

**SUPPLEMENTARY VOLUME 2 OF THE ADDENDUM TO THE DRAFT  
ENVIRONMENTAL IMPACT ASSESSMENT REPORT FOR THE  
PROPOSED GAUTRAIN RAPID RAIL LINK BETWEEN  
JOHANNESBURG, PRETORIA AND JOHANNESBURG  
INTERNATIONAL AIRPORT**

**HERITAGE IMPACT ASSESSMENT  
OF THE  
RECOMMENDED ROUTE ALIGNMENT  
FOR THE PROPOSED  
GAUTRAIN RAPID RAIL LINK PROJECT**

**Final Report**

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## LIST OF ACRONYMS

CBD	Central Business District
CSAR	Central South African Railways
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ERE	Environmental Resource Economics
GDACEL	Gauteng Department of Agriculture, Conservation, Environment and Land Affairs
HIA	Heritage Impact Assessment
I & APs	Interested and Affected Parties
MLPORA	Muckleneuk and Lukasrand Property Owners and Residents Association
NHRA	National Heritage Resources Act, 25 of 1999
NZASM	Nederlandsche Zuid-Afrikaansche Spoorweg-Maatschappij
PTA	Pretoria Tunnel Alliance
SAHRA	South African Heritage Resources Agency
SAR	South African Railways
SARCC	South African Rail Commuter Corporation
SAR&H	South African Railways and Harbours
UNISA	University of South Africa
UP	University of Pretoria

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The HIA team is also thankful to the residents associations and representatives of other Interested and Affected Parties (I & APs) who participated in the debate brought about by the investigation.

Mr Thabo Kgomommu attended a meeting of a Focus Group, held on 15 January 2003, in an observing capacity as the Gauteng Provincial Manager of the SA Heritage Resources Agency (SAHRA). Generally, the interest shown not only by him but by SAHRA in the study, is appreciated.

Lastly, the HIA team would like to acknowledge the use of the photographs in this report by kind permission of Ms Catharina Bruwer.

## 1. INTRODUCTION AND TERMS OF REFERENCE

This specialist report forms part of the Environmental Impact Assessment (EIA) process for the proposed Gautrain Rapid Rail Link project. The report focuses on the heritage resources which may be impacted by the recommended route alignment for the project and is the outcome of the Heritage Impact Assessment (HIA) undertaken for the project.

The HIA has been conducted in two phases. Phase One involved an evaluation of alternative route alignments from a heritage perspective, whilst Phase Two has investigated, in depth, the potential impact on heritage resources of the recommended route alignment for the Gautrain.

Alternative route alignments for the proposed Gautrain Rapid Rail Link project were considered during Phase One of the HIA (Appendix A), which formed part of the draft EIA report (Bohlweki Environmental, 2002) that was released for public comment in October 2002. The Phase One HIA identified heritage resources, which could be impacted upon by the proposed project, specifically in the areas of Midrand, Modderfontein and Pretoria, and made recommendations regarding the alternative alignments.

In common with other specialist studies undertaken for the draft EIA report, the Phase One HIA indicated a preference for an underground route alignment in Pretoria. From a heritage viewpoint, the proposed refined route alignment through Muckleneuk was not a recommended option. Although the refined Muckleneuk alignment did have less of an impact on the residential area of Muckleneuk than the original reference route alignment, the impact on heritage resources of the refined Muckleneuk alignment, particularly in the eastern section of the suburb, was considered severe. Given the substantial costs associated with an underground alignment, however, and contrary to the conclusion reached in the Phase One HIA report, it was recommended in the draft EIA report that the refined Muckleneuk route alignment (route 6FD) in Pretoria remained environmentally feasible and should be further investigated in Phase Two of the HIA. A main reason for the draft EIA report recommendation was that the refined Muckleneuk alignment largely follows, at surface, an existing Metrorail corridor between the north-western section of the suburb of Muckleneuk and Hatfield Station.

In parallel with the Phase Two process of the HIA, a more detailed Environmental Resource Economics (ERE) study has been undertaken on the refined Muckleneuk route in order to provide a more detailed assessment of the costs associated with the environmental impacts identified along this section of the route, and to compare these costs with those of an underground alignment in Pretoria.

The draft EIA Report was released for public comment on 21 October 2002. Interested and Affected Parties (I & APs) were given two months in which to comment on the draft EIA report. The Phase Two HIA was commenced during this period and the bulk of the further HIA work was conducted during the course of January and February 2003. A meeting was held with the South African Heritage Resources Agency (SAHRA), on 13 December 2002, to agree on the Terms of Reference of the further HIA assessment. A meeting was also held with key I & APs on 15 January 2003 in order to obtain their input into the assessment. This was followed by a further meeting on 17 March 2003 with members of the Pretoria Tunnel Alliance (PTA). In addition, a meeting and on-going



discussions took place between the HIA team and the Gautrain Technical Team, as well as the team that was conducting the ERE study.

In terms of Section 38(8) of the National Heritage Resources Act, the findings contained in this report will be commented on by SAHRA as the responsible heritage resources authority at this time. This was confirmed in a discussion with SAHRA held on 13 December 2003. Any comments and recommendations by SAHRA will be submitted to the decision making authority for the proposed project, i.e. the Department of Agriculture, Conservation, Environment and Land Affairs of the Gauteng Provincial Government (GDACEL). As contemplated in the above-mentioned provision of the NHRA, such comments or recommendations by SAHRA would be taken into account by GDACEL prior to a final Record of Decision in regard to the project.

This Phase Two HIA report was released as a draft on 11 March 2003 for public comment. The comment period was subsequently extended at the request of I & APs until 24 March 2003, prior to the finalisation of the report. Comments from I & APs have been incorporated into the report.

The information contained in the report has been structured to enable the reader to continuously refer to and compare the information with the statutory requirements, mentioned below, that had to be met by the HIA team.

## **2. AIM OF THE STUDY**

Guided by the above-mentioned terms of reference, the aim of Phase Two of the HIA was to comply with the requirements stipulated in Section 38(3) of the National Heritage Resources Act, 1999 (Act 25 of 1999), hereafter referred to as the NHRA. For the purpose of the study, these requirements were considered to be essentially as follows:

- the identification and mapping of all affected heritage resources within the area of the recommended Gautrain Rapid Rail Link route alignment;
- the assessment of the significance of such resources in terms of the heritage assessment criteria as prescribed under the NHRA;
- the assessment of the impact of the recommended route alignment on such heritage resources;
- the evaluation of the impact of the proposed project on these heritage resources relative to the sustainable social and economic benefits to be derived from the project;
- consultation with affected communities and other interested parties regarding the potential impact of the proposed project on heritage resources;
- the consideration of alternatives in the event of such heritage resources being potentially adversely affected by the proposed project; and
- the making of appropriate recommendations with regard to the mitigation of any such adverse effects during construction and after completion of the project.

## **3. STUDY AREA**

The study area (see Appendix B) is defined by the rail corridor associated with the recommended route alignment between Park Station, Johannesburg and Hatfield Station, Pretoria, and including the proposed east-west alignment between Sandton Station and Johannesburg International Airport.

Heritage resources, which received attention in the HIA, were focused on the following areas:

- the old Modderfontein village on the Sandton-Johannesburg Airport route;
- in Midrand on the Johannesburg - Pretoria route; and
- between Salvokop and Hatfield in Pretoria on the Johannesburg - Pretoria route.

The most significant section of the recommended route alignment in terms of potential impacts on heritage is the alignment between Salvokop and Hatfield in Pretoria. For the other sections of the route where no heritage resources are affected, an explanation of the work undertaken in reaching such a conclusion is provided for completeness, as requested by SAHRA.

#### **4. ZONING OF THE STUDY AREA**

The area of the recommended route alignment covered by the HIA team was divided for the specific purposes of the study into the following zones, which are attended to as separate units in this report. It was decided to use the landscape character and urban fabric as criteria to determine these zones, each of which has a unique character.

- the area between Park Station, Johannesburg and the proposed general point of entry of the recommended route alignment in Pretoria (including the one area identified as holding heritage resources potentially affected by this section of the route, viz Midrand);
- the area of the recommended east-west alignment route between Sandton and Johannesburg International Airport (including the old Modderfontein village);
- the area of the former Salvokop railway precinct and that of the proposed national legacy project development, known as Freedom Park (i.e. the intended point of entry of the recommended route in Pretoria);
- the area of the Pretoria Railway Station (i.e. where the new route would cut across the existing rail lines at the station);
- the area between the Pretoria Railway Station and the suburb of Muckleneuk;
- the Muckleneuk residential area;
- the area between Muckleneuk and the proposed new railway station in Hatfield, Pretoria.

#### **5. ASSUMPTIONS, CONDITIONS AND METHODOLOGY**

##### **5.1 Terminology and relevant provisions of the NHRA**

The approach followed by the HIA team was to investigate and evaluate the potential or perceived impact of the proposed project on heritage resources, in accordance with not only the requirements, but also the terminology of the NHRA. This terminology is premised on the widely recognised concept of heritage resources, i.e. places and objects of cultural significance that form part of the National Estate as defined in the NHRA.

According to the NHRA, the cultural significance of a heritage resource must be determined in order to measure its conservation value. Cultural significance means

*"aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance."*

As the purpose of the study was to determine the potential impact of the proposed Gautrain Rapid Rail Link on places of cultural significance falling within the study area, it means that the HIA team's area of focus and related investigation (refer Section 3[2] of the NHRA) included aspects such as buildings, structures and associated equipment, townscapes, landscapes / natural features of cultural significance, archaeological and palaeontological sites, graves and burial grounds and their inter-connectivity where relevant.

Any structures or parts thereof that are older than 60 years, are protected under the NHRA and may not be destroyed, altered etc., without a permit from the responsible heritage resources authority, unless Section 38 (10) is applicable. According to the NHRA, a structure means *"any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith."* As was the case with the preliminary or first "stock taking" of affected heritage resources during the development of the draft EIA Report, this general protection provision was again used as a reference "filter" during the identification and assessment of culturally significant places. This, however, did not prevent the HIA team from looking at places or structures not protected under the above-mentioned "60 Year Rule". Heritage resources were investigated with specific reference to Section 3(3) of the NHRA, and the assessment was not constrained by the "60 Year Rule".

## **5.2 Assessment of culturally significant places**

In assessing culturally significant places within the study area, the HIA team made use of the assessment criteria of general application as specified in Section 3(3) of the NHRA, hereafter called the NHRA assessment criteria. A place might according to this provision, be considered of cultural significance or other special value, based on the following criteria:

- *its importance in the community, or pattern of South Africa's history;*
- *its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;*
- *its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;*
- *its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places...;*
- *its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;*
- *its importance in demonstrating a high degree of creative or technical achievement at a particular period;*
- *its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and*
- *sites of significance relating to the history of slavery in South Africa.*

It should be noted, however, that the detailed criteria needed to assess culturally significant places, as contemplated in Section 7 of the NHRA, are yet to be developed

through regulations. The outcome of the grading system that was used should consequently be considered with reference to the above-mentioned shortcoming which has the effect of frustrating heritage practitioners in the official grading of heritage resources in terms of national, provincial or local importance.

### **5.3 Evaluation of the impact of the proposed route alignment on heritage resources**

South Africa's heritage practitioners lack their own national charter of principles pertaining to, not only the assessment of culturally significant places, but also the evaluation of the impact, whether direct or indirect, of a new development on existing heritage resources.

One of the most difficult problems experienced during the study, therefore, was how to attend to the many "soft" issues pertaining to impact evaluation. The proposed demolition of tangible heritage resources is a definite, and therefore a "hard" issue. In this instance, the potential impact is direct. The difference between "hard" and "soft" issues in regard to impact assessment, is considerable. The HIA team was tasked with assessing the impact of the proposed rail alignment, on intangible heritage resources or the intangible attributes of heritage resources, such as vistas and or view lines, the concept of the spirit or sense of place, the integrity of a cultural landscape, as well as the long term affect of an impact of an indirect nature, on the sustainable conservation and use of a heritage resource.

The following interpretations of value or significance within the wider concept of cultural significance were used as important reference points:

- *aesthetic value* - this pertains to sensory perception and includes aspects such as the consideration of form, scale, colour, the texture and material of the fabric, as well as the sounds and smells associated with a place and its use;
- *historic value* - it encompasses the history of aesthetics, science and society and essentially underlies these terms. A place may be of historic value because of its association with an important event/s or figure/s.
- *scientific value* - a place may be of scientific or research value due to its rare or special qualities, its representivity, as well as its potential to contribute to further information / knowledge; and
- *social value* - this includes the qualities for which a place has become a focus, inter alia, of spiritual, political or other cultural sentiment to people.

The HIA team, during its investigation, paid attention to the potential affect of the proposed new route alignment on values such as those described above. Generally, an impact is understood to take place when a change has an effect on an existing situation. From a heritage resources viewpoint, it is critically important that the amount of change to a place should be guided by its ability to absorb the change and by the cultural significance of such a place. It is important that changes in this regard, should be reversible or manageable. Clearly, the proposed destruction of a heritage resource is irreversible and the approach in this study, as is internationally accepted, has been to consider destruction as a direct impact on heritage resources. Impacts on intangible heritage resources have, in certain instances, been assessed as being direct, e.g. where the sense of a place would be destroyed.

The method followed in this study with regard to impact evaluation has been as follows:

- the identification of any potential impact on a heritage resource as being direct or indirect (see below for aspects of place which have been assessed in terms of direct or indirect impacts);
- the determination of the cumulative effect of impacts;
- the assessment of the significance or severity of an impact on affected tangible and intangible heritage resources; and
- the determination of the capacity of such resources to absorb impacts.

On the subject of impact absorption capacity, the approach followed in this study has been to stress the capacity of any heritage resources to absorb the cumulative effect of impacts. This is illustrated by the example of an indirect as opposed to a direct impact on the sense of place of a heritage resource. It might under certain circumstances be possible to mitigate such an impact. In the event, however, of different kinds of impacts on a heritage resource and its intangible attributes, the impact absorption capacity of such a heritage resource can become limited. This limited capacity is determined by the cumulative effect of such impacts and the limited possibilities to reverse or manage the potential changes to the affected heritage resource inherent in the cumulative effect of the impacts concerned.

In attending to the evaluation of impacts, the HIA team elected to take appropriate advice from the Burra Charter (see 5.5 Application of the Burra Charter). The resultant references made in the report to impacts on culturally significant places come from the internationally recognised view that cultural significance finds embodiment in the place itself, its fabric, setting, location, use, associations, meanings, records, as well as related places. For the purpose of further clarification, the following definitions are therefore of relevance to the approach that was followed to evaluate impacts:

- *fabric* – the physical material of a place including components, fixtures, contents and objects (to this should be added evidence of historic layers or layering);
- *setting* – the area around a place, including the visual catchments (the relationship of a place and its parts with its setting);
- *location* – the physical location of a place is part of its cultural significance;
- *use* – the use of a place must be complementary to its cultural significance;
- *associations* – the special connections that exist between people and a place;
- *meanings* – denoting what a place signifies, indicates, evokes or expresses - this generally pertains to such intangible aspects as symbolic qualities and memories; and
- *related places* – places within a given context, that contribute to the cultural significance of a particular place, including visual connections and interconnectedness;
- *view lines*;
- *integrity of place*;
- *natural landscape*; and
- *sense of place* (see below).

In addition to the concept of place, there are also the concepts of *authenticity* and *spirit or sense of place*. As regards the latter, reference should be made to what was stated by Terry Winstanley, one of the panellists at a workshop on HIAs that was held on 13 October 2001 in Cape Town. Winstanley referred to the Constitution and the right of

everyone to "an environment that is not harmful to their health or well-being (Section 24)". She went on to point out that "well-being" clearly included emotional and aesthetic senses, which is where the notion of 'sense of place' could fit; and she illustrated the argument with examples of both national (St Lucia Bay mining) and local ('the building across the way') resources."

In practice, "sense of place" is a difficult concept to deal with in a legal context. Linking the loss of sense of place with harm to health or well being may well be difficult to prove, depending on the particular circumstances, and a change to sense of place need not always imply a loss of a sense of place or a negative impact on a person's well being.

The following description on the intended application of the concepts of authenticity and sense of place comes from the Nara Document on Authenticity (1994):

*"Depending on the nature of the cultural heritage, its cultural context, and its evolution through time, authenticity judgements may be linked to the worth of a great variety of sources of information. Aspects of the sources may include form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling.... The use of these sources permits elaboration of the specific artistic, historic, social, and scientific dimensions of the cultural heritage being examined."*

Reference has also been made to the following description of the concept of sense of place as offered in the draft HIA Report: New Headquarters For The Department Of Foreign Affairs West Of The Union Buildings National Heritage Site, 21 September 2001: *"Central to the concept of sense of place is that the place requires uniqueness and distinctiveness – it has a vivid, or unique, or at least particular character of its own."*

From the writings of J.L. Motloch (Introduction to Landscape Design, 1991), Pierre Von Meiss (Elements Of Architecture; From Space To Place), and Yi-Fi Tuan (Space and Place, 1977), it is apparent that there are certain pointers that are relevant to an appreciation of sense of place. In coming to a physical space namely, one's first reaction is to formulate an overall reference framework with regard to defined spatial and other patterns, routes and boundaries. The implicit aim, albeit of an unconscious nature, is to establish an identity of sorts. Moving from space towards a definition and understanding of place, is therefore what is important.

The reader is advised to refer to the above-mentioned extract when studying the section of the report dealing with the evaluation of the direct and indirect impacts that the recommended route alignment would have on heritage resources, i.e. places of cultural significance. The findings of the attached architectural assessment are part of this report.

#### **5.4 Application of the Burra Charter**

Heritage resources practitioners are generally familiar with the benefits of using the principles laid down in the *Australia ICOMOS Charter For The Conservation Of Places Of Cultural Significance* (commonly known as the Burra Charter, 1999) when called upon to identify and assess culturally significant places. The Burra Charter is intended for international use and is one of many such heritage charters to which our country is a signatory. It is used by SAHRA and the Heritage Assets Management section of the national Department of Public Works and has been adopted by the National Heritage Committee of the South African Institute of Architects. The Burra Charter was also used

by the HIA team as a guiding document in the refinement of their identification and assessment methodology and in ensuring that the study would meet the requirements of good practice.

### **5.5 Categories of investigation and sources of information**

The study under consideration was undertaken by various specialists who attended to the following specific research aspects:

- Title deeds survey and supporting information

A survey of title deeds, held by the Registrar of Deeds in Pretoria, was conducted in order to collect relevant information pertaining to current as well as past ownerships of affected properties / heritage resources. The purpose of this was to record any evidence of important association between individual properties and their past and or current respective owners.

See Appendix C for information extracted during the deeds investigation and additional supporting information.

- Architectural Assessment

Structures within the refined Muckleneuk route alignment (6FD) were documented and assessed. As is explained in the report on this investigation, an assessment form was developed and successfully used by the responsible specialists during their investigation. See Appendix D for this report and a full set of the collected data.

- Community evidence

A questionnaire was developed and circulated as part of the study in order to obtain additional background information from the owners of potentially affected properties / heritage resources within the area of the refined Muckleneuk route alignment. Where applicable this information was also used in the architectural assessment.

See Appendix E for completed questionnaires that were received back from various property owners.

- Historical and other information

The collection of relevant information of a historical, social and spiritual nature (i.e. within the context of the definition of cultural significance) during the Phase One heritage resources impact assessment study, was continued and where necessary, expanded.

- Archaeological information

Information pertaining to the Modderfontein Dynamite Factory was obtained from Dr Simon Hall of the University of Cape Town. The report produced by Prof Tom Huffman of Wits University on potentially affected archaeological resources along

the recommended route alignment was included in the draft EIA report, but is added here for completeness in Appendix F.

- Contributions by Interested and Affected Parties (I & APs)

The contribution of information by various residents associations and other I & APs during the preceding Phase One heritage resources impact study and the study now being reported on, assisted the HIA team's investigations. The information was used to augment and not detract from the focused process of the identification and assessment of culturally significant places. Much useful information was also obtained at a meeting held on 15 January 2003 with a key I & AP Focus Group in Pretoria. See Appendix G.

Following the release of the Phase Two draft HIA report for comment, a meeting was held on 17 March 2003 with members of the Pretoria Tunnel Alliance (PTA). See Appendix H.

Numerous written representations were received from I & APs in the Pretoria area during the course of the study. The detailed comments made by I & APs were considered by the HIA team and taken into account in the findings of this final report.

## 5.6 Limiting factors<sup>1</sup>

Considering the scale and magnitude of the Phase Two HIA (which has never been undertaken before in South Africa for a linear type of project such as the proposed Gautrain), it would have been surprising had the HIA team not experienced any difficulties during the investigations preceding the finalisation of this report. The dynamics of the study presented itself as a challenging learning curve to the HIA team, stakeholders and I & APs. The difficulties experienced, "gaps" in knowledge, uncertainties, as well as some of the lessons learnt from the study are shared below.

- The lack of an official policy document, or regulations, in regard to the implementation of the HIA provisions of the NHRA, presented itself as a challenge to the HIA team. In terms of the NHRA, the function associated with HIAs falls within the sphere of provincial competence. One of the valuable lessons learnt is that the steering of the HIA process requires clear and workable official policy guidelines. It is hoped that SAHRA, as the authority responsible for the development of national policy, standards and norms relating to heritage resources management, will be successful in attending to the formulation of relevant policy guidelines as soon as practically possible.
- As was mentioned previously, the area of the recommended route alignment was divided into separate focus areas or zones. More attention might have been paid to the interconnectivity between the various focus areas.
- On the subject of impact evaluation, the lack of detailed information at this stage relating to drawings reflecting the vertical or three-dimensional alignment of the recommended rail route was an impediment along certain sections of the route in Pretoria. Had such information been available, it would have made it easier to assess the impact on heritage resources.

<sup>1</sup> As required in terms of Section 24(7)(e) of the National Environmental Management Act, 107 of 1998



- Due to time constraints, it was difficult to gather comprehensive base line information on all the affected heritage resources and their intangible attributes. In some cases, e.g. the Freedom Park site and the Salvokop suburb, as well as the suburb of Muckleneuk, such information was available. This was of great benefit to the HIA team and the use of this information is acknowledged.
- Time constraints similarly prevented the HIA team from collecting fully comprehensive information through an oral history survey. Only in the case of Muckleneuk was it possible to obtain additional information. It is also hoped that the development of the necessary policy guidelines concerning the implementation of the HIA provisions of the NHRA, would sufficiently clarify the parameters and methodology for the collection of such information in future.

It is, nonetheless, the view of the HIA team that whatever the difficulties experienced during the investigation, the gaps in knowledge, and that even with further time and more detailed information, the HIA final conclusions and recommendations would remain the same.

The HIA team has acted in accordance with what is accepted to be best practice. It has tried to be as objective and impartial as possible and would recommend peer review of this report, if required.

## **5.7 Structure of the report**

The remainder of the report is structured as follows:

- *Findings and specific mitigation measures* – in this, the main section of the report, the focus is on the identification and the assessment of the significance of affected heritage resources, the assessment of the impact of the recommended route alignment on them, the results of consultations with affected communities and interested parties on the subject of the impact on the heritage resources concerned, as well as proposed mitigation measures specific to the various focus areas of the report;
- *Proposed measures of mitigation* - as also required by Section 38 of the NHRA (included in this section is a tabulated summary of assessed impacts and an indication of the possibilities for mitigation);
- *Evaluation of the impact of the proposed route alignment on the affected heritage resources relative to the sustainable social and economic benefits to be derived from the rail link;*
- *The consideration of alternatives as required in terms of Section 38 of the NHRA;* and
- *Conclusions and Recommendations.*

## **6. FINDINGS AND SPECIFIC MITIGATION MEASURES**

### **6.1 General**

The entire route is characterised by urban and semi-urban (or built) areas interspersed with open spaces. Most of the identified heritage resources were found to be situated in the built areas. The report serves to confirm the findings from the previous preliminary heritage resources impact assessment study, namely that the area where most of the heritage resources that will be impacted on by the recommended route, is located in Pretoria. The main focus of the report then fell within the area of the proposed route in Pretoria, i.e. the refined Muckleneuk route alignment (6FD).

### **6.2 Area between Park Station, Johannesburg and the proposed general point of entry of the recommended route alignment in Pretoria**

The study similarly confirms the findings from the preliminary heritage resources impact study with respect to this part of the recommended route alignment. As it is proposed to take the Gautrain route underground in the area of Johannesburg and the intermediate areas such as Rosebank, Sandton and Marlboro, it was unnecessary to conduct a detailed identification and mapping of existing heritage resources in the area under consideration. It is the opinion of the HIA team, after consulting with the Gautrain Technical Team on the depth of the underground tunnels and after considering the proposed route alignment in this area following a windscreen survey, that there will be no impacts on heritage resources along this section of the alignment that cannot be managed. Heritage resources will be taken into account at the detailed design phase when the location of ventilation shafts for the underground tunnels as well as exact station locations and associated parking facilities are determined. There is provision in the Environmental Management Plan (EMP) for the preparation of mitigation plans, which will cover this issue and other issues such as noise and vibration. In addition, one of the recommendations of this report, that has been included in the draft EMP, is that a Heritage Resources Management Plan be included in the EMP. The Heritage Resources Management Plan could address any potential minor impacts that may arise at the detailed design phase, although no such issues have as yet arisen on this section of the route alignment. Heritage buildings on the Parktown and Westcliff ridge, for example, will not be impacted by the tunnelled route, which will be at considerable depth at this point. In written comments dated 20 December 2002 received from SAHRA, the point was made, however, that the above-mentioned tunnelling of the route did not necessarily imply a zero impact on heritage resources. To illustrate the point, the example of ventilation shafts has been mentioned.

**In order to ensure that no heritage resources would be adversely affected, whether directly or indirectly, in this zone of the proposed route alignment, the following is recommended:**

- **All engineering plans with regard to new surface structures of the rail link such as ventilation shafts, station sites and associated parking facilities, must be submitted to the responsible heritage resources authority for scrutiny and consideration as soon as draft final design plans become available;**
- **From a comment received from an interested party, a special effort should be made, where possible to increase the depth of the tunnel, where it**

**approaches the surface in areas of old, i.e. established trees. This would ensure that the roots of such trees would not be affected by any tunnel construction works.**

The recommended route alignment might affect some of the original bluegum trees lining the Old Johannesburg-Pretoria Road, extending from Randjesfontein farm towards Midrand in the south and Valhalla in the north. This will be known once detailed designs for the route are produced. Originally, there was only a single row of trees, but currently, clusters of these trees are located next to the road. Due to the above uncertainty, it was decided not to further investigate any of the trees as directly affected heritage resources. **Maximum care must be taken during the construction phase not to remove any of the old trees. If this is essential, a commemoration mitigation measure should be appropriate.**

A culturally significant place near the zone of the recommended route alignment between Johannesburg and Pretoria is the old farmstead of Randjesfontein, its most noteworthy features being the original dwelling, stables, dairy, silo and sheds. These structures are located approximately 500 metres from the alignment and consequently do not qualify as directly affected heritage resources. Some residents of Randjesfontein have objected to this finding as they believe that the impact would be of a direct nature. It is our view that this cannot be substantiated. Indirect impacts can be addressed via the EMP.

In a written objection received from the Midrand Presbyterian Church, mention was made of the disturbance that will be caused to the congregation of the St. Saviour's Church and the Hedgehog Meadow Nursery School "*during the construction phase and...during the operation of the system.*" The church building comes from Pietermaritzburg where it was carefully dismantled (in 1981) and then reconstructed (completed and dedicated for worship in 1985) approximately 50 metres from the farmstead of Randjesfontein.

In the absence of any perceived heritage impact, it was decided not to map the above-mentioned facilities as directly affected heritage resources. The EMP requires the successful bidder to draft detailed mitigation plans on visual impacts, noise and vibration etc.

**The Randjesfontein farm and Midrand Presbyterian church in Midrand will not be directly impacted by the recommended route, but the Concessionaire must draft mitigation plans to address, inter alia, indirect visual and noise/vibration impacts.**

### **6.3 Area of the east-west alignment route between Sandton and Johannesburg International Airport**

The only finding of note in regard to heritage resources in the area of the recommended east-west route pertains to an affected portion of the old Modderfontein (AECI) Dynamite Factory. The history of this site dates from 1895 when the factory was officially opened by President Paul Kruger of the former Transvaal Republic to supply dynamite to the gold mining industry of the Witwatersrand. Dr Simon Hall of Cape Town University has researched the historical archaeological aspects of the site and his advice proved of great help to better understand the complexities of the site.

The recommended route alignment will affect two separate structures west of the cricket field in the old Modderfontein village, the one being a corrugated iron structure previously used as a work shed and storage facility and the other, the old Modderfontein company hospital. A number of freestanding corrugated iron and brick houses forming part of the village, and older than 60 years, are in close proximity, (these should be checked to see whether they are impacted when the final alignment is confirmed). There is also an area of demolished workers' houses that might be affected by the recommended route alignment. No remains of these structures are visible, however, and the site should therefore be considered of archaeological interest.

The corrugated iron shed dates from the mid-1960s – mid-1970s and is not of any conservation value. The old Modderfontein company hospital dates from the period of about 1940. The double storey annex of the old hospital building currently stands vacant. It is a red brick structure with plastered concrete lintels, steel framed windows and doors, and a corrugated iron roof. This building is of historic and social importance and forms an integral part of the development (i.e. the layered history) of the factory. It is considered to be of local heritage significance. Being probably older than 60 years, it is protected under the NHRA. See Photograph 1 at the end of this report.

The impact of the proposed route alignment will entail the demolition of both the corrugated iron shed and the annex of the old company hospital. There might also be an impact on the area of former workers' houses. See **7. Proposed Measures of Mitigation.**

It has been noted that there is a possibility of a refinement of the proposed route alignment in the area of the former factory. This might prevent the demolition of the annex of the old company hospital and an indirect impact on the corrugated iron and brick houses nearby. Pending the detailed finalisation of such a refinement, the potential impact of the route alignment on the above-mentioned buildings requires no further attention.

**In the event, however, of confirmation of the planned demolition of the annex of the hospital, it is recommended:**

- that the matter be taken up with SAHRA;
- that the standard procedures in respect of the mitigation of archaeological sites should otherwise be applied to the whole area of the proposed route alignment where it passes the factory site.

The last section of the recommended rail link near Johannesburg International Airport would run on the periphery of the residential area of Rhodesfield. No heritage resources were identified or mapped in the affected area. Rhodesfield has been identified for redevelopment as part of the economic development of the Kempton Park area, referred to as the Aero City development.

#### **6.4 Area of the former Salvokop railway precinct and that of the proposed national legacy project development, known as Freedom Park**

Pivotal to the entry of the recommended route in Pretoria is the location of the Pretoria Railway Station and its contextual relationship with the adjacent site known as Salvokop. This was recognised in the preliminary heritage resources impact assessment study.

#### **6.4.1 Identification and mapping of affected heritage resources**

The area in question comprises a prominent quartzite ridge (Salvokop) on which it is planned to develop a new precinct of commemoration facilities, to be known as Freedom Park. According to the Final Draft of the Freedom Park Urban Design and Development Framework, the commemoration facilities would consist of a memorial to commemorate "*those who made the ultimate sacrifice for the struggle*", a museum and interpretation network, as well as a garden of remembrance. It is proposed to implement the project, which has been designated a National Legacy project, in phases. Freedom Park will according to the above-mentioned draft document, become a place of safety and protection, of remembrance and contemplation, as well as a place of orientation. It will become the end of a journey.

The hill (koppie) on which the Freedom Park development is proposed, used to be a lookout post for hunters during the Stone Age up until the Iron Age. Game migrated from the Highveld in the south to the Bushveld and Middleveld ecosystems (in the north) following the flow of the Apies River through Elandspoort. Both this hill and the hill directly opposite (where UNISA is located) had the same status during those times (this was confirmed by the archaeologists who did the EIA for the Freedom Park site). The Elandspoort was just as significant to the Stone Age and Iron Age people as the Wonderboompoort, which is located further north in the Magaliesberg.

Although the koppie has biodiversity and conservation value, and is of ecological sensitivity, it has nearly no physical expressions (by people) of cultural significance. The little that remains of the fortification on Salvokop ridge dating from 1880, namely Fort Tullichewan, was not mapped as the recommended rail link will be tunnelled underneath the ridge, so avoiding direct impact on that part of the site.

Due north-west of the designated site for Freedom Park is the former Salvokop railway precinct. This precinct is defined by Potgieter Street to the west, the designated Freedom Park site, and the existing railway station and marshalling area. The precinct dates from 1892 and comprises of various interesting sub-precincts, such as the Nederlandsche Zuid-Afrikaansche Spoorweg-Maatschappij (NZASM) Court and Central South African Railways (CSAR) residential precincts, a precinct of extant and demolished railway workshops, a former compound precinct designated for black people, a school precinct (i.e. the site of the Jopie Fourie Primary School), as well as a precinct of former NZASM head office buildings.

The proposed new Gautrain rail link is to be routed through the area of this precinct, east of the NZASM Court and the old houses dating from the days of the former CSAR. None of these structures would however be demolished. The NZASM Court dates from 1898 and was restored by the SAR&H during 1980/81. See Photograph 2 at the end of this report. A detailed audit of the physical heritage assets of the old railway precinct has been undertaken by Cultmatrix cc. and it was therefore unnecessary to re-map any of these assets. The audit forms part of the Salvokop Development Framework project, initiated by Propnet (for the landowner Transnet), the Freedom Park Trust, and the City of Tshwane (the latter is based on the Mayoral initiative to revitalise and redevelop the Salvokop area as an urban housing component).

Cardinal to an understanding of the heritage of the Freedom Park site and the area of Salvokop suburb are aspects such as the layered history of the area and its intrinsic

cultural landscape, including intangible heritage attributes. The latter two aspects are covered under **6.4.2 Assessment of significance**.

The characteristic of layered history is illustrated in the Cultmatrix heritage audit. During the CSAR and subsequent South African Railways and Harbours (SAR&H) periods (1903-1947), many buildings (mostly residential) were constructed in the area between the NZASM Court and the Findlay reservoir (1906). This is evident from the research of historic maps and old aerial photographs. Most of these buildings were subsequently demolished. It is important to note that these buildings were part of a set of integrated historic urban patterns and spaces, centered on the Paul Kruger Street axis. In terms of function, grain, scale and form, the area was intimately linked with the Salvokop Suburb.

#### **6.4.2 Assessment of heritage significance**

The designated site for Freedom Park is, from an interrogation of the definition in the NHRA, of exceptional cultural significance. This interpretation is strengthened by the application of the Burra Charter and of accepting its view that cultural significance is embodied in *the place* itself, its fabric, setting, location, use, associations, meanings, records, as well as related places.

The following are some of the characteristics and features of the site, which combine to denote and emphasise its cultural significance:

- the diverse plant species found on the koppie;
- the prominence of the site as a physical landmark and visual catchment platform, as well as its geological characteristics;
- the important association of the site with South Africa's President, Mr Thabo Mbeki, who on the occasion of the launch of Freedom Park on 16 June 2002, planted an olive tree on top of the crest (sangomas at that time, canonized the site through offerings at various other localities) – see Photograph 3 at the end of this report;
- the site is a backdrop for the existing Pretoria Station;
- it is one of the hills surrounding Pretoria that gives the city its special character;
- to date, it is mostly unblemished by development.

The area of the ridge has, on numerous occasions, already been called a national heritage site. This calls for correction, in view of the fact that the area is not formally protected as a heritage site under Section 27 of the NHRA. Considering its heritage significance, there is justification for the declaration of Freedom Park as a national heritage site under the NHRA.

It is apparent from the draft report of the heritage audit, titled Salvokop – Heritage Audit And Conceptualisation Input in Development Framework, that the entirety of the old Salvokop railway precinct is of cultural significance. The following extracts from the report illustrate this point: *“The history of Salvokop encompasses the history of six major railway administrations that helped to shape South African history.... Salvokop was established by the NZASM in 1892 as a permanent railway camp to house its*

*employees. Similar to staff villages or housing complexes established by other government institutions.... Salvokop developed during the past 110 years as a typical semi-isolated, self-contained railway township... Probably one of the most important characteristics of Salvokop is its architecture. It is significant as an ensemble that combines a range of common architectural styles adopted and built by the various railway administrations ... The earliest dwellings date back to the 1890s and since then every decade is represented through various types that were built at that time, up to the last houses erected in the early 1970s.... Salvokop is associated with the lives of many persons and their families employed by the various railway administrations in the Pretoria area."* This extracted information makes it superfluous to apply any further assessment of the significance of the old railway precinct as the information adequately meets the Section 3(3) assessment criteria of the NHRA.

It must be emphasised that the Salvokop railway precinct has a strong association of historic functionality with the Pretoria Station and its surrounds. Apart from this, the precinct is an all-encompassing entity from the past, comprising not only old buildings and other structures, but also historically complementary activity areas and planted vegetation. It has all the requisite attributes of what a culturally significant place such as this should have, i.e. a rich layering of historical development, a largely intact contextual setting, as well as authenticity.

It might be construed from the above assessment that the area under consideration comprises two separate sites. This is definitely not the case. The area constitutes a legible cultural landscape in which the following considerations are of relevance:

- the integrity of existing open spaces and natural landscape assets of the entire area (e.g. the sensitive landscape south, southeast and east of the Freedom Park site) and the linear green zone north of the Salvokop ridge stretching south from the NZASM Court at Koch Street to and beyond the Findlay Reservoir in the east;
- the physical heritage manifestations of the area as previously shown;
- the rich layering of history in the northern and northwestern sections of the area;
- the intangible heritage attributes of the area (see below);
- the prospects for the enhancement and augmentation of the cultural significance of the area in its entirety and the strengthening of its integrity and natural and cultural attributes (see below).

The intangible heritage attributes of the area mainly pertain to meaning and sense of place, as well as view lines and vistas.

The site designated for the Freedom Park development has, essentially, already become a place of "powerful" meaning. As is the case with the other National Legacy projects therefore, the great symbolism already inherent in the planning of the development, cannot be approached lightly. It is this very symbolism that has become cardinal to the intentions and objectives of the Development Frameworks of Freedom Park and Salvokop Suburb.

Of equal importance is the attribute of sense of place. Currently, aspects such as the location and setting of the cultural landscape combine to make the latter a special place. From any commanding position on the crest of Salvokop, one can appreciate the feeling of being somewhere special. This applies equally to many other locations in the area, e.g. interesting vantage points along the ring road, viz. north, east and south of the crest, and further down on the northern slopes of Salvokop. Coming to the area of the old NZASM Court and looking towards the city and the crest of Salvokop, one can be equally impressed by a feeling of being at a place that should be treasured.

Before assessing the remaining intangible heritage attributes, viz. view lines and vistas, it is necessary to first consider the underlying development principles of the Freedom Park project and the associated Salvokop Suburb redevelopment project. The following aspects are of relevance in this regard:

- Salvokop's (as a "Hill-Top Site") major attribute is its elevated and imposing position in relation to its surrounds;
- The orientation of the koppie in relation to existing landmarks and associated visual axes is important;
- The Salvokop projects are premised on the intention to capitalise on the natural and cultural attributes of the area in its entirety (e.g. gateways, edges, visual axes, historic layering and existing paths and movement networks);
- The proposed establishment of development synergies between the Freedom Park project and the Salvokop Suburb redevelopment, based on compatible insertions of new (historically-based) urban layers.

On the subject of view lines and vistas, it should be noted that it is planned to reinforce various axes through the development of narrative paths on the hill. The view lines that are integral to the Freedom Park design are those to and from Church Square (i.e. along the Paul Kruger Street axis), the Union Buildings (see Photograph 4 at the end of this report), the Voortrekker Monument, as well as the historic fortifications of Schanskop and Klapperkop (*"Vistas, unimpeded views, landmarks and limited intrusions are key elements to the successful development of Freedom Park, the creation of the desired ambience and its genius loci."* – written representation dated 19 November 2002 by Freedom Park Trust).

The most critical of the above-mentioned view lines to the success of both projects, is the one based on the Paul Kruger Street axis, north of the crest of Salvokop – see Photograph 5 at the end of this report. It is proposed to both visually and contextually enhance this view line through the development on the axis, on the northern slopes of Salvokop, of a sequence of public spaces and a ceremonial approach or memorial walk extending to the crest of the hill. This area would be further developed by the construction of the necessary administrative site facilities for Freedom Park. It is furthermore planned to extend the residential component of the suburb of Salvokop as a forecourt development into this area. *"Both the Freedom Park Project and it's forecourt Salvokop Suburb have been approached with the objective of creating a unique National Legacy site and an integrated and sustainable urban regeneration area...Salvokop has a quantity and quality of natural and heritage resources that enable the definition of a distinct urban character, in terms of scale, function, road patterns, materials, building-*



*street relationships and streetscapes...The design process of Salvokop has been an iterative process including the cultural landscape elements and their importance in creating a unique environment that is supportive of Freedom Park...Analysis of the historical layering of the precinct and its surrounding context have provided clear guidelines for the consolidation of the heritage fabric and urban pattern, as well as for insertion of an urban intervention, the required functional nature of zones, the most desirable location of buildings together with their typology, scale and style."* – Gautrain Impact on Salvokop Suburb Development Framework and Freedom Park; Draft Report for finalisation by Freedom Park Trust and its Partners: MMA/GAPP Consortium professional team (Salvokop Development Framework and Freedom Park projects). The extension of the Salvokop forecourt development into the area east of the old NZASM Court would therefore be guided by the old railway precincts history and the retention of the legibility of its historic layering. This clearly illustrates how it is proposed to not only maintain, but also enhance the heritage attributes of the cultural landscape comprising the Freedom Park site and the old Salvokop railway precinct.

#### **6.4.3 Assessment of impact**

**The cumulative effect of the impact of the proposed route alignment on the cultural landscape comprising the designated site for Freedom Park and the old Salvokop railway precinct will be severe, based on the considerations set out below:**

- There will be a direct impact in the form of the elevated alignment (i.e. viaduct) and the tunnel portal on the sensitive natural landscape on the southern side of Salvokop – see Photograph 5 at the end of this report.
- There will be a direct impact on the setting, integrity and sense of place of the old NZASM Court and the area east of the point of egress of the tunneled section of the alignment – see Photograph 6 at the end of this report. This is a matter of particular concern as the impact conflicts with efforts spanning nearly ten years by the predecessor of SAHRA aimed at the declaration of the historic NZASM Court precinct as a national monument.
- The direct impact of the proposed route alignment on the sense of place and the special characteristics and quality of the existing green zones and open spaces of the cultural landscape, is of concern.
- The intrusive effect of the route on the designed visual axes and on view lines from the lookout zones of Freedom Park, is noted with concern. Special mention must be made of the visual impact by the alignment approach between the N1 (Ben Schoeman) and the ring road south of the crest of Salvokop, as well as the obtrusive effect of the elevated alignment (viaduct) on view lines from the north on the Paul Kruger Street view line.
- The proposed route will compromise the proposed forecourt development east of the old NZASM Court, thereby hindering the planned establishment of the necessary functional and other synergies between Freedom Park and the suburb of Salvokop in this historically layered section of the cultural landscape. It is anticipated that it will be difficult to reinstate the historic diagonal movement system; it will be equally problematic to retain visual connections between

elements such as the historic arrival and public space in front of the NZASM Court and the proposed new public space at the bottom of the ceremonial path, and the urban node and open space complex east of the ceremonial path.

- As the cultural significance of a place is embodied in related places, the potentially disruptive visual and physical effect of the viaduct and the elevated new station building on the historically-based contextual and other connections between the Freedom Park-Salvokop Suburb cultural landscape and the area of the existing railway station and the Berea Park node, must also be recorded as a cumulative impact.

#### **6.4.4 Consultation with affected communities and other interested parties**

The Freedom Park Trust's main objections to the proposed new route alignment are as follows:

- that critical views to and from the Freedom Park site would be compromised due to *"the visual and physical intrusion of this route into the southern (sensitive natural area) of the Freedom Park site and the scale and height above ground level of the viaduct and station...(i.e. north of Salvokop)"*;
- that the effect of mitigation measures would not effectively reduce the negative affects of visual intrusions in the area of Freedom Park;
- that Salvokop's setting, the surrounding landscape and its functional and contextual interface with the suburb of Salvokop, the Pretoria Station as well as the CBD further to the north, would be compromised.

The Salvokop Suburb Spatial Development Framework partnership has also objected to the proposed route alignment, due to the perceived severity of its impacts, which would be difficult to mitigate. These impacts pertain to sense of place, setting, the sensitive visual, historic and other attributes of the affected portion of the former railway precinct and the fear that the recommended route alignment would also preclude a meaningful unlocking of the heritage potential of the precinct in its south-eastern quadrant.

From the evaluation of the route alignment in this report (set out above) of impacts, including the severity of their cumulative effect, the above objections are important.

From a written response, dated 19 March 2003, by the Freedom Park Heritage Trust the following should be noted:

- the relevance of the Freedom Park draft performance guidelines (see below) to the development, adjustment and performance monitoring of mitigation measures;
- the severity of the cumulative effect of the impacts of the route alignment on the Freedom Park-Salvokop Suburb cultural landscape;
- the doubtful impact absorption capacity of this cultural landscape;
- the problematic implication of the lack of clarity at this stage with regard to various detailed technical aspects related to the route and a verification of environmental

impacts (such as noise and vibration) in the area of Freedom Park and the suburb of Salvokop.

#### **6.4.5 Mitigation of impact**

**Considering the extent of physical intrusion by the proposed route alignment into the Freedom Park and Salvokop Suburb cultural landscape and the assessed resultant adverse effects of impacts on this landscape, it is believed by the HIA team that the scale of the cumulative effect of these impacts will exceed the impact absorption capacity of this delicate cultural landscape.**

**It is therefore recommended that the route alignment should be amended in order to prevent the adverse cumulative effect of impacts on the above cultural landscape.**

It is noted that the Gauteng MEC, Mr Moleketi, received a delegation of the Freedom Park Trust and other stakeholders on 16 January 2003 to discuss the potential impact of the Gautrain on the proposed Freedom Park National Legacy project, as well as the Salvokop Suburb development. The meeting was also attended by Mr Jack van der Merwe, Head of Gautrans, who undertook to investigate all possible refinements to the alignment between the Pretoria Station and Salvokop, as well as possible modifications to the design and construction techniques to minimise the impact of the Gautrain on the above projects.

A meeting was subsequently held between the Freedom Park Trust and the City of Tshwane Metropolitan Municipality and members of the Gautrain Technical Team on 23 January 2003, where the following aspects were indicated by the Gautrain team:

- Gautrans is prepared to refine the alignment of the Gautrain. The historic reservoir that is fed by a gravity pipeline from the Fountains Valley and supplies water to the Pretoria CBD limits the extent to which the line can be deviated to the east. The Gautrain alignment would therefore still cross the visual axis to Paul Kruger Street.
- The portal of the tunnel (near the old NZASM Court), however, can be moved north to limit the impact on Salvokop as far as possible.
- The open cut section can be replaced by cut and cover construction to minimise the limitations of accessibility to the Salvokop Suburb.
- The section that follows the existing ground level towards Pretoria Station can be covered to minimise the visual and noise impacts, as well as to allow the ceremonial approach and main pedestrian and vehicular links to be maintained.

The urban designers and architects of the Freedom Park and Salvokop Suburb Development projects undertook to investigate the feasibility of these proposals and to explore the opportunities to ensure that the proposed Gautrain project is implemented in harmony with the proposed Freedom Park and Salvokop Suburb precincts.

Here it is necessary to refer to a document titled *Gautrain Impact on Salvokop Suburb Development Framework and Freedom Park; Draft Guidelines for assessment of any major infrastructure intrusion*, dated 5 March 2003. This document was developed by the MMA/GAPP Consortium professional team working on the Salvokop Development Framework and Freedom Park projects. See Appendix I.

On mitigation, the following specific recommendations are made:

- That the above-mentioned draft performance guidelines or criteria should be rigorously followed in the planning and assessment of any forms of mitigation. The detailed design study of any proposed mitigation and the careful devising of alternative route alignment mitigation measures must be informed by the guidelines;
- That attention should be paid to the following preferred conditions as suggested in paragraph 1.1 of the above-mentioned document, viz.
  - The developer *"should demonstrate through documentation a commitment to the implementation of mitigation measures that clearly set out objectives or performance standards, describing exactly what is required for mitigation to be effective at all stages of the project life-cycle; -"*
  - *"...contingency plans should be stated at the outset, in the event that mitigation measures are proved to be unacceptable or unsuccessfully secured in the long term."*
- That cognizance be taken of the fact that investigations with regard to various detailed technical aspects pertaining to the underground vertical alignment in the area under consideration are still outstanding, as well as the verification of environmental impacts with regard to visual, noise, vibration and other impacts.

Considering the sensitivity of the Freedom Park-Salvokop Suburb heritage complex or cultural landscape, the project proponent must consult SAHRA, the Freedom Park Trust, as well as Propnet and the City of Tshwane (i.e. the other partners of the Salvokop Suburb Development Framework project) in all planning and design processes.

For the purpose of ease of reference and in order to appreciate the complexity of the issues associated with the sensitive nature and heritage importance of the above-mentioned cultural landscape, the following documents (appended to this report) should be consulted:

- Appendix J - Freedom Park National Legacy Project: Final Draft Urban Design And Development Framework; and
- Appendix K - Salvokop Heritage Audit (draft document) for Salvokop Development Framework (as commissioned by Transnet, City of Tshwane and the Freedom Park Trust).

## 6.5 Area of the Pretoria Railway Station

Passing the former railway precinct at Salvokop, the recommended Gautrain rail alignment would cross over the existing railway tracks at right angles and pass over the area behind the Pretoria Station itself.

### **6.5.1 Identification and mapping of heritage resources**

The well-known Herbert Baker designed station building, completed in 1912, is located in the area. (Baker was also the architect of the Union Buildings). The building was partly gutted by fire in 2002 but has since been restored. Contrary to what was stated in the preliminary heritage impact assessment report, and in a letter from SAHRA dated 20 December 2002, the building was never afforded permanent protection status under the former National Monuments Act, 1969 and is therefore not a provincial heritage site in terms of the NHRA. West of this building is what used to be the station for "non-whites", a near forgotten relic from the days of apartheid. Various other structures, including the remaining sheds (e.g. the historic coach washing shed), the 1928 Audit building and annexes to the main building, as well as the landscaped open space with its symmetrical layout between the main station building and Scheiding Street, currently form part of the station precinct. See Photograph 7 at the end of this report. Also located in the vicinity are the old Victoria Hotel (formerly the Hollandia Hotel) as well as the Belgrave Hotel (1929). Peripheral to the existing core area of the main station are various other historic structures such as the old mill building on Stand No. 2672 (598 Andries Street) at the designated location of the new station (see Appendix D), as well as the railway houses further south in Railway Street at what was previously known as Du Preez's Hoek.

### **6.5.2 Assessment of heritage significance**

The Paul Kruger Street Spine Development Framework (2001) identified the Pretoria Station precinct as an important node in the city. This stems from the landmark position of the precinct and the imposing visual prominence of the main station building in particular, at the southern end of Paul Kruger Street. From an aesthetic/visual viewpoint, the importance of the station precinct is beyond question.

The Pretoria Station is the oldest station in Pretoria. The first station buildings date from 1894 but none of these buildings or their related original railway structures remain. The existing main station building is, from both an historical and architectural perspective, the most significant structure and is a physical reminder of the early days of the station precinct.

In the days of the former Transvaal Republic, the Pretoria Station became the point of connection of the capital of the former Republic with the gold mining industry of Johannesburg. During that time, it was the only station in the interior of the country from which Lourenço Marques (now Maputo) in Mozambique, could be reached.

The buildings and associated structures, which currently form part of the historic station precinct, have been erected over a long period of time. These buildings and structures are functionally inter-related. A particular pattern of land use has also emerged over the years with most of the railway tracks entering the city through Elandspoort via the Fountains Valley alignment. With the passing of time and with trees becoming taller and bigger, the visual impact of trains passing on this route became largely obscured.

The historic Pretoria Railway Station precinct forms the central point of a clearly legible larger cultural landscape based on historic urban patterns (e.g. streetscapes and street-building relationships), scale, grain and form. The main axis of this landscape extends from the intersection of the Paul Kruger Street axis and Scheiding Street in a southeasterly direction along Railway Street into Andries Street. The complementary scale and form of the modern buildings and other recent interventions in Andries Street

and in the area of the old mill building must be noted. The latter building is a good example of early industrial architecture and is conservation-worthy. See Appendix D.

### **6.5.3 Assessment of impact**

**The cumulative effect of the direct and indirect impacts of the proposed route alignment on the cultural landscape attributes of the Pretoria Railway Station will be severe, based on the following considerations:**

- The new elevated station building will directly impact on the most important view line associated with the historic railway precinct; facing the existing station building from the point where Paul Kruger Street meets Scheiding Street. The proposed new station will be obtrusive in its position left of the main station building. See Photograph 8 at the end of this report. The affect of such a direct visual intrusion on the contextual integrity, sense of place, setting and scale of the existing station building will be significant;
- The alignment will cut across the existing rails at a 90-degree angle. This adversely affects the historic composition in relation to the Pretoria Station and surrounds and is a potentially significant direct impact on the historically-defined form, layout and grain of the cultural landscape under consideration – see Photograph 9 at the end of this report (this photograph shows the approximate position of the new station and Salvokop in the background);
- The impact on the historic mill building in Andries Street will be significant, i.e. in terms of the integrity of existing view lines, intangible heritage attributes such as the sense of place, the quality and character of the setting of the building. The affect that the close proximity of the proposed new station structure will have on the long-term sustainability of this building will be negative.

### **6.5.4 Consultation with affected communities and other interested parties**

Objections to the cumulative effect of the impacts of the proposed route alignment on the Pretoria Railway Station and surrounds, have been received from the following affected and interested parties:

- Architectural Heritage SA – mention is made of the severity of the potential impacts on vistas and view lines and the negative impact on buildings of historical, cultural or architectural importance;
- Tshwane Building Heritage Association – reference is made to the severity of the potential impacts of the elevated alignment and position of the proposed new station building on vistas and view lines on the historic buildings in Railway Street. According to the objector, the buildings have not been properly assessed in the draft HIA Report.

### **6.5.5 Mitigation of impact**

**Bearing in mind the extent of physical intrusion by the proposed route alignment into the cultural landscape centered on the existing Railway Station and the assessed effects of impacts on this landscape, it is believed that the scale of the**

**cumulative effect of these impacts will exceed the impact absorption capacity of the historically-based urban characteristics and intangible heritage of this cultural landscape.**

**It is therefore recommended that that the route alignment be amended to prevent the potential adverse cumulative effect of its impacts.**

It is unfortunate that an important precinct such as the Pretoria Station lacks a Conservation Management Plan. In the absence of such a plan, the HIA team was not able to assess the intricacies of the historic functions within the context of the development of the station over a long period of time.

This shortcoming does not mean that the team's evaluation of impact on the historic core of the Pretoria Station would have been different. It does, however, imply that the suggested mitigation measures listed in this section would ultimately have to be tested against the findings of a Conservation Management Plan.

It is recommended that the project proponent should facilitate the development of such a plan with respect not only to the area of the Pretoria Station but to all the historically related railway properties (i.e. forming part of the cultural landscape) in the peripheral area of the station, north and east of the existing railway tracks. Such a plan would be required to inform the planning, design and construction of the proposed new station and the planning of the future preservation and presentation of the historic railway station precinct as a heritage resource. Included in this would be the Victoria Hotel, the Belgrave Hotel, the historical coach washing shed, the 1928 Audit building, as well as the railway-associated houses further south at what was previously known as Du Preez's Hoek.

The development of the above-mentioned Conservation Management Plan would need to be done in collaboration with the project proponents of the Salvokop Development Framework and the Freedom Park National Legacy development. Because of the HIA currently being undertaken as part of the former project, much baseline information that would be required in the development of the Conservation Management Plan already exists.

Provision should also be made for the development of a museum and related information centre in the area under consideration to accommodate all heritage-related aspects with regard to the development of the Gautrain Rapid Rail Link. Such a facility would need to illustrate how heritage issues came to be addressed within the context of the new development. It is also suggested that funding should be allocated for the development of a suitable railway heritage tourism node catalysed by the new station. This clearly meets current thinking in the development of guidelines with regard to the functional area around the Pretoria Station.

As regards the proposed new elevated station, the HIA team recommends that the design of the structure will need to be attended to with great care and sensitivity. The structure would in terms of scale, materials etc. have to be designed so as to be in sympathy with the existing historic fabric, setting and related aspects of contextual integrity.

## **6.6 Area between the Pretoria Railway Station and the suburb of Muckleneuk**

Located in the area is an extensive collection of apartment blocks as well as numerous residential dwellings, many of the latter are part of the historic fabric of Pretoria. Many of these buildings are older than 60 years and thus protected under the NHRA.

### **6.6.1 Berea Club**

#### **6.6.1.1 Identification and mapping of heritage resources**

Due to the continued expansion of the railway operation and the general lack of public transport for railway employees, houses were erected in the area east of the station. Subsidies were also made available for railway employees to erect their own houses in this area extending to the Apies River. The area was therefore developed as a residential extension of the bigger railway operation.

This is how it also came to be that the site, known as Berea Club (or Berea Park), was developed as a recreational facility by the former CSAR for white railway employees. For many years, the Club was widely frequented, mostly over weekends, by white railway employees and public service officials who lived in apartment buildings in the city centre, Sunnyside, and the suburbs of Arcadia and Muckleneuk. Particular attention is drawn to the sport stadium and the cricket fields south-east of the former club buildings, which will be crossed by the recommended route alignment. The buildings on the site date from 1906-1927 and are thus protected under the "60 Year Rule" of the NHRA – see Photograph 10 at the end of this report. The fact that the facility is no longer used as a recreational facility and that the former Club grounds are in a state of neglect is a concern. See Photograph 11 at the end of this report for a view of the Club buildings and sport fields from the crest of Salvokop.

#### **6.6.1.2 Assessment of heritage significance**

Based on the following considerations, the former Berea Club recreational facility is a potential provincial heritage site:

- As the only recreational facility of its kind in the city, it is of historic importance.
- Its importance in demonstrating a pattern in South Africa's history must also be recorded; the facility is a remaining integral physical manifestation of the historical and social development of the railway administration in Pretoria as previously described.
- Its potential to yield information of an architectural and social nature and in contributing to an understanding of the historic railway development, must be noted.
- The special association of the facility with the work and activities of the former railway administrations in Pretoria and, particularly, the many railway employees and their families who frequented the Club, makes it important.



The Berea Club has intrinsic heritage attributes as a cultural landscape. These attributes have retained a high degree of integrity and authenticity. Examples of this are its constructed landscape qualities and sense of place.

### **6.6.1.3 Assessment of impact**

**The cumulative effect of the direct and indirect impacts of the proposed route alignment on the former Berea Club recreational facility as a cultural landscape, will be severe, based on the following considerations:**

- There will be a significant impact of the route alignment on various view lines and vistas to and from not only the former Club buildings, but the Club grounds; the effect of such visual impacts will be compounded by the elevation of the recommended alignment as it crosses the grounds of the Club.
- The route alignment will directly impact on the physical integrity of the facility in view of the fact that the directly affected sport fields are an integral part of the facility, its layered history, and setting. The possibility of the Club returning to its original use is compromised by the alignment.
- The indirect visual and physical impact of the elevated route alignment on the connections of the Berea Club's cultural landscape with adjacent cultural landscapes will be significant; the extent of this impact will be such as to affect the integrity of the view from Salvokop towards the area of the city east of the existing Pretoria Station.

### **6.6.1.4 Consultation with affected communities and other interested parties**

The following interested and affected parties have submitted written objections to the proposed route alignment:

- Tshwane Building Heritage Association – with regard inter alia, to the potential indirect impact of the route alignment on the Berea Club buildings.
- Architectural Heritage SA – “We are extremely concerned ...about the potential environmental damage in which the suspended rail will dominate the landscape for parts of the route.”
- MLPORA – mention is made of the potential obliteration of the sports grounds facility and the separation of part of the affected grounds from the clubhouse.

### **6.6.1.5 Mitigation of impact**

**The extent and nature of physical intrusion by the proposed route alignment into the grounds of the former Berea Club cultural landscape and the resultant adverse effects of impacts on this landscape, are of serious concern. The scale of the cumulative effect of these impacts will exceed the impact absorption capacity of the Berea Club cultural landscape under consideration.**

**It is therefore recommended that efforts be made to amend the alignment as a mitigation measure with respect to the entire Berea Club cultural landscape.**

It is furthermore proposed that the severe effect of the impact of the recommended route alignment on the integrity of this cultural landscape, be turned into an opportunity aimed at benefiting the future sustainable conservation of the facility. Thus it is recommended that the facility should not only be included in the scope of study of a suggested Conservation Management Plan, but also as a part of the suggested railway heritage node. The possibility of locating the suggested railway museum / heritage information facility in the historic buildings at Berea Park should also be investigated. From the viewpoint of historic context, the Berea Park recreational facility must again become be an integral part of the Pretoria Railway Station precinct and its heritage assets.

## **6.6.2 UNISA Sunnyside Campus**

### **6.6.2.1 *Identification and mapping of heritage resources***

As was mentioned in the heritage chapter of the draft EIA report, the UNISA Sunnyside Campus, east of the Apies River, will be impacted on by the recommended route alignment.

The site of this educational facility used to form part of the former Pretoria Normaal College that was founded after the Second Anglo-Boer War (1899-1902). After moving to their new premises on the southern side of Muckleneuk Hill, the old campus became redundant and most of it was taken over by UNISA. The buildings on this campus date from 1910 to 1965 and have been renovated by UNISA.

The historic fabric of the site was respected after the site was taken over by UNISA; the renovation and partial restoration of the old college buildings was executed in sympathy with the remaining original fabric. The original core-building complex together with its later additions were put to new uses.

The oldest building (viz. the erstwhile Normaal College's Harmonie hostel) on the site is currently used by UNISA's Art Department. See Photographs 12 at the end of this report. This building complex consists of offices, storage areas, training workshops, as well as later additions due to subsequent functional requirements. One of these additions, i.e. the annex south of the original building (1935), connects the Department of Art and the Legal Aid facility into a unified court complex. This annex would be demolished. Two other buildings will be directly impacted (demolished) by the recommended route alignment. See Photograph 13 at the end of this report.

### **6.6.2.2 *Assessment of heritage significance***

See Appendix D for an assessment of the above-mentioned buildings.

The annex of the Art Department building was found to be of conservation value whereas the remaining two buildings are not of conservation importance. This, however, does not diminish the intrinsic qualities of the affected portion of the university campus as part of a worthy and functional cultural landscape. The Art and Legal Aid complexes constitute a unified complex, which in turn defines the main operational axis of the campus in terms of the UNISA Sunnyside Campus Development Plan. The visual, aesthetic and architectural qualities of the restored complex combine to provide a legible and distinctive character to the greater cultural landscape of the campus. The affected portion of the campus has a discernible sense of place. Although the remaining

buildings that would be demolished were not found to be of conservation value, their manifestation collectively of a particular layered historical development, must also be noted.

The existing dwelling situated on Stand No. 167/R (at 221 Preller Street) south of the annex of the Art Department building, was not assessed in the Architectural Assessment. There will be an indirect impact on this building which is protected under the "60 Year Rule" of the NHRA.

#### **6.6.2.3 Assessment of impact**

**The cumulative effect of the impact of the proposed route alignment on the affected portion of the UNISA Sunnyside Campus and its tangible as well as intangible heritage resources will be severe, based on the following considerations:**

- The direct impact on the above mentioned cultural landscape as a heritage resource.
- The direct impact on the contextual integrity and character (including setting) of the campus (the campus will be divided by the route alignment) and its intangible heritage attributes.
- The direct impact on UNISA's planned further enhancement of the special heritage qualities of the campus in terms of the Campus Development Plan.

#### **6.6.2.4 Consultation with affected communities and other interested parties**

Opposition to the recommended route alignment has been received from UNISA relating to the impact of the alignment on its Sunnyside Campus. From a heritage viewpoint, UNISA has objected to the proposed demolition of the annex of the old Arts Department building; the resultant proximity of the recommended alignment to the remainder of the original building complex; and the division of its campus as a functional entity. The HIA team supports these concerns.

#### **6.6.2.5 Mitigation of impact**

**The scale of the cumulative effect of the above-mentioned impacts will exceed the impact absorption capacity of the physical and intangible attributes of the affected portion of the UNISA Sunnyside Campus as a cultural landscape.**

As the existing dwelling at 221 Preller Street will be indirectly impacted on, it is recommended that appropriate mitigation measures be instituted and that the structural integrity of the building should be respected. Such measures should also be compatible with aspects such as the scale, form and materials of the building.

**It is recommended that the design of the alignment be amended to avoid demolition of buildings or splitting of the Campus.**

### 6.6.3 Mandela Corridor and Apies River

East of the grounds and sports facilities of the Berea Club is the Nelson Mandela Drive, also called the Mandela Corridor. Adjoining this major traffic artery on the east is the Apies River. The latter is currently the subject of redevelopment planning and a consortium of designers has been appointed to investigate the proposed upgrading of this spine. The following initiatives all relate to this: Apies River Open Design Framework; Rainbow Junction; Apies River Development Corridor.

From comments received from the Tshwane Building Heritage Association and MLPORA, the HIA team must point out the severity of the visual and other effects, including on the Elandsport landscape of the elevated alignment as it crosses over the Mandela Drive and the Apies River.

## 6.7 Muckleneuk residential area

### 6.7.1 Identification and mapping of heritage resources

This area (named 'little corner' by the Scot McKenzie Harry Walker) is well defined by its topography, location and street grid. It is unique in the sense that its residential character has been maintained since it was laid out together with the suburbs of Sunnyside and Arcadia before the turn of the 19<sup>th</sup> century. The Township of Muckleneuk was proclaimed on 29 January 1896. Today, Muckleneuk is on one of the three Jacaranda routes in Pretoria. When the over 500 Jacarandas bloom in October, the suburb, comprising of about 460 dwellings, becomes a tourist attraction.

The area is bounded by a hill and nature reserve to the south, Queen Wilhelmina Street in the east, the R101/Elandsport Road in the west, and the existing Metro rail corridor in the north. The latter is understandably of direct relevance to the study and dates from 1895, viz. when President Kruger of the former Transvaal Republic inaugurated the Delagoa Bay (Maputo) railway line that linked Pretoria to that port. The railway line was later sunk into a cutting, due to the occurrence of accidents at the at-grade Walker Street road crossing. As was also stated in the heritage chapter of the draft EIA Report, the *"existing railway line falls under the control of the SARCC and already provides for the quadrupling of the corridor to 4 lines as is evident from the road...(over) the rail bridge where Mears Street crosses the railway line."* Since its construction, the railway line has served as a natural demarcation between the suburbs of Sunnyside and Muckleneuk, which is appreciated as such by many residents of Muckleneuk.

Properties that would be both directly and indirectly affected by the recommended route alignment were identified and mapped. These properties are adjacent to the proposed route alignment from Normaal to Celliers Streets, and south of the existing South African Rail Commuter Corporation (SARCC) corridor between Celliers and Leyds Streets, Bourke and Middelberg Streets, as well as between Middelberg and Klip Streets. See Appendix D.

### 6.7.2 Assessment of heritage significance

Of the properties (i.e. residential dwellings and houses that have been converted for business purposes) that would be affected by the route alignment, five (of which 3 would be demolished) were identified as being of sufficient cultural significance to be afforded provincial heritage site status under the NHRA. A total of 25 properties (of which 9

would be demolished) were assessed to be of local conservation value or significance. This however, does not mean that the affected area of the suburb of Muckleneuk comprises only of a combined total of 30 structures of cultural significance.

The above-mentioned buildings all form part of a bigger cultural ensemble of both tangible and intangible heritage resources that are valued by the residents of Muckleneuk. See in this regard:

- Appendix L: *An Extract From The "Gautrain Rapid Rail Link – Alignment Through Muckleneuk" Report, 30 April 2002;* and
- Appendix M: *2<sup>nd</sup> Specialist Report on Heritage Impact on Muckleneuk – MLPORA, 14 October 2002.*

where MLPORA have detailed the special qualities of the heritage resources in the area.

The conclusion of the HIA team with regard to the character and quality of the affected area and its urban fabric, is that the area constitutes an integral part of a wider cultural landscape. The latter comprises mature residential qualities and a strong sense of place that differentiates itself from other suburban townscapes, clearly manifested historical urban spatial relationships including authentic street-building relationships and street patterns, largely open frontages, dense planting, low scale of construction, variety combined with compatibility of architectural styles, integrity of visual catchments, as well as legible qualities of inter-connectedness with related places of cultural significance.

From the application of the Section 3(3) assessment criteria of the NHRA in the Architectural Assessment (See Appendix D), the shared conservation value of the affected properties, combined with the special cultural landscape qualities of the wider area in which they are located, make of the affected properties and their surrounds, a heritage resource.

### **6.7.3 Assessment of impact**

**The cumulative effect of the impacts of the recommended route alignment on tangible and intangible heritage resources in the suburb of Muckleneuk will be severe, based on the following considerations:**

- Direct impact: a total of 17 buildings will be demolished; the severity of this impact is illustrated by the fact that of these buildings, three are of potential provincial heritage site status and nine of local cultural significance;
- Direct impact: a total of eight other properties will be impacted on in terms of the destruction of their settings (e.g. established gardens, excising of parts of stands and the removal of adjoining planted buffer zone); the removal of neighbours and friends from their habitat will have a negative social impact; two of these properties have the potential to be nominated as provincial heritage sites;
- Indirect impact: an additional total of 19 properties of which 18 have been assessed to be of local heritage significance, will be indirectly impacted on (i.e. mostly through the proximity of the proposed track);

- Direct impact: this refers to the partial or complete destruction of many of the physical and intangible heritage attributes and qualities inherent in the focus area and the loss similarly of this area to the rest of the Muckleneuk cultural landscape.

#### **6.7.4 Consultation with affected communities and other interested parties**

Extensive representations have been made by the Muckleneuk and Lukasrand Property Owners and Residents Association (MLPORA). The representations express misgivings on the question as to whether the HIA study would be undertaken in full compliance with the requirements for such a study as prescribed in the NHRA. This report shows that all the requirements have been met. As was previously mentioned, the outcome of the study will be considered by SAHRA whose comments and recommendations, if any, will be communicated to the relevant decision making authority, i.e. GDACEL. MLPORA was informed of this and the fact that any such comments and recommendations from SAHRA will be taken into account in GDACEL's decision making process.

It is well known that MLPORA (as reflected in their detailed written submissions and verbal comments to the EIA/HIA teams) is opposed to the refined Muckleneuk route alignment (6FD). MLPORA's opposition stems from its interpretation of the affects of the following potential main impacts:

- loss of residential properties and heritage resources as well as indirect impacts on properties and heritage resources;
- loss of social and residential cohesion and sense of place;
- loss of environmental quality through impacts such as noise; and
- loss of neighbours (i.e. members of an established residential community).

In commenting on the draft Phase Two HIA report, MLPORA has inter alia, pointed to various shortcomings in the report, including the lack of the identification of Muckleneuk as a cultural landscape, the absence of a substantial definition of its heritage resources other than those on the proposed route alignment, as well as the lack of an analysis of its intangible heritage resources and a definition of its cultural significance. These comments have been addressed in this final report.

#### **6.7.5 Mitigation of impact**

**It is of concern to the HIA team that the scale of the cumulative effect of the above impacts will exceed the impact absorption capacity of the affected heritage resources in the suburb of Muckleneuk.**

Further to what is stated below under **7.1 The relocation / reconstruction of buildings and other structures: a no-go option**, the dismantling and reconstruction elsewhere of the buildings that will be destroyed in the area under consideration, is not acceptable from a heritage perspective.

An alternative suggested by the project proponent was to identify buildings in Muckleneuk of similar architectural and heritage attributes and to preserve them as museums to replace those that would be lost. After due consideration by the HIA team, it was decided that such a course of action would not be acceptable in terms of heritage best practice. The uniqueness of the "fingerprint" of the original fabric, craft, design, detailing, materials, setting and contributory cultural landscape characteristics of the

conservation-worthy buildings cannot be duplicated. The lost attributes are as set out in the criteria listed under Section 5.4 above.

**It is therefore recommended that the proposed new route alignment should be adjusted to remain in the existing Metro Rail reserve and not to deviate from the latter in the eastern section of the area of affected heritage resources.** However, other impacts resulting from the Gautrain such as noise, vibration and frequency of trains will still impact on the suburb and particularly the buildings in close proximity, as well as aspects of the cultural landscape. **See 8. Conclusions in Appendix D. The vertical alignment of the existing rail corridor should consequently also be adjusted to mitigate such impacts.**

In the event of the final recommendation made in this report not being implemented, an obligation should be placed on the Gautrain project proponent to facilitate efforts aimed at the sustainable conservation of the remainder of the suburb of Muckleneuk, south of the existing rail corridor, as a heritage area in terms of Section 31 of the NHRA. The HIA team emphasises that this suggestion must not be construed as a mitigation measure. The long-term benefit of placing the suburb of Muckleneuk under the formal protection of the NHRA, should not be overlooked.

The value placed upon the suburb of Muckleneuk by its residents is longstanding and is demonstrated by the Development Plan drawn up by them more than ten years ago. The residents have shown a consistent concern for the preservation of their suburb and its history. It is clear from the *Muckleneuk/Lukasrand Eienaarsvereniging Ontwikkelingsplan (August 1993)* that the Muckleneuk/Lukasrand residential area comprises extensive heritage attributes, including such noteworthy architecture as the Kirkness House, the Moerdijk House, two Herbert Baker houses, the Bourke House (by the architect De Zwaan), as well as the Zuid-Afrikaansche Hospital. Mention has been made of the density of the area's Jacaranda trees. The development of the above-mentioned masterplan was initiated by the MLPORA in order to structure their intention to extend and protect the mainly residential character of the area, to protect and use the historical buildings in this area, and to promote and regulate appropriate new development in the area. The commonly used practice of allowing business development in the houses on the edge of the suburb as a buffer between roads and railway has been employed in the Development Plan.

Pursuant to the above-mentioned aims and in response to the proposed Gautrain Rapid Rail Link project, MLPORA recently commissioned their own audit (an initial scoping study) of heritage resources in Muckleneuk. From this, it was found that approximately *"50% of the properties in the whole of Muckleneuk contain structures of 60 years or older that still retain a high degree of authenticity and integrity in heritage terms."* The HIA team supports these findings.

It is the opinion of the HIA team that the area of Muckleneuk, south of the existing railway corridor, qualifies for designation as a heritage area in terms of Section 31 of the NHRA. The area is of sufficient environmental and cultural interest to be afforded such special conservation status.

In terms of the NHRA, the function of heritage areas falls within the sphere of designated local authority competence. This function would only be transferred to the Tshwane Metropolitan Municipality following the establishment of a Provincial Heritage Resources Authority and the subsequent successful testing of the capacity of the local authority

concerned to perform the function. It is understood that a Provincial Heritage Resources Authority will be appointed shortly.

Pending the establishment of a Provincial Heritage Resources Authority, it is recommended that the Gautrain Rapid Rail Link project proponent commit themselves to the following course of action:

- facilitate exploratory discussions with both MLPORA and the planning department of the responsible local authority, as well as the Department of Sport, Recreation, Arts and Culture: Gauteng Provincial Government, with regard to the proposed designation of the above-mentioned area as a heritage area;
- define the extent of the proposed heritage area in consultation with MLPORA and the planning department of the responsible local authority; and
- allocate sufficient funds to commission a comprehensive heritage resources survey of the area and for the development of the necessary heritage management guidelines with a view to the development in turn, of requisite by-laws by the local authority for the area.

#### **6.8 Area between Muckleneuk and the proposed railway station in Hatfield, Pretoria**

This area or zone comprises the following:

- the Magnolia Dell park and recreational facility;
- University Road spine, the palm trees along the northern side of University Road, and the educational institutions in Hatfield; and
- the last stretch of the recommended route alignment to the proposed railway station in Hatfield, where various properties that will be affected north of the existing SARCC alignment between Hilda and Grosvenor Streets, have been mapped.

##### **6.8.1 Magnolia Dell park and recreational facility**

This open public parkland is unique in that it is the only space of its kind in central Pretoria. According to the *Second Specialist Report on Heritage Impact on Muckleneuk* by MLPORA (refer MLPORA's second submission dated 14 October 2002), this public place *"was reclaimed from land belonging to the consolidated brickworks of Olive and Co., makers of bricks for amongst others the Union Buildings...Whilst being an important element in the management of storm-water in the city area, this space has...become one of the most used public green spaces within the central urban area. The triangle bounded by Q. Wilhelmina, Walker and University Road is frequently used by African syncretist churches as a religious space."*

Magnolia Dell park and recreational area is more than just a public open space. It is of historical, aesthetic, as well as social importance, in view of the following aspects and considerations:



- it has been landscaped and maintained as a safe area visited by hundreds of people every weekend (its lawns and kiosk have become the venue for a large and popular flea market once a month) and is well used every day;
- it is a people-friendly green lung and place of leisure for the residents of the surrounding suburbs of Muckleneuk, Bailey's Muckleneuk, Nieuw Muckleneuk, as well as apartment dwellers from Sunnyside and Arcadia;
- it is a place of contemplation and a space essential for adding value to the spiritual lives of people;
- it is a large, well-designed open space.

The most important intangible heritage attributes of Magnolia Dell however, are the qualities of its visual catchments and sense of place. These qualities combined with the above aspects of importance, illustrate the local cultural significance of this public recreational facility.

**There will be a direct impact of the route alignment on these sensitive heritage attributes as it crosses Walker Street at the triangle bounded by Queen Wilhelmina and Walker Streets and University Road at an elevation raised above the level of the park. See Photograph 14 at the end of this report. The capacity of Magnolia Dell to absorb such an impact is considered to be limited.**

**It is therefore recommended that, in the event that the conclusion contained in this report is not implemented, the track of the Gautrain should, be lowered sufficiently to eliminate the visual impact and source of noise.**

It is furthermore recommended that relevant mitigation measures referred to under **7.2 Proposed mitigation measures of general prescription** be instituted so as to ensure that the special qualities of the facility be respected. Due to the sensitivity of the area, extensive measures to mitigate noise and the affect of visual intrusion would be required. Mitigation through landscaping must be rigorously applied. It is felt that this might be considered an opportunity to redesign the affected portion of the park, roads and recreational facility.

#### **6.8.2 University Road spine, the palm trees along the western side of University Road, and the educational institutions in Hatfield**

##### **6.8.2.1 Identification and mapping of heritage resources**

North and north-east of the triangle bounded by University Road, Queen Wilhelmina and Walker Streets is the educational or academic precinct comprising the Pretoria Boys High School, the Afrikaanse Hoër Seunskool, the Afrikaanse Hoër Meisieskool, the Pretoria High School for Girls as well as the University of Pretoria (UP). This clearly defined precinct constitutes one of the city's most important and well-known cultural landscapes.

The legibility of the above cultural landscape is centered on the University Road axis or spine extending north-east from the above-mentioned triangle across Lynnwood Road

and the western boundary of the UP to the area of the north-east corner of the Pretoria High School for Girls – see Photograph 15 at the end of this report.

#### **6.8.2.2 Assessment of heritage significance**

The palm trees lining both sides of University Road date from the 1920s and have been maintained by the Tshwane City Council. The rows of trees used to continue directly parallel to the existing railway line until the construction of a grade separation between the latter and Lynnwood Road necessitated the diversion of University Road. From an application of the NHRA assessment criteria, the trees are of cultural significance and collectively constitute a heritage resource. The collection of trees, inter alia:

- is of aesthetic importance and is valued by the community, particularly those members of the community associated with the educational institutions in the area;
- is of conservation value because of the above-mentioned educational institutions' expressed strong / special association with it;
- is unique and has exceptional qualities of authenticity, based on aspects such as location, setting, including its visual (i.e. as a linear visual catchments landmark) and history with related places (i.e. the educational or academic institutions) within the context of the cultural landscape under consideration; and
- its manifested attributes of meaning (refer intangible symbolic qualities and memories) – see also below.

The palm trees are but an element of many that contribute to the historically based spatial and visual qualities of the University Road spine. The following comes from the Heritage Chapter of the draft EIA Report: *“University Road spine – The main significance is for its vista and connecting visual character towards the University of Pretoria and Loftus from Magnolia Dell and from the University's western entrance in University Road towards Magnolia Dell. This road is more than a mere connecting link for motor vehicles and has since its construction been a scenic drive and walkway for students and residents using this route to the University of Pretoria. This character has been enhanced by its curved design and being narrow without proper curbing at any of its sides. The curved road is enhanced by the palm trees lining the railway line from Magnolia Dell right up to Pretoria Girls High School. The 'green' and park like character is enhanced by old and tall pine and bluegum trees inside the Pretoria Boys High School Grounds.”*

The area of the above-mentioned educational or academic precinct has a legible layered history of almost a century. Starting with the UP, it firstly possesses a rich architectural heritage, including buildings designed by Gerhard Moerdijk, Brian Sandrock (i.e. the Main Administration building) and Karel Jooste. The character of the University campus is based on its function as a place of academic discourse, research and learning. Historically, these functions form the basis of the special environmental and culturally significant character of the campus: low noise levels, slow moving traffic, pedestrian friendly areas, areas of contemplation, calm working environments, safe surroundings and links to the surrounding residences and places of related academic activity. These aspects contribute to the unique character of the University campus and its strong qualities of sense of place.

The UP is a place of cultural significance based inter alia, on the following considerations:

- its recognised importance within the greater South African community;
- its possession of special cultural heritage aspects (e.g. its many historic and architecturally valuable buildings);
- its contributory potential to an understanding of the history of tertiary education in South Africa; and
- its strong association with not only the South African community at large, but with the life and work of the untold number of persons who from their training at this institution, proceeded to reach significant levels of respect and acclaim not only locally but internationally.

All of the high schools mentioned previously are institutions of long standing. The Pretoria High School for Girls, west of University Road and the UP, was started in 1902. The main school building is a declared Provincial Heritage Site and thus formally protected under the NHRA. Other buildings situated on the school property such as the hostels, are older than the main building.

The significance of the schools and the UP as functional entities within the educational or academic cultural landscape, lies in the following shared and interconnected physical aspects of character and intangible heritage attributes: the special quality of the open green spaces for sports fields and related activities adjoining the existing rail corridor; the visual and spatial relationship of these fields, existing buildings, vehicular and pedestrian routes, as well as to other spaces (e.g. of planted vegetation); the special qualities of urban scale, forms and landscape design; the integrity of a host of aesthetic qualities pertaining to the scale of buildings and visual connections. The sum total of this affords the educational or academic precinct with a strong sense of place and the potential to be afforded provincial heritage site status.

### **6.8.2.3 Assessment of impact**

West of University Road in the focus area are the grounds of the Afrikaanse Hoër Seunskool. Numerous structures on the edge of the sports grounds and within close proximity of the existing rail corridor will be destroyed. None of the affected structures however, are protected under the NHRA. These buildings did not form part of the Architectural Assessment. These structures include the Scout Hall, the double volume multi-purpose hall, structures at the swimming pool and other modern structures further north alongside the existing rail corridor. See Photograph 16 at the end of this report.

**Although no physical heritage resources (including the palm trees lining University Road) will be destroyed, the cumulative effect nonetheless of the impact of the proposed route alignment on the educational or academic precinct will be significant, based on the following considerations:**

- Indirect impact: the palm trees on the western side of University Road and south of the Lynnwood Road intersection (see Photograph 17 at the end of this report) will be affected in the event of a significant modification to the existing railway embankment.

- Indirect impact: the aesthetic qualities and integrity of setting of the palm trees adjacent to the railway corridor north of the Lynnwood Road intersection will be affected by the proposed construction of a sound abatement structure next to the palm trees.
- Indirect impact: the impact on the palm trees implies that there will also be an impact on the aesthetic, including visual qualities of the University Road spine as a physical spine.
- Indirect impact: the diminished quality of the visual axis from the old Lettere building on the UP Campus towards University Road will be affected; important to note is that the old Lettere building was designed on a west facing axis intended to focus across the property of the Pretoria High School for Girls towards the Union Buildings.
- Direct impact: the integrity of visual inter-connectedness between the institutions west and east of the existing rail corridor and north of the University and Lynnwood Roads intersection will be significantly affected.
- Direct impact: there will be a marked impact on the sense of place of the cultural landscape comprising the educational institutions.
- Indirect impact: there will also be a similar impact on the special aesthetic qualities of the green open spaces (mostly sports fields) of the secondary educational institutions west of the existing railway corridor.
- Indirect impact: the proposed noise attenuation structures on both sides of the rail reserve west of the UP, will have an obtrusive effect on the visual catchments qualities of the buildings of architectural value on the western boundary of the UP Campus.

#### **6.8.2.4 Consultation with affected communities and other interested parties**

A written statement, dated 6 December 2002, received from the heads of the following educational institutions in Hatfield: University of Pretoria (UP), Pretoria Boys High School, Pretoria High School for Girls, Afrikaanse Hoër Seunskool, as well Afrikaanse Hoër Meisieskool makes reference to perceived noise and increased traffic congestion impacts within the area of the above-mentioned educational precinct. Concerns have also been expressed that the running of the rail tracks, mostly at grade, past the University of Pretoria Campus would, inter alia, result in the following:

- the University's strong sense of place would be affected;
- the historic view lines from the ou Lettere building on the University campus towards the Pretoria High School for Girls would also be affected (so also would "the view on the administration building that is a defining landmark of UP"); and
- the disturbing aesthetic affect of the proposed noise abatement structure along the railway reserve in University Road on the palm trees and the scenic qualities of University Road.

In commenting on the Phase Two draft HIA report, the UP once again emphasised its contention that the proposed route alignment would have a detrimental impact on not only the tangible and intangible heritage resources of the UP Campus but also the educational precinct as a whole. The assessment in this report supports this view.

#### **6.8.2.5 Mitigation of impact**

The proposed construction of noise attenuation structures on both sides of the rail corridor, which is located either above or at grade, will constitute a significant physical intrusion into the educational or academic precinct as a distinctive cultural landscape. The cumulative effect of this new intrusive element and the impacts on the surrounding cultural landscape are noted with concern. The capacity of the cultural landscape to absorb such cumulative impacts is limited.

It is consequently recommended that the design of the alignment be amended to avoid the cumulative effect of the impacts.

In the event of the appropriate amendment of the route alignment, all relevant suggested mitigation measures under **7.2 Mitigation measures of general prescription** must be rigorously applied. It is suggested that an amendment of the proposed route alignment could offer an opportunity to increase connectivity and accessibility (e.g. through the provision of walkways and open spaces for pedestrian movement) between the various educational or academic institutions.

### **6.8.3 Residential and business properties in Hatfield**

#### **6.8.3.1 Identification and mapping of heritage resources**

See Appendix D with reference to the nine residential / business properties between Hilda and Grosvenor Streets in Hatfield that would be directly affected by the proposed route alignment.

#### **6.8.3.2 Assessment of heritage significance**

Only two of the above buildings are of conservation value.

#### **6.8.3.3 Assessment of impact**

See Appendix D.

#### **6.8.3.4 Mitigation of impact**

The impact on the properties listed in Appendix D must be mitigated in accordance with **7.2 Mitigation measures of general prescription**.

## **7. PROPOSED MEASURES OF MITIGATION**

With regard to the findings of the HIA, the identification of affected heritage resources (i.e. places, including buildings of cultural significance) within the focus area of the study and the perceived impact of the proposed route alignment on them, are summarised in

the table overleaf. An indication is also given in the table of whether, in the opinion of the team, it would be possible to mitigate the impact on such heritage resources.

### **7.1 The relocation / reconstruction of buildings and other structures: a no-go option**

In a written reaction (on the draft EIA report which preceded this study), dated 20 December 2002 from SAHRA, the following is mentioned on the question of mitigation:

*It is noted that the Heritage Report states that for several of the specific sites... mitigation measures can only be determined after more detailed plans and architectural drawings have been presented. The statement for the Muckleneuk area that little mitigation is possible unless the route passes under Park St is noted with concern. The recommendation that a full investigation and record be undertaken of the affected sites is only acceptable if there is no other alternative. The further recommendation 'that most historic buildings should be reconstructed at an appropriate location' is not (at) all acceptable as the buildings would no longer be 'historically authentic' and this does not agree with current international best practice."*

The above-mentioned position on the part of SAHRA is supported in view of the fact that heritage resources are irreplaceable and non-renewable.

In the event of the threatened destruction of a structure of cultural significance, the most obvious solution in the recent past may have been to recommend that the structure be carefully documented, dismantled, and then reconstructed in a suitable location elsewhere. This is no longer considered to be an appropriate solution in terms of best practice. An immovable heritage resource that is taken out of its original setting and away from its physical location loses its authentic attributes. The original fabric of such a heritage resource is also irreversibly compromised.

The following two principles as laid down in the Burra Charter are of particular relevance to the question of relocation and reconstruction:

*"Reconstruction is appropriate only where a place is incomplete through damage or alteration and where it is necessary for its survival, or where it reveals the cultural significance of the place as a whole. Reconstruction is limited to the completion of a depleted entity and should not constitute the majority of the fabric of the place."*

No recommendation is consequently made with regard to mitigating the proposed destruction of buildings and other structures in the area of the study through the relocation / reconstruction of such buildings / structures. However, mitigating steps can be taken in conjunction with the recommended refinements/amendments to the route with regard to such problems as noise and other indirect impacts and these are discussed below.

THE MEANINGS USED IN THE COLUMN HEADINGS BELOW ARE TO BE UNDERSTOOD AS FOLLOWS:			
<b>Zone</b>	the place / area of potential impact on heritage resources		
<b>Direct impact (*)</b>	the destruction of tangible (e.g. buildings) and intangible (e.g. sense of place) heritage resources – see aspects of cultural significance under <b>5.3 Evaluation of the impact of the proposed route alignment on heritage resources</b>		
<b>Indirect impact (*)</b>	impact on tangible and intangible heritage resources, i.e. adverse effects of impact such as visual and noise on sense of place, setting etc - see aspects of cultural significance under <b>5.3 Evaluation of the impact of the proposed route alignment on heritage resources</b>		
<b>Mitigation possibilities</b>	can the impact be mitigated?		
ZONES	IMPACT DIRECT	IMPACT INDIRECT	MITIGATION POSSIBILITIES
Johannesburg to Salvokop	None	(Midrand) Sense of place, setting	Yes
Modderfontein Dynamite Factory	Fabric, setting association, related places, integrity, sense of place	Related places	No, unless horizontal alignment of the route alignment is refined
Freedom Park Site / Salvokop Suburb	Fabric, setting, association, related places, view lines, integrity, natural landscape, sense of place	None	No, unless vertical alignment of the route alignment is amended in accordance with MMA/GAPP Consortium guidelines
Pretoria Railway Station	Setting, use, associations, meanings, related places, view lines, integrity, sense of place	Fabric, associations, meanings	No, unless vertical alignment of the route alignment is amended
Berea Club recreational facility	Setting, use, associations, meanings, related places, view lines, integrity, sense of place	Fabric, related places	No, unless vertical alignment of the route alignment is amended

ZONES	IMPACT DIRECT	IMPACT INDIRECT	MITIGATION POSSIBILITIES
Apies River	Setting, meanings, view lines, sense of place	Fabric, associations, related places, integrity, natural landscape	No, unless vertical alignment of the route alignment is amended
UNISA Sunnyside Campus	Fabric, setting, use, associations, meanings, related places, view lines, integrity, sense of place	None	No, unless vertical alignment of the route alignment is amended
Muckleneuk Suburb	Fabric, setting, use, associations, meanings, related places, integrity, sense of place	Fabric, associations, meanings	No, unless route alignment follows existing Metro Rail alignment and vertical alignment of the alignment is amended in the eastern section of the area of affected heritage resources
Magnolia Dell park / recreational area	Setting, related places, view lines, sense of place	None	No, unless vertical alignment of the route alignment is amended
Educational or academic Precinct centred on University Road	Fabric, setting, related places, view lines, integrity, sense of place	Fabric, associations, meanings, setting	No, unless vertical alignment of the route alignment is amended
Properties in Hatfield between Hilda and Grosvenor Streets	Fabric, setting, related places, view lines, integrity, sense of place	Fabric, associations, meanings, setting	Yes (Where buildings will be demolished, the reader should refer to Appendix D, i.e. Architectural Assessment for the significance of the affected buildings)

\* There is a cumulative effect of impact from the criteria that are used on any zone that is listed, as well as a cumulative effect of impact along the entire length of the Pretoria section of the recommended route alignment.



## 7.2 Mitigation measures of general prescription

The team concludes fact that any alternative to a tunnel option in Pretoria, i.e. a surface route alignment, would have an impact on heritage resources to a greater or lesser extent. In responding to such an impact, the norm would be to prescribe mitigation measures of general application and measures to mitigate specific impacts on affected heritage. Proposals with regard to the latter are included in the section of the report titled **6. Findings and specific mitigation measures.**

As regards the route under investigation, it is recommended that the following mitigation measures of minimum prescription be instituted. These measures would need to apply to the entire area of the study. Their relevance and necessity is explained by the following:

- any comments and recommendations to be made by SAHRA with regard to these findings would be passed on to GDACEL;
- the findings from the HIA study would be considered by GDACEL as the responsible decision making authority (refer **1. Introduction And Terms Of Reference**);
- should GDACEL decide to grant the necessary consent, it would have been obliged to take into account any comments and recommendations by SAHRA (refer Section 38(8) of the NHRA);
- the granting of consent would imply inter alia, that the study had fulfilled the requirements stipulated in Section 38(3) of the NHRA); and
- this being the case, there will be an exemption from compliance with any other general protection provisions of the NHRA (refer Section 38(10) of the NHRA).

If the consent being sought from GDACEL is granted, it means that it would be unnecessary to make subsequent applications to the responsible heritage resources authority in terms of any other general protection provisions of the NHRA. It would for example, be unnecessary to apply for permits for the demolition / alteration of buildings or other structures that are older than 60 years in terms of Section 34 of the NHRA. This should explain why it is considered of critical importance to recommend the following prescriptive mitigation measures (these measures should be read together with the mitigation measures recommended under **6. Findings and specific mitigation measures.**

- Expert advice and supervision

All further studies / investigations and planning processes with regard to the proposed refined route alignment would need to be constantly informed by expert advice on heritage resources management. Adequate provision (including sufficient funding allocation) would need to be made for the rendering of such advice where and when appropriate. To this end the HIA team recommends that a Heritage Resources Mitigation Plan be included in the EMP.

All construction works pertaining to the proposed route alignment would have to be carried out under the ongoing on-site supervision of competent heritage practitioners. Thus it is suggested that a team of heritage practitioners be appointed for this purpose. It would be critical that a qualified archaeologist be included in such a team of specialists.

- Discovery of heritage resources not identified by the study

Should any material or objects that are protected under the general provisions of the NHRA be uncovered during the course of construction works, it would be necessary to cease such work and to consult the responsible heritage resources authority on appropriate arrangements. Such material or objects might include archaeological or palaeontological finds.

The discovery of graves and burial grounds as well as the remains of former man-made structures, are also the subject of protection under the NHRA. In the case of graves and burial grounds, careful attention would need to be paid to the statutory requirements pertaining to the relocation / re-interment of mortal remains.

Provision would have to be made for the detailed recording and documentation of the remains of any man made structures that might be uncovered during construction works. The chances of the discovery of such remains of buildings, water furrows, military installations etc, are real. Sufficient time would have to be allocated to survey the sites of such remains.

- Detailed documentation of all categories of affected heritage resources

A comprehensive photographic and other documentary record would need to be compiled in respect of each of the identified heritage resources that would be destroyed. In the case of a building, such a record would include copies of all relevant architectural plans, i.e. original plans as well as plans of all subsequent alterations and additions. In the absence of any such plans, measured drawings would be required. Depending also on the quality of the existing documentation, this might be necessary in any case.

It is suggested that the above-mentioned records should, when completed, be handed to SAHRA for the purposes of safekeeping, as well as future reference and research.

- Mitigation of indirect impacts

Every possible effort should be made to mitigate visual, noise and vibration impacts on those affected heritage resources that would not be physically destroyed. It is also important that all mitigation structures would have to be designed in suitable scale and materials to be in keeping and sympathy with affected heritage resources, including their settings. It is understood that such measures might, inter alia, comprise walls to deflect noise, planting and landscaping for screening, the creation of buffer zones, as well the design of physical infrastructure such as cable supports and aerial track supports.

The HIA team has had consultations with Mr Derek Cosijn of the EIA team and Dr Herman Joubert of the Technical Team, from which it is clear that much

investigatory work and research will have to be undertaken to devise and effect effective mitigation measures.

- Design aspects

It is also critical that SAHRA be consulted during all of the remaining phases of the rail link project with regard to aspects such as the actual positioning and design of ventilation shafts, tunnel mouths, viaducts, the elevated station in Pretoria, and all other related structures that have either indirect or direct impacts on aspects of heritage.

- Liaison and consultation

In order to facilitate the actions and consultations, mostly of an ad hoc nature, that would be required to effect the above-mentioned measures, the suggestion should be made to SAHRA (as the responsible heritage resources authority for the time being) to appoint a delegated standing committee to attend to any issues that would need to be referred to them. This would greatly facilitate the necessary interfacing that would have to exist in terms of the EMP between the Concessionaire and SAHRA. Funding for such initiatives is to be ensured.

- Route commemoration measures

It is suggested that measures of commemoration be instituted at appropriate places along the entire route to present heritage resources that are impacted on.

## 8. EVALUATION OF THE IMPACT OF THE PROPOSED GAUTRAIN RAPID RAIL LINK ON THE AFFECTED HERITAGE RESOURCES RELATIVE TO THE SUSTAINABLE SOCIAL AND ECONOMIC BENEFITS TO BE DERIVED FROM THE RAIL LINK

As explained under **2. Aim of the study**, one of the requirements of the study stipulated in Section 38(3) of the NHRA, is to evaluate the impact of the proposed project on affected heritage resources relative to the sustainable social and economic benefits to be derived from the project.

As already demonstrated in the draft EIA report, the potential overall economic and social benefits of the Gautrain Rapid Rail Link project are substantial (See Chapter 8 of the draft EIA report). The difficulty, however, is to relate this to the adverse impact of the recommended route alignment on heritage resources, particularly in the Pretoria area, and their irreversible loss to the national estate.

It is very difficult to place material values on heritage resources. The following considerations, however, are of relevance:

- Heritage resources are irreplaceable and non-renewable. According to Section 5(1)(a) of the NHRA, they *"have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival."*

- Heritage resources must be nurtured for their enjoyment by future generations. If a heritage resource is lost, it is lost not only for the present generation but future generations as well. According to Section 5(1)(b) of the NHRA, "*every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans.*"
- The intrinsic value of heritage resources according to Section 5(1)(c) of the NHRA, lies in their "*capacity to promote reconciliation, understanding and respect*" and in their potential "*to contribute to the development of a unifying South African identity*".

It is clear from the above *general principles for heritage resources management* stipulated in the NHRA, that the loss of heritage resources would, inter alia, entail the following:

- The loss of evidence of the origins of South African society.
- That the opportunity for future generations to appreciate such heritage resources, would have been lost.
- That the chances of such heritage resources contributing to the promotion of reconciliation and an understanding of and respect for heritage resources, would have been nullified. Similarly, their potential to contribute to the development of a unifying South African identity, would also have been discarded.

From the above considerations, the loss of heritage resources is clearly, therefore, not an issue to be attended to lightly. Understandably also, the evaluation of the impact of the recommended route alignment on heritage resources relative to the potential social and economic benefits must be premised on these heritage resources management imperatives.

As regards a quantitative evaluation of the loss of heritage resources that will be impacted by the route alignment, the following must be borne in mind. The assessment of the value of heritage resources and of the cultural landscape in the broadest, including spiritual sense, is not appropriate to reductionism or mechanical checklist processes (refer *Proceedings of a Workshop on Heritage Impact Assessments held at Offices of DECAS, Western Cape Department of Education, Culture and Sport, 13 October 2001*). In order to attempt a quantitative evaluation of the loss of heritage resources that will be impacted by the route, the perceptions of the community-at-large relating to the value of the affected heritage resources would need to be researched. Unfortunately this is not practical.

Since there are no defined heritage property values for the affected heritage resources, the social and economic values of these resources can only be determined indirectly. This exercise has been undertaken in the further Environmental Resource Economics (ERE) study carried out in the Pretoria area. From the HIA team's perspective, the costing of welfare changes in order to compensate for the loss of heritage resources remains at this stage a relatively crude estimation.

The first hypothetical question that could be asked is what interested or affected parties are prepared to pay to prevent the loss of a culturally significant place. This, however, does not imply that they will be expected to pay the money themselves. The question may also be phrased as follows: What are the interested or affected parties prepared to accept as due compensation for the impact? (This equally does not mean that compensation will be paid).

The difficulties of making a comparison of the impacts of the proposed Gautrain project on the affected heritage resources relative to the sustainable social and economic benefits to be derived from the rail link is explained further below.

In the case of the cultural landscape comprising the Freedom Park site and the old Salvokop railway precinct, no alternative exists for this cultural landscape. It is unique and has a national value (It is in the national interest that this culturally significant complex, including its strong sense of place, should be preserved). Its value stems from its tangible and intangible heritage attributes and the fact that it qualifies for national heritage site status. Financial compensation is therefore not an option in terms of the severe impacts of the recommended route alignment on this sensitive heritage complex. It would furthermore be impossible to determine who the recipients of such compensation should be. How does one compensate the South African community or future generations for not being able to visit and experience a site, where evidence of the origins of South African society will be presented and the development of a unifying South African identity will be promoted?

The impact on the above-mentioned cultural landscape will be considerable, based on its national cultural significance, it being an integral part of the National Estate.

In the case of the impact of the recommended route alignment in the suburb of Muckleneuk, the impact on the affected heritage resources will also be significant. As mentioned previously, there are no two buildings with the same "fingerprint". At the macro level, these buildings and the special intangible qualities (e.g. sense of place) of the area in which they are situated, are an integral part of a greater cultural landscape and in turn, of the National Estate. From the assessment of affected heritage resources in Muckleneuk, these resources were found to be of either provincial or local significance.

It is noted, that the impact of the affected heritage resources in the suburb of Muckleneuk is intrinsically linked to not only physical but also intangible attributes. The interest in the retention of these resources is also wider than the owners or the interested or affected community, represented by MLPORA. The Pretoria community at large has a stake in the conservation of the affected heritage resources and in a broader sense, the special characteristics of the suburb as a cultural landscape. The impact on these resources will be considerable, based on their perceived provincial and local heritage significance, them being an integral part of the National Estate.

The residents of Muckleneuk have for a considerable time been entertaining the idea of having their suburb designated as a heritage area. This being one of the reasons for the Development Plan initiated by them more than ten years ago and of which mention was made earlier in the report. The benefits inherent in the suburb of Muckleneuk being afforded such conservation status under the NHRA, are numerous. Today, the Parktown Ridge Heritage Area in Johannesburg is one of the best examples locally, of the benefits to be derived from the formal protection of conservation-worthy residential

areas. Organised heritage tours of the area by local and international tourists have become a popular item on the Johannesburg heritage tourism calendar. The net result of this has been as follows:

- A greater public awareness of the conservation value of the properties in the area as well as the value of their entire context including trees, mine stone kerb stones etc.
- Greater monetary values attached to the properties covered by the conservation area thereby rewarding owners for their investment in heritage.
- Protection from unregulated development.
- Recognition from the City authorities of heritage and its value in drawing tourism as well as affording the, as yet unutilised, opportunity for positive publicity relative to suburbs threatened by their proximity to the CBD.

In the likely event of the residents of Muckleneuk succeeding in having their suburb designated a heritage area, their stake in the benefits to be derived from this is obvious. The owners of the properties that will be impacted by the recommended route alignment are entitled to these potential benefits.

The findings from the above determination of the value of heritage resources are summarised in the table overleaf. These findings show that the loss of heritage resources in the Pretoria area to the National Estate and to the South African community-at-large will be significant. It is also shown that future generations will be left much the poorer because of this. Should the heritage sites covered in this report be destroyed we will not have been acting in the best interests of future generations.

In summary, it is the opinion of the HIA team that the impact of the proposed Gautrain Rapid Rail Link on heritage resources is manageable for the recommended route between Park Station, Johannesburg to Pretoria and from Sandton to JIA. However, the impact on heritage resources in the Pretoria area, if the recommended route is implemented, is severe, and in the view of the HIA team, outweighs the benefits to be derived from the project on this section of the route.

## **9. THE CONSIDERATION OF ALTERNATIVES AS REQUIRED IN TERMS OF SECTION 38 OF THE NHRA**

As explained under **1. Introduction and Terms of Reference**, the HIA was undertaken in two phases. Various alternative route alignment options were investigated and evaluated during the first phase of the study along the entire proposed route of the Gautrain between Johannesburg, JIA and Pretoria. One of these route alignment options, was the proposed refined route alignment through Muckleneuk, which has received much attention in this Phase Two report.

In the draft EIA report (released for comment in October 2002) it was recommended that the refined Muckleneuk route alignment (route 6FD) should be further investigated. Route 6FD was thus the main subject of focus in Phase Two of the HIA. The brief given to the HIA team did not include the consideration of alternative route alignment options, it was rather to investigate the impacts on a particular route alignment in line with the impact assessment regulations.

THE MEANINGS USED IN THE COLUMN HEADINGS BELOW ARE TO BE UNDERSTOOD AS FOLLOWS					
<b>Zone</b>	the place / area where heritage resources will be lost in the event that the conclusion contained in this report is overruled				
<b>Significance</b>	the significance of affected heritage resources in terms of the Section 3(3) criteria in the NHRA				
<b>National Estate</b>	are the affected heritage resources part of the National Estate?				
<b>Value of evidence of origin</b>	does the affected heritage resources provide evidence of the origin of South African society?				
<b>Value of capacity and potential</b>	does the affected heritage resources have the capacity to promote reconciliation, and understanding and respect for heritage and do they have the potential to contribute to the development of a unifying South African identity?				
<b>Substitutes</b>	are there any substitutes for the affected heritage resources?				
Zones	Significance	National Estate	Value of evidence of origin	Value of capacity and potential	Substitutes
Modderfontein Dynamite Factory	Local	Yes	Yes	Yes	No
Freedom Park Site / Salvokop Suburb	National	Yes	Yes	Yes	No
Pretoria Railway Station Precinct	National and provincial	Yes	Yes	Yes	No
Berea Club recreational facility	Provincial	Yes	Yes	Yes	No
UNISA Sunnyside Campus	Local	Yes	Yes	Yes	No
Muckleneuk Suburb	Provincial and local	Yes	Yes	Yes	No
Magnolia Dell park and recreational area	Local	Yes	Yes	Yes	No
Educational or academic precinct centred on University Road, Hatfield	Provincial	Yes	Yes	Yes	No
Properties in Hatfield between Hilda and Grosvenor Streets	Local	Yes	Yes	Yes	No

On the subject of design alternatives for the recommended route alignment, various recommendations have been made under **6. Findings and Specific Mitigation Measures** in regard to the mitigation of adverse impacts on heritage resources. These recommendations would of course need to be technically and financially feasible in order to be implemented. However, the heritage specialists are not themselves in a position to assess these issues. These recommended alternatives for consideration in the design of the project are repeated below for ease of reference:

- Area of Modderfontein Dynamite Factory – the recommended route should be refined to avoid the structures at the edge of the old Modderfontein Village;
- Freedom Park site and Salvokop Suburb – the recommended route alignment should be amended in accordance with the proposed Gautrans alignment refinements and with the draft performance guidelines or criteria contained in the document titled *Gautrain Impact on Salvokop Suburb Development Framework and Freedom Park; Draft Guidelines for assessment of any major infrastructure intrusion* dated 5 March 2003 – see Appendix I;
- Area of the Pretoria Railway Station – the recommended route alignment should be amended;
- Berea Club – the recommended route alignment should be amended;
- UNISA Sunnyside Campus – the recommended route alignment should be amended;
- Muckleneuk residential area – the recommended route alignment should be adjusted to remain in the existing Metro Rail reserve and not deviate from the latter in the eastern section of the area of affected heritage resources; the vertical alignment of the existing rail corridor should also be investigated as an additional refinement;
- Magnolia Dell park and recreational facility – the recommended route alignment should be lowered or depressed; and
- University Road spine, the palm trees along the western side of University Road, and the educational institutions in Hatfield – the recommended route alignment should be altered by lowering the vertical alignment from Magnolia Dell to Burnett Street.

The HIA team was unable to suggest the option of completely tunnelling the refined Muckleneuk route as the Gautrain Technical Team have advised that tunnelling along this section of the route is not financially feasible.

The recommendations made in the report on alternative route alignment design options, therefore constitute the best possible alternatives that can be proposed by the heritage impact assessment team in these circumstances and as required by section 38(3) of the NHRA.



## 10. CONCLUSIONS AND RECOMMENDATIONS

It is the considered opinion of the members of the HIA team that the scope of the investigation that was undertaken in order to comply with the relevant provisions of the NHRA, was sufficient to have allowed for an adequate identification and assessment of affected heritage resources and for the necessary evaluation of the impact of the proposed route alignment on such heritage resources.

The main findings from the study are summarised below.

***Finding One:*** There will not be any direct impacts on heritage resources for the longest section of the proposed Gautrain route between Park Station in Johannesburg and Salvokop in Pretoria. Any potential indirect impacts in the Randjesfontein area can be mitigated.

***Finding Two:*** There will not be any impact on heritage resources by the route alignment between Sandton Station and Johannesburg International Airport except in the area of the old Modderfontein Dynamite Factory. Pending the detailed design of the route alignment in the affected area of the former Modderfontein Dynamite Factory, it will be possible to mitigate impact on physical heritage resources in the area.

***Finding Three:*** The cumulative effect of the direct and indirect impacts and consequent loss of heritage resources along the entire route in Pretoria will be severe. The design of the alignment should be refined/amended in order to minimise the cumulative effect of these impacts. It was stated in *5.3 Evaluation of the impact of the proposed route alignment on heritage resources* that it is critical that the amount of change to a heritage resource should be guided by its ability to absorb the change and by its cultural significance. It was also stated that changes in this regard, should be reversible or manageable. Considering the long life-cycle of a rail link, it is concluded that the adverse cumulative effect of the impacts of the proposed Gautrain Rapid Rail link in Pretoria, should be prevented.

***Finding Four:*** The socio-economic benefits of the project outweigh any potential impacts of the proposed Gautrain Rapid Rail Link on heritage resources on the recommended route between Park Station, Johannesburg to Pretoria and from Sandton to JIA. However, the impact on heritage resources in the Pretoria area, if the recommended route is implemented, is severe, and in the view of the HIA team, outweighs the benefits to be derived from the project on this section of the route.

***Recommendations:***

All draft final engineering plans with regard to new surface structures (i.e. stations, ventilation shafts and parking areas) in the area of the tunnelled section of the recommended route alignment between Johannesburg and Marlboro must be timeously submitted to SAHRA for consideration and comment.

The route alignment in the area of affected heritage resources associated with the Modderfontein Dynamite Factory should be refined or alternatively, avoided.

The design of the route alignment in Pretoria should be amended or alternatively, avoided

In the event of the route refinements/amendments recommended for the area of Modderfontein Dynamite Factory and Pretoria in this report not being implemented, the project proponent should still comply with all other mitigation requirements stipulated in the report under 6. *Findings and specific mitigation measures* and 7.2 *Mitigation measures of general prescription*.

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12. PHOTOGRAPHS

PHOTO 1 [1040 MODF]



PHOTO 2 [727 NZAM]



PHOTO 3 [673a FRE P]



PHOTO 4 [676 FRE P]



PHOTO 5 [664a FRE P]



PHOTO 6 [620 NZASM]



PHOTO 7 [691 PTA S]



PHOTO 8 [690 PTA S]



PHOTO 9 [696 NEW S]



PHOTO 10 [738 BEREA]



PHOTO 11 [656 FRE P]



PHOTO 12 [740 UNIS]



PHOTO 13 [743 UNIS]



PHOTO 14 [748 MAGN]



PHOTO 15 [753 UN RD]



PHOTO 16 [754 AFIES]



PHOTO 17 [1070 UN RD]

