

## TABLE OF CONTENTS

<b>1. REPORT CONTEXT .....</b>	<b>3</b>
1.1 GENERAL NOTES .....	3
1.1.1 Report structure.....	3
1.1.2 Background to the report .....	3
1.2 PURPOSE OF THE REPORT.....	3
1.3 HISTORY OF THE REPORT.....	4
1.4 LEGAL CONTEXT OF THE REPORT.....	4
1.4.1 Summary.....	4
1.4.2 Section 38 of the NHRA.....	5
1.4.3 Section 35 of the NHRA.....	6
1.4.4 Section 36 of the NHRA.....	6
1.4.5 Section 34 of the NHRA.....	6
1.4.6 Section 37 of the NHRA.....	6
1.4.7 NEMA.....	6
1.4.8 Church Square, Pretoria, Development Amendment Act (House of Assembly) (Act 35 of 1988) .....	6
1.5 PLANNING CONTEXT OF THE REPORT.....	7
1.5.1 City of Tshwane Spatial Development Strategy 2010 and Beyond (February 2007) .....	7
1.5.2 The City of Tshwane policy and guidelines on the design quality of hard urban spaces and landscape elements (April 2005).....	7
1.5.3 City of Tshwane Inner City Development and Regeneration Strategy (2006).....	8
1.5.4 The Re Kgabisa Tshwane Project.....	8
1.5.5 City of Tshwane Integrated Transport Plan 2006-2011.....	9
1.5.6 The Mabopane-Centurion Development Corridor .....	10
1.5.7 Marabastad Integrated Urban Design Framework.....	11
1.5.8 Paul Kruger Street Spine Development Framework .....	11
1.5.9 Urban Conservation Framework of the Pretoria Inner City Integrated Spatial Development Framework .....	12
1.6 DEVELOPMENT CRITERIA IN TERMS OF SECTION 38 OF THE NHRA.....	12
1.7 PROPERTY DETAILS .....	12
1.8 DEVELOPER.....	13
1.9 IMPLEMENTING AGENT .....	13
1.10 ENVIRONMENTAL SPECIALIST .....	13
1.11 HERITAGE IMPACT ASSESSMENT PRACTITIONERS .....	13
<b>2. DEVELOPMENT CONTEXT.....</b>	<b>14</b>
2.1 DEVELOPMENT SITE/AREA LOCATION.....	14
FIGURE 1: General location of the route of the Line 1 BRT.....	14
2.2 DESCRIPTION OF DISTINGUISHING SITE FEATURES .....	14
2.2.1 Environmental features .....	14
2.2.2 Heritage features.....	15
2.2.3 Surrounding environment.....	15
2.3 DEVELOPMENT DESCRIPTION .....	15
<b>3. HERITAGE IMPACT CONTEXT .....</b>	<b>18</b>
3.1 CULTURAL LANDSCAPE EVIDENCE .....	18
3.2 HERITAGE CONTEXT CLASSIFICATION .....	19
3.2.1 Soshanguve corridor .....	19
3.2.2 Mabopane Freeway corridor .....	19
3.2.3 DF Malan Drive corridor.....	20
3.2.4 Marabastad and Pretoria CBD corridors.....	20
3.3 DEVELOPMENT CONTEXT TYPE .....	20
3.4 EXPECTED IMPACT SIGNIFICANCE .....	21
3.4.1 Soshanguve corridor .....	21
3.4.2 Mabopane Freeway corridor .....	21
3.4.3 DF Malan Drive corridor.....	21
3.4.4 Marabastad and Pretoria CBD corridors.....	21
<b>4. HERITAGE IMPACT ASSESSMENT.....</b>	<b>22</b>
4.1 APPROACH .....	22
4.1.1 Definitions and assumptions .....	22

4.1.2 <i>Limiting/Restricting factors</i> .....	22
4.1.3 <i>Field work</i> .....	23
4.1.4 <i>Desktop study</i> .....	23
4.2 GENERAL ISSUES OF SITE AND CONTEXT .....	23
4.2.1 <i>Context</i> .....	23
4.2.2 <i>Property features and characteristics</i> .....	23
4.2.3 <i>Heritage resources on the property</i> .....	24
4.2.4 <i>Property history and associations</i> .....	24
4.3 SUMMARISED IDENTIFICATION AND CULTURAL SIGNIFICANCE ASSESSMENT OF AFFECTED HERITAGE RESOURCES AT BRT COMPONENTS.....	25
4.4. SUMMARISED IMPACT ASSESSMENT AFFECTING HERITAGE RESOURCES AT BRT COMPONENTS .....	25
4.5 SUMMARISED RECOMMENDED IMPACT MANAGEMENT INTERVENTIONS AT BRT COMPONENTS .....	26
4.6 SOCIAL AND ECONOMIC BENEFITS .....	29
4.7 PUBLIC PARTICIPATION .....	30
4.8 IDENTIFICATION OF RISK SOURCES .....	30
4.9 KEY MITIGATION AND ENHANCEMENT MEASURES BEFORE CONSTRUCTION .....	30
4.8 KEY MITIGATION AND ENHANCEMENT MEASURES DURING CONSTRUCTION .....	30
4.9 CONSIDERATION OF ALTERNATIVES .....	30
4.10 KEY UNCERTAINTIES AND RISKS THAT MAY INFLUENCE ACCURACY AND CONFIDENCE OF IMPACT ASSESSMENT .....	30
4.11 FINAL RECOMMENDATIONS .....	30
<b>APPENDIX 1: SOCIO-CULTURAL HISTORY OF DEVELOPMENT AREA .....</b>	<b>32</b>
<i>Pre-colonial settlement</i> .....	32
<i>Colonial settlement and urban development</i> .....	32
<i>Transport infrastructure</i> .....	34
<b>APPENDIX 2: INFORMATION SOURCES USED IN THIS REPORT .....</b>	<b>38</b>
DATABASES .....	38
LITERATURE.....	38
MAPS .....	38
AERIAL PHOTOS .....	39
PHOTOGRAPHS .....	39
WEBSITES .....	39
<b>APPENDIX 3: GLOSSARY OF TERMS .....</b>	<b>40</b>
<b>APPENDIX 4: STANDARDIZED SET OF CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON INDIVIDUAL HERITAGE FEATURES.....</b>	<b>43</b>

## 1. REPORT CONTEXT

### 1.1 General notes

#### 1.1.1 Report structure

The structure of this report is based on:

- SOUTH AFRICAN HERITAGE RESOURCES AGENCY, Heritage Impact Assessment: Notification of intent to develop (form)
  - DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING, PROVINCIAL GOVERNMENT OF THE WESTERN CAPE, 2005, Guideline for involving heritage specialists in EIA processes (document)
  - DEPARTMENT OF ENVIRONMENT AFFAIRS AND TOURISM, Integrated Environmental Management Guidelines
  - SOUTH AFRICAN HERITAGE RESOURCES AGENCY, 2006, *Minimum standards: Archaeological and palaeontological components of impact assessment reports* (unpublished).
  - WORLD BANK, *Environmental Assessment Sourcebook Update No 8, September 1994: Cultural Heritage in Environmental Assessment*.
  - Best-practice HIA reports submitted by Cultmatrix and other heritage consultants
2. This report is informed by the *National Heritage Resources Act (25/1999)* (NHRA) and is consistent with the various ICOMOS charters for places of cultural significance.
  3. Recommendations contained in this application do not exempt the applicant from complying with any national, provincial and municipal legislation or other regulatory requirements, including any protection or management or general provision in terms of the NHRA.
  4. Rights and responsibilities that arise from this report are those of the applicant and not that of Cultmatrix cc. Cultmatrix cc assumes no responsibility for compliance with conditions that may be required by SAHRA in terms of this report.
  5. Cultmatrix assumes no responsibility whatsoever for any loss or damages that may be suffered as a direct or indirect result of information contained in this application. Any claim that may however arise is limited to the amount paid to Cultmatrix for services rendered to compile this report.

#### 1.1.2 Background to the report

The City of Tshwane approved the provision of a Bus Rapid Transit (BRT) Phase 1 and its operational plan in 2008. Phase 1 consists of two lines, i.e. Line 1 and Line 2. Line 1 starts on the Soshanguve side of the Mabopane railway stations and turns around at the Pretoria railway station. Line 2 starts in Mamelodi and turns around at the Boom-DF Malan Station in Boom Street. The two lines overlap in Paul Kruger, Boom and Bloed streets and at the Pretoria railway station.

Gudani Consulting the EIA consultants appointed by SANRAL, requested Cultmatrix to investigate any impacts on heritage resources and to submit to SAHRA a HIA report for purposes of authorising the proposed construction of Line 1 and the overlaps with Line 2.

### 1.2 Purpose of the report

Report category	Aim	SAHRA office submitted to	Requested SAHRA response
Screening	The aim of the screening investigation is to provide an informed heritage-related opinion about the proposed development by an appropriate heritage specialist. The objectives of this investigation are to screen potential heritage issues through a site inspection, to develop a broad understanding of heritage policy-related context, to review any existing data on the history and heritage significance of the site, to check if the site has any formal heritage status, to discuss the	-	-
		-	-

CULTMATRIX CC

Report category	Aim	SAHRA office submitted to	Requested SAHRA response
	proposed development with heritage contacts and to scan the development proposals. The result of this investigation is a brief statement indicating potential heritage impacts/issues and the need for further investigation.	-	-
Scoping (basic assessment)	The aim of the scoping investigation is to analyse heritage issues and how to manage them within the context of the proposed development. The objectives are to assess heritage significance (involving site inspections and basic desktop and archival research); to identify the need for further detailed inputs by heritage specialists, to consult with local heritage groups and experts, to review the general compatibility of the development proposals with heritage policy and to assess the acceptability of the proposed development from a heritage perspective. The result of this investigation is a heritage scoping report indicating the presence/absence of heritage resources and how to manage them in the context of the proposed development.	-	-
		-	-
		-	-
Full HIA (draft for public participation)	The aim of the full HIA investigation is to analyse and recommend heritage management mitigation measures and monitoring programmes. The objectives are to analyse heritage issues, to research the chronology of the site and its role in the broader context, to undertake a comprehensive assessment of heritage significance, to analyse the nature and scale of the proposed development, to consult with local heritage groups and experts as part of the broader EIA stakeholder engagement process, to establish the compatibility of the proposed development with heritage and other statutory frameworks and to assess alternatives in order to promote heritage conservation issues.	<b>SAHRA Gauteng (final report to include public participation process report)</b>	<b>Approval of development</b>
		-	-
		-	-

### 1.3 History of the report

This report is the second draft HIA report and has been preceded by a first draft report based on an earlier conceptual plan and alignment.

### 1.4 Legal context of the report

The legal “triggers” for this HIA are grounded in three different acts.

#### 1.4.1 Summary

ACT	COMPONENT	IMPLICATION	RELEVANCE	COMPLIANCE
NHRA	S 34	Impacts on buildings and structures older than 60 years	Buildings in CBD will not be physically affected. Streets, pavements and kerbstones in CBD may be physically affected e.g. through road widening.	Authorisation through final HIA submission to SAHRA. No separate permit applications.
	S 35	Impacts on archaeological and palaeontological heritage resources	Possible hidden (buried) features, e.g. old tram tracks and water furrows below streets in CBD	Monitor during construction work as recommended in final HIA report
	S 36	Impacts on graves	None present	-
	S 37	Impacts on public monuments	Kruger statue on Church Square will not be physically affected	-
	S 38	Developments requiring an HIA	Development is listed activity	Full HIA
NEMA	EIA Regulations	Activities requiring an EIA	Development is subject to an EIA	HIA is part of EIA

Church Square, Pretoria, Development Amendment Act (House of Assembly) (Act 35/1988)	Entire act	Demolitions, alterations, new work and other changes within protected precinct (bordered by Andries, Pretorius, Bosman and Vermeulen streets)	Must be authorised by Minister of Cooperative Governance and Traditional Affairs	Inform Department and City of Tshwane. It is assumed that the Minister may consent to the construction of BRT structures within the precinct only after confirmation of SAHRA authorisation, since the NHRA applies to the precinct and binds the State.
--	------------	---	--	--

#### 1.4.2 Section 38 of the NHRA

This study constitutes a heritage impact assessment investigation linked to the environmental impact scoping and impact assessment required for the development. The proposed development is a listed activity in terms of Section 38 (1) of the NHRA. Section 38 (2)(a) of the National Heritage Resources Act (Act 25 of 1999) requires the submission of a heritage impact assessment report for authorisation purposes to the responsible heritage resources agency, SAHRA.

Heritage conservation and management in South Africa (excluding KwaZulu Natal on a provincial level) is governed by the *National Heritage Resources Act* (Act 25 of 1999) (NHRA) and falls under the overall jurisdiction of the *South African Heritage Resources Agency* (SAHRA) and its provincial offices and counterparts.

Section 38 of the NHRA requires a Heritage Impact Assessment (HIA), to be conducted by an independent heritage management consultant, for the following development categories:

- Construction of a road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length
- Construction of bridge or similar structure exceeding 50m in length
- Development or other activity that will change the character of a site -
  - Exceeding 5000 sq m
  - Involving three or more existing erven or subdivisions
  - Involving three or more erven or divisions that have been consolidated within past five years
  - Rezoning of site exceeding 10 000 sq m
  - The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority
- Any other development category, public open space, squares, parks, recreation grounds

In addition, the new EIA Regulations promulgated in terms of NEMA determine that any environmental reports will include cultural (heritage) issues.

The end purpose of this report is to alert the developer, the environmental consultant, SANRAL, the City of Tshwane, GDACE, SAHRA and interested and affected parties about existing heritage resources that may be affected by the proposed development, and to recommend mitigatory measures aimed at reducing the risks of any adverse impacts on these heritage resources. Such measures could include the recording of any heritage buildings and structures older than 60 years prior to demolition, in terms of Section 34 of the NHRA and also other Sections of this act dealing with archaeological sites, buildings and graves. The implementation of these interventions constitutes separate, follow-up projects with separate permits.

In terms of the ECA, Section 38(1) of the NHRA is also applicable – thus any person undertaking any development in the categories of Section 38 (1) a-e, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. In the case of an EIA, comments from the responsible heritage resources agency based on a heritage scoping report are required.

The NHRA Section 2 (xvi) states that a “heritage resource” means any place or object of cultural significance, and in Section 2 (vi) that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

This report forms part of an EIA for the site.

Based on the report, SAHRA will be able to authorise the proposed development with possible conditions. These conditions have been included in the Recommendations in this report.

Apart from a heritage report assisting a client to make informed development decisions, it also serves to provide the relevant heritage resources authority with the necessary data to perform their statutory duties under the NHRA. After evaluating the heritage scoping report, the relevant heritage resources authority will decide on the status of the resource, whether the development may proceed as proposed or whether mitigation is acceptable, and whether the heritage resources require formal protection, i.e. as a Grade I, II or III resource, with relevant parties having to comply with all aspects pertaining to such Grading.

#### **1.4.3 Section 35 of the NHRA**

Section 35 (4) of the NHRA stipulates that no person may, without a permit issued by SAHRA, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object. This section may apply to any significant archaeological sites that may be discovered, e.g. old tram tracks and old water furrows, all below street level. In the case of such chance finds, the heritage practitioner will assist in investigating the extent and significance of the finds and consult with an archaeologist about further action. This may entail removal of material after documenting the find site or mapping of larger sections before destruction.

#### **1.4.4 Section 36 of the NHRA**

Section 36 (3) of the NHRA stipulates that no person may, without a permit issued by the South African Heritage Resources Agency (SAHRA), destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority. This section may apply in case of the discovery of chance burials, which is unlikely.

#### **1.4.5 Section 34 of the NHRA**

Section 34 of the NHRA stipulates that no person may alter, damage, destroy, relocate etc any building or structure older than 60 years, without a permit issued by SAHRA or a provincial heritage resources authority. This section would not apply to heritage buildings, since none will be physically affected, but may apply to streets, pavements and kerbing that need to be changed to accommodate the BRT.

#### **1.4.6 Section 37 of the NHRA**

This section deals with public monuments and memorials but may not apply since the Paul Kruger statue group will not be physically affected by the BRT.

#### **1.4.7 NEMA**

The Regulations (21 April 2006) in terms of Chapter 5 of the *National Environmental Management Act*, or NEMA (Act 107 of 1998) provide for an assessment of development impacts on the cultural (heritage) and social environment and for Specialist Studies in this regard.

#### **1.4.8 Church Square, Pretoria, Development Amendment Act (House of Assembly) (Act 35 of 1988)**

This act used to be the mandate of the former House of Assembly in terms of the (1983) tri-cameral political dispensation and is now under the jurisdiction of the Department of Cooperative Governance and Traditional Affairs.

The act provides for an area demarcated by Andries, Pretorius, Bosman and Vermeulen streets as a projected heritage environment. It determines that no alteration regarding the planning, design and layout of this precinct, and no building or other structure within this precinct may be erected, altered, extended or demolished, without the permission of the Minister.

It is assumed that the Minister may consent to the construction of BRT structures within the precinct only after confirmation of SAHRA authorisation, since the NHRA applies to the precinct and binds the State.

## 1.5 Planning context of the report

This HIA report has taken cognisance of a number of existing spatial planning frameworks that may apply in particular to the CBD and Marabastad.

### 1.5.1 City of Tshwane Spatial Development Strategy 2010 and Beyond (February 2007)

The purpose of the Tshwane Spatial Development Strategy: 2010 and Beyond (“the Strategy”) is to provide a holistic spatial strategy that gives direction to the City of Tshwane’s 5-Year Programme (IDP). The Strategy aims to provide focussed, spatial guidance for the implementation of the 5-year plan.

The city’s 5-Year Programme, has identified certain Strategic Priority Areas, through which to achieve the above-mentioned objectives, namely –

- Basic service delivery and infrastructure development
- Economic growth and development
- Building safer, viable and sustainable communities
- Caring and effective government
- Investing in our people and deepening democracy
- Financial viability and management of resources
- Institutional capacity and transformation

The Spatial Arrangement and Integration Strategy provides a long term, holistic view with regard to the spatial development of the city and forms the foundation of spatial restructuring on a metropolitan level.

The spatial elements that impact on the BRT and vice versa are:

- Metropolitan Open Space Network: Apies River zone
- Economic Activity Areas: Mabopane Station and Klip-Kruisfontein, Mabopane Freeway, Mabopane-Centurion Development Corridor
- The Capital Core: Inner City
- Accessibility and Mobility: Transport infrastructure including BRT
- Housing Priority Areas: Bloed-Boom Street, Capital Park, Lady Selborne/Suiderberg
- Sustainable Neighbourhoods: Access to parks, social infrastructure etc.
- Infrastructure investment: Roads

### 1.5.2 The City of Tshwane policy and guidelines on the design quality of hard urban spaces and landscape elements (April 2005)

The Strategic Executive Officer (SEO): Housing, City Planning and Environmental Management initiated the development of a policy on the design quality of hard urban spaces and streetscape elements with the aim of –

- Enhancing the appearance (aesthetic qualities) and pedestrian-friendliness of Tshwane's streets, squares, malls and other hard urban spaces; and
- Ensuring that the placing of all public furniture, utilities, amenities and other streetscape elements within a hard urban space, which normally involves a number of municipal departments, is properly coordinated.

In terms of this Policy and its associated Guidelines (which include detailed guidelines for transport infrastructure), the BRT master plan is expected to contain the following elements:

- The system (network) of hard open spaces; how various elements of this system relate to one another spatially; how this system relates to the broader (external) urban context; and what the characteristics of the system are as a whole, especially in terms of permeability, legibility, safety and security; and
- The type and intended character (in terms of both function and ambience) of each proposed hard open space, with specific reference to –
  - the sidewalks/walkways (width of walkways, paving materials, basic design principles to be applied, and pedestrian crossing solutions);

- The on-street parking arrangements;
- The landscaping (position and species of trees, basic landscape design, and planting principles to be applied);
- The public furniture, signage and other public/communal amenities (typology and basic design characteristics, and basic principles for placing/coordination of different elements);
- Outdoor advertising (the need for outdoor advertising and basic placing and design principles to be applied); and
- The interface with the private realm (basic principles for site boundary fencing and landscaping).

### **1.5.3 City of Tshwane Inner City Development and Regeneration Strategy (2006)**

The Tshwane Inner City is a place of strategic significance, not only in the city, but also from a national and international perspective. However, it is generally acknowledged that the Inner City is currently not functioning as it should from an environmental, economic and social point of view. The City Development Strategy, the IDP and the Metropolitan Spatial Development Framework have all identified the inner city, together with its important role within the Capital City vision, as a strategic focus area. The Tshwane City Vision, namely “to become the leading international African capital city of excellence that empowers the community to prosper in a safe and healthy environment”, clearly sets out the development goal of becoming the African Capital City of Excellence. The Inner City, as the functional and symbolic heart of the Capital City, has to transform to a place of excellence as an embodiment of the Tshwane City Vision.

Hence the City Development Strategy sets the following development goal for the inner city:

“Celebrating the National Capital and Repositioning the Inner City as a vibrant cultural and government centre”

The interventions into the spatial and physical environment of the Inner City, is based on 8 building blocks, some of which impact on the BRT, namely:

- Announcing the destination: Design of gateways into the Inner City, e.g. at Paul Kruger Street Station
- Cultural Circle: Town Hall Station near Museum Park
- Capital Precinct
- Mandela Development Corridor and Apies River Precinct
- Tshwane Crossing
- Zone of Urban Regeneration: Marabastad
- Movement: BRT and other modes
- Exceptional Public Environment: Improvement of public spaces

### **1.5.4 The Re Kgabisa Tshwane Project**

Re Kgabisa Tshwane is a programme of the South African Government led by the Department of Public Works (DPW), the Department of Public Service and Administration (DPSA) together with the City of Tshwane. The main purpose of Re Kgabisa Tshwane is to ensure a long term accommodation solution of an acceptable standard for national government department head offices and agencies within the inner city of Tshwane. The work of Re Kgabisa Tshwane began under the banner of the Tshwane Inner City Project (TICP) before undergoing a name change at its official launch on 9 and 10 November 2005. The work of the TICP was presented to Cabinet in May 2005 and the programme gained Cabinet approval for further development and implementation.

The DPW, as custodian of national government's immovable fixed assets in the inner city of Tshwane, is responsible for providing long term accommodation solutions in terms of the buildings in which public servants work.

The DPSA is responsible for the conditions under which public servants are employed and by which they deliver services to the public. The role of the DPSA is to ensure that the Batho Pele principles are infused into the project's strategy and to integrate the project with other Batho Pele service level initiatives.

The role of the City is to provide suitable public infrastructure as well as urban management of services, such as public transport (such as the BRT) and security. The City has integrated the programme framework, structures and processes with the City of Tshwane Inner City Development Strategy to ensure vision alignment.



National Treasury is collaborating in the design and implementation of the funding strategy and ensuring compliance with the requirements of the Public Finance Management Act. GCIS has and will continue to assist with the development and implementation of the communication strategy. GCIS is also tasked with ensuring that the accommodation solutions are delivered in a manner that is consistent with the government brand.

A Spatial Development Framework (SDF) has been developed to determine inner city development corridors and precincts within which the accommodation solution is to be located. The SDF sets out the principles and guidelines that assist the decision making and guide the location as well as the nature of the accommodation within a strategy of public infrastructure and urban management improvements providing an improved working environment in a holistic manner.

The SDF has determined a series of precincts within which departments and agencies are to be consolidated and clustered. There are seven precincts in the inner city along the two corridors of development investment being Paul Kruger and Church Streets. These precincts are currently the Presidency Precinct, Mandela Corridor Precinct, Sammy Marks Square Precinct, Paul Kruger North Precinct, Church Square Precinct, Museum Park Precinct and Salvokop Precinct. Each of the precincts are intended to develop their own character and are linked by the proposed dedicated pedestrian and public transport route along Paul Kruger and Church Streets, from Freedom Park to the Union Buildings.

The SDF includes a proposed public space network or “capital web” of pedestrian and public space (squares and parks) improvements that provide a positive public urban environment. Besides the public space network there are proposals for the improvements to urban management, public transport, parking facilities and services infrastructure within the seven precincts. The SDF is integrated into the City of Tshwane Inner City Development Strategy and their planning for the Inner City as the City is responsible for the urban regeneration aspects of the programme.

As part of the SDF a series of guideline packages have been developed dealing with the architectural exterior and interior of the redeveloped government accommodation, the heritage aspects, the development of the public spaces, the transport system, the services infrastructure and urban management complimenting the City of Tshwane Inner City Development Strategy and their public space and streetscape guidelines.

The key spatial proposals can be summarized as follows:

- Development corridors - to focus both government and private sector re-development investment.
- Precincts - to consolidate and cluster department accommodation and frame a delineated planning area for the integration of the accommodation solutions with the urban management and public infrastructure improvements.
- Public space network improvements - to provide an improved public environment of the quality of a capital city.
- Public transport improvements - to ensure public and government workers ease of access into and within the inner city.
- Parking facility improvements - to ensure the control of necessary provision of parking for re-development viability in a complimentary manner with the development of improved public transport to meet national policy on public transport.

### ***1.5.5 City of Tshwane Integrated Transport Plan 2006-2011***

This document contains details about the proposed transport rationalisation plan, the operating licence strategy, and strategic transport planning and proposed major transport projects.

The following principles, also applicable to the BRT, have been formulated as a basis for the conceptual transport network:

1. The network should support the SDF, which states that:
  - Growth should be directed inwards in order to curb sprawl;
  - All parts of the Tshwane Metropolitan area should be well interconnected by means of efficient and wide-spread transport infrastructure;
  - The potential of the existing rail infrastructure should be exploited;

- The city should be structured around a number of urban cores, suburban regional centres, and activity corridors (spines);
  - The city centre should be developed as befits the nation's capital, combining exceptional environmental quality, monumentality and symbolism;
  - High intensity and high density mixed land use;
  - Pedestrian-friendly environments, well defined communal spaces and 24- hour activity;
  - Public transport activities and facilities; The northern areas should be developed and the southern areas maintained;
  - Rail should be the back-bone of the public transport network and existing stations should be used for transfer facilities;
  - Public transport should be provided to serve exploding security settlements.
2. The urban cores, suburban regional centres and economic clusters should be connected by the rail and the main road network.
  3. The public transport network should connect previously disadvantaged areas to the economic nodes i.e. the urban cores and suburban regional centres. Parallel road and rail links are acceptable as rail provides a mobility function while road provides an accessibility function. Where rail services do not provide sufficient capacity, road can also support public transport line-haul services.

The objectives for the public transport network are as follows:

- Establish a network that brings a reliable and frequent level of public transport service within the acceptable walking distance
- Establish focused and high frequency corridors where passengers are transported over longer distances, and where public transport enjoys priority over private transport.
- Provide interconnectivity between residential areas and main employment and business nodes, as well as between main nodes
- Provide Tshwane with a permanent, recognizable public transport framework consisting of radial and circular routes.
- Provide nodes at the intersecting points of major routes where transfers can take place.

The characteristics of the public transport network should:

- be public transport friendly
- have continuity of routes
- have a hierarchy of routes
- Minimize transfers
- Transfer points/nodes
- Terminals

The Mabopane to CBD route, the Saulsville/ Atteridgeville to CBD route and Mamelodi to CBD route are corridors regarded as possible phases of bus rapid transit (BRT) corridors providing additional capacity above the rail services. It is proposed that these corridors are developed over time in a comprehensive and integrated way, following the Bogotá and Curitiba models. Important components of these corridors should be:

- High-quality bus rapid transit services and minibus-taxi recap services serving all socio-economic groups;
- Non-motorised modes (walking and cycling);
- Integration with rail;
- Higher density land development including residential, commercial, industrial and recreation;
- Social and institutional development;
- Formation of a management body responsible for all public transport operations along the corridors;
- Through-ticketing and dynamic passenger information.

### **1.5.6 The Mabopane-Centurion Development Corridor**

The MCDC is an older planning concept that emerged in the 1990s but is still valid. The MCDC is located on the western, south-western and northern fringes of the city, which puts it in the middle of the economic hub of South Africa and Southern Africa, making it ideal for enterprises and investors to tap into the

potential of the large consumer markets available in Pretoria, Johannesburg and the Witwatersrand. The eastern and south-eastern fringes of the MCDC interface with the established development patterns in Pretoria, but also with other development areas such as Centurion and Midrand.

The MCDC is also an important public transport corridor linking large low-income residential areas to the north with existing and potential employment nodes to the south. The PWV 9 forms the back-bone of this corridor providing long-distance mobility, supported by parallel provincial and metropolitan roads. Various MCDC studies defined a master plan for the development of the road network, public transport services and facilities along the corridor. Due to the high cost of building the PWV 9 and the limited north-south travel demand, the MCDC is more a longer term strategy.

A large portion of the BRT Line 1 runs through the MCDC.

### ***1.5.7 Marabastad Integrated Urban Design Framework***

This framework was submitted in 1998 and a revised version appeared in 2002.

Its goals are:

- Provide a framework for optimum land rights restitution;
- Solve major east-west roads and other roads that threaten the redevelopment of Marabastad;
- Integrate Marabastad with the CBD;
- Provide basis for economic sustainability;
- Create framework to conserve heritage and to revive the area's vibrant character;
- Permit holistic community life through provision of mixed-land uses;
- Provide for general socio-economic upliftment.

The key planning concepts are the reinstatement of the historical urban grid and finding new uses for vacant and underutilised peripheral land.

Specific implications for the BRT include:

- Designation of the vacant land north of Boom Street (the wedge between DF Malan West and East) for a bus or taxi terminus plus a green open space
- Straightening of Bloed Street across Steenoven Spruit
- Zoning of Boom and Bloed streets for restricted business and mixed-use
- Zoning of Steenoven Spruit as green open space
- Retention of street trees along Boom and Bloed streets
- Retention of Boom and Bloed streets as one-way streets

### ***1.5.8 Paul Kruger Street Spine Development Framework***

The *City of Tshwane Spatial Development Strategy: 2010 and Beyond* and other spatial development frameworks do not say much regarding future development along Paul Kruger Street. The need for a more detailed framework was answered through the Paul Kruger Street Spine document developed by the University of Pretoria.

This framework proposes the following:

- Buildings must define the street and have an articulated and permeable street edge that contributes to the activity in the street;
- Existing building configurations in terms of alignment to the street must be respected;
- If a setback is created, this setback must create a public place that forms part of the street;
- The use of colonnades must be encouraged in areas where there are existing colonnades;
- Compatible mixed-use development should be encouraged;
- Parking must be provided in the centre of blocks and not on the street edge.

### 1.5.9 Urban Conservation Framework of the Pretoria Inner City Integrated Spatial Development Framework

This 1999 document formulates a conservation policy and serves as a reference manual assisting the municipality in evaluating applications pertaining to change the status quo of listed elements, structures and areas.

The urban conservation framework contains the following goals that have considered during the HIA for the BRT:

- To enhance the rich history and cultural heritage of Pretoria;
- To establish a sense of ownership and awareness of cultural heritage;
- To develop tourism and market Pretoria;
- To enhance and complement attractive, appropriate and well-defined urban structures;
- To emphasize and complement Pretoria's natural features;
- To obtain optimum balance between mobility and accessibility;
- To promote and support appropriate land use;
- To support sustainable growth through strategic planning;
- To enhance/emphasize different precincts, each with a unique character and identity;
- To facilitate effective management and subsequent economic will-power.

### 1.6 Development criteria in terms of Section 38 of the NHRA

1.6	Development criteria in terms of Section 38(1)	Yes/No details
1.6.1	Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	Yes
1.6.2	Construction of bridge or similar structure exceeding 50m in length	Yes
1.6.3	Development exceeding 5000 sq m	Yes
1.6.4	Development involving three or more existing erven or subdivisions	Yes
1.6.5	Development involving three or more erven or divisions that have been consolidated within past five years	No
1.6.6	Rezoning of site exceeding 10 000 sq m	Not available
1.6.7	Any other development category, public open space, squares, parks, recreation grounds	Yes: Church Square

### 1.7 Property details

1.7	Property details	
1.7.1	Name and location of affected properties	Mokhetle (Buitenkant) Street, Soshanguve Church Street, Soshanguve R 80 Mabopane Freeway DF Malan Drive Boom and Bloed streets, Marabastad Boom and Bloed streets, CBD Paul Kruger Street, CBD Church Square, CBD Station Square, CBD
1.7.2	Erf or farm numbers	Not available
1.7.3	Magisterial districts	Pretoria, Soshanguve, Wonderboom
1.7.4	Closest towns	Pretoria and Soshanguve
1.7.5	Local authority	City of Tshwane
1.7.5	Current use	Transportation
1.7.5	Current zoning	Transportation
1.7.5	Predominant land use of surrounding properties	Vacant, roads, commercial, industrial, residential, public open spaces
1.7.9	Total extent of property	-

**1.8 Developer**

<b>1.8</b>	<b>Developer</b>	
1.8.1	Name and contact address	City of Tshwane
1.8.2	Telephone number	
1.8.3	Fax	
1.8.4	E-mail	

**1.9 Implementing Agent**

<b>1.9</b>	<b>Implementing Agent</b>	
1.9.1	Name and contact address of representative	Mr Hannes van der Merwe, SANRAL, Private Bag X 17, Lynnwood Ridge 0040
1.9.2	Telephone number	(012) 426-6200
1.9.3	Fax	(012) 348-1680
1.9.4	E-mail	<a href="mailto:vdmerweh@nra.co.za">vdmerweh@nra.co.za</a>

**1.10 Environmental specialist**

<b>1.10</b>	<b>Environmental Specialist</b>	
1.10.1	Name and contact address	Setenane Nkopane, Gudani Consulting, PO Box 714, Faunapark, 0787 Polokwane
1.10.2	Telephone number	(015) 297-6719
1.10.3	Fax	(015) 296-4471
1.10.4	E-mail	<a href="mailto:Setenane@gudaniconsulting.co.za">Setenane@gudaniconsulting.co.za</a>

**1.11 Heritage impact assessment practitioners**

<b>1.11</b>	<b>Specialist (1)</b>	
1.11.1	Name and contact address	Dr RC de Jong (Principal Member: Cultmatrix cc), PO Box 12013, Queenswood 0121, Pretoria
1.11.2	Qualifications and field of expertise	PhD (Cultural History) UP (1990), Post-Graduate Museology Diploma UP (1979), generalist heritage management specialist with experience in museums and heritage since 1983
1.11.3	Relevant experience in study area	Numerous HIA reports in Tshwane area since 1997
1.11.4	Telephone number	(082) 577-4741
1.11.5	Fax number	(086) 612-7383
1.11.6	E-mail	<a href="mailto:cultmat@iafrica.com">cultmat@iafrica.com</a>

<b>1.11</b>	<b>Specialist (2)</b>	
1.11.1	Name and contact address	Prof Karel Bakker
1.11.2	Qualifications and field of expertise	PhD (Architecture) (UP). Specialist in architectural heritage management and conservation.
1.11.3	Relevant experience in study area	Numerous HIAs for projects in Tshwane, urban and spatial planning projects
1.11.4	Telephone number	(083) 564-0381
1.11.5	Fax number	(086) 612-7383
1.11.6	E-mail	<a href="mailto:kabakker@telkomsa.net">kabakker@telkomsa.net</a>

## 2. DEVELOPMENT CONTEXT

### 2.1 Development site/area location

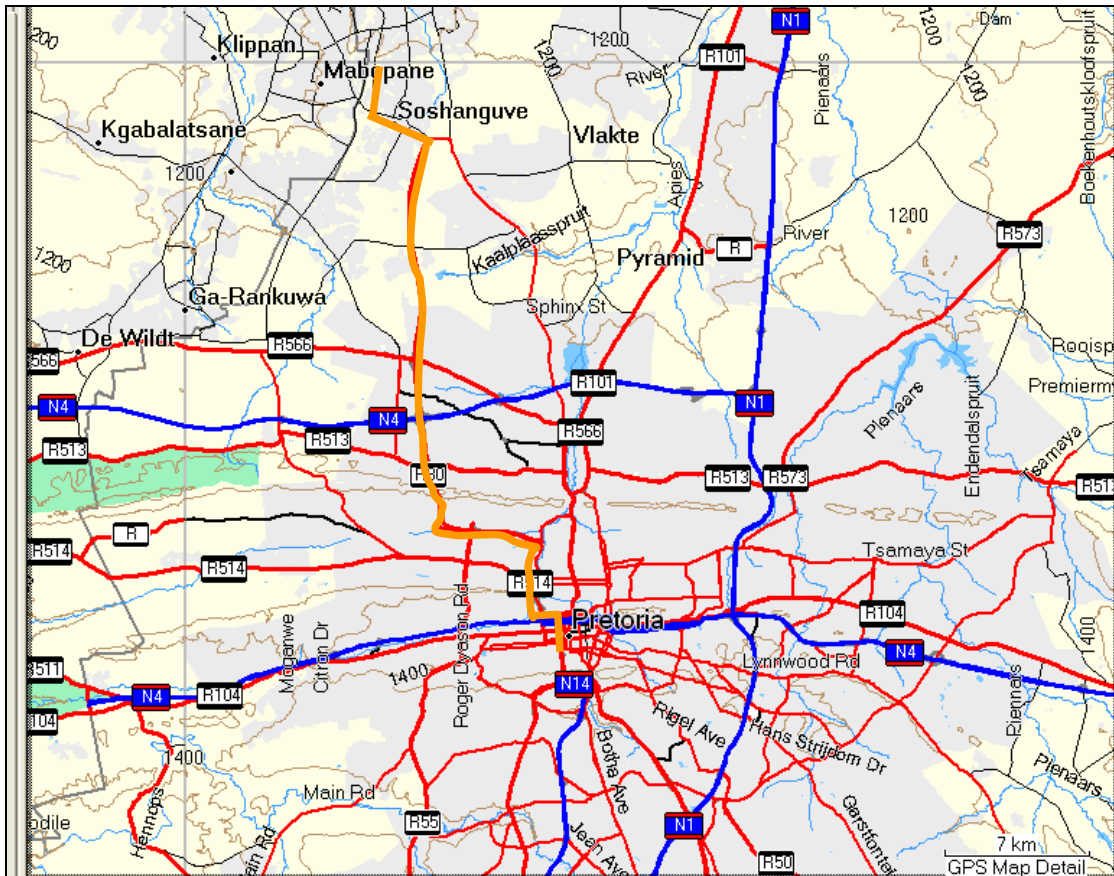
This HIA deals with the proposed construction of Line 1 of the Bus Rapid Transit System (BRT), connecting the Soshanguve side of the Mabopane railway station precinct with the Pretoria railway station precinct, using the following route from Soshanguve to the Pretoria CBD:

Mokhetle (Buitenkant) Street – Church Street – R 80 (Mabopane Freeway) – DF Malan Drive – Boom Street – Paul Kruger Street via Church Square – Pretoria railway station

And the following route back to Soshanguve:

Pretoria railway station – Paul Kruger Street via Church Square – Bloed Street – DF Malan Drive – R 80 – Church Street – Mokhetle Street

The Boom-Bloed-Paul Kruger street sections of Line 1 overlap with Line 2 (from Mamelodi).



**FIGURE 1: General location of the route of the Line 1 BRT**

### 2.2 Description of distinguishing site features

#### 2.2.1 Environmental features

COMPONENT	DESCRIPTION
Acocks veld type	Sour bushveld
Geological and mining	None
Geology	Shale, arenite, granite etc
Hydrology	Apies River (outside development site) Steenoven Spruit (crossed by BRT in Boom and Bloed streets)

COMPONENT	DESCRIPTION
Land cover	Transformed land
Land use	Transportation, vacant
Vegetation	Mainly street trees, grass
Terrain morphology	Flat except for Theo Martins Poort where freeway crossed the Magaliesberg
Wetlands	None

### 2.2.2 Heritage features

S 3(2) NHRA heritage resource	Identification of heritage resources inside of and adjacent to BRT corridor	
	BRT Section	Components
Buildings, structures, places and equipment of cultural significance	Mokhetle (Buitenkant) Street	Vacant land, modern dwellings, modern railway station, roads, Giant Stadium, modern shopping malls
	Church Street	Vacant land, modern dwellings, modern filling stations, modern shops, modern police station and magistrate's courts, roads
	R 80 Mabopane Freeway	1980s freeway with bridges and interchanges, adjacent residential and vacant land
	DF Malan Drive	Roads, modern industrial buildings, Apies River canal, modern filling stations, 1940s rail over road bridge, 1950s traffic interchange, vacant land
	Boom and Bloed streets	Roads, dwellings, commercial, religious, transport and industrial buildings some older than 60 years, Steenoven Spruit canal, vacant land, bus depots, taxi ranks, Mariammen Temple (provincial heritage site)
	Paul Kruger Street	Commercial, industrial, religious, residential, educational and administrative buildings some older than 60 years, provincial heritage sites (Old Synagogue, Transvaal Museum)
	Church Square	Commercial and administrative buildings most older than 60 years, Kruger Statue, provincial heritage sites (Raadsaal, Palace of Justice, West Façade)
	Station Square	Transportation, commercial and administrative buildings some older than 60 years, station square with garden and war memorials, historic railway station, provincial heritage site (NZASM goods office)
Areas to which oral traditions are attached or which are associated with intangible heritage	All	Built environment and open land, roads and freeways
Historical settlements and townscapes	Soshanguve, Asiatic Bazaar (Marabastad), Pretoria CBD	Historic built environment
Landscapes and natural features of cultural significance	R 80 Mabopane Freeway	Magaliesberg
	DF Malan Drive	Apies River canal, Daspoort, Witwatersberg
Geological sites of scientific or cultural importance	-	-
Archaeological and palaeontological sites	CBD	Possible remains of old tram tracks and water furrows
Graves and burial grounds	-	-
Areas of significance related to labour history	Mokhetle and Church streets	Soshanguve (apartheid) settlement
	Bloed and Boom streets	Asiatic Bazaar built environment
Movable objects	-	-

### 2.2.3 Surrounding environment

BRT SECTION	DESCRIPTION
Soshanguve	Soshanguve, Soshanguve AA, Soshanguve F, Soshanguve H
Mabopane Freeway	Soshanguve L, Soshanguve V V, Soshanguve XX, farm land, Rosslyn, Klerksoord, Clarina, The Orchards, Winterness, Eldorette, Akasia, Heatherdale, Amandasig, Andeon, Lady Selborne, Suiderberg, Booyens, Daspoort, Mountain View, Claremont
DF Malan Drive	Roseville, Hermanstad, Capital Park, PPC cement factory
CBD and Marabastad	Marabastad, Asiatic Bazaar, Pretoria West, Pretoria CBD

### 2.3 Development description

2.3	Development description	
2.3.1	Nature of proposed development	BRT
2.3.2	Possible impacts on heritage value of sites and contents	Varies from neutral to positive and negative
2.3.3	Structures older than 60 years	Yes: Roads, pavements, kerbs etc

2.3	Development description	
	affected by proposed development	
2.3.4	Rezoning or change of land use	No details
2.3.5	Construction work	Yes
2.3.6	Total floor area of proposed development	Not available
2.3.7	Extent of land coverage of development	Not available
2.3.8	Earth moving and excavation	Earthmoving and excavation work
2.3.9	Number of storeys	Maximum 1,5 (height of stations)
2.3.10	Maximum height above ground level	-
2.3.11	Monetary value development	-
2.3.12	Time frames	Urgent

Bus Rapid Transit (BRT) comprises a combination of infrastructure, technology and operations to provide a greatly improved level of public transport service. It is less costly to implement than metro or light rail systems, and yet can provide similar service levels. BRT has or is being implemented in more than 40 cities on six continents around the world, including Curitiba, Quito, Bogotá, Sao Paulo, León, México, Jakarta, Beijing, Pereira, Guayaquil, Santiago de Chile, Delhi, Istanbul, Brisbane and Ottawa, as well as a number of cities in the United States. In many cases its implementation has resulted in a reorganization of the management and regulation of the public transport system.

A “full” BRT system is typically made up of the following main elements:

- Segregated (usually median) busways, i.e. infrastructure that is dedicated to the buses and is physically separated from other traffic with some type of barrier allowing for improved travel times. Feeder services are designed to increase accessibility to the trunk services operating on these busways.
- Closed bus “stations” with fare payment upon entering the stations (not on-board the buses) and level boarding, i.e. the station platform height and the height of the bus floor and doors is aligned to make access as easy as possible.
- Large buses (often articulated buses on trunk routes), designed to maximize passenger flows with a number of doors (typically three to four) and wide aisles. Smaller vehicles may be used on feeder routes.
- Centralized control of the system, including radio communication with the bus drivers and station personnel, CCTV cameras, real-time passenger information, etc.
- A distinctive image that is recognisable and identified with the above elements and the service levels they represent.

The BRT is designed to provide a high quality and affordable transport system based on trunk and feeder routes, which is fast and safe. It comprises a middle lane for large, high tech buses which will transport passengers comfortably and quickly using specific designated routes, enclosed bus stations along the routes and a high tech control centre. Buses will run in exclusive, dedicated and demarcated lanes in the centre of existing roads. Smaller feeder buses will bring people from the outer areas to a bus terminus close to the stations on the BRT trunk routes. This will extend the BRT network to areas far beyond the main trunk routes. Buses have varied capacity, depending on passenger volumes, and will operate from stations, positioned half a kilometre apart. They will run very frequently in peak times and less frequently in off-peak times. Stations will be located in the middle lane or on the right side of existing roads and therefore the buses will have doors on the right side. Station sizes vary due to the anticipated passenger demand. At each station there will be two BRT lanes, one for buses to stop and one for other buses to bypass buses that are stationary.

Each route will start at a terminal where the buses will be able to turn around and drivers will change. At the end of each route there will be a turn-around space. Feeder services will link into the terminals in order for people to transfer from the outer areas to the main trunk services.

The BRT will complement other transport systems such as taxis, municipal bus services, Metrorail or the Gautrain. It is an urban transport network that will link, feed into and complement existing networks to ensure the most effective movement of people across the city.



The below image illustrates the situation around a typical station for Johannesburg's Rea Vaya BRT and this configuration will be similar in Tshwane, although the station and bus designs may differ.



### 3. HERITAGE IMPACT CONTEXT

#### 3.1 Cultural landscape evidence

HERITAGE LANDSCAPE CONTEXT	ELEMENTS	EVIDENCE
A. PALAEOONTOLOGICAL LANDSCAPE CONTEXT	Fossil remains. Such resources are typically found in specific geographical areas, e.g. the Karoo and are embedded in ancient rock and limestone/calcrete formations.	None
B. ARCHAEOLOGICAL LANDSCAPE CONTEXT	Archaeological remains dating to the following periods: <ul style="list-style-type: none"> <li>• Early Stone Age</li> <li>• Middle Stone Age</li> <li>• Late Stone Age</li> <li>• Early Iron Age</li> <li>• Late Iron Age</li> <li>• Historical</li> </ul>	None
<b>C. HISTORICAL BUILT URBAN LANDSCAPE CONTEXT</b>	<ul style="list-style-type: none"> <li>• <b>Historical townscapes/streetscapes</b></li> <li>• <b>Historical structures; i.e. older than 60 years</b></li> <li>• <b>Formal public spaces</b></li> <li>• <b>Formally declared urban conservation areas</b></li> <li>• <b>Places associated with social identity/displacement</b></li> </ul>	<b>Entire corridor</b>
D. HISTORICAL FARMLAND CONTEXT	These possess distinctive patterns of settlement and historical features such as: <ul style="list-style-type: none"> <li>• Historical farm werfs</li> <li>• Historical farm workers villages/settlements</li> <li>• Irrigation furrows</li> <li>• Tree alignments and groupings</li> <li>• Historical routes and pathways</li> <li>• Distinctive types of planting</li> <li>• Distinctive architecture of cultivation e.g. planting blocks, trellising, terracing, ornamental planting.</li> </ul>	None
E. HISTORICAL RURAL TOWN CONTEXT	<ul style="list-style-type: none"> <li>• Historical mission settlements</li> <li>• Historical townscapes</li> </ul>	None
F. PRISTINE/NATURAL LANDSCAPE CONTEXT	<ul style="list-style-type: none"> <li>• Historical patterns of access to a natural amenity</li> <li>• Formally proclaimed nature reserves</li> <li>• Evidence of pre-colonial occupation</li> <li>• Scenic resources, e.g. view corridors, viewing sites, visual edges, visual linkages</li> <li>• Historical structures/settlements older than 60 years</li> <li>• Pre-colonial or historical burial sites</li> <li>• Geological sites of cultural significance.</li> </ul>	None
G. RELIC LANDSCAPE CONTEXT	<ul style="list-style-type: none"> <li>• Past farming settlements</li> <li>• Past industrial sites</li> <li>• Places of isolation related to attitudes to medical treatment</li> <li>• Battle sites</li> <li>• Sites of displacement,</li> </ul>	None
H. BURIAL GROUND & GRAVE SITE CONTEXT	<ul style="list-style-type: none"> <li>• Pre-colonial burials (marked or unmarked, known or unknown)</li> <li>• Historical graves (marked or unmarked, known or unknown)</li> <li>• Human remains (older than 100 years)</li> <li>• Associated burial goods (older than 100 years)</li> <li>• Burial architecture (older than 60 years)</li> </ul>	None
I. ASSOCIATED LANDSCAPE CONTEXT	<ul style="list-style-type: none"> <li>• Sites associated with living heritage e.g. initiation sites, harvesting of natural resources for traditional medicinal purposes</li> <li>• Sites associated with displacement &amp; contestation</li> </ul>	None

CULTMATRIX CC

	<ul style="list-style-type: none"> <li>• Sites of political conflict/struggle</li> <li>• Sites associated with an historic event/person</li> <li>• Sites associated with public memory</li> </ul>	
J. HISTORICAL FARM WERF CONTEXT	<ul style="list-style-type: none"> <li>• Setting of werf and its context</li> <li>• Composition of structures</li> <li>• Historical/architectural value of individual structures</li> <li>• Tree alignments</li> <li>• Views to and from</li> <li>• Axial relationships</li> <li>• System of enclosure, e.g. werf walls</li> <li>• Systems of water reticulation and irrigation, e.g. furrows</li> <li>• Sites associated with slavery and farm labour</li> <li>• Colonial period archaeology</li> </ul>	None
K. HISTORICAL INSTITUTIONAL LANDSCAPE CONTEXT	<ul style="list-style-type: none"> <li>• Historical prisons</li> <li>• Hospital sites</li> <li>• Historical school/reformatory sites</li> <li>• Military bases</li> </ul>	None
L. SCENIC/VISUAL	<ul style="list-style-type: none"> <li>• Scenic routes</li> </ul>	None
K. AMENITY LANDSCAPE CONTEXT	<ul style="list-style-type: none"> <li>• View sheds</li> <li>• View points</li> <li>• Views to and from</li> <li>• Gateway conditions</li> <li>• Distinctive representative landscape conditions</li> <li>• Scenic corridors</li> </ul>	

### 3.2 Heritage context classification

#### 3.2.1 Soshanguve corridor

CATEGORY	DESCRIPTION	EVIDENCE
A	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources	No
B	Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources	No
C	Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources	No
D	<b>Of little or no intrinsic, associational or contextual heritage value due to disturbed, degraded conditions or extent of irreversible damage</b>	<b>Yes</b>

#### 3.2.2 Mabopane Freeway corridor

CATEGORY	DESCRIPTION	EVIDENCE
A	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources	No
B	Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources	No
C	Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources	No
D	<b>Of little or no intrinsic, associational or contextual heritage value due to disturbed, degraded conditions or extent of irreversible damage</b>	<b>Yes</b>

**3.2.3 DF Malan Drive corridor**

CATEGORY	DESCRIPTION	EVIDENCE
A	Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources	No
B	Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources	No
<b>C</b>	<b>Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources</b>	<b>Yes</b>
D	Of little or no intrinsic, associational or contextual heritage value due to disturbed, degraded conditions or extent of irreversible damage	No

**3.2.4 Marabastad and Pretoria CBD corridors**

CATEGORY	DESCRIPTION	EVIDENCE
<b>A</b>	<b>Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources</b>	<b>Yes</b>
B	Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources	No
C	Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources	No
D	Of little or no intrinsic, associational or contextual heritage value due to disturbed, degraded conditions or extent of irreversible damage	No

**3.3 Development context type**

CATEGORY	ONE OR MORE ELEMENTS	EVIDENCE
A: Minimal intensity development	<ul style="list-style-type: none"> <li>No rezoning involved; within existing use rights</li> <li>No subdivision involved</li> <li>Upgrading of existing infrastructure within existing envelopes</li> <li>Minor internal changes to existing structures</li> <li>New building footprints limited to less than 1000m<sup>2</sup></li> </ul>	No
B: Low-intensity development	<ul style="list-style-type: none"> <li>Spot rezoning with no change to overall zoning of a site</li> <li>Linear development less than 100m</li> <li>Building footprints between 1000m<sup>2</sup>-2000m<sup>2</sup></li> <li>Minor changes to external envelop of existing structures (less than 25%)</li> <li>Minor changes in relation to bulk and height of immediately adjacent structures (less than 25%).</li> </ul>	No
C: Moderate intensity development	<ul style="list-style-type: none"> <li>Rezoning of a site between 5000m<sup>2</sup>-10 000m<sup>2</sup></li> <li>Linear development between 100m and 300m</li> <li>Building footprints between 2000m<sup>2</sup> and 5000m<sup>2</sup></li> <li>Substantial changes to external envelop of existing structures (more than 50%)</li> <li>Substantial increase in bulk and height in relation to immediately adjacent buildings (more than 50%)</li> </ul>	No
<b>D: High intensity development</b>	<ul style="list-style-type: none"> <li><b>Rezoning of a site in excess of 10 000m<sup>2</sup></b></li> <li><b>Linear development in excess of 300m</b></li> <li><b>Any development changing the character of a site exceeding 5000m<sup>2</sup> or involving the subdivision of a site into three or more erven</b></li> <li><b>Substantial increase in bulk and height in relation to immediately adjacent buildings (more than 100%)</b></li> </ul>	<b>Yes</b>

### 3.4 Expected impact significance

#### 3.4.1 Soshanguve corridor

HERITAGE CONTEXT	TYPE OF DEVELOPMENT			
	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
A: High heritage value	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected	Very high heritage impact expected
B: Medium to high heritage value	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected
C: Medium to low heritage value	Little or no heritage impact expected	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected
D: Low heritage value	Little or no heritage impact expected	Little or no heritage impact expected	Minimal heritage value expected	<b>Moderate heritage impact expected</b>

#### 3.4.2 Mabopane Freeway corridor

HERITAGE CONTEXT	TYPE OF DEVELOPMENT			
	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
A: High heritage value	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected	Very high heritage impact expected
B: Medium to high heritage value	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected
C: Medium to low heritage value	Little or no heritage impact expected	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected
D: Low heritage value	Little or no heritage impact expected	Little or no heritage impact expected	Minimal heritage value expected	<b>Moderate heritage impact expected</b>

#### 3.4.3 DF Malan Drive corridor

HERITAGE CONTEXT	TYPE OF DEVELOPMENT			
	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
A: High heritage value	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected	Very high heritage impact expected
B: Medium to high heritage value	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected
C: Medium to low heritage value	Little or no heritage impact expected	Minimal heritage impact expected	Moderate heritage impact expected	<b>High heritage impact expected</b>
D: Low heritage value	Little or no heritage impact expected	Little or no heritage impact expected	Minimal heritage value expected	Moderate heritage impact expected

#### 3.4.4 Marabastad and Pretoria CBD corridors

HERITAGE CONTEXT	TYPE OF DEVELOPMENT			
	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
A: High heritage value	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected	<b>Very high heritage impact expected</b>
B: Medium to high heritage value	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected
C: Medium to low heritage value	Little or no heritage impact expected	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected
D: Low heritage value	Little or no heritage impact expected	Little or no heritage impact expected	Minimal heritage value expected	Moderate heritage impact expected

## 4. HERITAGE IMPACT ASSESSMENT

### 4.1 Approach

#### 4.1.1 Definitions and assumptions

The following aspects have a direct bearing on the investigation and the resulting report:

- *Cultural (heritage) resources* are all non-physical and physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artefacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.
- The *cultural significance* of sites and artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.
- The *value* is related to concepts such as *worth, merit, attraction or appeal*, concepts that are associated with the (current) usefulness and condition of a place or an object. Hence, in the development area, there are instances where elements of the place have a high level of significance but a lower level of value.
- It must be kept in mind that significance and value are not mutually exclusive, and that the evaluation of any feature is based on a combination or balance between the two.
- Isolated occurrences: findings of artefacts or other remains located apart from archaeological sites. Although these are noted and samples are collected, it is not used in impact assessment and therefore do not feature in the report.
- Traditional cultural use: resources which are culturally important to people.
- All archaeological remains, artificial features and structures older than 100 years and historic structures older than 60 years are protected by the relevant legislation, in this case the National Heritage Resources Act (NHRA) (Act No. 25 of 1999). No archaeological artefact, assemblage or settlement (site) and no historical building or structure older than 60 years may be altered, moved or destroyed without the necessary authorisation from the South African Heritage Resources Agency (SAHRA) or a provincial heritage resources authority. Full cognisance is taken of this Act in making recommendations in this report.
- The guidelines as provided by the NHRA (Act No. 25 of 1999) in Section 3, with special reference to subsection 3, and the Australian ICOMOS Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.
- It should be kept in mind that archaeological deposits usually occur below ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted, and it would be required that the heritage consultants would be required to be notified in order for an investigation and evaluation of the find(s) to take place (*cf.* NHRA (Act No. 25 of 1999), Section 36 (6)).

#### 4.1.2 Limiting/Restricting factors

The investigation has been influenced by the following factors related to the overall HIA:

- Unpredictability of buried archaeological remains (absence of evidence does not mean evidence of absence)
- Difficulty in establishing intangible heritage values
- Unpredictable results from public participation

**4.1.3 Field work**

The approach used in the study entailed extensive and intensive foot investigations of the study area. This was done in May 2009.

**4.1.4 Desktop study**

Published literature was sourced, 1:50 000 maps were studied, an assessment of archival information was done and aerial images were studied.

**4.2 General issues of site and context**

<b>4.2.1 Context</b>		
	<i>(check box of all relevant categories)</i>	<i>Brief description/explanation</i>
x	Urban environmental context	<ul style="list-style-type: none"> <li>• Roads and freeways</li> <li>• Townships</li> <li>• Vacant land</li> <li>• Offices</li> <li>• Commercial and industrial buildings</li> <li>• Transport buildings</li> <li>• Educational buildings</li> <li>• Apartment flats</li> <li>• Religious buildings</li> </ul>
	Rural environmental context	
	Natural environmental context	
<b>Formal protection (NHRA)</b>		
	Is the property part of a protected area (S. 28)?	No
	Is the property part of a heritage area (S. 31)?	No
<b>Other</b>		
x	Is the property near to or visible from any protected heritage sites?	Yes: Church Square buildings, Old Synagogue, Transvaal Museum, NZASM goods office
x	Is the property part of a conservation area or special area in terms of the Zoning Scheme?	Yes: Inner City and Marabastad
x	Does the site form part of a historical settlement or townscape?	Yes: Inner City, Marabastad, Soshanguve
	Does the site form part of a rural cultural landscape?	No
	Does the site form part of a natural landscape of cultural significance?	No
	Is the site within or adjacent to a scenic route?	No
x	Is the property within or adjacent to any other area which has special environmental or heritage protection?	Yes: Apies River, Steenoven Spruit
x	Does the general context or any adjoining properties have cultural significance?	Yes: Historic built environment

<b>4.2.2 Property features and characteristics</b>		
	<i>(check box if YES)</i>	<i>Brief description</i>
x	Have there been any previous development impacts on the property	Yes (see item 2.1.1)
x	Are there any significant landscape features on the property?	Witwatersberg and Magaliesberg
x	Are there any sites or features of geological significance on the property?	Witwatersberg and Magaliesberg

	Does the property have any rocky outcrops on it?	No
x	Does the property have any fresh water sources (springs, streams, rivers) on or alongside it?	Yes: Apies River and Steenoven Spruit
	Does the property have any sea frontage?	No
	Does the property form part of a coastal dune system?	No
	Are there any marine shell heaps or scatters on the property?	No
	Is the property or part thereof on land reclaimed from the sea?	No

<b>4.2.3 Heritage resources on the property</b>		
	<i>(check box if present on the property)</i>	<i>Name / List / Brief description</i>
<b>Formal protections (NHRA)</b>		
	National heritage site (S. 27)	No
x	Provincial heritage site (S. 27)	Church Square and buildings
	Provisional protection (s.29)	No
	Place listed in heritage register (S. 30)	No
<b>General protections (NHRA)</b>		
x	structures older than 60 years (S. 34)	Yes: Streets, pavements, kerbing
x	archaeological site or material (S. 35)	Possible (old tram tracks and water furrows)
	palaeontological site or material (S. 35)	No
	graves or burial grounds (S. 36)	No
x	public monuments or memorials (S. 37)	Yes: Kruger statue
<b>Other</b>		
x	Any heritage resource identified in a heritage survey (state author and date of survey and survey grading/s)	Yes: Marabastad Integrated Urban Development Framework (2002), Inner City surveys since 1986
	Any other heritage resources (describe)	No

<b>4.2.4 Property history and associations</b>		
	<i>(check box if YES)</i>	<i>Brief description/explanation</i>
x	Provide a brief history of the property (e.g. when granted, previous owners and uses).	See Annexure 1
x	Is the property associated with any important persons or groups?	Yes: Tshwane history
x	Is the property associated with any important events, activities or public memory?	Yes: Tshwane history
	Does the property have any direct association with the history of slavery?	No
x	Is the property associated with or used for living heritage?	Yes
x	Are there any oral traditions attached to the property?	Yes



### 4.3 Summarised identification and cultural significance assessment of affected heritage resources at BRT components

- See Annexure 1 for detailed assessments of BRT components
- See Appendix 3 (Glossary of Terms) for significance assessment criteria

BRT COMPONENT	HERITAGE RESOURCES	CUMULATIVE SIGNIFICANCE	RATING
Mabopane Station terminus	Vacant land, modern dwellings, roads, modern shopping malls, railway station, bus and taxi ranks	13/30	Medium = 2
Soshanguve 1 Station	Vacant land, modern dwellings, roads, modern shopping malls	10/30	Low = 1
Giant Stadium Station	Vacant land, modern dwellings, roads, modern shopping malls, stadium	13/30	Medium = 2
Soshanguve 2 Station	Vacant land, roads, modern shopping malls, houses, filling stations, schools	7/30	Low = 1
Soshanguve 3 Station	Vacant land, roads, modern shopping malls, houses, filling stations, police station, magistrate's courts	8/30	Low = 1
Taxi Rank Station	Vacant land, roads, landscaped gateway to Soshanguve	8/30	Low = 1
Mabopane to Taxi Rank Station	Vacant land, modern dwellings, roads, modern shopping malls, stadium etc.	9/30	Low = 1
Hebron Road Station	Vacant land, roads, location between freeway lanes close to road over freeway bridge	5/30	Low = 1
Rosslyn 1 Station	Vacant land, roads, location between freeway lanes under road over freeway bridge	5/30	Low = 1
Rosslyn 2 Station	Vacant land, roads, location between freeway lanes	5/30	Low = 1
Brits Road Station	Vacant land, roads, location between freeway lanes	5/30	Low = 1
Daspoort-Mountain View Station	Vacant land, roads, modern residential neighbourhoods, berm between site and freeway, Holy Cross Home to north, water canal to north	9/30	Low = 1
DF Malan Station	Vacant land, railway lines, roads, railway lines, gateway to freeway	11/30	Medium = 2
Taxi Rank Station to DF Malan Station	Mabopane Freeway	6/30	Low = 1
Moot Street Station	Roads, Apies River, industrial buildings, warehouses, historic railway viaduct	11/30	Medium = 2
Boom-DF Malan Station	Roads, industrial buildings, warehouses, filling station, vacant land associated with school in old Marabastad	22/30	High = 3
DF Malan to Boom-DF Malan Station	Roads, Apies River, industrial buildings, warehouses, historic railway viaduct, cement factory, De Vaal traffic interchange (1950s), market, sewage treatment plant, Marabastad edge	13/30	Medium = 2
Boom-DF Malan to Boom and Bloed Street stations	Shops, cinemas, dwellings, Steenoven Spruit and other features of Marabastad	21/30	High = 3
Boom Street Station	Shops, cinemas, dwellings, Steenoven Spruit and other features of Marabastad	23/30	High = 3
Bloed Street Station	Shops, vacant land, Steenoven Spruit – degraded precinct	13/30	Medium = 2
Paul Kruger Station	Warehouse, new Dept of Education head office, V and R Printing Works, shops	12/30	Medium = 2
Church Square North Station	Old German Club, high-rise offices, Supreme Court, law chambers	20/30	High = 3
Church Square	Historic buildings, statue, public open space	30/30	High = 3
Church Square South Station	Modern high-rise offices, shops, historic shops	20/30	High = 3
Town Hall Station	Transvaal Museum, City Hall, statues	24/30	High = 3
Pretoria Railway Station	Railway buildings	25/30	High = 3
Paul Kruger Street section	CBD buildings	21/30	High = 3

### 4.4. Summarised impact assessment affecting heritage resources at BRT components

- See Annexure 1 (separate document) for detailed assessments of BRT components

BRT COMPONENT	POSITIVE IMPACT SIGNIFICANCE AND RISK			NEGATIVE IMPACT SIGNIFICANCE AND RISK		
	Impact rating	Risk	Risk rating	Impact rating	Risk	Risk rating
Mabopane Station terminus	20	Very high	3	6	Low	1
Soshanguve 1 Station	6	Low	1	4	Low	1
Giant Stadium Station	9	Medium	2	4	Low	1
Soshanguve 2 Station	6	Low	1	4	Low	1
Soshanguve 3 Station	9	Medium	2	12	Medium	2
Taxi Rank Station	6	Low	1	-	-	-
Mabopane Station to Taxi Rank Station	-	-	-	-	-	-
Hebron Road Station	6	Low	1	12	Medium	2

CULTMATRIX CC

BRT COMPONENT	POSITIVE IMPACT SIGNIFICANCE AND RISK			NEGATIVE IMPACT SIGNIFICANCE AND RISK		
	Impact rating	Risk	Risk rating	Impact rating	Risk	Risk rating
Rosslyn 1 Station	-	-	-	-	-	-
Rosslyn 2 Station	-	-	-	-	-	-
Brits Road Station	-	-	-	-	-	-
Daspoort-Mountain View Station	-	-	-	-	-	-
DF Malan Station	12	Medium	2	4	Low	1
Taxi Rank Station to DF Malan Station	-	-	-	-	-	-
Moot Street Station	12	Medium	2	4	Low	1
Boom-DF Malan Station	15	High	3	4	Low	1
DF Malan to Boom-DF Malan Station	-	-	-	-	-	-
Boom-DF Malan to Boom and Bloed Street stations	6	Low	1	9	Medium	2
Boom Street Station	9	Medium	2	15	High	3
Bloed Street Station	6	Low	1	6	Low	1
Paul Kruger Station	6	Low	1	16	High	3
Church Square North Station	6	Low	1	15	High	3
Church Square	6	Low	1	8	Medium	2
Church Square South Station	6	Low	1	15	High	3
<b>Town Hall Station</b>	<b>6</b>	<b>Low</b>	<b>1</b>	<b>25</b>	<b>High (possible fatal flaw)</b>	<b>3</b>
Pretoria Railway Station	6	Low	1	4	Low	1
Paul Kruger Street section	6	Low	1	8	Medium	2

**4.5 Summarised recommended impact management interventions at BRT components**

- See Annexure 1 (separate document) for detailed assessments of BRT components

BRT COMPONENT	IMPACT SIGNIFICANCE Cultural significance rating x impact risk rating			Recommended management actions	Motivation
	Cult. Sign.	Impact risk	Impact sign.		
Mabopane Station terminus	2	+3 High pos.	+6	• Detailed SDP	Possible anchor for future development of area
		-1 Low neg.	-2	• Unobtrusive terminus design	Synergy with surrounding environment
Soshanguve 1 Station	1	+2 Low pos.	+2	-	-
		-1 Low neg.	-1	• Unobtrusive terminus design	Synergy with surrounding environment
Giant Stadium Station	2	+2 Low pos.	+4	• SDP to take cognisance of broader planning framework if possible	Potential to enhance local development
		-1 Low neg.	-2	• Unobtrusive terminus design	Synergy with surrounding environment
Soshanguve 2 Station	1	+1 Low pos.	+1	-	-
		-1 Low neg.	-1	• Unobtrusive terminus design	Synergy with surrounding environment
Soshanguve 3 Station	1	+2 Medium pos.	+2	• SDP to take cognisance of broader planning framework if possible	Potential to enhance local development
		-2 Medium neg.	-2	• Relocate to new position <b>east</b> of intersection	Better access and more passengers Better synergy with existing commercial and admin. environment
Taxi Rank Station	1	-	-	None (no impact)	-
		-	-	None (no impact)	-
Mabopane Station to Taxi Rank Station	1	+1 Low pos.	+1	-	-
		-	-	None (no impact)	-

CULTMATRIX CC

BRT COMPONENT	IMPACT SIGNIFICANCE Cultural significance rating x impact risk rating			Recommended management actions	Motivation
	Cult. Sign.	Impact risk	Impact sign.		
Hebron Road Station	1	+1 Low pos.	+1	-	-
		-2 Medium neg.	-2	<ul style="list-style-type: none"> <li>Pedestrian access (footbridge) to Soshanguve XX</li> <li>Urban framework recommended to formalise routes and possible drop-off and pick-up point in Soshanguve XX</li> </ul>	Management of increased traffic through/past Soshanguve XX
Rosslyn 1 Station	1	-	-	None (no impact)	-
		-	-	None (no impact)	-
Rosslyn 2 Station	1	-	-	None (no impact)	-
		-	-	None (no impact)	-
Brits Road Station	1	-	-	None (no impact)	-
		-	-	None (no impact)	-
Daspoort-Mountain View Station	1	-	-	None (no impact)	-
		-	-	None (no impact)	-
DF Malan Station	2	+2 Medium pos.	+4	<ul style="list-style-type: none"> <li>Enhance urban planning framework for area</li> <li>Provide for expansion as development node</li> <li>Create linkage with Apies River open space system</li> </ul>	Potential to improve sense of place Potential to improve area as a gateway/landmark
		-1 Low neg.	-2	<ul style="list-style-type: none"> <li>Appropriate design</li> </ul>	Synergy with environment
Taxi Rank Station to Boom-DF Malan Station	1	-	-	None (no impact)	-
		-	-	None (no impact)	-
Moot Street Station	2	+2 Medium pos.	+4	<ul style="list-style-type: none"> <li>Enhance urban planning framework for area</li> <li>Create linkage with Apies River open space system</li> <li>Maximum accessibility for pedestrians</li> </ul>	Potential to improve sense of place Potential to improve area as a gateway/landmark
		-1 Low neg.	-2	<ul style="list-style-type: none"> <li>Appropriate design</li> </ul>	Synergy with environment
Boom-DF Malan Station	3	+3 High pos.	+9	<ul style="list-style-type: none"> <li>Appropriate station and precinct design</li> <li>Acknowledge history of precinct in station signage</li> </ul>	Memorialisation of site history Gateway to Marabastad Revamp of neglected open space Catalyst for upgrade of environment by CoT and property owners
		-1 Low neg.	-3	<ul style="list-style-type: none"> <li>Appropriate design</li> </ul>	Synergy with environment
DF Malan to Boom-DF Malan Station	3	-	-	None (no impact)	-
		-	-	None (no impact)	-
Boom-DF Malan to Boom and Bloed Street stations	3	+1 Pos.	+3	-	-
		-2 Neg.	-6	<ul style="list-style-type: none"> <li>Street surfacing design</li> <li>Retain kerbing</li> <li>Retain street trees</li> </ul>	Mitigate visual intrusion as far as possible
Boom Street Station	3	+2 High pos.	+6	<ul style="list-style-type: none"> <li>Appropriate station and precinct design</li> <li>Acknowledge history of precinct in station signage</li> </ul>	Catalyst for upgrade of whole precinct by CoT and property owners
		-3 High neg.	-9	<ul style="list-style-type: none"> <li>Retain station – not possible to relocate since other precincts are more sensitive</li> <li>Appropriate station design</li> <li>Acknowledge history of precinct in station signage</li> </ul>	Synergy with environment Mitigate visual intrusion Memorialise Marabastad by providing info
Bloed Street Station	2	+1 Low pos.	+2	<ul style="list-style-type: none"> <li>Appropriate station and precinct design</li> <li>Acknowledge history of precinct in station signage</li> </ul>	Catalyst for upgrade of whole precinct by CoT and property

CULTMATRIX CC

BRT COMPONENT	IMPACT SIGNIFICANCE Cultural significance rating x impact risk rating			Recommended management actions	Motivation
	Cult. Sign.	Impact risk	Impact sign.		
		-1 Low neg.	-2	<ul style="list-style-type: none"> <li>Retain station – not possible to relocate</li> <li>Appropriate station design</li> <li>Acknowledge history of precinct in station signage</li> </ul>	owners Synergy with environment Mitigate visual intrusion Memorialise Marabastad by providing info
Paul Kruger Station	2	+1 Low pos.	+2	<ul style="list-style-type: none"> <li>Appropriate station and precinct design</li> <li>Acknowledge history of precinct in station signage</li> <li>Align with precinct plans (e.g. Re Kgabisa)</li> </ul>	Catalyst for upgrade of whole precinct by CoT and property owners
		-3 High neg.	-6	<ul style="list-style-type: none"> <li>Retain station – not possible to relocate</li> <li>Appropriate station design</li> <li>Acknowledge history of precinct in station signage</li> <li>Platform must stop at Struben Street</li> <li>Retain original kerbing on west side</li> <li>Mirror original kerbing of west side with new kerbing on east side</li> </ul>	Synergy with environment Mitigate visual intrusion Memorialise precinct by providing info Ensure traffic flow in Struben Street (important boulevard)
Church Square North Station	3	+1 Low pos.	+3	<ul style="list-style-type: none"> <li>Appropriate station and precinct design</li> <li>Acknowledge history of precinct in station signage</li> <li>Align with precinct plans (e.g. Re Kgabisa)</li> </ul>	Catalyst for upgrade of whole precinct by CoT and property owners Removal of motor vehicles
		-3 High neg.	-9	<ul style="list-style-type: none"> <li>Retain station – not possible to relocate</li> <li>Appropriate station design</li> <li>Acknowledge history of precinct in station signage</li> <li>Retain original kerbing on both sides</li> </ul>	Synergy with environment Mitigate visual intrusion and view on to Church Square Memorialise precinct by providing info
Church Square	3	+1 Low pos.	+3	<ul style="list-style-type: none"> <li>Urge complete redevelopment and redesign plus HIA for whole square</li> </ul>	Pedestrian-friendly square Regained status as social-cultural and tourism hub of city
		-2 Medium neg.	-6	<ul style="list-style-type: none"> <li>Redesign bus lane demarcation</li> </ul>	Minimised visual intrusion
Church Square South Station	3	+1 Low pos.	+3	<ul style="list-style-type: none"> <li>Appropriate station and precinct design</li> <li>Acknowledge history of precinct in station signage</li> <li>Align with precinct plans (e.g. Re Kgabisa)</li> </ul>	Catalyst for upgrade of whole precinct by CoT and property owners Removal of motor vehicles
		-3 High neg.	-9	<ul style="list-style-type: none"> <li>Retain station – not possible to relocate</li> <li>Appropriate station design</li> <li>Acknowledge history of precinct in station signage</li> <li>Retain original kerbing on both sides</li> </ul>	Synergy with environment Mitigate visual intrusion and view on to Church Square Memorialise precinct by providing info
Town Hall Station	3	+1 Low pos.	+3	<ul style="list-style-type: none"> <li>Appropriate station and precinct design</li> <li>Acknowledge history of precinct in station signage</li> <li>Align with precinct plans (e.g. Re Kgabisa)</li> </ul>	Catalyst for upgrade of whole precinct by CoT and property owners
		-3 High neg.	-9	<ul style="list-style-type: none"> <li>Relocate to north of Visagie Street to less sensitive precinct</li> <li>Appropriate station design</li> </ul>	Loss of parking spaces along both street sides due to need to preserve

BRT COMPONENT	IMPACT SIGNIFICANCE Cultural significance rating x impact risk rating			Recommended management actions	Motivation
	Cult. Sign.	Impact risk	Impact sign.		
Pretoria Railway Station	3	+1 Low pos. -1 Low neg.	+3 -3	- • Appropriate station design • Interpretive signage about heritage environment	lanes for buses, station and vehicles Sense of place in City Hall precinct preserved Closer to larger volumes of pedestrians, buses and taxis (Skinner Street) Mitigate view on to Church Square along Paul Kruger Street - Information and memorialisation
Paul Kruger Street section	3	+1 Low pos. -2 Medium neg.	+3 -6	- • Appropriate lane design • Retain kerbing • Retain street trees	Minimise vehicle traffic Mitigate/minimise negative visual impacts

#### 4.6 Social and economic benefits

The proposed BRT will have heritage-related benefits such as:

- Promotion of proper urban planning frameworks for neglected and under-utilised precincts
- Support for implementation of Marabastad Integrated Urban Framework
- Support for implementation of other urban planning frameworks and policies
- Kick-starting the redevelopment and re-planning of Church Square
- Kick-starting the redevelopment and re-planning of Pretoria railway station precinct
- Opportunities for interpretation of local heritage resources through interpretive signage at stations

There are short-term, medium and long term benefits to the implementation of the BRT system.

##### Short Term Benefits

- Efficient, reliable and frequent services
- Affordable fares
- A safe and secure public transport system
- Accessible public transport for the disabled, elderly and mothers with children
- A decrease in road congestion, energy consumption and vehicle emissions
- An enhanced urban environment
- Recapitalisation of the public transport fleet.

##### Medium-Term Benefits

- Containing urban sprawl (spread of settlements) and promoting densification;
- Promoting social inclusion instead of isolation
- Job creation

##### Long-Term Benefits:

- Economic development in and around the areas of operation
- Reductions in pollution
- A world class public transport system which South Africans can be proud of

#### 4.7 Public participation

This process is part of the EIA as a whole.

#### 4.8 Identification of risk sources

The following project actions will very likely impact negatively on any potential historical and archaeological sites and remains.

The actions are likely to occur during the Construction Phase of the proposed project.

- Site preparations and excavations may expose or uncover foundations, ruins, objects and artefacts.
- Public participation may bring new information to light.

#### 4.9 Key mitigation and enhancement measures before construction

No key mitigation and enhancement measures are required.

#### 4.8 Key mitigation and enhancement measures during construction

The following project actions may impact negatively on any archaeological sites and other sites of cultural importance. The actions are most likely to occur during the construction phase of the proposed project.

- Road making, construction and rehabilitation activities and development of services may expose as yet unknown heritage resources, e.g. old tram tracks and water furrows;

We recommend that:

- Construction work is monitored for the uncovering of any archaeological and historical sites, structures and objects (e.g. old tram tracks) through excavation and demolition activities;
- This recommendation must be included in construction tender documents.
- Identified sites should be properly documented and protected.

#### 4.9 Consideration of alternatives

No site alternatives apply, except for the following recommendations:

- Relocate Soshanguve 3 Station to east of intersection
- Relocate Town Hall Station to block north of Visagie Street

#### 4.10 Key uncertainties and risks that may influence accuracy and confidence of impact assessment

It is possible that new information, which could change the recommendations, will be generated through the following research activities:

- Archaeological and historical sites and objects that are hidden or are buried;
- Inputs from public participation process.

#### 4.11 Final recommendations

Based on what was found and its evaluation, there are within a heritage framework no compelling reasons to delay or abandon the proposed development provided that both positive and negative impacts should be taken into consideration and addressed.

Cultmatrix recommends that SAHRA authorises the proposed development, provided that:

1. The developer agrees to the recommended mitigation measures as tabulated above.
2. Conceptual site development plans and visual impressions of the proposed stations will be made available.
3. The City of Tshwane agrees to the replanning and redevelopment of Church Square and provides very basic information what this may entail.
4. The HIA for the Pretoria railway station precinct will be aligned with this HIA and vice versa.

5. The statutory public participation in terms of the EIA and the HIA combined will be done and the results thereof will be made available for inclusion into the final HIA documentation.
6. The City of Tshwane and SANRAL will provide proof of communication with the Department of Provincial and Local Government about the implications of the Church Square legislation for the BRT.
7. Each BRT station will provide passengers with basic information about the heritage of the site.
8. Construction work in Marabastad and the CBD will be monitored for chance finds (e.g. old tram tracks) and a heritage specialist will be consulted about such issues.

## APPENDIX 1: SOCIO-CULTURAL HISTORY OF DEVELOPMENT AREA

### *Pre-colonial settlement*

Habitation of the larger geographical area took place since Stone Age times. This is confirmed by the occurrence of stone tools dating to the Middle and Late Stone Age found in a number of places. Stone Age tools associated with the Middle Stone Age are common in the area, especially along the spruits where they cut through poorts and valleys and at the lower parts of the ridges and mountains. These indicate that the area was inhabited and exploited by humans as far back as about 100 000 years ago. However, due to the absence of shelter and the exposed environment the Highveld was sparsely populated during the Stone Age.

Sites dating to the Late Iron Age are found in the larger geographical area. Some of them can be related to the Tswana-speakers, whereas others to the Manala Ndebele-speakers.

The Iron Age sites tend to cluster around the hills and ridges as well as on the more open flatlands, especially in areas where outcrops (dolerite, etc.) occur.

This period of relative prosperity ended through environmental degradation, overpopulation, local conflict and widespread upheaval perpetuated by the reign of the Matabele in the 1820s and 1830s and the permanent settlement of the Voortrekkers in the 1840s.

Lines 1 and 2 of the BRT run through an environment that has been transformed by roads, railway lines, residential and other forms of development, which would have destroyed any Stone and Iron Age remains.

### *Colonial settlement and urban development*

The first white colonists who settled on the Highveld came for very much the same reasons as the Iron Age groups: water and grazing for cattle, water for crop-farming, trees, thatching grass, clay for making bricks and pots, mild climate, wildlife and the presence of the mountains as shelter and protection.

However, the principal goal of the Voortrekkers who ventured over the Vaal River was to establish their independence and security. The area claimed by the Voortrekkers after the conquest of Mzilikazi was demarcated at a public meeting on 16 October 1840 held in Potchefstroom. Initially, the areas of Suikerbosrant (Heidelberg), Schoonspruit (Klerksdorp), Mooirivier (Potchefstroom) and Magaliesberg, all within limits of the original claim of 1840, were the most popular locations for settlements, but by 1855 settlements had been established beyond the originally claimed area.

Burghers selected farms and then provided a description of the farm to the local landdrost, who noted the detail in a registration book and gave the claimant a copy. Claimed land then had to be inspected before a title and deed were issued. Since the registration of land entailed registration costs and annual land taxes, it was often delayed as long as possible. As a result, the registration of land claimed on the basis of burgher rights continued well into the 1890s.

Pretoria was initially established as a new congregation for the Nederduitsch Hervormde Church at a site which would soon become a new town as well. A church building was erected on an open piece of land that was to become Church Square. Around this square a number of erven were laid out and a few roads leading to it, namely Markt (now Paul Kruger) and Church streets. These functions were completed in 1854. A year later the place was proclaimed the new capital of the Transvaal Boer republic.

The first magistrate, Andries du Toit, resurveyed the original church site with its few streets and at the same time surveyed an enlarged town with Church Square as its centre and Boom, Scheiding, Schubart and Du Toit streets as its boundaries. This was completed in 1859. His survey formed the basis of the present-day CBD. The streets were purposely surveyed as wide as possible in order to allow a wagon with a full span of oxen to do a U-turn.

In the Pretoria urban area servants resided either in detached single quarters on the properties of their employees or at the facilities of the Berlin Mission Society, established in 1867 at Schoolplaats on the northern fringe of the town. A year later this private facility was extended by the purchase of an adjacent piece of land, Frischgewaagd. The Schoolplaats-Frischgewaagd complex comprised 95 stands on 19,7 ha. These premises soon became overcrowded and in 1888 an additional 67 stands were demarcated to



the west next to the Apies River. This area, Marabastad, was left under the supervision of a headman and soon developed into an informal village.

Numbers of Coloureds settled in Pretoria during the 19<sup>th</sup> century, residing either on white-owned premises or staying at Schoolplaats. Indians also settled in Pretoria. Indian traders clustered between Prinsloo and Van der Walt streets on the north-eastern periphery of the town and a mosque was erected shortly after 1887. In terms of government legislation, no Indian could enjoy citizenship and own property. This legislation did allow for areas to be allocated for Indian occupation and in 1889 an Asiatic Bazaar of 25,7 ha was laid out a small distance south of Marabastad. A small Cape Boys (Coloured) location was also established south of Marabastad during the same period.

In the years immediately after the war there was large-scale urbanisation and a number of informal settlements sprang up in and around Pretoria. Within town limits the area between Marabastad and the Asiatic Bazaar soon became an unsurveyed settlement. In 1905 the squatter area between Marabastad and the Asiatic Bazaar was surveyed and proclaimed as a location (New Marabastad). A resurvey of Old Marabastad in 1905 showed it to be unsuitable for housing and an alternative housing project was launched on municipal land south of Hove's Ground. The new settlement became popularly known as Newclare and eventually had 294 rental houses. In 1922 Hove's Ground was surveyed and linked to the Newclare settlement that became known as Bantule.

Marabastad, including the Cape Boys Location, and Bantule, including Hove's Ground, were proclaimed official locations in terms of the natives (Urban Areas) Act of 1923.

For almost forty years since its founding in 1855, urban development of Pretoria remained concentrated in the central area around Church Square. In the Moot valley and elsewhere, settlement was mainly agricultural, characterised by the subdivision of the original farms to accommodate more farmers and later smallholdings. Most of the smallholdings were concentrated along the Apies River and some of the smaller streams. Some of the wealthier white Pretorians chose to settle outside the urban area and had large dwellings built for themselves, of which the imposing mansion built for President Kruger's son-in-law F C Eloff by Gerrit Pierneef on the farm Eloff's Estate in the 1890s was a classic example. Another example is Zwartkoppies, Sammy Marks's mansion.

Significant urban development only began in the 1890s, when the first townships or suburbs outside central Pretoria were established as residential extensions of the town. Probable reasons for this were the close proximity of these new townships to the town centre, adequate connecting roads, fertile land, pleasant climate and sufficient water for household and small-scale farming purposes. Another reason was industrial development: Eerste Fabrieken in the east, PPC in the Moot valley, limeworks in the south and prospects for silver mining at Silverton. Urban development accelerated after the Anglo-Boer War, in particular after 1910 when Pretoria became the executive and administrative capital of the Union of South Africa. The white and black population increased considerably after 1910. During the 1930-1940 era there was a large increase in the urban population and many empty stands were gradually populated.

The newly-proclaimed suburbs initially only consisted of a few of scattered dwellings, interspersed with large numbers of undeveloped erven. Many of these dwellings were corrugated iron structures, cheap and also easy to erect. More durable and solid brick dwellings only began appearing around 1910.

The decade 1940-1950 was a continuation of the previous period, characterised by the proclamation of new suburbs on the periphery of the urban area. Population growth continued in the following years, accelerated by the development and expansion of national, provincial and local government offices and by industrial growth. By 1964, when the new Pretoria municipal area was demarcated, a total of about 46 new suburbs or extensions of existing suburbs had been proclaimed since 1940. The establishment of even more suburbs, in particular in a north-easterly, easterly and south-easterly direction, continued at an accelerated pace during the 1970s and 1980s.

The youngest municipality, Akasia, only started developing in the 1980s. The first residential suburb was The Orchards.

Apartheid-style urban planning and re-planning started in the late 1930s. The clearance of Marabastad and forced removals to Atteridgeville started in June 1940. Depopulated areas in Marabastad were demolished immediately. Marabastad was finally deproclaimed in 1955 after the last 735 people had been removed to Atteridgeville. A portion of Derdepoort was proclaimed a Coloured area and renamed Eersterus, to which the residents of the Cape Boys Location were removed. Lady Selborne was

proclaimed a white group area; its African residents were removed to the new homeland town Garankuwa and other homeland areas, its Indian residents were removed to Laudium and its Coloured community were removed to Eersterus. Laudium on a portion of Claudius (a white suburb) was designated an Indian group area and the Indian residents of the Asiatic Bazaar were resettled here. The Bazaar itself was allocated for Indian trading but residential use was excluded.

Parallel with the government's policies in the urban areas went a major process of political restructuring in the reserves. The government's answer to the drive for majority rule in the towns and other "white" areas was to develop a Bantustan policy. The establishment of nine "ethnic" Bantustans in the 1950s and 1960s gave rise to a new wave of forced removals. Self-contained towns to rehouse inhabitants of deproclaimed municipal townships and to provide accommodation for workers in border industries were established in these Bantustans. North-west of Pretoria, in the Tswana "homeland", such towns already existed by the mid-1960s (Garankuwa and Temba), or were being developed (Mabopane).

By 1969 it was clear that the policy of ethnic segregation was causing serious overcrowding in the Pretoria black townships. Non-Tswana families, because they did not qualify for houses in Garankuwa and Temba, resorted to fast growing informal settlements on tribal and private African-owned land such as Ramakgodi and Winterveld just inside the homelands. The decision was thus taken to develop a new town, Mabopane, on the site of Boekenhoutfontein, a rudimentary town with about 11 000 two-roomed houses established in the early 1960s to accommodate people displaced from black spots like Wallmannsthal and Boekenhoutkloof.

In 1976, even before Bophuthatswana became an independent homeland, the eastern non-Tswana section of Mabopane was excluded from the homeland, renamed Soshanguve and placed under the direct control of the South African government.

By the 1980s it had become clear that the Pretoria area was one of South Africa's cities that could be classified as dysfunctional multiple cities, cities close to homeland areas that had been changed and complicated through the processes of homeland urbanisation and border industry development. This system included an array of components: white controlled municipalities of Akasia, Pretoria and Centurion with a majority of white residents, Atteridgeville and Mamelodi as peripheral African townships separated from the white-controlled areas by industrial and transport buffer zones, decentralised Coloured and Indian townships, a huge border industry at Rosslyn and one at Brits, two decentralised multi-ethnic African townships outside the homeland borders (Soshanguve, Ekangala) and a number of smaller white controlled central place towns at Brits, Bronkhorstspuit, Hammanskraal, Rayton and Cullinan.

### ***Transport infrastructure***

Pretoria was connected by rail to the Free State and the Cape Colony on 1 January 1893 when the first train entered the station. This station grew in importance when it became the terminus for two other major railway lines, namely the line to Maputo (completed in 1894) and the line to Polokwane.

Sections of Line 1 of the BRT run close to the old Pretoria-Polokwane railway. Construction of this railway line started in 1896 and it was completed in August 1899 when the first train entered Pietersburg Station. From its own terminus west of the Pretoria station (today Bosman Street Station); the line went in a northerly direction through today's suburbs of Pretoria West, Hermanstad, Daspoort, Mountain View and Pretoria North.

To accommodate the heavier traffic that was experienced as a result of the opening of the Hercules-Magaliesburg line in 1925, Hercules being one of the stations on the Pretoria-Pietersburg railway, the line was doubled between Pretoria and Hercules in 1928-1930, involving new bridges across Potgieter Street and Skinner Spruit. After the addition of another new railway line that connected with the Pretoria-Pietersburg railway (the Hercules-Koedoespoort line) in 1943, the section between Pretoria and Hercules was quadrupled and electrified, involving the construction of a new bridge across Potgieter Street and a complicated subway at the western end of Van der Hoff Street. After the decision had been taken in 1967 to provide a railway connection to Garankuwa, the remainder of the line was doubled and electrified. This project was completed in 1972.

Following a decision in 1967 not to extend existing Black townships in urban areas but resettle Blacks in homeland towns, the expansion of Atteridgeville/Saulsville and Mamelodi was halted. Instead, the focus fell on resettlement in Garankuwa (already established in 1961) and a new town on the farm Boekenhoutfontein in the Tswana homeland, to be known as Mabopane.

As a result of the construction of the Cordelfos-Saulsville line, the doubling and electrification of the line to Garankuwa Station (on the Rustenburg railway) and the doubling of the line to Eerste Fabriek at Mamelodi, the number of daily commuters from these areas had increased to 68 100 by 1971. This made facilities at Bosman Street Station (for Blacks) inadequate.

The *Inter-Departmental Committee for the Conveyance of Non-Whites* (as the committee was renamed) recommended the construction of a new 'Non-European' terminus station at Belle Ombre (east of Marabastad) and a new electrified double line between Winterneest Station (on the Pretoria-Rustenburg line) and a terminus station at Mabopane, including a station for Soshanguve. Mabopane Station would also be accessible from the northern parts of Soshanguve. This recommendation was sanctioned by Act 71 of 1973.

Planning for the Belle Ombre Station began in 1973-1974. The project also involved the construction of special connecting lines to Golf and Bantule stations (on the Pretoria West-Hercules section) and the quadrupling of the section between Hercules and Winterneest. Because of shortage of funds, construction work only started in 1979. It was completed in 1983. Work on the Winterneest-Mabopane railway got under way in 1975. The section to Soshanguve Station (south of Mabopane Station) was taken into use on 29 February 1980. The Belle Ombre-Mabopane connection became fully operational on 30 April 1984.

Belle Ombre and Mabopane were at the time the largest stations for the conveyance of Black commuters in South Africa. At Mabopane there were also medical facilities, restaurant and take-away facilities and a dry-cleaner. Belle Ombre houses a large restaurant, butchery and dry-cleaner. Running through the centre of the Mabopane station complex used to be the former border between Bophuthatswana and South Africa, today the provincial border between Gauteng and North-West Province.

In order to service the growing urban area, the road network was also constantly expanded. This was accelerated by the growth of road transport and the increase in private motor vehicles in the 1930s. The original ox-wagon trail from the western parts of the town through the Daspoort near Marabastad was upgraded and later doubled and named DF Malan Drive, servicing the urban areas in the Moot and north of the Magaliesberg. In 1983 the R 80 (Mabopane Freeway) was taken into use, connecting the city with the far-away black urban settlements of Mabopane and Soshanguve via Akasia.

The spread of the town increased the distances between homes and places of work and gave rise to the first public transport system, forerunners to the BRT.

In 1889 Pieter Nikolaas Jacobus Smit of Pretoria applied to the Government of the ZAR for a concession to construct, operate and maintain a tramway in Pretoria Central and the suburbs, with extensions to the brick works and other industries. On 20 January 1890 the concession was granted to Smit. On 27 January 1891 he sold the concession to Carl Hanau, one of the Johannesburg mining magnates and a co-director of the Johannesburg City and Suburban Tramway Company Limited. Hanau purchased the concession on behalf of another company, the Johannesburg Tramway Company, and ceded the concession on 10 December 1894 to this company. On 31 October 1895 the Johannesburg Tramway Company sold their interests in the tramway to the Pretoria Tramway Company Limited, a newly formed company whose directors were Johann Rissik, Edward Rooth and R K Loveday.

According to the concession the tramway had to start operating not later than the third year from the date of the approval of the plans for the system, or pay a fine of £ 100 for every month that the opening was delayed. Construction began in September 1897. On 21 December 1897 the first tram made a successful journey along the whole line. Heavy rains that caused a wash-away in Du Toit Street delayed the official opening until 24 December.

Commencing at the railway station, the route of the tramway went down Market Street (Paul Kruger Street) to Church Square, where the line turned into Church Street East. Three blocks east it turned into Du Toit Street and then left into Esselen Street. The Apies River was crossed at Du Toit Street by means of a wooden bridge, the Tram Bridge, and the present-day concrete bridge there is today still known as the Tram Bridge. The terminus was situated at the east end of Esselen Street, and here were also the company's corrugated iron barns and stables. Today the Bronberg Church occupies this land.

The Pretoria Tramway Company operated a horse-drawn tramway service with initially eight cars and fifty horses and mules. Two horses or mules drew the cars. They were open to the elements except on rainy days when canvas flaps hanging on the sides were drawn closed. At each terminus the wooden seat

backs were switched across the fixed seats and the team of horses was detached and brought round and attached to the other end of the car for its return trip. To collect the fares and punch tickets the guard or conductor proceeded along one or other of the side steps holding on to the uprights that supported the roof. The tramway line was a single line in the middle of and level with the street of 3 feet 6 inch (1044mm) gauge (the same gauge used by the railways).

During the Anglo-Boer War of 1899-1902 the service was suspended because the horses and mules were commandeered. After the war the residents of Pretoria called upon the municipal authorities to expand and improve the tram service, and after lengthy negotiations the newly elected Town Council purchased the assets of the Pretoria Tramway Company for £ 40 000 in July 1903. The manager of the late tramway company, J E Burdekin, was appointed manager of the new Municipal Tramway Department, and on 18 July 1903 the service was resumed.

By 1903 electric tramcars were already coming into use in Europe and the USA and the Town Council began considering the horse-trams were something more modern, considering motor buses and electric trams. Pretoria was in the fortunate position of already having a power station which had been built in 1889 in Pretorius Street, just to the east of the present-day tram-shed. In 1908 Mayor J G van Boeschoten and a municipal official, T C Wolley-Dodd, reported to the Town Council on their study tour of Europe to investigate electric tramway systems. The result was that the Town Council voted that £ 75 000 be spent on electrifying the Pretoria tramway system. Dick Kerr & Company supplied 14 tramcars and ancillary equipment at £ 21 399. The Telegraph Manufacturing Company (Colonial) Ltd was contracted for £ 1 056 to erect overhead power cables and H Rainey obtained the tender of £ 46 935 to lay new tracks for the existing route and new routes.

The first electric tram travelled the Sunnyside route on 2 November 1910 and signalled the end of the horse tram system. The new routes that came into operation began from Church Square and went to the Zoo, Pretoria West, the railway station, Sunnyside and Arcadia, and the old General Hospital in Potgieter Street. In 1913 they were expanded at a cost of £ 48 200. The central government contributed financially to extend the tram service to the newly completed Union Buildings. Traces of the route followed by the tracks can still be seen to the west of the winding road that connects the Union Buildings with Church Street.

In 1912 a new specially built tram shed in Van der Walt Street was completed. This building complex is a fine example of industrial architecture and brickwork of the time and represents an extremely important era in the city's transport history.

The operation of the electric tramway system gave many problems and experiments were made from time to time. The small open type of tramcar originally used, which seated 28 passengers, was found uneconomical and two cars were coupled together to increase the passenger carrying capacity and halve the crew. This gave a shaky and uncomfortable ride, especially when going around bends, and the system was not popular with passengers and crews. Closed cars were then introduced, fitted with air brakes, improved seating and better protection for the driver. On special occasions illuminated cars were used, such as the 1918 victory parade and the visit of the Prince of Wales in 1924. In contrast to Johannesburg, only single-deck cars were used in Pretoria. In the course of the electric tramway's history, between 13 and 31 closed tramcars were employed. Other rolling stock included two sprinkler cars, three freight cars and one motor tower.

The last electric trams left the Van der Walt tram shed for their final runs on 19 August 1939 when a fleet of new electric single and double decker trolley buses replaced the trams.

A trolley bus can be described as a bus running on tyres and driven by electric motors receiving their current through a trolley wheel and flexible cable from a double overhead electric wire. A trolley wheel is a wheel attached to a pole for collecting electric current from an overhead electric wire.

As in other South African cities, the trolleybuses in Pretoria were introduced as a replacement of the tramway system. When the trolleybus system was developed in the late 1930s, new overhead wires were strung above the existing tramway overheads. After the cessation of tramway operations on 19 August 1939, the trolleybus overheads were then lowered to the operating level.

The initial trolleybus routes were tramway replacements to Sunnyside, Hatfield, Pretoria West and the railway station. Brooklyn was a new route. The Pretoria City Council purchased a fleet of 34 Leylands

with Metro-Cammell bodies and GEC electric equipment. Numbers 104-124 were 38-seat single deckers and Numbers 150-159 54-seat double deckers.

The first trolleybus to run in Pretoria was from Belgrave Square in Hatfield to a terminus in Brooklyn and it was a single decker. It was towed out from the old tram sheds In Van der Walt Street to its new route. The Brooklyn run was used for training purposes and running-in new buses.

No further trolleybuses were acquired until 1949-1950, when 40 double deckers were obtained to enable the system to be extended into many new township developments, such as West Park, Danville, Parktown, Wonderboom South, Rietfontein and Brooklyn. The new vehicles replaced most of the old single deckers until the last four were scrapped in 1959.

Trolleybuses operated on the following routes, all beginning and ending at Church Square:

- Parktown
- Pretoria General Hospital
- Wonderboom South
- Rietfontein
- Colbyn
- Brooklyn
- Sunnyside
- Pretoria station
- West Park
- Danville

The trolleybus depot was situated in Boom Street, west of Bosman Street, on the site formerly occupied by Schoolplaats, Pretoria's first Black township.

In the early 1960s the first steps towards abandoning the trolleybus system were taken. In 1963 all operations ceased in the evenings, Saturday afternoons and Sundays. The second stage in the decline of the system occurred in June 1965, when Van der Walt Street became a one-way street. Rather than erect wiring in Prinsloo Street for inward journeys, the service to Wonderboom South was given over to motor buses. This made a number of trolleybuses redundant. On 24 February 1968 the trolleybus service to Parktown ceased, triggered by the widening of Eloff's Cutting, the point at which Paul Kruger Street crosses the Daspoortant. In February 1971 the Colbyn route was given over to motor buses. In October 1971 the remainder of Pretoria's trolleybus system ceased to operate.

## APPENDIX 2: INFORMATION SOURCES USED IN THIS REPORT

### Databases

Heritage Sites Database, Pretoria.

### Literature

ANDREWS, TE, & PLOEGER, J, 1988, *Street and Place Names of Old Pretoria*. Pretoria: JL van Schaik.

ANDREWS, TE, 1987, *God's Acre*. Private publication, Pretoria.

BERGH, JS (ed), 1999, *Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies*. Pretoria: JL van Schaik.

BOLSMANN, E, 2001, *Pretoria Artists' impressions 1857-2001*. Pretoria: Protea Book House.

CAMERON, T (ed), 1986, *Nuwe geskiedenis van Suid-Afrika in woord en beeld*. Cape Town: Human and Rousseau.

CAPITOL CONSORTIUM, 1999, *Urban Conservation Goals, Objectives and Strategies: Pretoria Inner City Integrated Spatial Development Framework*

*City of Tshwane Inner City Development and Regeneration Strategy* (2006)

*City of Tshwane Integrated Transport Plan 2006-2011* (2006)

*City of Tshwane policy and guidelines on the design quality of hard urban spaces and landscape elements* (April 2005)

*City of Tshwane Regional Spatial Development Framework: Central Western Region* (2008)

*City of Tshwane Spatial Development Strategy 2010 and Beyond* (February 2007)

ICOMOS Australia. 1999. *The Australia ICOMOS Burra Charter for the conservation of places of cultural significance*.

*Lochhead's Guide, Handbook and Directory of Pretoria, 1913*. Facsimile reprint by the State Library, 1980.

*Longland's Pretoria Directory for 1899*. Facsimile reprint by the State Library, 1979.

NAMELA CONSULTING, 2009, *Socio-Economic Analysis in Support of the Basic Assessment for Line 1 of the Tshwane Bus Rapid Transit (BRT) System*. Draft report submitted to Gudani Consulting.

*National Heritage Resources Act* (Act 25 of 1999)

*Re Kgabisa Tshwane* (former Tshwane Inner City Project) (2005)

*Standard Encyclopedia of Southern Africa*.

STARK, F (ed), 1955, *Pretoria One Hundred Years*. Johannesburg: Municipal Public Relations Bureau.

TAYOB, AZIZ, et al, 2002, *Marabastad Integrated Urban Design Framework*

VAN DER WAAL, G-M (ed), 1998-2000, *Pretoria Historical Dictionary*. Unpublished progress report submitted to the City Council of Pretoria.

### Maps

Revised conceptual plans 1-8, plan of Church Square, sections (Arcus Gibb)

### **Aerial photos**

Google Earth 2009 images of the study area  
Job D47-48 of 1947-1948

### **Photographs**

Tshwane Info Collection  
RC de Jong  
A Paterson

### **Websites**

[www.reavaya.org.za](http://www.reavaya.org.za)

[www.rekgabisatshwane.gov.za](http://www.rekgabisatshwane.gov.za)

## APPENDIX 3: GLOSSARY OF TERMS

### Cultural significance (Burra Charter)

Aesthetic, historic, scientific, social or spiritual importance, meaning or noteworthiness for past, present or future generations

Cultural significance is embodied in the place itself (intrinsic significance), its fabric, setting, use, associations, meanings, records, related places and related objects.

Cultural significance is assessed in terms of the following criteria, some of which are embodied in the NHRA:

- Historic value: Material or intangible evidence resulting from changing social, political and environmental circumstances or conditions
- Rarity: Unique or unusual features also possess rarity value, apart from their age. Section 34 of the NHRA provided general protection for all structures older than 60 years. This does not imply that recently erected structures cannot possess rarity, or for that matter cultural value.
- Scientific value: Indicates research potential (the capacity to yield more knowledge)
- Typical: Indicates that the feature is a good example of a certain class or type of heritage resource
- Aesthetic: Other than artistic or architectural expression, aesthetic value can also be evident in craftsmanship, technique, visual cohesion (harmony), visual evidence of permanence and stability, setting etc.
- Technological: Indicates value in terms of a technological achievement
- Personal/Community: Indicates value in terms of association with a certain person, community, organisation or cultural group
- Landmark: A sense of place or belonging involves the physical and visual relationship between a feature and its environment.
- Condition (material integrity): Indicates substantial evidence of authentic fabric with minor degree of lost or obliterated fabric; also refers to a structure's restoration potential
- Sustainability: The potential for lasting economic viability (use) and the perpetuation of the original use or part thereof.

### Heritage resources/features (NHRA)

Any place or object of cultural significance, including:

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including—
  - (i) ancestral graves;
  - (ii) royal graves and graves of traditional leaders;
  - (iii) graves of victims of conflict;
  - (iv) graves of individuals designated by the Minister by notice in the *Gazette*;
  - (v) historical graves and cemeteries; and
  - (vi) other human remains, which are not covered in terms of the Human Tissue Act, 1983 Act No. 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including—

- (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
- (ii) objects to which oral traditions are attached or which are associated with living heritage;
- (iii) ethnographic art and objects;
- (iv) military objects;



(v) objects of decorative or fine art;  
 (vi) objects of scientific or technological interest; and  
 (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

#### Heritage significance (NHRA)

(a) its importance in the community, or pattern of South Africa's history;  
 (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;  
 (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;  
 (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;  
 (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;  
 (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;  
 (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;  
 (h) 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  
 (i) sites of significance relating to the history of slavery in South Africa.

#### Historic period

Since the arrival of the white settlers - c. AD 1840 in this part of the country

#### Impact

A description of the effect of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space

#### Impact assessment

Issues that cannot be resolved during screening (Level 1) and scoping (Level 2) and thus require further investigation

#### Intangible heritage

Defined in terms of the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003) as:

- Oral traditions and expressions, including language as a vehicle of the intangible cultural heritage;
- Performing arts;
- Social practices, rituals and festive events;
- Knowledge and practices concerning nature and the universe;
- Traditional craftsmanship.

The "intangible cultural heritage" means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.

Visual and social impact assessments as part of an HIA are directly associated with intangible cultural heritage.

**Iron Age**

Early Iron Age (EIA)	AD 200 - AD 1000
Late Iron Age (LIA)	AD 1000 - AD 1830

**Issue**

A question that asks what the impact of the proposed development will be on some element of the environment

**Maintenance**

Keeping something in good health or repair

**Management actions**

Actions that enhance benefits associated with a proposed development or avoid, mitigate, restore, rehabilitate or compensate for the negative impacts

**Preservation**

Conservation activities that consolidate and maintain the existing form, material and integrity of a cultural resource

**Reconstruction**

Re-erecting a structure on its original site using original components

**Rehabilitation**

Re-using an original building or structure for its historic purpose or placing it in a new use that requires minimal change to the building or structure characteristics and its site and environment.

**Restoration**

Returning the existing fabric of a place to a known earlier state by removing additions or by reassembling existing components

**SAHRA** - South African Heritage Resources Agency

**Stone Age**

Early Stone Age (ESA)	2 000 000 - 150 000 Before Present
Middle Stone Age (MSA)	150 000 - 30 000 BP
Late Stone Age (LSA)	30 000 - until c. AD 200

**Value**

Worth, conservation utility, desirability to conserve etc in terms of physical condition, level of significance (importance), economy (feasibility), possible new uses and associations/comparisons with similar features elsewhere

## APPENDIX 4: STANDARDIZED SET OF CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON INDIVIDUAL HERITAGE FEATURES

### Category of heritage significance of feature

One or more of the categories (a) to (i) in terms of Section 3(3) of the NHRA

From a heritage perspective there should be a distinction between significance embedded in the physical fabric, or in associations with events or persons, or in the experience of the place.

### Conservation value of heritage feature (individual)

Worth, conservation utility, and desirability to conserve: low, medium, high

### Duration of the impact

- Short term 1-5 years  
Factor 2
- Medium term 5-10 years  
Factor 3
- Long term Risk will only cease after the operational life of the activity, either because of natural processes or by human intervention  
Factor 4
- Permanent (irreversible) Mitigation, either by natural process or by human intervention, will not occur in such a way that the risk can be considered transient  
Factor 5

### Impact significance rating

This is calculated by multiplying the **severity rating** with the **probability rating**.

The impact significance factor should influence the development project as described below.

LEVEL	RATING	POSITIVE RISK CONSEQUENCE	NEGATIVE RISK CONSEQUENCE
Low	4-6	No influence on proposed development	No influence on proposed development
Medium	7-12	Proposed development should be approved	Proposed development should be mitigated or mitigation measures should be formulated before it can be approved
High	13-18	Points towards a decision to approve the development and with enhancement in final design	Points towards a decision to terminate development proposal or to formulate and perform mitigation to reduce significance level to at least low
Very high	19-25 and above	The development should be approved	If mitigation cannot be effectively implemented the development proposal should be terminated

### Intensity of impact

- Low Functions and processes of natural or human origin are not affected and only minor risks may occur  
Factor 1
- Medium Natural or heritage environment is affected but functions and processes of natural or human origin can continue through often in an altered manner

Factor 2

- High

Natural or heritage environment is affected to the extent that functions and processes of natural or human origin will temporarily or permanently cease  
Factor 4

**Nature of the impact**

Impact of the activity (development) on a heritage resource with indications about its positive and/or negative effects. The statement of significance informs it. The nature of the impact may be historical, aesthetic, social, linguistic, architectural, intrinsic, associational, contextual (visual or non-visual) or a combination of the above.

**Probability of the impact**

Probability describes the likelihood of the risk actually occurring and is rated as follows:

- Improbable Low possibility of risk to occur either because of design or historic experience  
Rating 2
- Probable Prominent possibility that risk will occur  
Rating 3
- Highly probable Most likely that risk will occur  
Rating 4
- Definite Risk will occur regardless of any prevention measures  
Rating 5

**Recommended management action**

For each impact, the recommended practically attainable mitigation actions that would result in a measurable reduction of the impact must be identified. This is expressed according to the following:

1. Avoidance: Preserve feature at all costs and restore/rehabilitate/enhance it together with interpretation
2. Mitigation: Preserve feature if possible, otherwise salvage excavation and/or documentation/recording before demolition/alteration, followed by preserving its memory in design and scale of development
3. None: No further action required

**Severity rating**

The severity rating is calculated from the multiplying the **intensity factor** with the **duration factor**, e.g. 2 x 3 = 6 (factor).

RATING	FACTOR
Low severity: rating = 2	Calculated values 2 to 4
Medium severity: rating = 3	Calculated values 5 to 8
High severity: rating = 4	Calculated values 9 to 12
Very high severity: rating = 5	Calculated values 13 to 16 and more
Severity factors below 3 indicate no risk	