



30 July 2019

To whom it may concern

LETTER FOR HIA EXEMPTION REQUEST: PROPOSED BULK SEWER AND WATER PIPELINES – BIRCHLEIGH NORTH X 4, CITY OF EKURHULENI, GAUTENG PROVINCE

The above-mentioned project refers. The project entails the provision of bulk sewer and water pipelines to the Birchleigh North X 4 area as well as the upgrading and extension of the existing link road to the north of the proposed Esselen Park Integrated Housing Development.

An Environmental Authorisation with Reference Number Gaut 002/13-14/E0347 and dated 28 September 2018 was issued by GDARD for the Proposed Esselen Park Integrated Housing Development. The approved development involves the development of approximately 7195 housing units (and associated services) on Portions 63 and 39 of the Farm Witfontein 15-IR, measuring approximately 172 hectares. The aim of the proposed township is to provide residential housing units. In addition, the proposed development also makes provision for supportive land uses such as business, education, community, municipal and churches that are primarily intended to serve the residents of proposed development. An HIA had formerly been done for this area (Van Vollenhoven & Marais-Botes 2014).

In order for the development to proceed, bulk sewer and water pipelines are required, and Lokisa Environmental Consulting was appointed to apply for Environmental Authorisation for the required bulk sewer and water pipelines to serve the proposed development. Since an HIA was done before, Archaetnos was requested to provide an HIA exemption motivation.

Birchleigh lies towards the north within the City of Ekurhuleni. This is in the Gauteng Province (Figure 1-3).

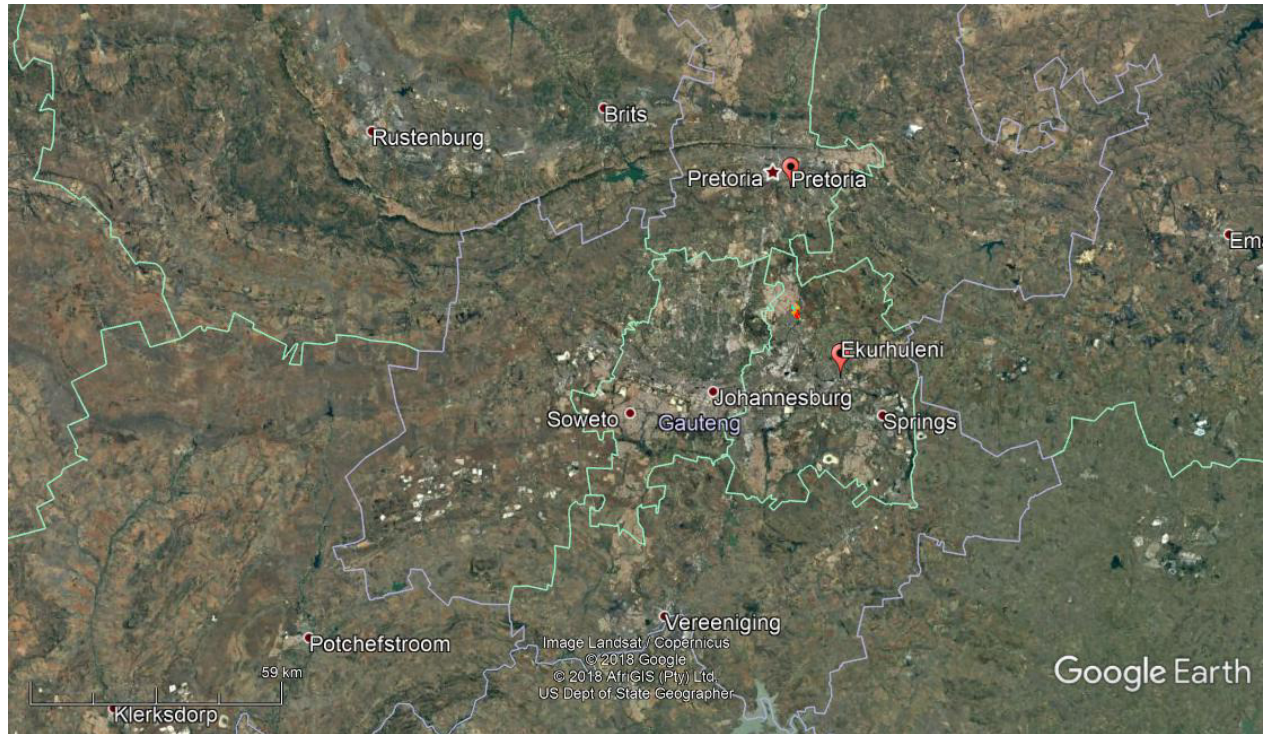


Figure 1: Locality of Ekurhuleni in the Gauteng Province.

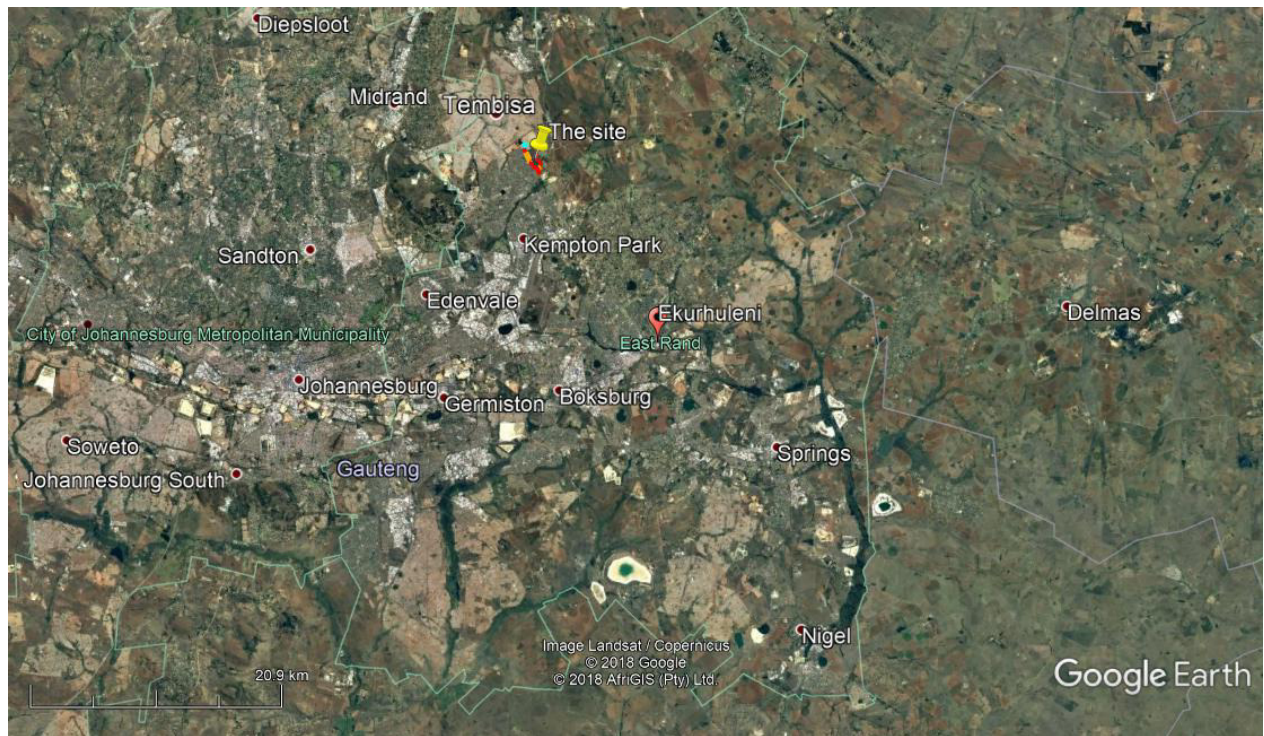


Figure 2: Location of the site within Ekurhuleni.



Figure 3: View of the boundaries of the development.

An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. Any development or other activity that will change the character of a site and exceed 5 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

It is my opinion that the project may be exempted from doing a Heritage Impact Assessment (HIA). The following is applicable:

- Firstly, the entire area had been surveyed for an HIA before (Van Vollenhoven & Marais-Botes 2014).
- During this survey no sites of cultural heritage importance was noted.
- The proposed sewer and water lines mainly follows existing roads, thus an entirely disturbed landscape.
- The proposed link roads also follows existing roads within a disturbed landscape.
- The vegetation on site clearly indicates a disturbed landscape (Figure 4-18).

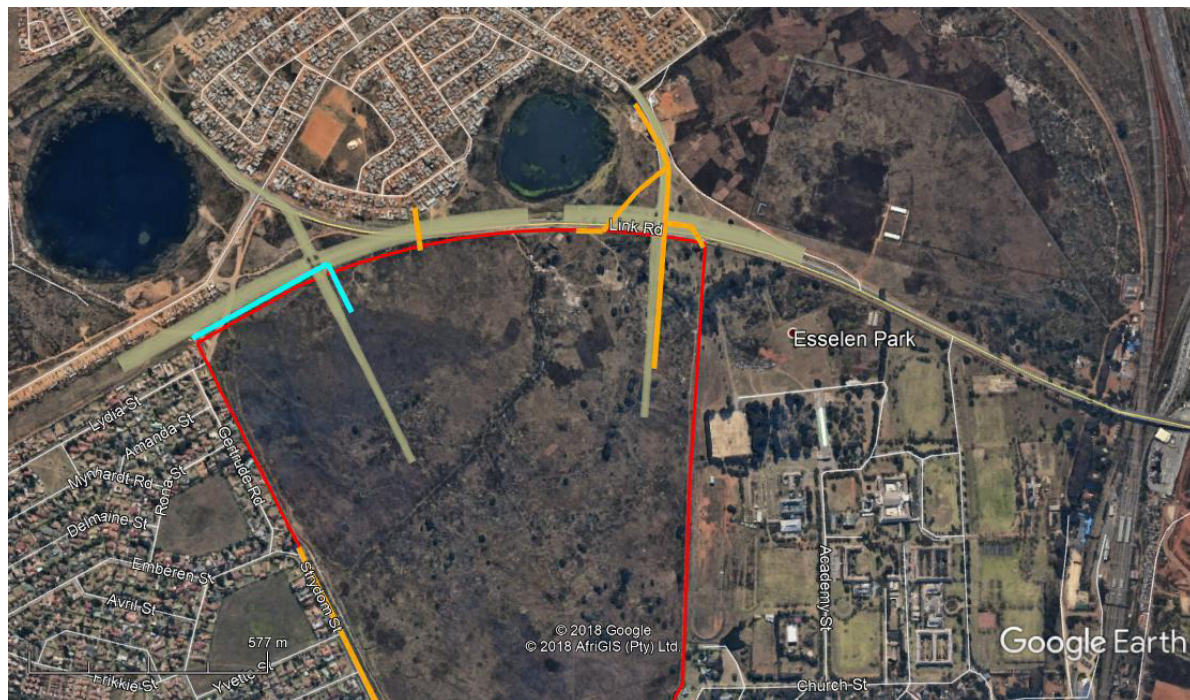


Figure 4: Google Earth view of the northern section of the site indicating the water and sewer lines following existing roads.

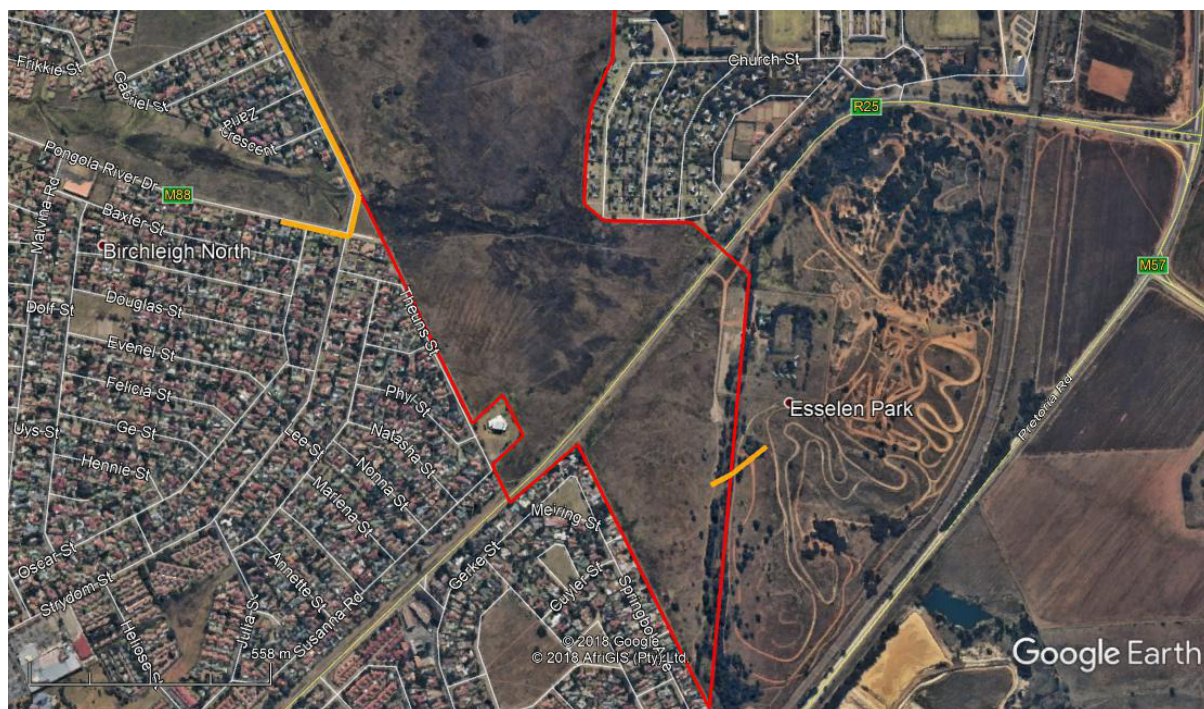


Figure 5: Google Earth view of the southern section of the site indicating the water and sewer lines following existing roads or being close thereto.



Figure 6: View of landscape around the first proposed water line.



Figure 7: View of the landscape along the second proposed water line.



Figure 8: View of the landscape around the first proposed sewer line.



Figure 9: View of the landscape at the second proposed sewer line.



Figure 10: View of the landscape around the third proposed sewer line.



Figure 11: View of the landscape along the fourth proposed sewer line.



Figure 12: View of the landscape along the route for the fifth proposed sewer line.



Figure 13: View of the landscape at the sixth proposed sewer line.



Figure 14: View of the landscape along the seventh proposed sewer line.



Figure 15: View of the landscape around the eighth proposed sewer line.



Figure 16: View of the landscape at the ninth proposed sewer line.



Figure 17: View along the first proposed road for the area.



Figure 18: View of the landscape at the second proposed road for the area.

Due to the mentioned factors, the chances therefore of finding any heritage related features are indeed extremely slim, if any. This letter serves as an exemption request to the relevant heritage authority.

The developer should however note that due to the nature of archaeological material, such sites, objects or features, as well as graves and burials may be uncovered during construction activities on site. In such a case work should cease immediately and an archaeologist should be contacted as a matter of urgency to assess such occurrences.

Recommendation:

That the development be exempted from doing an HIA.

I trust that you will find this in order.

Yours faithfully

A handwritten signature in black ink on a light-colored background.

Prof AC van Vollenhoven: Director

**PHASE 1 HERITAGE IMPACT ASSESSMENT FOR THE ESSELENPARK
RESIDENTIAL DEVELOPMENT, CLOSE TO KEMPTON PARK, GAUTENG
PROVINCE**

	
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For:

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REPORT NO.: AE01436V

May 2014

SUBMISSION OF REPORT

Please note that the South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report.

It is the client's responsibility to do the submission via the SAHRIS System on the SAHRA website.

Clients are advised not to proceed with any action before receiving the necessary comments from SAHRA.

DISCLAIMER

Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites are as such that it always is possible that hidden or subterranean sites could be overlooked during the study. Archaetnos/Leonie Marais-Botes Heritage Practitioner and its personnel will not be held liable for such oversights or for costs incurred as a result thereof.

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SUMMARY

Archaetnos cc/Leonie Marais-Botes Heritage Practitioner was requested by Nema Consulting to conduct a Heritage Impact Assessment (HIA) for the proposed Esselenpark residential development. This is adjacent to Birchleigh North, close to Kempton Park in the Ekurhuleni Metro, Gauteng Province.

A survey of the available literature was undertaken in order to obtain background information regarding the proposed project area and the surrounding environment. This was followed by the field survey which was conducted according to generally accepted HIA practices.

No sites were identified during the survey. Therefore the report is seen as ample mitigation and the proposed development may continue.

It should be noted however that the subterranean presence of archaeological and/or historical sites, features or artefacts is always a possibility. As such, care should be taken during any work in the entire area, that if any historical sites, features or artefacts are discovered, a qualified archaeologist should be commissioned to investigate.

It is also important to take cognisance of the applicant's responsibility to submit this report via the SAHRIS System on the South African Heritage Resource Agency (SAHRA) website. No work on site may commence before receiving the necessary comments from the SAHRA.

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1. INTRODUCTION

Archaetnos cc/Leonie Marais-Botes was requested by Nema Consulting to conduct a Heritage Impact Assessment (HIA) for the Esselenpark residential development. This is adjacent to Birchleigh North, close to Kempton Park in the Ekurhuleni Metro, Gauteng Province (Figure 1-3).

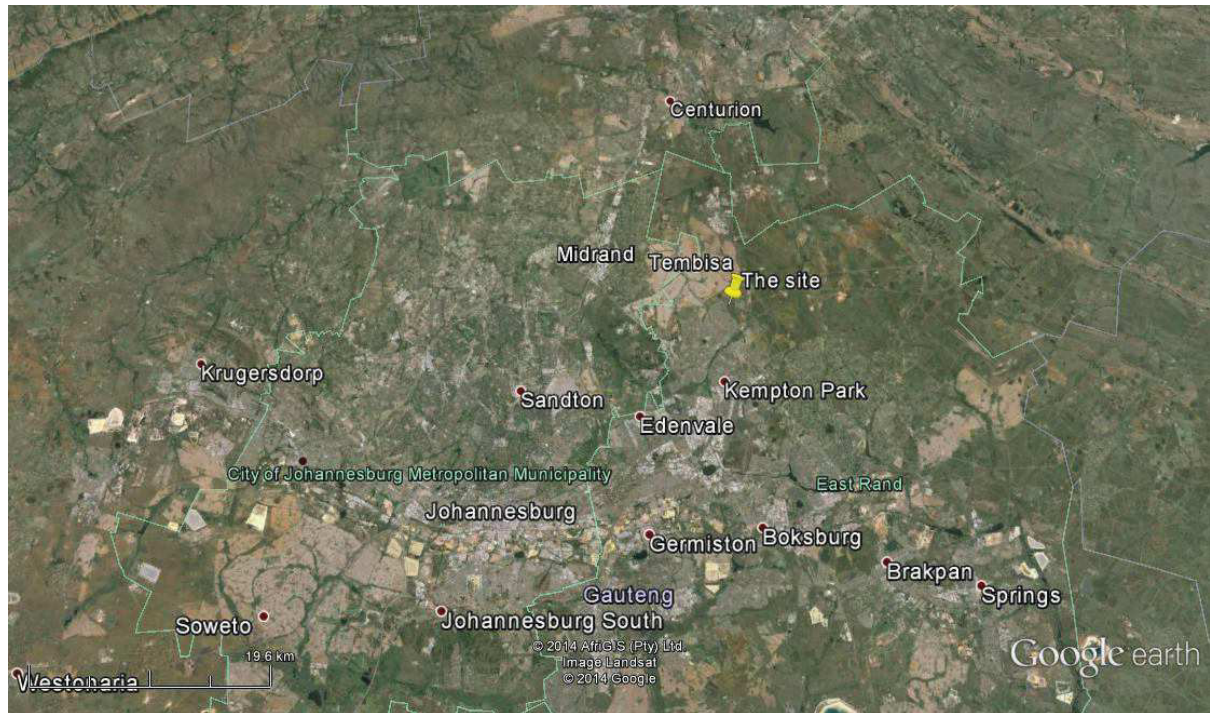


Figure 1: Location of Kempton Park in the Gauteng Province. North reference is to the top.

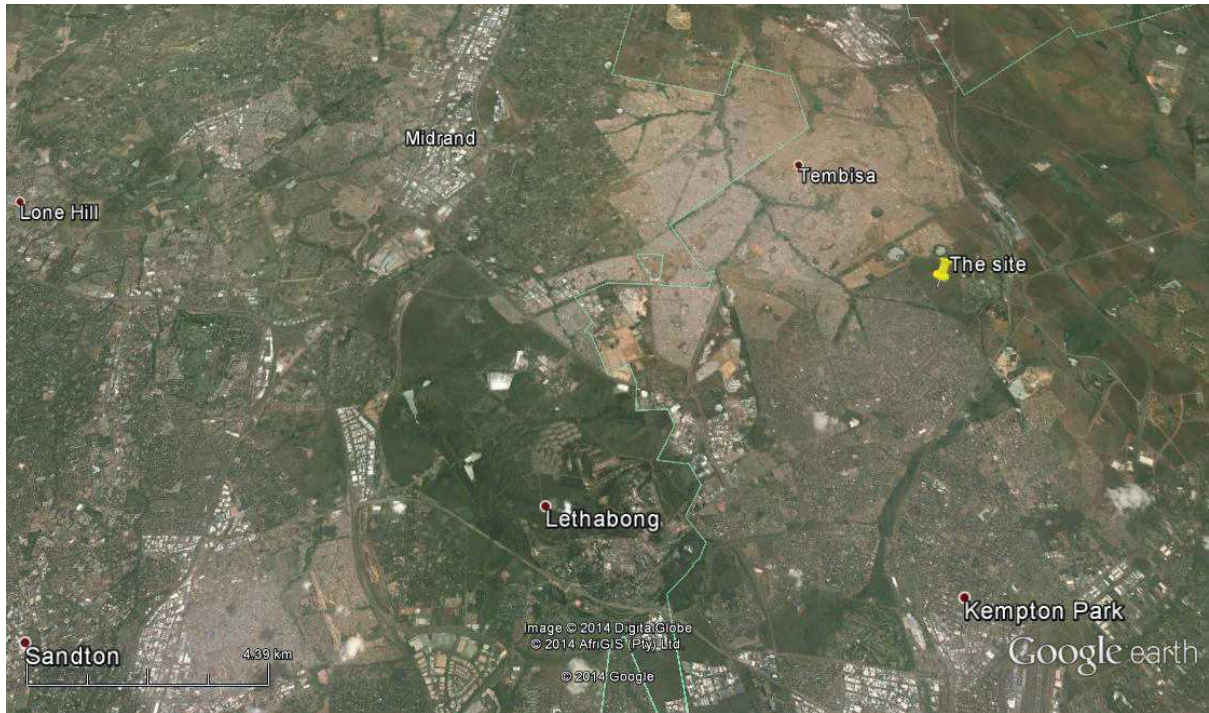


Figure 2: Location of the surveyed site, close to Tembisa and Kempton Park. North reference is to the top.



Figure 3: Map indicating the site boundary. North reference is to the top.

2. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

1. Identify objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property (see Appendix A).
2. Study background information on the area to be developed.
3. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B).
4. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.
5. Recommend suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development.
6. Review applicable legislative requirements.

3. CONDITIONS & ASSUMPTIONS

The following conditions and assumptions have a direct bearing on the survey and the resulting report:

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity (Appendix A). These include all sites, structure and artefacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.
2. The significance of the sites, structures and artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.
3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see Appendix C).
4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.

5. All recommendations are made with full cognizance of the relevant legislation.
6. It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might occur.
7. In this case there were certain areas where the vegetation cover was medium to high in length and the under footing was reasonably dense which had a negative effect on archaeological visibility.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with primarily through two Acts, namely the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

4.1 The National Heritage Resources Act

According to the National Heritage Resources Act (NHRA) the following are considered protected as heritage resources:

- a. Archaeological artefacts, structures and sites older than 100 years;
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography;
- c. Objects of decorative and visual arts;
- d. Military objects, structures and sites older than 75 years;
- e. Historical objects, structures and sites older than 60 years;
- f. Proclaimed heritage sites;
- g. Grave yards and graves older than 60 years;
- h. Meteorites and fossils; and
- i. Objects, structures and sites of scientific or technological value.

The national estate (see Appendix D) includes the following:

- a. Places, buildings, structures and equipment of cultural significance;
- b. Places to which oral traditions are attached or which are associated with living heritage;
- c. Historical settlements and townscapes;
- d. Landscapes and features of cultural significance;
- e. Geological sites of scientific or cultural importance;
- f. Archaeological and paleontological importance;
- g. Graves and burial grounds;
- h. Sites of significance relating to the history of slavery; and
- i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.).

An HIA is the process to be followed in order to determine whether any heritage resources are located within the area proposed for development as well as the

potential impact of the proposed development thereon. An Archaeological Impact Assessment only looks at archaeological resources. The different phases of the HIA process are described further in Appendix E. An HIA should be undertaken under the following circumstances:

- a. The construction of a linear development (road, wall, power line canal etc.) exceeding 300m in length;
- b. The construction of a bridge or similar structure exceeding 50m in length;
- c. Any development or other activity that will change the character of a site and exceed 5 000m² or involve three or more existing erven or subdivisions thereof;
- d. Re-zoning of a site exceeding 10 000 m²; and
- e. Any other category provided for in the regulations of South African Heritage Resource Agency (SAHRA) or a provincial heritage authority.

Structures

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

The act defines a structure as any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

According to the act alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

Archaeology, palaeontology and meteorites

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The NHRA states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial):

- a. Destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
- b. Destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
- c. Trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or paleontological material or object, or any meteorite;
- d. Bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites; and/or
- e. Alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by a registered archaeologist, after receiving a permit from the SAHRA. In order to demolish such a site or structure, a destruction permit from SAHRA is required.

Human remains

Graves and burial grounds are divided into the following:

- a. Ancestral graves;
- b. Royal graves and graves of traditional leaders,;
- c. Graves of victims of conflict;
- d. Graves designated by the Minister;
- e. Historical graves and cemeteries; and
- f. Human remains.

In terms of Section 36(3) of the NHRA, no person may, without a permit issued by the SAHRA:

- a. Destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. Destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; and/or
- c. Bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) (HTA) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place. Human remains can only be handled by a registered undertaker or an institution declared under the **HTA**.

4.2 The National Environmental Management Act

The National Environmental Management Act (Act 107 of 1998) states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimised and remedied.

5. THE INTERNATIONAL FINANCE CORPORATIONS' PERFORMANCE STANDARD FOR CULTURAL HERITAGE

This standard recognizes the importance of cultural heritage for current and future generations. It aims to ensure that clients protect cultural heritage in the course of their project activities.

This is done by clients abiding to the law and having heritage surveys done in order to identify and protect cultural heritage resources via field studies and the documentation of such resources. These need to be done by competent professionals (e.g. archaeologists and cultural historians). Possible chance finds, encountered during the project development, also needs to be managed by not disturbing it and by having it assessed by professionals.

Impacts on the cultural heritage should be minimized. This include the possible maintenance of such sites in situ, or when impossible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artefacts and structures need to be removed is should be done by professionals and by abiding to the applicable legislation. The removal of cultural heritage resources may however only be considered if there are no technically or financially feasible alternatives. In considering the removal of cultural resources, it should be outweighed by the benefits of the overall project to the effected communities. Again professionals should carry out the work and adhere to the best available techniques.

It is necessary to engage into consultation with affected communities. This entails that access to such communities should be granted to their cultural heritage if this is applicable. Compensation for the loss of cultural heritage should only be given in extra-ordinary circumstances.

Critical cultural heritage may not be impacted on. Professionals should be used to advise on the assessment and protection thereof. Utilization of cultural heritage resources should always be done in consultation with the effected communities in order to be consistent with their customs and traditions and to come to agreements with relation to possible equitable sharing of benefits from commercialization.

6. METHODOLOGY

6.1 Survey of literature

A review of literature was undertaken in order to obtain background information regarding the area. Sources consulted in this regard are indicated in the list of references.

6.2 Field survey

The survey was conducted according to generally accepted HIA practices. However, it was not aimed at locating all possible objects, sites and features of cultural significance in the area in which the Project is proposed as known sites, identified during a previous survey had to be visited and re-assessed.

If required, the location/position of any objects, sites and features of cultural significance was determined by means of a Global Positioning System (GPS)¹, while photographs were also taken where needed. The site survey was undertaken by means of a foot survey (Figure 4). The size of the surveyed area is approximately 200 Ha and took three hours to complete.

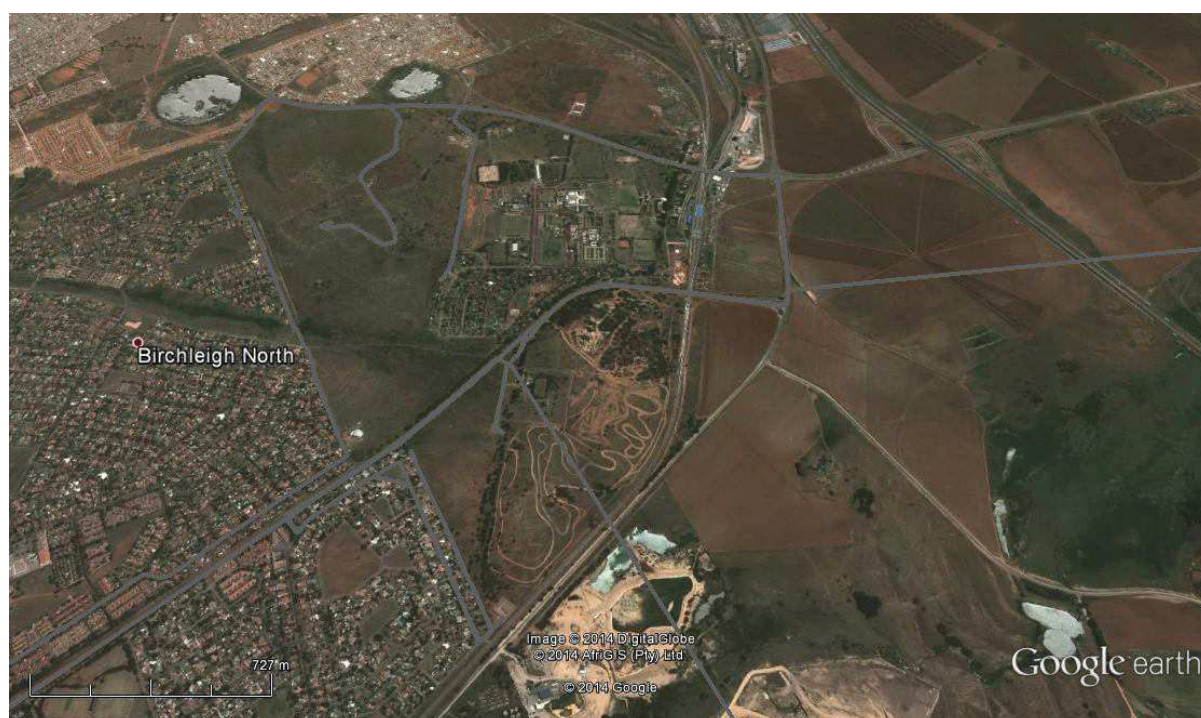


Figure 4: GPS track of the surveyed area.

6.3 Oral histories

People from local communities are interviewed in order to obtain information relating to the surveyed area. However, it should be understood that this activity is not

¹ A Garmin Oregon 550 with an accuracy factor of between 3 and 5 meters.

required under all circumstances as it only comes to the fore once a specific community is directly involved. When applicable, this information obtained is included in the report write-up and linked to the information sources.

6.4 Documentation

All sites, objects features and structures identified are documented according to the general minimum standards accepted by the archaeological profession. This includes photographic documentation, description of the sites and taking GPS co-ordinates.

6.5 Evaluation of Heritage sites

The evaluation of heritage sites is undertaken by applying a field rating to each (see Appendix C) using the following criteria:

- The unique nature of a site;
- The integrity of the archaeological deposit;
- The wider historic, archaeological and geographic context of the site;
- The location of the site in relation to other similar sites or features;
- The depth of the archaeological deposit (when it can be determined or is known);
- The preservation condition of the site;
- Uniqueness of the site; and
- Potential to answer present research questions.

7. DESCRIPTION OF THE ENVIRONMENT

The proposed area is located to the east of the Birchleigh North residential area. It seems that the residents of the surrounding area make use of the surveyed area, most likely in an informal manner. Signs of illegal dumping, especially in the northern section, are visible (Figure 5-6). This has disturbed a large section of the area.

The vegetation cover is between medium and high and the under footing reasonably dense. This of course had a negative effect on visibility. The vegetation however largely consists of alien species like Eucalyptus trees and pioneer species such as weeds and grass (Figure 7-8). This also is an indication of an earlier disturbance. In this case it most likely was done by agricultural activities in the recent past. It is clear that certain areas have been disturbed by ground work activities.

The topography of the area falls from north to south where a stream is situated. Around the stream the environment shows wetland characteristics. The area to the south of the stream is reasonably flat.



Figure 5: View of illegal dumping in the north of the surveyed area.



Figure 6: General view of the area showing illegal dumping, weeds and Eucalyptus trees.



Figure 7: General view of vegetation in the surveyed area.



Figure 8: General view of the surveyed area.

8. HISTORICAL CONTEXT

In order to place possible finds that could be unearthed during construction activities, in context, it is necessary to give a background regarding the different phases of human history.

8.1 Stone Age

The Stone Age is the period in human history when lithic material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided in three periods. It is, however, important to note that dates are relative and only provide a broad framework for interpretation. The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

- Early Stone Age (ESA) 2 million – 150 000 years ago;
- Middle Stone Age (MSA) 150 000 – 30 000 years ago; and
- Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

A few Stone Age sites were identified in the vicinity of the surveyed area by other scholars. This includes Middle and Late Stone Age sites in and around Johannesburg (Bergh 1999:4). Rock art is usually also associated with LSA people. The closest to the surveyed area are rock engravings that have been found around Krugersdorp on the West Rand (Bergh 1999: 5).

Although no natural shelter was identified during the survey, the close proximity to a river makes the area very suitable for human habitation. The area probably provided good grazing and therefore it is possible that Stone Age people may have utilized the site for hunting purposes. One may therefore find Stone Age material lying around in the area.

8.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artefacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

- Early Iron Age (EIA) 200 – 1000 A.D; and
- Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however, indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

- Early Iron Age (EIA) 250 – 900 A.D.;
- Middle Iron Age (MIA) 900 – 1300 A.D.; and
- Late Iron Age (LIA) 1300 – 1840 A.D.

Previous research indicates 794 Iron Age sites in an area to the south of Johannesburg and the East Rand (Bergh 1999: 7). These date to the Late Iron Age. These would however be closer to hills and areas where building material is found.

Again the presence of water and natural grass cover may have contributed to people settling in the surveyed area during the Iron Age. It is indicated that a Tswana group, the Khudu, inhabited the area to the south of the surveyed area previously as well as during the 19th century. It does not seem if someone settled closer to the surveyed area, but one has to take into consideration that the entire area may not have been researched yet (Bergh 1999: 10).

The subterranean presence of archaeological material is something that should however always be kept in mind. It also should be realized that the area may not have been surveyed before and therefore the possibility of finding new sites is always a reality.

The type of environment is suitable for human habitation. There is ample water sources and good grazing. One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers later on moved into this environment.

8.3 Historical Age

The historical age began with the first recorded oral histories in the area. It includes the moving into the area of people that were literate. This era is often referred to as the Colonial era or the recent past.

Due to factors such as population growth and a decrease in mortality rates, more people inhabited the country during the recent historical past. Therefore, much more cultural heritage resources from this era have been left on the landscape. It is important to note that all cultural resources older than 60 years are potentially regarded as part of the heritage and that detailed studies are required in order to determine whether these indeed have cultural significance. Factors to be considered include aesthetic, scientific, cultural and religious value of such resources.

During the difaquane, in this case ca. 1827, the Ndebele of Mzilikazi did move through this area (Bergh 1999: 11). The first white people to move through this area were the travellers Moffat and Archbell in 1829 (Bergh 1999: 12). Later other travellers also visited the area, being Harris in 1836 and Livingstone in 1847 (Bergh 1999: 13). The first white people to settle here were Voortrekkers during the 1839 and 1840 (Bergh 1999: 14-15).

The city of Johannesburg was established in 1886. The city of Germiston was established in 1909 and Kempton Park, which originally formed a part of Germiston, in 1977 (Bergh 1999: 21-25).

Historical structures, such as farm houses and infrastructure relating to these times, may be found in the surveyed area. It is also possible that graves, associated with the above, may be present.

9. ALTERNATIVES

Alternative 1

Alternative 1 has three types of residential housing zoning, Residential 1 (with one unit per 500m² or 200m² making up 8.57% of the site) Residential 2 (with one unit per 120m² making up 4.83% of the site) and Residential 4 (with either 110, 190 or 210 dwelling units per hectare making up 17.12% of the site). Alternative 1 also has zones for business (4.77%), social services (2.22%), community facilities (11.30%) and public open space (26.50%).

This alternative took consideration of the surrounding land-uses on residential and social facilities including the proposed hierarchy of roads to minimize the impact of the development on the environment.

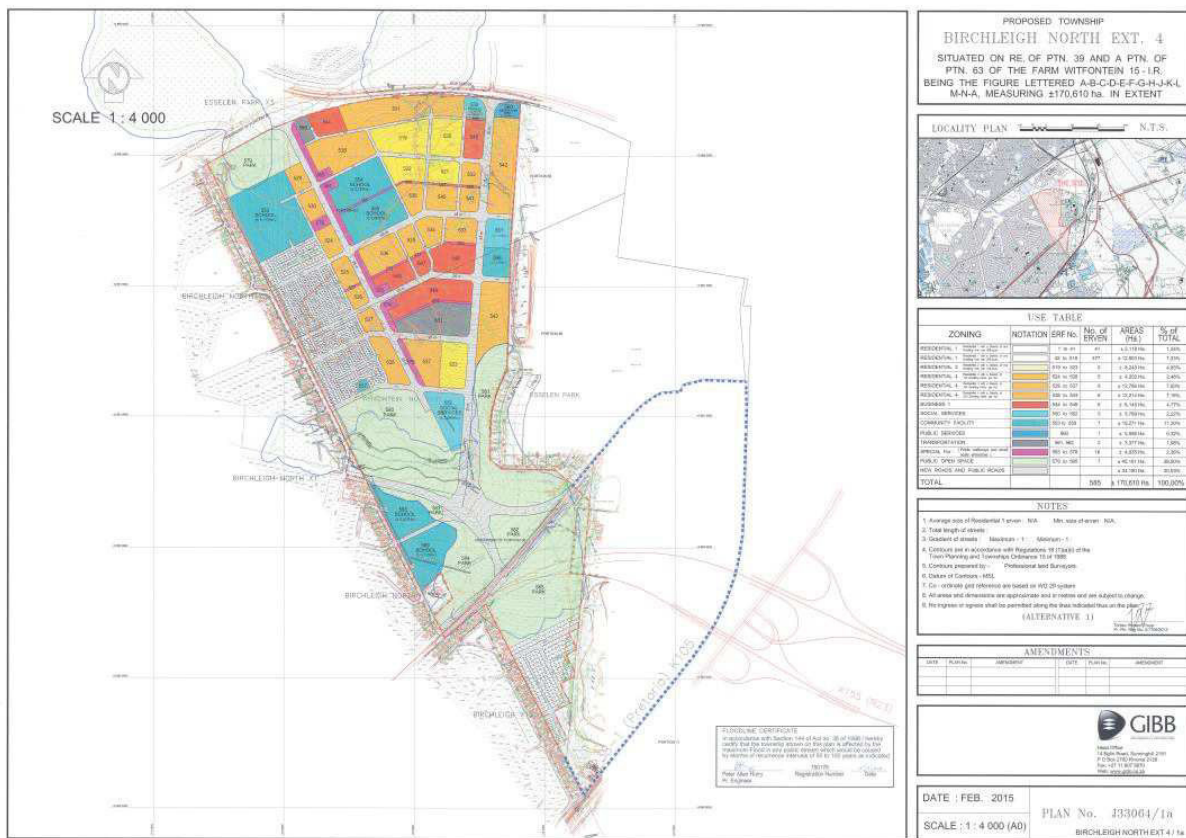


Figure 9: Alternative 1

Alternative 2

Alternative 2 has five types of residential housing: Residential 1 (8.82%), Residential 2 (2.46%), Residential 3 (7.22%), Residential 4 (5.54%) and Residential 5 (6.75%). Alternative 3 also has zones for business (4.77%), institutional (3.18%), educational (10.62%) and public open space (26.50%).

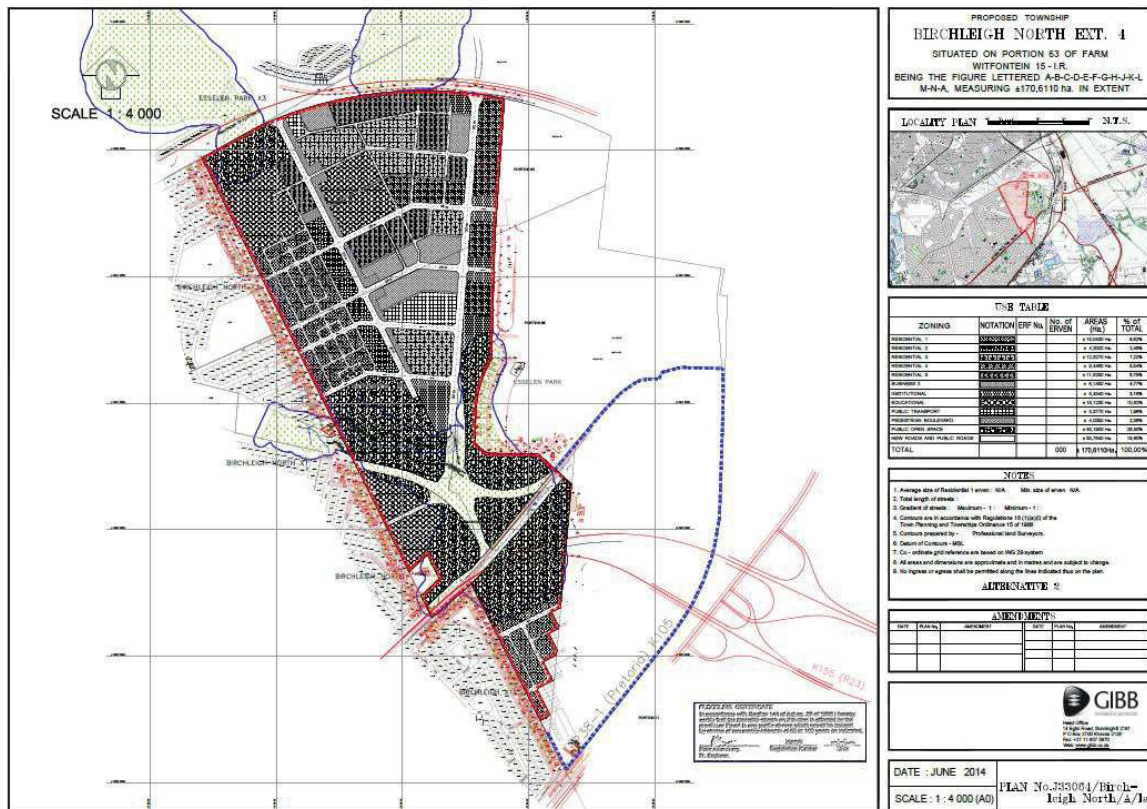


Figure 10: Alternative 2

No Go Alternative

As standard practice and to satisfy regulatory requirements, the option of not proceeding with the project is included in the evaluation of the alternatives.

The main implication of the No Go Option is that should the development not proceed, there will be a lack of housing available in EMM which will negatively impact the housing backlog in the Municipality. In addition, there will be a number of socio-economic opportunities which are lost including the loss of the potential employment benefits in the local community as well as a loss of the injection of funds into the area through construction.

10. IMPACT ASSESSMENT

As indicated, no sites were identified. Therefore there is cannot be any impact on cultural resources in the area to be developed.

Thus both the development alternatives are suitable in terms of heritage.

11. CONCLUSION AND RECOMMENDATIONS

The survey of the indicated area was completed successfully. No sites were identified during the survey.

The following is recommended:

- This report is seen as ample mitigation.
- The proposed development may continue. Both development alternatives are suitable in terms of heritage.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artefacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence.

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APPENDIX A

DEFINITION OF TERMS:

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artefacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

Object: Artefact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE:

Historic value: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

Aesthetic value: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

Scientific value: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

Social value: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Rarity: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

Representivity: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

APPENDIX C

SIGNIFICANCE AND FIELD RATING:

Cultural significance:

- Low A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.

- Medium Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.

- High Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

Heritage significance:

- Grade I Heritage resources with exceptional qualities to the extent that they are of national significance

- Grade II Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate

- Grade III Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

- i. National Grade I significance should be managed as part of the national estate
- ii. Provincial Grade II significance should be managed as part of the provincial estate
- iii. Local Grade IIIA should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB should be included in the heritage register and may be mitigated (high/ medium significance)
- v. General protection A (IV A) site should be mitigated before destruction (high/ medium significance)
- vi. General protection B (IV B) site should be recorded before destruction (medium significance)
- vii. General protection C (IV C) phase 1 is seen as sufficient recording and it may be demolished (low significance)

APPENDIX D

PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – grade I and II

Protected areas - an area surrounding a heritage site

Provisional protection – for a maximum period of two years

Heritage registers – listing grades II and III

Heritage areas – areas with more than one heritage site included

Heritage objects – e.g. archaeological, paleontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states

Structures – older than 60 years

Archaeology, paleontology and meteorites

Burial grounds and graves

Public monuments and memorials

APPENDIX E

HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or scoping phase – establishment of the scope of the project and terms of reference.
2. Baseline assessment – establishment of a broad framework of the potential heritage of an area.
3. Phase I impact assessment – identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – if there is no likelihood that any sites will be impacted.
5. Phase II mitigation or rescue – planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III management plan – for rare cases where sites are so important that development cannot be allowed.

APPENDIX F

IMPACT ASSESSMENT

CRITERIA FOR ASSESSMENT OF IMPACTS:

These criteria are drawn from the EIA Regulations, published by the Department of Environmental Affairs and Tourism (April 1998) in terms of the Environmental Conservation Act No. 73 of 1989. The criteria include:

Nature of the impact:

This is an appraisal of the type of effect the construction, operation and maintenance of a development would have on the affected environment. This description should include what is to be affected and how.

Extent of the Impact:

The environmental consultant &/or any relevant specialists should describe whether the impact will be:

- Site (i.e. extending only as far as the development boundary of the site area),
- (2) Local/Surrounds (i.e. the area and its immediate surroundings within 5km of the site),
- Municipal (i.e. Nokeng Tsa Taemane Municipal Region),
- Provincial (i.e. Gauteng),
- National (i.e. South Africa), or
- (6) International (i.e. Southern Africa).

Duration of the Impact:

The environmental consultant &/or any relevant specialists should indicate whether the lifespan of the impact would be:

- (1) Immediate (>1 year),
- (2) Short term (1-5 years),
- (3) Medium term (6-15 years),
- (4) Long term (16-30 years and/or the impact will cease after the operational life span of the project), or
- (5) Permanent (no mitigation measure of natural process will reduce the impact after construction).

Magnitude/Intensity:

The environmental consultant &/or any relevant specialists should establish whether the impact is destructive or benign and should be qualified i.e. the severity of the impacts is indicated as either:

- None (where the aspect will have no impact on the environment),
- (2) Minor (where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected),
- Low (where the impact affects the environment in such a way that natural, cultural and social functions and processes are slightly affected),
- 6) Moderate/Medium (where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way),

- (8) High (where natural, cultural or social functions or processes are altered to the extent that it will temporarily cease), or
- (10) Very High / don't know (where natural, cultural or social functions or processes are altered to the extent that it will permanently cease).

Probability of occurrence:

The environmental consultant &/or any relevant specialists should describe the probability (i.e. likelihood) of the impact actually occurring and should be described as either:

- (0)None (the impact will not occur),
- (1)Improbable (low likelihood – the possibility of the impact materializing is very low as a result of design, historic experience, or implementation of adequate corrective actions),
- (2) Low Probability (there is a possibility that the impact will occur),
- (3)Medium Probability (distinct possibility – the impact may occur),
- (4)High Probability (it is most likely that the impact will occur), or
- (5)Definite / I don't know (the impact will occur regardless of the implementation of any prevention measures and/or corrective actions, or you don't know what the probability will be based on too little published information).

Status of the Impact:

The environmental consultant &/or any relevant specialists should determine whether the impacts are:

- Negative Effect (i.e. at a “cost” of the environment),
- Positive Effect, (i.e. a “benefit” to the environment), or
- Neutral effect on the environment.

The impacts are to be assessed in terms of their effect on the project and the environment. For example, an impact that is positive for the proposed development may be negative for the environment. It is important that this distinction is made in the analysis.

Degree of confidence in predictions:

The environmental consultant &/or any relevant specialists should state what degree of confidence (low, medium or high) is there in the predictions based on the available information and level of knowledge and expertise.

Significance of the Impact:

Based on the information contained in the points above, the potential impacts are assigned as significance weighting (S). This weighting is formulated by adding the sum of the numbers assigned to extent (E), duration (D) and Magnitude (M) and multiplying this sum by the probability (P) of the Impact.

$$S=(E+D+M)P$$

(0) No significance: (The impacts do not influence the proposed development and/or environment in any way),

- (<30) Low: (The impacts will have a minor influence on the proposed development and/or environment i.e. where this impact would not have a direct influence on the decision to

develop in the area. These impacts could possibly require some attention to modification of the project design where possible, or alternative mitigation.

- (30-60) Moderate/Medium: (The impacts will have a moderate influence on the proposed development and/or environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated).
- (>60) High: (i.e where the impact must have an influence on the decision process to develop in the area. The impacts will be likely to have the “no-go” implication on the development or portions of the development regardless of any mitigation measures that could be implemented. This level of significance must be well motivated. "

A: IMPACTS that may result from the PLANNING, DESIGN & CONSTRUCTION PHASES

CULTURAL HERITAGE IMPACT TABLE FOR THE PROPOSED ESSELEN PARK RESIDENTIAL DEVELOPMENT

Nature of Impact:	Extent of Impact:	Duration of Impact:	Intensity of Impact:	Probability of Occurrence	Status of the Impact:	Confidence in Predictions:	Significance of Impact Before Implementation Of Mitigation Measures:	Mitigation Measures:	Significance of Impact after Implementation of Mitigation Measures:
Potential disturbance of or damage to Cultural Heritage	(2)Local/ Surrounds	Permanent	High	(1) Improbable (low likelihood – the possibility of the impact materializing is very low as a result of design, historic experience, or implementation of adequate corrective actions	Negative	High	No significance	Section 38 of Act 25 of 1999 (NHRA) to be submitted to Gauteng Provincial Heritage Authority for demolition approval. In the event of sub-surface archaeological finds or graves work should be stopped and a heritage practitioner contacted for further guidance.	Low

B: IMPACTS that may result from the OPERATIONAL PHASE

No impacts are foreseen.

C: IMPACTS that may result from the DECOMMISSIONING & CLOSURE PHASES

No impacts are foreseen.