DRAFT BASIC ASSESSMENT REPORT

FOR

PROPOSED HOSPITAL EXTENSION - DIE WILGERS EXT 83

REF: GAUT 002/18-19/E2268

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DEFINITIONS

Activity (Development)	An action either planned or existing that may result in environmental impacts through pollution or resource use. For the purpose of this report, the terms 'activity' and 'development' are freely interchanged.
Alternatives	Different means of meeting the general purpose and requirements of the activity, which may include site or location alternatives; alternatives to the type of activity being undertaken; the design or layout of the activity; the technology to be used in the activity and the operational aspects of the activity.
Applicant	The project proponent or developer responsible for submitting an environmental application to the relevant environmental authority for environmental authorisation.
Biodiversity	The diversity of animals, plants and other organisms found within and between ecosystems, habitats, and the ecological complexes.
Construction	The building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.
Cumulative impact	The impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
Decommissioning	The demolition of a building, facility, structure or infrastructure.
Direct Impact	Impacts that are caused directly by the activity and generally occur at the same time and at the same place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally quantifiable.
Ecosystem	A dynamic system of plant, animal (including humans) and micro-organism communities and their non-living physical environment interacting as a functional unit. The basic structural unit of the biosphere, ecosystems are characterised by interdependent interaction between the component species and their physical surroundings. Each ecosystem occupies a space in which macro-scale conditions and interactions are relatively homogenous
Environment	In terms of the National Environmental Management Act (NEMA) (No 107 of 1998)(as amended), "Environment" means the surroundings within which humans exist and that are made up of: a) the land, water and atmosphere of the earth; b) micro-organisms, plants and animal life; c) any part or combination of (i) of (ii) and the interrelationships among and between them; and d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.
Environmental Assessment	The generic term for all forms of environmental assessment for projects, plans, programmes or policies and includes methodologies or tools such as environmental impact assessments, strategic environmental assessments and risk assessments.
Environmental Authorisation	An authorisation issued by the competent authority in respect of a listed activity, or an activity which takes place within a sensitive environment.]
Environmental Assessment Practitioner (EAP)	The individual responsible for planning, management and coordination of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instrument introduced through the EIA Regulations.
Environmental Management	Ensuring that environmental concerns are included in all stages of development, so that development is sustainable and does not exceed the carrying capacity of the environment.
Environmental Management	A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative

Programme (EMPr)	environmental impacts are implemented during the life cycle of a project. This EMPr focuses on the construction phase, operation (maintenance) phase and decommissioning phase of the proposed project.
Environmental Impact	Change to the environment (biophysical, social and/ or economic), whether adverse or beneficial, wholly or partially, resulting from an organisation's activities, products or services.
Environmental Issue	A concern raised by a stakeholder, interested or affected parties about an existing or perceived environmental impact of an activity.
Fatal Flaw	Issue or conflict (real or perceived) that could result in developments being rejected or stopped. In the context of an environmental impact assessment a fatal flaw can be termed as an environmental issue that cannot be mitigated by any means
General Waste	Household waste, construction rubble, garden waste and certain dry industrial and commercial waste, which does not pose an immediate threat to man or the environment.
Groundwater	Water in the ground that is in the zone of saturation from which wells, springs, and groundwater run-off are supplied.
Hazardous Waste	Waste that may cause ill health or increase mortality in humans, flora and fauna.
Hydrology	The science encompassing the behaviour of water as it occurs in the atmosphere, on the surface of the ground, and underground.
Important areas	Sites that are important for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Indirect Impacts	Indirect or induced changes that may occur as a result of the activity. These types if impacts include all of the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
Interested and Affected Party (I&AP)	Any person, group of persons or organisation interested in or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.
Irreplaceable areas	Sites, which are essential in meeting targets set for the conservation of biodiversity in Gauteng; (Gauteng C-Plan Version 3)
Mitigate	The implementation of practical measures designed to avoid, reduce or remedy adverse impacts or enhance beneficial impacts of an action.
No-Go Option	In this instance the proposed activity would not take place, and the resulting environmental effects from taking no action are compared with the effects of permitting the proposed activity to go forward.
Public Participation Process	A process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters.
Rehabilitation	A measure aimed at reinstating an ecosystem to its original function and state (or as close as possible to its original function and state) following activities that have disrupted those functions.
Sensitive Environments	Any environment identified as being sensitive to the impacts of the development.
Significance	Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. magnitude, intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgements and science-based criteria (i.e. biophysical, social and economic).
Stakeholder Engagement	The process of engagement between stakeholders (the proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities.
Sustainable Development	Development which meets the needs of current generations without hindering future generations from meeting their own needs.
Undeveloped	means that no facilities, structures or infrastructure have been effected upon the land or property during the preceding 10 years
Urban areas	means areas situated within the urban edge (as defined or adopted by the

	competent authority), or in instances where no urban edge or boundary has been defined of adopted, it refers to areas situated within the edge of built-up areas
Vacant	Means not occupied for the purpose of its lawful land use during the preceding ten year period
Watercourse	Means (a) a river or spring; (b) a natural depression in which water flows regularly or intermittently; (c) a wetland, lake or dam into which, or from which, water flows; and (d) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and bank
Wetland	Means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil

ABBREVIATIONS

BID	Background Information Document
BSc	Bachelor of Science
CC	Close Corporation
C- Plan	Gauteng Conservation Plan Version 3.3
DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation
GDARD	Gauteng Department of Agriculture and Rural Development
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EISD	Environment and Infrastructure Services Department
EMPr	Environmental Management Programme
Ha	Hectares
HIA	Heritage Impact Assessment
I&APs	Interested and Affected Parties
IDP's	Integrated Development Plans
Km	Kilometers
LDO	Land Development Objectives
m	Meters
NEMA	National Environmental Management Act
NDP	The National Development Plan
NGO's	Non-Governmental Organisations
OHSA	Occupational Health and Safety Act
PHRA-G	Provincial Heritage Resources Authority - Gauteng
(Pty) Ltd	Proprietary Limited
RDL	Red Data List
RDP	Reconstruction and Development Programme
SAHRA	South African Heritage Resources Agency
SCC	Species of Conservation Concern

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.

2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.

3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**

4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**

5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.

6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.

8. An incomplete report may lead to an application for environmental authorisation being refused.

9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**

10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.

11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.

12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.

13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the of the Environmental Affairs Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the of the Environmental Affairs Branch
Ground floor Diamond Building
11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

N/A

Is a closure plan applicable for this application and has it been included in this report? **NO**

if not, state reasons for not including the closure plan.

The Activity applied for does not relate to the decommissioning or closure of a facility and it is not envisaged that the development will be decommissioned.

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity? **YES**

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person? **YES**

If no, state reasons for not attaching the list.

Please refer to Appendix I

Have State Departments including the competent authority commented? **NO**

If no, why?

Comment from the State Departments and the competent authority on the Draft Report is awaited.

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

Proposed Hospital Extension – Die Wilgers Extension 83

Select the appropriate box

The application is for an upgrade of an existing development		The application is for a new development	X	Other, specify	

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES	NO

If yes, describe the legislation and the Competent Authority administering such legislation

An application was submitted to the City of Tshwane Metropolitan Municipality in terms of Section 16(4) of the City of Tshwane Land Use Management By-Law, 2016.

If yes, have you applied for the authorisation(s)?	**YES**	NO
If yes, have you received approval(s)? (attach in appropriate appendix)	YES	**NO**

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations:

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	**National & Provincial**	**27 November 1998**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017. **<u>Activities listed under GN R985:</u>** **<u>Activity 4</u> - The development of a road wider than 4m with a reserve less than 13,5 metres. c. Gauteng: iv. Sites identified as Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or bioregional plans; v. Sites identified within threatened ecosystems listed in terms of the National Environmental Management Act: Biodiversity Act (Act No. 10 of 2004).** **<u>Activity 12</u> - The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management**	**National Department of Environmental Affairs and GDARD**	**2014**

plan. c. Gauteng: i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within Critical Biodiversity Areas or Ecological Support Areas identified in the Gauteng Conservation Plan or bioregional plans; or iii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.		
National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	**National Department of Environmental Affairs and GDARD**	**2004**
National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA)	**National Department of Environmental Affairs and GDARD**	**2008**
National Water Act (Act No. 36 of 1998)	**Department of Water and Sanitation**	**1998**
National Heritage Resources Act (Act No. 25 of 1999)	**SAHRA**	**1999**
Occupational Health & Safety Act (Act No. 85 of 1993) (OHSA) as amended in July 2001, Including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**National Government**	**2001**
Conservation of Agricultural Resources Act (Act No. 43 of 1983)	**Department of Agriculture Forestry and Fisheries**	**1983**
Reconstruction and Development Programme	**National & Provincial**	**1995**
National Development Plan	**National Planning Commission**	**2011**
Gauteng Conservation Plan (C-Plan Version 3.3)	**GDARD**	**2011**
Gauteng Provincial Environmental Management Framework	**GDARD**	**2015**
Gauteng Spatial Development Framework	**Provincial**	**2011**
The Gauteng Department of Agriculture and Rural Development's (GDARD) Requirements for Biodiversity Assessments (Version 3)	**Gauteng Department of Agriculture and Rural Development**	**March 2014**
Gauteng Spatial Development Framework	**Provincial**	**2011**
Gauteng Planning and Development Act (Act	**Gauteng**	**2003**

No. 3 of 2003)	**Provincial Legislature**	
City of Tshwane: Draft 2017/21 Integrated Development Plan	**City of Tshwane Metropolitan Municipality**	**2017**
City of Tshwane: Metropolitan Spatial Development Framework (MSDF)	**City of Tshwane Metropolitan Municipality**	**June 2012**
City of Tshwane: Regional Spatial Development Framework (RSDF): Region 7	**City of Tshwane Metropolitan Municipality**	**2017**
City of Tshwane By-Laws	**City of Tshwane Metropolitan Municipality**	**-**

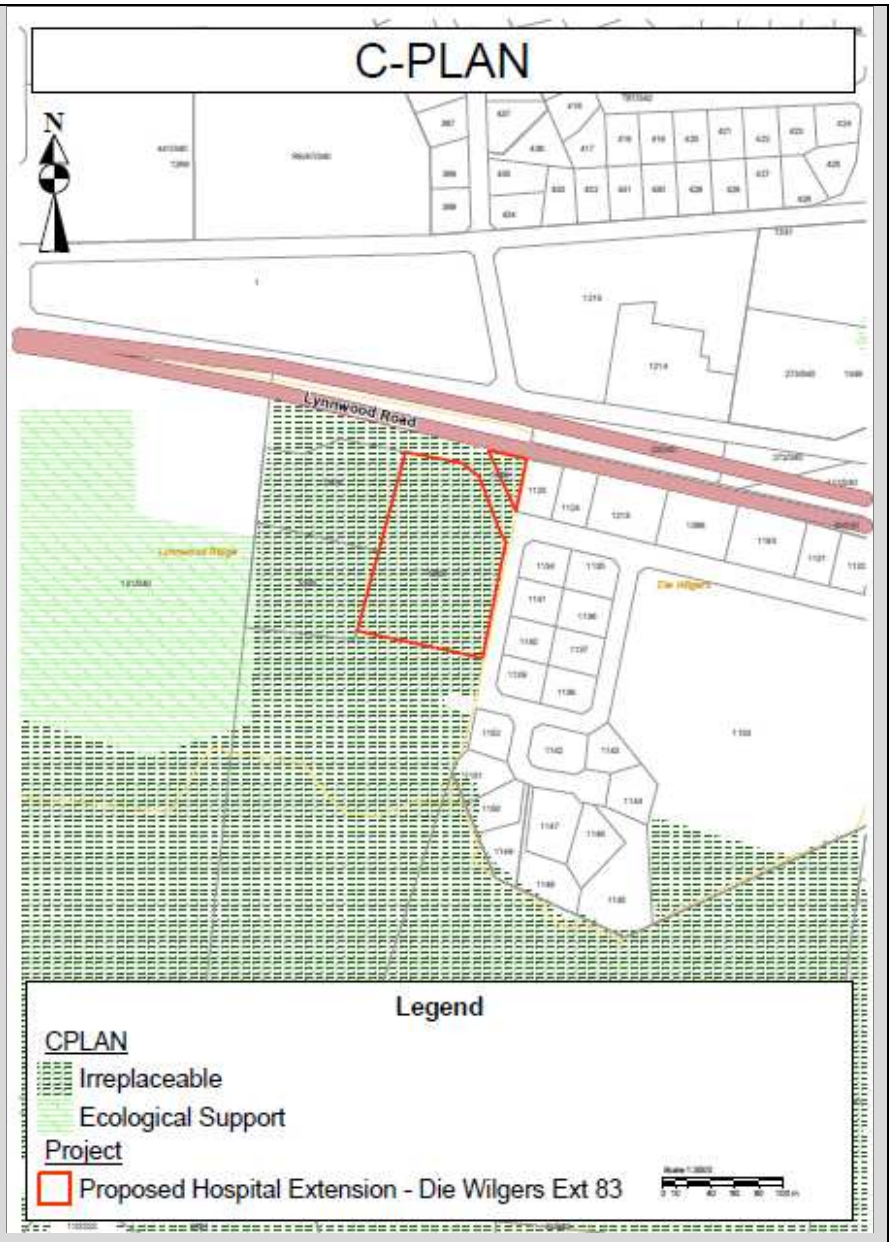
Description of compliance with the relevant legislation, policy or guideline:

Legislation, policy of guideline	Description of compliance
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	**NEMA establishes the basis for environmental governance and sets out the principles for decision-making on matters affecting the environment. The principles of the Act are provided in Section 2 and it is the responsibility of all organs of state to take these principles into account when making decisions that could affect the environment.** **The proposed development does not occur in contrast with the principles and main objective of the Act.**
NEMA EIA Regulations, 2014 (Government Notice Nos. GN R982, R983, R984, R985) as amended 2017.	**The EIA process, applicable to this application, is determined by the Environmental Impact Regulations published in Government Notice R982 in Government Gazette No 38282 of 4 December 2014 promulgated under Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and amended in 2017.** **The EIA regulations inter alia describe the procedure for EIA and provide a description of activities that would require authorisation through either 1) a Basic Assessment (in terms of Government Notices R983 and R985 of 2014) or 2) Scoping and Environmental Impact Assessment (in terms of Government Notice R984 of 2014).** **An application is submitted in terms of Chapter 4 of the EIA Regulations as the proposed development triggers activities that require a Basic Assessment.**
National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	**The objectives of this Act are:** **Within the framework of the National Environmental Management Act, to provide for –** **(i) the management and conservation of biological diversity within the Republic and of the components of such biological diversity;**

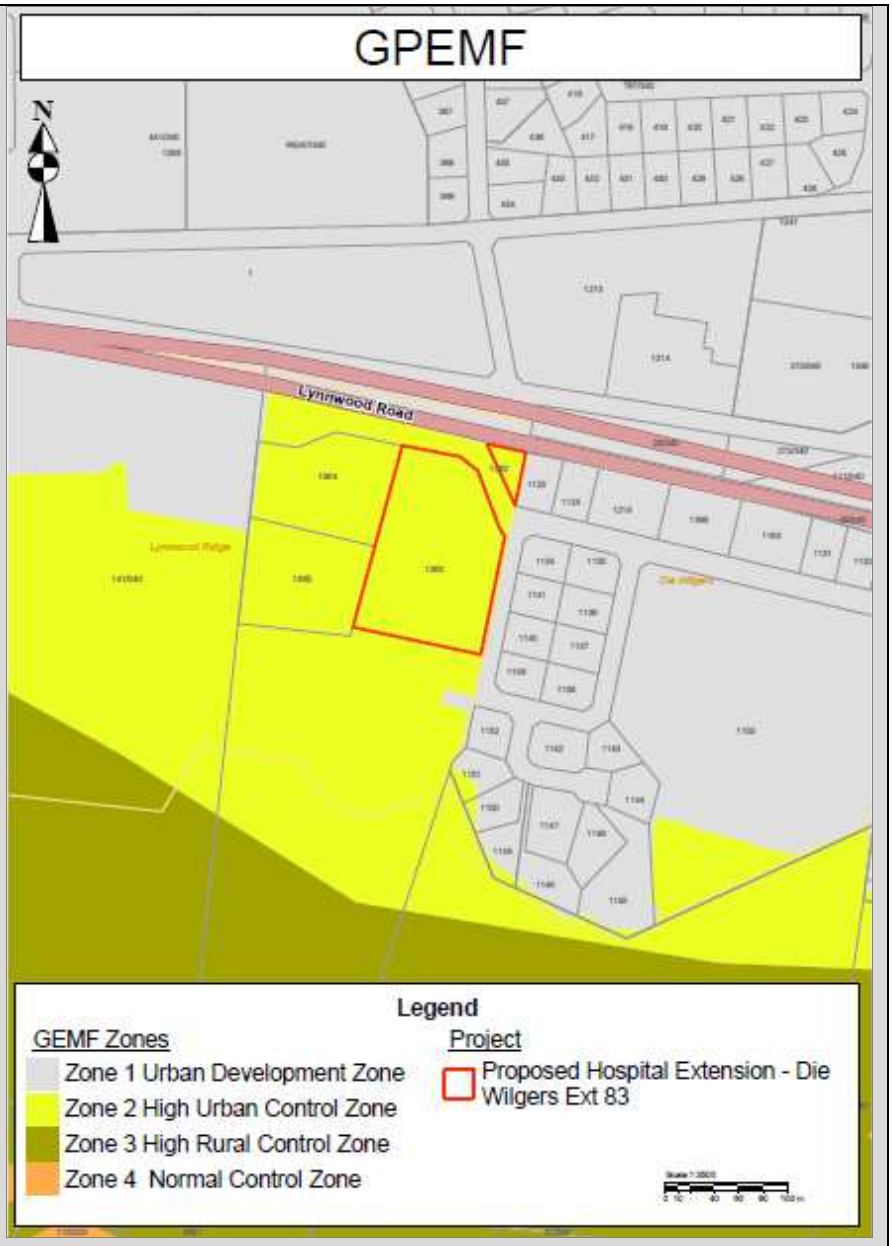
	(ii) the use of indigenous biological resources in a sustainable manner and **(ii) the fair and equitable sharing among stakeholders of benefits arising from bioprospecting involving indigenous biological resources.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA)	**The objective of this act is to protect health, well-being, and the environment by providing measures for-** • **Minimising consumption of natural resources;** • **Avoiding and minimising the generation of waste;** • **Reducing, reusing, recycling and recovering waste;** • **Treating and safely disposing of waste as last resort;** • **Preventing pollution and ecological degradation;** • **Securing ecologically sustainable development while promoting justifiable economic and social development.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Water Act (Act No. 36 of 1998)	**The purpose of this Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that takes into account amongst other factors:** • **Promoting equitable access to water** • **Redressing the results of past racial and gender discrimination;** • **Promoting the efficient, sustainable and beneficial use of water in the public interest;** • **Facilitating social and economic development;** • **Providing for growing demand for water;** • **Protecting aquatic and associated ecosystems and their biological diversity;** • **Reducing and preventing pollution and degradation of water resources;** • **Meeting international obligations** • **Promoting dam safety;** • **Managing floods and drought.** **The proposed development does not occur in contrast with the objectives of the Act.**
National Heritage Resources Act (Act No. 25 of 1999)	**Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and, as they are valuable, finite, non-renewable and irreplaceable, they must be carefully managed to ensure their survival.** **A Heritage Impact Assessment is included under Appendix G.**
Occupational Health & Safety Act (Act No. 85 of 1993) (OHSA) as amended in July 2001, Including	**The main objective of the Act is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of in connection with the activities of persons at work; to establish an advisory**

Major Hazard Installation Regulation, GNR 692, 30 July 2001.	**council for occupational health and safety; and to provide for matters connected herewith.** **The proposed development site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA) and the National Building Regulations.**
Conservation of Agricultural Resources Act (Act No. 43 of 1983)	**The proposed development will ensure that no agricultural resources are impacted upon.**
Reconstruction and Development Programme	**One of the six principles of the Reconstruction and Development programme is meeting basic needs and building the infrastructure.** **The RDP integrates growth, development, reconstruction, redistribution and reconciliation into a unified programme. The key link is an infrastructural programme that will provide access to modern and effective services such as electricity, water, telecommunications, transport, health, education and training for all our people.** **The proposed development does not contrast with one of the six principles of the RDP.**
National Development Plan	**The National Development Plan (NDP) offers a long-term perspective. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal.** **As a long-term strategic plan, it serves four broad objectives:** • **Providing overarching goals for what the nation want to achieve by 2030.** • **Building consensus on the key obstacles to us achieving these goals and what needs to be done to overcome those obstacles.** • **Providing a shared long-term strategic framework within which more detailed planning can take place in order to advance the long-term goals set out in the NDP.** • **Creating a basis for making choices about how best to use limited resources.** **The Plan aims to ensure that all South Africans attain a decent standard of living through the elimination of poverty and reduction of inequality. The core elements of a decent standard of living identified in the Plan are:** • **Housing, water, electricity and sanitation** • **Safe and reliable public transport** • **Quality education and skills development** • **Safety and security** • **Quality health care** • **Social protection** • **Employment** • **Recreation and leisure** • **Clean environment**

	• **Adequate nutrition** **The proposed development does not occur in contrast with the NDP.**
Gauteng Conservation Plan (C-Plan Version 3.3)	**GDARD's (Gauteng Department of Agriculture and Rural Development) C-Plan (Gauteng Conservation Plan Version 3.3) was used to determine the sensitivities of the site and is provided in the figure below.** **Conservation planning was started in Gauteng in the year 2000 and the aim was to revise the C-Plan at least every 5 years. C-Plan Version 1 was produced in 2001 and was followed by version 2 in 2005. Version 2 was refined in 2007 and was named Version 2.1. The small size of the province made it feasible to conduct an extensive biodiversity survey, named BGAP, which aimed to provide the information on spatial occurrence of biodiversity necessary for rigorous conservation planning. C-Plan 3 represents priority areas for biodiversity conservation in the Gauteng province.** **An extract of the sensitivities that could affect the site in terms of the C-Plan is provided below for ease of reference.**

	 **Figure 1: C-Plan** **According to GDARD's conservation plan (C-Plan version 3.3), the entire study area is situated within a CBA. The CBA is considered an irreplaceable area, for red listed plant and mammal habitat and for primary vegetation.**
Gauteng Provincial Environmental Management Framework	**The guiding objectives that emerged during the course of the development of the GEMF are:** • **To facilitate the optimal use of current industrial, mining land and other suitable derelict land for the development of non-polluting industrial and large commercial developments.** • **To protect Critical Biodiversity Areas (CBAs as defined in C-Plan 3.3) within urban and rural environments.** • **To ensure the proper integration of Ecological Support Areas (ESAs as defined in C-Plan 3.3) into rural land use**

	change and development. • **To use ESAs as defined in municipal bioregional plans in spatial planning of urban open space corridors and links within urban areas.** • **To focus on the sustainability of development through the implementation of initiatives such as:** ➢ **Energy efficiency programmes, plans and designs;** ➢ **Waste minimisation, reuse and recycling;** ➢ **Green infrastructure in urban areas; and** ➢ **Sustainable Drainage Systems (SuDS).** **The Environmental Management Zones (EMZ) were derived from the desired state, the environmental sensitivity as well the unique control areas as identified in sections 1, 2 and 3. The EMZs were also presented to the Gauteng Planning Forum 6 where it was generally accepted as a suitable contribution to facilitate appropriate development in Gauteng. The EMZs also took the Gauteng Growth and Management Perspective, 2014, into account and is therefore aligned to the general development policy for Gauteng.** **Five EMZs were identified and overlaying those a further six Special Management Areas were identified where specific planning and policy measures are necessary to achieve the development objective of those areas.** **According to the GPEMF, the site is identified as the following Environmental Management Zone:** ➢ **Zone 2: High Urban Control Zone** **An extract of the zones that could affect the site in terms of the GPEMF is provided below for ease of reference.**

	 **Figure 2: GPEMF**
Gauteng Spatial Development Framework	**The GSDF are in pursuit of planning for shared, equitable, sustainable and inclusive growth and development in the country. The Gauteng Provincial Government (GPG) seeks to:** • **provide a clear future provincial spatial structure that is robust to accommodate growth and sustainability;** • **specify a clear set of spatial objectives for municipalities to achieve in order to ensure realisation of the future provincial spatial structure;** • **propose a set of plans that municipalities have to prepare in their pursuit of these objectives;** • **provide a common language and set of shared planning constructs for municipalities to use in their planning processes and plans; and** • **enable and direct growth.**

	The proposed development does not occur in contrast with the objectives of the GPG.
The Gauteng Department of Agriculture and Rural Development's (GDARD) Requirements for Biodiversity Assessments (Version 3)	**The document provides guidelines for the minimum requirements for all biodiversity assessments when development is proposed.** **A Terrestrial Ecological Habitat Integrity Investigation was conducted and is included under Appendix G. Based on the findings of the assessment, it is the opinion of the ecologists that from an ecological perspective, the proposed project be considered favorably. However, all essential mitigation measures and recommendations presented in the report should be adhered to as to ensure that the impact on the receiving environment is minimized.**
City of Tshwane: Draft 2017/21 Integrated Development Plan	**According to Section 25 of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000), each municipal council must, after the start of its elected term, adopt a single, inclusive and strategic plan (Integrated Development Plan or IDP) for the development of the municipality which links, integrates and coordinates plans and takes into account proposals for the development of the municipality and which aligns the resources and capacity of the municipality with the implementation of the said plan.** **An Integrated Development Plan is a super plan for an area that gives an overall framework for development. It aims to co-ordinate the work of local and other spheres of government in a coherent plan to improve the quality of life for all the people living in an area. It takes into account the existing conditions and problems and resources available for development. It looks at economic and social development for the area as a whole. It is used by municipalities as a tool to plan short and long term future development.** **The 2017/21 IDP is the first IDP for the 2017–2021 term of office. It sets the agenda for the term of office, which will focus on the following three strategic framers: stabilisation, revitalisation and delivery.** **The following are the strategic pillars that will guide the development in the term of office:** • **City that facilitates economic growth and job creation** • **City that cares for residents and promotes inclusivity** • **City that delivers excellent services and protects the environment** • **City that keeps residents safe** • **City that is open, honest and responsive** **The proposed development does not occur in contrast with the IDP.**
City of Tshwane: Metropolitan Spatial Development	**Every great city has a vision. In order to realise that vision, a strategy that responds to the various elements of that vision is required. The vision of the CoT is to become the African**

Framework (MSDF)	**Capital City of Excellence.** **The purpose of a spatial framework for the city is to provide a spatial representation of the City Vision and to be a tool to integrate all aspects of spatial (physical) planning such as land use planning; planning of a pedestrian, vehicular and other movement patters; planning regarding buildings and built-up areas; planning of open space systems; planning of roads and other service infrastructure; as well as to guide all decision-making processes regarding spatial (physical) development.** **The MSDF aims to address the following towards the achievement of the City vision:** • **Addressing social need** • **Restructuring of a spatially inefficient City** • **Promotion of sustainable use of land resources** • **Strategic direction around infrastructure provision** • **Creating opportunities for both rural and urban areas** • **Guiding developers and investors as to appropriate investment localities** • **Rural management programmes to improve livelihoods and stimulate employment.** **The proposed development does not occur in contrast with the MSDF.**
City of Tshwane: Regional Spatial Development Framework (RSDF): Region 6	**The City of Tshwane (COT) embarked on processes to compile seven Regional Spatial Development Frameworks (RSDF's) for the administrative planning regions of the metropolitan area in 2011.** **The RSDF's needed to be inter-linked and also support the Tshwane Metropolitan Spatial Development Framework (MSDF) of 2017 as well as the Tshwane City Development Strategy (CDS), Tshwane Densification and Compaction Strategy (2005) and Tshwane Open Space Framework.** **The RSDF for Region 6 was therefore prepared within the context of the MSDF, the City Development Strategy and in support of the other RSDF's.** **A Spatial Development Framework must:** • **Indicate where public and private development infrastructure investment should take place.** • **Indicate desired development and land use patterns for different areas.** • **Indicate where development of particular land uses should be discouraged or restricted.** • **Provide broad indication of the areas where priority spending should take place.** • **Shall provide guidelines for development and land use decision-making by the municipality.** **The proposed development does not occur in contrast with**

	the RSDF.
City of Tshwane By-Laws	**The proposed development will be constructed to comply with the City of Tshwane By-Laws**

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Please describe the process followed to reach (decide on) the list of alternatives below

Lokisa was provided with 2 different options for the layout of the proposed Hospital Extension.

Provide a description of the alternatives considered

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	**Description**
1	Proposal	**The project entails the proposed expansion of the existing Life Wilgers Hospital. The project site measures approximately 1.7ha in extent.** **The property is known as Portion 161 of the farm The Willows 340 JR. A previous township was approved over the portion of land and the General Plan (Die Wilgers Ext 83) was subsequently approved. However, the rights that were obtained were not suitable for the intended use and the township process was also not finalised.** **The site is to be developed in two portions being Site A (to be known as Erf 1374 of Die Wilgers x 83) and Site B (to be known as Erf 1375 of Die Wilgers x 83).** **Site A /Erf 1374 is to be developed with a Hospital and related and subservient uses, medical consulting rooms, parking, helipad, a cafeteria, a florist, a kiosk and a dispensing chemist with a height of 3 storeys.** **Site B /Erf 1375 is to be used for parking purposes.** **The south western portion of Erf 1374 has been excluded from the development and a servitude is to be registered for the Natural**

Conservation: Juliana's Golden Mole.

The site is situated approximately 4.79km east of Lynnwood, 2.11km north of Faerie Glen, 1.94km west of Equestria and directly south of the M6 Road, also known as Lynnwood Road.

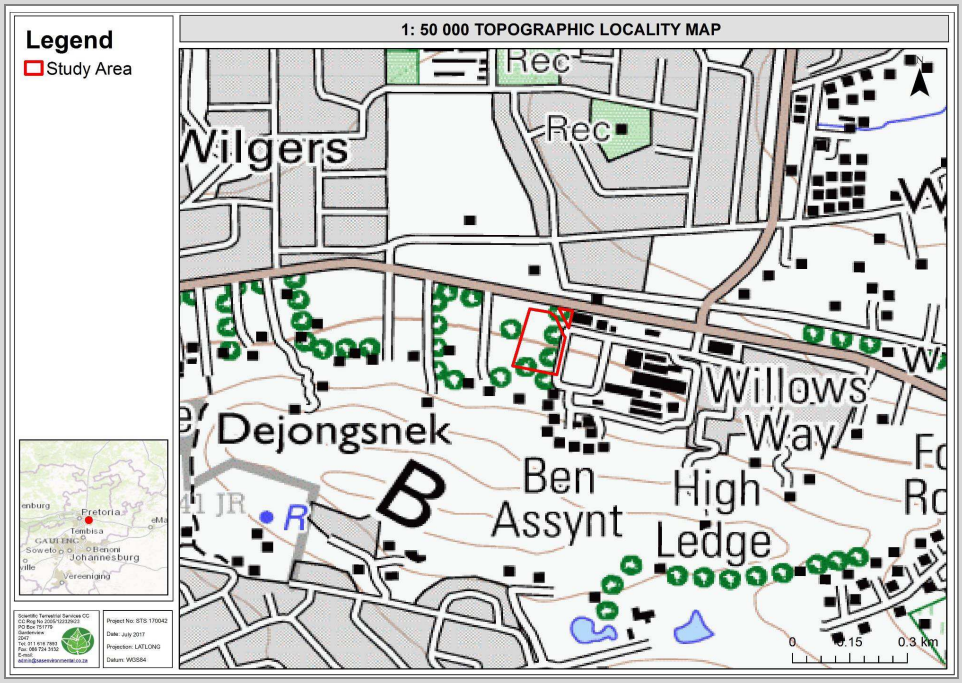


Figure 3: Locality of the proposed project

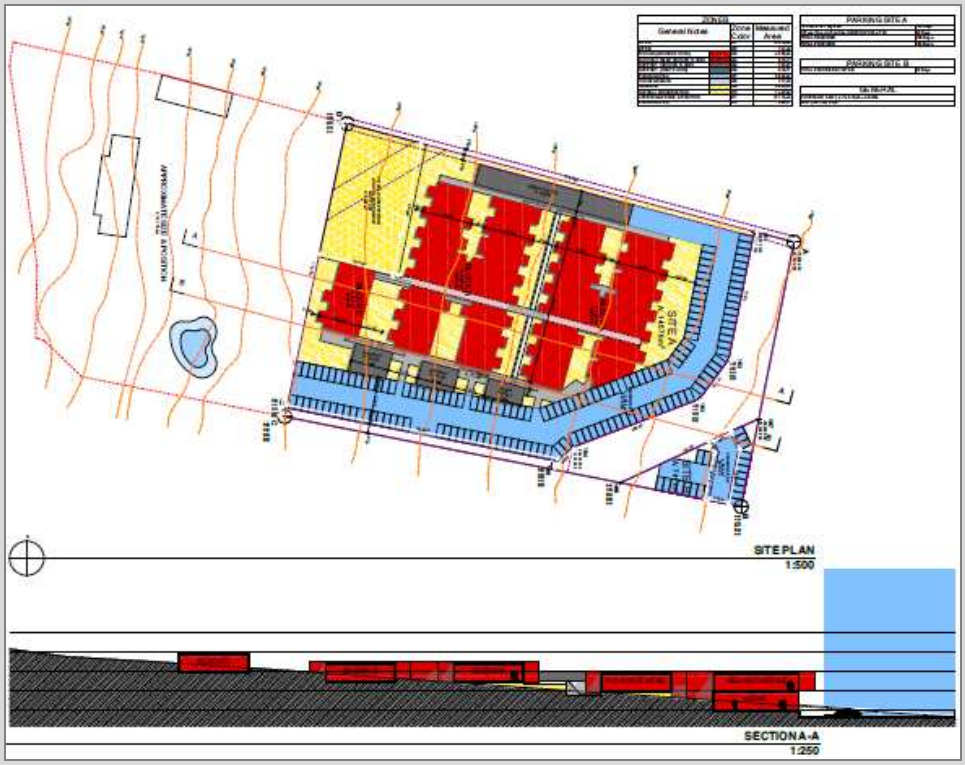


Figure 4: Site Plan

2	Alternative 1	**Alternative 1 will be similar to the Proposal but for the south western portion of Erf 1374, which will be left in its current state. The existing trees will therefore not be removed.**
3	Alternative 2	**No other alternative presented.**
	Etc.	

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	**± 1.7 Ha**
Alternatives:	
Alternative 1 (if any)	**± 1.7 Ha**
Alternative 2 (if any)	
	Ha/ m^2

or, for linear activities:

	Length of the activity:
Proposed activity	
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	
	m/km

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

	Size of the site/servitude:
Proposed activity	**± 1.7 Ha**
Alternatives:	
Alternative 1 (if any)	**± 1.7 Ha**
Alternative 2 (if any)	
	Ha/m^2

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	**YES**	NO
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	**YES**	NO
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?	YES	NO
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated [ ] Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
  - A4 size for activities with development footprint of 10sqm to 5 hectares;
  - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
  - A2 size for activities with development footprint of >20 hectares to 50 hectares);
  - A1 size for activities with development footprint of >50 hectares);

- The following should serve as a guide for scale issues on the layout plan:
  - A0 = 1: 500
  - A1 = 1: 1000
  - A2 = 1: 2000
  - A3 = 1: 4000
  - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

Refer to Appendix A for the Site Plans

7. SITE PHOTOGRAPHS

Colour photographs from the center of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under the appropriate Appendix**.** It should be supplemented with additional photographs of relevant features on the site, where applicable.

Refer to Appendix B for the Site Photographs

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity to be attached in the appropriate Appendix.

Refer to Appendix C for the Facility Illustrations

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Instructions for completion of Section B for linear activities

1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
2) Indicate on a plan(s) the different environments identified
3) Complete Section B for each of the above areas identified
4) Attach to this form in a chronological order
5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route | **0** | times

Instructions for completion of Section B for location/route alternatives

1) For each location/route alternative identified the entire Section B needs to be completed
2) Each alterative location/route needs to be clearly indicated at the top of the next page
3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives | **0** | times | (complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route | | (complete only when appropriate for above)

Section B - Location/route Alternative No. | | (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	**A Portion of Portion 161 of the Farm The Willows 340 - JR**

2. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.767178°	**28.317297°**

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity		
• Middle point of the activity		

- End point of the activity

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached **Not Applicable**

The 21 digit Surveyor General code of each cadastral land parcel

Proposal & Alternative 1	**T**	**O**	**J**	**R**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**4**	**0**	**0**	**0**	**1**	**6**	**1**

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Flat	**1:50 – 1:20**	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

4. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site.

Ridgeline	Plateau	**Side slope of hill/ridge**	Valley	**Plain**	Undulating plain/low hills	River front

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

Shallow water table (less than 1.5m deep)	YES	**NO**
Dolomite, sinkhole or doline areas	YES	**NO**
Seasonally wet soils (often close to water bodies)	YES	**NO**
Unstable rocky slopes or steep slopes with loose soil	YES	**NO**
Dispersive soils (soils that dissolve in water)	YES	**NO**
Soils with high clay content (clay fraction more than 40%)	YES	**NO**
Any other unstable soil or geological feature	YES	**NO**
An area sensitive to erosion	YES	**NO**

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

b) are any caves located on the site(s) YES **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

c) are any caves located within a 300m radius of the site(s) YES **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

d) are any sinkholes located within a 300m radius of the site(s) YES **NO**

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

If any of the answers to the above are “YES” or “unsure”, specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential YES **NO**

Atlas (GAPA 4)?		

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % =	Natural veld with scattered aliens % =	**Natural veld with heavy alien infestation % = 90**	Veld dominated by alien species % =	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	**Bare soil % = 10**

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site	YES	**NO**

If YES, specify and explain:

No faunal or floral Species of Conservation Concern (SCC) were observed within the study area during the field assessment. The study area is highlighted as preferred habitat for Neamblysomus julianae (Juliana's Golden Mole), but due to historic and current anthropogenic activities, especially alien and invasive plant proliferation and vagrants present within the study area makes it highly unlikely for this species to be present. Furthermore, no other faunal or floral SCC are expected to occur within this habitat unit, primarily due to the high levels of anthropogenic activities and related impacts that are ongoing within the study area and in the immediate surrounding areas.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	YES	**NO**

If YES, specify and explain:

No faunal or floral SCC were observed within the study area during the field assessment. The study area is highlighted as preferred habitat for *Neamblysomus julianae* (Juliana's Golden Mole), but due to historic and current anthropogenic activities, especially alien and invasive plant proliferation and vagrants present within the study area makes it highly unlikely for this species to be present. Furthermore, no other faunal or floral SCC are expected to occur within this habitat unit, primarily due to the high levels of anthropogenic activities and related impacts that are ongoing within the study area and in the immediate surrounding areas.

Are there any special or sensitive habitats or other natural features present on the site?	**YES**	NO

If YES, specify and explain:

The study area is situated within the Bronberg Ridge, which is considered a class 2 ridge. Class 2 ridges include ridges of which more than 5% but less than 35% of their surface area has been converted to urban development, quarries and/or alien vegetation.

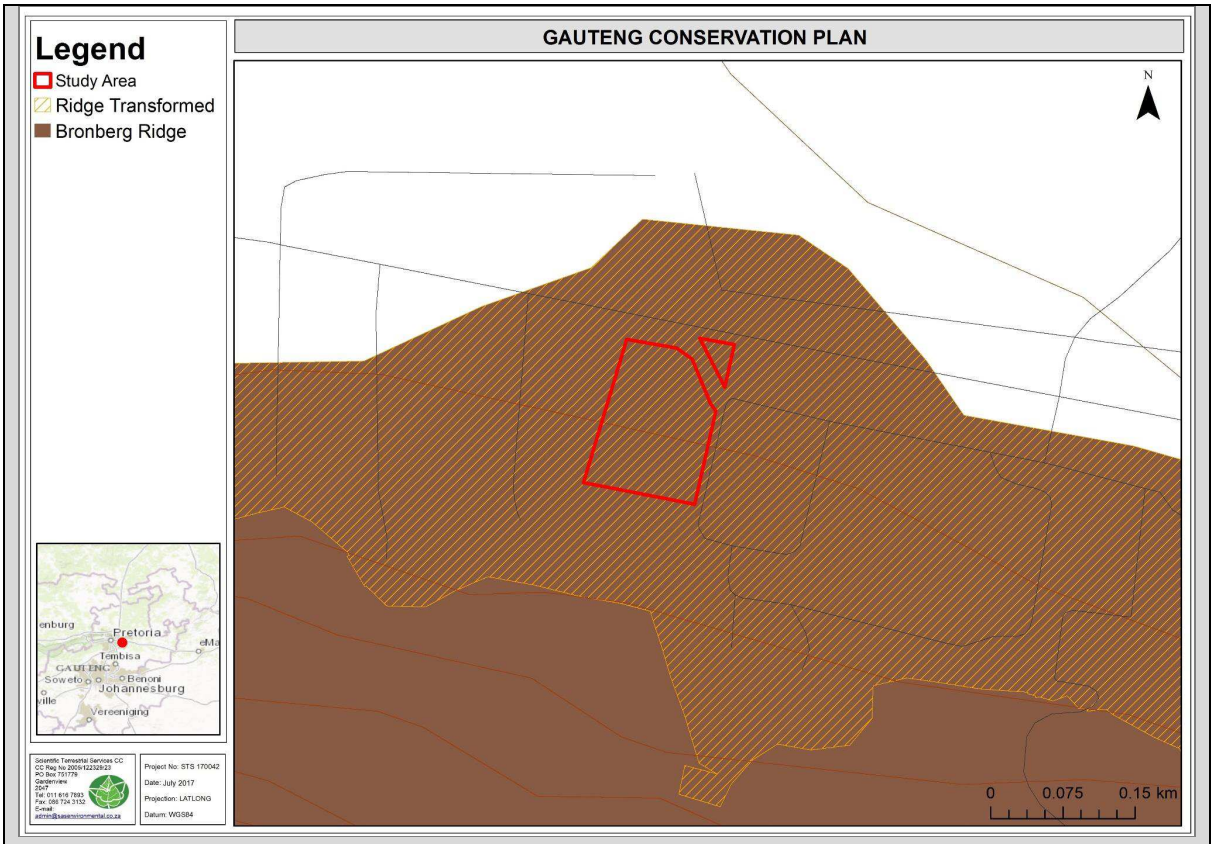


Figure 5: The Bronberg ridge associated with the study area

Was a specialist consulted to assist with completing this section			**YES**	NO
If yes complete specialist details				
Name of the specialist:	**H. de Beer & E. van der Westhuizen**			
Qualification(s) of the specialist:	**National Diploma Nature Conservation (H. de Beer)** **BSc (Hons) Plant Science** **(SACNASP Reg. Number 100008/15) (E. van der Westhuizen)**			
Postal address:	**P.O. Box 751779**			
Postal code:	**2047**			
Telephone:	**011 616 7893**	Cell:	**-**	
E-mail:	**admin@sasenvironmental.co.za**	Fax:	**-**	
Are any further specialist studies recommended by the specialist?			YES	**NO**
If YES, specify:				
If YES, is such a report(s) attached?			YES	NO
If YES list the specialist reports attached below				

Signature of specialist:	**See attached report**	Date:	**July 2017**

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	**5. Koppie or ridge**
6. Dam or reservoir	7. Agriculture	**8. Low density residential**	**9. Medium to high density residential**	10. Informal residential
11. Old age home	**12. Retail**	**13. Offices**	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial[AN]	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport[N]	23. Train station or shunting yard[N]	24. Railway line[N]	**25. Major road (4 lanes or more)[N]**
26. Sewage treatment plant[A]	27. Landfill or waste treatment site[A]	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33.Spoil heap or slimes dam[A]	34. Small Holdings	
Other land uses (describe):	**35. Life Wilgers Hospital**			

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

9, 12	**1, 9**	**1, 9**	**9**	**9,**
9, 12, 25	**9, 12, 25**	**1, 9, 12, 25**	**12, 25**	**9, 12, 25**
5, 12, 13	**5, 12**		**5, 12, 35**	**5, 12, 35**
1, 5	**1, 5, 8**	**1, 5, 8**	**1, 5**	**1, 5**
1, 5, 8	**1, 5**	**1, 5**	**1, 5, 8**	**1, 5, 8**

WEST EAST

SOUTH

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "[A]" and with an "[N]" respectively.

Have specialist reports been attached	**YES**	NO

If yes indicate the type of reports below

- **Terrestrial Ecological Habitat Integrity Investigation**
- **Heritage Impact Assessment**
- **Motivating Memorandum**
- **Geotechnical Report**

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

The project site falls within ward 44 in Region 6 of the City of Tshwane Metropolitan Municipality.

Region 6 is bordered by the Magaliesberg Mountain range to the north, the N1 freeway to the west and Ekurhuleni Local Municipality to the South.

The Region includes large parts of the former Kungwini and Nokeng Tae Tsamane regions.

It is accessible via:

- **The N4 freeway which links the City of Tshwane with Mpumalanga Province and runs east-west through the region.**
- **The N1 freeway which runs on the western side of the region and links the City of Tshwane with the Limpopo Province in the north and Johannesburg, Bloemfontein and Cape Town towards the south.**
- **The R21 freeway along the western boundary of the region which links the City with the Ekurhuleni Municipality and the OR Tambo International Airport.**

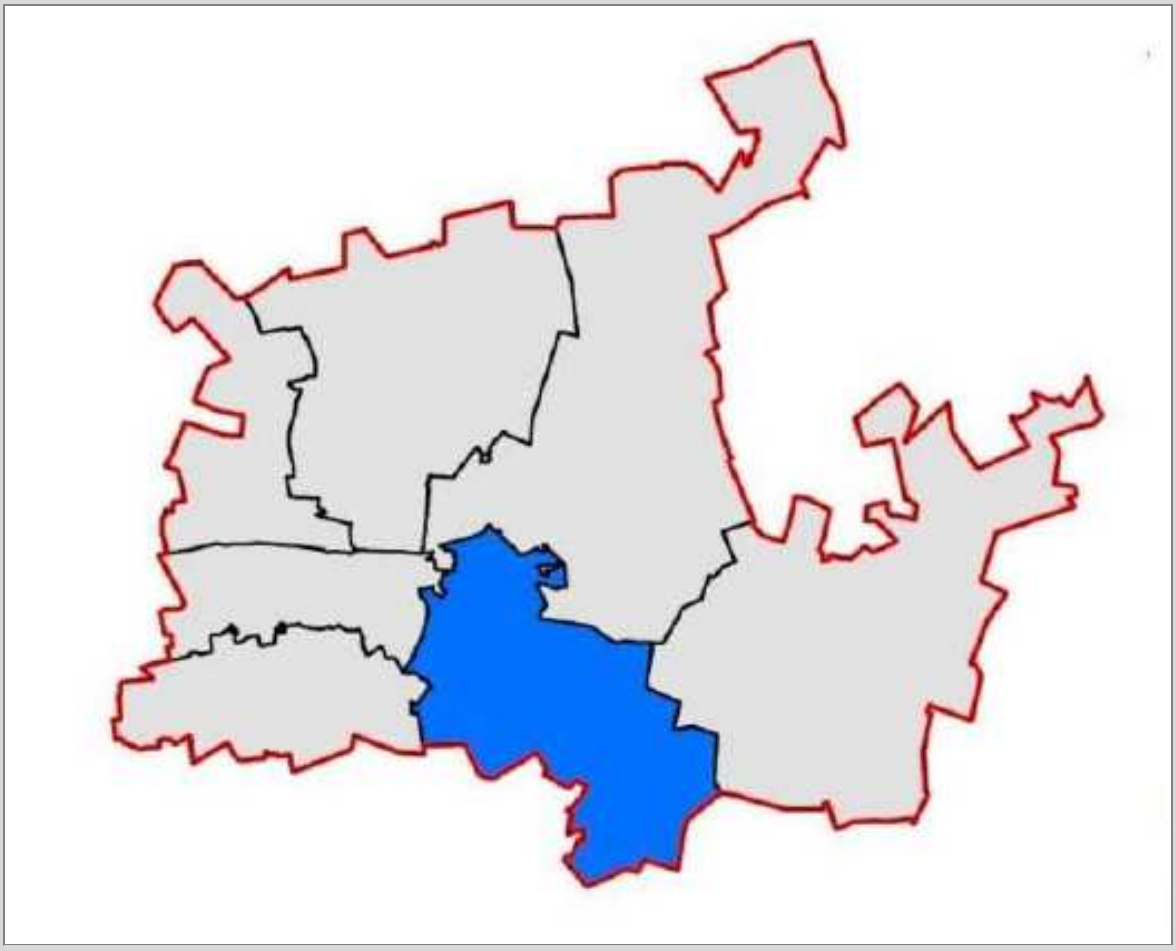


Figure 6: Region 6 within the City of Tshwane Metropolitan Municipality

An estimated population figure for this area suggests 648 501 people in 2017 (IHS Global Insight). The average growth rate for Region 6 is about 2.8%.

Region 6 has an unemployment figure of about 20.5 % which is below the national average of 25%.

The main characteristics of Region 6 are as follow:

- **The south-eastern section of this region has the highest income per capita and**

could be considered the fuel injection of the city.

- **However, there is also a huge concentration of people in the north east quadrant, representing low and no- income groups.**
- **It is the region with the greatest development pressure.**
- **Decentralised nodes accommodate a wide range of urban facilities.**
- **The region is popular in terms of retail as well as office functions as many of the higher category retail and office functions of the City have relocated to this region over the past few years. Further to this is also the second most important industrialised area in Tshwane situated in Silverton/ Silvertondale/ Waltloo/ Bellevue-area.**
- **Suburban areas are mostly low density in nature and the region accommodates a number of Golf and Life Style Estates such as Woodhill, The Hills and Silver lakes. However, there is also a high density area to the north of the region with large areas planned for RDP type development and informal settlements invaded the land before construction of services took place.**
- **The historical radial linkages to the CBD are prominent.**
- **There is a high dependency on private motor vehicles, from the southern section of the region, placing an impossible demand on the road infrastructure. Further to this is a high rail related dependency of the north eastern quadrant to the City Centre. No south connection is possible.**
- **There are also an unusually high dependency on bus travel through the area from the far outlying rural areas e.g. Moutse and Moloto.**
- **The Bronberg and the Magaliesberg Mountain range is a major environmental feature running east to west in the northern part of the region. It provides limited thoroughfare, with only two major crossing points.**
- **The Moreleta Spruit and its tributaries cover virtually the entire area to the south of the Bronberg, contributing to the well-defined regional open space system of the southern part of the region.**
- **Further to the south of the region is the Rietvlei Dam and Nature reserve which is one of the larger open space assets of the City.**
- **The region contains a number of strategic land uses including the CSIR, South African National Intelligence Service and the Menlyn Park Retail Node which has a metropolitan function in terms of facilities.**
- **The Hatherley landfill site has a metropolitan function in terms of its Strategic nature and size. No other sites are known for future development in the Metro as yet.**
- **The region contains three large private hospitals as well as the Pretoria East Cemetery.**
- **Almost all the developable land within the southern section of the Region has been developed and the uncontrolled development in the old Kungwini area places a burden on the existing saturated road infrastructure.**
- **The north-eastern section of the region accommodates mostly low-income communities and industrial land uses.**
- **The middle and south-western section of the region accommodates medium to high-income areas with large institutional uses.**
- **The northern section of the region includes a number of strategically located undeveloped areas in terms of accessibility and infrastructure which offer significant development potential**

In terms of a city wide perspective the region has the following residential Characteristics:

- **The south eastern section of the region has a relatively low density character.**
- **Although densities in the south eastern section of the region are relatively low, this part of the region has the highest percentage of group housing**

developments compared to any other region.

- **There are however very few apartment blocks in the southern section of this region.**
- **The region accommodates most of the city's homes for the aged.**
- **The region is subject to high development pressure.**
- **Virtually all areas have developed up to the old border of the Tshwane municipal area. The only areas available for development in the south eastern section of this region are the Willow Glen Agricultural Holdings and the Waterkloof Agricultural Holdings.**
- **This has led to development pressure in the old Kungwini area immediately to the east of the old Tshwane boundary with relatively high density development responding to the opportunities offered by the metropolitan area.**
- **Smallholdings attract the development of townhouse complexes, while the larger farm portions attract the larger low density residential developments, many of which are developed as lifestyle estates.**
- **The area around Eerste Fabrieke Station has the highest density at 50,6 persons per ha in the entire metro.**
- **There are approximately 40 000 informal units in Region 6 and mainly in the northern section of the region; however these units are mostly situated on serviced stands.**

The region's strengths are as follow:

- **The region enjoys good regional accessibility via the N4, N1 and R21 routes.**
- **The region offers good quality residential opportunities.**
- **The region accommodates a number of well-developed nodes.**
- **The region has access to private sector investment.**
- **Good rail infrastructure in the northern part of the region.**
- **The region has a strong industrial sector with job opportunities at Waltloo, Silverton, East Lynn and Koedoespoort.**

The region's weaknesses are as follow:

- **Poor internal linkages and traffic congestion. Limited access to first order road system.**
- **Poorly developed public transport facilities, with no rail services in the south.**
- **Too few interchanges especially on the N4 on the first order road network to effectively benefit the region.**
- **Poor linkages to the north and south.**
- **Poverty, in the northern section with more than a third of the population having no income at all.**
- **Uncontrolled development in the eastern section (Old Kungwini area).**
- **Large estate and retail developments that are currently not economically viable and that have only developed partially due to the economic recession.**

(Source: Spatial Development Framework Region 6, 2017)

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, 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.

Are there any signs of culturally (aesthetic, social, spiritual, environmental) or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or close (within 20m) to the site? If YES, explain:	YES	**NO**

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

In terms of Section 35 of the NHRA no archaeological sites were identified. No further mitigation prior to construction is recommended in terms of the archaeological component of Section 35 of the NHRA for the proposed development to proceed.

The study area is of high palaeontological sensitivity and a paleontological assessment will have to be conducted prior to construction.

In terms of the built environment of the area (Section 34 of the NHRA) no standing structures older than 60 years occur within the study area. In terms of Section 36 of the NHRA no burial sites were recorded. If any graves are located in future they should ideally be preserved *in-situ* or alternatively relocated according to existing legislation. No public monuments are located within or close to the study area and the proposed development will not impact negatively on significant viewscapes. The cumulative impact of the project is considered to be acceptable due to the lack of heritage resources in the study area. During the Public Participation Process conducted for the project no heritage concerns was raised.

The impact of the proposed project on heritage resources is considered to be of low significance and it is recommended that the proposed project can commence on the condition that the following recommendations are implemented as part of the EMPr and based on approval from SAHRA.

- **Assessment of the study area by a professional palaeontologist;**
- **Implementation of a chance find procedure as outlined below:**

The possibility of the occurrence of subsurface finds cannot be excluded. Therefore, if during construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped and a qualified archaeologist must be contacted for an assessment of the find and therefore chance find procedures should be put in place as part of the EMPr.

This procedure applies to the developer's permanent employees, its subsidiaries, contractors and subcontractors, and service providers. The aim of this procedure is to establish monitoring and reporting procedures to ensure compliance with this

policy and its associated procedures. Construction crews must be properly inducted to ensure they are fully aware of the procedures regarding chance finds.

- **If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.**
- **It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area.**
- **The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.**

Will any building or structure older than 60 years be affected in any way?	YES	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	YES	**NO**

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?	**YES**
If yes, has any comments been received from the local authority?	YES / **NO**

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

Comments from the City of Tshwane are awaited.

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least **thirty (30) calendar days** before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?	**YES** / NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Transnet Pipelines
Not Affected

PHRA-G
A Heritage Impact Assessment, in terms of Section 38 of the National Heritage Resources Act 25 of 1999, needs to be conducted, during the EIA process.

GAUTRANS
The Department will not be able to participate in the Environmental Impact Assessment Process.

However, note must be taken that the Gauteng Strategic Transportation Network namely, provincial Road(s): K34 is affected and as such, in terms of the Gauteng Transport Infrastructure Act, 2001 (Act No 8 of 2001), when an application for a township establishment, change of land use (rezoning, subdivision, consent use etc) is lodged with the relevant authority, the said application must be lodged with the Department for evaluation.

Note must also be taken that an application must be submitted to the Department for a way leave if any part of the proposed service falls within 95,0m (measured from the centreline of any of the Department's existing or future road(s)/railway line or within a 500,0m radius of any intersection on said road(s)/railway line.

These conditions are laid down in terms of delegated authority in terms of the provisions of the Gauteng Transport Infrastructure Act, Act no. 8 of 2001 and do not

exempt the application/ owner/ successor-in-title from the provision of any other law.

If "NO" briefly explain why no comments have been received

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report

Appendix 9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
4) Each alterative needs to be clearly indicated in the box below
5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives **0** times (complete only when appropriate)

Section D Alternative No. "insert alternative number" (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? **YES** / NO

If yes, what estimated quantity will be produced per month? **To be confirmed**

How will the construction solid waste be disposed of (describe)?

The material is to be removed to a licensed Landfill site.

Where will the construction solid waste be disposed of (describe)?

The material is to be removed to a licensed Landfill site.

Will the activity produce solid waste during its operational phase? **YES** / NO

If yes, what estimated quantity will be produced per month? **To be confirmed**

How will the solid waste be disposed of (describe)?

Municipal waste collection

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity? YES / **NO**

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

Note: If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation? ~~YES~~ / **NO**

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility? YES / **NO**

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Describe the measures, if any, that will be taken to ensure the optimal reuse or recycling of materials:

Recycling at the source

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES / **NO**

If yes, what estimated quantity will be produced per month? m^3

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?	YES	NO

Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	**NO**
If yes, what estimated quantity will be produced per month?		m^3

If yes describe the nature of the effluent and how it will be disposed.

Note that if effluent is to be treated or disposed on site the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA

Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	**NO**

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	**YES**	NO
If yes, what estimated quantity will be produced per month?	**To be confirmed**	
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	YES	NO

Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	**NO**

If yes describe how it will be treated and disposed off.

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES	**NO**
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Emissions during construction will mostly be in the form of dust and smoke

2. WATER USE

Indicate the source(s) of water that will be used for the activity

municipal	Directly from water board	groundwater	river, stream, dam or lake	other	the activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month: liters

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs?	YES	**NO**

If yes, list the permits required

If yes, have you applied for the water use permit(s)?	YES	NO
If yes, have you received approval(s)? (attached in appropriate appendix)	YES	NO

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

Municipal

If power supply is not available, where will power be sourced from?

4. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

Regular supply can be supplemented with alternative renewable sources such as:

- **<u>Solar water heater</u> - As regular geysers are the biggest consumers of domestic electricity. Solar hot water cylinders can remain connected to the regular supply in case of back up required over cloudy or very cold periods. The electrical back-up should be managed with a timer switch. Unsightly storage tanks can be hidden in the roof void and need not be visible.**

- **<u>Gas</u> - Although not renewable it is less polluting and recommended for cooking and heating. Electric stoves use a huge amount of electricity.**

- **<u>Aerated Shower Head</u> - Daily shower consumes more energy than all electrical household appliances together, including light. An aerated shower head uses less water overall, due to insertion of oxygen in each drop.**

- **<u>Floor Insulation and Roof / Ceiling Insulation</u> - Up to 15% of the energy used to heat up residences in winter are lost through the floor. 30 mm of high density polystyrene below the concrete of a new house will reduce the heat loss through the floor significantly.**

  Up to 35% of the energy used to heat up residences in winter is lost through the roof. Roof insulation will ensure comfort by reducing heat loss in winter and keeping the heat out in summer.

- **<u>Lighting</u> - Low energy lamps will be used for interior and exterior lighting, with timers or light sensors for switching where necessary.**

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

See above.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts as well as the impacts of not implementing the activity (Section 24(4)(b)(i).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

L. Britz

Requested more information on this project, as her client wants to develop specialised medical facilities 2 plots west of the proposed project at Karoo Kafee, with physical address, 141 Lynnwood Rd & Albeth, The Willows 340-Jr, Pretoria, 0081

M. Murray

Dr Murray provided the following comments:

1. **Currently the large trees on the property renders some protection against the noise and pollution from Lynnwood road. Requested to be informed regarding planting of trees on the property? It would be highly recommended that gardens include as many indigenous trees as is viable.**
2. **Requested to be informed regarding security during the construction phase, as well as thereafter?**

Lokisa conducted a site visit and meeting with Dr. Murray during the week of 6 August 2018.

The following were discussed:

3. **No visual impact is foreseen since the Nova Institute is located on a higher slope in relation to the proposed development site.**
4. **Dr. Murray stated that there are rumours that the hospital will make use of generators in the new building. If this is true, he suggested that these generators should not be placed on the upper side of the building as they will definitely have a noise impact.**
5. **Dr. Murray stated his concerns about the security of the area during construction and operational phase of the development and suggested that the hospital close off the entire area if possible. He also indicated that he was willing to engage with the hospital further regarding this. He said the new proposed road to the north east of the site might jeopardise their safety.**
6. **Dr. Murray indicated that the trees on the site act as a buffer for the noise coming from Lynnwood Road (M6) and as a filter for pollution. He then suggested that some of the trees should not be cut down unnecessarily. He also added that since the trees are not indigenous, and the planting of indigenous trees on site would mean that they would take some time to grow, he would be happy if the exotic trees are not cut down.**

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)
(A full response must be provided in the Comments and Response Report that must be attached to this report):

Transnet Pipelines

No response required.

PHRA-G

The Heritage Impact Assessment is included under Appendix G.

GAUTRANS
Access to the site will comply with the requirements of Gautrans.

I&APs
Registered as I&APs. The Draft BAR will be made available for comment once finalised.

Ms. Britz was provided with the Background Information Document for the Proposed Wilgers Hospital Extension.

Response to Dr. Murray as follows:
1. **Dr. Murray indicated that since the trees are not indigenous, and the planting of indigenous trees on site would mean that they would take some time to grow, he would be happy if the exotic trees are not cut down.**
2. **The construction component will be handled by a construction company who will be responsible for the safety of the site. The hospital itself has 24 hour security.**
3. **No visual impact is foreseen.**
4. **The proposed development will be responsible for critical care. The hospital will therefore need to have generators for backup purposes. The main power source will still be CoT power.**
5. **The construction component will be handled by a construction company who will be responsible for the safety of the site. The hospital itself has 24 hour security.**
6. **Noted.**

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

Criteria used to determine the Consequence of an Impact

Table 1: Methodology

Rating	Definition of Rating	Score
A. Extent – *the area in which the impact will be expected*		
None		0
Local	Confined to project or study area or part thereof (eg. site)	1
Regional	The region, which may be defined in various ways, eg. Cadastral, catchment, topographic	2
(Inter) national	Nationally or beyond	3
B. Intensity – *the magnitude or size of the impact*		
None		0
Low	Natural and/or social functions and processes are negligibly altered	1
Medium	Natural and/or social functions and processes continue albeit in a modified way	2
High	Natural and/or social functions or processes are severely altered	3
C. Duration – *the time frame for which the impact will be experienced*		

None		0
Short term	Up to 2 years	1
Medium term	2 – 15 years	2
Long Term	More than 15 years	3

The combined score of these three criteria corresponds to a Consequence Rating, as set out in Table below:

Table 2: Methods used to determine the Consequence Score

Combined score (A+B+C)	**0 - 2**	**3 - 4**	**5**	**6**	**7**	**8-9**
Consequence Rating	Not significant	Very low	Low	Medium	High	Very high

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications indicated in table below:

Table 3: Probability Classification

Probability of impact – the likelihood of the impact occurring	
Improbable	< 40% chance of occurring
Possible	40% - 70% chance of occurring
Probable	> 70% - 90% chance of occurring
Definite	> 90% chance of occurring

The overall significance of impacts is determined by considering consequence and probability using the rating system indicated in table below:

Table 4: Impact Significance Rating

Significance Rating	**Consequence**		**Probability**
Insignificant	Very low	&	Improbable
	Very low	&	Possible
Very Low	Very low	&	Probable
	Very low	&	Definite
	Low	&	Improbable
	Low	&	Possible
Low	Low	&	Probable
	Low	&	Definite
	Medium	&	Improbable
	Medium	&	Possible
Medium	Medium	&	Probable
	Medium	&	Definite
	High	&	Improbable
	High	&	Possible
High	High	&	Probable
	High	&	Definite
	Very high	&	Improbable
	Very high	&	Possible
Very High	Very high	&	Probable
	Very high	&	Definite

In conclusion the impacts are also considered in terms of their status (positive or negative impact) and the confidence in the ascribed impact significance rating. The prescribed system for considering impacts status and confidence (in assessment) is indicated in table below.

Table 5: Impact status and confidence classification

Status of Impact	
Indication of where the impact is adverse (negative) or beneficial (positive)	+ ve (positive – a 'benefit')
	- ve (negative – a 'cost')
	Neutral
Confidence of assessment	
The degree of confidence in predictions based on available information, EAP's judgement and/or specialist knowledge	Low
	Medium
	High

The impact significance rating should be considered by GDARD in their decision-making process based on the implications of ratings ascribed below:

- **Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity / development;**
- **Very low: the potential impact should not have any meaningful influence on the decision regarding the proposed activity / development;**
- **Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity / development;**
- **Medium: the potential impact should influence the decision regarding the proposed activity / development;**
- **High: the potential impact will affect the decision regarding the proposed activity / development;**
- **Very high: The proposed activity should only be approved under special circumstances.**

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Potential Impacts for the construction and operational phase

Proposal

Table 6: Potential Impacts for the construction and operational phase - Proposal

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confi-dence
CONSTRUCTION PHASE								
1. ISSUE: AIR QUALITY								
1.1 Dust/Air pollution - The generation of fugitive dust associated with construction activities & earthworks.	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
2. ISSUE: TOPOGRAPHY								
2.1 Visual Impacts	**Local (1)**	**Medium (2)**	**Short term (1)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
2.2 Bulk earthworks: Deep cuttings, high embankments,	**Local (1)**	**Medium (2)**	**Short term (1)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confi-dence
disposal of spoil and excavations cause local changes to topography								
3. ISSUE: GEOLOGY AND SOILS								
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
3.2 Soil pollution	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
3.3 Disturbance of surface geology for development foundations	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
4. ISSUE: FAUNA AND FLORA								
4.1 Degradation, destruction of habitats/ ecosystem and loss of natural vegetation	**Regional (2)**	**Medium (2)**	**Short term (1)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**High**
4.2 Impact on Floral and Faunal Species of Conservation Concern	**Regional (2)**	**Medium (2)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
5. ISSUE: HYDROLOGY								
5.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another. This may contribute to flooding, soil erosion, and sedimentation of nearby water bodies.	**Regional (2)**	**High (3)**	**Short term (1)**	**Medium (6)**	**Definite**	**Medium & Definite = Medium**	**-ve**	**Medium**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
6. ISSUE: AESTHETICS, LANDSCAPE CHARACTER AND SENSE OF PLACE								
6.1 Noise/ vibration	**Local (1)**	**Medium (2)**	**Short term (1)**	**Very Low (4)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
6.2 Impact on the privacy of adjacent land owners.	**Local (1)**	**High (3)**	**Short term (1)**	**Low (5)**	**Definite**	**Low & Definite = Low**	**-ve**	**High**
7. ISSUE: SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT								
7.1 Safety and Security	**Region (2)**	**High (3)**	**Short term (1)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	-ve	**High**
7.2 Economic opportunities	**Region (2)**	**High (3)**	**Short term (1)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	+ve	**Medium**
7.3 Hygiene	**Local (1)**	**Medium (2)**	**Short term (1)**	**Very Low (4)**	**Probable**	**Very Low & Probable = Very Low**	**-ve**	**High**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confi-dence
8. ISSUE: HISTORICAL ENVIRONMENT								
8.1 Destruction of cultural / heritage sites	**None**	**None**	**None**	**Not Significant (0)**	**Improbable**	**Not Significant & Improbable = Insignificant**	**-ve**	**Low**
9. ISSUE: TRAFFIC								
9.1 Traffic – Construction vehicles	**Regional (2)**	**Medium (2)**	**Short term (1)**	**Low (5)**	**Probable**	**Low & Definite = Low**	**-ve**	**High**
10. ISSUE: SERVICES AND WASTE								
10.1 Waste	**Local (1)**	**Low (1)**	**Short term (1)**	**Very Low (3)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
10.2 Pressure on existing infrastructure and services	**Local (1)**	**Low (1)**	**Short term (1)**	**Very Low (3)**	**Definite**	**Very Low & Definite = Very Low**	**-ve**	**High**
OPERATIONAL PHASE								
1. ISSUE: FAUNA AND FLORA								
1.1 Alien invasion	**Local (1)**	**Low (1)**	**Long term (3)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**Medium**
1.2 Impact on Floral and Faunal Species of Conservation Concern	**Local (1)**	**Low (1)**	**Long term (3)**	**Low (5)**	**Probable**	**Low & Probable = Low**	**-ve**	**High**
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT								
2. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE								
2.1 Noise	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**High**
3. ISSUE: SOCIAL WELL BEING AND QUALITY OF THE ENVIRONMENT								
3.1 Job opportunities	**Regional (2)**	**Medium (2)**	**Long term (3)**	**High (7)**	**Probable**	**High & Probable = High**	**+ve**	**Medium**
4. ISSUE: HYDROLOGY								
4.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in another.	**Regional (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium h & Probable = Medium**	**-ve**	**Medium**
5. ISSUE: TRAFFIC								
5.1 Traffic – vehicles from the new development.	**Regional (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**
INFRASTRUCTURE, SERVICES AND WASTE								
6. ISSUE: INFRASTRUCTURE AND WASTE								
6.1 Waste	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**
6.2 Pressure on existing infrastructure and services	**Local (1)**	**Medium (2)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**
7. ISSUE: SITE LAYOUT								
7.1 Site layout to	**Regional**	**Low (1)**	**Long**	**Medium (6)**	**Probable**	**Medium &**	**+ve**	**Medium**

Potential Impact	Extent A	Intensity B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confi-dence
include servitude to be registered for the Natural Conservation: Juliana's Golden Mole	**(2)**		**term (3)**			**Probable = Medium**		

Potential Impacts for the construction and operational phase

Alternative 1

The potential impacts for the construction phase and operational phase for Alternative 1 is similar to that of the proposal with the only exception being the site layout.

Table 7: Potential Impacts for the construction and operational phase - Alternative 1

Potential Impact	Extent A	Intensi ty B	Duration C	Consequence A+B+C	Probability	Impact Significance	Status	Confi-dence
OPERATIONAL PHASE								
7. ISSUE: SITE LAYOUT								
7.1 Site layout to exclude servitude to be registered for the Natural Conservation: Juliana's Golden Mole	**Regional (2)**	**Low (1)**	**Long term (3)**	**Medium (6)**	**Probable**	**Medium & Probable = Medium**	**-ve**	**Medium**

Significance Rating for the construction and operational phase

Proposal

Table 8: Significance Rating for the construction and operational phase - Proposal

Potential Impacts	Signifi-cance rating of impacts	Proposed mitigation	Signifi-cance rating of impacts after mitigation	Risk of the impact and mitigation not being implemented
CONSTRUCTION PHASE				
1. ISSUE: AIR QUALITY				
1.1 Dust /Air pollution The generation of dust associated with construction	**Low**	• Dust generation should be kept to a minimum. • Dust must be suppressed at construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent.	**Very Low**	Negative impact to the ambient air quality of the area

activities & earthworks		• Speed limits must be implemented in all areas, including public roads and private property to limit the levels of dust pollution. • It is recommended that the clearing of vegetation from the site should be selective and done just before construction so as to minimise erosion and dust. • Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided. • All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials. • No burning of refuse or vegetation is permitted.		
2. ISSUE: TOPOGRAPHY				
2.1 Visual Impacts and light pollution	**Very Low**	• Site development to be limited to footprint area. • The construction camp must be located as far from residential properties as possible. • Light pollution should be minimised. • Construction / management activities must be limited to the daylight hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays. • Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, disturb wildlife, or interfere with road traffic. • In this situation low flux and frequency lighting shall be utilised.	**Very Low**	Negative impact to the visual quality of the area including light pollution
2.2 Bulk earthworks	**Very Low**	• Avoid development on excessively steep slopes. • Avoid cutting steep embankments • Provide the necessary erosion protection measures. • Disturbed surface areas in the construction phase to be rehabilitated. No open trenches to be left. No mounds of soils created during construction to be left. • All construction material, equipment and any foreign objects brought into the area by contractors to be removed immediately after completion of the construction phase.	**Very Low**	Negative impact to the visual quality of the area
3. ISSUE: GEOLOGY AND SOILS				
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	**Low**	• Appropriate erosion and storm water management structures must be installed around the construction site. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fuelling of machinery and to catch incidental spills and pollutants • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Ensure appropriate handling of hazardous substances. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes. • Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded. • Once earthworks are complete, disturbed area	**Low**	Degradation or impairment of soil quality

		are to be stabilised with an appropriate approved method. • Disturbed surfaces to be rehabilitated with locally indigenous grass species. No open trenches to be left. • No mounds of soils created during construction to be left. Soils around erected poles to be leveled and sculptured to the original contours of the surrounding soils.		
3.2 Soil Pollution	**Low**	• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution. • Ensure appropriate handling of hazardous substances • Remediate polluted soil. • All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks. • Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area. • Drip trays are to be utilised during daily greasing and re-fueling of machinery and to catch incidental spills and pollutants. • Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes. • Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded.	**Very Low**	Spilled oil prevents water absorption by soil
3.3 Disturbance of surface geology for development foundations	**Low**	• Appropriate erosion and stormwater management structures must be installed around the construction site.	**Very Low**	Negative impact on the geology of the area.
4. ISSUE: FAUNA AND FLORA				
4.1 Degradation, destruction of habitats/ ecosystem and loss of natural vegetation	**Low**	• It is recommended that site clearing take place in a phased manner (where possible) to allow for any faunal species present to move away from the study area to the surrounding area; • Upon completion of construction activities, it must be ensured that no bare areas remain and that indigenous grassland species are reintroduced. • As far as possible, indigenous grassland species, including grasses, should be used as part of the landscaping of the project and it is recommended that *Cynodon dactylon* be used instead of *Pennisetum clandestinum* (Kikuyu) for any lawned areas; • Edge effects of activities need to be actively managed to minimise further impacts to the receiving environment, with specific consideration to erosion control, including alien and invasive species management; • Informal fires by construction personnel within the study area should be prohibited; • No dumping of waste should take place. If any spills occur, they should be immediately cleaned up; • In the event of a breakdown, maintenance of vehicles must take place with care and the recollection of spillage should be practiced preventing the ingress of hydrocarbons into the topsoil	**Very low**	Loss of biodiversity
4.2 Impact on Floral	**Low**	• Should any floral or faunal SCC be	**Very Low**	Loss of

and Faunal Species of Conservation Concern		encountered during the site preparation or construction phase, the following measures are to be carried out: o Where feasible, effective relocation of individuals to suitable similar habitat in the vicinity of the proposed site. o All rescue and relocation plans should be overseen by a suitably qualified specialist • No trapping or hunting of any faunal species are to take place during the construction phase within the study area or within the surrounding area. • Alien vegetation must be removed from the study area during both the construction and operational phases of the development, with specific mention of Category 1b species in line with the NEMBA Alien and Invasive Species Regulations (2014).		biodiversity
5. ISSUE: HYDROLOGY				
5.1 Storm water flow and drainage	**Medium**	• The proposed development's storm water to be adequately managed. • It is important to ensure vegetation cover as widely as possible, to improve the potential water quality emanating from the site.	**Low**	Soil erosion, flooding and sedimentation of water bodies and loss of habitat.
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
6. ISSUE: AESTHETICS, LANDSCAPE CHARACTER AND SENSE OF PLACE				
6.1 Noise/ vibration	**Very Low**	• Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise. • No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. • Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays. • Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance. • Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.	**Very Low**	An increase in the ambient noise levels of the area.
6.2 Impact on the privacy of adjacent land owners	**Low**	• The construction camp must be located as far from residential properties as possible. • No access to neighbouring holdings should be allowed. • Construction crew to respect adjacent landowners.	**Low**	Nuisance to adjacent land owners
7. ISSUE: SOCIAL WELL-BEING AND QUALITY OF THE ENVIRONMENT				
7.1 Safety and Security	**Medium**	• Signs should be erected on all entrance gates to the site camp indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations • All structures that are vulnerable to high winds must be secured (including toilets). • Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times. • The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are	**Low**	Potential criminal activities such as theft might occur.

		undertaken on or near public roads. • Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.). • All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA). • An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues. • All construction workers shall be issued with ID badges and clearly identifiable uniforms. • Access to fuel and other equipment stores is to be strictly controlled. • Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided. • Adequate emergency facilities must be provided for the treatment of any emergency on the site. • The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at prominent locations around the construction site and the construction crew camps at all times. • The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. • The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site.		
7.2 Economic opportunities	**Positive - Medium**	• Make use of local labour • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations. • Provide skills training for construction workers.	**Positive – Medium**	A large influx of uncontrolled numbers of people coming to the site seeking employment opportunities. This might also pose a security risk.
7.3 Hygiene	**Very Low**	• The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. • Washing and toilet facilities shall be provided on site and in the Contractors camp. • Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided. • The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately.	**Very Low**	Unhealthy working conditions on project site

		• The chemical toilets must be emptied on a regular basis. • HIV AIDS awareness and education should be undertaken by all Contractor staff.		
8. ISSUE: HISTORICAL ENVIRONMENT				
8.1 Destruction of cultural / heritage sites	**Insignifi-cant**	• Assessment of the study area by a professional palaeontologist. • Implementation of a chance find procedure as outlined in the Heritage Impact Assessment Report, should any sites be identified during the construction phase.	**Insignifi-cant**	Impairment of heritage resources / Depletion of archaeological record of the area.
9. ISSUE: SERVICES AND WASTE				
9.1 Waste	**Very Low**	• Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. • No burning of waste. • Waste will be collected and removed off-site to a registered waste site.	**Very Low**	Waste that is not disposed of correctly mainly leads to the following: • Environmental degradation • Water pollution • Infestation by rodents and potential disease causing vectors
9.2 Pressure on existing infrastructure and services	**Very Low**	• Integrity of existing services to be ensured.	**Very Low**	Damage to infrastructure resulting in liability costs
OPERATIONAL PHASE				
1. ISSUE: FAUNA AND FLORA				
1.1 Alien invasion	**Low**	• Alien vegetation must be removed from the study area during both the construction and operational phases of the development, with specific mention of Category 1b species in line with the NEMBA Alien and Invasive Species Regulations (2014).	**Very Low**	Alien infestation
1.2 Impact on Floral and Faunal Species of Conservation Concern	**Low**	• Alien vegetation must be removed from the study area during both the construction and operational phases of the development, with specific mention of Category 1b species in line with the NEMBA Alien and Invasive Species Regulations (2014).	**Very Low**	Loss of biodiversity
SOCIO-ECONOMIC AND CULTURAL HISTORICAL ENVIRONMENT				
2. ISSUE AESTHETICS, SITE CHARACTER AND SENSE OF PLACE				
2.1 Noise	**Medium**	• Ensure acceptable noise levels	**Low**	An increase in the ambient noise levels of the area
3. ISSUE: SOCIAL WELL BEING AND QUALITY OF THE ENVIRONMENT				
3.1 Job opportunities	**High (Positive)**	• Implement local labour. • Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations.	**High (Positive)**	A large influx of uncontrolled numbers of people seeking employment opportunities. This might also pose a security risk.
4. ISSUE: HYDROLOGY				
4.1 Storm water flow and drainage- Developments cause the modification of drainage patterns. Storm water may be concentrated at certain points, increasing the velocity of flow in one area and reducing flow in	**Medium**	• The proposed development's storm water to be adequately managed. • It is important to ensure vegetation cover as widely as possible.	**Low**	Soil erosion, flooding and loss of habitat.

another.				
5. ISSUE: TRAFFIC				
5.1 Traffic –vehicles from the new development.	**Medium**	• Compliance to Traffic and Municipal By-Laws	**Low**	Increased levels of traffic
INFRASTRUCTURE, SERVICES AND WASTE				
6. ISSUE: INFRASTRUCTURE AND WASTE				
6.1 Waste	**Medium**	• Sorting of waste • Waste yard to be kept clean and neat • Regular cleaning of waste yard so that it does not became a nuisance and terms of odour and vermin	**Low**	Waste that is not disposed of correctly mainly leads to the following: • Environmental degradation • Water pollution • Infestation by rodents and potential disease causing vectors
6.2 Pressure on existing infrastructure and services	**Medium**	• Integrity of existing services in the area to be ensured	**Low**	Damage to infrastructure
7. ISSUE: SITE LAYOUT				
7.1 Site layout to include servitude to be registered for the Natural Conservation: Juliana's Golden Mole	**Medium (Positive)**	• Should the servitude be registered and habitat conditions are favourable for Juliana's Golden Mole, it is likely that they may start utilising the area.	**Medium (Positive)**	It is unlikely that Juliana's Golden Mole will utilise the area

Significance Rating for the construction and operational phase

Alternative 1

Table 9: Significance Rating for the construction and operational phase - Alternative 1

Potential Impacts	Significance rating of impacts	Proposed mitigation	Significance rating of impacts after mitigation	Risk of the impact and mitigation not being implemented
OPERATIONAL PHASE				
7. ISSUE: SITE LAYOUT				
7.1 Site layout to exclude servitude to be registered for the Natural Conservation: Juliana's Golden Mole	**Medium**	• No Mitigation proposed	**Medium**	**None**

No Go

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented

None				

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

- **Terrestrial Ecological Habitat Integrity Investigation**
- **Heritage Impact Assessment**
- **Motivating Memorandum**
- **Geotechnical Report**

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

No impact assessment can be completely certain of the exact nature and extent of the various impacts that would result from a given development activity. However, this assessment strives to limit any uncertainties by optimising the collection of base data, and by following a rigorous impact assessment methodology.

The following assumptions and limitations are applicable to the Terrestrial Ecological Habitat Integrity Investigation report:

- **The ecological assessment is confined to the study area and does not include the neighbouring and adjacent properties; these were however considered as part of the desktop assessment;**
- **With ecology being dynamic and complex, some aspects (some of which may be important) may have been overlooked. It is, however, expected that most floral and faunal communities have been accurately assessed and considered;**
- **Due to the nature and habits of most faunal taxa and the increased level of surrounding anthropogenic activities, it is unlikely that all species would have been observed during a site assessment of limited duration. Therefore, site observations were compared with literature studies where necessary;**
- **The data presented in the report are based on a single site visit, undertaken on 20 July 2017 (Winter). A more accurate assessment would require that assessments take place in all seasons of the year. However, on-site data was significantly augmented with all available desktop data, local knowledge of the area and studies which have been conducted in the surrounding areas and the findings of the assessment are considered to be an accurate reflection of the ecological characteristics of the study area.**

3. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
No decommissioning is envisaged.				

Alternative 1

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being**

				implemented

No decommissioning is envisaged.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

None

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

No decommissioning is envisaged.

Rehabilitation costs involved will be determined as part of the tendering process.

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

Surface Water Pollution

- **Spillages of oil, lubricants and fuel from construction vehicles, plant and machinery has the potential to contaminate surface water bodies.**

Increased run off of water

- **Stormwater run off has the potential to erode the topsoil and result in sedimentation of water bodies if not controlled.**

Ground Water Pollution

- **The construction phase could result in increased infiltration of contaminants into the ground water and soil.**
- **Spillages of oil, lubricants and fuel from construction vehicles, plant and machinery has the potential to contaminate the soil and groundwater.**
- **Cement mixing and the storage of fuel must be conducted so as to prevent contamination of the soil and groundwater.**

Waste

- **The construction and subsequent operational activities will be the source of various waste streams which must be managed appropriately.**

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Proposal

The development of the proposed Hospital Extension as per the proposal will have an impact on the immediate biophysical environment which cannot be mitigated. However, the biophysical impact of the development will be limited in a regional context, and will be more than offset by the social benefits of the development.

As a necessary part of infrastructure, the proposed development is bound to have a positive effect on the surrounding area in terms of comparative land use and economic opportunities.

A further advantage with the infill of vacant land in established areas is the effective use of existing infrastructure and the capability of urban sprawl.

The proposed Hospital Extension will have a short term impact ranging from very low to medium during the construction phase, and a long term impact ranging from low to medium during the operational phase, but will result in a long term improvement to the area during the operational phase if the correct mitigation measures are implemented during the construction phase.

Positive impacts include the Economic Opportunities during the construction phase (Positive – Medium) and the Employment opportunities (Positive – High) as well as the servitude to be registered for the Natural Conservation: Juliana's Golden Mole (Positive – Medium) during the operational phase.

Please see below a summary of the identified impacts and their pre-mitigation and post-mitigation impact significance rating scores.

Table 10: Summary of identified Impacts – Proposal

Potential Impacts	Signifi-cance rating of impacts	Signifi-cance rating of impacts after mitigation
CONSTRUCTION PHASE		
1.1 Dust /Air pollution The generation of dust associated with construction activities & earthworks	Low	Very Low
2.1 Visual Impacts and light pollution	Very Low	Very Low
2.2 Bulk earthworks	Very Low	Very Low
3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	Low
3.2 Soil Pollution	Low	Very Low
3.3 Disturbance of surface geology for development foundations	Low	Very Low
4.1 Degradation, destruction of habitats/ ecosystem and loss of natural vegetation	Low	Very low
4.2 Impact on Floral and Faunal Species of Conservation Concern	Low	Very Low
5.1 Storm water flow and drainage	Medium	Low
6.1 Noise/ vibration	Very Low	Very Low
6.2 Impact on the privacy of adjacent land owners	Low	Low
7.1 Safety and Security	Medium	Low
7.2 Economic opportunities	Positive - Medium	Positive - Medium
7.3 Hygiene	Very Low	Very Low
8.1 Destruction of cultural / heritage sites	Insignifi-cant	Insignifi-cant
9.1 Waste	Very Low	Very Low
9.2 Pressure on existing infrastructure and services	Very Low	Very Low
OPERATIONAL PHASE		
1.1 Alien invasion	Low	Very Low
1.2 Impact on Floral and Faunal Species of Conservation Concern	Low	Very Low
2.1 Noise	Medium	Low
3.1 Job opportunities	High (Positive)	High (Positive)
4.1 Storm water flow and drainage	Medium	Low
5.1 Traffic –vehicles from the residential development.	Medium	Low
6.1 Waste	Medium	Low
6.2 Pressure on existing infrastructure and services	Medium	Low
7.1 Site layout to include servitude to be registered for the Natural Conservation: Juliana's Golden Mole	Medium (Positive)	Medium (Positive)

Alternative 1

The potential impacts for Alternative 1 is similar to that of the proposal with the only exception being the site layout during the operational phase as per the table below.

Table 11: Summary of identified Impacts – Alternative 1

Potential Impacts	Significance rating of impacts	Significance rating of impacts after mitigation
OPERATIONAL PHASE		
7.1 Site layout to exclude servitude to be registered for the Natural Conservation: Juliana's Golden Mole	**Medium**	**Medium**

~~**Alternative 2**~~

No-go (compulsory)

The "No-go" alternative refers to the alternative of not embarking on the proposed project at all and this option would not experience any impacts during the construction or the operational phase.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The impacts of the proposed activities have been summarised under Paragraph 5 above.

For alternative 1:

The impacts of the proposed activities have been summarised under Paragraph 5 above.

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

The proposed township was initially submitted for the development of offices, however, the client's needs have changed and require land for more health related services. In 2018, the Gauteng Department of Health approved a license to develop a facility for approximately 40 beds for rehab purposes including a facility for dialyses.

According to the Terrestrial Ecological Habitat Integrity Investigation the study area is highlighted as preferred habitat for *Neamblysomus julianae* (Juliana's Golden Mole), but due to historic and current anthropogenic activities, especially alien and invasive plant proliferation and vagrants present within the study area makes it highly unlikely for this species to be present.

The study area was specifically investigated and was searched for the presence of tell-tale 'trails' caused by the sub-surface 'swimming' action of *N. julianae* through soft sand. Furthermore, the soil was probed with a thin rod to identify any subterranean burrows.

As the study area is severely degraded and isolated from surrounding natural areas, no *N. julianae* or signs of this species were encountered within the study area and no other faunal SCC were observed.

Should the servitude be registered and habitat conditions are favourable for Juliana's Golden Mole, it is likely that they may start utilising the area.

The proposal as the chosen alternative will possibly contribute to the conservation of *Neamblysomus julianae* (Juliana's Golden Mole), which is endemic to South Africa, more specifically to the Bronberg, and is listed as critically endangered.

7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

Gauteng Spatial Development Framework, 2011

Gauteng Province adopted the Gauteng Spatial Development Framework (GSDF, 2011) as the core policy framework intended to guide decisions relating to the location and nature of physical development in the Province. The GSDF seeks to achieve the following:

- **Creation of a functionally integrated natural open space system and protection of the rural parts of the province for agricultural, recreational (walking and cycling), biodiversity and aquifer management purposes;**
- **The containment of urban sprawl by way of growth management that seeks to advance compaction, residential densification, and in-fill development, and mixed land uses within the existing urban fabric which will promote walking and cycling;**
- **The social and economic integration of disadvantaged communities into the urban system, particularly those on the urban periphery;**
- **The establishment of a hierarchy of nodes coupled with the improvement of linkages and connectivity between these nodes and areas of economic opportunity;**
- **Land use-public transport integration through nodal and corridor development;**
- **The promotion of viable public transport systems and reduction of reliance on private mobility with strong emphasis on densification along the priority public transport routes, especially rail and BRT routes which form the basis of the IRPTN movement system;**
- **Public transport routes become the priority areas for densification and infill development; and**
- **The urban system's existing and proposed road network is used to reinforce and shape the urban form as a growth management tool.**

8. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).	**YES**	NO

If "NO", indicate the aspects that require further assessment before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

- **The privacy of adjacent land users should be ensured throughout the life span of the proposed development.**
- **The presence of archaeological and/or historical sites, features or artefacts is always a possibility. Care should be taken when development commences that if any of the mentioned are discovered, a qualified archaeologist should be called in to investigate**
- **Conclusions and Recommendations contained in specialist studies conducted for this development must be implemented and adhered to.**
- **Mitigation measures contained in the Environmental Management Programme (EMPr) must be implemented and adhered to.**
- **A suitably qualified Environmental Control Officer must be appointed to monitor the construction phase in terms of the EMPr.**
- **All types of waste generated during each stage of the development from site preparation to final construction must be disposed of at a licensed disposal site. No waste must be dumped on open spaces. A proof of disposal at a licensed disposal landfill must be provided.**

9. THE NEEDS AND DESIREBILITY OF THE PROPOSED DEVELOPMENT (as per notice 792 of 2012, or the updated version of this guideline)

The proposed development is situated directly adjacent to the existing Wilgers Hospital. The facility may therefore be able to assist patients directly from the hospital. The development is also a natural extension of the hospital and medical associated uses.

The three renal dialyses units in the proposed development will provide a wider alterative to patients that require dialyses. There is currently only three dialyses centres east of the N1 which may cause long waiting times or inconvenient time slots for patients. The proposed development is also contributing to a more compact city, the clustering of facilities, minimising urban sprawl and the protection of agricultural land on the outskirts of the city.

The site currently enjoys access from Denneboom Road which feeds into Lynnwood Road which is a mobility spine. The proposal is that Denneboom Road be extended in a western direction to link into Albert Road. The extended link will allow for an additional access for the properties which currently obtain access only from Lynnwood via Denneboom Road. The site is also located in close proximity to the Proposed BRT which strives toward the utilisation of public transport and minimising personal transport.

The development of the portion of land may contribute to the full utilisation of the vacant portion of land and contribute to increasing the safety and security of the area with a portion of land being fully utilised. The hospital had to remove vagrants from the portion of land earlier this a year and secure it with a fence to prevent illegal dumping onto the property.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED ***(consider when the activity is expected to be concluded)***

Medium term (2-15 years)

11. EVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) (must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers “Yes” to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPr attached	**YES**

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s) – *(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)*

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
- All relevant sections of the form have been completed.