

BASIC ASSESSMENT REPORT

In terms of Section 24 and 24(D) of NEMA (Act No. 107 of 1998)

for:

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED CLEARANCE OF 10,9205HA OF INDIGENOUS VEGETATION, OF WHICH 62 272M² IS LOCATED WITHIN AN ECOLOGICAL SUPPORT AREA, IN ORDER TO ESTABLISH A SHOPPING CENTRE WITH ASSOCIATED ACCESS AND PARKING ON PORTION 36 AND THE REMAINING EXTENT OF PORTION 216 OF THE FARM ZANDFONTEIN 317, JR, GAUTENG PROVINCE.

GAUT 002/21-22/E3072

Report Date: April 2022



Compiled by:

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Compiled for:

GH DEVCO (Pty) Ltd



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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 1/2022)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This template is current as of April 2022. It is the responsibility of the EAP to ascertain whether subsequent versions of the template 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 must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority (uploaded to the EIA online system) empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application. The EIA online system can be accessed at <https://eia.gauteng.gov.za>.**
- 5.
6. **A copy (PDF) of the final report and attachments must be uploaded to the EIA online system. The EIA online system can be accessed at <https://eia.gauteng.gov.za>.**
7. **Draft and final reports submitted in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) must be emailed to environment@sue@gauteng.gov.za.**
8. 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.
9. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
10. An incomplete report may lead to an application for environmental authorisation or Waste Management License being refused.
11. 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 authorization or Waste Management License being refused.
12. 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 or Waste Management License being refused.
13. The applicant must fill in all relevant sections of this form. Incomplete applications will not be processed. The applicant will be notified of the missing information in the acknowledgement letter that will be sent within 10 days of receipt of the application.
14. 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.
15. 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 Sustainable Utilisation of the Environment (SUE) Branch
P.O. Box 8769
Johannesburg
2000

Ground floor, Umnotho House, 56 Eloff Street, Johannesburg

Administrative Unit telephone number: (011) 240 3051/3052
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.

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 application deals with the establishment of a Shopping Centre that will not be closed within the foreseeable future.

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.


Have State Departments including the competent authority commented?

NO

If no, why?

No comments or responses have been received yet.

Project Title	<i>Environmental Impact Assessment for the proposed clearance of 10,9205ha of indigenous vegetation, of which 62 272m² is located within an Ecological support area, in order to establish a shopping centre with associated access and parking on Portion 36 and the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.</i>		
Competent Authority:	Gauteng Department of Agriculture and Rural Development		
Reference Number:	<u>GAUT 002/21-22/E3072</u>		
Assigned Officer	Not Available yet		
Project applicant:	GHDEVCO PROPRIETY LIMITED		
Contact person:	Mr Gert Hooghiemstra		
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Environmental Assessment Practitioner (EAP):	Mr. JP de Villiers of AB Enviro consult cc		
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Professional affiliation(s) (if any)	EAP-EAPASA (2019-808)		

Report compiled by: Mr J. P. de Villiers

Signature:
Report reviewed by: Mrs Hannie du Plooy
Signature: <i>JE du Plooy</i>

EXECUTIVE SUMMARY

The land owner, **GHDEVCO PROPRIETY LIMITED** has appointed **AB Enviro Consult CC**, an independent environmental consultancy, to undertake an Environmental Impact Assessment for the proposed clearance of 10,9205ha of indigenous vegetation, of which 62 272m² is located within an Ecological support area, in order to establish a shopping centre with associated access and parking on Portion 36 and the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.

According to the Screening Report generated, using the National Web Based Environmental Screening Tool, the site is located within the Gauteng Provincial Environmental Management Framework (GPEMF) Zone 1 and partially in Zone 5. According to the Gauteng C-Plan, an area of 62 272m² is located within an Ecological Support area. As Activity 12(h)(vi) of GN. R 324 of 7 April 20217 is not excluded in EMZ 1, an application for Environmental Authorization will have to be applied for as question 15 in the frequently asked questions, on the Gauteng website is answered as follows:

“Where a development triggers activities that are excluded in terms of the Standard, as well as activities that are not excluded in terms of the Standard, the Standard will not apply and an EA process will need to be followed. In order for the Standard to apply all the activities that are triggered need to be excluded by the Standard and need to take place in Zones 1 and/or 5 of the Standard.”

The detailed environmental assessment for the proposed development, has not found any environmental impacts that *cannot* be mitigated to acceptable and manageable levels.

This **Proposal** entails the establishment a shopping centre with associated access and parking on Portion 36 and the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province. The development is planned to be a Phased development with Phase 1 being the development of a Shopping centre with associated access and parking on Portion 36 and Phase 2 being the development of a shopping centre with associated access and parking on the Remaining Extent of Portion 216.

The Alternative considered entails the establishment of a shopping centre with associated access and parking on Portion 36 (phase 1) and a high density residential development on the Remaining Extent of Portion 216 (Phase 2). This option is considered to be a viable option as an Alternative as there is a housing shortage in the area. The developer intends to revert to this option should it prove to be more viable in future. In this assessment, both options have been considered.

Tshwane Metropolitan Municipality's SDF highlights the fact that retail is one of the most dynamic urban land uses or activities of our cities, towns and rural areas. The retail sector is a significant catalyst for urban development in Tshwane. Shopping centers have influenced and changed the spatial direction in many areas. The demand for retail space is mainly driven by consumer characteristics and profiles, population numbers and growth, and the level of disposable income per subarea. In addition, the success of the retail sector is very much a function of economic conditions on the macro and micro level, changes in shopping behavior, new retail formats, changes in the rest of the urban environment, as well as shopper preferences. Lifestyles play an important role in what goods and services consumers purchase.

The site has excellent visibility from the R514 (Hermanstad/Van der Hoff Road). The (R514) Retail/Commercial and Industrial development corridor accommodates approximately 15,000

workers, of which 62% are industrial/commercial workers and 14% retail workers. This area is regarded as the twelfth largest job opportunity node in Tshwane. Most of the activities, especially retail are taking place to the East of the R55 (Dense level of activity). Other businesses along this road are automotive related, chicken farms and nurseries. The proposed site is located in a developing node. Buses and taxis currently drive past the site. The planned PWV9 freeway could have positive spin-offs for the envisaged retail development when it materializes. The proposed and currently underway residential developments could be expected to increase the market for the planned centre.

The R514 is a retail corridor especially to the East. The retail that is currently interacting with the R514 traffic have poor or complicated access from the R514. Therefore, this retail development should have good micro access from the R514. The opinion is being held that the proposed development will strengthen the retail sector within the area, due to the provision of a shopping centre within the urban area.

The ground surface is highly disturbed, and the presence of historic works, excavations, fill and foundations were identified. The 1:50 000-scale topographical sheet indicates historic excavations across the majority of Portion 36. The 1:50 000-scale geological sheet indicates historic workings (mainly sand and clay pits) towards the south of the sites of interest. The 1:50 000-scale geological sheet indicates structures on PTN36 with notes on an historic brick works present on Portion 36. The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on Portion 36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.

Considering the special site conditions with reference to 1) historic workings, 2) remanence of infrastructure and foundations, 3) presence of significant uncontrolled and un-engineered backfill and restricted accessibility, the following are recommended:

a) It will be in the best interest of the client and role-players to conduct an infill geotechnical investigation to establish the vertical and lateral extent of the expected and partially identified fill region towards the centre portion of the investigated area (currently assigned Zone II), once the site is accessible/trafficable.

The need for a waste classification study was triggered by the phase 1 shallow soil engineering geological assessment that was conducted. During the evaluation, fly-Ash and Slag fill were encountered at four of the nine test pits. The report indicated that the material could be hazardous and should be analysed. A Specialist was appointed to conduct a waste classification and the results were as follows:

“Additional analyses performed on the sampled material indicate that all three samples have the potential to generate acid. Considering the rock classification, both the Ash and G5 Ash classify as Type I rock, which is potentially acid-forming, while the Slag has moderate acid-forming potential.

When the results were compared to the NPR screening criteria, all the samples were likely to generate AMD. The material should be removed and disposed of at a suitable licenced site (GLB+). The waste has been classified as Type 3 waste.”

As mentioned above, Slag, Ash and G5 Ash has been dumped on the site and has the potential to generate acid that could potentially pollute the soil and ground water of the area. If the development is approved, these waste materials will be removed to a suitable waste site where it will be contained.

An earth shaped stormwater channel currently runs through the property entering the South Western corner of the property and exit close to the North Eastern corner, discharging into the road reserve. The natural slope of the remainder of the proposed development drains towards the North Eastern corner. The closest Tshwane council stormwater infrastructure is a low point concrete outlet structure, connected to a 1050dia pipe located in the City of Tshwane road reserve between Van Der Hoff Road & Malie Street on the North Eastern corner of development.

The existing earth shaped stormwater channel will have to be re-routed in a controlled manner along the Western boundary line to discharge into Gautrans road reserve. The material, construction and testing of the storm water drainage system will comply with the SABS 1200 specifications.

Vegetation at the site is **extensively disturbed**, modified and at some places transformed. A mixture of alien invasive and indigenous plant species exists at the site. Threatened and Near Threatened animal and plant species appear to be absent. Other animal or plant species of particular conservation concern also appear to be absent at the site.

No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were found in the study & development area during the assessment

The activity is listed in terms of the Regulations (in force since 4 December 2014) in terms of Section 24(M) and 44 made under section 24(5) of the National Environmental Management Act (NEMA) 1998 (Act 107 of 1998) as amended and published in Government Notice No. R 326 of 2017. The proposed development triggers the following regulations and listed activities:

Number and date of the relevant notice:	Activity No and Activity Description (in terms of the relevant notice)	Describe each listed activity as per project description	Time for construction to be completed applied for
GN. R 327, 7 April 2017	27	The clearance of 10,9205ha of indigenous vegetation for the proposed establishment of a shopping centre with associated access and parking	10 Years
GN. R 324, 7 April 2017	12(c)(ii)	Clearance of 62 272m ² of indigenous vegetation located within an Ecological support area as identified in the Gauteng conservation plan.	10 Years

The purpose of the study is therefore to determine the impacts that the environment may have on the proposed activity, as well as the possible impacts that the activity may have on the environment.

The study is being conducted according to normal scientific practices. A theoretical background review was compiled for the different variables by using available information from the literature. Field verification was undertaken and visits paid to the site to gather further information and/or to verify information. It also includes the identification of *key interest groups*, both governmental and non-governmental, and to establish good lines of communication. Specialist studies were undertaken to determine the impacts on sensitive areas and to determine whether the proposed project can be sustainably implemented. The specialists will also advise on mitigation measures where applicable.

1. INTRODUCTION

The land owner, **GHDEVCO PROPRIETY LIMITED** has appointed **AB Enviro Consult CC**, an independent environmental consultancy, to undertake an Environmental Impact Assessment for the proposed clearance of 10,9205ha of indigenous vegetation of which 62 272m² is located within an Ecological support area in order to establish a shopping centre with associated access and parking on Portion 36 and the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.

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Tshwane Metropolitan Municipality’s SDF highlights the fact that retail is one of the most dynamic urban land uses or activities of our cities, towns and rural areas. The retail sector is a significant catalyst for urban development in Tshwane. Shopping centers have influenced and changed the spatial direction in many areas. The demand for retail space is mainly driven by consumer characteristics and profiles, population numbers and growth, and the level of disposable income per subarea. In addition, the success of the retail sector is very much a function of economic conditions on the macro and micro level, changes in shopping behavior, new retail formats, changes in the rest of the urban environment, as well as shopper preferences. Lifestyles play an important role in what goods and services consumers purchase.

1.1 THE BASIC ASSESSMENT PROCESS

The purpose of this document is to adhere to the requirements for compilation of Basic Assessment Reports as amended and published in Government Notice R. 326 of 7 April 2017, Appendix 1, and the National Environmental Management Act (Act 107 of 1998) (NEMA).

1.2 DESCRIPTION OF THE PROCESS FOLLOWED

In order to assess a proposed development it is important to take into consideration the principles of NEMA. These principles are outlined in Chapter 1 and read as follows:

- 1) *“The principles set out in this section apply throughout the Republic to the actions of all organs of state that may significantly affect the environment and—*
 - a. *shall apply alongside all other appropriate and relevant considerations, including the State’s responsibility to respect, protect, promote and fulfil the social and economic rights in Chapter*

- 2 of the Constitution and in particular the basic needs of categories of persons disadvantaged by unfair discrimination;*
- b. serve as the general framework within which environmental management and implementation plans must be formulated:*
 - c. serve as guidelines by reference to which any organ of state must exercise any function when taking any decision in terms of this Act or any statutory provision concerning the protection of the environment;*
 - d. serve as principles by reference to which a conciliator appointed under this Act must make recommendations; and*
 - e. guide the interpretation administration and implementation of this Act, and any other law concerned with the protection or management of the environment.*
- 2) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.*
- 3) Development must be socially, environmentally and economically sustainable.*
- 4) (a) Sustainable development requires the consideration of all relevant factors including the following:*
- (i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied:*
 - (ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
 - (iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;*
 - (iv) that waste is avoided. or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;*
 - (v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;*
 - (vi) that the development use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;*
 - (vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and*
 - (viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.*

- (b) *Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.*
- (c) *Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.*
- (d) *Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.*
- (e) *Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.*
- (f) *The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation and participation by vulnerable and disadvantaged persons must be ensured.*
- (g) *Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognizing all forms of knowledge, including traditional and ordinary knowledge.*
- (h) *Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.*
- (i) *The social, economic and environmental impacts of activities, including disadvantages and benefits must be considered, assessed and evaluated and decisions must be appropriate in the light of such consideration and assessment.*
- (j) *The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.*
- (k) *Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.*
- (l) *There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.*
- (m) *Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.*
- (n) *Global and international responsibilities relating to the environment must be discharged in the national interest.*

- (o) *The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.*
- (p) *The costs of remedying pollution, environmental degradation consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.*
- (q) *The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.*
- (r) *Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure."*

The above mentioned principals and the applicable legislation, Policies and Guidelines as described in Paragraph 5 of this Report were taken into account in the assessment of the Environmental Impacts for the proposed development. The process followed can be described as follows:

- 1) The EAP was contracted by **GHDEVCO PROPRIETY LIMITED** as their Independent Environmental Assessment Practitioner.
- 2) A **Geo-Technical Engineer** was appointed to assess the suitability of the site in terms of geological features.
- 3) The **Civil Engineer** was appointed to determine the capability of existing infrastructure to be linked to proposed development and available bulk services.
- 4) A **Heritage Specialist** has been appointed to determine the possible impact of the development on Archaeological and Cultural features.
- 5) A **Botanical specialist** has been appointed to determine the impact of the proposed development on the Fauna and Flora of the area.
- 6) An **Economical Feasibility study** was conducted to determine the need for the proposed development.
- 7) A Specialist was appointed to conduct a **Waste Classification**. The need for a waste classification was triggered by a phase 1 shallow soil engineering geological assessment conducted. During the evaluation, fly-Ash and Slag fill were encountered at four of the nine test pits. The report indicated that the material could be hazardous and should be analysed.
- 8) An Environmental Screening Process was conducted by the EAP to ensure that all the relevant Environmental Legislation is taken into consideration.
- 9) Desk top studies were conducted and alternatives assessed.
- 10) Site inspections were carried out to verify the outcomes of the desktop studies, and the preferred alternative defined.
- 11) A full Public Participation Process is being followed to obtain inputs from interested and affected parties.

- 12) All the information obtained from the above mentioned processes is being used to assess the Environmental Impact that the proposed development may have on the Environment and vice versa.
- 13) The inputs from Specialists, interested and affected parties, together with the knowledge of the EAP is being used to determine measures to avoid, mitigate and manage potential impacts. These measures are described in the Environmental Management Programme.

1.3 ASSESSMENT PHASE

The assessment phase included the necessary investigations to assess the suitability of the identified site and its surrounding environment, for the development proposal. The assessment phase described the “status quo” of the bio-physical, social, economic and cultural environment, and identifies the anticipated environmental aspects associated with the proposed development. The assessment phase included the identification of *key interest groups*, (both government and non-government), and strived to establish efficient and effective communication. Identifying and informing Interested and affected parties of the proposed development may have an impact on the focus of the EIA. (S. Cliff, 2015).

This phase also determines the *significance of the impact* of the proposed activity on the surrounding Environment. During this phase, a Basic assessment Report (BAR) is compiled, and, following public review, is submitted to the approving authority – the GDARD.

The purpose of the Basic Assessment Report is to document the outcome of the Assessment Phase of the project. The report fulfilled the requirements of the EIA Regulations (2014) for the documentation of the Basic Assessment Process. The Report was compiled in accordance with Section 21(3) of NEMA’s 2014 EIA Regulation (GN R. 982) as amended and published in Government Notice R. 326 of 7 April 2017.

1.4 OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

The objective of the basic assessment process is to, through a consultative process-

- (a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- (b) identify the alternatives considered, including the activity, location, and technology alternatives;
- (c) describe the need and desirability of the proposed alternatives;
- (d) through the undertaking of an impact and risk assessment process, inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine—
 - (i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
 - (ii) the degree to which these impacts—
 - (aa) can be reversed;
 - (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated;

- (cc) can be avoided, managed or mitigated; and
- (e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—
 - (i) identify and motivate a preferred site, activity and technology alternative;
 - (ii) identify suitable measures to avoid, manage or mitigate identified impacts; and
 - (iii) identify residual risks that need to be managed and monitored.

1.5 SCOPE OF ASSESSMENT AND CONTENT OF BASIC ASSESSMENT REPORTS

The BAR assesses those identified potential environmental impacts and benefits (direct, indirect and cumulative impacts) associated with the project design, construction, and operation phases, and recommends appropriate mitigation measures for potentially significant environmental impacts. The Environmental impacts are assessed both before and after mitigation to determine:

- The significance of the impact despite mitigation; and
- The effectiveness of the proposed mitigation measures.

The BAR addresses potential environmental impacts and benefits associated with all phases of the project, including design, construction and operation, and aims to provide the environmental authorities with sufficient information to make an informed decision regarding the proposed project.

Table 1 below provides a summary of the legislative requirements in terms of a Basic Assessment Report as stipulated in Section 23 of the 2014 EIA Regulation (GN R. 982) as amended and published in Government Notice R. 326 of 7 April 2017. Cross-references are provided in terms of the relevant section within this BA Report where the NEMA and BA Report requirements have been addressed.

Table 1: Basic Assessment Report content as per Section 23 of NEMA’s 2014 EIA Regulation (GN R. 982) as amended and published in Government Notice R. 326 of 7 April 2017 Appendix 1.

3. (1) *A basic assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include:*

Section of the EIA Regulations, 2014	Description of EIA Regulations Requirements for Basic Assessment Reports
Appendix 1, section 3 (a)	Details of the EAP who prepared the report; and the expertise of the EAP;
Appendix 1, section 3 (b)	The location of the development footprint of the activity on the approved site as contemplated in the accepted scoping report, including – <ul style="list-style-type: none"> (i) The 21 digit Surveyor General code of each cadastral land parcel; (ii) Where available, the physical address and farm name; (iii) Where the required information in items (i) and (ii) is not available, coordinates of the boundary of the property or properties
Appendix 1, section 3 (c)	A plan which locates the proposed activity or activities applied for, at an appropriate scale, or, if it is – <ul style="list-style-type: none"> (i) A linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or (ii) On land where the property has not been defined, the coordinates within which the activity is to be undertaken;
Appendix 1, section 3 (d)	A description of the scope of the proposed activity, including – <ul style="list-style-type: none"> (i) all listed and specified activities triggered and being applied for; and (ii) a description of the activities to be undertaken including associated structures and infrastructure;
Appendix 1, section 3	A description of the policy and legislative context within which the development is

Section of the EIA Regulations, 2014	Description of EIA Regulations Requirements for Basic Assessment Reports
(e)	<p>proposed including</p> <p>(i) an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report; and</p> <p>(ii) how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks, and instruments explanation of how the proposed development complies with and responds to the legislation and policy context</p>
Appendix 1, section 3 (f)	A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location.
Appendix 1, section 3 (g)	a motivation for the preferred site, activity and technology alternative
Appendix 1, section 3 (h)	<p>A full description of the process followed to reach the proposed preferred alternative within the site, including-</p> <p>(i) Details of all alternatives considered;</p> <p>(ii) Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;</p> <p>(iii) A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;</p> <p>(iv) The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;</p> <p>(v) The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration, and probability of the impacts, including the degree to which the impacts-</p> <p>(aa) can be reversed;</p> <p>(bb) may cause irreplaceable loss of resources; and</p> <p>(cc) can be avoided, managed, or mitigated.</p> <p>(vi) The methodology used in deterring and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;</p> <p>(vii) Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographic, physical, biological, social, economic, heritage and cultural aspects;</p> <p>(viii) The possible mitigation measures that could be applied and level of residual risk;</p> <p>(ix) the outcome of the site selection matrix</p> <p>(x) If no alternatives, including alternative footprints for the activity were investigated, the motivation for not considering such and;</p> <p>(xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity.</p>
Appendix 1, section 3 (i)	<p>A full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including-</p> <p>(i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and</p>

Section of the EIA Regulations, 2014	Description of EIA Regulations Requirements for Basic Assessment Reports
	(ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;
Appendix 1, section 3 (j)	<p>An assessment of each identified potentially significant impact and risk, including-</p> <p>(i) cumulative impacts;</p> <p>(ii) the nature, significance and consequences of the impact and risk;</p> <p>(iii) the extent and duration of the impact and risk;</p> <p>(iv) the probability of the impact and risk occurring;</p> <p>(v) the degree to which the impact and risk can be reversed;</p> <p>(vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and</p> <p>(vii) the degree to which the impact and risk can be mitigated;</p>
Appendix 1, section 3 (k)	Where applicable, a summary of the findings and recommendations of any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final assessment report;
Appendix 1, section 3 (l)	<p>An environmental impact statement which contains-</p> <p>(i) a summary of the key findings of the environmental impact assessment;</p> <p>(ii) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and</p> <p>(iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;</p>
Appendix 1, section 3 (m)	Based on the assessment, and where applicable, recommendations from specialist reports, the recording of proposed impact management outcomes for the development for inclusion in the EMPr
Appendix 1, section 3 (n)	Any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation
Appendix 1, section 3 (o)	A description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed
Appendix 1, section 3 (p)	A reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation
Appendix 1, section 3 (q)	Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required and the date on which the activity will be concluded and the post construction monitoring requirements finalised
Appendix 1, section 3 (r)	<p>An undertaking under oath or affirmation by the EAP in relation to-</p> <p>(i) The correctness of the information provided in the report;</p> <p>(ii) The inclusion of the comments and inputs from stakeholders and interested and affected parties; and</p> <p>(iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and</p> <p>(iv) Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties.</p>
Appendix 1, section 3 (s)	Where applicable, details of any financial provision for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts.
Appendix 1, section 3 (t)	Any specific information that may be required by the competent authority.
Appendix 1, section 3 (u)	Any other matters required in terms of section 24(4)(a) and (b) of the Act

1.6 ASSUMPTIONS, UNCERTAINTIES, LIMITATIONS AND GAPS IN KNOWLEDGE:

This report is based on current available information and, as a result, the following limitations and assumptions are implicit –

The report is based on the *project description* provided by the Applicant as a result of reports that was compiled by the following Specialists:

- A **Geo-Technical Engineer** was appointed to assess the suitability of the site in terms of geological features
- A **Civil Engineer** has been appointed to determine the availability of services and the layout of the development
- A **Heritage Specialist** has been appointed to determine the possible impact of the development on Archaeological and Cultural features.
- An **Ecologist Specialist** has been appointed to determine the impact of the proposed development on the Fauna and Flora of the area.
- An **Economical Feasibility Study** was conducted to determine the need for the proposed development.
- An Engineer was appointed to conduct a **Traffic Impact Assessment** to determine the impact of the proposed development on the existing road infrastructure of the area.
- A Specialist was appointed to conduct a **Waste Classification**.
- An Environmental Screening Process was conducted by the EAP to ensure that all the relevant Environmental Legislation is taken into consideration.
- Desktop studies were conducted and alternatives assessed.

Descriptions of the biophysical and social environments are based on specialist fieldwork, investigations, and the Public Participation Process.

2. DETAILS AND EXPERTISE OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

AB Enviro Consult (CC) is a registered consultancy, owned and operated as an independent unit by the registered owner and consultant: **Prof. A.B. de Villiers**

- **Mr J.P. De Villiers** joined the consultancy during 2004
- **Mrs J.E. du Plooy** is a consultant since 2001

Over a period of 26 years (1996-2022) this consultancy has successfully applied for, and obtained positive ROD's and EA's for more than 380 projects. Environmental Control Officer's duties are also performed on various projects.

Mr. JP de Villiers holds a M.Sc. in Geography from the North West University's Department of Geography and Environmental Management. He started as a junior EAP in 2004 with AB Enviro Consult and was promoted in 2007 to senior EAP. During 2011 he was appointed as the Manager of the North West University, EIA Pro-Bono Office. This office is an initiative of, and funded by, the DEA. (This was a three year contract between DEA and NWU that was extended by one year) As Manager of this office, Mr. de Villiers had the following responsibilities:

- Conduct Environmental Impact Assessments for municipalities on a pro-bono basis.
- Provide environmental management training to North West Municipalities.
- Provide environmental assistance to North West Municipalities.
- Undertake research related to Environmental Impact Management within the North West Municipal Context.
- Marketing for stakeholder 'pro-bono' expert donations.
- Marketing for corporate 'pro-bono' funding.

As EAP, Mr. de Villiers has been directly involved in obtaining 308 Environmental Authorizations and has performed the duties of Environmental Control Officer (ECO) for 32 developments. His responsibilities as Senior EAP includes the following:

Duties pertaining to Basic Assessments, EIA and Scoping and Section 24 G Applications:

- Marketing and communication with clients
- Communication with authorities, source and analyse relevant baseline information and undertake site inspections
- Compile Environmental Application Form for the project and submit to the authorities
- Compile an *information requirements list* that is distributed to the project team. The Information required would assist with completion of the Report.
- Identify key interested and affected parties (I&APs)
- Compilation of terms of reference for specialist studies
- Commission specialist studies
- Compile and publish media notices in relevant newspapers
- Compile and place poster/s along the boundary of the site
- Hold a public meeting / Open House / focus meeting with I&APs

- Receive and address comments from public
- Undertake assessment phase by assessing and evaluating potential impacts identified.
- Review and manage specialist studies.
- Compile and distribute Draft Reports (Including Environmental Management Programmes)
- Should the Reports require substantial changes, these changes are incorporated into the final reports and distributed
- Address comments received on the final Report, finalise Report and submit to authorities
- Once the decision is issued, all I&Ps are formally informed of the decision

Duties pertaining to Environmental Control Officer

- Preparation (Compilation) and submission of Environmental Control Document.
- Training of and leasing with the Engineers Representative.
- Communicate with the Contractor.
- A monthly visit to the site during the construction period. Should any Environmental incident occur, an immediate site visit is undertaken.
- Monitoring and auditing according to the approved EMP and EA.
- Compilation of a written audit report for each site visits during the construction phase
- Liaising with the Compliance section of the Competent Authority

ACADEMIC AND PROFESSIONAL QUALIFICATIONS PROF DE VILLIERS

Post–Matric Qualifications

<u>YEAR</u>	<u>Qualification</u>	<u>Institution</u>	<u>Field of Study</u>
1968	B.Sc.	PU FOR CHE	Geography, Geology
1970	HONNS. B.Sc.	PU FOR CHE	Soil Science
1974	M.Sc.	PU FOR CHE	Geography
1981	Ph.D.	UOFS	Geography

ACADEMIC AND PROFESSIONAL QUALIFICATIONS MR J.P. DE VILLIERS

<u>YEAR</u>	<u>Qualification</u>	<u>Institution</u>	<u>Field of Study</u>
1993	BA	PU FOR CHE	Geography, Economics
1994	HED	PU FOR CHE	Geography Economics
2006	B.Sc.(Honns) Cum Laude	North-West University	Environmental Management
2007	M.Sc.	North-West University	Geography

PROFESSIONAL QUALIFICATIONS AND REGISTRATIONS

<u>YEAR</u>	<u>Qualification/ Registration</u>	<u>Institution</u>	<u>Field of Study</u>
2008	Basic Principles of Ecological Rehabilitation and Mine Closure	Centre for Environmental Management (North West University)	Ecological Rehabilitation
2019	Registered as Environmental assessment Practitioner	EAPASA Registration number: 2019/808	

2020-2022	International Association for impact assessment South Africa (IAIASA)	IAIASA Member	
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ACADEMIC AND PROFESSIONAL QUALIFICATIONS MRS J.E. DU PLOOY

<u>YEAR</u>	<u>Qualification</u>	<u>Institution</u>	<u>Field of Study</u>
1999	BA	PU FOR CHE	Geography, Tourism
2000	BA (Honns) Cum Laude	PU FOR CHE	Geography
2003	Master's degree in Environmental Management	PU FOR CHE	Environmental Management
2001	Aquabase Intro	AQUABASE	Hydrology
2001	Geomedia Professional	INTERTECH	GIS
2001	Map Info	SPATIAL TECHNOLOGY	GIS
2019	Registered as Environmental assessment Practitioner	EAPASA Registration number: 2019/1573	
2020-2022	International Association for impact assessment South Africa (IAIASA)	IAIASA Member	

3. DESCRIPTION OF THE ACTIVITY

This proposed development entails the clearance of 10,9205ha of indigenous vegetation, of which 62 272m² is located within an Ecological Support Area, in order to establish a shopping centre. The development is planned to be a Phased development with Phase 1 being the development of a Shopping centre with associated access and parking on Portion 36 and Phase 2 being the development of a shopping centre with associated access and parking on the Remaining Extent of Portion 216.

The Alternative considered entails the establishment of a shopping centre with associated access and parking on Portion 36 (phase 1) and a high density residential development on the Remaining Extent of Portion 216 (Phase 2). This option is considered to be a viable option as an Alternative as there is a housing shortage in the area. The developer intends to revert to this option should it prove to be more viable in future. In this assessment, both options has been considered.

Please see Figure 1 for a copy of the proposed Layout plan and Figure 2 and 3 for an artist's impression of the proposed development. The following development parameters are proposed:

Phase 1	
Description	Area in square meters
SHOP 01	1578 m ²
SHOP 02 (LIQUOR STORE)	149 m ²
SHOP 03	149 m ²
SHOP 04 (ATM)	9 m ²
SHOP 05	139 m ²
SHOP 06 (SLEEPMASTERS)	111 m ²
SHOP 07 (PHARMACY)	523 m ²
SHOP 08	50 m ²
SHOP 09	398 m ²
SHOP 10 (PEP HOME)	249 m ²
SHOP 11	128 m ²
SHOP 12 (ATM)	9 m ²
SHOP 13 (RUSSELS)	350 m ²
SHOP 14 (PEP)	350 m ²
SHOP 15	199 m ²
SHOP 16 (PEP CELL)	50 m ²
SHOP 17 (ACKERMANS)	378 m ²
SHOP 18 (SPAR)	1 800 m ²
SHOP 19 (LIQUOR STORE)	298 m ²
SHOP 20 (HARDWARE)	1 370 m ²
DRIVE THRU 01	225 m ²
DRIVE THRU 02	305 m ²
TOTAL GROSS LEASABLE AREA	8 817 m²
PARKING PROVIDED	575 Parking Bays
Phase 2	
Description	Area in square meters
SHOP 101	669 m ²
SHOP 102	298 m ²
SHOP 103	423 m ²
SHOP 104	50 m ²
SHOP 105	423 m ²
SHOP 106	447 m ²
SHOP 107	448 m ²
SHOP 108	199 m ²

SHOP 109	199 m ²
SHOP 110	199 m ²
SHOP 111 (ATM)	9 m ²
SHOP 112	3184 m ²
SHOP 113	520 m ²
SHOP 114	197 m ²
SHOP 115	199 m ²
SHOP 116	527 m ²
SHOP 117	199 m ²
SHOP 118	199 m ²
SHOP 119	398 m ²
SHOP 120	100m ²
SHOP 121	398 m ²
SHOP 122	249 m ²
SHOP 123	249 m ²
SHOP 124	249 m ²
SHOP 125	448 m ²
SHOP 126	439 m ²
SHOP 127 (ATM)	9 m ²
SHOP 128	1168 m ²
SHOP 129	476 m ²
SHOP 130	50 m ²
SHOP 131	471 m ²
TOTAL GROSS LEASABLE AREA	12 988 m²
PARKING PROVIDED	788 Parking Bays
TOTAL GROSS LEASABLE AREA FOR PHASE 1 AND 2	21 805 m²
TOTAL PARKING PROVIDED FOR PHASE 1 AND 2	1 363 Parking Bays

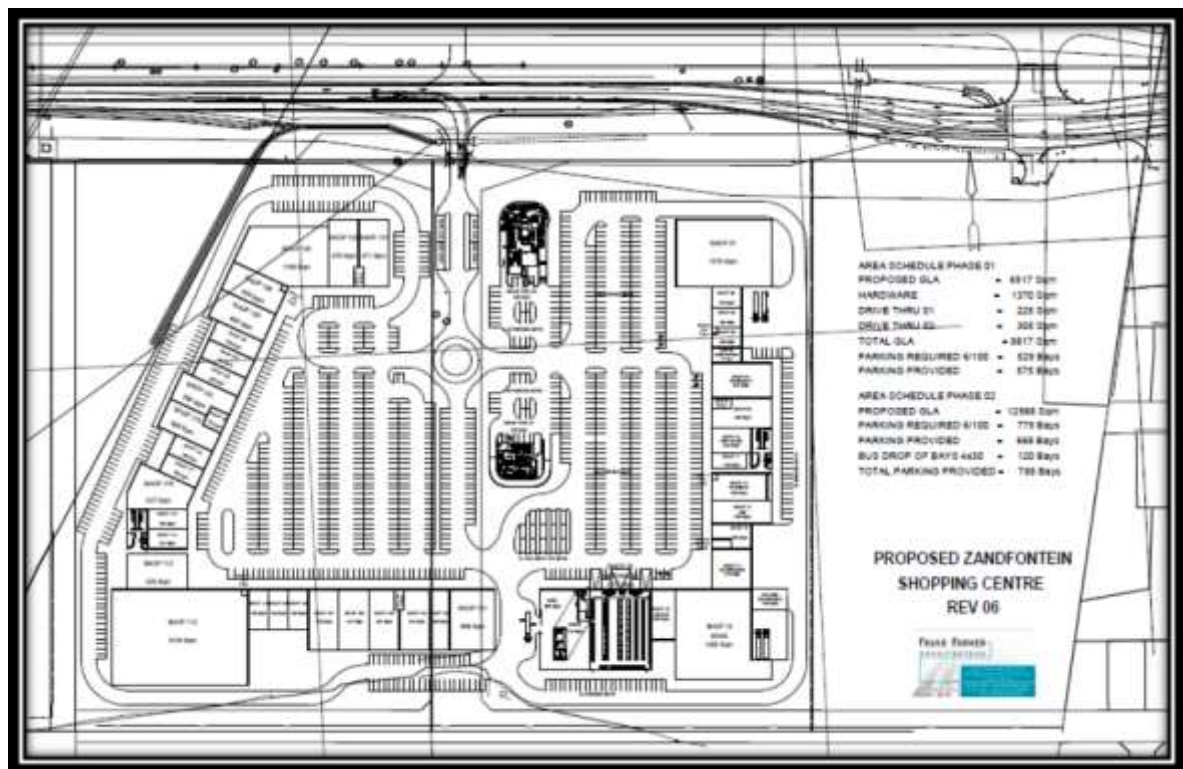


Figure 1: Proposed layout plan

3.1 BULK SERVICES

3.1.1 ROADS

3.1.1.1 Existing roads

The nearest road, constructed to the local authority (Gautrans) standards is Van Der Hoff road, situated on the Northern boundary of the development.

3.1.1.2 Proposed new infrastructure

It is proposed that the property obtain access from Van Der Hoff Road on the Northern boundary of the property. The proposed new access road towards the development with the relevant road upgrades will be determined by Gautrans based on the traffic impact study conducted by an appointed traffic engineer. The necessary approvals to construct the proposed access have been granted by the applicable authorities. See letter of approval below.



Roads and Transport Department Transportation Planning Division

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My ref: V10/1/2/1-Z1(Ptn 36&206)
Your ref: C2963/01AS
Contact person: Glacia Khumalo
Section: Intelligent Transport System and Traffic Engineering

Tel: 012 358 3421
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Email: glaciat@tshwane.gov.za

Civil Concepts (Pty) Ltd
PO Box 36148
Menlo Park
0102
Fax No.: 012 460 0005
mail@civilconcepts.co.za

07 September 2021

Dear Sir/Madam

ACCESS STUDY FOR THE RETAIL DEVELOPMENT TO BE LOCATED ON PORTIONS 36 AND 216 OF THE FARM ZANDFONTEIN 317-JR

Access study dated June 2021 prepared by Civil Concepts refers.

A. COMMENTS BY TRAFFIC IMPACT ASSESSMENT MANAGEMENT SUB-SECTION:

Glacia Khumalo (glaciat@tshwane.gov.za, 012 358-3421)

The Traffic Impact Assessment Report prepared by Civil Concepts Consulting Engineers dated November 2019, received July 2021 refers:

CONDITIONS TO BE COMPLIED WITH PRIOR TO PROMULGATION

1. SPECIFIC CONDITIONS OF APPROVAL

1.1 The land use rights must be limited to the following and must be included in the Annexure T before approval of this application:

1.1.1 Industrial 1: Retail Centre limited to 9 538 m²

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE APPROVAL OF ANY SITEDEVELOPMENT PLAN(S)

2. GENERAL CONDITIONS OF APPROVAL

2.1. Access Aspects

Roads and Transport • Paal en Vervoer • Lefapha le Ditsele le Dipalanga • Umnyango wezevela nezakuThutha • Igare ye Ditsele le Dinamela • Makhaha wa Vhuvani na Ditsele • Ndzawala ya Magonzo na Vutlanti • Umnyango Wezemigwaga Nezithuthi

ACCESS STUDY FOR THE RETAIL DEVELOPMENT TO BE LOCATED ON PORTIONS 36 AND 216 OF THE FARM ZANDFONTEIN 317-JR

2.1.1 Access to the site/development will be taken along new Link Road 100m away from its intersection with Van Der Hoff Road, and must be to the satisfaction of the City of Tshwane (CoT).

CONDITIONS TO BE COMPLIED WITH PRIOR TO THE ISSUING OF AN OCCUPATION CERTIFICATE

2.2. Road Upgrades

2.2.1 The proposed roads improvements discussed under section 9 of the report must be implemented at the applicant's own cost as follows:

2.2.1.1 Construct a new access road intersecting with Van Der Hoff Road R514 to form a new signalised junction. The intersection layout must be implemented as follows:

- **On the Eastern Approach:** Provide a left-turn slip of 60m storage length, a through lane with 120m storage length, and 120m long receiving lane.
- **On the Southern Approach:** Construct the southern leg of the T-junction i.e. Provide a left-turn lane, a right turn lane and a receiving.
- **On the Western Approach:** Provide exclusive right-turning lane of 60m storage length, an additional through lane of 120m storage length and left-turn slip of 60m storage length, a through lane of 120m long, and 120m long receiving lane.

2.2.2 All road infrastructure upgrades to roads under the jurisdiction of the CoT must be according to relevant, approved municipal standards.

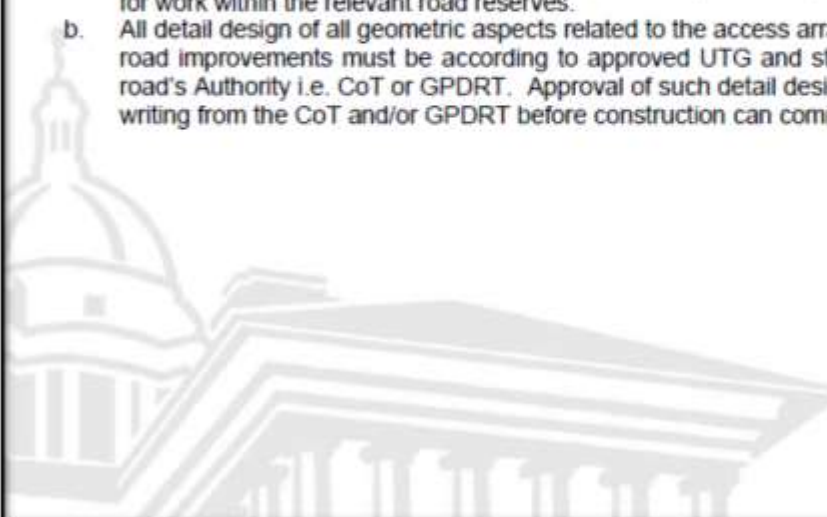
2.2.3 The applicant will be responsible to obtain any additional land to increase existing road reserve width that may be required for the provision of new roads or transportation infrastructure applicable to this development.

2.2.4 Road upgrades identified must be designed and constructed to the requirements and specifications of the relevant roads authority under which jurisdiction the specific route reserves.

2.3 Way Leaves

2.3.1 Before any construction work of whatever nature will be allowed, the following is to be obtained by the Developer:

- a. Way-leave approval from the metropolitan (CoT) and provincial (GPDRT) roads authorities for work within the relevant road reserves.
- b. All detail design of all geometric aspects related to the access arrangements and external road improvements must be according to approved UTG and standards of the relevant road's Authority i.e. CoT or GPDRT. Approval of such detail designs must be obtained in writing from the CoT and/or GPDRT before construction can commence.



ACCESS STUDY FOR THE RETAIL DEVELOPMENT TO BE LOCATED ON PORTIONS 36 AND 216 OF THE FARM ZANDFONTEIN 317-JR

2.4 Conditions for Land Use Applications

2.4.1 In addition to any other applicable road and transport infrastructure upgrades, the following facilities must be provided:

2.4.1.1 All loading and off-loading activities must take place on site and turning facilities for delivery vehicles must also be provided on site.

2.4.1.2 On-site parking, with sufficient manoeuvring space must be provided at the ratios as per Tshwane Town Planning Scheme, 2008, revised 2014 and it remains the responsibility of the applicant / land owners to ensure that sufficient parking is available on site. Should insufficient parking be available, additional parking must be provided or if not possible the land use must be restricted. All parts of the erf upon which motor vehicles are allowed to move or park must be provided with a permanent dust free surface.

2.4.2 A complete Site Development Plan must be submitted at the cost of the applicant, for approval by this Division, before any building construction may commence. Details regarding access, parking layout, site circulation, loading areas and stormwater drainage must be clearly shown on the Site Development Plan.

2.4.3 No building plans may be approved before a site development plan has been approved by this Division.

2.4.4 A non-removable physical barrier, preventing vehicular and pedestrian movement, must be erected on all the street erf boundaries, the approved accesses excluded.

2.4.5 Existing public and non-motorised transport infrastructure, e.g. cycle and pedestrian facilities, must be retained or replaced where affected by the proposed road upgrades.

2.5 Other comments

2.5.1 The traffic impact assessment only evaluates the traffic operations and does not evaluate neither the exact access positions nor the geometric designs. Approval of these aspects must be discussed separately with this Division. The approval of the Traffic Impact Study also does not imply that the alignment of any of the proposed roads is approved nor does this letter imply any conditions relating to the change in land-use process.

2.5.2 All internal road works, provision of sidewalks and provision of on-site parking as well as any costs associated with the proposed access to the site will all be for the account of the developer.

2.5.3 The applicant must comply with the access arrangements, parking demand and road upgrades as it will be agreed upon in further engagements between the Council and the developer.



ACCESS STUDY FOR THE RETAIL DEVELOPMENT TO BE LOCATED ON PORTIONS 36 AND 216 OF THE FARM ZANDFONTEIN 317-JR

A. COMMENTS BY TRAFFIC SYSTEMS MANAGEMENT:

Felicia Mbele (feliciamb2@tshwane.gov.za, 012 358-7725)

The study is supported subject to the following conditions:

- A recommended walkway of 1.8m wide or more, must be provided along Van der Hoff (aligning with the upgraded road), and the new Link road (from Van der Hoff intersection all the way to the access), and along the site frontage.
- Safe pedestrian crossing (RPC, pedestrian painted crossing lines, Zebra crossing etc.) is required and must be provided.
- A detailed design drawing for the proposed Traffic circle on the Site layout plan is required.
- Universal access (Pedestrian ramps) must be accommodated, proposed position to be shown on the drawing.

B. COMMENTS BY INTEGRATED TRANSPORT PLANNING:

Lerato Seakamela (leratosea@tshwane.gov.za, 012358 -1461)

The study is supported subject to the following condition:

- The developer must provide Pick up and drop off facilities for taxis on site at their own cost.

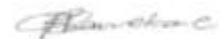
The applicant must engage further and come to an agreement with the Transport Planning Division, Integrated Transport Planning Section of the Transport and Roads Department of the CoT regarding the provision of public transport stated.

C. COMMENTS BY TRAFFIC SIGNALS MANAGEMENT:

Tebogo Lekalakala (tebogole@tshwane.gov.za, 012 358-7632)

- Left turning movement from the southern leg must also be permitted on phase C.

Kind Regards,



Lourens Swanepoel

For: DIVISIONAL HEAD: TRANSPORTATION PLANNING DIVISION

On request, this document can be provided in another official language.

3.1.2. STORMWATER DRAINAGE – Status and technical requirements

3.1.2.1 Existing storm water reticulation

An earth shaped stormwater channel currently runs through the property entering the South Western corner of the property and exit close to the North Eastern corner, discharging into the road reserve. The natural slope of the remainder of the proposed development drains towards the North Eastern corner. The closest Tshwane council stormwater infrastructure is a low point concrete outlet structure, connected to a 1050dia pipe located in the City of Tshwane road reserve between Van Der Hoff Road & Malie Street on the North Eastern corner of development.

No flood lines are situated adjacent any boundary of the proposed township.

3.1.2.2 Proposed new infra-structure

Major Storm water System

The major storm flow will surface flow via the new internal parking area towards the North Eastern boundary of the site, where it will overflow to the lower laying area.

Minor Storm water System

A new proposed internal stormwater piped system will be designed and constructed for the 5 year flood. The internal system will connect to a newly constructed City of Tshwane stormwater pipe within the road reserve, which will convey the stormwater up to the existing 1050dia council stormwater main, situated on the North Eastern corner of the development.

The existing earth shaped stormwater channel will have to be re-routed in a controlled manner along the Western boundary line to discharge into Gautrans road reserve. The material, construction and testing of the storm water drainage system will comply with the SABS 1200 specifications.

The stormwater discharge will depend on the approval of all applicable authorities.

3.1.3 SEWAGE RETICULATION

3.1.3.1 Existing sewer reticulation

Existing 225dia sewer main is located along the Northern boundary line of the development. The pipe is located outside the road reserve, inside the building line & protected by a servitude in favour of the City of Tshwane.

3.1.3.2 Proposed new infrastructure

New 160dia Upvc pipes will be installed on the perimeter of the building to drain towards the existing 225dia council main along the Northern boundary. The proposed new 160dia erf connection will connect to an existing sewer manhole which is located in the lowest North Eastern corner. Council confirmed that the existing network do have sufficient capacity to accommodate the proposed development. Further upgrades will have to be confirmed by City of Tshwane Municipality.

3.1.3.3 Materials and construction

The proposed materials, construction and testing of the sewage reticulation Complies with the SABS 1200 specification.

Sewer pipes and fittings are uPVC Maincore class 400.

Manholes are 1 050 mm internal diameter, precast concrete manholes, constructed of dolomite aggregate (SABS 1294), with step irons (BS 1247). Type 2A (SABS 558) manhole covers will be used for carriageways and Type 4 (SABS 558) for servitudes.

3.1.3.4 Indicative sewage flow calculations

Flow calculations.

$$\begin{aligned}\text{Sewer outflow} &= \text{Total area } 10\,000\text{m}^2 @ 0.6\text{kl}/100\text{m}^2/\text{day} = 60\text{kl}/\text{day} \\ &= 60\,000/24 \times 3600 \\ &= 0.69\text{l}/\text{s}\end{aligned}$$

3.1.4 PROVISION OF WATER

3.1.4.1 Existing water reticulation

City of Tshwane municipality indicated a 400dia & 700dia bulk water line which run within the Van Der Hoff road reserve along the Northern boundary line. These pipes are bulk supply mains and do not serve as networks distribution mains. The closest reticulation network line, is a 76dia Asbestos line installed parallel to the bulk mains up to the North Eastern corner of the property, connecting to a ring main network in Theo Slabbert Street which are approximately 700m towards the Eastern side of the proposed new development. Council confirmed that this pipe will not have sufficient capacity to accommodate the fire requirements for the development.

3.1.4.2 Proposed new infrastructure

Council suggest to upgrade the 76dia AC council main to a new 160dia Upvc Class 12 pipe, towards the existing 76dia water ring main network in Theo Slabbert Avenue which will have sufficient capacity to accommodate development. The approximate distance towards the connection is measured as 700m. Further upgrades will have to be confirmed by City of Tshwane Municipality.

3.1.4.3 Materials and construction

It is proposed that the materials, construction and testing of the water reticulation comply with the SABS 1200 series of specifications.

The more important materials may be summarized as follows:

- Pipe - uPVC class 12
- Bends - uPVC class 12
- Fitting: - uPVC class 12
- Valves - Class 16 gate valve SABS 664, non-rising spindle, anti-Clockwise closing, flanged

3.1.4.4 Water demand calculations

Flow calculations (Existing retail phase)

$$\begin{aligned}\text{Water demand} &= \text{Total area } 10\,000\text{m}^2 @ 0.4\text{kl}/100\text{m}^2/\text{day} = 40\text{kl}/\text{day} \\ &= 40\,000/24 \times 3600 \\ &= 0.46\text{l}/\text{s}\end{aligned}$$

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Environmental Impact Assessment for the proposed clearance of 10,9205ha of indigenous vegetation, of which 62 272m² is located within an Ecological support area, in order to establish a shopping centre with associated access and parking on Portion 36 and the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.

Select the appropriate box

The application is for an upgrade of an existing development

The application is for a new development

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

If yes, have you applied for the authorisation(s)?

YES	NO
YES	NO

If yes, have you received approval(s)? (attach in appropriate appendix)

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	Applicability to the project	Administering authority	Date
National Environmental Management Act No. 107 of 1998 as amended.	NEMA is the guiding legislation that has been considered during the Environmental Impact Assessment process and the compilation of this Scoping Report.	National & Provincial (DEA And Gauteng GDARD)	27 November 1998
The Bill of Rights, Constitution of South Africa, Section 27 (1)(b)	<p>The Constitution of the Republic of South Africa is the legal source of all law, including environmental law, in South Africa. The Bill of Rights is fundamental to the Constitution of South Africa and in, section 24 of the Act, it is stated that:</p> <p>Everyone has the right (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations through reasonable legislative and other measures that (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</p> <p>Given that environmental management is founded partly on the principles of public participation, Section 195 of the</p>	National Government	1994

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
	<p>Constitution is of primary relevance:</p> <p>(1) Public administration must be governed by the democratic values and principles enshrined in the constitution, including the following principles: (a) (b) (c) (d) (e) Peoples needs must be responded to, and the public must be encouraged to participate in policymaking. (f) Public administration must be accountable. (g) Transparency must be fostered by providing the public with timely, accessible and accurate information (Government Gazette, 1996).</p>		
New Regulations 2014 in terms of NEMA	<p>Legislation consulted during the environmental impact assessment process to determine whether any listed activities would be triggered. The Regulations were also consulted to determine inter alia the requirements regarding the contents of Scoping reports and the public participation process that should be followed.</p>	National & Provincial (DEA And Gauteng GDARD)	7 April 2017
National Water Act (36 OF 1998)	<p>National Water Act (NWA), 1998 (Act 36 of 1998) is the primary statute providing the legal basis for water management in South Africa and has to ensure ecological integrity, economic growth and social equity when managing and using water.</p> <p>The major objectives of the National Water Act are to:</p> <ul style="list-style-type: none"> •Aid in providing basic human needs; •Meet the growing demand of water in a sustainable manner; •Ensure equal access to water and use of water resources; •Protect the quality of water of natural resources; •Ensure integrated management of water resources; •Foster social and economic development; and •Conserve aquatic and related ecosystems. <p>Section 19 of the National Water Act states that the person responsible for land upon which any activity is or was performed which causes, has caused or is likely to cause, pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.</p>	Department of water and sanitation	1998
National Environmental Management: Biodiversity Act (NEMBA) (ACT NO. 10 OF 2004)	<p>The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004), provides for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bio-prospecting involving</p>	National & Provincial (DEA And Gauteng GDARD)	2004

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
	<p>indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith.</p> <p>In terms of Chapter 4 of the Above Act:</p> <p>52. (1) (a) The Minister may, by notice in the Gazette, publish a national list of ecosystems that are threatened and in need of protection.</p> <p>(b) An MEC for environmental affairs in a province may, by notice in the Gazette, publish a provincial list of ecosystems in the province that are threatened and in need of protection.</p> <p>(2) The following categories of ecosystems may be listed in terms of subsection:</p> <p>(a) critically endangered ecosystems, being ecosystems that have undergone severe degradation of ecological structure, function or composition as a result of human intervention and are subject to an extremely high risk of irreversible transformation;</p> <p>(b) endangered ecosystems, being ecosystems that have undergone degradation of ecological structure, function or composition as a result of human intervention, although they are not critically endangered ecosystems;</p> <p>(c) vulnerable ecosystems, being ecosystems that have a high risk of undergoing significant degradation of ecological structure, function or composition as a result of human intervention, although they are not critically endangered ecosystems or endangered ecosystems; and</p> <p>(d) protected ecosystems, being ecosystems that are of high conservation value or of high national or provincial importance, although they are not listed in terms of paragraphs (a), (b) or (c).</p> <p>(3) A list referred to in subsection (1) must describe in sufficient detail the location of each ecosystem on the list.</p> <p>53 (1) The Minister may, by notice in the Gazette, identify any process or activity in a listed ecosystem as a threatening process.</p> <p>(2) A threatening process, identified in terms of subsection (1) must be regarded as a specified activity contemplated in section 24(2)(b) of the National Environmental Management Act (1998) and a listed ecosystem must be regarded as an area identified for the purpose of that section.</p>		

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management: Protected Areas Act (ACT NO. 57 OF 2003)	<p>This Act aims to provide for a national system of protected areas in South Africa as part of a strategy to manage and conserve its biodiversity. The Protected Areas Act tries to ensure the protection of the entire range of biodiversity, referring to natural landscapes and seascapes. The Act makes express reference to the need to move towards Community Based natural Resource Management (CBNRM) as its objectives include promoting the participation of local communities in the management of protected areas. The purpose of the Act is:</p> <ul style="list-style-type: none"> •To protect ecologically viable areas repres •To conserve biodiversity in those areas; •To protect South Africa's rare species; •To protect vulnerable or ecologically sensitive areas; •To assist in ensuring the sustained supply of environmental goods and services; •To provide for the sustainable use of natural and biological resources; •To create or augment destinations for nature-based tourism; • To manage the interrelationship between •To contribute to human, social, cultural, spiritual and economic development; •To rehabilitate and restore degraded ecosystems and promote the recovery of endangered and vulnerable species. <p>This Act further stipulates various criteria which must be met before an area can be declared as a special nature reserve, national park, nature reserve and protected environment. It also prescribes a range of procedures, including consultation and public participation procedures which must be followed before any of the kinds of protected areas are declared.</p>	National & Provincial	2003
National Heritage Resources Act, Act No. 25 of 1999	Legislation consulted during the impact assessment process, to determine the legal requirements relating to the management of heritage resources that are present in and around the site.	SAHRA	1999
National Environmental Management: Waste Act, Act No. 59 of 2008, read together with the List of Waste Activities that Have, or are Likely to Have, a Detrimental Effect on the Environment, GN No. 921 of 29 November 2013	<p>Legislation consulted to determine whether a waste licence will have to be obtained for the development.</p> <p>The two key objectives of the testing and analyses were to classify the waste material samples according to NEMWA (R. 635 & R. 636) and determine the acid generation potential of the material.</p> <p>Three samples were analysed according to the procedures described in the National Environmental Management: Waste Act (Act No. 59 of 2008) (NEMWA). The norms and standards for waste classification and liner identification as stipulated in regulations no. R. 635 and R. 636 of</p>	National & Provincial (DEA And Gauteng GDARD)	2008

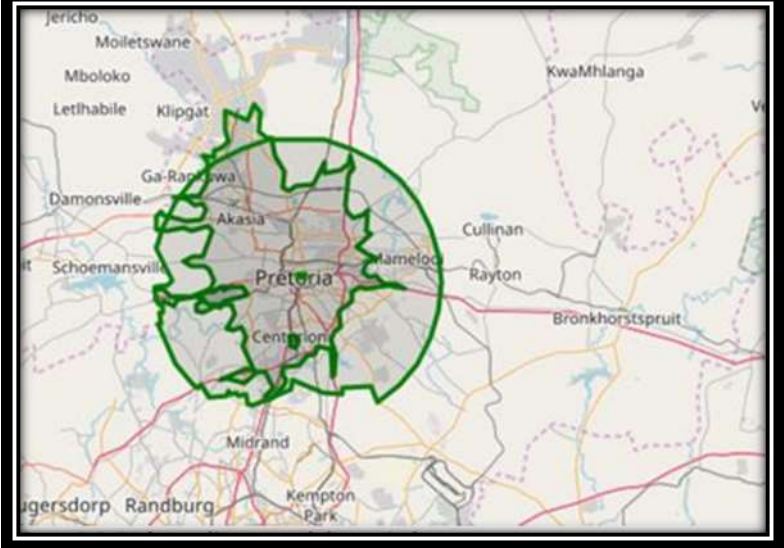
Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
	NEMWA were applied.		
<i>Mineral and Petroleum Resources Development Act (MPRDA), Act 28 of 2002</i>	<p>The Act distinguishes between mining permits and mining rights as follows:</p> <p>Mining Permit: Required where the activity will last less than two years and affects an area of less than 1.5ha in extent (valid for 3 years). In terms of the Act a mining permit requires a submission of an Environmental Management Plan (EMP to DME for approval prior to the onset of activities).</p> <p>Mining Right: Required for larger mining operations (renewable and valid for 30 years). In terms of the Act a mining right requires the submission of an Environmental Management Programme (EMProg) to DME for approval prior to the onset of activities.</p> <p>In light of their limited spatio-temporal extent, borrow pits (for the provision of construction material) and quarry operations would typically require a mining permit.</p> <p>The closure of borrow pits requires the submission of a closure application; this must be submitted within 180 days after ceasing operations. It is important to recognise that the mining right/permit holder's liability persists until such time as a Closure Certificate has been issued by DME.</p>	Relevant Provincial Authorities.	2002
<i>National Environmental Management: Air Quality Act (Act 39 of 2004)</i>	To protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social Development. Construction activities may cause some air pollution.	Relevant Provincial Authorities.	2004
<i>The Conservation of Agricultural Resources Act (Act 43 of 1983)</i>	This Act regulates the flow pattern of runoff water, control of weeds and invader plants.	Relevant Provincial Authorities.	1983
<i>National Veldt and Forest Fire Act (Act 101 of 1998)</i>	Chapter 4 places a duty on owners to prepare and maintain firebreaks.	Relevant Provincial Authorities.	1998
<i>National Forests Act, Act 84 of 1998 (NFA) read with GN1602 of December 2016.</i>	During the construction phase of the development certain protected trees may be affected. Licences will have to be obtained from the Minister before the affected trees may be cut, disturbed, damaged or destroyed. GN1602 of December 2016 contains the list of protected trees.	National and Provincial authorities.	1998
<i>Occupational Health and Safety Act (Act 85 of 1993)</i>	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 and the protection of persons other than persons at work against hazards to health.	Relevant Provincial Authorities.	1993

Regional legislations, policies and guidelines

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

Legislation, policy or guideline	Description of compliance
<p>GDACE requirements for Biodiversity Assessments</p>	<p>Gauteng is South Africa's smallest and most densely populated and economically productive province. As such it has intense land-use pressure, from urban expansion and mining predominantly, and there are severe pressures on Gauteng's natural resources. To address this, as well as enhance livelihoods for the citizens of Gauteng, a range of tools have been developed to aid the wise use of natural resources and sustainable development. These tools help to mainstream biodiversity objectives into land-use planning and development decision-making.</p> <p>Biodiversity is in fact key to a green economy. It underpins the ecological infrastructure and natural capital from which flows a range of goods and services that benefit people. This provides a foundation for:</p> <ul style="list-style-type: none"> • Economic growth and the creation of jobs in biodiversity management, restoration and maintenance of ecological infrastructure • Social development through the delivery of services that support the poorest members of society and aid in poverty alleviation • Human wellbeing including helping us cope with climate-related hazards and disaster risk reduction <p>The Biodiversity Specialist were provided with copies of the requirements and he has incorporated them into his report.</p>
<p>Development guidelines for Ridges</p>	<p>The quartzite ridges of Gauteng are one of the most important natural assets in the northern provinces of South Africa. This is because these ridges, and the area immediately surrounding the ridges, provide habitat for a wide variety of fauna and flora, some of which are Red List, rare or endemic species or, in the case of certain of the plant species, are found nowhere else in South Africa or the world. The ridges also fulfill functions that are necessary for the sustainability of ecosystems such as the recharging of groundwater, wetlands and rivers, wildlife dispersal and providing essential habitat for pollinators. Ridges also have a socio-cultural role in that they provide aesthetically pleasing environments that are valued by residents, tourists and recreational users. Human activities such as urbanization, mining and the planting of alien vegetation may undermine the contribution that ridges make to the environment.</p> <p>These factors were all taken into account by the Botanical and Heritage Specialists in their assessment of the area.</p>
<p>The City of Tshwane 2021 2026 Integrated Development Plan</p>	<p>City of Tshwane is classified as a Category A municipality by the Municipal Demarcation Board in terms of section 4 of the Local Government Municipal Structures Act, 1998 (Act 117 of 1998). The Municipality was established on 5 December 2000 through the integration of various municipalities and councils that had previously served the greater Pretoria regime and surrounding areas.</p> <p>Tshwane 2030 vision</p> <p>The vision for the City of Tshwane which was adopted on 25 May 2017 for 2030 is as follows:</p> <p><i>Tshwane: A prosperous capital city through fairness, freedom and opportunity</i></p> <p>The achievement of the above vision depends on embedding the above governance values in the plans and actions of the City and its partners. In fact, these values will propel the City towards its vision, provided that the following strategic pillars for development are embraced:</p> <ol style="list-style-type: none"> 1. Advancing economic growth and job creation 2. Creating a caring environment and promoting inclusivity 3. Delivering excellent services and protecting the environment 4. Keeping the residents safe 5. Being open, honest and responsive <p>Building on the vision set the review of the IDP further develops and enhances the five strategic pillars referred to above.</p> <p>Strategic Pillar 1: A City that facilitates economic growth and job creation</p> <p>In order to realise opportunity, care, inclusivity, sustainability, safety and cleanliness, openness and honesty, and communication, this IDP must address these issues as challenges in the next five years.</p> <p>It is, however, undeniable that job-creating economic growth forms a central, if not the most important part of the solution to the triple threat of poverty, inequality and unemployment. Economic growth that allows businesses to expand and start-ups to</p>

	<p>succeed will create more employment opportunities in Tshwane. Such opportunities will empower more individuals and their families and dependents to obtain an income. Economic empowerment, linked to having a dependable income, will radically change the lives of Tshwane’s residents who were previously unemployed and struggled daily with poverty and inequality.</p> <p>The City of Tshwane also recognises that promoting economic growth and development is one of the key mandates of local government. This mandate and the static absolute unemployment figures, when viewed together, make it clear that the City must focus its efforts, in terms of the local economy, on measures that will bring about significant labour-absorptive economic growth.</p> <p>The City’s plan for the term is to create a city of opportunity. The plan centres around five focus areas, which we believe will create economic growth, which in turn will be labour-absorbing, provide many more residents with new employment opportunities and develop the city further. This will make it easier to do business, support entrepreneurship, empower individuals, invest in infrastructure and encourage new industries, which will lead to economic growth and employment.</p> <p>The focus for this pillar is supported by the following priorities:</p> <ul style="list-style-type: none"> • Attracting investment and encouraging growth by making it easy to do business in Tshwane • Revitalising and supporting Tshwane’s entrepreneurs • Empowering individuals to take advantage of opportunities • Infrastructure-led growth to catalyse and revitalise existing nodal economies • Encouraging tourism and recreation <p>The Executive Mayor, as part of his theme for the remainder of the term- “Tshwane: Stable. Safe. Delivers” identified a ten-point plan which covers the Mayoral priorities and actions to be undertaken: Pont 8 of this action plan states the following:</p> <p>8. Fast track development by cutting red tape. –</p> <ul style="list-style-type: none"> -Clear rates clearance certificate backlogs. - Accelerate planning approval processes in the face of Covid-10. - Implement strict building control measures on derelict and non-complaint buildings. - Dedicated city support to key strategic investment sectors
<p>Tshwane Metropolitan spatial development framework, 2030</p>	<p>2.1.3 URBAN EDGE</p> <p>The urban edge (boundary) is a growth management tool that contributes towards the achievement of strategic objectives by conserving valuable environmental areas which would otherwise be compromised by development. The urban edge also achieves this by promoting the use of existing infrastructure through redevelopment, infill development and densification within the edge, thus achieving development that is sustainable. The urban edge also encourages the agglomeration of economies within the edge, encouraging scattered secondary or emerging nodes to develop into consolidated primary nodes, as opposed to leapfrog development. The urban edge also ensures the protection of land – an exhaustible resource – by encouraging brownfield developments instead of greenfield developments.</p> <p>The urban edge encourages the prevention of urban decay by drawing a boundary around the existing urban area, ensuring that development is focused inward, resulting in all opportunities being explored, especially the regeneration of decaying areas.</p> <p>This further supports the promotion of opportunities for redevelopment, infill development and densification. The conservative approach to expansion also results in opportunities for infill development being explored. As well-located land is often more expensive and vacant land in the urban area often has high-level constraints, higher densities are considered because these result in a higher yield.</p> <p>Using the Geo-Terralmage Web Platform to determine the parameters of the areas that could be reached within a 30-minute drive time within average traffic conditions, a circle was drawn around this area and roughly provided a 25-km radius around the center of the capital core, taken to be Church Square within the Pretoria CBD.</p> <p>This area, that is found to be within a 30-minute drive time, then serves as a further layer of focus for investment and development because these areas are the most “accessible” relative to the best social and economic infrastructure within Tshwane.</p>

	 <p>Figure 2.3: 25-km radius around the capital core</p> <p>The proposed development falls within this zone.</p>
<p>The National Development Plan 2030</p>	<p>The National Development Plan (NDP) 2030 offers a long-term perspective on South Africa's priorities, and aims to eliminate poverty and reduce inequality by 2030. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal. The NDP recognises the wealth of natural resources such as biodiversity and the need to protect the environment whilst benefiting from mineral resources. It proposes three measures to protect natural resources in South Africa:</p> <ul style="list-style-type: none"> i) An Environmental Management Framework, including biodiversity offsets for developments with negative environmental or social impacts. ii) Targets for protected areas. iii) Annual reports of the health of natural resources in order to inform policy
<p>Government priorities and biodiversity</p>	<p>The Medium Term Strategic Framework (MTSF) is a framework that guides government's programme of work in a particular electoral mandate period. It provides a prioritisation framework focusing government efforts on strategic priority areas. The phased development of new MTSFs every 5 years provides guidance for achieving the NDP priorities.</p> <p>The MTSF for the period of 2014-2019 provides a framework for implementing South Africa's transition to an environmentally sustainable, climate change resilient, low-carbon economy. The MTSF is a key input in determining national budget allocations, through the Medium Term Expenditure Framework.</p> <p>The MTSF strategic priorities are articulated in more detail in key Outcomes, with accompanying measurable outputs and key activities, and Outcome Delivery Agreements. The latter are performance agreements between the President and Ministers.</p>
<p>Outcome 10 Delivery Agreement</p>	<p>The Government's main priorities for the period reflected by the MTSF are reflected by 14 Outcomes, derived from the Strategic Plan of The Presidency's ten priorities. These outcomes form the government's delivery and implementation plans for the period. The plans are reviewed annually and reported on throughout the year, forming a key input in determining national budget allocations. Final budget allocations affect the order of priorities and phasing of the implementation of the delivery agreements.</p> <p>Outcome 10 in the MTSF 2014-2019 is 'protect and enhance our environmental assets and natural resources', and sets priorities for relevant government departments and conservation agencies.</p>

The study is conducted in such a way as to comply with the instructions regarding such studies and reports (as contained within the above-mentioned documents).

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

One of the objectives of a BA is to investigate alternatives to the proposed project. The IEM procedure stipulates that the environmental investigation needs to consider feasible alternatives for any proposed development. Therefore, a number of possible proposals or alternatives for accomplishing the same objectives should be identified and investigated. In order to ensure that the proposed development enables sustainable development, *feasible* alternatives must be explored (S. Cliff, 2015).

The identification, description, evaluation and comparison of alternatives are important for ensuring a sound environmental scoping process. Alternatives should be considered as a *norm* within the Environmental Process (S. Cliff, 2015).

Alternatives have been considered in terms of EIA Regulation, 2014 Appendix 1(h). Alternatives considered includes a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative have also been included to act as a baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate have been informed by the specific circumstances of the activity and its environment.

FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;**
- (b) the type of activity to be undertaken;**
- (c) the design or layout of the activity;**
- (d) the technology to be used in the activity;**
- (e) the operational aspects of the activity; and**
- (f) the option of not implementing the activity.**

Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, energy,	Description:
-----	-----------------------------------------------------------------------------------------------------------	--------------

	operational or other(provide details of "other")	
1	Proposal	This proposal entails the establishment of a shopping centre with associated access and parking on Portion 36 and the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.
2	Alternative 1	Alternative 1 entails the establishment of a shopping centre with associated access and parking on Portion 36 and a high density residential development on the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.

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

N/A

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:

Proposed activity (**Total environmental (landscaping, parking, etc.) and the building footprint**)

Size of the activity:

10,9205ha

Alternatives:

Alternative 1 (if any)

10,9205ha

Alternative 2 (if any)

0 ha

Ha/ m²

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

Proposed activity

Size of the site/servitude:
10,9205ha

Alternatives:

Alternative 1 (if any)

10,9205ha

Alternative 2 (if any)

0 ha

Ha/m²

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

N/A

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.

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.

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.

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

"insert No. of duplicates"

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 alternative 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

"insert No. of duplicates"

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.)

Portion 36 and the Remaining Extent of Portion 216 of Farm Zandfontein 317, JR, Gauteng Province.

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):

Coordinates of site:

25° 43' 01.30"

28° 06' 58.57"

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	T	O	J	R	0	0	0	0	0	0	0	0	0	3	1	7	0	0	0	3	6	
	T	O	J	R	0	0	0	0	0	0	0	0	0	0	3	1	7	0	0	2	1	6
ALT. 1	T	O	J	R	0	0	0	0	0	0	0	0	0	0	3	1	7	0	0	0	3	6
	T	O	J	R	0	0	0	0	0	0	0	0	0	0	3	1	7	0	0	2	1	6

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
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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
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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

Inputs from Geo-Technical Engineer:

RockSoil Consult (Pty) Ltd. was appointed by ProPlan Technologies, representing GHDEVCO (Pty) Ltd., to conduct a Phase 1 shallow soil engineering geological assessment on Portion 216 and Portion 36 of the Farm Zandfontein 317-JR, Ward 55, Region 3, City of Tshwane Metropolitan Municipality, Gauteng Province, South Africa.

An initial fieldwork phase was conducted on 29 September 2021. A draft report, RS21041 V1.0, dated 15 December 2021 was provided to the client for commentary. The draft report stated that fill is present on-site and that infill work is recommended, including infill test pitting and waste classification. The client appointed an independent consultant to conduct the waste classification. The results are not available at the time of writing this report. The planners/developers should refer to the specialist input for planning and/or design purposes.

Infill test pitting was attempted by RockSoil Consult (Pty) Ltd. on 7 February 2022 to establish the vertical and lateral extent of the fill; however, the site was not trafficable due to excessive ongoing precipitation over the period, ponding water and saturated soft clay rendering the majority of the site

inaccessible. The excavation equipment got stuck in the attempts and the infill test pitting was abandoned for time being. Re-establishment during a dryer period was suggested. The client requested formalisation of the report considering the available data obtained/available to date.

This report serves as a Phase 1 detailed shallow soil investigation considering the available data to date. The waste classification is addressed in a separate specialist report. This investigation is limited to a shallow soil engineering geological investigation with test pits positioned across the accessible areas of the site.

The area is seemingly zoned as Industrial 1 and mainly surrounded by Industrial 1 with Residential 1 and Industrial 2 towards the east and south-east and Residential 1, limited Residential 2, Special and Educational zonings in the immediate region. The planners should refer to registered and planned servitudes and/or planned routes that may bisect the site/s. Informal settlements are present towards the south and partially on the southern extent of the area of interest.

The site is situated towards the north of the Witwatersberg ridge, with a regional slope direction towards the north to north-east. The site is situated between approximately 1 295 and 1 290 mamsl. The site-specific drainage is towards the NNE. Localised high-spots of weathered shale fill is present towards the south-eastern portion of Erf 36. Relatively flat-lying areas are present that is expected to result in surface ponding immediately after heavy downpours.

The ground surface is mainly highly disturbed, and the presence of historic works, excavations, fill and foundations were identified, especially on the eastern erf, PTN 36. The 1:50 000-scale topographical sheet indicates historic excavations across the majority of PTN36. The 1:50 000-scale geological sheet indicates historic workings (mainly sand and clay pits) towards the south of the sites of interest. The 1:50 000-scale geological sheet indicates structures on PTN36 with notes on an historic brick works present on PTN36. The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on PTN36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.

Geology

According to the 1:50 000 geological sheet 2528CA Pretoria, the site is underlain by shale of the Silverton Formation (T3mS) with quartzite of the Daspoort Formation (T3dQ) of the Pretoria Group towards the far south of the site with two thick diabase intrusions striking east-west through the northern and southern parts of the erven with a 30° to 45° dip to the north.

A large sand deposit (SG) is indicated to the south of the erven with brick-clay and shale (CS) on and immediately south of the erven.

This site is not underlain by potentially soluble dolomite or limestone formations and a dolomite stability investigation is therefore not required.

According to the geological maps and accompanied explanation no specific mineral deposits, except the sand/clay deposits for fine aggregate/brick-clay, are present on the site, and from surface evidence most of this material has been mined out.

The different materials or soil horizons encountered on this site is grouped into 9 material groups, namely:

1. Un-engineered fill of mix origin;
2. Surficial fill of shale origin (localised stockpiled);

3. Surficial fill Ash/Slag mix origin (centre site portion backfill);
4. Topsoil and/or colluvium;
5. Alluvium;
6. Residual shale;
7. Shale rock;
8. Residual diabase; and
9. Diabase rock.

The materials encountered are discussed in the following sections.

Un-engineered Fill of Mix Origin

Un-engineered fill of mix origin was encountered in all of the test pits excavated. The thickness of the fill varies between 0.20 m (TP07) to >2.70 mbgl (TP02). The fill material varies between brick rubble to residual diabase, topsoil and shale to dolerite residuum. Vertical and lateral extent of the fill, as encountered in the test pits excavated in the accessible portions of the site, is significant.

Surficial Fill of Shale Origin (Localised Stockpile)

Two stockpiles (Roughly 1 900 to 2 000m³ in total) of mainly weathered and residual shale origin is present on site, south of TP05 and west of TP10. The material contains a high percentage of highly to moderately weathered sub-angular to platy to slab-like shale gravel to small cobbles and scattered medium to large boulders.

Surficial Fill Ash/Slag Mix Origin (Centre Site Portion Backfill)

Un-engineered and uncontrolled ash, slag and soil mixtures are present across the central site portion. The majority of the centre site portion were not accessible at the time of conducting this investigation due to extensive surface borrows of generally between ≈ 0.5 and ≈ 1.1 m in depth, where the slag is extracted by the local community. Infill investigation was attempted during early February and the site were inaccessible by the TLB due to wet/saturated/ponding water conditions and soft upper soils. The thickness of the fill in the centre site portion is unknown. Test pit TP02 was terminated in fill at 2.7 mbgl (practical reach of the TLB in the material type). Fill of mix origin was encountered from surface to 0.6 mbgl, some slag and mix origin fill from 0.6 to 1.8 mbgl from where construction rubble comprising mainly brick fill was encountered from 1.8 mbgl to termination depth of 2.7 mbgl.

Topsoil and/or Colluvium

The natural topsoil and/or reworked colluvium horizon was encountered in test pits TP01 (0.50 to 1.70 mbgl), TP03 (0.60 to 0.80 mbgl), TP09 (0.50 to 0.90 mbgl), TP10 (1.10 to 1.90 mbgl), TP11 (0.50 to 0.90 mbgl) and TP12 (1.10 to 1.90 mbgl). The natural profile is generally identifiable by the lack of uncontrolled fill and material of mix origin and the upper slightly organic grey topsoil horizon that serves as a marker between the upper fill and lower natural soil profile.

Alluvium

Transported fine alluvial soils were encountered in test pits TP01, TP03, TP04, TP06, TP07, TP08, TP09, TP10, TP11 and TP12. Test pits TP02 and TP05 were terminated in fill and on a historic foundation/slab. The alluvium is generally identifiable by the grey colour and high fines content with scattered sub-angular to sub-rounded quartzite or quartz gravel and/or pebbles.

Residual Shale

Residual shale was logged in test pits TP03, TP04 and TP06. The level of confidence in the material origin is generally fair to low due to the deeply weathered and reworked profiles.

Shale Rock

Shallow shale rock was not confirmed during this shallow soil investigation. It is expected that the majority of the site is underlain by shale of the Silverton Formation, at depth.

Residual Diabase

Residual diabase was not encountered during this shallow soil investigation. Residual diabase may however be encountered with deeper or infill investigations, especially towards the southern boundary and northern boundary of the area of interest, as indicated by the 1:50 000-scale geological sheet.

Diabase Rock

Diabase rock was not confirmed during this shallow soil assessment; however, may be present towards the northern and southern site boundaries, as indicated on the 1:50 000-scale geological sheet.

Seasonal Seepage Water or Perched Water Tables

No seepage water was encountered in any of the test pits excavated on 29 September 2021. The eastern and centre portions of the area of interest are disturbed and the natural seepage water and/or water tables are expected to be affected by the workings. Some staining and Fe and Mn nodules (pedocrete formation) were recorded in some of the profiles, indicating expected seasonal seepage water conditions. Seasonal seepage water may be experienced at depths of between, but not limited to ≈ 1.0 and 3.2 mbgl.

Infill test pitting was attempted on 7 February 2022. The site was mainly inaccessible due to excessive water ponding and soft non-trafficable upper soils. Only two test pits were excavated during this infill investigation attempt (test pits TP11 and TP12). No water seepage was recorded by the field personnel during the open inspection periods of the test pits (+/- 30minutes per test pit).

Undermined Ground

The ground surface is mainly highly disturbed, and the presence of historic works, excavations, fill and foundations were identified, especially on the eastern erf, PTN 36.

The 1:50 000-scale topographical sheet indicate historic excavations across the majority of PTN36. The 1:50 000-scale geological sheet indicate historic workings (mainly sand and clay pits) towards the south of the sites of interest.

The 1:50 000-scale geological sheet indicates structures on PTN36 with notes on an historic brick works present on PTN36.

The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on PTN36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.

Mining activities were limited to surface excavations and no surface instability due to undermining activities can occur. The excavation depths and thickness of backfill in the inaccessible centre portion of the area of interest could not be established during this shallow

soil assessment that was limited to inspection depths of the TLB and current accessibility of the site.

Geotechnical Solutions

Geotechnical solutions generally eliminate or reduce the total soil movements to within limits which can be tolerated by buildings without distress by means of one of the following (SANS10400-H, 2012):

- a) Removal of the soil horizons that cause unacceptable differential movements and replacement of these horizons with inert material suitably compacted or the reuse of the excavated material as founding material in a compacted form;
- b) Founding of the wall footings at a deeper level than is commonly associated with normal construction, i.e. a suitable founding horizon below the horizons within which relatively large movements might take place (where soil conditions allow); and
- c) Densification of the soil horizons that cause unacceptable differential movement by means of surface compaction.

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)?

YES	NO
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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 % = 0	Natural veld with scattered aliens % = 10	Natural veld with heavy alien infestation % = 10	Veld dominated by alien species % = 80	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % =

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
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If YES, specify and explain:

--

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:

--

Are there any special or sensitive habitats or other natural features present on the site?

YES	NO
-----	----

If YES, specify and explain:

The site is situated at the Savanna Biome (Mucina & Rutherford 2006). Savanna Biome at the

site is represented by the Moot Plains Bushveld vegetation type (Mucina & Rutherford 2006) of which an outline follows.

SVcb 8 Moot Plains Bushveld

In South Africa Moot Plains Bushveld is found in North West and Gauteng Provinces. Main belt of this vegetation type occurs immediately south of the Magaliesberg from the Selons River Valley in the West through Maanhaarrand, filling the valley bottom of the Magalies River, proceeding east of the Hartebeestpoort Dam between the Magaliesberg and Daspoort mountain ranges to Pretoria. It also occurs as a narrow belt immediately north of the Magaliesberg from Rustenburg in the west to just east of the Crocodile River in the east; also south of the Swartuggens-Zeerust line. Altitude at this vegetation type is typically about 1050-1450 m.

Vegetation and landscape features comprise open to closed, low, often thorny savanna dominated by various species of *Acacia* in the bottomlands and plains as well as woodlands of varying height and density on the lower hillsides. Herbaceous layer is dominated by grasses (Mucina & Rutherford, 2009).

Geology and soils at the Moot Plains Vegetation type are clastic sediments and minor carbonates and volcanics of the Pretoria Group (including the Silverton Formation) and some Malmani dolomites in the west, all of the Transvaal Supergroup (Vaalian). There is also some contribution from mafic Bushveld intrusives. Soils often stony with colluvial clay-loam but varied, including red-yellow apedal freely drained, dystrophic and eutrophic catenas, vertic and melanic clays, and some less typical Glenrosa and Mispah forms. Land types Ae, Ba, Ea, Bc, Ac and less typically Fb (Mucina & Rutherford, 2006).

Climate: Summer rainfall with very dry winters. Mean annual precipitation (MAP) form about 550 mm in the west to about 700 mm in the east. Frost frequent in winter. Mean monthly maximum and minimum temperatures for Pretoria-Pur 33.6°C and -3.6°C for January and June respectively (Mucina & Rutherford, 2006).

Important taxa: Small trees: *Acacia nilotica*, *Acacia tortilis* subsp. *heteracantha*, *Searsia lancea*. Tall shrubs: *Buddleja saligna*, *Euclea undulata*, *Olea europaea* subsp. *africana*, *Grewia occidentalis*, *Gymnosporia polyacantha*, *Mystroxydon aethiopicum* subsp. *burkeanum*. Low shrubs: *Aptosimum elongatum*, *Felicia fascicularis*, *Lantana rugosa*, *Teucrium trifidum*. Succulent shrub: *Kalanchoe paniculata*. Woody Climber: *Jasminum breviflorum*. Herbaceous climber: *Lotononis bainesii*. Graminoids: *Heteropogon contortus*, *Setaria sphacelata*, *Themeda triandra*, *Aristida congesta*, *Chloris virgata*, *Cynodon dactylon*, *Sporobolus nitens*, *Tragus racemosus*. Herbs: *Achyroopsis avicularis*, *Corchorus asplenifolius*, *Evolvulus alsinoides*, *Helichrysum nudifolium*, *Helichrysum undulatum*, *Hermannia depressa*, *Osteospermum muricatum*, *Phyllanthus maderaspatensis* (Mucina & Rutherford, 2006).

Note: Not all the plant species listed for the above vegetation type are present at the site.

The Specialist produced a map indicating the sensitivity of the site. Please see map below.



Indications of ecological sensitivity at the site.

- | | | |
|---|----------------------------------|------------------------|
| — | Red outline | Boundaries of the site |
| — | Light yellow outline and shading | Low Sensitivity |

The Specialist concluded the following:

- Vegetation as the site is extensively disturbed, modified and at some places transformed. A mixture of alien invasive and indigenous plant species exists at the site.
- Indigenous tree species at the site include *Vachellia karroo*. A number of alien invasive tree species such as *Melia azedarach*, *Eucalyptus camaldulensis*, *Solanum mauritianum* and *Tecoma stans* are present at the site. The alien invasive reed species *Arundo donax* occur in clumps at the site. A clump of *Typha capensis* has established at a ditch that has been dug next to the tar road at the northern limits of the site.
- Indigenous grass species at the site include *Heteropogon contortus*, *Hyparrhenia hirta*, and *Cynodon dactylon*. The herbaceous shrub *Gomphocarpus fruticosus* also occurs at the site. Indigenous forb species appear to be scarce at the site. Many alien invasive weed species are found at the site and these include *Argemone ochroleuca*, *Datura ferox*, *Datura stramonium*, *Gomphrena celosioides*, *Schkuhria pinnata*, *Tagetes minuta*, *Conyza bonariensis*, *Malva parviflora*, *Verbena aristigera*, *Bidens bipinnata*, *Bidens pilosa* and *Flaveria bidentis*.
- Rocky ridges are absent at the site.
- No wetlands appear to be present at the site.
- Savanna at the site is represented by the Moot Plains Bushveld (SVcb 8) vegetation type which is not listed as a Threatened Ecosystem, according to the National List of Threatened Ecosystems (2011).
- Threatened and Near Threatened animal and plant species appear to be absent. Other animal or plant species of particular conservation concern also appear to be absent at the site.

- The scope for the site to be a corridor of particular conservation importance is small.
- Ecological sensitivity at the site is low.
- Following the mitigations which will be upheld and planned footprint for development all the impact risks listed above are moderate or low.
- If the development is approved continued monitoring and eradication of alien invasive plant species are imperative. It is in particular declared alien invasive species such as *Melia azedarach* (Syringa) and alien invasive Australian *Acacia* species (Australian wattles) that should not be allowed to establish.

If the development is approved an opportunity presents itself to cultivate indigenous plant species which would benefit urban nature conservation

Was a specialist consulted to assist with completing this section

YES	NO
-----	----

If yes complete specialist details

Name of the specialist:

Reinier F Terblanche

Qualification(s) of the specialist:

M.Sc Ecology, *Cum Laude*

Postal address:

Posbus 20488, Noordbrug,

Postal code:

2522

Telephone:

N/A

Cell: 082 614 6684

E-mail:

reinierf.terblanche@gmail.com

Fax: N/A

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:



Date:

18/10/2021

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):				

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	9	7	9	9	
	14,25	14,25	14,25	14,25	9,25	
WEST	14	1		14	9	EAST
	10	10	10	10	9	
	10	10	10	10	10	
	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

- **Phase 1 Shallow Soil Engineering Geological Investigation was conducted by RockSoil Consult (Pty) Ltd.**
- **A "PHASE 1 HIA REPORT FOR PROPOSED DEVELOPMENT LOCATED ON A PORTION OF ZANDFONTEIN 317JR GREATER TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG" was compiled by A Pelsers Archaeological Consulting (APAC).**
- **An "ECOLOGICAL FAUNA AND FLORA HABITAT SURVEY" was compiled by Anthene Ecological CC.**
- **A "CIVIL ENGINEERING SERVICES BASELINE REPORT FOR THE DEVELOPMENT OF THE VAN DER HOFF SHOPPING MALL, (PTN 36 & 216 ZANDFONTEIN 317-JR.)" was compiled by DG Corner Consulting Engineers (PTY) LTD.**
- **A "BULK SERVICES REPORT for ELECTRICAL SERVICES" was compiled by WATSON MATTHEUS CONSULTING ELECTRICAL ENGINEERS (Pty) Ltd.**
- **A "Retail Study" was compiled by Fernridge Solutions Pty Ltd.**
- **A Specialist was appointed to conduct a WASTE CLASSIFICATION. The need for a waste classification was triggered by a phase 1 shallow soil engineering geological assessment conducted. During the evaluation, fly-Ash and Slag fill were encountered at four of the nine test pits. The report indicated that the material could be hazardous and should be analyzed.**

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.

HIGH LEVEL COMPOSITION OF TSHWANE (According to the 2021/2026 IDP of the City of Tshwane)

Understanding the changes in the composition of the population with respect to population group, age and gender is vital in the face of growing pressure on food, energy, water, jobs and social support on the country's citizens. An understanding of how the total fertility rates, age-specific fertility rates, sex ratios at birth, life expectancies and international migration affect the respective population groups, ages and genders is essential for effective planning on a spatial level. Population statistics are also important when analyzing an economy, as the population growth directly and indirectly influences employment and unemployment, as well as other economic indicators such as economic growth and per capita income. A wealth of literature exists attesting to the wide ranging effects of demography on the economy.

Population: 3,31 million in (2017)

Operating budget: R35.4 billion (2019/20)

Capital budget: R4.2 billion. (2019/20)

GGDP per capita: R140 397 (current prices)

GGDP growth: 1.2% (2017)

Labour Force: Labour Force 1.83 million people

1.22 Million Employed

70.35% labour force participation rate

Unemployment: 24%

Principal economic activities: Principal economic activities are Government and community services (30%), finance (25%) and manufacturing (13%).

Focus sectors: - Advanced manufacturing

- Agri-business (agricultural production and processing)

- Tourism

- Research and Innovation

From the above it is clear that:

- The largest portion of the population of Tshwane is working age
- The unemployment rate is sitting at 24% which indicates the need to create an environment in which the economy can grow to meet in the need for work opportunities
- The various sectors which make up the economy have the potential to create work opportunities and to contribute to the overall economic growth of the province and the country. Tshwane contributes just over 28% to the Gauteng GGDP and 10% to the National GGDP which indicates the importance of the role it plays in the economy of the country. To support the development in these sectors and the various industrial and economic nodes, the City has prioritized investment in areas such as Rosslyn, Silverton, Babelegi, Ekandustria and Sunderland Ridge.

DEMOGRAPHICS

Based on the present age-gender structure and the present fertility, mortality and migration rates, City of Tshwane's population is projected to grow at an average annual rate of 2.0% from 3.56 million in 2019 to 3.92 million in 2024. The average annual growth rate in the population over the forecasted period for Gauteng Province and South Africa is 1.9% and 1.3% respectively and is lower than that the average annual growth in the City of Tshwane Metropolitan Municipality.

City of Tshwane Metropolitan Municipality's male/female split in population was 98.0 males per 100 females in 2019. In 2019, the City of Tshwane Metropolitan Municipality's population consisted of

78.95% African (2.81 million), 16.89% White (601 000), 2.02% Coloured (71 900) and 2.14% Asian (76 000) people.

The largest share of population is within the young working age (25-44 years) age category with a total number of 1.23 million or 34.7% of the total population. The age category with the second largest number of people is the babies and kids (0-14 years) age category with a total share of 24.9%, followed by the older working age (45-64 years) age category with 615 000 people. The age category with the least number of people is the retired / old age (65 years and older) age category with only 243 000 people.

EDUCATION

Educating is important to the economic growth in a country and the development of its industries, providing a trained workforce and skilled professionals required. According to the United Nations definition of education, a person is an adult at 15 years or older. IHS uses this cut-off point to allow for cross-country comparisons.

Within City of Tshwane Metropolitan Municipality, the number of people without any schooling decreased from 2009 to 2019 with an average annual rate of -1.95%, while the number of people within the 'matric only' category, increased from 586,000 to 876,000. The number of people with 'matric and a certificate/diploma' increased with an average annual rate of 3.29%, with the number of people with a 'matric and a Bachelor's' degree increasing with an average annual rate of 5.47%. Overall improvement in the level of education is visible with an increase in the number of people with 'matric' or higher education.

THE ECONOMY

The City of Tshwane is the fourth biggest municipality in South Africa and second biggest in Gauteng in terms of gross value added by region with gross value add of R497 billion. In 2019, City of Tshwane contributed 28.4 percent to the provincial economy. Moreover, Tshwane accounted for 9.79 percent of the country's economy.

LABOUR

The labour force of a country consists of everyone of working age (above a certain age and below retirement) that are participating as workers, i.e. people who are actively employed or seeking employment. This is also called the economically active population (EAP). People not included are students, retired people, stay-at-home parents, people in prisons or similar institutions, people employed in jobs or professions with unreported income, as well as discouraged workers who cannot find work.

The working age population in City of Tshwane in 2019 was 2.43 million, increasing at an average annual rate of 2.63% since 2009. For the same period the working age population for Gauteng Province increased at 2.33% annually, while that of South Africa increased at 1.62% annually.

In 2019, City of Tshwane employed 1.21 million people which is 23.69% of the total employment in Gauteng Province (5.11 million), 7.44% of total employment in South Africa (16.3 million). Employment within City of Tshwane increased annually at an average rate of 1.67% from 2009 to 2019.

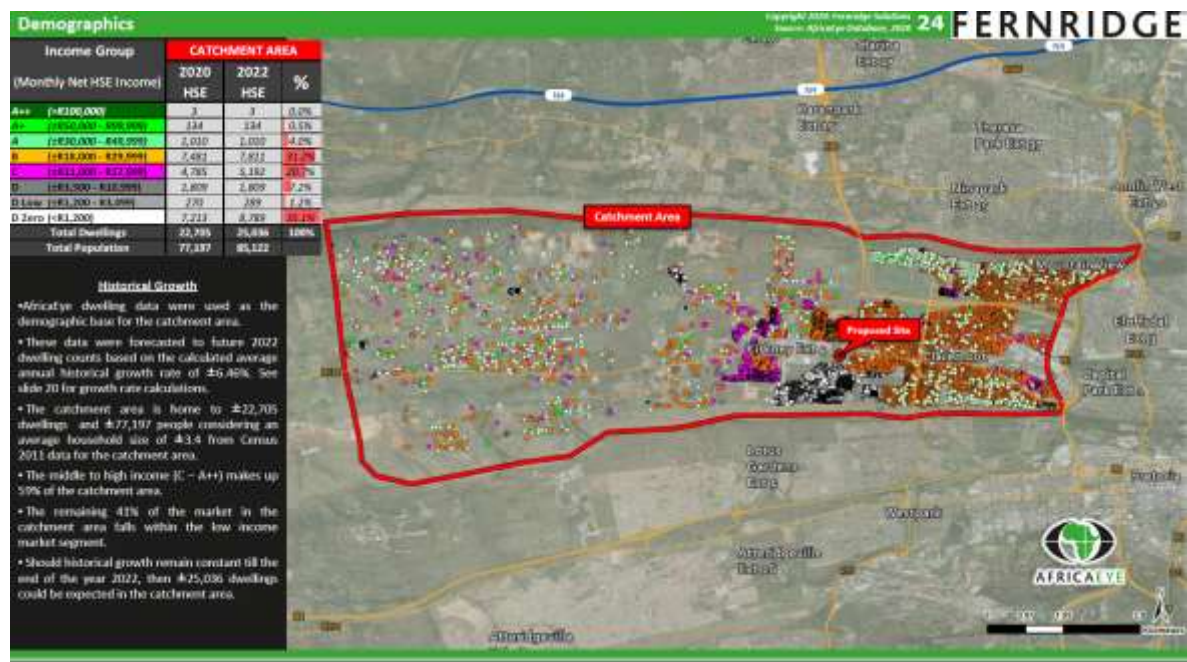
In City of Tshwane Metropolitan Municipality the economic sectors that recorded the largest number of employment in 2019 were the community services sector with a total of 284 000 employed people or 23.5% of total employment in the metropolitan municipality. The finance sector with a total of 284 000 (23.4%) employs the second highest number of people relative to the rest of the sectors. The electricity sector with 2 420 (0.2%) is the sector that employs the least number of people in City of

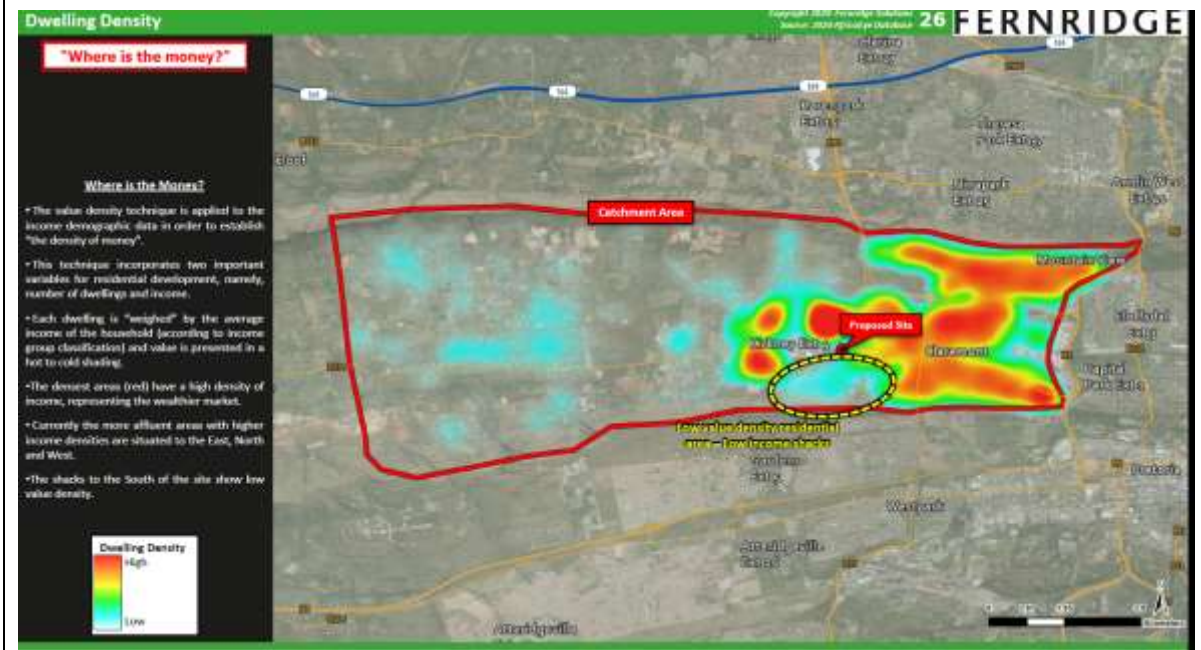
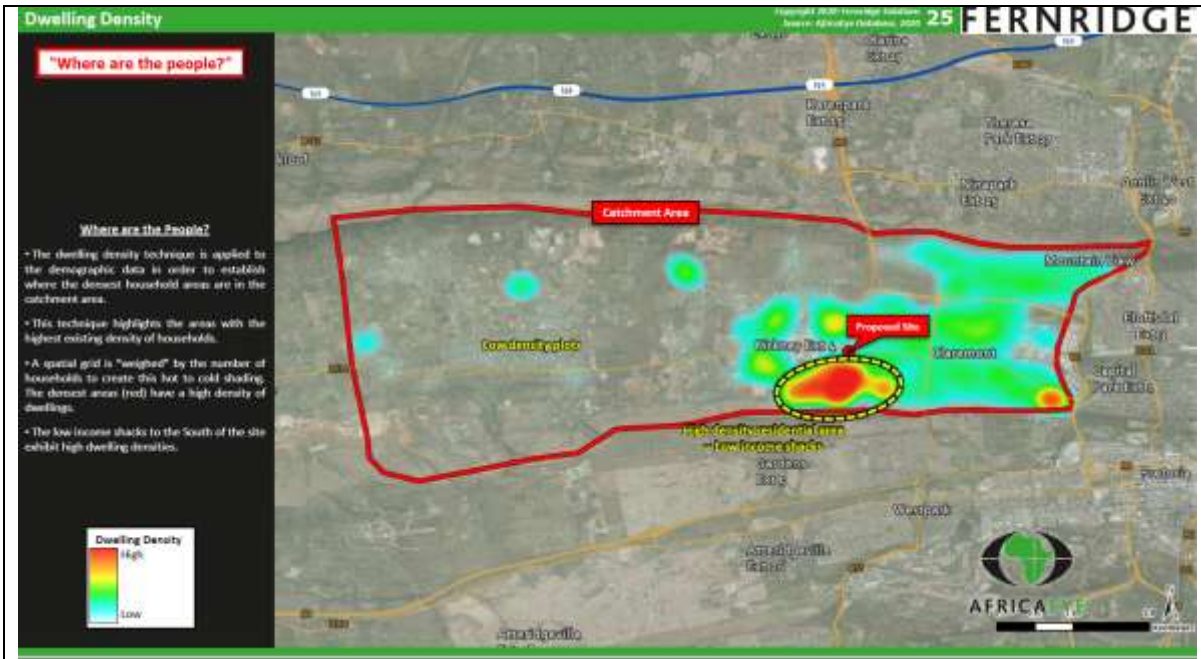
Tshwane Metropolitan Municipality, followed by the agriculture sector with 10 400 (0.9%) people employed.

In 2019, there were a total number of 439 000 people unemployed in City of Tshwane, which is an increase of 167 000 from 272 000 in 2009. The total number of unemployed people within City of Tshwane constitutes 20.63% of the total number of unemployed people in Gauteng Province. The City of Tshwane Metropolitan Municipality experienced an average annual increase of 4.89% in the number of unemployed people, which is worse than that of the Gauteng Province which had an average annual increase in unemployment of 4.63%.

In 2019, the unemployment rate in City of Tshwane Metropolitan Municipality (based on the official definition of unemployment) was 26.48%, which is an increase of 5.4 percentage points. The unemployment rate in City of Tshwane Metropolitan Municipality is lower than that of Gauteng. The unemployment rate for South Africa was 28.37% in 2019, which is a increase of -4.06 percentage points from 24.31% in 2009.

SITE SPECIFIC LEVEL DEMOGRAPHICS (According to the Retail study compiled by Fernridge Solutions Pty Ltd)





Race Profile	%
White	66%
Coloured	1%
Black	32%
Indian & Asian	1%
Other	0%

Age Profile	%
Children 0 to 19	26%
Young Adult 20 to 29	19%
Adult 30 to 44	25%
Mature 45 to 59	19%
Pensioner 60+	12%

Language Profile	%
English	6%
Afrikaans	70%
Other Language	4%
African Language	19%

Education Profile	%
No schooling	3%
Some primary	13%
Complete primary	3%
Some High School	34%
Matriculated	33%
Tertiary Education	15%

Employment Status	%
Employed	63%
Unemployed	10%
Not Economically Acti	27%

Type Dwelling	%
House	71%
Shack	7%
Flat	7%
Plot	9%

Employment Sect	%
Formal Sector	77%
Informal Sector	11%
Private Household	12%

- The catchment area is dominated by White people (66%) followed by Black people at 32%.
- There is an equal split between males and females.
- 62% of the people in the catchment area are aged from 20 years to 59 years.
- This is a predominantly middle to low income market. Most of the people live in formal dwellings (houses).
- 48% have matriculated or have higher education qualification and 63% employment rate was recorded in the catchment area.

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:

Background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were found in the study & development area during the assessment. The area would have been used in the historical past for agricultural purposes, while recent urban residential & industrial related developments and activities have had a major impact on the area. Encroaching informal settlement has also impacted on the area. Aerial images of the study and proposed development area footprint from 2005 onwards clearly shows the impacts of activities such as quarrying, other developments and the dumping of refuse and building material on the land. If any sites or features with a cultural heritage origin did exist here in the past it would have been extensively disturbed or destroyed as a result.

It should be noted that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.

Finally, based on the desktop research & physical field assessment of the area it is recommended that the proposed development can continue taking the above measures into consideration.

Will any building or structure older than 60 years be affected in any way?

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
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	NO
-----	----

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):

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

No comments have been received

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):

--

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

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

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 alternative 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 times (complete only when appropriate)

Section D Alternative No. (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
30 m ³	

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

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

The building rubble will be removed by means of trucks to the licensed solid waste disposal site operated by the City of Tshwane Metropolitan Municipality.

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

The building rubble will be removed by means of trucks to the licensed solid waste disposal site operated by the City of Tshwane Metropolitan Municipality.

Will the activity produce solid waste during its operational phase?

YES	NO
3 110 m ³	

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

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

Waste recyclers will be approached to collect recyclable waste. The remainder of the waste will be disposed of at the solid waste site operated by the City of Tshwane Metropolitan Municipality. The City of Tshwane Metropolitan Municipality renders a waste collection service in the area. The additional refuse from the proposed development is minor in comparison to the existing refuse generated and can therefore be spoiled at the existing dumping site without difficulty.

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)?

Waste recyclers will be approached to collect recyclable waste.

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:

Waste recyclers will be approached to collect recyclable waste.

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?

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?

		m ³
YES	NO	

Will the activity produce any effluent that will be treated and/or disposed of on site?

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

Yes	NO
	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?

If yes, provide the particulars of the facility:

Facility name:

Contact person:

Postal address:

Postal code:

Telephone:

E-mail:

Cell:

Fax:

YES	NO
-----	----

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

No measures considered at this stage.

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?

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

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
	1 800kl
YES	NO

Will the activity produce any effluent that will be treated and/or disposed of on site?

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

YES	NO
-----	----

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

If yes, is it controlled by any legislation of any sphere of government?

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:

YES	NO
YES	NO

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
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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?

If yes, list the permits required

YES	NO
-----	----

If yes, have you applied for the water use permit(s)?

If yes, have you received approval(s)? (attached in appropriate appendix)

YES	NO
YES	NO

3. POWER SUPPLY

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

Municipality

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

N/A

4. ENERGY EFFICIENCY

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

The design of the buildings will be done in accordance with the latest building regulations, ensuring optimal energy efficiency.

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

It is proposed that a 600Kva solar system be constructed on the rooftop of the shopping Centre.

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.

No comments have been received

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):

No comments have been received

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

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

Impacts were rated using the following methodology:

Nature of the potential impact		Description of the effect, and the affected aspect of the environment
Duration (time scale)	Short term	Up to 5 years
	Medium term	6 – 15 years
	Long term	More than 15 years
Extent (area)	Local	Confined to study area and its immediate surroundings
	Regional	Region (cadastral, catchment, topographic)
	National	Nationally (The country)
	International	Neighboring countries and the rest of the world.
Magnitude (Intensity)	Low	Site-specific and wider natural and/or social functions and processes are negligibly altered. ((A low intensity impact will not affect the natural, cultural, or social functions of the environment).
	Medium	Site-specific and wider natural and/or social functions and processes continue albeit in a modified way. (Medium scale impact will alter the different functions slightly).
	High	Site-specific and wider natural and/or social functions and processes are severely altered. (A High intensity impact will influence these functions to such an extent that it will temporarily or permanently cease to exist).
Probability	Improbable	Possibility of occurrence is very low. (Such an impact will have a very slight possibility to materialise, because of design or experience).
	Possible	There is a possibility that the impact will

Nature of the potential impact		Description of the effect, and the affected aspect of the environment
		occur
	Probable	It is most likely that the impact will occur
	Definite	The impact will definitely occur
Significance	Insignificant	Impact is negligible and will not have an influence on the decision regarding the proposed activity (No mitigation is necessary)
	Very Low	Impact is very small and should not have any meaningful influence on the decision regarding the proposed activity (No mitigation is necessary)
	Low	The impact may not have a meaningful influence on the decision regarding the proposed activity (No mitigation is necessary)
	Medium	The impact should influence the decision regarding the proposed activity (The project can only be carried through if certain mitigatory steps are taken)
	High	The impact will influence the decision regarding the proposed activity
	Very High	The proposed activity should only be approved under special circumstances
Reversibility	Low	There is little chance of correcting the adverse impact
	Medium	There is a moderate chance of correcting the adverse impact
	High	There is a high chance in correcting the adverse impact
Risk	Low	Assessing a risk involves an analysis of the consequences and likelihood of a hazard being realized. In decision-making, low-consequence / low-probability risks (green) are typically perceived as acceptable and therefore only require monitoring.
	Medium	Other risks (amber) may require structured risk assessment to better understand the features that contribute most to the risk. These features may be candidates for management
	High	High-consequence / high-probability risks (red) are perceived as unacceptable and a strategy is required to manage the risk.

Attributes associated with the alternatives were assessed and is outlined below:

Geographical attributes

The Geographical attributes of an area relates to the characteristics of a particular region, area or place. It influences the determination of site alternatives as it relates to the location of a site in relation to relevant features in the area.

Physical attributes

Physical attributes of an area relates to the processes and patterns in the natural environment. For the purpose of this assessment, the following processes and patterns have been investigated. Geology, soil, topography and landforms, climate and meteorology, surface water and ground water.

Biological attributes

Biological attributes for the purpose of this study includes the distribution of species and ecosystems in geographic space and through geological time. Organisms and biological communities often vary in a regular fashion along geographic gradients of latitude, elevation, isolation and habitat area. The two main branches assessed will be:

Phytogeography is the branch of biogeography that studies the distribution of plants.

Zoogeography is the branch that studies distribution of animals.

Social attributes

Social attributes is closely related to social theory in general and sociology in particular, dealing with the relation of social phenomena and its spatial components.

Economic attributes

Economic attributes includes the location, distribution and spatial organization of economic activities and also takes into account social, cultural, and institutional factors in the spatial economy of the development.

Heritage attributes

The broad generic term Cultural Heritage Resources refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of paleontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

Cultural attributes

Cultural attributes relates to the specific characteristics such as language, religion, ethnic and racial identity, and cultural history & traditions of people. These attributes influences family life, education, economic and political structures, and, of course, business practices.

It should be noted that the above mentioned attributes do not occur in isolation and it is not uncommon for an identified impact to overlap with two or more of these attributes. Also note, not all risks require comprehensive and detailed assessment. Solid problem formulation should allow decision-makers to evaluate the extent of subsequent analysis required. The level of effort put into assessing each risk should be proportionate to its significance and priority in relation to other risks, as well as its complexity, by reference to the likely impacts. Consideration should be given to stakeholders' perceptions of the nature of the risk.

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.

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
The proposed development will also involve the clearance of 10,9205ha of indigenous vegetation, of which 62 272m ² is located within an Ecological support area.	Negative	<p>Conduct a Fauna and Flora Habitat Study to determine the sensitivity of the Biodiversity of the area.</p> <p>Eradicate alien invasive plant species as described in the specialist's report.</p> <p>Minimize vegetation clearance. The project infrastructure footprint and associated area of disturbance should be minimised as far as practically possible.</p> <p>Avoid clearing the entire site, instead only clear areas required for foundations.</p> <p>Prohibit vehicular or pedestrian access into natural areas beyond the demarcated boundary of the construction area.</p> <p>The clearing of vegetation and disturbance of soils should be done considering the potential for subsequent erosion.</p> <p>Cleared vegetation and debris that has not been utilized must be collected and disposed of at a suitable waste disposal site. Under no circumstances may it be burned on site.</p>	Positive	Low

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
		<p>The modified grassland can be removed as sods and stored within modified areas – remove alien invasive vegetation prior to storing grasslands sods in transformed areas. The sods must preferably be removed during the winter months and be replanted by latest springtime. The sods should not be stacked on top of each other. Once construction is completed, these sods should be used to rehabilitate the disturbed areas from where they have been removed. In the absence of timely rainfall, the sods should be watered well after planting and at least twice more over the next 2 weeks.</p> <p>No painting or marking of rocks or vegetation to identify locality or other information will be allowed. Marking should be done by steel stakes with tags, if required. All temporary markings will be removed upon completion.</p> <p>All areas to be stripped firstly of topsoil and fertile soils and stockpiled in a designated area.</p> <p>Do not mix sub-soil with topsoil and fertile soils. Topsoil and fertile soil to be protected from contamination (i.e. hydrocarbons or infertile material).</p> <p>Topsoil and fertile soil stockpiles to be protected from weathering conditions such as covering the stockpiles with indigenous, non-invasive vegetation</p> <p>Obtain the necessary environmental authorization for the development.</p> <p>Implement the mitigation measures as described in the Environmental Management Plan</p>		
<p>The ground surface is highly disturbed, and the presence of historic works, excavations, fill and foundations were identified. The 1:50 000-scale topographical sheet indicates historic excavations across the majority of Portion 36. The 1:50 000-scale geological sheet indicates historic workings (mainly sand and clay pits) towards the south of the sites of interest. The 1:50 000-scale geological sheet indicates structures on Portion 36 with notes on an historic brick works present on Portion 36. The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on Portion 36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.</p>	<p>Negative</p>	<p>Considering the special site conditions with reference to 1) historic workings, 2) remanence of infrastructure and foundations, 3) presence of significant uncontrolled and un-engineered backfill and restricted accessibility, the following are recommended:</p> <p>a) It will be in the best interest of the client and role-players to conduct an infill geotechnical investigation to establish the vertical and lateral extent of the expected and partially identified fill region towards the centre portion of the investigated area (currently assigned Zone II), once the site is accessible/trafficable</p>	<p>Positive</p>	<p>Low</p>

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
Slag, Ash and G5 Ash have been dumped on site	Negative	Additional analyses performed on the sampled material indicate that all three samples have the potential to generate acid. Considering the rock classification, both the Ash and G5 Ash classify as Type I rock, which is potentially acid-forming, while the Slag has moderate acid-forming potential. When the results were compared to the NPR screening criteria, all the samples were likely to generate AMD. The material should be removed and disposed of at a suitable licenced site (GLB+). The waste has been classified as Type 3 waste.	Positive	Low
Un-rehabilitated, disturbed surfaces can lead to erosion and dust pollution.	Negative	<p>Start the rehabilitation of disturbed surfaces as soon as possible.</p> <p>Minimize vegetation clearance. The project infrastructure footprint and associated area of disturbance should be minimised as far as practically possible.</p> <p>Avoid clearing the entire site, instead only clear areas required for foundations.</p> <p>The clearing of vegetation and disturbance of soils should be done considering the potential for subsequent erosion.</p> <p>Spray bare surfaces with water to prevent dust pollution</p>	Positive	Low
Foreign plant species are likely to invade disturbed areas	Negative	<p>Under no circumstances should exotic and invasive plants be used for landscaping or rehabilitation purposes.</p> <p>Use of herbicides and handpicking/ slashing to control alien plants in development footprint.</p> <p>Manual removal is preferred to chemical control, particularly in the moist grassland.</p> <p>Disposal of alien plants must be done in a manner that cannot propagate.</p> <p>No alien plant should be allowed develop to a point of producing seed.</p> <p>Awareness training on the identification of weeds and alien species to employees responsible for the management of these species.</p> <p>Alien vegetation growing on topsoil stockpiles must be removed immediately in a manner as to prevent regrowth.</p> <p>All disturbed areas to be monitored on a regular basis for exotic or invasive plant species and weeds.</p> <p>Chemical removal shall be used in accordance with the manufacturer's specification for weeds where mechanical eradication/control are no longer effective.</p> <p>The type of chemical to be utilised must be determined in consultation with an herbicide consultant and the ECO.</p> <p>Those exotic/invasive plant or weed which cannot be eradicated by means of herbicides, needs to be manually removed from site.</p> <p>The herbicide consultant must have a Pest Control Operators licence.</p> <p>Control the type of material imported to site to ensure that soil contamination, in terms of weed and</p>	Positive	Low

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
		alien invasive plants does not occur		
Poorly planned ablation facilities for construction workers may cause pollution of surface and underground water	Negative	<p>Provide portable ablation facilities that will not cause pollution during the construction phase. One chemical toilet for every 30 workers on site.</p> <p>Sufficient toilets for people working on site to prevent using the surrounding environment for ablutions.</p> <p>Portable toilets properly secured to the ground.</p>	Positive	Low
The proposed project can cause pollution of the soil and surface water.	Negative	<p>Prevent spills of lubricants/oils that can take place on bare soil. This will include the use of drip trays for vehicles that are standing for more than 24 hours.</p> <p>Any spill which may contaminate water must be treated according to the approved spill management procedure.</p> <p>Contain oil or fuel spills in water using an approved oil absorbent fibre.</p> <p>Should contaminated water due to spillages or other unforeseen circumstances enter identified wetland or watercourse, a wetland/aquatic specialist must be consulted regarding implementation of suitable mitigation and/or rehabilitation measures.</p> <p>Wastewater as well as spilled fuel collected within bunded areas and refuelling areas shall be disposed of or treated as hazardous waste.</p> <p>All spills (minor and major) must be cleaned and remediated to the satisfaction of the appointed environmental representative or the competent authority within 24 hours.</p> <p>Any spillages on site to be excavated to the visible depth of impact and disposed of for removal to a registered hazardous waste disposal site. Alternative in-situ remediation techniques may be used.</p> <p>On site spill kits or absorbent materials must be readily available. These kits must include materials to absorb, breakdown, and where possible encapsulate minor material spillages.</p> <p>All vehicles, plant, and equipment must be inspected daily. Records to be made available for these inspections.</p> <p>Drip trays or any form of oil absorbent material must be placed underneath vehicles and equipment (where possible leaks may occur) when not in use.</p> <p>All vehicles, plant, and equipment must be well maintained to minimise the risk of fuel and oil leakages.</p> <p>Leaking equipment shall be removed and repaired immediately from site to facility designated for repairs.</p>	Positive	Low
Open trenches can be dangerous as they can either collapse on people or on equipment and people- especially small children, can fall into them	Negative	<p>Ensure that the trenches stay open for as short a time as possible.</p> <p>Ensure that open trenches are demarcated as required by the Occupational Health and Safety Act.</p> <p>Ensure that the construction site is fenced as per the Occupational Health and Safety Act.</p>	Positive	Low

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
Waste materials such as glass, plastic, metal or paper present a possible pollution hazard	Negative	<p>Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at construction yard, offices and camps. Mobile bins to be provided during the construction of the powerline and associated infrastructures.</p> <p>The bins are to be animal proof, sealed bins that cannot leak leachate material and waterproof that rain water cannot enter into them.</p> <p>Bins shall be emptied on a weekly basis or if there is a nauseous smell coming from them or vectors are breeding within them.</p> <p>An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials.</p> <p>No waste material or litter shall be burnt or buried on site.</p> <p>All solid waste shall be disposed of offsite at an approved municipal landfill site.</p> <p>No wastewater shall be disposed of directly into watercourses unless the water quality meets the DWS general discharge limits.</p> <p>All hazardous waste is to be stored in a hazardous waste container (sealed, leak proof, water proof container) clearly labelled.</p> <p>The hazardous waste is to be collected and transported to a registered hazardous waste facility.</p> <p>All waste manifestos are to be kept on site and up to date.</p> <p>Weekly checks are to be done to see if all registers are up to date.</p> <p>All ablutions are to be serviced weekly by a registered service provided, no contamination of sewage will be allowed on site.</p> <p>The Service provider for ablutions is to ensure that when servicing the toilets, it is done in a manner as to prevent any spills from occurring.</p> <p>All servicing of plant and equipment is to be undertaken off site.</p> <p>In the case where an emergency service is required for plant or equipment on site, the soil is to be protected from any potential spills prior to the emergency service commences.</p> <p>Hydrocarbon spill kits are to be readily available at construction sites and kept stocked. A register of the spill kits content is to be kept inside of the kit, once an item is used the item is to be re-placed immediately therefore extra items used to clean up a spill are to be kept on standby at all times</p>	Positive	Low
Non-compliance to the relevant legislation may cause social and environmental problems	Negative	<p>Ensure that contractors (construction phase) abide by all the requirements of the Occupational Health and Safety Act.</p> <p>Ensure that all contractors are aware of the consequences of non-compliance to the relevant legislation regarding the above-mentioned act as well as with regard to the environment (acts,</p>	Positive	Low

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
		regulations, and special guidelines).		
<p>Cumulative impacts:</p> <p>Solid waste: The proposed development will add additional solid waste into the existing waste stream of the Local Municipality.</p> <p>Sewage: The proposed development will add additional sewage to the sewage system of the Local Municipality.</p> <p>Water supply: The proposed development will add pressure to the water supply of Local Municipality.</p> <p>Access: More trips will be generated to the area.</p>	Negative	Ensure that the bulk infrastructure development is constructed as planned and developed by the Civil Engineer.		
An area that is currently vacant and a haven for criminal activities and illegal dumping will be utilised as a shopping centre	Negative	Construct the development as planned	Positive	Low
Lack of rehabilitation may cause problems	Negative	It will be the responsibility of the applicant to ensure that the rehabilitation plan is implemented	Positive	Low
Increased traffic volumes and storm water runoff	Negative	<p>An earth shaped stormwater channel currently runs through the property entering the South Western corner of the property and exit close to the North Eastern corner, discharging into the road reserve. The natural slope of the remainder of the proposed development drains towards the North Eastern corner. The closest Tshwane council stormwater infrastructure is a low point concrete outlet structure, connected to a 1050dia pipe located in the City of Tshwane road reserve between Van Der Hoff Road & Malie Street on the North Eastern corner of development.</p> <p>No flood lines are situated adjacent any boundary of the proposed township.</p> <p>Major Storm water System The major storm flow will surface flow via the new internal parking area towards the North Eastern boundary of the site, where it will overflow to the lower laying area.</p> <p>Minor Storm water System A new proposed internal stormwater piped system will be designed and constructed for the 5 year flood. The internal system will connect to a newly constructed City of Tshwane stormwater pipe within the road reserve, which will convey the stormwater up to the existing 1050dia council stormwater main, situated on the North Eastern corner of the development.</p> <p>The existing earth shaped stormwater channel will have to be re-routed in a controlled manner along the Western boundary line to discharge into Gautrans road reserve. The material, construction and testing of the storm water drainage system will comply with the SABS 1200 specifications</p> <p>Construct and maintain the infrastructure as planned.</p>	Positive	Low
Increase in waste generated	Negative	Implement a waste management strategy with the	Positive	Low

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
		following principals in mind: avoidance, reduction, recycling, treat, reuse and disposal where appropriate		
Broadened tax base: The proposed development will generate more income for the Local Municipality.	Negative	No mitigation measures required.	Positive	Low

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
The proposed development will also involve the clearance of 10,9205ha of indigenous vegetation, of which 62 272m ² is located within an Ecological support area.	Negative	<p>Conduct a Fauna and Flora Habitat Study to determine the sensitivity of the Biodiversity of the area.</p> <p>Eradicate alien invasive plant species as described in the specialist's report.</p> <p>Minimize vegetation clearance. The project infrastructure footprint and associated area of disturbance should be minimised as far as practically possible.</p> <p>Avoid clearing the entire site, instead only clear areas required for foundations.</p> <p>Prohibit vehicular or pedestrian access into natural areas beyond the demarcated boundary of the construction area.</p> <p>The clearing of vegetation and disturbance of soils should be done considering the potential for subsequent erosion.</p> <p>Cleared vegetation and debris that has not been utilized must be collected and disposed of at a suitable waste disposal site. Under no circumstances may it be burned on site.</p> <p>The modified grassland can be removed as sods and stored within modified areas – remove alien invasive vegetation prior to storing grasslands sods in transformed areas. The sods must preferably be removed during the winter months and be replanted by latest springtime. The sods should not be stacked on top of each other. Once construction is completed, these sods should be used to rehabilitate the disturbed areas from where they have been removed. In the absence of timely rainfall, the sods should be watered well after planting and at least twice more over the next 2 weeks.</p> <p>No painting or marking of rocks or vegetation to identify locality or other information will be allowed. Marking should be done by steel stakes with tags, if required. All temporary markings will be removed upon completion.</p> <p>All areas to be stripped firstly of topsoil and fertile soils and stockpiled in a designated area.</p> <p>Do not mix sub-soil with topsoil and fertile soils. Topsoil and fertile soil to be protected from contamination (i.e. hydrocarbons or infertile material).</p>	Positive	Low

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
		<p>Topsoil and fertile soil stockpiles to be protected from weathering conditions such as covering the stockpiles with indigenous, non-invasive vegetation</p> <p>Obtain the necessary environmental authorization for the development.</p> <p>Implement the mitigation measures as described in the Environmental Management Plan</p>		
<p>The ground surface is highly disturbed, and the presence of historic works, excavations, fill and foundations were identified. The 1:50 000-scale topographical sheet indicates historic excavations across the majority of PTN36. The 1:50 000-scale geological sheet indicates historic workings (mainly sand and clay pits) towards the south of the sites of interest. The 1:50 000-scale geological sheet indicates structures on PTN36 with notes on an historic brick works present on PTN36. The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on PTN36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.</p>	Negative	<p>Considering the special site conditions with reference to 1) historic workings, 2) remanence of infrastructure and foundations, 3) presence of significant uncontrolled and un-engineered backfill and restricted accessibility, the following are recommended:</p> <p>a) It will be in the best interest of the client and role-players to conduct an infill geotechnical investigation to establish the vertical and lateral extent of the expected and partially identified fill region towards the centre portion of the investigated area (currently assigned Zone II), once the site is accessible/trafficable</p>	Positive	Low
<p>Slag, Ash and G5 Ash have been dumped on site</p>	Negative	<p>Additional analyses performed on the sampled material indicate that all three samples have the potential to generate acid. Considering the rock classification, both the Ash and G5 Ash classify as Type I rock, which is potentially acid-forming, while the Slag has moderate acid-forming potential. When the results were compared to the NPR screening criteria, all the samples were likely to generate AMD. The material should be removed and disposed of at a suitable licenced site (GLB+). The waste has been classified as Type 3 waste.</p>	Positive	Low
<p>Un-rehabilitated, disturbed surfaces can lead to erosion and dust pollution.</p>	Negative	<p>Start the rehabilitation of disturbed surfaces as soon as possible.</p> <p>Minimize vegetation clearance. The project infrastructure footprint and associated area of disturbance should be minimised as far as practically possible.</p> <p>Avoid clearing the entire site, instead only clear areas required for foundations.</p> <p>The clearing of vegetation and disturbance of soils should be done considering the potential for subsequent erosion.</p> <p>Spray bare surfaces with water to prevent dust pollution</p>	Positive	Low
<p>Foreign plant species are likely to invade disturbed areas</p>	Negative	<p>Under no circumstances should exotic and invasive plants be used for landscaping or rehabilitation purposes.</p>	Positive	Low

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
		<p>Use of herbicides and handpicking/ slashing to control alien plants in development footprint.</p> <p>Manual removal is preferred to chemical control, particularly in the moist grassland.</p> <p>Disposal of alien plants must be done in a manner that cannot propagate. No alien plant should be allowed develop to a point of producing seed.</p> <p>Awareness training on the identification of weeds and alien species to employees responsible for the management of these species.</p> <p>Alien vegetation growing on topsoil stockpiles must be removed immediately in a manner as to prevent regrowth.</p> <p>All disturbed areas to be monitored on a regular basis for exotic or invasive plant species and weeds.</p> <p>Chemical removal shall be used in accordance with the manufacturer's specification for weeds where mechanical eradication/control are no longer effective.</p> <p>The type of chemical to be utilised must be determined in consultation with an herbicide consultant and the ECO.</p> <p>Those exotic/invasive plant or weed which cannot be eradicated by means of herbicides, needs to be manually removed from site.</p> <p>The herbicide consultant must have a Pest Control Operators licence.</p> <p>Control the type of material imported to site to ensure that soil contamination, in terms of weed and alien invasive plants does not occur</p>		
<p>Poorly planned ablution facilities for construction workers may cause pollution of surface and underground water</p>	<p>Negative</p>	<p>Provide portable ablution facilities that will not cause pollution during the construction phase. One chemical toilet for every 30 workers on site.</p> <p>Sufficient toilets for people working on site to prevent using the surrounding environment for ablutions.</p> <p>Portable toilets properly secured to the ground.</p>	<p>Positive</p>	<p>Low</p>
<p>The proposed project can cause pollution of the soil and surface water.</p>	<p>Negative</p>	<p>Prevent spills of lubricants/oils that can take place on bare soil. This will include the use of drip trays for vehicles that are standing for more than 24 hours.</p> <p>Any spill which may contaminate water must be treated according to the approved spill management procedure.</p> <p>Contain oil or fuel spills in water using an approved oil absorbent fibre.</p> <p>Should contaminated water due to spillages or other unforeseen circumstances enter identified wetland or watercourse, a wetland/aquatic specialist must be consulted regarding implementation of suitable mitigation and/or rehabilitation measures.</p> <p>Wastewater as well as spilled fuel collected within</p>	<p>Positive</p>	<p>Low</p>

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
		<p>bunded areas and refuelling areas shall be disposed of or treated as hazardous waste.</p> <p>All spills (minor and major) must be cleaned and remediated to the satisfaction of the appointed environmental representative or the competent authority within 24 hours.</p> <p>Any spillages on site to be excavated to the visible depth of impact and disposed of for removal to a registered hazardous waste disposal site. Alternative in-situ remediation techniques may be used.</p> <p>On site spill kits or absorbent materials must be readily available. These kits must include materials to absorb, breakdown, and where possible encapsulate minor material spillages.</p> <p>All vehicles, plant, and equipment must be inspected daily. Records to be made available for these inspections.</p> <p>Drip trays or any form of oil absorbent material must be placed underneath vehicles and equipment (where possible leaks may occur) when not in use.</p> <p>All vehicles, plant, and equipment must be well maintained to minimise the risk of fuel and oil leakages.</p> <p>Leaking equipment shall be removed and repaired immediately from site to facility designated for repairs.</p>		
<p>Open trenches can be dangerous as they can either collapse on people or on equipment and people- especially small children, can fall into them</p>	Negative	<p>Ensure that the trenches stay open for as short a time as possible.</p> <p>Ensure that open trenches are demarcated as required by the Occupational Health and Safety Act.</p> <p>Ensure that the construction site is fenced as per the Occupational Health and Safety Act.</p>	Positive	Low
<p>Waste materials such as glass, plastic, metal or paper present a possible pollution hazard</p>	Negative	<p>Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at construction yard, offices and camps. Mobile bins to be provided during the construction of the powerline and associated infrastructures.</p> <p>The bins are to be animal proof, sealed bins that cannot leak leachate material and waterproof that rain water cannot enter into them.</p> <p>Bins shall be emptied on a weekly basis or if there is a nauseous smell coming from them or vectors are breeding within them.</p> <p>An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials.</p> <p>No waste material or litter shall be burnt or buried on site.</p> <p>All solid waste shall be disposed of offsite at an approved municipal landfill site.</p> <p>No wastewater shall be disposed of directly into watercourses unless the water quality meets the DWS general discharge limits.</p> <p>All hazardous waste is to be stored in a hazardous</p>	Positive	Low

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
		<p>waste container (sealed, leak proof, water proof container) clearly labelled.</p> <p>The hazardous waste is to be collected and transported to a registered hazardous waste facility.</p> <p>All waste manifestos are to be kept on site and up to date.</p> <p>Weekly checks are to be done to see if all registers are up to date.</p> <p>All ablutions are to be serviced weekly by a registered service provided, no contamination of sewage will be allowed on site.</p> <p>The Service provider for ablutions is to ensure that when servicing the toilets, it is done in a manner as to prevent any spills from occurring.</p> <p>All servicing of plant and equipment is to be undertaken off site.</p> <p>In the case where an emergency service is required for plant or equipment on site, the soil is to be protected from any potential spills prior to the emergency service commences.</p> <p>Hydrocarbon spill kits are to be readily available at construction sites and kept stocked. A register of the spill kits content is to be kept inside of the kit, once an item is used the item is to be re-placed immediately therefore extra items used to clean up a spill are to be kept on standby at all times</p>		
Non-compliance to the relevant legislation may cause social and environmental problems	Negative	<p>Ensure that contractors (construction phase) abide by all the requirements of the Occupational Health and Safety Act.</p> <p>Ensure that all contractors are aware of the consequences of non-compliance to the relevant legislation regarding the above-mentioned act as well as with regard to the environment (acts, regulations, and special guidelines).</p>	Positive	Low
<p>Cumulative impacts:</p> <p>Solid waste: The proposed development will add additional solid waste into the existing waste stream of the Local Municipality.</p> <p>Sewage: The proposed development will add additional sewage to the sewage system of the Local Municipality.</p> <p>Water supply: The proposed development will add pressure to the water supply of Local Municipality.</p> <p>Access: More trips will be generated to the area.</p>	Negative	<p>Ensure that the bulk infrastructure development is constructed as planned and developed by the Civil Engineer.</p>		
An area that is currently vacant and a haven for criminal activities and illegal dumping will be utilised as a shopping centre	Negative	Construct the development as planned	Positive	Low
Lack of rehabilitation may cause problems	Negative	It will be the responsibility of the applicant to ensure that the rehabilitation plan is implemented	Positive	Low

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
Increased traffic volumes and storm water runoff	Negative	<p>An earth shaped stormwater channel currently runs thru the property entering the South Western corner of the property and exit close to the North Eastern corner, discharging into the road reserve. The natural slope of the remainder of the proposed development drains towards the North Eastern corner. The closest Tshwane council stormwater infrastructure is a low point concrete outlet structure, connected to a 1050dia pipe located in the City of Tshwane road reserve between Van Der Hoff Road & Malie Street on the North Eastern corner of development.</p> <p>No flood lines are situated adjacent any boundary of the proposed township.</p> <p>Major Storm water System The major storm flow will surface flow via the new internal parking area towards the North Eastern boundary of the site, where it will overflow to the lower laying area.</p> <p>Minor Storm water System A new proposed internal stormwater piped system will be designed and constructed for the 5 year flood. The internal system will connect to a newly constructed City of Tshwane stormwater pipe within the road reserve, which will convey the stormwater up to the existing 1050dia council stormwater main, situated on the North Eastern corner of the development.</p> <p>The existing earth shaped stormwater channel will have to be re-routed in a controlled manner along the Western boundary line to discharge into Gautrans road reserve. The material, construction and testing of the storm water drainage system will comply with the SABS 1200 specifications</p> <p>Construct and maintain the infrastructure as planned.</p>	Positive	Low
Increase in waste generated	Negative	Implement a waste management strategy with the following principals in mind: avoidance, reduction, recycling, treat, reuse and disposal where appropriate	Positive	Low
<u>Broadened tax base:</u> The proposed development will generate more income for the Local Municipality.	Negative	No mitigation measures required.	Positive	Low

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
The no-go alternative will entail that the <i>status quo</i> will remain. The implication of this will be that waste dumped on site will remain " <i>in-situ</i> " and might start to generate acid that may pollute the soil and ground water of the area.	Negative	If the development is not constructed, the developer will not have funds to remove the waste that has been dumped on site and therefore none of the advantages as listed above will realize.	Negative	High
The informal earth shaped stormwater channel will continue to cause flooding of the site as water is not	Negative	If the development is not constructed, the developer will not have funds to reroute the earth shaped stormwater channel and therefore none of the advantages as listed above will realize.	Negative	High

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
properly diverted towards the Municipal storm water infrastructure.				
Alien invasive plant species that have established on site will not be removed and illegal, informal dumping will continue.	Negative	If the development is not constructed, the developer will not have funds to remove the Alien invasive plant species that have established on site and therefore none of the advantages as listed above will realize.	Negative	High
The establishment of a shopping Centre, with the benefits to society as mentioned above will not realize.	Negative	If the development is not constructed, the establishment of a shopping Centre, with the benefits to society as mentioned above will not realize.	Negative	High

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

- **Phase 1 Shallow Soil Engineering Geological Investigation was conducted by RockSoil Consult (Pty) Ltd.**
- **A “PHASE 1 HIA REPORT FOR PROPOSED DEVELOPMENT LOCATED ON A PORTION OF ZANDFONTEIN 317JR GREATER TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG” was compiled by A Pelser Archaeological Consulting (APAC).**
- **An “ECOLOGICAL FAUNA AND FLORA HABITAT SURVEY” was compiled by Anthene Ecological CC.**
- **A “CIVIL ENGINEERING SERVICES BASELINE REPORT FOR THE DEVELOPMENT OF THE VAN DER HOFF SHOPPING MALL, (PTN 36 & 216 ZANDFONTEIN 317-JR.)” was compiled by DG Corner Consulting Engineers (PTY) LTD.**
- **A “BULK SERVICES REPORT for ELECTRICAL SERVICES” was compiled by WATSON MATTHEUS CONSULTING ELECTRICAL ENGINEERS (Pty) Ltd.**
- **A “Retail Study” was compiled by Fernridge Solutions Pty Ltd.**
- **A Specialist was appointed to conduct a WASTE CLASSIFICATION. The need for a waste classification was triggered by a phase 1 shallow soil engineering geological assessment conducted. During the evaluation, fly-Ash and Slag fill were encountered at four of the nine test pits. The report indicated that the material could be hazardous and should be analyzed.**

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

This report is based on current available information and, as a result, the following limitations and assumptions are implicit –

The report is based on the *project description* provided by the Applicant as a result of reports that was compiled by the following Specialists:

- A Geo-Technical Engineer was appointed to assess the suitability of the site in terms of geological features. The identified shortcomings are:
 - a) The investigation is considered a **shallow soil investigation**.
 - b) The **depth of inspection was limited** to between approximately 2.8 to 3.2 mbgl that is the practical reach of the excavator.
 - c) The **centre portion of the site is not accessible** in the current state due to excessive fill, excessive shallow borrows and trafficability at the time of the conducting the fieldwork phases. Shallow borrows are mainly hand-excavated (shovel) where the local community extract slag for various uses.
 - d) The **depth of historic workings** (excavations), vertical and lateral extent and properties of the backfill was not established during this Phase 1 shallow soil assessment. Infill test pitting was attempted in early February 2022. The site was however not trafficable due to severe water ponding and soft surface soil.
 - e) Indications of historic platforms and structures are present towards the eastern portion of the area investigated. The exact **positions of the historic foundations and/or presence of historic underground services was not established** in this shallow soil assessment.
- The Civil Engineer was appointed to determine the capability of existing infrastructure to be linked to proposed development and available bulk services.
- A SAHRA Specialist has been appointed to determine the possible impact of the development on Archaeological and Cultural features.
- A Botanical specialist has been appointed to determine the impact of the proposed development on the Fauna and Flora of the area.
- An Engineer was appointed to conduct a Traffic Impact Assessment to determine the impact of the proposed development on the existing road infrastructure of the area.
- An Economical feasibility study was conducted to determine the need for the proposed development.
- A Specialist was appointed to conduct a waste classification. The need for a waste classification was triggered by a phase 1 shallow soil engineering geological assessment conducted. During the evaluation, fly-Ash and Slag fill were encountered at four of the nine test pits. The report indicated that the material could be hazardous and should be analysed.

Descriptions of the biophysical and social environments are based on specialist fieldwork, investigations, and the Public Participation Process.

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.

The application deals with the installation of infrastructure that will not be discontinued within the foreseeable future.

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

N/A

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

N/A

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:

- An area that is currently vacant and a haven for criminal activities and illegal dumping will be utilised as a shopping centre.
- Slag, Ash and G5 Ash has been dumped on the site and has the potential to generate acid that could potentially pollute the soil and ground water of the area. If the development is approved, these waste materials will be removed to a suitable waste site where it will be contained.
- The development will result in an increase in traffic volumes in the area. If the mitigation measures as is described in the Traffic Engineer's Report is adhered to, these impacts can be mitigated.
- The development will result in an increase in storm water runoff as impermeable surfaces will be constructed. The Storm water management plan will address these issues.
- The development will result in an increase in waste generated in the area. It can be stated that most of the Anchor retailers have a very strict policy on waste management and ensures that the generation of waste is avoided, reduced, and that waste generated is recycled.

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 detailed environmental assessment for the proposed development, has not found any environmental impacts that *cannot* be mitigated to acceptable and manageable levels.

This **Proposal** entails the establishment a shopping centre with associated access and parking on Portion 36 and the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.

Tshwane Metropolitan Municipality's SDF highlights the fact that retail is one of the most dynamic urban land uses or activities of our cities, towns and rural areas. The retail sector is a significant catalyst for urban development in Tshwane. Shopping centers have influenced and changed the spatial direction in many areas. The demand for retail space is mainly driven by consumer characteristics and profiles, population numbers and growth, and the level of

disposable income per subarea. In addition, the success of the retail sector is very much a function of economic conditions on the macro and micro level, changes in shopping behavior, new retail formats, changes in the rest of the urban environment, as well as shopper preferences. Lifestyles play an important role in what goods and services consumers purchase.

The site has excellent visibility from the R514 (Hermanstad/Van der Hoff Road). The (R514) Retail/Commercial and Industrial development corridor accommodates approximately 15,000 workers, of which 62% are industrial/commercial workers and 14% retail workers. This area is regarded as the twelfth largest job opportunity node in Tshwane. Most of the activities, especially retail are taking place to the East of the R55 (Dense level of activity. Other businesses along this road are automotive related, Chicken farms and nurseries. The proposed site is located in a developing node. Buses and taxis currently drive past the site. The planned PWV9 freeway could have positive spin-offs for the envisaged retail development when it materializes. The proposed and currently underway residential developments could be expected to increase the market for the planned centre.

The R514 is a retail corridor especially to the East. The retail that is currently interacting with the R514 traffic currently have poor or complicated access from the R514. Therefore, this retail development should have good micro access from the R514. The opinion is being held that the proposed development will strengthen the retail sector within the area, due to the provision of a shopping centre within the urban area. The impacts of the proposed shopping centre on the economy of the area are considered to be long term in duration, local in extent with a high (positive) significance. The likelihood of these impacts materialising, should the development be established is considered to be definite.

ROADS

Existing roads

The nearest road, constructed to the local authority (Gautrans) standards is Van Der Hoff road, situated on the Northern boundary of the development.

Proposed new infrastructure

It is proposed that the property obtain access from Van Der Hoff Road on the Northern boundary of the property. The proposed new access road towards the development with the relevant road upgrades will be determined by Gautrans based on the traffic impact study conducted by an appointed traffic engineer. The necessary approvals to construct the proposed access have been granted by the applicable authorities.

The ground surface is highly disturbed, and the presence of historic works, excavations, fill and foundations were identified. The 1:50 000-scale topographical sheet indicates historic excavations across the majority of Portion 36. The 1:50 000-scale geological sheet indicates historic workings (mainly sand and clay pits) towards the south of the sites of interest. The 1:50 000-scale geological sheet indicates structures on Portion 36 with notes on an historic brick works present on Portion 36. The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on Portion 36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.

Considering the special site conditions with reference to 1) historic workings, 2) remanence of infrastructure and foundations, 3) presence of significant uncontrolled and un-engineered backfill and restricted accessibility, the following are recommended:

a) It will be in the best interest of the client and role-players to conduct an infill geotechnical investigation to establish the vertical and lateral extent of the expected and partially identified fill region towards the centre portion of the investigated area (currently assigned Zone II), once the site is accessible/trafficable

The need for a waste classification study was triggered by the phase 1 shallow soil engineering geological assessment that was conducted. During the evaluation, fly-Ash and Slag fill were encountered at four of the nine test pits. The report indicated that the material could be hazardous and should be analysed. A Specialist was appointed to conduct a waste classification and the results were as follows:

“Additional analyses performed on the sampled material indicate that all three samples have the potential to generate acid. Considering the rock classification, both the Ash and G5 Ash classify as Type I rock, which is potentially acid-forming, while the Slag has moderate acid-forming potential.

When the results were compared to the NPR screening criteria, all the samples were likely to generate AMD. The material should be removed and disposed of at a suitable licenced site (GLB+). The waste has been classified as Type 3 waste.”

As mentioned above, Slag, Ash and G5 Ash has been dumped on the site and has the potential to generate acid that could potentially pollute the soil and ground water of the area. If the development is approved, these waste materials will be removed to a suitable waste site where it will be contained. The impact of this rehabilitation process is considered to be long term in duration, local in extent with a high (positive) significance. The likelihood of these impacts materialising, should the development be established is considered to be definite.

An earth shaped stormwater channel currently runs through the property entering the South Western corner of the property and exit close to the North Eastern corner, discharging into the road reserve. The natural slope of the remainder of the proposed development drains towards the North Eastern corner. The closest Tshwane council stormwater infrastructure is a low point concrete outlet structure, connected to a 1050dia pipe located in the City of Tshwane road reserve between Van Der Hoff Road & Malie Street on the North Eastern corner of development.

No flood lines are situated adjacent any boundary of the proposed township.

Major Storm water System

The major storm flow will surface flow via the new internal parking area towards the North Eastern boundary of the site, where it will overflow to the lower laying area.

Minor Storm water System

A new proposed internal stormwater piped system will be designed and constructed for the 5 year flood. The internal system will connect to a newly constructed City of Tshwane stormwater pipe within the road reserve, which will convey the stormwater up to the existing 1050dia council stormwater main, situated on the North Eastern corner of the development.

The existing earth shaped stormwater channel will have to be re-routed in a controlled manner along the Western boundary line to discharge into Gautrans road reserve. The material,

construction and testing of the storm water drainage system will comply with the SABS 1200 specifications. The impact of the formalization of the storm water structures in the area is considered to be long term in duration, local in extent with a high (positive) significance. The likelihood of these impacts materialising, should the development be established is considered to be definite.

SEWAGE RETICULATION

Existing sewer reticulation

Existing 225dia sewer main is located along the Northern boundary line of the development. The pipe is located outside the road reserve, inside the building line & protected by a servitude in favour of the City of Tshwane.

Proposed new infrastructure

New 160dia Upvc pipes will be installed on the perimeter of the building to drain towards the existing 225dia council main along the Northern boundary. The proposed new 160dia erf connection will connect to an existing sewer manhole which is located in the lowest North Eastern corner. Council confirmed that the existing network do have sufficient capacity to accommodate the proposed development.

PROVISION OF WATER

Existing water reticulation

City of Tshwane municipality indicated a 400dia & 700dia bulk water line which run within the Van Der Hoff road reserve along the Northern boundary line. These pipes are bulk supply mains and do not serve as networks distribution mains. The closest reticulation network line, is a 76dia Asbestos line installed parallel to the bulk mains up to the North Eastern corner of the property, connecting to a ring main network in Theo Slabbert Street which are approximately 700m towards the Eastern side of the proposed new development. Council confirmed that this pipe will not have sufficient capacity to accommodate the fire requirements for the development.

Proposed new infrastructure

Council suggest to upgrade the 76dia AC council main to a new 160dia Upvc Class 12 pipe, towards the existing 76dia water ring main network in Theo Slabbert Avenue which will have sufficient capacity to accommodate development. The approximate distance towards the connection is measured as 700m.

The impact of the additional pressure on the services of the area considered to be long term in duration, local in extent with a high significance. The likelihood of these impacts materialising, should the development be established is considered to be definite

According to the Screening Report generated, using the National Web Based Environmental Screening Tool, the site is located within the Gauteng Provincial Environmental Management Framework (GPEMF) Zone 1 and partially in Zone 5. According to the Gauteng C-Plan, an area of 62 272m² is located within an Ecological Support area. As Activity 12(h)(vi) of GN. R 324 of 7 April 2017 is not excluded in EMZ 1, an application for Environmental Authorization will have to be applied for as question 15 in the frequently asked questions, on the Gauteng website is answered as follows:

“Where a development triggers activities that are excluded in terms of the Standard, as well as activities that are not excluded in terms of the Standard, the Standard will not apply and an EA process will need to be followed. In order for the Standard to apply all the activities that are triggered need to be excluded by the Standard and need to take place in Zones 1 and/or 5 of the Standard.”

A Fauna and Flora Habitat Study was conducted and the Specialist concluded the following:

- Vegetation at the site is **extensively disturbed**, modified and at some places transformed. A mixture of alien invasive and indigenous plant species exists at the site.
- Indigenous tree species at the site include *Vachellia karroo*. A number of alien invasive tree species such as *Melia azedarach*, *Eucalyptus camaldulensis*, *Solanum mauritianum* and *Tecoma stans* are present at the site. The alien invasive reed species *Arundo donax* occur in clumps at the site. A clump of *Typha capensis* has established at a ditch that has been dug next to the tar road at the northern limits of the site.
- Indigenous grass species at the site include *Heteropogon contortus*, *Hyparrhenia hirta*, and *Cynodon dactylon*. The herbaceous shrub *Gomphocarpus fruticosus* also occurs at the site. Indigenous forb species appear to be scarce at the site. Many alien invasive weed species are found at the site and these include *Argemone ochroleuca*, *Datura ferox*, *Datura stramonium*, *Gomphrena celosoides*, *Schkuhria pinnata*, *Tagetes minuta*, *Conyza bonariensis*, *Malva parviflora*, *Verbena aristigera*, *Bidens bipinnata*, *Bidens pilosa* and *Flaveria bidentis*.
- Rocky ridges are absent at the site.
- No wetlands appear to be present at the site.
- Savanna at the site is represented by the Moot Plains Bushveld (SVcb 8) vegetation type which is not listed as a Threatened Ecosystem, according to the National List of Threatened Ecosystems (2011).
- Threatened and Near Threatened animal and plant species appear to be absent. Other animal or plant species of particular conservation concern also appear to be absent at the site.
- The scope for the site to be a corridor of particular conservation importance is small.
- Ecological sensitivity at the site is low.
- Following the mitigations which will be upheld and planned footprint for development all the impact risks listed above are moderate or low.
- If the development is approved continued monitoring and eradication of alien invasive plant species are imperative. It is in particular declared alien invasive species such as *Melia azedarach* (Syringa) and alien invasive Australian *Acacia* species (Australian wattles) that should not be allowed to establish.
- If the development is approved an opportunity presents itself to cultivate indigenous plant species which would benefit urban nature conservation.

The impact of the development on the fauna and flora of the site is considered to be long term in duration, local in extent with a high (positive) significance. This positive impact is due to the eradication of alien invasive species that are currently found on site. The likelihood of these impacts materialising, should the development be established is considered to be definite

A Heritage impact Assessment was also conducted and the results were as follows:

Background research indicates that there are some cultural heritage sites and features in the

larger geographical area within which the study area falls. **No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were found in the study & development area during the assessment.** The area would have been used in the historical past for agricultural purposes, while recent urban residential & industrial related developments and activities have had a major impact on the area. Encroaching informal settlement has also impacted on the area. Aerial images of the study and proposed development area footprint from 2005 onwards clearly shows the impacts of activities such as quarrying, other developments and the dumping of refuse and building material on the land. If any sites or features with a cultural heritage origin did exist here in the past it would have been extensively disturbed or destroyed as a result.

The impact of the development on the Heritage features is considered to be insignificant as no features has been identified. Should any features be discovered, a specialist will be consulted to advice on the way forward.

Alternative 1

The **Alternative** considered entails the establishment of a shopping centre with associated access and parking on Portion 36 and a high density residential development on the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.

This option is considered to be a viable option as an Alternative as there is a housing shortage in the area. At this stage the development of the shopping centre will be phased with phase 1 being the construction of the shopping centre only on Portion 36. The developer intends to revert to this option should it prove to be more viable in future.

No-go (compulsory)

The no-go alternative will entail that the *status quo* will remain. The implication of this will be that waste dumped on site will remain "*in-situ*" and might start to generate acid that may pollute the soil and ground water of the area.

The informal earth shaped stormwater channel will continue to cause flooding of the site as water is not properly diverted towards the Municipal storm water infrastructure.

Alien invasive plant species that have established on site will not be removed and illegal, informal dumping will continue.

The establishment of a shopping Centre, with the benefits to society as mentioned above will not realize.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The detailed environmental assessment for the proposed development, has not found any environmental impacts that *cannot* be mitigated to acceptable and manageable levels.

This **Proposal** entails the establishment a shopping centre with associated access and parking on Portion 36 and the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.

Tshwane Metropolitan Municipality's SDF highlights the fact that retail is one of the most dynamic urban land uses or activities of our cities, towns and rural areas. The retail sector is a significant catalyst for urban development in Tshwane. Shopping centers have influenced and

changed the spatial direction in many areas. The demand for retail space is mainly driven by consumer characteristics and profiles, population numbers and growth, and the level of disposable income per subarea. In addition, the success of the retail sector is very much a function of economic conditions on the macro and micro level, changes in shopping behavior, new retail formats, changes in the rest of the urban environment, as well as shopper preferences. Lifestyles play an important role in what goods and services consumers purchase.

The site has excellent visibility from the R514 (Hermanstad/Van der Hoff Road). The (R514) Retail/Commercial and Industrial development corridor accommodates approximately 15,000 workers, of which 62% are industrial/commercial workers and 14% retail workers. This area is regarded as the twelfth largest job opportunity node in Tshwane. Most of the activities, especially retail are taking place to the East of the R55 (Dense level of activity. Other businesses along this road are automotive related, Chicken farms and nurseries. The proposed site is located in a developing node. Buses and taxis currently drive past the site. The planned PWV9 freeway could have positive spin-offs for the envisaged retail development when it materializes. The proposed and currently underway residential developments could be expected to increase the market for the planned centre.

The R514 is a retail corridor especially to the East. The retail that is currently interacting with the R514 traffic currently have poor or complicated access from the R514. Therefore, this retail development should have good micro access from the R514. The opinion is being held that the proposed development will strengthen the retail sector within the area, due to the provision of a shopping centre within the urban area.

The ground surface is highly disturbed, and the presence of historic works, excavations, fill and foundations were identified. The 1:50 000-scale topographical sheet indicates historic excavations across the majority of Portion 36. The 1:50 000-scale geological sheet indicates historic workings (mainly sand and clay pits) towards the south of the sites of interest. The 1:50 000-scale geological sheet indicates structures on PTN36 with notes on an historic brick works present on Portion 36. The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on Portion 36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.

Considering the special site conditions with reference to 1) historic workings, 2) remanence of infrastructure and foundations, 3) presence of significant uncontrolled and un-engineered backfill and restricted accessibility, the following are recommended:

a) It will be in the best interest of the client and role-players to conduct an infill geotechnical investigation to establish the vertical and lateral extent of the expected and partially identified fill region towards the centre portion of the investigated area (currently assigned Zone II), once the site is accessible/trafficable.

The need for a waste classification study was triggered by the phase 1 shallow soil engineering geological assessment that was conducted. During the evaluation, fly-Ash and Slag fill were encountered at four of the nine test pits. The report indicated that the material could be hazardous and should be analysed. A Specialist was appointed to conduct a waste classification and the results were as follows:

“Additional analyses performed on the sampled material indicate that all three samples have the potential to generate acid. Considering the rock classification, both the Ash and G5 Ash classify as Type I rock, which is potentially acid-forming, while the Slag has moderate acid-

forming potential.

When the results were compared to the NPR screening criteria, all the samples were likely to generate AMD. The material should be removed and disposed of at a suitable licenced site (GLB+). The waste has been classified as Type 3 waste.”

As mentioned above, Slag, Ash and G5 Ash has been dumped on the site and has the potential to generate acid that could potentially pollute the soil and ground water of the area. If the development is approved, these waste materials will removed to a suitable waste site where it will be contained.

An earth shaped stormwater channel currently runs thru the property entering the South Western corner of the property and exit close to the North Eastern corner, discharging into the road reserve. The natural slope of the remainder of the proposed development drains towards the North Eastern corner. The closest Tshwane council stormwater infrastructure is a low point concrete outlet structure, connected to a 1050dia pipe located in the City of Tshwane road reserve between Van Der Hoff Road & Malie Street on the North Eastern corner of development.

The existing earth shaped stormwater channel will have to be re-routed in a controlled manner along the Western boundary line to discharge into Gautrans road reserve. The material, construction and testing of the storm water drainage system will comply with the SABS 1200 specifications. The impact of the formalization of the storm water structures in the area is considered to be long term in duration, local in extent with a high (positive) significance. The likelihood of these impacts materialising, should the development be established is considered to be definite.

Vegetation at the site is **extensively disturbed**, modified and at some places transformed. A mixture of alien invasive and indigenous plant species exists at the site. Threatened and Near Threatened animal and plant species appear to be absent. Other animal or plant species of particular conservation concern also appear to be absent at the site.

No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were found in the study & development area during the assessment.

For alternative:

The **Alternative** considered entails the establishment of a shopping centre with associated access and parking on Portion 36 and a high density residential development on the Remaining Extent of Portion 216 of the Farm Zandfontein 317, JR, Gauteng Province.

This option is considered to be a viable option as an Alternative as there is a housing shortage in the area. At this stage the development of the shopping centre will be phased with phase 1 being the construction of the shopping centre with associated access and parking only on Portion 36. The developer intends to revert to this option should it prove to be more viable in future.

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.

At this stage the development is planned to be a Phased development with Phase 1 being the development of a Shopping centre with associated access and parking on Portion 36 and Phase 2 being the development of a shopping centre with associated access and parking on the Remaining Extent of Portion 216.

The Alternative considered entails the establishment of a shopping centre with associated access and parking on Portion 36 (phase 1) and a high density residential development on the Remaining Extent of Portion 216 (Phase 2). This option is considered to be a viable option as an Alternative as there is a housing shortage in the area. The developer intends to revert to this option should it prove to be more viable in future. In this assessment, both options has been considered.

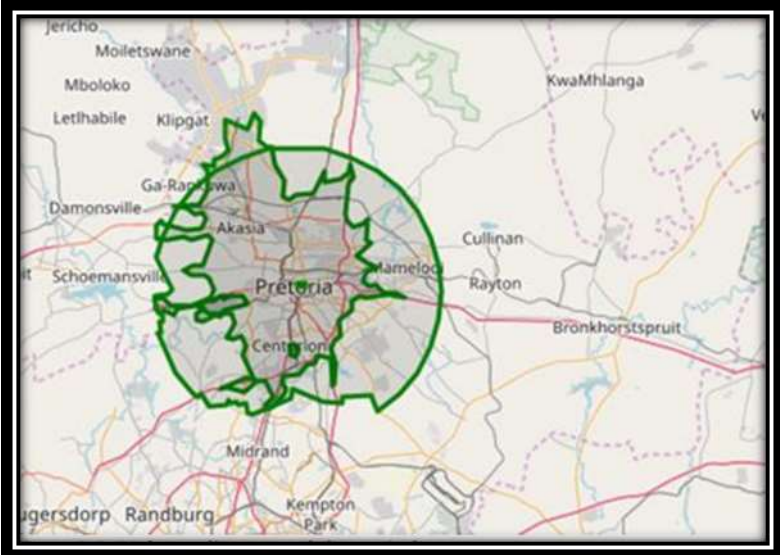
Market research can only predict so much. At this stage the establishment of the phase 1 is supported by the study. The study indicates that there is a possibility that stage 2 will be viable in future. Phase 1 will first have to be constructed and be operational to determine the exact success and potential of the development. Although indications are that there is a big enough market for Phase 2.

7. SPATIAL DEVELOPMENT TOOLS

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

<p>GDACE requirements for Biodiversity Assessments</p>	<p>Gauteng is South Africa's smallest and most densely populated and economically productive province. As such it has intense land-use pressure, from urban expansion and mining predominantly, and there are severe pressures on Gauteng's natural resources. To address this, as well as enhance livelihoods for the citizens of Gauteng, a range of tools have been developed to aid the wise use of natural resources and sustainable development. These tools help to mainstream biodiversity objectives into land-use planning and development decision-making.</p> <p>Biodiversity is in fact key to a green economy. It underpins the ecological infrastructure and natural capital from which flows a range of goods and services that benefit people. This provides a foundation for:</p> <ul style="list-style-type: none"> • Economic growth and the creation of jobs in biodiversity management, restoration and maintenance of ecological infrastructure • Social development through the delivery of services that support the poorest members of society and aid in poverty alleviation • Human wellbeing including helping us cope with climate-related hazards and disaster risk reduction <p>The Biodiversity Specialist were provided with copies of the requirements and he has incorporated them into his report.</p>
<p>Development guidelines for Ridges</p>	<p>The quartzite ridges of Gauteng are one of the most important natural assets in the northern provinces of South Africa. This is because these ridges, and the area immediately surrounding the ridges, provide habitat for a wide variety of fauna and flora, some of which are Red List, rare or endemic species or, in the case of certain of the plant species, are found nowhere else in South Africa or the world. The ridges also fulfill functions that are necessary for the sustainability of ecosystems such as the recharging of groundwater, wetlands and rivers, wildlife dispersal and providing essential habitat for pollinators. Ridges also have a socio-cultural role in that they provide aesthetically pleasing environments that are valued by residents, tourists and recreational users. Human activities such as urbanization, mining and the planting of alien vegetation may undermine the contribution that ridges make to the environment.</p> <p>These factors were all taken into account by the Botanical and Heritage Specialists in their assessment of the area.</p>
<p>The City of Tshwane 2021 2026 Integrated Development Plan</p>	<p>City of Tshwane is classified as a Category A municipality by the Municipal Demarcation Board in terms of section 4 of the Local Government Municipal Structures Act, 1998 (Act 117 of 1998). The Municipality was established on 5 December 2000 through the integration of various municipalities and councils that had previously served the greater Pretoria regime and surrounding areas.</p> <p>Tshwane 2030 vision</p> <p>The vision for the City of Tshwane which was adopted on 25 May 2017 for 2030 is as follows:</p> <p><i>Tshwane: A prosperous capital city through fairness, freedom and opportunity</i></p> <p>The achievement of the above vision depends on embedding the above governance</p>

	<p>values in the plans and actions of the City and its partners. In fact, these values will propel the City towards its vision, provided that the following strategic pillars for development are embraced:</p> <ol style="list-style-type: none"> 1. Advancing economic growth and job creation 2. Creating a caring environment and promoting inclusivity 3. Delivering excellent services and protecting the environment 4. Keeping the residents safe 5. Being open, honest and responsive <p>Building on the vision set the review of the IDP further develops and enhances the five strategic pillars referred to above.</p> <p>Strategic Pillar 1: A City that facilitates economic growth and job creation</p> <p>In order to realise opportunity, care, inclusivity, sustainability, safety and cleanliness, openness and honesty, and communication, this IDP must address these issues as challenges in the next five years.</p> <p>It is, however, undeniable that job-creating economic growth forms a central, if not the most important part of the solution to the triple threat of poverty, inequality and unemployment. Economic growth that allows businesses to expand and start-ups to succeed will create more employment opportunities in Tshwane. Such opportunities will empower more individuals and their families and dependents to obtain an income. Economic empowerment, linked to having a dependable income, will radically change the lives of Tshwane’s residents who were previously unemployed and struggled daily with poverty and inequality.</p> <p>The City of Tshwane also recognises that promoting economic growth and development is one of the key mandates of local government. This mandate and the static absolute unemployment figures, when viewed together, make it clear that the City must focus its efforts, in terms of the local economy, on measures that will bring about significant labour-absorptive economic growth.</p> <p>The City’s plan for the term is to create a city of opportunity. The plan centres around five focus areas, which we believe will create economic growth, which in turn will be labour-absorbing, provide many more residents with new employment opportunities and develop the city further. This will make it easier to do business, support entrepreneurship, empower individuals, invest in infrastructure and encourage new industries, which will lead to economic growth and employment.</p> <p>The focus for this pillar is supported by the following priorities:</p> <ul style="list-style-type: none"> • Attracting investment and encouraging growth by making it easy to do business in Tshwane • Revitalising and supporting Tshwane’s entrepreneurs • Empowering individuals to take advantage of opportunities • Infrastructure-led growth to catalyse and revitalise existing nodal economies • Encouraging tourism and recreation <p>The Executive Mayor, as part of his theme for the remainder of the term- “Tshwane: Stable. Safe. Delivers” identified a ten-point plan which covers the Mayoral priorities and actions to be undertaken: Pont 8 of this action plan states the following:</p> <p>8. Fast track development by cutting red tape. –</p> <ul style="list-style-type: none"> -Clear rates clearance certificate backlogs. - Accelerate planning approval processes in the face of Covid-10. - Implement strict building control measures on derelict and non-complaint buildings. - Dedicated city support to key strategic investment sectors
<p>Tshwane Metropolitan spatial development framework, 2030</p>	<p>2.1.3 URBAN EDGE</p> <p>The urban edge (boundary) is a growth management tool that contributes towards the achievement of strategic objectives by conserving valuable environmental areas which would otherwise be compromised by development. The urban edge also achieves this by promoting the use of existing infrastructure through redevelopment, infill development and densification within the edge, thus achieving development that is sustainable. The urban edge also encourages the agglomeration of economies within the edge, encouraging scattered secondary or emerging nodes to develop into consolidated primary nodes, as opposed to leapfrog development. The urban edge also ensures the protection of land – an exhaustible resource – by encouraging brownfield developments instead of greenfield developments.</p> <p>The urban edge encourages the prevention of urban decay by drawing a boundary</p>

	<p>around the existing urban area, ensuring that development is focused inward, resulting in all opportunities being explored, especially the regeneration of decaying areas.</p> <p>This further supports the promotion of opportunities for redevelopment, infill development and densification. The conservative approach to expansion also results in opportunities for infill development being explored. As well-located land is often more expensive and vacant land in the urban area often has high-level constraints, higher densities are considered because these result in a higher yield.</p> <p>Using the Geo-Terrimage Web Platform to determine the parameters of the areas that could be reached within a 30-minute drive time within average traffic conditions, a circle was drawn around this area and roughly provided a 25-km radius around the center of the capital core, taken to be Church Square within the Pretoria CBD.</p> <p>This area, that is found to be within a 30-minute drive time, then serves as a further layer of focus for investment and development because these areas are the most “accessible” relative to the best social and economic infrastructure within Tshwane.</p>  <p>The map shows Pretoria at the center, with a green circle indicating a 25-km radius. Surrounding areas labeled include Jericho, Moleletswane, Mboloko, KwaMhlanga, Letlhabile, Klipgat, Ga-Rankwe, Akasia, Cullinan, Rayton, Bronkhorstspuit, Midrand, and Kempton Park.</p> <p>Figure 2.3: 25-km radius around the capital core</p>
<p>The National Development Plan 2030</p>	<p>The proposed development falls within this zone.</p> <p>The National Development Plan (NDP) 2030 offers a long-term perspective on South Africa’s priorities, and aims to eliminate poverty and reduce inequality by 2030. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal. The NDP recognises the wealth of natural resources such as biodiversity and the need to protect the environment whilst benefiting from mineral resources. It proposes three measures to protect natural resources in South Africa:</p> <ul style="list-style-type: none"> i) An Environmental Management Framework, including biodiversity offsets for developments with negative environmental or social impacts. ii) Targets for protected areas. iii) Annual reports of the health of natural resources in order to inform policy
<p>Government priorities and biodiversity</p>	<p>The Medium Term Strategic Framework (MTSF) is a framework that guides government’s programme of work in a particular electoral mandate period. It provides a prioritisation framework focusing government efforts on strategic priority areas. The phased development of new MTSFs every 5 years provides guidance for achieving the NDP priorities.</p> <p>The MTSF for the period of 2014-2019 provides a framework for implementing South Africa’s transition to an environmentally sustainable, climate change resilient, low-carbon economy. The MTSF is a key input in determining national budget allocations, through the Medium Term Expenditure Framework.</p> <p>The MTSF strategic priorities are articulated in more detail in key Outcomes, with accompanying measurable outputs and key activities, and Outcome Delivery Agreements. The latter are performance agreements between the President and Ministers.</p>
<p>Outcome 10 Delivery Agreement</p>	<p>The Government’s main priorities for the period reflected by the MTSF are reflected by 14 Outcomes, derived from the Strategic Plan of The Presidency’s ten priorities. These outcomes form the government’s delivery and implementation plans for the period. The</p>

	<p>plans are reviewed annually and reported on throughout the year, forming a key input in determining national budget allocations. Final budget allocations affect the order of priorities and phasing of the implementation of the delivery agreements.</p> <p>Outcome 10 in the MTSF 2014-2019 is 'protect and enhance our environmental assets and natural resources', and sets priorities for relevant government departments and conservation agencies.</p>
<p>Gauteng Provincial Environmental Management Framework (GPEMF)</p>	<p>According to the Screening Report generated, using the National Web Based Environmental Screening Tool, the site is located within the Gauteng Provincial Environmental Management Framework (GPEMF) Zone 1 and partially in Zone 5. According to the Gauteng C-Plan, an area of 62 272m² is located within an Ecological Support area. As Activity 12(h)(vi) of GN. R 324 of 7 April 20217 is not excluded in EMZ 1, an application for Environmental Authorization will have to be applied for as question 15 in the frequently asked questions, on the Gauteng website is answered as follows:</p> <p><i>"Where a development triggers activities that are excluded in terms of the Standard, as well as activities that are not excluded in terms of the Standard, the Standard will not apply and an EA process will need to be followed. In order for the Standard to apply all the activities that are triggered need to be excluded by the Standard and need to take place in Zones 1 and/or 5 of the Standard."</i></p>

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

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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:


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| <ol style="list-style-type: none"> 1. A full copy of the signed EA from GDARD in terms of NEMA, granting approval for the development must be available on site 2. A copy of the EMPr as well as any amendments thereof must be available on site. 3. Conduct an infill geotechnical investigation to establish the vertical and lateral extent of the expected and partially identified fill region towards the centre portion of the investigated area (currently assigned Zone II), once the site is accessible/trafficable 4. Slag, Ash and G5 Ash should be removed and disposed of at a suitable licensed site (GLB+). The waste has been classified as Type 3 waste. 5. A suitably qualified ECO must be appointed. 6. Impacts on the environment must be minimised during site establishment and the development footprint must be kept to the approved development area. 7. Vegetation clearing may not commence until such time as the development footprint has been clearly defined. 8. No clearance of vegetation outside of the development footprint may occur. 9. At the end of the construction phase the site and its surrounding area must be free from any pollution that originated as a result of the construction activities. 10. No disturbance of topsoil & subsoil may commence until such time as the development footprint has been clearly defined. 11. No disturbance of topsoil & subsoil outside of the development footprint may occur. 12. At the end of the construction phase the site and its surrounding area must be free from any chemical, fuel, oil and cement spills that originated as a result of the construction activities. 13. At the end of the construction phase the site and its surrounding area must be free |
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- from any sewage that originated as a result of the construction activities.
14. At the end of the construction phase the site and its surrounding area must be free from any hazardous or general waste pollution that originated as a result of the construction activities.
 15. Dust prevention measures must be applied to minimise the generation of dust.
 16. Noise prevention measures must be applied to minimise the generation of unnecessary noise pollution as a result of construction activities on site.
 17. Absolutely no burning of waste is permitted.
 18. Fires will only be allowed in facilities especially constructed for this purpose.
 19. No hunting of animals will be allowed.
 20. No intentional destruction of any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance may occur.
 21. All Contractors and sub-contractors must abide to the rules and regulations of the Occupational Health and Safety Act, 85 of 1993.

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

Questions (Notice 792, NEMA, 2012)	Answer
PART I: NEED	
<p>1. Is the land use associated with the activity being applied for considered within the timeframe intended by the existing approved SDF agreed to be the relevant environmental authority?</p>	<p>Yes.</p> <p><u>The City of Tshwane 2021 2026 Integrated Development Plan</u></p> <p>City of Tshwane is classified as a Category A municipality by the Municipal Demarcation Board in terms of section 4 of the Local Government Municipal Structures Act, 1998 (Act 117 of 1998). The Municipality was established on 5 December 2000 through the integration of various municipalities and councils that had previously served the greater Pretoria regime and surrounding areas.</p> <p>Tshwane 2030 vision</p> <p>The vision for the City of Tshwane which was adopted on 25 May 2017 for 2030 is as follows:</p> <p><i>Tshwane: A prosperous capital city through fairness, freedom and opportunity</i></p> <p>The achievement of the above vision depends on embedding the above governance values in the plans and actions of the City and its partners. In fact, these values will propel the City towards its vision, provided that the following strategic pillars for development are embraced:</p> <ol style="list-style-type: none"> 1. Advancing economic growth and job creation 2. Creating a caring environment and promoting inclusivity 3. Delivering excellent services and protecting the environment 4. Keeping the residents safe 5. Being open, honest and responsive <p>Building on the vision set the review of the IDP further develops and enhances the five strategic pillars referred to above.</p> <p>Strategic Pillar 1: A City that facilitates economic growth and job creation</p> <p>In order to realise opportunity, care, inclusivity, sustainability, safety and cleanliness, openness and honesty, and communication, this IDP must address these issues as challenges in the next five years.</p>

Questions (Notice 792, NEMA, 2012)	Answer
	<p>It is, however, undeniable that job-creating economic growth forms a central, if not the most important part of the solution to the triple threat of poverty, inequality and unemployment. Economic growth that allows businesses to expand and start-ups to succeed will create more employment opportunities in Tshwane. Such opportunities will empower more individuals and their families and dependents to obtain an income. Economic empowerment, linked to having a dependable income, will radically change the lives of Tshwane's residents who were previously unemployed and struggled daily with poverty and inequality.</p> <p>The City of Tshwane also recognises that promoting economic growth and development is one of the key mandates of local government. This mandate and the static absolute unemployment figures, when viewed together, make it clear that the City must focus its efforts, in terms of the local economy, on measures that will bring about significant labour-absorptive economic growth.</p> <p>The City's plan for the term is to create a city of opportunity. The plan centres around five focus areas, which we believe will create economic growth, which in turn will be labour-absorbing, provide many more residents with new employment opportunities and develop the city further. This will make it easier to do business, support entrepreneurship, empower individuals, invest in infrastructure and encourage new industries, which will lead to economic growth and employment.</p> <p>The focus for this pillar is supported by the following priorities:</p> <ul style="list-style-type: none"> • Attracting investment and encouraging growth by making it easy to do business in Tshwane • Revitalising and supporting Tshwane's entrepreneurs • Empowering individuals to take advantage of opportunities • Infrastructure-led growth to catalyse and revitalise existing nodal economies • Encouraging tourism and recreation <p>The Executive Mayor, as part of his theme for the remainder of the term- "Tshwane: Stable. Safe. Delivers" identified a ten-point plan which covers the Mayoral priorities and actions to be undertaken: Pont 8 of this action plan states the following:</p> <p>8. Fast track development by cutting red tape. –</p> <ul style="list-style-type: none"> -Clear rates clearance certificate backlogs. - Accelerate planning approval processes in the face of Covid-19. - Implement strict building control measures on derelict and non-complaint buildings. - Dedicated city support to key strategic investment sectors <p><u>Tshwane Metropolitan spatial development framework, 2030</u></p> <p>2.1.3 URBAN EDGE</p> <p>The urban edge (boundary) is a growth management tool that contributes towards the achievement of strategic objectives by conserving valuable environmental areas which would otherwise be compromised by development. The urban edge also achieves this by promoting the use of existing infrastructure through redevelopment, infill development and densification within the edge, thus achieving development that is sustainable. The urban edge also encourages the agglomeration of economies within the edge, encouraging scattered secondary or emerging nodes to develop into consolidated primary nodes, as opposed to leapfrog development. The urban edge also ensures the protection of land – an exhaustible resource – by encouraging brownfield developments instead of greenfield developments.</p>

Questions (Notice 792, NEMA, 2012)	Answer
	<p>The urban edge encourages the prevention of urban decay by drawing a boundary around the existing urban area, ensuring that development is focused inward, resulting in all opportunities being explored, especially the regeneration of decaying areas.</p> <p>This further supports the promotion of opportunities for redevelopment, infill development and densification. The conservative approach to expansion also results in opportunities for infill development being explored. As well-located land is often more expensive and vacant land in the urban area often has high-level constraints, higher densities are considered because these result in a higher yield.</p> <p>Using the Geo-Terralmage Web Platform to determine the parameters of the areas that could be reached within a 30-minute drive time within average traffic conditions, a circle was drawn around this area and roughly provided a 25-km radius around the center of the capital core, taken to be Church Square within the Pretoria CBD.</p> <p>This area, that is found to be within a 30-minute drive time, then serves as a further layer of focus for investment and development because these areas are the most “accessible” relative to the best social and economic infrastructure within Tshwane.</p>  <p>The map shows Pretoria and its surrounding areas. A green circle is drawn around the central part of Pretoria, representing a 25-km radius around the capital core. Labeled areas include Jericho, Moleletswane, Mboloko, Lethabile, Klipgat, Ga-Rankwa, Akasia, Pretoria, Cullinan, Rayton, Bronkhorstspuit, Midrand, and Kempton Park.</p> <p>Figure 2.3: 25-km radius around the capital core</p> <p>The proposed development falls within this zone.</p>
<p>2. Should the development, or if applicable, expansion of the town/area concerned in terms of this land use occurs here at this point in time?</p>	<p>Yes. The site is located within the urban edge and along the R514 road towards Hartbeespoort dam. The proposed site is bound by the R514 (Van Der Hoff Rd) to the North, informal settlements to the South, Impala Truck City to the East and vacant land to the West</p> <p>Most of the activities, especially retail are taking place to the East of the R55 (Dense level of activity).</p> <p>Other businesses along this road are automotive related, Chicken farms and nurseries.</p> <p>The proposed site is located in a developing node.</p> <p>The proposed and currently underway residential developments could be expected</p>

Questions (Notice 792, NEMA, 2012)	Answer
	<p>to increase the market for the planned centre.</p> <p>The R514 is a retail corridor especially to the East. The retail that is currently interacting with the R514 traffic currently have poor or complicated access from the R514. Therefore, this retail development should have good micro access from the R514</p>
<p>3. Does the community/area need the activity and the associated land use concerned? This refers to the strategic as well as local level.</p>	<p>Yes. Tshwane Metropolitan Municipality's SDF highlights the fact that retail is one of the most dynamic urban land uses or activities of our cities, towns and rural areas. The retail sector is a significant catalyst for urban development in Tshwane. Shopping centers have influenced and changed the spatial direction in many areas. The demand for retail space is mainly driven by consumer characteristics and profiles, population numbers and growth, and the level of disposable income per subarea. In addition, the success of the retail sector is very much a function of economic conditions on the macro and micro level, changes in shopping behavior, new retail formats, changes in the rest of the urban environment, as well as shopper preferences. Lifestyles play an important role in what goods and services consumers purchase.</p> <p>The (R514) Hermanstad/Van der Hoff Road Retail/Commercial and Industrial development corridor accommodates approximately 15,000 workers, of which 62% are industrial/commercial workers and 14% retail workers. The R514 is busy throughout the day with increased traffic volumes during peak hours</p> <p>This area is regarded as the twelfth largest job opportunity node in Tshwane.</p> <p>The industrial workers near the site means that lunch time support can be expected especially for the food and fast food retailers in the centre. The proposed and currently underway residential developments could be expected to increase the market for the planned centre. The site is well positioned to cater for everyone in the catchment area including the through flow market to and from Hartebeespoort.</p> <p>The industrial activities along the R514 corridor acts as complementary facilities for the site.</p>
<p>4. Are the necessary services with adequate capacity currently available (at the time of application) or must additional capacity be created to cater for the development?</p>	<p>Yes</p> <p>ROADS</p> <p>Existing roads The nearest road, constructed to the local authority (Gautrans) standards is Van Der Hoff road, situated on the Northern boundary of the development.</p> <p>Proposed new infrastructure It is proposed that the property obtain access from Van Der Hoff Road on the Northern boundary of the property. The proposed new access road towards the development with the relevant road upgrades will be determined by Gautrans based on the traffic impact study conducted by an appointed traffic engineer. The necessary approvals to construct the proposed access have been granted by the applicable authorities.</p> <p>Major Storm water System The major storm flow will surface flow via the new internal parking area towards the North Eastern boundary of the site, where it will overflow to the lower laying area.</p> <p>Minor Storm water System</p>

Questions (Notice 792, NEMA, 2012)	Answer
	<p>A new proposed internal stormwater piped system will be designed and constructed for the 5 year flood. The internal system will connect to a newly constructed City of Tshwane stormwater pipe within the road reserve, which will convey the stormwater up to the existing 1050dia council stormwater main, situated on the North Eastern corner of the development.</p> <p>The existing earth shaped stormwater channel will have to be re-routed in a controlled manner along the Western boundary line to discharge into Gautrans road reserve. The material, construction and testing of the storm water drainage system will comply with the SABS 1200 specifications. The impact of the formalization of the storm water structures in the area is considered to be long term in duration, local in extent with a high (positive) significance. The likelihood of these impacts materialising, should the development be established is considered to be definite.</p> <p>SEWAGE RETICULATION</p> <p>Existing sewer reticulation Existing 225dia sewer main is located along the Northern boundary line of the development. The pipe is located outside the road reserve, inside the building line & protected by a servitude in favour of the City of Tshwane.</p> <p>Proposed new infrastructure New 160dia Upvc pipes will be installed on the perimeter of the building to drain towards the existing 225dia council main along the Northern boundary. The proposed new 160dia erf connection will connect to an existing sewer manhole which is located in the lowest North Eastern corner. Council confirmed that the existing network do have sufficient capacity to accommodate the proposed development.</p> <p>PROVISION OF WATER</p> <p>Existing water reticulation City of Tshwane municipality indicated a 400dia & 700dia bulk water line which run within the Van Der Hoff road reserve along the Northern boundary line. These pipes are bulk supply mains and do not serve as networks distribution mains. The closest reticulation network line, is a 76dia Asbestos line installed parallel to the bulk mains up to the North Eastern corner of the property, connecting to a ring main network in Theo Slabbert Street which are approximately 700m towards the Eastern side of the proposed new development. Council confirmed that this pipe will not have sufficient capacity to accommodate the fire requirements for the development.</p> <p>Proposed new infrastructure Council suggest to upgrade the 76dia AC council main to a new 160dia Upvc Class 12 pipe, towards the existing 76dia water ring main network in Theo Slabbert Avenue which will have sufficient capacity to accommodate development. The approximate distance towards the connection is measured as 700m.</p>
<p>5. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of the services and opportunity cost)?</p>	<p>Yes. Job-creating economic growth forms a central, if not the most important part of the solution to the triple threat of poverty, inequality and unemployment. Economic growth that allows businesses to expand and start-ups to succeed will create more employment opportunities in Tshwane. Such opportunities will empower more individuals and their families and dependents to obtain an income. Economic empowerment, linked to having a dependable income, will radically change the lives of Tshwane's residents who were previously unemployed and struggled daily with poverty and inequality.</p>

Questions (Notice 792, NEMA, 2012)	Answer
	<p>The City of Tshwane also recognizes that promoting economic growth and development is one of the key mandates of local government. This mandate and the static absolute unemployment figures, when viewed together, make it clear that the City must focus its efforts, in terms of the local economy, on measures that will bring about significant labour-absorptive economic growth.</p> <p>The City's plan for the term is to create a city of opportunity. The plan centers around five focus areas, which we believe will create economic growth, which in turn will be labour-absorbing, provide many more residents with new employment opportunities and develop the city further. This will make it easier to do business, support entrepreneurship, empower individuals, invest in infrastructure and encourage new industries, which will lead to economic growth and employment.</p> <p>The focus for this pillar is supported by the following priorities:</p> <ul style="list-style-type: none"> • Attracting investment and encouraging growth by making it easy to do business in Tshwane • Revitalising and supporting Tshwane's entrepreneurs • Empowering individuals to take advantage of opportunities • Infrastructure-led growth to catalyse and revitalise existing nodal economies • Encouraging tourism and recreation <p>The Executive Mayor, as part of his theme for the remainder of the term- "Tshwane: Stable. Safe. Delivers" identified a ten-point plan which covers the Mayoral priorities and actions to be undertaken: Pont 8 of this action plan states the following:</p> <p>8. Fast track development by cutting red tape. –</p> <ul style="list-style-type: none"> -Clear rates clearance certificate backlogs. - Accelerate planning approval processes in the face of Covid-10. - Implement strict building control measures on derelict and non-complaint buildings. - Dedicated city support to key strategic investment sectors
<p>6. Is the project part of a national programme to address an issue of national concern or importance?</p>	<p>Not specifically but it is in line with the outcomes.</p> <p>The National Development Plan (NDP) 2030 offers a long-term perspective on South Africa's priorities, and aims to eliminate poverty and reduce inequality by 2030. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal. The NDP recognises the wealth of natural resources such as biodiversity and the need to protect the environment whilst benefiting from mineral resources. It proposes three measures to protect natural resources in South Africa:</p> <ol style="list-style-type: none"> i) An Environmental Management Framework, including biodiversity offsets for developments with negative environmental or social impacts. ii) Targets for protected areas. iii) Annual reports of the health of natural resources in order to inform policy. <p>Although this project draws from no specific objectives of the National Development Plan of South Africa, the proposed development would however contribute to the country's collective objective of promoting Economic growth that allows businesses to expand and start-ups to succeed and to create more employment opportunities.</p>
PART II: DESIRABILITY	
<p>1. Is the development the best practicable environmental option for this land/site?</p>	<p>Yes. The ground surface is highly disturbed, and the presence of historic works, excavations, fill and foundations were identified. The 1:50 000-scale topographical sheet indicates historic excavations across the majority of PTN36. The 1:50 000-scale geological sheet indicates historic workings (mainly sand and clay pits)</p>

Questions (Notice 792, NEMA, 2012)	Answer
	<p>towards the south of the sites of interest. The 1:50 000-scale geological sheet indicates structures on PTN36 with notes on an historic brick works present on PTN36. The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on PTN36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.</p> <p>The need for a waste classification study was triggered by the phase 1 shallow soil engineering geological assessment that was conducted. During the evaluation, fly-Ash and Slag fill were encountered at four of the nine test pits. The report indicated that the material could be hazardous and should be analysed. A Specialist was appointed to conduct a waste classification and the results were as follows:</p> <p><i>“Additional analyses performed on the sampled material indicate that all three samples have the potential to generate acid. Considering the rock classification, both the Ash and G5 Ash classify as Type I rock, which is potentially acid-forming, while the Slag has moderate acid-forming potential.</i></p> <p><i>When the results were compared to the NPR screening criteria, all the samples were likely to generate AMD. The material should be removed and disposed of at a suitable licenced site (GLB+). The waste has been classified as Type 3 waste.”</i></p> <p>As mentioned above, Slag, Ash and G5 Ash has been dumped on the site and has the potential to generate acid that could potentially pollute the soil and ground water of the area. If the development is approved, these waste materials will removed to a suitable waste site where it will be contained.</p>
<p>2. Would the approval of this application compromise the integrity of the existing approved and credible IDP and SDF as agreed to by the relevant authorities?</p>	<p>No. As mentioned above, the development is in line with the development strategies as is proposed in the Tshwane Metropolitan spatial development framework, 2030 and the City of Tshwane 2021 2026 Integrated Development Plan</p>
<p>3. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustainability considerations?</p>	<p>No. Although according to the Gauteng C-Plan, an area of 62 272m² is located within an Ecological Support area the Fauna and Flora Habitat survey conducted for the site has found that Vegetation as the site is extensively disturbed, modified and at some places transformed. A mixture of alien invasive and indigenous plant species exists at the site. Ecological sensitivity at the site is low.</p> <p>According to the Screening Report generated, using the National Web Based Environmental Screening Tool, the site is located within the Gauteng Provincial Environmental Management Framework (GPEMF) Zone 1 and partially in Zone 5.</p>
<p>4. Do location factors favour this land use at this place? (this relates to the contextualization of the proposed land use on this site within its broader context).</p>	<p>The R514 is a retail corridor especially to the East. The retail that is currently interacting with the R514 traffic currently have poor or complicated access from the R514. Therefore, this retail development should have good micro access from the R514.</p> <p>Residents have great visibility of the site. The people that work on the R514 corridor to the West of the R55 have visibility of the site on their way to and from work.</p> <p>The retail study conducted for the proposed development concluded that: <i>“A neighbourhood type centre is suitable for the site. The retail could grow organically as the residential and commercial market grows in the node.”</i></p>
<p>5. How will the activity of the land</p>	<p>It will fit in well as no sensitive natural and cultural areas are present on site.</p>

Questions (Notice 792, NEMA, 2012)	Answer
<p>use associated with the activity being applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?</p>	<p>The ground surface is highly disturbed, and the presence of historic works, excavations, fill and foundations were identified. The 1:50 000-scale topographical sheet indicates historic excavations across the majority of PTN36. The 1:50 000-scale geological sheet indicates historic workings (mainly sand and clay pits) towards the south of the sites of interest. The 1:50 000-scale geological sheet indicates structures on PTN36 with notes on an historic brick works present on PTN36. The infrastructure was demolished; however, indications of the excavations/workings and foundation remains were identified during this assessment. Shallow concrete slabs were encountered on PTN36, indicating the presence of historic structures/foundations and relatively thick fill of mix origin were encountered across the site.</p> <p>As mentioned above, Slag, Ash and G5 Ash has been dumped on the site and has the potential to generate acid that could potentially pollute the soil and ground water of the area. If the development is approved, these waste materials will removed to a suitable waste site where it will be contained.</p> <p>An earth shaped stormwater channel currently runs thru the property entering the South Western corner of the property and exit close to the North Eastern corner, discharging into the road reserve. The natural slope of the remainder of the proposed development drains towards the North Eastern corner. The closest Tshwane council stormwater infrastructure is a low point concrete outlet structure, connected to a 1050dia pipe located in the City of Tshwane road reserve between Van Der Hoff Road & Malie Street on the North Eastern corner of development. The existing earth shaped stormwater channel will have to be re-routed in a controlled manner along the Western boundary line to discharge into Gautrans road reserve. The material, construction and testing of the storm water drainage system will comply with the SABS 1200 specifications. The impact of the formalization of the storm water structures in the area is considered to be long term in duration, local in extent with a high (positive) significance. The likelihood of these impacts materialising, should the development be established is considered to be definite. Vegetation at the site is extensively disturbed, modified and at some places transformed. A mixture of alien invasive and indigenous plant species exists at the site. Threatened and Near Threatened animal and plant species appear to be absent. Other animal or plant species of particular conservation concern also appear to be absent at the site.</p> <p>No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were found in the study & development area during the assessment.</p>
<p>6. How will the development impact on people's health and well-being? (E.g. In terms of noise, odours, visual character and sense of place, etc.)?</p>	<p>It will have a positive impact on their health as the waste dumped on site will be removed, preventing the generation of acid that may pollute the soil and ground water of the area.</p> <p>The informal earth shaped stormwater channel will not continue to cause flooding of the site and water will be properly diverted towards the Municipal storm water infrastructure.</p> <p>The alien invasive plant species that have established on site will be removed and illegal, informal dumping will cease.</p>
<p>7. Will the proposed activity or the land use associated with the activity being applied for, result in</p>	<p>No. The only additional cost that will be incurred will be for the account of the developer that will have to rehabilitate the site as mentioned above.</p> <p>During both the construction and operational phases of the development jobs will be</p>

Questions (Notice 792, NEMA, 2012)	Answer
unacceptable opportunity costs?	created and additional income in the form of Property Tax will be earned by the Municipality.
8. Will the proposed land use result in unacceptable cumulative impacts?	<p>No. An area that is currently vacant and a haven for criminal activities and illegal dumping will be utilised as a shopping centre.</p> <p>Slag, Ash and G5 Ash has been dumped on the site and has the potential to generate acid that could potentially pollute the soil and ground water of the area. If the development is approved, these waste materials will be removed to a suitable waste site where it will be contained.</p> <p>The development will result in an increase in traffic volumes in the area. If the mitigation measures as is described in the Traffic Engineer's Report is adhered to, these impacts can be mitigated.</p> <p>The development will result in an increase in storm water runoff as impermeable surfaces will be constructed. The Storm water management plan will address these issues.</p> <p>The development will result in an increase in waste generated in the area. It can be stated that most of the Anchor retailers have a very strict policy on waste management and ensures that the generation of waste is avoided, reduced, and that waste generated is recycled.</p>

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(CONSIDER WHEN THE ACTIVITY IS EXPECTED TO BE CONCLUDED)

10 Years

11. ENVIRONMENTAL 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 EMPr is to be attached to this report as an Appendix

EMPr attached

YES

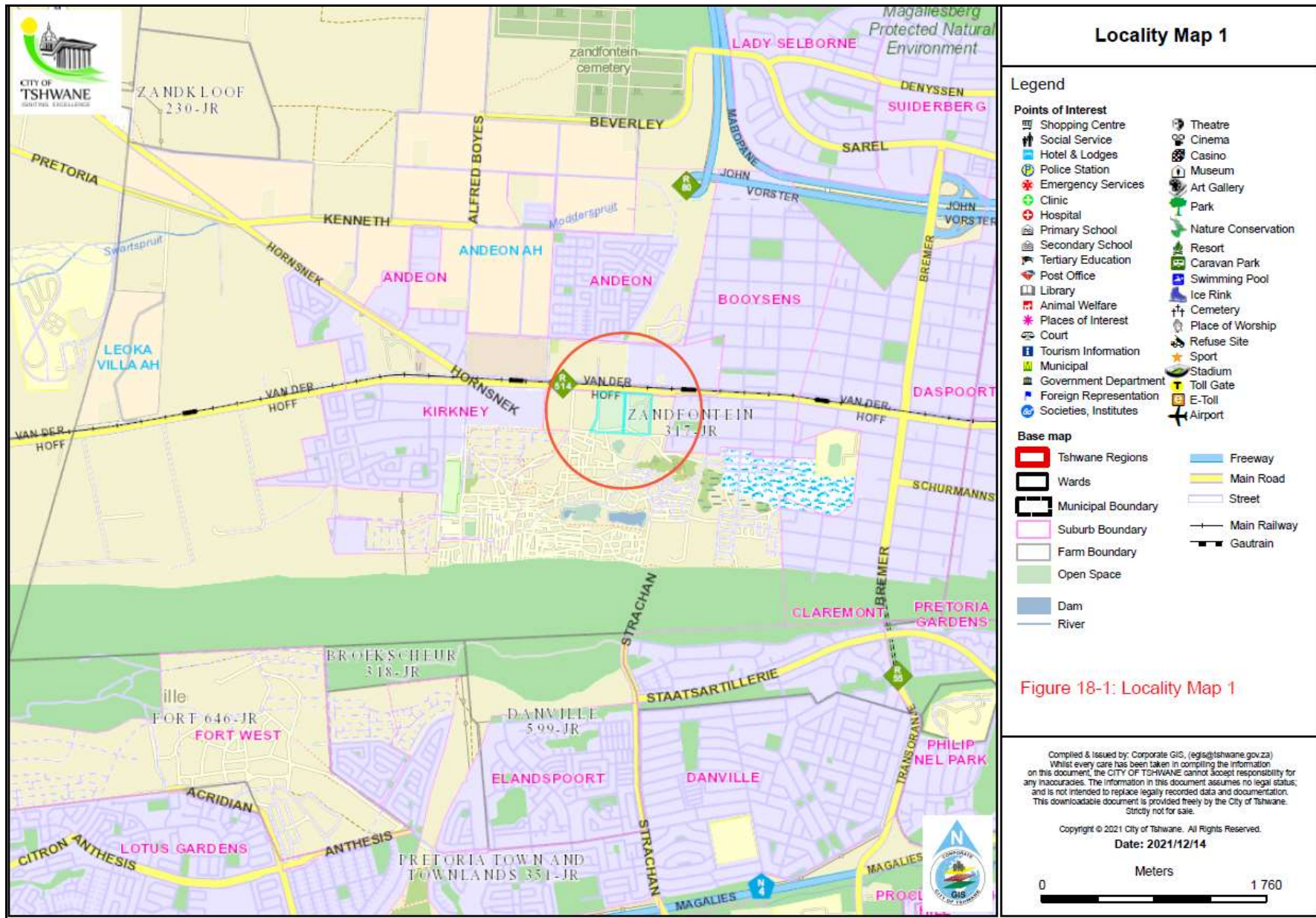
Section F: Appendixes

Appendix A	Site plan(s) – <i>(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)</i>
Appendix B	Photographs
Appendix C	Facility illustration(s)
Appendix D	Route position information (N/A)
Appendix E	Public participation information
	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
Appendix F	<ul style="list-style-type: none"> ➤ Water use license(s) authorisation – No Water use License required ➤ SAHRA information – See Proof of consultation with SAHRA (Appendix F1) ➤ Service letters from municipalities – See Letter received from Tshwane (Appendix F2) ➤ Water supply information - Water will be Municipal
Appendix G	<ul style="list-style-type: none"> ➤ Phase 1 Shallow Soil Engineering Geological Investigation (Appendix G1) ➤ Civil Engineering services baseline report (Appendix G2) ➤ Ecological fauna and flora habitat survey (Appendix G3) ➤ Phase 1 Heritage Impact Assessment report (Appendix G4) ➤ Retail Study (Appendix G5) ➤ Waste Classification Report (Appendix G6)
Appendix H	EMPr
Appendix I	Other information

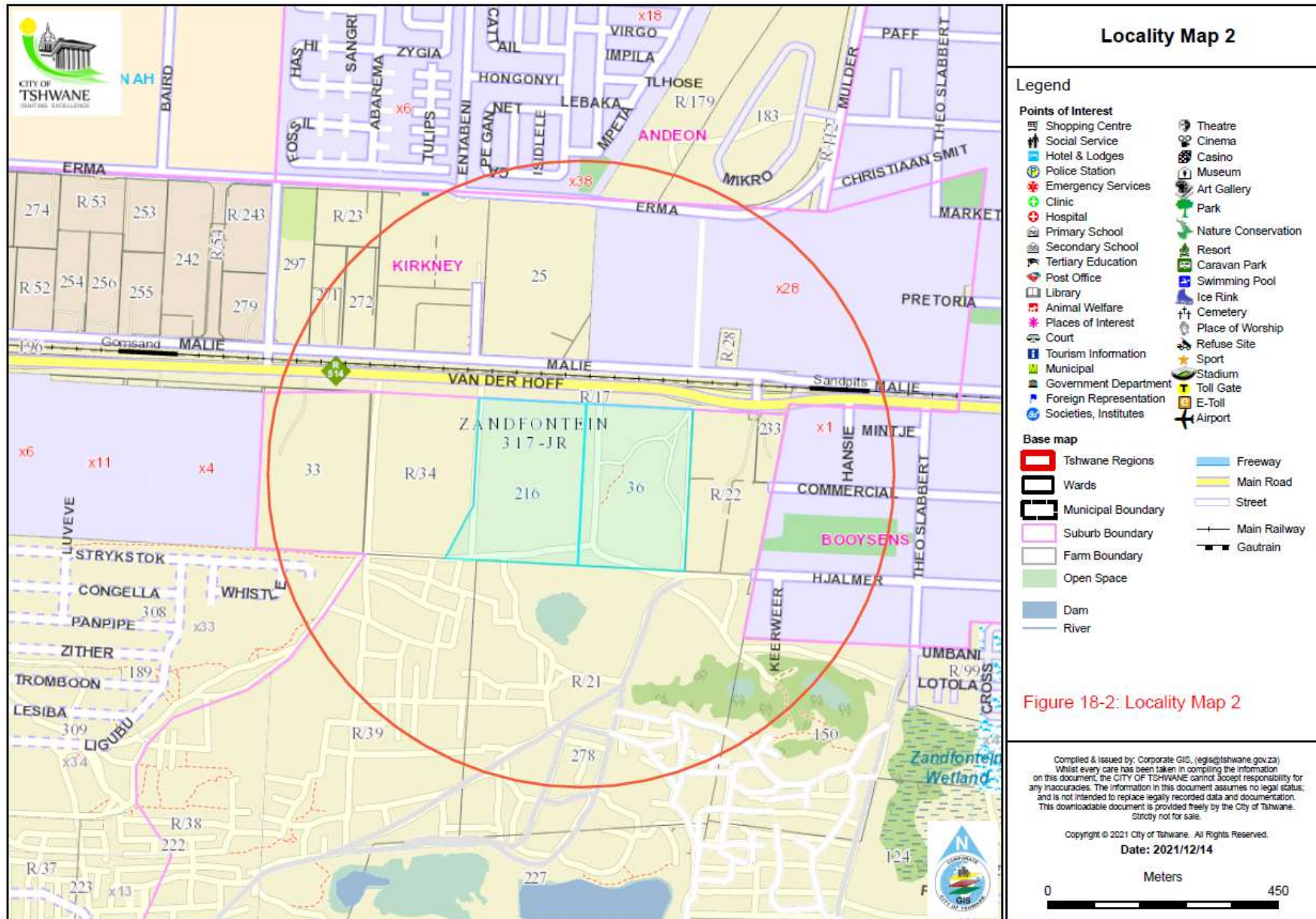
APPENDIX A: SITE PLANS

CONTENTS

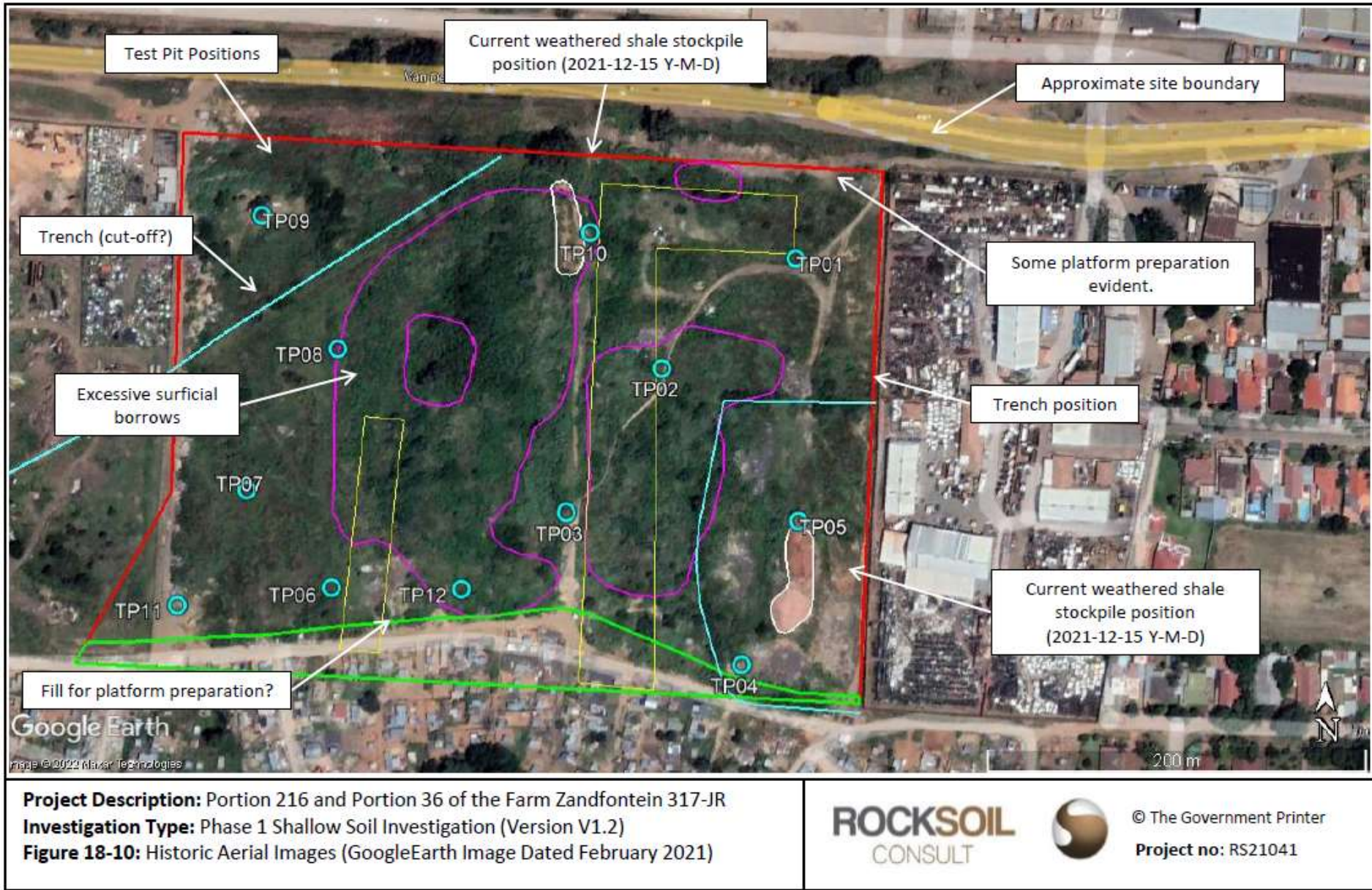
- Map 1: Locality Map**
- Map 2: Locality Map**
- Map 3: Sensitivity Map – Historical soil conditions**
- Map 4: Sensitivity Map - Geological zones**
- Map5: Sensitivity Map – Biodiversity**
- Map 6: Sensitivity Map - BGIS**
- Map 7: Layout Plan: Proposal**
- Map 8: Layout Plan – Proposal Phase 1**
- Map 9: Layout Plan – Alternative 1**



Map 2: Locality Map:



Map 3: Sensitivity Map – Historical soil conditions:



Project Description: Portion 216 and Portion 36 of the Farm Zandfontein 317-JR
Investigation Type: Phase 1 Shallow Soil Investigation (Version V1.2)
Figure 18-10: Historic Aerial Images (GoogleEarth Image Dated February 2021)

ROCKSOIL
CONSULT



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Project no: RS21041

Map 4: Sensitivity Map - Geological zones



Project Description: Portion 216 and Portion 36 of the Farm Zandfontein 317-JR Gauteng
Investigation Type: Phase 1 Shallow Soil Assessment
Figure 18-11: Preliminary Assigned Geotechnical Zonation Map (Shallow Soil Designation)

Notes:

- 1) The figure is for informational purposes only, refer to the report and report data.
- 2) Refer to limitations, identified shortcomings and recommendations on the way forward, as outlined in the relevant report sections.

Figure compiled by: DHW
 Profession: Engineering Geologist
 Registration: SACNASP
 Date compiled: 2021/12/15
 Figure version: V1.0

© 2021 GoogleEarth
 Project no: RS21041



Map5: Sensitivity Map - Biodiversity



- Red outline Boundaries of the site
- Light yellow outline and shading Low Sensitivity

Map 6: Sensitivity Map - BGIS

Sensitivity Map

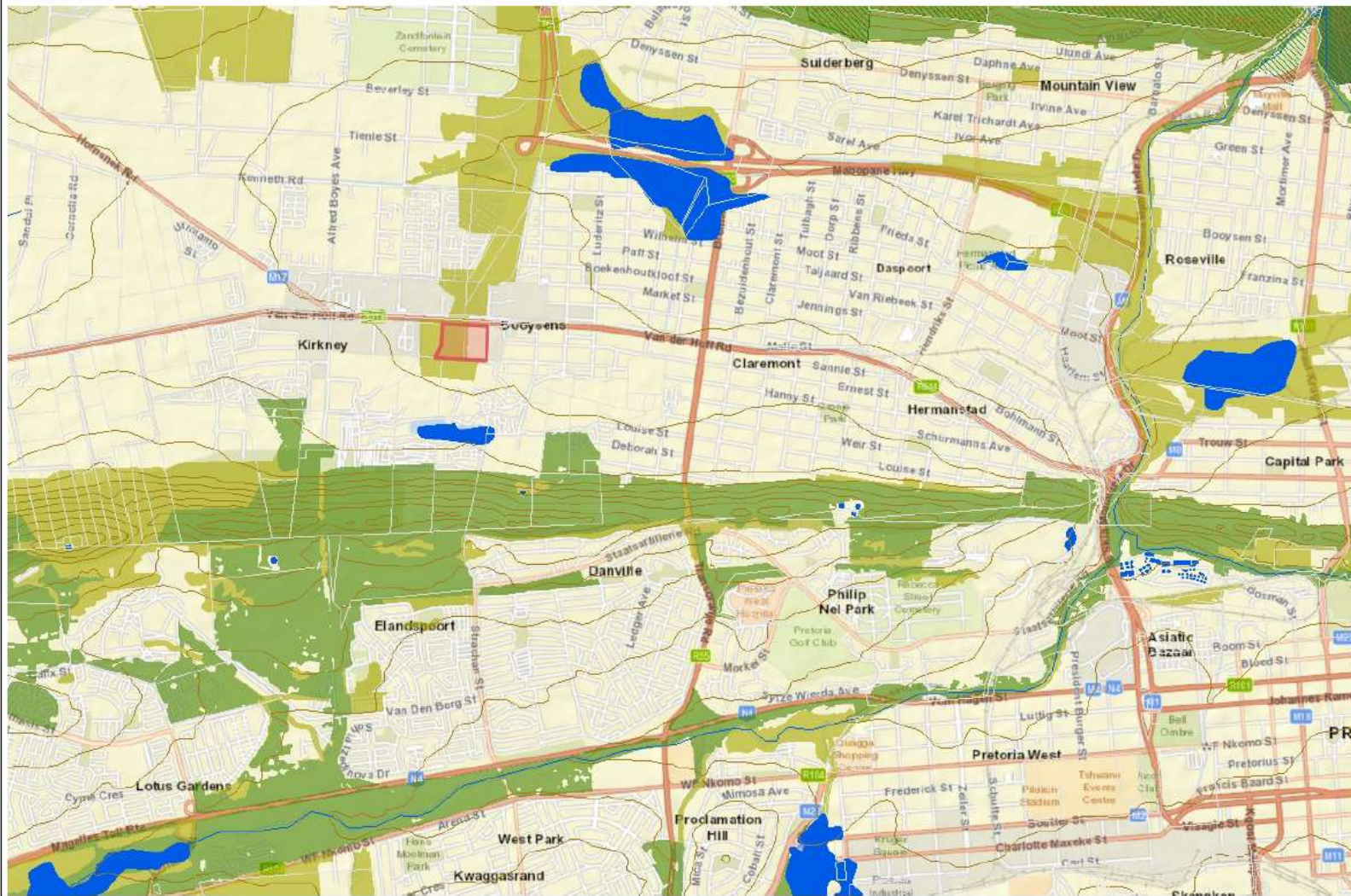
Description

Erven 216/317 and 36/317, Zandfontein

Legend

- Gauteng C-Plan boundary
- Local municipalities - LUDS
- South African municipal boundaries 2009
- South African parent farm cadaster
- 20m Contour lines - northern RSA
- 20m contour lines - southern RSA
- Rivers (NFEPA)
- 1
- 5
- 10
- Wetland clusters (NFEPA)
- National wetlands map 4 (NFEPA)
- Formal protected areas (NBA 2011)
- Informal protected areas (NPAES)
- Marine Protected Areas MPAs (NBA 2011)
- Gauteng C-Plan - CBA map
- Protected Area
- Critical Biodiversity Area (irreplaceable)
- Critical Biodiversity Area (important)
- Ecological Support Area
- World Street Map

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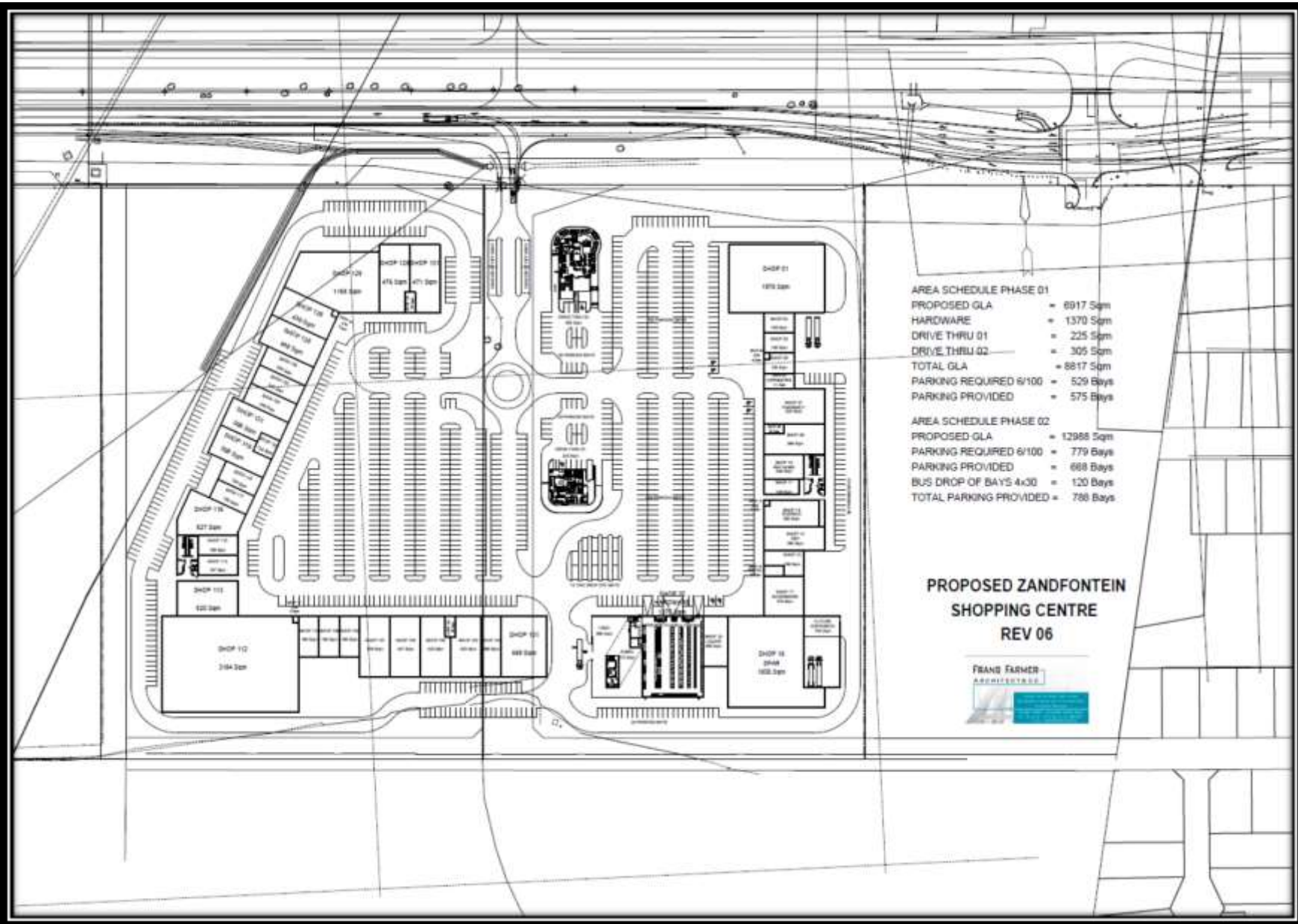


WGS_1984_Web_Mercator_Auxiliary_Sphere
© Latitude Geographics Group Ltd.

This map is a user generated static output from an internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Map 7: Layout Plan: Proposal (Phase 1 and Phase 2)



AREA SCHEDULE PHASE 01

PROPOSED GLA	= 8917 Sqm
HARDWARE	= 1370 Sqm
DRIVE THRU 01	= 225 Sqm
DRIVE THRU 02	= 305 Sqm
TOTAL GLA	= 8817 Sqm
PARKING REQUIRED @100	= 529 Bays
PARKING PROVIDED	= 575 Bays

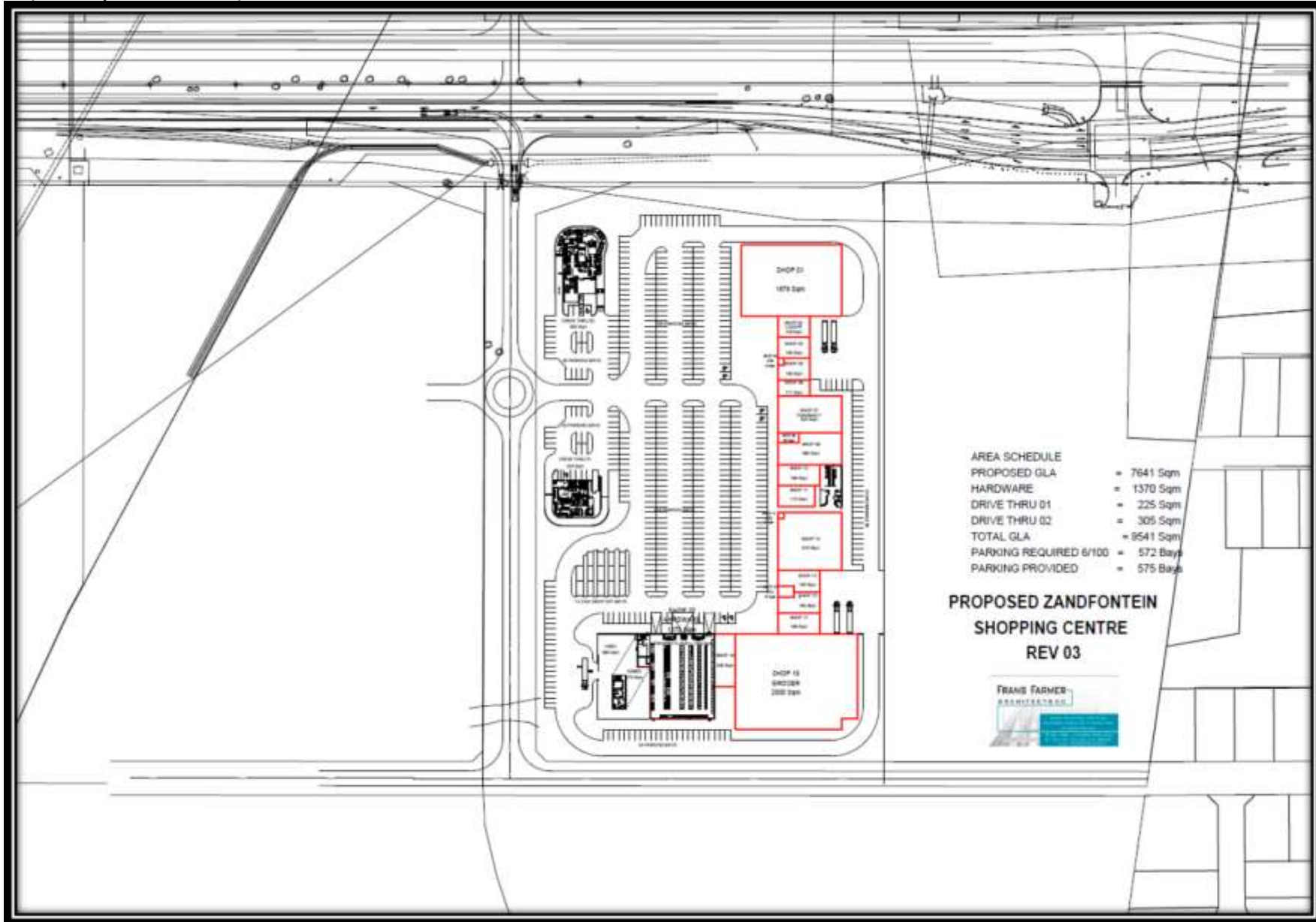
AREA SCHEDULE PHASE 02

PROPOSED GLA	= 12988 Sqm
PARKING REQUIRED @100	= 779 Bays
PARKING PROVIDED	= 688 Bays
BUS DROP OFF BAYS 4x30	= 120 Bays
TOTAL PARKING PROVIDED	= 788 Bays

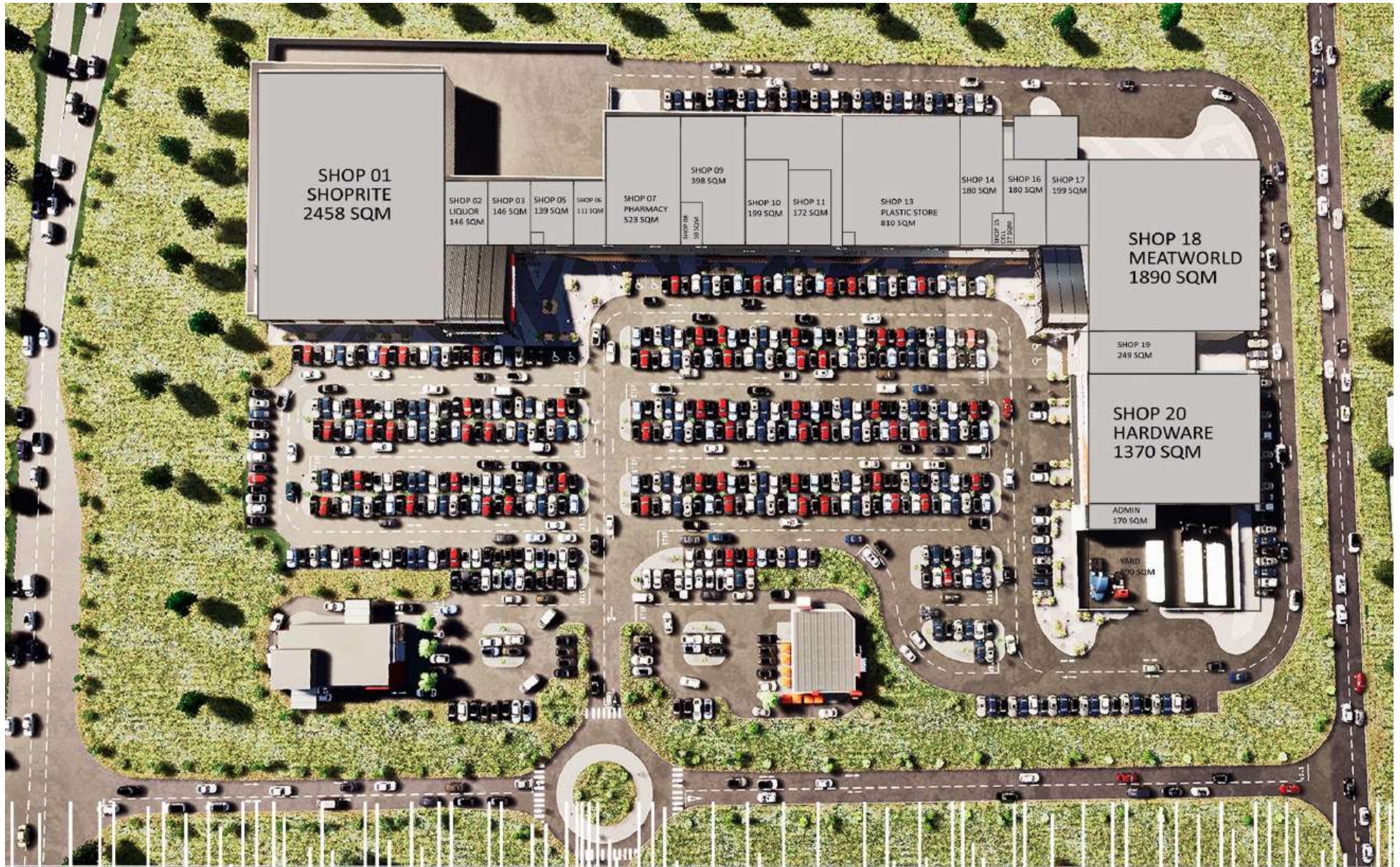
**PROPOSED ZANDFONTEIN
SHOPPING CENTRE
REV 06**



Map 8a: Layout Plan – Proposal Phase 1

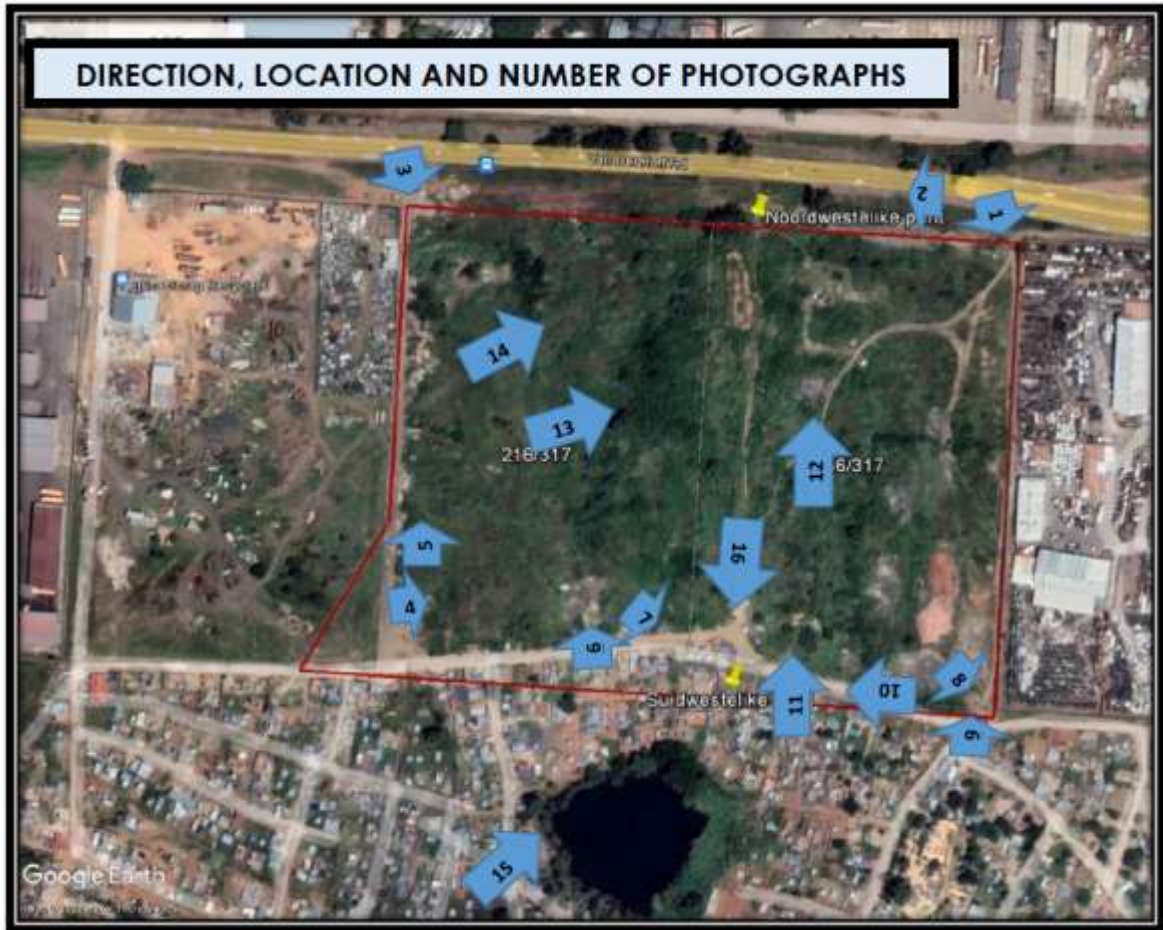


Map 8b: Layout Plan – Phase 1



Map 9: Layout Plan – Alternative 1

APPENDIX B: PHOTOGRAPHS



Photograph 1: View towards the south as seen from the North Eastern corner



Photograph 2: View towards the west as seen from the North Eastern corner



Photograph 3: View towards the south as seen from the North western corner. Note the illegal dumping.



Photograph 4: View towards the east as seen from the south western corner. Note the illegal dumping.



Photograph 5: View towards the north as seen from the south western corner. Note the illegal dumping.



Photograph 6: View towards the north as seen from the south. Note the illegal dumping and rock spoils.



Photograph 7: Informal residential development located towards the south.



Photograph 8: Informal retail ("Spaza shop") located adjacent to the site.



Photograph 9: View towards the north as seen from the south eastern corner.



Photograph 10: View towards the west as seen from the south eastern corner.



Photograph 11: Community members digging for G5 Ash to use as fuel for cooking purposes.



Photograph 12: Burning of illegal dumped waste.



Photograph 13: Highly disturbed nature of vegetation. Not the *Eucalyptus* trees in the background.



Photograph 14: Earth shaped stormwater furrow traversing the site.



Photograph 15: Old borrow pits filled water located south of the site.



Photograph 16: Water tanker truck delivering water to informal residents.

APPENDIX C: FACILITY ILLUSTRATIONS



Illustration of the Proposed Shopping Centre (Phase 1 – Proposal)



Illustration of the Proposed Shopping Centre (Phase 1 – Proposal)



Illustration of the Proposed Shopping Centre (Phase 1 – Proposal)



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Illustration of the Proposed Shopping Centre (Phase 1 – Proposal)

APPENDIX E: PUBLIC PARTICIPATION

Appendix 1 – Proof of site notice



7 Louis Leipoldt Street,
Potchefstroom, 2531
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Cell: + 27 (83) 5488 105
E-mail: jp@abenviro.co.za

AB ENVIRO-CONSULT CC

Reg no. 2000/016653/23

29/04/2022

Directorate: Department of Water and Sanitation
The Registry
Provincial Office: Gauteng/ Vaal River Catchment Management Agency
Bothongo Plaza East, Level 15
285 Francis Baard Street
PRETORIA, 0001
Tel. 012 392 1300

Dear Sir/Madam

Environmental Impact Assessment for the proposed clearance of 11ha of indigenous vegetation of which 6ha is located within an Ecological support area in order to establish a shopping centre with associated access and parking on Erven 216/317 & 36/317 Zandfontein, Guateng Province. The alternative considered entails the establishment of a shopping centre with associated access and parking on Portion 36 (phase 1) and a high density residential development on the Remaining Extent of Portion 216 (Phase 2).

AB ENVIRO CONSULT was appointed by GHDEVCO PROPRIETY LIMITED to submit an application to the Gauteng Province: Department of Agriculture and Rural Development for the above mentioned proposed development. Attached please find a notification of the proposed development as well as a copy of the Basic Assessment report for your comments. We must receive your comments by no later than the 31st of May 2022. In the event of your organisation/department not wishing to comment on this matter, it would be appreciated if we could receive written confirmation thereof to enable us to continue with the finalisation of the application. If no response is however received from your Department/organisation within the said time, it will be assumed that your department/organisation does not wish to comment on this matter and the application will be processed further. Please be advised, in accordance with POPIA and NEMA, personal data is collected and processed by the applicant/EAP and shared with the Competent Authority to enable informed decision-making.

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Please do not hesitate to contact us should any further information or clarification be required.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'JP de Villiers', is written over a light blue horizontal line.

Mr. JP de Villiers
EAP-EAPASA 2019/808

PROF A B DE VILLIERS (M Sc, Ph D, SACNASP)
MR.J.P. DE VILLIERS (M Sc,HED, EAP-EAPASA); MRS.J.E. DU PLOOY (M.E.M; EAP-EAPASA)



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29/04/2022

Head of Department: Gauteng: Department of Agriculture and Rural Development
Mr Nhlakanipho Nkontwana
PO Box 8769
Johannesburg
2000

Dear Sir/Madam

Environmental Impact Assessment for the proposed clearance of 11ha of indigenous vegetation of which 6ha is located within an Ecological support area in order to establish a shopping centre with associated access and parking on Erven 216/317 & 36/317 Zandfontein, Guateng Province. The alternative considered entails the establishment of a shopping centre with associated access and parking on Portion 36 (phase 1) and a high density residential development on the Remaining Extent of Portion 216 (Phase 2).

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29/04/2022

Gauteng Province: Department of Agriculture and Rural Development
Head of department: Biodiversity
PO Box 8769
Johannesburg
2000

Dear Sir/Madam

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29/04/2022

The Civil Aviation Authority
Planning Unit
obstacles@caa.co.za

Dear Sir/Madam

Environmental Impact Assessment for the proposed clearance of 11ha of indigenous vegetation of which 6ha is located within an Ecological support area in order to establish a shopping centre with associated access and parking on Erven 216/317 & 36/317 Zandfontein, Guateng Province. The alternative considered entails the establishment of a shopping centre with associated access and parking on Portion 36 (phase 1) and a high density residential development on the Remaining Extent of Portion 216 (Phase 2).

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29/04/2022

South African National Roads Agency Ltd
Mr Progress Hlahla
PO Box 415
Pretoria
0001

Dear Sir/Madam

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29/04/2022

City Of Tswane Metropolitan Municipality
The Municipal Manager
PO Box 440
Pretoria
0001

Dear Sir/Madam

Environmental Impact Assessment for the proposed clearance of 11ha of indigenous vegetation of which 6ha is located within an Ecological support area in order to establish a shopping centre with associated access and parking on Erven 216/317 & 36/317 Zandfontein, Guateng Province. The alternative considered entails the establishment of a shopping centre with associated access and parking on Portion 36 (phase 1) and a high density residential development on the Remaining Extent of Portion 216 (Phase 2).

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29/04/2022

City Of Tswane Metropolitan Municipality
The Councillor Ward 55: Frans Smith
PO Box 440
Pretoria
0001

Dear Sir/Madam

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Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

To follow

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

To follow

Appendix 6 - Comments and Responses Report

To follow

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

To follow

APPENDIX F:

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Appendix F1 - SAHRA information – Proof of consultation with SAHRA

Appendix F2 - Service letters from municipality – See Letter received from Tshwane

APPENDIX F 1:

Proof of consultation with SAHRA

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Service letter from municipality

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Appendix G2 - Civil Engineering services baseline report

Appendix G3 - Ecological fauna and flora habitat survey

Appendix G4 - Phase 1 Heritage Impact Assessment report

Appendix G5 - Retail Study

Appendix G6 - Waste Classification Report

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**Shallow Soil Engineering Geological
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Civil Engineering services baseline report

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Ecological fauna and flora habitat survey

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Phase 1 Heritage Impact Assessment report

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Retail Study

APPENDIX G6:
Waste Classification Report

**APPENDIX H:
EMPr**

APPENDIX I: Other Information