

THE KATHU FOREST ECOSYSTEM?

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A unique Camel Thorn forest in the southern Kalahari is being threatened by up-market housing developments and a developmental boom in the once-sleepy town of Kathu. The forest's survival depends on political will and the full commitment of the various stakeholders to protect the untransformed part of this beautiful ecosystem.

The Kathu woodland, about 4 000 hectares in extent, is commonly known as the Kathu Forest because of the exceptional size and density of the camel thorn trees. It is one of only two such woodlands in the world, with the other being between Mariental and Rehoboth in Namibia. Its uniqueness was recognised as early as 1920, when it was declared a State Forest. In 1956 this forest was de proclaimed to allow for the establishment of the town of Kathu, "the town under the trees", for Sishen mine's workers, in the southern portion of the woodland. In 1995, on the request of the landowners, several properties containing the largest part of the Kathu Forest were registered as a Natural Heritage Site. The landowners agreed to protect the Kathu Forest, and the municipality committed itself to only allowing developments to the south of the town – thus away from the

Kathu Forest Natural Heritage Site. Kathu Forest is considered worth protecting for scientific, biodiversity, landscape and ecotourism reasons. Surveys have shown a moderate to high diversity in plant and animal species, including several Red Data, endemic and protected species. Today there is widespread support from various stakeholders for the protection of the Kathu Forest.

Threats to the Kathu Forest are not new, as it has had a long history of utilisation by man dating back to 800 000 years ago, to which billions of artefacts at one of the richest archaeological sites in the world testify. More recently, an article by the late Dr Richard Liversidge in *African Wildlife* Vol. 55 No. 3 (2001) exposed mismanagement of parts of the Kathu Forest, and in the same volume of *African Wildlife*, we raised concerns about the sustainability of harvesting protected Camel Thorn trees from the Natural Heritage Site for the fuel-wood market.

Kathu is currently experiencing a developmental boom, and it is expected to almost triple in size within a decade. Developments on the cards include two controversial up-market housing developments to the north of the town, and new and expanding mines. In response to inadequate environmental impact studies, the first author raised concerns about the effects of the proposed development on the Kathu Forest's ecological integrity, and

the potential loss of biodiversity. The need for further ecological, archaeological and groundwater studies was also stressed. Groundwater issues are of major concern, because the lowering of the water table by abstraction could lead to the death of Camel Thorn trees, the keystone species of the forest. With such rapid development, the availability of water will remain an issue for the foreseeable future. We also question whether there will be sufficient groundwater to sustain the Camel Thorn trees.

The issue of compliance with planning systems was also raised. The Strategic Environmental Assessment and Integrated Environmental Development Plan of the late Kgalagadi District Municipality records Kathu Forest as a sensitive habitat with significant tourism potential, and recommends that it be mapped as a conservation node in spatial plans, that no development be allowed therein, and that only limited ecotourism activities be permitted. In line with this, the local municipality's Spatial Development Framework (SDF) for Kathu recommends that developments should not expand into the Kathu Forest, and that these should be reserved for tourism-related activities. The development areas indicated in the spatial development maps, however, appear to be in conflict with the higher order plans, and there is a difference of opinion on how strictly the guidelines of the SDF should

be interpreted. Currently the SDF is being adapted to suit new developments – instead of guiding them – because the local authority is swamped by the extent of new developments and the service provision thereof.

In April 2006, a request was made to the Department of Water Affairs and Forestry (DWAF) for emergency protection of the Kathu Forest under the emergency clause of the National Forests Act of 1998 (NFA). As a result, a working group was formed which included the DWAF, WESSA: Northern Cape, the Botanical Society of South Africa, Gamagara Municipality, the Northern Cape Department of Tourism, Environment and Conservation (DTEC), as well as the national Department of Environmental Affairs and Tourism (DEAT). This working group investigated the conservation options for the Kathu Forest, and made certain recommendations to the DWAF.

Expert reports for the scoping study of one up-market development, Kalahari Gholf en Jag Landgoed, showed that the Kathu Forest is seriously under-protected. Between 27 and 34 per cent of the forest has already been transformed, and this could reach 35 per cent should the proposed up-market developments proceed. According to the National Spatial Biodiversity Assessment for South Africa, the threshold at which an ecosystem could become critically endangered is when only 16 to 30 per cent of the natural ecosystem remains. For a forest ecosystem the threshold could be as high as 70 per cent, and as this has already been reached for the Kathu Forest, it could already be considered critically endangered.

Initially it was decided that there were sufficient grounds for emergency protection, based on the preliminary investigations and the decisions taken at a meeting of the Kathu Forest Working Group. After further meetings with the DTEC and the developers, the DWAF decided, however,

that securing protection under Section 12 of the NFA was the better option. Dr Bruce McKenzie of the Botanical Society proposed recognising the forest as a protected environment under the National Environmental Management Protected Areas Act (2003).

In response, the developers of the Kalahari Gholf en Jag Landgoed altered their development plans to avoid impacts on the core areas of the Kathu Forest and committed to affording formal protection to the remaining 2 000 hectares of the property previously owned by Sishen Mine. The developers have started negotiations with an adjacent private landowner, as well as Sishen Mine, in an attempt to create a larger conservation area that would eventually include more than 70 per cent of the Kathu Forest. Once formal protection is secured, all parties will comply with a biodiversity management plan developed by the DTEC. Funds for the management of the land will be provided through additional levies administered by the Home Owners' Association and written into the title deeds of the property owners. Owners of the land on which the remainder of the Kathu Forest occurs, will also be included in future discussions about the establishment of the protected area.

In December 2006, the DWAF submitted their request to the Minister of Water Affairs and Forestry to declare the Kathu Forest a protected woodland. Such protection will allow current land use practices to continue, but will safeguard the woodland against future detrimental anthropogenic influences. The core area of dense woodland will be regarded as the prime conservation area, while the development of limited low-impact, ecotourism facilities may be allowed in the second class of more open woodland. Low density residential eco-estates may be considered in the buffer area (comprising the third class of open woodland), but with

compensative actions to provide for the protection of the primary conservation areas.

A record of decision recently issued for the Kalahari Gholf en Jag development was not explicit enough on, *inter alia*, measures for formal protection of the forest. On the advice of the Scientific Services section of the DTEC, it is being revised to include more detailed conditions and the commitments of the developer. A task team will soon be established by the DTEC to tackle the process of formally declaring the forest as a protected environment. It is of utmost importance that, before any other developments that may impact on the Kathu Forest are approved, the formal protection of the forest is secured by the DWAF and DTEC. An issue that needs further investigation is the potential impact that increased abstraction of groundwater may have on the ecosystem.

If this initiative to protect Kathu Forest comes to fruition, the community of Kathu will reap the benefits of having a very important conservation area and tourist attraction on their doorstep. In the past South Africans have failed dismally at acting rather than talking when it came to environmental management and legislation to protect our biodiversity. Let's hope for the sake of the Kathu Forest that our actions in this instance will do us proud.

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The Camel Thorn tree, *Acacia erioloba*, is a protected tree under the National Forests Act of 1998. Camel thorns provide support for large Sociable Weaver nests (in left side of tree) and are used by many other bird and animal species.



The density of Camel Thorn trees below three metres in height, such as this one, is on average 80 individuals per ha in parts of the Kathu Forest. Taller Camel Thorn trees in the background could be as old as 300 years.



A section of closed woodland in the Kathu Forest, with some trees more than eight metres in height.

The Sishen golf course in the southern part of the Kathu Forest – the centre of a new upmarket development.