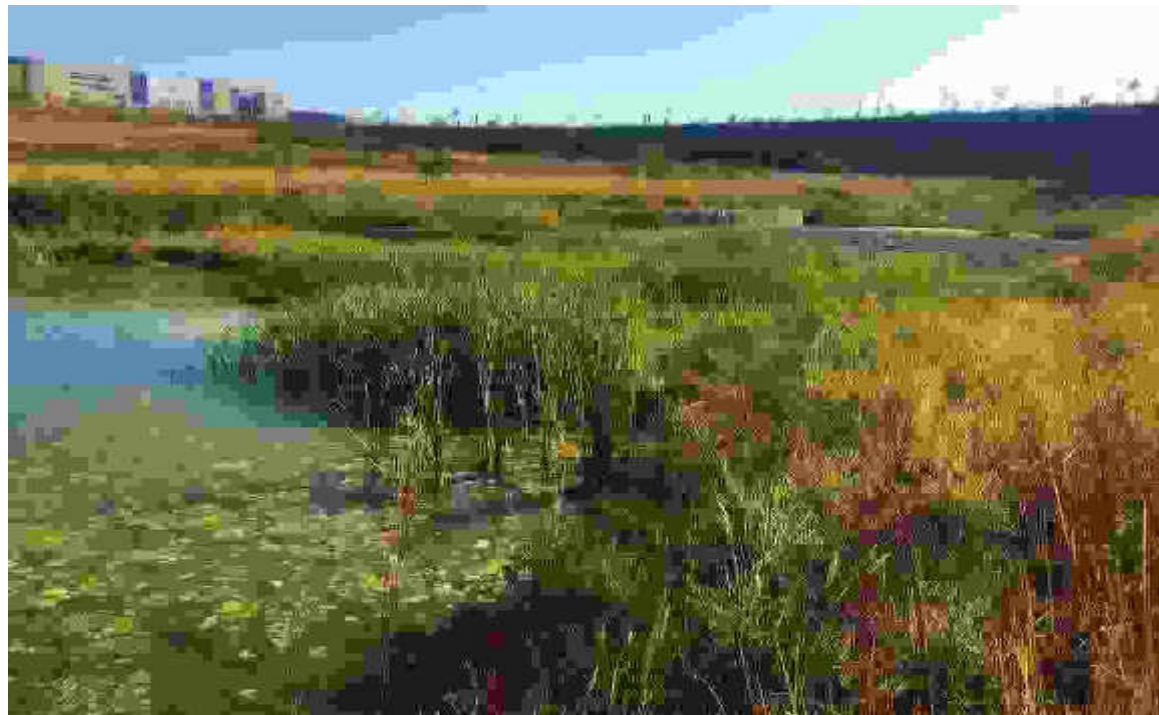


# Environmental Authorization Amendment Draft Report For Portions of the Remainder of Portion 1 of the Farm Waterval 5IR



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## List of Abbreviations

**DWA:** Department of Water Affairs

**EA:** Environmental Authorisation

**EAP:** Environmental Assessment Practitioner

**EMPr:** Environmental Management Programme

**GDARD:** Gauteng Department of Agriculture and Rural Development

**I&AP:** Interested and affected party

**NEMA:** National Environmental Management Act

**NEM:AQA:** National Environmental Management: Air Quality Act

**NEMBA:** National Environmental Management Biodiversity Act

**NWA:** National Water Act

**NWMS:** National Waste Management Strategy

**SWMP:** Storm Water Management Plan



## Glossary of Terms

**Alien species:** A plant or animal species introduced from elsewhere: neither endemic nor indigenous.

**Biodiversity:** The variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are apart.

**Ecology:** The study of the inter relationships between organisms and their environments.

**Environment:** All physical, chemical and biological factors and conditions that influence an object and/or organism. Also defined as the surroundings within which humans exist and are made up of the land, water, atmosphere, plant and animal life (micro and macro), interrelationship between the factors and the physical or chemical conditions that influence human health and well-being.

**Environmental Management Programme:** A legally binding working document, which stipulates environmental and socio-economic mitigation measures that must be implemented by several responsible parties throughout the duration of the proposed project.

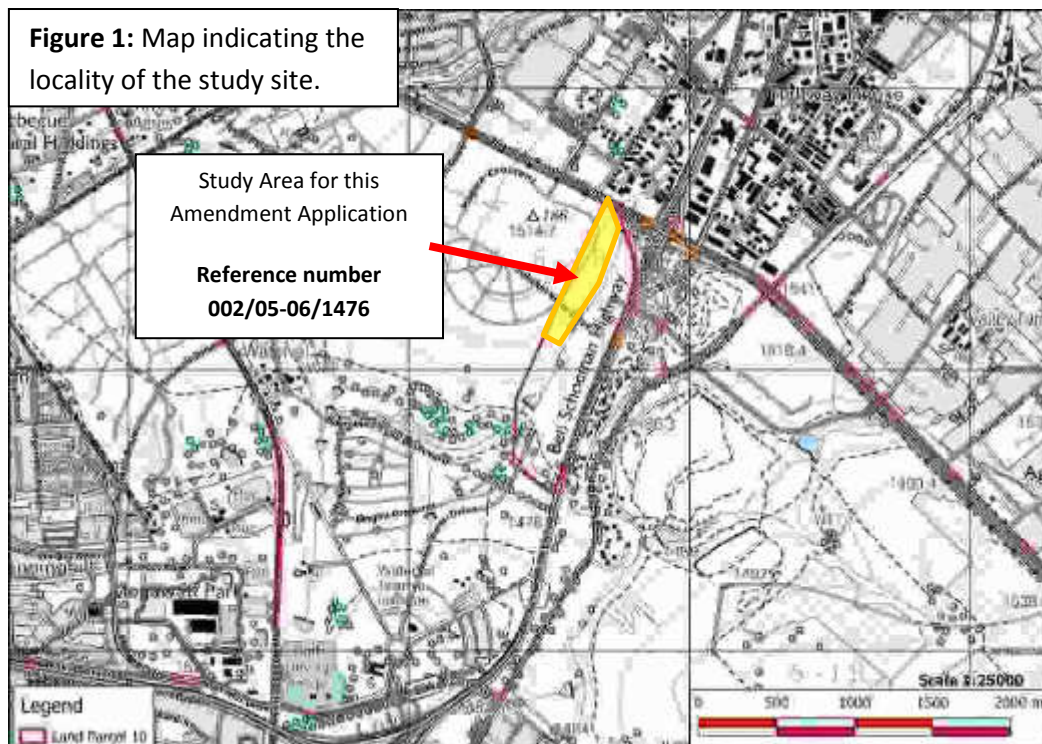
**Study Area:** Refers to the entire study area compassing the total area of the land parcels as indicated on the study area map.

# 1. Introduction and background

## 1.1. General

The purpose of this Amendment Report is to apply for authorisation for the removal of the 30m wetland buffer zone enforced in the EIA Authorisation for the Jukskei View Ext 4 Township (hereafter referred to as the “**study area**”). This Township is also known as Northern Residential Estate, which is in the process of being divided into Jukskei View Ext 89, 91 and 92 to the West of the wetland area. The application site is situated on portions of the Remainder of Portion 1 of the Farm Waterval 5IR in Midrand, Gauteng, just south of Allandale Road and west of the Ben Schoeman (N1) Freeway (**Figure 1 and 2 - Also refer to Annexure A1 and A2**). The study site falls in the area of jurisdiction of the City of Johannesburg Metropolitan Municipality (CoJMM).

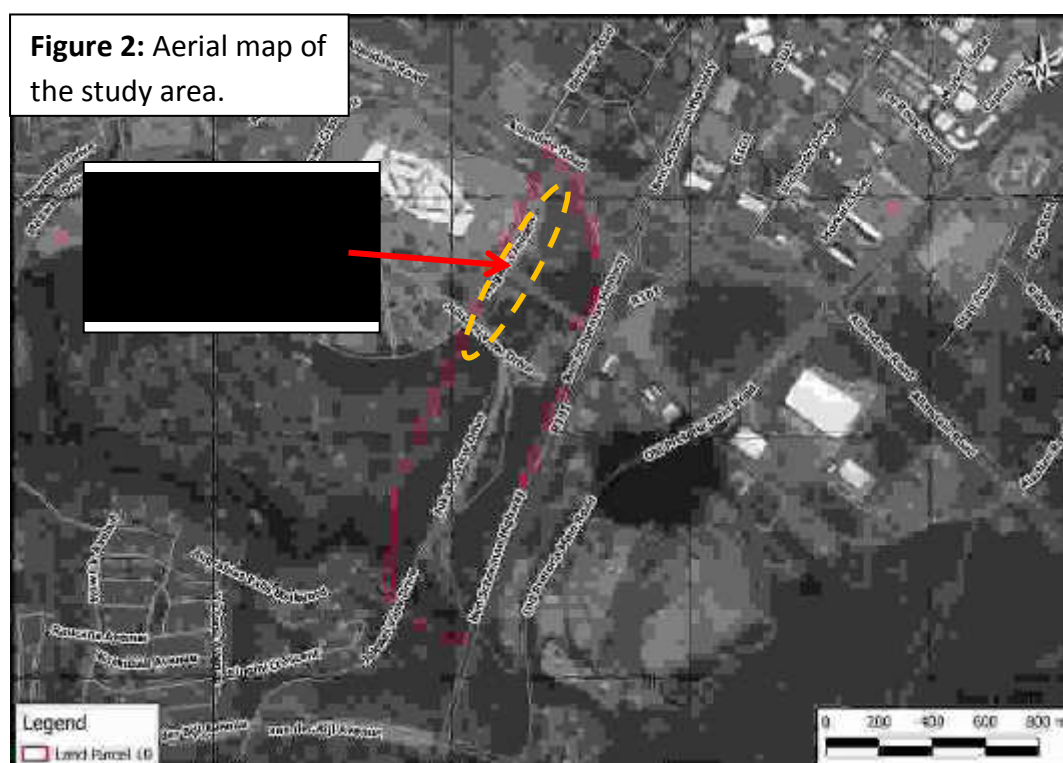
The **study area** is situated in the economic hub (Gauteng Province) of the country, between the busy corridor of Pretoria and Johannesburg. The intersection between Allandale Road and the Ben Schoeman (N1) freeway is extremely busy owing to rapidly growing residential areas, business parks, and the newly opened Mall of Africa and associated land-uses. The location of the **study area** is therefore very important from an economical and social perspective.



From an institutional point of view, this site is also regarded as strategically located for urban development. The newly enacted Gauteng Provincial Environmental Management Framework (GPEMF) placed the study area in Zone 1, which is an area in which development infill, densification and the concentration of urban development within the urban development zones will be supported and promoted. In this zone applicants are exempted from certain EIA Related listed activities, but the listed activities associated with a watercourse/ wetland will however still remain applicable.

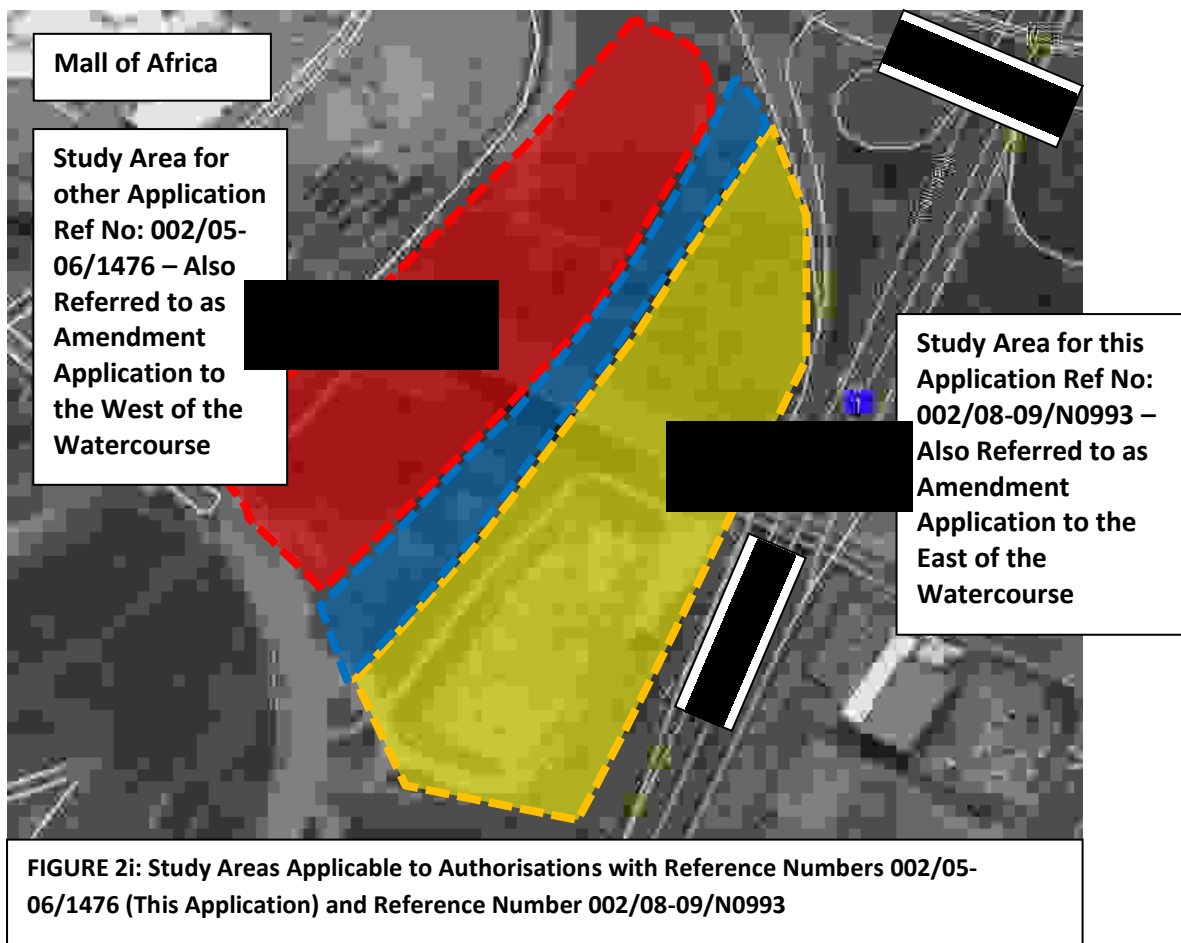
From an institutional point of view development in this area will also promote the optimum utilisation of services, it will prevent urban sprawl, it will promote job creation and it will promote increased rates and taxes payable to the various authorities.

Environmental Authorisation (EA) (**Reference number 002/05-06/1476**) was successfully granted to Waterval Islamic Institute by the Gauteng Department of Agriculture and Rural Development (GDARD) on **20 October 2007** for the establishment of the Northern Residential Estate. The Decision also included the authorisation for the upgrading of Allandale Road (section between Maxwell Boulevard and the N1) and the upgrade of Woodmead Drive (section between Maxwell Boulevard and the proposed K60 alignment). *(Refer to Annexure B for a copy of the Environmental Authorization).*



This application must be read in conjunction with another Amendment Application, namely the Application for the Amendment of an Environmental Authorisation (EA) (**Reference Number 002/08-09/N0993**) that was granted to **Atterbury Property Developments (Pty) Ltd** by the Gauteng Department of Agriculture and Rural Development (GDARD) on **29 April 2010** for the mixed-nodal development (*Refer to Annexure C: Environmental Authorisation for Project with Reference Number 002/08-09/N0993*). This authorisation approved the nodal development associated with the new Mall of Africa and it includes the watercourse buffer between the Mall of Africa and the watercourse referred to. *Refer to Figure 2i below*

The Amendment requested in this Amendment Application will be for the relaxation of the 30m wetland buffer to the west of the watercourse (area between the watercourse and the Mall of Africa), where the Environmental Authorisation issued to the Waterval Islamic Institute (**Reference Number 002/05-06/1476**) is applicable. Also *Refer to Figure 2i below*.



The applicant however also wishes to apply for the relaxation of the 30m buffer to the east of the watercourse and therefore it was also regarded as necessary to apply (in a separate application) for the relaxation of the 30m buffer to the east of the watercourse (area between the watercourse and the N1 freeway). Another separate Amendment Application for the relaxation of the 30m buffer to the east of the watercourse/ river was also submitted to GDARD and a copy of the Amendment Application form is attached hereto as **Annexure Ci**. The complete Draft Amendment Application and Associated Impacts Assessment for this proposed buffer relaxation have also been submitted to GDARD and various I&APs and Organs of State for scrutiny.

***Refer to Figure 2i above for the Identification of the 2 Study Areas for the 2 Amendment Applications That Are Regarded as Interrelated and That Are Referred to Above***

## **1.2. Environmental Assessment Practitioner (EAP)**

The 2014 NEMA Environmental Regulations require that the relevant details of the Environmental Assessment Practitioner be included as part of EIA Reports. In this regard, attached as **Annexure D**, is a copy of the CV of the EAP for this project, Ms. Lizelle Gregory from Bokamoso Landscape Architects and Environmental Consultants CC. In summary details of the EAP are indicated below:

- **Name:** Lizelle Gregory
- **Company:** Bokamoso Landscape Architects and Environmental Consultants CC
- **Qualifications:** Registered Landscape Architect and Environmental Consultant (degree obtained at the University of Pretoria) with more than 25 years' experience in the following fields:
  - Environmental Planning and Management;
  - Compilation of Environmental Impact Assessments;
  - Landscape Architecture; and
  - Landscape Contracting

Ms. L. Gregory also lectured at the Technicon of South Africa and the University of Pretoria. She is a registered member of the South African Council of the Landscape Architects Profession (SACLAP), the International Association of Impact Assessments (IAIA) and the Institute of Environmental Management and Assessment (IEMA).

### 1.3. Application History

As already mentioned, this application is done on a **study area**, which has already received an Environmental Authorisation (EA) for a mixed-use township development.

The rationale for this amendment application is for the relaxation of the 30m wetland buffer around the recently rehabilitated water course, which was highly eroded and dysfunctional from an ecological and hydrological point of view. It is requested that the buffer be relaxed and that the 1:100-year flood line (as indicated on Figure 2) become the new development line for the study area.

The initial authorisation that was issued enforced a 30m wetland buffer zone around the wetland/ watercourse area, but the Applicant and the applicant's appointed specialists did not agree with the required 30m buffer around such highly eroded, disturbed and diverted water-course.

It was therefore decided by the Applicant in 2006 to apply for the relaxation/removal of the wetland buffer which was originally imposed by the delegated authority. The amendment application referred to two historical wetland delineation reports, dated March 2006 and September 2010, as well as an addendum to the September 2010 report, dated May 2013 (*Refer to Annexure P for copies of all three mentioned reports*).

The professional recommendations and opinion of wetland specialist Antoinette Bootsma was that the buffer zone no longer functions to protect the degraded wetland and will not likely ensure the persistence of the wetland. Ms. Bootsma further stated: ***"It should not be the aim to return the wetland to its hypothetical original state"***.

The amendment application was however rejected by The Head of the Department: GDARD on 1 March 2013 (*Refer to Annexure E*). An Appeal against such decision was then submitted to the MEC: Department of Agriculture and Rural Development of the Gauteng Provincial Government who similarly, on the 13 September 2013, confirmed the decision of the Head of the Department: GDARD and dismissed the appeal.

After the Appeal was dismissed, the Applicant had no other choice but to approach the High Court in order to request that GDARD reconsider their rejection of the requested relaxation



of the buffer. After the relevant papers were filed at the High Court, the legal representative of the Applicant (Mr. Adriaan Venter) approached the legal team of GDARD and proposed that a “without prejudice” conversation be held at the offices of GDARD in order to discuss the reasons for the rejection of the Amendment Application that was submitted and in order to determine whether it will at all be possible to settle the matter out of Court.

At this meeting the involved GDARD officials indicated that they mainly rejected the Amendment Application, because the application did not provide the Department with sufficient information to make an informed decision. Apparently GDARD requested that the former EAP refer back to the original (undisturbed) state of the affected watercourse and that the EAP illustrate the various human impacts (including the construction of Allandale Road) on the watercourse over the years. It was apparently stated in the original amendment application that the construction of Allandale Road caused major irreversible impacts to the watercourse, but the EAP failed to justify such statements. GDARD furthermore indicated at the “without prejudice” meeting referred to above, that they are willing to consider another amendment application,<sup>1</sup> but on the condition that the historical background and the modifications to the watercourse be illustrated in such amendment application.

After a period of on-going discussions between the legal representatives of GDARD and the Applicant, it was agreed that the High Court Application submitted by the Applicant will be withdrawn and that GDARD will accept and consider a new and more comprehensive amendment application for the relaxation of the buffer. ***Refer to Annexure F for correspondence relating to such discussions and decisions regarding the way forward***

Subsequent to the aforementioned agreement that a new amendment application can be submitted, Bokamoso already had two pre-application meetings with Mr. Tebogo Leku of GDARD regarding the amendment application to be submitted. The first pre-application consultation took place in November 2015 between Me. Lizelle Gregory of Bokamoso and Mr. Tebogo Leku of GDARD. During this meeting Bokamoso explained to Mr. Leku that the

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<sup>1</sup> Take note that this scenario is also applicable to the other amendment application that was submitted for the relaxation of the buffer to the west of the watercourse. Both amendment applications were compiled and submitted after it was agreed with GDARD that amendment applications can be submitted for the relaxation of the 30m buffers to the east and west of the watercourse. As mentioned this amendment application must be read in conjunction with the amendment application for the buffer to the west of the watercourse.



Applicant is planning to withdraw the High Court Application and to submit a more comprehensive amendment application, which will enable the Department to make an informed Decision. Mr. Tebogo Leku was very helpful and he indicated that the Department will gladly accept a new amendment application as soon as the high court application has been withdrawn. During this meeting Mr. Leku once again emphasized the importance of illustrating the historical state and impacts on the watercourse as well as the erosion in the watercourse prior to the recent rehabilitation works.

After the High Court Application was formally withdrawn, another pre-application consultation was arranged with Mr. Tebogo Leku in order to confirm the aspects to consider in the amendment application and in order to discuss the risks and timeframes associated with such amendment application. The Assessing Official of GDARD, Mr. Tebogo Leku of GDARD, Mr. Alex De Beer (representative of the Applicant: ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD – ALSO REFERRED TO AS AWIC) and Me. Lizelle Gregory (appointed EAP, Bokamoso) attended this meeting.

At the meeting it was explained that the study area and its surroundings, which fall within Zone 1 of the recently enacted GPEMF, is a sought after node for commercial and office developments. The specific study area involved lies immediately adjacent to the Allandale off-ramp from the N1 Freeway and various large tenants already indicated that they are interested to procure offices in this strategic node.

It was then explained that a highly modified watercourse runs through the study area and that GDARD enforced a 30m buffer around such watercourse. AWIC recently rehabilitated the watercourse, because it was highly eroded and according to the appointed specialist, there is no need for a 30m buffer around this artificial feature.<sup>2</sup> ***Refer to Annexure G for the rehabilitation plan that was implemented within the watercourse area.***

The rehabilitation measures that were implemented in the watercourse by the Applicant already play the role of the proposed 30m buffer. ***Refer to Annexure H for copy of updated wetland/ watercourse report compiled by Dr. Johan van der Waals***<sup>3</sup>

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<sup>2</sup> Former wetland studies conducted for this study area also recommended that the 30m buffer be removed. Refer to **Annexure P**

<sup>3</sup> It was specifically decided to appoint Dr. van der Waals to assist with this input, because he recently reconsidered wetland and watercourse buffers enforced in the areas underlain by the Halfway House Granites and he is of the opinion that there

Mr. Tebogo Leku of GDARD explained that the Department is willing to consider another amendment application, but he specifically requested that the amendment application include and address the following:

- The history of the watercourse and illustrations of how the watercourse was modified over the years;
- Photographs of the state of the watercourse prior to the rehabilitation works;
- Impacts of the proposed structures within the 30m on the watercourse and riparian systems higher-up and lower down along the watercourse;
- How the additional storm water generated by the increased hard-surfaces will be managed and how increased storm water lower down (the site next door) will be accommodated;
- The erosion and siltation prevention measures that will be implemented;
- The impacts on the 1:100 year flood line; and
- What will be lost and what will be gained from an environmental point of view.

Mr. Alex De Beer of AWIC stated that they currently have a large and reputable tenant that is interested in one of the properties that require a 30 buffer relaxation. The potential tenant gave AWIC a limited amount of time to confirm the availability of the property for the development of their new Midrand headquarters at the Allandale off-ramp and it was therefore requested that GDARD indicate, already at an early stage, whether there is a risk that the 30m buffer will not be relaxed. If this is the case, AWIC will rather walk away from the project.

AWIC requested that GDARD treat the project as a priority project and it was eventually decided that the relevant GDARD officials (including the wetland specialists of GDARD), AWIC, Bokamoso and AWIC's appointed specialists will meet on site when the Draft Impact Assessment becomes available to briefly discuss the proposals made in such report. According to Mr. Leku the assessing official and the GDARD specialists will then take approximately 30 days to confirm risks associated with the application and whether they need any additional information to make an informed Decision.

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*are cases where intervention is required within a watercourse to prevent erosion and siltation and in most cases he is of the opinion that no wetland buffer is required (especially in cases with no wetlands or wetlands with a low PES value). The study was conducted for the City of Johannesburg and more detail is available on request.*

This report took longer to compile than anticipated, because the applicant regarded it as extremely important to thoroughly address all the issues as listed by Mr. Tebogo Leku at the pre-application meeting. This document represents the Draft Version of the Impact assessment for the Amendment Application and it is, therefore, regarded as very important that all parties in possession of such a report peruse this report and supply their valuable comments regarding this report to Bokamoso by 8 July 2016.

## 2. Current Status, Updated Information and Layout Plan Changes

Bokamoso was appointed by the Applicant to obtain the necessary information to verify whether it is possible, from an environmental point of view, to develop within the proposed 30m buffer zone, as the wetland area is highly modified and dysfunctional.

The following specialists assisted with the required Impact assessment:

- A wetland specialist (Dr Johan van der Waals);
- Fauna and flora specialists (Bokamoso Environmental: Specialist Division); and
- A civil engineer (Mr. KC Ooijkaas)<sup>4</sup>.

The wetland specialist, Dr Johan H. van der Waals, assessed the historical and current status (1938-2015) of the wetland and it was specifically requested that he confirm whether a 30m wetland buffer is still required around this highly modified system.

From his assessment, Dr van der Waals was able to prove from historical aerial photographs that the wetland was already in a deteriorating state prior to the construction of Allandale road and the N1 freeway and even before urban expansion commenced within the vicinity of the **study area (Refer to Annexure H)**. He furthermore indicated that the wetland area has been impacted severely through erosion prior to the recent rehabilitation works conducted by the applicant (**Figure 3**), and that this erosion occurred within the past 20 to 30 years.

Even during the rehabilitation process, soil erosion was noticeable (**Figure 4**). The Present Ecological Status (PES) of previous wetland delineation studies should have indicated a

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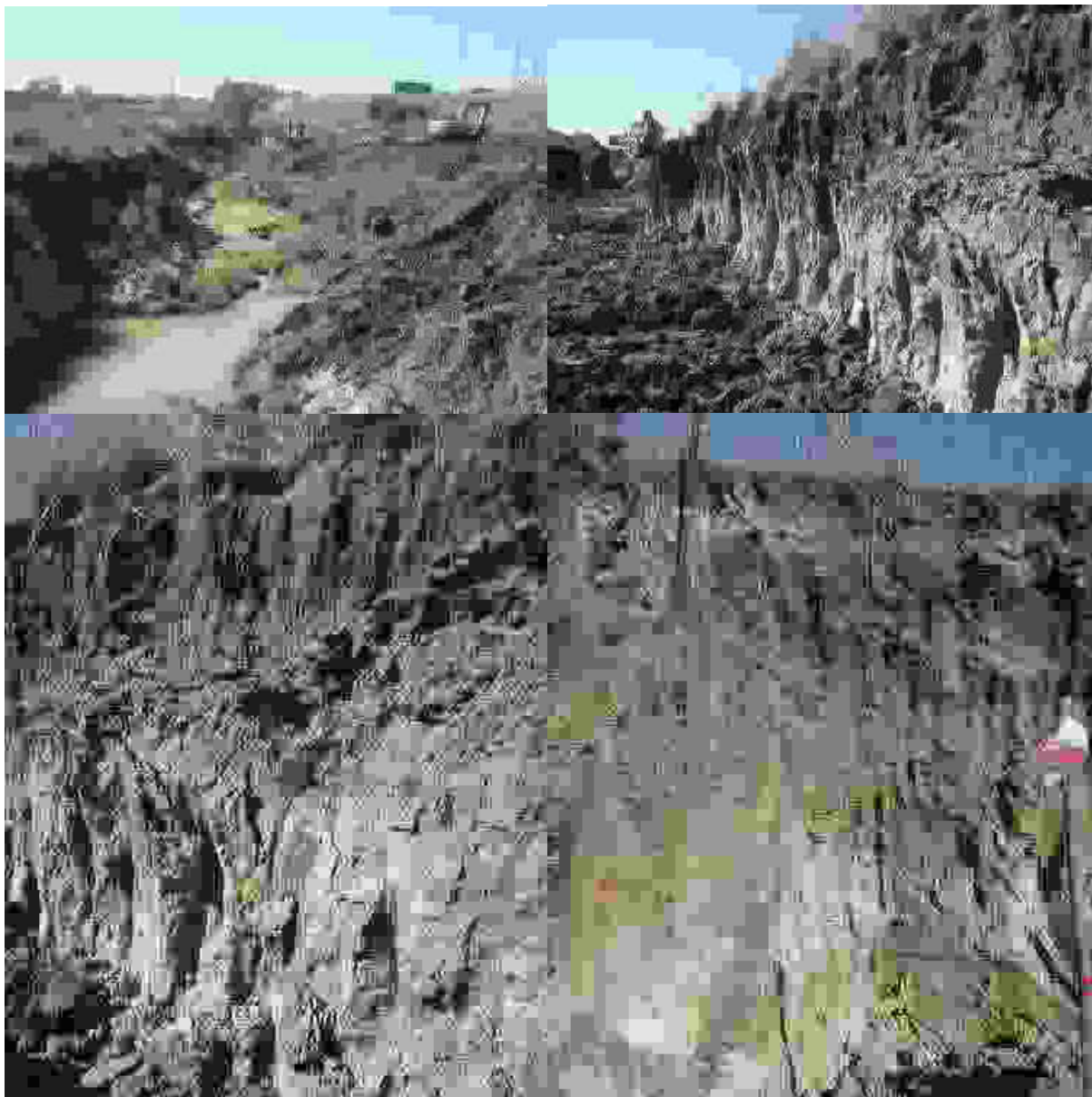
<sup>4</sup> The appointed Civil Engineer also assisted the Applicant with the storm water management plans of the surrounding new developments and he also assisted with the rehabilitation measures (which included culverts, weirs, outlets etc.) as recently applied in the rehabilitated watercourse.

rating of an E or an F due to the severe erosion. Wetlands with such ratings should not be treated as “hands off” sites but should rather receive very specific interventions to prevent pollution and degradation of downstream systems. Due to this, the idea of an exclusionary buffer is not supported.

Dr van der Waals is of the opinion that the proposed infrastructure developments should be used as a tool to stabilise the wetland area through erosion mitigation, stream flow, and storm water flow attenuation and siltation trapping. This provides an opportunity for the establishment and rehabilitation of artificial wetlands (which has already been done upstream) with the sole purpose of pollution prevention.



**Figure 3:** Photographs indicating severe erosion and degradation in the watercourse prior to rehabilitation.



**Figure 4:** Photographs indicating erosion and degradation in the watercourse during the rehabilitation process.

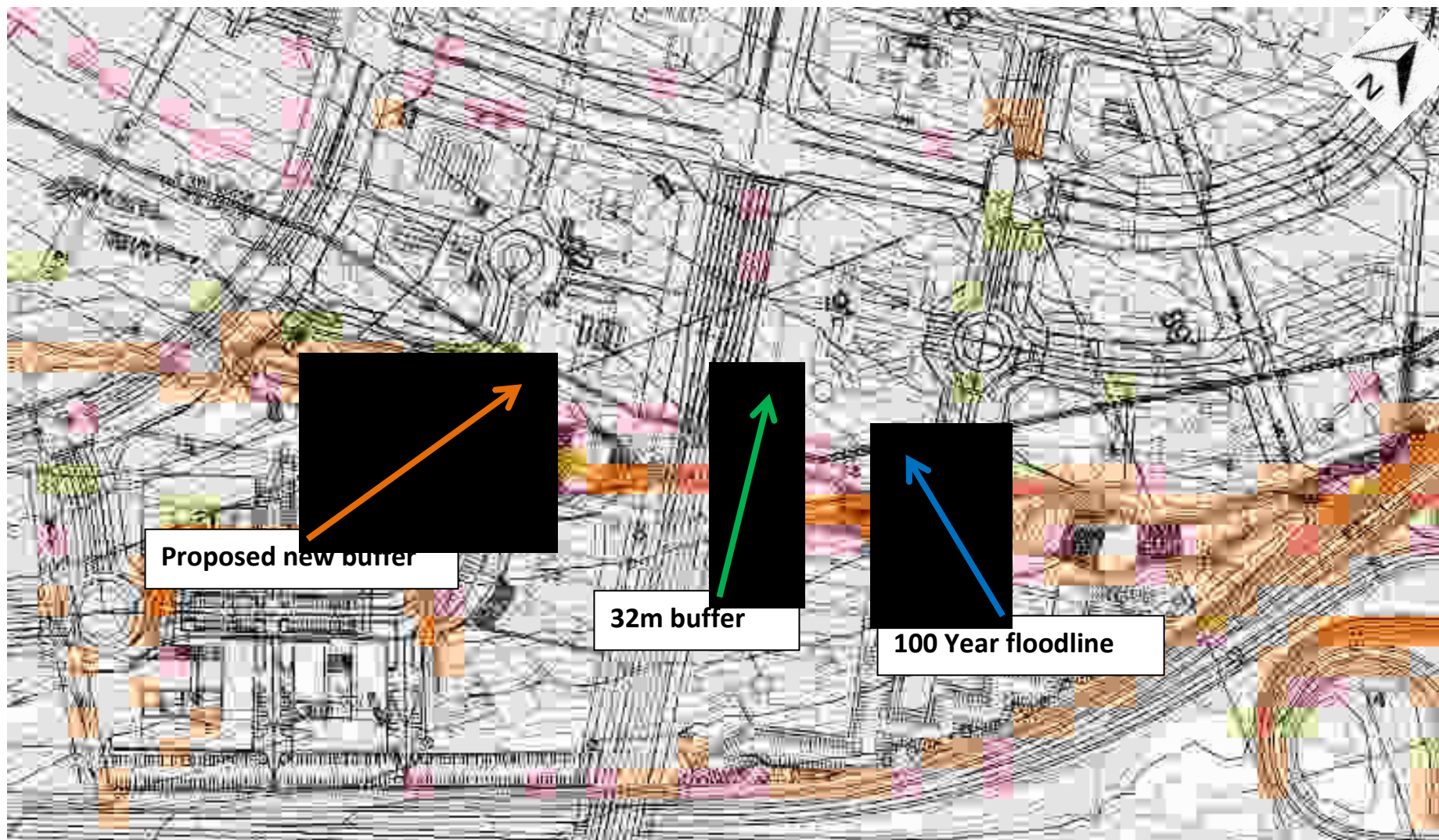
### 3. More Details Regarding the Amendments Applied for in This Application

The proposed amendments to the Authorisation constitute the following:

- **Amendment Part 1:** The name and contact details of the applicant changed. The authorisation issued requires that the Department be informed of a name change and transfer of responsibilities (*Refer to Annexure I*).
- **Amendment Part 2:** A request for the reduction of the 30m wetland buffer in an area that accommodates a very disturbed watercourse system and in an area that is identified as a high priority development zone (Zone 1) in the GPEMF. Consequently, the original approved layout design for development has been altered within and around the buffer area (*Figure 5 and 6; Also Refer to Annexure A3 and A4*). In addition, an amended storm water management plan will be incorporated as part of the amendment application (*Figure 7; Also Refer to Annexure A5 which includes site photos*). *Also refer to Annexure J for storm water management report for this area.*

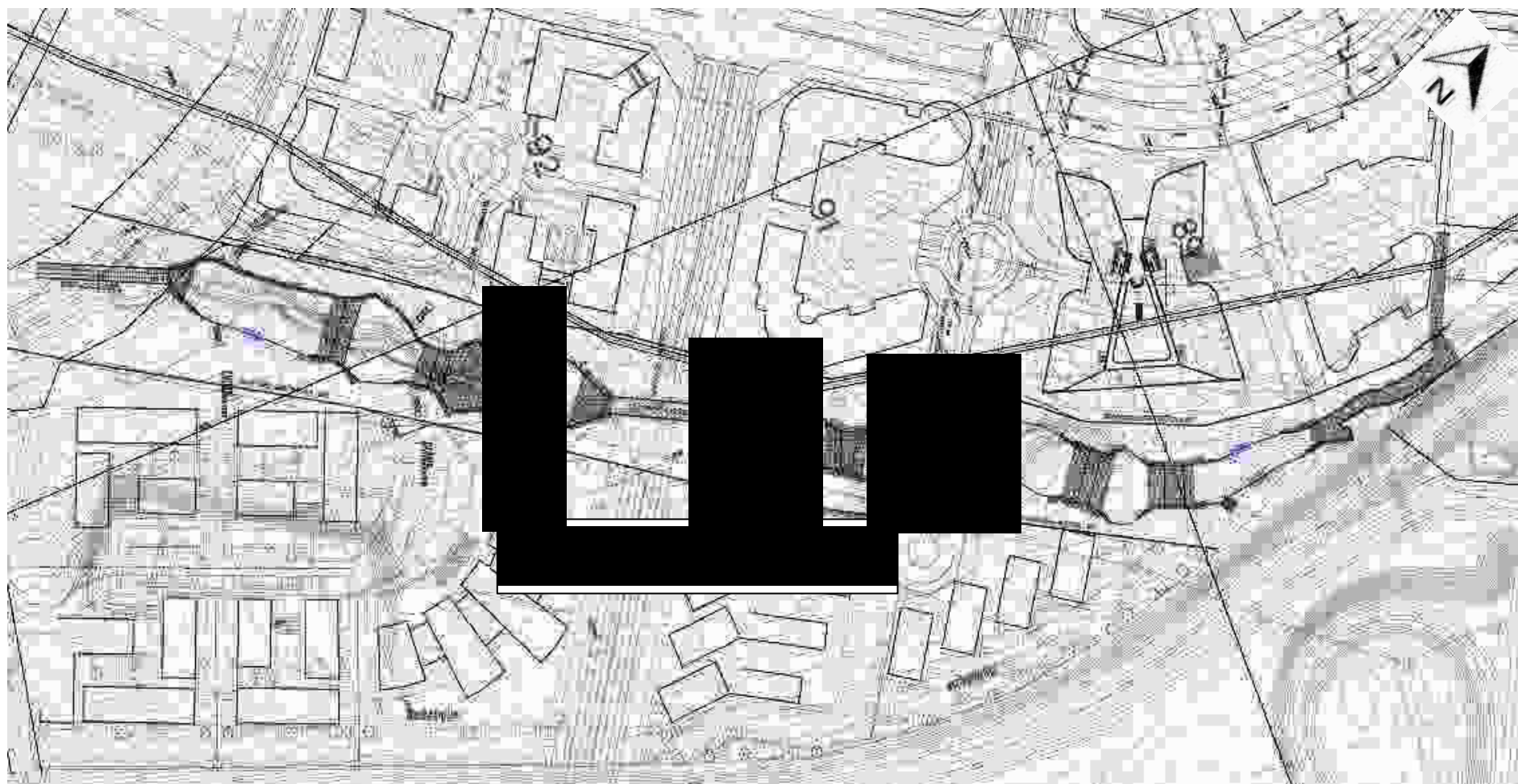
**Take note:** There is already an approved Rehabilitation Plan and EMPr for the study area and no amendments to these plans will be required. However, a new Rehabilitation Plan and EMPr which will specifically be applicable to the relaxation of the 30m buffer area and proposed mitigation measures will be submitted as part of this application and must be regarded as supplementary documentation to the existing Rehabilitation Plan and EMPr which have already been approved and implemented in the former authorisations.



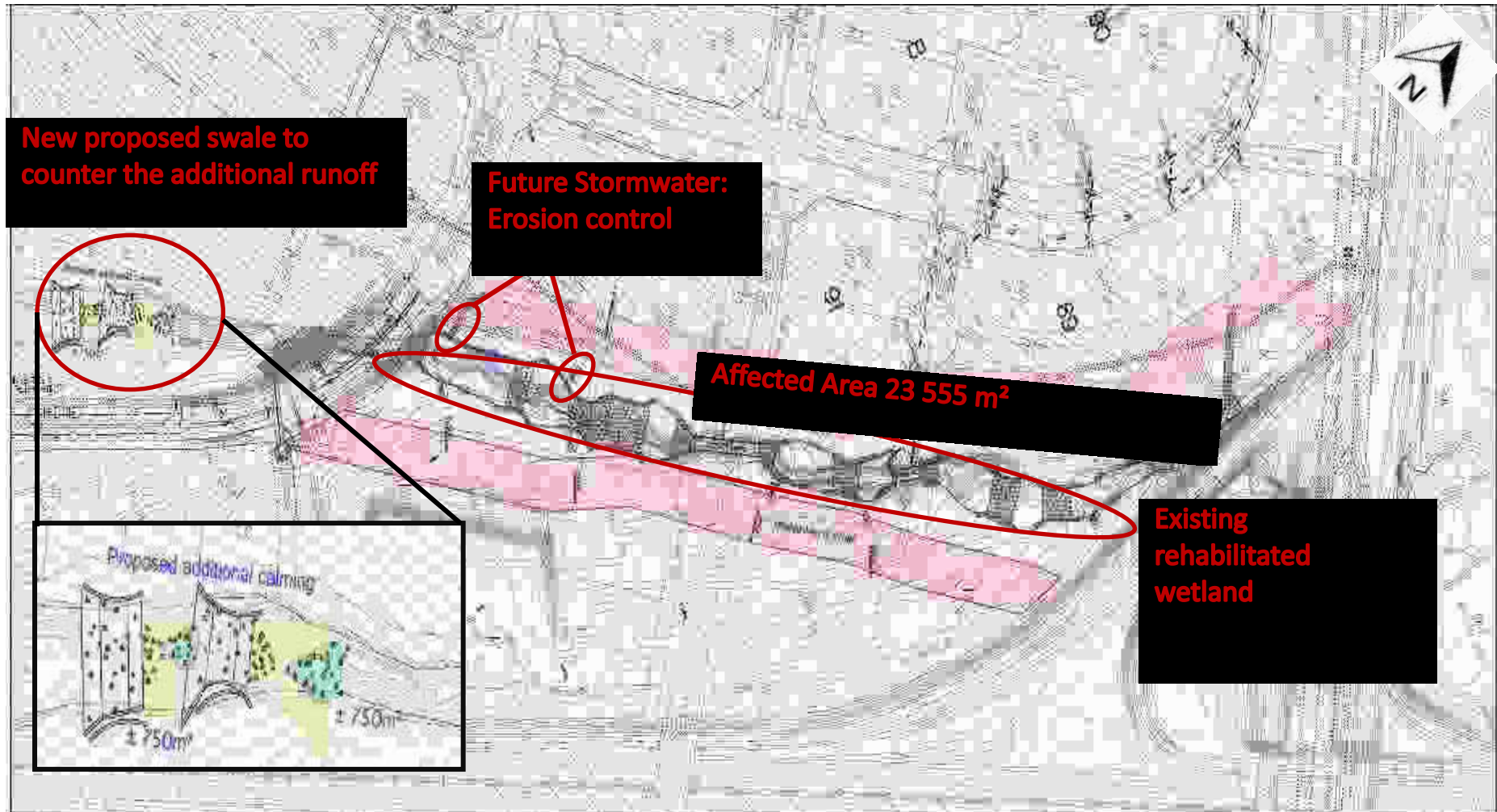


**Figure 5:** Previously approved layout plan including the rehabilitated wetland area and approved storm water layout.





**Figure 6:** Updated layout plan indicating amendments to the original footprint of the mixed-use development including the rehabilitated wetland area and approved storm water layout.



**Figure 7:** The amended storm water layout including the additional recommended swale downstream of the existing rehabilitated wetland.

#### **4. Amendment Application in terms of the 2014 NEMA EIA Regulations and Transitional Arrangements Applicable for Applications Originally Dealt with in terms of former EIA Regulations**

The Minister of Environmental Affairs and Tourism passed (in April 2006) Environmental Impact Assessment Regulations (the Regulations) in terms of Chapter 5 of the National Environmental Management Act, 1998 (NEMA). The Regulations replaced the environmental impact assessment (EIA) regulations, which were promulgated in terms of the Environmental Conservation Act, 1989 in 1997. The 2006 EIA Regulations came into place on 3 July 2006. In June 2010 the Minister of Environmental Affairs (DEA) passed the Amended Environmental Impact Assessment Regulations in terms of Chapter 5 of the National Environmental Management Act, 1998 (NEMA). This 2<sup>nd</sup> set of Amended NEMA EIA Regulations came into effect on 2 August 2010. The NEMA EIA Regulations' latest amendment (3<sup>rd</sup> set of Amended Regulations) namely the 2014 NEMA EIA Regulations, came into effect on 8 December 2014.

It is important to note that the mixed-use development RoD was approved prior to 8 December 2014, the date on which the Amended NEMA Regulations came into effect. Chapter 8, Regulation 52 of the 2014 Environmental Impact Assessment Regulations deals with transitional arrangements and the continuation of actions undertaken and authorisations issued under previous NEMA regulations. The impacts of the newly listed activities should also be taken into consideration and adequately assess such activities.

*(Please refer to Annexure K for a copy of the application submitted to the delegated authority, GDARD).*

#### **5. Details of the Public Participation Process**

*(Refer to Annexure Q for all public participation details)*

The principles of the National Environmental Management Act, 1998 (Act No 107 of 1998) and the Environmental Impact Assessment Regulations, December 2014 govern many aspects of Environmental Impact Assessments, including Public Participation. These include provision of sufficient and transparent information on an ongoing basis to stakeholders to allow them to comment and ensuring the participation of previously disadvantaged people, women, and youth.

Effective public involvement is an essential component of many decision-making structures, and effective community involvement is the only way in which the power given to communities can be used efficiently. The Public Participation Process is designed to provide

sufficient and accessible information to interested and affected parties (I&AP's) in an objective manner to assist them to:

- Raise issues of concern and suggestions for enhanced benefits;
- Verify that their issues have been captured;
- Verify that their issues have been considered by the technical investigations; and
- Comment on the findings of the Basic Assessment Report.

In terms of the Guideline Document for Environmental Impact Assessment (EIA) Regulations promulgated in terms NEMA, stakeholders (I&AP's) were notified of the Environmental Evaluation Process through:

- 1) A site notice that was erected (at prominent points on and around the study area) on 26<sup>th</sup> April 2016 (**Annexure Q1**);
- 2) A public notice was distributed in a 100m radius around the proposed site to all parties concerned (**Annexure Q2**);
- 3) Notices regarding the project were e-mailed to a list of interested and affected parties and the councillors in the area that registered for other projects in the area (**Annexure Q3**);
- 4) An advertisement was placed in the Star Newspaper on 25<sup>th</sup> April 2016 (**Annexure Q4**);
- 5) A list of all persons, organisations and organs of state that were registered as interested and affected parties in relation to the application are attached (**Annexure Q5**).

This Draft Amended Report was made available to all registered I&APs, Stakeholders and the relevant Organs of State for scrutiny.



## 6. Description and Assessment of Environmental Impacts

The most significant anticipated environmental impacts associated with the amendment, including the advantages and disadvantages relating to the proposed changes, are discussed in this section with reference to possible mitigation measures that will minimize negative impacts and enhance positive impacts.

There are no impacts associated with regards to **Amendment Part 1**: the new/amended Holder of Authorization and therefore this amendment are not considered in the Impact Assessment below.

### a) Impact Assessment for the Reduction of the Wetland Buffer (Amendment Part 2)

In the studies conducted by the wetland and fauna and flora specialists it was recommended that the 30m watercourse buffer as originally imposed in the Decision issued by the delegated authority be relaxed. The 30m buffer strip referred to covers approximately 2.3 555 ha of land.

The main reasons for this proposed relaxation are the following:

#### From a Bio-Physical/ Ecological Point of View:

- The original watercourse was almost completely destroyed through the construction of Allandale Road (the photographs inserted above and the historical aerial photographs provided and analysed in the wetland study of Dr Van der Waals **(Annexure H)** speak for itself;
- Dr van der Waals indicated in his report that the rehabilitation works that were done in the watercourse to prevent erosion and siltation already sufficiently fulfils the role of a watercourse buffer;
- The current ecological value of the rehabilitated watercourse is low, because the rehabilitation works have only recently been completed;
- The study area is highly affected by edge effects, because it is surrounded by development; and
- The areas below the flood line will be incorporated and maintained as part of the office and other developments to be erected along the watercourse. The proposed landscaping around the new buildings will be indigenous, it assists with the creation of new habitats for fauna species that are more adaptable to the urban environment and such landscaping will also assist with the prevention of erosion and siltation.

**From a Socio-Economic Point of View:**

- The study area is situated immediately adjacent to the very busy N1 Freeway and even more strategically at the Allandale/N1 off-ramp, which makes it highly visible and accessible;
- The relaxation of the buffer opens-up land for the development of office and other commercial developments in this economic hub of South-Africa;
- Such infill developments in already disturbed urban areas promote the optimum utilisation of services, it promotes infill development and it prevents urban sprawl;
- The proposed relaxation of the buffer will create a large number of jobs during the construction and operational phases of the development;
- The open space areas associated with the watercourse will be maintained and will be incorporated as part of the proposed new development structures to be erected in this zone;
- The proposed development will lead to a significant increase in the rates and taxes payable to the local authority; and
- The proposed new developments in the buffer zone are in close proximity of public transport facilities.

**From an Institutional Point of View:**

- According to the newly enacted Gauteng Provincial Environmental Management Framework (GPEMF) the study area is situated within Zone 1, which is regarded as an area suitable for urban development (*Refer to Annexure L*); and
- According to the GDARD C-Plan the study area is not regarded as an irreplaceable site or any special biodiversity area.

**i) Construction Related Impacts**

**Advantages**

**a. Socio-economic**

- **Creation of Job opportunities**

The proposed development will create approximately 2 000 jobs during the construction phase. The value of the jobs to be created should not be underestimated as it will also create jobs to the unemployed and it will assist with the transfer of skills. However, in order to limit the influx of people from other areas, it is recommended that (where possible) only people from the local communities are employed. It must be ensured that the working

conditions of construction workers comply with the requirements of the occupational Health and safety Act, 1993 (Act No 85 of 1993).

**b. Flora**

The eradication of alien plant species and weeds before and during construction of the proposed development.

**Disadvantages**

**a. Bio-Physical Environment**

**• Geology and Soils**

The Halfway House Granite Dome Catena is a well-studied example of a quartz dominated Bb catena. The soils in the drainage feature are predominantly high clay content swelling soils with vertic properties. Vertic soils are highly erodible once disturbed which could cause rapid degradation of the watercourse once storm water volumes increase following surface sealing in the wetland buffer zone and its surrounding areas. The following impacts are of concern:

- The site clearance and levelling will cause some additional exposed areas and could trigger some additional erosion and siltation, especially during rainy periods;
- Topsoil may be lost if not removed, stockpiled correctly and used during rehabilitation works;
- Stockpiling in the wrong areas might be detrimental to fauna and flora and will deplete the soil quality. Topsoil should be stockpiled as specified in the EMP to ensure that the soil quality doesn't deplete and that the grass seed remain in the soil for later rehabilitation of the disturbed areas. The footprint of stockpile areas will be contaminated with the stored material and will require cleaning before rehabilitation;
- In addition to the impact discussed in the paragraph above, rainwater falling onto stockpiles may become polluted with dust originating from aggregate and other construction material, such as bitumen from pre-mix stockpiles;
- Dust pollution;
- Degradation of soils; and
- Dangerous excavations.



**Proposed Mitigation measures:**

- Implementation of temporary storm water management measures during construction;
- Identify areas that are suitable for the storage of topsoil on all planning drawings. These areas must be located outside drainage lines/ watercourse areas. Furthermore, it should not be stored in areas with perched water conditions;
- Designated areas for stockpiling of construction materials must be specified by the Environmental Control Officer. Such stockpile areas must preferably be in areas that are already disturbed;
- Remove vegetation only in designated areas for construction;
- Rehabilitation works must be done immediately after the involved works are completed;
- All compacted areas should be ripped prior to them being rehabilitated/landscaped;
- The top layer of all areas to be excavated must be stripped and stockpiled in areas where this material will not be damaged, removed or compacted. This stockpiled material should be used for the rehabilitation of the site and for landscaping purposes;
- Stockpiles of topsoil should be correctly covered to prevent pollution as well as loss of topsoil by wind erosion;
- Appointing of a geotechnical engineer to assist with foundation designs and other stability and geotechnical issues;
- Implementation of dust suppression measures during the construction phase; and
- Although regarded as common practice, it is important to erect proper signs indicating the danger of the excavation in and around the development site. Putting temporary fencing around excavations where possible.

- **Storm Water Management and landscape hydrology**

Runoff from the extensive road network in the area and from the approved urban structures is already a major concern for wetland degradation without a proper storm water management plan. Additional runoff is expected to increase with increased sealing of the development site (such as roads, parking sites and buildings) in the 30m buffer zone. This could cause more exposed areas and increased erosion and siltation which ultimately lead to water pollution and soil erosion. Some perched water conditions could occur adjacent to the wetland area and during wet conditions. Another concern is possible construction during the rainy periods, increasing siltation runoff into the wetland and increased soil erosion.

**Proposed Mitigation Measures:**

A comprehensive storm water management plan indicating the management of all surface runoff generated as a result of the development (during both the construction and operational phases) prior to entering any natural drainage system or wetland, must be submitted and approved by the local authority and DWA and submitted to GDARD prior to construction activities commencing;

- Attenuation ponds and energy dissipaters must be installed on the study area to break the speed of the water and to act as siltation ponds;
  - Surface storm water generated as a result of construction phase must not be channelled directly into any natural drainage system or wetland;
  - The storm water management plan must indicate how surface runoff will be retained outside of the demarcated buffer/flood zone and how the natural release of retained surface runoff will be simulated;
  - The storm water management plan should be designed in a way that aims to ensure that post development runoff does not exceed predevelopment values in:
    - Peak discharge for any given storm;
    - Total volume of runoff for any given storm;
    - Frequency of runoff; and
    - Pollutant and debris concentrations reaching water course;
  - Bio-swale and bio-filters could be installed to minimize the risk of pollutants entering the natural drainage system of the area;
  - It could become necessary to de-water areas for construction purposes. In many cases water is pumped from construction areas/ cut-off trenches are implemented to create dry conditions for construction. Discuss the temporary and permanent dewatering alternatives with the civil engineer, geo-hydrologist, wetland specialist, geotechnical engineer, and ECO in order to determine the most suitable method. The most economical alternative is not necessarily the preferred alternative from a geo-hydrological and ecological point of view. The solution must be sustainable;
  - Ensure temporary soil stabilisation interventions around the wetland;
  - Fencing and protection of the rehabilitated wetland in the north-east of the study site;
  - Schedule (where possible) construction associated with earthworks for the dryer winter months.
- 
- **Climate**
    - Should the construction phase be scheduled for the summer months, frequent rain could cause very wet conditions, which makes it difficult to build in and rehabilitate disturbed areas on site;

- These wet conditions often cause delays to building projects. The drainage of water away from the construction site into the surrounding open space areas could (if not planned and managed correctly) have an impact on the water quality of these water bodies.

**Proposed Mitigation measures:**

- It is recommended that the construction phase be scheduled for the winter months, especially activities such as the installation of services, foundations, excavations and road construction;
- It is also recommended that precautionary measures be taken in order to prevent the extensive loss of soil during rainstorms. Large exposed areas should be protected against erosion by matting or cladding;
- Measures should be implemented during the rainy season to channel storm water away from open excavations and foundations; and
- Construction workers and construction vehicles and machinery must stay out of the waterlogged areas during the wet periods. Barrier tape should be used to demarcate the areas that are drenched with water it should only be removed when the appointed Environmental Control Officer (ECO)/ Site supervisor/ project manager /main contractor regard the conditions as favourable.

- **Flora and Fauna**

The rehabilitated watercourse is regarded as of importance to plants, mammals, amphibians, and reptile species. However, due to the artificial state of the watercourse, the functionality, ecology, and terrain have been severely altered. This makes it difficult for the movement of especially small mammals, amphibians, and reptile species.

In the determining of the habitat integrity, the direct and indirect disturbances were taken into account. Erosion, road crossings, alien plant species etc. are present on the site.

The proposed development could have the following impacts on the biological and ecological environments:

- Destruction of the artificial wetland habitat can lead to habitat loss which could lead to a decrease in flora and fauna species and numbers of individual species;
- Increase in flow velocity around the development area in an already fragmented environment;
- Increase in surface drainage to accommodate infrastructure;
- Change in water quality;
- The proposed development can result in an increase of hardened surfaces and subsequent storm water runoff. Any hardening in the surfaces will reduce the

infiltration and ultimately reduce the yield of ground water that may be feeding into the wetland systems adjacent to the study area;

- If not managed correctly, fauna species could be disturbed, trapped, hunted or killed; and
- Additional noise of construction machinery could have a negative impact on the fauna species.

Based on the evaluation tables and data from the present survey the study area is considered to be highly disturbed and modified. Since the artificial wetland site does not provide a reasonable important function in the maintenance of the wetland biodiversity, its habitat can be regarded as sensitive from a biodiversity aspect.

**Proposed Mitigation measures:**

- Construction, vegetation clearing and top soil clearing should commence from a predetermined location and gradually commence to ensure that fauna species present on the site have enough time to relocate to surrounding areas;
- All affected and exposed areas should be rehabilitated upon the completion of construction. These areas are to remain as open space and should be appropriately re-vegetated and/or landscaped to prevent erosion and/or the loss of valuable soil on site. In this regard, special reference is made to the use of indigenous plant species as the first choice during landscaping;
- Indigenous species and preferably endemic plant species should be encouraged within the development as this will promote habitat for fauna species such as birds, small mammals, insects, reptiles and amphibians;
- The effectivity of the rehabilitated wetland should be monitored for flow velocity and water quality in order to manage possible negative impacts on the biological and ecological environment;
- A suitable storm water management plan should be implemented to enhance water runoff into the wetland and to reduce erosion and siltation;
- All concrete and cement works should be restricted to low ecologically sensitive areas away from the wetland and storm water systems. Cement powder have a high alkalinity pH rating, which can contaminate and affect both soil and water pH dramatically, which could have serious consequences on the biological and ecological environment;
- All areas where concrete and cement works occurred should be rehabilitated to ensure no contamination of the soil or water on site;
- All areas affected by construction, which are to remain as open space areas, should be rehabilitated upon the completion of the construction phase of the development;
- All alien plant species on site, especially in invasive Categories 1 and 2 should be eradicated;

- Noise should be kept to a minimum and the development should be done in phases to allow faunal species to temporarily migrate into the conservation areas in the vicinity;
- The integrity of remaining wildlife should be upheld, and no trapping or hunting by construction personnel should be allowed. Caught animals should be relocated to the conservation areas in the vicinity. Council shall prosecute offenders;
- Conservation-orientated clauses should be built into contracts for construction personnel as well as buyers of property within the new development complete with penalty clauses for non-compliance;
- Domestic pets must be excluded from areas of good quality bird habitat; and
- Information boards must be erected within the development informing residents of the presence of Red Data fauna species, their identification, conservation status, and importance, biology, habitat requirements and the requirements of the plan in terms of management.

**b. Visual Impact and Waste Management If the Site Office and Camp Is Not Managed According to The EMP**

The construction for the developments that encroach into the buffer areas requires the establishment of construction infrastructure, such as a site office, materials stockyards and workshops. The area where the above facilities are to be erected should be located in an already disturbed part of the site, as close as possible to the site access and above the 1:100-year flood line. Absence of proper sanitation facilities and good housekeeping could negatively impact the local community, surface/sub-surface hydrology and soils.

**Proposed Mitigation Measures:**

- Prevent unhygienic usage on site and pollution of the natural assets. Develop a central waste temporary holding site to be used during construction (away from the wetland and other sensitive areas). This site should comply with the following:
  - Suitable container skips for the containment and disposal of waste that could cause soil and water pollution, i.e. paint, lubricants, etc. should be established for the different waste streams;
  - Small lightweight waste items should be contained in skips with lids to prevent wind littering;
  - The wind direction and the proximity to neighbouring properties should be taken into account, when a central waste storage area is established;
  - Bounded areas for containment and holding of dry building waste.
  - THESE AREAS SHALL BE PREDETERMINED AND LOCATED IN AREAS THAT IS ALREADY DISTURBED. THESE AREAS SHALL NOT BE IN CLOSE PROXIMITY OF DRAINAGE CHANNELS;

- Workers will only be allowed to use temporary chemical toilets on the site. CHEMICAL TOILETS SHALL NOT BE IN CLOSE PROXIMITY OF DRAINAGE CHANNELS;
- No French drain systems may be installed;
- No bins containing organic solvents such as paints and thinners shall be cleaned on site, unless containers for liquid waste disposal are placed for this purpose on site;
- All waste must be removed to a recognized waste disposal site on a weekly basis. No waste materials may be disposed of on or adjacent to the site. The storage of solid waste on site, until such time that it may be disposed of, must be in the manner acceptable to the Local Authority;
- The contractor should communicate with other trades and businesses in the area to establish waste exchange and recycling possibilities; and
- Keep records of waste reuse, recycling and disposal for future reference. Provide information to the Environmental Control Officer.

- **Dumping of builder's rubble on site**

The dumping of builder's rubble on site may cause visual and waste pollution. Dumping of waste in close proximity of the wetland and surrounding open space areas could have a detrimental effect on the fauna and flora, and can pollute the hydrological system and soil of the site. It is therefore critical that no builder's rubble be dumped within close proximity of the wetland and surrounding open space areas.

**Proposed Mitigation Measures**

- Identify a specific point for waste and rubble on site away from the wetland and surrounding areas to reduce potential water and soil pollution;
- The area should be located in an area that is already disturbed (not ecologically sensitive) and which can be hidden from the surrounding residents to prevent visual pollution;
- All the rubble and waste materials should be transported and disposed at this central waste disposal site that should be established;
- Rubble should be removed from this area on a regular basis as to not cause a negative visual impact;
- Appropriate containers for different waste streams should be provided on site; and
- Barriers and screens should be erected around the waste storage area to mitigate and reduce its visual impact.

- **Vehicle maintenance on site**

Temporary maintenance and refuelling workshops may be required for construction vehicles. Soil and water pollution by oil, lubricants and fuel may occur at these facilities. The volume of lubricants and fuel expected to be on site should only cause localised pollution. However, any pollution of the soil and water is undesirable and should be prevented.

**Proposed mitigation measures**

- One area in the site camp should be used for fuel or hazardous materials and lubricant storage away from the wetland and surrounding area;
- This area should be bounded to contain 1.5 times the storage volume of fuel and should have a concrete base;
- A working area, away from the wetland and surrounding area, should be established at the site camp with a concrete base on which all machinery repairs, vehicle services and such activities should take place; and
- After the construction works are completed this area should be rehabilitated and the soil quality should be restored.

- **Light Pollution**

Security and temporary lighting on site during the construction phase could have an adverse impact on the fauna and the surrounding neighbours.

**Proposed Mitigation Measures**

- Security lighting should be directed to the ground;
- Only the needed lighting should be installed;
- Lighting should not shine into the neighbouring properties or onto the surrounding roads and oncoming traffic; and
- The design, placement and arrangement of exterior lighting should take sensitive night views into consideration.
- Outside lighting on site, especially within the vicinity of the wetland, should be designed to minimise impacts on fauna species by directing it away from this sensitive area. Fluorescent and mercury vapour lighting should be avoided and rather make use of sodium vapour (yellow) lights wherever possible.

**c. Safety and Security**

The following safety and security problems can arise during the construction phase

- Reckless operators of construction vehicles can cause dangerous conditions on the nearby roads as well as on the construction site;
- Deep excavations without warning signs can pose a health and safety risk to the construction personnel on site, as well as the public/surrounding residents/pedestrians; and
- Possible crime initiated due to an influx of people that are associated with construction.

**Proposed mitigation measures**



- Although regarded as a normal practice, it is important to erect proper signs indicating the operation of heavy vehicles in the vicinity of dangerous crossings and access roads;
- Dangerous excavations where construction is not actively taking place, should be properly marked and demarcated with orange safety barrier tape;
- Construction must be completed in the shortest possible time. No construction worker or relative may reside on the application site during the construction phase. All construction workers must leave the site at the end of the day's work. A security company must be appointed to secure the site, and to ensure a safe and controlled environment;
- No construction worker, friend or relative may reside on site. Only security personnel may be present on site after construction hours; and
- No construction worker should be allowed to enter any adjacent private property for any reason without written consent.

The potential site impacts that are likely to occur as a result of the construction phase:

Definitions:













- **Direct Impacts:** Impact directly caused by the development.
- **Indirect Impacts:** Impacts caused by development impacts – not directly noticeable or identifiable.
- **Cumulative Impact:** changes to the biophysical, social, economic, and cultural environments caused by the combination of past, present and “reasonably foreseeable” future actions. They can be either positive or negative.

Green : Indicate beneficial/positive impacts

Red : Indicate adverse/negative impacts

Construction Phase:

**Note:** No mitigation required for positive impacts, some guidelines were however supplied (where regarded as necessary) in order to ensure optimal development of environmental opportunities/potential associated with positive impacts.

Environmental Aspects	Socio-Economic	Geology and Soil	Hydrology	Flora	Fauna	Surrounding Neighbours	Visual Quality	Air Quality		Direct Impact	Indirect Impact	Cumulative Impact
<b>CONSTRUCTION PHASE</b>												
Job opportunities										✓	✓	✓
The eradication of alien plants and weeds										✓	✓	✓
Siltation, erosion and water pollution could occur in the systems lower down in the catchment area if a stormwater management plan is not implemented										✓	✓	✓
Topsoil may be lost if not removed,										✓	✓	✓



Accidental introduction of alien species and invaders	■	■	■	■	■					√	√	√
Areas where vegetation cleared for construction are not properly rehabilitated			■	■	■					√	√	√
Destruction of the artificial wetland habitat can lead to habitat loss	■	■	■	■	■					√	√	√
Increase in flow velocity around the development area in already disturbed environment	■	■	■	■	■							
Increase in surface drainage to accommodate infrastructure and structures		■	■	■	■							
If not managed correctly, fauna species could be disturbed, trapped, hunted or killed					■					√		
Additional noise of construction machinery could have a negative impact on the fauna species					■					√		
If the site office and camp, and associated waste are not managed according to the EMP		■	■	■	■	■				√	√	√
Builder's rubble is dumped during the construction phase in close		■	■	■	■	■				√	√	√

proximity to the wetland and the surrounding open space areas													
Vehicle maintenance in close proximity to the wetland could cause pollution		■	■	■	■						√	√	√
Lighting pollution					■	■		■			√		
Safety and Security	■		■	■	■	■					√	√	√

## ii) Operational Phase Related Impacts

### Advantages

#### a. Socio-Economic

- **Economical and Institutional**

This new proposed development will increase and expand the product and service range within the market and improve the overall quality thereof. Therefore:

- The development will have a positive economic impact (of more than R45 billion);
- Promote the optimisation of existing services;
- The new development will attract high volumes of tourists (both national and internationally) to the hotel;
- More rates and taxes payable to the involved local authority;
- Increased jobs;
- Job opportunities in close proximity of residential areas;
- Job opportunities in close proximity of public transport;
- Economical injection to the area;
- Maximum exposure; and
- The proposed expansion is in line with the planning frameworks for the area.

- **Social**

- Upliftment of the CBD;
- Urban renewal and expansion;
- Increased jobs;
- Job opportunities in close proximity of residential areas;
- Job opportunities in close proximity of public transport;
- Contribute to the upliftment of the area;
- Upgrades to the surrounding road network will benefit the surrounding community;
- The proposed expansion will ensure a safe, secure and controlled environment; and
- The new proposed development will create a more attractive development. It is anticipated that the proposed development will enhance the "Sense of Place" of the study area and the surrounding urban environment.

- **Services (roads, water, sanitation, waste management, storm water management)**

- The proposed mixed-use development will promote the optimal utilisation of services and infrastructure.

#### b. Bio-Physical Environment

- **Geology and Soils**



- Prevention of any further erosion and siltation.
  
- **Hydrology**
  - Protection of the rehabilitated watercourse;
  - The implementation of additional erosion and siltation prevention measures; and
  - The implementation of additional erosion and siltation prevention measures downstream from the study area. (*Refer to Figure 7*)
  
- **Fauna and Flora**
  - Implementation of an alien species control programme, including eradication of especially Category 1 and 2 invaders;
  - Utilisation and further rehabilitation (if needed) of the man-made wetland and its associated ecosystems;
  - Replacement of alien plant species with indigenous and/or endemic plant species;
  - Habitat creation (in the vicinity of the man-made wetland);
  - Development on already disturbed areas; and
  - Create opportunity to introduce indigenous vegetation species on the site to attract fauna species and maintain ecological integrity.

### Disadvantages

#### a. Qualitative Environment

- **Lighting Pollution**

The new proposed development could cause a significant level of light pollution due to security and advertisement lighting. These lighting could easily glare into the surrounding environment, especially surrounding residences if not designed appropriately. Furthermore, outside lighting could have detrimental effects on fauna species, especially within the vicinity of the wetland.

#### **Proposed mitigation measures:**

- It is recommended that all the lighting on site be designed to point downwards and the lighting system should be designed not to cause glare, dispersal or unnecessary flickering.
- Outside lighting on site, especially within the vicinity of the wetland, should be designed to minimise impacts on fauna species by directing it away from this sensitive area. Fluorescent and mercury vapour lighting should be avoided and rather make use of sodium vapour (yellow) lights wherever possible.

- **Air pollution**

The proposed new development will generate additional traffic on the local roads that will contribute to the air pollution levels in the immediate area.

**Proposed mitigation measures:**

- Air pollution levels will not exceed acceptable levels. No mitigation measures proposed;
- An alternative is to consider the supply of preferred/special/VIP parking for ECO friendly cars in close proximity of office buildings, training centres, conference facilities, hotel, club house etc. Non Eco-Friendly vehicles will not receive such privileges. This will promote the purchasing of Eco-friendly vehicles. This principle is supported by the American LEED Certification system;
- Another alternative to consider is the provision of less parking than required. This principle is supported by the Australian Green Building Rating system, because the provision of less parking bays will promote the use of public transport and this will in turn lead to a reduction in vehicle emissions.
- Another alternative would be the promotion of safe bicycle lanes designated as green areas. This is particularly useful for close by residential areas.

- **Noise pollution**

Some additional noise will be generated during the operational phase of the new proposed development due to:

- Increased Traffic on the surrounding roads; and
- Activities associated with the operation of the new facility (Air conditioning, compressors, places of refreshment etc.)

**Proposed mitigation measures:**

- The design, placement and orientation of extractor fans for the ventilation of the buildings must take the noise impact aspect into consideration. Equipment with the best noise rating should be used. Roof mounted fans may further require attenuators and need to be screened from noise sensitive areas;
- High quality air conditioning equipment should be installed. Equipment with the best noise rating should be used;
- Where required, high quality refrigeration compressors should be installed.
- Equipment with the best noise rating should be used. Exterior installations should be acoustically encapsulated; and
- All mechanical equipment should be well maintained.

**b. Hydrology:**

• **Storm-water Management and the Protection of the Rehabilitated Wetland**

Runoff from the extensive road network in the area and from the approved urban structures is already a major concern for wetland degradation without a proper storm water management plan. Additional runoff is expected to increase with increased sealing of the development site in the wetland buffer zone, which leads to more exposed areas. Ultimately, the landscape hydrology could be affected due to alterations in the flow dynamics and water volume spikes through the wetland, causing increased erosion and siltation which ultimately lead to water pollution and increased soil erosion.

**Proposed mitigation measures**

- Adequate storm water management must be incorporated in the design of the proposed development to ensure the effective management of surface water run-off from the site, and to prevent erosion and the associated sedimentation of the surrounding areas;
- The release points of storm water to the surrounding open space areas must be carefully designed and the use of energy dissipation structures, gabion river/reno mattresses and geo-textiles should be made to prevent erosion down gradient of the discharge points;
- Sheet run-off from paved surfaces and access roads need to be curtailed;
- All areas which have been affected by construction, which are to remain as open space should be rehabilitated upon the completion of the construction phase;
- Discharge of storm water runoff from site should be limited to pre-design development peak flows and volumes;
- Where practical, retention and detention storage systems should be used to manage peak storm water flows within the on-site storm water management system;
- Uncontaminated storm water run-off from roofs, parking bays and the landscape should not be allowed to mix with process effluent, stored chemicals or storm water runoff from areas susceptible to chemical/petroleum based spills;
- Paved areas exposed to rainfall where dust, litter or spilled substances accumulate should be regularly cleaned using methods that prevent drainage or leaching of fluid into the surrounding environment. Gross pollutant (litter), oil and sand traps (appropriate to the site) are recommended at drain entry or discharge points. These traps require regular inspection and residue removal.
- First-flush water division for dusty outdoor areas should be considered to capture initial storm water run-off after any extended dry period.

### Operational Phase:

**Note:** No mitigation required for positive impacts, some guidelines were however supplied (where regarded as necessary) in order to ensure optimal development of environmental opportunities/potential associated with positive impacts.

Environmental Aspects	Socio-Economic	Geology and Soil	Hydrology	Flora	Fauna	Surrounding Neighbours	Visual Quality	Air Quality		Direct Impact	Indirect Impact	Cumulative Impact
<b>OPERATIONAL PHASE</b>												
Promote the optimum utilisation of services	◆									✓		
More rates and taxes payable to the local authority	◆									✓		
Increased job opportunities	◆					◆				✓	✓	✓
Job opportunities in close proximity of residential areas	◆					◆				✓	✓	✓
Job opportunities in close proximity of public transport	◆									✓		✓
Economical injection to the area	◆									✓	✓	✓
Upliftment of the area	◆									✓		✓

Urban expansion													
Increased job opportunities	◆					◆					√		√
The proposed new development will ensure a safe, secure and controlled environment	◆					◆					√		
The proposed new development will create a more attractive development area. It is anticipated that it will enhance the “Sense of Place” of the study area and the surrounding environment	◆					◆	◆				√	√	√
Prevention of any further erosion and siltation		◆	◆	◆							√	√	√
Protection of the rehabilitated wetland		◆	◆	◆	◆						√	√	√
Promotion of surface drainage		◆	◆	◆							√	√	√
Implementation of an alien species control programme		◆	◆	◆	◆						√	√	√

Utilisation and further rehabilitation (if needed) of the wetland and its associated ecosystems	◆	◆	◆	◆	◆	◆				√	√	√
Replacement of alien plant species with indigenous and/or endemic plant species		◆	◆	◆	◆					√	√	√
Habitat creation (in the vicinity of the wetland)		◆	◆	◆	◆					√	√	√
Attraction of fauna species and maintaining ecological integrity				◆		◆				√	√	√
Lighting Pollution	■			■		■				√	√	√
Air Pollution	■					■		■		√		
Noise Pollution	■			■		■					√	
Visual Impact						■		■		√		
Storm-water Management not correctly implemented		■	■	■	■					√	√	√
Protection and Maintenance of the Rehabilitated		■	■	■	■					√	√	√



Wetland													
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### b) Significance Description Methodology

The significance of Environmental Impacts was assessed in accordance with the following method:

Significance is the product of probability and severity.

- **Probability** describes the likelihood of the impact actually occurring, and is rated as follows:

- **Improbable**      Low possibility of impact to occur either, because of design or historic experience.      **Rating = 2**
- **Probable**      Distinct possibility that impact will occur.      **Rating = 3**
- **Highly probable**      Most likely that impact will occur.      **Rating = 4**
- **Definite**      Impact will occur, in the case of adverse impacts regardless of any prevention measures.      **Rating = 5**

- The **Severity Factor** is calculated from the factors given to “intensity” and “duration”. Intensity and duration factors are awarded to each impact, as described below.

- The **Intensity factor** is awarded to each impact according to the following method:

- **Low intensity**      Natural and man-made functions not affected.      **Factor 1**
- **Medium intensity**      Environment affected but natural and man-made functions and processes continue.      **Factor 2**
- **High intensity**      Environment affected to the extent that natural or man-made functions are altered to the extent that it will temporarily or permanently cease or become dysfunctional.      **Factor 4**

- **Duration** is assessed and a factor awarded in accordance with the following:

- **Short term**      <1 to 5 years      **Factor 2**

- **Medium term**      5 to 15 years      **Factor 3**
- **Long term**      Impact will only cease after the operational life of the activity, either because of natural process or by human intervention.      **Factor 4**
- **Permanent**      Mitigation, either by natural process or by human intervention, will not occur in such a way or in such a time span that the impact can be considered transient.      **Factor 4**

The **Severity Rating** is obtained from calculating a **Severity Factor**, and comparing the severity factor to the rating in the table below. For example:

$$\begin{aligned}
 \text{The Severity Factor} &= \text{Intensity factor X Duration factor} \\
 &= 2 \times 3 \\
 &= 6
 \end{aligned}$$

A **Severity Factor** of six (6) equals a **Severity Rating** of Medium severity (Rating 3) as per **Table 1** below:

**Table 1: Severity Ratings deduced from the calculated Severity Factor.**

SEVERITY FACTOR	SEVERITY RATING
Calculated values 2 to 4	Low Severity (Rating 2)
Calculated values 5 to 8	Medium Severity (Rating 3)
Calculated values 9 to 12	High Severity (Rating 4)
Calculated values 13 to 16	Very High Severity (Rating 5)

Severity factors below 2 indicate no impact

- A **Significance Rating** is calculated by multiplying the **Severity Rating** with the **Probability Rating**.
- The **Significance Rating** should influence the development project as described below:
  - Low significance** (calculated Significance Rating 4 to 6)
    - Positive impact and negative impacts of low significance should have no influence on the proposed development project.
  - Medium significance** (calculated Significance Rating >6 to 15)

- Positive impact: Should weigh towards a decision to continue
- Negative impact: Should be mitigated to a level where the impact would be of low significance before project can be approved.

**High significance** (calculated Significance Rating 16 and more)

- Positive impact: Should weigh towards a decision to continue, should be enhanced in final design.
- Negative impact: Should weigh towards a decision to terminate proposal, or mitigation should be performed to reduce significance to at least low significance rating.

**c) Significance Assessment**

The calculation and result of the significance assessment of the impacts identified to be associated with the proposed development are indicated below for the:

- i. Construction related impacts (Refer to Table 2)
- ii. Operational related impacts (Refer to Table 3)

**i) Construction Phase**

**Table 2: Calculation and Result of the Significance Assessment of Impacts Identified to be Associated with the Proposed Development**

Impact	Probability Rating	Severity Rating		Severity Factor	Severity Rating	Significance Rating - prior to mitigation and after mitigation <i>(Note: Proposed mitigation measures are supplied in EMP and in section 4 above)</i>
		Intensity	Duration			
<b>THE CONSTRUCTION PHASE</b>						
<i>BENEFICIAL IMPACTS (Note: Not necessary to mitigate because the impact are positive)</i>						
<b>Socio-Economic</b>						
Job opportunities	5	4	2	8	3	<b>15 Medium</b>
<b>Flora</b>						
The eradication of alien plants and weeds on the study area	5	2	2	4	2	<b>10 Medium</b>
<b>ADVERSE IMPACTS</b>						
<b>Geology and Soils</b>						
The site clearance and levelling will cause some additional exposed areas and could trigger	<b>4</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>3</b>	<b>12 Medium</b>
	<b>2</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>4 Low</b>

some additional erosion and siltation, especially during rainy periods						
Collapsible soils, compressible soils, and high clay content swelling soils with vertic properties	4	4	2	8	3	12 Medium
	2	2	2	4	2	4 Low
Dust pollution	4	2	2	4	2	8 Medium
	2	2	2	4	2	4 Low
Degradation of soils	5	4	2	8	3	15 Medium
	2	2	2	4	2	4 Low
Unstable conditions	4	2	2	4	2	8 Medium
	2	2	2	4	2	4 Low
<b>Hydrology</b>						
More exposed areas and increased erosion, siltation and water pollution.	5	4	2	8	3	15 Medium
	2	2	2	4	2	4 Low
Construction during the rainy periods	5	4	2	8	3	15 Medium
	2	2	2	4	2	4 Low
Excavated materials that are stockpiled in wrong areas can interfere with the natural drainage, cause sedimentation and water pollution.	4	4	2	8	3	12 Medium
	2	2	2	4	2	4 Low

Climate						
Should the construction be phased for the summer months, frequent rain could cause very wet conditions, which makes it difficult to build in as well as rehabilitation of disturbed areas on the site	4	4	2	8	3	12 Medium
	2	2	2	4	2	4 Low
The drainage of water away from the construction site into the surrounding open space areas could (if not planned and managed correctly) have an impact on the water quality of these water bodies	4	4	2	8	3	12 Medium
	2	2	2	4	2	4 Low
Flora and Fauna						
The clearance and the construction of the proposed structures and infrastructure will result in the eradication of the existing vegetation on site.	4	2	4	8	3	12 Medium
	3	2	2	4	2	6 Low
Accidental introduction of alien species and invaders.	4	2	4	8	3	12 Medium
	2	2	2	4	2	4 Low
Areas where vegetation cleared for construction are not properly rehabilitated.	4	4	4	16	5	20 High
	2	2	2	4	2	4 Low
Destruction of the artificial	4	4	4	16	5	20 High



wetland habitat can lead to habitat loss.	2	2	4	8	3	6 Low
Increase in flow velocity around the development area in already fragmented environment.	4	2	4	8	3	12 Medium
	2	2	2	4	2	4 Low
Increase in surface drainage to accommodate infrastructure and structures	5	4	2	8	3	15 Medium
	2	2	2	4	2	4 Low
<b>Visual Impact and Waste Management</b>						
If the site office and camp, and associated waste are not managed according to the EMP	4	2	2	4	2	8 Medium
	2	2	2	4	2	4 Low
Builder's rubble is dumped during the construction phase in close proximity to the wetland and the surrounding open space areas	4	4	2	8	3	12 Medium
	2	2	2	4	2	4 Low
Vehicle maintenance in close proximity to the wetland could cause pollution	3	2	2	4	2	6 Low
	2	2	2	4	2	4 Low
Lighting pollution	4	2	4	8	3	12 Medium
	2	2	2	4	2	4 Low
<b>Safety and Security</b>						
The following safety and security problems are likely to occur during the construction	4	4	4	16	5	20 High
	2	2	2	4	2	4 Low

<p><b>phase:</b></p> <ul style="list-style-type: none"><li>• <b>Reckless operators of construction vehicles can cause dangerous conditions on the study area and surrounding roads;</b></li><li>• <b>If ground works are not properly marked or demarcated for safety reasons; and</b></li><li>• <b>Possible crime initiated by construction workers/ friends/relatives during the construction phase</b></li></ul>						
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## ii) Operational Phase

Table 3: Calculation and Result of the Significance Assessment of Impacts Identified to be Associated with the Proposed Development

Impact	Probability Rating	Severity Rating	Severity Factor	Severity Rating	Significance Rating - prior to mitigation and after mitigation (Note: Proposed mitigation measures are supplied in EMP and in section 4 above)	
<b>OPERATIONAL PHASE</b>						
<b><i>BENEFICIAL IMPACTS (Note: Not necessary to mitigate because the impact are positive)</i></b>						
<b>Socio-Economic</b>						
<b>Economical and Institutional</b>						
The development will have a positive economic impact	5	4	4	16	5	25 High
Promote the optimum utilisation of services	5	4	4	16	5	25 High
The new development will attract high volumes of tourists	4	2	4	16	5	15 Medium
More rates and taxes payable to the local authority	5	4	4	16	5	25 High

Increased job opportunities	4	4	4	16	5	20 High
Job opportunities in close proximity of residential areas	5	2	4	8	3	15 Medium
Job opportunities in close proximity of public transport	5	2	4	8	3	15 Medium
Economical injection to the area	5	4	4	16	5	25 High
Maximum exposure	4	4	4	16	5	20 High
The proposed expansion is in line with the planning frameworks for the area	5	2	4	8	3	15 Medium
<b>Social</b>						
Upliftment of the area	4	2	4	8	3	12 Medium
Urban renewal and expansion	4	2	4	8	3	12 Medium
Increased job opportunities	4	2	4	8	3	12 Medium
Job opportunities in close proximity of residential areas	4	2	4	8	3	12 Medium
Job opportunities in close proximity of public transport	4	2	4	8	3	12 Medium
Contribute to the upliftment of the area	4	2	4	8	3	12 Medium
Upgrades to the surrounding road network will benefit the	4	4	4	16	5	20 High

<b>surrounding community</b>						
The proposed new development will ensure a safe, secure and controlled environment	4	2	4	8	3	12 Medium
The proposed new development will create a more attractive development area. It is anticipated that it will enhance the “Sense of Place” of the study area and the surrounding environment	4	2	4	8	3	12 Medium
<b>Services and Infrastructure</b>						
Promote the optimal utilisation of services and infrastructure	4	2	4	8	3	12 Medium
<b>Bio-Physical Environment</b>						
<b>Geology and Soils</b>						
Prevention of any further erosion and siltation	4	2	4	8	3	12 Medium
<b>Hydrology</b>						
Protection of the rehabilitated wetland	4	4	4	16	5	20 High
Promotion of surface drainage	4	2	4	8	3	12 Medium

Fauna and Flora						
Implementation of an alien species control programme	4	2	4	8	3	12 Medium
Utilisation and further rehabilitation (if needed) of the wetland and its associated ecosystems	4	4	4	16	5	20 High
Replacement of alien plant species with indigenous and/or endemic plant species	4	2	4	8	3	12 Medium
Habitat creation (in the vicinity of the man-made wetland)	4	2	4	8	3	12 Medium
Development on already disturbed areas	4	4	4	16	5	20 High
Attraction of fauna species and maintaining ecological integrity	3	2	4	8	3	9 Medium
ADVERSE IMPACTS						
Qualitative Environment, Pollution and Visual Impact						
Lighting Pollution	4	4	4	16	5	20 High
	2	2	4	8	3	6 Low
Air Pollution	3	2	4	8	3	9 Medium
	2	2	4	8	3	6 Low



Visual Impact	4	4	4	16	5	20 High
	2	2	4	8	3	6 Low
<b>Hydrology</b>						
Storm-water Management not correctly implemented	4	4	4	16	5	20 High
	2	2	4	8	3	6 Low
Protection and Maintenance of the Rehabilitated Wetland	4	4	4	16	5	20 High
	2	2	4	8	3	6 Low

#### **d) Discussion of Significance Assessment**

Thirty-one (31) beneficial and twenty-six (26) adverse impacts are associated with the proposed development.

Twenty (20) of the anticipated beneficial impacts are socio-economic and institutional related and eleven (11) bio-physical related. Of the twenty-six (26) adverse impacts, ten (10) are bio-physical related and sixteen (16) are socio-economical and institutional related.

Of the twenty-six (26) anticipated adverse impacts that are associated with both the construction and operation phase of the proposed development, seven (7) of the impacts have a high significance rating, but such ratings were successfully reduced to low impacts with low significance ratings through the application of suitable mitigation measures.

The above results can mainly be ascribed to the historical and current state of the wetland area and the current transformed state of the study area, and its immediate surrounding environment. Furthermore, the rehabilitation of the wetland is recent, thus the success of the rehabilitation measures will only be evident after a certain time period has lapsed. Therefore, implementation of the proposed mitigation measures is critical as well as monitoring and record keeping ensuring optimum hydrological and ecological functioning.

Twenty-one (21) of the twenty-six (26) adverse impacts relate to the construction phase alone. Thus, almost 81 % of all the adverse impacts, associated with the development within the proposed mixed-use development, are of a short term in nature, lasting for construction only and can be successfully mitigated.

The significance assessment furthermore indicates that twenty-nine (29) of the beneficial impacts are related to the operational phase of the proposed mixed-use development. Twenty (20) of these impacts are related to the socio-economical and institutional environments while the other nine (9) are associated with the bio-physical environments. This means that the socio-economical and institutional environment will benefit significantly from the proposed development, while hydrological and ecological functioning is maintained.

Based on the above findings, it can be provisionally concluded that, no “fatal flaw” adverse impacts or impacts that cannot be adequately mitigated, are anticipated to be associated with the proposed development activities within the 30m buffer area. This is however subjected to the condition that all recommended mitigation measures as stipulated in the Environmental Management Programme (EMPr), Wetland Rehabilitation Plan, and as supplied in this Impact Assessment (IA) report, be adhered to, in order to mitigate the adverse impacts and to achieve the maximum gain from the identified beneficial impacts.

## 7. Inputs and Recommendations by Specialists

All the inputs and recommendations made by the various specialists were taken into consideration and such inputs have been summarized in this report. Furthermore, the recommendations made by the specialists were included as part of the EMPr and it informed the final layout.

*Please refer to Annexure M for the fauna and flora specialist reports and to Annexure H for the wetland specialist report.*

## 8. Environmental Management Programme

*Please refer to Annexure N for the attached amended Environmental Management Programme (EMPr).*

## 9. Wetland Rehabilitation Plan

*Please refer to Annexure O for the attached Rehabilitation and Wetland Management Plan.*

## 10. Environmental Impact Statement

Environmental Impact Statement that summarizes the impacts that the proposed development may have on the environment after the management and mitigation of impacts that have been taken into account.

*The major impacts that are likely to occur during the construction and operational phases are the following:*

### a) The Physical and Biological Environment:

#### Construction Phase

- The natural environment will be affected by construction related activities- site clearance, bulk earthworks etc. The wetland/water course on the other hand has been rehabilitated and should be excluded from development as it is regarded as sensitive and important for environmental integrity and ecological services;
- Some vegetative coverage will be lost and areas will be exposed. Such areas will be subject to erosion and siltation. This impact can be minimised by effective mitigation measures such as replanting and stabilisation;

- It is recommended that the layout of the proposed mixed-use development be amended to incorporate the wetland area as attractive feature of the development. It must however be noted that runoff from the proposed development site has the potential to affect the surrounding open space areas if adequate stormwater management measures are not implemented;
- Valuable topsoil may be lost during the construction process. The loss of topsoil can be minimised through the storage of topsoil in stockpiles on site and the reuse thereof within the landscape component of the development.
- All concrete and cement works should be restricted to low ecologically sensitive areas away from the wetland and storm water systems;
- If *Hypoxis hemerocallidea* is found during construction, all individuals of this species should be relocated to sensitive areas such as the wetland area.
- Construction, vegetation clearing and top soil clearing should commence from a predetermined location and gradually commence to ensure that fauna species present on the site have enough time to relocate to surrounding areas.

### **Operational Phase**

- Some vegetative coverage will be permanently lost to accommodate the hard surfaces and structures associated with the proposed development;
- Increased storm water volumes due to an increase in impermeable surfaces;
- Protection, utilisation and further rehabilitation (if needed) of the wetland and its associated ecosystems;
- Prevention of any further erosion and siltation;
- Replacement of alien plant species with indigenous and/or endemic plant species.

## **b) The Socio-Economic Environment:**

### **Construction Phase**

- Nuisance to neighbours due to dust pollution that are associated with construction activities;
- Nuisance to neighbours and fauna species due to noise that is generated by construction activities;
- Nuisance to neighbours and fauna species due to the undesirable visual impact that is associated with construction activities;
- Health, safety and security problems that is likely to occur during construction.
- Dumping of waste and builder's rubble close to the wetland area

## Findings and Potential Implications

None of the adverse impacts that were identified are regarded as impacts that cannot be mitigated to acceptable levels and therefore it is our opinion that there are no “fatal flaws” associated with the proposed development.

### 11. Conclusion and Recommendations

The study area has been rehabilitated recently and additional wetland rehabilitation and storm water management implementation is recommended for the additional storm water runoff generated by the additional infrastructure development.

Due to the fact that rehabilitation works have only been done recently, the newly and artificially created ecological systems are still adapting to the surrounding hydrological conditions. Interference at this early stage can therefore still be accommodated and according to the storm water engineer, the newly rehabilitated system will be able to accommodate the increased flows and the change in the surface flow patterns.

The wetland specialist is of the opinion that the wetland area in its natural state was highly degraded, but through proper mitigation measures and rehabilitation, an opportunity is created for the establishment of artificial wetlands to stabilise the drainage feature through erosion mitigation, siltation trapping and storm water flow and stream flow attenuation.

The updated storm water management plan indicated that it is possible to counter the additional storm water runoff from the extension of the development into the buffer zone. An additional swale is recommended downstream of the existing rehabilitated wetland area for this purpose.

The significance assessment of the impacts that is associated with the amendments indicates that almost 81% of the anticipated adverse impacts are of a short term nature lasting for construction only. In addition, it is important to understand that the significance of these impacts is predominantly low to medium, with high mitigation levels.

The significance assessment further indicated that a great number of beneficial impacts are associated with the expansion of the proposed mixed use development into the buffer area. These impacts are generally of a socio-economic nature with medium to high significance ratings.

Based on the above results and inputs from the specialists, it is recommended that development can take place within the wetland buffer area. However, strict guidelines regarding storm water management and mitigation as well as erosion prevention should be implemented in order to minimise sediment transport into stream and drainage channels which could have detrimental effects on the hydrology, soil and biological environment.

### **i. Personal Recommendations by EAP**

It is believed that both advantages and disadvantages were thoroughly assessed, and the needs and benefits have been assessed so as to give the extension of the mixed-use development within the 30m buffer zone the go-ahead. As a result, Bokamoso is of the opinion that there are no significant negative impacts associated with the removal of the 30m buffer zone but rather that active rehabilitation and mitigation measures implemented could be used as a tool to stabilise the drainage feature even more. The opinion of Bokamoso is also supported by the various specialists appointed to assist with this impacts assessment.

Strict rehabilitation measures and landscaping guidelines that will also address the landscaping areas of the buildings to encroach into the buffer areas, will assist with the creation of even more habitats and it will also promote the sound long term integration of the built environment with the ecological environment in this transitional zone.

If well planned and managed the proposed development within the 30m buffer area will bring the occupants of the building closer to nature and the storm water management measures implemented, the ecological systems that were established and all other measures implemented to ensure the on-going management, maintenance and monitoring of the open space areas associated with the watercourse, will also contribute to environmental awareness and education.

Bokamoso is of the opinion that the mixed-use development including the proposed amendments will have a significant long-term beneficial socio-economic impact on the study area and its immediate surroundings.

It is therefore recommended by Bokamoso that the proposed amendments to the development be approved, subjected to the implementation of appropriate mitigation measures as stipulated in this report, the EMPr and the updated Wetland Rehabilitation Plan, to achieve maximum advantage from the beneficial impacts and the sufficient mitigation of adverse impacts.

It is recommended that, based on the findings of the Amended EA Report:

- Should the proposed amendments to the approved Northern Residential Estate mixed-use development obtain the necessary environmental authorisation, an EMPr must be implemented for the construction and operational phases of the development. The EMPr, as attached to this document, should be made part of the contractual documents of the contractors;
- Further rehabilitation downstream of the existing rehabilitated wetland be implemented by means of additional an additional swale, and maintained throughout its life-time to ensure minimum erosion and siltation trapping.

- The construction of all structures, roads and services must be in accordance with the specifications of the Geotechnical Investigation;
- The design and implementation of the infrastructure and services are to be done in accordance with engineering specifications so as to comply with the requirements, regulations and standards of the local controlling authority; and
- Runoff from the proposed development site has the potential to affect the surrounding open space areas. It is therefore recommended that adequate storm water management be incorporated in the design of the proposed development in order to prevent erosion and the associated sedimentation of the surrounding areas. All areas affected by construction which are to remain as open space areas should be rehabilitated upon the completion of the construction phase of the development.



# Annexure A

## ENLARGEMENT OF FIGURES

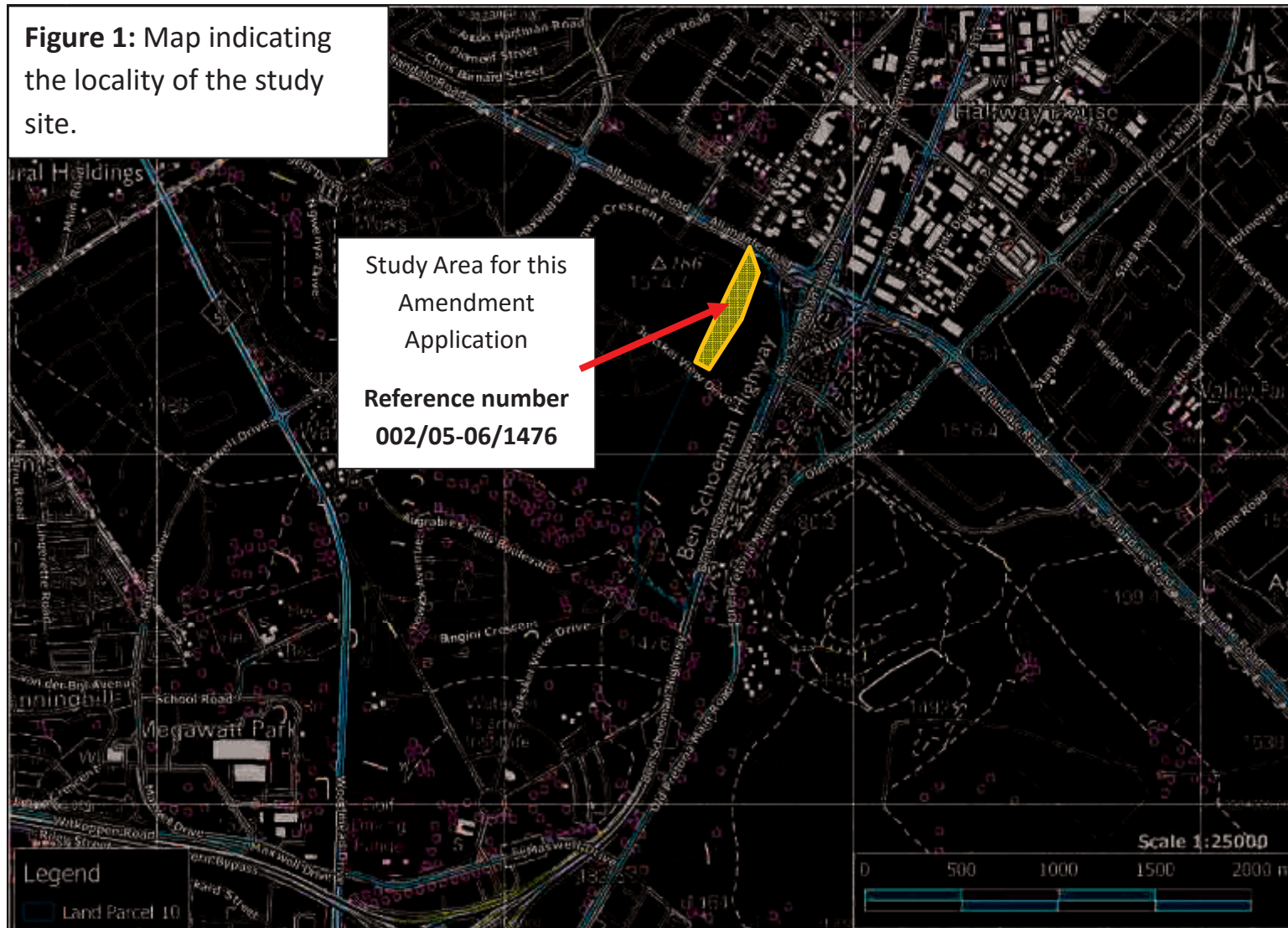


# Annexure A1

Map indicating the locality of  
the study site



**Figure 1:** Map indicating the locality of the study site.

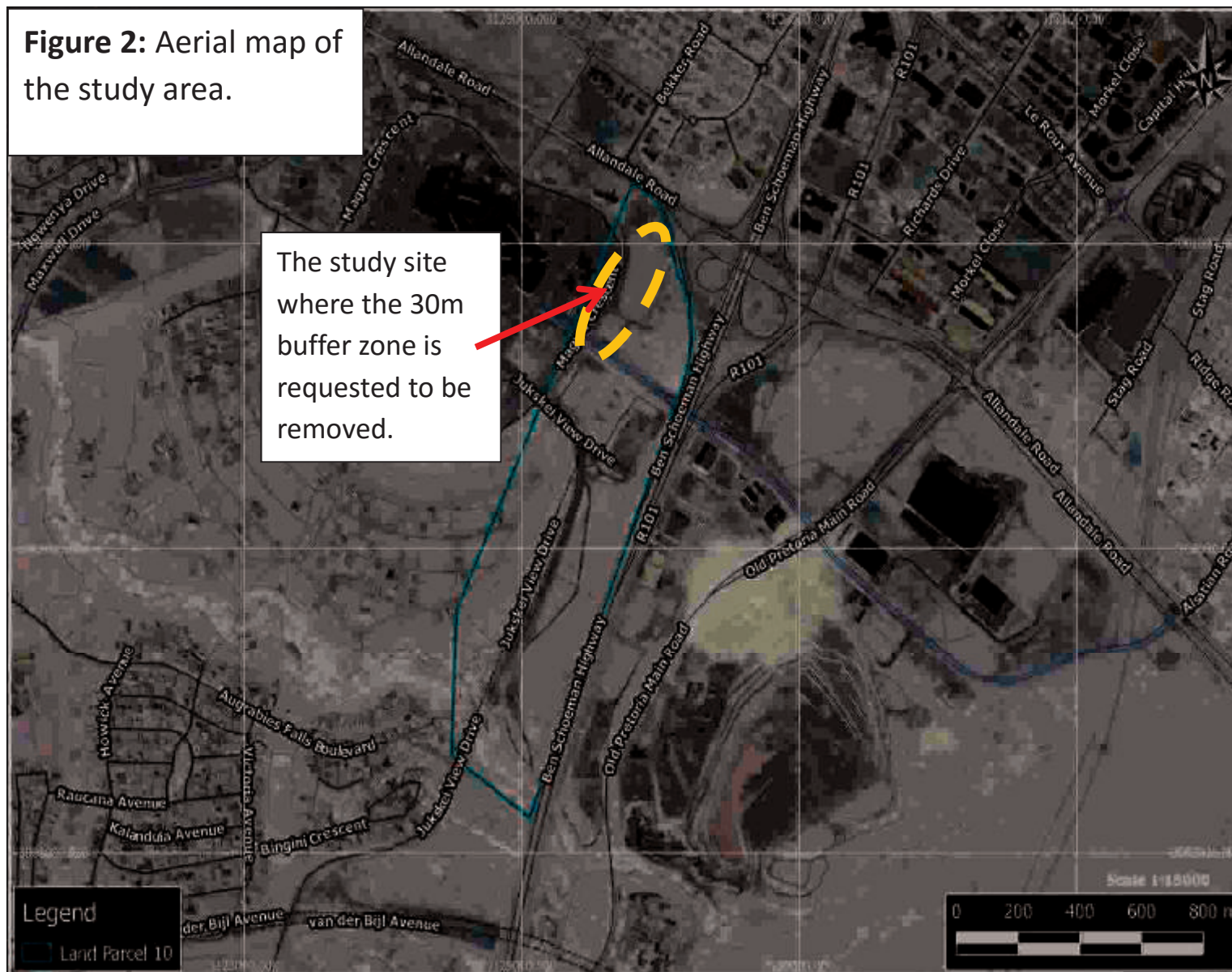


# Annexure A2

Aerial map of the study area.



**Figure 2:** Aerial map of the study area.

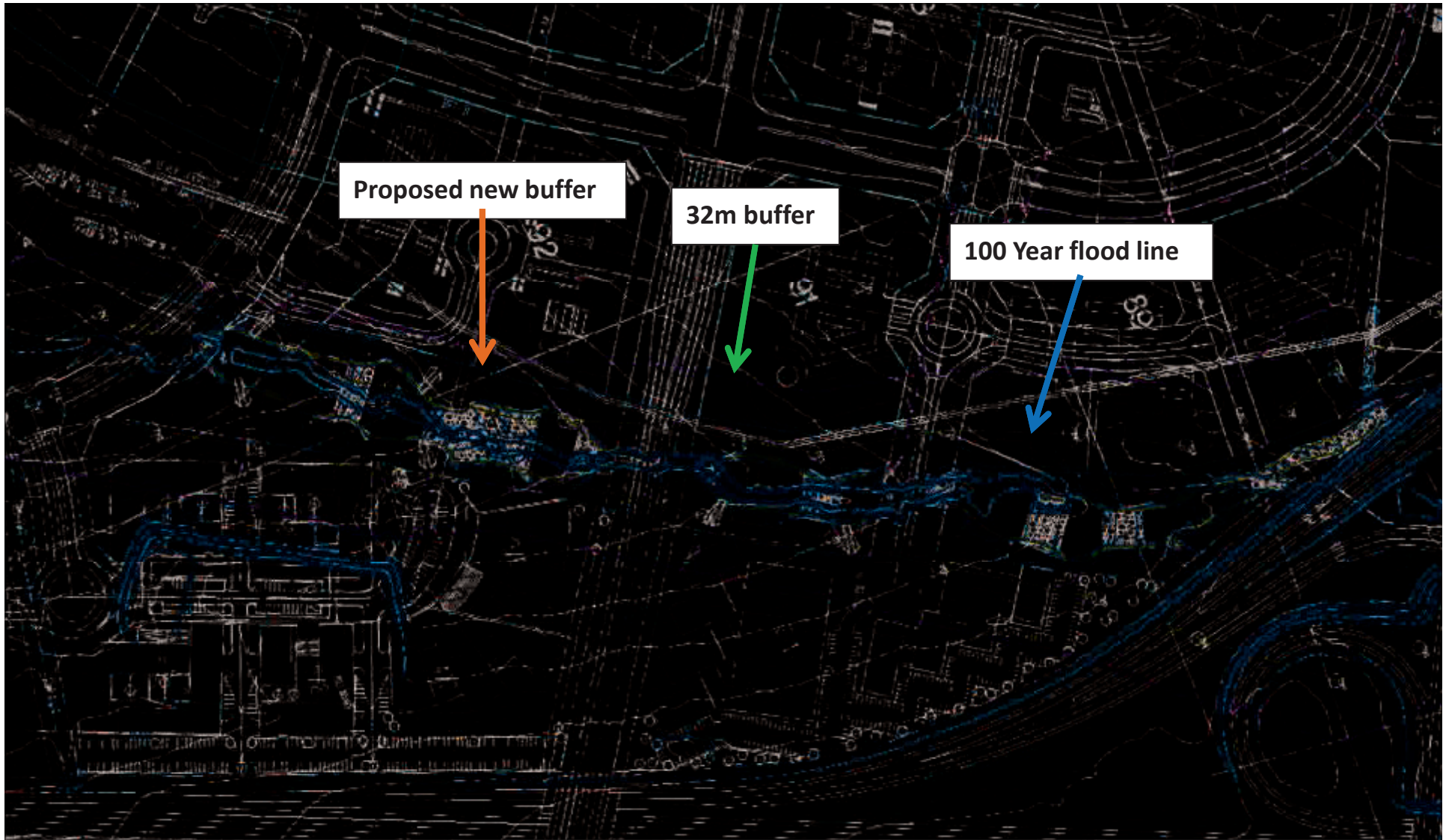


# **Annexure A3**

Previously approved layout plan including the rehabilitated wetland area and approved storm water layout.





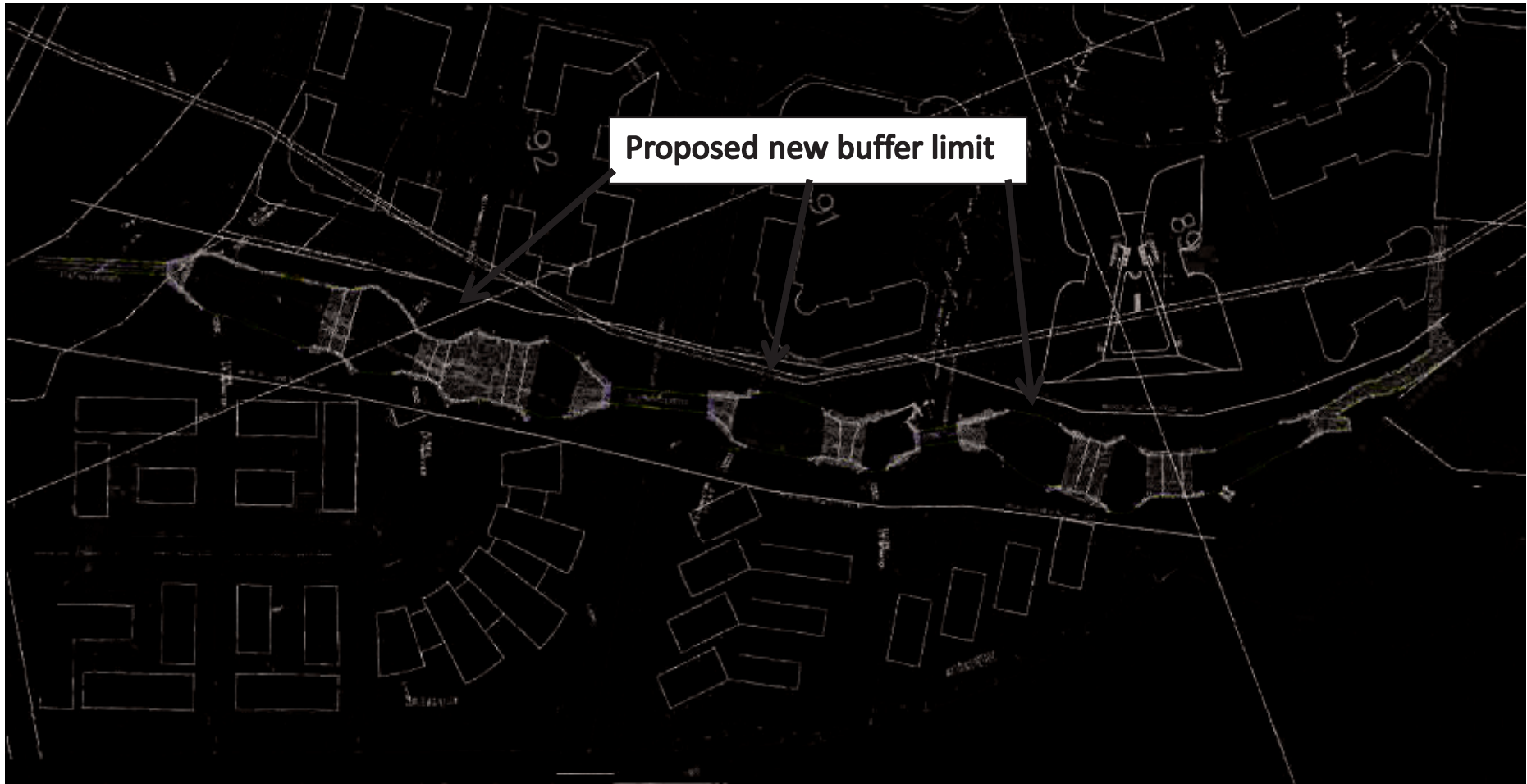


**Figure 5:** Previously approved layout plan including the rehabilitated wetland area and approved storm water layout.

# **Annexure A4**

Updated layout plan indicating amendments to the original footprint of the mixed-use development including the rehabilitated wetland area and approved storm water layout.



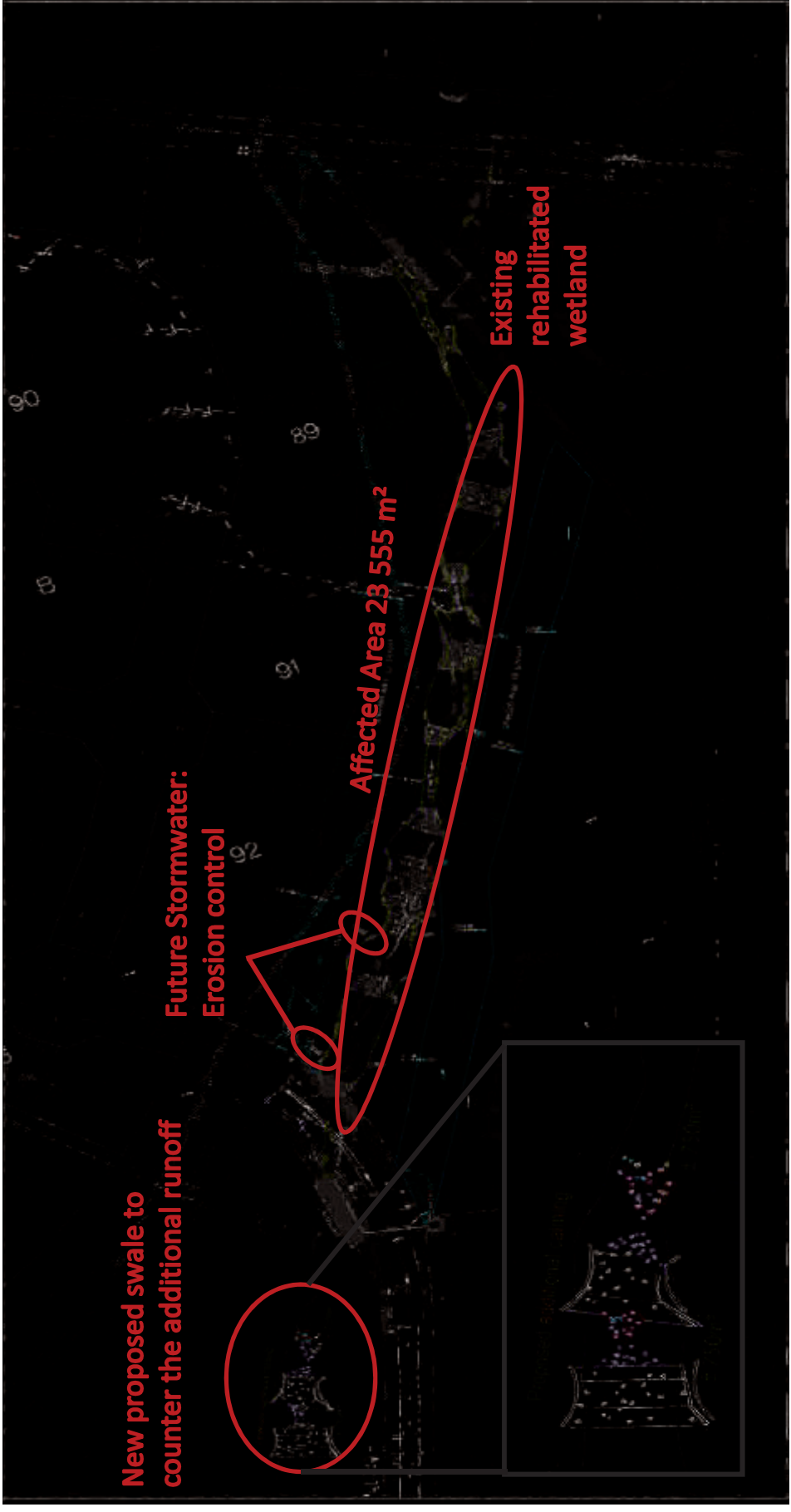


**Figure 6:** Updated layout plan indicating amendments to the original footprint of the mixed-use development including the rehabilitated wetland area and approved storm water layout.

# **Annexure A5**

The amended storm water layout including the additional recommended swale downstream of the existing rehabilitated wetland.

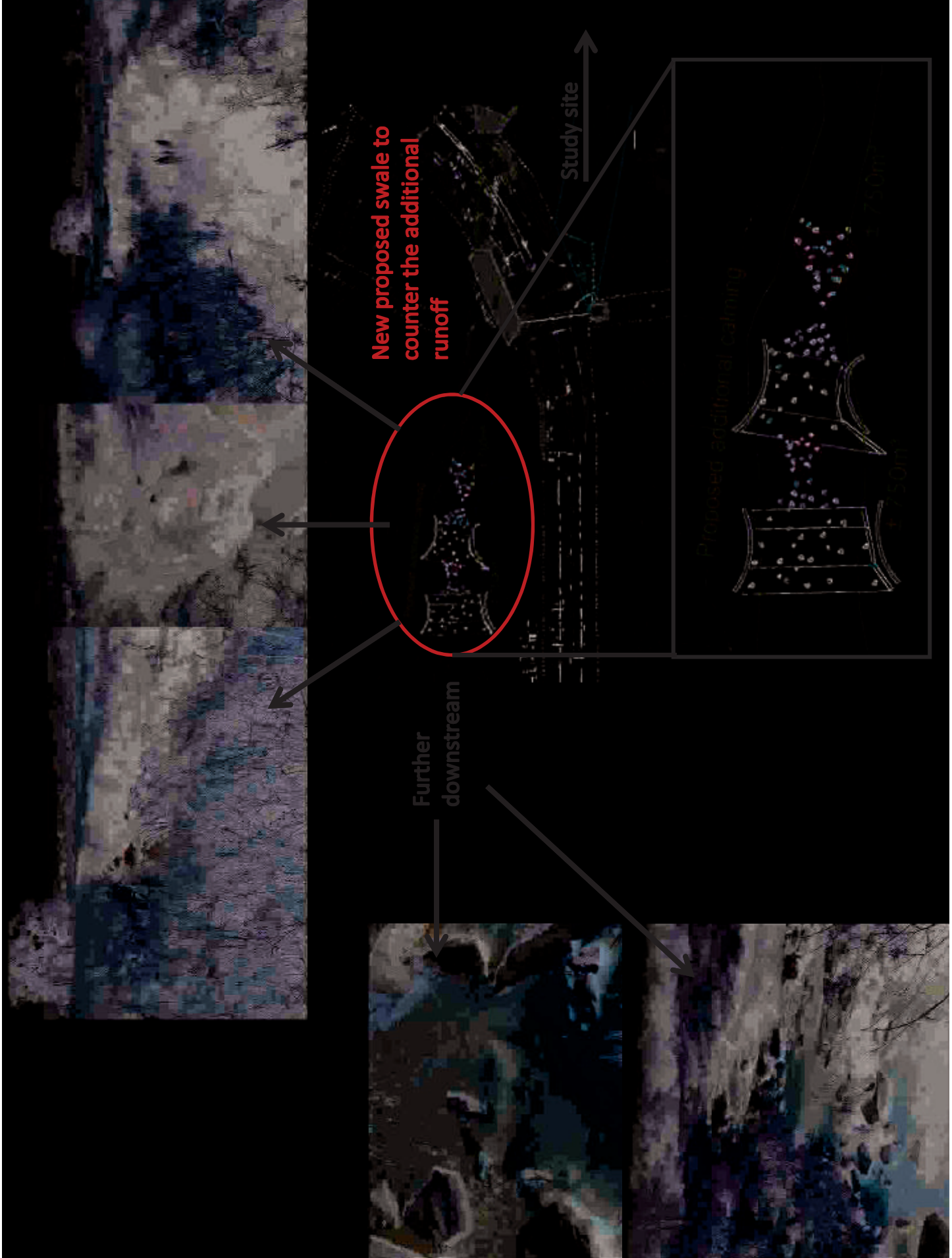




# Annexure A6

The additional  
recommended swale  
downstream of the existing  
rehabilitated wetland with  
site photos





New proposed swale to counter the additional runoff

Study site

Proposed additional swaling

Further downstream

# Annexure B

Environmental Authorisation



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Annexure HCB7



**AGRICULTURE, CONSERVATION,  
AND ENVIRONMENT**

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Waterval Islamic Institute  
PO Box 5  
JOHANNESBURG  
2000

Attention: Mr. Ibrahim Mia

Fax No: 011 802 1563

**BY FACSIMILE AND REGISTERED MAIL**

Dear Sir

**GRANTING OF CONDITIONAL AUTHORISATION FOR PROJECT REFERENCE  
GAUT 002/05-06/1476**

Please find attached the Record of Decision in respect of your application for authorisation in terms of Government Notice R1183 (as amended) promulgated under sections 21, 22, 26 and 28 of the Environment Conservation Act, 1989 (Act 73 of 1989).

Yours faithfully

Dr ST Cornelius  
Head: Agriculture, Conservation and Environment

Date: 12/10/2007

CC: Strategic Environmental Focus

City of Johannesburg Metropolitan Municipality

Mr. W van Rhyu

Attn: Danyo Rudolph  
Tel: 012-349 1307  
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**RECORD OF DECISION FOR PROJECT REFERENCE GAUT 002/05-06/1476**

By virtue of the powers delegated by the Minister in terms of Section 22 of the Environment Conservation Act, 1989 (Act 73 of 1989) ("the Act"), the Department of Agriculture, Conservation and Environment ("the Department") hereby authorises Waterval Islamic Institute to undertake the activity specified/ detailed below subject to the indicated conditions.

**1. DESCRIPTION, EXTENT AND LOCATION OF THE ACTIVITY:**

**1.1 The activities applied for include *inter alia* the following:**

- "The construction, erection or upgrading of roads, railways, airfields and associated structures": item 1(d) of Government Notice R1182
- "The construction, erection or upgrading of canals and channels, including structures causing disturbances to the flow of water in a river bed, and water transfer schemes between water catchments and impoundments": item 1(i) of Government Notice R1182
- "The construction, erection or upgrading of dams, levees or weirs affecting the flow of a river": item 1(j) of Government Notice R1182
- "The construction, erection or upgrading of public and private resorts and associated infrastructure": item 1(m) of Government Notice R1182
- "The change of land use from agriculture or undetermined use to any other land use": item 2 (c) of Government Notice R1182
- "The cultivation or any other use of virgin ground": item 10 of Government Notice R1182

The above activities fall within the ambit of Government Notice R1182 (as amended) promulgated under sections 21, 26 and 28 of the Act.

**1.2 The proposed development components as described in the Scoping Report include *inter alia*:**

- Residential 1 and 2 erven
- Private Open Space
- A hotel
- Commercial erven
- A school
- A gym
- 2 club houses

Two handwritten signatures are visible at the bottom right of the page. The first signature is a stylized, cursive name, and the second is a simpler, more direct signature.



- Cemetery
- Private and public roads

The establishment of the Northern Residential Estate is proposed to take place on portions of the Remainder of Portion 1 of the Farm Waterval 5 IR situated to the west of the N1 freeway as indicated on layout plan (Drawing number 0505-S-018,0) dated January 2007. The site falls within the jurisdiction of the City of Johannesburg Metropolitan Municipality.

## 2 KEY FACTORS INFORMING THE DECISION:

2.1 In reaching its decision in respect of the application, the Department has taken, *inter alia*, the following into consideration:

- a) The information contained in the:
  - The pre-application checklist (Exemption application) submitted by Strategic Environmental Assessment in October 2005.
  - The Plan of Study for Scoping submitted by Strategic Environmental Assessment in October 2005.
  - Scoping report (volumes 1-3) compiled by Strategic Environmental Assessment dated June 2006.
  - Comments from the Directorate of Conservation dated 4 August 2006 and 6 September 2006.
  - Environmental Management Plan compiled by Strategic Environmental Assessment dated July 2006.
  - Draft Alternative Analysis for the proposed establishment of the Northern Residential Estate compiled by Strategic Environmental Assessment dated May 2007.
  - Technical response to information requested for the proposed Northern Residential Estate compiled by Strategic Environmental Assessment dated July 2007.
  - The Memorandum of Agreement for the purchase of a property or properties to offset the Egoli Granite Grassland areas located on the proposed site signed between the Department and Waterval Islamic Institute ; Witwatersrand Estates Limited; Waterfall Golf Estate (Pty) Limited and Waterfall Properties WUQF (Pty) Limited.
  - The public participation process undertaken by the applicant from 19 January 2006 to 5 May 2006
  - Technical response to information requested for the proposed Northern Residential Estate compiled by Strategic Environmental Assessment (SEF) dated September 2007, the SEF response letter dated 1 October 2007 and the final layout plan (Drawing no: 0505-S-018,0) dated January 2007.
- b) Information obtained from the Departmental information base including *inter alia*:
  - Geographic Information System
  - C-plan version 2
- c) The general principles of biodiversity offsets and literature that support these principles.
- d) Compliance with applicable departmental, provincial and national legislation, policies and guidelines:
  - The principles contained in Section 2 of the National Environmental Management Act, 1998 ( Act 107 of 1998)(as amended)
  - The Gauteng Red Data Policy (June 2006)
  - The Gauteng Ridges Policy ( June 2006)
  - The Kyalami - Modderfontein Environmental Management Framework (EMF) dated May 2007
- e) The findings of a site visit undertaken by Mr David Hadzi during December 2005 and a further site visit by Ms Felicity Elliott and Mr Hejn Pienaar on 24 April 2007.
- f) The identification of an appropriate portion of land for conservation purposes as part of the Proposed Property indicated in the Memorandum of Agreement referred to in paragraph (a) above on which Ms Lorraine Mills conducted a site visit in October.

2.2 Based on the evaluation of the above information, the Department concluded *inter alia* that:

A large part of the proposed development site is irreplaceable and important (C-Plan 2). Sites designated as irreplaceable and important in terms of C-Plan 2 analyses are highly sensitive areas that are essential/important for the conservation of biodiversity in Gauteng and therefore must be protected from transforming land uses. Land uses incompatible with biodiversity conservation must be avoided in areas designated as irreplaceable and/or important. The site under consideration for the proposed activity has the following biodiversity features that need to be conserved:

- Egoli Granite Grassland, a severely transformed and extremely poorly conserved vegetation type that is endemic to Gauteng. The grassland within this project area is the most valuable contiguous remnant patch of Egoli Granite Grassland within the urban environment, within Gauteng and within South Africa.
- The proposed site further contains large granite dome/ridge outcrops as well as a meta-quartz discontinuous ridge which provides habitat for red data plants (*Bowiea volubilis*) and other protected plants and potential habitat for other red data plants and is therefore considered to be of high conservation value. Ridges form biodiversity hotspots, as they provide resources needed for survival, reproduction and movement; they are also ideal refuges for wildlife in an urbanised landscape. Ridges, and the interface between the lower slopes and the flat ground adjoining a ridge, provide important habitat required for the completion of the life cycles of many invertebrates, many of which provide essential ecosystem services (including pollination, evolutionary processes and hydrological processes). Ridges form naturally existing corridors that can functionally interconnect isolated natural areas and therefore play an important role in wildlife dispersal.
- Watercourses and associated wetlands are well represented on this site and the specialist studies undertaken has confirmed the Departmental position that this site contains some watercourses and wetlands in pristine or near pristine condition and hence these systems require measures to ensure their continued function and eco system services to the site as well as the wider catchment area.
- A population of *Bowiea volubilis* subsp. *volubilis*, a plant species currently indicated as a Red list plant, were recorded on site. To ensure adequate protection of the red list species suitable buffers need to be implemented around the known species and habitats.
- Habitat suitable for Grass Owl (*Tyto capensis*), a Red list bird species currently considered vulnerable in South Africa and threatened by habitat loss and degradation of habitat. To ensure adequate protection of the red list species suitable buffers need to be implemented around the known species and habitats.
- A number of historical farm buildings and cultural elements exist on site. These structures and elements need to be preserved and where appropriate incorporated into the development plans for the site.
- The Kyalami – Medderfontein EMF indicates areas/zones as "Conservation priority zones – Zone 1" in order to ensure that the "development of these areas should be limited to development where conservation of the natural resource is the key element of the development". The above site has been indicated as a "Zone 1" area due to the above sensitive biodiversity features on site.

### 3 DEPARTMENTAL DECISION

One or more of the above mentioned sensitive features may be detrimentally affected or permanently lost from the site should the proposed activity be authorised without appropriate mitigation measures. Further, uncertainty exists with regards to the occurrences of the Grass Owl (*Tyto capensis*) and suitable habitat as well as the locality and extent of the ridges and associated Red list plants and buffer zones. The full extent of wetlands (inclusive of 3 wetlands draining runoff from the NI Road) on site and the future management thereof is not properly provided for in the submitted final layout plan.

In view of the above, the following activities have not been included in this authorisation:

- The proposed litter trap/s on the Jukskei River as a separate application will be submitted by the applicant.
- The proposed grey water treatment plant as this is no longer required due to the exclusion of golf course element.
- The section of a public road along the alignment of the K60 road is dependent on the approval of the K60 road. The latter is currently under a separate EIA process. Consequently, should the K60 road alignment be changed, the alignment of the said public road would need to be reconsidered.
- The section of Jukskei Road located within the part of the Farm Waterval that was excluded from this application (Commercial District).
- The proposed road and bridge from the above Jukskei Road through the watercourse and commercial area linking across the N1 to the east of the site – due to lack of information and motivation.
- The outfall sewer (diverted sewer line – drawing no 300-P01) located to the north of the Jukskei river as per the applicant's request.
- The outfall sewer located south of the Jukskei River.
- Any bulk services provision located outside of the application site.

However, careful consideration of the integrated sensitivity analysis indicated that a large component of the sensitivity associated with this site is related to the occurrence of Egoli Granite Grasslands on this site. Having considered and accepted a proposal to accommodate the Egoli Granite Grasslands on a separate piece of egoli-grassland site secured by the applicant, the Department is of the view that the proposal can be allowed to proceed provided appropriate mitigating measures are put in place for other sensitivities on site.

Based on the above, the Department's conclusion is that this activity will not lead to substantial detrimental impact on the environment, alternatively, that potential detrimental impacts resulting from this activity can be mitigated to acceptable levels and that the principles contained in section 2 of NEMA can be upheld.

The Department has accordingly decided to grant Waterval Islamic Institute authorisation in terms of Regulations R1182 and R1183 (as amended) promulgated under sections 21, 22, 26 and 28 of the Environment Conservation Act (Act 73 of 1989) subject to the conditions and provisions listed below.

#### 4 CONDITIONS

##### 4.1 Description and extent of the activity

The authorisation applies in respect of establishment of the Northern Residential Estate mixed use township within the development area indicated on the layout submitted (Drawing number 0505-S-018.0) including associated structures and infrastructure. Authorisation includes the upgrade of Allendale Road (Section between Maxwell Boulevard and the N1) and the upgrade of Woodmead Drive (Section between Maxwell Boulevard and the proposed K60 alignment).

The relevant activities applied for include *inter alia* the following:

- "The construction, erection or upgrading of roads, railways, airfields and associated structures": item 1(d) of Government Notice R1182.
- "The construction, erection or upgrading of dams, levees or weirs affecting the flow of a river": item 1 (j) of Government Notice R1182.
- "The construction, erection or upgrading of sewage treatment plants and associated infrastructure": item 1 (n) of Government Notice R1182 for the pump station.
- "The construction, erection or upgrading of public and private resorts and associated infrastructure": item 1(m) of Government Notice R1182.
- "The construction, erection or upgrading of canals and channels, including structures causing disturbances to the flow of water in a river bed, and water transfer schemes between water catchments and impoundments": item 1(i) of Government Notice R1182.



- o "The change of land use from agriculture or undetermined use to any other land use"; item 2 (e) of Government Notice R1182.

The above activities fall within the ambit of Government Notice R1182 (as amended) promulgated under sections 21, 26 and 28 of the Act.

#### 4.2 Specific conditions

- 1) The applicant needs to comply fully with the content of the signed Memorandum of Agreement relating to the conservation of the Egoli Granite Grassland. Any non-compliance with the content of the above signed Memorandum of Agreement will be considered non compliance with this authorisation.
- 2) The layout plan submitted needs to be amended and resubmitted to the Department for approval prior to the commencement of construction activities on site. The following is required:
  - a) All wetlands (including 3 (three) wetlands draining runoff from the N1) and associated 30 m buffer zones on site as indicated in the wetland specialist report (Wetland delineation and functional assessment – Figure 32) dated May 2006 needs to be indicated on the layout plan. The exact position and extent of the Hydro-geomorphic unite 3 and 5 needs to be confirmed as documents submitted are providing contradictory information.
  - b) The existence or not of the *Bowlea volubilis* Red data plants needs to be confirmed by means of a specialist study during the growing season to be able to confirm the findings regarding the removal of these plants as indicated in the SHF response letter dated 1 October 2007. The above investigation and outcome needs to be submitted to the Department for review.
  - c) A detailed report on the alignment of part of the southern outfall sewer (South of the Jukskel River) needs to be submitted to the Department for review before a final decision on this matter can be considered. This report needs to investigate alternative routes (alignment) for this sewer pipe in the area where it will traverse 2 (two) sensitive hillslope wetlands with shallow ferricrete or hard plinthic sediments which creates perched aquifers close to the soil surfaces. Alternative route options needs to be investigated before a final decision on this matter can be considered.
- 3) The Environmental Management Plan (EMP) submitted (dated September 2007) is approved and will constitute an extension of this Record of Decision, and non-compliance with the conditions set out in the EMP will constitute an offence. The EMP must amongst other inclusions as indicated below, extend to the following:
  - a) The mandatory conditions imposed by the Department in this Record of Decision;
  - b) An agreement undersigned by the developer acknowledging that he/she recognises and understands the contents of the EMP and the possible legal ramification resulting from non-compliance with the EMP.
  - c) An independent, suitably qualified and experienced individual in the natural sciences must be appointed and act as the Environmental Control Officer (ECO).
  - d) The Department must be furnished with the contact details of the ECO responsible for compliance monitoring of the EMP.
    - i. All buffer zones (no go areas – 32 m buffer and all wetland and riparian areas) must be fenced off from the remainder of the site by means of a clearly defined fence before construction is initiated and remain fenced off for the duration of the construction phase. This is to ensure that the "no go areas" are clearly indicated and that accidental impacts on these areas are avoided. Only the construction of bridges as indicated on the layout plan will be allowed within the above buffer zones.
    - ii. Detailed plans indicating the "footprint" of bridges and the areas that will be affected by construction activity associated with these bridges, needs to be submitted to the Department for approval before commencement of construction.
    - iii. Detailed method statements for the construction of bridges needs to be submitted to the Department for approval before commencement of construction. These method statements needs to clearly indicate the methods to be used to construct these bridges.

- how water flow will be diverted to allow for the construction of bridge piers and pier foundations and how impacts on these watercourses will be limited during the construction phase.
- iv. No activity such as temporary housing, temporary ablution, disturbance of natural habitat, storing of equipment whatsoever, outside the development zone may be permitted during the construction phase.
  - v. No construction personnel other than those required for security purposes may be allowed to reside on site during construction phase.
  - vi. All construction related impacts must be contained within the development areas. The position of construction camps and areas for stockpiling need to be defined and clearly indicated on a plan to ensure that these activities are well managed.
  - vii. Mitigatory measures are required to prevent access of vehicles, equipment and staff to the buffer zones and associated wetland and riparian areas and access of people must be controlled, both during the construction and operational phases.
  - viii. The ECO must determine the location of the construction camp and the alignment of temporary access road(s) to the proposed development site.
  - ix. A waste management plan, including the handling, collecting and disposing of all waste generated on site, including but not limited to general litter, human waste and construction waste.
  - x. Safety measures to be taken during the construction of the public roads to ensure the safe management of traffic and personnel during the construction phase.
- 4) The applicant is required to submit a comprehensive wetland and ecological management plan for the 32 m buffer zone areas (including all wetlands and riparian areas) prior to the commencement of construction on site. This plan must be compiled by a suitably qualified specialist and approved by this Department before commencement of construction. This wetland and ecological management plan must address amongst other:
    - a) The rehabilitation of degraded portions of land and wetlands;
    - b) An ongoing monitoring and eradication programme for all non-indigenous species, with specific emphasis on invasive and weedy species.
    - c) Minimisation of artificial edge effects (e.g. water runoff from developed areas & application of chemicals).
    - d) A reporting programme for the above.
  - 5) A detailed storm water analysis needs to be undertaken to determine the total volume of storm water attenuation facilities required to ensure that post development runoff remains the same, or is less than the pre-development runoff. This study needs to identify and map all structures, pipes, swales, outlets and energy dissipation structures and attenuation ponds etc. that will be required to achieve the above objective. The above storm water analysis and map must be compiled by a suitably qualified specialist (Civil engineer) and must be submitted to the Department for approval prior to the undertaking of any construction activity on the site. No design or construction of attenuation ponds or dissipation structures will be allowed within the buffer zones of wetlands or watercourses. Temporary mitigation measures and methods to be used to mitigate storm water runoff during construction also need to be included in this analysis.
  - 6) A detailed method statement for the construction/rehabilitation of the dam wall in the tributary north of the Jukskei River needs to be provided to the Department for approval prior to the construction/rehabilitation of the dam wall. This method statement must clearly indicate the construction methods to be used during construction, the area that will be affected by construction activities, impacts on the watercourse and adjoining buffer zones, methods for rehabilitation of the watercourse and buffer zones following construction, the source of material for the construction of the wall, should local (on site) material be used.
  - 7) A detailed "Open Space" management plan needs to be submitted to the Department for approval prior to commencement of construction activities on site for the entire area contained within the watercourses, dam and wetlands and associated buffer zones on site. This plan must detail all activities to be undertaken in the above areas including walkways, soft and hard landscaping, vegetation

pedestrian bridges and activities related to open space planning and management. No activity is to be undertaken within these buffer zone areas prior to the approval of the above management plan.

- 8) All heritage sites and buildings that merit conservation based on the heritage specialist report (Level 2 Heritage Scoping revised final report) dated 19 June 2007 must be incorporated into the above layout plan for submission and approval by the Department.

#### 4.3 General conditions

- a) Any changes to, or deviations from, the project description set out in this letter must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations.
- b) This Department may review the conditions contained in this letter from time to time and may, by notice in writing to the applicant, amend, add or remove a condition.
- c) The applicant must notify the Department, in writing, at least 10 (ten) days prior to the change of ownership, project developer or the alienation of any similar rights for the activity described in this letter. The applicant must furnish a copy of this document to the new owner, developer or person to whom the rights accrue and inform the new owner, developer or person to whom the rights accrue that the conditions contained herein are binding on them.
- d) Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/ or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.
- e) Authorisation for the activity is granted in terms of the Environment Conservation Act, 1989 (Act 73 of 1989) only and does not exempt the holder from compliance with other relevant legislation.
- f) The applicant shall be responsible for ensuring compliance with the conditions contained in this letter by any person acting on his behalf, including but not limited to, an agent, servant, or employee or any person rendering a service to the applicant in respect the activity, including but not limited to, contractors and consultants.
- g) Departmental officials shall be given access to the property referred to in 1 above for the purpose of assessing and/ or monitoring compliance with the conditions contained in this document at all reasonable times.
- h) The applicant must notify the Department within 24 (twenty four) hours if any condition of this authorisation cannot, or is not, adhered to. The notification must be supplemented with reasons for non-compliance.

#### 5 DURATION OF AUTHORISATION

If the activity authorised by this letter does not commence within 5 (five) years from the date of signature of this letter, the authorisation will lapse and the applicant will need to reapply for exemption or authorisation in terms of the above legislation or any amendments thereto.

#### 6 CONSEQUENCES OF NON-COMPLIANCE

The applicant must comply with the conditions set out in this letter. Failure to comply with any of the above conditions may result in, *inter alia*, the Department withdrawing the authorisation, issuing directives to address the non-compliance – including an order to cease the activity – as well as instituting criminal and/or civil proceedings to enforce compliance.

**7 APPEALS:**

Appeals in respect of this decision must be directed to the MEC, Mr Khubisi Mosunkutu, Agriculture, Conservation and Environment, Gauteng Provincial Government within 30 (thirty) days of the date of this decision. Appeals can be submitted utilizing one of the following methods:

- By facsimile: (011) 333 0620;
- By post: P.O. Box 8769, Johannesburg 2000;
- By hand: 16th Floor, Diamond Corner Building, 68 Eloff Street, Johannesburg.

Please note that all appeals must comply with Section 35 of the Environment Conservation Act, 1989 read together with Government Notice R1183 of 5 September 1997. In terms of the above section and regulations, your appeal must set out all the facts as well as the grounds of appeal. Furthermore, all the relevant documents or copies thereof must accompany the appeal and a commissioner of oaths must certify them as true.

The applicant is required to inform all registered interested and affected parties of the decision contained in this Record of Decision as well as the process for appeal described above within 7 (seven) calendar days of the date of signature of this Record of Decision. Failure to inform interested and affected parties within the stipulated time period will constitute non-compliance with this Record of Decision.

Should the applicant wish to appeal any aspect of this decision, the applicant must notify and furnish copies of the appeal which will be submitted to the MEC to all registered interested and affected parties. Proof of such notification must be submitted to the MEC with the appeal. Failure to comply with this provision may result in the MEC refusing to consider the appeal.

Please note that any development that commences prior to the expiry of the time period allowed for the submission of an appeal, or before the MEC has reached a decision on any appeal submitted, is done solely at the applicant's risk.

Yours faithfully

  
 Dr. S.T. Cornelius  
 Head: Agriculture, Conservation and Environment  
 Date: 12/10/2007

CC: Strategic Environmental Focus

Attn: Dave Rudolph  
 Tel: 012-349 1307  
 Fax: 012-349 1229

City of Johannesburg Metropolitan Municipality

Attn: Rajeshree Dhanu  
 Tel: (011) 407 6439  
 Fax: (011) 403 4142

Mr. W van Rhyen

Fax: (011) 253 9229



# **Annexure C**

Environmental Authorisation  
for Project with Reference  
Number 002/05-06/1476





Annexure HCB 8

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D/1335/1492

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**DEPARTMENT OF AGRICULTURE  
AND RURAL DEVELOPMENT**

Diamond Corner Building, 68 Eloff & Market Street, Johannesburg  
P O Box 8769, Johannesburg, 2000

Telephone: (011) 355-1900  
Fax: (011) 357-1868

Reference: 002/09-09/R0993  
Enquiries: Loviso Mkwana  
Telephone: (011) 355 - 1581  
Email: Loviso.Mkwana@gauteng.gov.za

Atterbury Investments Holdings  
Mertech Building  
Glenfield Office Park  
Oberon Street  
Faerie Glen  
6100

Attn: Morné Wilton  
Fax: (012) 483 - 8675  
Tel: (012) 483 - 8676

PER FACSIMILE/REGISTERED MAIL

Dear Sir/Madam,

**ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED MIXED USE NODAL  
DEVELOPMENT ON A PORTION OF THE REMAINING EXTENT OF PORTION 1  
OF THE FARM WATERVAL 5 LR (SECTION 10), JOHANNESBURG  
METROPOLITAN MUNICIPALITY**

With reference to the abovementioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation and reasons for the decision are attached herewith.

In terms of Regulation 10(2) of the Environmental Impact Assessment Regulations, 2006, you are instructed to notify all registered interested and affected parties, in writing and within 10 calendar days of the date of this letter, of the Department's decision in respect of your application as well as the provisions regarding the making of appeals that are provided for in the regulations.

Your attention is drawn to Chapter 7 of the Regulations which regulates appeal procedures. Should you wish to appeal any aspect of the decision, you must, *inter alia*, lodge a notice of intention to appeal with the MEC, within 10 days of the date of this letter, by means of one of the following methods:

By facsimile: (011) 333 - 0620;  
By post: P.O. Box 8769, Johannesburg 2000; and  
By hand: 16<sup>th</sup> Floor, Diamond Corner Building, 68 Eloff Street, Johannesburg.


(25/4/10)  
Office of the HGD

10-04-2010

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Should you decide to appeal, you must serve a copy of your notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection


Yours faithfully;



Dr. S.T. Cornelius  
 Head: Agriculture and Rural Development  
 Date: 29/04/2010

GDARD  
Office of the HOD

10-06-2010 0055





ENVIRONMENTAL AUTHORISATION

Authorisation register number:	Gaut 002/08-09/N0993
Holder of authorisation:	Arterbury Investments Holdings
Location of activities:	Portion of the Remaining Extent of Portion 1 of the farm Waterval 5-IR

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Office of the HOD

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Two handwritten signatures are present at the bottom right of the page. The first is a scribbled signature, and the second is a signature with a long arrow pointing upwards and to the right.

Department of Agriculture and Rural Development  
 Environmental Authorisation Ref. No. Goul R02/08/09/N0393

### Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

### Activities authorized

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2006 the Department hereby authorises Atterbury Investments Holdings with the following contact details:

Morne Wilkon  
 Atterbury Investments Holdings  
 Mertech Building  
 Glenfield Office Park  
 Oberon Street  
 Faerie Glen  
 0100

GDARD  
 Office of the HOD

10 -04- 2 9 - 0 0 5 5

Fax: (012) 483 - 8675  
Tel: (012) 483 - 8676

to undertake the following activities ("hereafter referred to as "the activities"):-

proposed mixed use node development on a portion of the remaining extent of portion 1 of the Farm Waterval 5 LR on a 103,95 hectare site as per listed activities 1(k), 1(o), 7, 15 of GN R.386 and activities 18 and 2 of GN R.387 of 2006, which falls under the jurisdiction of the City of Johannesburg Metropolitan Municipality.

Please note that activity 1(p) has been removed from the Government Notice No. R386, and has been included in the Government Notice No.718 category B of the listed activities according to the National Environmental Management: Waste Act, 2008 (Act 59 of 2008). Effectively from the 1<sup>st</sup> of July 2009, the Department of Environmental Affairs (DEA) is the competent authority for the above activity.

The applicant intends to establish a business township on site, comprising of 33 erven zoned as follows:

"Special" permitting offices, shops, restaurants, business buildings, dwelling units, residential buildings including hotels, public garage, places of public worship, places of instruction, transport nodes, social halls, commercial purposes, institution, places of amusement, private open space, public open space, parking garage structures.

The granting of this environmental authorisation is subject to the conditions set out below.

### Conditions

#### Scope of authorisation

- 1.1 -- Authorisation of the activities is subject to the conditions contained in this authorisation, which conditions form part of the environmental authorisation and are binding on the holder of the authorisation.
- 1.2 The holder of the authorisation shall be responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of the authorisation.
- 1.3 The activities authorised may only be carried out at the property indicated above.

Department of Agriculture and Rural Development  
Environmental Authorisation Ref. No. GAUF 002/08-09/140293

- 1.4 Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.
- 1.5 These activities must commence within a period of five (5) years from the date of issue. If commencement of any activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activities to be undertaken.
- 1.6 This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activities.

**Appeal of authorisation**

- 1.7 The holder of the authorisation must notify every registered interested and affected party, in writing and within ten (10) calendar days, of receiving notice of the Department's decision to authorise the activities.
- 1.8 The notification referred to in 1.7 must:
  - 1.8.1 Specify the date on which the authorisation was issued;
  - 1.8.2 Inform the interested and affected parties of the appeal procedure provided for in Chapter 7 of the regulations; and
  - 1.8.3 Advise the interested and affected parties that a copy of the authorisation and reasons for the decision will be furnished on request.

Office of the HOD

**Management of the activities**

10-04-2010 0055

- 1.9 It has been noted that a draft Environmental Management Plan (EMP) has been attached to the report. A final Environmental Management Plan (EMP) must be submitted to the Department for review and comments before the commencement of any construction activity on site.
- 1.10 The construction area must to be clearly demarcated before any construction activity may take place. Signage must be displayed during the construction phase to inform the general public about potential dangerous conditions on site.
- 1.11 Oil, fuel and chemicals must be confined in a specific and secured area throughout the construction period to prevent potential spills and leaks.
- 1.12 All waste generated on site must be disposed of at a recognised and certified landfill site.
- 1.13 Adequate measures must be implemented regarding the collection, removal and disposal of waste during each stage of the development, from site preparation to final construction and operational stages.
- 1.14 No waste may be buried, hidden or burned on site. Wastes must be disposed off at an appropriate, permitted waste disposal facility.
- 1.15 No solid waste must be dumped into any water source. Waste skips must be provided on the construction site for the collection and disposal of solid waste.
- 1.16 All hazardous materials must be stored in a secured area, which is fenced and has a restricted entry. Hazardous materials must be stored in an appropriate manner; a concrete floor must be used to prevent spills, pollution which leads to groundwater contamination through seepage.
- 1.17 The waste disposal agreement that the developer together with the registered waste disposal contractor will be entering into, must be in compliance with the local bylaws of the municipality concerned.
- 1.18 Dust suppression measures must be implemented throughout the construction phase.
- 1.19 The drainage system should be designed to convey all contaminated water and spills of fuel to a suitable collection or containment points for disposal or treatment in order to avoid negative impacts towards water quality.
- 1.20 Service infrastructure construction such as roads, storm water and sewer pipes must be undertaken to the satisfaction of the City of Johannesburg Metropolitan Municipality and Johannesburg Roads Agency (JRA).

Department of Agriculture and Rural Development  
Environmental Authorisation Ref. No. Gaut 002/08-09/14993

- 1.21 Construction should be limited to dry seasons as far as possible, with silt fencing and sediment traps being implemented to negate the impact of soil erosion & sub-sequential siltation of the associated aquatic habitat in the vicinity of the proposed development.
- 1.22 Landscaping, re-vegetation, and rehabilitation of all disturbed areas must be undertaken post the construction period with indigenous plant species.

**Monitoring, Recording and reporting to the Department**

- 1.23 A suitable qualified person in the natural sciences must be appointed as an Environmental Control Officer (ECO).
- 1.24 The ECO must undertake site inspections at least once a week and compile a monthly environmental audit report.
- 1.25 The audit report must record any environmental incidents that occurred, how were these reported and the corrective measures undertaken. In addition, the audit report must detail how the environmental holder has complied with the EMP and this environmental authorization.

**Commissioning of the activity**

- 1.26 A fourteen (14) day written notice must be given to the Department that the activities will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activities will commence.

**General**

- 1.27 A copy of this authorisation must be kept at the property where the activities will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.
- 1.28 Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/ or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.
- 1.29 The holder of the authorisation must notify the Department, in writing and within seventy two (72) hours if a condition of this authorisation is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
- 1.30 Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.

Date of environmental authorisation: 29/04/2010

  
 Dr. S.T. Cornelius  
 Head: Agriculture and Rural Development

**GDARD**  
 Office of the HOD  
 10 04 29 0055



Department of Agriculture and Rural Development  
 Environmental Authorisation Ref. No. GOUT 002/08-09/140993

### Annexure 1: Reasons for Decision

#### 1. Background

The applicant, Atterbury Investments Holdings applied for authorisation to undertake the following activities -

proposed mixed use nodal development on a portion of the remaining extent of portion 1 of the Farm Waterval 5 LR on a 103.95 hectare site as per listed activities 1(k), 1(m), 1(o), 4, 6, 7, 15 of GN R.386 and activities 18 and 2 of GN R.387 of 2006, which falls under the jurisdiction of the City of Johannesburg Metropolitan Municipality.

Please note that activity 1(p) has been removed from the Government Notice No. R386, and has been included in the Government Notice No.718 category B of the listed activities according to the National Environmental Management: Waste Act, 2008 (Act 59 of 2008). Effectively from the 1<sup>st</sup> of July 2009, the Department of Environmental Affairs (DEA) is the competent authority for the above activity.

According to the report, activities 4 and 6 are not applicable to this application; the activities have been addressed in a previous environmental authorisation for Inksel View Extension 4.

The applicant intends to establish a business township on site, comprising of 33 erven zoned as follows:

"Special" permitting offices, shops, restaurants, business buildings, dwelling units, residential buildings including hotels, public garage, places of public worship, places of instruction, transport nodes, social halls, commercial purposes, institution, places of amusement, private open space, public open space, parking garage structures.

The applicant appointed Golder Associates (Pty) Ltd to undertake an Environmental Impact Assessment Process.

#### 2. Information considered in making the decision

In reaching its decision, the Department took, inter alia, the following into consideration -

- a) The information contained in the:
  - Environmental Impact Assessment Report dated 27 November 2009; and
  - Relevant information contained in the Departmental information base including -
  - The Geographical Information System especially the C-Plan Version 2; and
  - The objectives and requirements of relevant legislation, policies and guidelines, including:
  - The principles contained in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

#### 3. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below:

- a) Consultation with Interested and Affected Parties (I & APs).
- b) The RSDP of the area.
- c) Visual Impact Assessment.
- d) Availability of bulk services.

GRAND  
 Office of the HOD

10-04-2010

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Department of Agriculture and Rural Development  
Environmental Authorisation Ref. No. Goul 002/08-09/13/993

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#### 4. Findings

After consideration of the information and factors listed above, the Department made the following findings -

- a) Public Participation process was conducted as per Regulation 56 of GN. R385 of 2006.
- b) Region A Residential Spatial Development Framework (RSDF) supports the proposed development.
- c) It has been deduced that the proposed development will be able to blend in with the surrounding environment and will not look out of place due to its location within the urban realm.
- d) Existing bulk services are to be utilised as far as possible with appropriate upgrades where necessary.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activities can be mitigated to acceptable levels. Authorisation for this application is accordingly granted.

ODARD  
Office of the HOD

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# Annexure Ci

Copy of Amendment  
Application Form for other  
amendment application  
applied for



2



**ATTERBURY**

Atterbury Property Developments

16 November 2015

**Gauteng Department of Agriculture and Rural Development**

Ground floor,  
Diamond Building,  
11 Diagonal Street  
Johannesburg  
2000

Attention: Deputy Director: Strategic Administrative Unit of the Sustainable Utilization of the Environment (SUE) Branch

**APPLICATION FORM FOR AMENDMENT OF ENVIRONMENTAL AUTHORISATION AND ENVIRONMENTAL MANAGEMENT PROGRAMME IN TERMS OF NATIONAL MANAMENT ACT, 1998 (ACT No. 107 OF 1998), AS AMENDED AND THE ENRIONMENTAL IMPACT ASSESSMENT REGARULATIONS, 2014**

I, **Hercules Coenraad Bezuidenhout** (representative of ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC)) hereby confirms that AWIC accepts the rights and obligations contained in the Environmental Authorizations (002/08-09/N0993) and (002/05-06/1476).

I also confirm that I have the ability to implement the mitigation and management measures as well as to comply with the conditions of the Environmental Authorization.

Yours Faithfully,

Hercules Coenraad Bezuidenhout

Atterbury Property Developments (Pty) Ltd 2004/016760/07  
Business Building, Leinster Road, Johannesburg 2001  
Pretoriuskop 202, Private Bag 20200, Sandton 2008  
T +27 11 606 0000 F +27 11 606 0000

Atterbury Property Developments (Pty) Ltd 2004/016760/07  
Business Building, Leinster Road, Johannesburg 2001  
Pretoriuskop 202, Private Bag 20200, Sandton 2008  
T +27 11 606 0000 F +27 11 606 0000



② LP10 002/08-09/N0993



## AMENDMENT APPLICATION FORM

**Application Form for Amendment of Environmental Authorisation and Environmental Management Programme in terms of National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014**

### For official use only

Application Reference Number:  
 NEAS Reference number:  
 Date Received:


#### Kindly note that:

1. This application form is current as of December 2014. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
2. This form must be used to apply for the amendment of an environmental authorisation or Environmental Management Programme. An amendment includes adding, substituting, removing or changing a condition or requirement, updating and changing details and correcting a technical error.
3. An amendment application for an Environmental Authorisation is only provided for in law if the Environmental Authorisation is still valid. The subject amendment application should thus be submitted at least 3 months prior to the expiry of the validity period of an Environmental Authorisation; failure to submit the amendment application within the said period prior to the expiry of the validity period of an Environmental Authorisation may result in the competent authority not being able to process the application for amendment in time and thus resulting in the lapsing of the Environmental Authorisation.
4. No amendment to a valid Environmental Authorisation is provided for in terms of the 2014 EIA Regulations, if such amendments applied for will constitute a listed or specified activity; in this case an application for Environmental Authorisation for listed or specified activity in terms of Chapter 4 of the EIA Regulations, 2014.
5. A copy of the Environmental Authorisation and /or approved Environmental Management Programme (EMPr) which is the subject of the amendment application must be submitted together with this form.
6. An application for amendment lapses if the applicant fails to meet any of the timeframes prescribed in terms of the 2014 EIA Regulations. If authorisation is required from a number of different authorities, the authorities might also require that an integrated process be followed.
7. The application must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. Spaces are provided in tabular format and will extend automatically when each space is filled with typing.
8. The use of the phrase "not applicable" in the form must be done with circumspection. Should it be done in respect of material information required by the competent authority for assessing the application, it may result in the refusal of the application.
9. Three copies of this form must be submitted at the offices of the relevant competent authority as detailed below.
10. No faxed or e-mailed applications shall be accepted. Only hand delivered, couriered or posted applications will be accepted.
11. Unless protected by law, all information filled in on this application will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this application on request, during any stage of the application process.

**LIST OF ANNEXURES:**

- ANNEXURE 1: PROOF OF PAYMENT
- ANNEXURE 2: N/A – NO EXCLUSIONS REQUIRED
- ANNEXURE 3: N/A – ONLY ONE PROPERTY
- ANNEXURE 4: ENVIRONMENTAL AUTHORISATION
- ANNEXURE 5: FIGURES

**LIST OF ADDENDUMS:**

- ADDENDUM A: CONSENT FORM
- ADDENDUM B: DECLARATIONS APPLICANT
- ADDENDUM C: DECLARATIONS EAP
- ADDENDUM D: POWER OF ATTORNEY FROM LAND-OWNER AND APPLICANT
- ADDENDUM E: POWER OF ATTORNEY TO EAP AND EAP DETAILS



## 1. DEPARTMENTAL DETAILS

### Postal Address

Gauteng Department of Agriculture and Rural Development  
Attention: Deputy Director: Strategic Administrative Unit of the Sustainable Utilization of the Environment (SUE) Branch  
P. O. Box 8769  
Johannesburg  
2000

### Physical Address

Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch  
Ground floor, Diamond Building, 11 Diagonal Street  
Johannesburg

Queries should be directed to the Strategic Administrative Unit at:

Administrative Unit telephone number (011) 240 3051/3052  
Administrative Unit fax number (011) 240 3055  
Departmental central telephone number (011) 240 2500

View the Department's website at <http://www.gdard.gov.za> for the latest version of the documents

## Application for Environmental Authorisation in terms of NEMA

Proof of payment must accompany this application. The application will not be processed without proof of payment unless one of the exclusions provided for in the fee Regulations is applicable AND such information in the exclusion section of this application form has been confirmed by this Department.

## 2. FEES

Gauteng Department of Agriculture and Rural Development' details for the payment of application fees

### Payment Enquiries:

Contact person: Boniswa Belot  
Tel: (011) 240 3377/3051  
Email: Boniswa.Belot@gauteng.gov.za

### Department Banking details:

Bank Name: FNB Bank  
Account Name: GPG Agriculture and Rural Development PMG  
Account Number: 62298144058  
Branch Name and Number: Global Transactional Services Johannesburg - 255005

Reference number: EIA - Date (Y - M - D) of payment e.g. EIA20140401 (please quote this reference number when making payment)

Application form to be submitted with proof of payment attached as Annexure 1

### Tax exemption status:

Status: Tax Exempted

## EXCLUSIONS

An applicant is excluded from paying fees if:

- The activity is a community based project funded by a government grant; or
- The applicant is an organ of state.

Applicants are required to tick the appropriate box below to indicate that either proof of payment is attached or that, in the applicant's view, exclusion applies. Proof and a motivation for exclusions must be attached to this application form as Annexure 2.

Proof attached  
Exclusion applies

<input type="checkbox"/>
<input type="checkbox"/>

TYPE OF EXCLUSION	Tick where applicable. Proper motivation must be attached to the application
The activity is a community based project funded by a government grant	
The applicant is an organ of state	

## FEE AMOUNT

Application	Fee
Applications for an amendment of environmental authorisation in terms of the Environmental Impact Assessment Regulations	R2 000

### 3. DETAILS RELATING TO THE ENVIRONMENTAL AUTHORISATION

Initial Environmental  
Authorisation Ref No:

002/08-09/N0993 (Refer to Annexure 4 for Environmental  
Authorisation)

Date of issue of EA and  
EA's expiry date:

Date of issue: 29/04/2010  
EA's expiry date: 29/04/2015

**Project Title:**

The authorization applies in respect of establishment of a business township on site, comprising of 33 erven zoned as follows:  
"Special" permitting offices, shops, restaurants, business, buildings, dwelling units, residential buildings including hotels, public garage, places of public worship, places of instruction, transport nodes, social halls, commercial purposes, institution, places of amusement, private open space, public open space, parking garage structures.

With reference to the NEMA listed activities that following was approved:

The undertaking of the following activities:

Proposed mixed-nodal development on portion of the remaining extent of Portion 1 of the Farm Waterval 5 IR on a 103, 95ha site as per listed activities 1 (k), 1 (o), 7, 15 of GN R 386 and activities 18 and 2 of GN R 387 of 2006, which falls under the jurisdiction of the City of Johannesburg Metropolitan Municipality.

**Property description**

Portions of the Remaining extent of Portion 1 of the Farm Waterval 5 IR (Section 10), Johannesburg Metropolitan Municipality

(Farm/Erft name(s) and number, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application as **Annexure 3**.

**Physical/Street address of proposed sites:**

The study area is situated within the area of jurisdiction of the City of Johannesburg Metropolitan Municipality. It is furthermore situated to the south of Allandale Road and to the west of the N1 Freeway, in close proximity of the N1/ Allandale Road off-ramp.

**Closest City/Town**

Midrand



Current Zoning of site(s)

Was formerly zoned as agriculture, but extensive development already took place on the property. Township establishment already took place in the form of various development pockets that are known as the Jukskei View Townships (various Jukskei View extensions already exist)

Property size(s) (ha / m<sup>2</sup>):

103,95ha

Development footprint size(s) in ha / m<sup>2</sup>:

Proposed activity: 878 000m<sup>2</sup>

SG Digit code(s) of all proposed sites:

TQIR000000000011400074

Coordinates of all sites:

Latitude (S)

26°

15'

59.55"

Longitude (E)

28°

18'

03.43"

Locality map:

A locality map must be attached to the application form. The scale of the 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 map must include the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- road names or numbers of all the major roads as well as the roads that provide access to the site(s)
- a north arrow;
- a legend; and
- GPS co-ordinates (Indicate the position of the proposed activity with the latitude and longitude at the centre point for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should be to at least three decimal places. The projection that must be used in all cases is the WGS-84 spheroid in a national or local projection) *(Refer to Annexure 5 for Figures)*

A certified copy of the environmental authorisation must be attached to this application as **Annexure 4**. In addition, if the amendment requested will affect the layout plan or any designs related to the development, the initial layout plan or designs must be attached to the application together with the new plans or designs.

#### 4. DETAILS OF THE HOLDER OR HOLDERS OF THE ENVIRONMENTAL AUTHORISATION

Name of Applicant:

Atterbury Investments Holdings

Trading name (if any):

N/A

Contact person:

Morne Wilken

Physical address:

Mertech Building, Glenfield Office Park, Oberon Street, Faerie Glen, 0100

Postal address:

Postal code:

Telephone:

(012) 483-8676

Cell:

Fax: (012) 483-8675

E-mail:

The above section must be duplicated if there is more than one applicant.

## 5. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Company of Environmental Assessment Practitioner:	Bokamoso Landscape Architects and Environmental Consultants CC ( <b>Addendum A</b> )		
EAP name / Contact person:	Lizelle Gregory		
Postal address:	P.O. Box 11375, Maroelana		
Postal code:	0161	Cell:	083 255 8384
Telephone:	012 346 3810	Fax:	012 460 7079
E-mail:	lizelleg@mweb.co.za		
EAP Qualifications	Registered Landscape Architect and Environmental Consultant (degree obtained at the University of Pretoria) over 24 years' experience in the following fields Environmental Planning and Management; Landscape Architecture; and Landscape Contracting L. Gregory also lectured at the Technicon of South Africa and the University of Pretoria Professional Practice Number: 97078		
EAP Registration / Associations	IAIA, IFLA, SACLAP, ILASA		

## 6. DETAILS OF THE LANDOWNER

Name of landowner / entity:	Witwatersrand Estates Limited
Contact person:	Mr. Hercules Coenraad Bezuidenhout (authorized representative of the Land-Owner – <b>Refer to Addendum B for Power of Attorney</b> )

Postal address:

**Physical Address:**

Building 2  
Maxwell Office Park  
Maxwell Crescent West  
Waterval City  
Jukskei View  
2090

**Postal Address:**

P.O. Box 2527  
Sunninghill

Postal code:

2157

Telephone:

010 596 9800

E-mail:

alex@atterbury.co.za

Cell:

Fax:

010 596 9801

Consent: Form in Addendum 1 must be filled if the applicant is not the landowner or person in control of the land where the development will / is taking place. Further, the above section must be duplicated in instances where there is more than one landowner.

Municipality in whose jurisdiction the development is located:  
Contact person:

City of Johannesburg Metropolitan Municipality

Mr. Lebo Malefe

Postal address:

P.O. Box 1049  
Johannesburg  
South Africa  
2000

Postal code:

Telephone:

E-mail:

(011) 587-4201

noziphom@joburg.org.za

Cell:

Fax:

086 627 751 6

The above section must be duplicated in instances where there is more than one municipality involved.

**7. AMENDMENTS APPLIED FOR IN TERMS OF PART 1 AMENDMENT PROCESS**

Describe the amendments being applied for and motivation as to why the amendments are required.

Amendment requested	Reason why amendment is required
<p>Amendment of the current Holder of Authorization:</p> <p>Current Holder of Authorization-</p> <p>Atterbury Investments Holdings Morne Wilken</p> <p>Mertech Building Glenfield Office Park Oberon Street Faerie Glen 0100</p> <p>New/Amended Holder of Authorization-</p> <p>Postal Address:</p> <p>ATTACQ WATERFALL INVESTMENT COMPANY (Pty) Ltd (AWIC) P.O. Box 2527 Sunnunghill 2157</p> <p>Physical Address:</p> <p>Building 2 Maxwell Office Park Maxwell Crescent West Waterval City Jukstel View 2090</p>	<p>The name and contact details of the applicant changed and the Decision requires that the Department be informed of a name change and transfer of responsibilities.</p>

Please provide reasons why the amendment will not change the scope of Environmental Authorisation, why the amendment will not increase the level or nature of impact, which impact was assessed and considered when application was made for an Environmental Authorization and as well as how such impact will affect the Interested and Affected Parties

Part 1 of this amendment application is for a name change.

Take note that this amendment application also includes a request for the reduction of a wetland buffer. This amendment will be more substantial and will therefore qualify for a part 2 amendment.

Please provide the nature of impact (positive or negative) that will arise as a result of granting or not granting the proposed amendment and how such impact will affect the Interested and Affected Parties

No impact

## 7.1 Amendments with respect to proposed change of ownership or transfer of rights and obligations

If the amendment relates to the change of ownership or transfer of rights and obligations, please attach to this form, a letter by the person to whom the rights and obligations are to be transferred, indicating that the person accepts the rights and obligations contained in the Environmental Authorisation and that the person has the ability to implement the mitigation and management measures as well as to comply with the conditions of the Environmental Authorisation.

## 8. AMENDMENTS APPLIED FOR IN TERMS OF PART 2 AMENDMENT PROCESS

### 8.1 ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROPOSED AMENDMENT

A report with respect to an assessment of all impacts related to the proposed change (including the advantages and disadvantages associated with the proposed change) and measures to ensure avoidance, management and mitigation of impacts associated with such proposed change; and any proposed changes to the EMPr (including an amended EMPr with the proposed changes effected) must be submitted to the Department:

- within 90 days of receipt of the application by the Department, which report has been subjected to a public participation process which must be agreed to with the Department; or
- within 140 days of receipt of the application by the Department, as significant changes have been made or significant new information has been added to the report, which changes or information was not contained in the report consulted on during the initial public participation process which was agreed to with the Department and undertaken as part of the amendment application and that the revised report will be subjected to another public participation process of at least 30 days.

Describe the proposed assessments that will be undertaken to inform the application for the substantive amendment:

The amendment application will be for the relaxing of the wetland buffer related conditions imposed in the EMP and in the Decision. The relaxation of the buffer will occur in an area that accommodates a very disturbed wetland/ riparian zone. The wetland specialist and Bokamoso are of the opinion that no wetland/ riparian buffer is required around the disturbed watercourse.

The study area for this amendment is situated just to the west of the N1 and just to the south of Allandale Road and the applicant already completed some rehabilitation works in this very disturbed and artificial watercourse.

Take note that two related EIA Authorizations that restrict any form of development within the buffer area were issued. The reference number of the other EIA Authorization is Gaut: 002/05-06/1476.

It will therefore also be necessary to apply for the amendment of this EIA Authorization. A separate Amendment application will be submitted for the proposed amendment of such Decision (the two amendment applications will be submitted as parallel applications and we will illustrate in the Impact Assessment how the two applications dove-tail).

The following assessments/surveys will be conducted as part of the EA to be submitted:

- A historical survey of the origin of the watercourse and identification of human impacts that caused the modification of the watercourse;
- A revised wetland delineation and assessment of the status of the wetland;
- An assessment of the impacts of the proposed new activities within the buffer area on the watercourse and ecological systems.

A proposed new layout for development within and around the buffer area together with an amended storm water management plan will also be incorporated as part of the amendment application.

The application process will also involve a public participation process. The public participation will be conducted in line with the NEMA Guidelines for public participation and in line with Chapter 6 of the Amended NEMA EIA Regulations.

### 9. AUTHORISATION FROM OTHER GOVERNMENT DEPARTMENTS

Are any permit(s), licenses or other authorisations required from any other departments before the requested amendments can be effected?

Yes

No

If yes, please complete the table below.

Name of department and contact person	Authorisation required	Authorisation applied for (yes/ no)
Department of Water and Sanitation	Amendment of Section 21 WUL	In Process

# Annexure 1





Customer Care: 0860 123 000  
Website: [www.standardbank.co.za](http://www.standardbank.co.za)  
26 April 2016

## Payment receipt

**Beneficiary name**

GPG Agriculture

**Bank**

FIRST NATIONAL BANK

**Branch**

RMB CORPORATE BANKING (25500500)

**Account number**

62298144058

**Your reference**

Application

**Beneficiary reference**

AmendLP10-2

**Payment date**

26 April 2016

**Amount**

R 2 000.00

The Standard Bank of South Africa Limited (Reg. No. 1992/00738/06, Authorized financial services provider, VAT Reg No. 410016546) Registered credit provider (NCRCP15). We subscribe to the Code of Banking Practice of the Banking Association South Africa and, for unresolved disputes, support resolution through the Ombudsman for Banking Services.

0993 -  
LP10

Your details

From account  
62-084-451-1 CURRENT ACC BOKAMOSO LANDSCAPE A

Payment Details

Code	Beneficiary name	Beneficiary reference	My reference	Amount	Date of payment	Confirmation	Name	Details	Payment results
142	GPO AGRICULTURE	BA20151116 LP101	GDARD	R 2,000.00	2015-11-10	E-mail	Boniswa Bebi	Boniswa.Bebi@gauteng.gov.za	Transaction has been successfully processed
				Total payment amount	R 2,000.00				

[Print](#) [Close](#)

## **Annexure 2**

## **Annexure 3**

## **Annexure 4**



**DEPARTMENT OF AGRICULTURE  
AND RURAL DEVELOPMENT**

Diamond Corner Building, 58 Stoff & Market Street, Johannesburg  
P O Box 8769, Johannesburg, 2000

Telephone: (011) 355-1500  
Fax: (011) 357-1860

Reference: 002/00-09/N0993  
Enquiries: Loyiso Mkhama  
Telephone: (011) 355-1561  
Email: Loyiso.Mkhama@gaute.gov.za

Atterbury Investments Holdings  
Mertech Building  
Glenfield Office Park  
Oberon Street  
Fuerie Glen  
0100

Attn: Morne Wilton  
Fax: (012) 483-8675  
Tel: (012) 483-8676

PER FACSIMILE/REGISTERED MAIL

Dear Sir/Madam,

**ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED MIXED USE NODAL DEVELOPMENT ON A PORTION OF THE REMAINING EXTENT OF PORTION 1 OF THE FARM WATERVAL 5 LR (SECTION 10), JOHANNESBURG METROPOLITAN MUNICIPALITY**

With reference to the abovementioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation and reasons for the decision are attached herewith.

In terms of Regulation 10(2) of the Environmental Impact Assessment Regulations, 2006, you are instructed to notify all registered interested and affected parties, in writing and within 10 calendar days of the date of this letter, of the Department's decision in respect of your application as well as the provisions regarding the making of appeals that are provided for in the regulations.

Your attention is drawn to Chapter 7 of the Regulations which regulates appeal procedures. Should you wish to appeal any aspect of the decision, you must, *inter alia*, lodge a notice of intention to appeal with the MEC, within 10 days of the date of this letter, by means of one of the following methods:

By facsimile: (011) 333-0620;  
By post: P.O. Box 8769, Johannesburg 2000; and  
By hand: 16<sup>th</sup> Floor, Diamond Corner Building, 58 Stoff Street, Johannesburg.

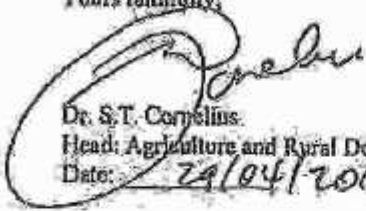
CE: JPD  
Office of the MEC

10-04-2010

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Should you decide to appeal, you must serve a copy of your notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection.

Yours faithfully,

  
Dr. S.T. Cornelius  
Head: Agriculture and Rural Development  
Date: 29/04/2010

OPARD  
Office of the HOD

10-04-29 0056







ENVIRONMENTAL AUTHORISATION

Authorisation register number:	Gaut 002/08-09/N0993
Holder of authorisation:	Attorbury Investments Holdings
Location of activities:	Portion of the Remaining Extent of Portion 1 of the farm Waterval 5-IR

GDARD  
Office of the MOD

10-04-10

0035

Two handwritten signatures are present at the bottom right of the page. The first signature is a stylized, cursive name, and the second is a simpler, more linear signature.

Department of Agriculture and Rural Development  
Environmental Authorisation Ref. No. GA01002708-09/NO293

### Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

### Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2006 the Department hereby authorises Atterbury Investments Holdings with the following contact details -

Morae Wilson  
Atterbury Investments Holdings  
Meritech Building  
Glenfield Office Park  
Oberon Street  
Faerie Glen  
0100

Fax: (012) 483 - 8675  
Tel: (012) 483 - 8676

GDARD  
Office of the HOD

10-06-2010 - 0155

to undertake the following activities ("hereafter referred to as "the activities")-

proposed mixed use nodal development on a portion of the remaining extent of portion 1 of the Farm Waterval 5 LR on a 103.95 hectare site as per listed activities 1(a), 1(o), 7, 15 of GN R.386 and activities 18 and 2 of EIA R.387 of 2006, which falls under the jurisdiction of the City of Johannesburg Metropolitan Municipality.

Please note that activity 1(p) has been removed from the Government Notice No. R386, and has been included in the Government Notice No. 718 category B of the listed activities according to the National Environmental Management: Waste Act, 2008 (Act 59 of 2008). Effectively from the 1<sup>st</sup> of July 2009, the Department of Environmental Affairs (DEA) is the competent authority for the above activity.

The applicant intends to establish a business township on site, comprising of 33 erven zoned as follows:

"Special" permitting offices, shops, restaurants, business buildings, dwelling units, residential buildings including hotels, public garage, places of public worship, places of instruction, transport nodes, social halls, commercial purposes, institution, places of amusement, private open space, public open space, parking garage structures.

The granting of this environmental authorisation is subject to the conditions set out below.

### Conditions

#### Scope of authorisation

- 1.1 Authorisation of the activities is subject to the conditions contained in this authorisation, which conditions form part of the environmental authorisation and are binding on the holder of the authorisation.
- 1.2 The holder of the authorisation shall be responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of the authorisation.
- 1.3 The activities authorised may only be carried out at the property indicated above.

Department of Agriculture and Rural Development  
 Environmental Authorisation Ref. No. GAU/002/08-09/ND993

- 1.4 Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.
- 1.5 These activities must commence within a period of five (5) years from the date of issue. If commencement of any activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activities to be undertaken.
- 1.6 This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activities.

#### Appeal of authorisation

- 1.7 The holder of the authorisation must notify every registered interested and affected party, in writing and within ten (10) calendar days, of receiving notice of the Department's decision to authorise the activities.
- 1.8 The notification referred to in 1.7 must:
  - 1.8.1 Specify the date on which the authorisation was issued;
  - 1.8.2 Inform the interested and affected parties of the appeal procedure provided for in Chapter 7 of the regulations; and
  - 1.8.3 Advise the interested and affected parties that a copy of the authorisation and reasons for the decision will be furnished on request.

Office of the HOB

#### Management of the activities

- 10-04-29 0055
- 1.9 It has been noted that a draft Environmental Management Plan (EMP) has been attached to the report. A final Environmental Management Plan (EMP) must be submitted to the Department for review and comments before the commencement of any construction activity on site.
  - 1.10 The construction area must to be clearly demarcated before any construction activity may take place. Signage must be displayed during the construction phase to inform the general public about potential dangerous conditions on site.
  - 1.11 Oil, fuel and chemicals must be confined in a specific and secured area throughout the construction period to prevent potential spills and leaks.
  - 1.12 All waste generated on site must be disposed of at a recognised and certified landfill site.
  - 1.13 Adequate measures must be implemented regarding the collection, removal and disposal of waste during each stage of the development, from site preparation to final construction and operational stages.
  - 1.14 No waste may be buried, hidden or burned on site. Wastes must be disposed off at an appropriate, permitted waste disposal facility.
  - 1.15 No solid waste must be dumped into any water source. Waste skips must be provided on the construction site for the collection and disposal of solid waste.
  - 1.16 All hazardous materials must be stored in a secured area, which is fenced and has a restricted entry. Hazardous materials must be stored in an appropriate manner, a concrete floor must be used to prevent spills, pollution which leads to groundwater contamination through seepage.
  - 1.17 The waste disposal agreement that the developer together with the registered waste disposal contractor will be entering into, must be in compliance with the local bylaws of the municipality concerned.
  - 1.18 Dust suppression measures must be implemented throughout the construction phase.
  - 1.19 The drainage system should be designed to convey all contaminated water and spills of fuel to a suitable collection or containment points for disposal or treatment in order to avoid negative impacts towards water quality.
  - 1.20 Service infrastructure construction such as roads, storm water and sewer pipes must be undertaken to the satisfaction of the City of Johannesburg Metropolitan Municipality and Johannesburg Roads Agency (JRA).

Department of Agriculture and Rural Development  
 Environmental Authorisation Ref. No. Govt 002268-09/140993

- 1.21 Construction should be limited to dry seasons as far as possible, with silt fencing and sediment traps being implemented to negate the impact of soil erosion & sub-sequential siltation of the associated aquatic habitat in the vicinity of the proposed development.
- 1.22 Landscaping, re-vegetation, and rehabilitation of all disturbed areas must be undertaken post the construction period with indigenous plant species.

#### Monitoring, Recording and reporting to the Department

- 1.23 A suitable qualified person in the natural sciences must be appointed as an Environmental Control Officer (ECO).
- 1.24 The ECO must undertake site inspections at least once a week and compile a monthly environmental audit report.
- 1.25 The audit report must record any environmental incidents that occurred, how were these reported and the corrective measures undertaken. In addition, the audit report must detail how the environmental holder has complied with the EMP and this environmental authorization.


#### Commencement of the activity

- 1.26 A fourteen (14) day written notice must be given to the Department that the activities will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activities will commence.

#### General

- 1.27 A copy of this authorisation must be kept at the property where the activities will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.
- 1.28 Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/ or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.
- 1.29 The holder of the authorisation must notify the Department, in writing and within seventy two (72) hours if a condition of this authorisation is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
- 1.30 Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.

Date of environmental authorisation: 29/04/2010

  
 Dr. S.T. Cornelius  
 Head: Agriculture and Rural Development

GDARD  
 Office of the HOD

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Department of Agriculture and Rural Development  
 Environmental Authorisation Ref. No. GAUF 002/08-09/ND993

### Annexure 1: Reasons for Decision

#### 1. Background

The applicant, Atterbury Investments Holdings applied for authorisation to undertake the following activities -

proposed mixed use node development on a portion of the remaining extent of portion 1 of the Farm Waterval 5 I.R on a 103.95 hectare site as per listed activities 1(k), 1 (m), 1(o), 4, 6, 7, 15 of GN R.386 and activities 18 and 2 of GN R.387 of 2006, which falls under the jurisdiction of the City of Johannesburg Metropolitan Municipality.

Please note that activity 1(p) has been removed from the Government Notice No. R386, and has been included in the Government Notice No. 718 category B of the listed activities according to the National Environmental Management: Waste Act, 2008 (Act 59 of 2008). Effectively from the 1<sup>st</sup> of July 2009, the Department of Environmental Affairs (DEA) is the competent authority for the above activity.

According to the report, activities 4 and 6 are not applicable to this application; the activities have been addressed in a previous environmental authorisation for Toksiki View Extension 4.

The applicant intends to establish a business township on site, comprising of 33 erven zoned as follows:

"Special" permitting offices, shops, restaurants, business buildings, dwelling units, residential buildings including hotels, public garage, places of public worship, places of instruction, transport nodes, social halls, commercial purposes, institution, places of amusement, private open space, public open space, parking garage structures.

The applicant appointed Golder Associates (Pty) Ltd to undertake an Environmental Impact Assessment Process.

#### 2. Information considered in making the decision

In reaching its decision, the Department took, inter alia, the following into consideration:

- a) The information contained in the:
  - Environmental Impact Assessment Report dated 27 November 2009; and
  - Relevant information contained in the Departmental information base including -
  - The Geographical Information System especially the C-Plan Version 2; and
- c) The objectives and requirements of relevant legislation, policies and guidelines, including:
  - The principles contained in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

#### 3. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below:

- a) Consultation with Interested and Affected Parties (I & APs).
- b) The RSDP of the area.
- c) Visual Impact Assessment
- d) Availability of bulk services.

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Department of Agriculture and Rural Development  
Environmental Authorisation Ref. No. GA02/08-07/MS293

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#### 4. Findings

After consideration of the information and factors listed above, the Department made the following findings -

- a) Public Participation process was conducted as per Regulation 56 of GN. R385 of 2006.
- b) Region A Residential Spatial Development Framework (R&DF) supports the proposed development.
- c) It has been deduced that the proposed development will be able to blend in with the surrounding environment and will not look out of place due to its location within the urban realm.
- d) Existing bulk services are to be utilised as far as possible with appropriate upgrades where necessary.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activities can be mitigated to acceptable levels. Authorisation for this application is accordingly granted.

GDARD  
Office of the HOD

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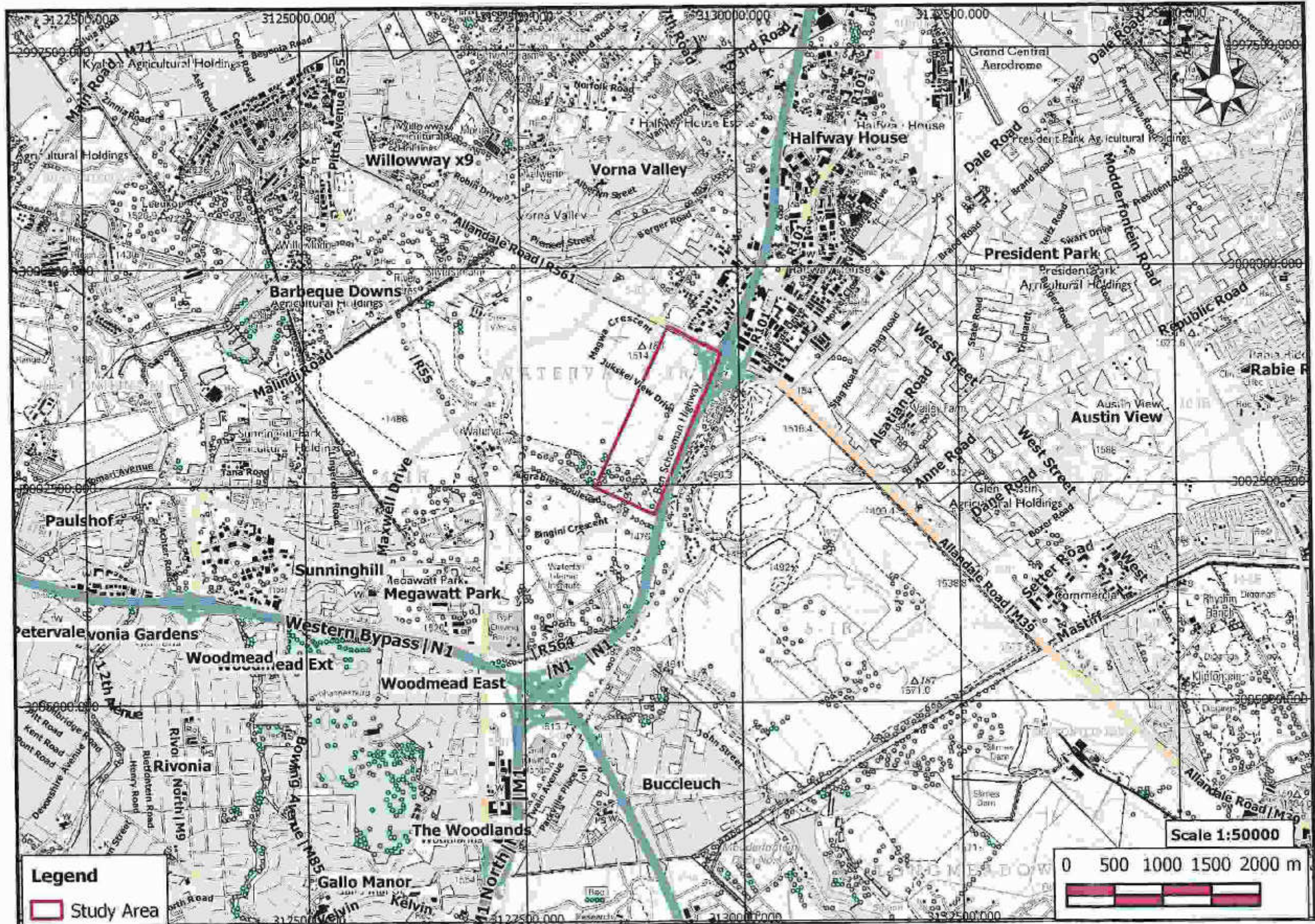


## Annexure 5

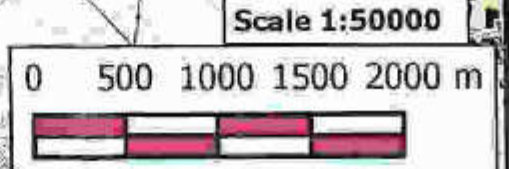


# Amendment Application

## Locality Map



**Legend**  
 Study Area



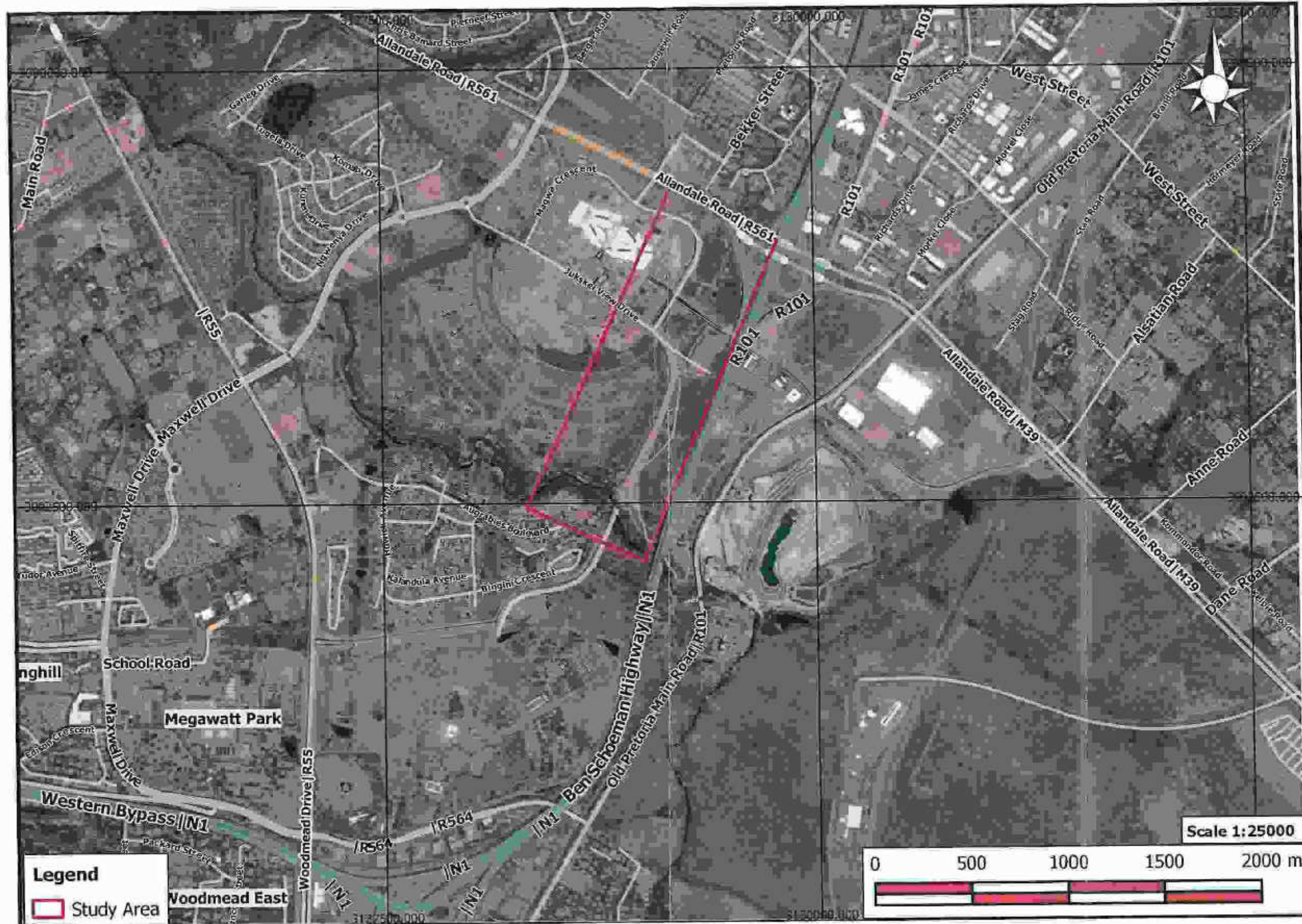
Projection – Transverse Mercator  
 Datum- Hartbeeshoek 1994  
 Reference Ellipsoid –WGS 1984  
 Central Meridian -29

GAUT Reference Nr: 002/08-09/N0993



# Amendment Application

## Aerial Map



**Legend**  
 Study Area

Projection – Transverse Mercator  
 Datum- Hartebeeshoek 1994  
 Reference Ellipsoid –WGS 1984  
 Central Meridian -29

GAUT Reference Nr: 002/05-06/1476



## **Addendum A**

## ADDENDUM A (CONSENT IN TERMS OF REGULATION 39 OF THE NEMA EIA REGULATIONS)

Consent in terms of Regulation 39 of the 2014 NEMA EIA Regulations by the landowner or person in control of the land that the proposed activity/ies may be undertaken on the land in question

### When to use this form

Note: This form must be completed when an application for amendment in terms of the 2014 NEMA EIA Regulations is submitted where the proposed amendment will impact on the activity undertaken/to be undertaken on the land or if the amendment relates to the transfer of rights and obligations.

### Notes for completing and submitting this form

- (1) This form is current as of December 2014. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been released by the Department.
- (2) This form must be attached to the application form for amendment.
- (3) Unless protected by law, all information contained in the form will become public information.

### CONTACT INFORMATION

Name of land owner/ person in control of the land	Witwatersrand Estates Limited		
Trading name (if any):	N/A		
Contact person:	Hercules Coenraad Bezuidenhout (authorized representative of the Land-Owner – <i>Refer to Addendum B for Power of Attorney</i> )		
	Take note that Mr. Bezuidenhout also represents the new applicant.		
Physical address:	<b>Physical Address:</b>  Building 2 Maxwell Office Park Maxwell Crescent West Waterval City Jukskei View 2090		
Postal address:	P.O. Box 2527 Sunninghill		
Postal code:	2157	Cell:	
Telephone:	010 596 9800	Fax:	010 596 9801
E-mail:	alex@afterbury.co.za		

## CONSENT

1. I/we the undersigned (insert the name/s of the owner/s of the land)

### **Witwatersrand Estates Limited**

of identity number/registration number (insert the owner/s ID number/s or the registration number of the legal entity)

1934/005481/06

am/ are the registered owner/s of the property (insert description of the property/ies and title deed numbers)

Portions of the Remaining extent of Portion 1 of the Farm Waterval 5 IR (Section 10), Johannesburg Metropolitan Municipality

### **Title Deed Number:**

T 116467/05

located at (insert physical address or a brief description of the location of the property)

The study area is situated within the area of jurisdiction of the City of Johannesburg Metropolitan Municipality. It is furthermore situated to the south of Allandale Road and to the west of the N1 Freeway, in close proximity of the N1/ Allandale Road off-ramp.

2. I/ we hereby give consent to the applicant /person to whom the rights are to be transferred (insert the name/s of the applicant/person/s)

### **ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD – ALSO REFERRED TO AS AWIC**

of identity number/registration number (insert the owner/s ID number/s or the registration number of the legal entity)

Registration Number: 2000/013587/07

to undertake the following activity(ies) on the property (insert a brief description of the project and identified activity(ies) in question and amendment that will be applied for):

### **The approved development of the above mentioned property includes the following:**

The undertaking of the following activities:

Proposed mixed-nodal development on portion of the remaining extent of Portion 1 of the Farm Waterval 5 IR on a 103, 95ha site as per listed activities 1 (k), 1 (o), 7, 15 of GN R 386 and activities 18 and 2 of GN R 387 of 2006, which falls under the jurisdiction of the City of Johannesburg Metropolitan Municipality.

ATTACQ will apply (in this amendment application) for the relaxation of one of the wetland buffers imposed by the original authorization issued for the development.

Signature of land owner/person in control of the land or authorised representative

JS

Name of authorised person if the landowner is a legal entity

Date

18/11/2015

## **Addendum B**



ADDENDUM B

10. DECLARATIONS

DECLARATION OF THE APPLICANT

I HERCULES COENRAAD BELUIDENHOUT declare under oath that I

- am, or represent, the applicant in this application;
- have appointed / will appoint (delete that which is not applicable) an Environmental Assessment Practitioner (EAP) to act as the independent EAP for this application / will obtain exemption from the requirement to obtain an environmental assessment practitioner;
- will provide the EAP and the competent authority with access to all information at my disposal that is relevant to the application;
- will be responsible for the costs incurred in complying with the Regulations, including but not limited to –
  - costs incurred in connection with the appointment of the EAP or any person contracted by the EAP;
  - costs incurred in respect of the undertaking of any process required in terms of the Regulations;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the Regulations;
  - costs in respect of specialist reviews, if the competent authority decides to recover costs; and
  - the provision of security to ensure compliance with conditions attached to an environmental authorisation, should it be required by the competent authority;
- will ensure that the EAP is competent to comply with the requirements of the Regulations and will take reasonable steps to verify that the EAP
  - o know the Act and the regulations, and how they apply to the proposed development
  - o know any applicable guidelines
  - o perform the work objectively, even if the findings do not favour the applicant
  - o disclose all information which is important to the application and the proposed development
  - o have expertise in conducting environmental impact assessments
  - o complies with the Regulations
- will inform all registered I&APs of any suspension of the application as well as of any decisions taken by the competent authority in this regard;
- am responsible for complying with the conditions of any environmental authorisation issued by the competent authority;
- hereby indemnify the Government of the Republic, the competent authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action which the applicant or EAP is responsible for in terms of these Regulations;
- will not hold the competent authority responsible for any costs that may be incurred by the applicant in proceeding with an activity prior to obtaining an environmental authorisation or prior to an appeal being decided in terms of these Regulations;
- will perform all other obligations as expected from an applicant in terms of the Regulations;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act.

[Signature]  
Signature of the applicant/ Signature on behalf of the applicant:

AWIC  
Name of company (if applicable):

18/11/2015  
Date:

[Signature]  
Signature of the Commissioner of Oaths:

18/11/2015  
Date:

ADVOCATE OF THE HIGH COURT  
Designation:

Commissioner of Oaths Official stamp (below)

The Deponent declares that:  
(a) He knows and understands the contents of this affidavit and that it is the truth;  
(b) That he views the prescribed oath, as binding on his conscience;  
(c) That there was compliance with Government Notice R1258 of 21 July 1978 (as amended).

[Signature] 18/11/2015 15  
COMMISSIONER OF OATHS DATE

ALEXANDER COENRAAD DE BEER  
Commissioner of Oaths  
Ex Officio  
Advocate of the High Court of South Africa  
02 Magwa Cres West, Waterfall City, 2090

## **Addendum C**

**ADDENDUM C**

**DECLARATION OF THE EAP**

LIZELLE GREGORY, declare that -

- I act as the independent environmental practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the Regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of regulation 71 of the Regulations and is punishable in terms of section 24F of the Act.

  
Signature of the Environmental Assessment Practitioner:

DOUGLASS LANDSCAPE ARCHITECTS & ENVIRONMENTAL CONSULTANTS CC.  
Name of company:

19/4/2016  
Date:

  
Signature of the Commissioner of Oaths:

2016-05-03  
Date:

Pretoria  
Designation:

Commissioner of Oaths Official stamp (below)

**IZAK JOHANNES ROSSOUW**  
COMMISSIONER OF OATHS  
36 LEBOMBO ROAD  
ASHLEA GARDENS  
PRETORIA 0081  
PROFESSIONAL ACCOUNTANT OF SOUTH AFRICA

## **Addendum D**

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**ROUND ROBIN RESOLUTION OF A MEETING OF THE BOARD OF  
DIRECTORS OF  
ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD**  
Registration Number 2000/013587/07  
("AWIC" / "the Company ")

---

**IT IS RESOLVED -**

1. That the Company, in order to give effect to the effective and efficient execution of the provisions of the Development Rights Agreement ("the DRA"), dated 21 August 2008 and concluded between Attacq Property Fund Limited (which name was changed to Attacq Limited – "Attacq") and Waterval Investment Company (Pty) Ltd and Waterval Development Company (Pty) Ltd, as amended (Attacq ceded and assigned its rights and obligations under the DRA to AWIC on 4 December 2009), and or to the provisions of any similar agreement to be concluded between the same parties and/or others pertaining to the property known as the remainder of portion 1 of the farm Waterval 5 IR, the remainder of portion 62 of the farm Waterval 5 IR , Registration Division IR (collectively referred to as "the Waterfall Property"), any land acquired by AWIC or Attacq or related party in respect of the Waterfall Property and/or any township established thereon or any erf in such a township in respect of the Waterfall Property (hereinafter referred to as the "Property") authorizes:

*[Handwritten signature]*

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**ROUND ROBIN RESOLUTION OF A MEETING OF THE BOARD OF  
DIRECTORS OF  
ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD  
Registration Number 2000/013587/07  
("AWIC" / "the Company ")**

---

**IT IS RESOLVED -**

1. That the Company, in order to give effect to the effective and efficient execution of the provisions of the Development Rights Agreement (" the DRA"), dated 21 August 2008 and concluded between Attacq Property Fund Limited (which name was changed to Attacq Limited – "Attacq") and Waterval Investment Company (Pty) Ltd and Waterval Development Company (Pty) Ltd, as amended (Attacq ceded and assigned its rights and obligations under the DRA to AWIC on 4 December 2009), and or to the provisions of any similar agreement to be concluded between the same parties and/or others pertaining to the property known as the remainder of portion 1 of the farm Waterval 5 IR, the remainder of portion 62 of the farm Waterval 5 IR , Registration Division IR (collectively referred to as "the Waterfall Property"), any land acquired by AWIC or Attacq or related party in respect of the Waterfall Property and/or any township established thereon or any erf in such a township in respect of the Waterfall Property (hereinafter referred to as the "Property") authorizes:

*J*  
*[Signature]*



**ATTERBURY PROPERTY DEVELOPMENTS PROPRIATERY LIMITED**

Registration number 2004/01670/07

**"APD"**

in its capacity as Development Manager appointed in terms of the Development Management Agreement dated 7 December 2014 the ("DMA") and APD is hereby also specifically authorized hereby to appoint any director or and, when such Director is not available, in the alternative, any other Director of APD, both which Directors can act independently and severally, with the power of substitution;

to sign documents on behalf of the Company, in respect of the provisions of the DRA, Developments, Development and Development Management Functions or any other matter as defined in the DMA which,

- 1.1 shall include a power of attorney, and/ or;
- 1.2 may include any documents deemed necessary by such authorized Director to give effect to this Resolution;
- 1.3 directly or indirectly pertain to the matters listed hereinafter including documents directed to the Registrar of Deeds and the Surveyor General in terms of the applicable legislation; and /or


A handwritten signature in black ink, appearing to be 'E. Smith', with the number '3' written to its right.

- 1.4 are directed to or required by any Municipality or any Provincial or National Department, Authority or body, as the case may be; and/ or
  - 1.5 are intended for procurement of any approval or permission or authorization of whatsoever nature required in respect of the Property mentioned hereinbefore or in respect of any part, portion or component thereof, from the authorities and or bodies mentioned; and/ or
  - 1.6 are required in order to pursue any such aforementioned applications to finality; and /or
  - 1.7 are required for purposes of the execution of any such aforementioned approvals and or permissions obtained; and/ or
  - 1.8 are required to, for all the purposes mentioned hereinbefore, in order to deal with such mentioned authorities by way of negotiations, attendances, the lodgment of Appeals and/or applications to a competent Court on behalf of the Company in his capacity as Director or by way of Consultants, legal Counsel and expert persons, the appointment of whom may include the granting of a power of substitution to such appointees whenever such appointments, in the discretion of such authorized Director, is deemed necessary.
2. The authority granted above by way of paragraph 1, shall pertain to the following applications and actions:

2.1 TOWN PLANNING AND ENVIRONMENTAL MATTERS



- 2.1.1 to apply for the establishment of a township in terms of the Town Planning and Township Ordinance no. 15 of 1986 ("The Ordinance") which authority shall include the authority to change the name of the township owner in terms of section 78(1) of such Ordinance; or to apply for and effect any amendment to such township in terms of section 98(5) and section 100 of such Ordinance;
- 2.1.2 to apply for a consent use in terms of the Ordinance read with the applicable Town Planning Scheme;
- 2.1.3 to apply for the amendment of a Town Planning Scheme in terms of section 56 or 28 of the Ordinance;
- 2.1.4 to apply for a consolidation or subdivision of erven in the township in terms of section 92 of the Ordinance;
- 2.1.5 to apply for the division of an approved township in terms of section 99 of the Ordinance;
- 2.1.6 to apply for the amendment or cancellation of a general plan pertaining to a township in terms of section 89 of the Ordinance;

  
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- 2.1.7 to apply for an extension of boundaries of an existing township in terms of section 88 of the **Ordinance**;
- 2.1.8 to apply for street closures in terms of section 67 of the Local Government **Ordinance 1939**;
- 2.1.9 to apply for park closures in terms of section 68 of the Local Government **Ordinance 1939**;
- 2.1.10 to apply for the removal of restrictive title deed conditions in terms of the **Gauteng Removal of Restrictions Act 3 of 1996** in respect of the **property** or any portion thereof which authority shall include the lodgment of a simultaneous application for amendment of a prevailing **Town Planning Scheme**;
- 2.1.11 to apply for the approval of a **Site Development Plan** in terms of any conditions of establishment or the conditions imposed in terms of an approved **Town Planning Scheme**;
- 2.1.12 to apply for approvals in terms of section 82 and 101 of the **Ordinance** in respect of a township mentioned hereinbefore and for the issue of certificates in respect of any such township by the Local Authority Involved;

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- 2.1.13 to apply for any authorizations in terms of Provincial or National Legislation for any water use license, environmental authorization or road access, road construction and way-leaves from any applicable authority;
- 2.1.14 to apply for the permission to utilize Eskom power line servitudes for parking and to sign any documents which may be necessary to amend the conditions in any existing registered servitude at the Registrar of Deeds;
- 2.1.15 to apply for the division of farm land in terms of the provisions of the Subdivision of Land Ordinance 1986 or if applicable, the Subdivision of Agricultural Land Act, Act 70 of 1970;
- 2.1.16 to apply for a land development area, authorization, permission, land use change or consent as mentioned hereinbefore, in terms of any other applicable legislation or other existing or future legislation.
- 2.1.17 to apply for the relaxation of building lines in terms of the provisions of the prevailing town planning scheme;
- 2.1.18 to apply for the cancellation or partial cancellation or the encroachment of servitudes in terms of the applicable legislation; and

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2.1.19 to apply for any other permission or consent or approval in terms of the legislation or requirements mentioned in this paragraph.

2.1.20 marketing functions as contemplated in terms of clause 6.31 of the DMA.

2.2 APPLICATIONS FOR APPROVALS IN TERMS OF THE NATIONAL BUILDING REGULATIONS & BUILDING STANDARDS ACT 103 OF 1977

2.2.1 to apply for approval of building plans in terms of section 4 of the National Building Regulation and Building Standards Act 1977 (hereinafter referred to as the "NBRBSA");

2.2.2 to apply for approval envisaged in terms of section 7(6) of the NBRBSA to commence with construction without approved building plans and for a further extension of the duration of such approval after initial procurement thereof;

2.2.3 to lodge an appeal against the decision of the Local Authority in respect of building plans submitted to the Review Board in terms of Section 9 of the NBRBSA;

2.2.4 to apply for the connection of any engineering services as may be required by the Local Authority or any other Authority for purposes of the

*P. Adew*



approval of any of the applications referred to in paragraphs 2.1 and 2.2 of this Resolution;

2.2.5 to apply for any consent or approval which may be deemed necessary by the relevant Authority to obtain temporary or permanent occupancy of any buildings erected by the Company on the property as is envisaged in terms of Section 14 or Section 14A of the NBRBSA.

2.2.6 to, if required, lodge an Internal Appeal in terms of Section 62 of the Local Government: Municipal Systems Act 2000, in respect of any decision of a Local Authority granted in respect of any Applications referred to in paragraphs 2.1 and 2.2 of this Resolution and or approach a competent Court with an application for urgent interim, mandatory or any other relief considered appropriate to procure the reasonable and expeditious processing of the Applications envisaged in paragraphs 2.1 and 2.2 of this Resolution and the review, set aside or correct any such decisions of the Authorities mentioned.

3. The authority granted by way of paragraph 1 above, shall also pertain to the following actions:

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**3.1 NOTARIAL AND TENANT LEASE AGREEMENTS WITH THE LANDLORD IN RESPECT OF THE PROPERTY REFERRED TO IN PARAGRAPH 1 HEREOF AND OTHER AGREEMENTS WITH THIRD PARTIES**

Subject to clause 13 of the DMA :

3.1.1 To enter, subject to the provisions of paragraph 3.1.4, into any notarial lease agreement, or sign a release in respect of such notarial lease agreement regarding any portion of the property regarding a development pocket, a Township or a Stand established or procured in respect of such property;

3.1.2 to enter into any agreement relating to the construction of Infrastructure, a building or structures or the appointment of contractors or professional team as defined in the DMA in execution of procured land use rights in respect of any portion of the property or a development pocket, township or erf established on such property as well as any agreements and arrangements as contemplated in clause 13.1 of the DMA;

3.1.3 to enter into any agreement or arrangement as contemplated in clause 13.2 of the DMA;

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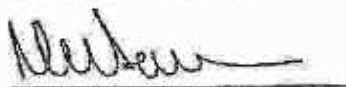
- 3.1.4 to enter into and on behalf of the Company, into a services agreement and or infrastructure maintenance agreement in respect of any approved township envisaged hereinbefore and sign such agreement on behalf of the Company and to also conclude an agreement with the Local Authority with regard to the payment of bulk service contributions as is envisaged in terms of section 63 of the Ordinance;
- 3.1.5 The authority granted by way of paragraph 3.1.1 hereof may, in the event that deviation from the standard form of lease agreement (as amended), for a Pocket Lease or Stand Lease or any addenda thereto as referred to in the Development Rights Agreement is required, only be entered into after consultation with the Director authorized by AWIC Asset Manager (Attacq Management Services Proprietary Limited) or when that Director is not available, after consultation with any other Director of that Company.
- 3.1.6 To enter into Tenant leases subject to approval by the Director authorized by AWIC Asset Manager (Attacq Management Services Proprietary Limited) and the provisions of clause 6.23 of the DMA or when that Director is not available after consultation with any other Director of that Company .
4. The resolutions of the Board dated 15 February 2014 and 29 May 2014 regarding the same matters and authorization is hereby substituted with



immediate effect: Provided that everything done or still in process on behalf of the Company by virtue of or in terms of such substituted Resolutions, shall remain valid and binding on the Company and shall be pursued to finality by the authorized representatives and agents of the Company in terms of such substituted Resolution.

- 5. Any of the Directors of AWIC is hereby authorized to sign any documents to give effect to this Resolution.
- 6. Everything done by APD in accordance with the resolutions dated 15 February 2014 and 29 May 2014 mentioned under paragraph 4 above as well as in terms of the DMA thusfar is hereby ratified.

\_\_\_\_\_  
PIERRE TREDoux



\_\_\_\_\_  
MEL HAMMAN



\_\_\_\_\_  
MORNE CORNELIUS WILKEN



\_\_\_\_\_  
STEWARD SHAW-TAYLOR

DATE: SIGNED ON  
17/02/2015  
SEE ATTACHED

DATE: 16 02 2015

DATE: 16/02/2015

DATE: 17/02/2015

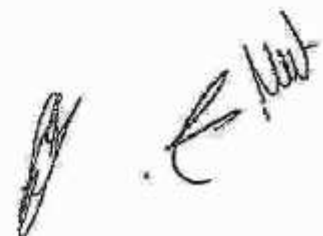
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**ROUND ROBIN RESOLUTION OF A MEETING OF THE BOARD OF  
DIRECTORS OF  
ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD  
Registration Number 2009/013587/07  
("AWIC" / "the Company")**

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**IT IS RESOLVED -**

1. That the Company, in order to give effect to the effective and efficient execution of the provisions of the Development Rights Agreement ("the DRA"), dated 21 August 2008 and concluded between Attacq Property Fund Limited (which name was changed to Attacq Limited - "Attacq") and Waterval Investment Company (Pty) Ltd and Waterval Development Company (Pty) Ltd, as amended (Attacq ceded and assigned its rights and obligations under the DRA to AWIC on 4 December 2009), and or to the provisions of any similar agreement to be concluded between the same parties and/or others pertaining to the property known as the remainder of portion 1 of the farm Waterval 5 IR, the remainder of portion 62 of the farm Waterval 5 IR, Registration Division IR (collectively referred to as "the Waterfall Property"), any land acquired by AWIC or Attacq or related party in respect of the Waterfall Property and/or any township established thereon or any erf in such a township in respect of the Waterfall Property (hereinafter referred to as the "Property") authorizes:



**ATTERBURY PROPERTY DEVELOPMENTS PROPRIATERY LIMITED**

**Registration number 2004/01670/07**

**"APD"**

In its capacity as Development Manager appointed in terms of the Development Management Agreement dated 7 December 2014 the ("DMA") and APD is hereby also specifically authorized hereby to appoint any director or and, when such Director is not available, in the alternative, any other Director of APD, both which Directors can act independently and severally, with the power of substitution:

to sign documents on behalf of the Company, in respect of the provisions of the DRA, Developments, Development and Development Management Functions or any other matter as defined in the DMA which,

- 1.1 shall include a power of attorney, and/ or;
- 1.2 may include any documents deemed necessary by such authorized Director to give effect to this Resolution;
- 1.3 directly or indirectly pertain to the matters listed hereinafter including documents directed to the Registrar of Deeds and the Surveyor General in terms of the applicable legislation; and /or





- 1.4 are directed to or required by any Municipality or any Provincial or National Department, Authority or body, as the case may be; and/ or
  - 1.5 are intended for procurement of any approval or permission or authorization of whatsoever nature required in respect of the Property mentioned hereinbefore or in respect of any part, portion or component thereof, from the authorities and or bodies mentioned; and/ or
  - 1.6 are required in order to pursue any such aforementioned applications to finality; and /or
  - 1.7 are required for purposes of the execution of any such aforementioned approvals and or permissions obtained; and/ or
  - 1.8 are required to, for all the purposes mentioned hereinbefore, in order to deal with such mentioned authorities by way of negotiations, attendances, the lodgment of Appeals and/or applications to a competent Court on behalf of the Company in his capacity as Director or by way of Consultants, legal Counsel and expert persons, the appointment of whom may include the granting of a power of substitution to such appointees whenever such appointments, in the discretion of such authorized Director, is deemed necessary.
2. The authority granted above by way of paragraph 1, shall pertain to the following applications and actions:
- 2.1 TOWN PLANNING AND ENVIRONMENTAL MATTERS

Two handwritten signatures in black ink are located at the bottom right of the page. The signature on the left is a stylized, cursive mark. The signature on the right is more legible, appearing to read 'R. A. ...'.

- 2.1.1 to apply for the establishment of a township in terms of the Town Planning and Township Ordinance no. 15 of 1986 ("The Ordinance") which authority shall include the authority to change the name of the township owner in terms of section 78(1) of such Ordinance; or to apply for and effect any amendment to such township in terms of section 98(5) and section 100 of such Ordinance;
- 2.1.2 to apply for a consent use in terms of the Ordinance read with the applicable Town Planning Scheme;
- 2.1.3 to apply for the amendment of a Town Planning Scheme in terms of section 56 or 28 of the Ordinance;
- 2.1.4 to apply for a consolidation or subdivision of erven in the township in terms of section 92 of the Ordinance;
- 2.1.5 to apply for the division of an approved township in terms of section 99 of the Ordinance;
- 2.1.6 to apply for the amendment or cancellation of a general plan pertaining to a township in terms of section 89 of the Ordinance;



- 2.1.7 to apply for an extension of boundaries of an existing township in terms of section 68 of the Ordinance;
- 2.1.8 to apply for street closures in terms of section 67 of the Local Government Ordinance 1939;
- 2.1.9 to apply for park closures in terms of section 68 of the Local Government Ordinance 1939;
- 2.1.10 to apply for the removal of restrictive title deed conditions in terms of the Gauteng Removal of Restrictions Act 3 of 1996 in respect of the property or any portion thereof which authority shall include the lodgment of a simultaneous application for amendment of a prevailing Town Planning Scheme;
- 2.1.11 to apply for the approval of a Site Development Plan in terms of any conditions of establishment or the conditions imposed in terms of an approved Town Planning Scheme;
- 2.1.12 to apply for approvals in terms of section 82 and 101 of the Ordinance in respect of a township mentioned hereinbefore and for the issue of certificates in respect of any such township by the Local Authority involved;



- 2.1.13 to apply for any authorizations in terms of Provincial or National Legislation for any water use license, environmental authorization or road access, road construction and way-leaves from any applicable authority;
- 2.1.14 to apply for the permission to utilize Eskom power line servitudes for parking and to sign any documents which may be necessary to amend the conditions in any existing registered servitude at the Registrar of Deeds;
- 2.1.15 to apply for the division of farm land in terms of the provisions of the Subdivision of Land Ordinance 1986 or if applicable, the Subdivision of Agricultural Land Act, Act 70 of 1970;
- 2.1.16 to apply for a land development area, authorization, permission, land use change or consent as mentioned hereinbefore, in terms of any other applicable legislation or other existing or future legislation.
- 2.1.17 to apply for the relaxation of building lines in terms of the provisions of the prevailing town planning scheme;
- 2.1.18 to apply for the cancellation or partial cancellation or the encroachment of servitudes in terms of the applicable legislation; and



2.1.19 to apply for any other permission or consent or approval in terms of the legislation or requirements mentioned in this paragraph.

2.1.20 marketing functions as contemplated in terms of clause 6.31 of the DMA.

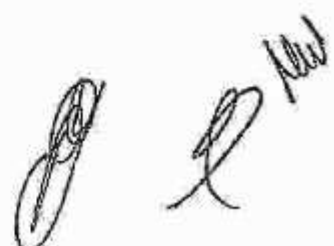
**2.2 APPLICATIONS FOR APPROVALS IN TERMS OF THE NATIONAL BUILDING REGULATIONS & BUILDING STANDARDS ACT 103 OF 1977**

2.2.1 to apply for approval of building plans in terms of section 4 of the National Building Regulation and Building Standards Act 1977 (hereinafter referred to as the "NBRBSA");

2.2.2 to apply for approval envisaged in terms of section 7(6) of the NBRBSA to commence with construction without approved building plans and for a further extension of the duration of such approval after initial procurement thereof;

2.2.3 to lodge an appeal against the decision of the Local Authority in respect of building plans submitted to the Review Board in terms of Section 9 of the NBRBSA;

2.2.4 to apply for the connection of any engineering services as may be required by the Local Authority or any other Authority for purposes of the



approval of any of the applications referred to in paragraphs 2.1 and 2.2 of this Resolution;

2.2.5 to apply for any consent or approval which may be deemed necessary by the relevant Authority to obtain temporary or permanent occupancy of any buildings erected by the Company on the property as is envisaged in terms of Section 14 or Section 14A of the NBRBSA.

2.2.6 to, if required, lodge an Internal Appeal in terms of Section 62 of the Local Government: Municipal Systems Act 2000, in respect of any decision of a Local Authority granted in respect of any Applications referred to in paragraphs 2.1 and 2.2 of this Resolution and or approach a competent Court with an application for urgent interim, mandatory or any other relief considered appropriate to procure the reasonable and expeditious processing of the Applications envisaged in paragraphs 2.1 and 2.2 of this Resolution and the review, set aside or correct any such decisions of the Authorities mentioned.

3. The authority granted by way of paragraph 1 above, shall also pertain to the following actions:





3.1 NOTARIAL AND TENANT LEASE AGREEMENTS WITH THE LANDLORD IN RESPECT OF THE PROPERTY REFERRED TO IN PARAGRAPH 1 HEREOF AND OTHER AGREEMENTS WITH THIRD PARTIES

Subject to clause 13 of the DMA :

3.1.1 To enter, subject to the provisions of paragraph 3.1.4, into any notarial lease agreement, or sign a release in respect of such notarial lease agreement regarding any portion of the property regarding a development pocket, a Township or a Stand established or procured in respect of such property;

3.1.2 to enter into any agreement relating to the construction of infrastructure, a building or structures or the appointment of contractors or professional team as defined in the DMA in execution of procured land use rights in respect of any portion of the property or a development pocket, township or erf established on such property as well as any agreements and arrangements as contemplated in clause 13.1 of the DMA;

3.1.3 to enter into any agreement or arrangement as contemplated in clause 13.2 of the DMA;

Two handwritten signatures are present at the bottom right of the page. The signature on the left is a stylized, cursive signature. The signature on the right is also cursive and includes the letters 'DMA' written above it.

- 3.1.4 to enter into and on behalf of the Company, into a services agreement and or infrastructure maintenance agreement in respect of any approved township envisaged hereinbefore and sign such agreement on behalf of the Company and to also conclude an agreement with the Local Authority with regard to the payment of bulk service contributions as is envisaged in terms of section 63 of the Ordinance;
- 3.1.5 The authority granted by way of paragraph 3.1.1 hereof may, in the event that deviation from the standard form of lease agreement (as amended), for a Pocket Lease or Stand Lease or any addenda thereto as referred to in the Development Rights Agreement is required, only be entered into after consultation with the Director authorized by AWIC Asset Manager (Attacq Management Services Proprietary Limited) or when that Director is not available, after consultation with any other Director of that Company.
- 3.1.6 To enter into Tenant leases subject to approval by the Director authorized by AWIC Asset Manager (Attacq Management Services Proprietary Limited) and the provisions of clause 6.23 of the DMA or when that Director is not available after consultation with any other Director of that Company .
4. The resolutions of the Board dated 15 February 2014 and 29 May 2014 regarding the same matters and authorization is hereby substituted with

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immediate effect: Provided that everything done or still in process on behalf of the Company by virtue of or in terms of such substituted Resolutions, shall remain valid and binding on the Company and shall be pursued to finality by the authorized representatives and agents of the Company in terms of such substituted Resolution.

5. Any of the Directors of AWIG is hereby authorized to sign any documents to give effect to this Resolution.
6. Everything done by APD in accordance with the resolutions dated 15 February 2014 and 29 May 2014 mentioned under paragraph 4 above as well as in terms of the DMA thusfar is hereby ratified.

  
PIERRE TREDOUX

DATE: 17/02/2015

  
MELT HAMMAN

DATE: 16-02-2015

  
MORNE CORNELIUS WILKEN

DATE: 16/02/2015

STEWART SHAW-TAYLOR

DATE:

**ROUND ROBIN RESOLUTION OF A MEETING OF THE BOARD OF  
DIRECTORS OF  
ATTERBURY PROPERTY DEVELOPMENTS PROPRIATERY LIMITED  
("APD")  
Registration number 2004/01670/07  
("the Company ")**

---

**IT IS RESOLVED**

1. That the Company, in order to give effect to the effective and efficient execution of the provisions of the Development Rights Agreement ("the DRA"), dated 21 August 2008 and concluded between Attacq Property Fund Limited and Waterval Investment Company (Pty) Ltd and Waterval Development Company (Pty) Ltd read with the provisions of the Development Management Agreement ("the DMA") dated 7 December 2014 and or to the provisions of any similar agreement to be concluded between the same parties and/or others pertaining to the property known as:
  - (a) the remainder of portion 1 of the farm Waterval 5 IR; and/or
  - (b) the remainder of portion 62 of the farm Waterval 5 IR , Registration Division IR and/or (collectively referred to as the **Waterfall Property**)
  - (c) any land acquired by AWIC or Attacq or related party thereto in respect of the **Waterfall Property**; and /or

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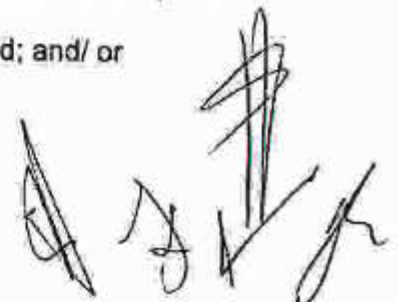
(d) any township established thereon or any erf in such a township in respect of the **Waterfall Property**;

(hereinafter referred to as the "**property**") authorizes:

**HERCULES COENRAAD BEZUIDENHOUT**

in his capacity as Director of the Company and, when such Director is not available, in the alternative, any other Director of Such Company, both which Directors can act independently and severally, with the power of substitution, to sign any document on behalf of the Company, which documents, where applicable,

- 1.1 shall include a power of attorney, and/ or;
- 1.2 may include any documents deemed necessary by such authorized Director to give effect to this Resolution;
- 1.3 directly or indirectly pertain to the matters listed hereinafter including documents directed to the Registrar of Deeds and the Surveyor General in terms of the applicable legislation; and /or
- 1.4 are directed to or required by any Municipality or any Provincial or National Department, Authority or body, as the case may be; and/ or
- 1.5 are intended for procurement of any approval or permission or authorization of whatsoever nature required in respect of the **property** mentioned hereinbefore or in respect of any part, portion or component thereof, from the authorities and or bodies mentioned; and/ or





- 1.6 are required in order to pursue any such aforementioned applications to finality; and /or
  - 1.7 are required for purposes of the execution of any such aforementioned approvals and or permissions obtained; and/ or
  - 1.8 are required to, for all the purposes mentioned hereinbefore, in order to deal with such mentioned authorities by way of negotiations, attendances, the lodgment of Appeals and/or applications to a competent Court on behalf of the Company in his capacity as Director or by way of Consultants, legal Counsel and expert persons, the appointment of whom may include the granting of a power of substitution to such appointees whenever such appointments, in the discretion of such authorized Director, is deemed necessary.
2. The authority granted above by way of paragraph 1, shall pertain to the following applications and actions:

2.1 **TOWN PLANNING AND ENVIRONMENTAL MATTERS**

- 2.1.1 to apply for the establishment of a township in terms of the Town Planning and Township Ordinance no. 15 of 1986 ("The Ordinance") which authority shall include the authority to change the name of the township owner in terms of section 78(1) of such Ordinance; or to apply for and effect any amendment to such

A handwritten signature in black ink, consisting of several stylized, overlapping strokes, located at the bottom right of the page.

- township in terms of section 98(5) and section 100 of such **Ordinance**;
- 2.1.2 to apply for a consent use in terms of the **Ordinance** read with the applicable Town Planning Scheme;
  - 2.1.3 to apply for the amendment of a Town Planning Scheme in terms of section 56 or 28 of the **Ordinance**;
  - 2.1.4 to apply for a consolidation or subdivision of erven in the township in terms of section 92 of the **Ordinance**;
  - 2.1.5 to apply for the division of an approved township in terms of section 99 of the **Ordinance**;
  - 2.1.6 to apply for the amendment or cancellation of a general plan pertaining to a township in terms of section 89 of the **Ordinance**;
  - 2.1.7 to apply for an extension of boundaries of an existing township in terms of section 88 of the **Ordinance**;
  - 2.1.8 to apply for street closures in terms of section 67 of the Local Government Ordinance 1939;
  - 2.1.9 to apply for park closures in terms of section 68 of the Local Government Ordinance 1939;
  - 2.1.10 to apply for the removal of restrictive title deed conditions in terms of the Gauteng Removal of Restrictions Act 3 of 1996 in respect of the **property** or any portion thereof which authority shall include the lodgment of a simultaneous application for amendment of a prevailing Town Planning Scheme;

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- 2.1.11 to apply for the approval of a Site Development Plan in terms of any conditions of establishment or the conditions imposed in terms of an approved Town Planning Scheme;
- 2.1.12 to apply for approvals in terms of section 82 and 101 of the **Ordinance** in respect of a township mentioned hereinbefore and for the issue of certificates in respect of any such township by the Local Authority involved;
- 2.1.13 to apply for any authorizations in terms of Provincial or National Legislation for any water use license, environmental authorization or road access, road construction and way-leaves from any applicable authority;
- 2.1.14 to apply for the permission to utilize Eskom power line servitudes for parking and to sign any documents which may be necessary to amend the conditions in any existing registered servitude at the Registrar of Deeds;
- 2.1.15 to apply for the division of farm land in terms of the provisions of the Subdivision of Land Ordinance 1986 or if applicable, the Subdivision of Agricultural Land Act, Act 70 of 1970;
- 2.1.16 to apply for a land development area, authorization, permission, land use change or consent as mentioned hereinbefore, in terms of any other applicable legislation or other existing or future legislation.

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- 2.1.17 to apply for the relaxation of building lines in terms of the provisions of the prevailing town planning scheme and provide comments in respect of building line relaxations on adjacent properties;
- 2.1.18 to apply for the cancellation or partial cancellation or the encroachment of servitudes in terms of the applicable legislation; and
- 2.1.19 to apply for any other permission or consent or approval in terms of the legislation or requirements mentioned in this paragraph.
- 2.1.20 marketing functions as contemplated in terms of clause 6.31 of the DMA.

**2.2 APPLICATIONS FOR APPROVALS IN TERMS OF THE NATIONAL BUILDING REGULATIONS & BUILDING STANDARDS ACT 103 OF 1977**

- 2.2.1 to apply for approval of building plans in terms of section 4 of the National Building Regulation and Building Standards Act 1977 (hereinafter referred to as the "NBRBSA");
- 2.2.2 to apply for approval envisaged in terms of section 7(6) of the NBRBSA to commence with construction without approved building plans and for a further extension of the duration of such approval after initial procurement thereof;

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- 2.2.3 to lodge an appeal against the decision of the Local Authority in respect of building plans submitted to the Review Board in terms of Section 9 of the **NBRBSA**;
- 2.2.4 to apply for the connection of any engineering services as may be required by the Local Authority or any other Authority for purposes of the approval of any of the applications referred to in paragraphs 2.1 and 2.2 of this Resolution;
- 2.2.5 to apply for any consent or approval which may be deemed necessary by the relevant Authority to obtain temporary or permanent occupancy of any buildings erected by the Company on the property as is envisaged in terms of Section 14 or Section 14A of the **NBRBSA**.
- 2.2.6 to, if required, lodge an internal Appeal in terms of Section 62 of the Local Government: Municipal Systems Act 2000, in respect of any decision of a Local Authority granted in respect of any Applications referred to in paragraphs 2.1 and 2.2 of this Resolution and or approach a competent Court with an application for urgent interim, mandatory or any other relief considered appropriate to procure the reasonable and expeditious processing of the Applications envisaged in paragraphs 2.1 and 2.2 of this Resolution and the review, set aside or correct any such decisions of the Authorities mentioned.
3. The authority granted by way of paragraph 1 above, shall also pertain to the following actions:

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**3.1 NOTARIAL AND TENANT LEASE AGREEMENTS WITH THE LANDLORD IN RESPECT OF THE PROPERTY REFERRED TO IN PARAGRAPH 1 HEREOF AND OTHER AGREEMENTS WITH THIRD PARTIES**

Subject to clause 13 of the DMA :

- 3.1.1 To enter, subject to the provisions of paragraph 3.1.4, into any notarial lease agreement, or sign a release in respect of such notarial lease agreement regarding any portion of the **property** regarding a development pocket, a Township or a Stand established or procured in respect of such **property**;
- 3.1.2 to enter into any agreement relating to the construction of infrastructure, a building or structures or the appointment of contractors or professional team as defined in the DMA in execution of procured land use rights in respect of any portion of the **property** or a development pocket, township or erf established on such **property** as well as any agreements and arrangements as contemplated in clause 13.1 of the DMA;
- 3.1.3 to enter into any agreement or arrangement as contemplated in clause 13.2 of the DMA;
- 3.1.4 to enter into and on behalf of the Company, into a services agreement and or infrastructure maintenance agreement in respect

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of any approved township envisaged hereinbefore and sign such agreement.

3.1.5 on behalf of the Company and to also conclude an agreement with the Local Authority with regard to the payment of bulk service contributions as is envisaged in terms of section 63 of the Ordinance;

3.1.6 The authority granted by way of paragraph 3.1.1 hereof may, in the event that deviation from the standard form of lease agreement (as amended), for a Pocket Lease or Stand Lease or any addenda thereto as referred to in the DRA is required, only be entered into after consultation with the Director authorized by AWIC Asset Manager (Attacq Management Services Proprietary Limited) or when that Director is not available, after consultation with any other Director of that Company.

3.1.7 To enter into Tenant leases subject to approval by the Director authorized by AWIC Asset Manager (Attacq Management Services Proprietary Limited) and the provisions of clause 6.23 of the DMA or when that Director is not available after consultation with any other Director of that Company .

4. Everything done by any representatives of APD in accordance with the resolutions of AWIC dated 15 February 2014 and 29 May 2014 as well as in terms of the DMA thusfar is hereby ratified.

  
HERCULES COENRAAD BEZUIDENHOUT

19-02-2015  
DATE:



  
\_\_\_\_\_  
JAMES BRUCE EHLERS

DATE: 2015.02.20

  
\_\_\_\_\_  
JAN HENDRIK JORDAAN

DATE: 2015.02.19

  
\_\_\_\_\_  
LOUIS LUKAS STEPHANUS VAN DER WATT

DATE: 2015.02.24

  
\_\_\_\_\_  
JACOBUS PAULUS VAN HEERDEN

DATE: 2015.02.20





## SPECIAL POWER OF ATTORNEY

I, the undersigned,

**MORNE CORNELIUS WILKEN**

duly authorized by

**ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD  
("AWIC")**

Hereby nominate, constitute and appoint

**ATTERBURY PROPERTY DEVELOPMENTS PROPRIATERY  
LIMITED Registration number 2004/01670/07**

**"APD"**

in order to give effect to the effective and efficient execution of the provisions of the Development Rights Agreement ("the DRA"), dated 21 August 2008 and concluded between Attacq Property Fund Limited (which name was changed to Attacq Limited – "Attacq") and Waterval Investment Company (Pty) Ltd and Waterval Development Company (Pty) Ltd, as amended (Attacq ceded and assigned its rights and obligations under the DRA to AWIC on 4 December 2009), and or to the provisions of any similar agreement to be concluded between the same parties and/or others pertaining to the **property** known as the remainder of portion 1 of the farm Waterval 5 IR, the remainder of portion 62 of the farm Waterval 5 IR, Registration Division IR (collectively referred to as "**the Waterfall Property**"), any land acquired by **AWIC** or Attacq or related party in respect of the Waterfall Property and/or any township



established thereon or any erf in such a township in respect of the Waterfall Property (hereinafter referred to as the "Property") authorizes

in its capacity as Development Manager appointed in terms of the Development Management Agreement dated 7 December 2014 the ("DMA") and APD is hereby also specifically authorized hereby to appoint any director or and, when such Director is not available, in the alternative, any other Director of APD, both which Directors can act independently and severally, with the power of substitution:

to sign documents on behalf of the Company, in respect of the provisions of the DRA, Developments, Development and Development Management Functions or any other matter as defined in the DMA which,

- 1.1 shall include a power of attorney, and/ or;
- 1.2 may include any documents deemed necessary by such authorized Director to give effect to this Resolution;
- 1.3 directly or indirectly pertain to the matters listed hereinafter including documents directed to the Registrar of Deeds and the Surveyor General in terms of the applicable legislation; and /or
- 1.4 are directed to or required by any Municipality or any Provincial or National Department, Authority or body, as the case may be; and/ or
- 1.5 are intended for procurement of any approval or permission or authorization of whatsoever nature required in respect of the property

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- mentioned hereinbefore or in respect of any part, portion or component thereof, from the authorities and or bodies mentioned; and/ or
- 1.6 are required in order to pursue any such aforementioned applications to finally; and /or
- 1.7 are required for purposes of the execution of any such aforementioned approvals and or permissions obtained; and/ or
- 1.8 are required to, for all the purposes mentioned hereinbefore, in order to deal with such mentioned authorities by way of negotiations, attendances, the lodgment of Appeals and/or applications to a competent Court on behalf of the Company in his capacity as Director or by way of Consultants, legal Counsel and expert persons, the appointment of whom may include the granting of a power of substitution to such appointees whenever such appointments, in the discretion of such authorized Director, is deemed necessary.
2. The authority granted above by way of paragraph 1, shall pertain to the following applications and actions:

### **2.1 TOWN PLANNING AND ENVIRONMENTAL MATTERS**

- 2.1.1 to apply for the establishment of a township in terms of the Town Planning and Township Ordinance no. 15 of 1986 ("The **Ordinance**") which authority shall include the authority to change the name of the township owner in terms of section 78(1) of such **Ordinance**; or to apply for and effect any amendment to such township in terms of section 98(5) and section 100 of such **Ordinance**;



- 2.1.2 to apply for a consent use in terms of the **Ordinance** read with the applicable Town Planning Scheme;
- 2.1.3 to apply for the amendment of a Town Planning Scheme in terms of section 56 or 28 of the **Ordinance**;
- 2.1.4 to apply for a consolidation or subdivision of erven in the township in terms of section 92 of the **Ordinance**;
- 2.1.5 to apply for the division of an approved township in terms of section 99 of the **Ordinance**;
- 2.1.6 to apply for the amendment or cancellation of a general plan pertaining to a township in terms of section 89 of the **Ordinance**;
- 2.1.7 to apply for an extension of boundaries of an existing township in terms of section 88 of the **Ordinance**;
- 2.1.8 to apply for street closures in terms of section 67 of the Local Government **Ordinance** 1939;
- 2.1.9 to apply for park closures in terms of section 68 of the Local Government **Ordinance** 1939;

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- 2.1.10 to apply for the removal of restrictive title deed conditions in terms of the Gauteng Removal of Restrictions Act 3 of 1996 in respect of the **property** or any portion thereof which authority shall include the lodgment of a simultaneous application for amendment of a prevailing Town Planning Scheme;
- 2.1.11 to apply for the approval of a Site Development Plan in terms of any conditions of establishment or the conditions imposed in terms of an approved Town Planning Scheme;
- 2.1.12 to apply for approvals in terms of section 82 and 101 of the **Ordinance** in respect of a township mentioned hereinbefore and for the issue of certificates in respect of any such township by the Local Authority involved;
- 2.1.13 to apply for any authorizations in terms of Provincial or National Legislation for any water use license, environmental authorization or road access, road construction and way-leaves from any applicable authority;
- 2.1.14 to apply for the permission to utilize Eskom power line servitudes for parking and to sign any documents which may be necessary to amend the conditions in any existing registered servitude at the Registrar of Deeds;

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- 2.1.15 to apply for the division of farm land in terms of the provisions of the Subdivision of Land Ordinance 1986 or if applicable, the Subdivision of Agricultural Land Act, Act 70 of 1970;
- 2.1.16 to apply for a land development area, authorization, permission, land use change or consent as mentioned hereinbefore, in terms of any other applicable legislation or other existing or future legislation.
- 2.1.17 to apply for the relaxation of building lines in terms of the provisions of the prevailing town planning scheme;
- 2.1.18 to apply for the cancellation or partial cancellation or the encroachment of servitudes in terms of the applicable legislation; and
- 2.1.19 to apply for any other permission or consent or approval in terms of the legislation or requirements mentioned in this paragraph.
- 2.1.20 Any marketing functions contemplated in terms of clause 6.31 of the DMA.

2.2 **APPLICATIONS FOR APPROVALS IN TERMS OF THE NATIONAL BUILDING REGULATIONS & BUILDING STANDARDS ACT 103 OF 1977**

- 2.2.1 to apply for approval of building plans in terms of section 4 of the National Building Regulation and Building Standards Act 1977 (hereinafter referred to as the "NBRBSA");



- 2.2.2 to apply for approval envisaged in terms of section 7(6) of the **NBRBSA** to commence with construction without approved building plans and for a further extension of the duration of such approval after initial procurement thereof;
- 2.2.3 to lodge an appeal against the decision of the Local Authority in respect of building plans submitted to the Review Board in terms of Section 9 of the **NBRBSA**;
- 2.2.4 to apply for the connection of any engineering services as may be required by the Local Authority or any other Authority for purposes of the approval of any of the applications referred to in paragraphs 2.1 and 2.2 of this Resolution;
- 2.2.5 to apply for any consent or approval which may be deemed necessary by the relevant Authority to obtain temporary or permanent occupancy of any buildings erected by the Company on the **property** as is envisaged in terms of Section 14 or Section 14A of the **NBRBSA**.
- 2.2.6 to, if required, lodge an internal Appeal in terms of Section 62 of the Local Government: Municipal Systems Act 2000, in respect of any decision of a Local Authority granted in respect of any Applications referred to in paragraphs 2.1 and 2.2 of this Resolution and or approach a competent Court with an application for urgent interim, mandatory or any other relief considered appropriate to procure the reasonable and

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expeditious processing of the Applications envisaged in paragraphs 2.1 and 2.2 of this Resolution and the review, set aside or correct any such decisions of the Authorities mentioned.

3. The authority granted by way of paragraph 1 above, shall also pertain to the following actions:

3.1 **NOTARIAL AND TENANT LEASE AGREEMENTS WITH THE LANDLORD  
IN RESPECT OF THE PROPERTY REFERRED TO IN PARAGRAPH 1  
HEREOF AND OTHER AGREEMENTS WITH THIRD PARTIES**

Subject to clause 13 of the DMA:

- 3.1.1 To enter, subject to the provisions of paragraph 3.1.4, into any notarial lease agreement, or sign a release in respect of such notarial lease agreement regarding any portion of the property regarding a development pocket, a Township or a Stand established or procured in respect of such property;
- 3.1.2 to enter into any agreement relating to the construction of infrastructure, a building or structures or the appointment of contractors or professional team as defined in the DMA in execution of procured land use rights in respect of any portion of the property or a development pocket, township or erf established on such property as well as any agreements and arrangements as contemplated in clause 13.1 of the DMA;



- 3.1.3 to enter into any agreement or arrangement as contemplated in clause 13.2 of the DMA;
- 3.1.4 to enter into and on behalf of the Company, into a services agreement and or infrastructure maintenance agreement in respect of any approved township envisaged hereinbefore and sign such agreement on behalf of the Company and to also conclude an agreement with the Local Authority with regard to the payment of bulk service contributions as is envisaged in terms of section 63 of the Ordinance;
- 3.1.5 The authority granted by way of paragraph 3.1.1 hereof may, in the event that deviation from the standard form of lease agreement (as amended), for a Pocket Lease or Stand Lease or any addenda thereto as referred to in the Development Rights Agreement is required, only be entered into after consultation with the Director authorized by AWIC Asset Manager ( Attacq Management Services Proprietary Limited) or when that Director is not available, after consultation with any other Director of that Company.
- 3.1.6 To enter into Tenant leases subject to approval by the Director authorized by AWIC Asset Manager (Attacq Management Services Proprietary Limited ) and the provisions of clause 6.23 of the DMA or when that Director is not available after consultation with any other Director of that Company.


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and generally for effecting the purpose aforesaid, to do or cause to be done whatsoever shall be requisite, as fully and effectually, for all intents and purposes, as I might or could do if personally present and acting herein, hereby ratifying, allowing and confirming and promising and agreeing to ratify, allow and confirm all and whatsoever my Agent shall lawfully do, or cause to be done, by virtue of these present.

SIGNED AT WATERPAUL CITY, MIDLAND on this the 17 February 2015

day of FEBRUARY 2015

AS WITNESSES:

  
\_\_\_\_\_  
2. Padra

DIRECTOR

  
\_\_\_\_\_

**EXTRACTS OF THE MINUTES OF A MEETING OF THE RESOLUTION PASSED AT A MEETING OF THE DIRECTORS OF WITWATERSRAND ESTATES LIMITED**

Registration Number 1934/005481/06

(the "Company")

HELD AT WOODMEAD ON 4 NOVEMBER 2015

**RECORDED THAT:**

1. The Gauteng Department of Agriculture, Conservation and Environment (GDACE) and the Gauteng Department of Agriculture and Rural Development (GDARD) respectively issued Record of Decisions (ROD's) in respect of the buffer areas associated with the demarcated wetlands on the remainder of portion 1 of the farm Waterval 5 IR.
2. The first ROD was by GDACE to the Waterval Islamic Institute on 12 October 2007 (GAUT 002/05-06/1476 and the second ROD by GDARD to Atterbury Investment Holdings on 29 April 2010. (GAUT 002/08-09/N0993).
3. An appeal was lodged to the MEC for Agriculture, Rural and Social Development of the Gauteng to relax the northern wetland buffer of 30 meters situated immediately to the west of the N1 highway and to the south of Allandale road which was rejected on 13 September 2013.
4. An application was then lodged to the High Court by WEL and AWIC on 23 May 2014 to set aside the decision of MEC mentioned under 3 below.
5. Due to changes to the regulations of the National Environmental Management Act, 107 of 1998 it is possible to submit new amendment applications to relax the 30 meter buffers imposed in terms of the mentioned ROD's and once accepted and approved in principle by GDARD, the High Court Application will be withdrawn.

**RESOLVED THAT:**

1. the Company grants a power of attorney to

**ATTACQ WATERFALL INVESTMENT COMPANY PROPRIETARY LIMITED**  
Registration Number 2000/013587/07

- 1.1 to Lodge an application(s) to amend the record of decisions of :
  - (a) GDACE on 12 October 2007 ( ref GAUT 002/05-06/1476; and
  - (b) GDARD 29 April 2010. (GAUT 002/08-09/N0993)for relaxation of the 30m northern wetland buffers or any matters incidental thereto immediately to the west of the N1 freeway and to the south of Allandale road situated within the proposed townships Jukskei View Extension 74, 106, 91, 92 and 89 situated on a part of the remainder of portion 1 of the farm Waterfal 5 IR and;
2. AWIC is hereby authorised to sign the relevant documents with the Power of Substitution which may be necessary to effect to the resolution in 1 above including the appointment of a professional team and agrees that AWIC may delegate such authority to any director or manager in the full-time employ of AWIC or any of its associated companies to execute and action or power which AWIC is authorised to execute in terms of this resolution.
3. All actions taken by AWIC thus far in respect of the above is hereby ratified.

**EXTRACTS OF THE MINUTES OF A MEETING OF THE RESOLUTION PASSED AT A MEETING OF THE DIRECTORS OF WITWATERSRAND ESTATES LIMITED**

Registration Number 1934/005481/06

(the "Company")

HELD AT WOODMEAD ON 4 November 2015

**RECORDED THAT:**

1. The Gauteng Department of Agriculture, Conservation and Environment (GDACE) and the Gauteng Department of Agriculture and Rural Development (GDARD) respectively issued Record of Decisions (ROD's) in respect of the buffer areas associated with the demarcated wetlands on the remainder of portion 1 of the farm Waterfal 5 IR.
2. The first ROD was by GDACE to the Waterfal Islamic Institute on 12 October 2007 (GAUT 002/05-06/1476 and the second ROD by GDARD to Atterbury Investment Holdings on 29 April 2010. (GAUT 002/08-09/N0993).
3. An appeal was lodged to the MEC for Agriculture, Rural and Social Development of the Gauteng to relax the northern wetland buffer of 30 meters situated immediately to the west of the N1 highway and to the south of Allandale road which was rejected on 13 September 2013.
4. An application was then lodged to the High Court by WEL and AWIC on 23 May 2014 to set aside the decision of MEC mentioned under 3 below.
5. Due to changes to the regulations of the National Environmental Management Act, 107 of 1998 it is possible to submit new amendment applications to relax the 30 meter buffers imposed in terms of the mentioned ROD's and once accepted and approved in principle by GDARD, the High Court Application will be withdrawn.

**RESOLVED THAT:**

1. the Company grants a power of attorney to

**ATTACQ WATERFALL INVESTMENT COMPANY PROPRIETARY LIMITED**  
Registration Number 2000/013587/07

- 1.1 to Lodge an application(s) to amend the record of decisions of :
  - (a) GDACE on 12 October 2007 ( ref GAUT 002/05-06/1476; and
  - (b) GDARD 29 April 2010. (GAUT 002/08-09/N0993)for relaxation of the 30m northern wetland buffers or any matters incidental thereto immediately to the west of the N1 freeway and to the south of Allandale road situated within the proposed townships Jukskel View Extension 74, 106, 91, 92 and 89 situated on a part of the remainder of portion 1 of the farm Waterfal 5 IR and;
2. AWIC is hereby authorised to sign the relevant documents with the Power of Substitution which may be necessary to effect to the resolution in 1 above including the appointment of a professional team and agrees that AWIC may delegate such authority to any director or manager in the full-time employ of AWIC or any of its associated companies to execute and action or power which AWIC is authorised to execute in terms of this resolution.
3. All actions taken by AWIC thus far in respect of the above is hereby ratified.

*Handwritten signature*



4. That **IBRAHIM MIA** in his capacity as a Director be and is hereby authorised to sign the relevant power of attorney as may be necessary to give effect to this resolution.

CERTIFIED A TRUE COPY

A handwritten signature in black ink, appearing to read 'Ibrahim Mia', written over a horizontal line.

**CHAIRMAN**

# POWER OF ATTORNEY

I, the undersigned, IBRAHIM MIA, in my capacity as director and duly authorised hereto by virtue of a resolution of

**WITWATERSRAND ESTATES LIMITED**  
Registration Number 1934/005481/06

(the "Company")

do hereby nominate, constitute and appoint

**ATTACQ WATERFALL INVESTMENT COMPANY PROPRIETARY LIMITED**  
Registration Number 2000/013587/07  
("AWIC")

with the Power of Substitution to be our Agent(s) to –

1. to Lodge an application(s) in terms of the National Environmental Management Act, 107 of 1998 and regulations to amend the record of decisions of the:
  - (a) Gauteng Department of Agriculture Conservation and Environment( GDACE) on 12 October 2007 ( ref GAUT 002/05-06/1476; and
  - (b) Gauteng Department of Agriculture and Rural Development (GDARD) 29 April 2010, (GAUT 002/08-09/N0993).

for relaxation of the 30m northern wetland buffers or any matters incidental thereto immediately to the west of the N1 freeway and to the south of Allandale road situated within the proposed townships Jukskel View Extension 74, 106, 91, 92 and 89 situated on a part of the remainder of portion 1 of the farm Waterfal 5 IR and;

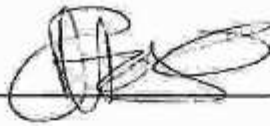
2. AWIC is hereby authorised to sign the relevant documents with the Power of Substitution including the appointment of a professional team, which may be necessary to give effect to 1 above and agrees that AWIC may delegate such authority to any director or manager in the full-time employ of AWIC or any of its associated companies to execute any action or power which AWIC is authorised to execute in terms of this power of attorney.

and generally, for effecting the purposes aforesaid, to do or cause to be done whatsoever shall be requisite, as fully and effectually, for all intents and purposes, as the Company might or could do if personally present and acting therein; hereby ratifying all actions already taken, allowing and confirming all and whatsoever the said Agent/s shall lawfully do or cause to be done by virtue of these presents.

Signed at WOODMEAD on 4/11/2015 in the presence of the undersigned witnesses.

AS WITNESSES :



1.  \_\_\_\_\_

2.  \_\_\_\_\_



On behalf of WITWATERSRAND  
ESTATES LIMITED

## **Addendum E**

# POWER OF ATTORNEY

I, the undersigned, HERCULES COENRAAD BEZUIDENHOUT, duly authorised hereto by virtue of a resolution of

**ATTERBURY PROPERTY DEVELOPMENTS (PTY) LTD  
REGISTRATION NUMBER 2004/01670/07 ("APD")**

(the "Company")

do hereby nominate, constitute and appoint

**LIZELLE GREGORY OF BOKOMOSO (LANDSCAPE ARCHITECTS &  
ENVIRONMENTAL CONSULTANTS CC).**

with the Power of Substitution to be our Agent(s) to –

1. to Lodge an application(s) in terms of the National Environmental Management Act, 107 of 1998 and regulations to amend the record of decisions of the:
  - (a) Gauteng Department of Agriculture Conservation and Environment( GDACE) on 12 October 2007 ( ref GAUT 002/05-06/1476; and
  - (b) Gauteng Department of Agriculture and Rural Development (GDARD) 29 April 2010. (GAUT 002/08-09/N0993).

for relaxation of the 30m northern wetland buffers or any matters incidental thereto immediately to the west of the N1 freeway and to the south of Allandale road situated within the proposed townships Jukeskei View Extension 74, 106, 91, 92 and 89 situated on a part of the remainder of portion 1 of the farm Waterfal 5 IR and;

2. Lizelle Gregory is hereby authorised submit and sign the relevant documents with the Power of Substitution including the appointment of a professional team, which may be necessary to give effect to the resolution in 1 above and agrees that may delegate such authority to any director or manager in the full-time employee of Lizelle Gregory and Bokomoso or any of its associated companies to execute any action or power which AWIC is authorised to execute in terms of this power of attorney.

and generally, for effecting the purposes aforesaid, to do or cause to be done whatsoever shall be requisite, as fully and effectually, to all intents and purposes, as the Company might or could do if personally present and acting therein; hereby ratifying all actions already taken, allowing and confirming all and whatsoever the said Agent/s shall lawfully do or cause to be done in the premises by virtue of these presents.




Signed at Midrand on

in the presence of the undersigned witnesses.

AS WITNESSES:

1.   
\_\_\_\_\_
2.   
\_\_\_\_\_

  
\_\_\_\_\_

On behalf of APD and AWIC



## Qualifications And Experience In The Field Of Environmental Planning And Management (Lizelle Gregory (Member Bokamoso)):

### Qualifications:

- Qualified as **Landscape Architect** at UP 1991;
- Qualified as **Professional Landscape Architect** in 1997;
- A Registered Member at The **South African Council for the Landscape Architect Profession (SACLAP)** with Practise Number: **PrLArch97078**;
- A Registered Member at the **International Association for Impact Assessment Practitioners (IAIA)**;
- Qualified as an **Environmental Auditor** in **July 2008** and also became a Member of the **International Environmental Management Association (IEMAS)** in 2008.

### Working Experience:

- Worked part time at **Eco-Consult** – 1988-1990;
- Worked part time at **Plan Associates as Landscape Architect in training** – 1990-1991;
- Worked as Landscape Architect at **Environmental Design Partnership (EDP)** from 1992 - 1994
- Practised under **Lizelle Gregory Landscape Architects** from 1994 until 1999;
- Lectured** at Part-Time at **UP** (1999) – Landscape Architecture and **TUT** (1998- 1999)- Environmental Planning and Plant Material Studies;
- Worked as **part time Landscape Architect and Environmental Consultant at Plan Associates** and **managed their environmental division for more that 10 years** – 1993 – 2008 (assisted the **PWV Consortium** with various road planning matters which amongst others included environmental Scans, EIA 's, Scoping reports etc.)
- Renamed business as **Bokamoso** in 2000 and is the only member of **Bokamoso Landscape Architects and Environmental Consultants CC**;
- More than 20 years experience in the compilation of Environmental Reports**, which amongst others included the compilation of various **DFA Regulation 31 Scoping Reports**, EIA 's for EIA applications in terms of the applicable environmental legislation, Environmental Management Plans, Inputs for Spatial Development Frameworks, DP's, EMF's etc. Also included EIA Application on and adjacent to mining land and slimes dams (i.e. Brahm Fisherville, Doornkop)



# Qualifications And Experience In The Field Of Landscape Architecture (Lizelle Gregory (Member Bokamoso)):

## Landscape Architecture:

-Compiled landscape and rehabilitation plans for more than 22 years.

### The most significant landscaping projects are as follows:

- Designed the Gardens of the Witbank Technicon (a branch of TUT). Also supervised the implementation of the campus gardens (2004);
- Lizelle Gregory was the Landscape Architect responsible for the paving and landscape design at the UNISA Sunnyside Campus and received a Corobrick Golden Award for the paving design at the campus (1998-2004);
- Bokamoso assisted with the design and implementation of a park for the City of Johannesburg in Tembisa (2010);
- The design and implementation of the landscape gardens (indigenous garden) at the new Coca-Cola Valpre Plant (2012-2013);
- Responsible for the rehabilitation and landscaping of Jukse River area at the Norwood Shopping Mall (Johannesburg) (2012-2013);
- Designed and implemented a garden of more than 3,5ha in Randburg (Mc Arthurpark). Bokamoso also seeded the lawn for the project (more than 2,5 ha of lawn successfully seeded) (1999);
- Bokamoso designed and implemented more than 800 townhouse complex gardens and submitted more than 500 Landscape Development Plans to CTMM for approval (1995 – 2013);
- Assisted with Landscape Designs and the Masterplan at Eco-Park (M&T Developments) (2005-2011);
- Bokamoso designed and implemented an indigenous garden at an office park adjacent to the Bronberg. In this garden it was also necessary to establish a special garden for the Juliana Golden Mole. During a recent site visit it was established that the moles are thriving in this garden. Special sandy soils had to be imported and special indigenous plants had to be established in the natural section of the garden.
- Lizelle Gregory also owns her own landscape contracting business. **For the past 20 years she trained more than 40 PDI jobless people (sourced from a church in Mamelodi)** to become landscape contracting workers. All the workers are (on a continuous basis) placed out to work at nurseries and other associated industries;
- Over the past 20 years the Bokamoso team compiled more than 800 landscape development plans and also implemented most of the gardens. Bokamoso also designed and implemented the irrigation for the gardens (In cases where irrigation was required). Lizelle regarded it as important to also obtain practical experience in the field of landscape implementation.





# Bokamoso

Landscape Architects &  
Environmental consultants

P.O. BOX 11375  
Maroelana  
0161

Tel: (012) 346 3810  
Fax: (086) 570 5559

E-mail: [lizelleg@mweb.co.za](mailto:lizelleg@mweb.co.za)  
Website: [www.bokamoso.biz](http://www.bokamoso.biz)



**Bokamoso** specialises in the fields of Landscape Architecture and all aspects of Environmental Management and Planning. Bokamoso was founded in 1992 and has shown growth by continually meeting the needs of our clients. Our area of expertise stretches throughout the whole of South Africa. Our projects reflect the competence of our well compiled team. The diversity of our members enables us to tend to a variety of needs. Our integrated approach establishes a basis for outstanding quality. We are well known to clients in the private, commercial as well as governmental sector.

At Bokamoso we stand on a firm basis of environmental investigation in order to find unique solutions to the requirements of our clients and add value to their operations.



**Bokamoso**

01 Executive Summary

• Company Overview



**Bokamoso** stands on the basis of fairness. This include respect within our multicultural team and equal opportunities in terms of gender, nationality and race.

We have a wide variety of projects to tend to, from complicated reports to landscape installation. This wide range of projects enables us to combine a variety of professionals and skilled employees in our team.

Bokamoso further aids in the development of proficiency within the working environment. Each project, whether in need of skilled or unskilled tasks has its own variety of facets to bring to the table.

We are currently in the process of receiving our BEE scorecard. We support transformation in all areas of our company dynamics.



**Bokamoso** 

**Human Resources**

**Employment Equity**

## Consulting

### Anè Agenbacht

**Introduction to Sustainable Environmental Management—An overview of Principles, Tools, & Issues (Potch 2006)**  
**Leadership Training School (Lewende Woord 2010)**  
**BA Environmental Management (UNISA 2011)**  
**PGCE Education (Unisa 2013) - CUM LAUDE**  
Project Manager  
More than 10 years experience in the compilation of various environmental reports.

### Mary-Lee Van Zyl

**Msc. Plant Science (UP)**  
**BSc (Hons) Plant Science (UP)**  
**BSc Ecology (UP)**  
More than 3 years working experience in the Environmental field  
Specialises in ECO works, Basic Assessments, EIA's, and Flora Reports  
Compilation of various Environmental Reports

### Dashantha Moodley

**BA Honours Degree in Environmental Management (UNISA) - CUM LAUDE**  
**Bachelor of Social Science in Geography & Environmental Management (UKZN)**  
More than 5 years experience in WUL Applications & Integrated Environmental Management within water resource management.  
Senior Environmental Practitioner & Water Use Licence Consultant  
Specialises in Water Use License & Compilation of various Env. Reports

### Ben Bhukwana

**BSc Landscape Architecture (UP)**  
More than 6 years experience in the field of Landscape Architecture (Design, Construction, and Implementation).  
Specialises in Landscape Design, ECO, Rehabilitation Plans and  
Compilation Basic Assessment Reports  
Compilation of Tender documents



03 Human Resources

033 Personnel



**Elsa Viviers**

**Interior Decorating (Centurion College)**  
( Accounting/ Receptionist ) and Secretary to Lizelle Gregory

**Loura du Toit**

**N. Dip. Professional Teacher (Heidelberg Teachers Training College )**  
Librarian and PA to Project Manager

**Merriam Mogalaki**

Administration Assistant with in-house training in bookkeeping

## **Landscape Contracting**

**Elias Maloka**

Site manager overseeing landscape installations.  
Irrigation design and implementation.  
Landscape maintenance  
More than 18 years experience in landscape construction works.

The contracting section comprises of six permanently employed black male workers. In many cases the team consists of up to 12 workers, depending on the quantity of work.



**03 Human Resources**

**035 Personnel**

## 02 Landscape Architecture

- Master Planning
- Sketch Plans
- Planting Plans
- Working Drawings
- Furniture Design
- Detail Design
- Landscape Development Frameworks
- Landscape Development Plans (LDP)
- Contract and Tender Documentation
- Landscape Rehabilitation Works

## 03 Landscape Contracting

Implementation of Plans for:

- Office Parks
- Commercial/ Retail / Recreational  
Development
- Residential Complexes
- Private Residential Gardens



*Bokamoso*

## 04 Services

Contracting Services



# 01 Valpre Bottling Plant, Heidelberg



project

shelby site plan

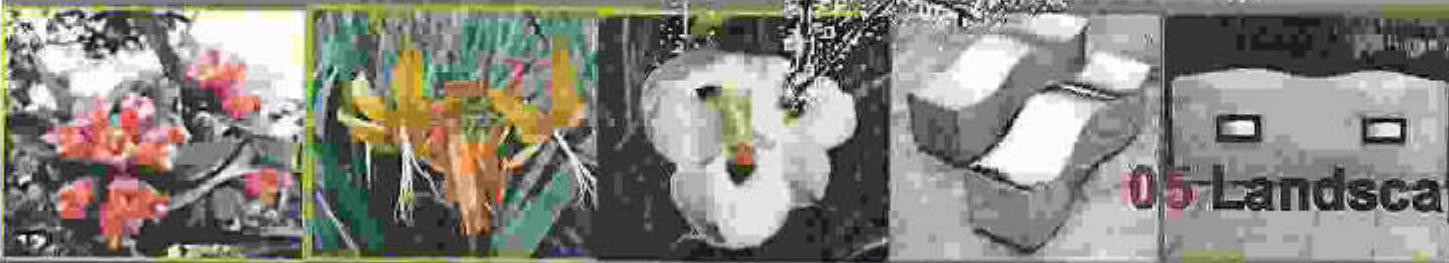


05 Landscape Projects— Current

051 Commercial



# 01 Valpre Bottling Plant, Heidelberg



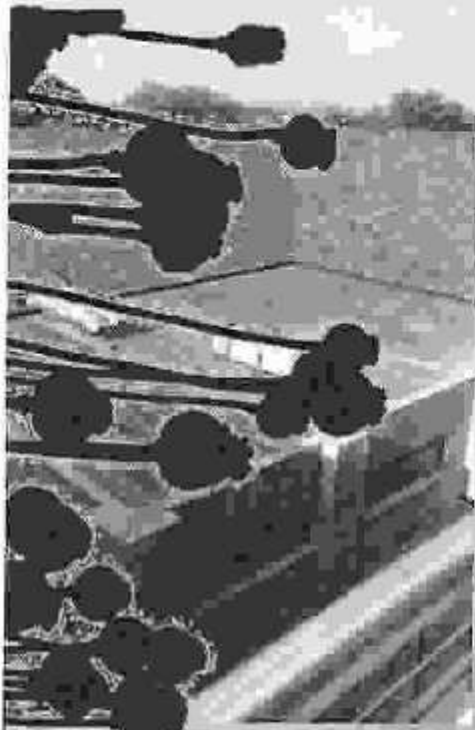
05 Landscape Projects- Current  
051 Commercial







### 03 Grain Building, Pretoria



*Bokamoso*

**05 Landscape Projects— Completed**

**053 Offices**



## 05 Celtic Manor, Pretoria



*Bokamoso*

■ Landscape Projects - Completed

■ S Complex Development

Natural



## 07 The Wilds, Pretoria



05 Landscape Projects – Completed

055 Residential



**09** The Wilds, Pretoria



*Bokamoso*

**05** Landscape Projects – Completed

**055** Residential



# 011 Governor of Reserve Bank's Residence, Pretoria



Plant Palette



Option 1



Option 2



05 Landscape Projects – Conceptual

055 Residential



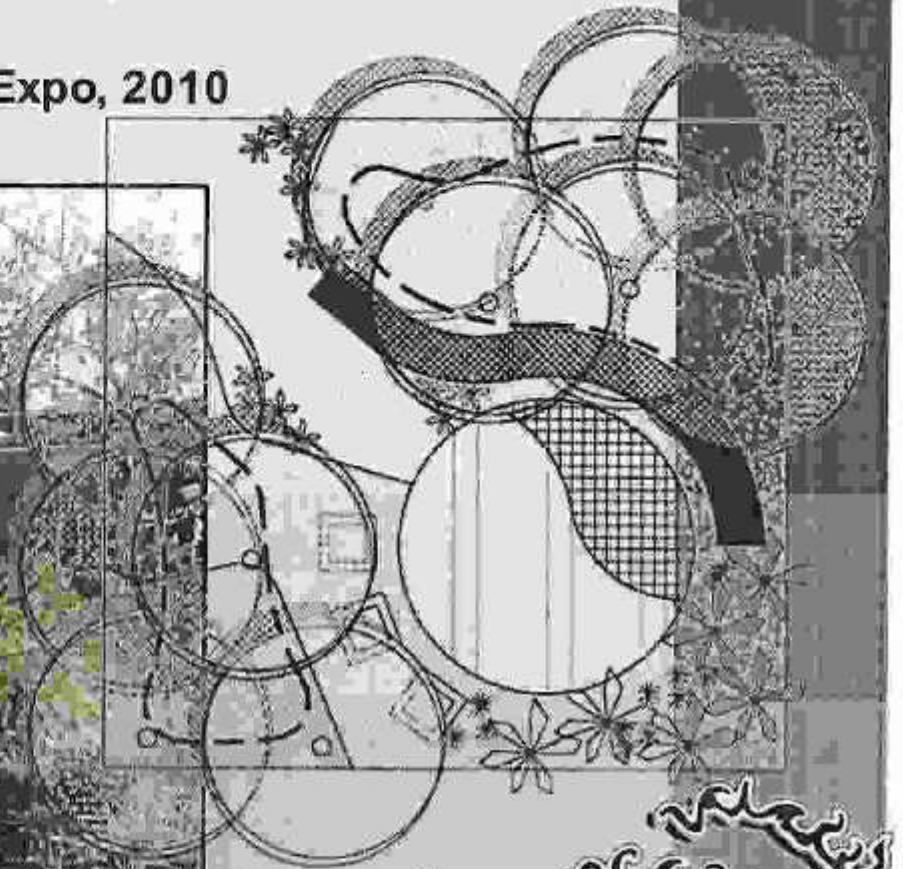
## 013 Forest Garden, Pretoria





## 01 Safari Garden Expo

Received a Silver Certificate at the Safari Garden Expo, 2010



*Bokamoso*

Corporate Highlights

061 Awards



Project Name	Status	Project
<b>Environmental Impact Assessment(EIA) and Scoping Report</b>		
Junction 21	ROD	EIA
5 O'clock site access	In Progress	EIA
Bokamoso X 1	In Progress	Scoping & EIA
Doornvallei Phase 6 & 7	In Progress	EIA
Engen Interchange	In Progress	Scoping & EIA
Erasmia X15	In Progress	EIA
Franschkloof	In Progress	EIA
K113	Amendment of ROD	EIA
K220 East	ROD	EIA
K220 West	ROD	EIA
K54 ROD conditions	In Progress	EIA
Knopjeslaagte 95/Peachtree	ROD	EIA
Knopjeslaagte portion 20 & 21	ROD	EIA
Lillieslief/Nooitgedacht	In Progress	EIA
Mooiplaats 70 (Sutherland)	In Progress	EIA
Naauwpoort 1 - 12/Valley View	In Progress	EIA
PeachTree X5	In Progress	EIA
Strydfontein 60	In Progress	EIA
Thabe Motswere	In Progress	Scoping & EIA
Vlakplaats	In Progress	EIA
Watervai Valley	In Progress	EIA
<b>Environmental Opinion</b>		
Doomkloof 68 (Ross)	In Progress	Opinion
Monavoni X 53	In Progress	BA & Opinion
Mookkloof (USN)	In Progress	Opinion
Norwood Mall/Sandstrand	In Progress	Opinion
Riversong X 9	In Progress	Opinion
Sandstone	In Progress	Opinion
USN/USN/USN	In Progress	Opinion



The adjacent list host the status of our current projects. Only a selected amount of projects are displayed.



**07 Current Environmental Projects**  
**EIA, Scoping & Opinion**



Project Name	Status	Project
<b>Objection</b>		
Colesberg WWTW	In Progress	Objection
Nigel Steelmill	Completed	Objection
Chantilly Waters	Completed	Objection

<b>Development facilitation Act- Input (DFA)</b>		
Burgersfort	In Progress	DFA & BA
Doornpoort Filling Station	In Progress	DFA & EIA & Scoping
Eastwood Junction	In Progress	DFA
Ingersol Road (Erf 78, 81 - 83)	In Progress	DFA
Roos Senekal	In Progress	DFA & EIA & Scoping
Thaba Meetse 1	In Progress	DFA & EIA & Scoping

<b>Water Use License Act (WULA)</b>		
Britstown Bulk Water Supply	In Progress	WULA
Celery Road / Green Channel	In Progress	WULA
Clayville X 46	In Progress	WULA
Dindingwe Lodge	In Progress	WULA
Doornpoort Filling Station	In Progress	WULA+DFA+EIA+SC
Eco Park Dam	In Progress	WULA
Groote Drift Potch	In Progress	WULA
Jozini Shopping Centre	In Progress	WULA+BA
K60	Completed	WULA
Maloto Roads	In Progress	WULA
Kwazele Sewage Works	In Progress	WULA
Monavoni External Services	In Progress	WULA+BA
Nyathi Expo Estate	In Progress	WULA
Prairie Giants X 3	In Progress	WULA



**Current Environmental Projects**

**Objection, DFA & WULA**



- Billion Property Group
- Cavaleros Developments
- Centro Developers
- Chaimberlains
- Chieftain
- Century Property Group
- Coca Cola
- Elmado Property Development
- Flanagan & Gerard
- Gautrans
- Hartland Property Group
- Moolman Group
- MTN
- M&T Development
- Old Mutual
- Property Investment Company
- Petroland Developments
- RSD Construction
- SAND
- Stephan Parsons
- Twin City Developments
- Urban Construction
- USN



**08 Indicative Clients**

# **Annexure D**

COPY OF CV OF LIZELLE  
GREGORY FROM BOKAMOSO  
LANDSCAPE ARCHITECTS AND  
ENVIRONMENTAL  
CONSULTANTS



# Qualifications And Experience In The Field Of Environmental Planning And Management (Lizelle Gregory (Member Bokamoso)):

## Qualifications:

- Qualified as **Landscape Architect** at UP 1991;
- Qualified as **Professional Landscape Architect in 1997**;
- A Registered Member at The **South African Council for the Landscape Architect Profession (SACLAP)** with Practise Number: **PrLArch97078**;
- A Registered Member at the **International Association for Impact Assessment Practitioners (IAIA)**;
- Qualified as an **Environmental Auditor in July 2008** and also became a Member of the International Environmental Management Association (IEMAS) in 2008.

## Working Experience:

- Worked part time at Eco-Consult – 1988-1990;
- Worked part time at **Plan Associates as Landscape Architect in training** – 1990-1991;
- Worked as Landscape Architect at **Environmental Design Partnership (EDP)** from 1992 - 1994
- Practised under **Lizelle Gregory Landscape Architects** from 1994 until 1999;
- Lectured** at Part-Time at **UP** (1999) – Landscape Architecture and **TUT** (1998- 1999)- Environmental Planning and Plant Material Studies;
- Worked as **part time Landscape Architect and Environmental Consultant at Plan Associates** and **managed their environmental division for more than 10 years** – 1993 – 2008 (assisted the **PWV Consortium** with various road planning matters which amongst others included environmental Scans, EIA's, Scoping reports etc.)
- Renamed business as **Bokamoso in 2000** and is the only member of Bokamoso Landscape Architects and Environmental Consultants CC;
- More than 20 years experience in the compilation of Environmental Reports**, which amongst others included the compilation of various **DFA Regulation 31 Scoping Reports**, EIA's for EIA applications in terms of the applicable environmental legislation, Environmental Management Plans, Inputs for Spatial Development Frameworks, DP's, EMF's etc. Also included EIA Application on and adjacent to mining land and slimes dams (i.e. Brahm Fisherville, Doornkop)



# Qualifications And Experience In The Field Of Landscape Architecture (Lizelle Gregory (Member Bokamoso)):

## Landscape Architecture:

-Compiled landscape and rehabilitation plans for more than 22 years.

### The most significant landscaping projects are as follows:

-Designed the Gardens of the Witbank Technicon (a branch of TUT). Also supervised the implementation of the campus gardens (2004);

-Lizelle Gregory was the Landscape Architect responsible for the paving and landscape design at the UNISA Sunnyside Campus and received a Corobrick Golden Award for the paving design at the campus (1998-2004);

-Bokamoso assisted with the design and implementation of a park for the City of Johannesburg in Tembisa (2010);

-The design and implementation of the landscape gardens (indigenous garden) at the new Coca-Cola Valpre Plant (2012-2013);

-Responsible for the rehabilitation and landscaping of Jukse River area at the Norwood Shopping Mall (Johannesburg) (2012-2013);

-Designed and implemented a garden of more than 3,5ha in Randburg (Mc Arthurpark). Bokamoso also seeded the lawn for the project (more than 2,5 ha of lawn successfully seeded) (1999);

-Bokamoso designed and implemented more than 800 townhouse complex gardens and submitted more than 500 Landscape Development Plans to CTMM for approval (1995 – 2013);

-Assisted with Landscape Designs and the Masterplan at Eco-Park (M&T Developments) (2005-2011);

-Bokamoso designed and implemented an indigenous garden at an office park adjacent to the Bronberg. In this garden it was also necessary to establish a special garden for the Juliana Golden Mole. During a recent site visit it was established that the moles are thriving in this garden. Special sandy soils had to be imported and special indigenous plants had to be established in the natural section of the garden.

-Lizelle Gregory also owns her own landscape contracting business. **For the past 20 years she trained more than 40 PDI jobless people (sourced from a church in Mamelodi)** to become landscape contracting workers. All the workers are (on a continuous basis) placed out to work at nurseries and other associated industries;

-Over the past 20 years the Bokamoso team compiled more than 800 landscape development plans and also implemented most of the gardens. Bokamoso also designed and implemented the irrigation for the gardens (in cases where irrigation was required). Lizelle regarded it as important to also obtain practical experience in the field of landscape implementation.

Bokamoso

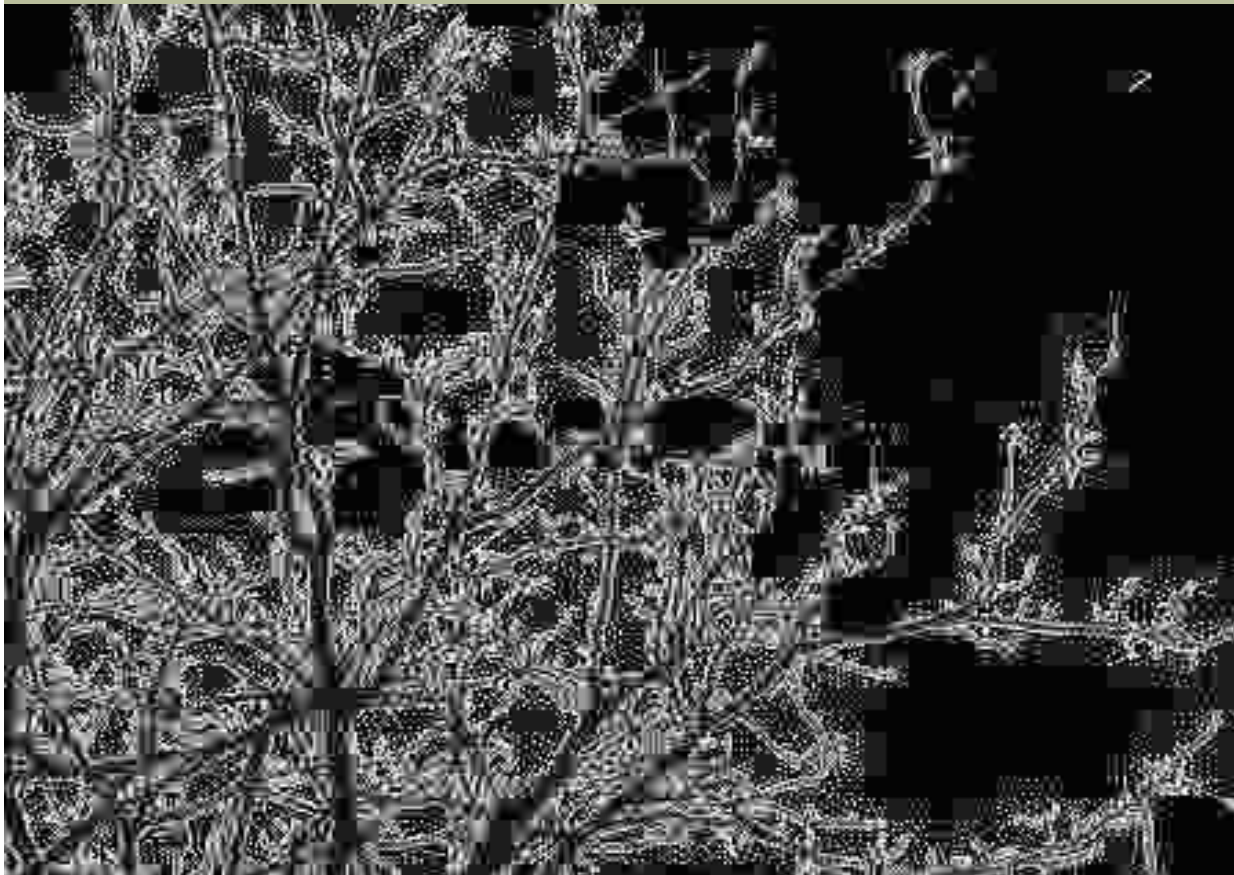
The word "Bokamoso" is written in a stylized, cursive font with a white outline and a yellow-to-white gradient fill. To the right of the word is a large, intricate, white-outlined flourish that resembles a stylized tree or a complex calligraphic element. The entire graphic is set against a black background. On the left side of the image, there is a vertical bar with a green-to-white gradient.

- 01 Executive Summary**
- 02 Vision, Mission & Values**
- 03 Human Resources**
- 04 Services**
- 05 Landscape Projects**
- 06 Corporate Highlights**
- 07 Environmental Projects**
- 08 Indicative Clients**
- 09 Tools**



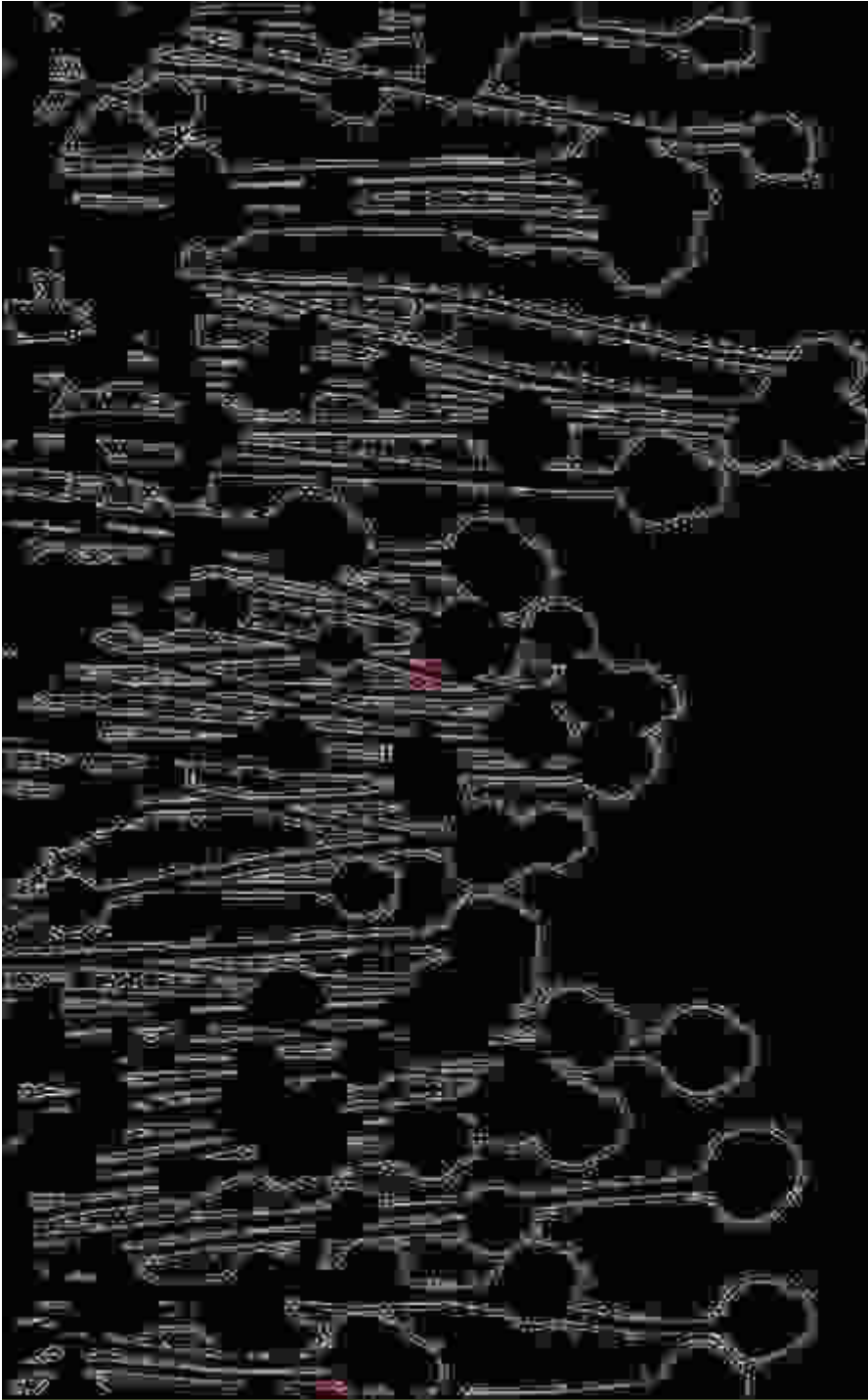
**Bokamoso** specialises in the fields of Landscape Architecture and all aspects of Environmental Management and Planning. Bokamoso was founded in 1992 and has shown growth by continually meeting the needs of our clients. Our area of expertise stretches throughout the whole of South Africa. Our projects reflect the competence of our well compiled team. The diversity of our members enables us to tend to a variety of needs. Our integrated approach establishes a basis for outstanding quality. We are well known to clients in the private, commercial as well as governmental sector.

At Bokamoso we stand on a firm basis of environmental investigation in order to find unique solutions to the requirements of our clients and add value to their operations.



**01 Executive Summary**

**011 Company Overview**



### **Vision:**

At Bokamoso we strive to find the best planning solutions by taking into account the functions of a healthy ecosystem. Man and nature should be in balance with each other.

### **Mission:**

We design according to our ethical responsibility, take responsibility for successful completion of projects and constitute a landscape that contributes to a sustainable environment. We add value to the operations of our clients and build long term relationships that are mutually beneficial.

### **Values:**

Integrity

Respect



## **02 Vision, Mission & Values**

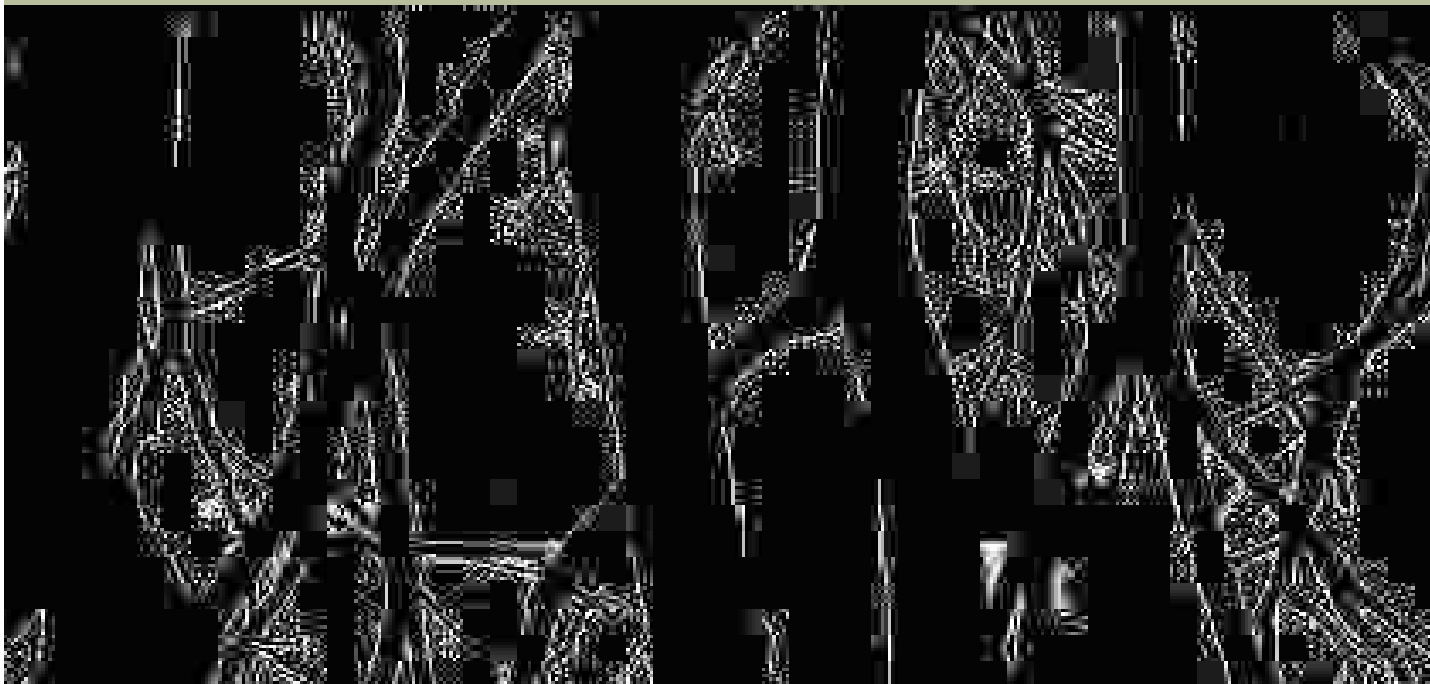


**Bokamoso** stands on the basis of fairness. This include respect within our multicultural team and equal opportunities in terms of gender, nationality and race.

We have a wide variety of projects to tend to, from complicated reports to landscape installation. This wide range of projects enables us to combine a variety of professionals and skilled employees in our team.

Bokamoso further aids in the development of proficiency within the working environment. Each project, whether in need of skilled or unskilled tasks has its own variety of facets to bring to the table.

We are currently in the process of receiving our BEE scorecard. We support transformation in all areas of our company dynamics.



**03 Human Resources**

**031 Employment Equity**

## Lizelle Gregory (100% interest)

Lizelle Gregory obtained a degree in Landscape Architecture from the University of Pretoria in 1992 and passed her board exam in 1995.

Her professional practice number is PrLArch 97078.

Ms. Gregory has been a member of both the Institute for Landscape Architecture in South Africa (ILASA) and South African Council for the Landscape Architecture Profession (SACLAP), since 1995.

Although the existing Environmental Legislation doesn't yet stipulate the academic requirements of an Environmental Assessment Practitioner (EAP), it is recommended that the Environmental Consultant be registered at the International Association of Impact Assessments (IAIA). Ms. Gregory has been registered as a member of IAIA in 2007.

Ms. Gregory attended and passed an International Environmental Auditing course in 2008. She is a registered member of the International Environmental Management and Assessment Council (IEMA).

She has lectured at the Tshwane University of Technology (TUT) and the University of Pretoria (UP). The lecturing included fields of Landscape Architecture and Environmental Management.

Ms. Gregory has more than 20 years experience in the compilation of Environmental Reports:

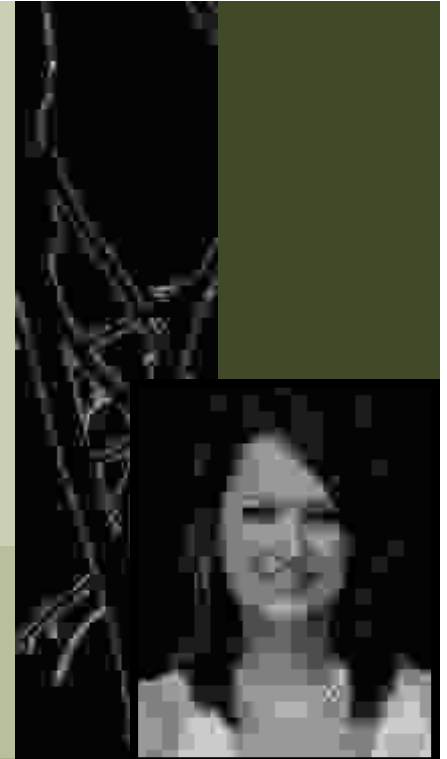
Environmental Management Plans (EMP);

Strategic Environmental Assessments;

All stages of Environmental input ;

EIA under ECA and the new and amended NEMA regulations and various other Environmental reports and documents.

Ms. Gregory has compiled and submitted more than 600 Impact Assessments within the last 5-6 years. Furthermore, Ms. L. Gregory is also familiar with all the GDARD/Provincial Environmental policies and guidelines. She assisted and supplied GAUTRANS/former PWV Consortium with Environmental input and reports regarding road network plans, road determinations, preliminary and detailed designs for the past 12 years.



**03 Human Resources**

**032 Members**

# Consulting

## Anè Agenbacht

**Introduction to Sustainable Environmental Management—An overview of Principles, Tools,& Issues (Potch 2006)**  
**Leadership Training School (Lewende Woord 2010)**  
**BA Environmental Management (UNISA 2011)**  
**PGCE Education (Unisa 2013) - CUM LAUDE**  
Project Manager  
More than 10 years experience in the compilation of various environmental reports

## Mary-Lee Van Zyl

**Msc. Plant Science (UP)**  
**BSc (Hons) Plant Science (UP)**  
**BSc Ecology (UP)**  
More than 3 years working experience in the Environmental field  
Specialises in ECO works, Basic Assessments, EIA's, and Flora Reports  
Compilation of various Environmental Reports

## Dashentha Moodley

**BA Honours Degree in Environmental Management (UNISA) - CUM LAUDE**  
**Bachelor of Social Science in Geography & Environmental Management (UNISA)**  
More than 6 years experience in WUL Applications & Integrated Environmental Management within water resource management.  
Senior Environmental Practitioner & Water Use Licence Consultant  
Specialises in Water Use License & Compilation of various Env. Reports

## Nadine Duncan

**BSc (Hons) Geography (UP)**  
**BSc Landscape Architecture (UP)**  
More than 10 years experience in compilation of Basic Assessments and EIA Reports  
Compilation of various Environmental Reports

**03 Human Resources**

**033 Personnel**



**Ben Bhukwana**

**BSc Landscape Architecture (UP)**

More than 6 years experience in the field of Landscape Architecture (Design, Construction, Implementation, and Management).

Specialises in Landscape Design, ECO, Rehabilitation Plans and Compilation various environmental reports and Compilation of Tender documents

**Juanita de Beer**

**Diploma Events Management and Marketing (Damelin)**

Specializes in Public relations and Public Participation Processes (4 years experience)

Specialises in compiling various environmental reports

**Alfred Thomas**

**CIW Foundation& Internet Marketing (IT Academy)**

12 years experience in GIS and IT in general.

GIS Operator and Multimedia Specialist.

**Bianca Reyneke**

**Applying SHE Principles and Procedures (NOSA)**

**Intro to SAMTRAC Course (NOSA)**

SHEQ Coordinator and compilation of environmental reports

Specialises in compiling various environmental reports

**A.E. van Wyk**

**BSc. Environmental Sciences (Zoology and Geography)**

Specialises in compiling various environmental reports



**03 Human Resources**

**034 Personnel**

# In-house Specialists

## Mark Cooper

**Pr. Sci. Nat. Biological Science (SACNASP)**  
**M.Sc. Zoology (UCT 1998)**  
**B.Sc. (Hons) Zoology (UCT 1995)**  
**B.Sc. Botany & Zoology (Wits 1994)**  
Specialises identifying Red-Listed Species  
Compilation of various fauna and flora reports

## Corné Niemandt

**M.Sc. Plant Science (UP 2015) – Cum Laude**  
**B.Sc. (Hons) Zoology (UP 2012)**  
**B.Sc. Ecology (UP 2011)**  
Specialises in vegetation and plant surveys  
Compilation of fauna and flora specialist reports

## Garth van Rooyen

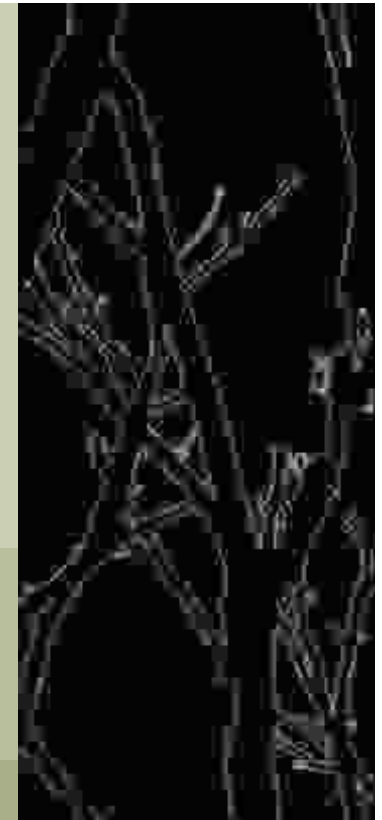
**BSc. (Hons) Environmental Soil Science**  
**BSc. Geology**  
Soil and Wetland Specialist

## Sampie van Rooyen

**M.Sc. Environmental Sciences in Botany (Candidate) (NWU)**  
**B.Sc. (Hons) Ecological Remediation (NWU)**  
**B.Sc. Environmental Sciences and Tourism (NWU)**  
Specialises in conducting ecological surveys and plant identification

## CW Vermeulen

**B.Sc. Environmental & Biological Sciences (NWU)**  
Junior Environmental Assessment Practitioner  
Field expert in avifauna and the compilation of avifaunal reports



**03 Human**

**035 Personnel**



**Elsa Viviers**

**Interior Decorating (Centurion College)**

( Accounting/ Receptionist ) and Secretary to Lizelle Gregory

**Loura du Toit**

**N. Dip. Professional Teacher (Heidelberg Teachers Training College )**

Librarian and PA to Project Manager

**Merriam Mogalaki**

Administration Assistant with in-house training in bookkeeping

## **Landscape Contracting**

**Elias Maloka**

Assisting with Public Participations, Office Admin

Site manager overseeing landscape installations.

Irrigation design and implementation.

Landscape maintenance

More than 18 years experience in landscape construction work

The contracting section comprises of six permanently employed black male workers. In many cases the team consists of up to 12 workers, depending on the quantity of work.



**03 Human Resources**

**035 Personnel**

**01**

## **Environmental Management Services**

- Environmental Assessment Reports
- Feasibility & Scoping Reports
- Environmental Management Plans
- Environmental Scans
- Strategic Environmental Assessments
- Environmental Impact Assessments for Mines
- Environmental Input and Evaluation of Environmental Development Frameworks
- Review of Environmental Reports
- Compilation of Environmental Legislation and Policy Documents
- Environmental Auditing and Monitoring
- Environmental Control Officer (ECO)
- Visual Impact assessments
- Specialist Assistance with Environmental Legislation Issues and Appeals
- Development Process Management
- Water Use License applications to DWA
- Waste License Application



**04 Services**

**041 Consulting Services**

## 02 Landscape Architecture

- Master Planning
- Sketch Plans
- Planting Plans
- Working Drawings
- Furniture Design
- Detail Design
- Landscape Development Frameworks
- Landscape Development Plans (LDP)
- Contract and Tender Documentation
- Landscape Rehabilitation Works

## 03 Landscape Contracting

Implementation of Plans for:

- Office Parks
- Commercial/ Retail / Recreational Development
- Residential Complexes
- Private Residential Gardens
- Implementation of irrigation systems



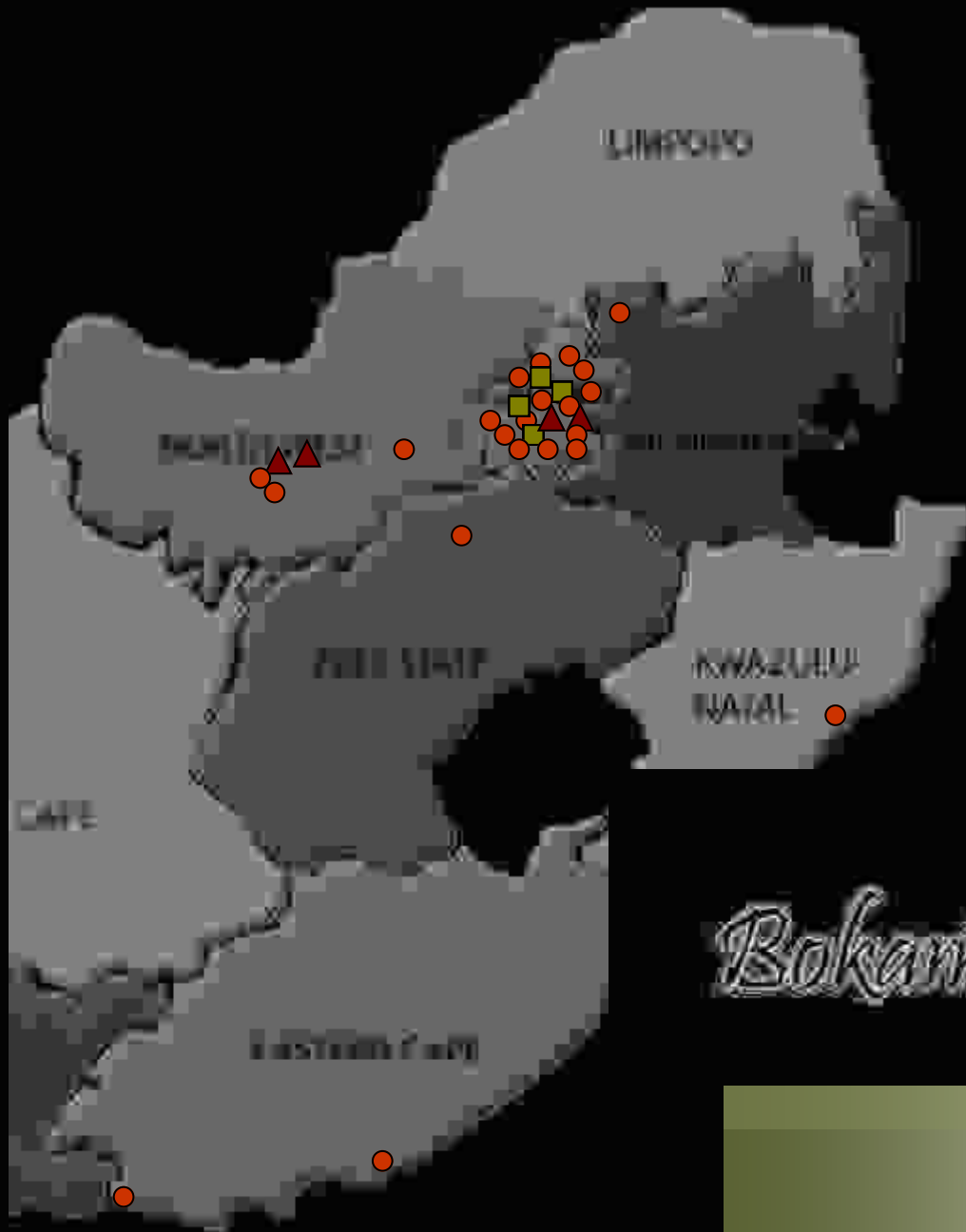
042

04 Services

Planting Services



Team Composition



**04 Services**

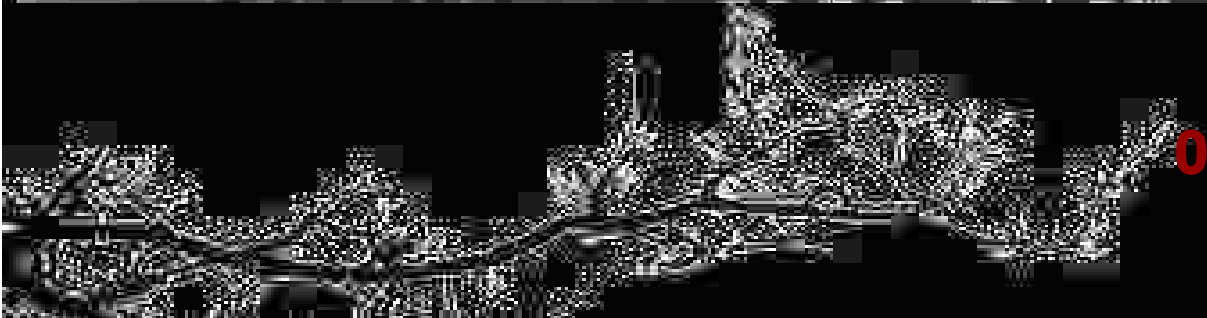
**043 Orientation**

01



project

Bokamoso

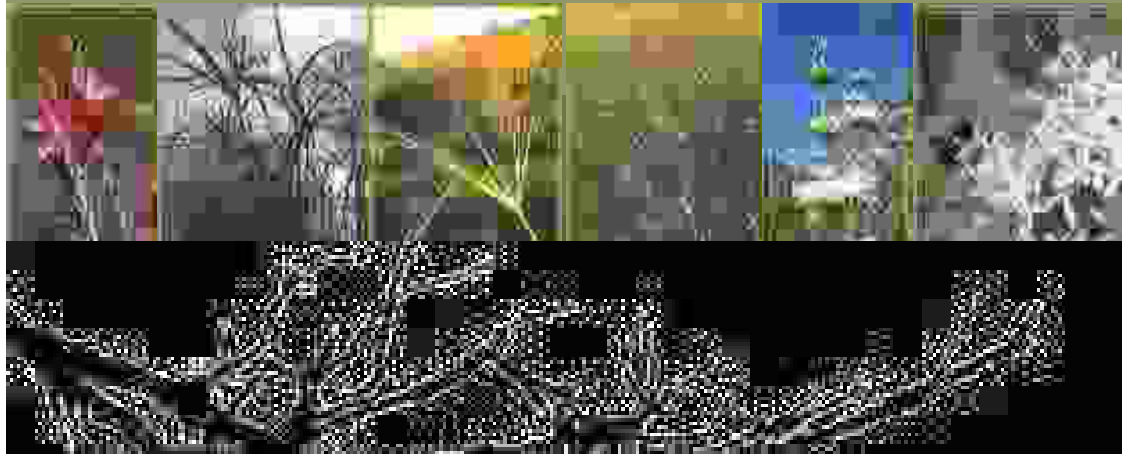


05 Landscape Projects– Current

051 Commercial



# 01 Valpre Bottling Plant, Heidelberg



## 05 Landscape Projects– Current

### 051 Commercial

# 01 Valpre Bottling Plant, Heidelberg



## 05 Landscape Projects– Current

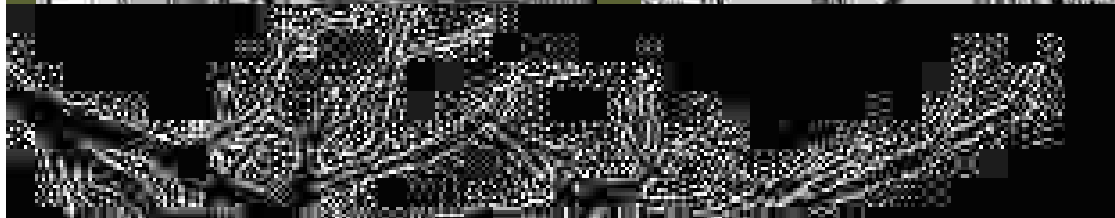
### 051 Commercial

# 01 Valpre Bottling Plant, Heidelberg



## 05 Landscape Projects– Current

### 051 Commercial

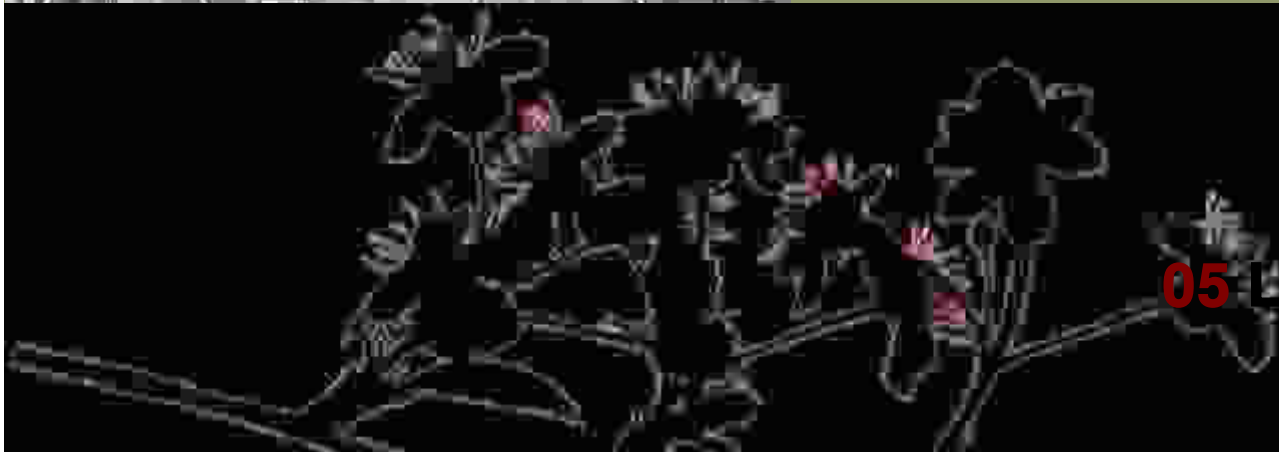


## 02 Melodie Waters, Hartebeespoortedam



Streetscape

Indigenous

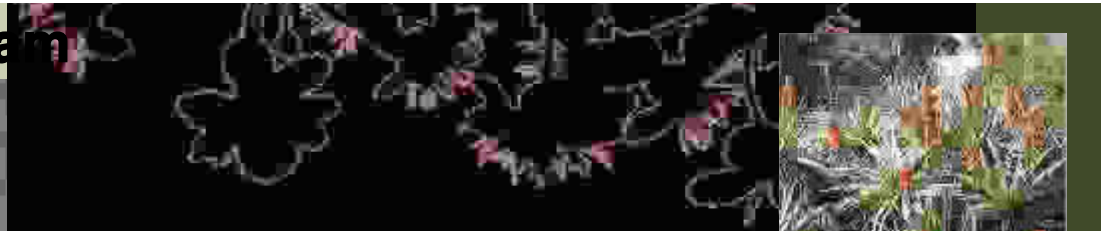


## 05 Landscape Projects – Current

### 052 Commercial/Recreational



## 02 Melodie waters, Hartebeestpoortdam



Development Framework



Rehabilitation



Area Layout

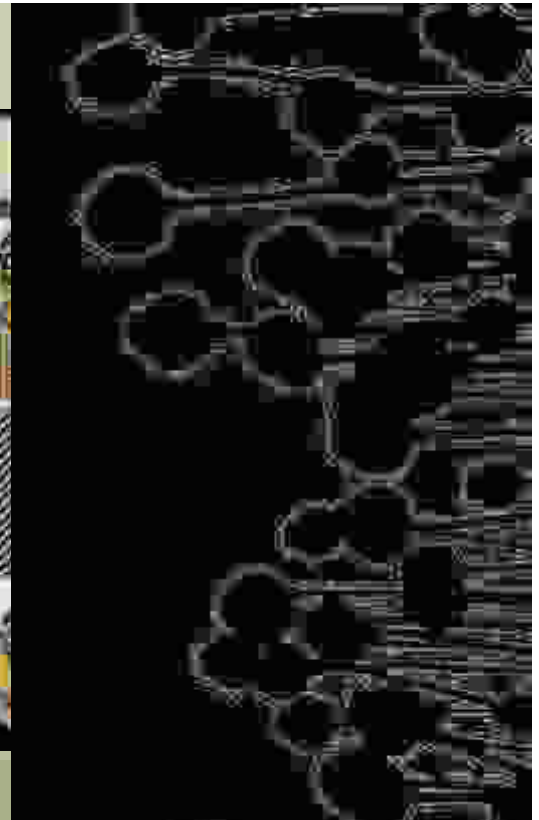
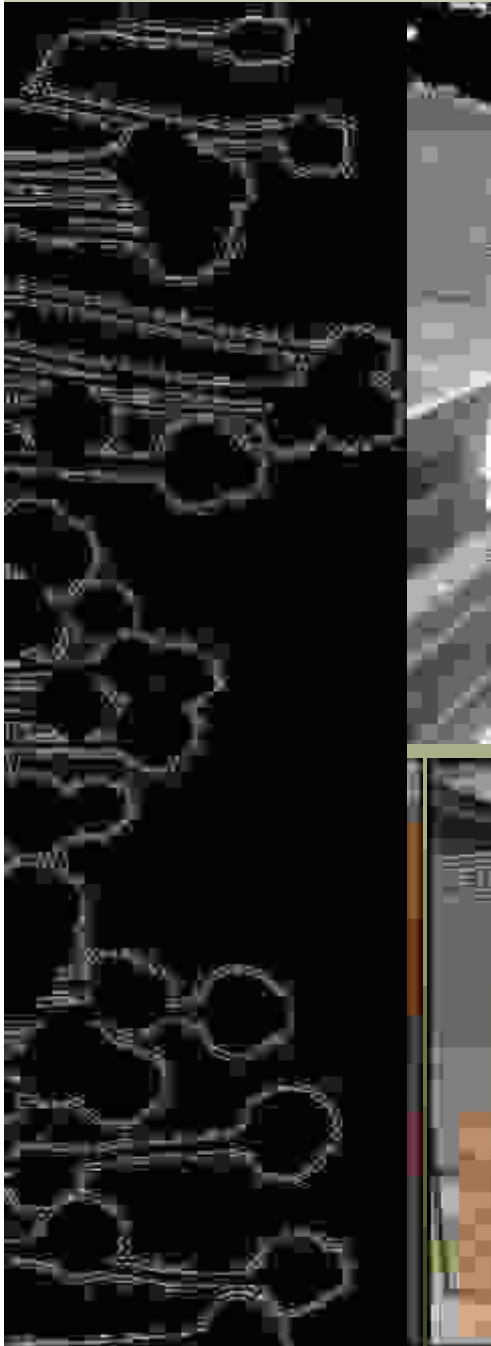


## 05 Landscape Projects– Current

052 Commercial/Recreational



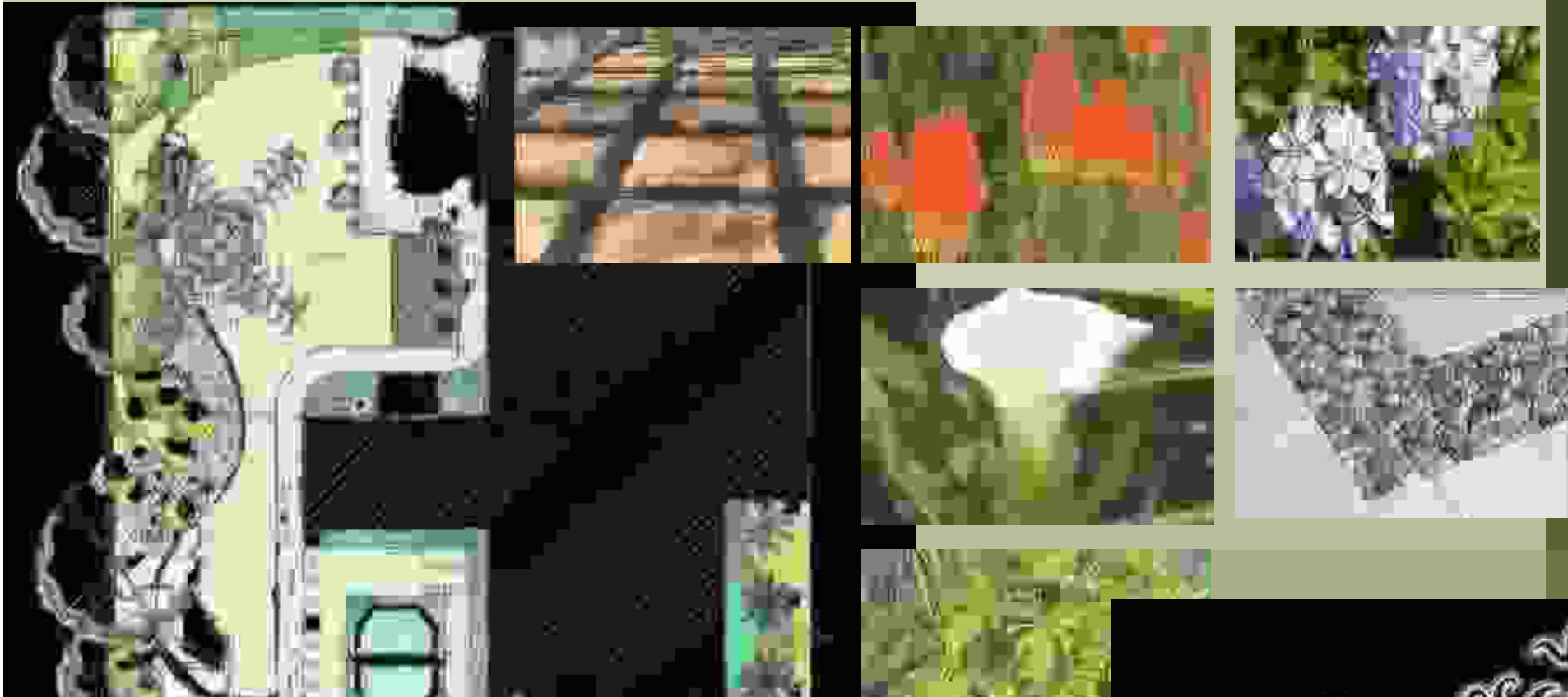
### 03 Grain Building, Pretoria



**05** Landscape Projects– Completed

**053** Offices

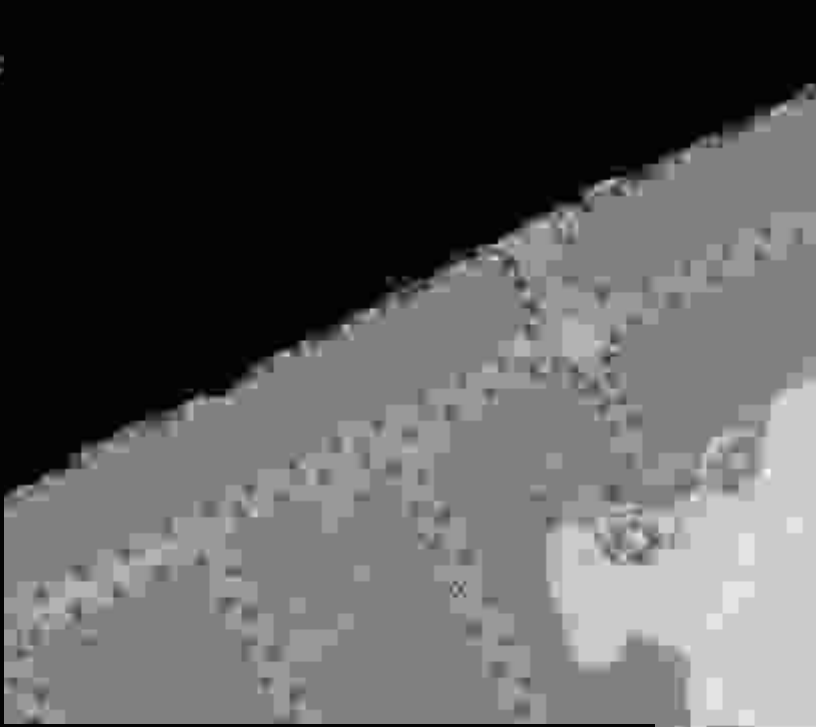
## 04 Ismail Dawson offices, Pretoria



## 05 Landscape Projects – Conceptual

053 Offices

# 05 Celtic Manor, Pretoria



*Bokamoso*

05

054

Completed  
Development

## 06 The Wilds, Pretoria



**05 Landscape Projects – Completed**

**054 Complex Development**



**07 The Wilds, Pretoria**

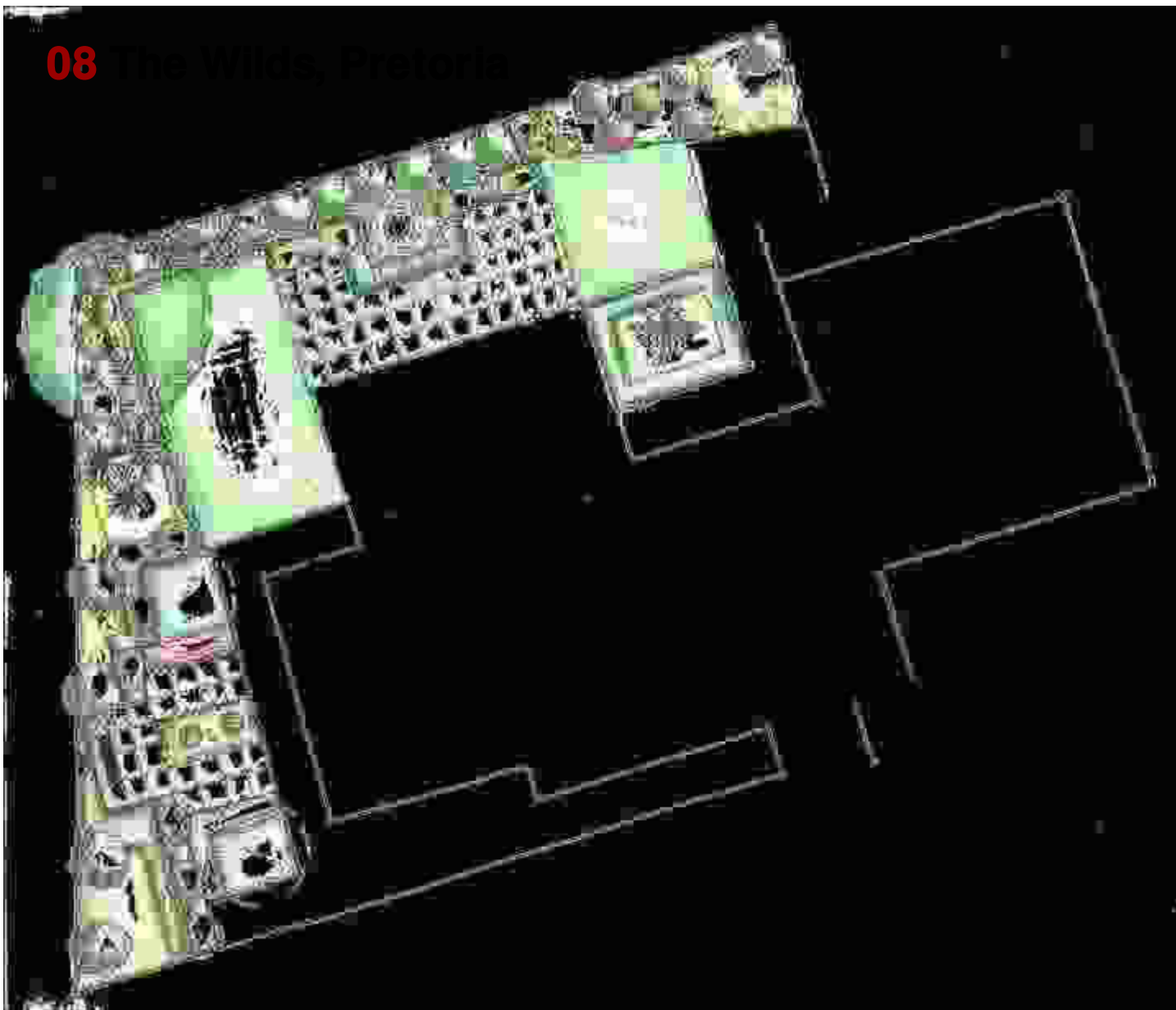


**05 Landscape Projects – Completed**

**055 Residential**



08



**05** Landscape Projects – Completed

**055** Residential

**09 The Wilds, Pretoria**



**05 Landscape Projects – Completed**

**055 Residential**

**010 The Wilds, Pretoria**



**05 Landscape Projects – Completed**

**055 Residential**

# 011 Governor of Reserve Bank's Residence, Pretoria



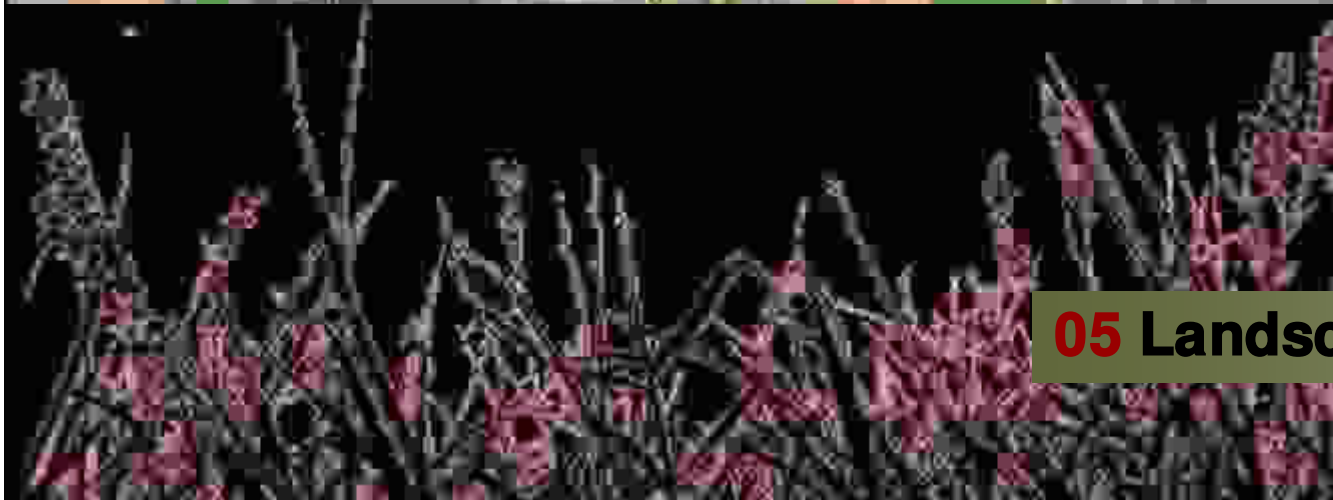
Plant Palette



Option 1



Option 2

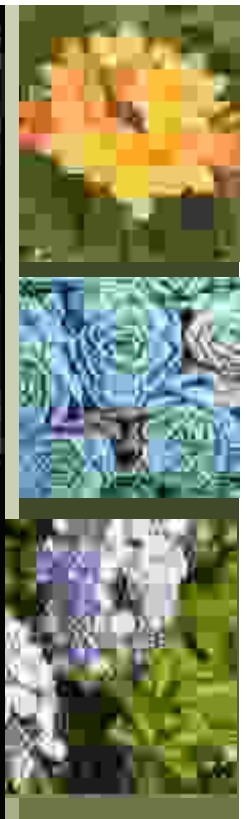


05 Landscape Projects – Conceptual

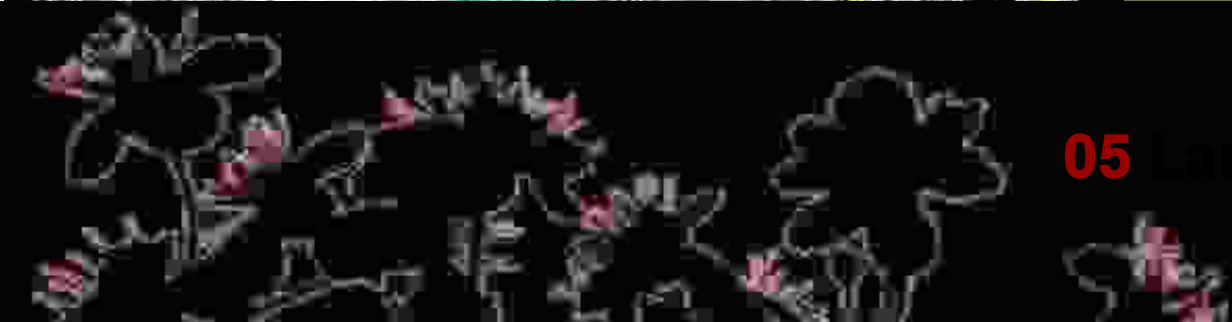
055 Residential



# 012 House Ismail, Pretoria



Back Gard

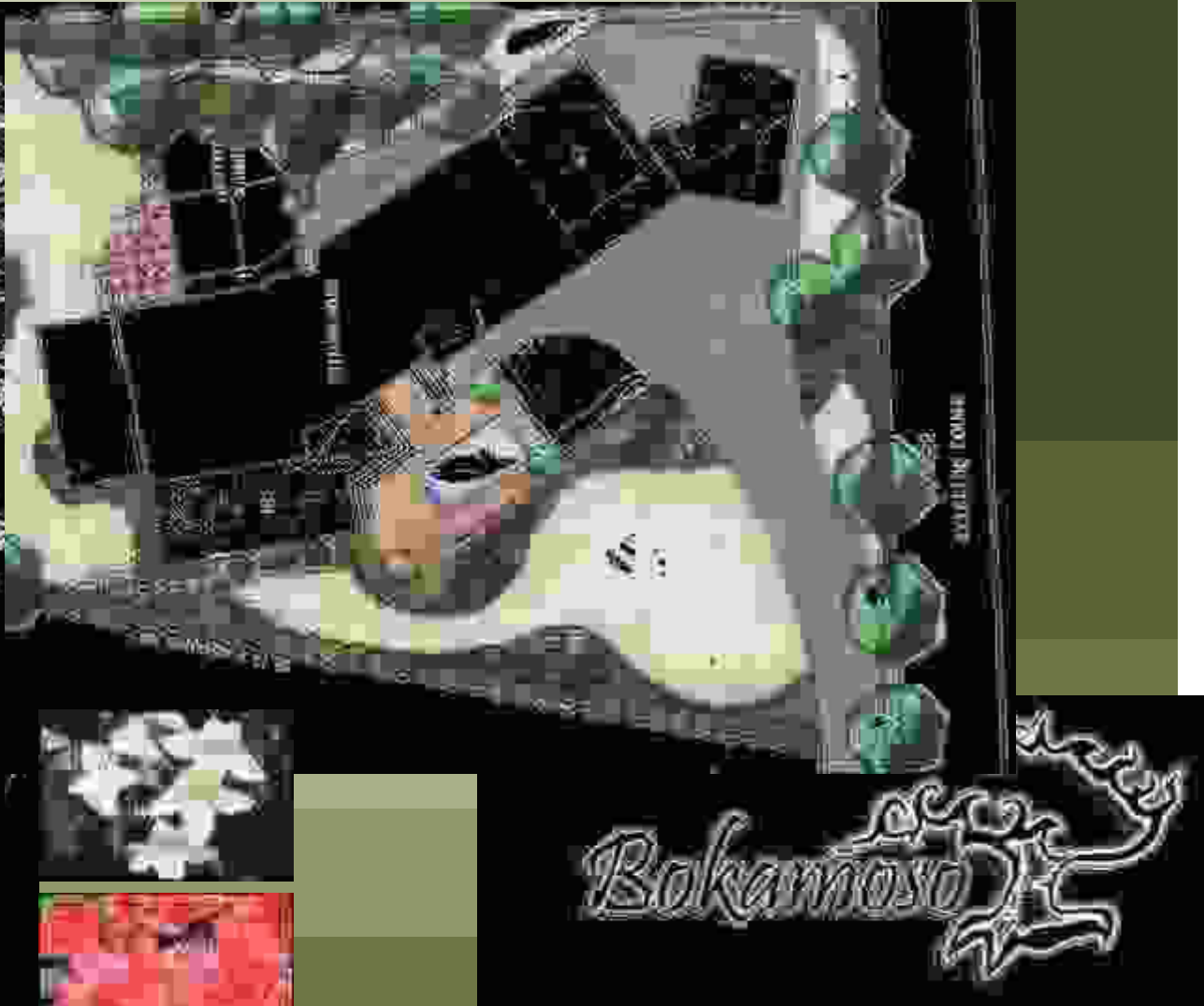
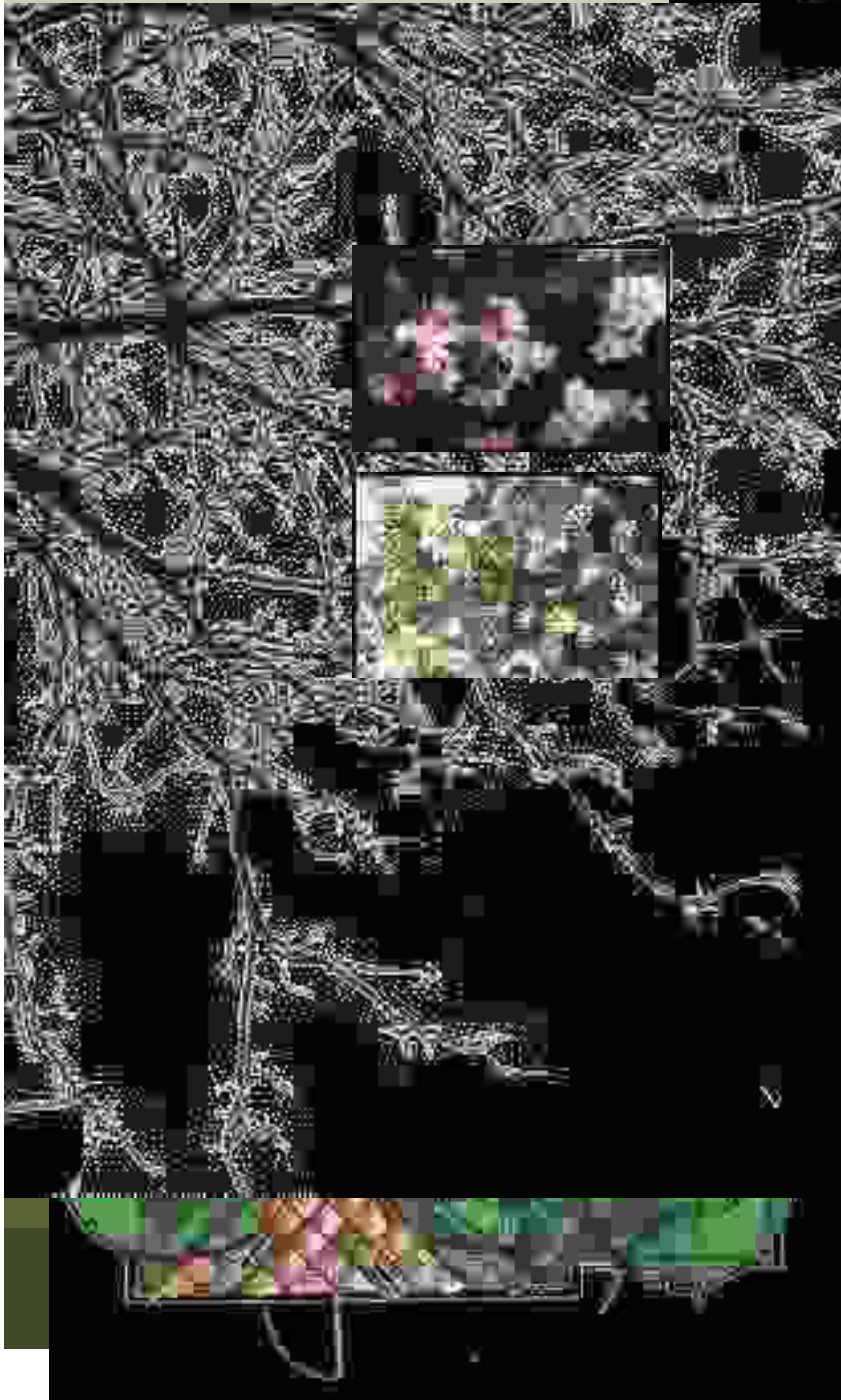


05 Landscape Projects - Conceptual

055 Residential



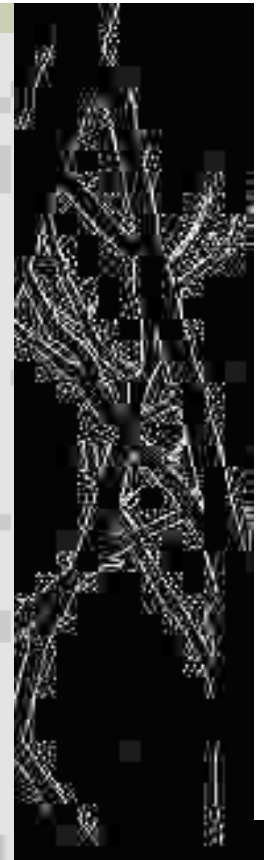
# 013 Forest Garden, Pretoria



**05** Landscape Projects – Completed

**055** Residential

**015 Forest Garden, Pretoria**

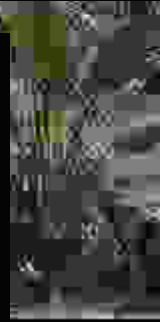
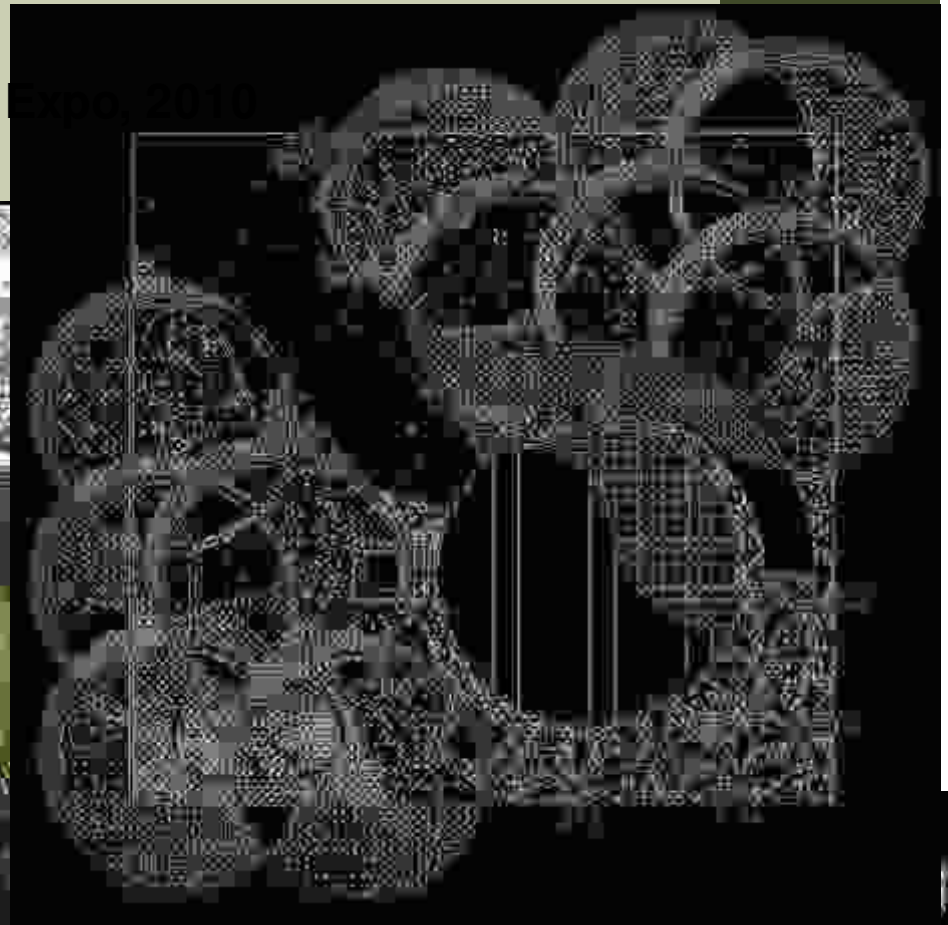


**05 Landscape Projects - Completed**

**055 Residential**

## 01 Safari Garden Expo

Received a Silver Certificate at the Safari Garden



*Bokamoso* 

06 Corporate Highlights

061 Awards



## **02 UNISA Sunnyside Campus, Pretoria**

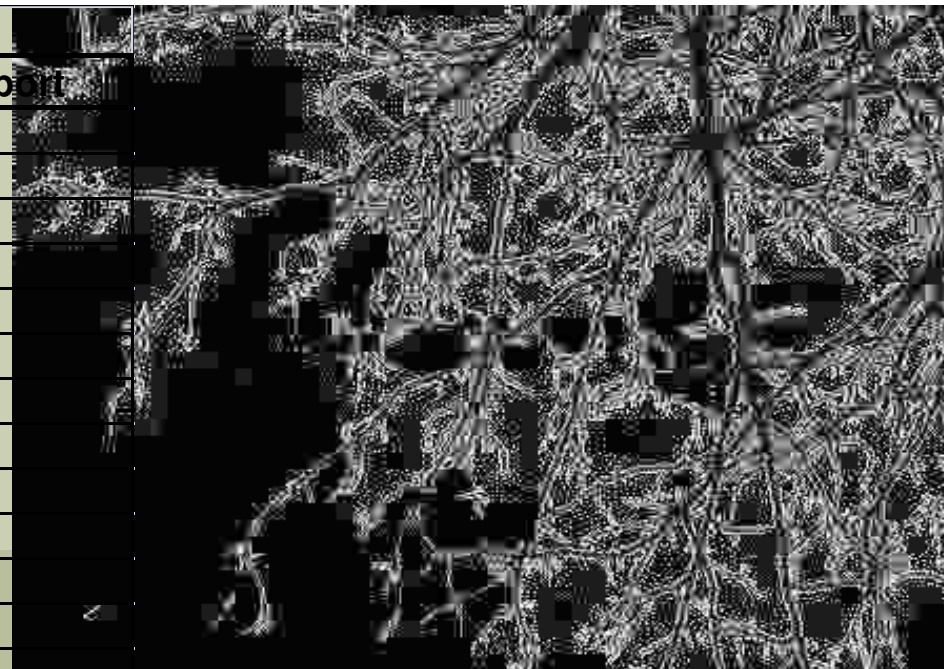
**Best Commercial Paving Plan in Gauteng, 1997**



**06 Corporate Highlights**

**061 Awards**

Project Name	Status	Project
<b>Environmental Impact Assessment(EIA) and Scoping Report</b>		
Junction 21	ROD	EIA
5 O'clock site access	In Progress	EIA
Bokamoso X 1	In Progress	Scoping & EIA
Doornvallei Phase 6 & 7	In Progress	EIA
Engen Interchange	In Progress	Scoping & EIA
Erasmia X15	In Progress	EIA
Franschkloof	In Progress	EIA
K113	Amendment of ROD	EIA
K220 East	ROD	EIA
K220 West	ROD	EIA
K54 ROD conditions	In Progress	EIA
Knopjeslaagte 95/Peachtree	ROD	EIA
Knopjeslaagte portion 20 & 21	ROD	EIA
Lillieslief/Nooitgedacht	In Progress	EIA
Mooiplaats 70 (Sutherland)	In Progress	EIA
Naauwpoort 1 - 12/Valley View	In Progress	EIA
PeachTree X5	In Progress	EIA
Strydfontein 60	In Progress	EIA
Thabe Motswere	In Progress	Scoping & EIA
Vlakplaats	In Progress	EIA
Waterval Valley	In Progress	EIA
<b>Environmental Opinion</b>		
Doornkloof 68 (Ross)	In Progress	Opinion
Monavoni X 53	In Progress	BA & Opinion
Mooikloof (USN)	In Progress	Opinion
Norwood Mall/Sandspruit	In Progress	Opinion
Riversong X 9	In Progress	Opinion
Sud Chemie	In Progress	Opinion
USN Benjoh Fishing Resort	In Progress	Opinion



The adjacent list host the status of our current projects. Only a selected amount of projects are listed.



**07 Current Environmental Projects**

**071 EIA, Scoping & Opinion**



Project Name	Status	Project
<b>Basic Assessment(BA)</b>		
Annlin X 138	In Progress	BA
Clubview X 29	ROD	BA
Darrenwood Dam	In Progress	BA
Durley Holding 90 & 91	In Progress	BA
Elim	In Progress	BA
Fochville X 3	In Progress	BA
Hartebeeshoek 251	In Progress	BA
Klerksdorp (Matlosana Mall)	In Progress	BA
Monavoni External Services	ROD	BA
Monavoni X 45	Amendment of ROD	BA
Montana X 146	In Progress	BA
Rooihuiskraal X29	In Progress	BA
Thorntree Mall	In Progress	BA

<b>Environmental control officer (ECO)</b>		
Grace Point Church	In Progress	ECO
R 81	In Progress	ECO
Highveld X 61	In Progress	ECO
Mall of the North	In Progress	ECO
Olievenhoutbosch Road	In Progress	ECO
Orchards 39	In Progress	ECO
Pierre van Ryneveld Reservoir	In Progress	ECO
Project Shelter	In Progress	ECO

<b>S24 G</b>		
Wonderboom	In Progress	S24 G
Mogwasi Guest houses	Completed	S24 G



## 07 Current Environmental Projects

072 BA, ECO & S24 G

Project Name	Status	Project
<b>Objection</b>		
Colesberg WWTW	In Progress	Objection
Nigel Steelmill	Completed	Objection
Chantilly Waters	Completed	Objection

<b>Development facilitation Act- Input (DFA)</b>		
Burgersfort	In Progress	DFA & BA
Doornpoort Filling Station	In Progress	DFA & EIA & Scoping
Eastwood Junction	In Progress	DFA
Ingersol Road (Erf 78, 81 - 83)	In Progress	DFA
Roos Senekal	In Progress	DFA & EIA & Scoping
Thaba Meetse 1	In Progress	DFA & EIA & Scoping

<b>Water Use License Act (WULA)</b>		
Britstown Bulk Water Supply	In Progress	WULA
Celery Road / Green Channel	In Progress	WULA
Clayville X 46	In Progress	WULA
Dindingwe Lodge	In Progress	WULA
Doornpoort Filling Station	In Progress	WULA+DFA+EIA+SC
Eco Park Dam	In Progress	WULA
Groote Drift Potch	In Progress	WULA
Jozini Shopping Centre	In Progress	WULA+BA
K60	Completed	WULA
Maloto Roads	In Progress	WULA
Kwazele Sewage Works	In Progress	WULA
Monavoni External Services	In Progress	WULA+BA
Nyathi Eco Estate	In Progress	WULA
Prairie Giants X 3	In Progress	WULA
Waveside Water Bottling Plant	Completed	WULA



## 07 Current Environmental Projects

073 Objection, DFA & WULA

Project Name	Status	Project
<b>Environmental Management Plan(EMP)</b>		
Heidelberg X 12	ROD	EMP
Monavoni Shopping Centre	Completed	EMP
Forest Hill Development	Completed	EMP
Weltevreden Farm 105KQ	Completed	EMP+EIA
Raslouw Holding 93	Completed	EMP+BA
Durley Development	Completed	EMP+BA
Rooihuiskraal North X 28	Completed	EMP

<b>Rehabilitation Plan</b>		
Norwood Mall/Sandspruit	In Progress	Rehabilitation
Project Shelter Heidelberg	In Progress	Rehabilitation
Sagewood Attenuation Pond	ROD	Rehabilitation
Velmore Hotel	Completed	Rehabilitation
Grace Point Church	Completed	Rehabilitation
Mmamelodi Pipeline	Completed	Rehabilitation

<b>Visual Impact Assessment</b>		
Swatzkop Industrial Developme	Completed	Assessment +DFA
Erasmia	Completed	Assessment

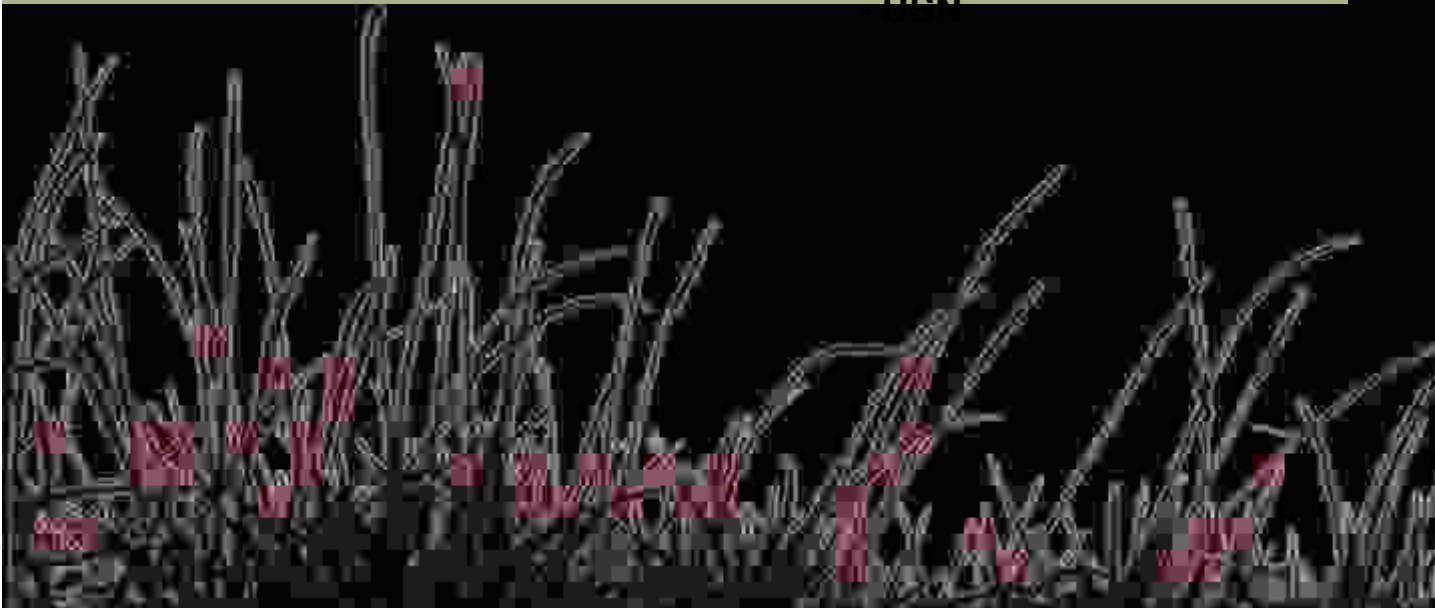
<b>Signage Application</b>		
Menlyn Advertising	Completed	Signage
The Villa Mall	Completed	Signage+EMP+BA



## 07 Current Env

### 074 EMP, Rehabilitation , Waste Managemen

- Billion Property Group
- Cavaleros Developments
- Centro Developers
- Chaimberlains
- Chieftain
- Century Property Group
- Coca Cola
- Elmado Property Development
- Flanagan & Gerard
- Gautrans
- Hartland Property Group
- Moolman Group
- MTN
- M&T Development
- Old Mutual
- Property Investment Company
- Petroland Developments
- RSD Construction
- SAND
- Stephan Parsons
- Twin City Developments
- Urban Construction



## **08** Indicative Clients

- Adobe Illustrator CS3
- Adobe Photoshop CS3
- Adobe InDesign CS3
- AutoCAD
- Google SketchUP
- GIS
- Microsoft Office Word
- Microsoft Office Excel
- Microsoft Office Publisher
- Microsoft Office Power Point





# **Annexure E**

Rejection of Amendment  
Application





**GAUTENG PROVINCE**  
 AGRICULTURE AND RURAL DEVELOPMENT  
 REPUBLIC OF SOUTH AFRICA

Reference: Gaut 005/12-13/E0070  
 Enquiries: Simon Mafu  
 Email: [Simon.Mafu@gauteng.gov.za](mailto:Simon.Mafu@gauteng.gov.za)

Mr. Werner van Rhyen and Mr. Ibrahim Mia  
 Waterval Islamic Institute  
 P.O. Box 5  
 Johannesburg  
 2000

Facsimile: (011) 802 1563 / (011) 253 9229

**PER FACSIMILE & REGISTERED MAIL.**

Dear Sir (s)

**APPLICATION FOR AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION GAUT 002/05-06/1476: THE PROPOSED NORTHERN RESIDENTIAL ESTATE ON PORTIONS OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR: GAUT 006/12-13/E0070**

The above matter and more specifically your application for an amendment received on 20 May 2012, have reference.

Please be advised that the Department has, under the powers vested in it by Regulations 41 and 42 of the Environmental Impact Assessment Regulations, 2010 ("the Regulations") decided not to amend the Environmental Authorisation (EA) ( GAUT 002/05-06/1476) issued on 12 October 2007 in respect of the above-mentioned project.

The Annexure reflecting the reasons for the decision are attached hereto.

In terms of Regulation 10(2), you are instructed to notify all Registered Interested and Affected Parties in writing and within 12 (twelve) calendar days of the date of this letter, of the Department's decision not to amend the Environmental Authorisation as well as the provisions regarding the making of appeals that are provided in the Regulations.

Your attention is drawn to Chapter 7 of the Regulations which regulates appeal procedures. Should you wish to appeal any aspect of the decision, you must, *inter alia*, lodge a Notice of Intention to Appeal with the Member of the Executive Council (MEC), within 20 (twenty) days of the date of this letter, by means of one of the following methods:

By facsimile: (011) 333 - 0620  
 By post: P. O. Box 8769 Johannesburg 2000; and  
 By hand: 16<sup>th</sup> Floor Diamond Corner Building 68 Eloff Street Johannesburg

Should you decide to appeal, you must serve a copy of your Notice of Intention to Appeal on all Registered Interested and Affected Parties and any organ of state within 10 (ten) days of having submitted such a Notice of Intent to Appeal as well as a Notice indicating that the appeal submission will be made available to all parties on the day of lodging it with the MEC and where and for what period the appeal submission will be available for inspection. The prescribed appeal form is available on the Department's website; [www.gdard.gpg.gov.za](http://www.gdard.gpg.gov.za).

Yours faithfully

Ms S.J. Sekgobela  
Head: Agriculture and Rural Development  
Date: 01/03/2013

**GDARD**  
**Office of the HOD**  
13-03-04 000002

CC: GDARD Compliance & Enforcement Branch

Attn: Environmental Compliance Monitoring  
Tel: (011) 355 - 1900  
Fax: (011) 355 - 1850

City of Johannesburg Environment Management

Attn: Labo Molefe  
Fax: 086 627 - 7516

Landscape Architect and Environmental Planner

Attn: Dr. Gwen Theron  
Tel: (012) 344 3582  
Fax: 086 606 6130

GDARD  
Office of the IRON  
13 08 0 1 000002

Annexure 1

REASONS FOR DECISION

1. Background

The Department issued Environmental Authorisation Gaut: 002/05-06/1476 on 12 October 2007 to Waterval Islamic Institute to undertake the following activities-

- 'the construction, erection or upgrading of roads, railways, airfields and associated structures': item 1(d) of Government Notice R1182;
- 'the construction, erection or upgrading of canals and channels, including structures causing disturbances to the flow of water in a river bed, and water transfer schemes between water catchments and impoundments': item 1(i) of Government Notice R1182;
- 'the construction, erection or upgrading of dams, levees or weirs affecting the flow of a river': item 1(j) of Government Notice R1182;
- 'the construction, erection or upgrading of public and private resorts and associated infrastructure': item 1(m) of Government Notice R1182;
- 'the change of landuse from agriculture or undetermined use to any other land use': item 2(c) of Government Notice R1182,

all of which fall within the ambit of Government Notice R1182 (as amended) promulgated under Sections 21; 26 and 28 of the Act (Environment Conservation Act, (Act 73 of 1989)).

2. Information Considered

The Department took, *inter alia*, the following into consideration -

- 2.1 The information contained in the amendment application form received by the Department on 20 May and August 2012;
- 2.2 The initial Environmental Authorisation issued on 12 October 2007;
- 2.3 Relevant information contained in the Departmental information data base including the Geographical Information System specifically the C-Plan Version 3; and
- 2.4 The objectives, principles and requirements of relevant legislation, policies and guidelines, including the principles contained in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

3. Key Factors Considered

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below,

- a) The contents of the Environmental Authorisation issued by the Department on the 12 October 2007;
- b) A request was made to relax the buffers of the northern section of the wetland (north of the Maxwell Drive bridge) that affect the land parcels through the use of the 1:100 year floodline delineated in 2006 (reduction) instead of the wetland buffers as set out in the ROD;
- c) A request was made to relax the buffers of the southern section of the wetland (south of the Maxwell Drive bridge) that affect a 400m stretch of the Jukskei Drive Road, on the eastern side of the watercourse. It also affects the land parcels located along this road and proposes buffer

- leniency (reduction) which allows for encroachment of the fill/toe of the road within the watercourse buffers instead of the buffers (32m and 30m) as set out in the ROD;
- d) The conditions of the Water Use License (License No: 27/2/2/A321/118/2; File No: 27/2/2/A21C/118) from the National Department of Water Affairs and issued in order to undertake the necessary construction activities;
- e) The prevailing environmental status quo in the wetland area (northern part of the site, south of Allandale Drive interchange, along N1) to be affected by the proposed buffer zone reduction. There is erosion of that section of stream due to the canalization and increased stormwater volumes of water from a culvert from the Allandale Road, as a result of the upgrade of the Allandale interchange by the South African National Road Agency Limited (SANRAL); and
- f) Encroachment of the buffers as requested would affect the buffers that have been set in Conditions 2(a) and 3(d)(i); 4 and 5.

Matters of clarity regarding your letters dated 20 May 2012 and 20 August 2012 (revised) submitted by to the Department by the Environmental Assessment Practitioner (LEAP):

- g) The buffers on the wetlands are set at 30m as stated in Condition 2(a) which is correctly set.
- h) Condition 3(d) (i) simply relates to all the buffers which include both the 30m buffer for the wetlands and 32m buffer for the rivers and streams which must be fenced-off as per the requirements of Condition 3(d) (i).
- i) Therefore, if according to Figure 1 in your letter dated 29/02/2012, the presence of the wetland area and 30m buffer are going to be bigger than the river and its 32m buffer, it would mean that the fence would be located on the bigger buffer (i.e. the wetland). *With this means is that the different systems (wetland and riverine) must be delineated according to the respective buffers as stated in the condition 3(d) (i).*

13-03-06 000000

**4. Findings**

Having considered the information and factors listed above, the Department made the following findings:

- a) The Department does not agree with encroachment of the road edge/verge into the wetland or river buffers, be it for accommodating the land parcels (3/2 and 2/2) on the northern section of the watercourse or construction of a wall for 400m or the fill from the edge of the road (Jukskei View Drive) on the southern section of the amendment proposal site. The Department is of the view that reducing the buffer along the 400m length of road and would exacerbate the existing erosion that is currently affecting the watercourse. Rather rehabilitation measures should be implemented and include the buffers that your proposal seeks to reduce. Development that seeks to build within the buffer is viewed as leading to increased problems such as increased storm water, potential flooding and assured destruction of the watercourse.
- b) The activities required for complying with the Water Use License (License No: 27/2/2/A321/118/2; File No: 27/2/2/A21C/118) have been approved in the ROD dated 12 October 2007.
- c) Encroachment and/or relaxation of the buffers as requested would serve to contradict the Department's guidelines that seek to conserve and promote sustainable ecological services in the Gauteng Province.
- d) It is rather advised that SANRAL be engaged in order to solve the erosion through rehabilitation measures.

In view of the above, the Department is of the opinion that the requested amendment would result in unacceptable negative environmental impact that would conflict with the general principles and objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impact resulting from the proposed activity cannot be mitigated to acceptable levels.

The amendment to the EA is accordingly refused.

4  




GAUT 003/05-06/1476: [THE PROPOSED NORTHERN RESIDENTIAL ESTATE ON PORTIONS OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR (GAUT 006/12-13/E0070)]

GDARD  
Office of the RCD  
13-08-06  
000002



REPUBLIC OF SOUTH AFRICA

Reference: 002/06-09/N0993  
Enquirer: Ms Thandaza Dzulane  
E-mail Address: Thandaza.dzulane@gauteng.gov.za

JA Venter  
Adriaan Venter Attorneys  
14<sup>th</sup> - 12<sup>th</sup> Street  
PRETORIA  
0001

Email Address: info@avatt.co.za

PER ELECTRONIC MAIL

Dear Sir/Madam

RE: APPEAL AGAINST THE REFUSAL TO AMEND THE ENVIRONMENTAL AUTHORISATION IN RESPECT OF THE PROPOSED NORTHERN RESIDENTIAL ESTATE ON PORTIONS OF THE REMAINDER OF PORTION 1 OF FARM WATERVAL 5 IR

Your appeal lodged dated 28 May 2013 refers.

I have considered your appeal and in issuing my decision I have taken into account the following:

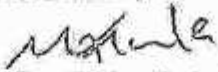
1. The contents of the project file;
2. The appeal documentation; and

Having considered the above information, I am of the view that:

1. The Department's decision not to amend the environmental authorisation was issued correctly and in compliance with applicable legislation and policies.
2. The condition imposing 30 meter buffer zone to wetlands present on site is aimed at protecting these wetlands. Further, the imposition of the 30 meter buffer clearly indicates the Department's commitment to discharging its duty towards the environment.
3. The request by the applicant that the 30 meter buffer be reduced will lead to unacceptable negative impacts to the environment.
4. The information submitted in respect of the application was adequate to enable the Department to issue a decision.

5. The Department's officials are qualified and experienced to formulate and provide credible opinions or views on issues relating to the environment.

Yours faithfully



Ms Nandi Mayathula-Khoza  
MEC: Agriculture, Rural and Social Development

Date: 13 SEPT 2013





**ADRIAAN  
VENTER**

PROKUREURS & ASSOCIATE  
ATTORNEYS & ASSOCIATES

info@avatt.co.za

Lady Brooks Gebou / Lady Brooks Building  
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14 - 12th Street, Menlo Park, Pretoria  
11335, Pretoria, 0001  
☎ 012 346 1075  
☎ 012 346 1845  
☎ 012 346 8865

OUR REF / ONS VERW: JA VENTER/LJ/AA0041  
YOUR REF / U VERW:

DATE / DATUM: 2013-05-28

**MEC: GAUTENG DEPARTMENT OF  
AGRICULTURE & RURAL DEVELOPMENT**  
16<sup>th</sup> Floor  
Diamond Corner Building  
68 Eloff Street  
Johannesburg

*Uitgelees*

ERKEN ONTVANGS HIERVAN ACKNOWLEDGE RECEIPT GOVERNMENT	
Department Of Agriculture And Rural Development	
29-05-2013	
OP/ON:	RECEIVED
OFFICE OF THE MEC	
P O BOX 8768 JOHANNESBURG 2000	

PER HAND

Dear Sir,

**APPEAL AGAINST THE REFUSAL TO AMEND ENVIRONMENTAL  
AUTHORISATION**

REFERENCE: GAUT 002/05-06/1476 (GAUT 002/08-09-N0993)

IN RESPECT OF THE PROPOSED NORTHERN RESIDENTIAL ESTATE ON  
PORTIONS OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR

YOUR REF: GAUT 006/12-13/E0070

We refer to the lodgement of the abovementioned Appeal on 20 May 2013 as well as the re-lodgement thereof, on 23 May 2013, both of which you received but indicated that the complete document apparently was not transmitted or received in its entirety. Copies of proof of such lodgements are attached hereto for your convenience.

We further refer to subsequent telephonic conversations between your Paulina and

JAN ADRIAAN VENTER  
BA B.PROC LLB LIMB

---

our Ms Suné Meyer with regards to the aforementioned situation. As mentioned above Paulina indicated once again that the Appeal was not received in its entirety and advised us that this might be caused by network problems at the MEC's office.

Therefore kindly find attached hereto, as agreed between Pauline and Ms Meyer, a hard copy of the aforementioned Appeal.

We trust you find the above in order.

Yours faithfully

  
o.b.o.  
**JAN ADRIAAN VENTER**  
**ATTORNEYS & ASSOCIATES**

---

**JAN ADRIAAN VENTER**  
**BA B.PROC LLB LIMB**





# **Annexure F**

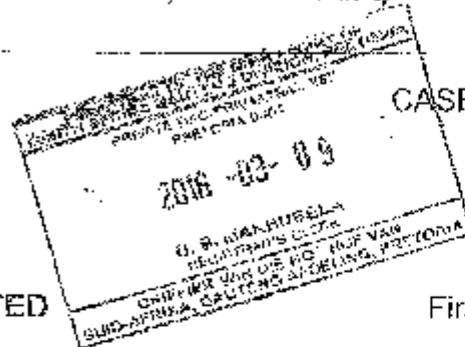
Correspondence from  
Attorney confirming  
withdrawal of High Court  
Application and the  
Proposed Way Forward

IN THE HIGH COURT OF SOUTH AFRICA

(GAUTENG DIVISION, PRETORIA)

In the Application between

WITWATERSRAND ESTATES LIMITED



CASE NR: 23130/14

First Applicant

ATTERBURY WATERFALL INVESTMENT COMPANY

Second Applicant

AND

THE HEAD OF THE DEPARTMENT:

AGRICULTURE & RURAL DEVELOPMENT

GAUTENG PROVINCIAL GOVERNMENT

First Respondent

THE MEC:

DEPARTMENT AGRICULTURE & RURAL DEVELOPMENT

GAUTENG PROVINCIAL GOVERNMENT

Second Respondent

NOTICE OF WITHDRAWAL

KINDLY NOTE that the Applicants herewith withdraws the Review Application lodged on the 19<sup>th</sup> of March 2014 in the above Honourable Court.

KINDLY FURTHER NOTE that the Applicants herewith tender the taxed party party costs of the Respondents relating to the drafting and filing of their answering papers in this matter.

SIGNED AT PRETORIA ON THIS 9<sup>th</sup> DAY OF MARCH 2016.



---

ADRIAAN VENTER ATTORNEYS  
AND ASSOCIATES  
ATTORNEYS FOR THE APPLICANTS  
LADY BROOKS BUILDING  
14 – 12<sup>TH</sup> STREET  
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TEL: 012 346 1075  
FAX: 012 346 6665  
EMAIL: [info@adv.co.za](mailto:info@adv.co.za)  
REF: JA VENTER/DS/AA0049

TO: THE REGISTRAR  
HIGH COURT OF SOUTH AFRICA  
GAUTENG DIVISION, PRETORIA

AND TO: THE FIRST RESPONDENT  
THE HEAD OF THE DEPARTMENT:

AGRICULTURE & RURAL DEVELOPMENT

GAUTENG PROVINCIAL GOVERNMENT

C/O

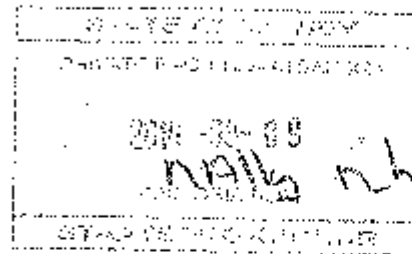
THE STATE ATTORNEY, PRETORIA

SALU BUILDING

316 THABO SEHUME STREET

PRETORIA

ATT: MRS RM NTLOKO



AND TO: THE SECOND RESPONDENT

THE MEC:

DEPARTMENT OF AGRICULTURE & RURAL DEVELOPMENT

GAUTENG PROVINCIAL GOVERNMENT

C/O

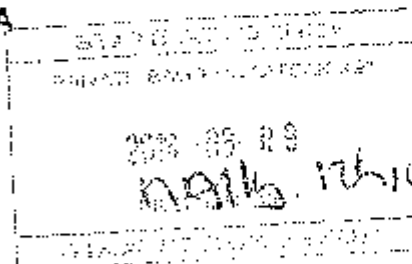
THE STATE ATTORNEY, PRETORIA

SALU BUILDING

316 THABO SEHUME STREET

PRETORIA

ATT: MRS RM NTLOKO



# **Annexure G**

Copy of Rehabilitation Plan  
Already Implemented







**LEAP**

Gwen Theron  
PrlArch No 97082

Landscape Architect  
Environmental Planner

Imbrilix cc 2010/0898/0/23

P.O. Box 13185  
Hatfield 0028

012 943 2751

083 302 2116

086 606 6130 fax

[gwen.theron@telkomsa.net](mailto:gwen.theron@telkomsa.net)

# WATERFALL OPEN SPACE, AND WETLAND MANAGEMENT PLAN

August 2012

Prepared in response to the ROD for Northern  
Residential Estate

GAUT 002/05-06/1476



To: Gauteng Department of Agriculture and Rural Development  
From: Dr. Gwen Theron  
Date: 14 June 2012 - Updated August 2102  
Project: Northern Residential Estate  
Distribution: GDARD  
Century Properties Development  
Atterbury Property Development

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## 1. INTRODUCTION

The purpose of an Open Space Management plan is to guide the management, maintenance and enhancement of the Open space over time. Interventions and proposal are flexible and are linked to the annual seasons.

The purpose of a Wetland Management Plan is to guide the rehabilitation work within and adjacent to the sensitive areas on site.

The plans are flexible to be adapted where necessary and to address issues that may arise during the construction phase.

### Objectives;

The purpose of this document is to

- guide the management of the ecological attributes of wetland and open space areas, as well as
- provide remedial measures that had deteriorated during the various phases of construction.
- suitable rehabilitation measures are provided in order to facilitate the ongoing ecological functioning of the wetland and associated open space features.

## 2. DOCUMENTATION CONSULTED

The following reference material was considered during the development of the addendum to the rehabilitation and open space management plan:

- ROD for Northern Residential Estate – GAUT 002/05-06/1476
- Wetland report and ecological assessments prepared as part of the EIA application – completed by SEF.
- The ecological assessment undertaken by Scientific Aquatic Services CC as part of the initial EIA application;
- The Wetland Rehabilitation and Management Plan of Waterfall Estate as drafted by Scientific Aquatic Services CC
- National Environmental Management Act (1998) (NEMA and related EIA regulations);
- National Water Act (Act 36 of 1998)
- National Environmental Management: Biodiversity Act (2004)
- Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983)
- National Heritage Resources Act (1999); and
- The Convention on Biological Diversity (1995)
- Other general stream rehabilitation mitigation and management guidelines.

### 3. ENVIRONMENTAL CONDITIONS

The ecological, wetland, geotechnical and other applicable assessments, prepared by any of the specialists must be studies as part of the implementation of any rehabilitation work on the land. Specific attention must be paid to the underlying soil, which is highly dispersive and will give way to any water coming in contact with it.

The areas where the soil is exposed for periods during the rainy season must be covered with hessian and pegged. The slopes must also be planted with fast growing grass. The only way to keep the slopes from eroding is to keep water away from it.

### 4. OPEN SPACE MANAGEMENT

#### 4.1 INTRODUCTION

An open space management plan allows open space in the greater Waterfall Estate to be viewed as a whole rather than as several individual unrelated parcels. This view supports continuity in planning and management of open space as a collective resource. Each parcel is evaluated and examined to establish its unique position as open space and to determine what is appropriate in each area, what the neighbors want, and what the issues and opportunities are associated with each of the open spaces.

The benefits of developing an open space management plan are numerous. A broad-based public involvement approach is encouraged to allow for a participatory environment where residents, land owners, occupants, and interested parties are able to offer their input into the shape of their natural surroundings. It is hoped that continuing dialogue will lead to a constituency that is informed about challenges with open space and a planning team that is aware of the concerns of citizens. Dialogue is managed at a high level between the various land owns and developers.

From these management recommendations a schedule for implementation is operated by each land owner and developer.

#### 4.2 GOALS

The goals of management and stewardship in the open spaces of Waterfall are to:

- Promote ecosystem sustainability
- Enhance and protect natural, cultural, educational and scenic resources
- Provide safe and enjoyable passive outdoor recreation activities.

Each of these goals will be achieved through specific management actions that may include:

- Control of noxious invasive weeds through an Integrated Pest Management plan
- Monitoring of vegetation, wildlife and water
- Planting of favorable plant species
- Maintaining trails

- Maintaining amenities such as fences, signs and benches, and introducing them as appropriate for enhanced management
- Working to provide educational opportunities through on-site informational materials and guided nature hikes where appropriate.
- Targeted enhancement based on public input

#### 4.3 ACTIONS

- Maintain fences between open spaces and development pockets until all development parcels has been completely built up, rehabilitated and signed-off by the building inspectors and occupancy certificates issued.
- Evaluate trees to identify and remove hazards in the open areas.
- Retain falls trees and plant materials that area not a hazard to increase biomass and microbial activity in the open spaces.
- Trim trees and shrubs to maintain clearance along trails.
- Continue mowing and trimming regularly.
- Maintain wooden boardwalks.
- Maintain bird hides and lookout spots.
- Dredge ponds periodically.
- Clear weeds form lawns and storm water areas.
- Trim the grass around the pond and along the pathway.
- Periodically test water quality in the ponds.
- Stock fish in large ponds.
- Monitor fish population for a healthy fish stock.
- Install bird houses, bat and owl boxes in larger trees.
- Install more benches/shelters around native area.
- Formalize the dirt trails to ensure people stay on the trail and not rat-run across the grass.
- Implement and maintain signage for the trail system.
- Plant with indigenous vegetation where at all possible. (Pennistum may be used as a stabilising material)
- Enhance native plant communities by encouraging planting of indigenous vegetation in all gardens.
- Remove invasive species from around native plant communities to increase sunlight and reduce competition. Additional native plantings and natural regeneration will encourage these plant populations to spread beyond their current extent.

#### 5. REHABILITATION

This Rehabilitation Plan has been compiled in accordance with the requirements contained in Government Notice No. R. 541 (General Authorisation in terms of Section 39 of the National Water Act 1998, Act 36 of 1998). The rehabilitation plan contains the following:

- Rehabilitation objectives;
- Rehabilitation problems;



- Areas requiring rehabilitation interventions;
- Rehabilitation measures;
- Ongoing problems within the wetlands and open spaces and specific mitigation measures.;
- Final rehabilitation plans;
- Rehabilitation intervention;
- Maintenance details;
- Monitoring and evaluation data; and
- Construction notes.

The rehabilitation plan, in addition to the Environmental Management Programme (EMP), is a comprehensive document describing all rehabilitation measures aimed at rehabilitating the identified riparian zones along the tributaries and streams, thereby allowing for the efficient coordination and implementation of the proposed rehabilitation measures.

## 5.1 OBJECTIVES

Objectives pertaining to the rehabilitation of the riparian zones along the tributaries and stream are indicated below:

- Stabilisation and rehabilitation of adjacent area to the tributaries and stream;
- Stabilisation and rehabilitation of the wetland habitat units
- Rehabilitation of construction areas adjacent to the wetlands, tributaries and stream ; and
- Biodiversity conservation to maintain habitat for species associated with riparian areas.
- Ensure as far as is practicable that the measures contained in the report are implemented;
- Manage activities on the study area in order to maintain and improve ecological integrity of the study area;
- Minimise adverse impacts on the environment;
- Minimise impacts on the receiving environment;
- Maximise the service provision of open space areas and especially the wetland areas;
- Maximise the ecological functioning of the open space areas, wetland system and green belts and;
- Monitor the impact of the project on the receiving environment.

A rehabilitation strategy will provide guidance as to the strategic decision making by the Department of Water Affairs (DWA) and GDARD. The rehabilitation strategy in the form of this rehabilitation plan will provide a perspective and strategic approach for the rehabilitation of the affected areas along the tributaries and stream.

## 5.2 REHABILITATION PROBLEMS

The success of the rehabilitation measures will only be evident after a certain time period has elapsed. Having assessed the existing status of the previously affected wetlands along the tributaries.

Vegetation used for the rehabilitation and stabilisation of wetland habitat units must be done according to the EMP and Rehabilitation Plan in order for adequate cover. Should such measures not be implemented correctly the risk of storm water erosion and siltation of wetlands will be encountered.

## **5.3 AREAS REQUIRING REHABILITATION INTERVENTION**

### **5.3.1 Wetland, tributaries and streams.**

The tributaries and streams are encountered within a steep and incised embankment. It is located within private Open space erven running along its entirety. The erven allows for the movement of wildlife and pedestrian traffic along the length of the tributaries and stream without disturbing any wetland features. Wetlands are impacted to varying degrees, mainly by the construction of the road crossings, infrastructure crossings, and adjacent development sites. Construction across the wetlands, the tributaries and stream necessitates the excavation, entrenching and fitment of new pipes. All of these proposed construction activities will take place within various wetland habitat units.

Other small scale excavations will be necessary to accommodate the casting of concrete infrastructure. There will therefore not be large stockpile areas of soil that could pose a threat to smothering nearby wetlands. It is, however, be prudent to protect any stored topsoil from erosion.

### **5.3.2 Construction camp and storage areas**

The construction camp and material storage area, including vehicle and machinery maintenance area will be situated outside of the 30m Wetland buffer zone. However it lies immediately adjacent to the Jukskei River and special precautions must be taken to prevent erosion, run-off or impact on the wetland areas. Another large construction camp is located on parcel 10, but is located far from the N1 tributary. Other smaller construction camp must best be located more than 100m from any wetland, tributary or stream.

### **5.3.3 Infrastructure zones, residential erven, commercial erven etc.**

Residential areas form the majority of the approved development area for the Islamic Northern Residential Estate. The construction commenced in 2008 with infrastructure and small residential areas being built, with the development expanding to include large expansions covering many hectares. The commercial development has been developed in appropriate pockets and has escalated to the current development of Parcel 10, comprising of the development of a major commercial node at the N1, Allendale road intersection.

## **5.4 REHABILITATION MEASURES**

### **5.4.1 General**

These measures apply to all wetland, stream, open spaces, river and tributary areas or any area affected by construction impacts.

In general, affected and scarred area must be tilled, shaped and levelled whether mechanically or manually in order to provide suitable conditions for grass germination. Soil is to be tilled to a minimum depth of 60mm and with a tilling spacing of not more than 200mm apart. Soil, due to the dispersive characteristics, MUST be covered and staked with bio-degradable material and stakes. All erosion gullies shall be filled with uncontaminated soil and compacted so that the final level of the gully is level with the surrounding soil surface. Entrances, exit areas and every 8 m in gullies shall be staked with straw bales – at least three bales perpendicular to the flow must be installed.

The shaping of the land must take storm water movement into account and must aim to disperse the energy of water rather than channel water where it can cause later soil erosion. All stones in excess of 50mm must be collected and packed in overflow channels/berm offshoots; this would include those dislodged in any soil preparation works. When Offshoots channels/berms are considered they are not to be directed into areas that are not stabilised well enough to cope with the waters energies which may cause erosion.

#### 5.4.2 Rehabilitation measures:

##### a. Clearance:

- All construction/building related rubble left on site is to be collected and removed from site and disposed of at a permitted waste disposal site. Proof of disposal must be made available to the Environmental Control Officer (ECO) on site.
- Rubble to a depth of 100mm in the soil must all be removed.
- Cement mixing areas remaining on site must be removed to a depth necessary to clear all signs of cement.

##### b. Levelling:

- The affected and scarred area is to be levelled off as close as possible to the surrounding topography and with storm water management in mind so as not to hinder water drainage and cause channelling which may in time lead to erosion.
- If the area requires a cut and fill of greater than 300mm then the topsoil in the area is to first be removed, the cut and fill process completed and then the topsoil returned.
- Should additional topsoil be required to be brought onto site it must be of a suitable standard. (The Contractor shall provide the EMS Manager with a sample thereof prior to having the product delivered to site).
- It must be free of stones and organic matter in excess of 50mm.
- It must be loose and friable (to avoid crusting when compacted or watered.)
- It must be of a similar texture and moisture retaining ability to that on site.
- It must be a comparable or improved nutrient base to that on site.

##### c. Alien invasive vegetation eradication:

- The Contractor's methods and programs shall provide rapid and effective control of alien invasive vegetation for the overall site. Techniques, programming and chemicals employed shall therefore be directed at this aim. The Contractor shall carry out immediate treatment of growth in all instances where rapid and effective control is not achieved during any period of the contract.
- Where a chemical approach to vegetation control is adopted, hoeing (skoffel) will not be allowed as method of achieving control. Herbicides which act as a scorching agent (e.g. with Paraquate or similar active ingredient) are incapable of meeting the definition of control and shall not be used.
- Scorching of above-surface part of the canopy growth only shall not constitute control of vegetation as defined.
- Slashing of dead material to below 150mm will be permitted provided that no erosion is caused and that it is effective in stopping re-sprouting of alien trees.
- Application methods shall, however, be entirely in accordance with the manufacturer's specifications and recommendations for safe and effective use of the herbicides or herbicide mixtures concerned.

- The essence of this contract regarding vegetation control is that Rand Water requires the control of living invasive alien vegetation and the management of dead remains of previously living vegetation, to the extent that areas controlled in terms of this contract are free from any form of invasive alien vegetation in all areas included in this contract.

**d. Soil preparation:**

- Rip site with tractor mounted single line sub soiler to a depth of 300mm to relieve compaction.
- The area is then to be rotovated to obtain an even (fine) tilth (not dug over) to a depth of 100mm.
- Where topsoil is not present, spread topsoil to a depth of at least 75mm and compact lightly.
- Prepare and shape the final levels of the area ensuring once the veld grass seed is planted the finished level will tie in with the existing hard landscape levels and take the movement of storm water in to account.

**e. Other grassing:**

- Should an area become apparent where the embankment will have to withstand fast moving water from the flooding or scouring of water, the use of non-indigenous sterile Vetiver grass will be used.
- Vetiver grass has deep rooting mechanisms which will allow for appropriate vegetative control in such circumstances.
- According to the available international literature, the time of planting should be scheduled during the rainy season or irrigation provided. ( a Vetiver Grass planting guide can be provided in event it becomes necessary)

**f. Planting of Wet areas:**

- Areas that remain permanently wet (flat or slightly sloping) will be rehabilitated with riverine vegetation such as:
  - Sedges (cyperus sp. And Schoenoplectus),
  - Rushes (Juncus sp).
  - Bull rushes (Typhasp) indigenous Miscanthus,
  - Phragmites and appropriate water loving Eragrotis such as plana or planiculmis.
  - Bulbs such as Crinum kniphfia and Zantedeschia could also be used.
- Installation of the plants must reflect their natural position in a riparian zone.

**g. Instant grassing:**

- The areas that currently have instant grass will be re-grassed with the equivalent grass to ensure a quick turnaround time in the rehabilitation of such areas.

**h. Veldt grass seeding:**

- The entire scarred area must be tilled either mechanically or manually in order to provide suitable conditions for grass germination and minimise water/wind disturbances. Soil is to be tilled to a minimum depth of not less than 60mm and with a scarification spacing of not more than 200mm apart.
- All seeding mixtures must contain a suitable fast propagating, non-invasive grass sees to establish quickly. This is specifically necessary to stabilise the dispersive soils.
- Use a Potch mixture (Smutsfinger / Rhodesgrass / Borseltjie)
- Alternatively, a seeding mixture of Eragrostis teff, Digitaria smutsii, Chloris gayana and Cynodon dactylon.
- These mixtures ensure adequate variety and blends in well with surrounding grass species.

- These mixtures remain open to further species being added. Should the Contractor wish to recommend additional/replacement indigenous grass species, these must be specified in the quotation together with the Contractors' recommended application rate. Preference will be given to improved seeding mixtures recommended by the Contractor.
  - Seeding rate:
    - Eragrostis teff 5 kg/ha
    - Digitaria smutsii 5 kg/ha
    - Chloris gayana 5 kg/ha
    - Cynodon dactylon 10 kg/ha
    - Themeda triandra 5 kg/ha
    - Melinis repens 5 kg/ha
    - Further species that can be combined with the above include Themeda triandra and Panicum maximum.
  - It is envisaged that with the above-mentioned seeding mixtures and at the given application rate a 95% cover can be obtained by the end of the second growing season. The Contractor shall ensure that no single area of 2 m<sup>2</sup> or larger is left uncovered with a total uncovered area not in excess of 5% over the entire scarred area. Should these conditions not be acceptable to a Contractor' guaranteed percentage cover.
  - A total die back not in excess of 5% will be accepted. Should a larger die back be experienced, plants must be replaced at the cost of the Contractor. This die back percentage will be determined 2 months after planting. Over this 2 month period it will be left to the Contractor's discretion as to whether or not to water. (The 2 month period, applies to the months of September to March. If plants are planted from March to September, the 2 month assessment period will commence from end of September.)
- i. **Construction of berms/water offshoots/soil erosion prevention structures at outlets( see Figure 1 below)**
- The minimum height of berms is to be not less than 200mm, measured from the surrounding soil level to the peak of the berm.
  - The water gully/offshoot on the upward (top) side of each berm/water offshoot is to be not less than 200mm deep, measured from the surrounding soil level to the trough of the gully
  - Each berm/water offshoot must be constructed in such a way that the water runs down the offshoot and off the area (road, scarred area). Where possible berms on roadways should direct water into alternate sides of the roadway so that water is dissipated as far as possible. The berm should end in a dissipation settling area.
  - No berm/water offshoot is to have an angle of more than 1:4, measured from the horizontal down towards the vertical. This is to ensure that water run-off is slow enough not to start unwanted erosion problems.
  - The length of the berms on roadways shall where feasible commence at least 1m into vegetated soil on the top side of the berm and will continue across the scarred area/road requiring protection from erosion and end at least 2m into vegetated soil on the down side of the berm.
  - This is to ensure that water removed from the protected area spreads out sufficiently over a vegetated area without causing any further erosion and simultaneously does not return to the area being protected.
  - The minimum width of a berm is to be not less than 2m. The gradual height differences in the berm is to ensure that a standard 2 wheel drive vehicle can transgress the berm without the potential of getting stuck and cause skid of tyres. The berm must allow vehicles to cross easily without undue jarring.



- The placing of soil onto a berm must be sufficiently compacted in to the required shape so that it does not wash away.
- Rocks and stones in the soil mass should not protrude up and become a hazard to car traversing the berms on roadways.
- Rock packing on the leeward side of berms that are not traversed by vehicles is encouraged when possible.
- The position of the berms will be indicated on site by the ECO. The following guidelines shall apply in all instances where the position and length of the berms is not indicated by the ECO.
- The position of the berms will be indicated on site by the ECO
- The factors influencing distances between berms:
  - Rainfall of the area
  - Soil types
  - Length of slope
  - Catchment area plus surface runoff water
  - Potential to establish vegetation
- Siltation prevention measures such as hay bales, must be installed at the outflows from all storm water outlets to catch any further sediment still in suspension. Measures such as use of sand bags or hay bales are also to be used to prevent any erosion at the outflow areas.

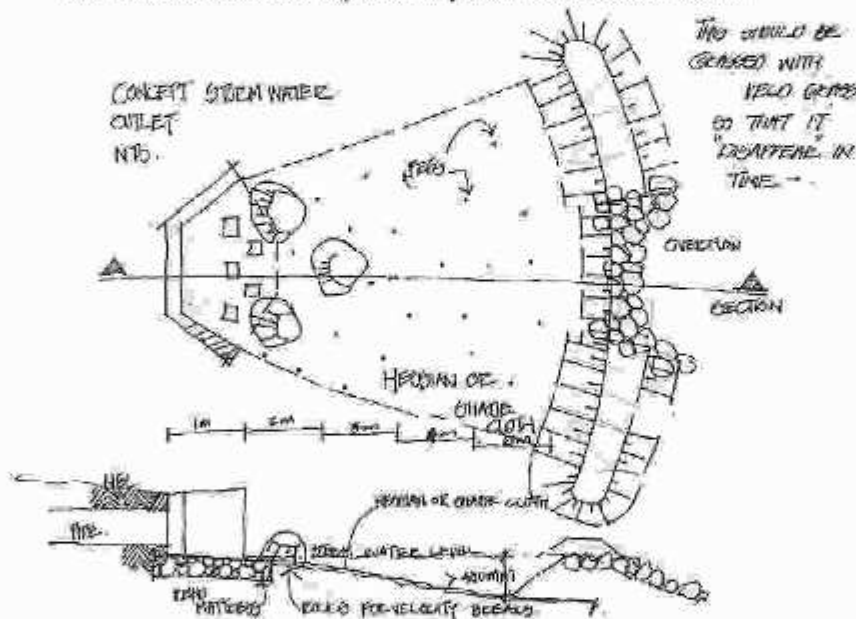


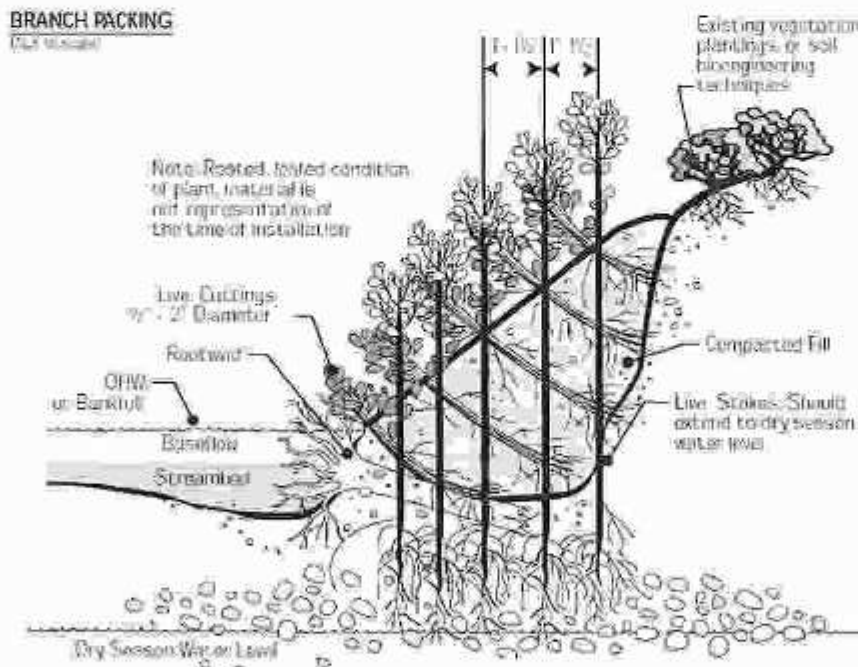
Figure 1: Soil erosion prevention structures

- After construction all the material such as silt traps, berms, etc. are to be removed from the site rehabilitation measures as prescribed in this report to be implemented.
- Water accumulated in open excavation due to surface/ sub-surface flow must be pumped out of the excavation to the downstream side thereof. A secondary containment pit/sump must be used into which such water is pumped. Siltation prevention measures such as hay bales, silt traps or another method approved by the ECO must be installed at the outflows from the sump to catch any further sediment still

in suspension. Measures such as use of sand bags or hay bales are also to be used to prevent any erosion at the outflow areas of the pumped water.

**j. Branch packing**

- Branch packing can be used to repair small, localised slumps and holes in the stream's banks. It consists of alternate layers of live branches and compacted backfill. The live branches used should be from 1.5cm to 10.5cm in diameter and long enough to touch the undisturbed soil of the back of the slump and extend slightly from the stream bank. The wooden stakes should be 1.5m to 2.5m long, depending on the depth of the slump being repaired and made from poles that are 7cm to 10cm in diameter. To install, the bottom at or below the stream bed must be dug out, and a layer of rock or root wad must be placed in combination on the bottom.
- The aforementioned must be covered with 5cm to 10cm of soil. Start driving the poles vertically 7cm to 10cm into the ground at the lowest point of the slump and set them about 45cm apart. Place an initial layer of living branches 10cm to 15cm thick in the bottom of the hole between the vertical stakes and perpendicular to the slope face.
- Place them in a crisscross configuration with the growing tips oriented toward the slope face. The basal ends of the branches should touch the undisturbed soil at the back of the hole. Follow each layer of branches with a layer of compacted soil to ensure soil contact with the branches and wet the soil. Install subsequent layers of branches with the basal ends lower than the growing tips of the branches. When the installation is final, branches should protrude only slightly. Key in this technique to the bank or end at an existing tree or rock outcrop. See figure 2 below.



**Figure 2: Branch Packing.**

## 6. ONGOING PROBLEMS WITHIN THE WETLANDS AND OPEN SPACES AND SPECIFIC MITIGATION MEASURES.

### 6.1 EXCESSIVE EROSION AT THE STORM WATER DISCHARGE POINTS



Figure 3: Severe erosion due storm water runoff, storm water management is insufficient

- Energy dissipation devices such as gabions, straw bales or other dissipation devices must be installed at storm water inlets and outlets to decrease the speed and energy of the water and to minimize the potential for downstream erosion by reduction the velocity of concentrated storm water flows.
- Figure 1 shows an option of a dissipation device to decrease the speed and energy of the flow of water.
- Straw bales or other screening devices must be installed at storm water inlets to prevent silt on the roads to silt up the storm water pipes and thus the outlet trenches downstream.
- This, or an approved equal, MUST be used and implemented at the outlet of the storm water pipes.
- Ensure that service systems implemented within the development are maintained to prevent leakages within the wetland wand water system.
- Sheet runoff from cleared areas, paved surfaces and access roads needs to be curtailed.
- Runoff from paved surfaces should be slowed down by the strategic placement of berms.
- During the construction and operational phases of the development erosion berms or straw bales should be installed to prevent gully formation and siltation of the wetland resources. The following points should serve to guide the placement of erosion berms:
  - Where the track has slope of less than 2%, berms or straw bales every 50m should be installed.
  - Where the track slopes between 2% and 10%, berms or straw bales every 25m should be installed.
  - Where the track slopes between 10%-15%, berms or straw bales every 20m should be installed.
  - Where the track has slope greater than 15%, berms or straw bales every 10m should be installed

- Refuge pools and stilling basins are to be constructed within the stream bed at 30m intervals to minimise siltation/ sedimentation, aid in attenuation and provide habitat.
- Cobble beds may be constructed within the streambed to minimise siltation.
- Regular desilting is to take place.

## 6.2 ERODED GULLIES ACROSS THE SITE

- The runoff of silt and rubbish into the stream must be prevented.
- Littering in the area must be prevented by placing a fence along the stream preventing access to the stream.
- No dumping will be allowed within any drainage areas. No bins shall be located within 50m of these areas.
- Surface runoff must be directed away from the streams and must be filtered or put into a municipal system prior to being released into the stream.
- All surface runoff shall be managed in such a way as to ensure that erosion of soil does not occur.
- Soil must be ripped as indicated under the Rehabilitation section in this report.
- Erosion of the stream banks can be prevented by placing gabions, straw bales or stone pitching on the banks of the river.
- For shallow-slopes plants are a good solution to riverbank erosion, the planting of herbaceous plants with a dense surface root mat and ground cover are effective for stabilising the soil that can erode rapidly. Plants must be planted in rows along the contour lines of the stream banks.



Figure 4: Filling and mulching of gullies



### 6.3 THE JUKSKEI RIVER, TRIBUTARIES AND STREAMS AND WETLANDS.

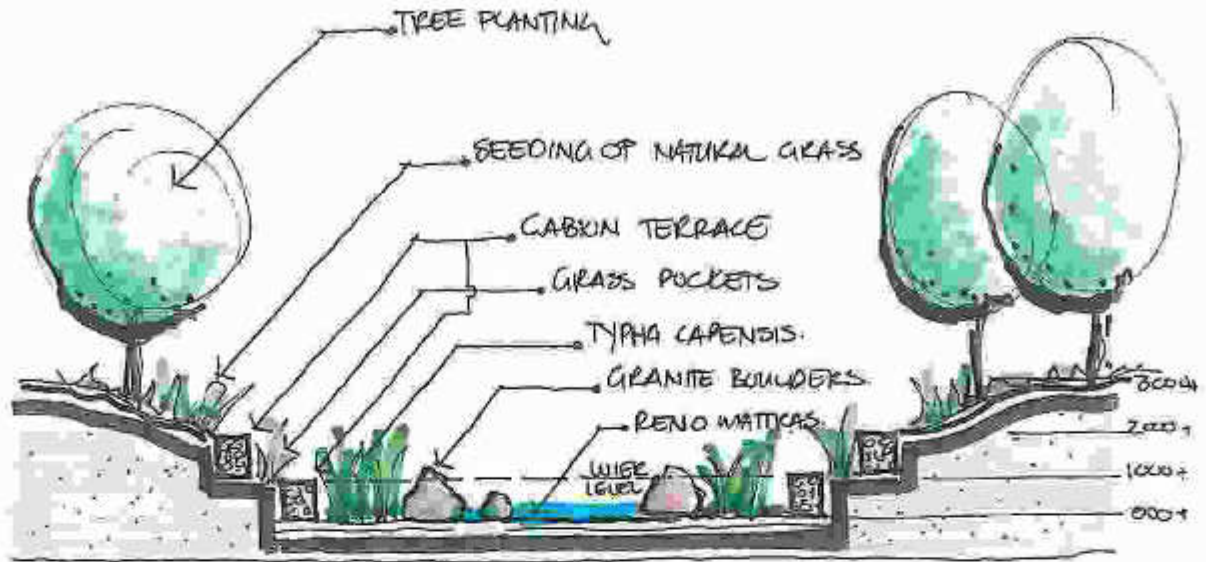


The Jukskei River and several smaller tributaries flow through the site. The Jukskei is under jurisdiction of the City of Johannesburg, but cleaning of trash is being done by the land owners adjacent to the river. Other tributaries and stream must be managed and rehabilitated in the manner discussed below.

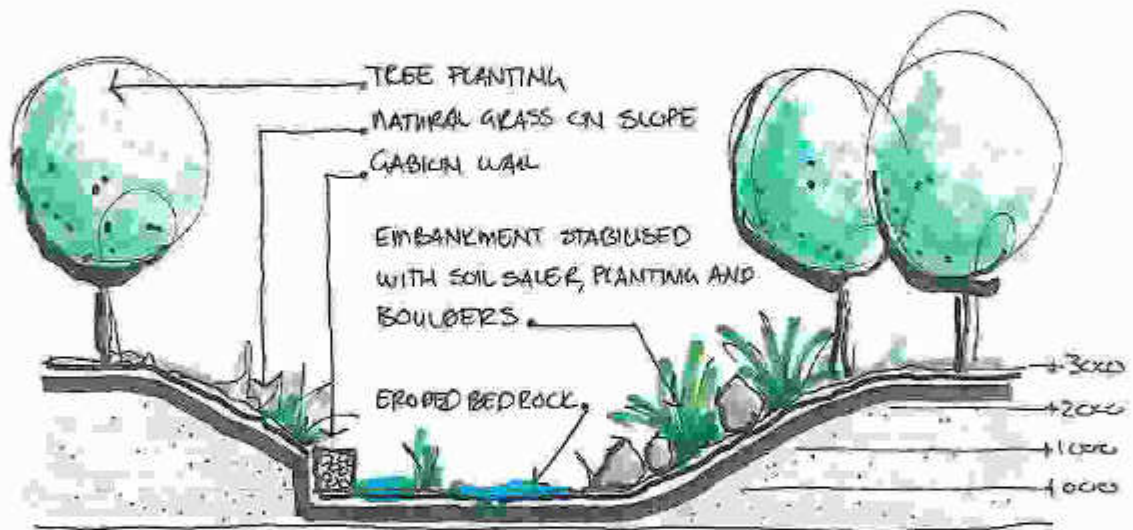
Figure 5: Tributaries and stream are polluted and eroded.

- Gabion structures to be reinstated and securely fixed to stream banks. See **Annexure A** for Engineering drawings of the proposals for the stream along the N1.
- Gabion structures must be constructed to above the height of a 1:50 year flood event to ensure that incision at the toe in point to the stream bank is minimised.
- Use must also be made of geo-fabrics to conserve sediment with geo-fabrics being installed in conjunction with gabion structures.
- Gabions should be designed in such a way as to form small attenuation ponds in order to slow water flow through the system.
- Settling ponds should be developed at all existing gabion structures and additional structures should be developed to have stilling features at approximately 40m intervals. **Figures 4 and 5** provide concept sketches for the softening and landscape installation at the gabion structures.
- Natural smooth pebbles, reno-mattress and large rocks should be placed within the stream bed at selected areas, especially below gabion structures in order to improve in stream habitat and overall ecological functioning of the system and to minimise incision and sedimentation of the system.
- Re-profiling of stream banks needs to take place after alien and invasive species have been cleared in all areas where incision and bank failure have occurred. Stream banks to be re-profiled to a minimum **1:4 slope**.
- Stabilisation of stream banks to take place by means of placement of gabion structures where re-sloping is impractical.
- Slopes devoid of vegetation and all re profiled banks are to be hydro seeded with indigenous veld grass mixture.





TYPICAL SECTION A-A. SCALE 1:100 (A3).

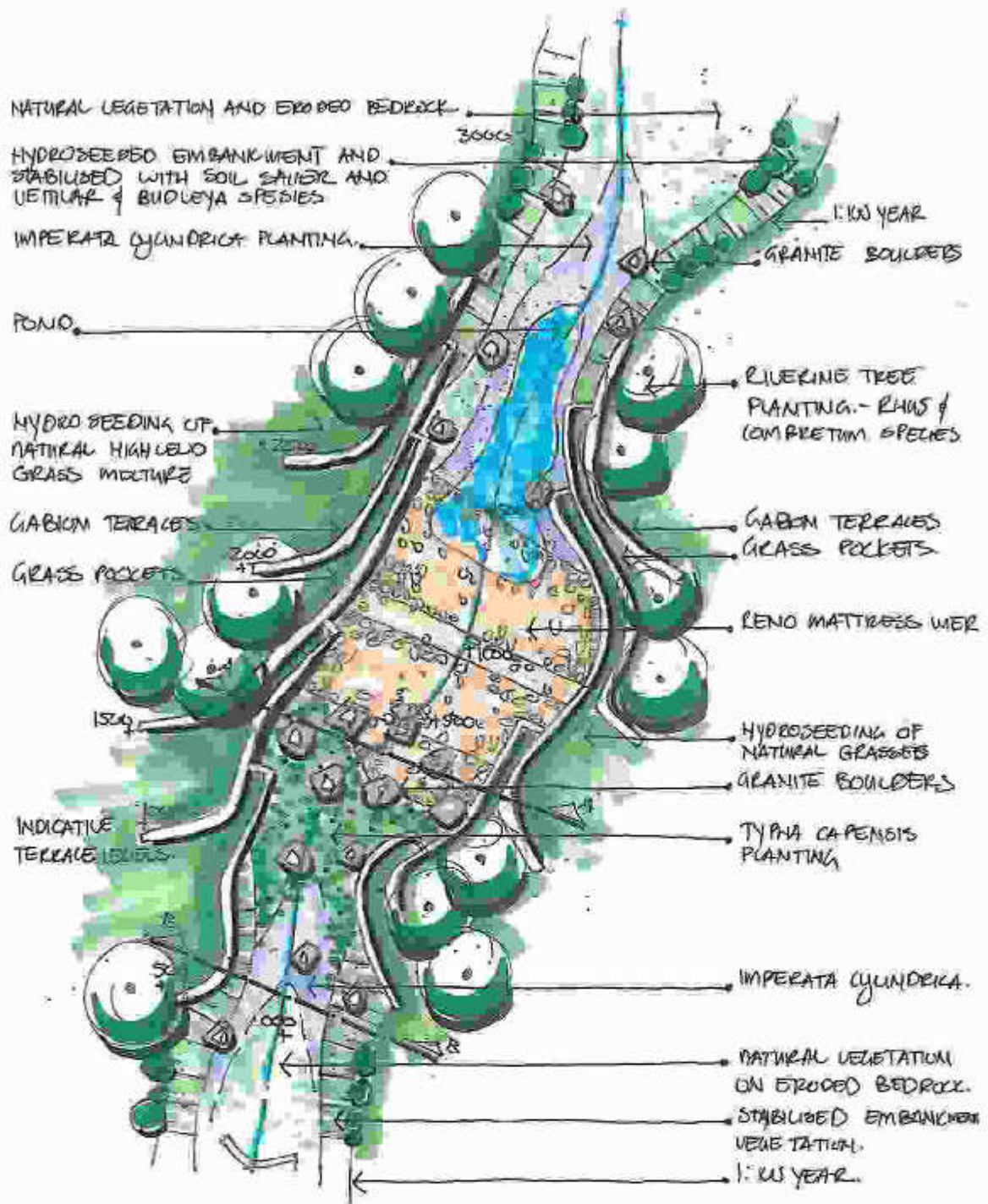


TYPICAL SECTION B-B SCALE 1:100 (A3).

**Waterfall Estate Jukskei View 67**  
 Typical landscape rehabilitation for stream & dissipators  
 17 August 2012 Scale: 1:100 (A3)


 Landscape Architects  
**Uys & White** PVT LTD

Figure 6: Sections at Gabion structures to provide softening and a "Natural Condition"



## Waterfall Estate Jukskei View 67

Typical landscape rehabilitation for stream & dissipators

17 August 2012

Scale 1:200 (A3)



Landscape ARCHITECTS

Uys & White

Figure 7: Plan at Gabion structures to provide softening and a "Natural Condition"



#### 6.4 GENERAL DETERIORATION AND DUMPING WITHIN SENSITIVE WETLAND AREAS.



Figure 8: A play area was constructed within a sensitive wetland area

Several impacts were identified:

- Disturbance of the soil by infilling in the wetland, as a result of the installation of bulk services;
- High levels of vegetation transformation in sections of the wetland, with historic and current impacts occurring;
- Alien floral invasion was observed to be a problem, leading to further transformation of the vegetation community structure;
- Historic/current disturbances with special mention of the disposal of building rubble and
- In some areas incision and erosion of the wetland have occurred, and this has led to a loss of wetland vegetation and flood attenuation and filtration functions.

When effective wetland zone rehabilitation takes place, its ecological service provision capability and sensitivity will increase. The most pertinent threats which are currently posed to the system, over which the proponent for this development has control, are alien invasion, soil infilling and erosion / incision of the wetland. Should these factors be mitigated and effective rehabilitation measures be implemented, the wetland zone will regain most of its ecological service provision capability. The management plan can also mitigate future impacts on water quality in the area.

Actions required to mitigate physical wetland character:

- All sensitive areas and their prescribed buffer zones must be fenced off and no access is allowed within these areas.

- The fences around the wetland areas must be maintained and any broken fences must be repaired.
- Re-grade land slopes to natural levels and remove severe incised slopes.
- Re-condition soil to represent a suitable growth medium.
- Restore or rehabilitate transformed areas to historically natural vegetation conditions;
- Remove alien floral invasion;
- Remove all waste and all building rubble and
- Treat incision and erosion of the wetland as per mitigation measures above.

**Actions required to mitigate siltation and water quality:**

- All sensitive areas and their prescribed buffer zones must be fenced off and no access is allowed within these areas.
- The fences around the wetland areas must be maintained and any broken fences must be repaired.
- Prevent any vehicular traffic in wetland or buffer zones which breaks, flattens the grass, breaks the soil structures and loosens the soils.
- Do not remove any fallen trees, brush or grass cutting in the buffer areas to allow increase in bio-mass and thus microbes in the buffer areas.
- Install gabions perpendicular to flow to slow the velocity and create shallow ponds.
- Plant endemic wetland vegetation in the manner in which it occurred in the on-site – predevelopment riparian zones.

## 6.5 WASTE MANAGEMENT AND BUILDING RUBBLE



**Figure 9: Waste management on site does not adhere to EMP requirements**

- Cement mixing shall be done only at specifically selected sites.
- Use plastic trays or liners when mixing cement and concrete: Do not mix cement and concrete directly on the ground.
- Building rubble and rubbish dumped within the wetland buffer and soil stockpiles within the buffer zone and maintenance of fences around wetland areas
- No dumping of rubble or rubbish or stockpiling is permitted within the sensitive wetland areas. All the sensitive areas must be checked for rubble, rubbish or stockpiling and same must be removed from the sensitive area. N

- No storage of any waste product should occur next to the fence of the sensitive areas.
- The waste storage area must be fenced off to prevent the waste from being transferred to the stream or sensitive wetland areas by wind or storm water.
- Build a bund around waste storage area to stop overflow of waste into storm water channels.
- Cover any wastes that are likely to wash away or contaminate storm water running of into the stream and sensitive wetland areas.
- Wastes must be removed on a regular basis (once a week).
- Stockpiling must only be done in designated places where it will not interfere with the natural drainage paths of the environment.
- No stockpiling shall be allowed below the 1:100 year flood line / within the transitional zones.
- Cover stockpiles and surround downhill sides with a sediment fence to stop materials washing away.
- Care must be taken to prevent the runoff of silt from open soil and stockpiles into the sensitive areas.
- Strip topsoil at start of works and store in stockpiles no more than 2m high and 4m<sup>2</sup> footprints in a designated materials storage area.
- Stockpiles must be seeded.
- No vehicles are allowed to traverse the stockpiled topsoil areas.
- After construction activities ended all cement mixing areas, waste storage areas and stock-pile areas shall be rehabilitated by removing all remaining material, by ripping the ground and planting or seeding with suitable material.

## 7. CONCLUSION

The measures as set out in this document are deemed sufficient for the conservation of ecological processes and provide a tool for managing and improving the current state of the wetland and open space areas. If these measures are adhered to, ecological processes within the wetland areas will not only re-establish, but also allow the improvement of the functionality of the system. If these measures are implemented along with measures to minimise footprint areas, especially within the wetland areas, impacts on the system can be adequately minimised.

Compiled by Dr Gwen Theron

August 2012



# Annexure H

Updated Wetland Report





## **REPORT**

# **HYDROPEDOLOGY BASED WETLAND BUFFER ASSESSMENT AND MANAGEMENT REPORT:**

## **LAND PARCEL 10, WATERFALL DEVELOPMENT SITE, GAUTENG PROVINCE**

3 September, 2015

**Compiled by:**  
**J.H. van der Waals**  
**(PhD Soil Science, Pr.Sci.Nat.)**

Member of:  
Soil Science Society of South Africa (SSSSA)

Accredited member of:  
South African Soil Surveyors Organisation (SASSO)

Registered with:  
The South African Council for Natural Scientific Professions  
Registration number: 400106/08

## Declaration

I, Johan Hilgard van der Waals, declare that:

- I act as the independent specialist in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing
  - any decision to be taken with respect to the application by the competent authority; and
  - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



**J.H. VAN DER WAALS**  
**TERRA SOIL SCIENCE**

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# HYDROPEDOLOGY BASED WETLAND BUFFER ASSESSMENT AND MANAGEMENT REPORT: LAND PARCEL 10, WATERFALL DEVELOPMENT SITE, GAUTENG PROVINCE

## 1. INTRODUCTION

### 1.1 TERMS OF REFERENCE

Terra Soil Science was appointed by **Bokamoso and Atterbury** to conduct a hydrogeology based wetland buffer assessment and management investigation for Land Parcel 10 of the Waterfall development site in the Gauteng Province. The focus of the investigation is to address specifically the functioning of the wetland, historical impacts and drivers of change in the wetland system, hydrogeology parameters for the wetland and site as well as the usefulness and requirement for a buffer on the wetland / watercourse system.

### 1.2 AIM OF THIS REPORT

The aim of this report is to provide a hydrogeology perspective on the functioning of the wetland / watercourse, historical impacts and drivers of change in the wetland / watercourse system and hydrogeology parameters for the wetland / watercourse and site. Ultimately the aim is to provide guidance on the requirement and extent of a buffer on the wetland / watercourse system for the purpose of effective water, wetland and watercourse management on the site and maintenance and protection of downstream wetlands and watercourses.

### 1.3 DISCLAIMER

This report was generated under the regulations of NEMA (National Environmental Management Act) that guides the appointment of specialists. The essence of the regulations are 1) independence, 2) specialisation and 3) duty to the regulator. The independent specialist has, in accordance with the regulations, a duty to the competent authority to disclose all matters related to the specific investigation should he be requested to do such (refer to declaration above).

It is accepted that this report can be submitted for peer review (as the regulations also allow for such). However, the intention of this report is not to function as one of several attempts by applicants or competent authorities to obtain favourable delineation outcomes. Rather, the report is aimed at addressing specific site conditions in the context of current legislation, guidelines and best practice with the ultimate aim of ensuring the conservation and adequate management of the water resource on the specific site.

Due to the specific legal liabilities wetland specialists face when conducting wetland delineations and assessments this author reserves the right to, in the event that this report becomes part of a delineation comparison exercise between specialists, submit the report to the competent

authorities, without entering into protracted correspondence with the client, as an independent report.

## 1.4 METHODOLOGY

The report was generated through:

1. The collection and presentation of baseline land type and topographic data for the site;
2. The thorough consideration of the statutory context of wetlands assessment and the process of wetland delineation;
3. The identification of water related landscape parameters (conceptual and real) for the site;
4. Aerial photograph interpretation of the site;
5. Assessment of historical impacts and changes on the site through the accessing of various historical aerial photographs and topographic maps;
6. Focused soil and site survey in terms of soil properties as well as drainage feature properties;
7. Assessment of the functioning, status and hydrology of the wetlands on the site; and
8. Presentation of the findings of the various components of the investigation.

## 2. SITE LOCALITY AND DESCRIPTION

### 2.1 SURVEY AREA BOUNDARY

The site lies between 26° 00' 45" and 26° 01' 35" south and 28° 06' 33" and 28° 06' 53" east near Halfway House in the Gauteng Province (Figure 1).

### 2.2 LAND TYPE DATA

Land type data for the site was obtained from the Institute for Soil Climate and Water (ISCW) of the Agricultural Research Council (ARC). The land type data is presented at a scale of 1:250 000 and entails the division of land into land types, typical terrain cross sections for the land type and the presentation of dominant soil types for each of the identified terrain units (in the cross section). The soil data is classified according to the Binomial System (MacVicar et al., 1977). The soil data was interpreted and re-classified according to the Taxonomic System (Soil Classification Working Group, 1991).

The site falls into the **Bb1** land type (Land Type Survey Staff, 1972 - 2006) with Figure 2 providing the land type distribution for the site. The **Bb1** and **Bb2** land types are restricted to the Halfway House Granite Dome with typical bleached sandy soils dominating the bulk of the landscape (details provided later in the report).

# LP10 Locality Map

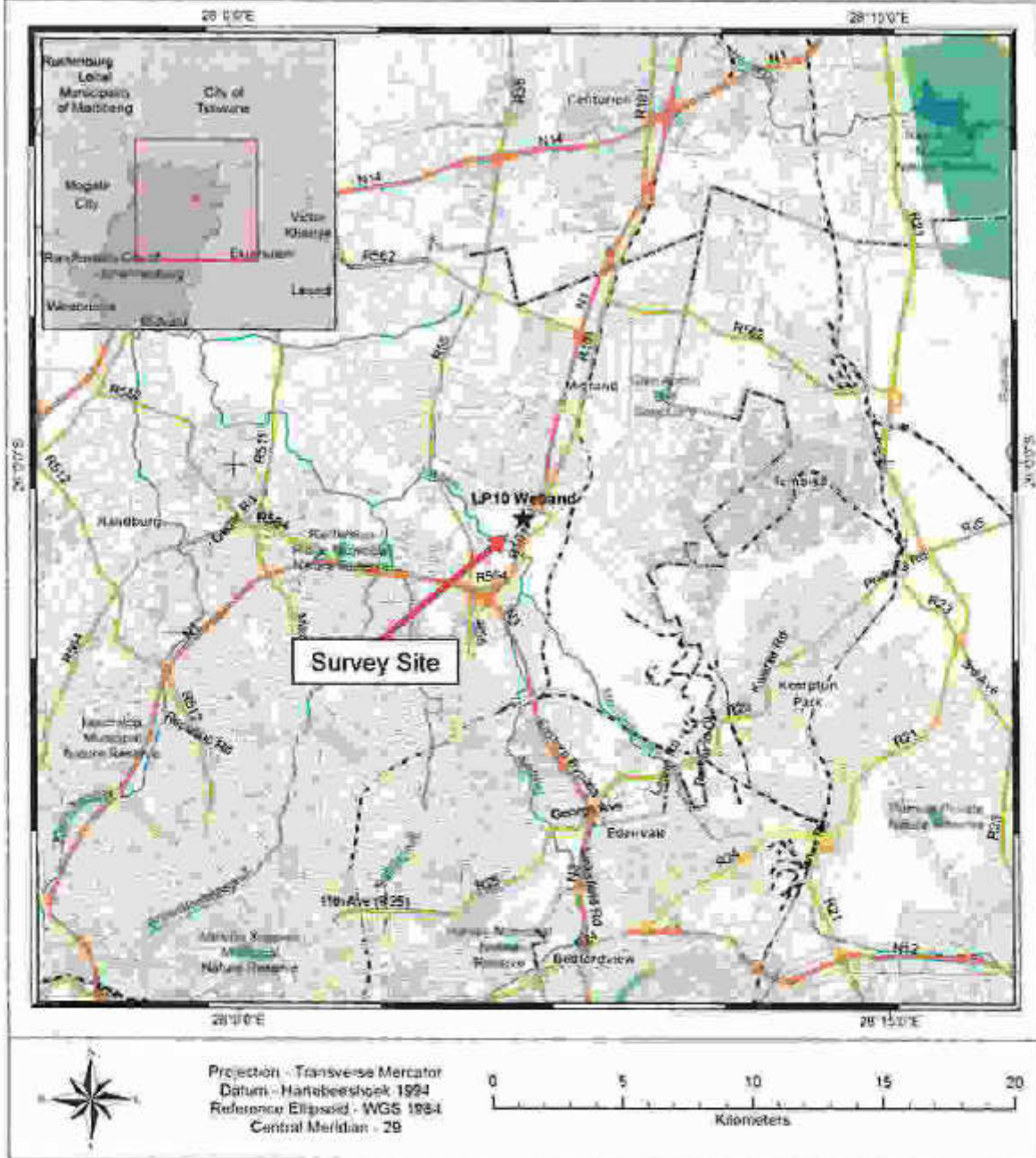
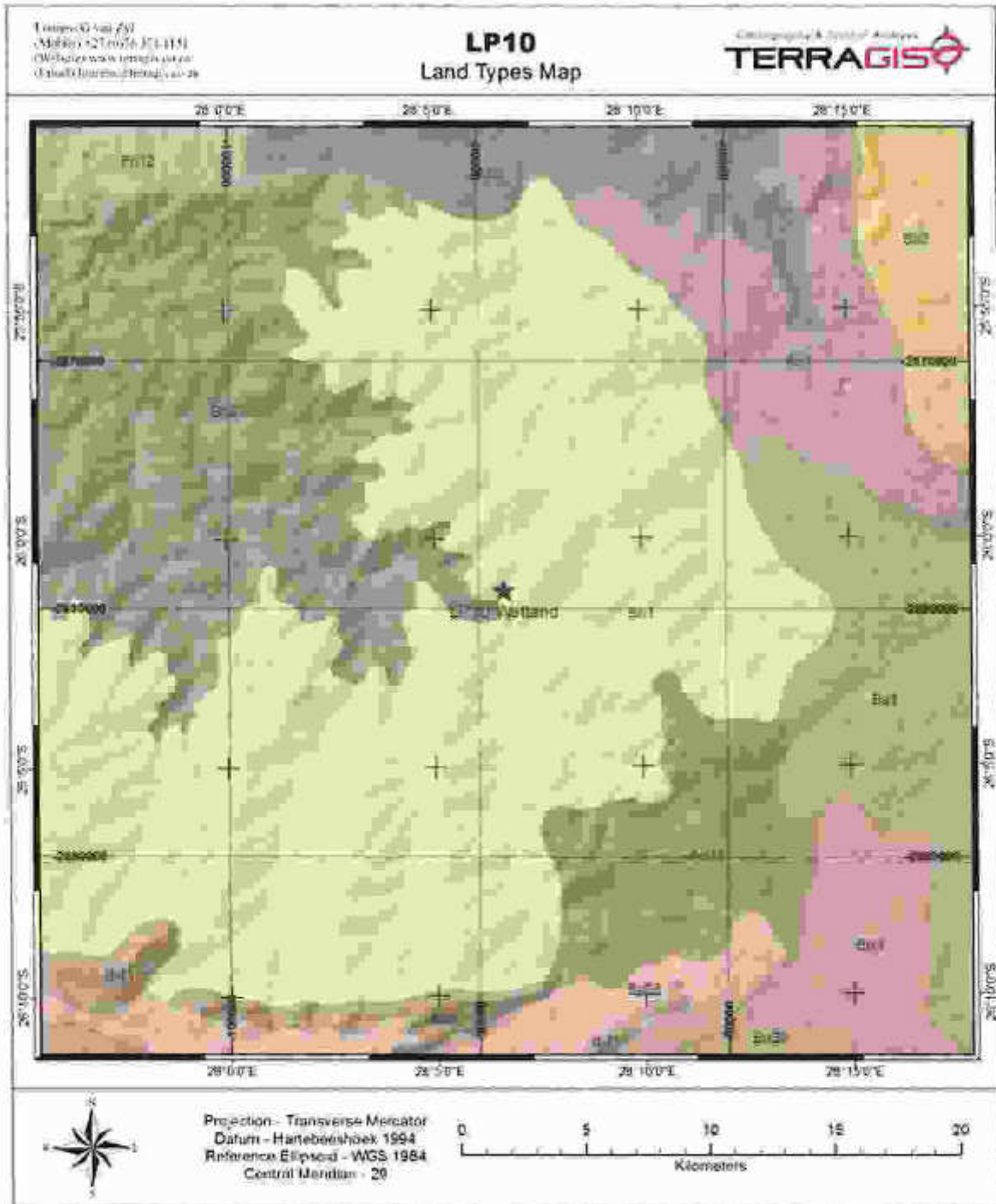


Figure 1 Locality of the survey site

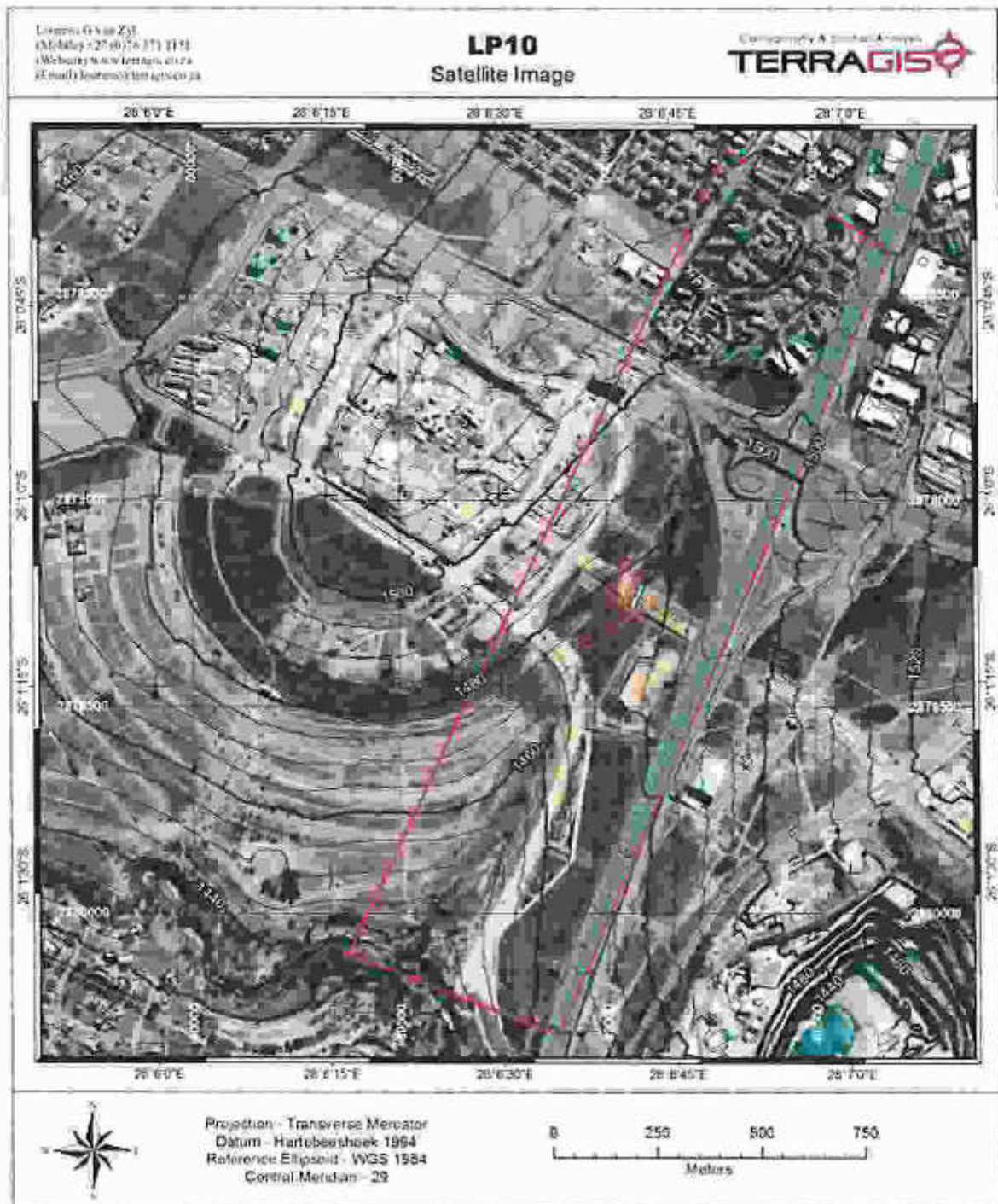




**Figure 2** Land type map of the survey site and surrounding area

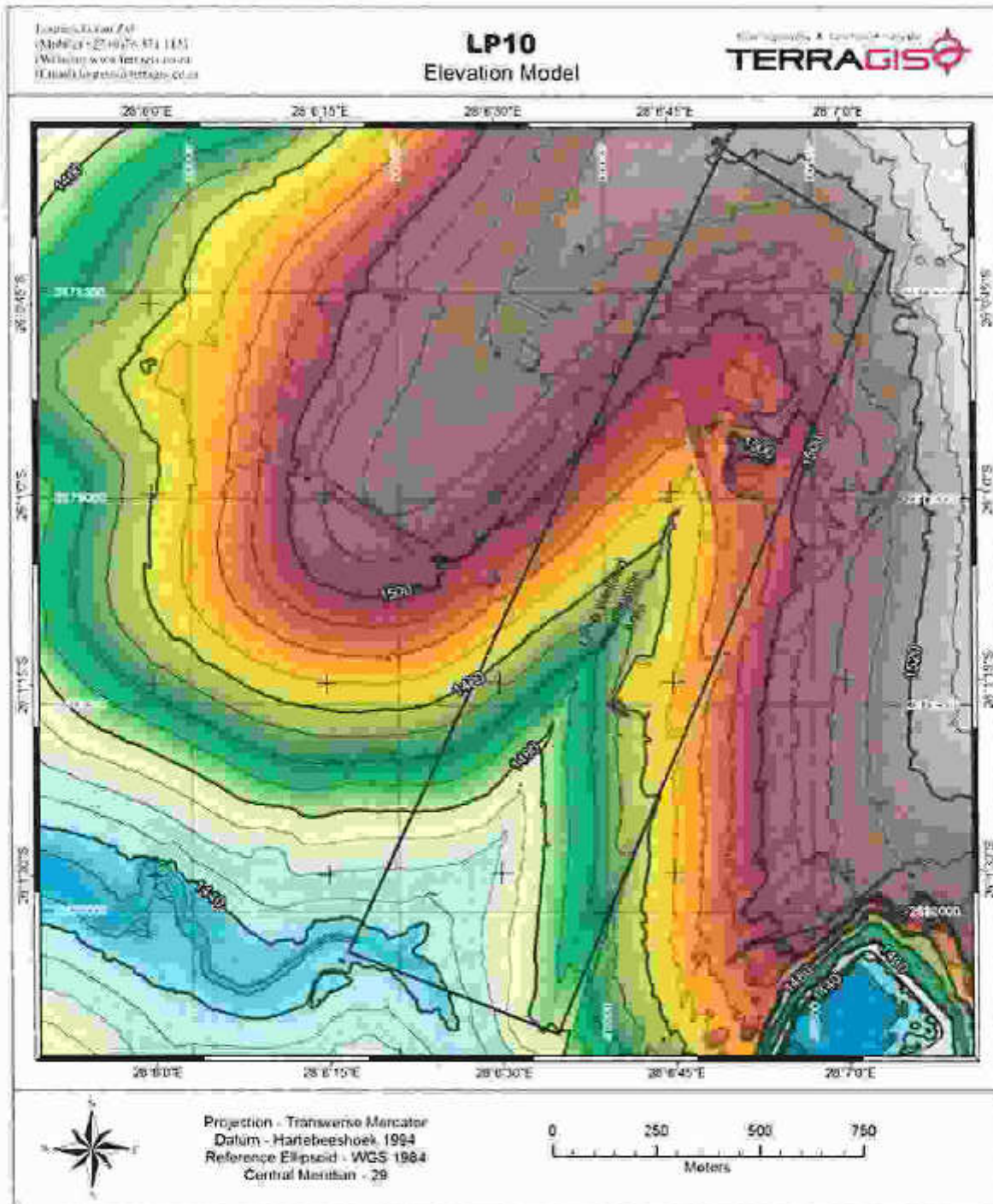
### 2.3 TOPOGRAPHY

The topography of the site is undulating. The contour map for the site is provided in **Figure 3**. From the contour data a digital elevation model (DEM) was generated. The topographic data was further interpreted and the approaches and results are discussed later in the report.



**Figure 3** Contours of the survey area superimposed on an aerial photograph





**Figure 4 DEM of the survey site**

### **3. PROBLEM STATEMENT**

The delineation of wetland in the HHGD area is challenging due to a range of factors that lead to difficulty in distinguishing between wetland and terrestrial zones. One of the main factors contributing to the difficulty is the specific geological context of the HHGD. From a soil form and wetness perspective the specific land type exhibits some form of "wetland" characteristic, according to the present wetland delineation guidelines (DWAF, 2005), in at least 75 % of the landscape. This aspect has led to significant challenges and friction regarding the interpretation of the guidelines as well as the specific soils in the area. The following section provides a perspective of the statutory as well as biophysical context of wetland delineation in the HHGD area. This investigation will therefore focus on the identification of the wetland features based on soil hydromorphy, landscape hydrology as well as various historical modifiers through a dedicated assessment and elucidation of hydrogeological processes experienced in the catchment and on the site.

### **4. STATUTORY CONTEXT**

The following is a brief summary of the statutory context of wetland delineation and assessment. Where necessary, additional comment is provided on problematic aspects or aspects that, according to this author, require specific emphasis.

#### **4.1 WETLAND DEFINITION**

Wetlands are defined, in terms of the National Water Act (Act no 36 of 1998) (NWA), as:

*"Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil."*

#### **4.2 WATERCOURSE DEFINITION**

"Catchment" is defined, in terms of the National Water Act (Act no 36 of 1998) (NWA), as:

"..., in relation to a watercourse or watercourses or part of a watercourse, means the area from which any rainfall will drain into the watercourse or watercourses or part of a watercourse, through surface flow to a common point or common points;"

"Watercourse" is defined, in terms of the National Water Act (Act no 36 of 1998) (NWA), as:

- (a) a river or spring;
  - (b) a natural channel in which water flows regularly or intermittently;
  - (c) a wetland, lake or dam into which, or from which, water flows; and
  - (d) any collection of water which the Minister may, by notice in the *Gazette*, declare to be a water course,
- and a reference to a watercourse includes, where relevant, its bed and banks;"

### 4.3 THE WETLAND DELINEATION GUIDELINES

In 2005 the Department of Water Affairs and Forestry published a manual entitled "A practical field procedure for identification and delineation of wetland and riparian areas" (DWAF, 2005). The "...manual describes field indicators and methods for determining whether an area is a wetland or riparian area, and for finding its boundaries." The definition of a wetland in the guidelines is that of the NWA and it states that wetlands must have one or more of the following attributes:

- **"Wetland (hydromorphic) soils** that display characteristics resulting from prolonged saturation"
- **"The presence, at least occasionally, of water loving plants (hydrophytes)"**
- **"A high water table** that results in saturation at or near the surface, leading to anaerobic conditions developing in the top 50cm of the soil."

The guidelines further list four indicators to be used for the finding of the outer edge of a wetland. These are:

- **Terrain Unit Indicator.** The terrain unit indicator does not only identify valley bottom wetlands but also wetlands on steep and mild slopes in crest, midslope and footslope positions.
- **Soil Form Indicator.** A number of soil forms (as defined by MacVicar et al., 1991) are listed as indicative of permanent, seasonal and temporary wetland zones.
- **Soil Wetness Indicator.** Certain soil colours and mottles are indicated as colours of wet soils. The guidelines stipulate that this is the primary indicator for wetland soils. (Refer to the guidelines for a detailed description of the colour indicators.) In essence, the reduction and removal of Fe in the form of "bleaching" and the accumulation of Fe in the form of mottles are the two main criteria for the identification of soils that are periodically or permanently wet.
- **Vegetation Indicator.** This is a key component of the definition of a wetland in the NWA. It often happens though that vegetation is disturbed and the guidelines therefore place greater emphasis on the soil form and soil wetness indicators as these are more permanent whereas vegetation communities are dynamic and react rapidly to external factors such as climate and human activities.

The main emphasis of the guidelines is therefore the use soils (soil form and wetness) as the criteria for the delineation of wetlands. The applicability of these guidelines in the context of the survey site will be discussed in further detail later in the report.

Due to numerous problems with the delineation of wetlands there are a plethora of courses being presented to teach wetland practitioners and laymen the required techniques. Most of the courses and practitioners focus on ecological or vegetation characteristics of landscapes and soil characteristics are often interpreted incorrectly due to a lacking soil science background of these practitioners. As such this author regularly presents, in conjunction with a colleague (Prof. Cornie van Huysteen) from the University of the Free State, a course on the aspects related to soil classification and wetland delineation.



#### **4.4 THE RESOURCE DIRECTED MEASURES FOR PROTECTION OF WATER RESOURCES**

The following are specific quotes from the different sections of the "Resource Directed Measures for Protection of Water Resources." as published by DWAF (1999).

##### **4.4.1 The Resource Directed Measures for Protection of Water Resources: Volume 4: Wetland Ecosystems.**

###### From the Introduction:

"This set of documents on Resource Directed Measures (RDM) for protection of water resources, issued in September 1999 in Version 1.0, presents the procedures to be followed in undertaking **preliminary determinations of the class, Reserve and resource quality objectives for water resources**, as specified in sections 14 and 17 of the South African National Water Act (Act 36 of 1998).

The development of procedures to determine RDM was initiated by the Department of Water Affairs and Forestry in July 1997. Phase 3 of this project will end in March 2000. Additional refinement and development of the procedures, and development of the full water resource classification system, will continue in Phase 4, until such time as the detailed procedures and full classification system are ready for publication in the Government Gazette.

It should be noted that until the final RDM procedures are published in the Gazette, and prescribed according to section 12 of the National Water Act, all determinations of RDM, whether at the rapid, the intermediate or the comprehensive level, will be considered to be preliminary determinations."

##### **4.4.2 The Resource Directed Measures for Protection of Water Resources: Generic Section "A" for Specialist Manuals – Water Resource Protection Policy Implementation Process**

"Step 3: Determine the reference conditions of each resource unit"

"What are reference conditions?"

"The determination of reference conditions is a very important aspect of the overall Reserve determination methodology. Reference conditions describe the natural unimpacted characteristics of a water resource. Reference conditions quantitatively describe the ecoregional type, specific to a particular water resource."

##### **4.4.3 The Resource Directed Measures for Protection of Water Resources: Appendix W1 (Ecoregional Typing for Wetland Ecosystems)**

Artificial modifiers are explained namely:

"Many wetlands are man-made, while others have been modified from a natural state to some degree by the activities of humans. Since the nature of these alterations often greatly influences the character of such habitats, the inclusion of modifying terms to accommodate human influence is important. In addition, many human modifications, such as dam walls and drainage ditches, are visible in aerial photographs and can be easily mapped. The following Artificial Modifiers are defined and can be used singly or in combination wherever they apply to wetlands:

*Farmed:* the soil surface has been physically altered for crop production, but hydrophytes will become re-established if farming is discontinued

*Artificial:* substrates placed by humans, using either natural materials such as dredge spoils or synthetic materials such as concrete. Jetties and breakwaters are examples of Non-vegetated Artificial habitats

*Excavated:* habitat lies within an excavated basin or channel

*Diked/Impounded:* created or modified by an artificial barrier which obstructs the inflow or outflow of water

*Partially Drained:* the water level has been artificially lowered, usually by means of ditches, but the area is still classified as wetland because soil moisture is sufficient to support hydrophytes."

#### **4.4.4 The Resource Directed Measures for Protection of Water Resources: Appendix W4 IER (Floodplain Wetlands) Present Ecological Status (PES) Method**

In Appendix W4 the methodology is provided for the determination of the present ecological status (PES) of a palustrine wetland.

The present ecological state (PES) of the wetland was determined according to the method described in "APPENDIX W4: IER (FLOODPLAIN WETLANDS) PRESENT ECOLOGICAL STATUS (PES) METHOD" of the "Resource Directed Measures for Protection of Water Resources, Volume 4: Wetland Ecosystems" as published by DWAF (1999). However, the PES methodology already forms an adaptation from the methodology to assess palustrine wetlands. Hillslope seepage wetlands have a range of different drivers and as such some modification of the criteria has been made by this author to accommodate the specific hydrogeology drivers of hillslope seepage wetlands.

The criteria as described in Appendix 4 is provided below with the relevant modification or comment provided as well.

The summarised tasks in the PES methodology are (for detailed descriptions refer to the relevant documentation):

1. Conduct a literature review (review of available literature and maps) on the following:
  - a. Determine types of development and land use (in the catchment in question).



- b. Gather hydrological data to determine the degree to which the flow regime has been modified (with the "virgin flow regime" as baseline). The emphasis is predominantly on surface hydrology and hydrology of surface water features as well as the land uses, such as agriculture and forestry, that lead to flow modifications. Important Note: The hydrogeology of landscapes is not explicitly mentioned in the RDM documentation and this author will make a case for its consideration as probably the most important component of investigating headwater systems and seepage wetlands and areas.
  - c. Assessment of the water quality as is documented in catchment study reports and water quality databases.
  - d. Investigate erosion and sedimentation parameters that address aspects such as bank erosion and bed modification. Important Note: The emphasis in the RDM documentation is again on river and stream systems with little mention of erosion of headwater and seepage zone systems. Again a case will be made for the emphasis of such information generation.
  - e. Description of exotic species (flora and fauna) in the specific catchment in question.
2. Conduct an aerial photographic assessment in terms of the parameters listed above.
  3. Conduct a site visit and make use of local knowledge.
  4. Assess the criteria and generate preliminary PES scores.
  5. Generation of report.

Table 1 presents the scoresheet with criteria for the assessment of habitat integrity of palustrine wetlands (as provided in the RDM documentation).

**Table 1 "Table W4-1: Scoresheet with criteria for assessing Habitat Integrity of Palustrine Wetlands (adapted from Kleynhans 1996)"**

Criteria and attributes	Relevance	Score	Confidence
<b>Hydrologic</b>			
Flow modification	Consequence of abstraction, regulation by impoundments or increased runoff from human settlements or agricultural land. Changes in flow regime (timing, duration, frequency), volumes, velocity which affect inundation of wetland habitats resulting in floristic changes or incorrect cues to biota. Abstraction of groundwater flows to the wetland.		
Permanent Inundation	Consequence of impoundment resulting in destruction of natural wetland habitat and cues for wetland biota.		
<b>Water Quality</b>			
Water Quality Modification	From point or diffuse sources. Measure directly by laboratory analysis or assessed indirectly from upstream agricultural activities, human settlements and industrial activities. Aggravated by volumetric decrease in flow delivered to the wetland		
Sediment load modification	Consequence of reduction due to entrapment by impoundments or increase due to land use practices such as overgrazing. Cause of unnatural rates of erosion, accretion or infilling of wetlands and change in habitats.		

<b>Hydraulic/Geomorphic</b>			
Canalisation	Results in desiccation or changes to inundation patterns of wetland and thus changes in habitats. River diversions or drainage.		
Topographic Alteration	Consequence of infilling, ploughing, dykes, trampling, bridges, roads, railwaylines and other substrate disruptive activities which reduces or changes wetland habitat directly or through changes in inundation patterns.		
<b>Biota</b>			
Terrestrial Encroachment	Consequence of desiccation of wetland and encroachment of terrestrial plant species due to changes in hydrology or geomorphology. Change from wetland to terrestrial habitat and loss of wetland functions.		
Indigenous Vegetation Removal	Direct destruction of habitat through farming activities, grazing or firewood collection affecting wildlife habitat and flow attenuation functions, organic matter inputs and increases potential for erosion.		
Invasive plant encroachment	Affect habitat characteristics through changes in community structure and water quality changes (oxygen reduction and shading).		
Alien fauna	Presence of alien fauna affecting faunal community structure.		
Overutilisation of biota	Overgrazing, Over-fishing, etc		
<b>TOTAL MEAN</b>			

Scoring guidelines per attribute:

natural, unmodified = 5; Largely natural = 4, Moderately modified = 3; largely modified = 2; seriously modified = 1; Critically modified = 0.

Relative confidence of score:

Very high confidence = 4; High confidence = 3; Moderate confidence = 2; Marginal/low confidence = 1.

Important Note: The present ecological state (PES) determination is, as discussed earlier in the report, based on criteria originally generated for palustrine and floodplain wetlands. Seepage wetlands very rarely have the same degree of saturation or free water and consequently often do not have permanent wetland zones. These wetlands are therefore often characterised by seasonal or temporary properties and as such a standard PES approach is flawed. The existing criteria is provided below as is a comment on the applicability as well as proposed improvements.

Criteria

Hydrological Criteria

- "Flow modification: Consequence of abstraction, regulation by impoundments or increased runoff from human settlements or agricultural land. Changes in flow regime (timing, duration, frequency), volumes, velocity which affect inundation of wetland habitats resulting