

	<p>ensure temporary measures to prevent siltation, gully formation and water pollution during the rehabilitation process. These measures need to be approved by the Environmental Consultant or Landscape Architect before it is implemented.</p>	
<p>6. Installation of silt traps</p>	<p>Water will be cleaned before it is transported to the wetland area through the installation of silt traps. A silt trap will be constructed at all boulder weirs within the watercourse. The silt trap will include indigenous vegetation, boulders (Reno mattress), as well as a geotextile lining.</p>	<p>Contractor</p>
<p>7. Re-vegetation of the rehabilitated watercourse</p>	<p>Re-vegetation is a very important part of sloping as it will make the soil more stable and create roughness. A groundcover should be established on the sloped areas (where work was done for the storm water channels) to avoid sedimentation in the wetland downstream. Groundcover will also be necessary as the rehabilitated area need to have a vegetation cover of at least 75%.</p> <p><i>It should be noted that re-vegetation is only necessary if the natural vegetation was disturb or removed. In order to maintain a natural system, as little as possible work should be done within the wetland as well as the minimum alterations should be executed.</i></p> <p>Indigenous tree species such as <i>Celtis africana</i>, <i>Combretum erythrophyllum</i>, <i>Searsia lancea</i> and <i>Vachellia karroo</i>, and grasses such as <i>Eragrostis</i> spp., <i>Sporobolus</i> spp. and <i>Cynodon dactylon</i> are recommended for the sloped areas. <i>C. dactylon</i> is an adaptable grass that forms a thick mat and is able to grow in wet and dry land conditions. Planting method suggested for this project is hydro-seeding or even sowing by hand as the area is not that big. Hydro-seeding is the establishment of vegetation using a slurry water and seed mixture which is sprayed over a prepared surface. This is the most cost effective method for rehabilitation of large areas as all surfaces are covered and vegetation quality is high.</p>	<p>Landscape contractor Hydro-seeding contractor</p>

	<p>Aquatic vegetation may also be incorporated in the re-vegetation plan. These will include sedges (<i>Cyperus spp.</i>, <i>Fuirena spp.</i> and <i>Schoenoplectus spp.</i>), rushes (<i>Juncus spp.</i>), bull rushes (<i>Typha capensis</i>), reeds (<i>Phragmites australis</i>), and grasses (<i>Imperata cylindrica</i>). Alongside the water channel, <i>Typha capensis</i> should be planted to add roughness to the stream. This aquatic plant provides nesting opportunities and shelter for various bird species as well as habitat for frogs, toads and other aquatic organisms. On the areas cleared of vegetation along the watercourse, a seed mix suitable for moist conditions can be seeded.</p>	
8. Clean up litter	<p>For the health of the wetland, a program is suggested to clean up the litter especially near the streams. Litter, sewage and the bathing of humans in the streams allows chemicals into the wetland, decreasing the health in the wetland which will lead to lower biodiversity. The program may include the occasional day job for previously disadvantaged individuals.</p>	Owner

7. Alien Invasive Programme

An alien invasive eradication and monitoring program is recommended for the study area as well as the adjacent wetland areas that will form part of the SWMP, as this will promote biodiversity in the area and limit the distribution of alien invasive species via water and humans. (*Refer to Addendum A for a list of alien species known to occur on site*).

Table 4: Control methods for alien invasive species

Method	Description
Mechanical	The removal of species by hand or with appropriate tools, instruments and machines
Chemical	The optimal use of herbicides to control target species
Biological	This involves the intentional use of populations of natural enemies of the target alien or invasive species or other methods that adversely affect the biological integrity of the target species
Habitat management	This control methods uses measures such as prescribed burning, grazing and other activities
Integrated pest management (IPM)	This involves a combination of methods above based on ecological research regular monitoring and careful co-ordination

A recommended eradication program includes:

- The areas to be disturbed during construction should be limited.
- Careful removal of indigenous plants before construction commences. Plants should be replanted on the study site (as suggested by the landscape architect) as soon as construction is completed.

The best mitigation measure for alien and invasive species is the early detection and eradication of these species.

A suggested method of establishing a continual eradication program is:

1. The scope of the problem should be assessed and a clearing plan should be established. Funding should be included in the budget to rehabilitate the areas in which alien and invasive species have been removed in order to prevent further destruction to the ecosystem.

2. Decide where control should start and how much can be coped with. Remove weeds in the least affected areas and work outwards to the heavier weed infestations thus rapidly safeguarding relatively large areas.
3. Identify areas where vigorous indigenous bush meets weedy areas and carefully work outwards from the indigenous area to the weedy area. If possible always start at the peak and work downwards.
4. Remove weeds carefully and try to cover exposed soil with cut vegetation or leaf litter that is free of weeds, seeds which will not regrow if in contact with the soil.
5. Press any loosened soil down lightly taking care not to damage native plants and mulch with plant material where possible. This will help prevent alien weeds from filling gaps left by weeding.
6. Wherever possible try to prevent weeds from producing seeds or fruit by controlling them before they flower. Do not transport seeds, fruits, bulbs, tuber or stems that root easily away from the areas. It is advisable to burn the pieces "on site" if at all possible.

Often the most time/cost effective way of dealing with heavy infestations is to arrange for the correct use of herbicides e.g. use a spot spray or foliar spray correctly applied to the target plants, thus ensuring minimum soil disturbance and so reducing the chance of invader seeds germinating in the "seed bed" created by "weeding". In other instances, slash the plant down and return in a few months to foliar spray the re-growth e.g. reeds. Paint or spray the cut stumps of the larger and more difficult plants. Paint the lower stem.

Follow up control is essential and it requires a regular monitoring program done on a regular basis to ensure early detection and removal of alien seedlings until the viable invasive seed bank is exhausted and indigenous plants once again are naturally re-established. The ultimate goal in the control and eradication of alien invasive plants must be the restoration and rehabilitation of the land.

8. Monitoring

8.1. Construction Phase

Water quality

Other aspects

- Soil and water contamination must be avoided. In the event that it does occur, the impacts of such pollution must be mitigated and remediated immediately.
- A competent person must be appointed to assess and ensure the quality of the water during all phases of the construction period.

- Removed soil and stockpiling of soil must occur outside the extent of the watercourse to prevent siltation and increased runoff during construction.
- Utilisation and servicing of chemical toilets must be monitored to ensure that possible soil and water pollution are prevented.
- No chemical or waste water must be allowed to contaminate the runoff on site.
- The utilisation of drip trays, lined earth bunds and cement trays must be monitored to ensure prevention of spill of hazardous materials such as fuel, oil and cement.
- Ensure that a spill kit is always available on site.
- Oils and chemicals must be confined to specific secured bunded/containment areas within the site camp to prevent potential spills or leaks.
- All spilled hazardous substances must be contained in impermeable containers for removal to a licensed hazardous waste site and the area where the spill occurred is rehabilitated.
- No leaking vehicles must be allowed on site.
- No bins containing organic solvents such as paints and thinners may be cleaned on site, unless containers for liquid waste disposal are placed on site for such purposes.
- No effluent (including effluent from any storage areas) may be discharged into any water surface or groundwater resources.
- An area must be allocated for stockpiling of topsoil
- A sediment fence or temporary barrier must be constructed around the stockpile to prevent the soil from washing away by rain or any other water.
- Water quality must be monitored from commencement to completion of construction.

8.2. Operational Phase

Water quality

- Bi-annual water quality monitoring should be undertaken by a competent person to ensure that no detrimental impacts occur on the wetland, surface or groundwater resources.

Other aspects

- On-going monitoring of water quality on a monthly basis is essential to ensure the functionality of the wetland and Jukskeiriver.
- No effluent (including effluent from any storage areas) may be discharged into any surface or groundwater resources.
- Repair and storage of vehicles only allowed within the demarcated site area.
- Spill kits must be available on site and inspected and monitored regularly to ensure that it complies with the minimum safety requirements.

All spilled hazardous substances must be contained in impermeable containers for removal to a licensed hazardous waste site.

9. Conclusion

It is believed that the rehabilitation measures offer a viable solution to lessen the impact on the environment and for the conservation of ecological processes. The new proposed swale downstream of the existing rehabilitated wetland should counter the additional storm water runoff should the buffer zone be removed. The rehabilitation plan further provides a tool for managing the current state of the wetland area and should act as a guideline for future monitoring. Since the success of the rehabilitation measures will only be evident after a certain time period has elapsed, this document serves as a dynamic document and should preferably be updated on a yearly basis.

This document should be read in conjunction with the EMPr (*Refer to Annexure N*).

Addendum A: Alien plant species occurring in the study area which should be eradicated. (Species list extracted from Flora assessment and used with permission from specialist).

Species	Invasive Category
<i>Acacia dealbata</i> *	2
<i>Acacia mearnsii</i> *	2
<i>Alternanthera pungens</i>	
<i>Amaranthus hybridus</i> subsp. <i>hybridus</i> var. <i>hybridus</i> *	
<i>Arundo donax</i> *	1b
<i>Bidens bipinnata</i>	
<i>Bidens pilosa</i>	
<i>Campuloclinium macrocephalum</i>	1b
<i>Celtis australis</i> *	3
<i>Conyza bonariensis</i>	
<i>Cortaderia selloana</i>	1b
<i>Datura ferox</i>	1b
<i>Datura stramonium</i> *	1b
<i>Flaveria bidentis</i> *	1b
<i>Gomphrena celosioides</i>	
<i>Hibiscus trionum</i>	
<i>Ipomoea purpurea</i>*	1b
<i>Lantana camara</i>	1b
<i>Melia azedarach</i>	3
<i>Mirabilis jalapa</i> *	1b
<i>Morus alba</i> *	3
<i>Opuntia cf. stricta</i>	1b
<i>Paspalum dilatatum</i>*	
<i>Paspalum urvillei</i>	
<i>Pennisetum clandestinum</i> *	
<i>Persicaria lapathifolia</i>*	
<i>Pinus</i> sp.	
<i>Platanus wrightii</i> *	
<i>Populus alba</i> *	2
<i>Populus x canescens</i> *	2
<i>Ricinus communis</i> var. <i>communis</i> *	2
<i>Richardia brasiliensis</i>	
<i>Salix babylonica</i> *	2
<i>Solanum mauritianum</i> *	1b
<i>Tagetes minuta</i>*	
<i>Verbena aristigera</i>	
<i>Verbena bonariensis</i>*	1b
<i>Verbena brasiliensis</i>	1b
<i>Xanthium spinosum</i>*	1b
<i>Zinnia peruviana</i>	

Species in **Bold** occur in the wetland area; Species with * occur in riverine area.



Annexure P

Former Wetland Reports



**A PRELIMINARY WETLAND DELINEATION AND FUNCTIONAL
ASSESSMENT FOR THE PROPOSED NORTHERN GOLF
COURSE DEVELOPMENT ON THE REMAINDER OF FARM
WATERVAL 5 IR, WOODMEAD EXTENSION 24, GAUTENG**

PREPARED FOR:

Waterval Islamic Institute
PO Box 5
Johannesburg
Tel: (011) 802 1355
Fax: (011) 802 1563

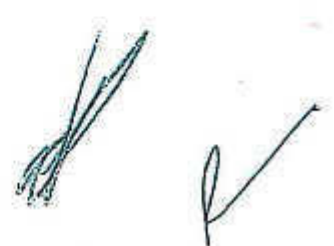
COMPILED BY:



STRATEGIC ENVIRONMENTAL FOCUS (PTY) LTD

P.O. Box 74785
Lynnwood Ridge
0040
Tel: (012) 349 1307
Fax: (012) 349 1229
E-mail: sei@seise.co.za

March 2006



Executive Summary

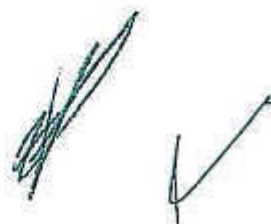
A preliminary wetland delineation and functional assessment was conducted in order to determine the wetland boundaries and functions provided by wetlands for a proposed public golf course and private golf estate to be established on Portion 1 of the Farm Waterval 5 – IR, Woodmead Extension 24, Gauteng. The site's wetland units are in a good functioning condition with their hydrological integrity still well intact. The wetlands support a high natural Egoli Granite Grassland (Mucina & Rutherford, in press) biodiversity, including populations of the vulnerable Marsh Sylph (*Metisella meninx*). The only exceptions are the Modderfonteinspruit and the Jukskei River Riparian Wetlands (Valley bottom with a channel hydro-geomorphic units 5 & 6), which both possess a low water quality and poor aquatic species diversity.

The outer wetland boundary was partly determined by the methodology described in the Department of Water Affairs and Forest's (DWAF) delineation guide document entitled, *A practical field procedure for identification and delineation of wetlands and riparian areas* (DWAF, 2005). Hydrophytic plants and especially hydromorphic soils were the two main indices relied on in this specific delineation process, but only covered a small portion of the site, due to restricted fieldwork. In addition the geotechnical site investigation, soil investigation report, and interpretations from 1:50 000 cadastral maps and 1: 10 000 ortho rectified aerial photographs with 5 m contour lines were made to determine wetland boundaries as part of the desktop study. Desktop delineated wetlands did correlate well with the soil core derived data.

A total of 229.13 ha of wetlands have been delineated, with 84.48 % (193.57 ha) wetland area located on the proposed private golf estate and 15.52 % (35.56 ha) on the public golf course. The wetlands form 1.03 % of the collective wetland catchment (22 293.20 ha).

A Level 1 wetlands function assessment was conducted according to the "Wet-EcoServices" document (Kotze *et al.*, 2005). The result was 15 hydro-geomorphic (HGM) units consisting of three different categories:

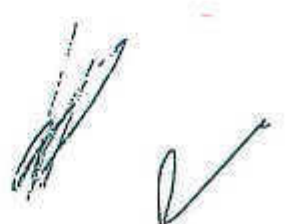
- Valley bottom with a channel 6
- Valley bottom with a channel 5
- Valley bottom with a channel 4
- Valley bottom with a channel 3
- Valley bottom with a channel 2
- Valley bottom with a channel 1
- Valley bottom without a channel 5
- Valley bottom without a channel 4



- Valley bottom without a channel 3
- Valley bottom without a channel 2
- Valley bottom without a channel 1
- Hillslope seepage feeding a watercourse 4
- Hillslope seepage feeding a watercourse 3
- Hillslope seepage feeding a watercourse 2
- Hillslope seepage feeding a watercourse 1

The wetland units perform vital functions in terms of improving water quality, regulating stream flow, assisting flood attenuation, help control erosion and facilitate sedimentation. A minimum buffer zone of 35 m is recommended around each wetland unit to help keep existing hydrological functioning intact, while a 200 m buffer zone is recommended around Valley bottom with a channel 1 HGM unit to conserve viable populations of the endangered Marsh Sylph (*Metisella meninx*).

Hardened surface structures and golf course holes should be kept outside of all buffered wetland units and several mitigation measures, including a well designed wetland sensitive stormwater management plan need to be put in place.

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Content

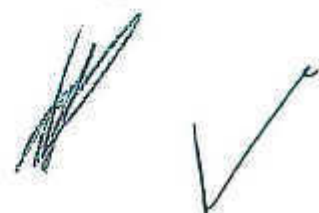
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1 Introduction: Background and description of the scope of the study

As South Africa is a contracting party to the Ramsar Convention on Wetlands, the South African government has taken a keen interest in the conservation, sustainable utilisation and rehabilitation of wetlands in South Africa. This aspect is also reflected in various pieces of legislation controlling development in and around wetlands and other water resources, of which the most prominent may be the National Water Act, Act 36 of 1998. As South Africa is an arid country, with a mean annual rainfall of only 450mm in relation to the world average of 860mm (DWA:2003), water resources and the protection thereof becomes critical to ensure their sustainable utilisation. Wetlands perform various important functions related to water quality, flood attenuation, stream flow augmentation, erosion control, biodiversity, harvesting of natural resources, and others, highlighting their importance as an irreplaceable habitat type. Determining the location and extent of existing wetlands, as well as evaluating the full scope of their ecosystem services, form an essential part in the strive towards sustainable development and protection of water resources.

1.1 Site and project description

The site is situated on the farm remainder of Portion 1 of the Farm Waterval 5 – IR, adjacent to the Ben Schoeman Highway on the east, Allandale Road to the northeast and Witkoppen road to the south (Figure 1). The Jukskei River runs through the site in a general north-western direction, with several tributaries flowing into it, especially from the north-eastern side and the main tributary, the Modderfonteinspruit, from the south-eastern side (see Fig. 1). Strategic Environmental Focus, as independent environmental consultants and impact assessors, have been appointed by Waterval Islamic Institute to undertake a wetland delineation and assessment for the proposed development of a public and private golf course on the remainder of Portion 1 of the farm Waterval 5 IR. The Waterval Islamic Institute is proposing to develop both a public and a private golf course, with the required ancillary features. The proposal is to develop the courses as single 18-hole courses with the private golf course consisting of residential erven, situated between the fairways.

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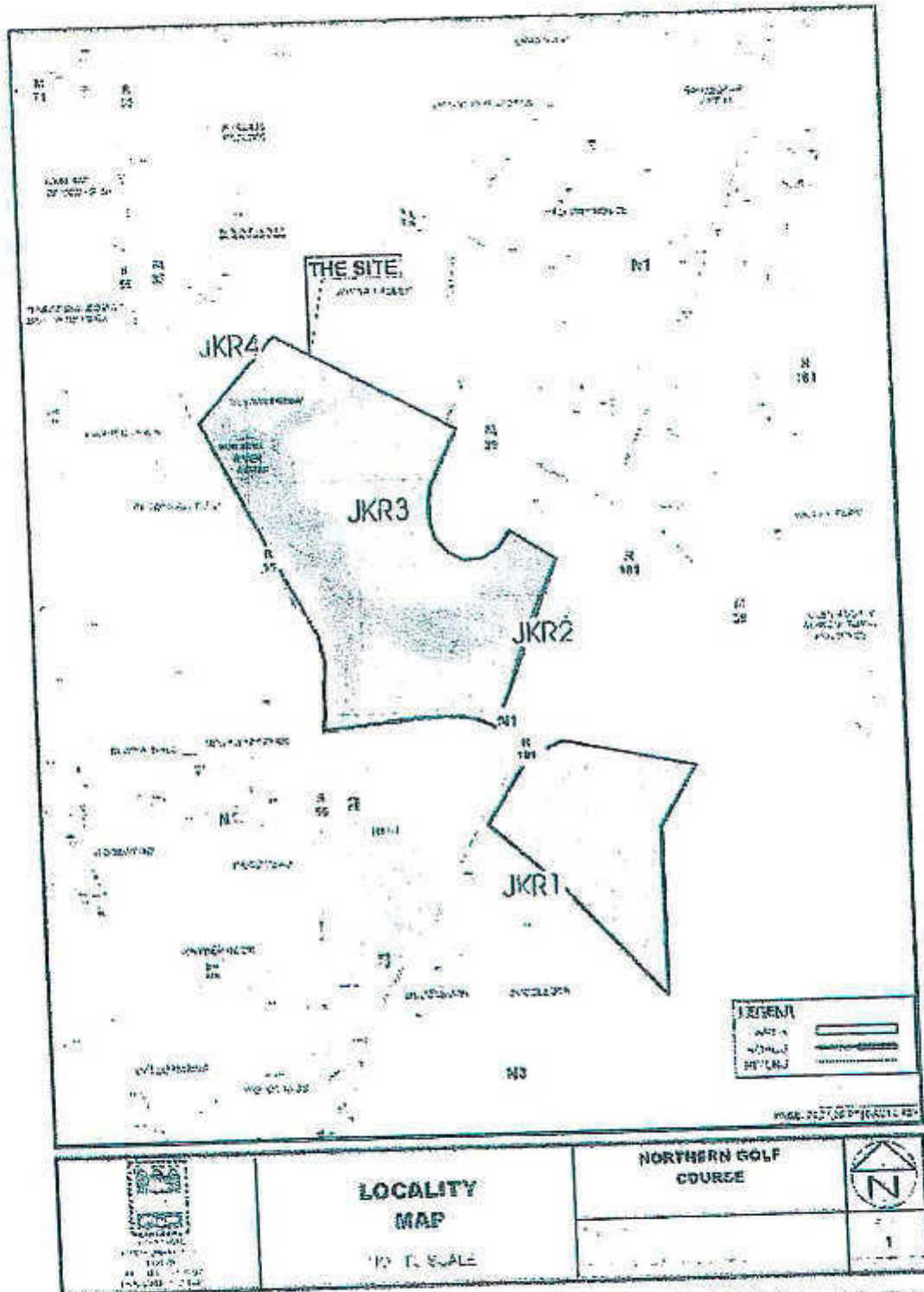


Figure 1. The locality map of the Northern Golf Course site (marked in red). The private golf estate is located on the north-western side of the N1 and the public golf course on the south-eastern side.

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1.2 Terms of reference

- To delineate the wetlands found within the Northern Golf Course study site.
- To indicate the relative functional importance of the wetlands.
- To make recommendations and an assessment of the proposed development's impacts on the site's wetlands.

1.3 Limitations of the study

The following assumptions were made:

- No plant studies and surveys are required.
- No animal studies and surveys are required.
- No archaeology studies and surveys are required.
- No geological and pedological studies and surveys are required.

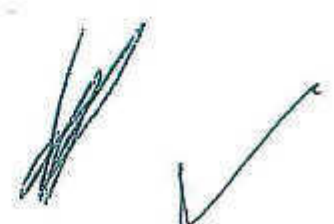
Due to significant time constraints with regards to the fieldwork (only a single field visit on the 2006-03-03) and report compilation, this study is only a preliminary one (an opinion). A more detailed study is required in future to present a more accurate and reliable source of information, with regards to wetland delineation, functional assessment, buffer zones, recommendations and mitigation measures. The results in this report should therefore not be viewed as final and changes should be anticipated. Care was taken to make the most of available means and time.

1.4 Definitions and terms

A glossary of terms is provided in Section 11 of this document.

1.5 Statutory Requirement related to wetlands

Prior to 1983 wetlands were poorly protected by law and regarded as "wastelands" that should be drained, filled in or destroyed as pest breeding habitat. From 1983 up to 1997 the Conservation of Agricultural Resources Act (CARA, Act no 43 of 1983) was the deciding statute on wetland utilisation and was only applicable to agricultural land outside official town planning schemes (Lizamore, 2005). Since 1997 onward additional legislation protecting wetlands has been drafted, but no single act exist solely dedicated to wetlands.

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The authoritative legislation, which list impacts and activities on wetlands that requires authorisation, are:

- Conservation of Agriculture Resources Act, Act 43 of 1983.
- Environment Conservation Act, Act 73 of 1989.
- National Water Act, Act 36 of 1998.
- National Environmental Management: Biodiversity Act, Act 10 of 2004.

1.6 Wetlands

According to the National Water Act (Act no 54 of 1956) a wetland is defined 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."

2 Methodology

The study was conducted as a desktop survey with one day of fieldwork to verify the accuracy of the desktop survey in certain sections of the site. With limited soil coring to be analysed for signs of wetness as wetland indicators, defined by the Department of Water affairs and Forestry in their document "A practical field procedure for identification and delineation of wetlands and riparian areas" (DWAF, 2005), other data sources had to be relied onto. These included:

- The Geotechnical site investigation report (Van Rooy, 2005).
- The Soil information report (Paterson, 2006)
- 1:50 000 cadastral maps
- 1:10 000 ortho rectified aerial photographs with 5 m contour lines

Aerial photographs, 1:50 000 cadastral maps and georeferenced 1:10 000 ortho rectified aerial photos were used as reference material for the mapping of the wetland boundaries. These were converted to digital image backdrops and delineation lines and boundaries were imposed accordingly after the field surveys. These maps are included as part of the project report (see Fig. 2 & 3).

A field survey was undertaken on the property on 3 March 2006. The delineation methodology used was the same as the one set out by the DWAF (2005) document "A Practical field procedure for the identification and delineation of wetlands and riparian areas", but only covered some wetland units located in the north-central section of the site. The "marshy areas prone to flooding" delineated in the geotechnical report (Van Rooy, 2005) correlated well with the soil coring results and a fair degree of accuracy is

therefore assumed. Soil profiles described in the geotechnical were also used to identify potential wetlands in combination with local topography, ortho rectified aerial photo interpretation and the soil information report.

The DWAF field guide makes use of indirect indicators of prolonged saturation by water, namely wetland plants (hydrophytes) and (hydromorphic) soils. The presence of these two indicators is indicative of an area that has sufficient saturation to classify the area as a wetland. Hydrophytes were recorded during the site visit and hydromorphic soils were identified by augering with a bucket soil auger. Wetland boundaries were mapped all throughout the site area.

The methodology "*Wet-EcoServices*" (Kotze *et al.*, 2005) was adapted and used to assess the different benefit values of the wetland units. A Level 1 desktop assessment was performed to determine the wetlands' functional benefits. Other documents and guidelines used are referenced accordingly. Where possible, cross sections were taken to determine the state and boundaries of the wetlands.

3 Wetland delineation

Wetland delineation was based on DWAF's (2005) wetland delineation document, described under the Methodology (see section 2), as well as on topography (5 m contour lines), aerial photo interpretation, and information from the geotechnical site report (Van Rooy, 2005). The result is a series of maps, which indicate the wetlands' boundaries on site, as well as their collective catchment (see Fig. 2 & 3); and a table with wetland specific statistics (Table 1).

3.1 Delineated wetlands on the site area

Total wetland area delineated: 229.13 hectares

Site area: 667.05 hectares

(Private golf estate area = 559.70 ha; Public golf course area = 107.35 ha)

Wetland statistics are listed in Table 1

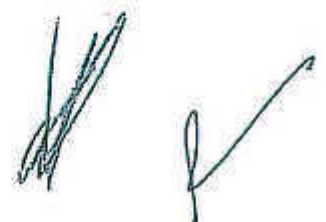


Table 1: Statistics of wetlands situated in the wetlands' direct catchment and quaternary catchment (see Fig. 2 & 3)

	Hectares	Percentage of catchment	Percentage of respective site areas (Private and Public; see Fig. 3)
Site wetlands' direct catchment	22 293.20	100	
Total site area	667.05	2.99	100
Wetlands within the total site boundary	229.13	1.03	34.35
Private golf estate wetland area	193.57	0.87	34.58
Public golf course wetland area	35.56	0.16	33.13
Quaternary	Hectares	Percentage	Not applicable
Other wetlands	Non mapped/ Not available	Non mapped/ Not available	Not applicable

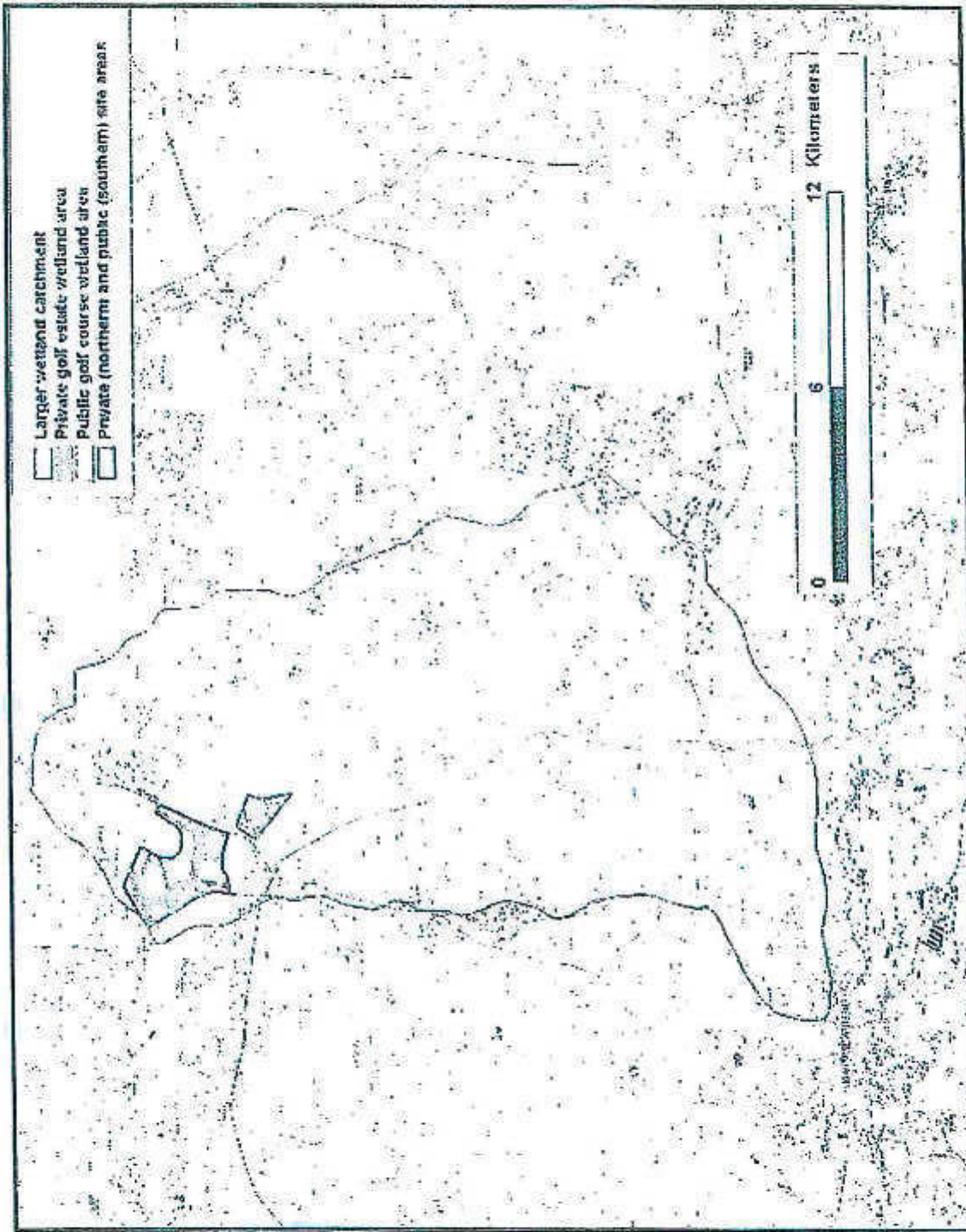


Figure 2. Delineated wetland areas within the site area, as well as their collective catchment.



Figure 3. Wetland area delineated on Private golf estate (northern site) and the Public golf course (southern site)

3.2 Wetland soils

According to the document "A practical field procedure for identification and delineation of wetlands and riparian areas", the permanent zone of the wetland will always have either Champagne, Katspruit, Willowbrook or Rensburg soil forms present, as defined by the Soil Classification Working Group (1991).

The seasonal and temporary zones of the wetlands will have one or more of the following soil forms present (signs of wetness incorporated at the form level): Kroonstad, Longlands, Wasbank, Lamotte, Estcourt, Klappmuts, Vilafontes, Kinkelbos, Cartref, Fernwood, Westleigh, Dresden, Avalon, Glencoe, Pinedene, Bainsvlei, Bloemdal, Witfontein, Sepane, Tukulu, Montagu. Alternatively, the seasonal and temporary zones will have one or more of the following soil forms present (signs of wetness incorporated at the family level): Inhoek, Tsitsikamma, Houwhoek, Molopo, Kimberley, Jonkersberg, Groenkop, Etosha, Addo, Brandvlei, Glenrosa, Dundee (DWAF, 2005).

Signs of wetness were abundant and distinct in several of the soil cores, including the sampled higher lying hillslope seepages, as well as at lower lying sections of valley bottoms (see Fig. 4 & 5). Perched aquifers (Parsons, 2004) and seepage zones are located throughout the site area, typically with hardpan formations (ferricrete) forming an underlying impermeable layer (Van Rooy, 2005). The high degree of seepage is also evident from wet contour drainage lines and furrows collecting seepage and run off water, with a discrete difference in vegetation colouration (see Fig. 6).

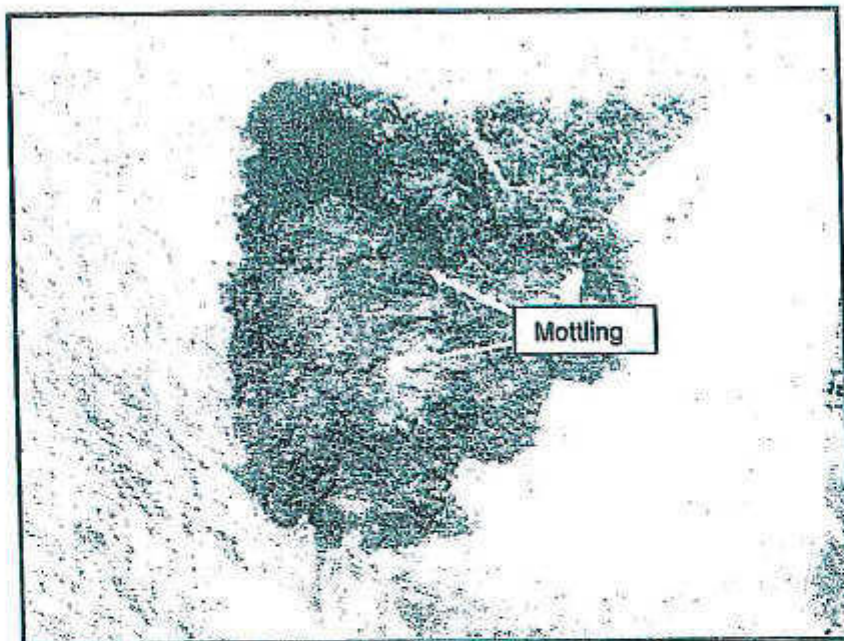


Figure 4. A seasonal wetland soil with distinct mottling.

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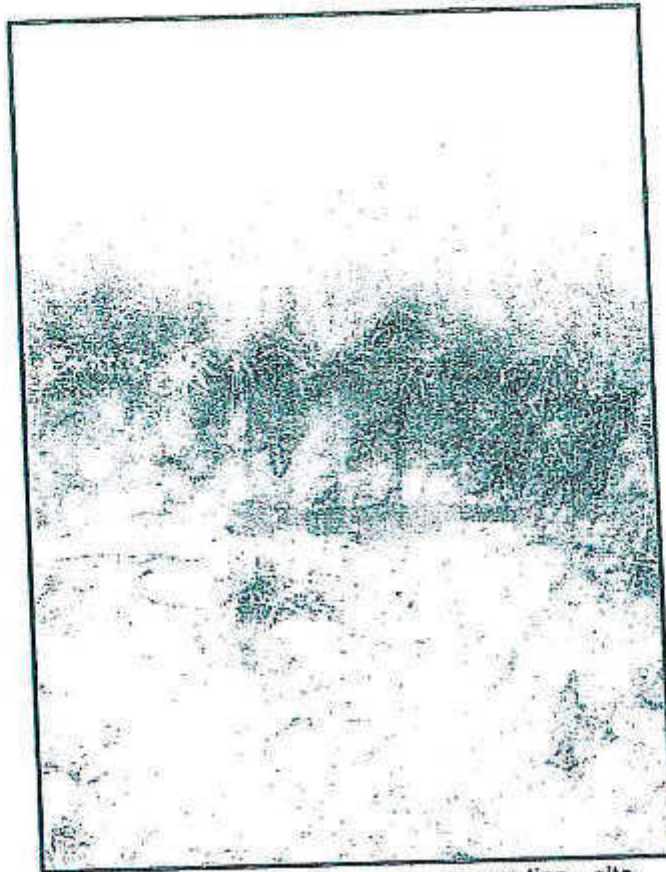


Figure 5. Seepage from an excavation site, exposing a wetland soil profile.

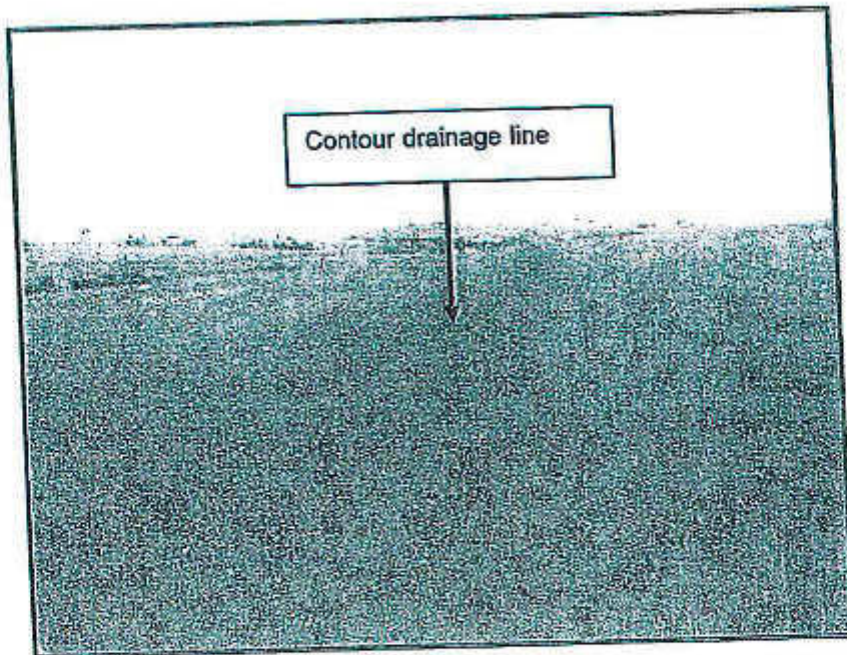


Figure 6. A wet contour drainage line with a different vegetation coloration.

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The soil information report (Paterson, 2006) classifies the predominate portion of the site's soils as shallow soils of the *Glenrosa* form (468.6ha), followed by plinthic soils of the *Avalon* and *Longlands* form (81.7 ha & 15.0 ha respectively), and red, structureless soils, mainly of the *Hutton* form, but also of *Avalon* and *Bainsvlei* forms (24 ha). The *Glenrosa*, *Avalon*, *Longlands*, and *Bainsvlei* soil forms are all soil forms described as potential seasonal to temporary wetland soils in the wetland delineation document (DWAF, 2005), which underlines the likelihood and widespread occurrence of wetlands on the site.

3.3 Wetland vegetation

The Department of Water Affairs and Forestry's (DWAF) identification and delineation of wetlands and riparian areas document (2005), highlights vegetation as a key component to be used in the delineation procedure. Vegetation also forms a central part of the wetland definition in the National Water Act. Using vegetation as a primary wetland indicator however, requires undisturbed conditions (DWAF, 2005). In general the site's vegetation is in a good condition, with the major disturbance being grazing. Grazing is pronounced especially in the lower lying areas with little sign of erosion or over grazing. Most of the wetland units are dominated by wet grasslands with few sedge species (see Fig. 7). The lack of sedges, especially in the higher lying seepages zones, may give the impression of non-wetland conditions, but signs of wetness from the soils confirm their status. Important wetland associated species include: *Imperata cylindrical*, *Cynodon dactylon*, *Typha capensis*, *Leersia hexandra*, *Phragmites australis*, and *Paspalum* spp.

The lower lying valley bottom wetland zones also contain a high grassland component, but some areas, especially along the Jukskei River, are characterised by riparian trees, such as *Rhus pyroides*, *Cellis Africana*, *Salix babylonica*, *Acacia karoo* and *Combretum erythrophyllum* (see Fig. 7 & 8)



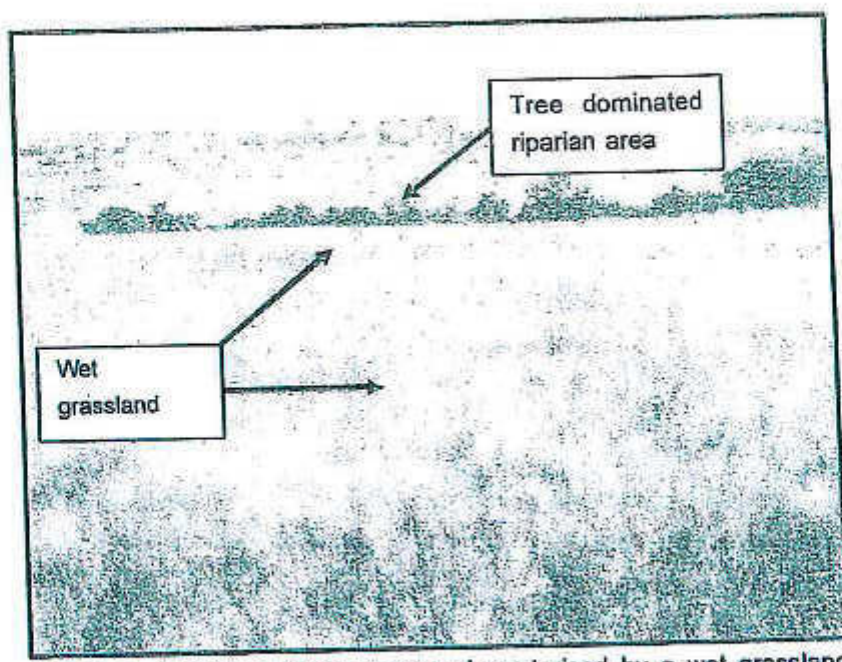


Figure 7. A wetland hillslope seep characterised by a wet grassland with the tree dominated riparian wetland below.

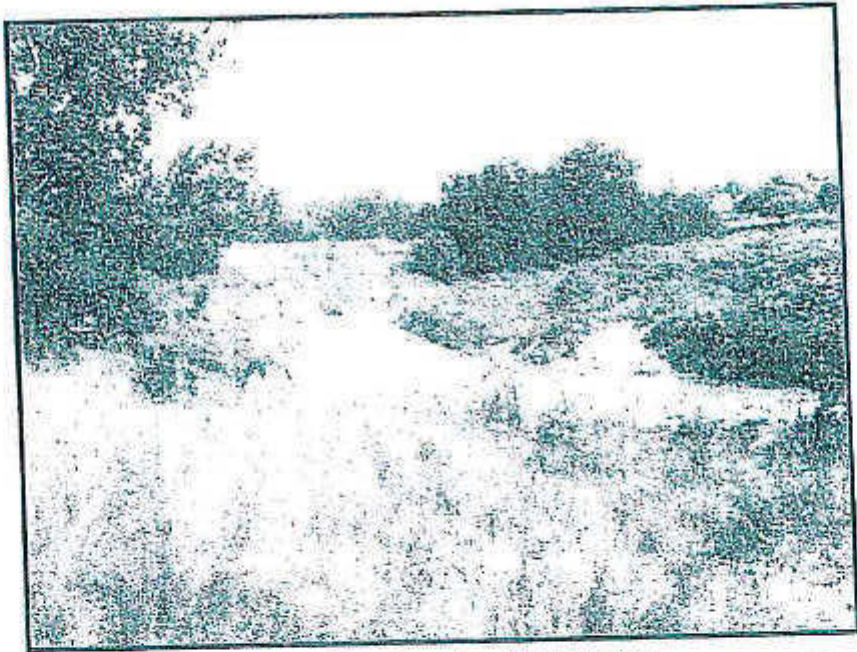


Figure 8. Riparian vegetation along the Jukskei River

The riparian area along the Jukskei River can be classified as a Category C to a Category B wetland from field observations and the geotechnical report (Van Rooy, 2005). This means that it is in almost permanent contact with the zone of saturation and seepage into the system will only cease during periods of drought.

~~_____~~ ✓

4 Wetland assessment

The "Wet-EcoServices" (Kotze *et al.*, 2005) methodology was adapted and used to assess the benefit values of the site's wetland units. A level 1 desktop assessment was combined with field observations during the site visit. The technique is however not ideally suited to determine "the specific level of impact of a current or proposed development" and is based more on qualitative data as opposed to quantitative data, which opens it up to subjective misuse (Kotze *et al.*, 2005). The authors do however highlight the system's value to assist in identifying key wetland issues. The technique is used increasingly, due to a lack of existing official wetland assessment techniques in South Africa. It therefore fulfils an important role in assessing wetland functions and value, provided that its limitations are thoroughly taken note of throughout the process.







The site's wetlands have been categorised according to different hydro-geomorphic units (HGM units), they are also referred to as wetland units in this report. Hydro-geomorphic units describe how water moves through the landscape. Each time the flow pattern of water changes through the landscape, one HGM unit changes to another type. To keep matters simplified and avoid repetition that might deter comparison, the Valley bottom with a channel HGM units are kept as single HGM entities in spite of the presence of several dams along their length. Each HGM unit on the site area has been mapped as intact systems, even outside the site area's boundaries (see Fig. 9). The only exception are the Modderfonteinspruit Jukskei River Riparian Wetlands (Valley bottom with a channel 5 & 6 HGM units), which stretch beyond the site's boundaries (see Fig. 9).

All the wetland units appear to be in a good functional condition with an intact hydrology. The largest current impacts are overgrazing by livestock and dams within Valley bottom with a channel 6 and Valley bottoms without a channel 3 & 4 HGM units (see Fig. 9). A broad summary of each group of hydro-geomorphic units' hydrological functions and benefits follow below, accompanied by a table illustrating the different types of hydro-geomorphic units (see Table 2 & 3).

4.1 Description and results from the hydrological services provided by the different wetland units

Three different types of HGM units are described in the study site (see Fig 9 & Table 2). The majority of the wetlands were classified as Valley bottoms with a channel (40 % of all HGM units), followed by Valley bottoms without a channel (33.33 % of all HGM units), and Hillslope seepages feeding a watercourse (26.67 % of all HGM units).

Table 2. Different hydro-geomorphic units typically supporting inland wetlands in South Africa (modified from Brinson, 1993; Kotze, 1999; and Marneweck and Batchelor, 2002).

Hydro-geomorphic types	Description	Source of water maintaining the wetland	
		Surface	Sub-surface
 <p><i>Floodplain</i></p>	Valley bottom areas with a well-defined stream channel, gently sloped and characterized by floodplain features such as oxbow depressions and natural levees and the storage of water; transport and deposition of sediment, usually leading to a net accumulation of sediment. Water inputs from main channel (when channel banks overtop) and from adjacent slopes.	***	*
 <p><i>Valley bottom with a channel</i></p>	Valley bottom areas with a well-defined stream channel, but lacking characteristic floodplain features. May be gently sloped and characterized by the net accumulation of silt. Deposits may have steep slopes and be characterized by the net loss of sediment. Water inputs from main channel (when channel banks overtop) and from adjacent slopes.	***	*/***
 <p><i>Valley bottom without a channel</i></p>	Valley bottom areas with a poorly defined stream channel, usually gently sloped and characterized by a local sediment deposition, generally leading to a net accumulation of sediment. Water inputs mainly from channel entering the wetland and also from adjacent slopes.	***	*/***
 <p><i>Hill slope seepage feeding a watercourse</i></p>	Slopes on hillsides, which are characterized by the downslope (usually by gravity) movement of materials. Water inputs are mainly from sub-surface flow and outflow usually via a well-defined stream channel connecting the area directly to a watercourse.	*	***
 <p><i>Hill slope seepage not feeding a watercourse</i></p>	Slopes on hillsides, which are characterized by the downslope (usually by gravity) movement of materials. Water inputs mainly from sub-surface flow and outflow either directly or indirectly through surface-sub-surface and/or surface flow, but with no direct surface water connection to a watercourse.	*	***
 <p><i>Depression (includes Pans)</i></p>	A basin shape area with a closed elevation contour that allows for the accumulation of surface water, i.e. it is a dead standing. It may store both surface water. An outlet is usually absent.	*/***	*/***

Free water is an important water source and evapotranspiration an important output in all of the above settings

Water source: * Contribution usually small
 *** Contribution usually large
 */*** Contribution may be small or important depending on the local circumstances

Wetland:



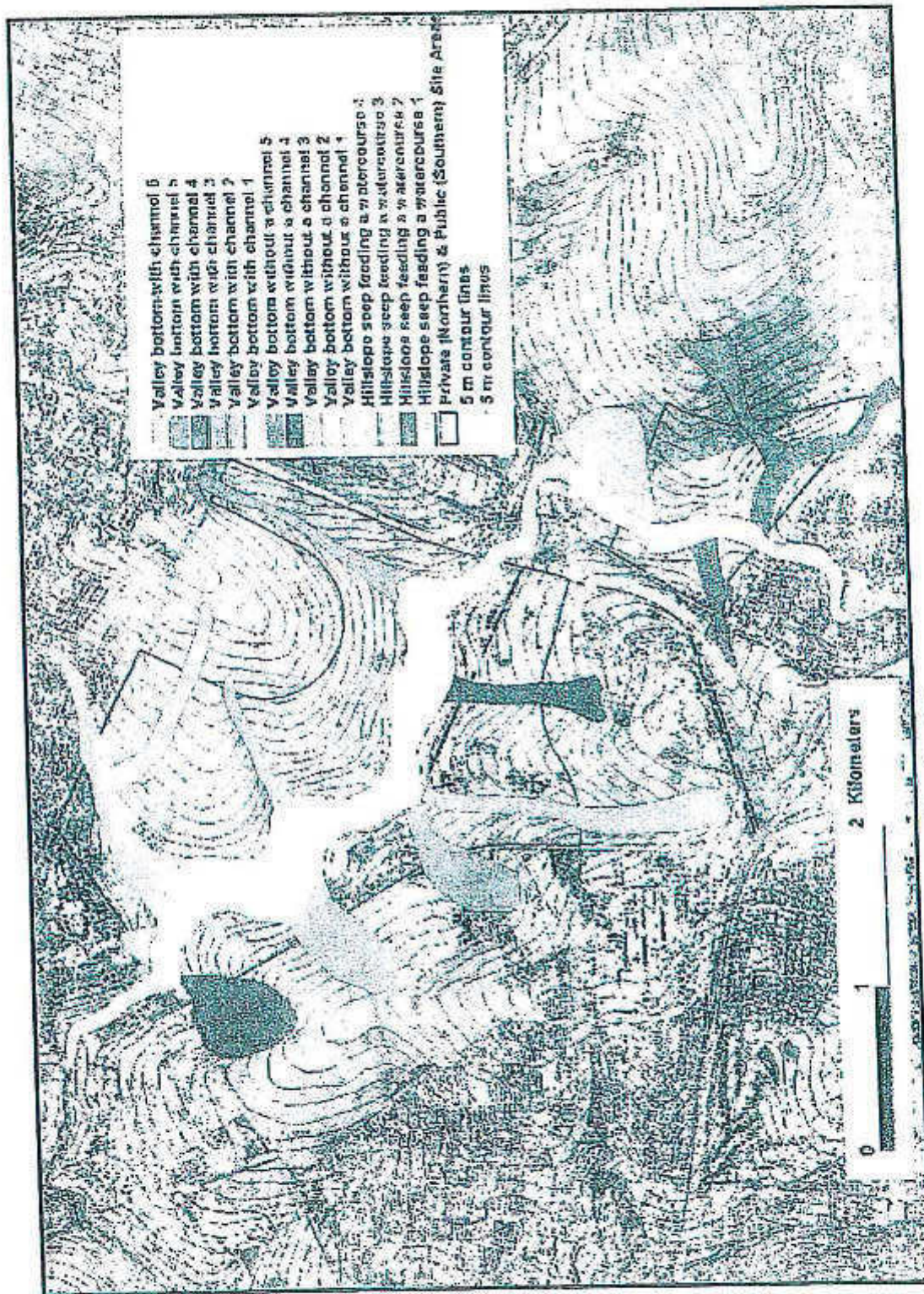


Figure 9. Hydro-geomorphic units in and around the site area.






Table 3. Preliminary rating of the hydrological functions likely to be performed by a wetland given its particular hydro-geomorphic type (Kotze *et al.*, 2005).

WETLAND HYDRO- GEOMORPHIC TYPE	HYDROLOGICAL FUNCTIONS POTENTIALLY PERFORMED BY THE WETLAND									
	Flood attenuation			Stream flow augmentation		Erosion control	Enhancement of water quality			
	Early wet season	Late wet season	Early wet season	Late wet season	Sediment trapping		Phosphates	Nitrates	Toxicants ¹	
1. Floodplain	++	+	0	0	++	++	++	+	+	
2. Valley bottom - channeled	+	0	0	0	++	+	+	+	+	
3. Valley bottom - unchanneled	+	+	+	+?	++	++	+	+	++	
4. Hillslope seepage feeding a stream channel	+	0	+	+	++	0	0	++	++	
5. Hillslope seepage not feeding a stream	+	0	0	0	++	0	0	++	+	
7. Pan/ Depression	+	+	0	0	0	0	0	+	+	

Note: ¹Toxicants are taken to include heavy metals and biocides

Rating: 0 Function unlikely to be performed to any significant extent
 + Function likely to be present at least to some degree
 ++ Function very likely to be present (and often performed to a high level)



4.1.1 Valley bottom channelled HGM units

There are a total of 6 of these HGM units draining from various directions into the system (see Fig. 9). The source of water is in the form of surface input and a higher than normal subsurface contribution. The main hydrological benefit is erosion control, but additional important benefits are also provided in the form of water supply, early season flood attenuation, sediment trapping, and water quality improvement (see Table 3).

4.1.2 Valley bottom unchannelled HGM units

There are a total of 5 of these HGM units draining predominately from a north-eastern to eastern direction into the Jukskei River. Their source of water is in the form of surface input and a high contribution of subsurface flow. The main hydrological benefits are erosion control, sediment trapping, and water quality improvement. Additional important benefits are also provided in the form of water supply, and early and late season flood attenuation (see Table 3).

4.1.3 Hillslope seepages feeding a watercourse HGM units

There are a total of 4 of these HGM units draining from a north-eastern and south-western direction into the Jukskei River. Their source of water is mainly in the form of subsurface input, with some contribution of surface runoff during the wet season. The main hydrological benefits are erosion control and water quality improvement. Additional important benefits are provided in the form of water supply, early and late season flood attenuation and sediment trapping (see Table 3).

4.2 Discussion on the importance of the wetland units and the implications for development

The wetlands are in excellent conditions, with the exception of the Modderfonteinspruit and the Jukskei River (Valley bottom with a channel 5 & 6 respectively), which are highly polluted as a result of various urban related impacts along its length. The site possesses some of the best examples of remaining "near-pristine" wetlands in Midrand, as an ever increasing development pressure has already resulted in a high percentage of wetland loss.

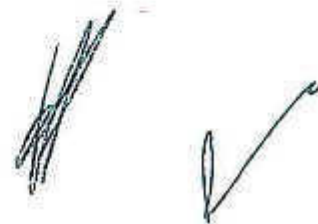
The intact wetland units provide important water quality and quantity benefits to the degraded Jukskei System, which help alleviate negative impacts that have occurred further upstream. The wetlands also help maintain a threatened biodiversity, in the form of confirmed populations of Marsh sylph (*Metisella meninx*) present in Valley bottom with a channel 1 HGM unit and provide a high degree of connectivity for species, by linking important habitats with one another (see Fig. 9).

The perched aquifers and groundwater seepage in the Valley bottom and Hillslope HGM units are the vital hydrological factors determining the wetlands' functioning. For these subsurface hydrological processes to take place, open areas upslope of the wetland units need to remain free of hardened surfaces in order to facilitate water infiltration, the source of all subsurface flow. Buffering around each wetland unit must therefore not only focus at protecting sensitive habitat for biodiversity, but also take the hydrological processes into consideration (see Section 5). The potential for groundwater pollution and pollution into the Jukskei River is very high, due to shallow perched aquifers and groundwater seepage in the wetland units and the site gradient toward the Jukskei River (Van Rooy, 2005). Accordingly golf course development must be excluded from all buffered wetland area, as fertilisation is likely to lead to groundwater pollution. Draining wetlands in an attempt to prevent or reduce the risk of groundwater contamination and to create conditions conducive for year round golfing is strongly not advised. Wetland draining will undermine their hydrological integrity and result in degraded wetlands with little to no remaining functionality. In conclusion, all wetland areas on the site should be excluded from development and preserved, although delineated wetland boundaries and functions should be redefined with further fieldwork and analysis.

6 Buffer zones

A wetland buffer zone is area of vegetation which usually begins from the boundary of a wetland's temporary zone (wetland edge) and extends outward (Water Notes 4 (WNA4), 2000). The buffer width recommended for a particular wetland depends upon the conservation significance of the wetland and the purpose/function of the buffer (Water Notes 4 (WNA4), 2000). Each wetland should therefore be assessed on its own criteria in order to determine a sufficient buffer zone. A recent literature search indicated that there is no worldwide standard buffer zone width to rely on and that the most common ranges fall between 20 -60 m with some reports indicating even less (Dlamini, 2005).

Defining an adequate buffer zone without a thorough wetland assessment is consequently unreliable and open to significant future change. A preliminary minimum buffer zone of 35 m is however recommended around each wetland unit, in order to ensure continued hydrological functioning (see Fig. 10 & Section 4.2). A 200 m buffer zone has been suggested around Valley bottom with a channel 1 HGM unit, proposed as a guideline by the Gauteng Department of Agriculture, Conservation and Environment (Dlamini, 2005). A 200 m buffer zone around suitable habitat of rice grass (*Leersia hexandra*) at confirmed sightings of the red data Marsh Sylph (*Melisella meninx*), would help conserve viable populations (see Preliminary Avifaunal and Invertebrate Study, 2006).



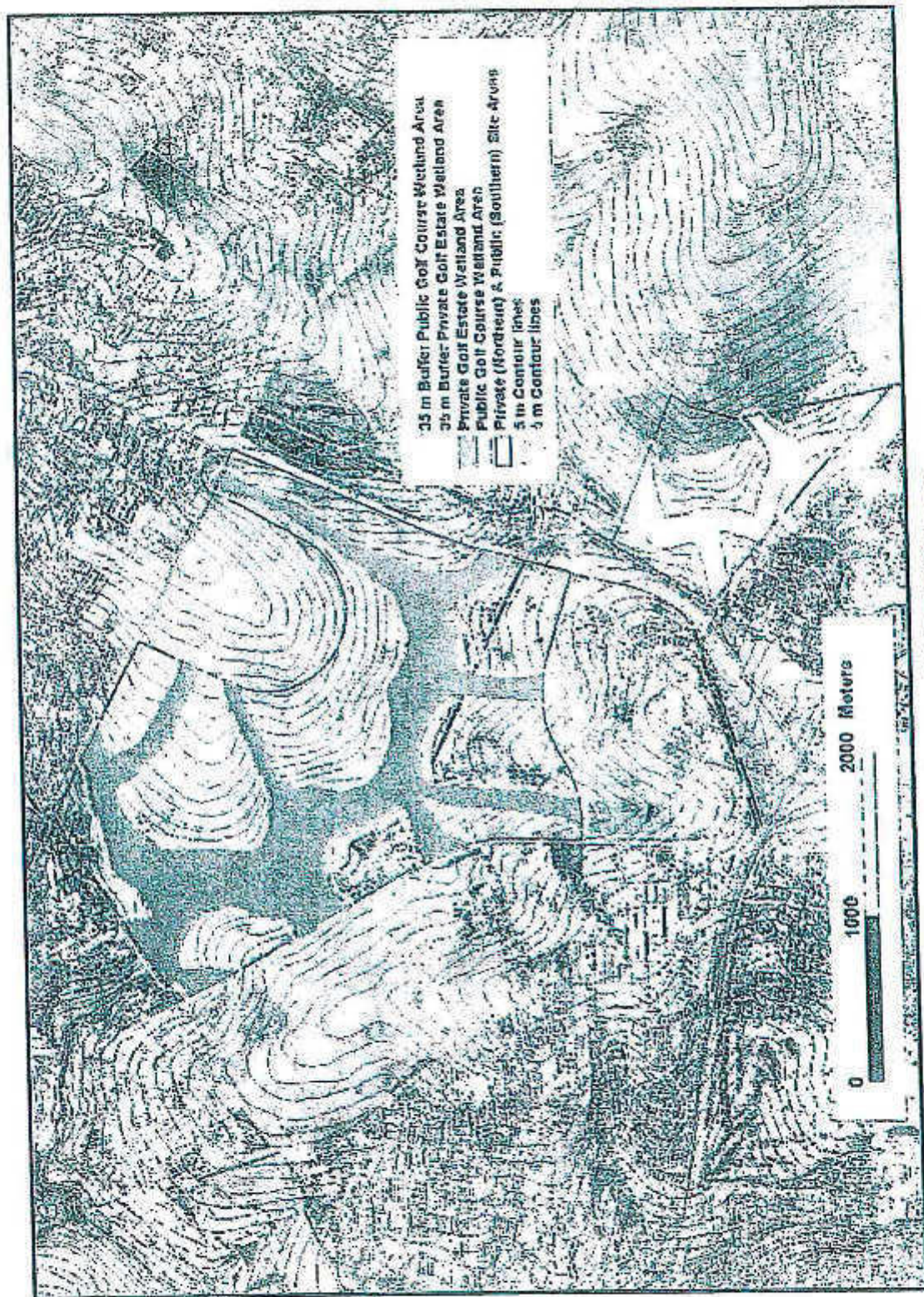


Figure 10. Delineated wetland areas located on the site area with 35 m buffer zones.

7 Recommendations and mitigation

Meaningful mitigation and appropriate recommendations are dependent on well informed decision making. A preliminary wetland study of this nature has limited scope to successfully attain these ends. Established guidelines and principals can however still be applied to help steer proposed development plans as to help ensure minimal wetland disturbance. It is suggested that the document "*Interim guidelines for development activities that may affect wetlands*" by Kotze *et al* (2002) be utilised in the design, planning and implementation phases to eliminate negative wetland impacts. Section 4.2 also pertains to several of the recommendations and should be incorporated in concordance.

Most of the current impacts on the wetlands, such as contour furrows and dams, are historic and legislation would in all likelihood regard it as such. The planned development does involved hardened surfaces in some of the wetland areas, as well as significant sections of golf course. Hardened surfaces are likely to impact negatively on the wetlands, as most of the wetlands are fed, at least to some extend, by seepage. Constructing impermeable layers on the surface will prevent infiltration and ultimately result in reduced seepage yield. Hardening of surface area will also result in increased run off with an increased erosion potential. The narrow nature of many of the drainage lines/valley bottoms and the steepness of the slopes will further increase run off velocity. An appropriate buffer zone comprised of dense stands of natural vegetation will help slow run off water down and simultaneously filtrate and facilitate pollutant removal.

In addition a well designed storm water management plan will be required to attenuate flood peak events and prevent excessive erosion. It is recommended that the storm-water management systems be designed in such a way that the natural flow regime (velocity of the water) of the wetlands are not exceeded by 50% in the event of 1:10 year flood to prevent the possibility of erosion in the wetland (pers. comm. M Lizamore).

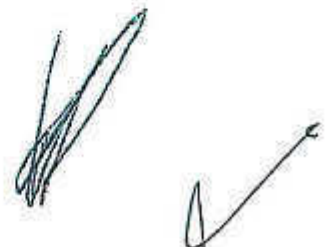
Construction of storm water engineering structures in wetland units will require a Water Use Licence and is only recommended in wetland units that already contain water retention structures, such as existing dams. Ideally these existing structures should be converted into the desired storm water system, which will prevent other wetland areas from being disturbed. In other wetland units, free of hydrological modifications, storm water mitigation measures, such as storm water retention dams, need to be constructed outside of wetland areas. Storm water retention dams adjacent to wetlands can intercept storm flows, store the water for at least 48 hours and release it slowly into the wetland. Storm water outflows should not be allowed to enter into a wetland directly, but must be well buffered by vegetation and accompanied by energy dissipating interventions (Kotze *et al.*, 2002).

Draining wetlands on site to create habitat favourable for year round golfing could only be done on authorisation of NWA, CARA, and ECA. Wetland draining would destroy the wetlands' integrity and result in exacerbating functional loss, wetland functioning may even cease completely.

No roads should be constructed through wetlands, but in areas where this is unavoidable planning should be done to ensure minimum impact. This include among others (Kotze *et al.*, 2002):

- Impacts should as far as possible be focussed on more degraded wetlands as opposed to more intact systems. (The intactness or integrity of each individual wetland unit i.e. its remaining ecological functioning, would be more accurately assessed with more extensive fieldwork.).
- Roads must be constructed in such a way as to have a minimal impact on the flow of water through the wetland (e.g. by using a bridge or box culverts in preference to pipes).
- Where a road runs adjacent to a wetland and impede natural runoff from a hill slope, the road should be separated by an appropriate buffer from the wetland boundary. Feed-off points should be incorporated into the road at regular intervals (at least every 100 m).
- Stormwater originating from the roads should also not be allowed to enter directly into the wetland areas.
- Compaction of soils should be limited as far as possible as it would reduce infiltration and result in increased runoff and erosion.

In wetland systems of this nature, where infiltration rates are high and groundwater inputs are very important, portions of higher lying non-wetland surface areas need to be kept as open areas to allow adequate infiltration. Interventions and mechanisms can also be included into the development to facilitate a higher percentage of infiltration (e.g. porous pavements). The importance of buffer zones cannot be emphasised enough, firstly in order to help maintain hydrological functioning, but also to ensure a high level of connectivity and biological integrity. A minimum buffer zone of 35 m is therefore recommended to be incorporated as natural features into the development around each wetland unit, with an additional 200 m buffer zone around Valley bottom with a channel 1 HGM unit to protect confirmed populations of the Marsh Sylph (*Metisella meninx*).

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8 Conclusion

A cautionary approach, dictated by a wide array of available information, has been taken as the best course of action throughout the wetland delineation and assessment process. The study site contains wetland units of an exceptional quality, which display a well functioning hydrology and maintain an intact biodiversity, including endangered Egoli Granite Grassland habitat. The Jukskei River and Modderfonteinspruit Riparian Wetlands are the main exceptions, with degraded water quality and a consequently low aquatic biodiversity. The wetland units feed water of a significantly higher quality into the river system, and thereby fulfil a crucial role in alleviating and mitigating some of the water quality impacts. If these wetland units were to become degrade and yield low quality water with a high sediment load and several golf course and storm water derived pollutants, the negative impact on the Jukskei River would escalate and have a detrimental effect on down stream users.


The presence of some of the last remaining "near-pristine" wetlands left in Midrand, which apart from their rarity also perform vital ecological and hydrological functions, stresses the need to prevent any further net loss to development in an environment where water quality and quantity continues to grow of concern.

This report is not the final assessment or conclusion to indicate the viability of establishing a golf course and golf estate on the property. Such a conclusion can only be done in accordance with various other reports, which did not form part of this investigation. The need, however to protect the site's existing wetlands are of imperative importance. It is believed that sufficient space will remain for development on this large property without further impacting on the wetland, if the development is redesigned to include appropriate layouts around buffered wetland areas and open space, include wetland compatible engineering designs, as well as taking wetlands into consideration throughout further planning, implementation and monitoring phases.



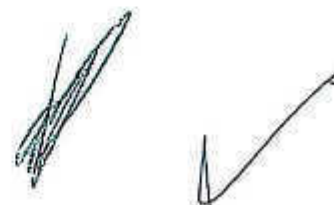
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10 Glossary of terms

- Aquatic macrophytes:** Obligated wetland plants that have morphological features visible with the naked eye, including emergent aquatic macrophytes (eg. bulrush and reeds), submerged aquatic macrophytes (eg. saw weed and bladderwort), free floating aquatic macrophytes (eg. water hyacinth and duckweed), and attached floating aquatic macrophytes (eg. water lilies and water chestnut).
- Alluvial soil:** can be defined as a deposit of sand, mud, etc. formed by flowing water or the sedimentary matter deposited thus within recent times, especially in the valleys of large rivers.
- Base Flow:** long-term flow in a river that continues after storm flow has passed.
- Biodiversity:** is the number and variety of living organisms on earth, the millions of plants, animals, and micro-organisms, the genes they contain, the evolutionary history and potential they encompass, and the ecosystems, ecological processes, and landscapes of which they are integral parts.
- Buffer:** A strip of land surrounding a wetland or riparian area in which activities are controlled or restricted, in order to reduce the impact of adjacent land uses on the wetland or riparian area.
- CARA:** Conservation of Agricultural Resources Act, Act 43 of 1983.
- Catchment:** the area contributing to runoff at a particular point in a river system.
- Channel Section:** a length of river bounded by the banks and the bed
- DALA:** Mpumalanga Provincial Department of Agriculture and Land Affairs.
- Delineation (of a wetland):** to determine the boundary of a wetland based on soil, vegetation, and/or hydrological indicators (see definition of a wetland)
- DWAF:** Department of Water Affairs and Forestry.
- ECA:** Environment Conservation Act, Act 73 of 1989.
- Emergent aquatic macrophyte:** – A water living plant, easily visible with the eye, which grows in the permanent wetland zone with its roots attached to the substrate and a large part of its vegetative parts are emerged above the water surface.
- Flood Plain:** a relatively level alluvial (sand or gravel) area lying adjacent to the river channel, which has been constructed by the present river in its existing regime.
- Gleying:** a soil process resulting from prolonged soil saturation, which is manifested by the presence of neutral grey, bluish or greenish colours in the soil matrix
- Groundwater:** subsurface water in the saturated zone below the water table
- Habitat:** the natural home of species of plants or animals
- Hydro-geomorphic (HGM) unit :** - encompasses three key elements: (1) geomorphic setting (i.e. the landform, its position in the landscape and how it evolved (e.g. through the deposition of riverborne sediment); (2) water source (i.e. where does the water come from that is maintaining the wetland?) of which there are usually several sources including precipitation groundwater flow, streamflow, etc. but



their relative contributions will vary amongst wetlands; and (3) hydrodynamics, which refers to how water moves through the wetland.

Hydromorphic soil: a soil that, in its undrained condition, is saturated or flooded long enough to develop anaerobic conditions favouring the growth and regeneration of hydrophytic vegetation (vegetation adapted to living in anaerobic soils).

Hydrology: the study of the occurrence, distribution and movement of water over, on and under the land surface.

Hydromorphy: a process of gleying and mottling resulting from the intermittent or permanent presence of excess water in the soil profile.

Intermittent Flow: flows only for short periods.

National Water Act: National Water Act, Act 36 of 1998.

NBA: National Biodiversity Act

NDA: National Department of Agriculture.

NEMA: National Environmental Management Act, Act 107 of 1998.

NWA: National Water Act, Act 36 of 1998.

Peat: a dark brown or black organic soil layer, composed of partly decomposed plant matter, and formed under permanently saturated conditions.

Perennial: flows all year round.

Permanent Zone of Wetness: the inner zone of a wetland that is permanently saturated.

Ramsar convention on wetlands: South Africa acceded to the International Ramsar Convention on 12 March 1975 as one of the founding members of the wetland conservation movement and currently has 12 designated wetlands on the "Wetlands of International Importance List"

Riparian area delineation: the determination and marking of the boundary of a riparian area. In terms of the delineation procedure described in this document, delineation means marking the outer edge of the macro channel bank and associated vegetation.

Riparian Habitat (as defined by the National Water Act): includes the physical structure and associated vegetation of the areas associated with a watercourse which are commonly characterised by alluvial soils (deposited by the current river system), and which are inundated or flooded to an extent and with a frequency sufficient to support vegetation of species with a composition and physical structure distinct from those of adjacent land areas

Runoff: stream channel flow.

Seasonal Zone of Wetness: the zone of a wetland that lies between the Temporary and Permanent zones and is characterized by saturation for 3 - 10 months of the year within 50cm of the surface.

Soil Family: A hierarchical level within the S.A. Soil Classification System, below soil form.

Soil Form: a hierarchical level within the S.A. Soil Classification System, above soil family.

Soil horizons: layers of soil that have fairly uniform characteristics and have developed through pedogenic processes; they are bounded by air, hard rock or other horizons (i.e. soil material that has different characteristics).

Soil profile: the vertically sectioned sample through the soil mantle, usually consisting of two or three horizons.

Soil survey: the systematic examination, description, clarification and mapping of soils in an area for a specific purpose.

Soil wetness factor: an index indicating the period of wetness of a soil horizon; W1, W2 and W3 being short, long and all year round wetness respectively (correlated to the Forestry Soils Database).

Temporary zone of wetness: the outer zone of a wetland characterized by saturation within 50cm of the soil surface for less than 3 months of the year.

Watercourse (as defined by the National Water Act):


- A river or spring;
- Natural channel in which water flows regularly or intermittently;
- A wetland, lake or dam into which, or from which, water flows; and
- Any collection of water which the Minister may, by notice in the Gazette, declared to be a watercourse, and a reference to a watercourse includes where relevant, its bed and banks.

Water table: The upper surface of groundwater or that level below which the soil is saturated with water. The water table feeds base flow to the river channel network when the channel bed is in contact with the water table.

Wetland (as defined by the National Water Act): 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 under normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

Wetland delineation: the determination and marking of the boundary of a wetland. In terms of the delineation procedure described in this document, delineation means marking the outer edge of the temporary zone of wetness.

Wetland unit: - See Hydro-geomorphic unit



Antoinette HOB 337

Limosella

The Proposed Phasing of a Township known as Jukskei View Extention 19 Situated on a part of the Remainder of the Farm Waterval 5-IR

Wetland Buffer Zone Reduction Report September 2010

Drafted by Antoinette Bootsma
(Pr Sci Nat Hons Botany/Ecology)
Limosella Consulting
P.O. Box 32733, Waverley
Pretoria, 0135
Email: antoinette@limosella.co.za
Cell: +27 83 4545 454

Drafted for: Century Property Developments
P.O. Box 70406
Bryanston, 2021
Email: ms@century.co.za

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Declaration of Independence

I, **Antoinette Bootsma**, in my capacity as a specialist consultant, hereby declare that I -

- o Act as an independent consultant;
- o Do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act, 1998 (Act 107 of 1998);
- o Undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the National Environmental Management Act, 1998 (Act.107 of 1998);
- o As a registered member of the South African Council for Natural Scientific Professions, will undertake my profession in accordance with the Code of Conduct of the Council, as well as any other societies to which I am a member; and
- o Based on information provided to me by the project proponent, and in addition to information obtained during the course of this study, have presented the results and conclusion within the associated document to the best of my professional judgement.



2010.09.20

Antoinette Bootsma (PrSciNat)

Date

Ecologist/Botanist

SACNASP Reg. No. 400222-09



EXECUTIVE SUMMARY

Limosella Consulting was appointed by Century Property Developments to provide a report on the proposed buffer zone reduction for three wetland areas situated within the boundaries of the approved township known as Jukskei View Ext 19, on a part of the remainder of the Farm Waterval 5 – IR.

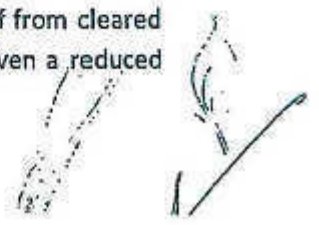
Wetland unit one is currently impacted by drains in the vicinity of the new Netcare Hospital and several path and road crossings. A reduced buffer zone for this wetland should be accompanied by the following mitigation measures can be supported given that the following mitigation measures are effectively implemented:

- o A conveyance system that intercepts water from rooftops, roads, parking lots, sidewalks, compacted sports fields and driveways to prevent the input of high energy stormwater into the wetland area. Stormwater intensity should be dissipated by including vegetated swales, permeable paving and attenuation structures shown to be designed based on the calculations of post-development stormwater volumes and velocities as well as slopes and soil permeability and erodibility properties;
- o Rigorous erosion control implemented throughout each phase of the development, including the post-development phase;
- o Strict landscaping policies regarding the use of indigenous vegetation species;
- o Wetland and buffer zone areas should be fenced as a matter of priority to prevent access to construction crews and vehicles; and
- o Strictly revegetate cleared areas as soon as possible to prevent sediment input into the downstream watercourses. It is evident that this policy is not currently being applied and is therefore considered as a risk to the success for protecting wetland and riparian areas should buffer zones be decreased.

Wetland unit two is currently impacted by invasion of *Pennisetum clandestinum* (Kikuyu Grass), trampling and grazing by cattle. A reduced buffer zone for this wetland should be accompanied by the following mitigation measures can be supported given that the following mitigation measures are effectively implemented:

- o Enhance indigenous biodiversity by implementing a landscape policy that supports the use of indigenous plant species;
- o Place proposed sports fields in areas that are more disturbed than surrounding areas;
- o Ensure that fertilisers not be washed into the wetland or downstream waterbodies; and
- o Monitor potential erosion.

Wetland unit three is in a highly impacted state. Canalisation has resulted from high energy water input from a culvert from Allandale Road, and recently infilling and dumping from the recent upgrade of the Allandale intersection has resulted in loss of wetland area and sedimentation. Further erosion and sedimentation were recorded in the southernmost section of the wetland and appear to be associated with runoff from cleared areas in preparation for construction. The effect of the development on the watercourse given a reduced



buffer zone should be addressed in a detailed rehabilitation and stormwater management report which demonstrate how impacts to the wetland will be contained within the reduced buffer area. The following principles apply in this regard:

- o It should not be the aim to return the wetland to its hypothetical original state. Rather interventions and management should aim to maintain the wetland in the best functional condition that is currently feasible;
- o Ecological principles must hold sway in determining how best to manage the wetland's different zones – including the buffer. Ecological principles include:
 - o Utilising opportunities to enhance current ecological functions of the wetland (described in SEF, 2006);
 - o Maintaining the zonation of wetland areas by avoiding canalization and increased water velocity; and
 - o Making use of soft engineering rather than hard engineering by using natural landscape features and vegetation to direct water flow rather than concrete canals;
- o Engineering interventions must enhance rather than further deteriorate the ecological functions of the wetland and must:
 - o Promote groundwater recharge by avoiding impermeable structures;
 - o Allow for lateral movement of water in the buffer zone;
 - o Focus on storm water management in terms of flow attenuation and reduced velocity;
 - o Avoid stagnant water pools; and
 - o Must be based on calculated volumes from the before and after development scenario, taking cognizance of the area of land required to maintain seasonal wetland conditions, while managing storm water impacts.

Given that the mitigation measures discussed above are stringently implemented and monitored, a reduced buffer zone can be supported. It is important that any mitigation be implemented in the context of an Environmental Management Plan in order to ensure accountability and ultimately the success of the mitigation.

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1 INTRODUCTION

Limosella Consulting was appointed by Century Property Developments to provide a report on the proposed buffer zone reduction for three wetland areas situated within the boundaries of the approved township known as Jukskei View Ext 19, on a part of the remainder of the Farm Waterval 5 – IR (Figure 1). A site visit was undertaken on the 15th of September 2010.

1.1 Terms of Reference

The terms of reference for the current study were as follows:

- o Discuss potential reduction in the generic required wetland buffer zones given site conditions;
- o Discuss detailed mitigation measures relevant to the reduction of buffer zones and the potential impact of the proposed development.

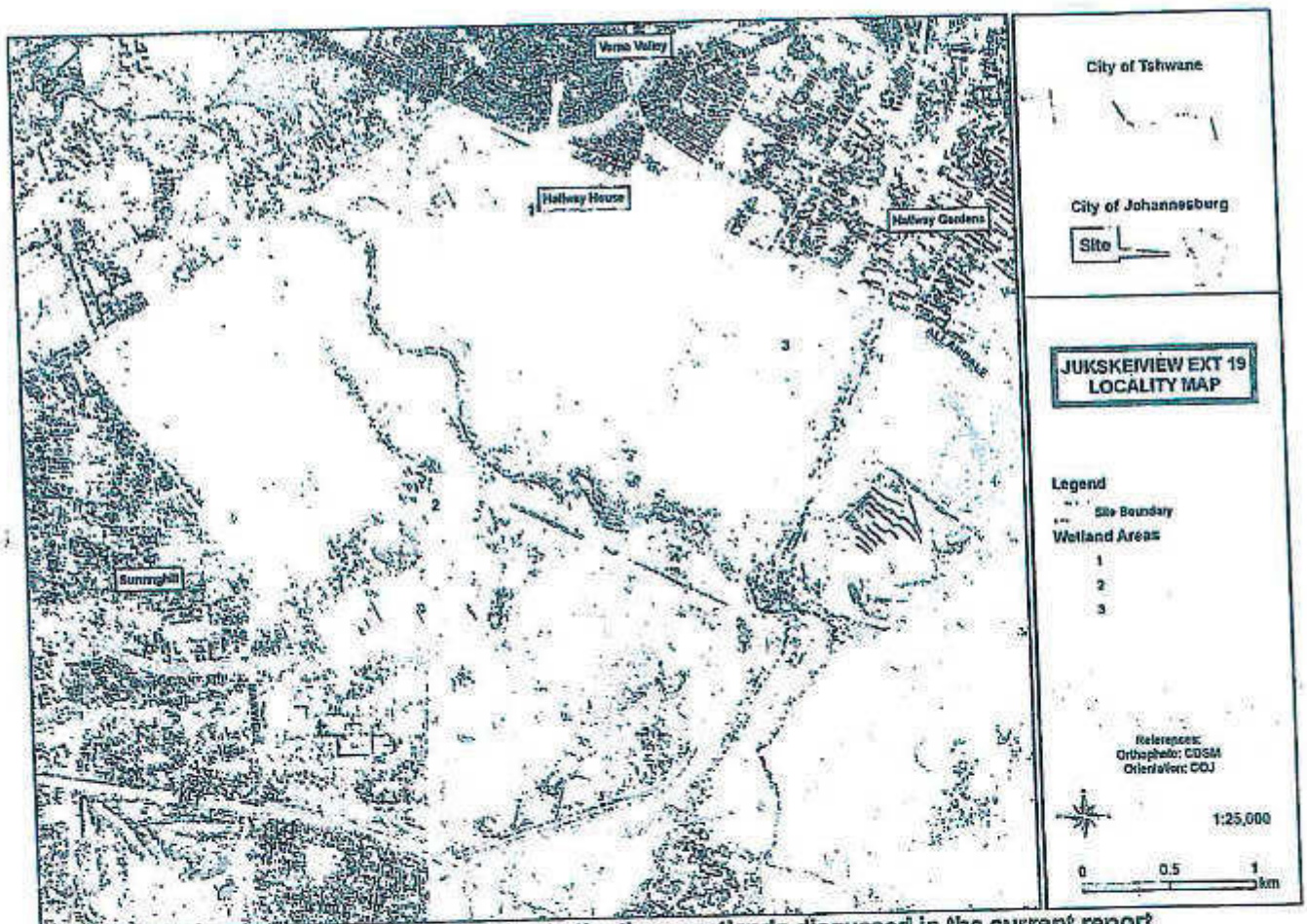


Figure 1: Location of the study site relative to the three wetlands discussed in the current report

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1.2 Assumptions and Limitations

The current assessment did not include a fine-scale wetland or riparian delineation nor a detailed faunal or floral survey. The site visit occurred before the onset of the growing season, and therefore a detailed plant species list could not be compiled. It was further assumed that wetland and riparian delineations provided by the client were correct and accurate.

1.3 A summary of south African Legislation Relating to Wetlands

In a South African legal context, the term watercourse is often used rather than the terms wetland, or river. The National Water Act, 1998 (Act No. 36 of 1998) includes wetlands and rivers into the definition of the term watercourse in the following definition:

- 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 watercourse; and
- e) Reference to a watercourse includes, where relevant, its bed and banks.

Authoritative legislation that lists impacts and activities on wetlands and riparian areas that requires authorisation includes (Armstrong, 2009):

- o Conservation of Agriculture Resources Act, 1983 (Act 43 of 1983);
- o Environment Conservation Act, 1989 (Act 73 of 1989);
- o National Water Act, 1998 (Act 36 of 1998);
- o National Forests Act, 1998 (Act 84 of 1998);
- o National Environmental Management Act, 1998 (Act No. 107 of 1998);
- o National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004).
- o GNR 1182 and 1183 of 5 September 1997, as amended (ECA);
- o GNR 385, 386 and 387 of 21 April 2006 (NEMA);
- o GNR 392, 393, 394 and 396 of 4 May 2007 (NEMA);
- o GNR 398 of 24 March 2004 (NEMA); and
- o GNR 544, 545 and 546 of 18 June 2010 (NEMA).

1.4 Current Literature Regarding Wetland and Riparian Buffer Zones

A buffer zone is defined as a strip of land surrounding a wetland or riparian area in which activities are controlled or restricted (DWAF, 2005). A development has several impacts on the surrounding environment and on a wetland or riparian area. The development changes habitats, the ecological environment, infiltration rate, amount of runoff and runoff intensity of the site, and therefore the water regime of the entire site. A hard impervious surface such as parking areas, roads and roofs adjacent to the wetland or riparian area will block normal water flow to the wetland, while increasing storm water flow during a rainfall event. An increased volume of stormwater runoff, peak discharges, and frequency and severity of flooding is therefore often characteristic of transformed catchments.

Buffer zones have been shown to perform a wide range of functions and have therefore been widely proposed as a standard measure to protect water resources and their associated biodiversity. These include (i) maintaining basic aquatic processes; (ii) reducing impacts on water resources from upstream activities and adjoining landuses; (iii) providing habitat for various aspects of biodiversity. A brief description of each of the functions and associated services is outlined in Table 1 below.

Table 1: Functions of buffer zones relevant to the study site (adapted from Macfarlane *et al*, 2010)

Primary Role	Buffer Functions
<p>Maintaining basic aquatic processes, services and values.</p>	<ul style="list-style-type: none"> ◦ Maintaining channel stability: Vegetation, in particular, root systems, strengthen streambanks while groundcover increases resistance to erosion, improving channel stability and reducing the impacts on aquatic systems and downstream users. Stream bank stability is particularly important during flood events, with the amount of erosion being greatly reduced by good vegetation cover along stream banks. ◦ Groundwater recharge: Seasonal flooding into riparian and wetland areas allows infiltration to the water table and replenishment of groundwater. This groundwater will often discharge during the dry season providing the base flow for streams, rivers, estuaries and wetlands. ◦ Control of microclimate and water temperature: Riparian vegetation may affect the microclimate of the stream area nearest the stream bank and reduce water temperatures. This can have serious consequences for aquatic biota as water temperature plays a key role in the lifecycles of many species. The occurrence of riparian vegetation also has a significant effect on aquatic plant growth, as light incidence is the main variable controlling productivity in shaded streams. Removing stream bank vegetation is likely to increase stream primary productivity, increase the risk of eutrophication and change the species structure and community composition in the water body. The lower temperatures caused by shading, also has important consequences for other water quality variables besides temperature, such as the dissolved oxygen concentration (DO), which increases with lower temperatures. This increases the capacity of the stream to contain life and assimilate organic wastes, further increasing water quality. ◦ Flood attenuation: Riparian and wetland vegetation increases the roughness of stream margins, slowing down flood-flows. This may therefore reduce flood damage in downstream areas. Aquatic buffers have therefore been promoted as providing cost-effective alternatives to highly engineered structures to reduce erosion and control flooding, particularly in urban settings.
<p>Reducing impacts from upstream activities and adjoining landuses</p>	<ul style="list-style-type: none"> ◦ Storm water attenuation: Flooding into the buffer zone increases the area and reduces the velocity of storm flow. Roots, branches and leaves of plants provide direct resistance to water flowing through the buffer, decreasing its velocity and thereby reducing its erosion potential. More water is exchanged in this area with soil moisture and groundwater, rather than simply transferring out of the area via overland flow. ◦ Sediment removal: Surface roughness provided by vegetation, or litter, reduces the velocity of overland flow, enhancing settling of particles. Buffer zones can therefore act as effective sediment traps, removing sediment from runoff water from adjoining lands thus reducing the sediment load of surface waters. ◦ Removal of toxics: Buffer zones can remove toxic pollutants, such hydrocarbons that would otherwise affect the quality of water resources and thus their suitability for aquatic biota and for human use. ◦ Nutrient removal: Riparian and wetland vegetation and vegetation in terrestrial buffer zones may significantly reduce the amount of nutrients (N & P), entering a water body reducing the potential for excessive outbreaks of microalgae that can have an adverse effect on both freshwater and estuarine environments. ◦ Removal of pathogens: By slowing water contaminated with faecal material, buffer zones encourage deposition of pathogens, which soon die when exposed to the elements.

Lucas Smith

Despite limitations, buffer zones are well suited to perform functions such as sediment trapping, erosion control and nutrient retention which can significantly reduce the impact of activities taking place adjacent to water resources. Buffer zones are therefore proposed as a standard mitigation measure to reduce impacts of landuses / activities planned adjacent to water resources. These must however be considered in conjunction with other mitigation measures.

Local government policies require that protective wetland buffer zones be calculated from the outer edge of the temporary zone of a wetland and river buffer zones be calculated from the outer edge of the riparian zone (KZN DAEA, 2002; CoCT, 2008; GDACE, 2009). Although research is underway to provide further guidance on appropriate defensible buffer zones, there is no current standard other than the generic recommendation of 32m for rivers, and 30m for wetlands inside the urban edge.

Changes to recommended buffer zones to accommodate proposed development layouts may be considered by the authorities if supporting documentation is provided to indicate that the integrity of the wetland or riparian areas will not be compromised by a reduced buffer zone.

The section below discusses each of the three wetlands for which buffer zone reductions are proposed in terms of their current functionality and the mitigation measures deemed appropriate for replacing the function of the original buffer zones to ensure their protection should such a scenario be approved by the authorities.

2 RESULTS

Appendix A provides a table of survey data (Table 2) and visually displays the location of survey points relative to the wetlands on the study site (Figure 6).

2.1 Wetland Unit 1

This wetland unit is classified in SEF (2006) [attached as Annexure A] as an un-channelled valley bottom wetland. The 2006 report described the wetland as relatively unmodified with little evidence of disturbance. The recent site visit, conducted in September 2010 indicated some impact in the form of stormwater drains associated with the new Netcare Hospital although the main body of the wetland appears to be undisturbed (Figure 2). Three pathways cross the wetland at several points and a new road has been cleared to join Kyalami Road opposite Harry Galaun Drive (Figure 3). No current evidence of erosion or sedimentation was found to be associated with these wetland crossings. Potential future impacts of the development approved for the area immediately adjacent to the wetland include increased stormwater flows, erosion and sedimentation which will negatively impact on the wetland area downstream and consequently add to the impacts to the Jukskei River.



Figure 2: Wetland Unit 1

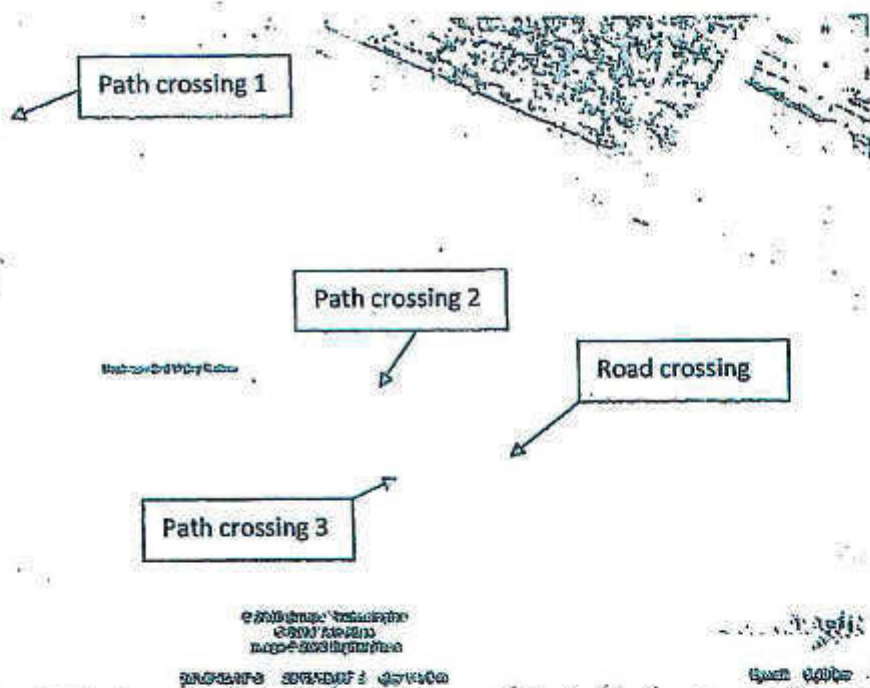
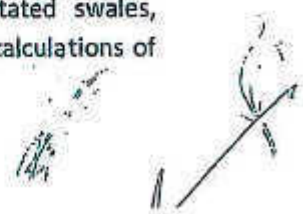


Figure 3: Location of pathways and road crossing wetland unit 1

The proposed reduction of the generic 30m buffer zone to 15m could potentially increase the risk of degradation unless strict mitigation measures are put into place. These include partially replacing the functionality of the buffer zone by:

- A conveyance system that intercepts water from rooftops, roads, parking lots, sidewalks, compacted sports fields and driveways to prevent the input of high energy stormwater into the wetland area. High energy stormwater should be dissipated by including vegetated swales, permeable paving and attenuation structures shown to be designed based on the calculations of



post-development stormwater volumes and velocities as well as slopes and soil permeability and erodibility properties;

- o Rigorous erosion control implemented throughout each phase of the development, including the post-development phase;
- o Strict landscaping policies regarding the use of indigenous vegetation species;
- o Wetland and buffer zone areas should be fenced as a matter of priority to prevent access to construction crews and vehicles; and
- o Strictly revegetate cleared areas as soon as possible to prevent sediment input into the downstream watercourses. It is evident that this policy is not currently being applied and is therefore considered as a risk to the success for protecting wetland and riparian areas should buffer zones be decreased.

2.2 Wetland Unit 2

This wetland unit is classified in SEF (2006) [attached as Annexure A] as an un-channelled valley bottom wetland impacted by invasion of *Pennisetum clandestinum* (Kikuyu Grass), trampling and grazing by cattle. The recent site visit, conducted in September 2010 highlighted landscaping of the areas downstream from the wetland, particularly associated with the dams, and clearing of the riparian zone adjacent to the Jukskei River in this area. Based on the functionality of the wetland and the downstream conditions, the current study suggests that a reduction of the buffer zone of this wetland unit from 30m to 15m should not impact on the downstream water resources as they are sufficiently buffered by dams that will attenuate increased stormwater flows and sedimentation (Figure 4). The following mitigation measures are relevant:

- o Enhance indigenous biodiversity by implementing a landscape policy that supports the use of indigenous plant species;
- o Placement of the proposed sports fields should be prioritised for the areas where disturbance is more pronounced than surrounding areas;
- o Ensure that fertilisers not be washed into the wetland or downstream waterbodies; and
- o Monitor potential erosion.



Figure 4: Dams downstream from Wetland Unit 2

2.3 Wetland Unit 3

This wetland unit runs parallel to the N1 and is classified in SEF (2006) [attached as Annexure A] as a channelled Valley Bottom wetland. SEF (2006) describes the wetland as impacted by channel incision (erosion) resulting from concentrated flows from the culvert that delivers water to the wetland from Allandale Road as well as dams in the northern and southern sections of the wetland. The recent site visit (conducted in September 2010) indicated further degradation of the wetland. The upgrading of the Allandale Road intersection has resulted in the loss of a section of wetland area at approximately S 26° 0'59.20" and E 28° 6'47.31" by large scale dumping and infilling. Sediment input in this area was also recorded (Figure 5). Although water quality was not assessed, a white precipitate as well as algal blooms were recorded in this section of the wetland and are expected to indicate a compromised condition regarding water quality. Erosion and sedimentation resulting from land clearing in preparation for construction were recorded at approximately S 26° 1'33.50" and E 28° 6'22.30" (Figure 6). This area is below the southernmost dam and marks the delineated boundary between the Jukskei River and the wetland unit discussed. The current study concludes that this wetland unit is in a highly impacted state and currently contributes to the cumulative degradation of the Jukskei River. Potential impacts associated with development adjacent to this wetland include further sediment input and erosion resulting from increased stormwater flows, increased degradation in water quality resulting from the input of hydrocarbons from roads and parking areas and invasion of alien invasive plant species.

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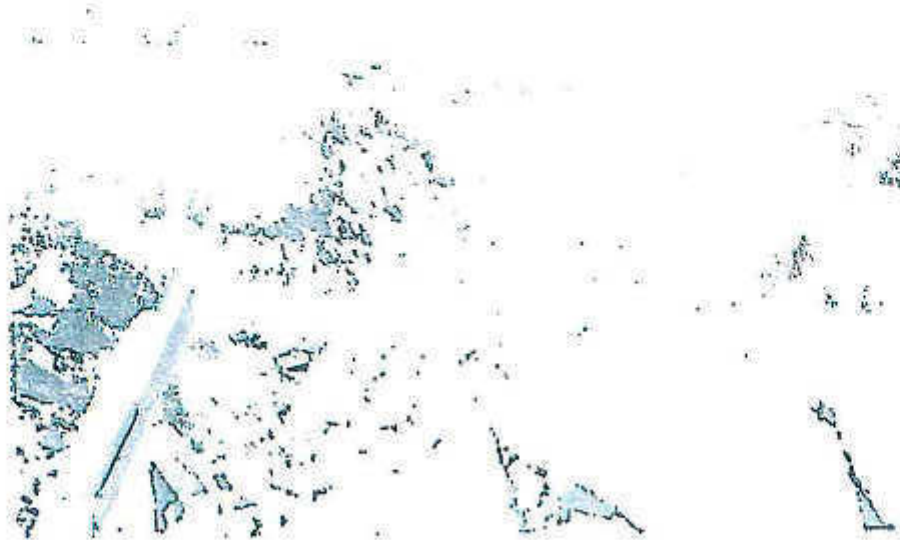


Figure 5: Degradation to Wetland Unit 3 resulting from construction activities at Allandale Road



Figure 6: Sedimentation and erosion in Wetland Unit 3 resulting from adjacent land clearing

In order to prevent potential degradation whilst reducing the wetland buffer zone to 15m, a team of engineers and landscape architects should design a rehabilitation and stormwater management plan which applies the following principles:



- o It should not be the aim to return the wetland to its hypothetical original state. Rather interventions and management should aim to maintain the wetland in the best functional condition that is currently feasible;
- o Take into consideration the slope and soil erodibility properties of the study site;
- o Ecological principles must hold sway in determining how best to manage the wetland's different zones – including the buffer. Ecological principles include:
 - o Utilising opportunities to enhance current ecological functions of the wetland (described in SEF, 2006);
 - o Maintaining the zonation of wetland areas by avoiding canalization and increased water velocity; and
 - o Making use of soft engineering rather than hard engineering by using natural landscape features and vegetation to direct water flow rather than concrete canals;
- o Engineering interventions must enhance rather than further deteriorate the ecological functions of the wetland and must:
 - o Promote groundwater recharge by avoiding impermeable structures;
 - o Allow for lateral movement of water in the buffer zone;
 - o Focus on storm water management in terms of flow attenuation and reduced velocity;
 - o Avoid stagnant water pools; and
 - o Must be based on calculated volumes from the before and after development scenario, taking cognizance of the area of land required to maintain seasonal wetland conditions, while managing storm water impacts.

2.4 Conclusion

Wetland unit one is currently impacted by drains in the vicinity of the new Netcare Hospital and several path and road crossings. A reduced buffer zone for this wetland can be supported if the following mitigation measures are effectively implemented:

- o A conveyance system that intercepts water from rooftops, roads, parking lots, sidewalks, compacted sports fields and driveways to prevent the input of high energy stormwater into the wetland area. Stormwater intensity should be dissipated by including vegetated swales, permeable paving and attenuation structures shown to be designed based on the calculations of post-development stormwater volumes and velocities as well as slopes and soil permeability and erodibility properties;
- o Rigorous erosion control implemented throughout each phase of the development, including the post-development phase;
- o Strict landscaping policies regarding the use of indigenous vegetation species;
- o Wetland and buffer zone areas should be fenced as a matter of priority to prevent access to construction crews and vehicles; and
- o Strictly revegetate cleared areas as soon as possible to prevent sediment input into the downstream watercourses. It is evident that this policy is not currently being applied and is

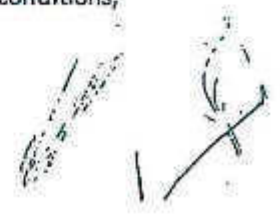
therefore considered as a risk to the success for protecting wetland and riparian areas should buffer zones be decreased.

Wetland unit two is currently impacted by invasion of Pennisetum clandestinum (Kikuyu Grass), trampling and grazing by cattle. A reduced buffer zone for this wetland can be supported if the following mitigation measures are effectively implemented:

- Enhance Indigenous biodiversity by implementing a landscape policy that supports the use of indigenous plant species;
- Place proposed sports fields in areas that are more disturbed than surrounding areas;
- Ensure that fertilisers not be washed into the wetland or downstream waterbodies; and
- Monitor potential erosion.

Wetland unit three is in a highly impacted state. Canalisation has resulted from high energy water input from a culvert from Allandale Road, and recently infilling and dumping from the recent upgrade of the Allandale Intersection has resulted in loss of wetland area and sedimentation. Further erosion and sedimentation were recorded in the southernmost section of the wetland and appear to be associated with runoff from cleared areas in preparation for construction. The effect of the development on the watercourse given a reduced buffer zone should be addressed in a detailed rehabilitation and stormwater management report which demonstrate how impacts to the wetland will be contained within the reduced buffer area. The following principles apply in this regard:

- It should not be the aim to return the wetland to its hypothetical original state. Rather interventions and management should aim to maintain the wetland in the best functional condition that is currently feasible;
- Take into consideration the slope and soil erodibility properties of the study site;
- Ecological principles must hold sway in determining how best to manage the wetland's different zones – including the buffer. Ecological principles include:
 - Utilising opportunities to enhance current ecological functions of the wetland (described in SEF, 2006);
 - Maintaining the zonation of wetland areas by avoiding canalization and increased water velocity; and
 - Making use of soft engineering rather than hard engineering by using natural landscape features and vegetation to direct water flow rather than concrete canals;
- Engineering interventions must enhance rather than further deteriorate the ecological functions of the wetland and must:
 - Promote groundwater recharge by avoiding impermeable structures;
 - Allow for lateral movement of water in the buffer zone;
 - Focus on storm water management in terms of flow attenuation and reduced velocity;
 - Avoid stagnant water pools; and
 - Must be based on calculated volumes from the before and after development scenario, taking cognizance of the area of land required to maintain seasonal wetland conditions, while managing storm water impacts.



If the above measures are stringently implemented and monitored, a reduced buffer zone can be supported. It is important that any mitigation be implemented in the context of an Environmental Management Plan to in order to ensure accountability and ultimately the success of the mitigation.

3 METHODOLOGY

The delineation method documented by the Department of Water affairs and Forestry in their document "A practical field procedure for identification and delineation of wetlands and riparian areas" (DWAFF, 2005) was followed throughout the field survey. This guideline describes the use of indicators to determine the outer edge of the wetland such as soil and vegetation forms as well as the terrain unit indicator.

A hand held GPSmap 76CSx was used to capture GPS co-ordinates in the field. 1:50 000 cadastral maps and available GIS data were used as reference material for the mapping of the preliminary wetland boundaries. These were converted to digital image backdrops and delineation lines and boundaries were imposed accordingly after the field survey.

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- Macfarlane D.M., Teixeira-Leite A., Goodman P., Bate G and Colvin C. (2010) Draft Report on the Development of a Method and Model for Buffer Zone Determination. Water Research Commission project K5/1789. The Institute of Natural Resources and its Associates

Strategic Environmental Focus (2006), Wetland Delineation and Functional Assessment for the Proposed Northern Golf Course Development on the Remainder of Farm Waterval 51R, Woodmead Extension 24, Gauteng. Strategic Environmental Focus

Appendix A: Survey Data

Table 2: Soil and vegetation data recorded during the site visit

Waypoint	Coordinates		Description
	South	East	
1	26° 01' 01.1"	28° 06' 45.9"	Large scale dumping and infilling, eroded gullies of about 3-4m deep, compromised water quality evident in algal blooms and white precipitate, sedimentation visible, sewer outfall in wetland area
2	26° 01' 01.7"	28° 06' 46.4"	Some invasion of pioneer and invasive species, for example, <i>Datura sp.</i> , <i>Salix Babylonica</i> , <i>Verbena bonariense</i> ,
3	26° 01' 01.9"	28° 06' 47.3"	Stand of <i>Imperata cylindrica</i> , distinct mottling and gleying within 15cm of the soil surface, soil dark, coarse grained with high clay component
4	26° 01' 02.8"	28° 06' 48.4"	Culverts release water from the N1, some invasive and pioneer species
5	26° 01' 18.6"	28° 06' 33.2"	Steep slopes, canalisation of the watercourse, overgrazing, loss of vegetation from cleared areas leads to sediment input.
6	26° 01' 33.5"	28° 06' 22.3"	Erosion and sediment input from cleared land
7	26° 00' 36.1"	28° 05' 47.9"	Sandy soil with fine particles and concretions at about 20cm. High abundance of <i>Seriphium plumosum</i> indicating overgrazing.
	26° 00' 35.3"	28° 05' 48.7"	Soil shallow, sandy, various forb species present, no evident disturbance
9	26° 01' 31.2"	28° 05' 42.9"	Dams downstream from wetland will attenuate sediments and nutrients and therefore protect the Jukskei River. Dominance of <i>Pennisetum clandestinum</i> , trampling and overgrazing



September 2010
Judicial View EIR 19 Wetland Buffer Zone Reduction Report

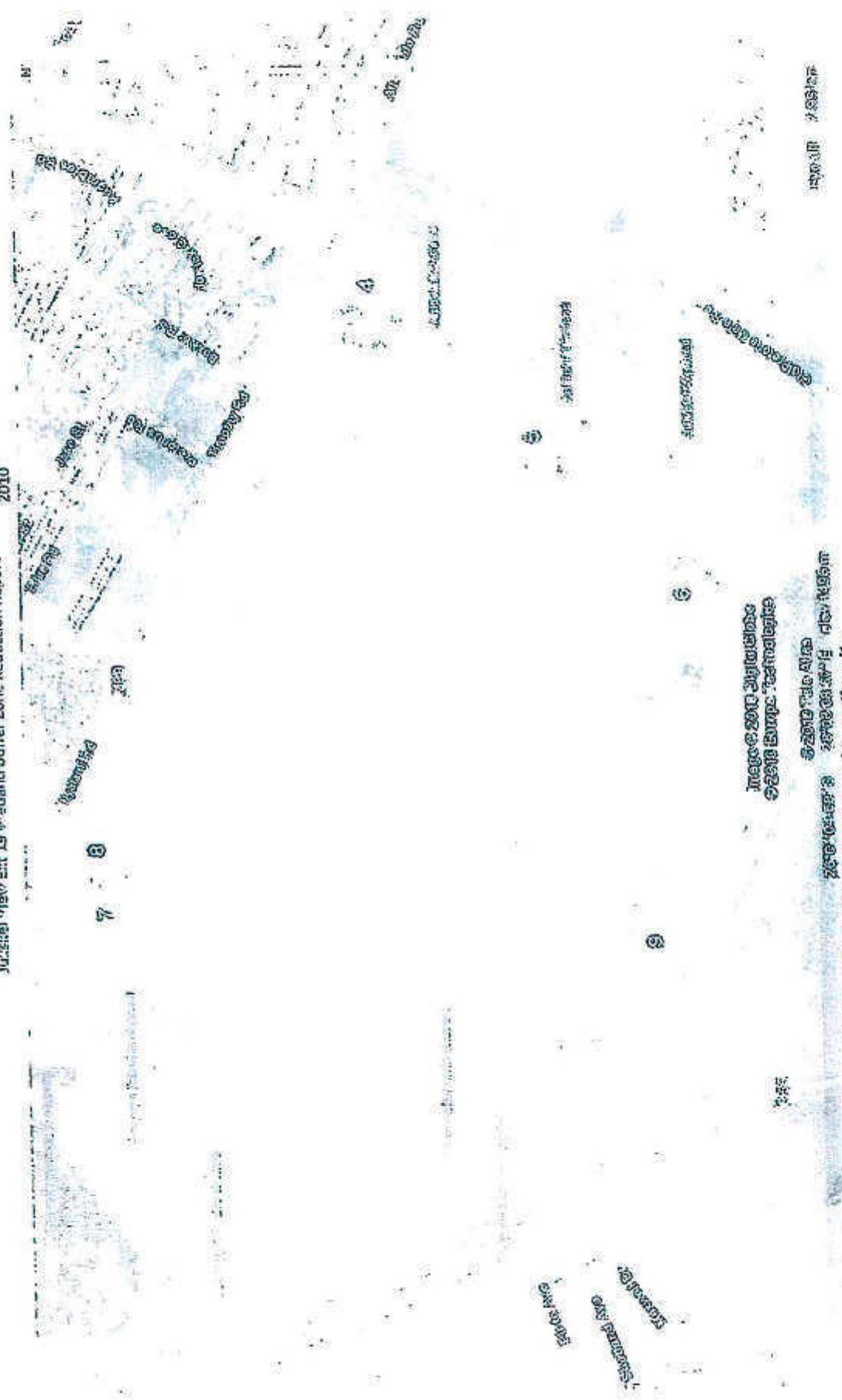


Figure 7: Location of survey points relative to wetland and riparian units on the site

Appendix B: Glossary of Terms

Anaerobic	not having molecular oxygen (O ₂) present
Buffer	A strip of land surrounding a wetland or riparian area in which activities are controlled or restricted, in order to reduce the impact of adjacent land uses on the wetland or riparian area
Gley	soil material that has developed under anaerobic conditions as a result of prolonged saturation with water. Grey and sometimes blue or green colours predominate but mottles (yellow, red, brown and black) may be present and indicate localised areas of better aeration
Hydrophyte	any plant that grows in water or on a substratum that is at least periodically deficient in oxygen as a result of soil saturation or flooding; plants typically found in wet habitats
Hydromorphic soil	soil that in its undrained condition is saturated or flooded long enough during the growing season to develop anaerobic conditions favouring the growth and regeneration of hydrophytic vegetation (vegetation adapted to living in anaerobic soils)
Mottles	soils with variegated colour patterns are described as being mottled, with the "background colour" referred to as the matrix and the spots or blotches of colour referred to as mottles
Seepage	A type of wetland occurring on slopes, usually characterised by diffuse (i.e. unchannelled, and often subsurface) flows
Perched water table	the upper limit of a zone of saturation in soil, separated by a relatively impermeable unsaturated zone from the main body of groundwater
Permanently wet soil	soil which is flooded or waterlogged to the soil surface throughout the year, in most years
Sedges	Grass-like plants belonging to the family Cyperaceae, sometimes referred to as nutgrasses. Papyrus is a member of this family.
Soil horizons	layers of soil that have fairly uniform characteristics and have developed through pedogenic processes; they are bound by air, hard rock or other horizons (i.e. soil material that has different characteristics).
Soil profile	the vertically sectioned sample through the soil mantle, usually consisting of two or three horizons (Soil Classification Working Group, 1991)
Soil saturation	the soil is considered saturated if the water table or capillary fringe reaches the soil surface

Temporarily wet soil	The soil close to the soil surface (i.e. within 50 cm) is wet for periods > 2 weeks during the wet season in most years. However, it is seldom flooded or saturated at the surface for longer than a month.
Temporary zone of wetness	the outer zone of a wetland characterised by saturation within 50cm of the soil surface for less than three months in a year
Wetland:	<i>"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."</i> (National Water Act; Act 36 of 1998).
Wetland delineation	the determination and marking of the boundary of a wetland on a map using the DWAF (2005) methodology. This assessment includes identification of suggested buffer zones and is usually done in conjunction with a wetland functional assessment. The impact of the proposed development, together with appropriate mitigation measures are included in impact assessment tables

Appendix C: Abridged Curriculum Vitae of the Specialist

Name:	ANTOINETTE BOOTSMA nee van Wyk
Name of Company:	Limosella Consulting
Position:	Wetland Specialist
SACNASP Status:	Professional Natural Scientist # 400222-09

EDUCATIONAL QUALIFICATIONS

- B. Sc (Botany & Zoology), University of South Africa (1997 - 2001)
- B. Sc (Hons) Botany, University of Pretoria (2003-2005)
- Short course in wetland delineation, legislation and rehabilitation, University of Pretoria (2007)
- Short course in Wetland Soils, Terrasoil Science, (2009)

KEY QUALIFICATIONS

- Principal Specialist

This entailed the management of wetland vegetation and rehabilitation related projects in terms of developing proposals, project management, technical investigation (delineation and functional assessment of wetlands and riparian areas in order to advise proposed development layouts) and quality control through the following:

- More than 60 fine scale wetland and ecological assessments in Gauteng, Mpumalanga, KwaZulu Natal, Limpopo and the Western Cape. Liaison with clients, and all facets of project management. April 2007, ongoing.
- Reviewing of specialist reports, including faunal and floral assessments, aquatic, wetland and rehabilitation reports;
- An assessment of wetlands in Tatu, Kenya in order to inform the proposed development of a residential estate. August 2009
- Riparian Management Plan for Mixed-Use developments in Kagiso, Gauteng. August 2009;
- Rehabilitation Plan for the wetland associated with Heroes Bridge in Soweto. Technical investigation as well as management of a team of specialist, integration of information into a final report. The technical investigation for this project also included an investigation into the occurrence of Red Data vegetation. June 2009;
- Input into the wetland component of the Green Star SA rating system. April 2009;
- Strategic analysis of wetlands in Thohoyandou in conjunction with a strategic vegetation assessment of the area, March 2009;
- Strategic analysis of wetlands in Gauteng for the GDACE Regional Management Framework, August 2008;
- Successful completion of an audit of the wetlands in the City of Johannesburg. Specialist studies as well as project management and integration of independent datasets into a final report. July 2008.
- An assessment of wetlands in southern Mozambique. This involved a detailed analysis of the vegetation composition and sensitivity associated with wetlands and swamp forest in order to inform the development layout of a proposed resort, May 2008.
- An assessment of three wetlands in the Highlands of Lesotho. This involved a detailed assessment of the value of the study sites in terms of functionality and rehabilitation opportunities. Integration of the specialist reports socio economic, aquatic, terrestrial and wetland ecology studies into a final synthesis. May 2007.
- Ecological investigation on a strategic scale to inform an Environmental Management Framework for the Emakazeni Municipality and an Integrated Environmental Management Program for the Emalahleni Municipality. May and June 2007

Conservation ecology

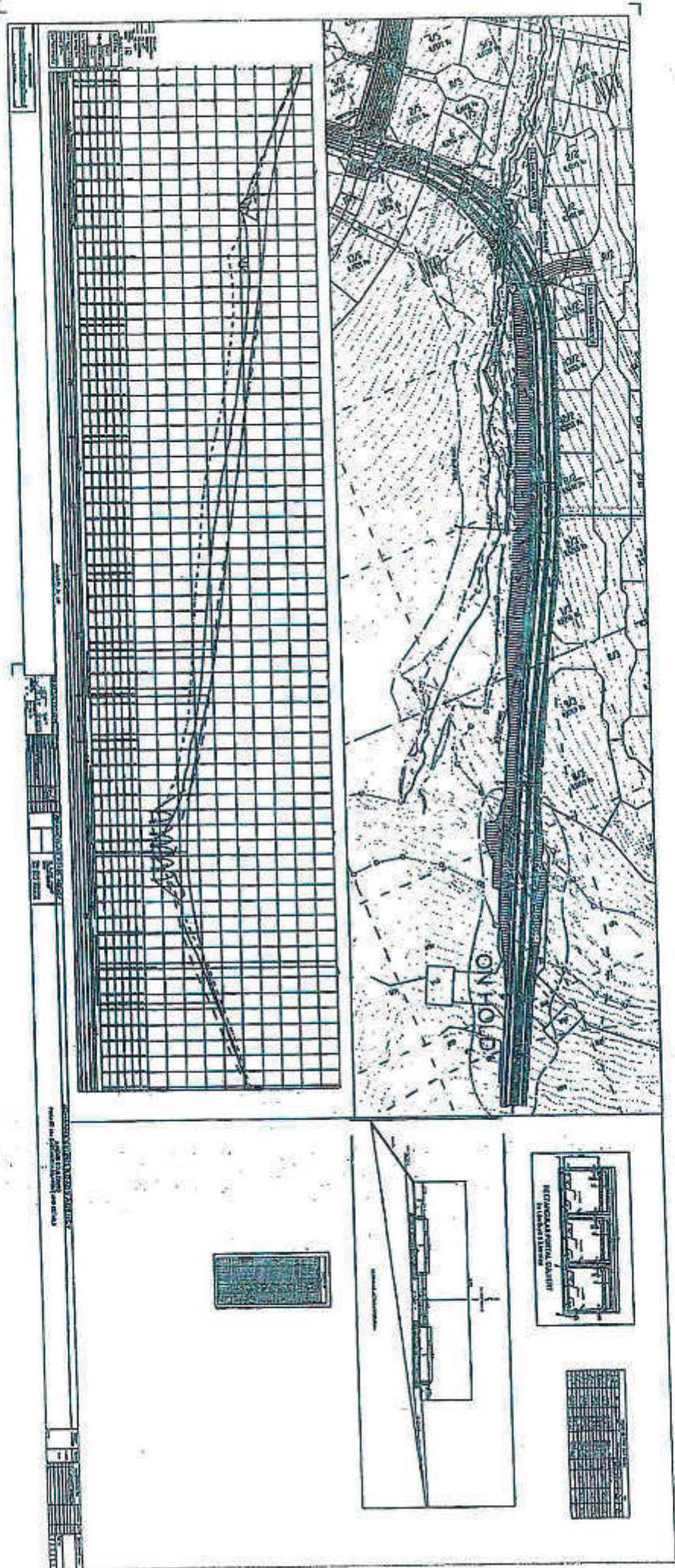
The implementation and management of projects related to long and short term studies on impacts and rehabilitation in a mining environment.

- Principal investigator. Species assemblages in the woody vegetation communities of coastal dune forests between the Umfolozi and Umlalazi rivers. This relates to colonisation trends across disturbance and rehabilitation age gradients, including aspects such as seed ecology and phenology. 2006/7
- Principal investigator. Biodiversity of the coastal dune forests and associated habitats in Richards Bay, particularly on the epiphytic orchids and ferns found on the mineral lease area of Richards Bay Minerals. 2006
- Technical assistant. Biodiversity of the coastal dune forests and associated habitats in Richards Bay, particularly on the herpetofauna found on the mineral lease area of Richards Bay Minerals. 2006
- Principal investigator. Baseline vegetation, and topsoil maps for Richards Bay Minerals' Zulti South lease area. 2005/6
- Technical assistant. A species list of woody and herbaceous plants of the Sekhukhune area. 2005

▫ **Phytosociology**

A technical investigation as part of academic research

- Principal investigator. A phytosociological study of vegetation associated with the wetlands of Lake Chrissie, Mpumalanga. 2004



[Handwritten signature]

Annexure HCR 21

Limosella

+27 63 454 5454
+27 12 543 9982
antoinette@limosella.co.za

14 May, 2013

RE: REDUCTION OF BUFFER ZONES FOR THE WETLAND ON THE NORTHERN RESIDENTIAL ESTATE (WATERFALL)

To Whom It May Concern,

This document serves to provide a specialist opinion on the buffer zone reduction application for the wetland that lies along the N1, south of Allandale Road (Figure 1).



Figure 1: Position of the wetland area discussed in the current document demarcated in red

Handwritten signature and date:

Antoinette
14 May 2013

The integrity of this wetland has deteriorated drastically in the past few years. It is currently severely incised, colonised by alien plants, and subject to large inputs of sediment and stormwater which are further decreasing its functionality. The largest current impact is severe erosion caused by stormwater input from the N1 (Figure 2). Downstream from this point the wetland has become incised to such a degree as to no longer display saturation of soils characteristic of wetland conditions. In this area in particular the buffer zone no longer functions to protect the wetland. Upstream from this point, erosion is not as pronounced yet and the buffer zone helps to maintain groundwater processes that are lost in the southern section. This was seen in the presence of the grass *Imperata cylindrica* which still grows along the northern section of the wetland but which has been lost from the southern section.

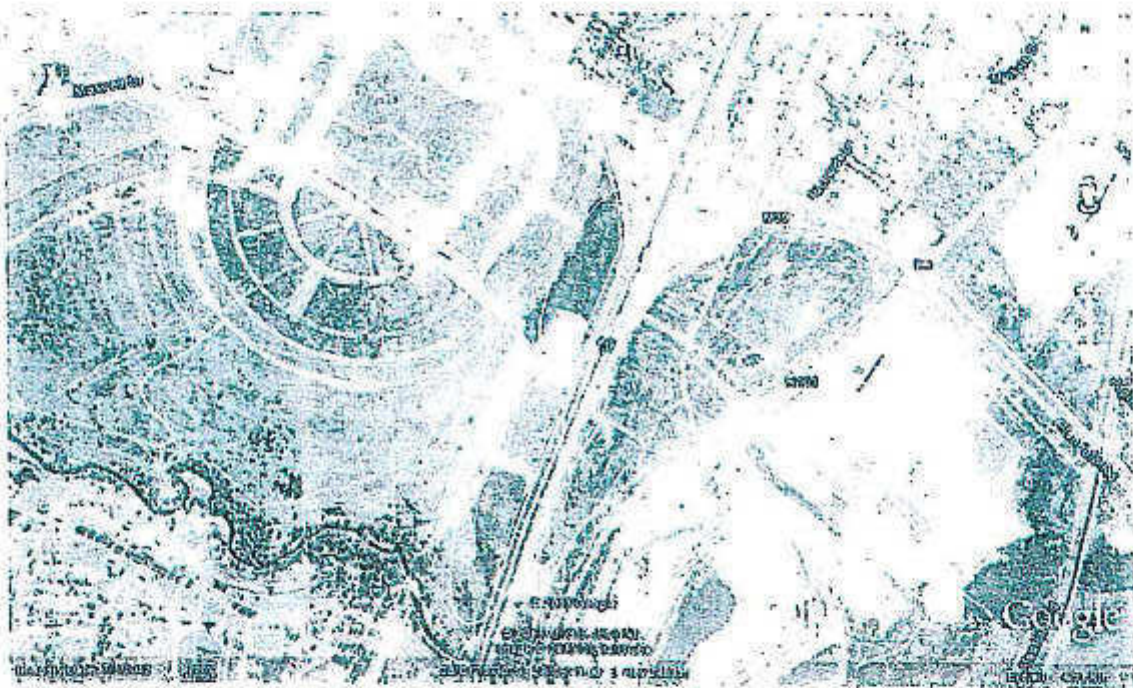


Figure 2: The northern section of the wetland marked in yellow and the southern section of wetland downstream of the stormwater input resulting in severe erosion in blue

In conclusion, national and regional policies and legislation have failed to protect this wetland and the sensitive ecological elements associated with it. Although the generic 30m buffer zone on the northern section of the wetland is in a better condition than the southern section, it is unfortunately not likely to ensure the persistence of this wetland. It is our opinion that the only way to ensure the persistence of this wetland is to include it into a managed open space system in which impacts (including those emanating from the N1) are carefully monitored and mitigated. Should such a system be implemented, the reduction of the generic 30m buffer zone to the 2006 floodline would not result in the further deterioration of the wetland.

Should the need for further details arise, please don't hesitate to contact us.

Yours sincerely,



Antoinette Bootsma
Wetland Ecologist Pr Sci Nat # 400222-09



Annexure Q

Public Participation



Annexure Q1

Site notice



**INTERESTED AND AFFECTED PARTY NOTIFICATION: APPLICATION FOR AMENDMENT OF
AUTHORIZATION FOR THE PROPOSED BUSINESS TOWNSHIP ON PORTIONS OF THE REMAINING
EXTENT OF PORTION 1 OF THE FARM WATERVAL 5 IR (SECTION 10), JOHANNESBURG
METROPOLITAN MUNICIPALITY**

In terms of Regulation 32(1) (a) of the 2014 Amended National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations the EAP must notify all registered interested and affected parties of an application for Amendment of an Authorization. This correspondence represents the formal notification of Interested and Affected Parties.

DATE OF NOTICE: 26 April – 30 May 2016

PROJECT NAME: The authorisation 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.

PROPERTY DESCRIPTION: On Portions of the Remaining extent of Portion 1 of the Farm Waterval 5 IR (Section 10), Johannesburg Metropolitan Municipality.

APPLICANT: ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC)

An application for the amendment of the Environmental Authorisation is made in terms of Section 31 of the 2014 NEMA EIA Regulations which sets out the requirements for amendments where a change in scope occurs

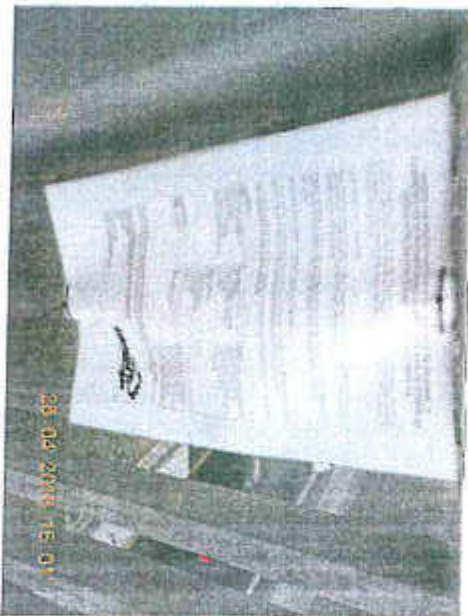
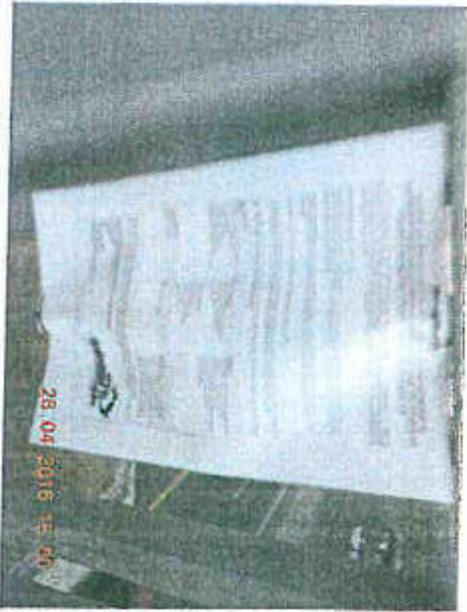
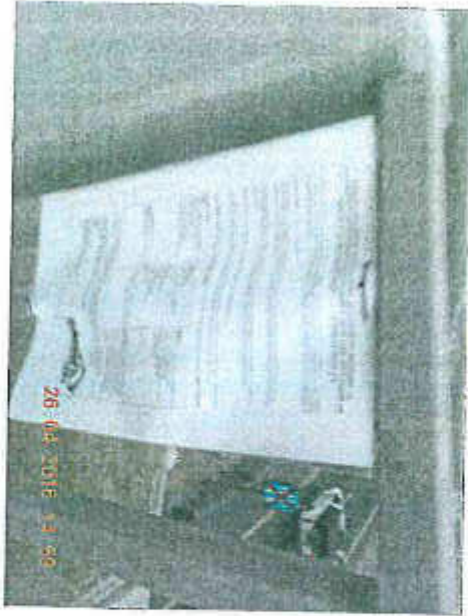
The Applicant applied for the following Amendments to the Environmental Authorisation granted on **29 April 2010**.
GDARD Reference Number: Gaut: 002/08-09/N0993.

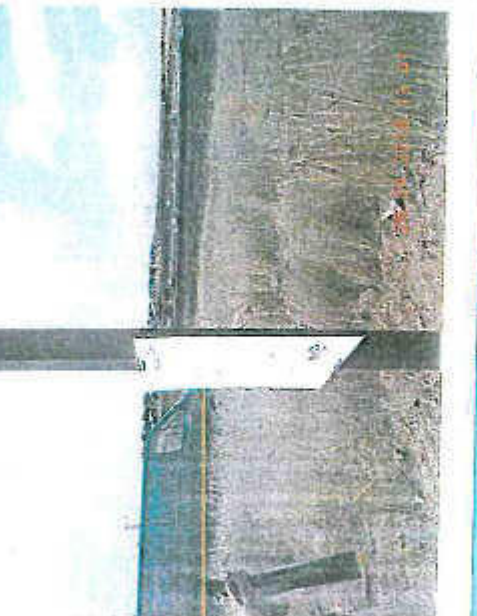
Amendment 1:		
From:	To:	Reason:
Current Holder of Authorization: Atterbury Investments Holdings Mome Wilken Mertech Building Glenfield Office Park Oberon Street Faerie Glen 0100	Postal Address: ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC) P.O. Box 2527 Sunninghill 2157 Physical Address: Building 2 Maxwell Office Park Maxwell Crescent West Waterval City Jukskei View 2090	The name and contact details of the applicant changed and the Decision require that the Department be informed of a name change and transfer of responsibilities.
Amendment 2:		
From:	To:	Reason:
Wetland buffer.	No wetland buffer.	The Applicant already completed a significant amount of rehabilitation works in this very disturbed and artificial watercourse and according to the appointed specialists no wetland/riparian buffer is required around the modified watercourse.

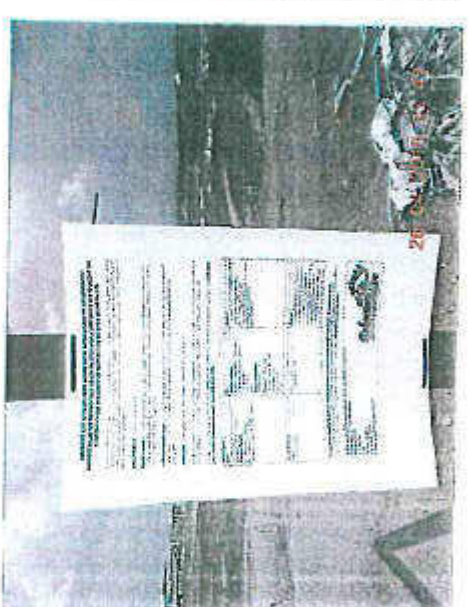
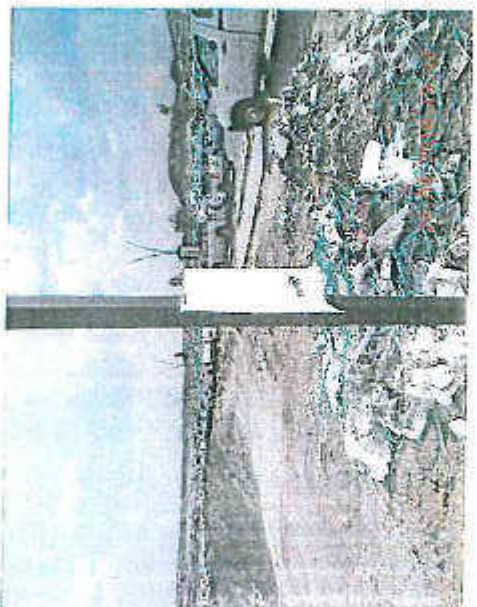
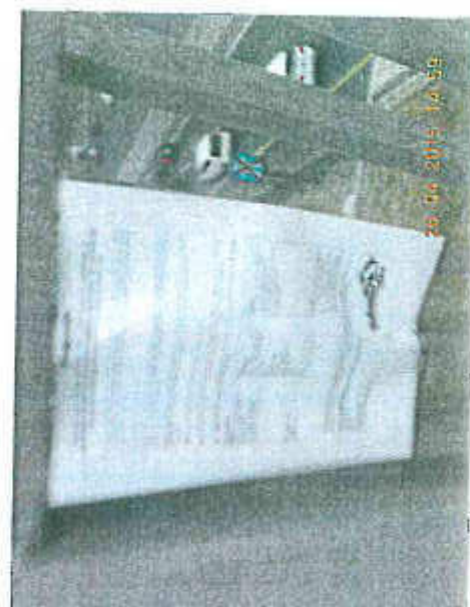
***Please note: The EIA Report for the proposed amendments will be made available to all registered I&APs.**
In order to ensure that you are identified as an Interested and/or Affected Party (I&AP) please submit your comment and interest in the matter, in writing, to the contact person given below **within 30 days of this Notice.**

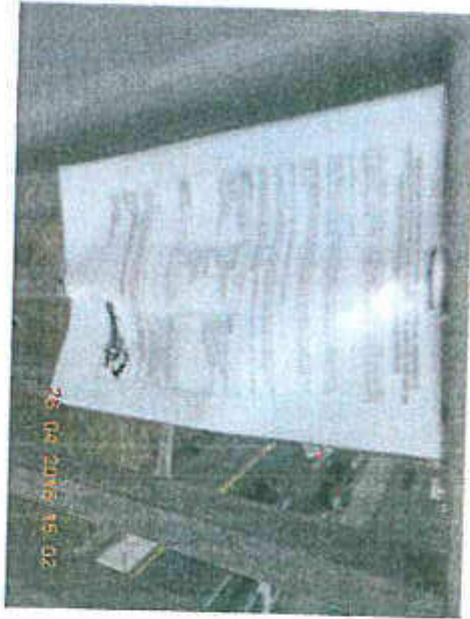
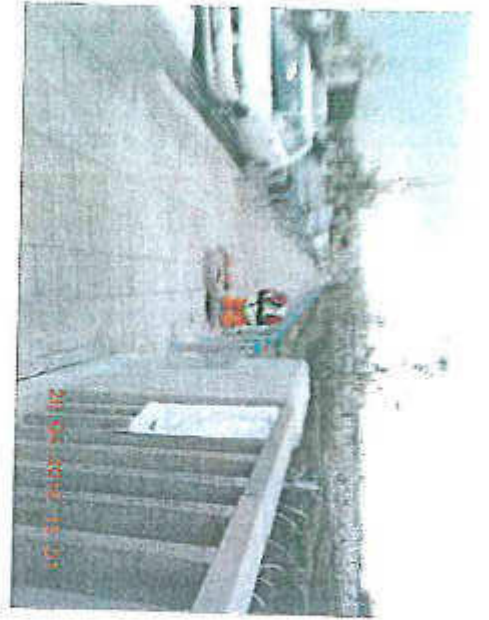
Bokamoso Landscape Architects and Environmental Consultants
Contact Person: Juanita De Beer
P.O. Box 11375
Maroelana
0161
Tel: 012 346 3810
Fax: 086 570 5659
E-Mail: reception@bokamoso.net











Annexure Q2

Public notice



LP10 Amended Draft

Report for Review

All interested and affected parties are invited to review the development information and to register any issues and concerns.

Venue: Mall of Africa (Management Centre – Info Desk)

Tel: 010 596 1470

Date: 17 June – 18 July 2016

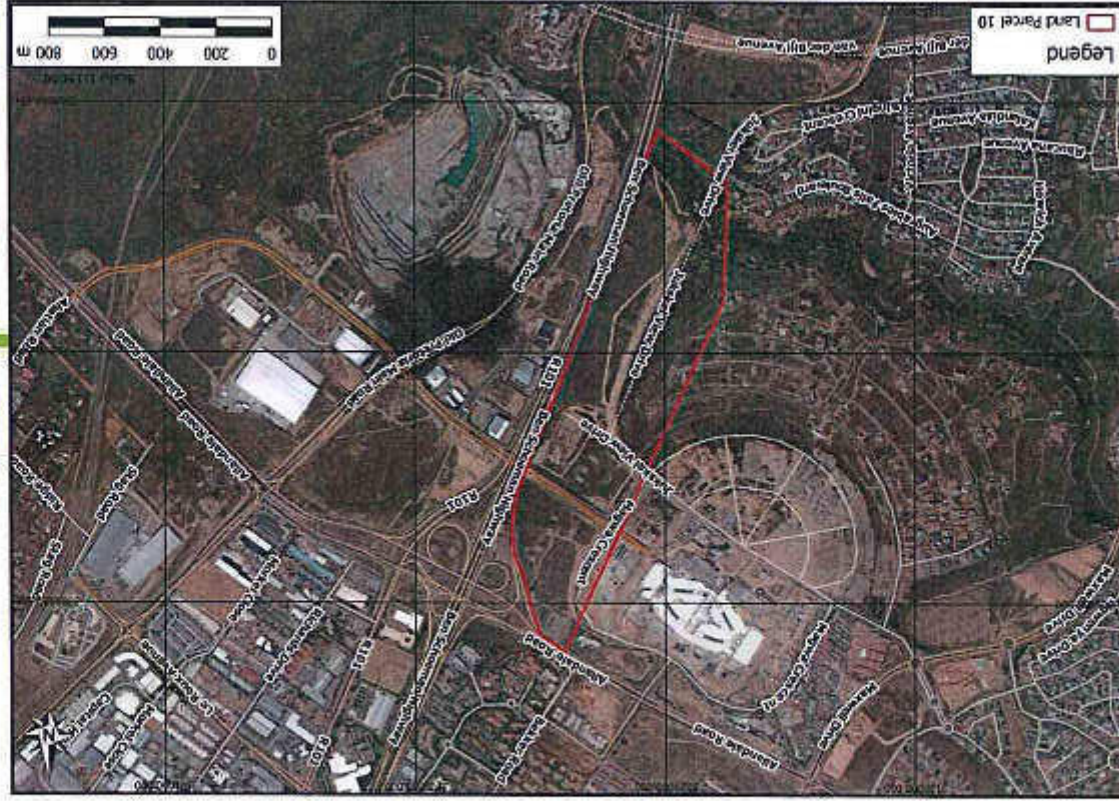
Website: www.bokamoso.net

Please do not hesitate to contact us if there are any questions in connection with the abovementioned development.

Contact person: **Juanita De Beer**

Tel: 012 346 3810 Fax: 086 570 5659

E-mail: reception@bokamoso.net



INTERESTED AND AFFECTED PARTY NOTIFICATION: APPLICATION FOR AMENDMENT OF AUTHORIZATION FOR THE PROPOSED NORTHERN RESIDENTIAL ESTATE MIXED-USE TOWNSHIP ON PORTIONS OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR

In terms of Regulation 32(1) (a) of the 2014 Amended National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations the EAP must notify all registered interested and affected parties of an application for Amendment of an Authorization. This correspondence represents the formal notification of Interested and Affected Parties.

DATE OF NOTICE: 26 April – 30 May 2016

PROJECT NAME: The authorization applies in respect of establishment of the Northern Residential Estate mixed-use township within the development area indicated on the layout submitted (Drawing Number 050-S-018,0) including associated structures and infrastructure.

PROPERTY DESCRIPTION: On Portions of the Remainder of Portion 1 of the Farm Waterval 5 IR situated to the west of the N1 freeway. The study area falls within the area of jurisdiction of the City of Johannesburg Metropolitan Municipality.

APPLICANT: ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC)

An application for the amendment of the Environmental Authorisation is made in terms of Section 31 of the 2014 NEMA EIA Regulations which sets out the requirements for amendments where a change in scope occurs

The Applicant applied for the following Amendments to the Environmental Authorisation granted on **20 October 2007**. GDARD Reference Number: Gaut: 002/05-06/1476.

Amendment 1:		
From:	To:	Reason:
Current Holder of Authorization: Waterval Islamic Institute Contact Person: Mr. Hercules Coenraad Bezuidenhout (authorized representative of the Land-Owner.	Postal Address: ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC) P.O. Box 2527 Sunninghill 2157 Physical Address: Building 2 Maxwell Office Park Maxwell Crescent West Waterval City Jukskei View 2090	The name and contact details of the applicant changed and the Decision require that the Department be informed of a name change and transfer of responsibilities.
Amendment 2:		
From:	To:	Reason:
Wetland buffer.	No wetland buffer.	The Applicant already completed a significant amount of rehabilitation works in this very disturbed and artificial watercourse and according to the appointed specialists no wetland/riparian buffer is required around the modified watercourse.

***Please note: The EIA Report for the proposed amendments will be made available to all registered I&APs.** In order to ensure that you are identified as an Interested and/or Affected Party (I&AP) please submit your comment and interest in the matter, in writing, to the contact person given below **within 30 days of this Notice**.


Bokamoso Landscape Architects and Environmental Consultants

Contact Person: Juanita De Beer
P.O. Box 11375
Maroelana
0161
Tel: 012 346 3810
Fax: 086 570 5659
E-Mail: reception@bokamoso.net



LP 10 Landowner Notification

Acknowledgement of Receipt of land owner notification concerning the proposed LP 10 project.

	Name	Address	Contact Details	Signature
1	Cindy Kilaia	City Lodge Motel	Email: c1waterfall-gne@cing.com Fax: Tel: 010 065 0000	
2	SHALU	WATERFALL HOA	Email: GRANT@PE Fax: 727 FALLEN A-10-27 Tel: 083 349 4354	
3			Email: Fax: Tel:	
4			Email: Fax: Tel:	
5			Email: Fax: Tel:	
6			Email: Fax: Tel:	
7			Email: Fax: Tel:	
8			Email: Fax: Tel:	
9			Email: Fax: Tel:	
10			Email: Fax: Tel:	
11			Email: Fax: Tel:	
12			Email: Fax: Tel:	
13			Email: Fax: Tel:	
14			Email: Fax: Tel:	
15			Email: Fax: Tel:	

Annexure Q3

E-mailed



Adele drake

From: corne@bokamoso.net
Sent: 04 August 2016 08:26 AM
To: juanita@bokamoso.net
Subject: FW: Follow up on amendment reports: review period ends 15 July

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

From: Nozipho Maduse [<mailto:NoziphoM@joburg.org.za>]
Sent: 13 July 2016 03:45 PM
To: corne@bokamoso.net
Cc: 'Lizelle Gregory Bokamoso'
Subject: RE: Follow up on amendment reports: review period ends 15 July



The banner features the Joburg logo on the left, a central image of a green water tap with a single drop of water falling, and the Johannesburg Water logo on the right. The text reads: "Use water sparingly. For our benefit, let's work together." Below this is a "Find Out More" button. At the bottom, there are social media links for www.joburg.org.za, @CityofJoburgZA, and CityofJohannesburg.

Good afternoon,

I will check and get back to you.

Regards,

Nozipho

From: corne@bokamoso.net [<mailto:corne@bokamoso.net>]
Sent: 13 July 2016 02:55 PM
To: Nozipho Maduse
Cc: 'Lizelle Gregory Bokamoso'
Subject: Follow up on amendment reports: review period ends 15 July

Good day Nozipho,

I tried calling your office and have not come through. I would like to follow up on two draft amendment reports with ref. no. 002/16-17/E0010 and 002/16-17/E0020 that we submitted on 14 June 2016. The 30 day review period ends 15 July 2016. Could you please indicate the relevant contact person for these reports so that we receive the City of Johannesburg comments on 15 July 2016.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)

Environmental Assessment Practitioner &

Water Use License Consultant



Landscape Architects &

Environmental Consultants

T: (+27)12 346 3810 | F: (+27) 86 570 5859 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

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Please note that the recipient must scan this e-mail and any attached files, for viruses and the like. While we do everything possible to protect information from viruses, the City of Johannesburg accepts no liability of whatever nature for any loss, liability, damage or expense resulting directly or indirectly from the access and/or downloading of any files which are attached to this e-mail message.

Adele drake

From: corne@bokamoso.net
Sent: 19 July 2016 09:20 AM
To: teboho.leku@gauteng.gov.za
Cc: 'Lizelle Gregory Bokamoso'; 'Ane Agenbacht'
Subject: Comments on Ref no. 006/16-17/E0010
Attachments: SDEPT_AGRIC16070811390_GDARD comments_E0010.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Teboho,

We received comments back from your department on 8 July 2016 regarding ref no. 006/16-17/E0010 (see attached). Based on the comments, it seems GDARD is not in favour of the relaxation of the wetland buffer.

Lizelle has a meeting with you next week Tuesday (26 July 2016) where she would like to discuss the feedback from GDARD and the way forward in order to inform our client whether it will be feasible to continue with the application.

Please take note that we have not received any comments from GDARD with regards to ref no. 006/16-17/E0020. The 30 day period for review ended last week.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
*Environmental Assessment Practitioner &
Water Use License Consultant*



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161



GAUTENG PROVINCE

AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Diamond Building, 11 Diagonal Street, Newtown
PO Box 8769, Johannesburg, 2000
Tel: 011 240 2500
Fax: 011 240 2700

Reference: Gaut 006/16-17/E0010
Enquiries: Teboho Leku
Telephone: 011 240 3421
E-mail: Teboho.Leku@gauteng.gov.za

Bokamoso Landscape Architects and Environmental Consultants
P. O. Box 11375
Moroelana
0161

Attention: Lizelle Gregory
Tel No.: 012 346 3810
Fax No.: 012 460 7079
E-mail: lizelleg@mweb.co.za

Dear Madam

COMMENTS ON THE DRAFT AMENDMENT OF ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED MIXED USE DEVELOPMENT ON REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR, CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY

The above -mentioned report received by the Department on 13 June 2016 has reference.

The proposal entails change of a holder of Environmental Authorisation and reduction of a wetland buffer. The amendment will trigger Regulation 29, part 1 and Regulation 31, part 2 of the Environmental Impact Assessment Regulations, 2014 on the above- mentioned site.

The Department will like to comment as follows:

A. Alignment of the activity with applicable legislations and policies

The report has made provision to accommodate all applicable legislation, policies and guidelines. The amendment entails the change of a holder of Environmental Authorisation and reduction of a wetland buffer zone which have an impact in terms of the National Water Act, 1998 (Act No. 36 of 1998), the National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended). The Gauteng Environmental Management Framework, 2015 (GEMF, 2015) identifies the proposed site as Environmental Management Zone 1 (Urban Development Zone) and Environmental Management Zone 2 (High Control Zone within urban development zone) which is characterised by sensitive areas within the urban development zone.

B. Guidelines GDARD requirements

The proposed site has been identified as a Critical Biodiversity Area (CBA) by the Departmental Conservation Plan version 3.3 and is characterised by sensitive environmental features such as Important Area, Orange Listed Plant Habitat, Red Listed Mammals Habitat, Primary Vegetation,

1
COMMENTS ON THE DRAFT AMENDMENT OF ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED MIXED USE DEVELOPMENT ON
RE- OF PORTION 1 OF THE FARM WATERVAL 5 IR, CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY



Threatened Ecosystem (Endangered), Buffered Wetland, none Perennial river and SANBI Grassland. The relaxation of Buffer is not in line with the GDARD Requirement for Biodiversity Assessment Version 3 dated March 2014.

C. Alternatives

No alternative outlined in the draft amendment as the authorisation was issued for mixed use township.

D. Significant rating of impacts

The identification and assessment of impacts is provided in the Draft Amendment application. However the relaxation of buffer will lead to the detrimental impact of the environment.

E. Locality map and layout plans or facility illustrations

A legible, A3 facility illustration map with a legend easily linked to activity components must be included in the Final Amendment. The layout plan must indicate buffer zone and the structures that will encroach the wetland buffer zone.

F. EMPr

The attached EMPr is noted and appears adequate to address impacts that may arise as a result of the proposed development.

G. Public participation process

Public Participation must be undertaken in accordance with the EIA Regulations, 2014. The Department of Water and Sanitation, City Johannesburg Metropolitan Municipality and all other relevant stakeholders affected by the proposed development must be notified and proof of notification must be attached on the final Amendment.

Proof of correspondence (site notice, newspaper advertisement, email, fax, delivery etc.) with stakeholders must be included in the Final Amendment. Should you be unable to submit comments, proof of attempts that were made to obtain comments must be submitted to the Department.

H. Any other issues noted

- Legible newspaper advert and site notice must be included on the Amendment application.
- The relaxation of wetland buffer zone is not in line with the GDARD Requirements for Biodiversity Assessments Version 3 dated March 2014.
- The reduction of wetland buffer will put more pressure on the recently rehabilitated watercourse and will have a detrimental impact on the downstream.
- Development on the buffer zone will result on the increase of soil erosion and flooding.
- The request of reducing the buffer will lead to unacceptable negative impact to the environment because the watercourse is feeding to the Jukskei River.
- The initial layout plan and the proposed layout plan of reduction of buffer must be included in the Final Amendment.



- The declaration of change of holder of Environmental Authorisation must be signed by the initial holder not by the proposed new holder.

If you have any queries regarding the contents of this letter, please contact the official of the Department at the number or email address indicated above.

Yours faithfully



Mr. S. Mukhola
Director: Impact Management
Date: 08/7/2016

Adele drake

From: corne@bokamoso.net
Sent: 04 August 2016 08:26 AM
To: juanita@bokamoso.net
Subject: FW: Follow up on amendment reports: review period ends 15 July

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

From: Mhinga Vongani (GAU) [<mailto:MhingaV@dws.gov.za>]
Sent: 19 July 2016 09:50 AM
To: corne@bokamoso.net
Cc: Siwelane Lilian (GAU)
Subject: RE: Follow up on amendment reports: review period ends 15 July

Morning,

Can you please send the full title of the reports submitted.

Regards,
Vongani

From: corne@bokamoso.net [<mailto:corne@bokamoso.net>]
Sent: 19 July 2016 08:45 AM
To: Mhinga Vongani (GAU)
Cc: Siwelane Lilian (GAU)
Subject: RE: Follow up on amendment reports: review period ends 15 July

Good day Vongani,

The email below refers. We have not received any feedback from your Department regarding projects with ref no. 006/16-17/E0010 and 006/16-17/E0020. Please indicate if we will receive anything this week as we are submitting the final report soon.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
*Environmental Assessment Practitioner &
Water Use License Consultant*



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Mhinga Vongani (GAU) [<mailto:MhingaV@dws.gov.za>]
Sent: 13 July 2016 03:49 PM
To: corne@bokamoso.net
Cc: Siwelane Lilian (GAU)
Subject: RE: Follow up on amendment reports: review period ends 15 July

Good day,

Will check if the reports have been allocated to any official and will get back to you.

Regards,

From: corne@bokamoso.net [<mailto:corne@bokamoso.net>]
Sent: 13 July 2016 02:51 PM
To: Mhinga Vongani (GAU)
Cc: 'Lizelle Gregory Bokamoso'; liliansiwelanel@dws.gov.za
Subject: Follow up on amendment reports: review period ends 15 July

Good day Vongani,

As per our telephonic discussion, I would like to follow up on two draft amendment reports with ref. no. 002/16-17/E0010 and 002/16-17/E0020 that we submitted on 14 June 2016. The 30 day review period ends 15 July 2016. Could you please indicate the relevant contact person for these reports so that we receive the DWS comments on 15 July 2016.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
*Environmental Assessment Practitioner &
Water Use License Consultant*



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

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Adele drake

From: corne@bokamoso.net
Sent: 04 August 2016 08:27 AM
To: juanita@bokamoso.net
Subject: FW: Follow up on amendment reports: review period ends 15 July

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

From: Etienne Allers [<mailto:EtienneA@joburg.org.za>]
Sent: 14 July 2016 06:00 AM
To: Nozipho Maduse
Cc: Mashudu Ratshitanga; Gift Mabasa; corne@bokamoso.net
Subject: RE: Follow up on amendment reports: review period ends 15 July



Plan your journey
Use alternative routes
Consider using public transport

Alternative routes on www.jra.org.za  

Good morning

The Bokamoso team should wake up. My comments were forwarded to them on 13/07/2016 at 06:00AM.

Regards

Etienne

From: Nozipho Maduse
Sent: 13 July 2016 03:51 PM
To: Etienne Allers
Cc: Mashudu Ratshitanga
Subject: FW: Follow up on amendment reports: review period ends 15 July

FYA

From: Gift Mabasa
Sent: 13 July 2016 03:49 PM
To: Nozipho Maduse
Cc: Etienne Allers
Subject: RE: Follow up on amendment reports: review period ends 15 July

Both of them have not being finalised, official responsible is Etienne and were due today.

Regards

From: Nozipho Maduse
Sent: 13 July 2016 03:45 PM
To: Gift Mabasa
Subject: FW: Follow up on amendment reports: review period ends 15 July

Please advise on status and responsible official.

Regards,

Nozipho

From: corne@bokamoso.net [<mailto:corne@bokamoso.net>]
Sent: 13 July 2016 02:55 PM
To: Nozipho Maduse
Cc: 'Lizelle Gregory Bokamoso'
Subject: Follow up on amendment reports: review period ends 15 July

Good day Nozipho,

I tried calling your office and have not come through. I would like to follow up on two draft amendment reports with ref. no. 002/16-17/E0010 and 002/16-17/E0020 that we submitted on 14 June 2016. The 30 day review period ends 15 July 2016. Could you please indicate the relevant contact person for these reports so that we receive the City of Johannesburg comments on 15 July 2016.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
*Environmental Assessment Practitioner &
Water Use License Consultant*



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

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and/or downloading of any files which are attached to this e-mail message.

Adele drake

From: corne@bokamoso.net
Sent: 04 August 2016 08:28 AM
To: juanita@bokamoso.net
Subject: FW: RE of Ptn 1 of the Farm Waterval 5-IR
Attachments: RE of Ptn 1 of the Farm Waterval 5-IR (006-16-17-E00010).pdf; RE of Ptn 1 of the Farm Waterval 5-IR (006-16-17-E00020).pdf

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

From: Bokamoso [<mailto:reception@bokamoso.net>]
Sent: 14 July 2016 01:51 PM
To: corne@bokamoso.net
Subject: FW: RE of Ptn 1 of the Farm Waterval 5-IR

From: Bokamoso [<mailto:reception@bokamoso.net>] **On Behalf Of** lizelle
Sent: 14 July 2016 01:49 PM
To: lizelled@mweb.co.za
Subject: FW: RE of Ptn 1 of the Farm Waterval 5-IR

From: Etienne Allers [<mailto:EtienneA@joburg.org.za>]
Sent: 13 July 2016 06:01 AM
To: lizelle
Subject: RE of Ptn 1 of the Farm Waterval 5-IR



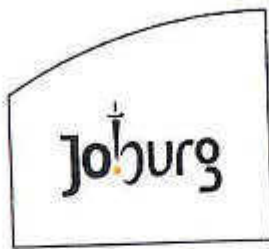
The banner features a blue sky background with a green water hose spraying water. On the left is the Joburg logo with the tagline 'a world class African city'. The central text reads 'Use water sparingly. For our benefit, let's work together.' with a 'Find Out More' button. On the right is the Johannesburg Water logo. At the bottom, there are social media links for www.joburg.org.za, @CityofJoburgZA, and CityofJohannesburg.

Good morning

Find attached my comments.

Kind regards

Etienne Allers
Environmental Impact Management



a world class African city

City of Johannesburg
Environment, Infrastructure & Services Department

118 Jorissen Street
Traduna House
Braamfontein

P.O. Box 1049
Johannesburg
South Africa
2000

Tel +27(0) 11 587 4201
Fax +27(0) 11 587 4244

www.joburg.org.za

UNIT: IMPACT MANAGEMENT & COMPLIANCE MONITORING

Our Reference: EIM-07/02/2016
Contact: Etienne Allers
CoJ Region: A
Tel: (011) 587 4230
Fax: 0866277516

Date: 6 July 2016

Bokamoso Environmental
P.O. Box 11375
Maroelana
0161

Attention: Lizelle Gregory

DRAFT ENVIRONMENTAL AUTHORISATION AMENDMENT REPORT: RE OF PORTION 1 OF THE FARM WATERVAL 5-IR

(GAUT: 006/16-17/E00020)

Your letter and report dated 14 June 2016 refers.

Description of the project:

The purpose of this Amendment Report is to apply for authorisation for the removal of the 30m wetland buffer zone for already approved townships Jukskei View Ext 4 which is in the process of being divided into Jukskei View Ext.74 and Ext.106.

Guidelines, by-laws, Precinct Plans and policies:

The development is in line with the RSDF 2010/11 for Region E, Sub Area 10, which states that the objective of the sub-area is to release land for development, while taking cognisance of environmental sensitivities on the property and protect and enhance the environment in this Sub Area by taking cognisance of environmental sensitivities on the property. After the re-demarcation of the COJ Regions the site now falls in Administrative Region A.

The application site falls within Environmental Management Zone of the GPEMP.

In terms of COJ Biodiversity Sector Plan, the proposed site is mapped as Critical Biodiversity Area. This means that the site is critical for conservation and management of biodiversity within the COJ. It is an ecological and hydrological sensitive zone which includes hydrological systems and Egoli grassland areas that are connected to the conservation priority zone. These areas should form the core of open space connectors and where appropriate accommodate developments that support conservation.

The site is within **Wetland Management Zone 1** as identified in the draft COJ Wetland Protection and Management Plan 2009. The plan identifies this as a priority zone for wetland management. In terms of key management concerns for Wetland Management Zone 1, management of sediments and water quality are both identified as key, while pre-emptive engineering is advocated whereby sufficient space is maintained for the systems to adjust with little active intervention to the changes in hydrology so as to ensure that wetland management objectives are met. The protection of watercourses is crucial.

Evaluation and presentation of mitigation measures:

The following specialist reports are included in the report:

- Flora and Fauna Assessment
- Hydrogeology Based Wetland Buffer Assessment and Management Report

Mitigation measures are proposed for each identified environmental impact. The proposed mitigation measures are also included in an Environmental Management Plan contained in Annexure N and a Rehabilitation and Wetland Management Plan contained in Annexure O.

Departmental Comments:

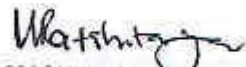
Although the wetland system has been highly compromised through human activities the COJ does not support the relaxation of the wetland buffer as it is not in line with the COJ Catchment Management Policy, 2009.

Should the GDARD decide to relax the buffer the following should be taken into consideration:

1. Any development that impacts on the wetland or the riparian zone requires a Water Use Licence under Section 21 of the National Water Act.
2. As much vegetation growth as possible should be promoted within the wetland areas in order to protect soils, using indigenous vegetation species.
3. Stormwater attenuation structures shall not be allowed within wetland buffers.
4. The design of storm water management systems should be based on Sustainable Urban Drainage Systems (SUDS) and Water Sensitive Urban Design approaches (WSUDS) which enhance natural drainage through permeable surfacing and which integrate landscaping with storm water in line with best practice storm water management. A Stormwater Management Plan is subject for approval by JRA prior to the Site Development Plan stage.
5. Management of stormwater will also need to be designed in such a manner as to prevent negative impacts such as erosion and sedimentation, and to ensure environmental protection of downstream areas. Such plan would be required to meet the following criteria/standards:
 - Peak discharge - no increase in discharge for any event of any duration up to the 25 year RI event.
 - Volume of runoff - no increase up to the annual 10 year rainfall
 - Runoff frequency - no surface runoff for the 1 yr RI event of any duration
 - Water Quality - no deterioration
6. The new Rehabilitation Plan and EMPr which will specifically be applicable to the relaxation of the 30m buffer area and proposed mitigation measures must be regarded as supplementary documentation to the existing Rehabilitation Plan and EMPr which have already been approved and implemented in the former authorisations which have already been approved and implemented in the former authorisations.
7. All landscaping in common areas and streetscaping should use indigenous plants only, with preference given to locally indigenous species where possible.
8. A copy of the Record of Decision showing approval by GDARD must be forwarded to this Department.
9. This Department should be informed of the date that construction on site would commence for the purpose of compliance monitoring.

Should you have any queries please do not hesitate to contact Etienne Allers on the numbers indicated above.

Yours faithfully



MASHUDU RATSHITANGA
ASSISTANT DIRECTOR: ENVIRONMENTAL IMPACT MANAGEMENT
Tel: (011) 587 4225
Fax: 0866277516
E-mail: mashudur@joburg.org.za

Adele drake

From: juanita@bokamoso.net
Sent: 26 April 2016 02:50 PM
To: 'jgrobler@geoscience.org.za'; msebesho;
'asalomon@sahra.org.za';
'maphata.ramphele@gauteng.gov.za'; 'mhingav@dws.gov.za';
'central@eskom.co.za'; 'paia@eskom.co.za'; schmidk; kumen
govender; 'mmpshe@randwater.co.za';
'nkoneigh@randwater.co.za'; 'Noziphom@joburg.org.za';
'lebom@joburg.org.za'; 'loveous.tampane@transnet.net';
CLCC@drdlr.gov.za; 'magezi.mhlanga@drdlr.gov.za';
'Naomi.Baatjes@gauteng.gov.za';
'albert.marumo@gauteng.gov.za';
'Kaye.petersen@gauteng.gov.za';
'Rethabile.Nkosi@gauteng.gov.za';
'andre.vanderwalt@gauteng.gov.za'; 'Nmahlo@jra.org.za';
'steve@moores.co.za'; 'cameron@sentinel360.co.za'
Subject: LP 10 - Public Participation Process
Attachments: Public Notice - LP10 No 1.pdf; Public Notice - LP10 - No 2.pdf

Dear Interested and/or Affected Parties,

Please refer to the attached Public Notices regarding the *Application for Amendment of Authorisation for the proposed Northern Residential Estate Mixed-Use Township on Portions of the Remainder of Portion 1 of the Farm Waterval 5* Project and also for the *Application for Amendment of Authorisation for the proposed Business Township of Portions of the Remaining extent of Portion 1 of the Farm Waterval IR (Section 10), Johannesburg Metropolitan* Project.

Kind Regards/Vriendelike Graete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

Adele drake

From: Louise [lizelle@mweb.co.za]
Sent: 22 August 2016 02:28 PM
To: info
Cc: juanita; corne
Subject: FW: Comment on the Draft Amendment 006/16-17/E0010
Attachments: SDEPT_AGRIC16070811390.pdf

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

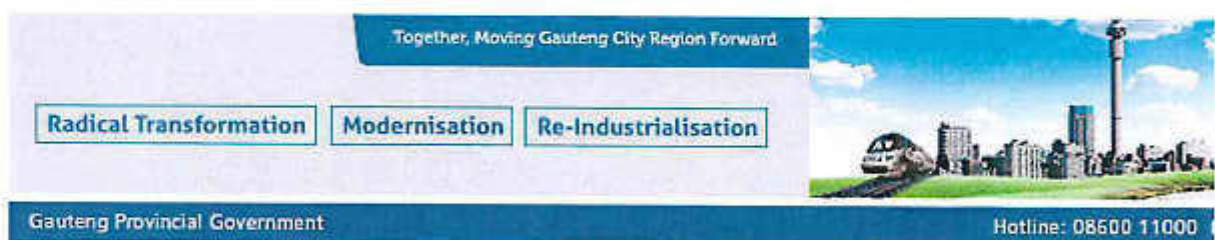
From: NEMUTUDI, ALUWANI (GDARD) [<mailto:Aluwani.Nemutudi@gauteng.gov.za>]
Sent: Monday, 22 August 2016 2:22 PM
To: lizelle@mweb.co.za
Subject: FW: Comment on the Draft Amendment 006/16-17/E0010

From: NEMUTUDI, ALUWANI (GDARD)
Sent: 08 July 2016 11:56 AM
To: lizelle@mweb.co.za
Cc: MUKHOLA, STEVEN (GDARD); MOAGI, WESI (GDARD)
Subject: Comment on the Draft Amendment 006/16-17/E0010

Good Day

Please receive comment on the attachment above.

From: aluwani.nemutudi@gauteng.gov.za [<mailto:aluwani.nemutudi@gauteng.gov.za>]
Sent: 08 July 2016 01:39 PM
To: NEMUTUDI, ALUWANI (GDARD)
Subject: Message from DEPT_AGRIC_3RD_EPIA_W_B363_MIN



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AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Diamond Building, 11 Diagonal Street, Newtown
PO Box 8769, Johannesburg, 2000
Tel: 011 240 2500
Fax: 011 240 2700

Reference: Gaut 006/16-17/E0010
Enquiries: Teboho Leku
Telephone: 011 240 3421
E-mail: Teboho.Leku@gauteng.gov.za

Bokamoso Landscape Architects and Environmental Consultants

P. O. Box 11375
Moroelana
0161

Attention: Lizelle Gregory
Tel No.: 012 346 3810
Fax No.: 012 460 7079
E-mail: lizelleg@mweb.co.za

Dear Madam

COMMENTS ON THE DRAFT AMENDMENT OF ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED MIXED USE DEVELOPMENT ON REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR, CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY

The above -mentioned report received by the Department on 13 June 2016 has reference.

The proposal entails change of a holder of Environmental Authorisation and reduction of a wetland buffer. The amendment will trigger Regulation 29, part 1 and Regulation 31, part 2 of the Environmental Impact Assessment Regulations, 2014 on the above- mentioned site.

The Department will like to comment as follows:

A. Alignment of the activity with applicable legislations and policies

The report has made provision to accommodate all applicable legislation, policies and guidelines. The amendment entails the change of a holder of Environmental Authorisation and reduction of a wetland buffer zone which have an impact in terms of the National Water Act, 1998 (Act No. 36 of 1998), the National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended). The Gauteng Environmental Management Framework, 2015 (GEMF, 2015) identifies the proposed site as Environmental Management Zone 1 (Urban Development Zone) and Environmental Management Zone 2 (High Control Zone within urban development zone) which is characterised by sensitive areas within the urban development zone.

B. Guidelines GDARD requirements

The proposed site has been identified as a Critical Biodiversity Area (CBA) by the Departmental Conservation Plan version 3.3 and is characterised by sensitive environmental features such as Important Area, Orange Listed Plant Habitat, Red Listed Mammals Habitat, Primary Vegetation,

COMMENTS ON THE DRAFT AMENDMENT OF ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED MIXED USE DEVELOPMENT ON RE- OF PORTION 1 OF THE FARM WATERVAL 5 IR, CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY

1

Threatened Ecosystem (Endangered), Buffered Wetland, none Perennial river and SANBI Grassland. The relaxation of Buffer is not in line with the GDARD Requirement for Biodiversity Assessment Version 3 dated March 2014.

C. Alternatives

No alternative outlined in the draft amendment as the authorisation was issued for mixed use township.

D. Significant rating of impacts

The identification and assessment of impacts is provided in the Draft Amendment application. However the relaxation of buffer will lead to the detrimental impact of the environment.

E. Locality map and layout plans or facility illustrations

A legible, A3 facility illustration map with a legend easily linked to activity components must be included in the Final Amendment. The layout plan must indicated buffer zone and the structures that will encroached the wetland buffer zone.

F. EMPr

The attached EMPr is noted and appears adequate to address impacts that may arise as a result of the proposed development.

G. Public participation process

Public Participation must be undertaken in accordance with the EIA Regulations, 2014. The Department of Water and Sanitation, City Johannesburg Metropolitan Municipality and all other relevant stakeholders affected by the proposed development must be notified and proof of notification must be attached on the final Amendment.

Proof of correspondence (site notice, newspaper advertisement, email, fax, delivery etc.) with stakeholders must be included in the Final Amendment. Should you be unable to submit comments, proof of attempts that were made to obtain comments must be submitted to the Department.

H. Any other issues noted

- Legible newspaper advert and site notice must be included on the Amendment application.
- The relaxation of wetland buffer zone is not in line with the GDARD Requirements for Biodiversity Assessments Version 3 dated March 2014.
- The reduction of wetland buffer will put more pressure on the recently rehabilitated watercourse and will have a detrimental impact on the downstream.
- Development on the buffer zone will result on the increase of soil erosion and flooding.
- The request of reducing the buffer will lead to unacceptable negative impact to the environment because the watercourse is feeding to the Jukskei River.
- The initial layout plan and the proposed layout plan of reduction of buffer must be included in the Final Amendment.



- The declaration of change of holder of Environmental Authorisation must be signed by the initial holder not by the proposed new holder.

If you have any queries regarding the contents of this letter, please contact the official of the Department at the number or email address indicated above.

Yours faithfully



Mr. S. Mukhola
Director: Impact Management
Date: 08/7/2016

Adele drake

From: corne@bokamoso.net
Sent: 04 August 2016 08:28 AM
To: juanita@bokamoso.net
Subject: FW: RE of Ptn 1 of the Farm Waterval 5-IR
Attachments: RE of Ptn 1 of the Farm Waterval 5-IR (006-16-17-E00010).pdf; RE of Ptn 1 of the Farm Waterval 5-IR (006-16-17-E00020).pdf

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

From: Etienne Allers [<mailto:EtienneA@joburg.org.za>]
Sent: 14 July 2016 06:03 AM
To: corne@bokamoso.net
Subject: FW: RE of Ptn 1 of the Farm Waterval 5-IR



**M1
Bridge
Maintenance**

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Alternative routes on www.jra.org.za  

Corne

[Find attached the comments.](#)

Regards

Etienne Allers

From: Etienne Allers
Sent: 13 July 2016 06:00 AM
To: 'lizelle'
Subject: RE of Ptn 1 of the Farm Waterval 5-IR

Good morning

[Find attached my comments.](#)

Kind regards

Etienne Allers
Environmental Impact Management

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Our Ref: 9474



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Andrew Salomon
Tel: 021 462 4502
Email: asalomon@sahra.org.za
CaseID: 9474

Date: Monday May 30, 2016
Page No: 1

Letter

In terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999)

Attention: ATTACQ WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC)

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

Thank you for your notification regarding this development.

In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that prior to development it is incumbent on the developer to ensure that a **Heritage Impact Assessment** is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are to be destroyed, must be done as required.

The quickest process to follow for the archaeological component is to contract an accredited specialist (see the web site of the Association of Southern African Professional Archaeologists www.asapa.org.za) to provide a Phase 1 Archaeological Impact Assessment Report. This must be done before any large development takes place.

The Phase 1 Impact Assessment Report will identify the archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites.

Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Palaeontological Desk Top study must be undertaken to assess whether or not the development will impact upon palaeontological resources - or at least a letter of exemption from a Palaeontologist is needed to indicate that this is unnecessary. If the area is deemed sensitive, a full

Our Ref: 9474



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Andrew Salomon
Tel: 021 462 4502
Email: asalomon@sahra.org.za
CaseID: 9474

Date: Monday May 30, 2016
Page No: 2

Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary. **Please note that a nationwide fossil sensitivity map is now available on SAHRIS to assist with this.**

If the property is very small or disturbed and there is no significant site the heritage specialist may choose to send a letter to the heritage authority motivating for exemption from having to undertake further heritage assessments.

Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewsapes must also be assessed.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

Andrew Salomon
Heritage Officer: Archaeology
South African Heritage Resources Agency

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/362350>
(GDARD, Ref. Gaut: 002/08-09/N0993)

Our Ref: 9474



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Andrew Salomon
Tel: 021 462 4502
Email: asalomon@sahra.org.za
CaseID: 9474

Date: Monday May 30, 2016
Page No: 3

Adele drake

From: juanita@bokamoso.net
Sent: 19 July 2016 11:43 AM
To: 'kevin@bmpro.co.za'
Subject: LP 10 - Review Invitation Notice
Attachments: Review Notice.pdf

RE: THE AUTHORIZATION APPLIES IN RESPECT OF ESTABLISHMENT OF THE NORTHERN RESIDENTIAL ESTATE MIXED-USE TOWNSHIP WITHIN THE DEVELOPMENT AREA INDICATED ON THE LAYOUT SUBMITTED (DRAWING NUMBER 050-S-018,0) INCLUDING ASSOCIATED STRUCTURES AND INFRASTRUCTURE AND THE AUTHORISATION 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.

Dear Kevin Gow,

Your telephonic conversation with Bianca Cronjé refers.

Please refer to the attached Review Invitation Notice that was sent out to all the Interested and/or Affected Parties (I&APs).

Our website link is as follows: www.bokamoso.net

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

Adele drake

From: juanita@bokamoso.net
Sent: 28 April 2016 03:29 PM
To: Kevin Gow
Subject: RE: LP 10 - Public Participation Process

Dear Kevin Gow,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed LP10 Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: juanita@bokamoso.net [<mailto:juanita@bokamoso.net>]

Sent: 28 April 2016 03:26 PM

To: Kevin Gow

Subject: RE: LP 10 - Public Participation Process

Dear Kevin Gow,

Please refer to the attached Map.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Kevin Gow [<mailto:kevin@bmpro.co.za>]
Sent: 28 April 2016 03:11 PM
To: juanita@bokamoso.net
Subject: LP 10 - Public Participation Process

Hi Juanita

Please send drawings or link for attached public notice so we can see what you are referring to.

Kind Regards

Kevin Gow
082 852 6440

Adele drake

From: juanita@bokamoso.net
Sent: 28 April 2016 03:26 PM
To: Kevin Gow
Subject: RE: LP 10 - Public Participation Process
Attachments: Aerial Street.jpeg

Dear Kevin Gow,

Please refer to the attached Map.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Kevin Gow [<mailto:kevin@bmpro.co.za>]
Sent: 28 April 2016 03:11 PM
To: juanita@bokamoso.net
Subject: LP 10 - Public Participation Process

Hi Juanita

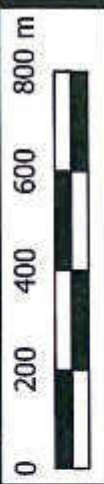
Please send drawings or link for attached public notice so we can see what you are referring to.

Kind Regards

Kevin Gow
082 852 6440



Scale 1:15000



Legend

- Land Parcel 10

Map labels include: Capital Road, Morkel Close, Le Roux Avenue, Stag Road, Ridge Road, Allandale Road, Ben Schoeman Highway, R101, Old Pretoria Main Road, Bekker Road, Magwa Crescent, Jutkei View Drive, Ben Schoeman Highway, Allandale Road, Magwa Crescent, Maxwell Drive, Argabies Falls Boulevard, Victoria Avenue, Bingint Crescent, Raucana Avenue, Kalmunda Avenue, Howick Avenue, der Bijl Avenue, van der Bijl Avenue, and Maxwell Drive.

Adele drake

From: corne@bokamoso.net
Sent: 11 August 2016 10:13 AM
To: Mhinga Vongani (GAU)
Cc: Siwelane Lilian (GAU); Lizelle Gregory Bokomoso; juanita@bokamoso.net
Subject: RE: Follow up on amendment reports: review period ends 15 July

Follow Up Flag: Follow up
Flag Status: Flagged

Good day Vongani,

The emails below refer. Is your department still going to provide comments on both draft reports? We are finalising both reports for submission to the GDARD, and if not received in time we will assume that DWS has no comments. Both draft reports were submitted on 14 June 2016 and the 30 day period for feedback ended on 15 July 2016. Please indicate if DWS will still provide us with comments within the next week.

I trust you find the above in order. Please contact our office should you require further details.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
Environmental Assessment Practitioner &
Water Use License Consultant



Landscape Architects &
Environmental Consultants

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: corne@bokamoso.net [mailto:corne@bokamoso.net]
Sent: 19 July 2016 03:28 PM
To: Mhinga Vongani (GAU)
Cc: Siwelane Lilian (GAU)
Subject: RE: Follow up on amendment reports: review period ends 15 July

Hi Vongani,

Ref No: 006/16-17/E0010: Environmental Authorization Amendment Draft Report For Portions of the Remainder of Portion 1 of the Farm Waterval 51R
Ref No: 006/16-17/E0020: Draft Environmental Authorization Amendment Report For the Proposed Mixed-Nodal Development on Portions of the Remainder of Portion 1 of the Farm Waterval 51R

See attached acknowledgement of receipt.

Kind Regards / Vriendelike Groete,
Corné Niemandt (M.Sc.)
*Environmental Assessment Practitioner &
Water Use License Consultant*



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: corne@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Mhinga Vongani (GAU) [<mailto:MhingaV@dws.gov.za>]
Sent: 19 July 2016 09:50 AM
To: corne@bokamoso.net
Cc: Siwelane Lillian (GAU)
Subject: RE: Follow up on amendment reports: review period ends 15 July

Morning,

Can you please send the full title of the reports submitted.

Regards,
Vongani

From: corne@bokamoso.net [<mailto:corne@bokamoso.net>]
Sent: 19 July 2016 08:45 AM
To: Mhinga Vongani (GAU)
Cc: Siwelane Lillian (GAU)
Subject: RE: Follow up on amendment reports: review period ends 15 July

Good day Vongani,

The email below refers. We have not received any feedback from your Department regarding projects with ref no. 006/16-17/E0010 and 006/16-17/E0020. Please indicate if we will receive anything this week as we are submitting the final report soon.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,
Corné Niemandt (M.Sc.)
*Environmental Assessment Practitioner &
Water Use License Consultant*



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Environmental Consultants**

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36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Mhinga Vongani (GAU) [<mailto:MhingaV@dws.gov.za>]
Sent: 13 July 2016 03:49 PM
To: corne@bokamoso.net
Cc: Siwelane Lilian (GAU)
Subject: RE: Follow up on amendment reports: review period ends 15 July

Good day,

Will check if the reports have been allocated to any official and will get back to you.

Regards,

From: corne@bokamoso.net [<mailto:corne@bokamoso.net>]
Sent: 13 July 2016 02:51 PM
To: Mhinga Vongani (GAU)
Cc: 'Lizelle Gregory Bokamoso'; liliansiwelanel@dws.gov.za
Subject: Follow up on amendment reports: review period ends 15 July

Good day Vongani,

As per our telephonic discussion, I would like to follow up on two draft amendment reports with ref. no. 002/16-17/E0010 and 002/16-17/E0020 that we submitted on 14 June 2016. The 30 day review period ends 15 July 2016. Could you please indicate the relevant contact person for these reports so that we receive the DWS comments on 15 July 2016.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
*Environmental Assessment Practitioner &
Water Use License Consultant*



**Landscape Architects &
Environmental Consultants**

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Adele drake

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Cc: Siwelane Lilian (GAU)
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Follow Up Flag: Follow up
Flag Status: Flagged

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I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
*Environmental Assessment Practioner &
Water Use License Consultant*



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36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Mhinga Vongani (GAU) [<mailto:MhingaV@dws.gov.za>]
Sent: 13 July 2016 03:49 PM
To: corne@bokamoso.net
Cc: Siwelane Lilian (GAU)
Subject: RE: Follow up on amendment reports: review period ends 15 July

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Will check if the reports have been allocated to any official and will get back to you.

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From: corne@bokamoso.net [<mailto:corne@bokamoso.net>]
Sent: 13 July 2016 02:51 PM

To: Mhinga Vongani (GAU)
Cc: 'Lizelle Gregory Bokamoso'; liliansiwelanel@dws.gov.za
Subject: Follow up on amendment reports: review period ends 15 July

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I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
*Environmental Assessment Practitioner &
Water Use License Consultant*



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Adele drake

From: corne@bokamoso.net
Sent: 13 July 2016 11:10 AM
To: shari@denobrega.net
Cc: juanita@bokamoso.net
Subject: RE: LP 10 - Public Participation Process

Follow Up Flag: Follow up
Flag Status: Flagged

Good day Shari,

We have submitted both draft reports to the local authorities and waiting for comments before end of the review period. We are busy finalising the report and will notify you when the final report is available for review. Please refer to our website www.bokamoso.net under **Projects and Useful Links** for both draft reports for review.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)

**Environmental Assessment Practitioner &
Water Use License Consultant**



**Landscape Architects &
Environmental Consultants**

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36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Shari de Nobrega [<mailto:shari@denobrega.net>]
Sent: 12 July 2016 11:16 AM
To: juanita@bokamoso.net
Cc: Kevin Gow; Annette Deppe
Subject: Re: LP 10 - Public Participation Process

Dear Juanita,

Please can you give me an update or status report on the LP10 Project.

Regards
Shari de Nobrega
082 850 4158
shari@denobrega.net
www.pilatesroom.co.za

On 28 Apr 2016, at 8:22 AM, juanita@bokamoso.net wrote:

Dear Shari de Nobrega,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed LP10 Project.

Please refer to the attached Map.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training

<image001.jpg>

**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Shari de Nobrega [<mailto:shari@denobrega.net>]

Sent: 27 April 2016 11:37 AM

To: juanita@bokamoso.net

Cc: Kevin Gow

Subject: Fwd: LP 10 - Public Participation Process

Dear Juanita,

Your attached application refers.

Please provide a detailed map of the stated wetland area and buffer

Please advise whether your client has any intentions for the area in question that necessitates removal of the boundary, and if so what are those intentions?

Regards

Shari de Nobrega

082 850 4158

shari@denobrega.net

www.pilatesroom.co.za

From: <juanita@bokamoso.net>

Date: Tuesday 26 April 2016 at 2:49 PM

To: <jgrobler@geoscience.org.za>, msebesho@geoscience.org.za,
<asalomon@sahra.org.za>, <maphata.ramphele@gauteng.gov.za>, <mhingav@dws.gov.za>,
<central@eskom.co.za>, <paia@eskom.co.za>, schmidk@nra.co.za, kumen govender
<kumen.govender@gauteng.gov.za>, <mmpshe@randwater.co.za>, <nkoneigh@randwater.co.za>,
<Noziphom@joburg.org.za>, <lebom@joburg.org.za>, <loveous.tampane@transnet.net>,
<ClCC@drdlr.gov.za>, <magezi.mhlanga@drdlr.gov.za>, <Naomi.Baatjes@gauteng.gov.za>,

<albert.marumo@gauteng.gov.za>, <Kave.petersen@gauteng.gov.za>,
<Rethabile.Nkosi@gauteng.gov.za>, <andre.vanderwalt@gauteng.gov.za>, <Nmahlo@jra.org.za>,
Stephen Moore <steve@moores.co.za>, Cameron MacKenzie Cameron
<cameron@sentinel360.co.za>

Subject: LP 10 - Public Participation Process

Dear Interested and/or Affected Parties,

Please refer to the attached Public Notices regarding the *Application for Amendment of Authorisation for the proposed Northern Residential Estate Mixed-Use Township on Portions of the Remainder of Portion 1 of the Farm Waterval 5* Project and also for the *Application for Amendment of Authorisation for the proposed Business Township of Portions of the Remaining extent of Portion 1 of the Farm Waterval IR (Section 10), Johannesburg Metropolitan* Project.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training

<Aerial Street.jpeg><Windeed.jpeg>

Adele drake

From: juanita@bokamoso.net
Sent: 28 April 2016 08:21 AM
To: Shari de Nobrega
Subject: RE: LP 10 - Public Participation Process
Attachments: Aerial Street.jpeg; Windeed.jpeg

Dear Shari de Nobrega,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed LP10 Project.

Please refer to the attached Map.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Shari de Nobrega [<mailto:shari@denobrega.net>]
Sent: 27 April 2016 11:37 AM
To: juanita@bokamoso.net
Cc: Kevin Gow
Subject: Fwd: LP 10 - Public Participation Process

Dear Juanita,

Your attached application refers.

Please provide a detailed map of the stated wetland area and buffer

Please advise whether your client has any intentions for the area in question that necessitates removal of the boundary, and if so what are those intentions?

Regards

Shari de Nobrega

082 850 4158

shari@denobrega.net

www.pilatesroom.co.za

From: <juanita@bokamoso.net>

Date: Tuesday 26 April 2016 at 2:49 PM

To: <jgrobler@geoscience.org.za>, msebesho <msebesho@geoscience.org.za>, <asalomon@sahra.org.za>, <maphata.ramphele@gauteng.gov.za>, <mhingav@dws.gov.za>, <central@eskom.co.za>, <paia@eskom.co.za>, schmidk <schmidk@nra.co.za>, kumen govender <kumen.govender@gauteng.gov.za>, <mmpshe@randwater.co.za>, <nkoneigh@randwater.co.za>, <Noziphom@joburg.org.za>, <lebom@joburg.org.za>, <loveous.tampane@transnet.net>, <CLCC@drdlr.gov.za>, <magezi.mhlanga@drdlr.gov.za>, <Naomi.Baatjes@gauteng.gov.za>, <albert.marumo@gauteng.gov.za>, <Kave.petersen@gauteng.gov.za>, <Rethabile.Nkosi@gauteng.gov.za>, <andre.vanderwalt@gauteng.gov.za>, <Nmahlo@ira.org.za>, Stephen Moore <steve@moores.co.za>, Cameron MacKenzie Cameron <cameron@sentinel360.co.za>

Subject: LP 10 - Public Participation Process

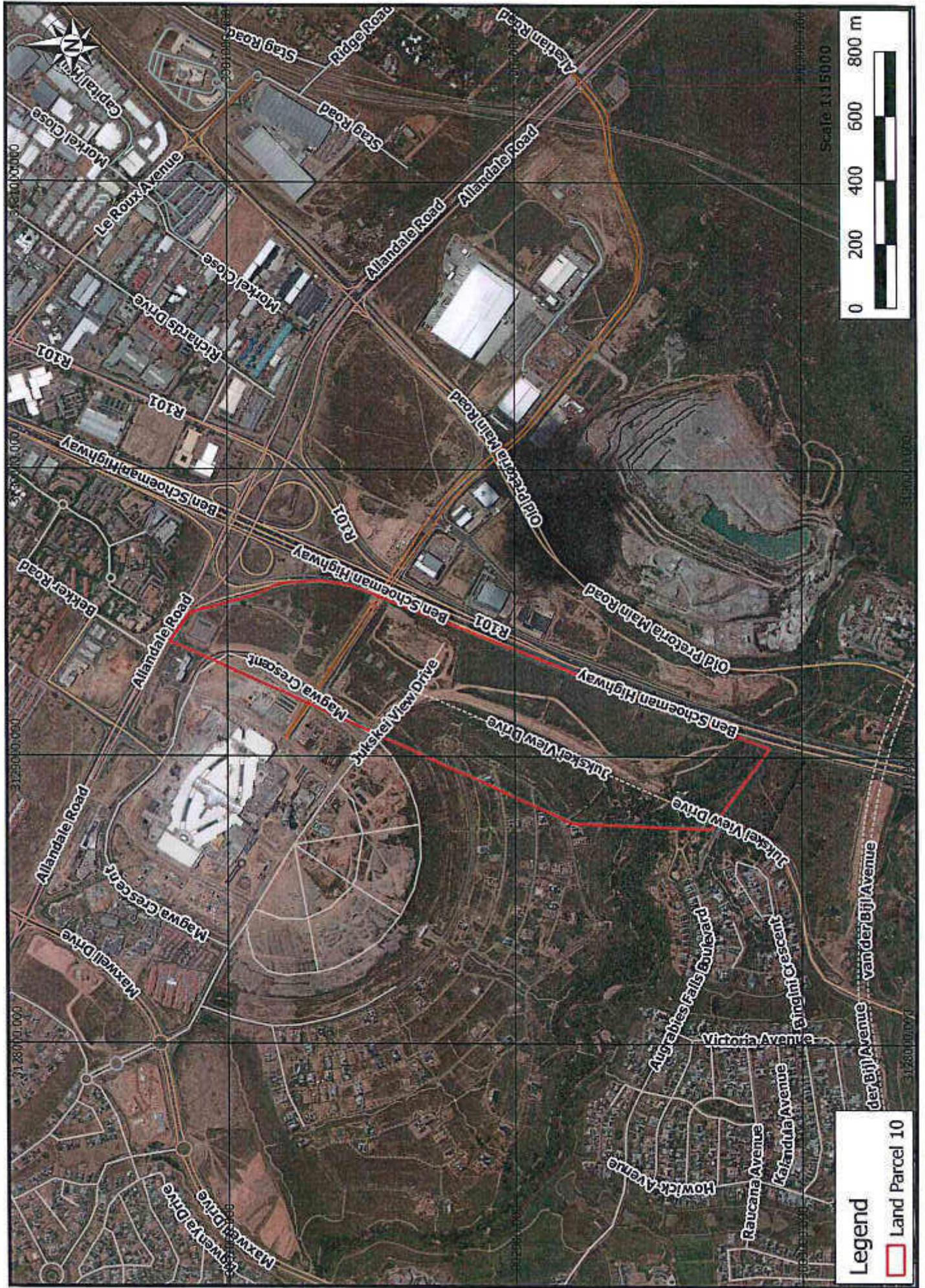
Dear Interested and/or Affected Parties,

Please refer to the attached Public Notices regarding the *Application for Amendment of Authorisation for the proposed Northern Residential Estate Mixed-Use Township on Portions of the Remainder of Portion 1 of the Farm Waterval 5* Project and also for the *Application for Amendment of Authorisation for the proposed Business Township of Portions of the Remaining extent of Portion 1 of the Farm Waterval IR (Section 10), Johannesburg Metropolitan* Project.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



Scale 1:15000



Legend
Land Parcel 10

Adele drake

From: juanita@bokamoso.net
Sent: 28 April 2016 04:04 PM
To: Kevin Gow
Subject: RE: LP 10 - Public Participation Process

Dear Kevin,

We are currently in the Public Participation Process, we will notify all the registered Interested and/or Affected Parties when there will be documents available for review.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Kevin Gow [<mailto:kevin@bmpro.co.za>]
Sent: 28 April 2016 03:39 PM
To: juanita@bokamoso.net
Subject: RE: LP 10 - Public Participation Process

Thanks, is the EIA report available?

From: juanita@bokamoso.net [<mailto:juanita@bokamoso.net>]
Sent: 28 April 2016 15:29
To: Kevin Gow
Subject: RE: LP 10 - Public Participation Process

Dear Kevin Gow,

Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed LP10 Project.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

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36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: juanita@bokamoso.net [<mailto:juanita@bokamoso.net>]

Sent: 28 April 2016 03:26 PM

To: Kevin Gow

Subject: RE: LP 10 - Public Participation Process

Dear Kevin Gow,

Please refer to the attached Map.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Kevin Gow [<mailto:kevin@bupro.co.za>]

Sent: 28 April 2016 03:11 PM

To: juanita@bokamoso.net

Subject: LP 10 - Public Participation Process

Hi Juanita

Please send drawings or link for attached public notice so we can see what you are referring to.

Kind Regards

Kevin Gow
082 852 6440

Adele drake

From: corne@bokamoso.net
Sent: 21 July 2016 03:36 PM
To: shari@denobrega.net
Cc: juanita@bokamoso.net; Lizelle Gregory Bokomoso
Subject: RE: LP 10 - Public Participation Process

Follow Up Flag: Follow up
Flag Status: Flagged

Good day Shari,

My apologies for the delayed response. Regarding your questions:

1. Still waiting for feedback from the engineer regarding the size difference between the 30m buffer zone and 1:100 year flood line
2. All rehabilitation work already implemented has been addressed in Annexure G under section 5. Additional rehabilitation work is discussed in Annexure D. Additional information from the wetland specialist will be included in the final report where the proposed downstream rehabilitation is discussed.
3. The offset for the loss of the wetland is not applicable as wetland functions have already been lost historically (as mentioned in draft report and the wetland specialist report). The wetland buffer currently does not serve any purpose as it has been altered significantly in terms of structure and function. The wetland specialist further stated in his report "many of the functions assigned to the buffer could be performed by the newly established drainage feature". The previous watercourse had minimum ecological functioning which was unsuitable for fauna species as vegetation was washed away due to uncontrolled flooding and eroding of the watercourse. Therefore, vegetation has been established in the rehabilitated wetland to create suitable habitat for aquatic fauna species. The corridor between the rehabilitated wetland and the Jukskei River is still in place, thus there is a link between all watercourses within the Waterfall development.

I trust you find the above in order. Please contact our office should you require further information.

Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)

***Environmental Assessment Practitioner &
Water Use License Consultant***



**Landscape Architects &
Environmental Consultants**

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36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Shari de Nobrega [<mailto:shari@denobrega.net>]
Sent: 18 July 2016 08:39 AM
To: corne@bokamoso.net
Cc: Kevin Gow
Subject: Re: LP 10 - Public Participation Process

Hi Corne,

I tried calling last week to ask a few questions, but perhaps you can answer by email.

1. What is the size difference(in metres) between the 30m buffer zone and 1:100 year flood line?
2. Besides stabilising for soil erosion, what other rehabilitation has taken place?
3. Following your statement of “what will be lost & what will be gained”, have you considered an offset for the loss of the wetland? Perhaps remediation in one of the nearby watercourses (e.g. Jukskei), and/or creating an acceptable link/corridor to exiting greenbelts within the broader Waterfall development.

At face value it appears the application is motivated predominantly by economics and I'm not entirely convinced that sufficient solutions have been provided to offset the environmental loss, not matter its current condition.

I look forward to receiving your input.

Regards
Shari de Nobrega
082 850 4158
shari@denobrega.net

On 13 Jul 2016, at 11:10 AM, corne@bokamoso.net wrote:

Good day Shari,

We have submitted both draft reports to the local authorities and waiting for comments before end of the review period. We are busy finalising the report and will notify you when the final report is available for review. Please refer to our website www.bokamoso.net under **Projects and Useful Links** for both draft reports for review.

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Kind Regards / Vriendelike Groete,

Corné Niemandt (M.Sc.)
Environmental Assessment Practioner &
Water Use License Consultant

<image001.jpg>
Landscape Architects &
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From: Shari de Nobrega [<mailto:shari@denobrega.net>]
Sent: 12 July 2016 11:16 AM
To: juanita@bokamoso.net
Cc: Kevin Gow; Annette Deppe
Subject: Re: LP 10 - Public Participation Process

Dear Juanita,

Please can you give me an update or status report on the LP10 Project.

Regards
Shari de Nobrega
082 850 4158
shari@denobrega.net
www.pilatesroom.co.za

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We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training

<image001.jpg>

**Landscape Architects &
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36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Shari de Nobrega [<mailto:shari@denobrega.net>]
Sent: 27 April 2016 11:37 AM
To: juanita@bokamoso.net
Cc: Kevin Gow
Subject: Fwd: LP 10 - Public Participation Process

Dear Juanita,

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Please advise whether your client has any intentions for the area in question that necessitates removal of the boundary, and if so what are those intentions?

Regards
Shari de Nobrega

082 850 4158

shari@denobrega.net

www.pilatesroom.co.za

From: <juanita@bokamoso.net>

Date: Tuesday 26 April 2016 at 2:49 PM

To: <jgrobler@geoscience.org.za>, **msebesho** <msebesho@geoscience.org.za>, <asalomon@sahra.org.za>, <maphata.ramphele@gauteng.gov.za>, <mhingav@dws.gov.za>, <central@eskom.co.za>, <paia@eskom.co.za>, **schmidk** <schmidk@nra.co.za>, **kumen govender** <kumen.govender@gauteng.gov.za>, <mmpshe@randwater.co.za>, <nkoneigh@randwater.co.za>, <NoziPhom@joburg.org.za>, <lebom@joburg.org.za>, <loveous.tampane@transnet.net>, <CLCC@drdlr.gov.za>, <magezi.mhlanga@drdlr.gov.za>, <Naomi.Baatjes@gauteng.gov.za>, <albert.marumo@gauteng.gov.za>, <Kave.petersen@gauteng.gov.za>, <Rethabile.Nkosi@gauteng.gov.za>, <andre.vanderwalt@gauteng.gov.za>, <Nmahlo@ira.org.za>, **Stephen Moore** <steve@moores.co.za>, **Cameron MacKenzie Cameron** <cameron@sentinel360.co.za>

Subject: LP 10 - Public Participation Process

Dear Interested and/or Affected Parties,

Please refer to the attached Public Notices regarding the *Application for Amendment of Authorisation for the proposed Northern Residential Estate Mixed-Use Township on Portions of the Remainder of Portion 1 of the Farm Waterval 5 Project* and also for the *Application for Amendment of Authorisation for the proposed Business Township of Portions of the Remaining extent of Portion 1 of the Farm Waterval IR (Section 10), Johannesburg Metropolitan Project*.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training

<Aerial Street.jpeg><Windeed.jpeg>

Adele drake

From: juanita@bokamoso.net
Sent: 17 May 2016 09:04 AM
To: Administration - Pravin Amar Development Planners
Subject: RE: Registering as an I&AP for the Development on Portion 1 of the Farm Waterval 5 IR

Dear Pravin,

Thank you for your response, we have registered Pravin Amar Development Planners as an Interested and/or Affected Party for the proposed LP1&6 and LP10 Projects.

We will keep you updated regarding the process in the future.

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



**Landscape Architects &
Environmental Consultants**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: juanita@bokamoso.net | www.bokamoso.net
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Administration - Pravin Amar Development Planners [<mailto:admin@pravinamar.com>]

Sent: 17 May 2016 08:54 AM

To: juanita@bokamoso.net

Subject: Re: Registering as an I&AP for the Development on Portion 1 of the Farm Waterval 5 IR

Dear Juanita,

As per our telephonic conversation;

Please register us as an I&AP for both the projects, as the landfill site we working on is located close to them.

Regards,
Pravin

On Thu, May 5, 2016 at 8:15 AM, <juanita@bokamoso.net> wrote:

Dear Pravin Amar Singh,

Thank you for your response, can you please refer to the Project Name?

Please find the attached Notices, which one do you refer to?

Kind Regards/Vriendelike Groete

Juanita De Beer

Senior Public Participation Consultant & EAP in training



Landscape Architects &

Environmental Consultants

T: [\(+27\)12 346 3810](tel:+27123463810) | F: [\(+27\) 86 570 5659](tel:+27865705659) | E: juanita@bokamoso.net | www.bokamoso.net

36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

From: Administration - Pravin Amar Development Planners [<mailto:admin@pravinamar.com>]

Sent: 04 May 2016 10:19 AM

To: reception@bokamoso.net

Cc: Managing Director -Pravin Amar Professional Services; Pravin Amar

Subject: Re: Registering as an I&AP for the Development on Portion 1 of the Farm Waterval 5 IR

Dear Juanita De Beers,

Please note that we act on behalf of EnviroServ Waste Management. We undertake land use and environmental audits on a monthly basis for the Chloorkop Landfill Site situated approximately 2km from your study area.

Please kindly register us as I&APs. Our details are as follows;

Name of Company: Pravin Amar Development Planners

Contact Person: Pravin Amar Singh

Tel No.: 031 201 7510

Fax No.: 031 201 8939

Email: admin@pravinamar.com

Regards,

Pravin Amar Singh

Annexure Q4

Advertisement placed in the
Star Newspaper



660 Operation Employment

Welder seeks a job. Call: ARC, fluxcap, power tools 07-231-1100

Legals

700 Business Licence

NOTICE IN RESPECT OF A LICENSE APPLICATION IN TERMS OF THE PETROLEUM PRODUCTS ACT, 1977 (ACT NO. 130 OF 1977)

This notice serves to inform persons that may be interested or affected that **WORLDWIDE FIRST CONSULTANCY**, hence referred to as "the applicant", has submitted an application for a **WHOLESALE LICENSE**, application number: **D/2016/04/21/0061**

14 WHELEW ROAD BROWTHORNE MIDRAND

The purpose of the application is for the applicant to be granted a licence to undertake petroleum **WHOLESALE** activities as detailed in the application. Arrangements for viewing the application documentation can be made by contacting the Controller of Petroleum Products at:

• Tel: (011) 323-5040 or • Fax: (011) 323-5040

Any objections to the issuing of a licence in respect of this application, which must clearly state the application number above, must be lodged with the Controller of Petroleum Products within a period of twenty (20) working days from the date of publication of this notice.

Such objections must be lodged at the following physical or postal address:

PHYSICAL ADDRESS: The Controller of Petroleum Products, Department of Energy, 182 Viaage Street, Pretoria.

POSTAL ADDRESS: The Controller of Petroleum Products, Department of Energy, Private Bag 200, Pretoria, 001 (TAR 1034113)

NOTICE IN RESPECT OF A LICENSE APPLICATION IN TERMS OF THE PETROLEUM PRODUCTS ACT, 1977 (ACT NO. 130 OF 1977)

This notice serves to inform persons that may be interested or affected that **BLISSAID TRADING ENTERPRISE (P) - PERSONAL** referred to as "the applicant", has submitted an application for a **WHOLESALE LICENSE**, application number: **D/2016/04/0060**

9 BISHOP DR WEST BUCKLEUCH SANDTON

The purpose of the application is for the applicant to be granted a licence to undertake petroleum **WHOLESALE** activities as detailed in the application. Arrangements for viewing the application documentation can be made by contacting the Controller of Petroleum Products at:

• Tel: (011) 323-5040 or • Fax: (011) 323-5040

Any objections to the issuing of a licence in respect of this application, which must clearly state the application number above, must be lodged with the Controller of Petroleum Products within a period of twenty (20) working days from the date of publication of this notice.

Such objections must be lodged at the following physical or postal address:

PHYSICAL ADDRESS: The Controller of Petroleum Products, Department of Energy, 182 Viaage Street, Pretoria.

POSTAL ADDRESS: The Controller of Petroleum Products, Department of Energy, Private Bag 200, Pretoria, 001 (TAR 1034025)

NOTICE OF RESTORATION OF COMPANY (C.O.S) CORPORATION

Please take notice that GARDNER & CO. (P) LTD (Registration Number: 1900013623/23), previously designated as a dormant company, has applied to the Registrar of Companies for the restoration of the company. Any objection to the application must be lodged with the Registrar of Companies within 31 clear days of the date of publication of this notice.

18th 10341040

OVERHOLD INVESTMENTS 47 CC

Please take notice that Chum Kuznetsov is making application to the Registrar of Companies for the restoration of the company. Any objection to the application must be lodged with the Registrar of Companies within 31 clear days of the date of publication of this notice.

18th 10340200

SERVICE SERVICE

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THE POWER OF PRINT

Advertise your great service in the classified.

One of our services at **www.wegojobs.co.za**

703 First/Final Notices

ESTATE LOTZ JOHAN PHILIP

In the estate of the late JOHAN PHILIP LOTZ, 10 No. 1004215027087. Date of Death: 08 October 2011. Level: Address: 27 Somerham Road, East Valley, Boksburg. Date of Birth: 20/11/19. Estate No: 21315/2012 JHB. The Final and Final Liquidation and Distribution Account in the above estate will be for inspection at the Office of the Master of the High Court, Johannesburg for a period of three weeks from the date of publication named below, at which meeting the Executor, John Lotz, 10 De Hoop, 101 Newmarket Village, Boksburg, Tel: 092 463 3777.

710 Miscellaneous

It should be noted that Peter C. de Vries, making application to the Commissioner of CPC, for the registration of the DOG-FIN COMPANY CC, REGISTRATION NUMBER 200110304423.

It should further be noted that any objection to the registration must be lodged with the Commissioner of CPC within twenty (20) days of the date of publication named below.

Notice of Restoration of Company (C.O.S) Corporation

Please take notice that the directors of Temp Minerals (Pty) Ltd (Registration Number: 20010120407) intend to re-register the company with the Registrar of Companies for the restoration of the company. Any objection to the application must be lodged with the Registrar of Companies within 31 clear days of the date of publication named below.

Notice of Restoration of Company (C.O.S) Corporation

Please take notice that the directors of Temp Minerals (Pty) Ltd (Registration Number: 20010120407) intend to re-register the company with the Registrar of Companies for the restoration of the company. Any objection to the application must be lodged with the Registrar of Companies within 31 clear days of the date of publication named below.

711 Public Notices

INTERESTED AND AFFECTED PARTY NOTIFICATION

APPLICATION FOR AMENDMENT PART 21 OF AUTHORIZATION FOR THE PROPOSED CONSTRUCTION OF AN ACCESS ROAD, OTHER INTERNAL ROADS AND INFRASTRUCTURE ASSOCIATED WITH THE CONSTRUCTION ON A PORTION OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 JR MIDRAND, GAUTENG

In terms of Regulation 32(1) of the 2014 Amended National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations the Applicant, ATTACC WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC), hereby notifies interested and affected parties of an application for Amendment of an authorization. This consolidated and affected party notification represents the formal notification of interested and affected parties of an application for Amendment of an authorization. This consolidated and affected party notification represents the formal notification of interested and affected parties of an application for Amendment of an authorization. This consolidated and affected party notification represents the formal notification of interested and affected parties of an application for Amendment of an authorization.

711 Public Notices

INTERESTED AND AFFECTED PARTY NOTIFICATION

APPLICATION FOR AMENDMENT OF AUTHORIZATION FOR THE PROPOSED NORTHERN RESIDENTIAL ESTATE REDEVELOPMENT TOWNSHIP ON PORTIONS OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 JR MIDRAND, GAUTENG

In terms of Regulation 32(1) of the 2014 Amended National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations the Applicant, ATTACC WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC), hereby notifies interested and affected parties of an application for Amendment of an authorization. This consolidated and affected party notification represents the formal notification of interested and affected parties of an application for Amendment of an authorization. This consolidated and affected party notification represents the formal notification of interested and affected parties of an application for Amendment of an authorization.

711 Public Notices

INTERESTED AND AFFECTED PARTY NOTIFICATION

APPLICATION FOR AMENDMENT OF AUTHORIZATION FOR THE PROPOSED BUSINESS TOWNSHIP ON PORTIONS OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 JR MIDRAND, GAUTENG

In terms of Regulation 32(1) of the 2014 Amended National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations the Applicant, ATTACC WATERFALL INVESTMENT COMPANY (PTY) LTD (AWIC), hereby notifies interested and affected parties of an application for Amendment of an authorization. This consolidated and affected party notification represents the formal notification of interested and affected parties of an application for Amendment of an authorization. This consolidated and affected party notification represents the formal notification of interested and affected parties of an application for Amendment of an authorization.

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711 Public Notices

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711 Public Notices

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Annexure Q5

Interested and affected
parties



Nr	Registered Parties	Contact details	Address
Stakeholders			
1	Council Geo-Science	lgrobler@geoscience.org.za msebesho@geoscience.org.za	
2	SAHRA Gauteng	asalomon@sahra.org.za nndobochani@sahra.org.za	
3	PHRAG	maphata.ramphele@gauteng.gov.za	
4	DWA	mhingav@dws.gov.za	
5	Eskom	central@eskom.co.za paia@eskom.co.za	
6	SANRAL	schmidk@nra.co.za	
7	Gautrans	kumen.govender@gauteng.gov.za	
8	Randwater	mmpshe@randwater.co.za nkoneigh@randwater.co.za	
9	City of Johannesburg		
	Nozipho Maduse	Noziphom@joburg.org.za Tel: 011 587 4225	
	Lebo Molefe	lebom@joburg.org.za	
10	Spoornet	loveous.tampene@transnet.net	
11	Department of Land Claims	CLCC@drrlr.gov.za	
		macezi.mhlanga@drrlr.gov.za	
	Ms Nomfundo Gobodo	Tel: 012 312 8883	
12	Ward Councillor - Ward 106		
	Stephen James Moore	steve@moores.co.za Cell: 084 332 4413	
13	Constituency head Fourways		
	Cameron Mackenzie	cameron@sentinel360.co.za Cell: 083 694 4510	

Nr	Registered Parties	Contact details	Address
Stakeholders			
1	Council Geo-Science	igrobler@geoscience.org.za msebesho@geoscience.org.za	
2	SAHRA Gauteng	asalomon@sahra.org.za nndobochani@sahra.org.za	
3	PHRAG	maphata_ramphele@gauteng.gov.za	
4	DWA	mhingav@dws.gov.za	
5	Eskom	central@eskom.co.za paia@eskom.co.za	
6	SANRAL	schmidk@nra.co.za	
7	Gautrans	kumen.govender@gauteng.gov.za	
8	Randwater	mmpshe@randwater.co.za nkoneigh@randwater.co.za	
9	City of Johannesburg Nozipho Maduse Lebo Molefe	Noziphom@joburg.org.za Tel: 011 587 4225 lebom@joburg.org.za	
10	Spoornet	loveous.tampane@transnet.net	
11	Department of Land Claims Ms Nomfundo Gobodo	CLCC@drdlr.gov.za magezi.mhlanga@drdlr.gov.za Tel: 012 312 8883	
12	Ward Councillor - Ward 106 Stephen James Moore	steve@moores.co.za Cell: 084 332 4413	
13	Constituency head Fourways Cameron Mackenzie	cameron@sentinel360.co.za Cell: 083 694 4510	
14	Economic Development Naomi Baatjes	Naomi.Baatjes@gauteng.gov.za Tel: 011 355 8000	
15	Department of Health Albert Marumo	albert.marumo@gauteng.gov.za Kaye.petersen@gauteng.gov.za	
16	Human Settlements	Rethabile.Nkosi@gauteng.gov.za andre.vanderwalt@gauteng.gov.za	
17	Johannesburg Roads Nils Mahlo	Nmahlo@jra.org.za	
Interested and Affected Parties			
1	Shari de Nobrega	shari@denobrega.net Cell: 082 850 4158	
2	Kevin Gow	kevin@bmpro.co.za Cell: 082 852 6440	
3	Pravin Amar Development Planners Pravin Amar Singh	admin@pravinamar.com Tel No: 031 201 7510	

Annexure Q6

Acknowledgement of receipt
from relevant authorities





agriculture and rural development

Department: Agriculture and Rural Development
GAUTENG PROVINCE

11 Diagonal Street, Diamond Building, Newtown, Johannesburg
P O Box 8769, Johannesburg, 2000

Telephone: (011) 240-2500

Fax: (011) 240-2700

Website: <http://www.gdard.gpg.gov.za>

Reference:	Gaut: 006/16-17/E0010
Enquiries:	Faith Mlambo
Telephone:	(011) 240-3053
Email:	Faith.mlambo@gauteng.gov.za

Bokamoso Environmental Consultants & Landscape Architects cc

Email/Fax. lizelleg@mweb.co.za

Dear Sir / Madam

Amendment Application: The upgrading of Allandale Road (Section between Maxwell Boulevard and the upgrade of Woodmead Drive (Section between Maxwell Boulevard and the proposed K60 alignment)

The Department acknowledges having received the above-mentioned application on 05/05/2016, but final amendments were made on 30/05/2016.

The application has been assigned the reference number Gaut: 006/16-17/E0010. Kindly quote this reference number in any future correspondence in respect of the application.

For status queries on your submission, please contact Boniswa Belot at 011 240 3377 or boniswa.belot@gauteng.gov.za.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours faithfully

Boniswa Belot

Deputy Director: Strategic Administration Support

Date: 02/06/2016

CC: Witswatersrand Estates Limited

Att:

Email/Fax:

Mr HC Bezuidenhout

alex@atterbury.co.za



agriculture and rural development

Department: Agriculture and Rural Development
GAUTENG PROVINCE

11 Diagonal Street, Diamond Building, Newtown, Johannesburg
P O Box 8769, Johannesburg, 2000

Telephone: (011) 240-2500

Fax: (011) 240-2700

Website: <http://www.gdard.gpg.gov.za>

Reference:	Gaut: 006/16-17/E0010
Enquiries:	Falth Mlambo
Telephone:	(011) 240-3053
Email:	Falth.mlambo@gauteng.gov.za

Bokamoso Landscape Architects and Environmental Consultants

Email/Fax. lizelleg@mweb.co.za

Dear Sir / Madam

Amendment Application: 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)

The Department acknowledges having received the above-mentioned application on 05/06/2016.

The application has been assigned the reference number Gaut: 006/16-17/E0010. Kindly quote this reference number in any future correspondence in respect of the application.

For status queries on your submission, please contact Boniswa Belot at 011 240 3377 or boniswa.belot@gauteng.gov.za.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours faithfully

Boniswa Belot

Boniswa Belot

Deputy Director: Strategic Administration Support

Date: 17/06/2016

CC: Waterval Islamic Institute

Att:

Mr I Mia

Email/Fax:

alex@atterbury.co.za

LEBOMBO GARDENS BUILDING
36 LEBOMBO ROAD
ASHLEA GARDENS
0081

P.O. BOX 11375
MARCELANA
0161

Tel: (012) 346 3810
Fax: 086 570 5659
E-mail: lizelleg@mweb.co.za
Website: www.Bokamoso.biz

Bokamoso
ENVIRONMENTAL

Landscape Architects, Environmental Consultants,
Environmental Auditing, Water License Applications

ACKNOWLEDGEMENT OF RECEIPT

GAUTENG DEPARTMENT OF AGRICULTURE
AND RURAL DEVELOPMENT
SUE ADMIN GROUND FLOOR
GROUND FLOOR SUE ADMIN UNIT
11 DIAGONAL STREET
DIAMOND BUILDING
NEWTON JOHANNESBURG
2000

ATTENTION: FAITH MLAMBO

30 May 2016

RE: APPLICATION FOR AMENDMENTS TO THE ENVIRONMENTAL AUTHORISATION FOR THE NORTHERN RESIDENTIAL ESTATE MIXED-USED TOWNSHIP SITUATED ON PORTIONS OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR SITUATED TO THE WEST OF THE N1 FREEWAY, THE STUDY AREA FALLS WITHIN THE AREA OF JURISDICTION OF CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY, MIDRAND, GAUTENG PROVINCE
GAUT: 002/05-06/1476

Please find **3x original copies** of the application for Amendments to the Environmental Authorization for the proposed **Northern Residential Mixed Use Township Development**.

By Hand

Name and Surname: _____
(Receiver)

Date: _____

Where: _____

Signature: _____

Sender:

Bianca Cronjé

REG NO: CK 2010/087490/23
VAT REG NO: 4080260872

BOKAMOSO LANDSCAPE ARCHITECTS AND ENVIRONMENTAL CONSULTANTS CC

MEMBER: Lizelle Gregory

LEBOMBO GARDENS BUILDING
36 LEBOMBO ROAD
ASHLEA GARDENS
0081

P.O. BOX 11375
MAROELANA
0161

Tel: (012) 346 3810
Fax: 086 570 5659
E-mail: lizelleg@mveb.co.za
Website: www.Bokamoso.net



Landscape Architects, Environmental Consultants,
Environmental Auditing, Water License Applications

ACKNOWLEDGEMENT OF RECEIPT

Gauteng Department of Agriculture and
Rural Development
Ground Floor
Diamond Building
11 Diagonal Street
Johannesburg
2000
Tel: 011-420 3053

ATTENTION: Faith Mlambo

13 June 2016

RE: SUBMISSION OF THE ENVIRONMENTAL AUTHORIZATION AMENDMENT DRAFT
REPORT FOR THE PROPOSED DEVELOPMENT ON PORTIONS OF THE REMAINDER OF
PORTION 1 OF THE FARM WATERVAL 51R.

REF: 006/16-17/E00010

Please find 3x hard copies and 2x electronic copies of the Draft Environmental Authorization Amendment Report for the Proposed Development on Portions of the Remainder of Portion 1 of the Farm Waterval 51R.

Please note that GDARD's description on the approved Amended Application refers to "The Upgrading of Allandale Road (Section between Maxwell Boulevard and the upgrade of Woodmead Drive Section between Maxwell Boulevard and the proposed K60 alignment)".

By Hand

Name and Surname: NHLANHLA MAKHATHINI
(Receiver)

Date: 13 June 2016

Where: GDARD

Signature: 

Sender: Lizelle Gregory

REG NO: GK 2010/087490/23
VAT REG NO: 4080260872
BOKAMOSO LANDSCAPE ARCHITECTS AND ENVIRONMENTAL CONSULTANTS CC

MEMBER: Lizelle Gregory

LEBOMBO GARDENS BUILDING
36 LEBOMBO ROAD
ASHLEA GARDENS
0081

P.O. BOX 11375
MAROELANA
0161

Tel: (012) 346 3810
Fax: 086 570 5659
E-mail: lizelleg@mwweb.co.za
Website: www.Bokamoso.biz



Landscape Architects, Environmental Consultants,
Environmental Auditing, Water License Applications

ACKNOWLEDGEMENT OF RECEIPT

City of Johannesburg
Environmental Management
118 Jorrison Street
Traduna Building 6th Floor
Braamfontein
Johannesburg
2000
Tel: 011-587 7516

ATTENTION: NOZIPHO MADUSE

14 June 2016

RE: SUBMISSION OF THE FINAL DRAFT ENVIRONMENTAL AUTHORIZATION
AMENDMENT REPORT FOR THE PROPOSED DEVELOPMENT ON PORTIONS OF THE
REMAINDER OF PORTION 1 OF THE FARM WATERVAL 51R.

REF: 006/16-17/E0010

Please find 1x hard copies and 1x electronic copies of the Draft Environmental Authorization Amendment Report for the Proposed Development on Portions of the Remainder of Portion 1 of the Farm Waterval 51R.

By Hand

Name and Surname: Tembisike Nkosi
(Receiver)

Date: 14/06/2016

Where: Braamfontein

Signature: 

Sender: Lizelle Gregory

LEBOMBO GARDENS BUILDING
36 LEBOMBO ROAD
ASHLEA GARDENS
0081

P.O. BOX 11375
MARCELANA
0161

Tel: (012) 346 3810
Fax: 086 570 5669
E-mail: lizelleg@mweb.co.za
Website: www.Bokamoso.biz

Bokamoso
ENVIRONMENTAL

Landscape Architects, Environmental Consultants,
Environmental Auditing, Water License Applications

ACKNOWLEDGEMENT OF RECEIPT

DEPARTMENT OF WATER & SANITATION
285 Bothongo Building
15th Floor
Francis Baard Street
Pretoria

Tel: 012 392 1411/1503

ATTENTION: Lilian Siwelane/Vongani Mhinga

15 June 2016

RE: SUBMISSION OF THE FINAL DRAFT ENVIRONMENTAL AUTHORIZATION
AMENDMENT REPORT FOR THE PROPOSED DEVELOPMENT ON PORTIONS OF THE
REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 -IR.

Reference No: 006/16-17/E0010

Please find 1 x **electronic copy** of the Draft Environmental Authorization Amendment Report for the proposed development. A hard copy was submitted on Tuesday, 14 June 2016 but with the wrong CD. Please find attached the right electronic copy.

By Hand

Name and Surname: Anna Malenela
(Receiver)

Date: 15 - 06 - 2016

Where: Bothongo Plaza

Signature: Amalemba

Sender: Lizelle Gregory

Annexure Q7

Comments and Issues register



COMMENT AND RESPONSE REPORT-
FOR THE APPLICATION FOR AMENDMENT OF AUTHORISATION FOR THE PROPOSED NORTHERN RESIDENTIAL ESTATE MIXED-USE TOWNSHIP ON PORTION OF THE REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR AND ALSO FOR THE APPLICATION FOR AMENDMENT OF AUTHORISATION FOR THE PROPOSED BUSINESS TOWNSHIP OF PORTIONS OF THE REMAINING EXTENT OF PORTION 1 OF THE FARM WATERVAL IR (SECTION 10), JOHANNESBURG METROPOLITAN.

Issue	Commentator	Response
<p>Your attached application refers.</p> <p>Please provide a detailed map of the stated wetland area and buffer. Please advise whether your client has any intentions for the area in questions that necessitates removal of the boundary, and if so what are those intentions?</p>	<p>Shari de Nobrega shari@denobrega.net</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed LP10 Project.</p> <p>Please refer to the attached Map.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Please send drawings or link for attached public notice so we can see what you are referring to.</p>	<p>Kevin Gow kevin@bmpro.co.za</p>	<p>Thank you for your response, we have registered you as an Interested and/or Affected Party for the proposed LP10 Project.</p> <p>Please refer to the attached map.</p>
<p>Is the EIA report available?</p>		<p>We are currently in the Public Participation Process; we will notify all the registered Interested and/or Affected Parties when there will be documents available for review.</p>
<p>Please note that we act on behalf of EnviroServ Waste Management. We undertake land use and environmental audits on a monthly basis for the Chloorkop Landfill Site situated approximately 2km from your study area. Please kindly register us as I&APs. Our details are as follows: Name of Company: Pravin Amar Development Planners Contact Person: Pravin Amar Singh Tel No: 031 201 7510 Fax No: 031 201 8939 Email: admin@pravinar.com</p>	<p>Pravin Amar Singh Pravin Amar Development Planners admin@pravinar.com</p>	<p>Thank you for your response, can you please refer to the Project Name? Please find the attached Notices, which one do you refer to?</p>

<p>As per telephonic conversation: Please register us as an I&AP for both the projects, as the landfill site we working on is located close to them.</p>		<p>Thank you for your response, we have registered Pravin Amar Development Planners as an Interested and/or Affected Party for the proposed LP1&6 and LP10 Projects.</p> <p>We will keep you updated regarding the process in the future.</p>
<p>Thank you for your notification regarding this development. In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that prior to development it is incumbent on the developer to ensure that a Heritage Impact Assessment is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are to be destroyed, must be done as required.</p> <p>The quickest process to follow for the archaeological component is to contract an accredited specialist (see the web site of the Association of Southern African Professional Archaeologist www.asapa.org.za) to provide a Phase 1 Archaeological Impact Assessment Report. This must be done before any large development takes place. The Phase 1 Impact Assessment Report will identify the archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites.</p>	<p>Andrew Salomon Sahra asalomon@sahra.org.za</p>	<p>Noted.</p> <p>An RoDs have already been issued for the study area, thus previous Heritage Impact Assessments have been done. The current amendment application is for the removal of the wetland buffer.</p> <p>Construction activities have already commenced on the larger study area.</p> <p>It is therefore not considered necessary to conduct a Heritage Impact Assessment for this amendment application.</p> <p>If anything is noted during the construction phase you will be notified immediately.</p>

<p>Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Palaeontological Desk Top study must be undertaken to assess whether or not the development will impact upon palaeontological resources – or at least a letter of exemption from a Palaeontologist is needed to indicated that this is unnecessary. If the area is deemed sensitive, a full Phase 1 Paleontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary. Please note that a nationwide fossil sensitivity map is now available on SAHRIS to assist with this. If the property is very small or disturbed and there is no significant site the heritage specialist may choose to send a leter to the heritage authority motivating for exemption from having to undertake further heritage assessments. Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewsapes must also be assessed.</p>		
After Draft Report Review Process		
<p>Please can you give me an update or status report on the LP10 Project.</p>	<p>Shari de Nobrega shari@denobrega.net</p>	<p>We have submitted both draft reports to the local authorities and waiting for comments before end of the review period. We are busy finalizing the report and will notify you when the final report is available for review. Please refer to our website www.bokamoso.net under Projects and Useful Links for both draft reports for review.</p>
<p>The above mentioned report received by the Department on 13 June 2016 has reference.</p> <p>The proposal entails change of a holder of Environmental Authorization and reduction of a wetland buffer. The amendment will trigger Regulation 29, part 1 and</p>	<p>Teboho Leku Teboho.Leku@gauteng.gov.za GDARD</p>	<p>We received comments back from your department on 8 July 2016 regarding ref no. 006/16-17/E0010 (see attached). Based on the comments, it seems GDARD is neutral or in some cases not in favour of the relaxation of the wetland buffer.</p> <p>Please take note that we have not received any comments from</p>

Regulation 31, part 2 of the Environmental Impact Assessment Regulations, 2014 on the above mentioned site.

The Department will like to comment as follows:

A. Alignment of the activity with applicable legislation and policies

The report has made provision to accommodate all applicable legislation, policies and guidelines. The amendment entails to change of a holder of Environmental Authorization and reduction of a wetland buffer zone which have an impact in terms of the National Water Act, 1998 (Act No. 36 of 1998), the National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended). The Gauteng Environmental Management Framework, 2015 (GEMF, 2015) identifies the proposed site as Environmental Management Zone 1 (Urban Development Zone) and Environmental management Zone 2 (High Control Zone within urban development zone) which is characterized by sensitive areas within the urban development zone.

B. Guidelines GDARD requirements

The proposed site has been identified as a Critical Biodiversity Area (CBA) by the Departmental Conservation Plan version 3.3 and is characterized by sensitive environmental features such as Important Area, Orange Listed Plant Habitat, Red Listed Mammals Habitat, Primary Vegetation, Threatened Ecosystem (Endangered), Buffered Wetland, none Perennial river and SANBI Grassland. The relaxation of Buffer is not in

GDARD with regards to ref no. 006/16-17/E0020. The 30 day period for review ended mid-July.

Response to comments:

A. We recognise that the study area falls in both zone 1 and zone 2 of the Gauteng Environmental Management Framework, 2015 (GEMF, 2015). However, as discussed in Annexure H: *Hydrogeology based wetland buffer assessment and management report*, the wetland has been rehabilitated and due to the widening of the channel “the original buffer area has been altered significantly in terms of structure and functioning”. Thus, “many of the functions assigned to the buffer could be performed by the newly established drainage feature”. Furthermore, it is stated that the rehabilitated wetland “requires very significant and focused storm water planning and intervention for the stabilisation of the watercourse as well as prevention of sediment generation”. Accordingly, the proposed development within the buffer area which falls in Zone 2 should be re-evaluated as the system is artificial, the buffer zone is not considered functional and the ecological sensitivity of the watercourse should be reassessed. It is therefore suggested that only the already rehabilitated wetland should be regarded as Zone 2.

B. Please Take Note: The biodiversity aspect of the study area was discussed in detail during the site visit on 7 June 2016 which included Ms. Albertina Setsiba from Biodiversity Management Directorate (GDARD). Furthermore, during the meeting on 26th of July 2016 Mr. Teboho Leku stated that the conservation department must still give detailed comments on the draft reports. Up until the finalization of this report, Bokamoso has not received detailed comments on either draft reports.

<p>line with the GDARD Requirement for Biodiversity Assessment Version 3 dated March 2014.</p>		<p>We recognise that the larger study area falls in a Critical Biodiversity Area (CBA), specifically in an Important Area, in Primary Vegetation and in a Threatened Ecosystem (Endangered). It should be noted that a RoD has already been approved for the larger study area, and that the terrestrial habitat is not applicable for the current application but only applicable for the reduction of the wetland buffer area. The reduction of the wetland buffer area will not have negative impacts on the connectivity with the Jukskei River and the rehabilitated wetland is still protected, therefore vegetation in the rehabilitated wetland and the fauna species that utilise the rehabilitated wetland is not compromised. The vegetation in the rehabilitated wetland cannot be regarded as primary vegetation and is not part of the mentioned Threatened Ecosystem (only applicable to the terrestrial habitat). The mention of the SANBI Grassland is irrelevant with regards to the reduction of the wetland buffer area. Regarding the Orange Listed Plant Habitat, only <i>Hypoxis hemerocallidea</i> was found on site, but not in the wetland area (Refer to Annexure M1). Therefore, no Red or Orange List plant species were found in the wetland area and is not expected to occur as the wetland was rehabilitated recently. It is not expected that any Red Listed Mammal species occur in the study area (Refer to Annexure M2). Regarding the Buffered Wetland, in Annexure H the wetland specialist mentions that a 30m wetland buffer is ineffectual and provides the necessary reasons for this. The Non-perennial River refers to the rehabilitated wetland on site and should be considered as such accordingly. The relaxation of the wetland buffer has been thoroughly explained by the relevant specialists in Annexure H and Annexure M1-3, including the Storm Water Plan (Annexure J). Based on all the specialist findings, there are no negative effects associated if the relaxation of the wetland buffer is implemented. All the necessary mitigation measures were addressed in the draft amendment report.</p>
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<p>C. Alternatives</p> <p>No alternative outlined in the draft amendment as the authorization was issued for mixed use township.</p> <p>D. Significant rating of impacts</p> <p>The identification and assessment of impacts is provided in the Draft Amendment application. However the relaxation of buffer will lead to the detrimental impact of the environment.</p> <p>E. Locality map and layout plans or facility illustrations</p> <p>A legible, A3 facility illustration map with a legend easily linked to activity components must be included in the Final Amendment. The layout plan must indicated buffer zone and the structures that will encroached the wetland buffer zone.</p> <p>F. EMPr</p> <p>The attached EMPr is noted and appears adequate to address impacts that may arise as a result of the proposed development.</p> <p>G. Public Participation process</p>		<p>C. No alternative was mentioned as a RoD has already been approved for the larger study area. The land uses are not amended for the current application as it is only for the reduction of the wetland buffer.</p> <p>Alternatives for rehabilitation were considered (not mentioned in report) and the best option based on several specialist inputs was implemented.</p> <p>D. Based on the impacts and proposed mitigation measures, the relaxation of the buffer will not have detrimental impacts on the environment if the proposed mitigation measures are followed and implemented correctly. Erosion, stabilisation and siltation has been addressed in the updated wetland report (Annexure H), the previous rehabilitation plan already implemented (Annexure G) and is further addressed in the amended rehabilitation plan (Annexure O). The only other concern is the storm water management which is also adequately addressed by the appointed engineer (Annexure J).</p> <p>E. Find attached a legible locality map and layout plans (Refer to Annexure A).</p> <p>F. We take note of this. (Annexure N)</p> <p>G. As requested, please find attached the proof of notification and</p>
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<p>Public Participation must be undertaken in accordance with the EIA Regulations, 2014. The Department of Water and Sanitation, City Johannesburg Metropolitan Municipality and all other relevant stakeholders affected by the proposed development must be notified and proof of notification must be attached on the final Amendment.</p> <p>Proof of correspondence (site notice, newspaper advertisement, email, fax, delivery etc.) with stakeholders must be included in the Final Amendment. Should you be unable to submit comments, proof of attempts that were made to obtain comments must be submitted to the Department.</p> <p>H. Any other issues noted</p> <ul style="list-style-type: none"> • Legible newspaper advert and site notice must be included on the Amendment application. • The relaxation of wetland buffer zone is not in line with the GDARD Requirements for Biodiversity Assessments Version 3 dated March 2014. • The reduction of wetland buffer will put more pressure on the recently rehabilitated watercourse and will have a detrimental impact on the downstream. 		<p>proof of correspondence with the relevant stakeholders such as the Department of Water and Sanitation, and City of Johannesburg Metropolitan Municipality. (Refer to Annexure Q). No comments were received from The Department of Water and Sanitation (see attached proof of correspondence). Attempts have been made to obtain comments from the DWS.</p> <p>H.</p> <ul style="list-style-type: none"> • Find attached a legible newspaper advert and site notice (Refer to Annexure Q) • Based on the specialist's findings, the storm water management plan and the proposed mitigation measures, the relaxation of the wetland buffer is feasible. Please refer to Annexures H, J, M, N and O. • The wetland report and personal opinion of the wetland specialist is not in agreement with the above-mentioned statement. The wetland buffer currently does not serve any purpose and as stated previously "many of the functions assigned to the buffer could be performed by the newly established drainage feature". Furthermore, an adequate storm water management plan has been included in the report and deals with the additional water pressures on the rehabilitated wetland. As requested by GDARD during the site visit on 7 June 2016, Dr. Johan van der Waals must address the impacts on the wetland downstream. Please refer to Annexure H (i) for his professional opinion. The engineer has also included additional measures downstream
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<ul style="list-style-type: none">• Development on the buffer zone will result on the increase of soil erosion and flooding. • The request of reducing the buffer will lead to unacceptable negative impact to the environment because the watercourse is feeding to the Jukskei River.		<p>of the watercourse to deal with the additional water run-off (Refer to Annexure J). The engineer stated that these additional measures are not required as the upstream system is more than capable of dealing with the additional run-off and prevent negative impacts on the environment, including downstream. The Applicant has already spent approx. R22 million on the upstream rehabilitation of the watercourse to ensure ecological functioning and prevent further degradation of the system. The proposed downstream rehabilitation is estimated to be approx. R 1 million. The Applicant has appointed several highly qualified specialists for the rehabilitation of the watercourse both upstream and downstream.</p> <ul style="list-style-type: none">• The Applicant has appointed several highly qualified specialists, including a wetland and storm water engineer. Both these mentioned specialists have provided their personal and integrated recommendations to prevent soil erosion and flooding of the watercourse. The rehabilitated wetland has already accounted for soil stability and flooding (Refer to Annexure G, Annexure H and Annexure O). Gabion structures and trees have already been implemented regarding stability of the soil. As mentioned above, the engineer has accounted for additional water run-off for development on the buffer zone. The rehabilitated wetland channel is wider than the original watercourse and the necessary measures were taken to deal with flood water during the raining season. Attenuation ponds have been included in the already rehabilitated wetland and will be included downstream of the watercourse (Annexure J).• The current and proposed rehabilitation work in the watercourse prevents soil erosion, flooding and sedimentation run-off into the Jukskei River. Siltation traps
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<ul style="list-style-type: none"> • The initial layout plan and the proposed layout plan of reduction of buffer must be included in the Final Amendment. • The declaration of change of holder of Environmental Authorization must be signed by the initial holder not by the proposed new holder. 		<p>and appropriate measures to prevent erosion and flooding have been implemented upstream and will be implemented downstream. Therefore, the current and proposed rehabilitation work and mitigation measures would not be detrimental to the Jukskei River. The effects of the watercourse downstream are addressed by the wetland specialist in Annexure H (i) and by the storm water engineer in Annexure J.</p> <ul style="list-style-type: none"> • The initial and proposed layout plan was included in the draft report, but a more legible layout plan is included for your convenience in the final report (Refer to Annexure A). • The initial holder of authorization, Mr. Morné C. Wilken has signed the declaration.
	<p>Bokamoso to DWS</p>	<p>13 July 2016</p> <p>As per our telephonic discussion, I would like to follow up on two draft amendment reports with ref no. 002/16-17/E0010 and 002/16-17/E0020 that we submitted on 14 June 2016. The 30 day review period ends 15 July 2016. Could you please indicate the relevant contact person for these reports so that we receive the DWS comments on 15 July 2016. I trust you find the above in order. Please contact our office should you require further information.</p>
<p>13 July 2016</p> <p>Will check if the report have been allocated to any official and will get back to you.</p>	<p>Vongani Mhinga Mhinga@dws.gov.za DWS</p>	<p>19 July 2016</p> <p>The email below refers. We have not received any feedback from your Department regarding projects with ref no. 006/16-17/E0010 and 006/16-17/E0020. Please indicate if we will receive anything this week as we are submitting the final report soon.</p> <p>I trust you find that above in order. Please contact our office should you require further information.</p>

<p>Can you please send the full title of the reports submitted.</p>	<p>19 July 2016</p>	<p><u>Bokamoso to DWS</u> Ref No: 006/16-17/E0010: Environmental Authorization Amendment Draft Report For Portions of the Remainder of Portion 1 of the Farm Waterval 5IR Ref No: 006/16-17/E0020: Draft Environmental Authorization Amendment Report For the Proposed Mixed-Nodal Development on Portions of the Remainder of Portion 1 of the Farm Waterval 5IR. See attached acknowledgement of receipt.</p>
	<p>11 August 2016</p>	<p>The emails below refer. Is your department still going to provide comments on both draft reports? We are finalizing both reports for submission to the GDARD, and if not received in time we will assume that DWS has no comments. Both draft reports were submitted on 14 June 2016 and the 30 day period for feedback ended on 15 July 2016. Please indicate if DWS will still provide us with comments within the next week.</p>
<p>I tried calling last week to ask a few questions, but perhaps you can answer by email.</p> <ol style="list-style-type: none"> 1. What is the size difference (in metres) between the 30m buffer zone and 1:100 year flood line? 2. Beside stabilizing for soil erosion, what other rehabilitation has taken place? 3. Following your statement of “what will be lost and what will be gained”, have you considered an offset for the loss of the wetland? Perhaps remediation in one of the nearby watercourses (e.g. Jukskei), and/or creating an acceptable link/corridor to exiting greenbelts within the broader Waterfall development. <p>At face value it appears the application is motivated predominantly by economics and I’m not entirely convinced that sufficient solutions have been provided to offset the environmental loss, not matter its current condition.</p>	<p>Shari de Nobrega shari@denobrega.net</p>	<p>My apologies for the delayed response. Regarding your questions:</p> <ol style="list-style-type: none"> 1. Still waiting for feedback from the engineer regarding the size difference between the 30m buffer zone and 1:100 year flood line. 2. All rehabilitation work already implemented has been addressed in Annexure G under section 5. Additional rehabilitation work is discussed in Annexure O. Additional information from the wetland specialist will be included in the final report where the proposed downstream rehabilitation is discussed. 3. The offset for the loss of the wetland is not applicable as wetland functions have already been lost historically (as mentioned in draft report and the wetland specialist report). The wetland buffer currently does not serve any purpose as it has been altered significantly in terms of structure and function. The wetland specialist further stated in his report “many of the functions assigned to the buffer could be performed by the newly established drainage feature”. The previous watercourse had minimum ecological functioning

<p>I look forward to receiving your input.</p>		<p>which was unsuitable for fauna species as vegetation was washed away due to uncontrolled flooding and eroding of the watercourse. Therefore, vegetation has been established in the rehabilitated wetland to create suitable habitat for aquatic fauna species. The corridor between the rehabilitated wetland and the Jukskei River is still in place, thus there is a link between all watercourses within the Waterfall development.</p> <p>I trust you find the above in order. Please contact our office should you require further information.</p>
<p>Your letter and report dated 14 June 2016 refers.</p> <p>Description of the project: The purpose of this Amendment Report is to apply for authorization for the removal of the 30m wetland buffer zone for already approved townships Jukskei View Ext 4 which is in the process of being divided into Jukskei View Jukskei View Ext. 89, 91 and 92 to the West of the wetland area.</p> <p>Guidelines, by-laws, Precinct Plans and policies: The development is in line with the RSDF 2010/11 for Region E, Sub Area 10, which states that the objective of the sub-area is to release land for development, while taking cognizance of environmental sensitivities on the property and protect and enhance the environment in this Sub Area by taking cognizance of environmental sensitivities on the property. After the re-demarcation of the COJ Regions the site now falls in Administrative Region A.</p> <p>The application site falls within Environmental Management Zone of the GPMP.</p> <p>In terms of COJ Biodiversity Sector Plan, the proposed site is mapped as Critical Biodiversity Area. This means that the site is critical for conservation and management</p>	<p>Etienne Allers EtienneA@joburg.org.za a City of Johannesburg 7 July 2016</p>	<p>Noted.</p>

of biodiversity within the COJ. It is an ecological and hydrological sensitive zone which includes hydrological systems and Egoli grassland areas that are connectors and where appropriate accommodate developments that support conservation.

The site is within Wetland Management Zone 1 as identified in the draft COJ Wetland Protection and Management Plan 2009. The plan identifies this as a priority zone for wetland management. In terms of key management concerns for Wetland Management Zone 1, management of sediments and water quality are both identified as key, while pre-emptive engineering is advocated whereby sufficient space is maintained for the systems to adjust with little active intervention to the changes in hydrology so as to ensure that wetland management objectives are met. The protection of watercourse is crucial.

Evaluation and presentation of mitigation measures:

The following specialist reports are included in the report:

- Flora and Fauna Assessment;
- Hydropedology Based Wetland Buffer Assessment and Management Report.

Mitigation measures are proposed for each identified environmental impact. The proposed mitigation measures are also included in an Environmental Management Plan contained in Annexure N and a Rehabilitation and Wetland Management Plan contained in Annexure O.

Departmental Comments:

Although the wetland system has been highly compromised through human activities that COJ does not support the relaxation of the wetland buffer as it is not in line with the COJ Catchment Management Policy, 2009.

Bokamoso Response:

According to the wetland specialist a wetland buffer does not exist for this site. Please refer to Annexure H for his full explanation for this. This was agreed upon during a meeting with the GDARD on 22 August 2016.

Should the GDARD decide to relax the buffer the following should be taken into consideration:

1. Any development that impacts on the wetland or the riparian zone requires a Water Use License under Section 21 of the National Water Act.
2. As much vegetation growth as possible should be promoted within the wetland areas in order to protect soils, using indigenous vegetation species.
3. Stormwater attenuation structures shall not be allowed within wetland buffers.
4. The design of storm water management systems should be based on Sustainable Urban Drainage Systems (SUDS) and Water Sensitive Urban Design approaches (WSUDS) which enhance natural drainage through permeable surfacing and which integrate landscaping with storm water in line with best practice storm water management. A Stormwater Management Plan is subject for approval by JRA prior to the Site Development Plan stage.
5. Management of stormwater will also need to be designed in such a manner as to prevent negative impacts such as erosion and sedimentation, and to ensure environmental protection of downstream areas. Such plan would be required to meet the following criteria/standards:
 - Peak discharge – no increase in discharge for any event of any duration up to the 25 year RI event.
 - Volume of runoff – no increase up to the annual 10 year rainfall.
 - Runoff frequency – no surface runoff for the 1 yr RI event of any duration
 - Water Quality – no deterioration.

We take note of this.

<p>6. The new Rehabilitation Plan an EMPr which will specifically be applicable to the relaxation of the 30m buffer area and proposed mitigation measures must be regarded as supplementary documentation to the existing Rehabilitation Plan and EMPr which have already been approved and implemented in the former authorizations which have already been approved and implemented in the former authorizations.</p> <p>7. All landscaping in common areas and streetscaping should use indigenous plants only, with preference given to locally indigenous species where possible.</p> <p>8. A copy of the Record of decision showing approval by GDARD must be forwarded to this Department.</p> <p>9. This Department should be informed of the date that construction on site would commence for the purpose of compliance monitoring.</p>		



Annexure R

GDARD Comments Regarding
Amendment Application





GAUTENG PROVINCE

AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Diamond Building, 11 Diagonal Street, Newtown
PO Box 8769, Johannesburg, 2000
Tel: 011 240 2500
Fax: 011 240 2700

Reference: Gaut 006/16-17/E0010
Enquiries: Teboho Leku
Telephone: 011 240 3421
E-mail: Teboho.Leku@gauteng.gov.za

Bokamoso Landscape Architects and Environmental Consultants
P. O. Box 11375
Moroelana
0161

Attention: Lizelle Gregory
Tel No.: 012 346 3810
Fax No.: 012 460 7079
E-mail: lizelleg@mweb.co.za

Dear Madam

COMMENTS ON THE DRAFT AMENDMENT OF ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED MIXED USE DEVELOPMENT ON REMAINDER OF PORTION 1 OF THE FARM WATERVAL 5 IR, CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY

The above -mentioned report received by the Department on 13 June 2016 has reference.

The proposal entails change of a holder of Environmental Authorisation and reduction of a wetland buffer. The amendment will trigger Regulation 29, part 1 and Regulation 31, part 2 of the Environmental Impact Assessment Regulations, 2014 on the above- mentioned site.

The Department will like to comment as follows:

A. Alignment of the activity with applicable legislations and policies

The report has made provision to accommodate all applicable legislation, policies and guidelines. The amendment entails the change of a holder of Environmental Authorisation and reduction of a wetland buffer zone which have an impact in terms of the National Water Act, 1998 (Act No. 36 of 1998), the National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended). The Gauteng Environmental Management Framework, 2015 (GEMF, 2015) identifies the proposed site as Environmental Management Zone 1 (Urban Development Zone) and Environmental Management Zone 2 (High Control Zone within urban development zone) which is characterised by sensitive areas within the urban development zone.

B. Guidelines GDARD requirements

The proposed site has been identified as a Critical Biodiversity Area (CBA) by the Departmental Conservation Plan version 3.3 and is characterised by sensitive environmental features such as Important Area, Orange Listed Plant Habitat, Red Listed Mammals Habitat, Primary Vegetation,

COMMENTS ON THE DRAFT AMENDMENT OF ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED MIXED USE DEVELOPMENT ON RE- OF PORTION 1 OF THE FARM WATERVAL 5 IR, CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY 1

Threatened Ecosystem (Endangered), Buffered Wetland, none Perennial river and SANBI Grassland. The relaxation of Buffer is not in line with the GDARD Requirement for Biodiversity Assessment Version 3 dated March 2014.

C. Alternatives

No alternative outlined in the draft amendment as the authorisation was issued for mixed use township.

D. Significant rating of impacts

The identification and assessment of impacts is provided in the Draft Amendment application. However the relaxation of buffer will lead to the detrimental impact of the environment.

E. Locality map and layout plans or facility illustrations

A legible, A3 facility illustration map with a legend easily linked to activity components must be included in the Final Amendment. The layout plan must indicated buffer zone and the structures that will encroached the wetland buffer zone.

F. EMPr

The attached EMPr is noted and appears adequate to address impacts that may arise as a result of the proposed development.

G. Public participation process

Public Participation must be undertaken in accordance with the EIA Regulations, 2014. The Department of Water and Sanitation, City Johannesburg Metropolitan Municipality and all other relevant stakeholders affected by the proposed development must be notified and proof of notification must be attached on the final Amendment.

Proof of correspondence (site notice, newspaper advertisement, email, fax, delivery etc.) with stakeholders must be included in the Final Amendment. Should you be unable to submit comments, proof of attempts that were made to obtain comments must be submitted to the Department.

H. Any other issues noted

- Legible newspaper advert and site notice must be included on the Amendment application.
- The relaxation of wetland buffer zone is not in line with the GDARD Requirements for Biodiversity Assessments Version 3 dated March 2014.
- The reduction of wetland buffer will put more pressure on the recently rehabilitated watercourse and will have a detrimental impact on the downstream.
- Development on the buffer zone will result on the increase of soil erosion and flooding.
- The request of reducing the buffer will lead to unacceptable negative impact to the environment because the watercourse is feeding to the Jukskei River.
- The initial layout plan and the proposed layout plan of reduction of buffer must be included in the Final Amendment.



- The declaration of change of holder of Environmental Authorisation must be signed by the initial holder not by the proposed new holder.

If you have any queries regarding the contents of this letter, please contact the official of the Department at the number or email address indicated above.

Yours faithfully



Mr. S. Mukhola
Director: Impact Management
Date: 08/7/2016