THE PROPOSED MNWENI CABLEWAY:

PRE – FEASIBILITY STUDY

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Prepared by:

D Reineke BSc Eng Civil, Pr Eng
P G Stewart BSc (Agric)(Natal), MS (Wildlife Mgmt, Mich State)
S W Cooke BSc Eng Mech., Pr Eng
I Lax B. Proc.
K L Kohler BA (Hons), MA (Geog)

Contact details:
The Secretary
Federation of Drakensberg User Groups
C/o 28 Blair Road, Pinetown 3610
Tel: 031 7010155
Fax: 031 7015197
Email: swc@cookeandson.co.za

EXECUTIVE SUMMARY

The Maloti Drakensberg range is an area of international significance in terms of biodiversity, natural beauty and cultural heritage. It is also the most important water catchment in southern Africa.

The possibility of constructing and operating a cableway in the KwaZulu-Natal Drakensberg has been suggested formally as early as 1994 and subsequently in various reports and studies. There has been much speculation as to the feasibility of such a project, and while some studies have addressed tourism figures in more detail, very little work has been done on conceptualizing the design of a cableway, assessing the practicality and establishing the financial viability.

The Federation of Drakensberg User Groups commissioned individuals from its member organizations, who collectively held appropriate qualifications in all necessary fields, to undertake a pre-feasibility study of a Drakensberg Cableway.

The site, while known not to be the most attractive from a cost perspective, was chosen as it related directly to previous reports and investors are being sought at the time of publication, to finance this as the lead development project of the uThukela Regional Council.

In the preparation of the report to assess viability:

- Current tourism figures available for the Drakensberg region were used (100 000 passengers per annum).
- No conceptual engineering layouts were done.
- All distances were obtained from existing cartographic information.
- Design figures for mechanical and electrical parameters were chosen in consultation with a company specializing in cableway construction.
- Electrical power supply was obtained from consulting electrical engineers.
- All civil engineering quantities and estimates were carried out by a consulting civil engineer.
- All visitor facilities were estimated on design factors and costs given by architects.

The result is a class 0 engineering estimate subject to contingency of 20% appropriate to the accuracy of all inputs.

The financial viability of the project is assessed, by using both projected income statement and IRR methods calculated over 10 years. Sensitivity analyses to ticket price were conducted and both methods showed the project is not financially viable.

The same estimate model was also used to give an indication of viability at a passenger volume of 350 000 per annum, by appropriately increasing those portions of the capital expenditure affected by this increased volume. Even with this increase, the project was shown still not to be economically feasible.

Furthermore, evaluation of all social, environmental and legal aspects, which will affect, and should concern a potential investor, have been set out. As such, this report can serve as a base document for any future investigations into a cableway in the Drakensberg.

CONTENTS

ACRONYMS

amsl	above mean sea level
EIA	Environmental Impact Assessment
FDG	Federation of Drakensberg User Groups
GEF	Global Environment Facility
IEM	Integrated Environment Management
IRR	Internal rate of return
KZNTA	KwaZulu-Natal Tourism Authority
MCSA	Mountain Club of South Africa
NPV	Net present value
STATSSA	Statistics South Africa
uDP	uKhahlamba Drakensberg Park
uTRC	uThukela Regional Council
WHS	World Heritage Site
WHC	World Heritage Committee

1. INTRODUCTION

This report has been prepared by the committee of the Federation of Drakensberg User Groups (FDG) assisted by members of the Mountain Club of South Africa (MCSA).

It came about because there was a general consensus within the FDG that the proposed cableway is not in line with any of the accepted development proposals for the Drakensberg. However, the FDG did not want to prejudge the proposal and decided to investigate the reasons for it. Although strongly promoted by the uThukela Regional Council (uTRC), in whose region the area falls, the FDG found that only very preliminary studies on the feasibility and likely impacts of a cableway or cableways had been done. As far as the FDG is aware the only studies are van Riet *et al* (1994), Integrated Planning Services (1998) and Deloitte & Touche (1994).

The van Riet (1994) study was a desktop GIS preliminary look at cableway possibilities and listed a number of further studies that would have to be done before taking the idea of a cableway further. The Integrated Planning Services (1998) study mentions cableways very briefly (p.40) and considers them inappropriate. No economic analysis other than a very superficial one by Deloitte & Touche has been undertaken by the uTRC (Deloitte & Touche, 1994). However, the uTRC in various documents and glossy brochures (uTRC, no date) has proposed a cableway as the lead tourism development for the area. None of their documentation gives any details on the likely costs or impacts of a cableway.

This report has therefore been considered necessary in order to put cableway proposals into perspective. The FDG in commissioning this report from volunteers among its members did not set out to prejudge the appropriateness or otherwise of a cableway. The authors would hope that this report will be seen as a sincere attempt to shed some light on the issues, and in particular on the proposal by the uTRC to build a cableway in the Ntonjelane valley with its upper station on the summit of the North Peak of the Saddle.

2. BACKGROUND

The background given here is very brief and reference should be made to the previous reports and documents that will be mentioned for a detailed account.

3. LOCATION OF SITE

The Mnweni area is located on the eastern boundary of South Africa with Lesotho, west of Bergville and the Woodstock Dam. The Royal Natal section of the uKhahlamba Drakensberg Park (uDP) lies to the north and the major part of the uDP beginning at Cathedral Peak to the south.

The proposed site of the Cableway is located in the valley of a tributary of the Mnweni River, namely the nTonjelana (Ntonjelana, Ntonyelane) River. The upper station is to be located on the North Peak of the Saddle, at an elevation of 3 153 metres above mean sea level (amsl). The lower station is proposed on the 2 000 metres amsl contour, with the horizontal distance between the stations at 2 000 metres.

The Mnweni is regarded as one of the most important high water catchments of the Drakensberg. The physical bio-diversity of the Mnweni manifests itself through a rich mix of plant and animal species, plentiful water, wetlands and wilderness, while cultural diversity exists through the rich and vibrant traditions of the Amangwane mountain communities and the rock art of the Drakensberg San, which together present a “unique cultural landscape”. Furthermore, the Mnweni Valley has the potential to add to the significant percentage of managed wilderness zones which exist in South Africa. The physical infrastructure and service provision in the study area is poor. These factors are important when looking at the feasibility of tourism development in an area.

4. THE MNWENI COMMUNITY

The study area falls within the Amangwane Tribal Authority with Inkhosi Hlongwane assuming responsibility for the administration of customary law in the area. The Tribal Court is located in Dukuza. The Amangwane Tribal Authority is divided into 24 sub-wards, three of which are the subject of this study - Khokhwana, Mabhhulesini and Manzana.

The Amangwane are expectant of development and the communities of the Upper Mnweni Valley, in particular, are anxious to see a result from the tedious rounds of meetings that so often seem to produce no concrete result. Community leaders from these three sub-wards have indicated a desire to proceed with tourism development in a managed and progressive manner so that all stakeholders can grapple with the issues, find solutions and develop the capacity to take on larger projects.

The primary interest of the Mnweni Community is in jobs, any jobs, because the levels of poverty are severe and the alternatives to their economically strapped existence are apparently few. A growing number of residents, however, recognize that the mountains (with their scenery and clean sustained water production) constitute their one prime asset, the one that can possibly result in avenues of development that may lead them out of their current poverty. Many residents, the cattle owners in particular, recognize that it is their very dependence upon livestock and the contingent pressure they place on fragile grazing resources that is in the process of undermining their livelihoods and that alternatives are essential in the short to medium term if they are not also to become submerged in ever-increasing poverty.

Tourism suited to the mountain environment is a land use that many local residents embrace as a way out of their poverty trap. Contact with members of the three communities in the upper Mnweni Valley has endorsed the need to initiate the process of tourism development as soon as possible but starting in a small way so that they can grow and adapt to the impacts and changes resulting from having increasing number of "outsiders" passing through their area.

To the north of the Mnweni and the Amangwane is the Amazizi clan and the Singati Valley. This area adjoins the Royal Natal section of the uKhahlamba Drakensberg Park. The Amazizi / Singati area has similar attributes to the Amangwane / Mnweni area. Together they are known as the Upper Thukela catchment.

5. EXISTING INFRASTRUCTURE AND ACTIVITIES

Investment in social and service infrastructure in the area is sadly lacking as is the case in most of the old KwaZulu self governing areas. Few roads are surfaced and many river crossings are low-level bridges, which are periodically flooded.

The major portion of the area is not provided with a potable, reticulated water supply and electricity has not yet been provided to most of the area. A micro-hydroelectric power scheme was a dismal failure and it appears that solar power is next on the list of possibilities. The schools that exist are poorly resourced and health facilities are also of a poor standard.

6. REGIONAL CONTEXT OF CURRENT TOURISM AND CONSERVATION DEVELOPMENTS

6.1 Tourism Context

Surveys of tourists to and within South Africa vary somewhat according both to the source and the methodology used. The KwaZulu-Natal Tourism Authority (KZNTA), who carried out an in-depth tourism consumer survey in 1998 and is presently repeating it for 2000, estimated that there were some 5,7 million foreign tourists to South Africa in 1998. This number included visitors from the African continent. The number drops to 1,5 million when only overseas visitors are considered (KZNTA, 1999).

Of the total number of foreign visitors to South Africa, about 8,8%, or just over 500 000, come to KwaZulu-Natal.

In terms of domestic tourism, there are some 20 million trips taken by South Africans within the country per year (KZNTA, 1999). Of these, about 8,7 million, or 44%, come to or travel within, KwaZulu-Natal.

In considering the possible or potential users of a cableway facility in the Mnweni valley, it is necessary to have some idea of the present number of users of the Drakensberg mountain area. Various sources were consulted in order to gain a clearer overall picture of such user numbers. The foreign tourism report (1999) concluded that about 27% of all foreign visitors to KZN spent time in the Drakensberg. This translates to about 135 000 foreign visitors during 1998.

In terms of domestic visitors, about 3,4% of the visitors to KwaZulu-Natal, some 348 000 people, went to the Drakensberg during 1998.

These findings are summarized in the table below:

	South Africa	KwaZulu-Natal		Drakensberg	
		No.	%	No.	%
Foreign Visitors	5 700 000	500 000	8.8	135 000	27
Domestic Visitors	20 000 000	8 700 000	44	348 000	3.4
Total Visitors	**25 700 000**	**9 200 000**		**483 000**	

These findings can be further broken down into the numbers of visitors to each of the three main Drakensberg areas - the Southern, Central and Northern Drakensberg, and this information is included in Section 8.5.2 of this report.

The figures from Statistics South Africa (STATSSA) for total occupancy rates in the Drakensberg region tell a similar story. During 1999 hotels in the region had a 38% room occupancy rate. This equates to about 245 687 bed nights sold during that year.

The KwaZulu-Natal Nature Conservation Service provided figures for gate entrants for their 1997/98 year. The visitor total for that period, consisting of both day and overnight visitors to the Drakensberg areas was 271 424. This figure cannot been seen as supplementary to that of STATSSA, in that while the first figure relates to visitors using hotels and other means of private accommodation and the KZNNCS figures relate only to both day and overnight visitors to the uKhahlamba Drakensberg Park, there is an unquantified overlap between the two groups.

6.2 Conservation and Environmental Context

Several important conservation and development initiatives affect the identified area. One of these is that the uKhahlamba-Drakensberg Park (uDP). The uDP is managed by the KwaZulu-Natal Nature Conservation Service. The World Heritage Committee (WHC) of UNESCO is currently considering the uDP for listing as a World Heritage Site (WHS). If this application is successful, which is highly likely, the listing will have a significant impact on tourist numbers to the region.

The Drakensberg area has also recently been the location of a study to develop appropriate development criteria and legislation - the Special Case Area Plan for the Drakensberg. The project identified three 'zones' in the area:

- Core Zone - or protected areas in which any developments would be restricted to appropriate projects linked to the main land use - conservation and wilderness,
- Buffer zone - in which a wider variety and developments related to nature based tourism (in most cases to specially identified development nodes) and extensive agriculture would be permitted and encouraged, and finally a
- Flexible Transition zone - the area surrounding the buffer in which developments mainly of an agricultural nature occur.

The main thrust of this project is to ensure the sustainability of the wilderness and conservation resource while also encouraging appropriate tourism and other developments within, adjacent to and near the Drakensberg area.

Prof. Willem van Riet in his desktop GIS study of cableway possibilities in the Upper Thukela area (van Riet *et al*, 1994) listed six issues that would have to be addressed to "establish the detail requirement and feasibility of …. a cableway system." These were:

a. "A need and desirability study."

b. An EIA of the proposed development on the "aesthetic and ecological, social and economic environments."

c. "An in-depth analysis of the provision of services etc."

d. "An economic feasibility study to determine the viability of the project."

e. The implications of Lesotho linkages or impacts.

f. GIS visual and profile analysis.

This report is a first attempt at addressing items a, b, c, d and e. This report does not purport to be the final word on these issues but will highlight the kinds of concerns that will have to be addressed if or when more detailed studies are undertaken.

The values of the Drakensberg / Maloti Mountains can be briefly listed as:

Values of International Significance

I. Biodiversity (both in terms of species numbers and the high level of endemism)
II. Cultural heritage – the greatest gallery of rock art in the world.
III. Outstanding natural beauty.

These values have been recognised through the granting of over R110 million by the Global Environment Facility (GEF) over the next five years for biodiversity conservation and the development of nature based tourism in the Maloti-Drakensberg region. The largest protected area in the region, the uKhahlamba Drakensberg Park (uDP), will almost certainly be listed as a World Heritage Site (WHS) when the World Heritage Committee (WHC) holds its annual meeting in Cairns, Australia in late November, early December 2000. The uDP will be recognised a "mixed site" because of its combination of natural and cultural attributes. This is very rare. There are currently only 22 "mixed" properties out of a listing of 630 (22 mixed, 128 natural and 480 cultural). To put this listing in perspective it may be helpful to reflect that only the Greater St Lucia Wetland Park, the Drakensberg and the Cape Peninsula National Park are ever likely to qualify for WHS listing as natural sites and only the Drakensberg as a mixed site. Internationally then, the uDP is seen to be far more important than even the Kruger National Park. All of the features of the uDP are found in the Upper Thukela area. Hence, if conserved, the area would qualify for addition to the WHS listing (see *Implications of the WHS listing* below).

Values of National Significance

I. Water provision - it the most important watershed in the country serving five provinces and the Kingdom of Lesotho.
II. Ecological and geological processes – it is an outdoor classroom of great merit.
III. Recreation opportunities – a truly user friendly environment for nature-based recreation
IV. Wilderness values – parts of the Drakensberg qualify for the designation "wilderness" in the sense of being representative of a landscape unaffected by the activities of mankind and large enough for visitors to enjoy a wilderness experience. This is a difficult concept to pin down but was expressed by Raymond Cowles in the dedication to his book *Zulu Journal* as ".... to those who love a world unspoiled by man; and love man well enough to try to leave to future generations some unspoiled fragments of that world."

Values of Local Significance

I. Rangeland and agriculture – people who are directly dependent upon the range and agricultural resources of the mountains for all or part of their livelihood.
II. Residential - a large number of people are resident in the area and are dependent on repatriated city earned income, old age pensions and other sources for their livelihood. Few actually earn their living from tourism or agriculture. In other words, relatively few of the residents in the area earn all of their income through use of local resources.

It should be noted that some of the land uses under this sub-heading are either completely unsustainable or are unsustainable as currently practiced.

Environmental and other concerns

Construction and operation of a cableway would affect these values. The impacts of a cableway can be considered under two headings. First, the impacts of the cableway itself with its associated roads, upper and lower cable stations, intermediate towers and other infrastructure. Secondly, the impacts of people (cableway users and employees) and the operation of the cableway. These impacts would have to be thoroughly investigated through the full IEM and EIA procedures as required by the relevant national and provincial legislation.

Without attempting to anticipate the outcome of the IEM process it can be expected that the principal concerns will be as follows: -

Biodiversity

The Upper Thukela area borders an area of the Alpine Zone in Lesotho that enjoys better conservation status than anywhere else in Lesotho does. For this reason the area from what is known as Senqu Sources (the source of the Orange River just west of Rockeries Pass) to Phofung (Mont-Aux-Sources) has been identified by the Maloti Drakensberg Transfrontier Project as a priority area for biodiversity conservation. It will be targeted for intensive community conservation efforts over the next five years. In fact, staff members of the ministries of environment and of agriculture in Lesotho are already talking about the declaration of a protected area, possibly even a national park (Nkareng Mota *pers. comm*). The international boundary is the watershed (the continental divide). This means that a relatively small part of South Africa falls within the alpine zone. Thus, with the exception of a few isolated peaks, there are few, if any, potential upper cableway sites that would not have a direct impact on Lesotho. The cableway considered in this document would have its upper station on an isolated peak entirely within South Africa, the top of the North Peak of the Saddle. Ecologists consider this to be a very special place. It is the one place where there is a reasonably large area of completely protected biodiversity. There is nowhere else along the entire Drakensberg escarpment, in either Lesotho or South Africa, of comparable size and soil depth that has not been affected by grazing and fire. Thus, a cableway to the top of the North Peak of the Saddle will be strongly opposed on the grounds of its impact on biodiversity.

Outstanding natural beauty, wilderness values

The impacts of a cableway on these values are undeniable and will have to be addressed. It is unlikely that they can be mitigated.

Cultural heritage

No doubt, management plans to protect the many sites in the area could be drawn up and, given sufficient will, implemented. There are no sites that will be directly affected by the proposed cableway.

Recreation opportunities

If economically feasible, a cableway would undoubtedly bring visitors to the area. This would diminish the wilderness hiking opportunities but would undoubtedly increase the viability of guided hiking trails and the like.

Implications of the World Heritage Site listing

The WHC monitors WHSites on a regular basis and sites are de-listed if they no longer qualify. There is good reason to believe that the WHC, in listing the uKhahlamba Drakensberg Park as a WHS, will make this partly conditional on progress being made in the creation of a viable conservation area linking the Cathedral Peak section of the uDP to the Royal Natal section - a protected area in the Upper Thukela. This does not mean that the area will have to become part of the uDP; simply that it will need to enjoy significant protection from degradation. Thus, there is an opportunity for the communities of the Upper Thukela to join hands with their counterparts in Lesotho and create a transfrontier community conservation area of international importance.

In order for a WHS to be listed and to remain listed the country concerned has to demonstrate a real commitment to protecting the core values of the WHS. The Special Case Area proposal under consideration in terms of the Provincial Development Act is an important demonstration of that commitment. Thus, the WHC is also expected to urge South Africa to give effect to the Special Case Area proposals.

Implications for the Maloti Drakensberg Transfrontier Conservation and Development Project

A cableway would not stop the granting of the $15.6 million (approximately R110 million). However, it should be noted that over $3 million (R22 million) has been budgeted for community involvement in conservation issues. Sociological studies by reputable scientists (Majoro *et al*, 1999; Kiepiel & Quinlan, 1999) have indicated that successful participatory planning depends on the community fully understanding the issues. Thus, a major capacity building and education program will be undertaken in conjunction with the local communities in the very near future (2001). There is a particular need to resolve the conflict between the desperate short-term need for jobs and poverty alleviation, and the need to develop a long-term vision for the ultimate prosperity of the area. As noted above, current land use patterns are unsustainable, the rangeland is deteriorating, soil erosion is rife, yields of useful produce from crops and animals are very low, alien plants are invading the rangeland and impacting on water yields, uncontrolled hunting is threatening the wildlife, and forest patches are being destroyed by fire and the collecting of plants for medicinal purposes. A difficult issue is the perception by the residents that it is their land and they have the exclusive right to decide what should be done with the land. If this were true then there would be no need for environmental legislation, pollution control regulations, soil conservation acts and the like.

The people of the Upper Thukela are responsible for the management of an international and national treasure. The challenge is to protect this while meeting the legitimate needs of the people.

7. CURRENT DEVELOPMENT PROPOSALS FOR MNWENI

7.1 Background

This section is taken from the Report, **A Tourism Feasibility Study for the Mnweni Valley, KZN Drakensberg,** published in November 1998 by Integrated Planning Services (Pty) Ltd. It is suggested that the proposals as contained in this report and given below be supported by all parties interested in the development and conservation of the Mnweni area.

Certain of the proposals are already in the implementation stage by the Trust that has been established for this purpose.

7.2 Motivation

The spectacular natural environment in this remote section of the Drakensberg is the primary attraction. It is this quality that is a potentially lucrative niche market and could provide a unique combination of hiking and riding trails teamed with genuine cultural

tourism. Together with the development of this market the conservation and rehabilitation of disturbed and eroded areas, through both environmentally sound agricultural practices and general management of the environment should be undertaken. If this is not done then the continuing deterioration of the area will lead to it losing its tourism appeal.

Of particular importance is the fact that the area is not frequented by tourists and can provide an "off the beaten track" experience. Some of the areas could qualify as wilderness and the higher lying zones were identified by both the Maloti Drakensberg Transfrontier Project (1999) and the SCA consultants as being of very high conservation significance, an area that should enjoy formal protected area status. As the development of timeshare resorts and cottages is expected to continue in other areas of the Berg, the existing parks and facilities are likely to become overcrowded and /or overdeveloped. The introduction of more and more western style infrastructure in these other areas means that the single biggest selling point, and the unique feature of Mnweni could well be a combination of its solitude and remoteness with a well preserved culture and lifestyle of its indigenous people and previously unrecorded San rock art.

In reality, the reaction by the rural communities to change is often paradoxical. Despite assurance from the communities themselves that they desire development (and by implications the change that accompanies development) it is not unusual that when the change starts to occur, it is resisted because the implications of that change were not fully realized at the outset. The ancestral traditions and life styles that have been handed down through the generations are sacred to such communities, and threats to such tradition are not embraced. Resistance to change is not a symptom only of rural communities; it is a characteristic common to all levels of society.

This reality means that, despite the Mnweni community's desire for tourism development in their area, such development will have to be undertaken with caution and with respect for their traditions. Initially, development on a small scale would provide the time necessary for adjustments to be made by the community as well as the time and greater understanding needed to decide on the aspects of the tourism development that should be promoted and those which should be discouraged.

Community members expressed frustrations over the misuse of their time by consultants who had in the past apparently promised developments such as a hotel, road, bridge and tourism ventures, none of which had never materialized.

The land in the Mnweni valley is extensively used for residential purposes, crop production and grazing. The community is willing to negotiate the release of land for tourism development in consultation with the Tribal Authority and the Ingonyama Trust. The community is uninformed of the provisions of the Extension of Security of Tenure Act, with regard to their rights and obligations. However, it is commonly accepted that any portion of land utilized for tourism will not be sold. The land would be made available on the basis of a formal agreement. There is an expectation however; that land lost should be compensated through the provision of an equal portion elsewhere.

Small-scale tourism development, appropriate to the residents communal way of life and to the natural environment would be most appropriate. Tourism in such areas should be of a nature over which the community can exert some control, which they can 'own' and which can generate community pride and growth.

The uniqueness of the Mnweni lies in the underdeveloped nature of the valley once one enters beyond the nTonjalana-Mnweni river confluence. This uniqueness factor is built upon the following:

- That the valley of the nTonyelana and Mnweni are more remote, by 3-4 hours walking than most other valleys accessible in the Drakensberg, before reaching the passes that hikers can use for ascent to the main escarpment;

- The fact of limited settlement up these valleys creates the possibility of a different relationship with the mountains. It creates the possibility of relating to the mountains through the eyes and perceptions (the worldview) of the community through which the hiker is passing. This creates the real possibility for guided hiking, which is not generally a feature of hiking activities in South Africa;

- Once one passes beyond the most remote homesteads, either up the valley bottoms or through ascending to altitude up the ridges beyond their immediate influence, the settlement is no longer an intrusive factor. Furthermore, there is an increasing sense of wilderness because of the distance from the nearest support services in the event of accident or other emergency and the fact that the length of the valleys and the shape of the topography places one in areas that have no view out to the lowlands which is quite unusual for the Drakensberg;

- The distances that have to be hiked to reach the main escarpment (generally two days hike from the confluence of the Mnweni and nTonyelana rivers) is greater than elsewhere in the Drakensberg where the time required to ascend to the top is usually not more than a day or at most a day and a half. This distance contributes to the sense of wilderness and remoteness.

All these factors add up to making a destination with appeal to a relatively small but lucrative market, but one, which is growing, and which could increasingly attract overseas hikers and backpackers. Just as more and more people are trekking in the Himalayas and

going on guided climbs to the top of Kilimanjaro in Tanzania, so the Mnweni could become the foreigners' preferred destination for accessing the Drakensberg mountains. It simply requires the organization to be put into place.

7.3 Proposals and Phasing

It is very important to recognize that considerable tourism potential of the Mnweni Valley needs to be approached on a step by step basis so that the community can buy into each stage of development on the basis of experience and not just hearsay. Therefore the proposals are presented in a format starting with those projects considered to have the least social impact. These initial projects are also designed, however, to provide the institutional basis for empowering local residents to seek after, adapt and respond to other, larger scale and more complex, opportunities that may be pursued as the Mnweni Valley becomes a sought-after destination.

Phase 1, which is presently underway, is the provision of a Visitors Center. The site will be at the confluence of the nTonjelana and Mnweni Rivers, although the exact site remains under discussion. A safe area for the parking of hikers' cars would be provided as well as a camp site for overnight stays. Once this is successfully in operation plans can continue for a Cultural and Rock Art Center to attract day visitors.

Phase 2, will consist of the construction of mountain lodges, which can be accessed by vehicle, or foot and provide comfortable overnight facilities in a wilderness and Zulu cultural setting.

Phase 3, is proposed to consist of a hotel resort site development at a location such as at Woodstock dam.

7.4 Conclusions

The Mnweni people have clearly expressed their desire that their traditions and culture are not disrupted and that they receive tangible benefits from tourism.

It is essential that any development planned in the area conforms to World Heritage Site criteria and does not jeopardize the area's potential of becoming a World Heritage Site. To be kept in mind also is the fact that World Heritage sites may also be de-proclaimed should they be found, subsequent to their being proclaimed, no longer to conform to any of the stated criteria. This is the case at present with, for example, the Banff National Park in Canada, where over-development is threatening just such de-proclamation.

8. THE CABLEWAY

8.1 Background

The first mention of a cableway in the Mnweni Valley that has been found is in a report entitled, "Proposed uKhahlamba Drakensberg Cableway - An analysis of the requirements and options", by Willem van Riet Landscape Architects (1994). The Tourism Working Group of the KwaZulu Department of Economic Affairs commissioned this report. The study area was that of the Amangwane and Amazizi tribal areas between the Royal Natal National Park in the north down to the Cathedral Peak area in the south. Some 16 potential sites were identified in a desktop study of the 1:50 000, 20 metre contour interval map 2829CC Cathedral Peak. A site called, "Alternative 15: Thonyelana Valley Option B", located in the Mnweni valley, was ranked as the 3rd most suitable site. The other two preferred sites are those in the Busingatha valley, north of Mnweni. No cost estimates were done on any of these proposals

A major drawback of this study was the limited area investigated. No sites were considered in the adjacent Cathedral Peak and Royal Natal National Park areas, nor were sites further north or south in the Drakensberg considered, such those in as Sani Pass or the Golden Gate area. The problems associated with any development in tribal land held by the Ingonyama Trust are well known and potential investors would prefer land under normal free hold title. A study is obviously needed to identify all possible sites so that the most suitable ones might be found, taking all factors into consideration. These would include sites not only in KwaZulu-Natal, but also the Free State and Eastern Cape Provinces.

In November 1994 a report entitled, "uThukela Tourism Developments" was done by Deloitte and Touche for the uThukela Joint Services Board. One of the potential tourism developments discussed was a cableway. Mnweni valley was mentioned as the most likely site with no reason given for this. The report suggested that the cableway could be used at night to transport goods to improve the viability of the project. Two costings were done. The one allowed R46.5 million for the cableway and the other R25.7 million and the conclusion was that, "….the cost of such a development in Rand terms also appears to be prohibitively high." No details were provided at to how this cost was arrived at, or how this relates to the potential income that would be generated by the cableway. No reference was made to the previous van Riet (1994) study either.

An undated document specifically written about the proposed cableway in the Mnweni should be mentioned. It is entitled, "Taking Tourism To New Heights" and is put forward as a technical document on the Mnweni cableway compiled for the uThukela Regional Council." by Grant Thornton Kessel Feinstein with inputs from uThukela Regional Council's Charl Fouche, Director: Tourism, Sport & Communication. The document estimates that 305 000 users of the cableway could be expected per annum. This figure is arrived at taking 25% of the 520 000 tourists that overnighted in the Berg area in 1998 and 35% of the 500 000 day visitors to the Berg in 1998. No source for the day visitor numbers was quoted, and it would appear to be a guess. Mention is again made of the possibility of using the cableway to transport goods into Lesotho. A suggested price of R30 for a round trip is mentioned. The cableway is estimated at R30 million excluding civil work and the on-site facilities are estimated at between R5 and R10 million. No details of how these costs have been arrived at are given and no economic analysis is done.

Another undated advertising brochure published by the uThukela Regional Council should also be mentioned. It is a glossy, A4 size brochure of 4 pages and is entitled, "Taking Tourism Investments to New Heights." It can be regarded as a supplement to the Grant Thornton Kessel Feinstein document and probably preceded it.

8.2 LAND AND LEGAL ISSUES

8.2.1 The Ingonyama Trust Act N^{o} 3 of 1994

Control of the land in question apparently vests in the Ingonyama Trust. Briefly, the Trust operates in terms of Ingonyama Trust Act. The Act applies to land that was transferred to the Government of the former self-governing state of KwaZulu in terms of Proclamation R232 of 1986, and all land acquired thereafter by the Government of KwaZulu, was vested in the Ingonyama Trust. The actual position regarding the control, ownership and other encumbrances of the land in question can easily be established by way of a search at the Deeds Registry. Such land is subject to, amongst other legislation, the KwaZulu-Natal Planning and Development Act, the Development Facilitation Act and the Environment Conservation Act and The National Environmental Management Act.

Any developer other than the relevant Tribal Authority itself will require some form of tenure. This is usually in the form of a Permission to Occupy (PTO). This means permission in writing, granted in the prescribed form, to any person, to occupy a specified area of land, for a specified purpose.

8.2.2 The Environment Conservation Act N^{o} 73 of 1989

The Environment Conservation Act applies to a development like a cableway.

The regulations, in terms of section 21 of the Environment Conservation Act, now stipulate that an Environmental Impact Assessment ("EIA") exercise must be conducted where the proposed development involves the construction or upgrading of, amongst other things, cableways and associated structures. The regulations also provide for a compulsory EIA where the proposed development involves a change of land use from, e.g., agricultural, or undetermined use, to any other land use or use for nature conservation, or zoned open space, to any other land use.

<u>Responsibilities of Applicant and the Relevant Authority</u>

The regulations also list the responsibilities of the applicant and the relevant authority i.e. Minister, provincial authority or local authority. Thus where an EIA is deemed compulsory, the applicant:

- must appoint an independent consultant;
- is solely responsible for all costs incurred in connection with the employment of a consultant;
- must ensure that the consultant has no financial or other interest in the undertaking;
- must ensure that the consultant has:
    - expertise in the specific area of environmental concern;
    - the ability to perform all tasks as stipulated in the regulations;
    - the ability to manage a public participation process;
    - the ability to timeously produce thorough, readable and informative documents;
    - adequate recording and reporting systems;
    - a good working knowledge of all relevant policies, legislation, guidelines, norms and standards;
- must ensure that the consultant provides the relevant authority with access to, and the opportunity for review of, all procedures, reports, data and interviews; and
- is responsible for the public participation process regarding all interested parties.

The relevant authority must, in turn, ensure that its representatives have equal capabilities.

The primary purpose of an EIA is to aid decision-making by providing comprehensive and detailed information on the environmental consequences of development. An EIA is a process to gather and evaluate environmental information, so as to provide sufficient supporting arguments to evaluate the overall impacts, consider alternative options, and make a value judgement in choosing one development alternative instead of another. The drafting of an environmental impact report is merely a stage in the EIA process wherein the information, arguments, impacts and alternatives are documented. It can, however, not serve this purpose if the document is not open for review and scrutiny. Thus, all interested and affected parties should be involved in reviewing the document.

The EIA Application Process

In terms of the regulations, an environmental impact assessment will consist of a number of separate phases, each of which is detailed below.

Consultation

A pre-application consultation with the provincial department responsible for environmental management is not compulsory, but it may serve to clarify the requirements of the regulations and the procedures that have to be followed. This step is followed by the submission of an application form. The provincial authority must then inform the applicant whether or not the application must be advertised, and if so, the manner in which this must be done.

After considering the application, the relevant authority may request the applicant to submit either a scoping report, or a plan of study for scoping.

Plan of Study for Scoping

A plan of study for scoping must include:

- a brief description of the activity to be undertaken;
- a description of all tasks to be performed during scoping;
- an indication as to the stages at which the relevant authority will be consulted; and
- a description of the proposed method of identifying the environmental issues and alternatives.

Scoping Report

Assuming the relevant authority has either waived the requirement of, or accepted, a plan of study for scoping, the applicant must submit a scoping report that must include:

- a brief description of the project;
- a brief description of how the environment may be affected;
- a description of environmental issues identified;
- a description of all alternatives identified; and
- an appendix containing a description of the public participation process followed, including a list of interested parties and their comments.

Upon receipt of the scoping report, the relevant authority may decide that the information contained in the scoping report is sufficient for the consideration of the application without further investigation. Alternatively, the relevant authority may decide that the scoping report should be supplemented by an environmental impact assessment.

Plan of Study for Environmental Impact Assessment

The applicant must submit a plan of study for the EIA, which must include:

- a description of the environmental issues, identified during the scoping, that may require further investigation and assessment;
- a description of the feasible alternatives identified during scoping, which may be further investigated;
- an indication of additional information required to determine the potential impacts of the proposed activity on the environment;
- a description of the proposed method of identifying these impacts; and
- a description of the proposed method of assessing these impacts.

Submission of Environmental Impact Report

After the plan of study for the environmental impact assessment has been accepted, the applicant must submit an environmental impact report, which must contain:

- a description of each alternative, including particulars on:
- the extent and significance of each identified environmental impact; and
- the possibility for mitigation of each identified impact;
- a comparative assessment of all the alternatives; and
- appendices containing descriptions of:
  - the environment concerned;
  - the activity to be undertaken;
  - the public participation process followed, including a list of interested parties and their comments;
  - any media coverage given to the proposed activity; and
  - any other information included in the accepted plan of study.

Record of Decision

The relevant authority must issue a record of the decision that was taken in respect of the environmental impact report. This record of decision will stipulate any conditions attached to the acceptance of the environmental impact report.

This statute has been largely superseded by the National Environmental Management Act. However the regulations referred to above are still in force at the present time.

8.2.3 The National Environmental Management Act N^{o}107 of 1998

The National Environmental Management Act (NEMA) is principally concerned with the co-ordination of activities of the different levels of government charged with environmental management in South Africa.
The tenets underlying NEMA are set out in a collection of national environmental principles. They are based on sustainable development and relate to justice, equity, responsibility, participation, integration and inter-governmental co-ordination. These principles apply to all organs of state, which significantly affect the environment.

The principles embodied in NEMA (there are eighteen in all) express contemporary legal thinking on environmental issues. The first principle embodies a commitment to wholly sustainable environmental management.

In order to achieve sustainable development NEMA requires that all relevant factors be considered. The first of these factors is embodied in the (precautionary) principle that the disturbance of ecosystems and loss of biological diversity must be avoided or, where they cannot be all together avoided, must be minimised and remedied. Other broad principles that have been articulated in NEMA in order to achieve proper national environmental management include:

The principle that the environment is held in public trust for the people and that the beneficial use of environmental resources serves the public interest. The environment must be protected as the people's common heritage. This means that even where environmental resources are in private ownership, their use must serve the public interest.

There must be inter-governmental co-ordination and harmonisation of policies, legislation and actions relating to the environment, and where conflicts of interests arise between organs of state, these must be resolved through conflict resolution procedures.

Environmental management must be properly integrated and must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.

Development must be socially, environmentally and economically sustainable.

A risk-averse and cautious approach must be applied, which takes into account the limits of current knowledge about the consequences of decisions and actions.

The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising such effects must be paid for by those responsible for causing harm in the first place.

8.2.4 Other Important Legislation

Federation of Drakensberg User Groups

The following Acts may also have a bearing on the application:

- The Conservation of Agriculture Resources Act N^{o} 43 of 1983
- The National Water Act No 36 of 1998
- The Mountain Catchment Areas Act N^{o} 63 of 1970
- The Physical Planning Act N^{o} 125 of 1991

In addition to the above the following policies and research should also be addressed:

- Drakensberg Approaches Policy (Martin, 1990)
- Development Control Scheme for Natal Drakensberg Babangibone and Garden Castle Development Nodes (W van Riet, 1992)
- The Wetlands of Natal and KwaZulu (Begg, 1990 (4 parts))

8.2.5 Conclusion

The above aspects set out some of the legal issues and procedures any application in the area concerned will need to contend with. The requirements pose an onerous and detailed set of issues that will need to be canvassed in order to obtain the necessary authority to proceed with a project of this nature.

Not only are such processes complex and time consuming but they are also expensive. The Applicant will need to conduct a thorough pre- feasibility in order to evaluate the legal, financial, physical and practical viability of the project before incurring unnecessary expenses and before raising unrealistic and potentially disastrous expectations for the people of the broader region and the Mnweni valley in particular.

8.3 PROPOSED SITE

As discussed earlier in Section 8.1, a previous study identified 16 possible sites located in the tribal areas not only of the Amangwane, but also the Amazizi. The shortcomings of such a limited area was mentioned and the need of investigating the entire Berg for the best possible sites needs still to be done.

The van Riet (1994) study found that two sites in the northern Amazizi tribal area located in the Busingata valley were considered more suitable as access to them would be very much cheaper than the site in the Mnweni valley that was considered the 3rd most suitable site. The site in the Mnweni valley called “Alternative 15: nThonjelana Valley Option B” has the lower station near Scaly and Sunshine Caves in the valley on Sketch 505/05 (Appendix 1) called Stream A, at an approximate level of 2 000 metres amsl. The top station is north of North Peak. It appears to be the same site as that which has been assumed in the Grant Thornton Kessel Feinstein document.

For the purposes of this study the same lower station site has been assumed. The upper station has been assumed on the North Peak but this difference should not effect the viability. Possible sites in the valley of Stream B on Sketch 505/05 have not been investigated. Locating the cableway in Stream B valley would have the advantage of not affecting Stream A valley, which is a popular hiking trail with access to the escarpment via Rockeries Pass. Stream B valley has no pedestrian access to the escarpment.

The proposed site was inspected in April 2000. A possible suitable site for the lower station was identified near Sunshine Cave located on the Sandstone in the north side of Stream A.

8.4 PROPOSED FACILITIES

8.4.1 General

To provide public access to the Lower Station would be costly, inappropriate and impractical. It is therefore proposed that a parking facility be provided in the vicinity of the confluence of the Mnweni and nTonjelana rivers. From there, passengers could be shuttled up to the Lower Station by custom-built busses on a narrow road that would follow the topography as much as possible so as to minimize the negative impacts on the environment. Note that the possibility of the cableway being used to transport goods as well as people has not been investigated. All facilities should conform to a standard that in international tourist would expect.

The proposed facilities, which will be discussed in more detail below, are:

- Access road to parking area

- Parking area
- Access road to lower station
- Lower station
- Upper Station
- Electrical supply
- Water Supply
- Sanitation
- Solid waste

8.4.2 Access road to parking area

The existing gravel road that starts near Woodstock Dam up the Parking area at the nTonjelana River will need to be upgraded to a surfaced road. Refer to Sketch 505/02 (Appendix 2). The road length is 17 kilometers. Provision should be made for pedestrians.

8.4.3 Parking area

A parking area for all visitors, hikers, campers and staff will be required. The main building will house all staff and visitors facilities such as a visitors lounge and toilets, reception and ticket purchase area, restaurant and take away, kitchen, craft, book and café shop, first aid room etc. Staff facilities such as housing, offices, storerooms and toilets and lounge, kitchen, amongst others, will be required.

Picnic areas, braai areas and under-cover shelter for visitors should also be provided.

Services such as water, electricity, sanitation, solid waste, telephones and the like will need to be provided.

8.4.4 Access road to lower station

As previously mentioned, this road will not be open to the public other than residents in the valley and will be essentially a one way road with occasional passing bays that will closely follow the topography to minimize the environmental impact. The total length of the road is 11 kilometers. Provision will be required for pedestrians.

Electricity and communication links will be laid underground along the route over the last 2 km.

8.4.5 Lower Station

The lower station tower, workshops (crane), storerooms, electrical sub station (crane) will be situated here. An embarkation area for the busses and parking for emergency vehicles only will be provided.

Limited visitor facilities, such as a waiting area under shelter and toilets, will be required. Provision for emergency rescue equipment storage must be provided.

Services such as water, electricity, sanitation, solid waste and phones will be provided. The facility for security personnel and the standby emergency power generation plant will be located here.

8.4.6 Upper Station

At the upper tower a visitor lounge and viewing area will be required. Some provision for staff will also be required.

Short walking routes are to be made safe with a number of viewing points provided and ‘no-go’ areas clearly marked.

Services such as water, electricity, sanitation, solid waste, phones will be provided. The facility for security personnel could be located here.

8.4.7 Electrical Supply

The power requirement for the cableway is estimated to be 2 MVA. It is assumed that the nearest connection to the National Grid, which has spare capacity, is Wood stock dam and thus this service will be required to be brought to the site. Underground cables for the last two kilometres to the parking area and up to the lower station will be appropriate for aesthetic reasons. Emergency power generation facilities to prevent standing passengers on the cableway will be provided.

8.4.8 Water Supply

As mentioned, the Parking area and both upper and lower stations will require a water supply. Perhaps the Upper Station can have its water transported up with the cableway. It may be cost effective to locate one river extraction unit and treatment works at the lower station and to gravitate the supply down to the parking area. There is no local piped water supply and provision should thus be made for some water to be reticulated to the local community.

8.4.9 Sanitation

Sanitation facilities will be required at all three areas. The upper station could have waterless toilets to minimize the volume of wastewater that will need treatment. Sewage treatment will be required to an appropriate standard for this sensitive catchment area.

8.4.10 Solid Waste

A centralized solid waste bin area can be located at the parking area for disposal at Bergville.

8.5 DESIGN PARAMETERS AND ASSUMPTIONS

8.5.1 Introduction

As has already been mentioned, the intention is to attract international tourists and it is therefore necessary that the appropriate high standards that will be expected from this class of tourist be provided in all facilities.

8.5.2 Estimate of expected users

Cape Town presently receives in the region of 830 000 foreign visitors per year and about 2 million local visitors (www.gocapetown.co.za, 1999). The success of the Cape Town cableway is rooted largely in the world-wide awareness of Table Mountain as a tourism icon of the southern tip of Africa, and the fact that there is a city of over 2 million people at its foot.

As mentioned in Section 6.1, some 348 000 local people go to the entire Drakensberg area every year, plus about 135 000 foreign tourists (KZNTA reports, 1999). Total visitor numbers, therefore, are in the region of half a million people, both foreign and local.

In terms of where the visitors go, the KZNTA surveys (1999) found that 32% of the foreign visitors went to the Northern Berg, 39% to the Central Berg and 24% to the Southern Berg. This translates to 43 200, 52 650 and 32 400 people to each area respectively.

With domestic visitors, 19% went to the Northern Berg, 44% to the Central Berg and 38% to the Southern Berg. This translates to 66 120, 153 120 and 132 240 domestic visitors to each area respectively. The table below clarifies this further:

	Northern		Central		Southern	
	No.	%	No.	%	No.	%
Foreign Visitors	43 200	32	52 650	39	32 400	24
Domestic Visitors	66 120	19	153 120	44	132 240	38
Total Visitors	**109320**		**205770**		**164 640**	

If the KZNNCS figures are used, the greatest number of visitors uses the Northern Drakensberg as the following table indicates:

	Northern	Central	Southern
Day Visitors	119 564	28 220	16 912
Overnight Visitors	61 921	34 353	10 454
Total Visitors	**181 485**	**62 573**	**27 366**

However, it should be noted that since the 1997/98 year, there has been a significant change in the facilities available in the Northern Drakensberg with the demise of the Royal Natal National Park Hotel and related facilities. The most recent figures available from the KZNNCS state that there was a total of 254 923 users of the uKhahlamba Drakensberg park areas and, although these figures are not complete, there has been a reduction in the number of visitors since the 1997/98 year where the total was 271 424.

It is likely that a significant number of those people visiting the Northern Drakensberg areas would make use of the cableway at least once. Furthermore, many from the Central areas, too, are likely to make use of such a facility at least once. It is unlikely, however, that people in the Southern Drakensberg areas would undertake a drive of several hours do so, and even less likely with the constant increases in the petrol price. Accommodation facilities in the Southern Drakensberg area report a 30-35% decrease in use compared with the same period last year, with the main reason being expense (Southern Drakensberg Publicity Association, interview, October 2000).

It can been seen then, that there are varying estimates as to the percentage of total Drakensberg visitors making use of the Northern Drakensberg area, but for the purposes of this report, estimates of potential users are based on the totals using the entire Drakensberg area.

Being extremely optimistic, it would be possible to expect about 20% of the total number of visitors to the Drakensberg to visit the cableway i.e. about 100 000 per year. This represents about 32 % of Northern and Central berg visitors. However, it is likely that two other factors will affect these numbers. Firstly, advertising would probably increase the visitor numbers, at least initially, as will its novelty value. Secondly, such a trip is likely to be done once, or at the most, twice, by local or domestic tourists, and such tourists are the mainstay of the industry in that area. Foreign tourism is really minuscule and unlikely to increase dramatically, even with a cableway.

As to projected increases, it seems the Deloitte's report (1994), mentioned elsewhere in this report, used an annual increase of 5% on visitor numbers, or numbers using the cableway. Other sources have suggested a 10% increase, but that, too, is overly optimistic. The foreign tourism increases for 1999 over 1998 were in the region of 3%. Domestic tourism, too, suffered smaller increases than had been estimated based on previous trends.

It appears from careful consideration that the figure of 305 000 visitors mentioned in the Grant Thornton Kessel Feinstein document is over optimistic, and it is suggested here that a lower figure of 80 000 per year with a 5% growth per annum and an upper figure of 100 000 with a 10% growth per annum is more feasible.

For the purposes of designing the required facilities, the 100 000 figure has been used with an annual growth rate of 10% and provision has been made for a 5 year growth. The total annual visitor figure used for design is therefore 133 000.

To provide for 305 000 users, the cost of the cableway and facilities will have to be re-evaluated.

Although there has been mention of the possible income from night or off-peak transport of goods down the mountains from the top, or even back up. It is doubtful that this sort of cableway would be practical for the transport of goods given that:

- the low gondola tare weight of 420 kg,
- regular freight trucks might not be able to negotiate the access road to the lower station, and
- turning, loading and unloading facilities at the lower station would be difficult to provide.

In view of this no provision has been made for access roads to the upper cableway station, and the topography in this area would make the construction of a road extremely difficult.

8.5.3 Access Roads

It is proposed that the access road should be a surfaced all weather road with a design speed of 60 kilometers per hour and a road width of 6.0 metres. Storm water structure should have a capacity of the 100-year recurrence interval flood flow. Road layers will be assumed as follows:

Premix	30mm
Base	100mm - C3
Sub-base	150mm – C4
In-situ	or 150mm imported G7

The shuttle road from the parking area to the lower station will be 3.0 metres wide with passing bays. The required restrictions on horizontal and vertical alignment will be relaxed and the road will follow the natural ground alignment as much as possible with cuts and fills avoided as much as possible. The same layer design as the main access road can be used.

8.5.4 Main design and evaluation inputs

An annual growth rate of 10% in visitor number has been assumed and the facilities have been designed for the peak daily expected visitors after 5 years of operation. An annual inflation rate of 5% has been assumed. The adult children ration has been assumed at 7:3.

A peak factor of 4 has been assumed to provide for the peak periods. From the annual expected visitors the daily average has been calculated assuming that the cableway will be operational for 292 days of the year. This daily figure has then been multiplied by four to arrive at the daily maximum visitors.

A daily operational duration of 6 hours has been assumed making allowance for weather considerations.

All input assumptions are summarised in the table below:

Mnweni Cableway - key input factors			
Design			
Days in operation per annum			292
Hours per day			6
Passenger volumes		Adults	70,000
		Children	30,000
Peak Design Factor			4
Construction and commissioning (Months)			14
Revenue			
Passenger tariffs	Adults		70
	Children u 16		35
Financial			
Interest rate per annum			14%
Inflation rate per annum			5.0%
Growth rate in volumes per annum			10.0%
Expenses			
Maintenance of buildings : % of capital costs			2.5%
Maintenance of cableway : % of capital cost			3.0%
Maintenance of water supply : % of capital cost			3.0%
Maintenance of sanitation system : % of capital cost			4.0%
Total Maintenance percentage of capital			12.5%
Insurance costs: % of capital cost			0.1%
Land lease : Area leased in ha			30
	Cost per ha per annum		500
	Total fixed lease cost		15,000
	Turnover portion of lease		2.5%
Sundries:	Consumables % of turnover		3.0%
	Advertising % of turnover		10.0%
	Other % of turnover		2.0%
Variable maintenance costs % of turnover			0.5%

The cableway will require permanent employees as set out in the table below. While certain categories in this may appear high, the current labour legislation and a maximum working week of 43 hours have been taken into account, bearing in mind the cableway must be able to run on weekends and public holidays all year round.

Permanent staffing salary and wage structure	No		Month	Year
Manager	1	@	5,000	60,000
Sec/PRO	1	@	3,000	36,000
Bookkeeper	1	@	3,000	36,000
Ticket office clerks	2	@	2,000	48,000
Operators	4	@	2,000	96,000
Fitter	2	@	3,000	72,000
Shuttle bus drivers	12.4	@	2,000	297,600
Security guards	4	@	1,000	48,000
Cleaners etc	4	@	700	33,600
Total annual staff cost	**31.4**			**727,200**

8.5.5 Cableway

Details and assumptions made with regard to the cableway are as follows:

Cableway design criteria	
Length (metres)	2000
Elevation (metres)	1153
No of passengers per car	6
Time of one way trip (minutes)	15
Turn around time incl. travel (minutes)	20
Number of trips per day is	18
Design Demand per day (people)	1849
Daily operation hours	6
Number of cars required	17
Passengers per hour	308

8.6 ESTIMATE OF COST

8.6.1 Access Road

The cost per metre used for the 17 kilometers, 6 metre wide access to the parking area is R1 200. Additional amounts have been allowed for the major drainage structures that will be required.

8.6.2 Shuttle Road

The cost per metre for the 11 kilometers, 3 meter wide shuttle road to the lower station is R600 with additional amounts allowed for the major drainage structures.

8.6.3 Cableway

Unfortunately no detailed cost for the cableway has been obtained. One supplier has told us we can work on $4 million for the mechanical and electrical and 50% of this for the civil works and we have used these figures based on an exchange rate of R7 to US$ 1.

8.6.4 Parking Area

Waiting facilities need to be provided for the visitors and the peak hourly number has been provided for at 2 square metres per person for 375 persons.

8.6.5 Other

It has been calculated that 11 shuttle buses will be required to transport the visitors to the lower station.

A Summary of the capital costs is given in the Table below:

Mnweni Cableway **Capital Costs Summary**	
Access road to parking area	21,285,000
Access road to Lower Station	7,355,000
Parking area facilities	4,567,213
Shuttle busses	5,500,000
Lower Station facilities	1,825,000
Upper Station facilities	1,025,000
Cableway civils	14,000,000
Standby Generators & Changeover equipment	2,300,000
Electricity supply	1,000,000
Water supply	250,000
Sanitation	600,000
Computers, phones, cabling etc	200,000
Subtotal costs subject to fees	**59,907,213**
Fees and disbursements 12%	7,188,866
Cableway mechanical & electrical	28,000,000
Feasibility Study	100,000
Site supervision	882,000
Geo-technical Assessment	100,000
Land Survey & GIS	150,000
Environmental Assessment	200,000
Social and Institutional Development	150,000
Legal Costs	100,000
Advertising and promotion during construction	600,000
Subtotal	**97,378,079**
Allow for contingencies of 20%	**19,475,616**
Total	**116,853,694**
VAT @ 14%	**16,359,517**
TOTAL EXPENDITURE	**133,213,211**

8.7 ECONOMIC ANALYSIS

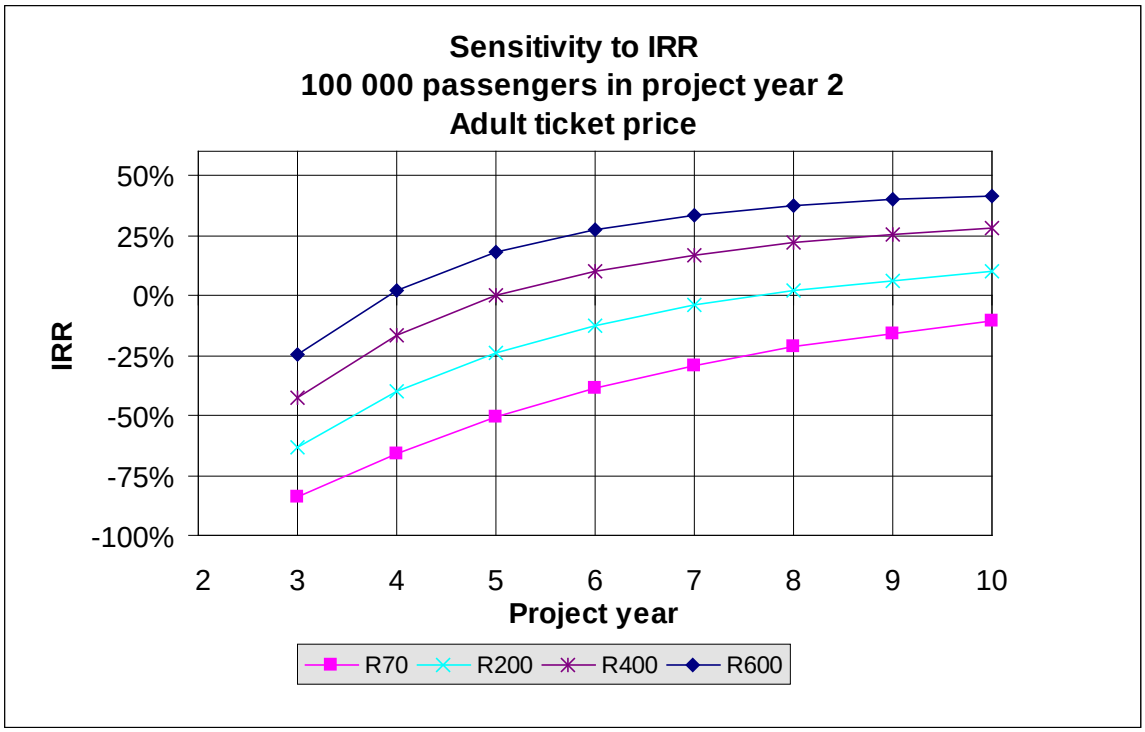
8.7.1 Base economic viability

The table below shows the income and expenditure, derived profit or loss, internal rate of return (IRR) and net present value calculated at 14% per annum for the first 10 years of operation based on the costs and assumptions mentioned above:

Projected annual income statement										
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Passenger volumes		70,000	77,000	84,700	93,170	102,487	112,736	124,009	136,410	150,051
		30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308
Tariffs		70.00	73.50	77.18	81.03	85.09	89.34	93.81	98.50	103.42
		35.00	36.75	38.59	40.52	42.54	44.67	46.90	49.25	51.71
Revenue:	0	5,950,000	6,872,250	7,937,449	9,167,753	10,588,755	12,230,012	14,125,664	16,315,142	18,843,989
Passenger turnover	0	5,950,000	6,872,250	7,937,449	9,167,753	10,588,755	12,230,012	14,125,664	16,315,142	18,843,989
Expenses:	15,000	3,669,366	3,852,835	4,045,476	4,247,750	4,460,138	4,683,145	4,917,302	5,163,167	5,421,325
Staff	0	763,560	801,738	841,825	883,916	928,112	974,518	1,023,243	1,074,406	1,128,126
Maintenance of buildings	0	112,014	117,615	123,496	129,671	136,154	142,962	150,110	157,615	165,496
Maintenance of cableway	0	226,449	237,772	249,660	262,143	275,250	289,013	303,464	318,637	334,569
Maintenance of water supply	0	7,875	8,269	8,682	9,116	9,572	10,051	10,553	11,081	11,635
Maintenance of sanitation	0	25,200	26,460	27,783	29,172	30,631	32,162	33,770	35,459	37,232
Electricity	0	1,291,721	1,356,307	1,424,122	1,495,328	1,570,095	1,648,599	1,731,029	1,817,581	1,908,460
Insurance costs:	0	102,247	107,359	112,727	118,364	124,282	130,496	137,021	143,872	151,065
Land lease Fixed	15,000	15,750	16,538	17,364	18,233	19,144	20,101	21,107	22,162	23,270
Turnover portion of lease	0	156,188	163,997	172,197	180,807	189,847	199,339	209,306	219,771	230,760
Consumables	0	187,425	196,796	206,636	216,968	227,816	239,207	251,167	263,726	276,912
Advertising	0	624,750	655,988	688,787	723,226	759,388	797,357	837,225	879,086	923,040
Other	0	124,950	131,198	137,757	144,645	151,878	159,471	167,445	175,817	184,608
Variable maintenance:	0	31,238	32,799	34,439	36,161	37,969	39,868	41,861	43,954	46,152
Profit(loss) before tax and financing	(15,000)	2,280,634	3,019,415	3,891,972	4,920,003	6,128,617	7,546,867	9,208,362	11,151,975	13,422,664
Capital	133,213,211	151,878,061	170,860,356	191,761,390	214,716,013	239,856,251	267,307,509	297,183,693	329,581,048	364,570,420
Interest charges	18,649,850	21,262,929	23,920,450	26,846,595	30,060,242	33,579,875	37,423,051	41,605,717	46,141,347	51,039,859
Profit(loss) before tax	(18,664,850)	(18,982,295)	(20,901,034)	(22,954,622)	(25,140,239)	(27,451,258)	(29,876,184)	(32,397,355)	(34,989,372)	(37,617,195)
IRR (Internal rate of return)			-84%	-66%	-51%	-39%	-29%	-22%	-16%	-11%

The analysis shows that the scheme is not viable. The income increases resulting in the 10% assumed growth in visitors does not keep up with the annual losses. The IRR and NPV show unacceptable returns on investment.

Ideally, to attract investors, the scheme should start showing a profit immediately and the capital borrowed should be paid off in less than 5 years. Using the same analysis model a sensitivity study was conducted in respect of the tariffs and the results plotted, as shown below:



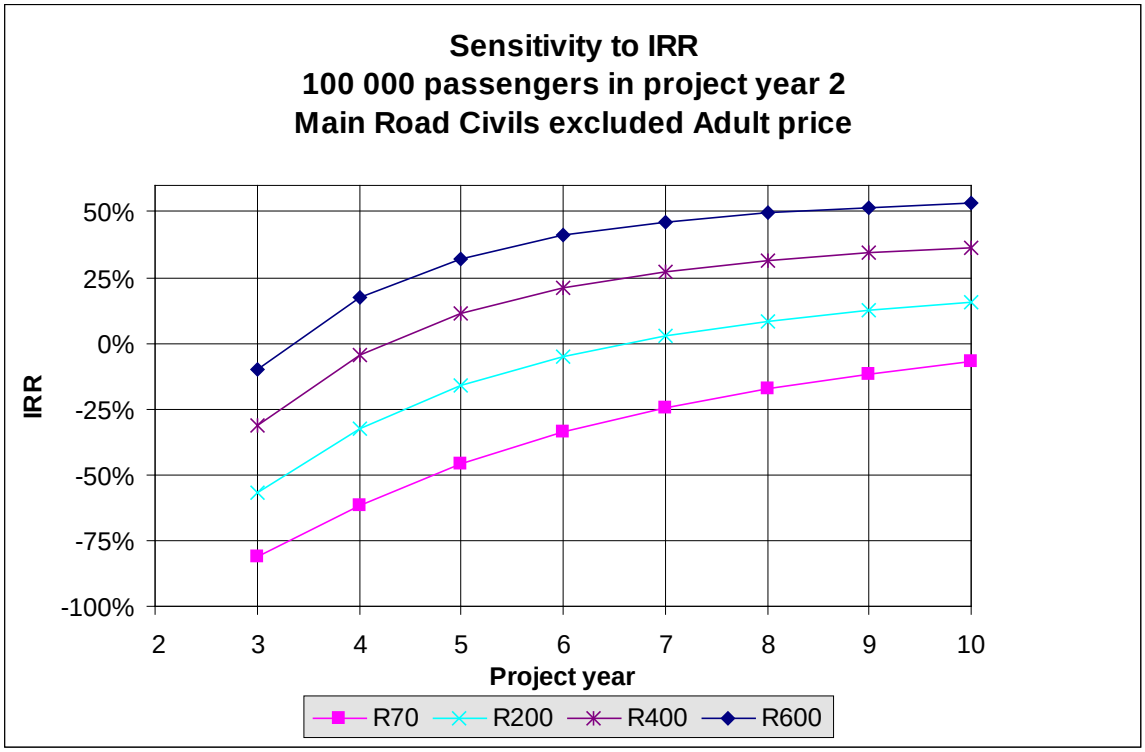
The graph shows that acceptable return on investment (IRR > 0 by 5th year) is only achieved with adult ticket prices between R400 and R600. In comparison a return trip ticket on Table Mountain Cableway in Cape Town is, at present, R75 for an adult.

8.7.2 Exclusion of upgrading of the main access road

The provincial road department already has R2.5 million approved to grade and seal this road, and it is understood that this work will be carried out shortly. Note that these improvements would not cope with the traffic demanded by the project.

There is a possibility that the provincial road department would bear the cost of upgrading the existing road from km # 0 to km # 17 as detailed in 8.6.1. This amounts to capital expenditure of R21.85 million, excluding associated fees. This would result in an overall reduction of capital from R133.2 million to R100.6 million.

The same sensitivity analysis in respect of IRR was run and the result shown in the graph below:



As would be expected the return on investment improves but is still insufficient to make the project viable.

8.8 FORECAST VIABILITY AT INCREASED PASSENGER VOLUMES

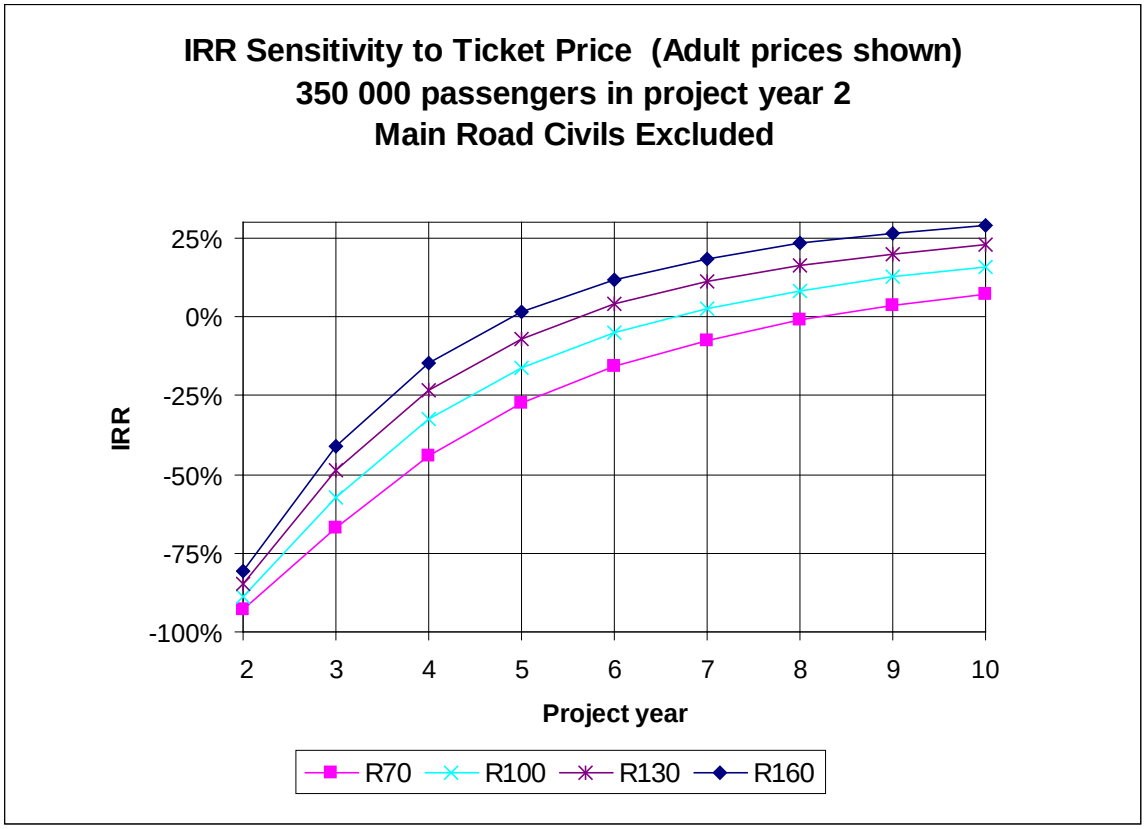
It is not accurate to perform an economic sensitivity analysis in terms of increasing passenger volumes without estimating the associated increase in capital expenditure brought about by the increase in volume. Clearly this would require the complete estimate to be redone. However in view of the fact that major elements of the estimate such as access roads would be unaffected by such an increase, the same model with appropriate adjustments to the assumptions has been used to obtain a feel for this scenario.

8.8.1 Change in design criteria

- The passenger volume (year 2) will increase from 100 000 to 350 000
- All areas directly accommodating visitors (i.e. buildings, parking etc) have been increased by a factor of 3.5.
- Areas not directly accommodating visitors have been increased by factors varying from 1.5 to 2 as appropriate.
- Shuttle busses have been increased to cope with the greater demand.
- Permanent staffing has been increased appropriately.
- The mechanical, electrical and civil portions directly related to the cableway itself have been increased by 50%.
- Maintenance cost percentage remains unchanged.
- The cost of upgrading the main road has been excluded as discussed in 8.7.2.
- The cost of the access road to the lower station increases to cope with increased traffic.

8.8.2 Economic Viability

The result increases the capital estimate to R174.4 million, and the sensitivity analysis to ticket price is shown in the graph below:



While a dramatic increase in the viability of the project is seen, return ticket prices would still need to be R160 or greater for an acceptable return on investment.

9. CONCLUSIONS AND RECOMMENDATIONS

This study has shown that the proposed cableway in the Mnweni is not economically feasible based on current tourism figures even with optimistic weighting given in respect of initial passenger volumes, growth in passenger volumes, inflation and interest rates.

Furthermore the extrapolation of this engineering estimate to cope with a 3.5 fold increase in passenger volumes also indicated that the project is still not viable.

It is recommended that the phased development as proposed by the IPS report is supported by all parties interested in the protection and development of this area.

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PROCEEDINGS OF THE FDG WORKSHOP ON THE MNWENI CABLEWAY
QUEEN ELIZABETH II PARK
14 OCTOBER 2000

(*Editorial note: comments on these proceedings were received from Dr Tony Heher – his comments are in parentheses in the appropriate places)*

1. Welcome

Ilan lax, Chairperson of the Federation of Drakensberg User Groups (FDG), opened the workshop and welcomed everyone to the meeting. It was noted that there would be no presentation by the uThukela Regional Council (uTRC) on their proposals for a cableway in the Mnweni area and that Bert Martin attended the meeting to represent the uTRC but as on observer only. (*Arrangements were made for members of the Mnweni community to attend but they had apparently not been able to rent suitable transport*).

The agenda was adjusted to accommodate the change and the workshop was to start off with the FDG's presentation by Steve Cooke. This would be followed by a short presentation by Dr Tony Heher.

All those attending introduced themselves and mentioned the organizations they represented or the interest they had in the workshop.

2. FDG Presentation

Steve Cooke presented the FDG's pre-feasibility report to the workshop.

The main findings of the report were, based on visitor numbers of 100 000 per year and maximum adult ticket prices of R600 per person, that even in a period of 10 years the project would not be economically viable.

The estimated cost of the project, from a highly conservative stance, was in the region of R133 million and there was no indication as to who would be funding the project.

The final recommendations were that a phased development such as that proposed by the IPS report was the most appropriate and was supported by all parties interested in the protection and development of the area

After the presentation there was discussion on a number of issues including the various options presented in terms of ticket costs, visitor numbers and the like. It was also noted that helicopter flips, as an alternative income generating option, cost some R350 for about a 10 minute flight and was not considered to be either suitable or sufficiently income-producing on the scale needed for the area.

It was also noted that in terms of cost, tickets for the cableway in excess of R100 would encounter serious consumer resistance.

3. Tony Heher's Presentation

Tony Heher gave a brief overview of proposals for possible developments on the Lesotho side of the Drakensberg. It was noted that the Mnweni area, or indeed the South African Drakensberg area, should not be seen in isolation, but any project should take into account linkages and consequences on both sides of the watershed.

Several sets of statistics were provided, amongst others that there was the potential for 300 000 additional tourists, 5000 jobs, contributions to biodiversity conservation and poverty alleviation. Geert Creemers's model was also discussed.

It was also noted that at present Lesotho received about 10 000 visitors per year, there were three existing road systems but these needed links between them, and the Highland Water Scheme generated some R112 million per year.

4. Summing Up

Ilan Lax summed up the presentation, the findings and the comments up to that point. He noted that there appeared to be little sense in looking at the development of a cableway in isolation. What should rather happen was that development should be looked at in a broader sense. The cableway on its own was not feasible.

Mr Michael Taylor, from the Town and Regional Planning Commission, provided the workshop with a brief outline of the proposals arising from the Special Case Area Plan (SCAP) for the Drakensberg. He noted that there had been a call for more development nodes than had been provided for already, and the Mnweni area may well be proclaimed one of them.

5. Discussion

Two approaches for a way forward were discussed - the graduated approach as presented in the IPS report by David A'Bear, and the 'honey pot' approach as presented by Tony Heher. It was felt that the incremental approach could work in the Mnweni area. (The "Honeypot" concept was discussed mainly in connection with Lesotho. See slides 5 & 18 for more details about why and wherefore. But the Honeypot and incremental approach are not mutually exclusive - see slide 9 for some more on this.)

Michael Taylor (TRPC) - It was also noted that framework planning for the Mnweni was important ie the SCAP, as no framework planning had previously been done. This must be private-sector driven as it is the money from the private sector which provides for that development. The facility or development project must thus be their choice as long as it fits in with environmental restrictions and regulations.

Andy Blackmore (KZNNCS) - the KZNNCS was looking at areas / owners / communities to 'bring in' to conservation along the borders of the uKhahlamba Drakensberg Park. Some of these may well be over the border on the Lesotho side.

The issue of what uses had more of an impact on the environment was raised - hikers / campers and the facilities they used as opposed to hotels and their guests. On the one hand one had impacts spread out over large areas as opposed to those contained in hotel precincts. On the other hand, what needed to be considered was the cumulative impact of the infrastructure supporting hotels vs the hikers / campers.

(It takes roughly 10 hiker-days to generate as much economic benefit as 1 hotel bed-night. Surveys show that typically about 10% of the 'Berg hotel residents go walking, so hikers have about 100 times more impact on trails than hotels (for a given economic benefit)! Of course the argument is more complex and must take into account many more factors, including cumulative impacts, but there is no doubt that there is a very substantial difference in impact.)

(There is a major difference in economic impact of different types of tourism - by two orders of magnitude or more. Slides 12 & 13 quantify some aspects of this. While local communities may benefit from a smaller percentage of large developments, the overall economic benefit to local communities is invariably larger from large developments. There are also well developed economic modeling procedures available to quantify how benefits accrue nationally, provincially and locally. These should be used to avoid wrong choices - and the irrational emotional debates that all to often cloud the issue.)

The issue of partnerships between private and public sectors was also noted.

Meridy Pfotenhauer (Bergwatch) - supported the cumulative impact of use of infrastructure for large developments such as hotels. She noted that there were already several projects

underway in the Mnweni area. In 2001 the community will look at producing a land use plan. The donga reclamation project and others are continuing and provide jobs for over 100 people. All projects should be 'informed' by the SCAP and other such framework plans.

Mark Astrup (KZNNCS) - Noted that there was mention made of zonation for the Berg some years ago. The Planning Department will be referring to that and where cableways might be allowed, and where helicopter flight paths might be permitted. In the case of the Mnweni area, there is a need to look at the NCS Planning Department's work and to work together.

Iona Stewart / Mike Taylor - There appears to be many bodies undertaking planning of various sorts but very little coordination between them. There is far too much duplication and fragmentation. The overall planning body is the TRPC and all other bodies must defer to the commission. At present this does not appear to be happening.

Greig Stewart (MCSA) - The matter of scale needs to be considered. Within the park planning should be under the auspices of the NCS, on a provincial level it should be controlled by the TRPC. The Berg is difficult in that it falls under several different planning authorities. Even so, as a whole it needs to be considered at a provincial scale and level. There need to be coordinated management policies for the whole Berg.

Ilan Lax (FDG) - Is there a comparison between the benefits to the community from the 'honeypot' or from ecotourism? There is a difference in landuse between South Africa and Lesotho in terms of the Berg. In South Africa, there seemed originally to be the 'exclusion' model, where the Berg areas under the control of the NCS were exclusively for conservation, then there was the tourism aspect where some areas were made available for the development of the tourism industry, and this is about where it stands today. In Lesotho there is 'dual' land use. Hiking trails go past the odd hut and flock of sheep or herd of cattle and no one seems to object to that. Is there a difference in the gains to the community for high cost amenities and for those of lower cost - eg from a Sabi Sabi or a Kruger Park?

Bert Martin (uTRC) - Is there any acceptable site for a cableway in the Berg?

NCS - a cableway is not permitted in the NCS areas thus the only possibility is in the Mnweni. There could be links to Lesotho and these links need to be investigated. The Singati Valley is more feasible, but the NCS would not allow it in a wilderness area although in other areas it would be possible.

Tony Heher - There is a need to look at what is in Lesotho in terms of links between the two countries and areas. The wilderness areas need to be considered. There is a need to move people away and into Lesotho as well as between the various areas of Lesotho. There is a need to consider the creation of a $600 / day tourism development. (*The correct figure is R600/day*)

Meridy Pfotenhauer (Bergwatch) - A cableway cannot be looked at in isolation. The Cape Town support base for their cableway is very strong. In the Berg it does not yet exist and would need to be created.

John Hone - If a cableway does not go to a freestanding peak it would be difficult to be planned and it must be planned.

Greig Stewart - QwaQwa is where an environmentally friendly cableway is possible, plus it would be more economically viable there.

Ilan Lax - the province will be spending some R150 000 on a feasibility for the cableway. However, we need an integrated development plan - all else is a waste of time. Such a project cannot be taken in isolation but must be integrated with all others. There must be integrated development with development nodes, wilderness and differences of scale - the SCAP. Lesotho is inextricably liked with South Africa - economically, politically, on the issue

of accessibility - so any developments are also linked. All development plans must therefore also be linked.

Henk Theron (Provincial Dept of Town Planning) - A Planning Development Committee needs to be constituted now. It is important to discuss this issue once and for all. The regional councils are going to receive money for projects so it needs to be clear as to whether this project is to receive support or not.

Ilan Lax - there should be a stop to the process of providing funding for projects until we have an Integrated Management Plan.

Henk Theron - All I&AP's, including the FDG, should be on the committee looking at development projects.

There is a need for the regional council to look at the FDG report and check it and then either discuss the project or shelve it, and move on to something else.

Bert Martin - the uTRC may want to pursue an independent study.

Mike Taylor - will talk to the Commission on this. A feasibility of R150 000 of taxpayers' money being well/ill spent should be carefully considered. Why replicate the FDG study with the province's R150 000?

Comments will be written up and passed on to the uTRC. There is the realization that there needs to be a more integrated approach to development in the Berg in line with the SCAP.

Meridy Pfotenhauer - raising expectations with a possible project is one thing. Doing so when there is no clue the project will fly is quite another. This report shows that the project is not feasible. If the council does not accept this study they must do their own before any further proposals are done.

Ilan Lax – Thanked everyone for attending and for their contributions. A letter of thanks is to be sent to Daniel Reinecke for his contribution to the report.

The workshop ended by 1pm.

FEDERATION OF DRAKENSBERG USER GROUPS - MNWENI CABLEWAY WORKSHOP

October 14, 2000 9am

NAME	ADDRESS	PHONE	FAX	EMAIL
1. Brett Corcoran	KZNNCS, Box 13053, Cascades 3202	033 8451460	033 8451499	corcorab@kznncs.org.za
2. Iona Stewart	Box 256, Merrivale, 3291	033 3304942		iona@sai.co.za
3. Greig Stewart	Box 256, Merrivale, 3291	033 3304942	033 3303665	stewart@nu.ac.za
4. Steve Cooke	46 Balmoral Dr, Cowies Hill	031 7010155	031 7015197	swc@cookeandson.co.za
5. Karen Kohler	9 Cleo Lodge, 180 Riley Rd, Durban 4001	031 2087510		kkohler@pixie.co.za
6. Elsa Pooley	Box 295, Scottburgh 4180	039 9731503		pooleywildlife@sco.eastcost.co.za
7. Mike Taylor	4 Kensington Dr, Durban North 4051	031 5647480	031 5647480	taylordm@icon.co.za
8. Dave Sclanders	60 Collins Rd, Hayfields	033 3868706	033 3868706	dave-sclandes@voermol.co.za
9. Tony Heher		082 654 5582		heher@mweb.co.za
10. Graham Smith	5 Oakfield Rd, Malvern	031 2603204	031 2603217	smith@nu.ac.za
11. Ilan Lax	02 Roberts Road Pmb	033 3425726	033 3425726	hallax@sai.co.za
12. Clem Robins	7 Lincoln Pl, Pinetown	031 7016810		robinsca@telkom.co.za
13. M Kirsten	PB X1015 Hillcrest 3650	031 7658052	031 7658052	
14. Meridy Pfotenhauer	115 Boom St Pmb	033 3944064	033 3944064	
15. Mark Astrup	KZNNCS, Box 13053, Cascades 3202	033 8541351	033 8451746	mastrup@kznncs.org.za
16. John Hone	1 Outspan Rd, 3630	031 2671707	031 2087319	sharper@artpub.co.za
17. Andy Blackmore	KZNNCS, Box 13053, Cascades 3202	033 8451461		ablackmore@kznncs.org.za
18. Bert Martin	Box 11302 Dorpspruit 3201	033 3456025	033 3421606	metroplan@pixie.co.za
19. Keith Ashton	27 Riley Crescent, Howick, 3290	033 3303763	033 3303763	keimarg@mweb.co.za
20. Margaret Ashton	"	"	"	"
21. Terry Everson	Univ of Natal, PB Z01 Scottsville	033 2605509	033 2605708	eversont@nu.ac.za
22. Philip Gatenby	270 Vause Rd, Durban 4001	031 2013592		
23. Sarah Allan	KZN Dept of Agric @ Env Affairs	033 3559120	033 3559122	leem@dae.kzntl.gov.za
24. H Bedingham	KZNNCS, Box 13053, Cascades 3202	033 8451977	033 8451922	bedinghh@kznncs.org.za
25. D Larsen	18 The Glade, Sheraton, 511 Mcarthy Dr	082 8297959	033 3473850	dlarsen@mweb.co.za
26. JH Theron		033 3556433		