EXECUTIVE SUMMARY

This study is a route evaluation and environmental impact assessment (EIA) of a proposed 132 kV power-line from the Auas Transmission Station east of Windhoek to the Rehoboth Substation just north of Rehoboth.

A 66 kV power supply system is currently providing power to Aris, Leutwein, Groot Aub, Oamites, Rehoboth, Oanob, Klein Aub and Blumfelde south of Windhoek. These areas are all supplied from one source, namely the Van Eck Transmission Station near Windhoek. Power supply constraints are already experienced in these supply areas due to the weak 66 kV system and the power is of a poor quality. In addition, Rehoboth has been identified as a central growth point in Namibia and needs an upgraded power supply, whilst there is also a growing power demand at Sossusvlei and the south-western areas of this region. An upgrade to the existing 66 kV power line is thus inevitable and the construction and operation of a new 132kV line would ensure security of supply to service this growing demand.

As part of the proposed construction of the power line, this route evaluation and EIA study involved the following primary steps:

- Consultation with interested and affected parties, particularly the affected farm owners along the proposed route.
- Data collection by means of desk studies and field visits. Specialist studies focused on avifauna (birds), vegetation and archaeology in the project area were also commissioned by the lead consultant.
- Route evaluation and consideration of alternative routes.
- An assessment of the likely environmental impacts of the finalised route, once this had been agreed to by NamPower, and
- An Environmental Management Plan to serve as a working document for the contractor to ensure environmental compliance and mitigation of environmental impacts identified as part of this study, and as a monitoring tool during construction and operation of the line.

In order to facilitate stakeholder and community participation during this EIA process, the following activities were undertaken:

- Compilation of I&AP lists using data from various sources.
- Distribution of a Background Information Document (BID) as an invitation to I&AP's to attend the public meetings. The BID invitation was followed up with telephone calls to all commercial farmers and to the Khomas Regional Council, who served as a communication link to communal farmers.
- Advertisements in local daily newspapers inviting I&AP's to attend the respective public meetings.
- Public meetings held both in Groot Aub and at the Auas Game Lodge; both venues are situated along the proposed line, and
- apart from the meetings, people were given the opportunity to communicate their input via telephone and e-mail directly with the Consultants.

The major issues and concerns with respect to the proposed line, stemming from the public meetings included the following:

- Cumulative visual impact of two or three power lines in an area, considering the fact that this line would be in addition to existing lines.
- Impact on tourism, particularly as a result of such visual impacts.
- Disruption of stock farming by three power-lines
- Nuisance impacts on farms during construction and maintenance, caused particularly by construction and maintenance teams working on the line.
- Impacts on birds through electrocutions and bird collisions, and
- Indiscriminate removal of vegetation, particularly large trees such as Camelthorns, and resultant erosion.

The Terms of Reference provided by NamPower for this study required the EIA team to evaluate the preferred route provided by NamPower and if constraints existed on this preferred route or if sections of this route were unacceptable from an environmental point of view, the consultants were

required to present the route alternatives and a discussion on their technical, financial and environmental advantages and disadvantages.

Route alternatives were therefore considered based on the IAP concerns listed above as well as on the following criteria, the rationale for which are given in the body of the report:

- Alignment of the route alongside existing power line infrastructure servitudes.
- Avoidance of areas used for tourism activities that depend on wilderness landscapes. To meet this objective the power line should be at least 1km from these areas, or as far away as needed to preserve important vistas.
- Avoidance of existing homesteads, grazing areas, farm infrastructure and other improvements that are of socio-economic value. To meet this objective the power line should maintain a distance of 1km from homesteads where possible.
- Avoidance of vegetation zones that rate high in terms of their conservation status and contribution to biodiversity.
- Avoidance of steep terrain, rocky outcrops and inselbergs, as these sites are important in terms of botanical diversity and are often important bird habitats.
- Avoidance of vulnerable and important archaeological sites.
- Avoidance of important bird habitats and areas, including migration routes, cliffs, farm dams, and larger riverbeds. To meet this objective the power line should maintain a distance of 1km from these areas.
- Factors affecting construction costs, in particular an increase in line lengths and route deviations, were to be considered.

Using the above criteria, conflict points where the proposed route crosses or comes close to ecological and socio-economic hotpots were identified and an alternative route was selected that would avoid most of these conflict points. An alternative route map is given in the body of this report. In a meeting held with applicable NamPower staff, it was agreed that, although the alternative route proposed is some 4km longer than the original one, it would avoid most of the problem areas encountered with the original route.

The EIA team is confident that the proposed alternative route has been optimised by aligning it along an existing disturbed corridor and away from most of the sensitive land uses and bio-physical features. Figure 1 shows the locality of the original and the proposed route.

The Environmental Management Plan to be submitted as a stand-alone document shall contain all mitigation measures identified for the proposed alternative route as part of this EIA study will be incorporated into this plan. Given the sensitivities of the receiving environment, and in particular the complaints levelled at NamPower by I&AP's from past experience during power line construction, it is a recommendation of this report that NamPower appoint a local person that is independent from the contractor, during construction of the line to serve as the contact person with farmers, and to ensure that complaints by I&AP's and requirements of the EMP are adhered to.

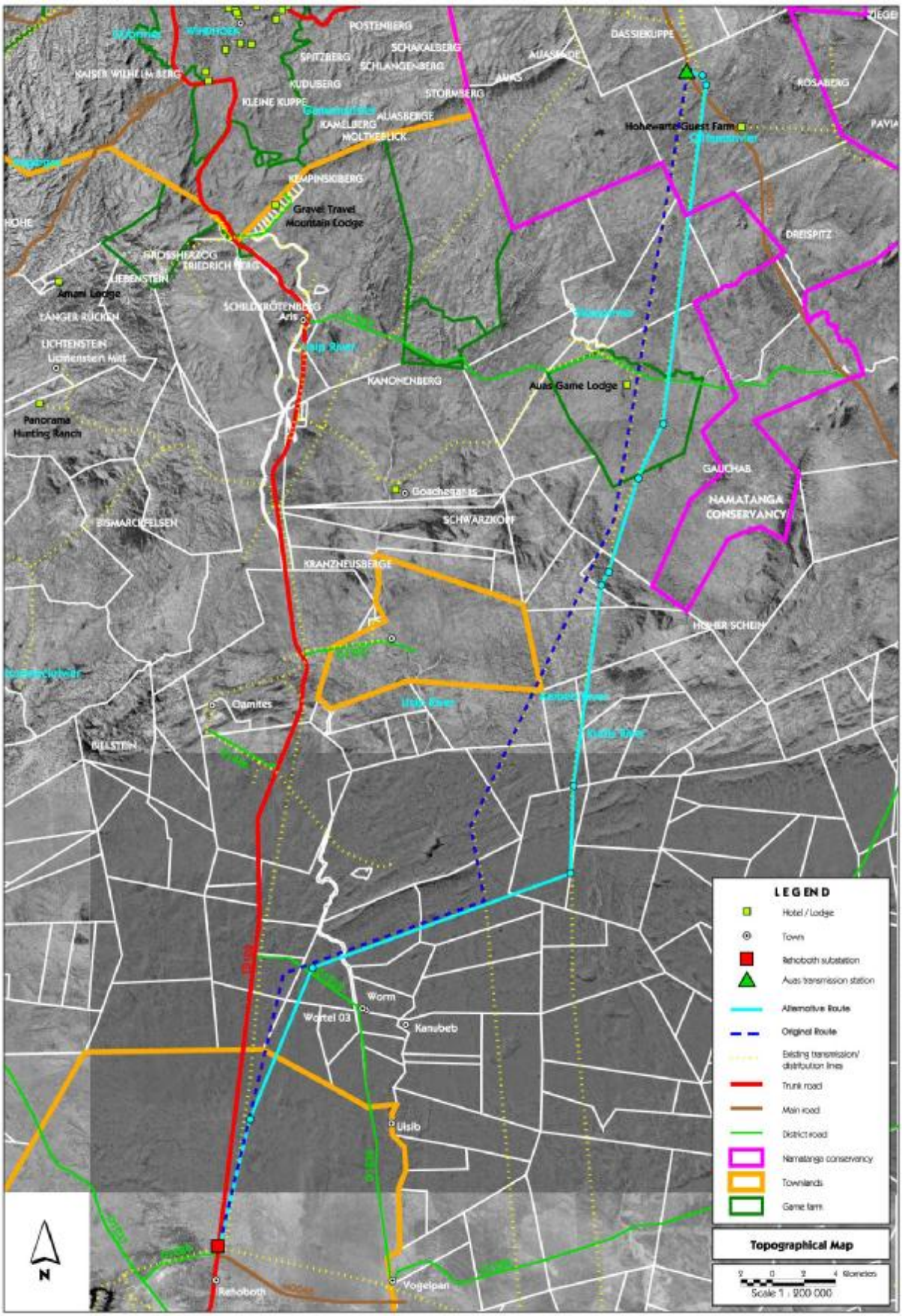

Figure 1: Locality of the original versus the alternative route