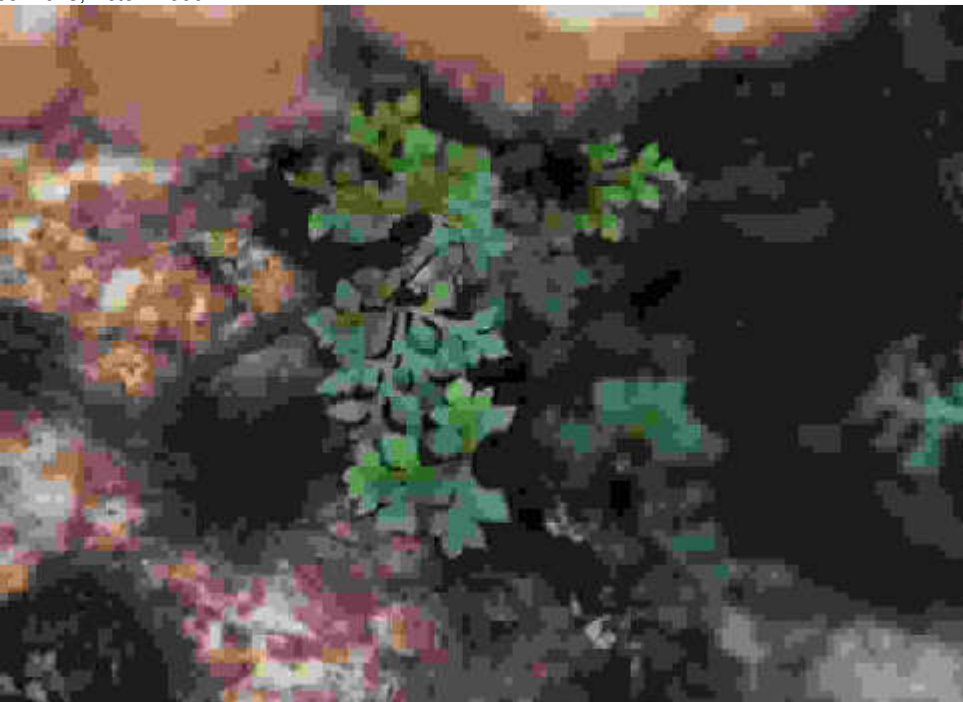




**Photo 1** *Ichneutoma stobbiai*, at the lower slopes of Smuts Koppie, Irene.  
Photo: October 2013, Peter Webb.



**Photo 2** *Cheilanthes deltoidea* subsp. *silicicola* at the study area.  
Photo: R.F. Terblanche.

## 4.2 ASSESSMENT OF PLANT SPECIES OF CONSERVATION CONCERN

**Table 4.2** Threatened plant species of the Gauteng Province that are listed in the **Critically Endangered** category. The list here follows the most recent updated red list of South African plant species (Raimondo *et al.* 2009). No = Plant species is not a resident on the site; Yes = Plant species is a resident at a site.

Species	Status:	Resident at the site
	Global status or national status indicated	
<i>Encephalartos middelburgensis</i>	Critically Endangered	No

**Table 4.3** Threatened plant species of the Gauteng Province that are listed in the **Endangered** category. The list here follows the most recent updated red list of South African plant species (Raimondo *et al.* 2009). No = Plant species is not a resident on the site; Yes = Plant species is a resident at a site.

Species	Status:	Resident at the site
	Global status or national status indicated	
<i>Aloe peglerae</i>	Endangered	No
<i>Brachystelma discoideum</i>	Endangered	No
<i>Delosperma purpureum</i>	Endangered	No
<i>Frithia humilis</i>	Endangered	No
<i>Habenaria mossii</i>	Endangered	No
<i>Holothrix micrantha</i>	Endangered	No

**Table 4.4** Threatened plant species of the Gauteng Province that are listed in the **Vulnerable** category. The list here follows the most recent updated red list of South African plant species (Raimondo *et al.* 2009). No = Plant species is not a resident on the site; Yes = Plant species is a resident at a site.

Species	Status:	Resident at the site
	Global status or national status indicated	
<i>Bowiea volubilis</i> subsp. <i>volubilis</i>	Vulnerable	No
<i>Brachycorythis conica</i> subsp. <i>transvaalensis</i>	Vulnerable	No
<i>Ceropegia decidua</i> subsp. <i>pretoriensis</i>	Vulnerable	No
<i>Cheilanthes deltoidea</i> subsp. <i>silicicola</i>	<b>Vulnerable</b>	<b>Yes</b>
<i>Cineraria longipes</i>	Vulnerable	No
<i>Cucumis humifructus</i>	Vulnerable	No
<i>Delosperma gautengense</i>	Vulnerable	No
<i>Dioscorea sylvatica</i>	Vulnerable	No
<i>Encephalartos lanatus</i>	Vulnerable	No
<i>Eulophia coddii</i>	Vulnerable	No
<i>Khadia beswickii</i>	Vulnerable	No
<i>Melolobium subspicatum</i>	<b>Vulnerable</b>	<b>Yes</b>
<i>Prunus africana</i>	Vulnerable	No

**Table 4.5 Near Threatened** plant species of the Gauteng Province. The list here follows the most recent updated red list of South African plant species (Raimondo *et al.* 2009). No = Plant species is not a resident on the site; Yes = Plant species is a resident at the site.

Species	Status: Global status or national status indicated	Resident at the site
<i>Alepidea attenuata</i>	Near Threatened	No
<i>Adromischus umbraticola</i> subsp. <i>umbraticola</i>	Near Threatened	No
<i>Argyrobium campicola</i>	Near Threatened	No
<i>Argyrobium megarrhizum</i>	Near Threatened	No
<i>Ceropegia turricula</i>	Near Threatened	No
<i>Cineraria austrotransvaalensis</i>	Near Threatened	No
<i>Cleome conrathii</i>	<b>Near Threatened</b>	<b>Yes</b>
<i>Delosperma leendertziae</i>	Near Threatened	No
<i>Drimia sanguinea</i>	Near Threatened	No
<i>Gladiolus robertsoniae</i>	Near Threatened	No
<i>Habenaria barbertoni</i>	Near Threatened	No
<i>Habenaria bicolor</i>	Near Threatened	No
<i>Habenaria kraenzliniana</i>	<b>Near Threatened</b>	<b>Yes</b>
<i>Holothrix randii</i>	Near Threatened	No
<i>Kniphofia typhoides</i>	Near Threatened	No
<i>Lithops leslei</i> subsp. <i>leslei</i>	<b>Near Threatened</b>	<b>Yes</b>
<i>Nerine gracilis</i>	Near Threatened	No
<i>Searsia gracillima</i> var. <i>gracillima</i>	Near Threatened	No
<i>Stenostelma umbelluliferum</i>	Near Threatened	No
<i>Trachyandra erythrorrhiza</i>	Near Threatened	No

**Table 4.6** Least Concern (= not threatened) plant species of the Gauteng Province that are however of particular conservation concern and listed in the **Rare** category. The list here follows the most recent red list of South African plant species (Raimondo *et al.* 2009). No = Plant species is not a resident on the site; Yes = Plant species is a resident at the site.

<b>Species</b>	<b>Status:</b> Global status or national status indicated	<b>Resident at the site</b>
<i>Blepharis uniflora</i>	Rare	No
<i>Frithia pulchra</i>	Rare	No
<i>Gladiolus pole-evansii</i>	Rare	No
<i>Gnaphalium nelsonii</i>	Rare	No

**Table 4.7** Not threatened plant species of the Gauteng Province which are however of particular conservation concern and listed in the **Declining** category. The list here follows the most recent red list of South African plant species (Raimondo *et al.* 2009). No = Plant species is not a resident on the site; Yes = Plant species is a resident at the site.

<b>Species</b>	<b>Status:</b> Global status or national status indicated	<b>Resident at the site</b>
<i>Boophone disticha</i>	<b>Declining</b>	<b>Yes</b>
<i>Callilepis leptophylla</i>	<b>Declining</b>	<b>Yes</b>
<i>Crinum bulbispermum</i>	Declining	No
<i>Crinum macowanii</i>	Declining	No
<i>Drimia altissima</i>	Declining	No
<i>Eucomis autumnalis</i>	Declining	No
<i>Gunnera perpensa</i>	Declining	No
<i>Hypoxis hemerocallidea</i>	<b>Declining</b>	<b>Yes</b>
<i>Ilex mitis</i>	Declining	No

**Table 4.8** Plant species of the Gauteng Province of which the conservation status is uncertain owing to a lack of information and which are listed in the **Data Deficient** category. The list here follows the most recent red list of South African plant species (Raimondo *et al.* 2009). No = Plant species is not a resident on the site; Yes = Plant species is a resident at the site.

<b>Species</b>	<b>Status:</b> Global status or national status indicated	<b>Resident at the site</b>
<i>Lepidium mossii</i>	Data Deficient	No

**Table 4.9** Some of the tree species of the Gauteng Province which are not threatened but listed as **Protected Species** under the National Forests Act No. 84 of 1998, Section 51(1). No = Plant species is not a resident on the site; Yes = Plant species is a resident at the site.

Species	Conservation status	Resident at the site
<i>Boscia albitrunca</i>	Protected	No
<i>Combretum imberbe</i>	Protected	No
<i>Sclerocarya birrea</i>	Protected	No
<i>Vachellia erioloba</i> (= <i>Acacia erioloba</i> )	Protected	No

### 4.3 ASSESSMENT OF VERTEBRATE SPECIES OF CONSERVATION CONCERN

#### 4.3.1 Mammals of particular high conservation priority

**Table 4.10 Threatened** mammal species of the Gauteng Province. Literature sources: Friedman & Daly, (2004), Skinner & Chimimba (2005), Wilson & Reeder (2005). Furthermore golden mole species that are rare and being reported from the adjacent Free State and Limpopo Provinces have also been included.

Species	Red Listed Status	Recorded at site during survey	Likely to be found based on habitat assessment
<i>Chrysoxpalax villosus</i> Rough-haired golden mole	Vulnerable	No	No
<i>Cloeotis percivali</i> Short-eared Trident Bat	Vulnerable/ Near-threatened	No	No
<i>Diceros bicornis</i> Black rhinoceros	Critically Endangered	No	No
<i>Lycaon pictus</i> African wild dog	Endangered	No	No
<i>Loxodonta africana</i> African elephant	Vulnerable	No	No
<i>Mystromys albicaudatus</i> White-tailed mouse	Endangered	No	No

<b><i>Neamblysomus juliana</i></b> Juliana's Golden Mole	Critically Endangered	No	No
<b><i>Panthera leo</i></b> Lion	Vulnerable	No	No
<b><i>Rhinolophus blasii</i></b> Blasi's Horseshoe Bat	Vulnerable	No	No

**Table 4.11** Near threatened mammal species known to occur in the Gauteng Province, Free State Province and North-West Province. Literature sources: Skinner & Chimimba (2005).

<b>Species</b>	<b>Red Listed Status</b>	<b>Recorded at site during survey</b>	<b>Likely to be found based on habitat assessment</b>
<b><i>Ceratotherium simum</i></b> White Rhinoceros	Near-threatened	No	No
<b><i>Manis temminckii</i></b> Ground Pangolin	Lower risk/ Near threatened	No	No

### 4.3.2 Birds of particular high conservation priority

**Table 4.12 Threatened** bird species of the Gauteng Province. Literature sources Barnes (2000), Hockey, Dean & Ryan, P.G. (2005) and Chittenden (2007).

Species	Common name	Red Listed Status	Recorded at site during survey	Likely to be found breeding on site based on being dependant on site
<i>Aegypius tracheliotos</i>	<b>Lappet-faced Vulture</b>	Vulnerable	No	No
<i>Anthropoides paradiseus</i>	<b>Blue Crane</b>	Vulnerable	No	No
<i>Aquila rapax</i>	<b>Tawny Eagle</b>	Vulnerable	No	No
<i>Ardeotis kori</i>	<b>Kori Bustard</b>	Vulnerable	No	No
<i>Botaurus stellaris</i>	<b>Eurasian Bittern</b>	Critically Endangered	No	No
<i>Buphagus africanus</i>	<b>Yellow-billed Oxpecker</b>	Vulnerable	No	No
<i>Circus ranivorus</i>	<b>African Marsh-Harrier</b>	Vulnerable	No	No
<i>Crex crex</i>	<b>Corn Crane</b>	Vulnerable	No	No
<i>Eupodotis senegalensis</i>	<b>White-bellied Korhaan</b>	Vulnerable	No	No
<i>Gorsachius leuconotus</i>	<b>White-backed Night-heron</b>	Vulnerable	No	No
<i>Gyps africanus</i>	<b>White-backed Vulture</b>	Vulnerable	No	No
<i>Gyps coprotheres</i>	<b>Cape Vulture</b>	Vulnerable	No	No
<i>Neophron percnopterus</i>	<b>Egyptian Vulture</b>	Regionally almost extinct	No	No
<i>Neotis denhami</i>	<b>Denham's Bustard</b>	Vulnerable	No	No
<i>Pelecanus rufescens</i>	<b>Pink-backed Pelican</b>	Vulnerable	No	No
<i>Polemaetus bellicosus</i>	<b>Martial Eagle</b>	Vulnerable	No	No
<i>Rhynchops flavirostris</i>	<b>African Skimmer</b>	Endangered	No	No
<i>Sarothrura ayresi</i>	<b>White-winged Flufftail</b>	Critically Endangered	No	No
<i>Therathopius ecaudatus</i>	<b>Bateleur</b>	Vulnerable (in South Africa)	No	No
<i>Tyto capensis</i>	<b>African Grass-Owl</b>	Vulnerable	No	No

**Table 4.13 Near threatened** bird species of the Gauteng Province. Literature sources Barnes (2000), Hockey, Dean & Ryan, P.G. (2005) and Chittenden (2007).

Species	Common name	Red Listed Status	Recorded at site during survey	Likely to be found breeding on site based or being dependant on site
<i>Alcedo semitorquata</i>	<b>Half-collared Kingfisher</b>	Near threatened	No	<b>No*</b>
<i>Anastomus lamelligerus</i>	<b>African Openbill</b>	Near threatened	No	No
<i>Aquila ayresii</i>	<b>Ayres's Hawk-Eagle</b>	Near threatened	No	No
<i>Buphagus erythrorhynchus</i>	<b>Red-Billed Oxpecker</b>	Near threatened	No	No
<i>Charadrius pallidus</i>	<b>Chestnut-banded Plover</b>	Near threatened	No	No
<i>Ciconia nigra</i>	<b>Black Stork</b>	Near threatened	No	No
<i>Circus macrourus</i>	<b>Pallid Harrier</b>	Near threatened	No	No
<i>Falco biarmicus</i>	<b>Lanner Falcon</b>	Near threatened	No	No
<i>Falco peregrinus</i>	<b>Peregrine Falcon</b>	Near threatened	No	No
<i>Glareola nordmanni</i>	<b>Black-winged Pratincole</b>	Near threatened	No	No
<i>Leptoptilos crumeniferus</i>	<b>Marabou Stork</b>	Near threatened	No	No
<i>Mirafra cheniana</i>	<b>Melodious lark</b>	Near threatened	No	No
<i>Mycteria ibis</i>	<b>Yellow-billed Stork</b>	Near threatened	No	No
<i>Pelecanus onocrotalus</i>	<b>Great White Pelican</b>	Near threatened	No	No
<i>Phoenicopterus minor</i>	<b>Lesser Flamingo</b>	Near threatened	No	No
<i>Phoenicopterus ruber</i>	<b>Greater Flamingo</b>	Near threatened	No	No
<i>Pterocles gutturalis</i>	<b>Yellow-throated Sandgrouse</b>	Near threatened	No	No
<i>Rostratula benghalensis</i>	<b>Greater Painted-snipe</b>	Near threatened	No	No
<i>Sagittarius serpentarius</i>	<b>Secretarybird</b>	Near threatened	No	No
<i>Sterna caspia</i>	<b>Caspian Tern</b>	Near threatened	No	No

\* Note that though the Half-Collared Kingfisher, *Alcedo semitorquata*, has been observed in the riparian zone near Irene Market, it has not been found at the riparian zones that runs through the sites in question, as a precaution it is still noted.



### 4.3.3 Reptiles of particular high conservation priority

The following tables list possible presence or absence of threatened reptile or near threatened reptile species in the study area. The Southern African Reptile Conservation Assessment (SARCA) was launched in May 2005 (Branch, Tolley, Cunningham, Bauer, Alexander, Harrison, Turner & Bates, 2006). Its primary aim is to produce a conservation assessment for reptiles of South Africa, Lesotho and Swaziland within the near future (Branch *et al.*, 2006). A full up-dated conservation assessment of reptiles, taking into account the recent IUCN (2001) criteria, can only be used once it becomes available. Alexander & Marais (2007) and Tolley & Burger (2007) give useful indications of present conservation statuses as well as possible red listings of reptile species and subspecies in the near future.

**Table 4.14 Threatened** reptile species in Gauteng Province. Sources: Alexander & Marais (2007). No = Reptile species is not a resident on the site; Yes = Reptile species is found to be resident on the site.

Species	Red Listed Status	Resident at site	Recorded at site during survey	Likely to be found based on habitat assessment
<i>Python natalensis</i> <b>Southern African Python</b>	Vulnerable*	No	No	No

\* Unlikely to retain this threat classification when reassessed (Alexander & Marais, 2007).

**Table 4.15 Near threatened** reptile species in Gauteng Province. Sources: Alexander & Marais (2007). No = Reptile species is not a resident on the site; Yes = Reptile species is found to be resident on the site.

Species	Red Listed Status	Resident at site	Recorded at site during survey	Likely to be found based on habitat assessment
<i>Homoroselaps dorsalis</i> <b>Striped Harlequin Snake</b>	Near threatened	No	No	No

## 4.4 ASSESSMENT OF INVERTEBRATE SPECIES OF CONSERVATION CONCERN

### 4.4.1 Butterflies of particular conservation priority

**Table 4.16 Threatened (Endangered) butterfly species of the Gauteng Province.** Sources: Mecenero *et al.* (2013), Henning, Terblanche & Ball (2009).

Species	Red List Status (Global status)	Recorded at site during survey	Residential status at the site: Confirmed, Highly likely, Likely, Medium possibility, Unlikely, Highly unlikely
<i>Aloeides dentatis dentatis</i> Roodepoort Copper	Endangered	No	Highly unlikely
<i>Chrysochrysis aureus</i> Golden Opal/ Heidelberg Opal	Endangered	No	Highly unlikely
<i>Lepidochrysis praeterita</i> Highveld Blue	Endangered	No	Highly unlikely
<i>Orachrysis mijburghi</i> Mijburgh's Blue	Endangered	No	Highly unlikely

**Table 4.17 Rare butterfly species of the Gauteng Province.** Source: Mecenero *et al.* (2013).

Species	Red List Status	Recorded at site during survey	Residential status at the site: Confirmed, Highly likely, Likely, Medium possibility, Unlikely, Highly unlikely
<i>Colotis celimene amina</i> Lilac Tip	Rare (Low density)	No	Highly unlikely
<i>Lepidochrysis procera</i> Grassland Blue	Rare (Habitat specialist)	No	Highly unlikely
<i>Metisella meninx</i> Marsh Sylph	Rare (Habitat specialist)	No	Highly unlikely
<i>Platylesches dolomitica</i> (Hilltop hopper)	Rare (Low density)	No	Unlikely, but possible

#### 4.4.2 Beetles of particular conservation priority

**Table 4.18** Fruit chafer species (Coleoptera: Scarabaeidae: Cetoninae) in the Gauteng Province and Gauteng Province which are of known high conservation priority.

Species	Red Listed Status	Resident at site	Recorded at site during survey	Likely to be found based on habitat assessment
<i>Ichneustoma stobbiai</i>	Uncertain (Currently listed as Endangered)	Yes*	Yes	Yes
<i>Trichocephala brincki</i>	Uncertain	No	No	No

\* See discussion and conclusions about occurrence of this species at and near Rietvlei 12-14.

#### 4.4.3 Mygalomorph spiders of particular conservation priority

**Table 4.19** Baboon spiders species (Araneae: Teraphosidae) species that are of known high conservation priority in the Gauteng Province and Gauteng Province.

Species	Red Listed Status	Resident at site	Recorded at site during survey	Likely to be found based on habitat assessment
<i>Brachionopus pretoriae</i>	Uncertain	No	No	No

#### 4.4.4 Scorpions of particular conservation priority

**Table 4.20** Rock scorpion species (Scorpiones: Ischnuridae) species that are of known high conservation priority in the Gauteng Province and Gauteng Province.

Species	Red Listed Status	Resident at site	Recorded at site during survey	Likely to be found based on habitat assessment
<i>Hadogenes gracilis</i>	Uncertain	No	No	No
<i>Hadogenes gunningi</i>	Uncertain	No	No	No

## 5 DISCUSSION

### 5.1 HABITAT AND VEGETATION CHARACTERISTICS

An outline of the habitat and vegetation characteristics is given in Table 4.1.

### 5.2 PLANT SPECIES

Extinct, threatened, near threatened and other plant species of high conservation priority in Gauteng Province are listed in Tables 4.2 – 4.9. The presence or not of all the species listed in the tables were investigated during the survey. A number of Threatened and Near Threatened species of plants have been found in certain habitats in the study area of which some fall outside the present sites. These are listed in the map (**Figure 1**), and Section 7, the Conclusion.

### 5.3 VERTEBRATES

#### 5.3.1 Mammals

Table 4.10 and Table 4.11 list the possible presence or absence of threatened mammal species and near threatened mammal species at the site. Literature sources that were used are Friedman & Daly (2004), Skinner & Chimimba (2005) and Wilson & Reeder (2005). Because the site falls outside reserves, threatened species such as the black rhinoceros (*Diceros bicornis*) and the African wild dog (*Lycaon pictus*) are obviously not present. No smaller mammals of particular high conservation significance are likely to be found on the site as well.

#### 5.3.2 Birds

Table 4.12 and Table 4.13 list the possible presence or absence of threatened bird species and near threatened bird species at the site. Literature sources that were mainly consulted are Barnes (2000), Hockey, Dean & Ryan, P.G. (2005) and Chittenden (2007). The site does not appear to form part of any habitat of particular importance for any threatened bird species or any bird species of particular conservation importance. In the case of this study, the presence or not of *Tyto capensis*, African grass-owl, deserves particular reference.

### ***Tyto capensis* (African Grass-owl)**

*Tyto capensis* is listed as regionally vulnerable in South Africa (Hockey, Dean & Ryan 2005). *Tyto capensis* (African Grass-owl) is often found as a resident in treeless areas with damp substrata, mainly marshes and vleis (Hockey, Dean & Ryan 2005). This owl favours patches of tall, rank grass, sedges or weeds (Armstrong, 1991). No *Tyto capensis* was recorded on the site, no particular suitable habitat for this owl species has been found at the site and it is unlikely that the African grass-owl will be present.

### **5.3.3 Reptiles**

Table 4.14 and Table 4.15 list the possible presence or absence of threatened and near threatened reptile species on the site. The Southern African Reptile Conservation Assessment (SARCA) was launched in May 2005 (Branch, Tolley, Cunningham, Bauer, Alexander, Harrison, Turner & Bates, 2006). Its primary aim is to produce a conservation assessment for reptiles of South Africa, Lesotho and Swaziland within the near future (Branch *et al.*, 2006). Therefore a full up-dated conservation assessment of reptiles, taking into account the recent IUCN (2001) criteria, will only be available in the near future. While the conservation statuses of reptile species are under revision Alexander & Marais (2007) as well as Tolley & Burger 2007) give useful indications of possible red listings in the near future. There appears to be no threat to any reptile species of particular high conservation importance if the site is developed.

### **5.3.4 Amphibians**

No frog species that occur in the Gauteng are red listed as threatened species or near threatened species at present. There appears to be no threat to any amphibian species of particular high conservation importance if the site is developed.

## 5.4 INVERTEBRATES

### 5.4.1 BUTTERFLIES

Studies about the vegetation and habitat of threatened butterfly species in South Africa showed that ecosystems with a unique combination of features are selected by these often localised threatened butterfly species (Deutschländer and Bredenkamp 1999; Edge 2002, 2005; Terblanche, Morgenthal & Cilliers 2003; Lubke, Hoare, Victor & Ketelaar 2003; Edge, Cilliers & Terblanche, 2008). Threatened butterfly species in South Africa can then be regarded as bio-indicators of rare ecosystems.

Because invertebrates are often less well known the expected presence or not of threatened butterfly species in the Endangered category (Table 4.16) and other high conservation priority species such as Rare butterfly species (Table 4.17) follows.

#### *5.4.1.1 Assessment of threatened butterfly species (Endangered) in the Gauteng Province*

##### *Aloeides dentatis dentatis (Roodepoort Copper)*

The proposed global red list status for *Aloeides dentatis dentatis* according to the most recent IUCN criteria and categories is Endangered (Mecenero *et al.* 2013). *Aloeides dentatis dentatis* colonies are found where one of its host plants *Hermannia depressa* or *Lotononis eriantha* is present. Larval ant association is with *Lepisiota capensis* (S.F. Henning 1983; S.F. Henning & G.A. Henning 1989). The habitat requirements of *Aloeides dentatis dentatis* are complex and not fully understood yet. See Deutschländer and Bredenkamp (1999) for the description of the vegetation and habitat characteristics of one locality of *Aloeides dentatis* subsp. *dentatis* at Ruimsig, Roodepoort, Gauteng Province. There is not an ideal habitat of *Aloeides dentatis* subsp. *dentatis* on the site and it is unlikely that the butterfly is present at the site.

##### *Chrysochrysis aureus (Golden Opal/ Heidelberg Copper)*

The proposed global red list status for *Chrysochrysis aureus* according to the most recent IUCN criteria and categories is Endangered (Mecenero *et al.* 2013) *Chrysochrysis aureus* (Golden Opal/ Heidelberg Copper) is a resident where the larval host plant, *Clusia pulchella* is present. However, the distribution of the butterfly is much more restricted than that of the larval host plant (S.F. Henning 1983; Terblanche, Morgenthal & Cilliers 2003). One of the reasons for the localised

distribution of *Chrysothrix aureus* is that a specific host ant *Crematogaster liengmei* must also be present at the habitat. Fire appears to be an essential factor for the maintenance of suitable habitat (Terblanche, Morgenthal & Cilliers 2003). Research revealed that *Chrysothrix aureus* (Golden Opal/ Heidelberg Copper) has very specific habitat requirements, which include rocky ridges with a steep slope and a southern aspect (Terblanche, Morgenthal & Cilliers 2003). Owing to a lack of habitat requirements and ideal habitat the presence of the taxon is highly unlikely.

#### *Lepidochrysops praeterita* (Highveld Blue)

The proposed global red list status for *Lepidochrysops praeterita* according to the most recent IUCN criteria and categories is Endangered (G.A. Henning, Terblanche & Ball, 2009; Mecenero *et al.* 2013). *Lepidochrysops praeterita* is a butterfly that occurs where the larval host plant *Ocimum obovatum* (= *Becium obovatum*) is present (Pringle, G.A. Henning & Ball, 1994), but the distribution of the butterfly is much more restricted than the distribution of the host plant. *Lepidochrysops praeterita* is found on selected rocky ridges and rocky hillsides in parts of Gauteng, the extreme northern Free State and the south-eastern Gauteng Province. No ideal habitat appears to be present for the butterfly on the site. It is unlikely that *Lepidochrysops praeterita* would be present on the site and at the footprint proposed for the development.

#### *Orachrysops mijburghi* (Mijburgh's Blue)

The proposed global red status for *Orachrysops mijburghi* according to the most recent IUCN criteria and categories is Endangered (Mecenero *et al.* 2013). *Orachrysops mijburghi* favours grassland depressions where specific *Indigofera* plant species occur (Terblanche & Edge 2007). The Heilbron population of *Orachrysops mijburghi* in the Free State uses *Indigofera evansiana* as a larval host plant (Edge, 2005) while the Suikerbosrand population in Gauteng uses *Indigofera dimidiata* as a larval host plant (Terblanche & Edge 2007). There is no suitable habitat for *Orachrysops mijburghi* on the site and it is unlikely that *Orachrysops mijburghi* would be present on the site.

#### *Conclusion on threatened butterfly species*

There appears to be no threat to any red listed butterfly species if the site is developed.

#### 5.4.1.2 Butterfly species that are not threatened but also of high conservation priority

##### *Colotis celimene amina* (Lilac tip)

*Colotis celimene amina* is listed as Rare (Low density) by Mecenero *et al.* (2013). In South Africa *Colotis celimene amina* is present from Pietermaritzburg in the south and northwards into parts of Kwa-Zulu Natal, Gauteng, Limpopo, Mpumalanga and the North West Provinces (Mecenero *et al.* 2013). Reasons for its rarity are poorly understood. It is highly unlikely that *Colotis celimene amina* would be present at the site.

##### *Lepidochrysops procera* (Savanna Blue)

*Lepidochrysops procera* is listed as Rare (Habitat specialist) by Mecenero *et al.* (2013). *Lepidochrysops procera* is endemic to South Africa and found in Gauteng, KwaZulu-Natal, Mpumalanga and North West (Mecenero *et al.* 2013). Owing to a lack of habitat requirements and ideal habitat the presence of the taxon at the site is highly unlikely.

##### *Metisella meninx* (Marsh Sylph)

Henning and Henning (1989) in the first South African Red Data Book of butterflies' listed *Metisella meninx* as threatened under the former IUCN category Indeterminate. Even earlier in the 20th century Swanepoel (1953) raised concern about vanishing wetlands leading to habitat loss and loss of populations of *Metisella meninx*. According to the second South African Red Data Book of butterflies (Henning, Terblanche & Ball, 2009) the proposed global red list status of *Metisella meninx* has been Vulnerable. During a recent large scale atlassing project the Conservation Assessment of Butterflies of South Africa, Lesotho and Swaziland: Red List and Atlas (Mecenero *et al.* 2013) it was found that more *Metisella meninx* populations are present than thought before. Based on this valid new information, the conservation status of *Metisella meninx* is now regarded as Rare (Habitat specialist) (Mecenero *et al.* 2013). Though *Metisella meninx* is more widespread and less threatened than perceived before, it should be regarded as a localised rare habitat specialist of conservation priority, which is dependent on wetlands with suitable patches of grass at wetlands (Terblanche In prep.). Another important factor to keep in mind for the conservation of *Metisella meninx* is that based on very recent discoveries of new taxa in the group the present *Metisella meninx* is a species complex consisting of at least three taxa (Terblanche In prep., Terblanche & Henning In prep.). The ideal habitat of *Metisella meninx* is treeless marshy areas where *Leersia hexandra* (rice grass) is abundant (Terblanche In prep.).



The larval host plant of *Metisella meninx* is wild rice grass, *Leersia hexandra* (G.A. Henning & Roos, 2001). Owing to a lack of habitat requirements and ideal habitat the presence of the taxon at the site is highly unlikely that the marsh sylph butterfly would be present at the site.

#### *Platylesches dolomitica* (Hilltop Hopper)

*Platylesches dolomitica* is listed as Rare (Low density) by Mecenero et al. (2013). Historically the conservation status of *Platylesches dolomitica* was proposed to be Vulnerable (Henning, Terblanche & Ball 2009). However, this butterfly which is easily overlooked has a wider distribution than perceived before. *Platylesches dolomitica* has a patchy distribution and is found on rocky ledges where *Parinari capensis* occurs, between 1300 m and 1800m (Mecenero et al. 2013, Dobson Pers comm.). At the study area, though not totally impossible, it is unlikely that *Platylesches dolomitica* would be present.

### 5.4.2 FRUIT CHAFER BEETLES

Table 4.18 lists the fruit chafer beetle species (Coleoptera: Scarabaeidae: Cetoniinae) that are of known high conservation priority in the Gauteng Province. At most of the study area no *Ichnestoma stobbiai* or *Trichocephala brincki* were found during the surveys. At most of the study area there appears to be no threat to any of the fruit chafer beetles of particular high conservation priority if the site is developed.

At the northern part of Rietvlei 12-14 and near this site there is an extant population of *Ichnestoma stobbiai*. Outside the site in question a strong population of *Ichnestoma stobbiai* is found on the lower slopes east of the Irene Market Parking Area.

*Ichnestoma stobbiai* is an endangered fruit chafer (Scarabaeidae: Cetoniinae) that occurs in small habitat fragments of South Africa (Kryger & Scholtz, 2008). The adults of this species are short-lived and the females are flightless. Thus, the vagility of these beetles is extremely low (Kryger & Scholtz, 2008). The Cetoniinae (Coleoptera: Scarabaeidae) genus *Ichnestoma* Gory & Percheron, 1833 currently comprises 13 described species and is endemic to South Africa. The species *I. stobbiai* Holm, 1992 is thought to occur in a very restricted area in and around Gauteng Province and all habitat patches should be protected (Kryger & Scholtz, 2008; Deschodt, Scholtz & Kryger, 2009). Nested clade analysis inferred allopatric fragmentation for all significant clades in

*Ichneustoma stobbiai* which reconfirms the original hypothesis that the extant populations represent relicts of a single, formerly widely distributed species (Kryger & Scholtz, 2008). All habitat patches should be protected and a detailed plan for genetic augmentation should be worked out (Kryger & Scholtz, 2008). Unlike most ceteroniine larvae, the larvae of this species usually occur in dolomitic to cherty, well-drained soils (Deschodt, Scholtz & Kryger, 2009). *Ichneustoma* larvae feed under the soil surface and also pupate under the soil surface in specific grassland areas (Perissinotto, Smith & Stobbiai, 1999). All the habitat requirements of *Ichneustoma stobbiai* in these grassland patches are not fully understood yet, but it is normally a rocky area (dolomite to chert: see Deschodt, Scholtz & Kryger, 2009), consisting of grassland with a variety of indigenous grass species. From personal experience few trees occur in such patches, with species diverse grassland that are well developed in terms of succession. Rocks, often well-embedded in the soil, are scattered throughout such areas. There would be a threat to the rare and localised fruit chafer beetle, *Ichneustoma stobbiai* if the development at northern parts of the study area destroys its habitat.

#### **5.4.3 MYGALOMOPH SPIDERS**

Table 4.19 lists the baboon spider species (Araneae: Teraphosidae) that are of known high conservation priority in the Gauteng Province. The assessment of the conservation status of baboon spiders in South Africa is in process but as a pre-caution the species listed in Table 4.18 has been included. None of the above baboon spider species were found on the site, or are likely to be resident at the site. There appears to be no threat to the baboon spider species of high conservation significance if the study site is developed.

#### **5.4.4 SCORPIONS**

Table 4.20 lists the rock scorpion species (Scorpiones: Ischnuridae) that are of known high conservation priority in the Gauteng Province. There appears to be no threat to the rock scorpion species of high conservation priority if the study site is developed.



**Figure 1** Map of sites in the study area (outlined in red) and core sensitive plant areas that are highly sensitive (outlined in yellow). Habitat pockets and connected habitat of the rare and localised beetle *Ichnestoma stobbiai* is outlined in purple and pink.

An outline of the sensitivities given in **Figure 1** follows.

#### **RIETVLEI 12-14:**

Polygon outlined in yellow at the left hand side:

Habitat of *Melolobium subspicatum* (Vulnerable), *Cloeme conrathii* (Near Threatened) and *Habenaria kraenzlineana* (Near Threatened).

Polygon outlined in yellow at the right hand side:

Chert ridge with fern *Cheilanthes deltoidea* subsp. *silicicola* (Vulnerable).

Polygons outlined in pink and light pink:

The light pink outline at indicates a confirmed habitat of the Endangered beetle *Ichnestoma stobbiai* but which does not appear to be as strong as the population east of Irene Market Parking Area (outlined in darker pink). The entire connected habitat is outlined in purple. This entire linked habitat is increasingly compromised by exotic trees and disturbances.

Polygons outlined in green:

Indication of approximate 200 m buffer zone. More exact 200 m buffer zone should be drawn by a mapper.

All the above areas are of high sensitivity.

Green line:

Indication of approximate buffer zone 50 m from the edge of the riparian zone. This should be refined, in this report only an indication. Riparian zone, though considerably and obviously disturbed and infested by alien invasive trees, is of medium-high sensitivity.

Polygon outlined in white:

Medium-low sensitivity.

#### **RIETVLEI 6-9:**

Polygon outlined in white:

Medium-low sensitivity.

#### **RIETVLEI 10, 11, 15:**

Polygon outlined in yellow at bottom of the site on the map:

Habitat of *Lithops leslei* subsp. *leslei* (Near Threatened).

Green line:

Indication of approximate buffer zone 50 m from the edge of the riparian zone. The exact measures should be refined, in this report only an indication. These riparian zones, though conspicuously disturbed are of medium-high sensitivity.

Polygon outlined in white:

Medium-low sensitivity.

## **6 TOWARDS ENVIRONMENTAL MANAGEMENT AND PLANNING OF RIETVLEI 6-15**

The following section builds on all the surveys and reports on the area south of Irene where the consultant was involved, especially of concern that this area may just continue to degradation in the absence of management decisions.

Habitats of threatened plants are in danger most often due to urban developments such as is the case for the Gauteng Province (Pfab & Victor, 2002). Habitat conservation is the key to the conservation of invertebrates such as threatened butterflies (Deutschländer and Bredenkamp 1999; Edge 2002, 2005; Terblanche, Morgenthal & Cilliers 2003; Lubke, Hoare, Victor & Ketelaar 2003; Edge, Cilliers & Terblanche, 2008). Furthermore corridors and linkages may play a significant role in insect conservation (Pryke & Samways, 2003, Samways, 2005).

Urbanisation is a major additional influence on the loss of natural areas (Rutherford & Westfall 1994). In the Gauteng the pressure to develop areas are high since its infrastructure allows for improvement of human well-being in some way. Urban nature conservation issues in South Africa are overshadowed by the goal to improve human well-being, which focuses on aspects such as poverty, equity, redistribution of wealth and wealth creation (Cilliers, Müller & Drewes 2004). Nevertheless the conservation of habitats is the key to invertebrate conservation, especially for those red listed species that are very habitat specific. This is also true for any detailed planning of corridors and buffer zones for invertebrates. Though proper management plans for habitats are not in place, setting aside special ecosystems is in line with the recent Biodiversity Act (2004) of the Republic of South Africa.

Corridors are important to link ecosystems of high conservation priority. Such corridors or linkages are there to improve the chances of survival of otherwise isolated populations (Samways, 2005). How wide should corridors be? The answer to this question depends on the conservation goal and the focal species (Samways, 2005). For an African butterfly assemblage this is about 250m when the corridor is for movement as well as being a habitat source (Pryke and Samways 2003). Hill (1995) found a figure of 200m for dung beetles in tropical Australian forest. In the agricultural context, and at least for some common insects, even small corridors can play a valuable role

(Samways, 2005). Much more research remains to be done to find refined answers to the width of grassland corridors in South Africa. The width of corridors will also depend on the type of development, for instance the effects of the shade of multiple story buildings will be quite different from that of small houses.

To summarise: In practice, as far as residential developments are concerned, the key would be to prioritise and plan according to sensitive species and special ecosystems.

In the case of this study study area the vegetation ranges from pristine patches that are mostly present in the northern parts to extensively transformed at most of the southern parts of the study area. With careful planning unique ecosystems and sensitive species could be conserved if the development is approved. If some areas such as the core sensitive habitats are developed there would be a significant loss of unique local ecosystems and in particular loss of species of conservation concern of which some are in reality threatened species. In other areas there appear to be no loss of any particular sensitive species or particular unique ecosystems. A challenge in the area is that a trend of increasing degradation has been observed in recent years and decisions have to be made on the future of the study area south of Irene.

Riparian zone at the site is a very important conservation corridor and a 50 m buffer zone from the edge of the river is thought to be sufficient to conserve the riparian zone.

## 7 CONCLUSION

A holistic approach was deliberately followed during this study to address present limitations in the consolidation and confirmation of key biodiversity information and consequently biodiversity priorities of the study area.

Extinction risk assessments (“conservation status of species”) are part of a continuous process and changes take place, however the conservation status of the plant species are well refined over recent years and are applied here. There is still some uncertainty regarding the conservation status of the beetle species *Ichnestoma stobbiai*. Nested clade analysis inferred allopatric fragmentation for all significant clades in *Ichnestoma stobbiai* which reconfirms the original hypothesis that the extant populations represent relicts of a single, formerly widely distributed species (Kryger & Scholtz, 2008). All habitat patches should be protected and a detailed plan for genetic augmentation should be worked out (Kryger & Scholtz, 2008). Therefore the habitat of *Ichnestoma stobbiai* at Irene is not a “last known locality scenario” but all the highly patchy and localised habitats are of high conservation priority. GDARD (2014) lists the species as Endangered, which is upheld here.

The study area is a mosaic of which the vegetation and habitat ranges from extensively degraded at Rietvlei 6-9 and Rietvlei 10,11,15 in southern and southmost of the southern parts to pristine patches of grassland in the northern parts. Some of the remaining patches of grassland and rocky outcrops in the study area contain not only Near Threatened species but also Threatened plant and animal species. In other parts of the study area large areas are unfortunately covered by alien invasive Australian *Acacia* species and exotic *Eucalyptus* species (gum trees). Though some of these exotic trees harbour some raptor bird species, these are not threatened and can in the case of this study, not weigh up against loss of indigenous grassland patches which serve as habitat for a number of localised plant and animal species.

A key issue at the study area is the apparent continuous ecological degradation of indigenous grassland and unique indigenous bushclumps in the area, witnessed for one, by the author of this document, in the past decade. If this trend of habitat degradation continues, habitat loss and loss of plant and animal species of particular conservation are most likely scenarios.

Another critical issue is that the entire study area is increasingly isolated and that corridors and buffer zones should be viewed in that context. Grassland and bushclump patches as well as sensitive species to be conserved in the area are unlikely to be linked to the Rietvlei Reserve as a continuous corridor, i.e. any conserved areas are more likely to be viewed in terms of stepping stone corridor models. Buffer zones such as required for species of particular conservation concern is impractical in this case and have already been compromised by extant developments, if not entirely. It may, however, and is then vital to have as great as possible connectivity of conserved areas in the study area itself, south of Irene. Such planning of the entire area falls beyond the scope of this study but should be conducted as soon as possible.

A summary of important considerations at each site follows:

#### **RIETVLEI 12-14**

- Northern parts of the site contain an extant habitat of the Endangered beetle species *Ichnestoma stobbiai*. Population of the beetle *Ichnestoma stobbiai* in this area does not appear to be as strong as the population east of Irene Market Parking Area but could with careful planning and eradication of exotic tree species be connected to the core population lower down. This area and its buffer zone are of particular high conservation priority.
- Vegetation at the site is represented by Carletonville Dolomite Grassland (Gh 15). Carletonville Dolomite Grassland is not listed as a threatened ecosystem according to the National List of Threatened Ecosystems (2011).
- Habitats of *Melolobium subspicatum* (Vulnerable), *Cloeme conrathii* (Near Threatened) and *Habenaria kraenzlineana* (Near Threatened) are present at the Rietvlei 12-14 and this area is of high sensitivity.
- A chert ridge with Chert ridge with fern *Cheilanthes deltoidea* subsp. *silicicola* (Vulnerable) is present at the eastern part of Rietvlei 12-14. Exotic trees from adjacent areas east of the site are encroaching upon this chert ridge and are a threat.
- *Boophone disticha*, *Hypoxis hemerocallidea* and *Callilepis leptophylla* are three plant species that are listed as Declining that occur at the site. There plant species are not Threatened or Near Threatened. A rescue and translocation programme for these plant species are to be implemented, if developments where they occur are approved.



- A perennial stream with riparian zone is present at part of the western boundary of Rietvlei 12-14 but vegetation associated with the water courses is in an obvious degraded state and visibly infested by exotic trees and weeds. These riparian zones are nevertheless important for bird species, which could include the Half-collared Kingfisher and African Finfoot and kept as no-go zones for developments. If exotic trees are removed it should be done in phases to introduce indigenous tree species back again without compromising the woodland riverine habitat these bird species may need.
- Some stands of exotic *Eucalyptus* trees are found at Rietvlei 12-14.

### **RIETVLEI 6-9**

- There appears to be no suitable habitat for *Ichnestoma stobbiai*, no *Ichnestoma stobbiai* was found during the surveys and the presence of *Ichnestoma stobbiai* at Rietvlei 6-9 is highly unlikely.
- There appears to be no threat to any Threatened or Near Threatened plant or animal species in particular if Rietvlei 6-9 is developed.
- *Boophone disticha* and *Hypoxis hemerocallidea*, two plant species that are listed as Declining occur at the site. These plant species are not Threatened or Near Threatened. A rescue and translocation programme for these plant species are to be implemented, if developments where they occur are approved.
- Vegetation is for most of the Rietvlei 6-9 represented by degraded, modified or transformed Carletonville Dolomite Grassland (Gh 15) in for a smaller part east of the R21, Rand Highveld Grassland (Gm 11). Carletonville Dolomite Grassland is not listed as a threatened ecosystem according to the National List of Threatened Ecosystems (2011). Rand Highveld Grassland is listed as Vulnerable (2011). Scope for restoration and conservation of isolated degraded patch of Rand Highveld Grassland between R21 and other developed areas is small.
- Rietvlei 6-9 appears to be increasingly degraded judged from informal dumping, exotic trees and other alien invasive species and numerous tracks.
- In some of the terrestrial parts of the site some large areas are unfortunately covered by alien invasive Australian *Acacia* species and exotic *Eucalyptus* species (gum trees).

## RIETVLEI 10,11,15

- Over a number of years recently, with improving knowledge and also various field surveys, it has now been established that occurrence of the beetle *Ichneustoma stobbiai* as a resident at Rietvlei 10,11 & 15 is unlikely.
- Vegetation at the site is represented by degraded, modified or transformed Carletonville Dolomite Grassland (Gh 15). Carletonville Dolomite Grassland is not listed as a threatened ecosystem according to the National List of Threatened Ecosystems (2011).
- Rietvlei 10,11,15 appears to be increasingly degraded judged from informal dumping, exotic trees and other alien invasive species and numerous tracks.
- There is a cement factory adjacent and near the northern boundary of Rietvlei 10,11,15.
- An area outlined in yellow at the southern part of the site contains the Near Threatened succulent species *Lithops leslei* and a Near Threatened herbaceous species *Cloeme conrathii*. Owing to an apparent increase of tracks, trampling and informal dumping the future of the *Lithops leslei* population is precarious given the status quo, translocation should be considered given the present conditions.
- *Boophone disticha* and *Hypoxis hemerocallidea*, two plant species that are listed as Declining occur at the site. These plant species are not Threatened or Near Threatened. A rescue and translocation programme for these plant species are to be implemented, if developments where they occur are approved.
- A perennial stream with riparian zone is present at Rietvlei 10, 11, 15 but vegetation associated with the water courses is in an obvious degraded state and visibly infested by exotic trees and weeds. These riparian zones are nevertheless important for bird species, which could include the Half-collared Kingfisher and African Finfoot and kept as no-go zones for developments. If exotic trees are removed it should be done in phases to introduce indigenous tree species back again without compromising the woodland riverine habitat these bird species may need.
- Informal settlements in the larger area have expanded so that edge effects and human induced ecological degradation in the area is likely to increase given the present developments in the larger area.

An opportunity presents itself to secure some diverse and highly sensitive grassland south of Irene through careful planning and eradication of large patches of exotic trees. This report removes some uncertainties and gives an indication of areas of particular high sensitivity and suggests some indicators of the conservation of these. The planning and management of the study area falls beyond the scope of this report, however, decisions cannot be postponed any longer, because the area is in a constant state of degradation.

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## ANNEXURE 1: Plants

### List of plant species that have been recorded or are likely to occur in the study area

Plant species are listed alphabetically under life forms that are generally recognizable.  
Plant species marked with an asterisk (\*) are exotic.

Sources: Germishuizen (2003), Manning (2003), Manning (2009), Van Oudtshoorn (1999), Van Wyk (2000), Van Wyk & Malan (1998), Van Wyk & Van Wyk (2013), Crouch, Klopper, Burrows & Burrows (2011), Goldblatt (1986), Goldblatt & Manning (1998), Jacobsen (1983), McMurtry, Grobler, Grobler & Burns (2008), Smit (2008), Van Ginkel *et al.* (2011), Van Jaarsveld (2006), Van Wyk & Smith (2003).

TAXON	COMMON NAMES	FAMILY
<b>PTERIDOPHYTA</b> (MONILOPHYTA)	PTERIDOPHYTES/ TRUE FERNS	
<i>Cheilanthes deltoidea</i> subsp. <i>sillicicola</i>		SINOPTERIDACEAE
<i>Cheilanthes hirta</i>		SINOPTERIDACEAE
<i>Cheilanthes viridis</i> (cf. subsp. <i>glauca</i> )		SINOPTERIDACEAE
<i>Pellaea calomelanos</i>		SINOPTERIDACEAE
<i>Pleopeltis macrocarpa</i>		POLYPODIACEAE
<b>GYMNOSPERMAE</b>	GYMNOSPERMS	
* <i>Pinus</i> species	Pine species	PINACEAE
<b>ANGIOSPERMAE: MONOCOTYLEDONS</b>		
<i>Albuca setosa</i>	Fibrous Slime Lily	HYACINTHACEAE
<i>Aloe davyana</i>	Kgopane	ASPHODELACEAE
<i>Aloe zebrina</i>		ASPHODELACEAE
<i>Alloteropsis semialata</i>	Black-seed Grass	POACEAE
<i>Andropogon schirensis</i>	Hairy Blue Grass	POACEAE
<i>Andropogon schirensis</i>	Stab Grass	POACEAE
<i>Aristida adscensionis</i>	Annual Three-awn	POACEAE
<i>Aristida canescens</i>	Pale Three-awn	POACEAE
<i>Aristida congesta</i> subsp. <i>congesta</i>	Tassel Three-awn	POACEAE
<i>Aristida diffusa</i>	Iron Grass	POACEAE
<i>Aristida scabrivalvis/transvaalensis</i>	Purple Three-awn	POACEAE
<i>Asparagus flavicaulis</i> subsp. <i>flavicaulis</i>		ASPARAGACEAE
<i>Asparagus laricinus</i>	Common Wild Asparagus	ASPARAGACEAE

<b><i>Asparagus suaveolens</i></b>	Wild Asparagus	ASPARAGACEAE
* <b><i>Arundo donax</i></b>	Spanish Reed	POACEAE
<b><i>Bewsia biflora</i></b>	False Love Grass	POACEAE
<b><i>Boophone disticha</i></b>	Poison Bulb	AMARYLLIDACEAE
<b><i>Brachiaria serrata</i></b>	Velvet Signal Grass	POACEAE
* <b><i>Bromus catharticus</i></b>	Rescue Grass	POACEAE
<b><i>Bulbine capitata</i></b>		ASPHODELACEAE
<b><i>Bulbine narcissifolia</i></b>		ASPHODELACEAE
<b><i>Bulbostylis burchellii</i></b>		CYPERACEAE
<b><i>Chloris virgata</i></b>	Feather-top Chloris	POACEAE
<b><i>Chlorophytum fasciculatum</i></b>		ANTHERICAECACEAE
<b><i>Commelina africana</i></b>		COMMELINACEAE
<b><i>Commelina benghalensis</i></b>	Wandering Jew	COMMELINACEAE
<b><i>Crinum graminicola</i></b>	Grass Lily	AMARYLLIDACEAE
<b><i>Cyanotis speciosa</i></b>	Doll's Powderpuff	COMMELINACEAE
<b><i>Cymbopogon caesius</i></b>	Broad-leaved Turpentine Grass	POACEAE
<b><i>Cymbopogon pospischilii</i></b>	Narrow-leaved Turpentine Grass	POACEAE
<b><i>Cynodon dactylon</i></b>	Couch Grass	POACEAE
* <b><i>Cyperus esculentus</i></b>	Yellow nutsedge	CYPERACEAE
<b><i>Cyperus species</i></b>		CYPERACEAE
<b><i>Cyperus obtusiflorus</i></b>		CYPERACEAE
<b><i>Digitaria eriantha</i></b>	Common Finger Grass	POACEAE
<b><i>Digitaria monodactyla</i></b>	Common Finger Grass	POACEAE
<b><i>Digitaria tricholaenoides</i></b>	Purple Finger Grass	POACEAE
<b><i>Diheteropogon amplexans</i></b>	Broad-leaved Bluestem	POACEAE
<b><i>Dipcadi viride</i></b>		LILIACEAE
<b><i>Drimia calcarata</i></b>		HYACINTHACEAE
<b><i>Drimia depressa</i></b>		HYACINTHACEAE
<b><i>Drimia sanguinea</i></b>		HYACINTHACEAE
<b><i>Eleusine coracana</i></b>	Goose Grass	POACEAE
<b><i>Elionurus muticus</i></b>	Wire Grass	POACEAE
<b><i>Eragrostis capensis</i></b>	Heart-seed Love Grass	POACEAE
<b><i>Eragrostis chloromelas</i></b>	Narrow Curly Leaf	POACEAE
<b><i>Eragrostis curvula</i></b>	Weeping Love Grass	POACEAE
<b><i>Eragrostis gummiflua</i></b>	Gum Grass	POACEAE
<b><i>Eragrostis nindensis</i></b>	Wether Love Grass	POACEAE
<b><i>Eragrostis micrantha</i></b>		POACEAE
<b><i>Eragrostis racemosa</i></b>	Narrow Heart Love Grass	POACEAE
<b><i>Eragrostis superba</i></b>	Saw-toothed Love Grass	POACEAE
<b><i>Eriospermum flagelliforme</i></b>		ASPARAGACEAE
<b><i>Eucomis autumnalis</i> subsp. <i>clavata</i></b>	Common Pineapple Lily	HYACINTHACEAE
<b><i>Eulophia hians</i></b>		ORCHIDACEAE

<i>Eulophia welwitschii</i>		ORCHIDACEAE
<i>Eustachys paspaloides</i>	Brown Rhodes Grass	POACEAE
<i>Gladiolus crassifolius</i>	Thick-leaved Gladiolus	IRIDACEAE
<i>Gladiolus permeabilis</i>		IRIDACEAE
<i>Habenaria epipactidea</i>		ORCHIDACEAE
<i>Habenaria kraenzliniana</i>		ORCHIDACEAE
<i>Habenaria nyikana</i>		ORCHIDACEAE
<i>Heteropogon contortus</i>	Spear Grass	POACEAE
<i>Hyparrhenia hirta</i>	Common Thatching Grass	POACEAE
<i>Hypoxis argentea</i>		HYPOXIDACEAE
<i>Hypoxis hemerocallidea</i>	Star Flower	HYPOXIDACEAE
<i>Hypoxis obtusa</i>		HYPOXIDACEAE
<i>Hypoxis rigidula</i>		HYPOXIDACEAE
<i>Imperata cylindrica</i>	Cotton Wool Grass	POACEAE
<i>Kyllinga alba</i>		CYPERACEAE
<i>Ledebouria ovatifolia</i>		HYACINTHACEAE
<i>Ledebouria revoluta</i>		HYACINTHACEAE
<i>Loudetia simplex</i>	Common Russet Grass	POACEAE
<i>Melinis nerviglumis</i>	Bristle-leaved Red Top	POACEAE
<i>Melinis repens</i>	Natal Red Top	POACEAE
<i>Microchloa caffra</i>	Pincushion Grass	POACEAE
<i>Monocymbium cerasiiforme</i>	Boat Grass	POACEAE
<i>Ornithogalum tenuifolium</i>		HYACINTHACEAE
<i>Panicum maximum</i>	Guinea Grass	POACEAE
* <i>Paspalum dilatatum</i>	Dallis Grass	POACEAE
* <i>Pennisetum clandestinum</i>	Kikuyu Grass	POACEAE
<i>Phragmites australis</i>	Common Reed	POACEAE
<i>Pogonarthria squarrosa</i>	Herringbone Grass	POACEAE
<i>Scadoxus puniceus</i>	Red Blood Lily	AMARYLLIDACEAE
<i>Schizachyrium sanguineum</i>	Red Autumn Grass	POACEAE
<i>Schizocarpus nervosus</i>	Wild Squill	HYACINTHACEAE
<i>Scheonoplectus brachyceras</i>		CYPERACEAE
<i>Setaria incrassata</i>	Vlei Bristle Grass	POACEAE
<i>Setaria megaphylla</i>	Broad-leaved Bristle Grass	POACEAE
<i>Setaria nigrirostris</i>		POACEAE
<i>Setaria sphacelata</i> var. <i>sphacelata</i>	Common Bristle Grass	POACEAE
<i>Setaria sphacelata</i> var. <i>torta</i>	Creeping Bristle Grass	POACEAE
* <i>Sorghum halepense</i>	Johnson Grass	POACEAE
<i>Sporobolus africanus</i>	Ratstail Dropseed	POACEAE
<i>Sporobolus festivus</i>	Red Dropseed	POACEAE
<i>Sporobolus fimbriatus</i>	Dropseed Grass	POACEAE
<i>Sporobolus stapfianus</i>	Fibrous Dropseed	POACEAE

<i>Themeda triandra</i>	Red Grass	POACEAE
<i>Trachyandra saltii</i>		ASPHODELACEAE
<i>Trachypogon spicatus</i>	Giant Spear Grass	POACEAE
<i>Tricholaena monachne</i>	Blue-seed Grass	POACEAE
<i>Trichoneura grandiglumis</i>	Small Rolling Grass	POACEAE
<i>Triraphis andropogonoides</i>	Broom Needle Grass	POACEAE
<i>Tristachya biseriata</i>		POACEAE
<i>Tristachya leucothrix</i>	Hairy Trident Grass	POACEAE
<i>Tristachya rehmannii</i>		POACEAE
<i>Tulbaghia leucantha</i>		ALLIACEAE
<i>Typha capensis</i>	Bulrush	TYPHACEAE
<i>Urelytrum agropyroides</i>	Quinine Grass	POACEAE
<i>Urochloa mosambicensis</i>	Bushveld Signal Grass	POACEAE
<i>Xerophyta retinervis</i>	Black-stick Lily/ Monkey's Tail	VELLOZIACEAE
<b>ANGIOSPERMS: DICOTYLEDONS</b>		
* <i>Acacia baileyana</i>	Bailey's Wattle	MIMOSACEAE
<i>Acacia caffra</i>	Common Hook-thorn	MIMOSACEAE
* <i>Acacia dealbata</i>	Silver Wattle	MIMOSACEAE
* <i>Acacia decurrens</i>	Green Wattle	MIMOSACEAE
<i>Acacia karroo</i>	Sweet Thorn	MIMOSACEAE
* <i>Acacia mearnsii</i>	Black Wattle	MIMOSACEAE
<i>Acalypha angustata</i>	Copper leaf	EUPHORBIACEAE
<i>Acalypha caperonioides</i>		EUPHORBIACEAE
<i>Acalypha villicaulis</i>	Heart-leaved Brooms and Brushes	EUPHORBIACEAE
* <i>Acanthospermum australe</i>	Prostrate Starbur	ASTERACEAE
* <i>Achyranthes aspera</i>	Chaff Flower	AMARANTHACEAE
* <i>Alternanthera pungens</i>	Duwweltjie	AMARANTHACEAE
<i>Alysicarpus rugosus</i> subsp. <i>perrennirufus</i>		FABACEAE
* <i>Amaranthus hybridus</i>	Pigweed	AMARANTHACEAE
<i>Ancylobotrys capensis</i>	Rock Wild Apricot	APOCYNACEAE
* <i>Araujia sericifera</i>	Moth catcher	ASCLEPIADACEAE
<i>Anthospermum rigidum</i> subsp. <i>rigidum</i>		RUBIACEAE
* <i>Argemone ochroleuca</i>	White-flowered Mexican poppy	PAPAVERACEAE
<i>Asclepias adscendens</i>		APOCYNACEAE
<i>Aster harveyanus</i>		ASTERACEAE
<i>Barleria macrostegia</i>		ACANTHACEAE
<i>Berkheya radula</i>		ASTERACEAE
* <i>Bidens bipinnata</i>	Spanish blackjack	ASTERACEAE
* <i>Bidens pilosa</i>	Common blackjack	ASTERACEAE

* <i>Campuloclinium macrocephalum</i>	Pom Pom Weed	ASTERACEAE
<i>Canthium gilfillanii</i>	Velvet Rock Alder	RUBIACEAE
<i>Celtis africana</i>	White Stinkwood	CELTIDACEAE
* <i>Celtis australis/ Celtis occidentalis/ Celtis sinensis</i>	Exotic Stinkwoods	CELTIDACEAE
<i>Chaetacanthus costatus</i>		ACANTHACEAE
<i>Chamaecrista capensis/ comosa</i>		CAESALPINIACEAE
<i>Chamaesyce inaequilatera</i>	Smooth Creeping Milkweed	EUPHORBIACEAE
* <i>Chenopodium album</i>	White Goosefoot	CHENOPODIACEAE
* <i>Cirsium vulgare</i>	Scotch Thistle	ASTERACEAE
<i>Clematis brachiata</i>	Traveller's Joy	RANUNCULACEAE
<i>Cleome conrathii</i>		CAPPARACEAE
<i>Cleome monophylla</i>	Single-leaved Spindle Pod	BRASSICACEAE (or Capparaceae)
<i>Combretum erythrophyllum</i>	River Bushwillow	COMBRETACEAE
<i>Combretum molle</i>	Velvet Bushwillow	COMBRETACEAE
<i>Convolvulus sagittatus</i>		CONVOLVULACEAE
* <i>Conyza albida/ bonariensis/ canadensis</i>	Tall Fleabane	ASTERACEAE
<i>Conyza podocephala</i>		ASTERACEAE
<i>Corchorus asplenifolius</i>		MALVACEAE
<i>Crabbea angustifolia</i>		ACANTHACEAE
<i>Crabbea hirsuta</i>		ACANTHACEAE
<i>Crassula capitella</i>		CRASSULACEAE
<i>Crassula setulosa</i>		CRASSULACEAE
<i>Cryptolepis oblongifolia</i>		PERIPLOCAEAE
<i>Cucumis hirsutus</i>		CUCURBITACEAE
<i>Cucumis zeyheri</i>		CUCURBITACEAE
<i>Cussonia paniculata</i>	Highveld Cabbage Tree	ARALIACEAE
<i>Cynoglossum lanceolatum</i>		BORAGINACEAE
* <i>Datura ferox</i>	Large Thorn-apple	SOLANACEAE
* <i>Datura stramonium</i>	Common Thorn-apple	SOLANACEAE
<i>Dianthus mooiensis</i>	Wild Pink	CARYOPHYLLACEAE
<i>Dicoma anomala</i>		ASTERACEAE
<i>Dichrostachys cinerea</i>	Sickle Bush	MIMOSACEAE (or Fabaceae)
<i>Dimorphotheca spectabilis</i>	Blou Bietou	ASTERACEAE
<i>Diospyros lycioides</i> var. <i>guerkei</i>	Bluebush	EBENACEAE
<i>Dombeya rotundifolia</i>	Common Wild Pear	STERCULIACEAE
<i>Elephantorrhiza elephantina</i>		MIMOSACEAE



<i>Englerophytum magalismontanum</i>	Transvaal Milkplum	SAPOTACEAE
<i>Eriosema burkei</i>		FABACEAE
<i>Eriosema cordatum</i>		FABACEAE
* <i>Eucalyptus camaldulensis</i>	Red Gum	MYRTACEAE
<i>Euclea crispa</i>	Blue Guarri	EBENACEAE
<i>Euphorbia trichadenia</i>	Melkbol	EUPHORBIACEAE
<i>Felicia muricata</i>		ASTERACEAE
* <i>Ficus carica</i>	Fig	MORACEAE
<i>Ficus ingens</i>	Red-leaved Fig	MORACEAE
* <i>Flaveria bidentis</i>	Smelter's bush	ASTERACEAE
<i>Gazania krebsiana</i> subsp. <i>serrulata</i>		ASTERACEAE
<i>Geigeria burkei</i>		ASTERACEAE
<i>Gerbera piloselloides</i>	Swarteebossie	ASTERACEAE
<i>Gerbera viridifolia</i> subsp. <i>viridifolia</i>		ASTERACEAE
* <i>Gleditsia triacanthos</i>	Honey Locust	CAESALPINIACEAE
<i>Gnidia capitata</i>		THYMELAEACEAE
<i>Gnidia kraussiana</i> var. <i>kraussiana</i>		THYMELAEACEAE
<i>Gnidia microcephala</i>		THYMELAEACEAE
<i>Gnidia sericocephala</i>		THYMELAEACEAE
<i>Gomphocarpus fruticosus</i>	Milkweed	APOCYNACEAE
* <i>Gomphrena celosioides</i>	Bachelor's Button	AMARANTHACEAE
<i>Graderia subintegra</i>	Wild Penstemon	OROBANCHACEAE
<i>Gymnosporia buxifolia</i>	Common Spike-thorn	CELASTRACEAE
<i>Haplocarpha lyrata</i>		ASTERACEAE
<i>Helichrysum acutatum</i>		ASTERACEAE
<i>Helichrysum cerastioides</i>		ASTERACEAE
<i>Helichrysum nudifolium</i>	Hottentot's tea	ASTERACEAE
<i>Helichrysum rugulosum</i>		ASTERACEAE
<i>Helichrysum setosum</i>	Yellow Everlasting	ASTERACEAE
<i>Hemizygia pretoriae</i>		LAMIACEAE
<i>Hermannia cordata</i>		MALVACEAE
<i>Hermannia depressa</i>	Creeping Red Hermannia	MALVACEAE
<i>Hermannia transvaalensis</i>		MALVACEAE
<i>Hibiscus microcarpus</i>		MALVACEAE

<b><i>Hibiscus pusillus</i></b>		MALVACEAE
* <b><i>Hibiscus trionum</i></b>	Bladder hibiscus	MALVACEAE
<b><i>Hilliardiella aristata</i></b> (= <i>Vernonia natalensis</i> )		ASTERACEAE
<b><i>Hilliardiella oligocephala</i></b> (= <i>Vernonia oligocephala</i> )		ASTERACEAE
<b><i>Indigastrum burkeanum</i></b>		
<b><i>Indigofera hedyantha</i></b>	Black-bud Indigo	FABACEAE
<b><i>Indigofera heterotricha</i></b>		FABACEAE
<b><i>Indigofera hilaris</i></b>	Red Indigo Bush	FABACEAE
<b><i>Indigofera melanadenia</i></b>		FABACEAE
* <b><i>Indigofera suffruticosis</i></b>		
<b><i>Ipomoea bolusiana</i></b>		CONVOLVULACEAE
<b><i>Ipomoea crassipes</i></b>		CONVOLVULACEAE
<b><i>Ipomoea oblongata</i></b>		CONVOLVULACEAE
<b><i>Ipomoea ommaneyi</i></b>	Beespatat	CONVOLVULACEAE
* <b><i>Ipomoea purpurea</i></b>	Common Morning Glory	CONVOLVULACEAE
<b><i>Justicia anagalloides</i></b>		ACANTHACEAE
<b><i>Kalanchoe thyrsiflora</i></b>		CRASSULACEAE
<b><i>Kiggelaria africana</i></b>	Wild Peach	KIGGELARIACEAE (or Flacourtiaceae)
<b><i>Kohautia amatymbica</i></b>		RUBIACEAE
<b><i>Kyphocarpa angustifolia</i></b>		AMARANTHACEAE
<b><i>Lactuca inermis</i></b>		ASTERACEAE
<b><i>Lannea edulis</i></b>		ANACARDIACEAE
<b><i>Lantana rugosa</i></b>		VERBENACEAE
* <b><i>Lepidium bonariense</i></b>	Pepperweed	BRASSICACEAE
* <b><i>Ligustrum</i> species</b>	Privets	OLEACEAE
<b><i>Lippia javanica</i></b>	Fever Tea	VERBENACEAE
<b><i>Lithops lesliei</i> subsp. <i>lesliei</i></b>		MESEMBRYANTHEMACEAE
<b><i>Lotononis calycina</i></b>		FABACEAE
<b><i>Lotononis foliosa</i></b>		FABACEAE
<b><i>Lotononis laxa</i></b>		FABACEAE
<b><i>Macleodium zeyheri</i></b>		ASTERACEAE
* <b><i>Malva parviflora</i></b>	Small Mallow	MALVACEAE
* <b><i>Malvastrum coromandelianum</i></b>	Malvastrum	MALVACEAE
* <b><i>Medicago sativa</i></b>	Lucerne	FABACEAE
* <b><i>Melia azedarach</i></b>	Seringa	MELIACEAE
* <b><i>Melilotus alba</i></b>	Bokhara Clover	FABACEAE

* <i>Mirabilis jalapa</i>	Four O'clock	NYCTAGINACEAE
<i>Monsonia angustifolia</i>	Crane's Bill	GERANIACEAE
<i>Morea stricta</i>	Bloutulp	IRIDACEAE
* <i>Morus alba</i>	Common Mulberry	MORACEAE
<i>Nemesia fruticans</i>		SROPHULARIACEAE
<i>Neorautanenia fivifolius</i>		FABACEAE
* <i>Nicotiana glauca</i>	Wild Tobacco	SOLANACEAE
<i>Nidorella anomala</i>		ASTERACEAE
<i>Nidorella hottentotica</i>		ASTERACEAE
<i>Ocimum obovatum</i>	Cat's whiskers	LAMIACEAE
* <i>Oenothera rosea</i>	Rose Evening Primrose	ONAGRACEAE
* <i>Oenothera stricta</i>	Yellow Evening Primrose	ONAGRACEAE
<i>Oldenlandia herbacea</i>		RUBIACEAE
* <i>Opuntia ficus-indica</i>	Sweet Prickly Pear	CACTACEAE
<i>Osteospermum muricatum</i>		ASTERACEAE
* <i>Oxalis corniculata</i>	Creeping Sorrel	OXALIDACEAE
<i>Oxalis obliquifolia</i>	Oblique-leaved Sorrel	OXALIDACEAE
<i>Ozoroa paniculosa</i>	Bushveld Ozoroa	ANACARDIACEAE
<i>Pachycarpus schinzianus</i>	Dark-eyed Bell	APOCYNACEAE
<i>Parapodium costatum</i>		APOCYNACEAE
<i>Parinari capensis</i> subsp. <i>capensis</i>	Dwarf Mobolo Plum	CHRYSOBALANACEAE
<i>Pearsonia cajanifolia</i>		FABACEAE
<i>Pearsonia sessillifolia</i>		FABACEAE
<i>Pelargonium luridum</i>		GERANIACEAE
<i>Pentanisia angustifolia</i>		RUBIACEAE
<i>Pentarrhinum insipidum</i>	African Heartvine	APOCYNACEAE
<i>Persicaria lapathifolia</i>		POLYGONACEAE
<i>Peucedanum magalismontanum</i>	Wild Parsley	APIACEAE
<i>Phyllanthus incurvus</i>		EUPHORBIACEAE
* <i>Plantago lanceolata</i>	Narrow-leaved plantain	PLANTAGINACEAE
<i>Pollichia campestris</i>	Waxberry	ILLECEBRACEAE
<i>Polygala amatymbica</i>		POLYGALACEAE
<i>Polygala hottentotta</i>		POLYGALACEAE
<i>Polygala rehmannii</i>		POLYGALACEAE
* <i>Populus x canescens</i>	Grey Poplar	SALICACEAE
* <i>Populus deltoides</i>	Match Poplar	SALICACEAE

<b><i>Protea welwitschii</i></b>	Cluster-head Sugarbush	PROTEACEAE
<b>* <i>Prunus persica</i></b>	Peach	ROSACEAE
<b><i>Psammotropha myriantha</i></b>		AIZOACEAE
<b><i>Pygmaeothamnus zeyheri</i></b>	Sand Apple	RUBIACEAE
<b>* <i>Pyracantha angustifolia</i></b>	Yellow Firethorn	ROSACEAE
<b>* <i>Raphanus raphanistrum</i></b>	Wild Radish	BRASSICACEAE
<b><i>Raphionacme galpinii</i></b>		APOCYNACEAE
<b><i>Raphionacme hirsuta</i></b>	Khadi Root	APOCYNACEAE
<b><i>Rhamnus prinioides</i></b>		RHAMNACEAE
<b><i>Rhyncosia monophylla</i></b>		FABACEAE
<b><i>Rhyncosia totta</i></b>		FABACEAE
<b>* <i>Robinia pseudoacacia</i></b>	Black Locust	FABACEAE
<b><i>Rorippa nudiuscula</i></b>		BRASSICACEAE
<b><i>Rothea hirsuta</i></b>	Bush Violet	LAMIACEAE
<b><i>Rubia horrida</i></b>	Kleefgras	RUBIACEAE
<b><i>Ruellia cordata</i></b>	Veld Violet	ACANTHACEAE
<b>* <i>Rumex crispus</i></b>	Curly Dock	POLYGONACEAE
<b>* <i>Salix babylonica</i></b>	Weeping Willow	SALICACEAE
<b><i>Salvia runcinata</i></b>		LAMIACEAE
<b><i>Scabiosa columbaria</i></b>	Wild Scabious	DIPSACACEAE
<b>* <i>Schkuhria pinnata</i></b>	Dwarf Marigold	ASTERACEAE
<b><i>Searsia discolor</i></b>		ANACARDIACEAE
<b><i>Searsia lancea</i></b>	Karree	ANACARDIACEAE
<b><i>Searsia leptodictya</i></b>	Mountain Karree	ANACARDIACEAE
<b><i>Searsia pyroides</i></b>	Common Wild Currant	ANACARDIACEAE
<b><i>Searsia rigida</i></b>		ANACARDIACEAE
<b><i>Searsia zeyheri</i></b>		ANACARDIACEAE
<b><i>Senecio affinis</i></b>		ASTERACEAE
<b><i>Senecio coronatus</i></b>	Sybossie	ASTERACEAE
<b><i>Senecio inaequidens</i></b>	Canary Weed	ASTERACEAE
<b><i>Senecio inornatus</i></b>		ASTERACEAE
<b><i>Senecio oxyriifolius</i></b>	False Nasturtium	ASTERACEAE
<b><i>Senecio venosus</i></b>		ASTERACEAE
<b><i>Seriphium plumosum</i></b>	Bankrupt Bush	ASTERACEAE
<b><i>Sida dregei</i></b>		MALVACEAE
<b><i>Silene burchellii</i></b>	Gunpowder Plant	CARYOPHYLLACEAE
<b>* <i>Solanum mauritianum</i></b>	Bugweed	SOLANACEAE
<b><i>Solanum panduriforme</i></b>	Poison Apple	SOLANACEAE

<b>* <i>Solanum sisymbriifolium</i></b>	Dense-thorned Bitter Apple	SOLANACEAE
<b>* <i>Sonchus oleraceus</i></b>	Sowthistle	ASTERACEAE
<b><i>Sphenostylis angustifolia</i></b>	Wild Sweetpea	FABACEAE
<b><i>Striga asiatica</i></b>	Witchweed	OROBANCHACEAE
<b><i>Striga elegans</i></b>	Large Witchweed	OROBANCHACEAE
<b>* <i>Tagetes minuta</i></b>	Khakiweed	ASTERACEAE
<b><i>Tephrosia capensis</i> var. <i>capensis</i></b>		FABACEAE
<b><i>Tephrosia longipes</i></b>		FABACEAE
<b><i>Tephrosia semiglabra</i></b>		FABACEAE
<b><i>Teucrium trifidum</i></b>		LAMIACEAE
<b><i>Thesium</i> sp.</b>		SANTALACEAE
<b><i>Thesium utile</i></b>		SANTALACEAE
<b>* <i>Tipuana tipu</i></b>	Tipu Tree	FABACEAE
<b>* <i>Tragopogon dubius</i></b>	Yellow Goat's Beard	ASTERACEAE
<b><i>Triaspis hypericoides</i></b>		MALPIGHIACEAE
<b><i>Ursinia nana</i></b>		ASTERACEAE
<b><i>Vangueria infausta</i></b>	Wild Medlar	RUBIACEAE
<b>* <i>Verbena aristigera</i></b>	Fine-leaved Verbena	VERBENACEAE
<b>* <i>Verbena bonariensis</i></b>	Purple top	VERBENACEAE
<b>* <i>Verbena brasiliensis</i></b>		VERBENACEAE
<b><i>Vernonia galpinii</i></b>		ASTERACEAE
<b><i>Vernonia staeheleinoides</i></b>		ASTERACEAE
<b><i>Vigna vexillata</i></b>	Narrow-leaved Sweetpea	FABACEAE
<b><i>Wahlenbergia denticulata</i></b>	Bellflower	CAMPANULACEAE
<b><i>Xysmalobium undulatum</i></b>		APOCYNACEAE
<b><i>Zanthoxylum capense</i></b>	Small Knobwood	RUTACEAE
<b><i>Ziziphus zeyheriana</i></b>	Dwarf Buffalo-thorn	RHAMNACEAE

## ANNEXURE 2: Mammals

List of mammals species that have been or could possibly be recorded at the study area.

Compiled by R.F. Terblanche

Sources: Apps (2012); Skinner & Chimimba (2005); Rautenbach (1982); Stuart & Stuart (2000)

Note that the species are listed alphabetically under the distinctive orders for easy reference.

ORDERS AND SPECIES	COMMON NAMES ENGLISH/ AFRIKAANS
ORDER CHIROPTERA	BAT ORDER
<i>Neoromicia capensis</i> (A. Smith, 1829)	Cape Serotine Bat
<i>Nycteris thebaica</i> E. Geoffroy Saint-Hilaire, 1813	Egyptian Slit-faced Bat
<i>Scotophilus dinganii</i> (A. Smith, 1833)	African Yellow Bat
<i>Tadarida aegyptiaca</i> (E. Geoffroy Saint-Hilaire, 1818)	Egyptian Free-tailed Bat
ORDER EULIPOTYPHLA	SHREW AND HEDGEHOG FAMILY
<i>Crocidura cyanea</i> (Duvernoy, 1838)	Reddish-grey Musk Shrew
<i>Crocidura hirta</i> (Peters, 1852)	Lesser Red Musk Shrew
ORDER RODENTIA	RODENT ORDER
<i>Aethomys ineptus</i> (Thomas & Wroughton, 1908)	Tete Veld Rat
<i>Cryptomys hottentotus</i> (Lesson, 1826)	African Mole-rat
<i>Hystrix africaeaustralis</i> Peters, 1852	Cape Porcupine
<i>Lemniscomys rosalia</i> (Thomas, 1904)	Single-striped Grass Mouse
<i>Mastomys coucha/ natalensis*</i>	Multimammate Mouse Species Complex

***Rhabdomys pumilio***  
(Spearman, 1784)

Four-striped  
Grass Mouse

***Tatera brantsii***  
(A. Smith, 1836)

Highveld Gerbil

***Tatera leucogaster***  
(Peters, 1852)

Bushveld Gerbil

ORDER LAGOMORPHA

HARES AND  
RABBITS ORDER

***Lepus saxatilis***  
F. Cuvier, 1823

Scrub Hare

ORDER RUMINANTIA

RUMINANTS

***Sylvicapra grimmia***  
(Linnaeus, 1758)

Common Duiker

ORDER CARNIVORA

CARNIVORE ORDER

***Cynictis penicillata***  
(G. Cuvier, 1829)

Yellow  
Mongoose

***Galerella sanguinea***  
(Rüppell, 1836)

Slender  
Mongoose

\* Species complexes are under revision or else species could not reliably be identified by using external characters.

## ANNEXURE 3: Birds

### List of bird species that have been recorded at the study area

Compiled by R.F. Terblanche

Sources: Chittenden (2007), Hockey, Dean & Ryan (2005), Peacock (2006).

Note that the species are listed according to their Roberts Bird numbers for easy reference.

SPECIES	COMMON NAMES ENGLISH
Roberts Bird No.	
8	<i>Tachybaptus ruficollis</i> Little Grebe
63	<i>Ardea melanocephala</i> Black-headed Heron
71	<i>Bubulcus ibis</i> Cattle Egret
91	<i>Threskiornis aethiopicus</i> African Sacred Ibis
94	<i>Bostrychia hagedash</i> Hadedda Ibis
102	<i>Alopochen aegyptiaca</i> Egyptian Goose
104	<i>Anas undulata</i> Yellow-billed Duck
105	<i>Anas sparsa</i> African Black Duck
127	<i>Elanus caeruleus</i> Black-shouldered Kite
199	<i>Pternistis swainsonii</i> Swainson's Spurfowl
203	<i>Numida meleagris</i> Helmeted Guineafowl
228	<i>Fulica cristata</i> Red-knobbed Coot
255	<i>Vanellus coronatus</i> Crowned Lapwing
258	<i>Vanellus armatus</i> Blacksmith Lapwing
260	<i>Vanellus senegallus</i> African Wattled Lapwing
297	<i>Burhinus capensis</i> Spotted Thick-knee
304	<i>Afrotis afraoides</i> Northern Black Korhaan
348	<i>Columba livia</i> Rock Dove
352	<i>Streptopelia semitorquata</i> Red-eyed Dove
354	<i>Streptopelia capicola</i> Cape Turtle-dove
355	<i>Streptopelia senegalensis</i> Laughing Dove
417	<i>Apus affinis</i> Little Swift
424	<i>Colius striatus</i> Speckled Mousebird
426	<i>Urocolius indicus</i> Red-faced Mousebird
443	<i>Merops bullockoides</i> White-fronted Bee-eater
473	<i>Trachyphonus vaillantii</i> Crested Barbet



494	<i>Mirafr</i> <b><i>a africana</i></b>	Rufous-naped Lark
518	<i>Hirundo</i> <b><i> rustica</i></b>	Barn Swallow
520	<i>Hirundo</i> <b><i> albigularis</i></b>	White-throated Swallow
526	<i>Hirundo</i> <b><i> cucullata</i></b>	Greater Striped Swallow
527	<i>Hirundo</i> <b><i> abyssinica</i></b>	Lesser Striped Swallow
568	<i>Pycnonotus</i> <b><i> tricolor</i></b>	Dark-capped Bulbul
-	<i>Turdus</i> <b><i> smithi</i></b>	Karoo Thrush
601	<i>Cossypha</i> <b><i> caffra</i></b>	Cape Robin-Chat
664	<i>Cisticola</i> <b><i> juncidis</i></b>	Zitting Cisticola
713	<i>Motacilla</i> <b><i> capensis</i></b>	Cape Wagtail
732	<i>Lanius</i> <b><i> collaris</i></b>	Common Fiscal
758	<i>Acridotheres</i> <b><i> tristis</i></b>	Common Myna
787	<i>Cinnyris</i> <b><i> talatala</i></b>	White-bellied Sunbird
796	<i>Zosterops</i> <b><i> virens</i></b>	Cape White-eye
803	<i>Passer</i> <b><i> melanurus</i></b>	Cape Sparrow
804	<i>Passer</i> <b><i> diffusus</i></b>	Southern Grey-headed Sparrow
814	<i>Ploceus</i> <b><i> velatus</i></b>	Southern Masked-weaver
824	<i>Euplectes</i> <b><i> orix</i></b>	Southern Red Bishop
852	<i>Ortygospiza</i> <b><i> atricollis</i></b>	African Quailfinch
854	<i>Sporaeginthus</i> <b><i> subflavus</i></b>	Orange-Breasted Waxbill
870	<i>Crithagra</i> <b><i> atrogularis</i></b>	Black-throated Canary
878	<i>Crithagra</i> <b><i> flaviventris</i></b>	Yellow Canary
881	<i>Crithagra</i> <b><i> gularis</i></b>	Streaky-headed Seedeater

## ANNEXURE 4: Reptiles

List of reptile species that have been recorded or are likely to occur at the study area

Compiled by R.F. Terblanche

*Sources of names and identifications:*

Alexander & Marais (2007), Branch (1998), Branch (2008), Marais (2004).

Reptile species are listed alphabetically.

SPECIES	COMMON NAMES ENGLISH
<i>Agama aculeata</i> subsp. <i>distanti</i>	Ground Agama
<i>Aparallactus capensis</i>	Cape Centipede Eater
<i>Crotaphopeltis hotamboeia</i>	Herald Red-lipped Snake
<i>Dasypeltis scabra</i>	Common Egg Eater
<i>Lamprophis capensis</i>	Brown House Snake
<i>Pachydactylus capensis</i>	Cape Thick-toed Gecko
<i>Trachylepis capensis</i>	Cape Skink
<i>Trachylepis striata</i> subsp. <i>punctatissima</i>	Striped Skink

## ANNEXURE 5: Amphibians

### List of frog species that have been recorded at study area

Compiled by R.F. Terblanche

Sources of names, distributions and habitats:

<sup>1</sup>Conradie, Du Preez, Smith & Weldon, <sup>2</sup>Carruthers & Du Preez (2011), <sup>3</sup>Du Preez (1996), <sup>4</sup>Du Preez & Carruthers (2009)

Note that the species are listed alphabetically for easy reference.

SPECIES	COMMON NAMES ENGLISH/ AFRIKAANS	STATUS
<i>Amietia angolensis</i> (Bocage, 1866)	Common River Frog	Grassland streams and other permanent water bodies <sup>2,4</sup>
<i>Amietophrynus gutturalis</i> (Power, 1927)	Guttural Toad	Grassland and savanna, Breeds in permanent waterholes, streams and garden ponds <sup>2,4</sup>
<i>Schismaderma carens</i> (Smith, 1848)	Red Toad	Breeds in deep pools, farm dams and swimming pools. Forages widely and then retreats into holes in trees <sup>2,4</sup>

## ANNEXURE 6: Butterflies

### List of butterfly species at the study area

Compiled by R.F. Terblanche

FAMILIES, SUBFAMILIES AND SPECIES	COMMON NAMES ENGLISH/ AFRIKAANS
FAMILY: PAPILIONIDAE	SWALLOWTAIL FAMILY SWAELSTERTFAMILIE
SUBFAMILY PAPILIONINAE	SWALLOWTAILS AND SWORDTAILS SWAELSTERTE EN SWAARDSTERTE
<i>Papilio demodocus</i> (Esper, 1798)	<b>Citrus Swallowtail</b> Lemoenswaelstert
FAMILY PIERIDAE	WHITES, YELLOWS AND TIPS WITJIES, GELETJIES EN PUNTJIES
SUBFAMILY COLIADINAE	YELLOWS AND CLOUDED YELLOWS GELETJIES EN WOLK-ORANJES
<i>Catopsilia florella</i> (Fabricius, 1775)	<b>African Migrant</b> Afrikaanse Migreerder
<i>Colias electo electo</i> (Linnaeus, 1763)	<b>African Clouded Yellow</b> Afrikaanse Wolk-oranje
<i>Eurema brigitta brigitta</i> (Stoll, 1780)	<b>Broad-bordered Grass Yellow</b> Grasveldgeletjie
SUBFAMILY PIERINAE	WHITES AND TIPS SUBFAMILY WITJIES EN PUNTJIES SUBFAMILIE
<i>Belenois aurota aurota</i> (Fabricius, 1793)	<b>Brown-veined White</b> Grasveldwitjie
<i>Belenois creona severina</i> (Stoll, 1781)	<b>African Common White</b> Afrikaanse Gewone Witjie
<i>Colotis evinina evinina</i> (Wallengren, 1857)	<b>Common Orange Tip</b> Gewone Oranjepuntjie
<i>Colotis subfasciatus subfasciatus</i> (Swainson, 1833)	<b>Lemon Traveller Tip</b> Suurlemoensmous
<i>Mylothris agathina agathina</i> (Cramer, 1779)	<b>Common Dotted Border</b> Gewone Spikkelrandjie/ Voëlentwitjie
<i>Pinacopteryx eriphia eriphia</i> (Godart, 1819)	<b>Zebra White</b> Kwagga
<i>Pontia helice helice</i> (Linnaeus, 1764)	<b>African Meadow White</b> Bontrokkie
FAMILY NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES BORSELPOOTSKOENLAPPERS
SUBFAMILY DANAINAE	MONARCH SUBFAMILY MONARG-SUBFAMILIE
<i>Danaus chrysippus chrysippus</i> (Linnaeus, 1758)	<b>African Monarch</b> Afrikaanse Melkbosskoelapper
SUBFAMILY CHARAXINAE	CHARAXES SUBFAMILY DUBBELSTERT SUBFAMILIE
<i>Charaxes jasius saturnus</i> Butler, 1866	<b>Saturn Foxy Charaxes</b> Saturnus-koppiedubbelstert
SUBFAMILY SATYRINAE	BROWNS SUBFAMILY BRUINTJIES-SUBFAMILIE
<i>Paternympha narycia</i>	<b>Spotted-eye Brown</b>

(Wallengren, 1857)

***Stygionympha wichgrafi wichgrafi***

Van Son, 1955

SUBFAMILY BIBLIDINAE

***Byblia ilithyia***

(Drury, 1773)

SUBFAMILY NYMPHALINAE

***Catacroptera cloanthe cloanthe***

(Stoll, 1781)

***Hypolimnas misippus***

(Linnaeus, 1764)

***Junonia hierta cebrene***

Trimen, 1870

***Junonia oenone oenone***

(Linnaeus, 1758)

***Junonia orithya madagascariensis***

Guenée, 1865

***Precis archesia archesia***

(Cramer, 1779)

***Vanessa cardui***

(Linnaeus, 1758)

SUBFAMILY HELICONIINAE

***Acraea natalica natalica***

De Boisduval, 1847

***Acraea neobule neobule***

Doubleday, 1847

***Acraea rahira rahira***

De Boisduval, 1833

***Acraea serena* (= *Acraea eponina*)**

Fabricius, 1775

***Phalanta phalantha aethiopica***

(Rothschild & Jordan, 1903)

FAMILY LYCAENIDAE

SUBFAMILY THECLINAE

***Aloeides aranda***

(Wallengren, 1857)

***Aloeides henningi***

Tite & Dickson, 1973

***Aloeides molomo molomo***

(Trimen, 1870)

***Cigaritis mozambica***

(Bertoloni, 1850)

***Cigaritis natalensis***

(Westwood, 1852)

***Leptomyrina henningi***

Dickson, 1976

SUBFAMILY POLYOMMATINAE

Koloogbruintjie

**Wichgraf's Hillside Brown**

Wichgraf-rantbruintjie

BYBLIA SUBFAMILY

BIBLIA SUBFAMILIE

**Spotted Joker**

Leliegrasvegter

PANSY SUBFAMILY

GESIGGIE SUBFAMILIE

**Pirate**

Seerower

**Common Diadem**

Gewone Na-aper/ Blouglans

**Yellow Pansy**

Geelgesiggie

**Blue Pansy**

Blougesiggie

**Eyed Pansy**

Padwagtertjie

**Garden Commodore**

Rots-blaarvlerk

**Painted Lady**

Sondagsrokkie

ACRAEA SUBFAMILY

ACRAEA SUBFAMILIE

**Natal Acraea**

Natal-se-rooitjie

**Wandering Donkey Acraea**

Dwaalesel-rooitjie

**Marsh Acraea**

Moerasrooitjie

**Small Orange Acraea**

Klein-oranjerootjie

**African Leopard Butterfly**

Afrikaanse Luiperdskoenlapper

BLUES AND COPPERS

BLOUTJIES EN KOPERVLERKIES

HAIRSTREAKS AND COPPERS

LANGSTERTE EN KOPERVLERKIES

**Aranda Copper**

Aranda-kopervlerkie

**Henning's Copper**

Henning-se-kopervlerkie

**Grassland Molomo Copper**

Grasveld-molomokopervlerkie

**Mozambique Bar**

Mosambiek-se-streepvlerkie

**Natal Bar**

Natal-se-streepvlerkie

**Henning's Black-eye**

Henning-se-swartogjie

BLOUTJIES AND CILIATED BLUES

BLOUTJIES EN KORTSTERTJIES

***Actizera lucida***  
(Trimen, 1883)

***Anthene amarah amarah***  
(Guérin-Méneville, 1849)

***Anthene definita definita***  
(Butler, 1899)

***Azanus jesous jesous***  
(Guérin-Méneville, 1849)

***Azanus moriqua***  
(Wallengren, 1857)

***Azanus ubaldus***  
(Stoll, 1782)

***Cacyreus marshalli***  
Butler, 1898

***Chilades trochylus***  
(Freyer, 1843)

***Cupidopsis cissus cissus***  
(Godart, 1824)

***Cupidopsis jobates jobates***  
(Hopffer, 1855)

***Eicochrysops messapus mahallakoena***  
(Wallengren, 1857)

***Euchrysops osiris***  
(Hopffer, 1885)

***Lampides boeticus***  
(Linnaeus, 1767)

***Lepidochrysops patricia***  
(Trimen, 1887)

***Lepidochrysops plebeia plebeia***  
(Butler, 1898)

***Leptotes brevidentatus***  
(Tite, 1958)

***Leptotes* species**

***Tarucus sybaris sybaris***  
(Hopffer, 1855)

***Tuxentius melaena melaena***  
(Trimen, 1887)

***Zintha hintza hintza***  
(Trimen, 1864)

***Zizeeria knysna***  
(Trimen, 1862)

***Zizula hylax***  
(Fabricius, 1775)

FAMILY HESPERIIDAE

SUBFAMILY COELIADINAE

***Coeliades forestan forestan***  
(Stoll, 1782)

***Coeliades pisistratus***  
(Fabricius, 1793)

SUBFAMILY PYRGINAE

**Rayed Blue**  
Witstreepbloutjie

**Black-striped Hairtail**  
Swartstreep-kortstertjie

**Common Hairtail**  
Donkerkortstertjie

**Topaz-spotted Blue**  
Hemels-kolbloutjie

**Thorn-tree Blue**  
Doringboombbloutjie

**Velvet-spotted Blue**  
Fluweel-kolbloutjie

**Geranium Bronze**  
Pelargoniumbrons

**Grass Jewel Blue**  
Grasjuweeltjie

**Common Meadow Blue**  
Vleibloutjie

**Tailed Meadow Blue**  
Aasbloutjie

**Grassland Cupreous Copper**  
Grasveldkoperbloutjie

**Osiris Smokey Blue**  
Osiris Dowwebloutjie

**Longtailed Pea Blue**  
Langstert-ertjiebloutjie

**Patricia Blue**  
Patricia-bloutjie

**Twin-spot Blue**  
Dubbelkolbloutjie

**Short-toothed Blue**  
Korttandbloutjie

**Common Blue**  
Gewone bloutjie

**Dotted Blue**  
Spikkelbloutjie

**Black Pie**  
Swartbontetjie

**Hintza Pie**  
Hintza-bontetjie

**Sooty Blue**  
Duwweltjiebloutjie

**Gaika Blue**  
Gaika-bloutjie

SKIPPERS

DARTELAARS

POLICEMEN

KONSTABELS

**Striped Policeman**  
Witbroekkonstabel

**Two-pip Policeman**  
Dubbelkolkonstabel

SANDMEN AND ELFINS

	SANDMANNETJIES EN ELWE
<b><i>Eretis umbra umbra</i></b> (Trimen, 1862)	<b>Small Marbled Elf</b> Umbra-kabouter
<b><i>Spialia diomus ferax</i></b> (Wallengren, 1863)	<b>Common Sandman</b> Kwagga-sandmannetjie
<b><i>Spialia mafa mafa</i></b> (Trimen, 1870)	<b>Mafa Sandman</b> Mafa-sandmannetjie
<b><i>Spialia spio</i></b> (Linnaeus, 1764)	<b>Mountain Sandman</b> Bergsandmannetjie
SUBFAMILY HETEROPTERINAE	SYLPHS
	WALSERTJIES
<b><i>Tsitana tsita</i></b> (Trimen, 1870)	<b>Grassland Dismal Sylph</b> Grasveld Donkerwalsertjie
SUBFAMILY HESPERIINAE	RANGERS AND SWIFTS
	WAGTERTJIES EN RATSVLIEËRS
<b><i>Gegenes niso niso</i></b> (Linnaeus, 1764)	<b>Common Gold Skipper</b> Gewone Goud
<b><i>Gegenes pumilio gambica</i></b> (Mabille, 1878)	<b>Dark Gold Skipper</b> Donker Goud
<b><i>Kedestes barberae barberae</i></b> (Trimen, 1873)	<b>Barber's Ranger</b> Barber-se-wagtertjie
<b><i>Kedestes nerva nerva</i></b> (Fabricius, 1793)	<b>Scarce Ranger</b> Seldsame wagtertjie
<b><i>Pelopidas mathias</i></b> (Fabricius, 1798)	<b>Black-banded Swift</b> Swartmerk-ratsvlieër
<b><i>Pelopidas thrax inconspicua</i></b> (Bertoloni, 1850)	<b>White-branded Swift</b> Witmerk-ratsvlieër
<b><i>Platylesches ayresii</i></b> (Trimen, 1889)	<b>Peppered Hopper</b> Ayres-se-hoppertjie

# Annexure H

BIODIVERSITY INFORMATION  
RECEIVED BY GDARD





**Bianca**

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**From:** User1 <user1@bokamoso.net>  
**Sent:** 21 August 2012 10:54 AM  
**To:** mientjie@bokamoso.net  
**Subject:** FW: Request to determine if biodiversity assesment is required

Sincerely,

Anè Agenbacht



---

**From:** Bokamoso [<mailto:ontvangs@bokamoso.net>]  
**Sent:** Tuesday, August 21, 2012 10:24 AM  
**To:** [user5@bokamoso.net](mailto:user5@bokamoso.net)  
**Cc:** [user1@bokamoso.net](mailto:user1@bokamoso.net)  
**Subject:** FW: Request to determine if biodiversity assesment is required

---

**From:** GDARD Biodiversity Information (GDARD) [[mailto:GDACE\\_BiodiversityInfo@gauteng.gov.za](mailto:GDACE_BiodiversityInfo@gauteng.gov.za)]  
**Sent:** 21 August 2012 09:51 AM  
**To:** Bokamoso  
**Subject:** RE: Request to determine if biodiversity assesment is required

Dear Lizelle

With regard to the above project, specialist biodiversity studies are required to investigate the following aspects:

- \* Plants, with specific reference to
  - *Brachycorythis conica*.
  - *Habenaria mossii*.
  - *Cheilantheus deltoidea*.

- *Habenaria bicolor*.
- *Habenaria kraenzliniana*.
- *Lithops lesliei*.

\* Mammals, with specific reference to *Lutra maculicollis* (Spotted-necked otter).

\* Invertebrates, with specific reference to *Ichnestoma stobbiai* (Stobbia's Fruit chafer).

\* Vegetation.

\* Rivers.

The absence of wetlands on site should be verified. Should a wetland be located, a wetland specialist study will be required.

Please note that this information is relevant solely for the study site specified in your request. Red/Orange Listed plant species information relevant to a wider geographic area can be obtained from Lorraine Mills ([Lorraine.Mills@gauteng.gov.za](mailto:Lorraine.Mills@gauteng.gov.za)).

All specialist studies must comply with GDARD Requirements for Biodiversity Assessments. The most recent version of this document (currently version 2) can be obtained by e-mailing [GDARD BiodiversityInfo@gauteng.gov.za](mailto:GDARD_BiodiversityInfo@gauteng.gov.za).

Should the environmental assessment practitioner be of the opinion that any of the above specialist studies are unnecessary for the site/activity in question, then an ecologically-based motivation justifying why the studies are deemed unnecessary must be submitted to GDARD as part of the application. This submission will be evaluated and either accepted or returned to the applicant for the completion of the necessary studies.

Please note that the application site is designated irreplaceable in the Gauteng Conservation Plan (Version 3.3), i.e. it is a highly sensitive site, essential for the conservation of biodiversity in Gauteng. Based on the biodiversity sensitivities confirmed on this site, it is highly unlikely that any activity will be supported by Conservation. Please take this into consideration before proceeding with the expense of specialist studies.

Please do not send follow up inquiries to this message as they will not be processed. For further queries please contact Phuti Matlamela ([Phuti.matlamela@gauteng.gov.za](mailto:Phuti.matlamela@gauteng.gov.za)).

Regards

EIA Unit

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**From:** Bokamoso [<mailto:lizelleg@mweb.co.za>]

**Sent:** Mon 2012/08/20 02:48 PM

**To:** GDARD Biodiversity Information (GDARD)

**Cc:** [mientjie@bokamoso.net](mailto:mientjie@bokamoso.net)

**Subject:** Request to determine if biodiversity assesment is required

**EIA for Rietvlei extension 6 -11 and extension 15.  
Reference nr: Gaut: 002/12-13/E0090**

To whom it may concern

Could you please determine which biodiversity assessments studies will be required for this project.  
Please find attached recent shapefiles for the specific project.

Sincerely

Alfred Thomas



# Annexure I

Comments from SAHRA





## **Final Decision**

**In terms of section 38(8) of the National Heritage Resources Act (Act 25 of 1999)**

Attention: Bokamoso Landscape Architects

### **Gaigher, S. April 2012. Phase 1 Heritage Impact Assessment Report for the Proposed Crosswise Estate Extension 1–10.**

The proposed development entails a residential extension situated on Portions 20, 317 and 318 as well as the remainders of Portion 15 and 113 of the farm Doornkloof 391 JR. This area is located in the present area of Irene, near the city of Pretoria. The total size of the proposed development is 397.5 ha. It will be a mixed use zoning with residential, commercial, industrial & retirement village.

The author contends that although a scattering of informal structures were identified throughout the study area, no sites of heritage significance could be identified. The author notes that the area adjacent to the development site does however have a strong historic association with the late Jan Smuts and the Jan Smuts Museum is located only 500m south of the boundary of the proposed development. The Irene Concentration Camp was also located close to the site. This lends a strong historic character to this landscape. The author recommends that the development take into account the historic character of this area as well as its association with Jan Smuts and the South African War through the Irene Concentration Camp and that this character is reflected and preserved in its design and layout. The author further recommends that a visual impact assessment be performed to gauge the possible visual impacts that the development might have on the museum and the cultural landscape.

#### **Decision:**

If the recommendations made in the specialist report and in this comment are adhered to, the SAHRA Archaeology, Palaeontology and Meteorite Unit has no objection to the development (in terms of the archaeological component of the heritage resources). If any new evidence of archaeological sites or artefacts, palaeontological fossils, graves or other heritage resources are found during development, construction or mining, SAHRA and a professional archaeologist must be alerted immediately.

Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, the developer must ensure that a professional Palaeontological Desk Top study is undertaken to assess whether or not the development will impact upon palaeontological resources. If this is deemed unnecessary, a letter of recommendation for exemption from a professional Palaeontologist is needed. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary.

Please note that decisions on Built Environment must be referred to the Gauteng Provincial Heritage





Enquiries: Andrew Salomon  
Tel: 021 462 4502  
Email: [asalomon@sahra.org.za](mailto:asalomon@sahra.org.za)  
CaseID: 332

Date: Wednesday August 22, 2012

Page No: 2

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Resources Agency (Ms Maphata Ramphele: [Maphata.Ramphele@gauteng.gov.za](mailto:Maphata.Ramphele@gauteng.gov.za), Mr Grant Botha: [grantb@gpg.gov.za](mailto:grantb@gpg.gov.za)).

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

Yours faithfully

A handwritten signature in black ink, appearing to read 'Andrew Salomon', written over a light grey background.

---

Andrew Salomon  
Heritage Officer: Archaeology  
South African Heritage Resources Agency

A handwritten signature in black ink, appearing to read 'Colette Scheermeyer', written over a light grey background.

---

Colette Scheermeyer  
SAHRA Head Archaeologist  
South African Heritage Resources Agency

---

## ADMIN:

### Terms & Conditions:

1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for proposed work.
2. If any heritage resources, including graves or human remains, are encountered they must be reported to SAHRA immediately.
3. SAHRA reserves the right to request additional information as required.



The South African Heritage Resources Agency

Street Address: 111 Harrington Street, Cape Town 8000 \* Postal Address: PO Box 4837, Cape Town 8000  
Tel: +27 21 462 4502 Fax: +27 21 462 4509 Web: <http://www.sahra.org.za>

# Annexure J

Comments from Rand Water



**Bianca**

---

**From:** Bokamoso <lizelle@mweb.co.za>  
**Sent:** 12 June 2013 03:19 PM  
**To:** user3@bokamoso.net  
**Cc:** user1@bokamoso.net  
**Subject:** FW: Registration as IAP: Proposed Rietvlei X6-X9 and Proposed Rietvlei X10, X11 and X15 Projects  
**Attachments:** Standard Conditions of Crossing RW Pipes\_Way Leave.pdf; Proposed Rietvlei X6-X9 and X10\_X11 and X15 Projects.pdf; Untitled attachment 00390.txt

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**From:** Natalie Koneight [<mailto:nkoneigh@randwater.co.za>]  
**Sent:** 12 June 2013 03:11 PM  
**To:** [lizelle@mweb.co.za](mailto:lizelle@mweb.co.za)  
**Subject:** Registration as IAP: Proposed Rietvlei X6-X9 and Proposed Rietvlei X10, X11 and X15 Projects

Dear Sir/Madam

Rand Water is hereby registering as IAP for the above-mentioned project.  
Kindly forward confirmation of registration as IAP to Natalie Koneight at [nkoneigh@randwater.co.za](mailto:nkoneigh@randwater.co.za)

Attached is Rand Water's Wayleaves, for your information.  
Rand Water would like to be sure that the development as per the BID have planned adequately for their sewerage removal off site.

Please provide Rand Water with:

1. The detail about the facility that will receive the sewerage.
2. An agreement that the identified sewerage facility I aware of the development and that they have the capacity to accept the sewerage from the site without overloading the facility.
3. Will there be any discharges other than the sewerage system that will increase storm water entering the environment. If so, has the development considered retention and stilling ponds to slow down high peak flows.

If the sewerage facility cannot accept the additional load into their facility then this will have a negative impact on the environment and the pollution load into the river system.

*Natalie Koneight*

Secretary to Leslie Hoy  
EMS Department, GSSE





## STANDARD CONDITIONS FOR CROSSING OF RAND WATER'S SERVICES

ANNEXURE "A" (OCT 2002)

### 1. SERVICE CROSSINGS :

- 1.1 The number of crossings of Rand Water's pipeline/s and servitude/s or proposed servitude/s shall be kept to a minimum; such crossings shall be as close to 90 degrees (right angles) as possible and the cover over its pipeline/s shall not be materially altered.
- 1.2 No service shall be less than one metre from a joint in Rand Water's pipeline/s and a space of not less than 300 mm shall be maintained between any service and Rand Water's pipeline/s at the point of crossing, or as separately specified. Where Rand Water's prestressed concrete pipeline is crossed, this space shall be measured from the lightning protection wires installed above and below the pipeline. For service crossings under those of Rand Water, where further larger diameter pipeline are installed in the servitude in the future, Rand Water may require the service owner, at its own cost, to lower its service to comply with the foregoing.
- 1.3 No service running parallel to Rand Water's pipeline/s, no box, manhole, structure supporting any service, footing of any pylon, pole or stay wire and no stormwater culvert and / or appurtenances shall be within two metres of Rand Water's pipeline/s or on Rand Water's servitude/s or proposed servitude/s or discharge thereon unless the prior written permission of Rand Water has been obtained.
- 1.4 Half-round concrete pipes or other approved protection shall be placed over any cable that is within two metres of Rand Water's pipeline/s or on Rand Water's servitude/s or proposed servitude/s.
- 1.5 Where any service crosses Rand Water's servitude/s or proposed servitude/s, it shall be laid at minimum grade (sewers and stormwater) / at an even depth below ground level (all other services) over the entire servitude / proposed servitude width and its position where it intersects Rand Water's pipeline/s, servitude/s or proposed servitude/s shall be clearly indicated by suitable markers. Sewer crossings shall be designed to span over Rand Water's existing and proposed pipeline trenches.

### 2. ROADS AND RAILWAY LINE CROSSINGS :

- 2.1 Rand Water shall have unimpeded vehicular access to its pipeline/s at all times for inspection and maintenance purposes. Culverts shall be provided at all railway line crossings to provide such access. Under roadways culverts will be required unless it can be proved to Rand Water that traffic density and the cover over the pipeline/s will not adversely affect Rand Water in the exercise of its rights and that excavation through the road layers to gain access to the pipeline/s is acceptable to the service owner. In general, the cover over Rand Water's pipeline/s may vary between 800 mm and 1 500 mm however, an undisturbed layer of at least 300 mm shall be maintained between the pipeline/s and the roadworks during construction unless relaxed by Rand Water in writing. Reinforced concrete box culverts with compartments having minimum internal dimensions as indicated on Rand Water's standard drawings No. B1933 and B1934 shall be provided for both existing and future pipelines. Culverts shall preferably be drained by a gravity system.
- 2.2 Long diagonal crossings of Rand Water's pipeline/s and servitude/s or crossings of bonds in Rand Water's pipeline/s shall be avoided. If this is not possible, Rand Water's pipeline/s shall be deviated so as to cross the proposed road/railway line at approximately right angles.

### 3. PIPELINE PROTECTION AND / OR DEVIATION AT DESIGN STAGE :

- 3.1 Where any development affects the discharge of water from Rand Water's scour valves, arrangements shall be made in collaboration with Rand Water's Manager Bulk Water Services to accommodate, channel or divert such flow.
- 3.2 Detailed proposals, including longitudinal sections along Rand Water's pipeline/s depicting the level of the road/railway line or other service in relation to the pipeline/s, shall be submitted for Rand Water's approval before the commencement of proposed construction work.
- 3.3 It may be necessary for Rand Water itself to strengthen the lead-caulked joints of its pipeline/s located under roadways or in culverts, by means of double tapers, the fabrication of which requires at least two months notice. Such strengthening shall extend to a distance of at least two metres beyond the road prism/kerb line, measured at right angles to the road direction. (The estimated cost of which is R 7 000 per joint). The actual cost of joint strengthening shall be borne by the service owner who shall be responsible for all excavation and backfilling.
- 3.4 Since lengthy delays can occur between the planning and construction stages, the proposed dimensions of the culverts shall be confirmed by Rand Water at least 12 months before construction work commences.
- 3.5 All planning, survey work, preparation of designs, specifications and drawings shall be undertaken by the service owner or its consulting engineers and submitted to Rand Water for approval. A copy / Copies of the relevant specimen specification/s will be provided, on request, when more details of the work to be performed are known.
- 3.6 Contractors approved by Rand Water shall be engaged to undertake all construction work, including :
- |  |  |
|--|--|
| (a) manufacture, supply and delivery of pipes; | (b) excavation and backfill of trenches etc; |
| (c) laying and jointing of pipes;              | (d) recovery of redundant pipes; and         |
| (e) construction of the necessary structures.  |  |
- 3.7 Rand Water shall be given reasonable notice prior to the commencement of the fabrication as well as the installation of pipes to enable it to undertake the necessary inspection work.
- 3.8 Except for the manufacture of pipes, which will be inspected by Rand Water or its agents, all work shall be supervised by the service owner or its consulting engineers who will also undertake all necessary negotiations with property owners and local authorities affected by any possible relocation of Rand Water's pipeline/s and obtain agreement from them in principle for the accommodation of Rand Water's pipeline/s in the proposed relocated position/s.

Continued overleaf.....

- 3.9 Where Rand Water is required to relocate its pipeline/s or servitude/s, the service owner shall bear the cost of the cancellation of Rand Water's servitude/s as well as the costs of acquiring, surveying and registering new servitudes that will provide Rand Water with rights equal to those provided by the servitudes to be cancelled.
- 3.10 Co-ordinates of the alignment of any proposed relocation/s shall be submitted to Rand Water to prepare the statutory notices for relocations of its pipeline/s. Relocation shall not take place until Rand Water has issued such statutory notices.
- 3.11 During the period April to August in any year, at a time suited to its water supply operations, Rand Water will, on receipt of 21 days notice, circumstances permitting, make the end connections from the deviations to the existing pipeline/s. Daywork rates shall be included in the pipelaying contract documents to allow for assistance to Rand Water.
- 3.12 Ownership of portions of the pipeline/s that become redundant as a result of relocations carried out at the service owner's cost will be transferred to it. If requested, Rand Water may take into stock pipes and / or valves recovered in good condition and credit the service owner with the value determined by Rand Water. Materials thus taken into stock shall be delivered to Rand Water's pipe yard at its Zwartkopjes pumping station by and at the cost of the service owner.
- 3.13 The service owner hereby indemnifies Rand Water against any claim arising from the non-removal and disposal of any portion of Rand Water's pipeline/s made redundant by a relocation.
- 3.14 No pipeline in its relocated position shall be subject to the provisions of the Advertising on Roads and Ribbon Development Act No 21 of 1940 or the National Roads Act No 54 of 1971 as amended.

#### 4. PIPELINE PROTECTION AND / OR DEVIATION AT CONSTRUCTION STAGE :

- 4.1 Rand Water's Distribution Manager (Telephone (011) 900-1910) shall be notified and his permission obtained before any work is carried out within five metres of Rand Water's pipeline/s, servitude/s or proposed servitude/s and before backfilling any excavation exposing Rand Water's pipeline/s - Please quote inspection order No. as specified separately.
- 4.2 If detailed information of the positions or levels of the pipeline/s is required the pipeline/s may be exposed by the service owner or its consulting engineers, provided that the foregoing condition is complied with.
- 4.3 In terms of Regulation 10.17.1 of the Explosives Act No 26 of 1956, written confirmation of the measures proposed to protect Rand Water's pipeline/s shall be obtained from Rand Water for any blasting to be undertaken within 500 metres of its pipeline/s. The service owner shall be responsible for ensuring that the approved protection measures are complied with and that Rand Water's Distribution Manager is notified at least 24 hours in advance of each blast.
- 4.4 The pipeline/s shall be supported at not greater than five metre centres in culverts and where excavation takes place under the pipeline/s during construction.
- 4.5 No heavy earthmoving or compaction equipment shall be operated within two metres of the steel or five metres of the prestressed concrete pipeline/s unless specific proposals have been approved by Rand Water.
- 4.6 The prestressed concrete pipeline/s shall be haunched under the road or supported on pedestals where crossed by services located thereunder in accordance with the details depicted on Rand Water's drawing A3993, a print of which is available on request. Such haunching shall extend for a distance of two metres beyond the edge of the roadway on both sides, or to such greater length as may be required to complete the haunching of the nearest whole pipe length.

#### 5. CATHODIC PROTECTION AT STEEL PIPELINE CROSSINGS :

- 5.1 Two 16 square millimetre leads or one 35 square millimetre lead appropriately marked must be provided at each crossing point and the crossing shall not be back-filled until Rand Water's staff have installed similar test leads on Rand Water's pipeline/s. The Electrolysis Section ((011)-682-0239 or 0240) must be contacted for the connections to Rand Water's pipeline/s.
- 5.2 The pipe to ground potential of Rand Water's pipeline/s at the crossing point will be monitored before installation of the service owner's steel service and that potential must be maintained irrespective of the cathodic protection applied to the service owner's steel service after installation.

#### 6. INDEMNITY :

- 6.1 The service owner shall indemnify Rand Water against all claims for damage arising out of, and will be held liable for any damage that may be caused to Rand Water's pipeline/s and/or appurtenances as a result of any crossing of or during construction or the installation/construction and/or the presence of any service/road/railway line and/or appurtenances on Rand Water's servitude/s or within two metres of Rand Water's pipeline/s. Rand Water shall not be liable for any damage to any service/road/railway line and/or appurtenances that may be caused by it in the exercise of its rights, provided that Rand Water will remain liable for any damage that is proved to have resulted directly from the wrongful action of its employees.

#### 7. COSTS :

- 7.1 The service owner shall bear the cost of any protective measure that may be necessary in order to prevent the exchange of stray direct currents between the cable/s or pipe/s and Rand Water's pipeline/s, the protection of existing installations and of making provision to accommodate future services, as outlined above as well as the cost of repairs to the lightning protection wires installed approximately 100 mm above and below Rand Water's prestressed concrete pipeline/s or to Rand Water's telemetering cables necessitated by the installation of the proposed service, and will be debited with all costs incurred by Rand Water on its behalf on the usual terms of actual cost plus 10% (ten per cent) for administration.

#### 8. ACCEPTANCE OF CONDITIONS :

- 8.1 The above conditions together with Annexure B (Vaal Barrage Conditions) - if relevant, and any foregoing special requirements shall be accepted in writing by the service owner before any work may commence. If no reply is received within 60 days from date of Rand Water's written notification, the conditions will be deemed to have been accepted by the service owner.

# REGISTRATION AS IAP

## PROPOSED RIETVLEI X6 – X9 AND THE PROPOSED RIETVLEI X10, X11 & X 15 PROJECTS

GDARD REF: GAUT: 002/12-13/E0224

First Name/s:	MPATI
Last Name:	MPSHE
Title: (Dr./ Miss/ Mr./ Mrs./ Prof. etc)	MRS
If representing an entity (i.e. company or organisation), name of entity:	RAND WATER
If representing an entity, position within entity (i.e. CEO, Chairperson, Secretary, Councillor, etc):	ENVIRONMENTAL ASSESSOR
Postal Address:	P.O. BOX 1127 JOHANNESBURG 2000
Physical Address	
E-mail Address:	<a href="mailto:mmpshe@randwater.coz.za">mmpshe@randwater.coz.za</a>
Phone Number:	(011) 724-9357
Cell Phone Number:	
Fax:	(011) 900-1208
<b><u>Comments:</u></b>  <b>ALL TRAVERSING ALONG AND OVER RAND WATER PIPELINES. POSSIBLE LEAKS FROM OTHER SERVICES THAT COULD CAUSE GROUND STABILITY TO CHANGE. PLEASE KEEP US INFORMED REGARDING THE ABOVE ASPECTS.</b>	

# Annexure K

Comments from COT





## Environmental Management Services Department

4th Floor, Nr 11 Francis Beard Street, Pretoria  
PO Box 1454 | Pretoria 10001  
Email: Tel: 012 358 8871 | Fax: 012 358 8934  
Email: [LivhuwaniS@tshwane.gov.za](mailto:LivhuwaniS@tshwane.gov.za) | [www.tshwane.gov.za](http://www.tshwane.gov.za)

My ref:	8/4/R/4	Tel:	012 358 7334
Your ref:	GAUT 002/12-13/E0089	Fax:	012 358 8934
Contact person:	K Mofela	Email:	<a href="mailto:kemr.onem@tshwane.gov.za">kemr.onem@tshwane.gov.za</a>
Section:	Environmental Planning and Open Space Management	Date:	17 February 2014

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

**Attention:** Lizelle Gregory  
**Tel:** (012) 346 3810  
**Fax:** 086 570 5859  
**E-mail:** [lizelleg@mweb.co.za](mailto:lizelleg@mweb.co.za)

Dear Sir/Madam,

### FINAL SCOPING REPORT FOR THE PROPOSED RIETVLEI EXTENSION 12, 13 AND 14 DEVELOPMENT ON PORTIONS OF THE REMAINING EXTENTS OF PORTION 15 AND PORTION 20 OF THE FARM DOORNKLOOF 391-JR

Your Report dated 30 October 2013 refers,

#### 1. INTRODUCTION

The Environmental Management Services Department (the Department) has considered the Final Scoping Report in respect of the above-mentioned application. The Final Scoping Report is submitted to the Environmental Management Services Department of the City of Tshwane, hereafter referred to as "the City", as a commenting authority in terms of the National Environmental Management Act (NEMA) and EIA Regulations of August 2010.

#### 2. PROJECT LOCATION AND DESCRIPTION

Bokamoso Landscape Architects and Environmental Consultants has been appointed by Gillyfrost (Pty) LTD as an independent Environmental Assessment Practitioner (EPA) to undertake the environmental assessment for the proposed township establishment on the Remainder of Portion 15 of the farm Doornkloof 391-JR and Remainder of Portion 20 of the farm Doornkloof 391-JR, Gauteng Province. The consequent proposed townships shall be known as Rietvlei Extension 12, Rietvlei Extension 13 and Rietvlei Extension 14. Furthermore, it is the third phase of the larger Rietvlei Development by Gillyfrost (Pty) Ltd. The proposed township establishment falls within the area of jurisdiction of the City of Tshwane Metropolitan Municipality.

The study area is approximately 150.81 hectares in extent of which 43.39ha; 70.50ha and 36.92ha are for Rietvlei x14, Rietvlei x13 and Rietvlei extension 12, respectively.

The proposed township establishment of a mixed land-use development consisting of:

- Residential 2 (5 units / ha) zone measures 44.73ha and will have 5 units per hectare
- Special zone for Hotel and Health Spa measures 11.5ha
- Special zone for Residential Centre measures 7.95 ha
- Special zone for Hotel and Residential Units measures 3.19ha
- Business 2 zone measures 34.27ha

The activity entails undertaking the following listed activities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and Environmental Impact Assessment Regulation, 2010,

Under Listing Notice 1, R 544: Activities 9, 10, 11, 18, 22, 23, 24, 26, 28, 37, 38, 39, 47 and 56;

Listing Notice 2, R 545: Activities 15

Listing Notice 3, R456: Activities 4, 13, 14, 16, 19 and 26

### 3. KEY FACTORS INFORMING THE COMMENTS

In making comments in respect of the proposed Activity the Department has taken, *inter alia*, the following into consideration:

- a. The information contained in the Final Scoping Report 30 October 2013 and received by the Department on 04 December 2013.
- b. Information obtained from the Section's information base including *inter alia*:
  - Geographic Information System (GIS); and
  - Gauteng Open Space Plan (GOSP).
- c. Compliance with applicable Municipal, Provincial, and National Policies and Guidelines including:
  - The National Environmental Management Act 1998 (Act 107 of 1998) (NEMA): its decision-making principles and Environmental Impact Assessment Regulations;
  - The Tshwane Integrated Environmental Policy (TIEP);
  - The Tshwane Open Space Framework (TOSF); and
  - The Bioregional Plan for the Gauteng Metropolitan Municipalities.

### 4. DISCUSSION

In reviewing the application the Department made the following findings:

- a) The revised layout map highlights the 1:50 and 1:100 year floodlines as well as the 32meter flood area servitude as requested by this Department.
- b) The report indicated that the following specialist studies will be undertaken during the EIA phase:
  - Geotechnical Study;
  - Hydrological/Stormwater Study;
  - Flora and Fauna survey;
  - Wetland delineation, and
  - Cultural and Historical Study.

## 5. RECOMMENDATIONS

The Department recommends that the following issues be taken into consideration during the EIA phase of the project:

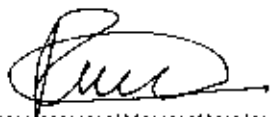
- a) A detailed layout plan, overlaying all sensitivities shall be included within the EIA report and submitted to this Department for perusal. The layout plan shall also be made available for the surrounding Interested and Affected parties to evaluate and comment on.
- b) No Development or structures (permanent or temporary) will be allowed within the Open Space areas, 1:50 and 1:100 year flood line or within the 32m line from the centre from the river, whichever is the greatest. The layout plan must make provision for this requirement.
- c) Given the nature of the proposed development it is recommended that a traffic impact study be included on the specialist's studies to be undertaken for the proposed development.
- d) A detailed Dolomite Stability Investigation Report must be included in the report.
- e) A detailed stormwater management plan must be compiled that ensures that storm water generated on site is discharged in such a way that the receiving environment is not adversely impacted upon.
- f) Confirmation of service capacity (water, electricity, storm water and sewer) from the relevant service providers must be included within the final report. Should no capacity exist for any of these services, an alternative should be discussed within the Report.
- g) All identified specialist studies must be conducted and included in the EIA Report. The Assessment must indicate all potential impacts of the proposed development and appropriate mitigation measures.
- h) A general Rehabilitation plan shall be included within the EIA Report which will aim to prevent erosion and aid the return of natural, endemic and indigenous vegetation cover to at least 80% of the rehabilitated area. The proposed rehabilitation plan should be included for the road servitudes as well as any sensitive water and wetland crossings.
- i) An Environmental Management Plan should be included within the EIA Report. The EMP should address impacts and mitigation measures for the pre-construction, construction and post-construction activities. All issues and recommendations from Specialist studies should be included within the final and approved EMP. An Environmental Control Officer and contact details should also be included within the EMP.

## 6. CONCLUSION

The above recommendations should be considered and included within the EIA report.

The Department will provide final comments upon the review of the Environmental Impact Assessment Report, with the inclusion of the above recommendations and issues.

Yours faithfully



17/02/2014

Mr Livhuwani Siphuma Date:

**EXECUTIVE DIRECTOR: ENVIRONMENTAL MANAGEMENT DIVISION**

Letter signed by: Rudzani Mukheli

**Designation: Deputy Director: Environmental Planning and Open Space Management Section**

CC Gauteng Department of Agriculture and Rural Development Attn:

Mr. Teboho Leku

Tel: (011) 240 2500

Fax: (011) 240 1000





**CITY OF  
TSHWANE**  
IGNITING EXCELLENCE

## Environmental Management Services Department

4th Floor, Nr 11 Francis Baard Street, Pretoria  
PO Box 1454 | Pretoria | 0001  
Email: Tel: 012 358 8871 | Fax: 012 358 8934  
Email: [Livhuwane@tshwane.gov.za](mailto:Livhuwane@tshwane.gov.za) | [www.tshwane.gov.za](http://www.tshwane.gov.za)

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My ref:	B/4/R/8	Tel:	012 358 7334
Your ref:	GAUT 002/12-13/E0089	Fax:	012 358 8934
Contact person:	K. Mofeta	Email:	<a href="mailto:kenn@em@tshwane.gov.za">kenn@em@tshwane.gov.za</a>
Section:	Environmental Planning and Open Space Management	Date:	07 November 2013

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

Attention: Lizelle Gregory  
Tel: (012) 346 3810  
Fax: 086 570 5659  
E-mail: [lizelleg@mweb.co.za](mailto:lizelleg@mweb.co.za)

Dear Sir/Madam,

### **SUBMISSION OF DRAFT SCOPING REPORT FOR THE PROPOSED RIETVLEI EXTENSION 12, 13 AND 14 DEVELOPMENT ON PORTIONS OF THE REMAINING EXTENTS OF PORTION 15 AND PORTION 20 OF THE FARM DOORNKLOOF 391-JR**

Your Report dated 2 September 2013 refers,

#### **1. INTRODUCTION**

The Environmental Management Services Department (the Department) has considered the Draft Scoping Report in respect of the above-mentioned application. The Draft Scoping Report is resubmitted to the Environmental Management Services Department of the City of Tshwane, hereafter referred to as "the City", as a commenting authority in terms of the National Environmental Management Act (NEMA) and EIA Regulations of August 2010.

#### **2. PROJECT LOCATION AND DESCRIPTION**

Bokamoso Landscape Architects and Environmental Consultants has been appointed by Gillyfrost (Pty) Ltd as an independent Environmental Assessment Practitioner (EPA) to undertake the environmental assessment for the proposed township establishment on the Remainder of Portion 15 of the farm Doornkloof 391-JR and Remainder of Portion 20 of the farm Doornkloof 391-JR, Gauteng Province. The consequent proposed townships shall be known as Rietvlei Extension 12, Rietvlei Extension 13 and Rietvlei Extension 14. Furthermore, it is the third phase of the larger Rietvlei Development by Gillyfrost (Pty) Ltd. The proposed township establishment falls within the area of jurisdiction of the City of Tshwane Metropolitan Municipality.

Rietvlei Development by Gillyfrost (Pty) Ltd. The proposed township establishment falls within the area of jurisdiction of the City of Tshwane Metropolitan Municipality. The study area is approximately 150.81 hectares in extent of which 43.39ha; 70.50ha and 36.92ha are for Rietvlei x14, Rietvlei x13 and Rietvlei extension 12, respectively.

The proposed township establishment of a mixed land-use development consisting of:

- Residential 2 (5 units / ha) zone measures 44.73ha and will have 5 units per hectare
- Special zone for Hotel and Health Spa measures 11,5ha
- Special zone for Residential Centre measures 7.95 ha
- Special zone for Hotel and Residential Units measures 3.19ha
- Business 2 zone measures 34.27ha

The activity entails undertaking the following listed activities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and Environmental Impact Assessment Regulation, 2010,

Under Listing Notice 1, R 544: Activities 9, 10, 11, 18, 22, 23, 24, 26, 28, 37, 38, 39, 47 and 56;

Listing Notice 2, R 545: Activities 15

Listing Notice 3, R456: Activities 4, 13, 14, 16, 19 and 26

### 3. KEY FACTORS INFORMING THE COMMENTS

In making comments in respect of the proposed Activity the Department has taken, *inter alia*, the following into consideration:

- a) The information contained in the Draft Basic Assessment Report 02 September 2013 and received by the Department on 02 October 2013.
- b) Information obtained from the Section's information base including *inter alia*:
  - Geographic Information System (GIS); and
  - Gauteng Open Space Plan (GOSP).
- c) Compliance with applicable Municipal, Provincial, and National Policies and Guidelines including:
  - The National Environmental Management Act 1998 (Act 107 of 1998) (NEMA): its decision-making principles and Environmental Impact Assessment Regulations;
  - The Tshwane Integrated Environmental Policy (TIEP);
  - The Tshwane Open Space Framework (TOSF); and
  - The Bioregional Plan for the Gauteng Metropolitan Municipalities.

### 4. DISCUSSION

In reviewing the application the Department made the following findings:

- a) According to the Tshwane Open Space Framework the proposed site is situated within and in close proximity to the following open space typologies:

- **Green Way**, namely class 3 ridge. Green ways consist of ridge systems. Such ridges are defined as areas steeper than 5 degrees in which ecological systems processes and values are concentrated. Green Ways also represent important habitats for fauna- and flora, areas representative of local biomes, vegetation types and high ecological sensitivity as well as areas of linkage and connectivity.

- A **Green Node**, namely GDACE Important Site: South and South-West of ARC as well as GDACE Irreplaceable Site: ARC. Green nodes are the most important elements in the provisioning of environmental goods and services, the protection of biodiversity, endangered species and ecological systems, as well as eco-based activity. Green nodes must be protected for conservation purposes.
  - A **Blue Way**, namely Kaelspruit, Sesmylspruit and Hennops River and associated wetlands. Blue ways are the most important elements in the provisioning of environmental goods and services, the protection of biodiversity, endangered species and ecological systems as well as eco-based activity. Blue ways must therefore be conserved.
  - A **Blue Node**, namely Olifantspruit wetland. Blue Nodes have secondary socio-economic and placemaking function, therefore they must be conserved.
- b) According to the GDARD C-Plan version 3 the proposed development is situated on **Irreplaceable Site**. Irreplaceable sites are essential in meeting targets set for conservation of biodiversity in Gauteng
- c) According to the Bioregional Plan for the Gauteng Metropolitan Municipalities the proposed site is situated within the following areas:
- **Critical Biodiversity Area 1 & 2**. The proposed development is situated within the Critical Biodiversity Area 1 and Critical Biodiversity Area 2. Critical Biodiversity Area, in relation to the class 3 ridge, implies that the area is either natural or near natural terrestrial or aquatic as well as have some cultivated landscapes required to meet biodiversity pattern and/or thresholds. Critical Biodiversity Area One must obtain formal conservation protection where possible to avoid net loss of intact habitat or intensification of land-use.
- d) The report indicates that development on the northern part of the proposed Rietvlei extension 14 is restricted by the presence of the overhead electrical power lines.
- e) The report indicates that the proposed Rietvlei extensions 13 and 14 are located largely within moderate potential agricultural land whilst Rietvlei extension 12 is on high potential zone as informed by the GAPA 3 principles.
- f) According to the report the proposed development site will be accessed from the existing R21 Albertina Sisulu Freeway where an interchange is planned.
- g) The proposed application site is located **inside the urban edge** as determined by the Gauteng Spatial Development Framework (2000).
- h) According to the report and the Tshwane GIS layers the proposed development site is underlain by dolomite and probably mainly dolomite of the Eccles Formation of the Chuniespoort Group of the Transvaal Supergroup.
- i) The Olifantspruit tributary and its associated wetland areas are bordering the western part of the proposed development site. The riparian and 32 meter buffer zones have been delineated.
- j) The report indicates that no groundwater encountered and seepage water recorded in holes drilled to 60 meters deep within proposed development site.
- k) The vegetation of the proposed development site can be broadly addressed as Rocky Highveld Grassland (Brankenveld) and its variation on dolomite-derived soils as indicated in the report.
- l) The proposed development site is located on Irreplaceable Site as informed by the GDARD C-Plan 3.

- m) According to the report no significant heritage sites were identified by the involved specialist. However, the Irene Concentration Camp situated adjacent to the proposed development site has strong historic character to this landscape.
- n) According to the report the proposed development may have visual impact on the Jan Smuts Museum and its cultural landscape.
- o) The report indicates that the proposed development site was previously earmarked for possible mining activities but it is currently undeveloped and unused for any active agricultural practice
- p) The proposed development is of similar nature to the existing complexes along the R21 and the N1 routes between Tshwane urban complex and City of Johannesburg and Ekurhuleni Metropolitan areas.
- q) The following detailed studies will be conducted and included in the EIA report as indicated in the report:
- Dolomite Stability Investigation Report
  - Stormwater Management Plan
  - Groundwater Management Strategy
  - Riparian Delineation Report
  - Centurion Lake Rehabilitation Plan
  - Fauna and Flora Surveys
  - Cave Biodiversity Study
  - Cultural and Historical Report
  - Visual Impact Assessment Report
  - Agricultural Potential Survey Report
  - Status Quo Investigations
  - Market Study
  - Traffic Impact Assessment Report
- r) The layout plan provided makes no clear distinction between Residential 2 (20units) and Residential 2 (25 units) unless they were omitted which must be shown in the revised layout plan.
- s) The legend items do not correlate with symbology used in the layout map.
- t) The layout plan does not clearly show information on the delineated wetland/river as well as the flood line to show that the proposed development will be outside the 32 meters buffer from the centre of watercourse or the 1:50 and 1:100 year flood lines as prescribed by TOSF.

## 5. RECOMMENDATIONS

In light of the above discussion, the Department request that the following amendments be effected:

- a) A detailed layout plan distinctively showing appropriate density for the proposed development and a clear corresponding symbology applied for in the provided map legend.
- b) A revised layout map should clearly include the floodlines and the 32m buffer between the development footprint and the watercourse.
- c) All identified specialists reports must be conducted and included in the EIA report. The assessment report must include all potential impacts of the proposed development and appropriate mitigation measures.

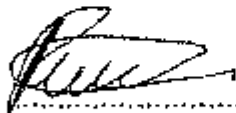
- d) Service Report (water, electricity, stormwater and sewage) from relevant service providers must be included in the assessment report
- e) Environmental Management Plan highlighting all possible impacts and appropriate mitigation measures thereof must be included within the EIA report.

**6. CONCLUSION**

The above recommendations should be considered and included within the EIA report.

The Department will provide final comments upon the review of the Environmental Impact Assessment Report, with the inclusion of the above recommendations and issues.

Yours faithfully



07/11/2013

Mr Livhuwani Siphuma Date:

**EXECUTIVE DIRECTOR: ENVIRONMENTAL MANAGEMENT DIVISION**

Letter signed by: Rudzani Mukheli

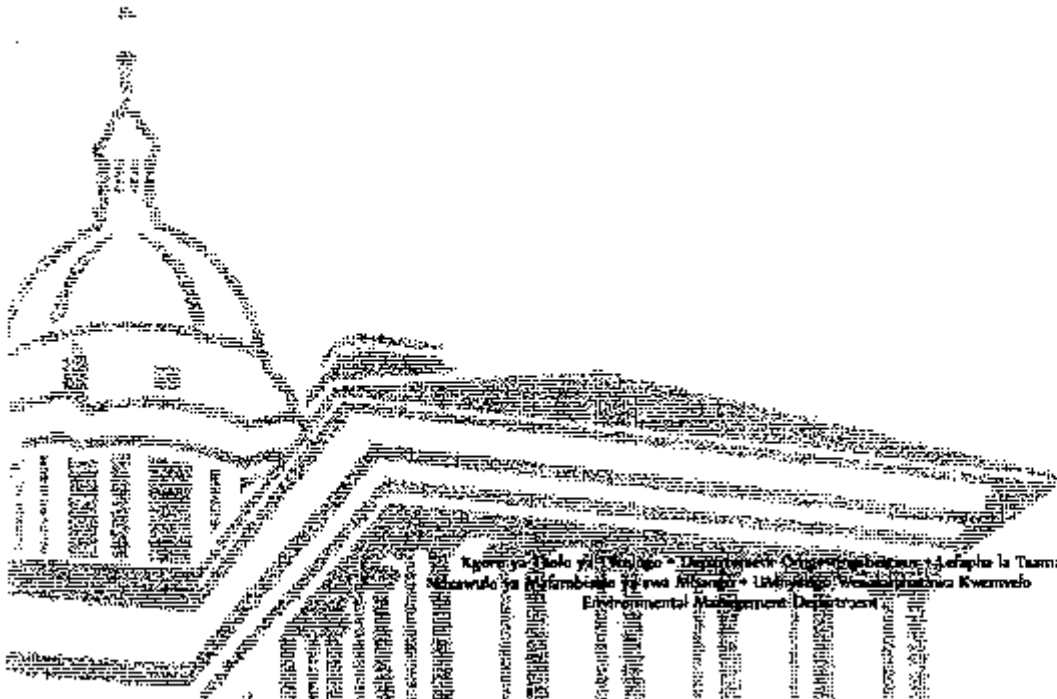
**Designation: Deputy Director: Environmental Planning and Open Space Management Section**

CC Gauteng Department of Agriculture and Attn: Rural Development

Mr. Tebho Leku

Tel: (011) 355 1354

Fax: (011) 355 1000



# **Annexure L**

## PUBLIC PARTICIPATION



# Annexure L(i)

SITE NOTICE



# NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given of an application for a **Scoping Environmental Impact Assessment Process** that was submitted to the Gauteng Department of Agriculture and Rural Development, in terms of Regulation No. R543 published in the Government Notice No. 33306 of 18 June 2010 of the National Environment Management Act, 1998 (Act No. 107 of 1998) governing **Environmental Impact Assessment Procedures (Listing Notice: 1, 2 and 3 – Governing Notice R544, R545 & R546)** for the following activity:

**Reference No:** Gaut: 002/12-13/E0089

**Project Name:** Proposed Mixed Use Development to be known as Rietvlei Extension 12, 13 & 14

**Property Description:** Portions of the Remaining Extent of Portion 15 of the farm Doornkloof 391 JR and Portion 20 of the farm Doornkloof 391 JR, Gauteng Province.

**Proposed Zoning Information:** The proposed activity will entail the construction of a mixed land-use development consisting of the following land-uses: Residential 2 (5 dwelling units/hectare), Business 2 (office, banks, display centres, light manufacturing/assembly), Special for Hotel/Health Spa and Resort, Place of Worship, Special for Retirement Centre.

## Listing Activities Applied for:

GNR 544 (Listing Notice 1), 18 June 2010	Activity 9, 10, 11, 18, 22, 23, 24, 26, 28, 37, 38, 39, 47 & 56
GNR 545 (Listing Notice 2), 18 June 2010	Activity 15
GNR 546 (Listing Notice 3), 18 June 2010	Activity 4, 6, 13, 14, 16, 19 & 26

**Proponent Name:** Gillyfrost 71 (Pty) Ltd

**Location:** The study area is located within City of Tshwane to the west of the R21 Freeway. It is situated to the west of Rietvlei Nature Reserve and St. Georges Hotel, to the south of Smuts House Museum, Irene Village, Twin Rivers Residential Estate & Cornwall Hill. Salberg Industrial Plant is situated to the south of the study area.

**Date of Notice:** 29 August 2012

**Queries regarding this matter should be referred to:**

## **Bokamoso Landscape Architects and Environmental Consultants**

Public Participation registration and inquiries: **Juanita De Beer**

Project inquiries: **Mientjie Coetzee**

P.O. Box 11375

Maroelana 0161

www.bokamoso.net

Tel: (012) 346 3810

Fax: (086) 570 5659

E-mail: lizelleg@mweb.co.za

In order to ensure that you are identified as an Interested and/or Affected Party (I&AP) please submit your name, contact information and interest in the matter, in writing, to the contact person given above **within 40 days of this Notice**.





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WISCONSIN POWER & LIGHT  
MILWAUKEE WISCONSIN

30.08.2012 14:22

## NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Reference is made to the Environmental Impact Assessment Process as outlined in the Planning Department's Guide to the Environmental Impact Assessment Process, published in the Government Gazette No. 3420 of 18 June 2010. The Environmental Impact Assessment Process was regulated by Regulation 10 of 1999, published in the Government Gazette No. 3420 of 18 June 2010. The Environmental Impact Assessment Process is regulated by Regulation 10 of 1999, published in the Government Gazette No. 3420 of 18 June 2010.

Reference is made to the following details:

**Project Name:** [Project Name] Development to be known as [Project Name] (to be known as [Project Name]).

**Project Description:** [Project Description] in terms of the [Project Description] of [Project Name] (to be known as [Project Name]).

**Project Location:** [Project Location] situated on [Project Location] in the [Project Location] of [Project Name] (to be known as [Project Name]).

**Land Use:** [Land Use]

DATE OF NOTICE: 30/08/2012	DATE OF NOTICE: 30/08/2012
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DATE OF NOTICE: 30/08/2012	DATE OF NOTICE: 30/08/2012

**Project Name:** [Project Name]

**Location:** [Project Location] situated on [Project Location] in the [Project Location] of [Project Name] (to be known as [Project Name]).

**Land Use:** [Land Use]

**Other relevant information should be provided to:**

**Project Name:** [Project Name]  
**Project Location:** [Project Location]  
**Project Description:** [Project Description]  
**Project Location:** [Project Location]  
**Project Description:** [Project Description]

**Project Name:** [Project Name]  
**Project Location:** [Project Location]  
**Project Description:** [Project Description]

30.08.2012 14:22

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### NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) HAS BEEN AWARDED A CONTRACT TO CONDUCT AN ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED IMPROVEMENTS TO STATE ROUTE 99 IN THE CITY OF SACRAMENTO, CALIFORNIA. THE PROJECT IS BEING CONDUCTED BY THE CALIFORNIA HIGHWAY PATROL (CHP) AND THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS).

THE PROJECT IS BEING CONDUCTED IN ACCORDANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) AND THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA). THE PROJECT IS BEING CONDUCTED IN ACCORDANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) AND THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA).

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30.08.2012 14:22

# NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given of an application for a **Environmental Assessment Process** that was submitted to the Gauteng Department of Agriculture and Rural Development, in terms of Regulation No. R543 published in the Government Notice No. 33306 of 18 June 2010 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) governing **Environmental Impact Assessment Procedure (Listing Notice 1, 2 and 3 – Governing Notice R544, R545 & R546)** for the following activity:

**Reference No:** Gaut: 002/12-13/E0224

**Project Name:** Proposed Mixed Use Development to be known as Rietvlei Extension 10, 11 and 15

**Property Description:** Portions of the Remaining Extents of Portions 15 and 113 of the farm Doornkloof 391 JR, Gauteng Province

**Proposed Zoning Information:** "Business 2", "Business 1", "Special for Parking", "Residential 2 (Dwelling Units)",

**Listing Activities Applied for:**

GNR 544 (Listing Notice 1), 18 June 2010	Activity 9, 10, 11, 18, 22, 23, 24, 26, 28, 37, 38, 39, 47 & 56
GNR 545 (Listing Notice 2), 18 June 2010	Activity 15
GNR 546 (Listing Notice 3), 18 June 2010	Activity 4, 13, 14, 16, 19 & 26

**Proponent Name:** Gillyfrost 71 (Pty) Ltd

**Location:** The study area is located within City of Tshwane adjacent to the R21 Freeway. Proposed Rietvlei X6 is situated to the east and proposed Rietvlei X7-X11 & X15 are situated to the west of the R21 Freeway. The study area is situated to the north of the proposed Strawberry Farm Property and Clayville X65 developments, to the south of Smuts House Museum, to the west of Rietvlei Dam Nature Reserve, to the south of Irene Village, Twin Rivers Residential Estate, Cornwall Hill Estate and the St. Georges Hotel. Salberg Industrial Plant is situated to the west and north of the study area.

**Date of Notice:** 28 July 2015 – 28 August 2015

**Queries regarding this matter should be referred to:**

**Bokamoso Landscape Architects and Environmental Consultants**

Public Participation registration and inquiries: **Juanita De Beer**

Project Inquiries: **Bianca Reyneke**

P.O. Box 11375

Maroelana 0161

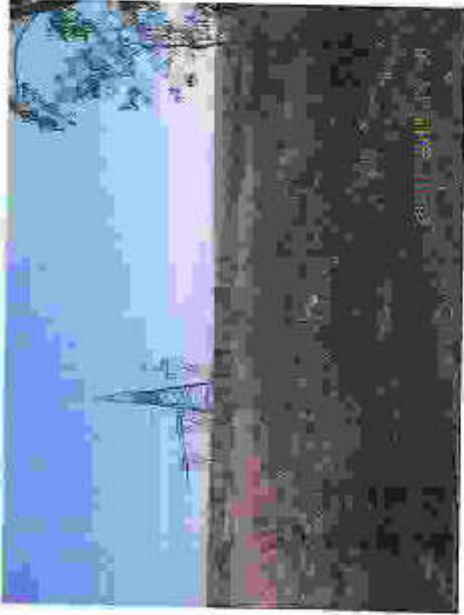
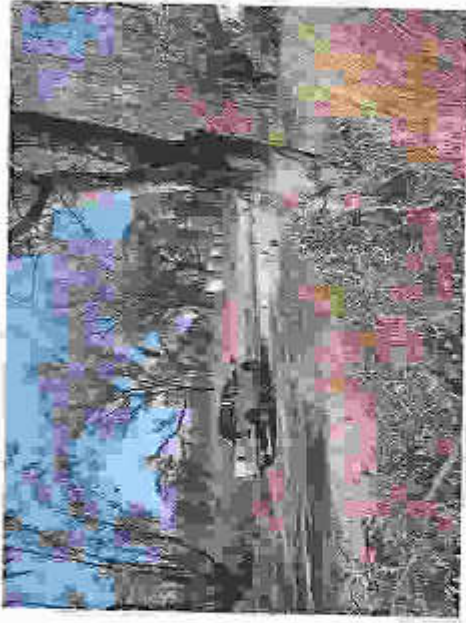
www.bokamoso.net

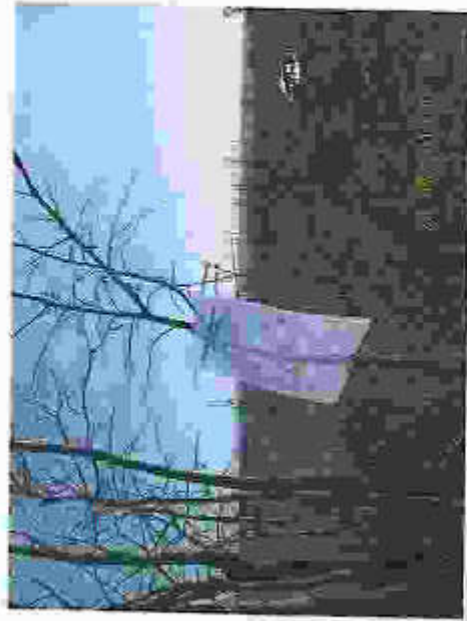
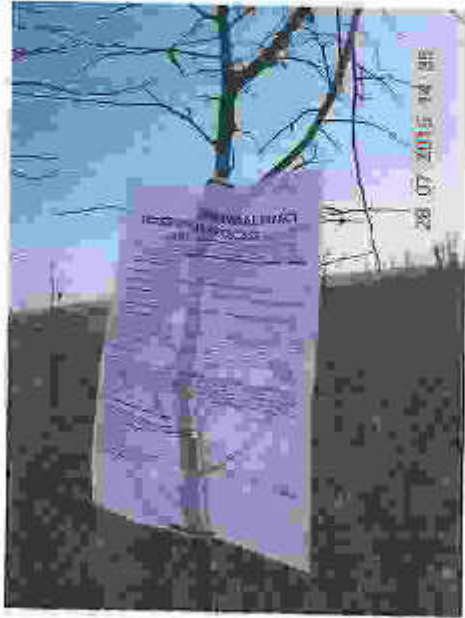
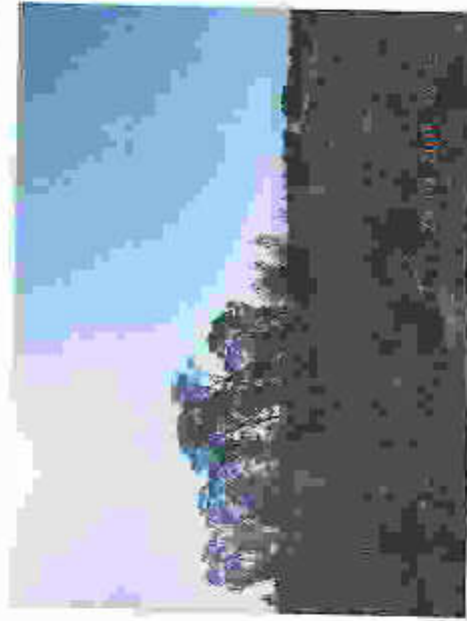
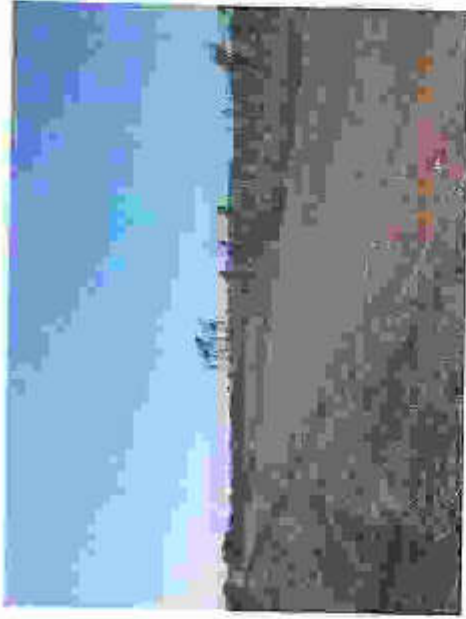
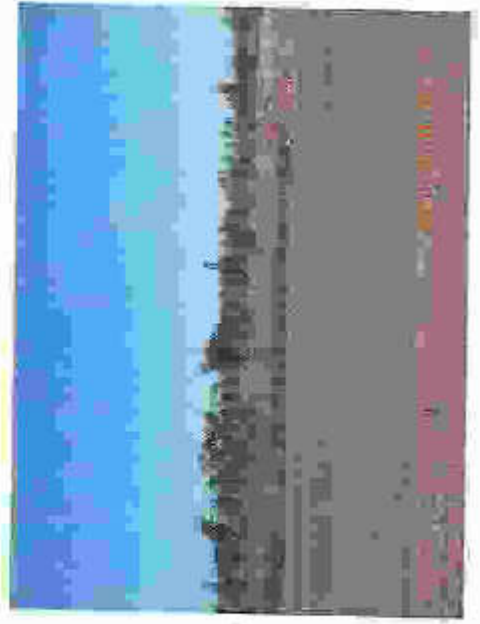
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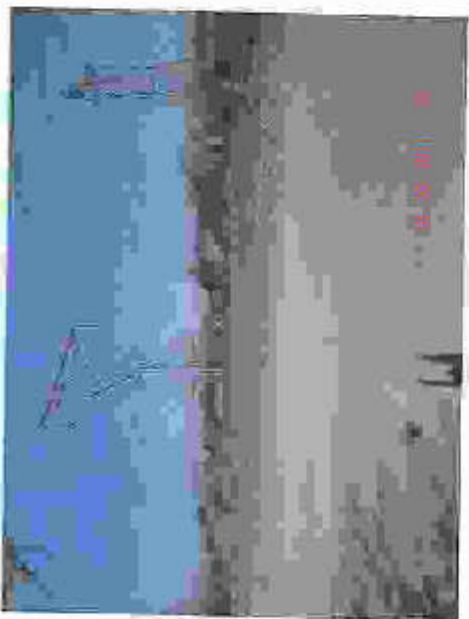
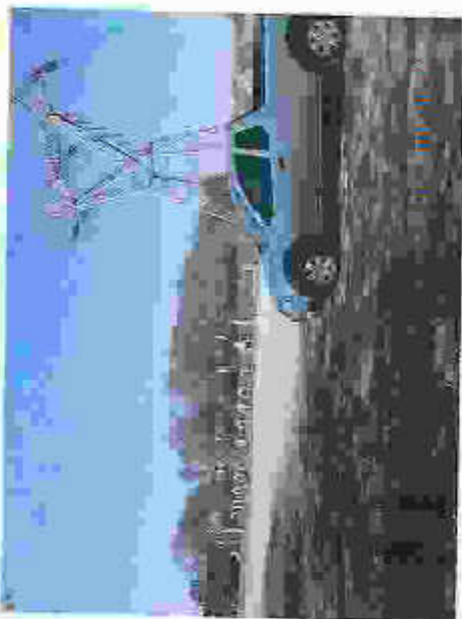
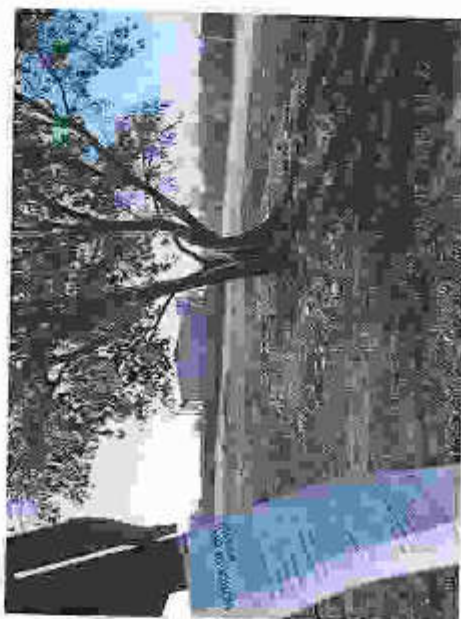
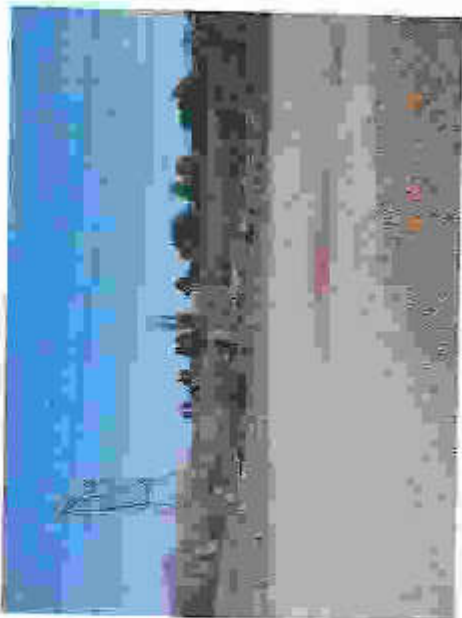
Fax: (086) 570 5659

E-mail: lizelleg@rnweb.co.za

In order to ensure that you are identified as an Interested and/or Affected Party (I&AP) please submit your name, contact information and interest in the matter, in writing, to the contact person given above **within 30 days of this Notice**.







**NOVICE OF SCOPING ENVIRONMENTAL  
IMPACT ASSESSMENT PROCESS**

This notice is provided to inform you of the environmental impact assessment process for the proposed project. The process is designed to ensure that the environmental impacts of the project are properly assessed and that the public has an opportunity to provide input into the decision-making process.

The project is located at [Address] in [City, State]. The project involves [Description of Project].

The environmental impact assessment process will consist of the following steps:

- 1. Preparation of an Environmental Impact Statement (EIS).
- 2. Review of the EIS by the [Agency].
- 3. Public hearing on the EIS.
- 4. Decision on the project.

You are invited to attend the public hearing on the EIS. The hearing will be held on [Date] at [Time] at [Location].

If you have any questions or need more information, please contact [Contact Information].

Thank you for your interest in the project.

[Signature]

[Title]

[Agency]

30 08 2012 14 22



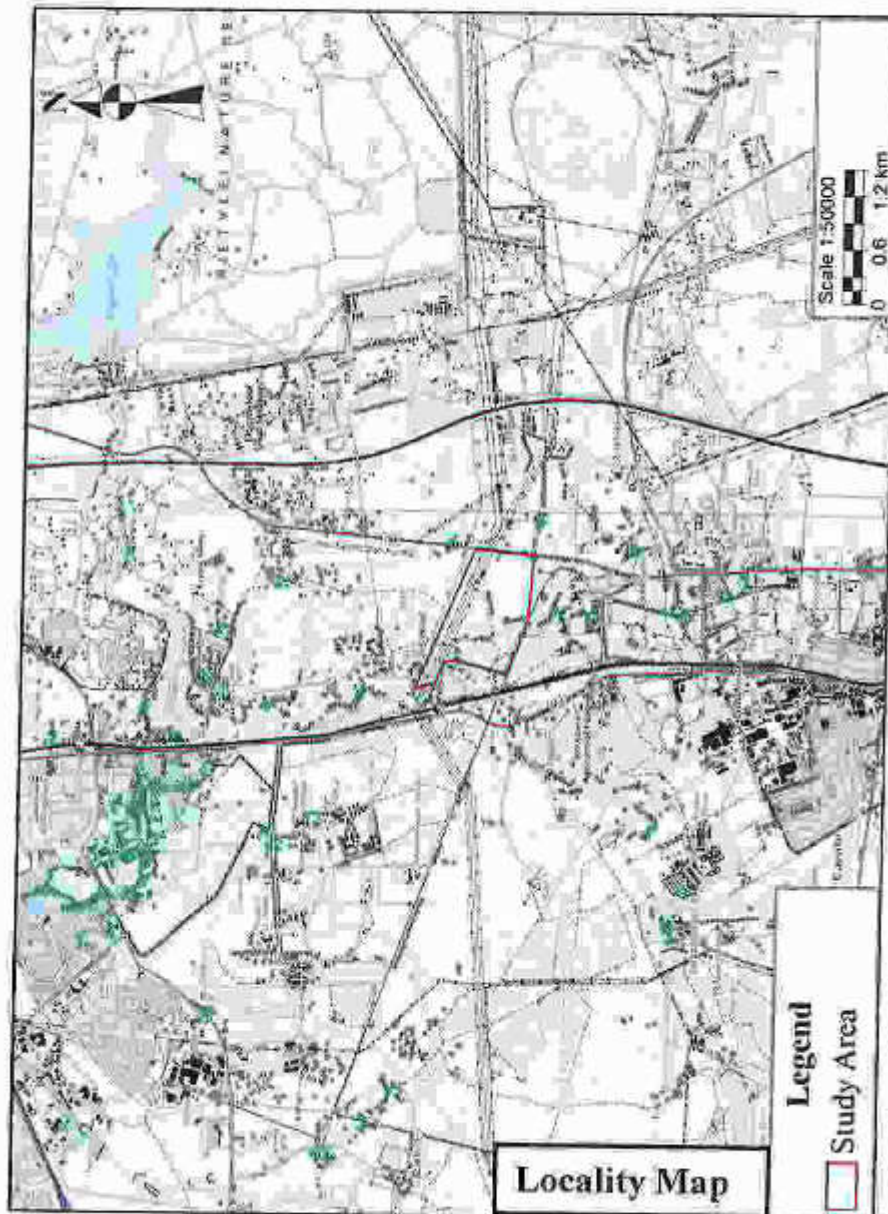
# **Annexure L(ii)**

NOTICE/FLYERS DISTRIBUTED  
TO I&AP'S



# Rietvlei X10, 11 & 15

## NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS



Notice is given an application for a **Environmental Assessment Process** that was submitted to the Gauteng Department of Agriculture and Rural Development, in terms of Regulation No. R543 published in the Government Notice No. 33306 of 18 June 2010 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) governing **Environmental Impact Assessment Procedure (Listing Notice 1, 2 and 3 – Governing Notice R544, R545 & R546)** for the following activity:

**Reference No:** Gaut: 002/12-13/E0224

**Project Name:** Proposed Mixed Use Development to be known as Rietvlei Extension 10, 11 and 15

**Property Description:** Portions of the Remaining Extents of Portions 13 and 113 of the farm Doornkloof 391 JR, Gauteng Province

**Proposed Zoning Information:** "Business 2", "Business 1", "Special for Parking", "Residential 2 (Dwelling Units)"

**Proponent Name:** Gillyfrost 71 (Pty) Ltd

**Listing Activities Applied:** GNR 544 (Listing Notice 1), 18 June 2010 – Activity 9, 10, 11, 18, 22, 23, 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing Notice 2), 18 June 2010 – Activity 15 and GNR 546 (Listing Notice 3), 18 June 2010 – Activity 4, 13, 14, 16, 19 & 26.

**Location:** The study area is located within City of Tshwane adjacent to the R21 Freeway. Proposed Rietvlei X6 is situated to the east and proposed Rietvlei X7-X11 & X15 are situated to the west of the R21 Freeway. The study area is situated to the north of the proposed Strawberry Farm Property and Clayville X65 developments, to the south of Smuts House Museum, to the west of Rietvlei Dam Nature Reserve, to the south of Irene Village, Twin Rivers Residential Estate, Cornwall Hill Estate and the St. Georges Hotel. Salberg Industrial Plant is situated to the west and north of the study area.

**Date of Notice:** 28 July 2015 – 28 August 2015

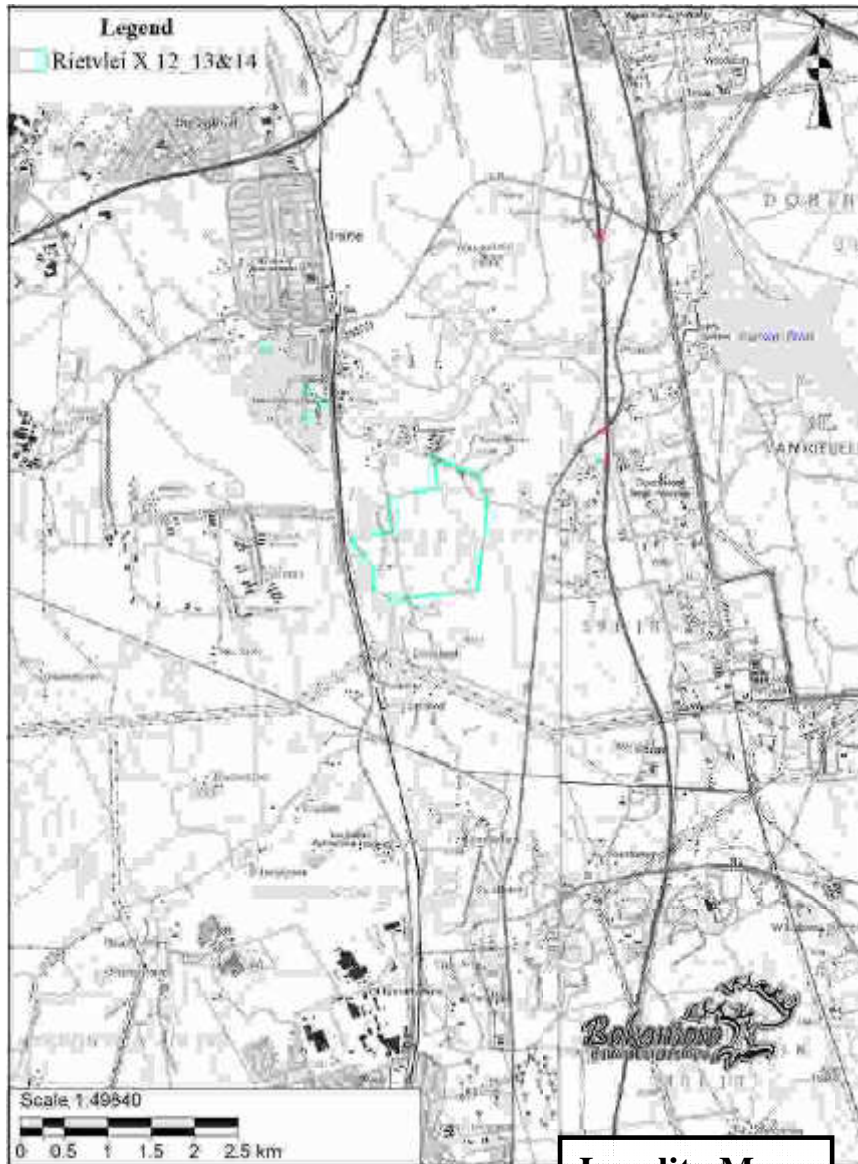
**Queries regarding this matter should be referred to:**

Bokamoso Landscape Architects and Environmental Consultants  
Public Participation registration and inquiries: **Juanita De Beer**  
Project inquiries: **Bianca Reyneke** Tel: (012) 346 3810  
P.O. Box 11375 Fax: (086) 570 5659  
Marcelana 0161 E-mail: lizelleg@mweb.co.za  
[www.bokamoso.biz](http://www.bokamoso.biz)



In order to ensure that you are identified as an Interested and/or Affected Party [I&AP] please submit your name, contact information and interest in the matter, in writing, to the contact person given above **within 30 days of this Notice.**

# Rietvlei X 12, X13 & X14



**Locality Map**

## NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given of an application for a **Scoping Environmental Impact Assessment Process** that was submitted to the Gauteng Department of Agriculture and Rural Development, in terms of Regulation No. R543 published in the Government Notice No. 33306 of 18 June 2010 of the National Environment Management Act, 1998 (Act No. 107 of 1998) governing **Environmental Impact Assessment Procedures (Notice 1, 2 and 3 – Governing Notice R544, R545 & R546)** for the following activity:

**Reference No:** Gaut: 002/12-13/E0089

**Project Name:** Proposed Mixed Use Development to be known as Rietvlei Extension 12, 13 & 14

**Property Description:** Portions of the Remaining Extent of Portion 15 of the farm Doornkloof 391 JR and Portion 20 of the farm Doornkloof 391 JR, Gauteng Province.

**Proposed Zoning Information:** The proposed activity will entail the construction of a mixed land-use development consisting of the following land-uses: Residential 2 (5 dwelling units/hectare), Business 2 (office, banks, display centres, light manufacturing/assembly), Special for Hotel/Health Spa and Resort, Place of Worship, Special for Retirement Centre.

**Proponent Name:** Gillyfront 71 (Pty) Ltd

**Listing Activities Applied:** GNR 544 (Listing Notice 1), 18 June 2010 – Activity 9, 10, 11, 18, 22, 23, 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing Notice 2), 18 June 2010 – Activity 15 and GNR 546 (Listing Notice 3), 18 June 2010 – Activity 4, 6, 13, 14, 16, 19 & 26.

**Location:** The study area is located within City of Tshwane to the west of the R21 Freeway. It is situated to the west of Rietvlei Nature Reserve and St. Georges Hotel, to the south of Smuts House Museum, Irene Village, Twin Rivers Residential Estate & Cornwall Hill. Salberg Industrial Plant is situated to the south of the study area.

**Date of Notice:** 29 August 2012

### Queries regarding this matter should be referred to:

Bokamoso Landscape Architects and Environmental Consultants

Public Participation registration and inquiries: **Juanita De Beer**

Project inquiries: **Mientjie Coetzee**

Tel: (012) 346 3810

P.O. Box 11375

Fax: (086) 570 5659

Mareelana 0161

E-mail: lizelleg@mweb.co.za

[www.bokamoso.net](http://www.bokamoso.net)

In order to ensure that you are identified as an Interested and/or Affected Party (I&AP) please submit your name, contact information and interest in the matter, in writing, to the contact person given above **within 40 days of this Notice.**

LEBOMBO GARDEN 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](mailto:lizelleg@mwweb.co.za)

Website: [www.Bokamoso.net](http://www.Bokamoso.net)



**Dear Landowner**

**29 August 2012**

You are hereby informed that Bokamoso Environmental Consultants were appointed (as EAP) by Gillyfrost 71 (Pty) Ltd to conduct the Scoping Environmental Impact Assessment Process in terms of the amended 2010 NEMA EIA Regulations for the proposed Portions of the Remaining extent of Portion 15 of the farm Doornkloof 391 JR and Portion 20 of the farm Doornkloof 391 JR, Gauteng Province.

**The proposed Land-uses for the study area are as follows:**

The proposed activity will entail the construction of a mixed land-use development consisting of the following land-uses: Residential 2 (5dwelling units/hectare), Business 2 (offices, banks, display centres, light manufacturing/assembly), Special for Hotel/Health Spa and Resort, Place of Worship, Special for Retirement Centre.

In terms of Regulation No. R543 published in the Government Notice No. 33306 of 18 June 2010 of the National Environment Management Act, 1998 (Act No. 107 of 1998) governing Basic Assessment Procedures (Notice 1 and 3 – Governing Notice R544 & R546) of the 2010 amended NEMA Regulations, the EAP must inform all landowners and tenants within 100m from the study area of the proposed development.

Bokamoso already supplied you (a landowner) of the proposed development with Notification Letter and request that you supply the contact details of any tenants or other interested and affected parties that reside or work on your property to Bokamoso. Bokamoso will then also supply these parties with the necessary Notification Letters.

Alternatively, you are also welcome to distribute copies of your Notification to these parties. We will however require proof that you supplied the Notices to your tenants, workers etc. Another option is to act as representative on behalf of these parties.

Please confirm (via email/Fax) that you received the Landowners Notification and this Letter. Also indicate in this Confirmation Letter whether you have tenants on your property and you're preferred method of tenant/worker notification

Regards

A handwritten signature in black ink that reads "Jd Beer". The signature is written in a cursive style with a horizontal line underneath the name.

.....  
Lizelle Gregory/Juanita De Beer

**LIST OF REGISTERED LETTERS**

**Lys van GEREGISTREERDE BRIEWE**

*(With an insurance option/met 'n versekeringsopsie)*



**Full tracking and tracing/Volledige volg en spoor**

Name and address of sender  
 Naam en adres van afsender: Bokamoso P.O. Box 11 375,  
Marcellana Ot61  
Rietvlei X12, X13 + X14

ENTERIC SERVICES  
 Toll-free number  
 Telvry nommer  
**0800 111 502**

No	Name and address of addressee Naam en adres van geadresseerde	Insured amount Versekerde bedrag	Insurance fee Versekeringsgeld	Postage Posgeld	Service fee Diensgeld	Affix Track and Trace customer copy Plak Volg-en-Spoor-kliëntafskrif	
1	Salbro Property Holdings (Pty) Ltd P.O. Box 1823, Bedfordview, 2008					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.spo.co.za RD 605 075 262 ZA	
2	Bush Willow River Property Development P.O. Box 911-1803, Rosslyn, 0200					CUSTOMER COPY 301028R REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.spo.co.za RD 693 135 154 ZA	
3	Ostiprop 1166 (Pty) Ltd P.O. Box 25045, Monument Park, 0105					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.spo.co.za RD 693 135 185 ZA	
4	Jomar Services (Pty) Ltd P.O. Box 3311, Cape Town, 8000					CUSTOMER COPY 301028R REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.spo.co.za RD 693 135 199 ZA	
5	Jr 209 Investments (Pty) Ltd P.O. Box 75266, Lynnwood Ridge, 0040					CUSTOMER COPY 301028R REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.spo.co.za RD 693 135 168 ZA	
6	Council of GEM Village Irene Plot 53, Doonkloof, Centurion, 0157					CUSTOMER COPY 301028R REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.spo.co.za RD 693 135 171 ZA	
7							
8							
9							
10							
		<b>Total</b>	<b>Totaal</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>

Number of letters posted  
 Getal briewe gepos: 6 / Six

Signature of client  
 Handtekening van klient: \_\_\_\_\_

Signature of accepting officer  
 Handtekening van aanneembeampte:

The value of the contents of these letters is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100,00. No compensation is payable without documentary proof. Optional insurance of up to R2 000,00 is available and applies to domestic registered letters only.

Die waarde van die inhoud van hierdie briewe is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100,00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering van tot R2 000,00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.



**LIST OF REGISTERED LETTERS**  
**Lys van Geregistreerde Briewe**



*(With an insurance option / met 'n versekeringsopsie)*

**Full tracking and tracing / Volledige volg en spoor**

Name and address of sender  
 Naam en adres van afsender: Bokamoso P.O. Box 11375,  
Marcelona 0161  
Rietvlei X6-X11 + X15

Logotipo / Logo  
 Toll free number  
 Telery nommer  
**0800 111 502**

No	Name and address of addressee Naam en adres van geadresseerde	Insured amount Versekerde bedrag	Insurance fee Versekeringsgeld	Postage Posgeld	Service fee Diensgeld	Affix Track and Trace customer copy Plak Volg-en-Spoor-kliëntafskrif
1	Black And White Trucks CC P.O. Box 73626, Lynnwood Ridge, 0040					REGISTERED LETTER <small>(with a domestic insurance option) Skreëf 0800 111 502 www.spoor.co.za</small> RD 605 075 276 ZA
2	Belinda Ellen Skinner P.O. Box 540, Irene, 0062					CUSTOMER COPY 301028R REGISTERED LETTER <small>(with a domestic insurance option) Skreëf 0800 111 502 www.spoor.co.za</small> RD 605 075 280 ZA
3	David Victor Larsen Private Bag X2352, Wingate Park, 1682					CUSTOMER COPY 301028R REGISTERED LETTER <small>(with a domestic insurance option) Skreëf 0800 111 502 www.spoor.co.za</small> RD 605 075 293 ZA
4	Mabran Farming Enterprises (Pty) Ltd P.O. Box 11259, Erasmusklouf, 0048					CUSTOMER COPY 301028R REGISTERED LETTER <small>(with a domestic insurance option) Skreëf 0800 111 502 www.spoor.co.za</small> RD 605 075 302 ZA
5	R21 Storage (Pty) Ltd P.O. Box 452, Bela Bela, 0480					CUSTOMER COPY 301028R REGISTERED LETTER <small>(with a domestic insurance option) Skreëf 0800 111 502 www.spoor.co.za</small> RD 605 075 316 ZA
6	Peter Robert Arnold P.O. Box 26741, Monument Park, 0105					CUSTOMER COPY 301028R REGISTERED LETTER <small>(with a domestic insurance option) Skreëf 0800 111 502 www.spoor.co.za</small> RD 605 075 320 ZA
7	Mayborn Investments 33 (Pty) Ltd P.O. Box 13687, Hatfield, 0028					CUSTOMER COPY 301028R REGISTERED LETTER <small>(with a domestic insurance option) Skreëf 0800 111 502 www.spoor.co.za</small> RD 605 075 333 ZA
8						
9						
10						
Total Totaal		R	R	R	R	

Number of letters posted  
 Getal briewe gepos: 7 / Seven

Signature of client  
 Handtekening van klient: \_\_\_\_\_

Signature of accepting officer  
 Handtekening van aanneembeampte: [Signature]

The value of the contents of these letters is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100,00. No compensation is payable without documentary proof. Optional insurance of up to R2 000,00 is available and applies to domestic registered letters only.

Die waarde van die inhoud van hierdie briewe is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100,00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering van tot R2 000,00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.

Date stamp  
  
 Datumstempel

# **Annexure L(iii)**

Newspaper Advertisement







12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221


**OVERSKOUTEN VAN PE OF 10 2012**

**JOHANNESBURG**

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221



**CITY OF TSHWANE**

**VERKOOPSTADION WED VAN DER MERWE**

**SIKHO SHAMANI**

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

**RETNIELE 112, 113, 114**

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

**RETNIELE 12, 13, 14**

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

**RETNIELE 12, 13, 14**

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

**RETNIELE 12, 13, 14**

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

**RETNIELE 12, 13, 14**

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

**RETNIELE 12, 13, 14**

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

12 September 2012 te bereik is.

12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221  
12/11/2012 Sothanyane South 43-2221

**Exklusiewer Kapings**

**DYNAMIC FIELDS TURBOURISE TAKEN**

**NOTICE OF SALE IN EXECUTION**

**REGSKENLIGINGS**

**Kaapstad - Die gingsgroep Granvestments (GPI) in beperkte uitbende (offewal LPM) aandeelhouer in die moontlik van 'n nuwe casidie Wes-Kaap.**

**GPI het in die einde Junie sy inkomste uit LE verhoog.**

**GPI het sy balstruktureur deur SunWest (wat die casino in Goodwoble Bay Hotel in diin Kaapstad bestuGolden Valley-cestier tot 25,1% elHy het ook sy 30% Real Africa HoldTen spyte van ekonomiese omgWes-Kaap het Gverdienste voor tie met 19,8% tojoen geklim.**

**Die Table Bay egter en die toeslies het met 37,5%**

**EIENDOM**

**Dipula**

**Elma Kloppers**

**Johannesburg - Dcome Fund het oegeboue in Pre R431 miljoen te kDie verkrygingfonds se hates op te staan bring.**

**Die oogmerk is domsportefulje bgende vier tot ses**

# Annexure L(iv)

Interested and Affected  
Parties List



<b>Nr</b>	<b>Registered Parties</b>	<b>Contact details</b>
<b>Stakeholders</b>		
1	Council Geo-Science	<a href="mailto:gheath@geoscience.org.za">gheath@geoscience.org.za</a>
2	SAHRA Gauteng	<a href="mailto:asalomon@sahra.org.za">asalomon@sahra.org.za</a> <a href="mailto:nndobochani@sahra.org.za">nndobochani@sahra.org.za</a>
3	PHRAG	<a href="mailto:maphata.ramphele@gauteng.gov.za">maphata.ramphele@gauteng.gov.za</a>
4	DWA	<a href="mailto:justicem@dwaf.gov.za">justicem@dwaf.gov.za</a> <a href="mailto:keetm@dwaf.gov.za">keetm@dwaf.gov.za</a>
5	Eskom	<a href="mailto:central@eskom.co.za">central@eskom.co.za</a> <a href="mailto:paia@eskom.co.za">paia@eskom.co.za</a>
6	SANRAL	<a href="mailto:schmidk@nra.co.za">schmidk@nra.co.za</a>
7	Gautrans	<a href="mailto:kumen.govender@gauteng.gov.za">kumen.govender@gauteng.gov.za</a>
8	Randwater	<a href="mailto:customerservice@randwater.co.za">customerservice@randwater.co.za</a>
9	City of Tshwane	<a href="mailto:RudzaniM@Tshwane.gov.za">RudzaniM@Tshwane.gov.za</a>
10	Spoornet	<a href="mailto:daniel.ramokone@transnet.net">daniel.ramokone@transnet.net</a>
11	DA Roads	<a href="mailto:casperm@tshwane.gov.za">casperm@tshwane.gov.za</a>
12	<b>Ward Councillor</b> Christa Spoelstra	<a href="mailto:mwcsvpoel@mweb.co.za">mwcsvpoel@mweb.co.za</a>
<b>Interested and Affected Parties</b>		
1	<b>Doornkloof Owners Association</b> (DKOA) David Larsen	<a href="mailto:dkoa@salbu.co.za">dkoa@salbu.co.za</a> <a href="mailto:dkoa@salbu.co.za">dkoa@salbu.co.za</a> Cell: 082 821 2202 Tel: 011 316 1393
2	Ruan de Lange	<a href="mailto:Ruan.Delange@diss.co.za">Ruan.Delange@diss.co.za</a>
3	Wim De Lange	<a href="mailto:delangewg@vodamail.co.za">delangewg@vodamail.co.za</a> Cell: 082 855 8482 Tel: 012 671 1991
4	<b>Rand Water</b> Natalie Koneight Mpati Mpshe	<a href="mailto:nkoneigh@randwater.co.za">nkoneigh@randwater.co.za</a> <a href="mailto:mmpshe@randwater.co.za">mmpshe@randwater.co.za</a> Tel: 011 724 9357



# **Annexure L(v)**

Comments to and from  
I&AP's



**Bianca**

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**From:** Bokamoso <lizelleg@mweb.co.za>  
**Sent:** 17 February 2014 03:56 PM  
**To:** user3@bokamoso.net; user1@bokamoso.net  
**Subject:** FW: Rietvlein extension 12,13 and 14  
**Attachments:** 20140217131802.pdf

**Flag Status:** Flagged

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**From:** Rudzani Mukheli [mailto:[RudzaniM@TSHWANE.GOV.ZA](mailto:RudzaniM@TSHWANE.GOV.ZA)]  
**Sent:** 17 February 2014 02:21 PM  
**To:** Bokamoso  
**Cc:** KHAKA, KHAKA (GDARD); Tjatja Mosia  
**Subject:** Rietvlein extension 12,13 and 14



IT'S MORE THAN JUST GOLF

SA'S CAPITAL GOLF TOURNAMENT | 27 FEBRUARY TO 2 MARCH 2014  
THE ELS CLUB COPPERLEAF

Logos: Tshwane Golf, Tshwane 2009, City of Tshwane, and various sponsors.

Good day

Please find our comments on the abovementioned application.

Regards

---

[http://www.tshwane.gov.za/Pages/Email\\_disclaimer.aspx](http://www.tshwane.gov.za/Pages/Email_disclaimer.aspx)



## Letter

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

Attention: Gillyfrost 71 (Pty) Ltd

**Portions of the Remaining Extents of Portions 15 and 113 of the Farm Doornkloof 391 JR, Gauteng Province**

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](http://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 Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary.

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 to indicate that there is no necessity for any further assessment.









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/319200>  
(GDARD, Ref. )

**Terms & Conditions:**

1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for proposed work.
2. If any heritage resources, including graves or human remains, are encountered they must be reported to SAHRA immediately.
3. SAHRA reserves the right to request additional information as required.





[juanita@bokamoso.net](mailto:juanita@bokamoso.net)

---

**From:** Juanita <user3@bokamoso.net>  
**Sent:** 30 July 2015 12:32 PM  
**To:** 'barbara@sagewoodconsulting.co.za'  
**Subject:** RE: Rietvlei X10, 11 & 15 - Environmental Impact Assessment Process

Dear Barbara,

Thank you for your response, we have already registered you as Interested and/or Affected Party Member for the proposed Rietvlei X10, 11 & 15 Project.

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

Kind Regards/Vriendelike Groete

*Juanita De Beer*

*Public Participation Consultant*

---



**Landscape Architects &  
Environmental Consultants**

Tel: +27(0)12 548 3810 | Fax: +27(0)12 520 5650 | E: [info@bokamoso.co.za](mailto:info@bokamoso.co.za) | [www.bokamoso.co.za](http://www.bokamoso.co.za)  
201 Labuan Street, Antonitzkopje, Pretoria, P.O. Box 16375 Morningside, 2001

---

**From:** Barbara [mailto:[barbara@sagewoodconsulting.co.za](mailto:barbara@sagewoodconsulting.co.za)]  
**Sent:** 28 July 2015 04:19 PM  
**To:** 'Bokamoso'; [jgrobler@geoscience.org.za](mailto:jgrobler@geoscience.org.za); [asalomon@sahra.org.za](mailto:asalomon@sahra.org.za); [maphata.ramphele@gauteng.gov.za](mailto:maphata.ramphele@gauteng.gov.za); [justicem@dwaf.gov.za](mailto:justicem@dwaf.gov.za); [keetm@dwaf.gov.za](mailto:keetm@dwaf.gov.za); [central@eskom.co.za](mailto:central@eskom.co.za); [paia@eskom.co.za](mailto:paia@eskom.co.za); [schmidk@nra.co.za](mailto:schmidk@nra.co.za); [kumen.govender@gauteng.gov.za](mailto:kumen.govender@gauteng.gov.za); [nkoneigh@randwater.co.za](mailto:nkoneigh@randwater.co.za); [mmpshe@randwater.co.za](mailto:mmpshe@randwater.co.za); [RudzaniM@tshwane.gov.za](mailto:RudzaniM@tshwane.gov.za); [loveous.tampare@transnet.net](mailto:loveous.tampare@transnet.net); [casperm@tshwane.gov.za](mailto:casperm@tshwane.gov.za); [mwccspol@mweb.co.za](mailto:mwccspol@mweb.co.za); [dkoa@salbu.co.za](mailto:dkoa@salbu.co.za); [Ruan.DeLange@diss.co.za](mailto:Ruan.DeLange@diss.co.za); [delangewg@vodamail.co.za](mailto:delangewg@vodamail.co.za); [info@wessanorth.co.za](mailto:info@wessanorth.co.za); [elana@salbro.co.za](mailto:elana@salbro.co.za); [rudolph@law.co.za](mailto:rudolph@law.co.za); [VDLindel@nra.co.za](mailto:VDLindel@nra.co.za)  
**Cc:** 'Russel Samuels'  
**Subject:** RE: Rietvlei X10, 11 & 15 - Environmental Impact Assessment Process

Dear Juanita  
I hope this email finds you well

---

Please register us as an interested and effected party.



Thank you once again, and  
kind regards  
Barbara

**B PARKER**

Barbara Parker

**SALBERG CONCRETE PRODUCTS (PTY) LTD**

Spring Road,  
Pretoria 0001  
Gauteng  
011 851 2000  
Fax: 011 851 2000  
Tel: 011 851 2000  
Tel (Dialing): +27 11 851 2000  
Mobile: +27 83 301 1111  
Call +27 11 851 2000  
Email: [barbara@salberg.co.za](mailto:barbara@salberg.co.za)

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---

**From:** Bokamoso [<mailto:lizelle@mweb.co.za>]

**Sent:** Tuesday, July 28, 2015 3:38 PM

**To:** [jgrobler@geoscience.org.za](mailto:jgrobler@geoscience.org.za); [asalomon@sahra.org.za](mailto:asalomon@sahra.org.za); [maphata.ramphele@gauteng.gov.za](mailto:maphata.ramphele@gauteng.gov.za); [justicem@dwaf.gov.za](mailto:justicem@dwaf.gov.za); [keetm@dwaf.gov.za](mailto:keetm@dwaf.gov.za); [central@eskom.co.za](mailto:central@eskom.co.za); [paia@eskom.co.za](mailto:paia@eskom.co.za); [schmidk@nra.co.za](mailto:schmidk@nra.co.za); [kuman.govender@gauteng.gov.za](mailto:kuman.govender@gauteng.gov.za); [nkoneigh@randwater.co.za](mailto:nkoneigh@randwater.co.za); [mmpshe@randwater.co.za](mailto:mmpshe@randwater.co.za); [RudzaniM@tshwane.gov.za](mailto:RudzaniM@tshwane.gov.za); [loveous.tampane@transnet.net](mailto:loveous.tampane@transnet.net); [casperm@tshwane.gov.za](mailto:casperm@tshwane.gov.za); [mwespoel@mweb.co.za](mailto:mwespoel@mweb.co.za); [dkoa@salbu.co.za](mailto:dkoa@salbu.co.za); [Ruan.DeLange@diss.co.za](mailto:Ruan.DeLange@diss.co.za); [deLangewg@vodamail.co.za](mailto:deLangewg@vodamail.co.za); [info@wessanorth.co.za](mailto:info@wessanorth.co.za); [barbara@sagewoodconsulting.co.za](mailto:barbara@sagewoodconsulting.co.za); [elana@salbro.co.za](mailto:elana@salbro.co.za); [rudolph@law.co.za](mailto:rudolph@law.co.za); [VDLindel@nra.co.za](mailto:VDLindel@nra.co.za)

**Subject:** Rietvlei X10, 11 & 15 - Environmental Impact Assessment Process

Dear Interested and/or Affected Party Member,

Please refer to the attached Public Notice regarding the Environmental Impact Assessment Process for the proposed **Rietvlei X10, 11 & 15 Project**.

Kind Regards/Vriendelike Groete

*Juanita De Beer*

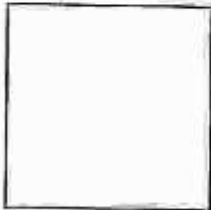
*Public Participation Consultant*





**Landscape Architects &  
Environmental Consultants**

Tel: +27 12 346 2810 | Fax: +27 84 570 5059 | E: [info@bokamoso.co.za](mailto:info@bokamoso.co.za) | [www.bokamoso.co.za](http://www.bokamoso.co.za)  
26 Lebombo Street, Allie's Gardens, Pretoria | P.O. Box 11326 Maitland 2009



This email has been checked for viruses by Avast antivirus software.  
[www.avast.com](http://www.avast.com)





**juanita@bokamoso.net**

---

**From:** Juanita <user3@bokamoso.net>  
**Sent:** 28 July 2015 03:38 PM  
**To:** jgrobler@geoscience.org.za; asalomon@sahra.org.za;  
maphata.ramphele@gauteng.gov.za; justicem@dwaf.gov.za; keetm@dwaf.gov.za;  
'central@eskom.co.za'; 'paia@eskom.co.za'; 'schmidk@nra.co.za';  
kumen.govender@gauteng.gov.za; nkoneigh@randwater.co.za;  
mmpshe@randwater.co.za; 'RudzaniM@tshwane.gov.za';  
loveous.tampane@transnet.net; casperm@tshwane.gov.za; mwcspoel@mweb.co.za;  
dkoa@salbu.co.za; Ruan.DeLange@diss.co.za; 'delangewg@vodamail.co.za';  
info@wessanorth.co.za; barbara@sagewoodconsulting.co.za; elana@salbro.co.za;  
rudolph@law.co.za; VDLindel@nra.co.za  
**Subject:** Rietvlei X10, 11 & 15 - Environmental Impact Assessment Process  
**Attachments:** Public Notice.pdf

Dear Interested and/or Affected Party Member,

Please refer to the attached Public Notice regarding the Environmental Impact Assessment Process for the proposed Rietvlei X10, 11 & 15 Project.

*Kind' Regards/Vriendelike Groete*

*Juanita De Beer*

*Public Participation Consultant*

---



**Landscape Architects &  
Environmental Consultants**

Tel: +27(0)21 446 2010 | Fax: +27(0)21 446 2011 | E: [info@bokamoso.co.za](mailto:info@bokamoso.co.za) | [www.bokamoso.co.za](http://www.bokamoso.co.za)  
28 Libeshe Street, Aspin (Garden), Pretoria | P.O. Box 11325, Midrand 2008



**Bianca**

---

**From:** Juanita <user3@bokamoso.net>  
**Sent:** 05 November 2013 01:38 PM  
**To:** ilamanager@irene.co.za  
**Subject:** RE: DKOA: Bokamoso Notice\_Final Scoping Report - Rietvlei X12, X13 & X14  
**Attachments:** Locality Maps Rietvlei X 12,13 & 14.pdf

Dear Alyson Lea-Cox,

Please refer to the attached Locality and Aerial Map.

Hope this finds you well.

Kind Regards/Vriendelike Groete

*Juanita Du Boer*



**Landscape Architects &  
Environmental Consultants cc.**

T: (+27)12 348 3610 | F: (+27)12 570 5659 | E: [lizelleq@mweb.co.za](mailto:lizelleq@mweb.co.za) | [www.bokamoso.biz](http://www.bokamoso.biz)  
36 Lohombo Street, Ashlea Gardens, Pretoria | P.O. Box 11376, Marofatsa 0161

Please consider the environment before printing this email

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**From:** Alyson Lea-Cox [<mailto:ilamanager@irene.co.za>]  
**Sent:** 04 November 2013 06:16 PM  
**To:** [lizelleq@mweb.co.za](mailto:lizelleq@mweb.co.za)  
**Cc:** [jan.swanepoel@irene.co.za](mailto:jan.swanepoel@irene.co.za)  
**Subject:** FW: DKOA: Bokamoso Notice\_Final Scoping Report - Rietvlei X12, X13 & X14

Hi Juanita

Before I download this report ( it is over 11 MB) , please can you send me the location map as it may not affect Irene.

thank you

Alyson Lea-Cox

Irene Landowners' Association

---

**From:** dkoa\_list [mailto:dkoa\_list-bounces@salbu.co.za] **On Behalf Of** DKOA\_LIST  
**Sent:** 02 November 2013 10:01 AM  
**To:** DKOA\_LIST (LONG)  
**Subject:** DKOA: Bokamoso Notice\_ Final Scoping Report - Rietvlei X12, X13 & X14

Greetings,

**Bokamoso Notice\_ Final Scoping Report - Rietvlei X12, X13 & X14**  
**GAUTENG REF NO: GAUT XXXXX**

Please see Bokamoso notice below.

We asked that the Doornkloof Owners Association (DKOA) be registered as an Interested and Affected Party (I&AP).

**For more information contact:**

Juanita De Beer - Telephone: 012-346-3810  
Bokamoso Landscape Architects and Environmental Consultants

Kind regards,

David Larsen - Salbu

Secretary: Doornkloof Owners Association (DKOA)  
For more information see URL: <http://www.salbu.co.za/dkoa>

**PLEASE PASS THIS MESSAGE ON TO THREE NEIGHBOURS  
AND ASK THEM TO DO THE SAME**

Begin forwarded message:

**From:** Bokamoso <lizelle@mweb.co.za>  
**Date:** 1 November 2013 16:50:15 GMT+02:00  
**Subject: Final Scoping Report - Rietvlei X12, X13 & X14**

Dear Interested and/or Affected Party Member,

Please note that the Final Scoping Report for the proposed Rietvlei X12, X13 & X14 Project will be available on our website: [www.bokamoso.biz](http://www.bokamoso.biz) from 1 November 2013 until 21 November 2013.

All Interested and Affected parties are invited to review the development information. Please submit your comments on the Final Scoping Report within **21 days** to the Gauteng Department of Agriculture and Rural Development (GDARD) – **Attention: Justine Chan** (email: [Justine.Chan@gauteng.gov.za](mailto:Justine.Chan@gauteng.gov.za) or fax: 011 355 1000). Please cc your comments to Bokamoso (email: [lizelle@mweb.co.za](mailto:lizelle@mweb.co.za) or fax: 086 570 5659).

Hope this finds you well.

Kind Regards/Vriendelike Groete

*Juanita De Beer*



**Landscape Architects &  
Environmental Consultants cc.**

T: (+27) 12 346 3870 | F: (+27) 86 670 6653 | E: [info@bkmweb.co.za](mailto:info@bkmweb.co.za) | [www.bokamoso.biz](http://www.bokamoso.biz)  
36 Labamba Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Mabelane 0167

Please consider the environment before printing this email

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No virus found in this message.

Checked by AVG - [www.avg.com](http://www.avg.com)

Version: 10.0.1432 / Virus Database: 3222/6302 - Release Date: 11/01/13

## Bianca

---

**From:** Juanita <user3@bokamoso.net>  
**Sent:** 02 September 2013 09:47 AM  
**To:** mwcspoel@mweb.co.za; dkoa@salbu.co.za; Ruan.DeLange@diss.co.za; delangewg@vodamail.co.za; nkoneigh@randwater.co.za; mmpshe@randwater.co.za; info@wessa.co.za; barbara@sagewoodconsulting.co.za; elana@salbro.co.za  
**Subject:** Rietvlei X12, X13 & X14 - Review Notice Invitation  
**Attachments:** Review Notice.pdf

Dear Interested and/or Affected Party Member,

Please refer to the attached Review Notice Invitation regarding the Draft Environmental Scoping Report for the proposed *Rietvlei X12, X13 & X14* Project.

The Draft Environmental Scoping Report will be available at St George Hotel or on our website: [www.bokamoso.biz](http://www.bokamoso.biz) from 4 September until 14 October 2013.

Hope this finds you well.

Kind Regards/Vriendelike Groete

*Juanita De Beer*



**Landscape Architects &  
Environmental Consultants cc.**

T (+27)12 346 3810 | F (+27) 86 570 6659 | E: [lizell@bokamoso.biz](mailto:lizell@bokamoso.biz) | [www.bokamoso.biz](http://www.bokamoso.biz)  
38 Labombi Street, Astoria Gardens, Pretoria P.O. Box 11375, Margelana 0181

Please consider the environment before printing this email

**Bianca**

---

**From:** Bokamoso <ontvangs@bokamoso.net>  
**Sent:** 18 September 2012 04:03 PM  
**To:** user3@bokamoso.net  
**Subject:** FW: DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

---

**From:** Ruan de Lange [<mailto:Ruan.DeLange@diss.co.za>]  
**Sent:** 18 September 2012 03:54 PM  
**To:** [lizelleq@mweb.co.za](mailto:lizelleq@mweb.co.za)  
**Cc:** Wim de Lange ([delangewo@vodamail.co.za](mailto:delangewo@vodamail.co.za))  
**Subject:** RE: DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

Hi

Can you please add us to the list of I&AP.

Contact details:  
W.G. de Lange – Owner Portion 59 Doornkloof  
(c) 082 855 8482  
(w) +27 12 671 1991  
Email: [Ruan.delange@diss.co.za](mailto:Ruan.delange@diss.co.za)



BEFORE PRINTING THIS E-MAIL  
*please consider the environment.*

Thanks

Best Regards

Ruan

---

**From:** [dkoa\\_list-bounces@salbu.co.za](mailto:dkoa_list-bounces@salbu.co.za) [[mailto:dkoa\\_list-bounces@salbu.co.za](mailto:dkoa_list-bounces@salbu.co.za)] **On Behalf Of** DKOA\_LIST  
**Sent:** 18 September 2012 02:28 PM  
**To:** DKOA\_LIST (LONG)  
**Subject:** DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

Greetings,

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**  
**Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14**  
**Portions of the farm Doornkloof 391-JR**  
**Gaut: 002/12-13/E0089 Gaut: 002/12-13/E0090**

Please refer to the attached Bokamoso notice.

We asked that the Doornkloof Owners Association (DKOA) be registered as an Interested and Affected Party (I&AP)



**For more information contact:**

Mientjie Coetzee or Juanita De Beer Telephone: 012-346-3810  
Bokamoso Landscape Architects and Environmental Consultants

Kind regards,

David Larsen - Salbu

Secretary: Doornkloof Owners Association (DKOA)  
For more information see URL: <http://www.salbu.co.za/dkoa>

**PLEASE PASS THIS MESSAGE ON TO THREE NEIGHBOURS  
AND ASK THEM TO DO THE SAME**

Bokamoso wrote:

Dear Mr. Larsen

Please find the site notices attached as requested. A layout plan is available on request.(pdf file)

Date of Notices: 29 August 2012

# Rietvlei X6-X11 & X15



## NOTICE OF SCOPING ENVIRONMENT

Notice is given of an application for a Scoping Report was submitted to the Gauteng Department of Environmental Regulation No. R543 published in the Government Gazette of the Republic of South Africa in terms of the National Environmental Management Act, 1989 (Act No. 107 of 1989) and the Environmental Impact Assessment Procedures (Notice 1, 2002) for the following activity:  
 Reference No: Gaut: 002/12-13/ED090

**Project Name:** Proposed Mixed Use Development Extension 15.

**Property Description:** Portions of the Remainder of the farm Doornbos 391 JR, Gauteng

**Proposed Zoning Information:** The proposed development consists of the following units/hectares: Commercial (warehousing, distribution, shops, offices, banks, places of refreshment buildings excluding public garages or filling stations, centres, light manufacturing/assembly), Industrial and Business Buildings and Special for portions.

**Proponent Name:** Glijfrost 71 (Pty) Ltd

**Listing Activities Applied:** GNR 544 (Listing No 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing Notice 3), 18 June 2010 – Activity

**Location:** The study area is located within the City of Johannesburg (proposed Rietvlei X6 is situated to the east of the R21 Freeway. The study area is situated on the farm Doornbos 391 JR, west of Rietvlei Dam Nature Reserve, to the west of the R21 Freeway. The study area is situated west of Rietvlei Dam Nature Reserve, to the west of the R21 Freeway, to the west of the R21 Freeway, to the west of the R21 Freeway.

**Date of Notice:** 29 August 2012

Queries regarding this matter should be referred to:  
 Bokamoso Landscape Architects and Environmental Consultants  
 Public Participation registration and Inquiries  
 Project inquiries: Mientjie Coetzee Tel: (011) 461-11375 Fax: (011) 461-11375  
 P.O. Box 11375 Maroelana 0161 E-mail: info@bokamoso.net  
[www.bokamoso.net](http://www.bokamoso.net)

In order to ensure that you are identified (I&AP) please submit your name, contact details in writing, to the contact person given.

# Rietvlei X 12, X13 & X14



## NOTICE OF SCOPING ENVIRONMENTAL

Notice is given of an application for a Scoping was submitted to the Gauteng Department of Regulation No. R543 published in the Government Gazette of the Republic of South Africa, National Environment Management Act, 1998 Impact Assessment Procedures (Notice 1, 2 at the following activity:

Reference No: Gaut: 002/12-13/ED089

Project Name: Proposed Mixed Use Development

Property Description: Portions of the Remaining JR and Portion 20 of the farm Doornkloof 391 JR

Proposed Zoning Information: The proposed activity development consisting of the following land use: Business 2 (office, banks, display centres, light retail), Hotel/Health Spa and Resort, Place of Worship,

Proponent Name: Gillyfrost 71 (Pty) Ltd

Listing Activities Applied: GNR 544 (Listing Notice 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing Notice 3), 18 June 2010 – Activity 4,

Location: The study area is located within City of Johannesburg situated to the west of Rietvlei Nature Reserve (Rietvlei House Museum, Irene Village, Twin Rivers Reservoir). A Plant is situated to the south of the study area.

Date of Notice: 29 August 2012

Queries regarding this matter should be referred to Bokamoso Landscape Architects and Environmental Public Participation registration and inquiries: J. Project inquiries: Mientjie Coetzee

P.O. Box 11375

Marcelana 0161

www.bokamoso.net

Fax: (086)

E-mail: lize

In order to ensure that you are identified (I&AP) please submit your name, contact details in writing, to the contact person given at

Kind Regards  
Mientjie Coetzee



Environmental Consultants &  
Landscape Architects

011 748 2200 / 011 748 2711 / 011 748 2811 / 011 748 6570 / 06 501 1311  
131 Telokombe Road, Ashlea Gardens, Pretoria

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\*\*\*\*\*

**Bianca**

---

**From:** Bokamoso <ontvangs@bokamoso.net>  
**Sent:** 18 September 2012 02:33 PM  
**To:** mientjie@bokamoso.net; user3@bokamoso.net  
**Cc:** user1@bokamoso.net  
**Subject:** FW: DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

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**From:** DKOA\_LIST [<mailto:dkoa@salbu.co.za>]  
**Sent:** 18 September 2012 02:28 PM  
**To:** DKOA\_LIST (LONG)  
**Cc:** Bokamoso  
**Subject:** DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

Greetings,

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**  
**Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14**  
**Portions of the farm Doornkloof 391-JR**  
**Gaut: 002/12-13/E0089 Gaut: 002/12-13/E0090**

Please refer to the attached Bokamoso notice.

We asked that the Doornkloof Owners Association (DKOA) be registered as an Interested and Affected Party (I&AP)

**For more information contact:**  
Mientjie Coetzee or Juanita De Beer Telephone: 012-346-3810  
Bokamoso Landscape Architects and Environmental Consultants

Kind regards,

David Larsen - Salbu

Secretary: Doornkloof Owners Association (DKOA)  
For more information see URL: <http://www.salbu.co.za/dkoa>

**PLEASE PASS THIS MESSAGE ON TO THREE NEIGHBOURS  
AND ASK THEM TO DO THE SAME**

Bokamoso wrote:

Dear Mr. Larsen

Please find the site notices attached as requested. A layout plan is available on request.(pdf file)

Date of Notices: 29 August 2012

# Rietvlei X6-X11 & X15



## NOTICE OF SCOPING ENVIRONM

Notice is given of an application for a Scoping Report submitted to the Gauteng Department of Environmental and Water Affairs Regulation No. R543 published in the Government Gazette in terms of the National Environmental Management Act, 1989 Impact Assessment Procedures (Notice 1, 2 of 2002) for the following activity:  
Reference No: Gaut: 002/12-13/E0090

**Project Name:** Proposed Mixed Use Development Extension 15.

**Property Description:** Portions of the Remainder and 318 of the farm Doornkloof 391 JR, Gauteng

**Proposed Zoning Information:** The proposed use development consisting of the following units/hectare). Commercial (warehousing, a retail (shops, offices, banks, places of refreshment buildings excluding public garage or filling stations, centres, light manufacturing/assembly), Industrial and Business Buildings and Special for parking

**Proponent Name:** Gilyrost 71 (Pty) Ltd

**Listing Activities Applied:** GNR 544 (Listing No 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing No 546 (Listing Notice 3), 18 June 2010 – Activity

**Location:** The study area is located within Clayville (proposed Rietvlei X6 is situated to the east of the R21 Freeway. The study area is situated on the Farm Property and Clayville X65 development west of Rietvlei Dam Nature Reserve, to the west of the Cornwall Hill Estate and the St. George's Estate, Cornwall Hill Estate and the St. George's Estate west and north of the study area.

**Date of Notice:** 29 August 2012

Queries regarding this matter should be referred to:  
Bokamoso Landscape Architects and Environmental Consultants  
Public Participation registration and inquiries  
Project inquiries: Mientjie Coetzee Tel: (011) 461-11375  
P.O. Box 11375 Fax: (011) 461-11375  
Marcelana 0161 E-mail: bokamoso@bokamoso.net  
[www.bokamoso.net](http://www.bokamoso.net)

In order to ensure that you are identified (I&AP) please submit your name, contact details in writing, to the contact person given

# Rietvlei X 12, X13 & X14



## NOTICE OF SCOPING ENVIRONMENTAL

Notice is given of an application for a Scoping of Regulation No. R543 published in the Government National Environment Management Act, 1998 Impact Assessment Procedures (Notice 1, 2 at the following activity:

Reference No: Gaut: 002/12-13/EO089

Project Name: Proposed Mixed Use Development

Property Description: Portions of the Remaining JR and Portion 20 of the farm Doornkloof 391 JR

Proposed Zoning Information: The proposed use development consisting of the following land use: Business 2 (office, banks, display centres, light Hotel/Health Spa and Resort, Place of Worship,

Proponent Name: Gillytrot 71 (Pty) Ltd

Listing Activities Applied: GNR 544 (Listing Notice 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing Notice 3), 18 June 2010 – Activity 4,

Location: The study area is located within City of Johannesburg situated to the west of Rietvlei Nature Reserve (House Museum, Irene Village, Twin Rivers Reservoir) Plant is situated to the south of the study area.

Date of Notice: 29 August 2012

Queries regarding this matter should be referred to Bokamoso Landscape Architects and Environmental Public Participation registration and inquiries. If Project inquiries: Mientjie Coetzee  
P.O. Box 11375  
Marosiana 0161  
www.bokamoso.net  
Fax: (086) 111 1111  
E-mail: info@bokamoso.net

In order to ensure that you are identified (I&AP) please submit your name, contact details in writing, to the contact person given at

Kind Regards  
Mientjie Coetzee



Environmental Consultants &  
Landscape Architects

Cell: 082 221 0011 Fax: (011) 271 1173/346 3810 E-mail: 27 80 570 56 49  
130 Lebombo Road, Ashlea Gardens, Pretoria

**Bianca**

---

**From:** Bokamoso <ontvangs@bokamoso.net>  
**Sent:** 22 October 2012 10:53 AM  
**To:** user3@bokamoso.net  
**Subject:** FW: Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** sahraletter Rietvlei X 12 to 14 oct2012.pdf

**Flag Status:** Flagged

-----Original Message-----

**From:** ANDREW SALOMON [<mailto:ASALOMON@sahra.org.za>]  
**Sent:** 22 October 2012 10:23 AM  
**To:** Bokamoso  
**Cc:** Grant Botha; Ramphele Maphata  
**Subject:** Re: Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14

Attached please find the SAHRA APM Unit response to your notification regarding the above development.

Regards,  
Andrew Salomon

Archaeological Heritage Impact Assesor  
South African Heritage Resources Agency  
Email: [asalomon@sahra.org.za](mailto:asalomon@sahra.org.za)  
Tel: 021 462 4502  
Fax: 021 462 4509  
Web : [www.sahra.org.za](http://www.sahra.org.za)

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>>> Bokamoso <[lizelleg@mweb.co.za](mailto:lizelleg@mweb.co.za)> 27/08/2012 09:09 >>>

To whom it may concern,



Please refer to the attached Public Notice regarding the proposed Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

Description: LATEST SIGNATURE LOGO

## Bianca

---

**From:** Bokamoso <ontvangs@bokamoso.net>  
**Sent:** 17 October 2012 09:34 AM  
**To:** user3@bokamoso.net  
**Cc:** user1@bokamoso.net  
**Subject:** FW: Registration as IAP: Proposed mixed use development to be known as Rietvlei Extension 12, 13 and 14  
**Attachments:** Standard Conditions of Crossing RW Pipes\_Way Leave.pdf; Proposed mixed use development\_Farm Doornkloof 391 JR\_Rietvlei Ext 12\_13 and 14.pdf; Untitled attachment 00068.txt

---

**From:** Natalie Koneight [<mailto:nkoneigh@randwater.co.za>]

**Sent:** 17 October 2012 09:24 AM

**To:** [lizelleg@mweb.co.za](mailto:lizelleg@mweb.co.za)

**Subject:** Registration as IAP: Proposed mixed use development to be known as Rietvlei Extension 12, 13 and 14

Dear Sir/Madam

Rand Water is hereby registering as IAP for the above-mentioned project.

Kindly forward confirmation of registration as IAP to Natalie Koneight at [nkoneigh@randwater.co.za](mailto:nkoneigh@randwater.co.za)

Attached is Rand Water's Wayleaves, for your information.

Rand Water would like to be sure that the development as per the BID have planned adequately for their sewerage removal off site.

Please provide Rand Water with :

1. The detail about the facility that will receive the sewerage.
2. An agreement that the identified sewerage facility is aware of the development and that they have the capacity to accept the sewerage from the site without overloading the facility.
3. Will there be any discharges other than the sewerage system that will increase storm water entering the environment. If so, has the development considered retention and stilling ponds to slow down high peak flows.

if the sewerage facility cannot accept the additional load into their facility then this will have a negative impact on the environment and the pollution load into the river systems

### Natalie Koneight

Secretary to Leslie Hoy  
EMS Department, GSSE



#### RAND WATER

+27-11-724-9366

+27-11-900-2108

[nkoneigh@randwater.co.za](mailto:nkoneigh@randwater.co.za)

[www.randwater.co.za](http://www.randwater.co.za)

**Bianca**

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:09 AM  
**To:** asalomon@sahra.org.za  
**Cc:** user1@bokamoso.net  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project**.

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
T: +27(12) 346 3810 | F: 27 86 570 5659 | [ed@bokamoso.co.za](mailto:ed@bokamoso.co.za)  
36 Lebombo Road Ashlea Gardens, PTA

## Bianca

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:10 AM  
**To:** nndobochani@sahra.org.za  
**Cc:** user1@bokamoso.net  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.**

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
T: +27(12) 346 3810 | F: 27-86 570 5659 | [ed@celles@msvb.co.za](mailto:ed@celles@msvb.co.za) |  
36 Lebombo Road Ashlea Gardens, PTA

## Bianca

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:10 AM  
**To:** maphata.ramphele@gauteng.gov.za  
**Cc:** user1@bokamoso.net  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.**

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
t: +27(12) 346 3810 | f: 27 86 570 5659 | e: info@bokamoso.co.za |  
36 Lebombo Road Ashlea Gardens, PTA

**Bianca**

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:10 AM  
**To:** 'justicem@dwaf.gov.za'  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project**.

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
T: +27(12) 346 3810 | F: 27 86 570 5659 | [edceller@bokamoso.co.za](mailto:edceller@bokamoso.co.za)  
36 Lebombo Road Ashlea Gardens, PTA

**Bianca**

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**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:13 AM  
**To:** central@eskom.co.za  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project**.

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
T: +27(12) 346 3810 | F: 27 86 570 5659 | e: [bell@bokamoso.co.za](mailto:bell@bokamoso.co.za) |  
36 Lebombo Road Ashlea Gardens, PTA

## Bianca

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:13 AM  
**To:** paia@eskom.co.za  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.**

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
T: +27(12) 346 3810 | F: 27 86 570 5659 | e: [info@bokamoso.co.za](mailto:info@bokamoso.co.za)  
36 Lebombo Road Ashlea Gardens, PTA



**Bianca**

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**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:13 AM  
**To:** schmidk@nra.co.za  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.**

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanifa De Beer

  
**Environmental Consultants &  
Landscape Architects**  
t: +27(12) 346 3810 | f: 27 86 570 5659 | e: [info@bokamoso.co.za](mailto:info@bokamoso.co.za)  
36 Lebombo Road Ashlea Gardens, JTA

**Bianca**

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:13 AM  
**To:** kumen.govender@gauteng.gov.za  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.**

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
t: 27(12) 346 3810 | f: 27 86 570 5659 | [edc@bokamoso.co.za](mailto:edc@bokamoso.co.za) |  
36 Lehombo Road Ashlea Gardens, PTA

## Bianca

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:13 AM  
**To:** customerservice@randwater.co.za  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
| t: +27(12) 346 3810 | f: 27 86 570 5659 | e: [info@bokamoso.co.za](mailto:info@bokamoso.co.za) |  
36 Lebombo Road Adilea Gardens, PTA

**Bianca**

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:13 AM  
**To:** 'RudzaniM@tshwane.gov.za'  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.**

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
T: +27(12) 346 3810 | F: 27 86 570 5659 | [office@bokamoso.co.za](mailto:office@bokamoso.co.za) |  
36 Lebombo Road Ashlea Gardens, PTA

**Bianca**

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:19 AM  
**To:** daniel.ramokone@transnet.net  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project**.

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
T: +27(12) 346 3810 | F: 27 86 570 5659 | [info@bokamoso.co.za](mailto:info@bokamoso.co.za)  
36 Lebombo Road Ashlea Gardens, PTA

## Bianca

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:08 AM  
**To:** gheath@geoscience.org.za  
**Cc:** user1@bokamoso.net  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed **Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project**.

Hope this finds you well.

Kind Regards/Vriendelike Groete

Juanita De Beer

  
**Environmental Consultants &  
Landscape Architects**  
T: +27(12) 346 3810 | F: 27 86 570 5659 | e: [info@bokamoso.net](mailto:info@bokamoso.net)  
36 Lebombo Road Ashlea Gardens, PTA

**Bianca**

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 27 August 2012 09:19 AM  
**To:** casperm@tshwane.gov.za  
**Subject:** Interested and/or affected Parties - Proposed Rietvlei X12, X13 & X14  
**Attachments:** Public Notice EIA.pdf

To whom it may concern,

Please refer to the attached Public Notice regarding the proposed Mixed Use Development to be known as Rietvlei X12, X13 & X14 Project.

Hope this finds you well.

Kind Regards/Vriendellke Groete

Juanita De Beer

  
**Bokamoso**  
Environmental Consultants &  
Landscape Architects  
| t: +27(12) 346 3810 | f: 27 86 570 5659 | e: [info@bokamoso.co.za](mailto:info@bokamoso.co.za) |  
36 Lebombo Road Ashlea Gardens, PTA

## Bianca

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 19 September 2012 08:44 AM  
**To:** 'Ruan.DeLange@diss.co.za'  
**Subject:** RE: DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

Dear Ruan de Lange,

Thank you for your response. I have registered you as Interested and Affected Party Member for the proposed Rietvlei X6-X11 & X15 and the proposed Rietvlei X12, 13 & 14 Projects. I will keep you updated regarding the Process in the future.

*Kind Regards/Vriendelike Groete*

*Juanita De Beer*



---

**From:** Ruan de Lange [<mailto:Ruan.DeLange@diss.co.za>]  
**Sent:** 18 September 2012 03:54 PM  
**To:** [lizelle@mweb.co.za](mailto:lizelle@mweb.co.za)  
**Cc:** Wim de Lange ([delangew@vodamail.co.za](mailto:delangew@vodamail.co.za))  
**Subject:** RE: DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

Hi

Can you please add us to the list of I&AP.

Contact details:

W.G. de Lange – Owner Portion 59 Doornkloof  
(c) 082 855 8482  
(w) +27 12 671 1991  
Email: [Ruan.delange@diss.co.za](mailto:Ruan.delange@diss.co.za)



BEFORE PRINTING THIS E-MAIL  
please consider the environment



Thanks

Best Regards

Ruan

---

**From:** [dkoa\\_list-bounces@salbu.co.za](mailto:dkoa_list-bounces@salbu.co.za) [mailto:[dkoa\\_list-bounces@salbu.co.za](mailto:dkoa_list-bounces@salbu.co.za)] **On Behalf Of** DKOA\_LIST  
**Sent:** 18 September 2012 02:28 PM  
**To:** DKOA\_LIST (LONG)  
**Subject:** DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

Greetings,

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**  
**Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14**  
**Portions of the farm Doornkloof 391-JR**  
**Gaut: 002/12-13/E0089 Gaut: 002/12-13/E0090**

Please refer to the attached Bokamoso notice.

We asked that the Doornkloof Owners Association (DKOA) be registered as an Interested and Affected Party (I&AP)

**For more information contact:**  
Mientjie Coetzee or Juanita De Beer Telephone: 012-346-3810  
Bokamoso Landscape Architects and Environmental Consultants

Kind regards,

David Larsen - Salbu

Secretary: Doornkloof Owners Association (DKOA)  
For more information see URL: <http://www.salbu.co.za/dkoa>

**PLEASE PASS THIS MESSAGE ON TO THREE NEIGHBOURS  
AND ASK THEM TO DO THE SAME**

Bokamoso wrote:

Dear Mr. Larsen

Please find the site notices attached as requested. A layout plan is available on request.(pdf file)

Date of Notices: 29 August 2012

# Rietvlei X6-X11 & X15



## NOTICE OF SCOPING ENVIRONM

Notice is given of an application for a Scoping was submitted to the Gauteng Department Regulation No. R543 published in the Govt National Environment Management Act, 19 Impact Assessment Procedures (Notice 1, 2 the following activity:

Reference No: Gaut: 002/12-13/ED090

Project Name: Proposed Mixed Use Develop Extension 15.

Property Description: Portions of the Remain and 318 of the farm Doornkloof 391 JR, Gaut

Proposed Zoning Information: The proposed use development consisting of the following units/hectare), Commercial (warehousing, d (shops, offices, banks, places of refreshment buildings excluding public garage or filling st centres, light manufacturing/assembly), Ind and Business Buildings and Special for parón

Proponent Name: Gillyfrost 71 (Pty) Ltd

Listing Activities Applied: GNR 544 (Listing No 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (U 546 (Listing Notice 3), 18 June 2010 – Activity

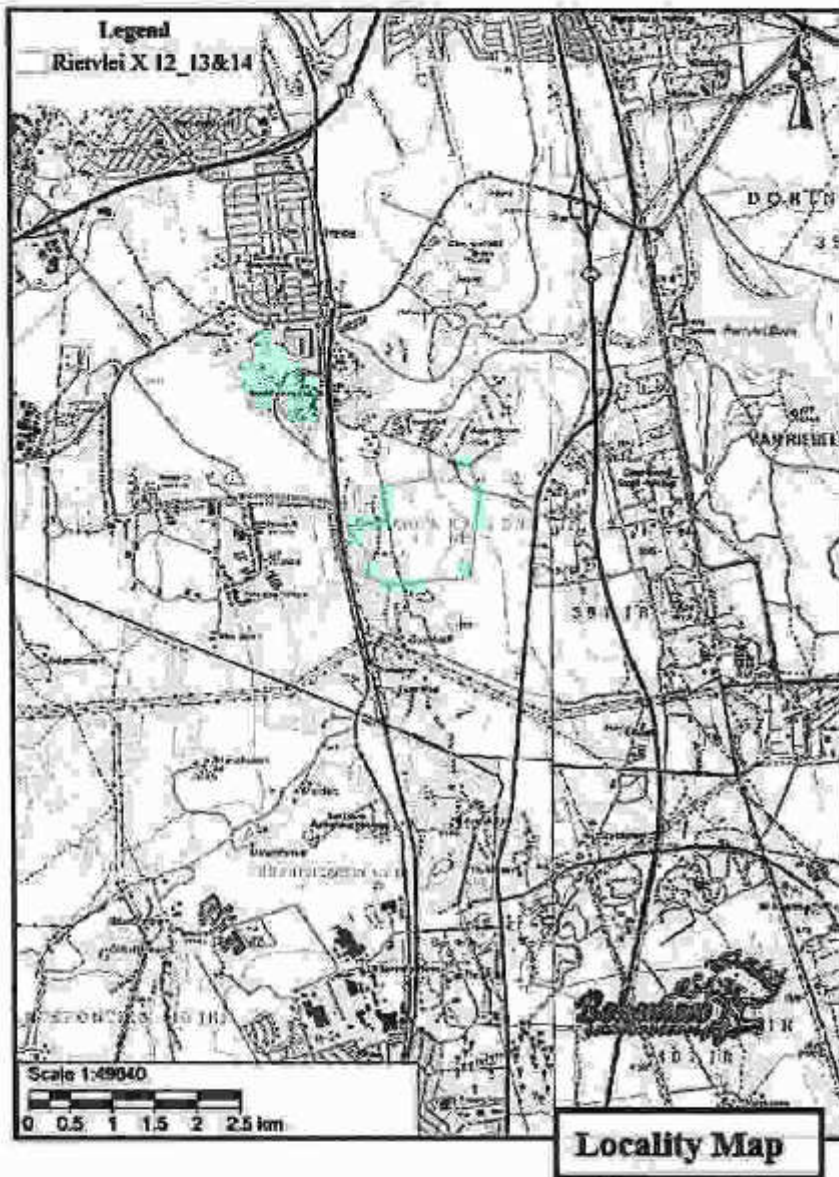
Location: The study area is located within Cl (proposed Rietvlei X6 is situated to the east of the west of the R21 Freeway. The study area Farm Property and Clayville X65 development west of Rietvlei Dam Nature Reserve, to the Estate, Cornwall Hill Estate and the St. George west and north of the study area.

Date of Notice: 29 August 2012

Queries regarding this matter should be refer Bokamoso Landscape Architects and Enviro Public Participation registration and inquiries Project inquiries: Mientjie Coetzee Tel: 011 P.O. Box 11375 Fax: 011 Marabana 0161 E-mail: www.bokamoso.net

In order to ensure that you are identified (I&AP) please submit your name, contact details in writing, to the contact person given

# Rietvlei X 12, X13 & X14



## NOTICE OF SCOPING ENVIRONMENTAL

Notice is given of an application for a Scoping Assessment was submitted to the Gauteng Department of Environmental and Natural Resources Management Act, 1998 Impact Assessment Procedures (Notice 1, 2 at the following activity:

Reference No: Gaut: 002/12-13/ED089

Project Name: Proposed Mixed Use Development

Property Description: Portions of the Remaining Farm and Portion 20 of the farm Doornidoof 391 JR

Proposed Zoning Information: The proposed activity is a mixed use development consisting of the following land uses: Business 2 (office, banks, display centres, light retail), Hotel/Health Spa and Resort, Place of Worship,

Proponent Name: Gillyfrost 71 (Pty) Ltd

Listing Activities Applied: GNR 544 (Listing Notices 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing Notices 3), 18 June 2010 – Activity 4,

Location: The study area is located within City of Johannesburg situated to the west of Rietvlei Nature Reserve and Irene Village, Irene Village, Twin Rivers Reservoir. The Irene Village House Museum, Irene Village, Twin Rivers Reservoir is situated to the south of the study area.

Date of Notice: 29 August 2012

Queries regarding this matter should be referred to Bokamoso Landscape Architects and Environmental Consultants. Public Participation registration and inquiries: Jh Project Inquiries: Mientjie Coetzee  
P.O. Box 11375 Fax: (086) 123 4567  
Maroelana 0161 E-mail: info@bokamoso.net  
www.bokamoso.net

In order to ensure that you are identified (I&AP) please submit your name, contact details in writing, to the contact person given above.

Kind Regards  
Mientjie Coetzee



136 Lechambo Road, Loshley Gardens, Pretoria  
Tel: +27 (0) 11 271 2346 Fax: +27 (0) 11 271 6570 Email: info@bokamoso.net

Disclaimer: The information contained in this communication is confidential and may be legally privileged. It is intended solely for the use of the individual or entity to whom it is addressed.

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\*\*\*\*\*

**Bianca**

---

**From:** User3 <user3@bokamoso.net>  
**Sent:** 19 September 2012 08:36 AM  
**To:** 'dkoa@salbu.co.za'  
**Subject:** RE: DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

Dear Doornkloof Owners Association (DKOA),

Thank you for your response, I have registered you as Interested and Affected Party Member for the proposed Rietvlei X6-X11 & X15 and the proposed Rietvlei X12, 13 & 14 Projects. I will keep you updated regarding the Process in the future.

Hope this finds you well.

*Kind Regards/Vriendelike Groete*

*Jannita De Beer*



---

**From:** DKOA\_LIST [<mailto:dkoa@salbu.co.za>]  
**Sent:** 18 September 2012 02:28 PM  
**To:** DKOA\_LIST (LONG)  
**Cc:** Bokamoso  
**Subject:** DKOA: Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14

Greetings,

**NOTICE OF SCOPING ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**  
**Bokamoso Notice\_Rietvlei X 6 - X11 & X15; Rietvlei X 12, 13 14**  
**Portions of the farm Doornkloof 391-JR**  
**Gaut: 002/12-13/E0089 Gaut: 002/12-13/E0090**

Please refer to the attached Bokamoso notice.

We asked that the Doornkloof Owners Association (DKOA) be registered as an Interested and Affected Party (I&AP)

**For more information contact:**

Mientjie Coetzee or Juanita De Beer Telephone: 012-346-3810  
Bokamoso Landscape Architects and Environmental Consultants

Kind regards,

David Larsen - Salbu

Secretary: Doornkloof Owners Association (DKOA)  
For more information see URL: <http://www.salbu.co.za/dkoa>

**PLEASE PASS THIS MESSAGE ON TO THREE NEIGHBOURS  
AND ASK THEM TO DO THE SAME**

Bokamoso wrote:

Dear Mr. Larsen

Please find the site notices attached as requested. A layout plan is available on request.(pdf file)

Date of Notices: 29 August 2012

# Rietvlei X6-X11 & X15



## NOTICE OF SCOPING ENVIRONM

Notice is given of an application for a Scoping was submitted to the Gauteng Department Regulation No. R543 published in the Government National Environmental Management Act, 1996 Impact Assessment Procedures (Notice 1, 2 the following activity:  
Reference No: Gaut: 002/12-13/E0090

**Project Name:** Proposed Mixed Use Development Extension 15.

**Property Description:** Portions of the Remainder and 318 of the farm Doornkloof 391 JR, Gauteng

**Proposed Zoning Information:** The proposed use development consisting of the following units/hectare). Commercial (warehousing, and shops, offices, banks, places of refreshment buildings excluding public garage or filling stations, centres, light manufacturing/assembly). Industrial and Business Buildings and Special for parks

**Proponent Name:** Gilityrost 71 (Pty) Ltd

**Listing Activities Applied:** GNR 544 (Listing No 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing Notice 3), 18 June 2010 – Activity

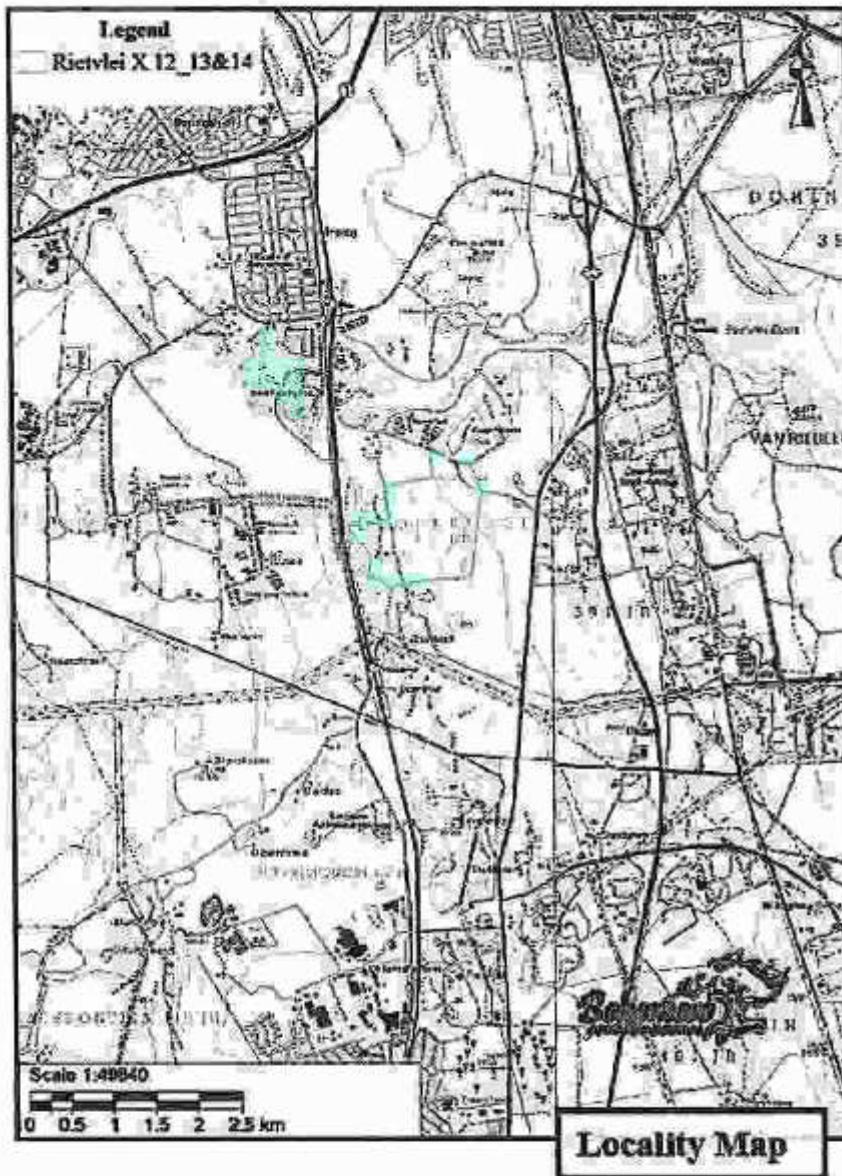
**Location:** The study area is located within Clayville (proposed Rietvlei X6 is situated to the east of the R21 Freeway. The study area is situated on Farm Property and Clayville X65 development west of Rietvlei Dam Nature Reserve, to the west of the Estate, Cornwall Hill Estate and the St. George's Estate west and north of the study area.

**Date of Notice:** 29 August 2012

Queries regarding this matter should be referred to Bokamoso Landscape Architects and Environmental Public Participation registration and Inquiries Project inquiries: Mienjie Costjee Tel: (011) 411-11375 P.O. Box 11375 Fax: (011) 411-11375 Marcelana 0161 E-mail: [www.bokamoso.net](mailto:www.bokamoso.net)

In order to ensure that you are identified (I&AP) please submit your name, contact details in writing, to the contact person given

# Rietvlei X 12, X13 & X14



## NOTICE OF SCOPING ENVIRONMENTAL

Notice is given of an application for a Scoping Notice was submitted to the Gauteng Department of Regulation No. R543 published in the Government National Environment Management Act, 1998 Impact Assessment Procedures (Notice 1, 2 at the following activity:

Reference No: Gaut: 002/12-13/EO089

Project Name: Proposed Mixed Use Development

Property Description: Portions of the Remaining JR and Portion 2D of the farm Doornkloof 391 JR

Proposed Zoning Information: The proposed activity (development) consisting of the following land use: Business 2 (office, banks, display centres, light retail), Hotel/Health Spa and Resort, Place of Worship,

Proponent Name: Gallyfrost 71 (Pty) Ltd

Listing Activities Applied: GNR 544 (Listing Notice 24, 26, 28, 37, 38, 39, 47 & 56 and GNR 545 (Listing Notice 3), 18 June 2010 – Activity 4,

Location: The study area is located within City of Johannesburg situated to the west of Rietvlei Nature Reserve (Rietvlei House Museum, Irene Village, Twin Rivers Residential Estate). A Water Treatment Plant is situated to the south of the study area.

Date of Notice: 29 August 2012

Queries regarding this matter should be referred to: Bokamoso Landscape Architects and Environmental Consultants  
Public Participation registration and inquiries: Mientjie Coetzee  
P.O. Box 11375  
Maroelana 0161  
www.bokamoso.net  
Fax: (086) 100 1000  
E-mail: info@bokamoso.net

In order to ensure that you are identified (I&AP) please submit your name, contact details in writing, to the contact person given at

Kind Regards  
Mientjie Coetzee



Environmental Consultants & Landscape Architects

136 Lombard Road, Alex Gardens, Pretoria  
Tel: (011) 271 3234 / 271 3235 / 27 36 570 56 51  
E-mail: info@bokamoso.net



## Bianca

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**From:** User3 <user3@bokamoso.net>  
**Sent:** 17 October 2012 10:18 AM  
**To:** 'nkoneigh@randwater.co.za'  
**Subject:** RE: Registration as IAP: Proposed mixed use development to be known as Rietvlei Extension 12, 13 and 14

Dear Natalie Koneight,

Thank you for your response, I have registered Rand Water as Interested and/or Affected Party Member for the proposed Rietvlei Extension 12, 13 & 14 Project. We will keep you updated regarding the process in the future.

Hope this finds you well.

*Kind Regards/Vriendelike Groete*  
*Juanita De Beer*



---

**From:** Natalie Koneight [<mailto:nkoneigh@randwater.co.za>]  
**Sent:** 17 October 2012 09:24 AM  
**To:** [lizelle@mwweb.co.za](mailto:lizelle@mwweb.co.za)  
**Subject:** Registration as IAP: Proposed mixed use development to be known as Rietvlei Extension 12, 13 and 14

Dear Sir/Madam

Rand Water is hereby registering as IAP for the above-mentioned project.  
Kindly forward confirmation of registration as IAP to Natalie Koneight at [nkoneigh@randwater.co.za](mailto:nkoneigh@randwater.co.za)

Attached is Rand Water's Wayleaves, for your information.

Rand Water would like to be sure that the development as per the BID have planned adequately for their sewerage removal off site.

Please provide Rand Water with :

1. The detail about the facility that will receive the sewerage.
2. An agreement that the identified sewerage facility is aware of the development and that they have the capacity to accept the sewerage from the site without overloading the facility.

3. Will there be any discharges other than the sewerage system that will increase storm water entering the environment. If so, has the development considered retention and stilling ponds to slow down high peak flows.

If the sewerage facility cannot accept the additional load into their facility then this will have a negative impact on the environment and the pollution load into the river systems

**Natalie Koneight**

Secretary to Leslie Hoy  
EMS Department, GSSE



**RAND WATER**

+27-11-724-9366

+27-11-900-2108

[nkoneigh@randwater.co.za](mailto:nkoneigh@randwater.co.za)

[www.randwater.co.za](http://www.randwater.co.za)

# **Annexure L(vi)**

## Comments and issues Register



**COMMENT AND RESPONSE REPORT-  
FINAL SCOPING REPORT FOR THE PROPOSED RIETVLEI EXTENSION 12, 13 AND 14 DEVELOPMENT ON PORTIONS OF THE REMAINING  
EXTENTS OF PORTION 15 AND PORTION 20 OF THE FARM DOORNKLOOF 391 JR  
GAUT: 002/12-13/E0089**

Issue	Commentator	Response
<p>1. The Detail about the facility that will receive the sewerage. 2. An agreement that the identified sewerage facility is aware of the development and that they have the capacity to accept the sewerage from the site without overloading the facility. 3. Will there be any discharges other than the sewerage system that will increase storm water entering the environment. If so, has the development considered retention and stilling ponds to slow down high peak flows?</p> <p>1. Services Crossing:</p> <p>1.1 The number of crossings of Rand Water's pipeline/s and servitude/s or proposed servitude/s shall be kept to a minimum; such crossing shall be close to 90 degrees (right angles) as possible and the cover over its pipeline/s shall not be materially altered.</p> <p>1.2 No service shall be less than one meter from a joint in Rand Water's pipeline/s and a space of not less than 300 mm shall be maintained between any service and Rand Water's pipeline/s at the point of crossing, or as separately specified. Where Rand Water's pre-stressed concrete pipeline is crossed, this space shall be measured from the lighting protection wires installed above and below the pipeline. For service crossings under those of Rand Water, where further larger diameter pipelines are installed in the servitude in the future, Rand Water may require the service owner, at its own cost, to lower its service to comply with the foregoing.</p> <p>1.3 No service running parallel to Rand Water's pipeline/s, no box,</p>	<p>Natalie Koneight Rand Water</p>	<p>Lukela Consulting Engineers was appointed to compile a Services Report. <b>Refer to Annexure G16 of the EIA Report.</b></p> <ol style="list-style-type: none"> <li>1. The internal sewerage reticulation will be taken over by the Tshwane Metropolitan Municipality after construction.</li> <li>2. An agreement that the identified sewerage facility is aware of the development and that they have the capacity to accept the sewerage from the site without overloading the facility will be provided within the Final EIA Report.</li> <li>3. Please note that upgrading is necessary for the water upgrading as well as for the sewer reticulation to service the proposed Rietvlei extensions.</li> </ol>

manhole, structure supporting any service, footing of any pylon, pole or stay wire and no storm water culvert and/or appurtenances shall be within two meters of Rand Water's pipeline/s or on Rand Water's servitude/s or proposed servitude/s or discharge thereon unless the prior written permission of Rand Water has been obtained.

1.4 Half-round concrete pipes or other approved protection shall be placed over any cable that is within two meters of Rand Water's pipeline/s or on Rand Water's servitude/s or proposed servitude/s.

1.5 Where any services crosses Rand Water's servitude/s or proposed servitude/s, it shall be laid at minimum grade (sewers and storm water) / at an even depth below ground level (all other services) over the entire servitude/proposed servitude width and its position where it intersects Rand Water's pipeline/s, servitude/s or proposed servitude/s shall be clearly indicated by suitable markers. Sewer crossings shall be designed to span over Rand Water's existing and proposed pipeline trenches.

## 2. Roads and railway line crossing:

2.1 Rand Water shall have unimpeded vehicular access to its pipeline/s at all times for inspection and maintenance purposes. Culverts shall be provided at all railway line crossings to provide such access. Under roadways culverts will be required unless it can be proved to Rand Water that traffic density and the cover over the pipeline/s will not adversely affect Rand Water in the exercise of its rights and that excavation through the road layers to gain access to the pipeline/s is acceptable to the service owner. In general, the cover over Rand Water's pipeline/s may vary between 800mm and 1500mm however, an undisturbed layer of at least 300mm shall be maintained between the pipeline/s and the roadworks during construction unless relaxed by Rand Water in writing. Reinforced concrete box culverts with compartments having minimum internal dimensions as indicated on Rand Water's standard drawing No.

Refer to **Annexure G14 for the Traffic Impact study.**

B1933 and B1934 shall be provided for both existing and future pipelines. Culverts shall preferably be drained by a gravity system.

2.2 Long diagonal crossings of Rand Water's pipeline/s and servitude/s or crossings of bends in Rand Water's pipeline/s shall be avoided. If this is not possible, Rand Water's pipeline/s shall be deviated so as to cross the proposed road/railway line at approximately right angles.

3. Pipeline protection and/or deviation at design stage:

3.1 Where any development affects the discharge of water from Rand Water's scour valves, arrangements shall be made in collaboration with Rand Water's Manager Bulk Water Services to accommodate, channel or divert such flow.

3.2 Detailed proposals, including longitudinal sections along Rand Water's pipeline/s depicting the level of the road/railway line or other service in relation to the pipeline/s, shall be submitted for Rand Water's approval before the commencement of proposed construction work.

3.3 It may be necessary for Rand Water itself to strengthen the lead-caulked joints of its pipeline/s located under roadways or in culverts, by means of double tapers, the fabrication of which requires at least two months notice. Such strengthening shall extend to a distance of at least two metres beyond the road prism/kerb line, measured at right angles to the road direction. (The estimated cost of which is R7000 per joint). The actual cost of joint strengthening shall be borne by the service owner who shall be responsible for all excavation and backfilling.

3.4 Since lengthy delays can occur between the planning and construction stages, the proposed dimensions of the culverts shall be confirmed by Rand Water at least 12 months before construction

work commences.

3.5 All planning, survey work, preparation of designs, specifications and drawings shall be undertaken by the service owner or its consulting engineers and submitted to Rand Water for approval. A copy/copies of the relevant specimen specification/s will be provided, on request, when more details of the work to be performed are known.

3.6 Contractors approved by Rand Water shall be engaged to undertake all construction work, including: a) manufacture, supply and delivery of pipes; b) excavation and backfill of trenches etc; c) laying and jointing of pipes; d) recovery of redundant pipes; and e) construction of the necessary structures.

3.7 Rand Water shall be given reasonable notice prior to the commencement of the fabrication as well as the installation of pipes to enable it to undertake the necessary structures.

3.8 Except for the manufacture of pipes, which will be inspected by Rand Water or its agents, all work shall be supervised by the service owner or its consulting engineers who will also undertake all necessary negotiations with property owners and local authorities affected by any possible relocation of Rand Water's pipeline/s and obtain agreement from them in principle for the accommodation of Rand Water's pipeline/s in the proposed relocated position/s.

3.9 Where Rand Water is required to relocate its pipeline/s or servitude/s, the service owner shall bear the cost of the cancellation of Rand Water's servitude/s as well as the costs of acquiring, surveying and registering new servitudes that will provide Rand Water with rights equal to those provided by the servitudes to be cancelled.

3.10 Co-ordinates of the alignment of any proposed relocation/s shall

be submitted to Rand Water to prepare the statutory notices for relocation/s of its pipeline/s. Relocation shall not take place until Rand Water has issued such statutory notices.

3.11 During the period April to August in any year, at a time suited to its water supply operations, Rand Water will, on receipt of 21 days notice, circumstances permitting, make the end connections from the deviations to the existing pipeline/s. Daywork rates shall be included in the pipelaying contract documents to allow for assistance to Rand Water.

3.12 Ownership of portions of the pipeline/s that become redundant as a result of relocations carried out at the service owner's cost will be transferred to it. If requested, Rand Water may take into stock pipes and/or valves recovered in good condition and credit the service owner with the value determined by Rand Water. Materials thus taken into stock shall be delivered to Rand Water's pipe yard at its Zwartkopjes pumping station by and at the cost of the service owner.

3.13 The service owner hereby indemnifies Rand Water against any claim arising from the non-removal and disposal of any portion of Rand Water's pipeline/s made redundant by relocation.

3.14 No pipeline in its relocated position shall be subject to the provisions of the Advertising on Roads and Ribbon Development Act No 21 of 1940 or the National Roads Act No 54 of 1971 as amended.

4. Pipeline protection and/or deviation at construction stage:

4.1 Rand Water's Distribution MAnager (Telephone (011) 900 1910) shall be notified and his permission obtained before any work is carried out within 5 metres of Rand Water's pipeline/s, servitude/s or proposed servitude/s and before backfilling any excavation exposing Rand Water's pipeline/s - Please quote inspection order No. as specified separately.



4.2 If detailed information of the positions or levels of the pipeline/s is required the pipeline/s may be exposed by the service owner or its consulting engineers, provided that the foregoing condition is complied with.

4.3 In terms of Regulations 10.17.1 of the Explosives Act No 26 of 1956, written confirmation of the measures proposed to protect Rand Water's pipeline/s shall be obtained from Rand Water for any blasting to be undertaken within 500 metres of its pipeline/s. The service owner shall be responsible for ensuring that the approved protection measures are complied with and that Rand Water's Distribution Manager is notified at least 24 hours in advance of each blast.

4.4 The pipeline/s shall be supported at not greater than 5 metre centres in culverts and where excavation takes place under the pipeline/s during construction.

4.5 No heavy earthmoving or compaction equipment shall be operated within 2 metres of the steel or 5 metres of the prestressed concrete pipeline/s unless specific proposals have been approved by Rand Water.

The prestressed concrete pipeline/s shall be haunched under the road or supported on pedestals where crossed by services located thereunder in accordance with the details depicted on Rand Water's drawing A3993, a print of which is available on request. Such haunching shall extend for a distance of 2 metres beyond the edge of the roadway on both sides, or to such greater length as may be required to complete the haunching of the nearest whole pipe length.

5. Cathodic protection at steel pipeline crossings:

5.1 Two 16 square millimetre leads or one 35 square millimetre lead

appropriately marked must be provided at each crossing point and the crossing shall not be backfilled until Rand Water's staff have installed similar test leads on Rand Water's pipeline/s. The Electrolysis Section ((011) 682 0239 or 0240) must be contacted for the connection to Rand Water's pipeline/s.

5.2 The pipe to ground potential of Rand Water's pipeline/s at the crossing point will be monitored before installation of the service owner's steel service and that potential must be maintained irrespective of the cathodic protection applied to the service owner's steel service after installation.

#### 6. Indemnity:

6.1 The service owner shall indemnify Rand Water against all claims for damage arising out of, and will be held liable for any damage that may be caused to Rand Water's pipeline/s and/or appurtenances as a result of any crossing of during construction or the installation/construction and/or the presence of any service/road/railway line and/or appurtenances on Rand Water's servitude/s or within 2 metres of Rand Water's pipeline/s.

Rand Water shall not be liable for any damage to any service/road/railway line and/or appurtenances that may be caused by it in the exercise of its rights, provided that Rand Water will remain liable for any damage that is proved to have resulted directly from the wrongful action of its employees.

#### 7. Costs:

7.1 The service owner shall bear the cost of any protective measure that may be necessary in order to prevent the exchange of stray direct currents between the cable/s or pipe/s and Rand Water's pipeline/s, the protection of existing installations and making provision to accommodate future services, as outlined above as well as the cost of repairs to the lightning protection wires installed

<p>approximately 100mm above and below Rand Water's prestressed concrete pipeline/s or to Rand Water's telemetering cable/s necessitated by the installation of the proposed service, and will be debited with all costs incurred by Rand Water on its behalf on the usual terms of actual cost plus 10% (ten per cent) for administration.</p> <p>8. Acceptance of conditions: 8.1 The above conditions together with Annexure B (Vaal Barrage Conditions) - if relevant, and any foregoing special requirements shall be accepted in writing by the service owner before any work may commence. If no reply is received within 60 days from date of Rand Water's written notification, the conditions will be deemed to have been accepted by the service owner.</p>		
<p>Thank you for your notice regarding the proposed Rietvlei Extension 12, 13 &amp; 14 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 before such sites are disturbed by 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 websites of the Association of Southern African Professional Archaeologist <a href="http://www.asapa.org.za">www.asapa.org.za</a>) 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</p>	<p>Andrew Salomon SAHRA</p>	<p>A Heritage Study was conducted during the EIA Phase. <b>Refer to Annexure G10.</b></p> <p>According to the specialist no sites of heritage significance could be found. The area adjacent to the development site does however have a strong historic association with the Jan Smuts and Jan Smuts Museum is located only 500m south of the boundary of the proposed development. The Irene Concentration Camp was also located close to the site. This lends a strong historic character to this landscape.</p>

<p>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 correct 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.</p> <p>If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary. 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 to indicate that there is no necessity for any further assessment. 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 of victims of conflict, and cultural landscapes or viewsapes must also be assessed.</p>		
<p>The Department recommends that the following issues be taken into consideration during the EIA phase of the project:</p> <ul style="list-style-type: none"> <li>a) A detailed layout plan, overlaying all sensitivities shall be included within the EIA report and submitted to this Department for perusal. The layout plan shall also be made available for the surrounding Interested and Affected parties to evaluate and comment on.</li> <li>b) No Development or structures (permanent or temporary) will be allowed within the Open Space areas, 1:50 and 1:100 year flood line or within the 32m line from the centre from the</li> </ul>	<p>K. Mofela  <a href="mailto:kemmonem@tshwane.gov.za">kemmonem@tshwane.gov.za</a></p>	<ul style="list-style-type: none"> <li>a) A detailed layout plan, overlaying all sensitivities will be included in the final EIA Report.</li> <li>b) No Development or structures (permanent or temporary) are within the Open Space areas, 1:50 and 1:100 year flood line</li> </ul>

<p>river, whichever is the greatest. The layout plan must make provision for this requirement.</p> <p>c) Given the nature of the proposed development it is recommended that a traffic impact study be included on the specialist's studies to be undertaken for the proposed development.</p> <p>d) A detailed Dolomite Stability Investigation Report must be included in the report.</p> <p>e) A detailed storm water management plan must be compiled that ensures that storm water generated on site is discharged in such a way that the receiving environment is not adversely impacted upon.</p> <p>f) Confirmation of service capacity (water, electricity, storm water and sewer) from the relevant service providers must be included within the final report. Should no capacity exist for any of these services, an alternative should be discussed within the Report.</p> <p>g) All identified specialist studies must be conducted and included in the EIA Report. The Assessment must indicate all potential impacts of the proposed development and appropriate mitigation measures.</p> <p>h) A general Rehabilitation plan shall be included within the EIA report which will aim to prevent erosion and aid the return of natural, endemic and indigenous vegetation cover to at least 80% of the rehabilitated area. The proposed rehabilitation plan should be included for the road servitudes as well as any sensitive water and wetland crossings.</p> <p>i) An Environmental Management Plan should be included within the EIA Report. The EMP should address impacts and mitigation measures for the pre-construction, construction and post-construction activities. All issues and recommendations from Specialist studies should be included within the final and approved EMP. An Environmental Control Officer and contact details should also be included within the EMP.</p>		<p>or within the 32m line from the centre from the river, whichever is the greatest.</p> <p>c) A detailed traffic study was undertaken as included as part of the EIA report, refer to <b>Annexure G14</b>.</p> <p>d) A detailed geotechnical study was undertaken to ensure the stability of the proposed development of the dolomite ground. <b>Refer to Annexure G1</b>.</p> <p>e) A detailed storm water management plan forms part of the EIA Report. <b>Refer to Annexure G15</b>.</p> <p>f) <b>Refer to Annexure G16</b> for the Services Report.</p> <p>g) All identified specialist studies are conducted and included in the EIA Report. The Assessment indicates all potential impacts of the proposed development and appropriate mitigation measures.</p> <p>h) A general Rehabilitation plan will be included within the Final EIA report which will aim to prevent erosion and aid the</p>
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		<p>return of natural, endemic and indigenous vegetation cover to at least 80% of the rehabilitated area.</p> <p>i). An Environmental Management Plan is included within the EIA Report. <b>Refer to Annexure M.</b></p>
<p>I am a resident at Twin Rivers Estate and also director of the home owners association.</p> <p>Can you please send me more information on the proposed development.</p> <p>Can you also register me as an interested and affected party in my personal capacity (owner of unit 5 at Twin Rivers Estate) and also the Twin Rivers Home Owners Association.</p> <p>You can also use the email <a href="mailto:Rudolph@law.co.za">Rudolph@law.co.za</a> for both in the meantime.</p> <p>My postal address is PO Box 600, Irene, 0062.</p> <p>The postal address of the home owners association is PO Box 193, Irene, 0062.</p>	<p>Rudolph Jansen <a href="mailto:Rudolph@law.co.za">Rudolph@law.co.za</a></p>	<p>Noted.</p>
<b>EIA Phase</b>		
<p>As interested party from Srnuts farm Conservancy and also interested in the possible School/retirement development.</p>	<p>Hantie Nel <a href="mailto:Hantie.nel@gmail.com">Hantie.nel@gmail.com</a></p>	<p>Thank you for your response, we have registered you as Interested and/or Affected party Member for the proposed Rietvlei X12, 13 &amp; 14 Project.</p> <p>We will keep you updated regarding the</p>



# Annexure L(vii)

Review Notice





# Rietvlei X12, X13 & X14 Amended Draft Environmental Impact Assessment Report for Review

All interested and affected parties are invited to review the development information and to register any issues and concerns to be included and addressed in the Final Environmental Impact Assessment Report.

**Venue:** St George Hotel

**Tel:** 011 316 1254

**Date:** 13 May – 10 June 2016

**Also available on our Website from 13 May 2016: [www.bokamoso.net](http://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: 087 570 5450

E-mail: [reception@bokamoso.net](mailto:reception@bokamoso.net)



**From:** juanita@bokamoso.net  
**Sent:** 11 May 2016 02:54 PM  
**To:** jgrobler@geoscience.org.za; asalomon@sahra.org.za; maphata.ramphele@gauteng.gov.za; justicem@dwaf.gov.za; keetm@dwaf.gov.za; central@eskom.co.za; paia@eskom.co.za; schmidk; kumen govender; nkoneigh@randwater.co.za; mmpshe@randwater.co.za; RudzaniM; loveous.tampane@transnet.net; casperm@tshwane.gov.za; mwcspoel@mweb.co.za; dkoa@salbu.co.za; ruan delange; delangewg; info@wessa.co.za; barbara@sagewoodconsulting.co.za; barbara@salberg.co.za; elana@salbro.co.za; rudolph@law.co.za; VDLindel@nra.co.za; hanlie.nel@gmail.com; stefan@lightfibre.co.za  
**Subject:** Rietvlei 12, 13 & 14 - Review Invitation Notice  
**Attachments:** Review Notice.pdf

Dear Interested and/or Affected Parties,

Please refer to the attached Review Invitation Notice regarding the proposed **Rietvlei 12, 13 & 14 Project**.

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](mailto:juanita@bokamoso.net) | [www.bokamoso.net](http://www.bokamoso.net)  
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

# Rietvlei X12, X13 & X14 Draft Environmental Scoping Report



All interested and affected parties are invited to review the development information and to register any issues and concerns to be included and addressed in the Final Environmental Scoping Report.

**Venue:** St George Hotel

**Tel:** 011 316 1254

**Date:** 4 September – 14 October 2013

**Website:** [www.bokamoso.biz](http://www.bokamoso.biz)

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

Contact person: **Juanita De Beer**

Tel: 012 346 3810 Fax: 086 570 5659

E-mail: [lizeleg@mweb.co.za](mailto:lizeleg@mweb.co.za)



**Bianca**

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**From:** Bokamoso <lizelle@mweb.co.za>  
**Sent:** 04 November 2013 07:42 AM  
**To:** user3@bokamoso.net  
**Cc:** user1@bokamoso.net  
**Subject:** FW: DKOA: Bokamoso Notice\_ Final Scoping Report - Rietvlei X12, X13 & X14

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**From:** DKOA\_LIST [<mailto:dkoa@salbu.co.za>]  
**Sent:** 02 November 2013 10:01 AM  
**To:** DKOA\_LIST (LONG)  
**Cc:** Bokamoso  
**Subject:** DKOA: Bokamoso Notice\_ Final Scoping Report - Rietvlei X12, X13 & X14

Greetings,

**Bokamoso Notice\_ Final Scoping Report - Rietvlei X12, X13 & X14**  
**GAUTENG REF NO: GAUT XXXXX**

Please see Bokamoso notice below.

We asked that the Doornkloof Owners Association (DKOA) be registered as an Interested and Affected Party (I&AP).

**For more information contact:**  
Juanita De Beer - Telephone: 012-346-3810  
Bokamoso Landscape Architects and Environmental Consultants

Kind regards,

David Larsen - Salbu

Secretary: Doornkloof Owners Association (DKOA)  
For more information see URL: <http://www.salbu.co.za/dkoa>

**PLEASE PASS THIS MESSAGE ON TO THREE NEIGHBOURS  
AND ASK THEM TO DO THE SAME**

Begin forwarded message:

**From:** Bokamoso <[lizelle@mweb.co.za](mailto:lizelle@mweb.co.za)>  
**Date:** 1 November 2013 16:50:15 GMT+02:00  
**Subject: Final Scoping Report - Rietvlei X12, X13 & X14**

Dear Interested and/or Affected Party Member,

Please note that the Final Scoping Report for the proposed Rietvlei X12, X13 & X14 Project will be available on our website: [www.bokamoso.biz](http://www.bokamoso.biz) from 1 November 2013 until 21 November 2013.

All Interested and Affected parties are invited to review the development information. Please submit your comments on the Final Scoping Report within **21 days** to the Gauteng Department of Agriculture and Rural Development (GDARD) – **Attention: Justine Chan** (email: [Justine.Chan@gauteng.gov.za](mailto:Justine.Chan@gauteng.gov.za) or fax: 011 355 1000). Please cc your comments to Bokamoso (email: [lizelleg@mweb.co.za](mailto:lizelleg@mweb.co.za) or fax: 086 570 5659).

Hope this finds you well.

Kind Regards/Vriendelike Groete

*Juanita De Beer*



**Landscape Architects &  
Environmental Consultants cc.**

T: (+27)12 346 3810 | F: (+27) 86 570 5659 | E: [lizelleg@mweb.co.za](mailto:lizelleg@mweb.co.za) | [www.bokamoso.biz](http://www.bokamoso.biz)  
36 Lebombo Street, Ashlea Gardens, Pretoria | P.O. Box 11375 Maroelana 0161

**Please consider the environment before printing this email**

## Bianca

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**From:** Juanita <user3@bokamoso.net>  
**Sent:** 01 November 2013 04:50 PM  
**To:** mwcspoel@mweb.co.za; dkoa@salbu.co.za; Ruan.DeLange@diss.co.za;  
delangewg@vodamail.co.za; nkoneigh@randwater.co.za;  
mmpshe@randwater.co.za; info@wessa.co.za; barbara@sagewoodconsulting.co.za;  
elana@salbro.co.za  
**Subject:** Final Scoping Report - Rietvlei X12, X13 & X14

Dear Interested and/or Affected Party Member,

Please note that the Final Scoping Report for the proposed Rietvlei X12, X13 & X14 Project will be available on our website: [www.bokamoso.biz](http://www.bokamoso.biz) from 1 November 2013 until 21 November 2013.

All Interested and Affected parties are invited to review the development information. Please submit your comments on the Final Scoping Report within **21 days** to the Gauteng Department of Agriculture and Rural Development (GDARD) – **Attention: Justine Chan** (email: [Justine.Chan@gauteng.gov.za](mailto:Justine.Chan@gauteng.gov.za) or fax: 011 355 1000). Please cc your comments to Bokamoso (email: [lizelleg@mweb.co.za](mailto:lizelleg@mweb.co.za) or fax: 086 570 5659).

Hope this finds you well.

Kind Regards/Vriendelike Groete

*Juanita De Beer*



**Landscape Architects &  
Environmental Consultants cc.**

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# Annexure M

## Environmental Management Plan



**FINAL ENVIRONMENTAL MANAGEMENT AND  
REHABILITATION PLAN THE PROPOSED RIETVLEI X  
12, 13 & 14**

Portions of the Remaining Extents of Portion 15 of the  
farm Doornkloof 391 JR and Portion 20 of the farm  
Doornkloof 391 JR

**GAUT: 002/12-13/E0089**

**June 2016**



**B O K A M O S O**

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## 1 Project Outline

### 1.1 Background

**Bokamoso Landscape Architects and Environmental Consultants** were appointed by **Gillyfrost 71 (Pty) Ltd** as **independent consultants** to prepare the applicable environmental reports and GDARD accepted the application that was submitted. The Reference Number issued by GDARD for the project is **GAUT: 002/12-13/E0089**.

### 1.2 Project description

The proposed Rietvlei 12, 13 & 14 is situated on **Portions of the Remaining Extents of Portion 15 and Portion 113 of the farm Doornkloof 391 JR**. The application is made for authorization of the establishment of a mixed land-use development consisting of the following land-uses: Residential 2 (5 units/ha), "Special" for Hotel and Residential Units, "Special" for Retirement Centre, Business 2 (Offices, banks, display centres, light manufacturing/assembly) and "Special" for Hotel/Health Spa Resort. The proposed Rietvlei Extension 12, 13 & 14 forms part of the larger Rietvlei Development (**Refer to Figure 1: Locality Map and Figure 2: Aerial Map**).



Figure 1 – Locality

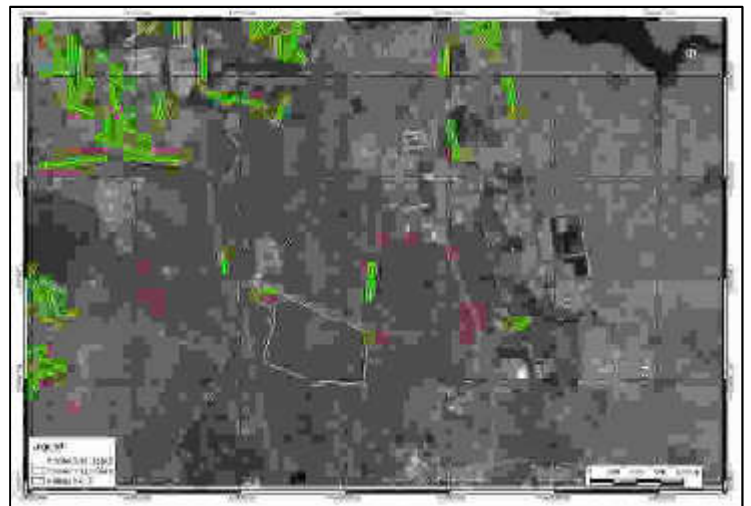


Figure 2 – Aerial Map

#### Timeframe for construction:

The expected timeframe for construction is approximately 18 months.

**The EMP will be a binding document for purposes of compliance.**

### **1.3 Receiving Environment**

**Geology:**

- According to a Geotechnical and Dolomite Stability Report by J.P. Venter the site is underlain by dolomite and probably mainly dolomite of the Eccles Formation of the Chuniespoort Group of the Transvaal Supergroup.

**Hydrology:**

- The study area is not affected by any rivers or streams. The site slopes towards the west and south-west. The relevant engineers are appointed to conduct a Storm Water Management Plan which will be included in the Final EIA Report.

**Fauna and flora:**

- In general the grassveld area is not suitable for the Striped Harlequin Snake and the African Python due to absence of termitaria and lack of suitable vegetation cover. The river and riparian vegetation does not offer suitable habitat for Gaint Bullfrogs.
- The *Ichnestoma stobiai*, an endangered fruit chafer that occurs in small habitat fragments has been found at the site on various occasions. There would be a threat to this rare and localized fruit chafe beetle, *Ichnestoma stobiai*, if the development is approved.
- The vegetation of the study area can be broadly classified as Rocky Highveld Grassland (Bankenveld), and more particularly its variation on dolomite-derived soils. Grassland predominates and indigenous trees are mainly confined to two well demarcated stands associated with rocky outcrops on some of the ridges. In Gauteng Province this vegetation type is highly threatened by urbanization, industrialization, mining, and, to a lesser degree, agriculture.
- The vegetation is near pristine state and contains specialized rock outcrop species such as *Xerophyta retinervis* and *Protea welwitschii*, as well as relictual outlier stands of trees species many of which are typical of bushveld vegetation further north.

**Ecological conditions of the Ridge:**

- The study area on the ecological conditions of the ridge found that the rocky ridges and the lower dolomitic slopes are of considerable conservation importance. These rocky ridges contain habitats which are in good enough conditions for the conservation of smaller fauna as well as very interesting flora diversity.

**Cultural /Historical:**

- Although a scattering of informal structures were identified throughout the study area, no sites of heritage significance could be found. The area adjacent to the development site does however have a strong historic association with the Jan Smuts and Jan Smuts Museum is located only 500m south of the boundary of the proposed development. The Irene Concentration Camp was also located close to the site. This lends a strong historic character to this landscape.

**Visual:**

- The proposed development could have visual impacts on the surrounding view sheds during the construction and operational phases and mitigation measures should be implemented.

**Noise:**

- The proposed development could have noise impacts on surrounding residents.

**Dust:**

- Dust could impact the surrounding residences if the construction will be done during the dry and windy months. It is proposed that regular damping down of the study area must be done if constructed during dry and windy months.

## **2 EMP Objectives and context**

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### **Objectives**

The objectives of this plan are to:

- Identify the possible environmental impacts of the proposed activity;
- Develop measures to minimise, mitigate and manage these impacts;
- Meet the requirements of the Record of Decision of GDARD and other of other Authorities; and
- Monitor the project.

### **EMP context**

This EMP fits into the overall planning process of the project by carrying out the conditions of consent set out by the GDARD. In addition, all mitigation measures recommended in the EIA report are included in the EMP.

This EMP addresses the following three phases of the development:

- Pre-construction planning phase;
- Construction phase; and
- Operational phase.

### **3 Monitoring**

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In order for the EMP to be successfully implemented all the role players involved must have a clear understanding of their roles and responsibilities in the project.

These role players may include the Authorities (A), other Authorities (OA), Developer/proponent (D), Environmental Control Officer (ECO), Project Manager (PM), Contractors (C), Environmental Assessment Practitioner (EAP) and Environmental Site Officer (ESO). Landowners interested and affected parties and the relevant environmental and project specialist's area also important role players.

#### **3.1 Roles and responsibilities**

##### **Developer (D)**

The developer is ultimately accountable for ensuring compliance with the EMP and conditions contained in the RoD. The developer must appoint an independent Environmental Control Officer (ECO), for the duration of the pre-construction and construction phases, to ensure compliance with the requirements of this EMP. The developer must ensure that the ECO is integrated as part of the project team.

##### **Project Manager (PM)**

The project Manager is responsible for the coordination of various activities and ensures compliance with this EMP through delegation of the EMP to the contractors and monitoring of performance as per the Environmental Control Officer's monthly reports.

##### **Environmental Control Officer (ECO)**

An independent Environmental Control Officer (ECO) shall be appointed, for the duration of the pre-construction and construction phase of the services and bulk infrastructure, by the developer to ensure compliance with the requirements of this EMP.

##### **Contact details of appointed ECO**

**ECO details will be available as soon as developer appointed a company.**

- The Environmental Control Officer shall ensure that the contractor is aware of all the specifications pertaining to the project.
- Any damage to the environment must be repaired as soon as possible after consultation between the Environmental Control Officer, Consulting Engineer and Contractor.
- The Environmental Control Officer shall ensure that the developer staff and/or contractor are adhering to all stipulations of the EMP.
- The Environmental Control Officer shall be responsible for monitoring the EMP throughout the project by means of site visits and meetings. This should be documented as part of the site meeting minutes.
- The Environmental Control Officer shall be responsible for the environmental training program.

- The Environmental Control Officer shall ensure that all clean up and rehabilitation or any remedial action required, are completed prior to transfer of properties.
- A post construction environmental audit is to be conducted to ensure that all conditions in the EMP have been adhered to.

### **Contractor (C):**

The contractors shall be responsible for ensuring that all activities on site are undertaken in accordance with the environmental provisions detailed in this document and that sub-contractor and laborers are duly informed of their roles and responsibilities in this regard.

The contractor will be required, where specified to provide Method Statements setting out in detail how the management actions contained in the EMP will be implemented.

The contractors will be responsible for the cost of rehabilitation of any environmental damage that may result from non-compliance with the environmental regulations.

### **Environmental Site Officer (ESO):**

The ESO is appointed by the developer as his/her environmental representative to monitor, review and verify compliance with the EMP by the contractor. The ESO is not an independent appointment but must be a member of the contractor's management team. The ESO must ensure that he/she is involved at all phases of the construction (from site clearance to rehabilitation).

### **Authority (A):**

The authorities are the relevant environmental department that has issued the Environmental Authorization. The authorities are responsible for ensuring that the monitoring of the EMP and other authorization documentation is carried out by means of reviewing audit reports submitted by the ECO and conducting regular site visits.

### **Other Authorities (OA):**

Other authorities are those that may be involved in the approval process of the EMP.

### **Environmental Assessment Practitioner (EAP):**

According to section 1 of NEMA the definition of an environmental assessment practitioner is "the individual responsible for the planning, management and coordination of environmental impact assessments, strategic environmental assessments, environmental management plans or any other appropriate environmental instruments through regulations".

## **3.2 Lines of Communication**

The Environmental Control Officer in writing should immediately report any breach of the EMP to the Project Manager. The Project Manager should then be responsible for rectifying

the problem on-site after discussion with the contractor. Should this require additional cost, then the developer should be notified immediately before any additional steps are taken.

### **3.3 Reporting Procedures to the Developer**

Any pollution incidents must be reported to the Environmental Control Officer immediately (within 12 hours). The Environmental Control Officer shall report to the Developer on a regular basis (site meetings).

### **3.4 Site Instruction Entries**

The site instruction book entries will be used for the recording of general site instructions as they relate to the works on site. There should be issuing of stop work order for the purposes of immediately halting any activities of the contractor that may pose environmental risk.

### **3.5 ESA/ESO (Environmental Site Officer) Diary Entries**

Each of these books must be available in duplicate, with copies for the Engineer and Environmental Site Officer. These books should be available to the authorities for inspection or on request. All spills are to be recorded in the ESA/Environmental Site Officer's diary.

### **3.6 Methods Statements**

Methods statements from the contractor will be required for specific sensitive actions on request of the authorities or ESA/ESO (Environmental Site Officer). All method statements will form part of the EMP documentation and are subject to all terms and conditions contained within the EMP document. For each instance wherein it is requested that the contractor submit a method statement to the satisfaction of ESA/ESO, the format should clearly indicate the following:

- What – a brief description of the work to be undertaken
- How- a detailed description of the process of work, methods and materials
- Where- a description / sketch map of the locality of work; and
- When- the sequencing of actions with due commencement dates and completion date estimate.

The contractor must submit the method statement before any particular construction activity is due to start. Work may not commence until the method statement has been approved by the ESA/ESO.

### **3.7 Record Keeping**

All records related to the implementation of this management plan (e.g. site instruction book, ESA/ESO diary, methods statements etc.) must be kept together in an office where it is safe and can be retrieved easily. These records should be kept for two years at any time be available for scrutiny by any relevant authorities.

### 3.8 Acts

#### 1. The National Water Act, 1998 (Act No: 36 of 1998)

The purpose of this Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that take into account, amongst other factors, the following:

- ❑ Meeting the basic human needs of present and future generations;
- ❑ Promoting equitable access to water;
- ❑ Promoting the efficient, sustainable and beneficial use of water in the public interest;
- ❑ Reducing and preventing pollution and degradation of water resources;
- ❑ Facilitating social and economic development; and
- ❑ Providing for the growing demand for water use.

#### Impact on proposed Development:

**Not Significant –** No water licences will be necessary for the proposed road in terms of the Section 21 of the National Water Act. The study area is affected by a perennial and non-perennial rivers and therefore by 1:50 and 1:100 year flood lines. In terms of the Section 21 of the National Water Act the 1:100 year floodline must be indicated on layout maps.

#### 2. National Environmental Management: Air Quality Act (Act No. 39 of 2004)

This act replaced the Atmospheric Pollution Prevention Act (Act No. 45 of 1965), however Part 2 of this act is still applicable. Part 2 of the act deals with the control of noxious or offensive gases. The proposed development will not release any of the listed gases into the atmosphere and this act is therefore not applicable to the proposed development.

The purpose of the Act is "To reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto."

The purpose of the Act is "To provide for the prevention of the pollution of the atmosphere, for the establishment of a National Air Pollution Advisory Committee, and for matters incidental thereto".

The Atmospheric Pollution Prevention Act was traditionally administered by the Department of Health until 1995, when it was transferred to the jurisdiction of the Department of Environmental Affairs and Tourism. The Act controls four forms of air pollution:

- ❑ Part II                    Noxious or Offensive gases
- ❑ Part III                   Atmospheric Pollution by Smoke
- ❑ Part IV                   Dust Control
- ❑ Part V                    Air Pollution by Fumes Emitted by Vehicles

**Impact on proposed Development:**

**Significant** – During the construction phase dust pollution can become a significant factor, especially to the surrounding developments and landowners. Dust control would be adequately minimized during this phase by way of water spraying and possible dust-nets, when required.

The additional vehicles generated by the proposed development will have an insignificant impact on the air pollution due to emissions gasses created by any additional vehicles or traffic of the proposed development.

**3. National Environmental Management Act (Act 107 of 1998)**

The NEMA is primarily an enabling Act in that it provides for the development of environmental implementation plans and environmental management plans. The principles listed in the act serve as a general framework within which environmental management and implementation plans must be formulated.

The principles in essence state that environmental management must place people and their needs at the forefront of its concern and that development must be socially, environmentally and economically sustainable.

**Impact on proposed road:**

**Significant** – The proposed development is listed under the activities as regulated under NEMA.

**4. The Municipal Systems Act (Act 32 of 2000)**

This Act was introduced to provide for the core principles, mechanisms and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of local communities, and ensure universal access to essential services that are affordable to all.

The proposed development will support the local authority in complying with the principles of the Municipal Systems Act, by assisting in providing the community with essential services, such as water and sewage infrastructure.

**Impact on proposed Development:**

**Significant** – The proposed development will contribute to the Municipal system.

**5. The Draft Red Data Species Policy**

This policy is provided for the protection, conservation and maintenance of Red Data species within the Gauteng Province.

**Impact on proposed Development:**



**Not Significant-** No RDL species were identified in the study area.

#### **6. National Veld and Forest Fire Act, 1998 (Act No. 101, 1998)**

The purpose of this Act is to prevent and combat veld, forest and mountain fires throughout the Republic. Furthermore the Act provides for a variety of institutions, methods and practices for achieving the prevention of fires.

##### **Impact on proposed Development:**

**Significant** – Fires of construction workers may only be lit in the designated site camp as indicated in assistance with the ECO. It is important that a site development camp be located on a part of the application site that is already disturbed.

#### **7. National Heritage Resources Act, 1999 (Act No. 25 of 1999)**

The National Heritage Resources Act legislates the necessity and heritage impact assessment in areas earmarked for development, which exceed 0.5ha. The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA).

##### **Impact on proposed Development:**

**Not significant** – No features of Heritage importance are present on site.

#### **8. Conservation of Agricultural Resources Act (Act No. 43 of 1983)**

This Act provides for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.

##### **Impact on proposed Development:**

**Not significant** – The study area is not located within an Agricultural Hub, an area identified for agricultural use by GDARD according to the **Draft Policy on the Protection of Agricultural Land (2006)**.

#### **9. Water Services Act, 1997 (Act No. 108 of 1997)**

This Act provides for the minimum standards and measures of which the following Water Services should adhere to:

- Basic sanitation

- Basic water supply
- Interruption in provision of water services
- Quality of potable water
- Control of objectionable substances
- Disposal of grey water
- Use of effluent
- Quantity and quality of industrial effluent discharged into a sewerage system
- Water services audit as a component in the Water Services Development Plan
- Water and effluent balance analysis and determination of water losses
- Repair of leaks
- Consumer installations other than meters
- Pressure in reticulation system

**Impact on proposed Development:**

**Not Significant** – The proposed development does not apply to the water service act.

**10. National Environmental Management Act: Biodiversity Act (Act No. 10 of 2004)**

The purpose of the Biodiversity Act is to provide for the management of South Africa's biodiversity within the Framework of the NEMA and the protection of species and ecosystems that warrant National protection. As part of the implementation strategy, the National Spatial Biodiversity Assessment was developed.

**Impact on proposed Development:**

**11. National Spatial Biodiversity assessment**

The National Spatial Biodiversity Assessment (NSBA) classifies areas as worthy of protection based on its biophysical characteristics, which are ranked according to priority levels.

**Impact on proposed Development:**

**Significant** – The Natural mixed grassland on shallow dolomite, the Natural mixed grassland and the Chert ridge vegetation were deemed sensitive.

**12. Protected Species – Provincial Ordinances**

Provincial ordinances were developed to protect particular plant species within specific provinces. The protection of these species is enforced through permitting requirements associated with provincial lists of protected species. Permits are administered by the Provincial Departments of Environmental Affairs.

**Impact on proposed Development:**

### **13. National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)**

The purpose of this Act is to provide for the protection, conservation and management of ecologically viable areas representative of South Africa's biological biodiversity and its natural landscapes.

#### **Impact on proposed Development:**

**Not Significant** – No area was identified as a system which needs protection, conservation and management.

### **14. Gauteng Transport Infrastructure Act, 2001**

To consolidate the laws relating to roads and other transport infrastructure in Gauteng; and to provide for the planning, design, development, construction, financing, management, control, maintenance, protection and rehabilitation of provincial roads, railway lines and other transport infrastructure in Gauteng.

### **15. National Road Traffic Act, 1996 (Act No. 93 of 1996)**

This Act provides for all road traffic matters which shall apply uniformly throughout the Republic and for matters connected therewith.

### **16. Environmental Conservation Act: Noise Regulations, 1989 (Act no.73 of 1989)**

The purpose of this Act is to provide measures and management relating Noise levels. This Act enables Noise levels to be acceptable to standards within a specific area and community.

#### **Impact on proposed Development:**

**Significant** – The proposed development may include some noisy activities with the construction of the proposed interchange and also during the operational phase.

## 4 Project activities

### 4.1 Pre-Construction Phase

<i>TYPE</i>	<i>Environmental risk or issue</i>	<i>Objective or requirement</i>	<i>Mitigation measure</i>	<i>Performance indicator</i>	<i>Responsibility</i>	<i>Frequency of Action</i>	<i>Applicable Act no.</i>
<b>General</b>	<b>Project contract</b>	To make the EMP enforceable under the general conditions of the contract.	The EMP document must be included as part of the tender documentation for all contractor appointments	The EMP is included as part of the tender documentation	Developer	-	3
<b>Design and planning</b>	<b>Stability of structures and restriction of land use due to geology</b>	To ensure stability of structures	1) The precautionary measures and foundation design from the involved geotechnical engineers must be implemented to ensure the stability of structures and embankments.	The land uses and layout corresponds to the recommended stability zonation and development types.	Individual Developer Engineer	-	
	<b>Storm water design</b>	To prevent and restrict erosion, siltation and groundwater pollution	1) A detailed storm water management plan must be approved by the Local Authority prior to commencement of construction activities. Such approval must be submitted to DWA together with a copy of the original stormwater management plans. Must be implemented according to guidelines provided by the relevant Local Authority Departments. 2) The storm water design for the proposed development must be designed to: Reduce and/ or prevent siltation, erosion and water pollution. 3) Storm water runoff should not be concentrated as far as possible and sheet flow should be implemented. 5) Energy dissipaters must be installed on the study area to break the speed of the	Compilation and approval of storm water management plan	Engineer Individual Developer	-	9

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			water. 6) Surface storm water generated as a result of the development must not be channeled directly into any natural drainage system or wetland. 7) The storm water management plan should be designed in a way that aims to ensure that post development runoff does not exceed predevelopment values in: - Peak discharge for any given storm; - Total volume of runoff for any given storm; - Frequency of runoff; and - Pollutant and debris concentrations reaching water courses.				
<b>Climate</b>	<b>Extreme change in micro climate temperatures</b>	To prevent the extreme change in micro climate temperatures	The proposed development will create a warm micro climate on the application site and can be mitigated through the planning of trees next to the road by the City of Tshwane once construction has been completed.	Landscape Development Plan complies	Landscape Architect	-	
<b>Geology and Soils</b>	<b>Unsuitable Geotechnical conditions</b>	To prevent unsuitable Geotechnical conditions	The special precautionary measures, as indicated within the Geotechnical Report must be adhered to at all times. 1) A storm water management plan must be implemented on the study area to prevent the erosion of soil. 2) A pro-active maintenance strategy for water bearing services and other infrastructure should be implemented.	Precautionary measures implemented	Geotechnical engineer Dolomite Risk Manager	-	9
	<b>Loss of sensitive vegetation</b>	To ensure some of the existing natural grassland areas on the study area.	Care must be taken to ensure that construction activities remain within the boundary of the planned road reserve.	Medicinal plants rescued prior to construction	Qualified specialist		
<b>Preparing Site Access</b>	<b>Environmental integrity</b>	To avoid erosion and	Designated routes shall be determined for the construction vehicles and designated	Access to site is erosion free.	Contractor	Continuous	

<i><b>TYPE</b></i>	<i><b>Environmental risk or issue</b></i>	<i><b>Objective or requirement</b></i>	<i><b>Mitigation measure</b></i>	<i><b>Performance indicator</b></i>	<i><b>Responsibility</b></i>	<i><b>Frequency of Action</b></i>	<i><b>Applicable Act no.</b></i>
		disturbance to indigenous vegetation	areas for storage of equipment. Clearly mark the site access point and routes on site to be used by construction vehicles and pedestrians. Provide an access map to all contractors whom in turn must provide copies to the construction workers. Instruct all drivers to use access point and determined route.	Minimum disturbance to surrounding vegetation.  Vehicles make use of established access routes.			
	<b>Waste storage</b>	To control the temporary storage of waste.	Temporary waste storage points on site shall be determined. These storage points shall be accessible by waste removal trucks and these points should not be located in sensitive areas /areas highly visible from the properties of the surrounding land-owners/tenants/in areas where the wind direction will carry bad odours across the properties of adjacent tenants or landowners.		Contractor ESO	-	
		Ensure waste storage area does not generate pollution	Build a bund around waste storage area to stop overflow into storm water and the drainage channel on the application site.		Contractor	-	

## 4.2 Construction Phase

<i><b>TYPE</b></i>	<i><b>Environmental risk or issue</b></i>	<i><b>Objective or requirement</b></i>	<i><b>Mitigation measure</b></i>	<i><b>Performance indicator</b></i>	<i><b>Responsibility</b></i>	<i><b>Frequency of Action</b></i>	<i><b>Applicable Act no.</b></i>
<b>Contractor's Camp</b>	<b>Loss of Vegetation and topsoil</b>	To minimize damage to and loss of vegetation and retain quality of	Site to be established under supervision of ECO/ESO.	Minimal vegetation removed/ damaged during	Contractor	Before any construction activity commences	5, 10, 11, 13

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
		topsoil		site activities.		and as and when required	
	<b>Surface and ground water pollution</b>	To minimize pollution of surface and Groundwater resources.	1) Sufficient and temporary facilities including ablution facilities must be provided for construction workers operating on the site. 2) A minimum of one chemical toilet shall be provided per 10 construction workers. The contractor shall keep the toilets in a clean, neat and hygienic condition. Toilets provided by the contractor must be easily accessible and a maximum of 50m from the works area to ensure they are utilized. The contractor (who must use reputable toilet-servicing company) shall be responsible for the cleaning, maintenance and servicing of the toilets. The contractor (using reputable toilet-servicing company) shall ensure that all toilets are cleaned and emptied before the builders' or other public holidays. 3) No person is allowed to use any other area than chemical toilets. 4) No French drain systems may be installed. 5) No chemical or waste water must be allowed to contaminate the run-off on site. This could possibly contaminate the drainage channel. 6) The chemical toilets may not be placed in close proximity of the adjacent dwellings to prevent odors from causing uncomfortable situations. 7) Avoid the clearing of the site camp (of specific phase) or paved surfaces with soap.	Effluents managed Effectively.  No pollution of water resources from site.  Workforce use toilets provided.	Contractor ESO	As and when required	
		To minimize pollution of surface and	1) Drip trays and/ or lined earth bunds must be provided under vehicles and equipment, to contain spills of hazardous materials such	No pollution of the environment	Contractor ESO	Daily	

TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility	Frequency of Action	Applicable Act no.
		Groundwater resources due to spilling of materials.	as fuel, oil and cement. 2) Repair and storage of vehicles only within the demarcated site area. 3) Spill kits must be available on site. 4) Oils and chemicals must be confined to specific secured areas within the site camp. These areas must be bunded with adequate containment (at least 1.5 times the volume of the fuel) for potential spills or leaks. 5) All spilled hazardous substances must be contained in impermeable containers for removal to a licensed hazardous waste site. 6) No leaking vehicle shall be allowed on site. The mechanic/ the mechanic of the appointed contractor must supply the environmental officer with a letter of confirmation that the vehicles and equipment are leak proof. 7) No bins containing organic solvents such as paints and thinners shall be cleaned on site, unless containers for liquid waste disposal are placed for this purpose on site. <b>8) If any pollution incident is experienced, DWA must be notified immediately.</b>				
		To minimize pollution of surface and groundwater resources by cement	The mixing of concrete shall only be done at specifically selected sites, as close as possible to the entrance, on mortar boards or similar structures to prevent run-off into drainage line, streams and natural vegetation.	No evidence of contaminated soil on the construction site.	Contractor ESO	Daily	
		To minimize pollution of surface and Groundwater resources due to effluent.	No effluent (including effluent from any storage areas) may be discharged into any water surface or ground water resource, especially the drainage channel on site.	No evidence of contaminated water resources.	Contractor ESO	Daily	



TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility	Frequency of Action	Applicable Act no.
	<b>Pollution of the environment</b>	To prevent unhygienic usage on the site and pollution of the natural assets.	1) Weather proof waste bins must be provided and emptied regularly. 2) The contractor shall provide laborers to clean up the contractor's camp and construction site on a daily basis. 3) Temporary waste storage points on the site should be determined. THESE AREAS SHALL BE PREDETERMINED AND LOCATED IN AREAS THAT IS ALREADY DISTURBED AND NOT WITHIN CLOSE PROXIMITY OF DRAINAGE LINES. These storage points should be accessible by waste removal trucks and these points should be located in already disturbed areas /areas not highly visible from the properties of the surrounding land-owners/ in areas where the wind direction will not carry bad odours across the properties of adjacent landowners. This site should comply with the following: <ul style="list-style-type: none"> <li>• Skips for the containment and disposal of waste that could cause soil and water pollution, i.e. paint, lubricants, etc.;</li> <li>• Small lightweight waste items should be contained in skips with lids to prevent wind littering;</li> <li>• Bunded areas for containment and holding of dry building waste.</li> </ul> 4) No solid waste may be disposed of on the site. 5) No waste materials shall at any stage be disposed of in the open veld of adjacent properties or within the drainage lines (No-Go areas). 6) The storage of solid waste on the site, until such time as it may be disposed of, must be in a manner acceptable to the local	No waste bins overflowing  No litter or building waste lying in or around the site	Contractor ESO	Daily Weekly	5,13

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			authority and DWA. 7) Cover any wastes that are likely to wash away or contaminate storm water.				
		<b>Recycle material where possible and correctly dispose of unusable wastes</b>	1) Waste shall be separated into recyclable and non-recyclable waste, and shall be separated as follows: <ul style="list-style-type: none"> <li>• General waste: including (but not limited to) construction rubble,</li> <li>• Reusable construction material.</li> </ul> 2) Recyclable waste shall preferably be deposited in separate bins. 3) All solid waste including excess spoil (soil, rock, rubble etc) must be removed to a permitted waste disposal site on a weekly basis. 4) No bins containing organic solvents such as paints and thinners shall be cleaned on site, unless containers for liquid waste disposal are placed for this purpose on site. 5) Keep records of waste reuse, recycling and disposal for future reference. Provide information to ESO.	Sufficient containers available on site  No visible signs of pollution	Contractor ESO	Daily Weekly	
	<b>Increased fire risk to site and surrounding areas</b>	<b>To decrease fire risk.</b>	1) Fires shall only be permitted on the application site. 2) No food vendors shall be allowed. 3) Fire extinguishers to be provided in all vehicles and fire beaters must be available on site. 4) Emergency numbers/ contact details must be available on site, where applicable.	No open fires on site that have been left unattended	Contractor	Monitor daily	6
<b>Construction site</b>	<b>Geology and soils</b>	To prevent the damaging of the existing soils and geology.	1) The top layer of all areas to be excavated for the purposes of construction shall be stripped and stockpiled in areas where this material will not be damaged, removed or compacted. 2) All surfaces that are susceptible to erosion, shall be protected either by cladding with	Excavated materials correctly stockpiled  No signs of erosion	Contractor	Monitor daily	

TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility	Frequency of Action	Applicable Act no.
			biodegradable material or with the top layer of soil being seeded with grass seed/planted with a suitable groundcover.				
		To prevent the loss of topsoil  To prevent siltation & water pollution.	1) Stockpiling will only be done in designated places where it will not interfere with the natural drainage paths of the environment. 2) In order to minimize erosion and siltation and disturbance to existing vegetation, it is recommended that stockpiling be done/ equipment is stored in already disturbed/exposed areas. 3) Cover stockpiles and surround downhill sides with a sediment fence to stop materials washing away. 4) Remove vegetation only in areas designated during the planning stage and for the purpose of construction. 5) Rehabilitation/ landscaping to be done immediately after the involved works are completed (will prevent erosion of the topsoil layer on site). 6) All compacted areas should be ripped prior to them being rehabilitated/landscaped by the contractor. 7) The top layer of all areas to be excavated must be stripped and stockpiled in areas where this material will not be damaged, removed or compacted. This stockpiled material should be used for the rehabilitation of the site and for landscaping purposes. 8) Strip topsoil at start of works and store in stockpiles no more than 1, 5 m high in designated materials storage area. 9) During the laying of any cables, pipelines or infrastructure (on or adjacent to the site) topsoil shall be kept aside to cover the	Excavated materials correctly stockpiled  No visible signs of erosion and sedimentation  Minimal invasive weed growth  Vegetation only removed in designated areas	Contractor of Developer	Monitor daily	4,9

TYPE	Environmental risk or issue	Objective or requirement	Mitigation measure	Performance indicator	Responsibility	Frequency of Action	Applicable Act no.
			<p>disturbed areas immediately after such activities are completed. Rehabilitation of these areas shall be done directly after infill of the trenches. No rocks shall be placed on the topsoil after re-filling.</p>				
	<p><b>Erosion and siltation</b></p>	<p>To prevent erosion and siltation</p>	<ol style="list-style-type: none"> <li>1) It is recommended that the construction of the development be done in phases.</li> <li>2) Each phase should be rehabilitated immediately after the construction for that phase has been completed. The rehabilitated areas should be maintained by the appointed rehabilitation contractor until a vegetative coverage of at least 80% has been achieved.</li> <li>3) Mark out the areas to be excavated.</li> <li>4) Large exposed areas during the construction phases should be limited. Where possible areas earmarked for construction during later phases should remain covered with vegetation coverage until the actual construction phase. This will prevent unnecessary erosion and siltation in these areas.</li> <li>5) Unnecessary clearing of flora resulting in exposed soil prone to erosive conditions should be avoided.</li> <li>6) All embankments must be adequately compacted and planted with grass to stop any excessive soils erosion and scouring of the landscape if required.</li> <li>7) The eradication of alien vegetation should be followed up as soon as possible by replacement with indigenous vegetation to ensure quick and sufficient coverage of exposed areas.</li> <li>8) Storm water outlets shall be correctly designed to prevent any possible soil</li> </ol>	<p>No erosion scars</p> <p>No loss of topsoil</p> <p>All damaged areas successfully rehabilitated</p>	<p>Contractor ESO</p>	<p>Monitor daily</p>	

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			erosion. 9) All surface run-offs shall be managed in such a way so as to ensure erosion of soil does not occur. 10) Implementation of temporary storm water management measures that will help to reduce the speed of surface water by the individual erf owner / developer. 11) All surfaces that are susceptible to erosion shall be covered with a suitable vegetative cover as soon as construction is completed by the individual erf owner / developer.				
	<b>Stability of structures due to geology</b>	To ensure stability of structures.	Preventative foundation designs shall be done. Detailed foundation inspections should be carried out at the time of construction to identify any variances and adjust foundation designs accordingly if need be. The foundation recommendations and geotechnical measures from the geotechnical engineers must be adhered to.		Engineers / Contractor / Individual Developer	When required	
			The normal drainage precautionary measures and special installation measures for underground wet services, applicable to dolomitic terrain and in compliance with the Tshwane Metropolitan Municipality requirements, should be adhered to.	Drainage precautions implemented	Engineers Contractors		
	<b>Hydrology</b>	Groundwater management	1) Ongoing monitoring of groundwater levels on and in the immediate vicinity of the site is recommended.	No deviation from baseline data during regular sampling	Engineer	Monthly	
		To minimise pollution of soil, surface and groundwater	1) Increased run-off during construction must be managed using berms and other suitable structures as required to ensure flow velocities are reduced.	No visible signs of erosion.  No visible signs of	Contractor	Monitor daily	

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			2) The contractor shall ensure that excessive quantities of sand, silt and silted water do not enter the storm water system.	pollution			
	<b>Fauna and flora</b>	To protect the existing fauna and flora.	1) The proposed interchange will eradicate exotic invaders. Indigenous plant species will be preserved where possible if not the species must be relocated prior to the commencing of construction.	Shall be determined by Fauna and Flora specialist.	Fauna and Flora specialist ESO?	Prior to construction.	10,11,13
		To protect the existing fauna and flora.	1) Trees that are intended to be retained shall be clearly marked on site. 2) Snaring and hunting of fauna by construction workers on or adjacent to the study area are strictly prohibited and offenders shall be prosecuted. 3) Should hedgehogs be encountered during the development, these should be relocated to natural grassland areas in the vicinity; 4) Wood harvesting of any trees or shrubs on the study area or adjacent areas shall not be allowed, especially within the Non-perennial drainage line. OFFENDERS WILL BE PROSECUTED AND A FINE WILL BE ISSUED IN ACCORDANCE WITH THE GDARD. 5) Where possible, work should be restricted to one area at a time. 6) Noise should be kept to a minimum and the development should be done in phases to allow faunal species to temporarily migrate into the conservation areas in the vicinity. 7) The contractor must ensure that no fauna species are disturbed, trapped, hunted or killed during the construction phase. Conservation-orientated clauses should be built into contracts for construction personnel, complete with penalty clauses for	No measurable signs of habitat destruction	Contractor ESO	As and when required	5,10,11,13, 16

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			non-compliance;				
<b>Social</b>	<b>Noise impact</b>	To maintain noise levels below "disturbing" as defined in the national Noise Regulations.	1) Site workers must comply with the Provincial noise requirements as outlined. 2) Noise activities shall only take place during working hours	No complaints from surrounding residents and I & AP	Contractor	Monitored daily	16
	<b>Dust impact</b>	Minimise dust from the site	1) Dust pollution could occur during the construction works, especially during the dry months. Regular and effective damping down of working areas (especially during the dry and windy periods) must be carried out to avoid dust pollution that will have a negative impact on the surrounding environment. 2) When necessary, these working areas should be damped down in the mornings and afternoons.	No visible signs of dust pollution  No complaints from surrounding residents and I & AP	Contractor	Monitored daily	2
	<b>Safety and security</b>	To ensure the safety and security of the public.	1) Although regarded as a normal practice, it is important to erect proper signs indicating the operations of heavy vehicles in the vicinity of dangerous crossings and access roads or even in the development site if necessary. 2) With the exception of the appointed security personnel, no other workers, friend or relatives will be allowed to sleep on the construction site (weekends included) 3) Construction vehicles and activities to avoid peak hour traffic times 4) Presence of law enforcement officials at strategic places must be ensured 5) Following actions would assist in management of safety along the road <ul style="list-style-type: none"> <li>▪ Adequate road marking</li> <li>▪ Adequate roadside recovery areas</li> <li>▪ Allowance for pedestrians and</li> </ul>	No incidences reported	Contractor ECO	Monitored daily	

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			cyclists where necessary Although regarded as a normal practice, it is important to erect proper signs indicating the danger of the excavation in and around the development site. Putting temporary fencing around excavations where possible.				
	<b>Influx of people from other areas</b>	In order to limit the influx of people from other areas	It is recommended that (where possible) only people from the local communities in and around the application site are employed.	People from local community employed.	Contractor	When required	
	<b>Cultural Resources</b>		Although no features of Cultural or Historical significance is located on site or in the direct vicinity, it is recommended that if any graves or archaeological sites are exposed during construction work it should immediately be reported to a museum. The report from the archaeologist must be provided to the local authorities if any graves are recovered.	No destruction of or damage to archaeological sites	Contractor ECO	Monitor daily	7
	<b>Visual impact</b>	In order to minimise the visual impact	1) The disturbed areas shall be rehabilitated immediately after the involved construction works are completed. 2) Shade cloth must be used to conceal and minimise the visual impact of the site camps and storage areas	Visual impacts minimized	Contractor ESO	Monitor daily	
	<b>Vegetation</b>	Landscaping	1) When planting trees, care should be taken to avoid the incorrect positioning of trees and other plants, to prevent the roots of trees planted in close proximity to the line of water-bearing services from causing leaking in, or malfunctioning of the services. 2) The proposed planting materials for the areas to be landscaped should preferably be endemic and indigenous. 3) All new trees and shrubs to be planted on the study area shall be inspected for pests and diseases prior to them being planted. 4) The inspection shall be carried out by the	Landscaping done according to landscape development plan	Landscape architect Contractor	When required	



<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			<p>maintenance contractor at the property of the supplier and not on the study area.</p> <p>5) All trees to be planted shall be in 20L containers with a height of approximately 1,8 metres and a main stem diameter of approximately 300 mm.</p>				
		Loss of plants	<p>1) Aerate compacted soil and check and correct pH for soils affected by construction activities.</p> <p>2) Make sure plant material will be matured enough and hardened off ready for planting. Water in plants immediately as planting proceeds.</p> <p>3) Apply mulch to conserve moisture</p> <p>Plant according to the layout and planting techniques specified by the Landscape Architect in the Landscape Development plans for the site.</p>	Landscaping done according to landscape development plan	Landscape architect Contractor	When required	
		Spread of weeds	<p>Ensure that materials used for mulching and topsoil/ fertilisers are certified weed free. Collect certifications where available.</p> <p>Control weed growth that appears during construction.</p>	Weed growth controlled	Landscape architect Contractor	When required	
		To ensure rehabilitation of the site	<p>1) Compacted soils shall be ripped at least 200mm.</p> <p>2) All clumps and rocks larger than 30mm diameter shall be removed from the soil to be rehabilitated</p> <p>3) The soil shall be leveled before seeding</p> <p>4) Hydro-seed the soil with Potch mixture or plant with suitable indigenous ground covering as specified)</p> <p>5) Watering shall take place at least once per day for the first 14 days until germination of seeds have taken place</p> <p>6) Thereafter watering should take place at least for 20 minutes every 4 days until grass</p>	Grass have hardened off	Landscape architect Contractor	Once a day Then every 4 days	

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Performance indicator</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			have hardened off.				

### 4.3 Operational Phase

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
<b>SITE CLEAN UP AND PREPARED FOR USE</b>	<b>Storm water pollution</b>	Do not allow any materials to wash into the storm water system.	Remove erosion and sediment controls only if all bare soil is sealed, covered or re-vegetated. Sweep roadways clean and remove all debris from kerb and gutter areas. Do not wash into drains.	Contractor	-	
		Minimise waste	Decontaminate and collect waste in storage area ready for off-site recycling or disposal. Arrange for final collection and removal of excess and waste materials.	Contractor	-	
<b>ESTABLISHING PLANTS</b>	<b>Slow or no re-vegetation to stabilise soil; loss or degradation of habitat</b>	To ensure re-vegetation to stabilize soil	Agreed schedule for regular follow-up watering, weed control, mulch supplements and amenity pruning, if needed. Replace all plant failures within three month period after planting.	Contractor	To be agreed	
<b>DRAINAGE FAILURE</b>	<b>On-site and downstream drainage pollution or flooding</b>	Storm water management plan	Inspect all site drainage works and repair any failures. Confer with design engineer and to correct site problems.	Contractor	-	
<b>SITE AUDIT</b>	<b>Eventual project failure</b>	Successful project establishment	Routinely audit the works and adjust maintenance schedule accordingly.	Contractor	-	
<b>GENERAL</b>			Open fires and smoking during maintenance works are strictly prohibited.	Contractor	-	6
<b>GEOLOGY</b>	<b>Erosion of topsoil</b>	Prevent topsoil erosion	Due to lose topsoil, the soil must be covered by means of re-seeding and vegetation with suitable ground covering.	Engineer / Contractor /	Once off	

<b>TYPE</b>	<b>Environmental risk or issue</b>	<b>Objective or requirement</b>	<b>Mitigation measure</b>	<b>Responsibility</b>	<b>Frequency of Action</b>	<b>Applicable Act no.</b>
			<p>A dolomite risk management plan must be compiled for this township in general and copies must be submitted to the Council for Geoscience and the NHBRC. This system must be practical with detailed requirements applicable to the township. This can, however, only be done after the township established has been approved.</p> <p>Groundwater monitoring must form an integral part of the risk management plan. The local authority in association with the Department of Water Affairs must also ensure that the groundwater level is not drawn down.</p> <p>The normal drainage precautionary measures and special installation measures for underground wet services, applicable to dolomitic terrain and in compliance with the Tshwane Metropolitan Municipality requirements, should be adhered to.</p>	Dolomite risk management plan compiled	Engineer	
<b>Geology</b>	<b>Erosion of topsoil</b>	Prevent topsoil erosion	Due to lose topsoil, the soil must be covered by means of re-seeding and vegetation with suitable ground covering.	Engineer/ Contractor	Once off	
	<b>Air pollution</b>	To mitigate air pollution	<p>1) The air pollution impact can be mitigated by screening through the planting of trees.</p> <p>2) Dust pollution could be mitigated by identifying the source and to recommend the regular dumping down during windy periods.</p>	City of Tshwane		2

## **5 Procedures for environmental incidents**

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### **5.1 Leakages & spills**

- Identify source of problem.
- Stop goods leaking, if safe to do so.
- Contain spilt material, using spills kit or sand.
- Notify Environmental Control Officer
- Remove spilt material and place in sealed container for disposal (if possible).
- Environmental Control Officer to follow Incident Management Plan.

### **5.2 Failure of erosion/sediment control devices**

- Prevent further escape of sediment.
- Contain escaped material using silt fence, hay bales, pipes, etc.
- Notify ECO.
- Repair or replace failed device as appropriate.
- Dig/scrape up escaped material; take care not to damage vegetation.
- Remove escaped material from site.
- ECO to follow Incident Management plan.
- Monitor for effectiveness until re-establishment.

### **5.3 Bank/slope failure**

- Stabilize toe of slope to prevent sediment escape using aggregate bags, silt fence, logs, hay bales, pipes, etc.
- Notify ECO.
- ECO to follow Incident Management plan.
- Divert water upslope from failed fence.
- Protect area from further collapse as appropriate.
- Restore as advised by ECO.
- Monitor for effectiveness until stabilized.

### **5.4 Discovery of rare or endangered species**

- Stop work.
- Notify ECO.
- If a plant is found, mark location of plants.
- If an animal, mark location where sighted.
- ECO to identify or arrange for identification of species and or the relocation of the species if possible.
- If confirmed significant, ECO to liaise with Endangered Wildlife Trust.
- Recommence work when cleared by ECO.

### **5.5 Discovery of archeological or heritage items**

- Stop work.
- Do not further disturb the area.
- Notify ECO.
- ECO to arrange appraisal of specimen.
- If confirmed significant, ECO to liaise with National, Cultural and History Museum.  
P.O. Box 28088  
SUNNYSIDE  
0132  
Contact Mr. J. van Schalkwyk

or  
Mr. Naude

- Recommence work when cleared by ECO.

## **6 EMP review**

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1. The Site supervisor is responsible for ensuring the work crew is complying with procedures, and for informing the work crew of any changes. The site supervisor is responsible for ensuring the work crew is aware of changes that may have been implemented by GDARD before starting any works.
2. If the contractor cannot comply with any of the activities as described above, they should inform the ECO with reasons within 7 working days.