

Information Sheet on Ramsar Wetlands

(RIS) – 2009-2014 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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Designation date Site Reference Number

2. Date this sheet was completed/updated:

25 March 2013

3. Country:

South Africa

4. Name of the Ramsar site:

uMgeni Vlei Nature Reserve

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

a) Designation of a new Ramsar site ; or

b) Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

i) the boundary has been delineated more accurately ; or

ii) the boundary has been extended ; or

iii) the boundary has been restricted**

and/or

If the site area has changed:

i) the area has been measured more accurately ; or

ii) the area has been extended ; or

iii) the area has been reduced**

**** Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site:

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

i) a **hard copy** (required for inclusion of site in the Ramsar List): ;

ii) an **electronic format** (e.g. a JPEG or ArcView image) ;

iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** .

Included in this submission are the following GIS files

1. ArcView Shape Files
2. Google Earth kmz file
3. Text co-ordinates

b) Describe briefly the type of boundary delineation applied:

The boundary of the proposed Ramsar site encompasses the majority of the wetland (uMgeni Vlei) as depicted on the 1:50 000 cadastral map for that area (Figure 1). The boundaries of the Ramsar site coincide exactly with the proclaimed boundaries uMgeni Vlei Nature Reserve. The site boundary is thus the cadastral boundaries of Subdivision 1 of the farm Woodhouse No. 2 (514.287 ha) and Sub 1 of the farm Woodhouse No. 1 N (443.9756 ha).

The beacon on the hill 'Drinkkop' marks the northern corner of the proposed site. The remainder of the boundary describing the site comprise of those parcel of land that was expropriated by the State.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

29°29'34"S; 29°49'43"E

9. General location:

KwaZulu-Natal Province; Impendle, Local Municipality. uMgeni Vlei Nature reserve lies approximately 22km south west of Nottingham Road.

10. Elevation: (in metres: average and/or maximum & minimum)

Maximum= 1840m; minimum= 1828m.

11. Area: (in hectares)

Designated Ramsar Site is 958 hectare, and this includes a wetland area of approximately 270 hectare.

12. General overview of the site:

uMgeni Vlei Nature Reserve is underlain by Karroo dolerite and consists of grasslands and a few small areas of scrubby woodland. The wetland system is predominantly hygrophilous grassland and its unique feature being that it is entirely in a pristine state. The centre of the vlei is predominated by *Carex acutiformis* and *C. cognata* marsh. Much of the latter is interdispersed with a hummock-depressions which are predominated by *Cyperus uniolooides*, *Pycnus cooperi* and *Juncus oxycarpus* intermixed with the *Carex*, and submerged vegetation such as *Lagarosiphon major* and *Utricularia vulgaris*. The grassland surrounding the vlei is an example of Highland Sourveld, which includes *Themeda triandra*, *Trachypogon spicatus*, *Heteropogon contortus* and *Tristachya spp.* The hillsides are rocky, supporting a substantial population of *Euphorbia clavarioides*.

uMgeni Vlei and the immediate surrounding thereto has a high diversity of wetland birds and is reported to be a core breeding area for the vulnerable Wattled Crane (*Bugeranus carunculatus*) (Johnson *et al*1998). It was for this reason, the land parcels comprising the wetland system and surrounding grasslands were expropriated for conservation.

In addition, the Crowned Crane (*Balearica regulorum*) and the globally threatened Blue Crane (*Anthropoides paradiseus*) regularly breed in the vlei. The vlei is also considered ideal breeding habitat for the globally endangered Whitewinged Flufftail (*Sarothrura ayresi*). The surrounding grassland area supports several species of threatened grassland birds including Blue Crane, Secretarybird (*Sagittarius serpentarius*), Grass Owl (*Tyto capensis*) and Yellowbreasted Pipit (*Hemimac ronyxchloris*). The rocky terrain at higher altitude supports globally threatened Ground Woodpecker (*Geocolaptes olivaceus*), Buffstreaked Chat (*Oenanthe bifasciata*), Sentinel Rock Thrush (*Monticola exploratory*) and Orangebreasted Rockjumper (*Chaetops aurantius*). Both Cape Vulture (*Gyps coprotheres*) and the rare but widespread Bearded Vulture (*Gypaetus barbatus*) are regular visitors to the area.

The wetland system forms principle source of the uMgeni River and is listed by Begg (1989) as being amongst the priority wetlands of KwaZulu-Natal. The uMgeni Vlei Nature Reserve is nevertheless one of the most important of the smaller wetlands in KwaZulu-Natal by virtue of the important ecosystem services it delivers. In 1985, Breen *et al.* estimated that some 20% of the gross national product of the country was generated within the uMgeni River catchment, and stated that as a consequence, the system was recognised as one of the most important river systems in the Republic of South Africa and as the most important river in KwaZulu-Natal.

13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1	2	3	4	5	6	7	8	9
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			

14. Justification for the application of each Criterion listed in 13 above:

Criterion 1

The wetland is situated in the remote portion of the eastern fringes of the Drakensberg region. uMgeni Vlei Nature Reserve consists of grasslands, a few small areas of scrubby woodland and most importantly, of an extensive series of unmodified wetlands. The latter form the principle source of the uMgeni River and are listed by Begg (1989) as being amongst the priority wetlands of KwaZulu-Natal. While relatively restricted in extent, uMgeni Vlei Nature Reserve is nevertheless one of the most important of the wetland systems in KwaZulu-Natal.

A very important aspect to note is that uMgeni Vlei is one a few wetland systems that remain in the province in a pristine (natural) state, and thus is a key representative remnant of the wetlands in Highland Sourveld bioregion.

Criterion 2

The wetland system provides a very important breeding site for the vulnerable Wattled Crane (*Bugeranus carunculatus*), accordingly to the IUCN Red List of threatened species with a decreasing population trend.

uMgeni Vlei Nature Reserve also provides breeding and/or foraging habitat for the following species which are considered globally threatened following the IUCN Red list.

Blue Crane (*Anthropoides paradiseus*) – Vulnerable (Pop. Trend: stable), 1–2 breeding pairs reordered in Reserve

Yellow-breasted Pipit (*Anthus chloris*) – Vulnerable (Pop. trend: decreasing) 5 breeding pairs reordered in Reserve

Crowned Crane (*Balearica regulorum*) - Endangered (Pop. trend: decreasing) 2–3 breeding pairs reordered in Reserve

Secretary bird (*Sagittarius serpentarius*) Vulnerable (Pop. trend: decreasing) 2–3 breeding pairs reordered in Reserve

Criterion 6

The Vlei currently provides for two to three breeding Wattled Crane (*Bugeranus carunculatus*, also called *Grus carunculatus*) pairs out of 68 active breeding pairs in the country. The wetland therefore supports 2-3 % of the population in the South Africa breeding range according to the Waterbird population estimates of Wetlands International (4th edition) of the South African breeding population. Previously six to 10 breeding pairs (14 % of national population) of this species have been recorded in the wetland. For this reason it was expropriated from private ownership for conservation. This site is thus internationally important as this species is considered vulnerable and decreasing.

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

a) biogeographic region: The Site is located at the foothills of the Drakensberg (See Figure 2) and thus falls within the eastern escarpment mountains ecoregion, and abuts the Drakensberg Montane Shrublands and Woodlands

b) biogeographic regionalisation scheme (include reference citation):

Drakensberg Foothill Moist Grassland, Vegetation type GS10; Eastern Temperate Freshwater Wetland, Vegetation Type (Muchina and Rutherford, 2004).

16. Physical features of the site:

The uMgeni wetland is located in the ancient Great Karoo Basin in the Gondwana Supercontinent. Gondwanaland was fragmented by rifting, and in the process, massive basaltic outpourings started some 187 million years ago, forming the Drakensberg volcanic group (Ezemvelo KZN Wildlife, 2005). The uMgeni wetland has the following topographical features:

- The south-eastern face of Drinkkop Mountain, the mountain itself is apparently a remnant of the Cainozoic landscape;
- Two large basins containing the wetlands, which are fringed by a series of Karoo dolerite ridges, separated by a central ridge all of which form a portion of the Impendle Plateau;
- A dolerite dyke which lies outside the uMgeni Vlei Nature Reserve, impedes further incision along the primary drainage line and so holds the accumulating sedimentary material, and maintains the integrity of the main wetland.

Acid hydromorphic soils of the Katspruit form (Scotney, 1970) quoted in Begg, (*ibid.*) have formed in the depressions that constitute the wetland, but these soils vary widely with regard to texture, pH and organic matter content. According to Begg, (*ibid.*) at least three series of Katspruit soils occur within uMgeni Vlei Nature Reserve and frequently all three occur in the same wetland system. The stability of these soils is maintained under natural conditions by the high moisture status and consequent accumulation of organic matter and they remain permanently waterlogged for most of the year. It follows therefore that the depressions filled by these soils are important water-yielding areas and that such activities could result in a loss of organic matter either by bacterial decay or by oxidation and increased susceptibility to erosion. (Begg, *ibid.*).

The following primary vegetation formations are present within uMgeni Vlei Nature Reserve:

- Scattered communities of the succulent *Euphorbia clavarioides* on the upper rocky slopes of Drinkkop Mountain;
- Highland Sourveld grasslands (with associated forbs and low shrubs such as *Rubus ludwigii*, *Rhus* spp. And *Helichrysum* spp.) throughout the interfluvial ridges, including the mid-and foot-slopes of the Drinkkop Mountain and the upper edges of the wetland;
- A forest patch at the foot of the mountain, dominated principally by *Leucosidea sericea*; and other associated shrubs or small trees, such as *Halleria*, *Rapanea* and *Kiggelaria*;
- Seasonally-wet swamp communities, or peripheral sedge meadow, with *Pycreus*, *Scleria welwitschii*, *Andropogon appendicularis*, *Aristida junciformis* and *Festuca*, merging into wet grassland; merging into wet grassland;

Permanently-wet swamp communities of *Carex acutiformis* and *C. cognata* marsh, with hummock-depression morphology, and with *Cyperus uniolooides*, *Pycreus cooperi* and *Juncus oxycarpus* intermixed with the *Carex*, and submerged vegetation such as *Largarosiphon major* and *Urticularia vulgaris*. There are no woody species in the wetland areas, and these are limited to various dryland habitats.

The site has not been well researched but the water pH is between 6.5 and 6.7 depending on the season and sampling point (own observation). Approximately 3% of the area is considered to be open water varying in depth to no more than a meter. These gradients are probable the key determinants of the complex array of floating and partially floating vegetation and mosaic of open and vegetated areas.

Climate

There is no direct weather observations have been made from the nature reserve itself, but broad weather patterns may be inferred from measurements taken from adjacent areas. Subsidence inversion may rise above the escarpment, resulting in an influx of humid air from the warm Mozambique current of the Indian Ocean in the form of south-easterly winds. Approximately 80% of the precipitation falls in summer and the remaining 20% in winter. In winter, air subsidence causes stability of the atmosphere and consequently, the area has a distinct dry season from May until August. The mean annual temperature of the Drakensberg is about 16°C, but variations are considerable both seasonally and diurnally. The mean for the summer months is about 18°C. Winters are cold, with the mean minimum July temperature ranging approximately between 0°C and 3.6°C. The highest temperatures (rarely up to 35°C) occur during summer on north-facing slopes, while the lowest temperatures, about -14°C, and are regularly experienced on clear nights throughout much of the winter. Approximately 80% of the precipitation falls in summer and the remaining 20% in winter. Both orographically induced and squall-line thunderstorms make up a substantial proportion of the precipitation in summer, but interception from mist in early summer also makes a significant contribution. Snowfalls may be expected mainly in winter, but may also occur in spring and autumn, with an average frequency of about eight days of snowfall per annum (Tyson et al. 1976, Phillips 1973, Schulze 1982, Camp 1997).

17. Physical features of the catchment area:

uMgeni Vlei Nature Reserve is located on the upper fringes of the Impendle Plateau, described as a massive undulating sheet of fractured dolerite (Turner, 1970, quoted in Begg, 1989). The basins in which the wetlands occur are the product of the natural shapes of the dolerite structures, modified by weathering and erosion over time. uMgeni Vlei is surrounded by well conserved *Themeda-Trachypogon* highland grassveld, and on the south-facing hill-slopes of “Drinkkop” a small relic patch of indigenous montane *Podocarpus* (Yellow-wood) forest occurs. Moll (1976) recommended that uMgeni vlei and its surrounding grasslands and forest patches warrant protection as a “witness area” of pristine montane vegetation (Begg. 1989).

The landscapes of uMgeni Vlei Nature Reserve are similar in character in many respects to those of the Maloti Drakensberg Mountains, in that they are ancient and soils reflect the age and high precipitation of the area (Bainbridge, 2004). The soils of the slopes of Drinkkop Mountain and the dolerite ridges are generally shallow and highly weathered.

uMgeni Vlei Nature Reserve falls within South Africa’s summer rainfall region, and annual precipitation varies between an estimated 980-1000mm p.a. The mean annual temperature of the Drakensberg is about 16°C, but variations are considerable both seasonally and diurnally. The mean for summer months is about 18°C. Winters are cold, with the mean minimum July temperature ranging approximately between 0°C and 3.6°C. Snowfalls may be expected mainly in winter with an average frequency of about eight days of snowfall per annum (Tyson *et al.* 1976, Phillips 1973, Schulze 1982, Camp 1997).

18. Hydrological values:

There has been little research on the hydrology of uMgeni Vlei and as a result is poorly understood. Over an extended period, a variety of hydrologists, agriculturists and a technical committee and which according to Begg (*ibid.*) date back over fifty years from the present, have requested studies to be undertaken to improve understanding of the importance of the wetland for water production, sediment trapping as well as, *inter alia*, the relationship between surface and ground water recharge.

In the past, a number of attempts were made to estimate the amount of water contributed by the uMgeni “sponge” to the uMgeni River system. For example, Smith (1953) estimated the area yielded 136 380m³ of water per day, and Green *et al.*, (1967) suggested that Ivanhoe vlei contributed eight “cusecs” (0,2m³/s) (Begg 1989).

19. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar “Classification System for Wetland Type” present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

b) dominance:

Tp - Permanent freshwater marshes/pools

20. General ecological features:

The Drakensberg Mountain range and its outliers, which include enclaves such as the Impendle Plateau, have been identified as a biodiversity hotspot – an area of high endemism and species-richness, which is under threat (Myers 1988). This is one of seven such areas on the sub-continent, known as the Eastern Mountain Hotspot (Cowling and Hilton-Taylor, 1994). Or the Drakensberg Alpine Centre (van Wyk and Smith, 2001 and Carbutt and Edwards, 2004). The Drakensberg Alpine Centre is a composite of high-altitude enclaves centred within the greater Drakensberg Range and has links to the Cape Floral Region. The floristic and vegetative diversity of the Drakensberg Alpine Centre may be accounted for the altitudinal, climatic, topographic and edaphic gradients on a broad scale (Bainbridge *et al.*, 1999).

The wetland falls within the grassland biome in the Drakensberg Foothill Moist Grassland (Vegetation type GS10; Muchina and Rutherford, 2004). It was described by Begg (*ibid.*) as “well-conserved *Themeda-Trachypogon* highland grass veld”. Camp (*ibid.*) states that this veld type is a fire-maintained grassland dominated by short bunch grasses, approximately 0.5 m high. In the absence or reduction of fire, a development towards *Podocarpus* forest occurs, with grasses such as *Cymbopogon* spp. and tall *Hyparrhenia* spp. and the trees *Leocosidea sericea* and *Buddleja salvyfolia* being the initial forest precursors.” He also states that forest patches occur mainly on the cooler and moister south-facing slopes, especially when they have been protected from fire. In such places, other tree species such as *Halleria lucida*, *Rapanea melanophloeos* and *Kiggelera Africana* are also found in the early succession stages.

Widely scattered patches of alien invasive species, primarily American bramble (*Rubus cuneifolius*) are found in the grassland next to the wetland. Follow-up programmes are carried out annually on the treating of the American bramble.

As this protected area falls into a sourveld area (high production spring and summer, but low palatability over winter, the carrying capacity and stocking rates of grazing ungulates is inherently low.

Fire is the key ecological process that maintains plant vigour, basal cover and species diversity in the catchment and wetlands. It is for this reason that an appropriate fire regime is maintained. In addition, an added benefit of fire is that it reduces the vulnerability of the wetland to colonisation by invasive and alien plants. The correct use of fire also facilitates sustainable clean water production for the downstream communities.

21. Noteworthy flora:

It might be expected that uMgeni Vlei Nature Reserve would contain a number of endemic or threatened plant species, by virtue of its location within the Drakensberg Alpine Centre biodiversity hotspot. However, insufficient work has been undertaken to demonstrate this. Scott-Shaw (1999) lists *Stachys rivularis* as a “Vulnerable”¹ (according to National classification) species occurring in the uMgeni wetland and the following species as occurring in the areas of the two 1:50 000 maps (2929BD and 2929DB) which include uMgeni Vlei Nature Reserve.

<i>Bowiea volubilis</i>	Vulnerable**
<i>Calpurnia woodiii</i>	Vulnerable**
<i>Crocoshia pearsei</i>	Vulnerable
<i>Dierama luteoalbidum</i>	Vulnerable
<i>Ocotea bullata</i>	Vulnerable**
<i>Sisyranthus fanniniae</i>	Vulnerable

** Unlikely to be present due to absence of suitable habitat.

Merwillia natalensis (Vulnerable) is known to be present but its status is not known. *Kniphofia brachystachya* and *K. breviflora* are KwaZulu-Natal endemic species, whose modelled habitat preferences are met in uMgeni Vlei Nature Reserve.

22. Noteworthy fauna:

The primary purpose of the uMgeni Vlei Nature Reserve is to protect part of an area considered to be the most important breeding site of the Wattled Crane (*Bugeranus carunculatus*) in the country (*vide* Section 3.4 above, Johnson *et al.*, *ibid.*). As an indication of the plight of this large bird species, listed as “Globally Vulnerable; Critically Endangered in S.A.”, the current national population was reduced from an estimated 380 (160 breeding pairs) in 1982 to an estimated current population of 81 breeding pairs and 85 “floaters” (Hockey *et al.*, 2005). The population in KwaZulu-Natal is estimated at 68-70 pairs (maximum 140 individuals) and about 70 “floaters”. According to McCann (personal communication, 2007) there are nine breeding pairs in the general vicinity of uMgeni Vlei Nature Reserve of which up to four or five pairs breed within the Nature Reserve itself. These, together with up to 20 “floaters”, have regularly been seen foraging in the Nature Reserve. Accordingly, the Nature Reserve may at times support as much as 20% of the national population.

Official records indicate the suspected presence of at least one Critically Endangered species, the rough-haired Golden Mole (*Chrysospalax villosus*).

¹ According to the SA National Classification System.

The Ezemvelo KZN Wildlife Biodiversity Database for the Nature reserve confirms the presence of Oribi (*Ourebia ourebi*) and the White-tailed Mouse (*Mystromys albicaudatus* - EN) as well as a Near Threatened species, Serval (*Felias serval*).

At least five antelopes have been recorded in the Nature Reserve (Rowe-Rowe, 1994). Oribi, Grey Rheebuck (*Pelea capreolus*), Mountain Reedbuck (*Redunca fulvorufula*), Southern Reedbuck (*Redunca arundinum*) and Common Duiker (*Sylicapra grimmia*). Eland (*Tragelaphus oryx*) have been observed on the farmlands surrounding the Nature Reserve, but their presence within the Nature Reserve is not recorded in official records.

Several wetland associated mammal species recorded are the Clawless Otter (*Aonyx capensis*), and the Spotted-necked Otter (*Lutra maculicollis*).

The following species are considered globally vulnerable which make use of the protected area

- Cape Vulture – (*Gyps coprotheres*) Vulnerable (Pop. trend: decreasing) (occasional visitor)

The following species are considered nationally vulnerable which make use of the protected area

Bearded Vulture - *Gypaetus barbatus* Endangered (Pop. trend: decreasing) (occasional visitor)
Grass Owl (*Tyto capensis*) Vulnerable (Pop. trend: decreasing) 3–5 breeding pairs
Martial Eagle (*Polemaetus bellicosus*) Vulnerable 1 breeding pair
African Marsh Harrier (*Circus ranivorus*) Vulnerable 5–6 breeding pairs

In addition the following important avifaunal species have been recorded to breed in this protected area and where there is motivation to have them included on the national Red Data Bird List of Species.

- Buff-streaked Chat (*Oenanthe bifasciata*) 10–20 breeding pairs
- Ground Woodpecker (*Geocolaptes olivaceus*) 5–10 breeding pairs
- Drakensberg Rockjumper (*Chaetops aurantius*) 3–6 breeding pairs
- Lanner Falcon (*Falco biarmicus*) 2–3 breeding pairs

23. Social and cultural values:

a) Cultural Heritage

The cultural heritage of uMgeni Vlei Nature Reserve is poorly researched and little known.

There are no known registered archaeological sites with uMgeni Vlei Nature Reserve., but there is much historical evidence of San activity in the "Upper uMgeni" (*sic*) area, which presumably included uMgeni Vlei Nature Reserve (Wright, 1971).

According to Prins (2006), the old farmhouse, which is located just south of the Nature Reserve and which is now largely in ruin, is said to have been built by an English soldier, who jumped ship while *en route* to India. He then made his way into the remote hinterland and spent the rest of his life there. The grave is near the house and is protected in terms of the KwaZulu-Natal Heritage Management Act.

Socio-economic values

The fact that uMgeni Vlei Nature reserve protects and conserves a significant portion of the uMgeni River's catchment area in itself makes the Nature reserve a valuable economic asset for the region and for KwaZulu-Natal.

Commercial agriculture has been the most economic driver for this portion of the province. The Nature Reserve is surrounded by privately owned land, on which the most important commercial use is mixed farming, primarily livestock management. The Lake Lyndhurst property to the east has been divided into a number of residential stands for holiday homes. Areas of communally owned land, on which subsistence agriculture is practised, lie some distance to the south-west but are not adjoining in any way.

The Nature Reserve is not a recognised eco-cultural tourism destination and such activity is therefore not economically important.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

- a) Within the Ramsar Site: State
- b) In the surrounding area: Privately owned agricultural land surrounding the proposed Nature Reserve.

25. Current land (including water) use:

- a) Within the Ramsar Site: Nature Conservation
- b) In the surrounding area: The surrounding area and catchment is used extensively for commercial livestock.

As of the last population census in 2006, Nottingham Road (29°21'00"S; 29°59'40"E) has 8044 inhabitants.

Commercial agriculture has been the most important economic driver for Nottingham Road. uMgeni Vlei Nature Reserve is surrounded by privately owned land on which the most important commercial use is mixed farming, primarily livestock management.

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

The loss and degradation of wetland habitats generally constitute the most important threats to wetland species. Wetland loss in South Africa is mainly due to intensified agriculture, dam construction and industrialisation. Human disturbance at or near breeding sites is also a major threat to the breeding success of wetland species. This includes birding and collection of natural products by local communities. Further establishment and expansion of human settlements too close to wetlands is becoming a significant concern.

a) Within Wetland of the Ramsar site:

The wetland and its associated plant species evolved under a burning regime. Following expropriation of the wetland, the number of breeding Wattled Cranes declined over a period of a few years from seven pairs to just one pair. On investigation, it was decided, that management intervention was necessary to re-establish the type of conditions that had prevailed when more pairs bred successfully with the Nature Reserve. Included in the interventions, were the introduction of a more frequent fire regime, coupled with controlled large herbivore grazing. Following a long period of decline (1988 – 2000), the number of Wattled Cranes that attempted to breed increased from one to two in the first year of intervention and thereafter by an additional pair in 2003 and another in 2004 (Rushworth, 2005). Subsequently (until September 2008), no additional pairs have been recorded at the Nature Reserve. The reasons for this are not clear and could be linked to extraneous factors beyond the control of reserve management (I. Rushworth, personal communication, 22 September 2008).

b) In the surrounding area: In the areas surround the Wetland and neighbouring areas to the Ramsar Site, American bramble (*Rubus cuneifloius*) occurs in the surrounding grasslands to the wetland. The surrounding farm land is used for livestock grazing and is unlikely to have a negative effect on the hydrological functioning of the wetland and its catchment. Reserve management should remain sensitive to opportunities and be ready to engage with relevant role-players, especially members of the Biodiversity Stewardship Programme, assisting them with the most appropriate options for establishing conservation areas. Areas that adjoin the Nature Reserve that have been identified as priority conservation areas in terms of the Maloti Drakensberg Transfrontier Programme and would contribute to the developing a buffer area surrounding the Nature reserve.

27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

Nature Reserve

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist - **Yes**; and is it being implemented? **Yes**

The Management Plan for uMgeni Vlei Nature Reserve was completed in December 2008 and is valid for the period 2009-2013. The Integrated Management Plan, which includes a Concept Development Plan, forms the framework within which the Nature Reserve will be managed towards achievement of its management objectives, which were derived in collaboration with the Nature Reserve's stakeholders during June 2006. The implementation of the management plan is assessed by Ezemvelo KZN Wildlife's Protected Area Effectiveness programme and as part of regular management meetings.

d) Describe any other current management practices:

As uMgeni Vlei Nature Reserve is managed by conservation staff from the uKhahlamba Drakensberg Park World Heritage, coupled with the limited number of neighbours and the limited range of activities undertaken, the uKhahlamba Drakensberg Park World Heritage Site Local Board has undertaken to deal with any matters associated with uMgeni Vlei Nature reserve.

A management decision to utilise domestic stock of neighbouring farmers according to the grazing management plan (integrated with the fire management plan) developed by the management team which are to benefit the uMgeni Vlei Nature Reserve Wattled Crane population. A Community Participatory Reserve was formed in 2002 and a Memorandum of Agreement has been entered into between Ezemvelo KwaZulu-Natal Wildlife and the relevant landowners.

28. Conservation measures proposed but not yet implemented:

A submission is currently being prepared to declare uMgeni Vlei Nature Reserve as a statutory nature reserve in accordance with the National Environmental Management: Protected Areas Act (No. 57 of 2003).

A management plan has been prepared and is undergoing public consultation. Once this process has been completed it will be submitted to the provincial Minister for adoption simultaneously with the proclamation of the protected area. The Minister will also be asked to assign Ezemvelo KZN Wildlife as the management authority in term of this Act.

29. Current scientific research and facilities:

Monthly counts of cranes and Oribi are undertaken. Fortnightly monitoring of the Wattled Crane is carried out during whilst the cranes are nesting. There are no research facilities or registered research projects taking place currently. The nearest research accommodation is at Kamberg Nature Reserve which is approximately 25km away.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

Due to its small size, difficulty of access, and the particular emphasis on Wattled Crane conservation, the Nature Reserve will not be considered for any development in relation to environmental education. Instead, use will be made of the nearby Kamberg Nature Reserve, which is larger, easily accessible and which has many features in common with uMgeni Vlei Nature Reserve.

31. Current recreation and tourism:

Limited visitation is permitted in consultation with the Conservation Manager when the cranes aren't nesting.

32. Jurisdiction:

Republic of South Africa, KwaZulu-Natal Province, uMgungundlovu District Municipality, Impendle Local Municipality, KZN Nature Conservation Board.

33. Management authority:

Ezemvelo KZN Wildlife is the current *de facto* management authority of the proposed RAMSAR site

Contact Person

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