opened up private railway lines through the southern suburbs as far as Wynberg as well as to Wellington. Both the Wynberg and Wellington lines together with their branch lines were built on the standard British gauge of 4'8½". The first locomotives, which were imported from Britain (built by Robert Stevenson and Co), were designed to operate on this gauge at a maximum speed of about 35 mph.<sup>1</sup> The discovery of diamonds at Hope Town near Kimberly prompted the Colonial Government to take very seriously the need to construct a series of railway lines into the interior of the country. After a number of surveys and feasibility studies a decision was made to continue the line from Wellington to Worcester over the Hex Pass and onwards through the Karoo to Kimberly, however the only economical way of doing this was to reduce the gauge of the track to 3' 6". Built under the leadership of the English railway engineer, William George Brounger, the work was completed on time, within budget, and apparently without injury. The decision to use the "Cape Gauge" as it is known was a momentous one for South African industrial history as it prompted the development of some of the earliest heavy industry – the Salt River Locomotive Plant, the Union Carriage Company to build rolling stock specifically for Southern African needs. The pass itself became a gateway into the interior of Southern Africa – conduit for development, waging of war and Rhodes's endeavors in the colonization and subjugation of lands and peoples to the north of the borders of the Cape colony.

The heritage assessment concluded that the section of line from De Doorns to Matroosberg Station was the most significant in that it retained a number of original bridges, tunnels, culverts and importantly, followed its original alignment. It was agreed with Transnet that the future of the track be subject to a further period of public participation with a view to identifying viable options for conserving the track and identifying parties who wished to become involved. Mr S. Jordaan, a local farmer and businessman, in appreciation of the railway history and the natural environment in which it has situated has acquired rights to use the railway for a period of time (?..?). He invited representatives of Ninham Shand and the Archaeology Contracts Office to view his enterprise and offer comment and advice.

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<sup>1</sup> The first locomotive is preserved on Cape Town Station

## 2 The Hexpas Express

Mr Jordaan has achieved reuse of the railway from the bottom of Hex Pass to Matroosberg Station by building a simple “train” consisting of a passenger carrying trolley adapted out of two SAR inspection trolleys, hauled by a tractor that has been modified to run on the railway line. Two ex-railway employees who spent much of their lives working on the pass operate the train and have a great deal of knowledge about the railway. Traveling at little more than 10km per hour, the *Hexpas Express* ascends the pass through scenery of extraordinary beauty, passes through the geological interface of Table Mountain Sandstone and the Karoo Shales (and thus from Fynbos to Karoo Biome) and terminates at Matroosberg Station – a journey of some 5 hours. En route the train stops at several features of interest, including the first rail tunnel in South Africa, South African war fortifications built by the English to guard the railway as well as locations where indigenous plants are pointed out for the interest of the passengers. The train crosses over Bronger’s prefabricated steel bridges, through original cuttings and past the Kafrarian Rifles Monument. In all, this makes up an informative and enjoyable experience.



Figure 1 Hexpas Express

### 2.1.1 Appropriate use of the railway

Representatives of Transnet pointed out the difficulties of ever getting a functioning locomotive back on the Hex Pass due to the fact that the costs of bringing the railway up to a standard to carry a steam or diesel locomotive and passenger cars would require millions of rands worth of repairs to embankments, and permanent way material. While the use of a genuine locomotive and rolling stock on the route would add a dimension of interest and “romance” to the experience, this would greatly increase both the running costs of the operation and probably raise the costs of the trip above the means of the average South African family. The light system devised by Mr Jordaan is appropriate to the state of the railway, provides an adequate sensation of traveling on a railway and puts the visitor very close to the natural and cultural environment of the pass. The simple “tractor locomotive” and open trolleys are environmental friendly, low key and require little or no peripheral infrastructure (water, coal, electricity, unsightly sheds etc) to operate. This is an excellent way of sustaining the use of this historic railway and provides the basis for ongoing sensitive use of the natural and cultural sites of the area.

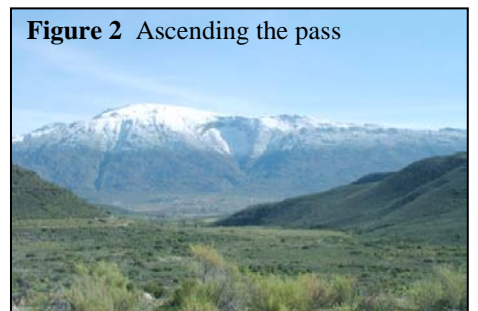


Figure 2 Ascending the pass

## 2.1.2 Heritage sites associated with the railway

Besides the permanent way material itself, the Hex railway pass boasts some of the oldest railway bridges in southern Africa and these remain functional, albeit missing hand rails and fixtures in places. There is also a functional tunnel (built in the 1930s) through which the railway passes, as well as the original railway tunnel built in the 1870's. This has been abandoned since the 1930's due to its inadequate size to accommodate 20<sup>th</sup> century locomotives. It now serves as a sanctuary for a large bat colony and as such is important as both a natural and cultural heritage site.



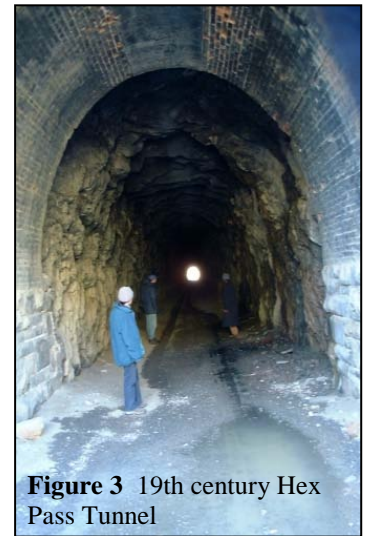
**Figure 4** Boer war fortification

Mr Jordaan drew our attention to several South African War period fortifications which have been built to guard cuttings, embankments and bridges along the route that were potential targets for sabotage. One such fortification is a stopping point along the route. A series of recycled cable gutter covers has been used to create a simple walk way to the site – the effect is unobtrusive yet contrasts suitably with the fabric of the fortification so that old and

new fabric are distinguishable. Mr Jordaan has wisely not interfered with the fabric of any structures along route, apart from the construction of walkways.

One of the most exciting discoveries that Mr Jordaan alerted us to is the presence of the remains of several stone buildings and a road close to the tunnel. He postulated that this could be the site of an English workers camp – imported skilled labour was employed to build the tunnel. Inspection of the site revealed that it was littered with artefacts, most notable were scores of 19<sup>th</sup> century Constantia - type wines bottles, fragments of Annular ware (a 19<sup>th</sup> century refined English earthenware), fragments of metal and corrugated iron, tent eyes. Under normal circumstances souvenir hunters would have looted the artifacts from sites such as this, however, the hidden location of the site has offered it some measure of protection. The initial inspection of the archaeological evidence on the site supports identification of the site as a workers camp. The construction workers site is archaeologically important and unique as it has the potential to offer a unique view into the daily lives of the people who lived there. It is very important that artifacts are not moved around on the site or removed from the site as they are the evidence, which once analysed, will tell the story of the daily lives of these people.

A further site of interest and a stopping off point along the route is the monument to troops of the Kafirarian Rifles who died as a result of a derailment. The stone monument had been damaged by erosion resulting in destabilization of its founding stones. It appears to have been repaired in the recent past by having its base encased with concrete. This has had the effect of disrupting the proportions of the monument. Erosion rills running down from the railway service road has the potential to cause future problems if water runoff is not diverted away from the site. Removal or disguising of the concrete reinforcement around the monument will also improve the aesthetics of the site. Monitoring and solving problems such as these epitomize the kinds of ongoing monitoring and conservation work that the railway will require.



**Figure 3** 19th century Hex Pass Tunnel

### 3 Research potential

It is clear that the Hex pass is a place of untapped research potential, the results of which can be incorporated into tourism enterprises focused on the railway. The cultural heritage associated with the pass is largely unstudied and undocumented – there is enough potential research material to encourage postgraduate students to pursue a variety of themes. Topics, which are identifiable, are:

- An analysis of the economic circumstances that prompted the construction of the pass.
- Detailed study of the technology and social history associated with its construction.
- The impact of the introduction of railway technology on South African society.
- The physical mapping and photography of surviving features associated with the building and operation of the railway.
- Professional excavation/sampling of the tunnel construction camp with a view to the forensic reconstruction of the daily lives of people who lived and worked there.
- The location, mapping and study of South African War fortifications associated with the pass.
- The collection of oral histories about the operation of the railway, the groups of people and families who were associated with it.
- The development of educational and tourism material that would enhance appreciation of the environment and heritage.

### 4 Conservation guidelines



**Figure 5** Pre-fabricated steel railway bridge (19th century)

While Mr Jordaan's efforts to utilize and conserve the Hex River Pass, are endorsed and commended, it is important to recognize that the tourism will produce demands and changes to his strategy that he may need to accommodate, but at the same time maintain the delicate balance of conservation of both heritage and natural environment. Furthermore, the permanent way material, bridges and embankments will need to be maintained, or even strengthened should he eventually wish to use a heavier train. Some conservation guidelines are offered that will assist in safeguarding authenticity and significance of the pass.

## 4.1 Repairs, maintenance and development

- A simple rule of thumb is “*change as little as possible but do as much as is necessary.*” Do not try to restore or create “fake” components or structures – do use good quality modern materials that are clearly distinguishable from older materials. In other words let the original aspects of the construction speak for themselves and allow modern repairs to stand as their own historic “layer” in the future history of the site.
- New facilities that may need to be built do not need to be erected in fake Victorian style – sympathetic contemporary styles are acceptable provided they do not detract from feel, ambience or significance of a place or feature.
- Interfere or change as little as possible original fabric, features, buildings and places associated with the railway line. It would be best to ensure “conservation” by trying to take measures to control impacts by people and the natural environment (good drainage, cordons around features or small roofs if rain is causing deterioration).

### 4.1.1 South African War sites and other ruins

- These are among the most fragile on the pass being subject to erosion and deterioration of dry stonewalls.
- As a rule it is best not to attempt to reconstruct or interfere with fabric. This should only be done under expert guidance and based on good research and archival evidence.
- Should walls look as though they are about to collapse, they must be reinforced by being packed with sandbags, small embankments etc. (anything will do as long as it is distinguishable from, and won't damage original fabric).
- Plant growth and root damage to walls are among the most destructive agents in this respect. The sites need to be monitored from time to time and plants growing in walls need to be eliminated.
- Erosion needs to be monitored and dealt with before it begins to undermine and collapse fabric.
- The tunnel construction camp is an important site. It is best that visitors to it are restricted to a defined walking route that will place them out of reach of the material lying around on the surface. The human desire to collect souvenirs is very strong and needs to be strongly discouraged through signs indicating that doing so is illegal and punishable.

## 5 Conclusion

Reutilisation of the Hex Railway Pass is probably the best way of not only conserving this unique heritage site, but also revealing the wider cultural and natural environment of the pass. Mr Jordaan's efforts to date are an excellent practical solution to achieving this. The challenge for the future are to ensure the conservation and sustainable use of the resource in a way which is sensitive to original fabric, ensures the conservation of not only structures but also artefacts that may be associated, and promote the area as a living museum. Albeit in its developing stages, the Hexpas Express is an enlightening and enjoyable experience that has no equal in the Cape.



**Figure 6** Rail cutting