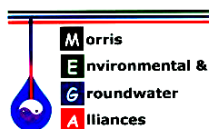


Department of Environmental Affairs
& Development Planning



RAPID REVIEW OF GOLF COURSE AND POLO FIELD DEVELOPMENTS

FINAL REPORT



With input from Grant Thornton and Bayette Development Consultants

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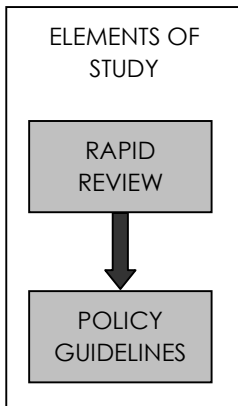
Golf Course and Polo Field Developments in the Western Cape

1 *Background and Introduction*

In October 2004 the Western Cape's Department of Environmental Affairs & Development Planning (DEA&DP) appointed a team of consultants to investigate the impacts of golf courses and polo field developments on the social, economic and natural environment. The study was initiated due to concerns that have been raised about the rapid increase in the number of such developments. Many of the concerns that have been raised and that resulted in the initiation of this investigation, have been experienced in other parts of the world, where a sudden increase in golf developments occurred (e.g. the state of Minnesota in the USA, the Halton Region in Canada, Spain, Ireland). Whilst there may be a greater emphasis on social aspects in the South African context, issues such as water use, fertiliser and pesticide use, use of land, impacts on agriculture, loss of biodiversity and visual impacts have emerged, at an international level, as key concerns in relation to golf course developments.

It must be noted that much of the information in this report is focused on golf estates, the reason being that most of the available data relates to these developments. Furthermore, the majority of parties with whom the project team interacted provided their views and perceptions on such developments, with some mentioning that their concerns related to large-scale developments in general. It was found that, in relative terms, polo field developments are not as significant unless they take the form of a polo estate (Refer to Section 4). This does not mean that these developments do not require management of environmental and socio-economic impacts. This is demonstrated by the fact that concerns regarding the negative environmental impacts caused by the construction of certain polo fields in the South Cape, resulted in their inclusion in the study. Additional information on polo field developments is provided in Section 4 of this document.

1.1 Terms of Reference



The terms of reference for the project cover two main elements:

- ◆ The Rapid Review in which the following issues must be addressed, based on *existing information*:
 - Social impacts
 - Economic impacts
 - Planning considerations (including alternative land uses)
 - Environmental considerations (including cultural and heritage issues)
 - Public utility services considerations
 - Mitigating measures
 - International and South African best practice.
- ◆ Development of draft policy guidelines, which address:
 - Issues raised in the rapid review
 - Relevant aspects of the PSDF
 - Guidelines and criteria for the evaluation of environmental and planning applications, including consideration of alternative land uses and mitigation measures
 - Sustainable development principles (environmental sustainability, economic equity and social responsibility)
 - Thresholds for locating golf course and polo field developments.

In addition to the above, the terms of reference require that public participation be undertaken and that the final report includes a record of participation activities and results. In this regard, several parties were consulted during the rapid review (interviews) and three workshops were held during the policy guideline development phase of the study.

1.2 Study approach

The work was undertaken in three Phases in order to fulfil the terms of reference.

- ◆ *Phase 1 – Initial Rapid Review*: The aim of this phase was to provide an initial, broad-brush overview of the socio-economic and environmental impacts of existing golf courses and polo fields. This phase of the project was completed on 29 November 2004, with a presentation to the Provincial Spatial Development Framework (PSDF) Summit. Initial feedback in the form of a presentation and summary progress report was provided to the Department on 9 November 2004. An updated draft report was released for comment in December 2004.
- ◆ *Phase 2 – Finalisation of the Rapid Review*: During this phase the project team followed up on key issues identified in Phase 1 to obtain additional information, with the purpose of finalising findings, conclusions and recommendations. A draft rapid review report, which was intended to

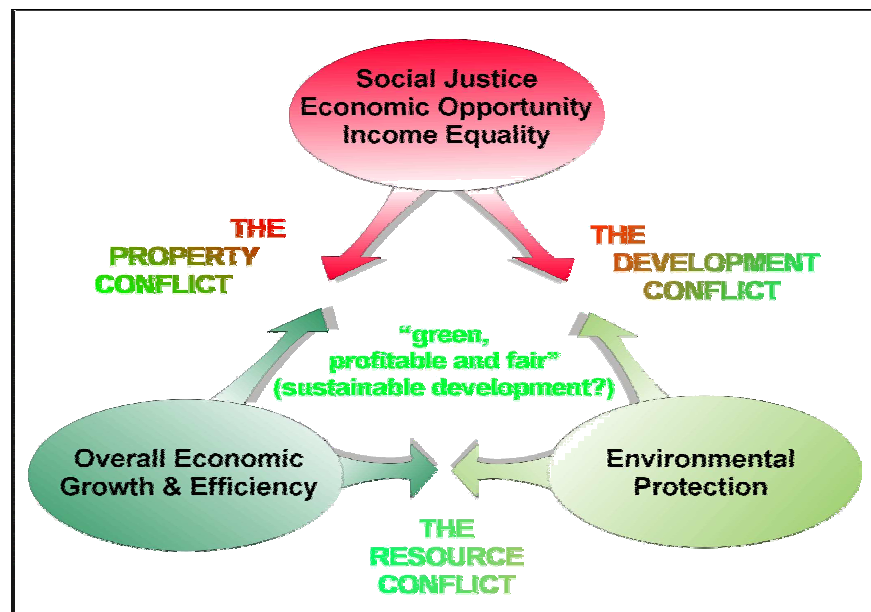
facilitate stakeholder engagement in the issues relating to golf and polo field developments, was published in December 2004. Over 170 responses were received. Limited additional hard information emerged through this commenting process. This final report has been updated on the basis of comments on the draft document and additional research undertaken by the project team, including visits to selected golf course and polo field developments.

- ◆ *Phase 3 – Formulation of Policy Guidelines:* The policy guidelines were developed¹, taking account of best practice and of the issues raised in the Rapid Review process. These guidelines have been formulated in a manner that provides for a practical tool to support the evaluation of applications (planning and EIA) and the associated decision-making processes.

1.2.1 Evaluation approach

TRIPLE BOTTOM
LINE EVALUATION
APPROACH

The approach to the rapid review is to assess golf course and polo field developments in terms of a range of issues that fall within the ambit of sustainable development. In applying the sustainable development framework, the project team were able to 'unpack' the issues and natural tensions that exist between economy, society and environment (illustrated below) as these pertain to golf course and polo field developments. This also allowed for an integrated approach to the evaluation of the impacts and benefits associated with these developments.



Accordingly, cross cutting issues have been identified to enable the consideration of the economic, environmental and social aspects within each. The following issues are addressed in this report:

¹ A draft of the policy guidelines was released for comment by I&APs in February 2005. A final client draft was submitted to the D:EA&DP at the end of March. This document was revised on the basis of feedback from the Department and a final draft was submitted in mid-May 2005.

- ◆ Spatial implications of golf courses
- ◆ Land use and availability
- ◆ Water use and demand
- ◆ Use of treated effluent and effluent generation
- ◆ Economic impacts
- ◆ Social and developmental issues
- ◆ Community considerations
- ◆ Institutional considerations

1.2.2 Information sources

In accordance with the brief, this study is based on existing information (such as reports) and written and verbal input² from various stakeholders. It was found that in general there is limited published information and research on the existing environmental and socio-economic impacts of golf course and polo field developments in the Western Cape. Whilst Environmental Impact Assessments have been undertaken for many of these developments, these serve to *predict* impacts and do report on *actual* impacts. In these circumstances written and verbal input from stakeholders is an important information source because it provides details on the perceptions and actual experiences of individuals and organisations in relation to these developments. Some responses on the draft Rapid Review report have been highly critical of the use of anecdotal evidence.

The project team is of the view that all inputs, whether in the form of hard facts or anecdotal experiences are of relevance to this study, since all information contributes to the picture or understanding of the social, economic and environmental impacts (both positive and negative) associated with golf and polo field developments. Interviews and meetings are accepted forms for gathering information on the experiences of communities in relation to development, that is, their historical experience with change (Taylor *et.al.*, 1995;). Wherever possible, anecdotal information has been verified or cross-referenced, through discussion with more than one party. Areas where additional research is considered necessary are dealt with in the recommendations (Section 5).

Information has been obtained from the following sources:

- ◆ *Survey*: A comprehensive questionnaire (Appendix A) was sent to a representative sample (Table 1), with the objective of obtaining information from a spread of facilities, in the following categories:
 - Golf estates (golf course with residential)
 - Private golf courses
 - Traditional golf courses
- } Golf course without residential

² It should be noted that the views and perceptions that are recorded in this report are part of the public participation process, which is an important component of this study. The DEA&DP's Project Steering Committee noted that such information should be recorded in this report.

- Polo estates (polo field with residential)
- Polo fields (polo field without residential)

The survey included questions on land use, infrastructure and services, employment, water use, environmental features, environmental management, local economy and social responsibility. The survey was submitted with a covering letter from the D:EA&DP requesting that facilities participate in this information gathering exercise. The facilities from the sample of 17 for which the completed survey has been received are highlighted (shaded in grey) in the Table 1.

In order to obtain more comprehensive information, the survey was also emailed or posted to all golf courses and polo field establishments on the database (i.e. those not included in the original sample), with the objective of obtaining more comprehensive information for the purposes of finalising the review. Those facilities outside of the original sample that have responded to the survey are shown in Table 2.

Table 1: Survey responses – original sample

NAME	TYPE OF FACILITY	LOCATION	STATUS
GOLF COURSE DEVELOPMENTS			
Arabella	Private Golf Estate	Overstrand – Bot River	Existing
Atlantic Beach	Private golf club, private housing	Metro - Melkbosstrand	Existing
Bredasdorp	Traditional golf course#	Bredasdorp	Existing
Boschenmeer	Traditional golf club, private housing	Drakenstein - Paarl	Existing
Clovelly	Private golf course	Cape Town Metro	Existing
Devonvale	Private Golf Estate	Stellenbosch	Existing
Erinvale	Private Golf Estate	Somerset West	Existing
Fancourt	Private Golf Estate	George	Existing
George Country Club	Private golf course	George	Existing
Goose Valley	Private Golf Estate	Plettenberg Bay	Existing
Pezula	Private Golf Estate	Knysna	Existing
Pinnacle Point	Private Golf Estate	Mossel Bay	Under construction
Rondebosch	Traditional golf course, privately run	Cape Town Metro	Existing
Simola	Private Golf Estate	Plettenberg Bay	Existing
Silverstrand	Traditional golf course#	Robertson	Planning
Vredenberg/Saldanha	Traditional golf course	Vredenberg/Saldanha	Existing
Worcester	Traditional golf course	Worcester	Existing

NOTE: # means that there is a proposal to develop a housing estate

Table 2: Survey responses – not in original sample

NAME	TYPE OF FACILITY	LOCATION	STATUS
GOLF COURSE DEVELOPMENTS			
Bellville	Traditional golf course	Bellville	Existing
Berg River	Traditional golf course	Veldrif	Existing
Ceres	Traditional golf course#	Witzenberg	Existing
Citrusdal	Traditional golf course	Cedarberg	Existing
De Salze	Private Golf Estate	Stellenbosch	Existing
Darling	Traditional golf course	Swartland	Existing
Helderberg Village	Private golf estate	Somerset West	Existing
Kleinmond	Traditional golf course	Overstrand	Existing
Lamberts Bay	Traditional golf course	West Coast	Existing
Milnerton	Traditional golf course	Metro	Existing
Mowbray	Traditional golf course	Metro	Existing
Parow	Traditional golf course	Metro	Existing
Pearl Valley	Private Golf Estate	Franschoek	Existing
Still Bay	Traditional golf course	Still Bay	Existing

NOTE: # means that there is a proposal to develop a housing estate

A total of 25 surveys have been returned, which amounts to a response rate of 33%. Some organisations that commented on the Draft Rapid Review were of the opinion that the response rate received at the time (25%) was inadequate for drawing any conclusions. Surveys are recognised as being a valuable way to gather information, but a disadvantage is that poor return rates are often experienced (Taylor *et.al.*, 1995). Given that the responses have come from a spread of golf estates and golf courses, valuable information has been obtained for the purposes of this Rapid Review.

- ◆ *Interviews:* Municipal and provincial officials, relevant government departments and agencies (e.g. Department of Water Affairs & Forestry, Department of Agriculture, South African Heritage Resources Agency), golfing industry representatives, polo representatives, NGOs and other interested and affected parties (I&APs) have been interviewed regarding issues surrounding golf courses and to gather relevant data. Most municipalities in the Western Cape were contacted to confirm information regarding existing and proposed golf courses, estates and polo fields. A database of all parties with which the team has interacted during the course of the study is provided in Appendix B. The items covered in the interviews included:
 - The number of applications that have been handled and proposals that authorities are dealing with currently (planning and environmental).
 - Views on key issues, concerns and benefits related to golf and polo field developments from a socio-economic and environmental perspective.

- The role and effectiveness of the Environmental Impact Assessment (EIA) process and the experience of I&APs in interacting with this process.
 - The economic, social and environmental initiatives that golf course developments have implemented.
 - Issues relevant to the economic viability of golf courses and the various ownership models that are being applied by these developments.
- ◆ *Review of existing information:* Available existing documentation was reviewed, including:
- Files relating to planning and EIA applications and related reports;
 - IDP and SDF reports;
 - Relevant provincial and local policies (e.g. Coastal Zone Policy);
 - Records relating to issues such as employment, water use, fertiliser use that were provided by some golf estates;
 - Environmental Impact Assessments (EIAs) for various golf estate developments for which a Record of Decision (RoD) has been issued. Most of these did not include a socio-economic specialist study;
 - Socio-economic impact studies undertaken on behalf of golf developments³;
 - Reports on international trends in the golfing industry and the environmental management of golf courses;
 - Inputs from interested parties and organisations. This included submissions prepared for other purposes that were copied to the project team, submissions made in response to particular applications and submissions that were specifically prepared for this study.
 - Commissioning of an independent economic impact assessment by Grant Thornton, due to lack of readily accessible information. In the course of their study, Grant Thornton reviewed various economic impact studies including that undertaken by Howarth Leisure Consulting for the Golf Estate Developers Forum⁴.
- ◆ *Review of international literature:* Available documentation was reviewed (from countries such as Spain, the USA, Scotland, England, Canada and China) with particular reference to:
- water use
 - pollution
 - fertiliser and pesticide use
 - land use impacts
 - management of natural areas (forests and parklands)
 - heritage resource management

³ Bayette Development Consultants contributed to the analysis of socio-economic information.

⁴ This forum was initiated by Arabella. The intention is that it will represent a number of the major golf estate facilities in the province. The forum has appointed technical specialists in golf tourism, environmental and planning matters to assist it in its work, which includes the formulation of a code of conduct for the industry.

1.3 Constraints

Based on the following, in general it was found that comprehensive data was hard to find:

- ◆ Whilst the survey has been completed by 50% of the 17 golf course facilities in the sample, the overall response rate taking the total number of golf courses into account was 25%. Furthermore, some of the facilities did not respond to all the questions. Hence, information from this source, although of value, is limited.
- ◆ Files relating to EIA and planning applications were not easy to locate, with just over half the requested files being available from the Department.
- ◆ Whilst EIA reports deal with potential impacts, many of the approved developments are still under construction. Consequently, there is limited information on the extent to which predicted impacts have occurred or on the effectiveness of mitigation measures.
- ◆ Based on the survey responses received there appears to be limited ongoing monitoring of environmental and social impacts at many existing facilities. This is particularly true of golf courses that were developed several years ago, prior to the promulgation of EIA legislation.

AVAILABLE INFORMATION NOT COMPREHENSIVE
--

Existing information that was available for the purposes of the Rapid Review was not comprehensive, with the spread of data being uneven (more information being available for some issues or for certain types of facilities than others). Notwithstanding, given the scope of sources consulted and the variety of parties interviewed, the information base is considered adequate for providing a good understanding of the key issues relevant to golf course and polo field developments. Furthermore, the difficulties in obtaining information have served to highlight what is required in this regard, both in terms of applications and monitoring for those developments that are approved. These requirements have been set out in the policy guidelines. In addition, points for consideration have been identified in this report and these are addressed either in the policy guidelines or in the recommendations to this report (Section 5).

2 Golf in the Western Cape

This section of the report provides baseline information on existing and proposed golf facilities in the Province. It also deals with supply and demand in relation to these sporting or recreational activities.

2.1 Golf courses and estates

Information about the number, size and location of golf courses and golf estates has been sourced from the golf industry, planning professionals, municipalities, the D:EA&DP, developers and internet searches. It has been compiled in a tabular format (Appendix B) and a GIS database has been established. The GIS database can be used on a continuous basis and updated as applications are received by the D:EA&DP. The data show:

- ◆ Number of existing golf courses and golf estates (9 hole and 18 hole).
- ◆ Type of facilities, that is, whether these are traditional or private facilities. Traditional facilities are courses that are owned by municipalities but managed by golf clubs, mostly through Section 21 companies. In most of these cases the land is leased from the municipality at a nominal fee. Most municipal golf clubs are structured in this way nowadays.
- ◆ Number of proposed golf estates (including extensions to existing estates) and re-applications such as Roodefontein and Paradyskloof).

A summary of data on the golf courses available in the Western Cape is shown in the table below. Based on current information, there are 83 existing golf courses⁵, of which more than half have 9 holes. In total there are more than 1 000 holes available on regular courses in the Province.

Table 3: Golf Courses available in the Western Cape

Type of Golf Course	9 or 18 Hole Golf Course	Number
Traditional Golf Course	9 hole	38
Traditional Golf Course	18 hole	12
Private Golf Course	9 hole	4
Private Golf Course	18 hole	5
Traditional Golf Course with Housing Element	9 hole *	1
Traditional Golf Course with Housing Element	18 hole	4
Private Golf Course with Housing Element	9 hole	3
Private Golf Course with Housing Element	18 hole **	16
Total number of golf courses		83***

Notes

* Boschenmeer has 27 holes in total – this has been recorded as one 18 hole and one 9 hole course

** Fancourt has four 18 hole courses.

*** This figure excludes the Oubaai and Pinnacle Point approved developments that are under construction.

⁵. This figure excludes mashe courses.

The distribution of golf courses within the Province is shown in Table 4. These courses have also been mapped, using GIS. From the table and the map the following is evident:

- ◆ There are 19 courses in the metropolitan area, 20 are situated along the Garden Route (from Mossel Bay to the boundary with the Eastern Cape) and 44 in the Boland, Overberg, West Coast and Karoo.
- ◆ There are 21 existing or approved facilities with a residential component that is closely associated with the golf course and these can therefore be categorised as golf estates. Seven such estates are situated in the Cape Metropolitan area, seven plus two that are under construction along the Garden Route and seven in the Boland, West Coast and Overberg. In total the existing and approved golf estates could accommodate more than 8 000 residential dwelling units (i.e. approved rights for units that could be occupied permanently).
- ◆ Whilst the Metro-Winelands area has the highest concentration of golf course developments, most of these are courses (i.e. no housing component). Proportionally the most estate type developments occur in the Garden Route area.
- ◆ There are no golf course developments on the coast, between Cape Agulhas (L'Agulhas links, a proposed development is in L'Agulhas village) and Stillbaai. This can be largely be attributed to the presence of the De Hoop Nature Reserve. Furthermore, much of the privately owned land between Witsand and Stillbaai falls within conservancies. There are also a number of private nature reserves along this stretch of coastline.

Table 4: Distribution of Existing and Approved Courses and Estates

	All Existing and Approved Golf Courses	Existing and Approved Facilities with a Residential Component
Garden Route (Mossel Bay, George, Knysna, Bitou, Oudtshoorn, Kannaland)	22	9*
Boland/Overberg/West Coast/Karoo	44	7**
Cape Metro Area	19	5
TOTAL	85***	21

Notes

* Fancourt counted as one facility, Pinnacle Point and Oubaai included as approved estates.

** Boschenmeer counted as one facility

*** Pinnacle Point and Oubaai included

Information on the land area taken up by traditional golf courses, which make up the majority of golf facilities, is not readily available. The City of Cape Town's investigation into the golf industry indicates that on average an 18-

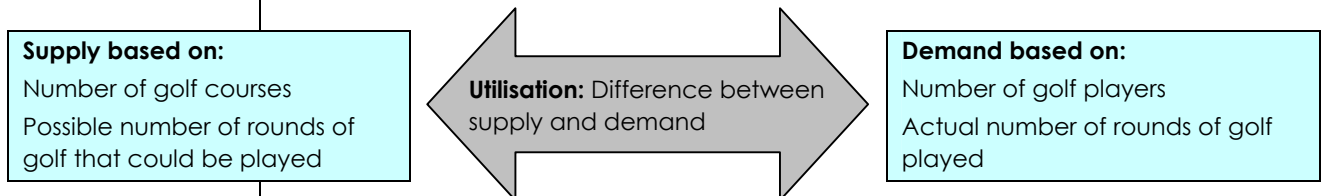


hole course takes up between 50-60ha. In small towns such as Citrusdal, the area of the 9-hole course is 20ha. Where golf courses are associated with residential estates they are likely to be 70-80 ha in extent to account for the protection of neighbouring properties (City of Cape Town, 2004). The land utilised by existing and proposed estates range from 65ha (including an 18 hole course) to a 1 000ha per estate. Where estates are larger than 150ha they usually include additional open space in the form of nature areas.

In gathering baseline information on existing facilities, the project team has come across 35 proposals for golf estate developments. This figure includes proposals for the extension of existing estates, and applications that have gone on appeal or are the subject of court action, but excludes approvals that have lapsed. Nineteen of these are proposed in the Boland, Overberg and West Coast, 12 along the Garden Route and four in the Cape Town Metropolitan Area. Should all of these proposals go ahead, more than 16 500 residential dwelling opportunities would be created, many of which would be outside of established residential or urban areas. More than a third of these residential opportunities will be created along the Garden Route. This figure excludes hotels and lodges. In addition many of the proposed developments include retail, "wellness" and conference facilities.

2.2 Golf - Supply and Demand Analysis

In order to project the utilisation of golf courses the supply and demand for golf, the number of rounds of golf that is played per annum has been quantified. The methodology is depicted in the diagram below.



The supply and demand analysis is based on the information compiled for golf developments, which shows that there are 83 golf developments (including 18 and 9-hole courses) in the Western Cape. Total supply has been calculated on the potential number of rounds of golf that could be played on an 18-hole golf course, as shown in Table 5.

TABLE 5: Calculation of supply

Hours of operation (7h30 to 16h00)	A	8.5
Laps (minutes) between tee off times per fourball	B	10
Number of fourballs per day	$A \times 60 \text{ minutes} / B = C$	51
Number of people per fourball	D	4
Rounds of golf per day	$C \times D = E$	204
Rounds of golf per annum	$E \times 315 \text{ days}^* = F$	64 260

* 50 days have been deducted for closure of the golf course for maintenance and bad weather

Accordingly, a golf course could accommodate around 64 000 rounds of golf per annum. Based on the number of golf developments in the province, it is projected that there is capacity to host 5 312 000 rounds of golf per annum (18 and 9 hole courses). This estimate is based on the number of courses, not the number of holes available.

Quantification of the demand for rounds of golf in the Western Cape is based on the survey responses obtained during the rapid review and the survey conducted by the Golf Developers Forum, as well as the "Western Cape Golf Tourism Facts and Figures 2002" study completed by Gert Blij. A number of assumptions about demand have been derived from the available information:

TABLE 6: Assumptions regarding demand and utilisation

High Utilisation for 18 hole golf course	50 000	rounds per annum
Medium Utilisation for 18 hole golf course	35 000	rounds per annum
Low Utilisation for 18 hole golf course	20 000	rounds per annum
High Utilisation for 9 hole golf course	35 000	rounds per annum
Medium Utilisation for 9 hole golf course	25 000	rounds per annum
Low Utilisation for 9 hole golf course	17 500	rounds per annum

Based on these assumptions, an 18-hole golf course that has a high utilisation rate (i.e. is very popular amongst golfers), would receive on average 50 000 rounds of golf per annum or 4 166 rounds per month or 961 rounds of golf per week. The typical utilisation rate per category of utilisation (based on the assumptions given above) is shown below.

TABLE 7: Utilisation Rates

Utilisation	Supply/Capacity	Demand	Utilisation Rate
High	64 000	50 000	78%
Medium	64 000	35 000	55%
Low	64 000	10 000	31%

It has been assumed that the utilisation of 9-hole traditional golf courses would be low, while the utilisation of 18-hole private golf courses with housing elements would be relatively high as this type of development usually includes a signature golf course by a leading golfer or a golf design company, which would be particularly attractive to golfers from overseas. The assumption is that all other types of golf courses would have a medium utilisation. Based on these assumptions, the projection of the utilisation of golf courses is as shown below, taking account of the number of facilities, the supply capacity, the assumed demand and utilisation rate.

TABLE 8: Projected utilisation of golf courses in the province

Existing Golf Courses		Number	Utilisation	Rounds per course	Rounds per annum	Capacity per course	Capacity per annum	Utilisation Rate
TGC	9 hole	35	Low	17 500	612 500	64 000	2 240 000	27%
TGC	18 hole	14	Medium	35 000	490 000	64 000	896 000	55%
PGC	9 hole	3	Medium	25 000	75 000	64 000	192 000	39%
PGC	18 hole	5	Medium	35 000	175 000	64 000	320 000	55%
TGC + HE	9 hole	2	Medium	25 000	50 000	64 000	128 000	39%
TGC + HE	18 hole	4	Medium	35 000	140 000	64 000	256 000	55%
PGC + HE	9 hole	6	Medium	25 000	150 000	64 000	384 000	39%
PGC + HE	18 hole	14	High	50 000	700 000	64 000	896 000	78%
Total		83		247 500	2 392 500	512 000	5 312 000	45%

Notes

TGC Traditional Golf Course

PGC Private Golf Course

TGC + HE Traditional Golf Course plus Residential Components PGC + HE Private Golf Course plus Residential Components

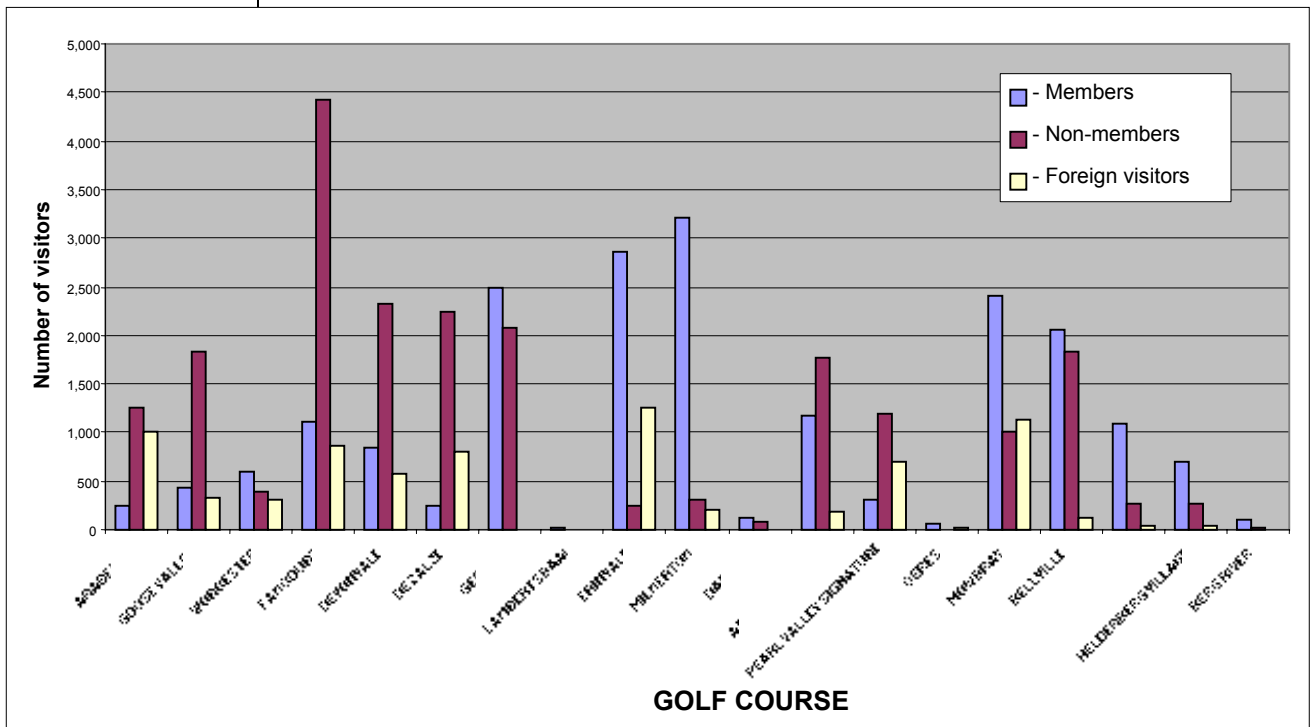
UTILISATION
DEPENDANT ON
STANDARD OF
FACILITY &
NUMBER OF
HOLES

Grant Thornton estimates that private golf courses (18-holes) with a housing element i.e. golf estates have a projected utilisation of 78%, while 9-hole traditional golf courses have a projected utilisation of 27%. On the basis of the projections undertaken by Grant Thornton, the average per 18 hole golf course in the Western Cape is 40 676 rounds. This compares with the results from the survey for this study (i.e. 37 950) and the results from the Blij study (i.e. 38 795). Grant Thornton's projection provides an average of 28 825 rounds of golf for all golf courses (9 and 18 hole), which compares to the 30 024 projected by Horwath. Whereas Grant Thornton project that in total 2 392 500 rounds of golf are played in the province per annum, Horwath projects that 2 582 065 rounds of golf are played per annum. For the purpose of the economic analysis presented in Section 3.1, it has been assumed that around 2 500 000 rounds of golf are played in the Western Cape per annum.

It can be expected that courses associated with an estate are more popular amongst golfers and therefore receive a higher utilisation. This is evident from the data received in the survey (see Figure 1, below). A possible explanation is that traditional golf courses are not always as well maintained as those on estates. Also they are not signature golf courses and may therefore be less popular amongst golfers. Furthermore, they are typically not designed by leading golfers and are usually not as well marketed as the private golf developments. Having stated this, it is accepted that some traditional golf courses receive high utilisation, particularly in the urban areas. Experience in the Cape Metropolitan Area and other parts of the province has shown that both traditional and privately run golf courses have high utilisation rates and are well maintained (e.g. George Golf Club, Clovelly Golf Course), to the extent that some of these courses are included in golf tourism packages. The greater utilisation of traditional golf courses in urban areas can also be attributed to higher population numbers.

The results from the survey conducted amongst golf developments for the purposes of this report shows that the traditional golf courses in rural areas in received between 2 500 to 15 000 rounds of golf per annum. This compares to anything between 35 000 to 50 000 rounds of golf at private golf developments and traditional golf developments in urban areas. It could not be determined, from the available information, whether traditional golf courses in rural areas are operating at a loss but it seems fair to assume that with the low levels of utilisation, these golf courses are operating on a marginal basis.

FIGURE 1: Golf course visitor numbers per category (from survey)



Another factor to consider is that some studies have suggested that the growth in demand for golf is likely to come from visitors, rather than an increase in membership (Blij 2003, City of Cape Town, 2004). Membership figures for the past 5 years for the Province, have been obtained for clubs in the Western Cape who are affiliated to the South African Golf Association (Table 9) and membership growth is shown in Table 10.

TABLE 9: Membership profile

		1999	2000	2001	2002	2003
Boland	Affiliated Clubs	48	46	47	47	47
	Golfers	8 407	9 066	8 983	8 504	9 525
S. Cape	Affiliated Clubs	13	13	13	14	14
	Golfers	2 605	2 619	2 868	3 477	3 674
W. Cape	Affiliated Clubs	17	18	18	18	18
	Golfers	10 105	11 730	12 594	12 611	13 562
TOTAL	Affiliated Clubs	78	77	78	79	79
	Golfers	21 117	23 415	24 445	24 592	26 761

Source: SAGA (www.saga.co.za)

The data available from SAGA shows the following:

- ◆ The growth rate in membership dropped from 11% in 2000 to 1% in 2001, and it has increased to 9% in 2003.
- ◆ Growth in membership was marked in the Southern Cape during 2001 and 2002 (highest rate of all regions).
- ◆ In 2003, the growth in membership in the Southern Cape dropped to 6%, with Boland showing the highest rate of increase in membership.
- ◆ On average, there has been a 6.7% increase in membership per annum, from 1999 to 2003.

TABLE 10: Percentage Growth of Golf clubs and Membership

		2000	2001	2002	2003
Boland	Affiliated Clubs	-4%	2%	0%	0%
	Golfers	8%	-1%	-5%	12%
S. Cape	Affiliated Clubs	0%	0%	8%	0%
	Golfers	1%	10%	21%	6%
W. Cape (includes Metro, W Coast and Karoo)	Affiliated Clubs	6%	0%	0%	0%
	Golfers	16%	7%	0%	8%
TOTAL	Affiliated Clubs	-1%	1%	1%	0%
	Golfers	11%	4%	1%	9%

The study undertaken by Blij involved 31 clubs – 9 in the Peninsula, 14 in the Winelands and 8 in the Garden Route. In terms of the growth per player category he found that the Visitor category showed a significant increase of 40.3% compared to 11.6% and 11.4% respectively for Affiliates and Members. The conclusion that Blij draws from this analysis is as follows: 'It cannot be expected that rounds by South African golfers will increase dramatically. There are only so many golfers and new members joining clubs are replacing old members fading away . . . It is true that golf has become a popular sport for youngsters, so the club membership population might increase slightly, but not by anything drastic. The only way to increase the rounds per annum for a club is via the Visitor rounds.'" (Blij, 2003).

Whether Blij's findings constitutes a trend can only be established when data for each club is collected over a period of years, especially since global trend shows a 20% per annum increase in demand. From his research on the 31 clubs Blij's was able to determine that the growth potential is 502 342 rounds (55,000 rounds X 31 clubs minus the present total of rounds). This translates into 71 763 visitors playing an average of 7 rounds during a 10 day holiday. According to Blij, this growth can be easily accommodated by the 31 clubs, which were the subject of his study.

The Western Cape Golf Union has expressed the view that at additional golf courses are needed to meet future demands, particularly in the Cape Town area. This is based on the following factors:

GOLF
DEVELOPMENT
PROGRAMMES
EXPECTED TO
INCREASE
DEMAND

- ◆ Golf is increasing in popularity due to the efforts of the numerous Golf Development Programmes, Junior Golf Foundations, virtual golf clubs (clubs without courses) and other private golf associations. There could be up to 6 000 to 10 000 golfers emerging from the youth development programme over the next 10-12 years. These players will require affordable facilities.
- ◆ Golf tourism has the potential to increase.
- ◆ Some courses are already over-subscribed, meaning that more rounds of golf are being played than is ideal, due to demand. There are courses that have had to close their membership lists as a means of managing the volume of rounds played.

Whilst the limited analysis of supply, demand and utilisation indicates that private golf courses with residential components receive high usage and that traditional golf courses are under-utilised, these are tentative conclusions. These findings present an interesting debate in that it could be argued that since golf courses with residential estates are the most popular (because of the standard of the courses) more such facilities are needed. The counter argument is that efforts should rather be concentrated on improving and utilising existing golf courses rather than building new golf estates, particularly as there appears to be capacity for hosting more golf rounds at many courses.

Utilisation of different types of facilities is also influenced by accessibility. The accessibility of golf courses is also not uniform with private clubs having strict entrance criteria and higher costs, with golf estates being considered generally the most expensive facilities. This could mean that there will be pressure on traditional golf courses to accommodate those who do not meet entrance criteria or who cannot afford to play at a private facility. The result may be that traditional facilities may be oversubscribed, particularly those in large urban areas. With more comprehensive data, however, it will be possible to say, whether there is a need for more courses to be built in the coming years and, if so, the rate at which they should be built to absorb the increase in players from all categories.

SUPPLY &
DEMAND PICTURE
IS COMPLEX

It can be seen from this section, that the picture with respect to supply and demand is relatively complex. Whereas it appears that there are sufficient golf course facilities to cater for the demand, the situation is not this simple because demand (i.e. preferences of golfers) are not uniform across the types of golf courses that are available. Demand is likely to be higher for certain types of courses than for others, depending on the number of holes, the standard of the facility and its location.

3 Key Issues Related to Golf Course Developments

This section of the report covers the key environmental and socio-economic issues relevant to golf course developments. As discussed in Section 1, socio-economic and environmental aspects of these developments have been categorised into cross-cutting issues, to provide a more integrated analysis than would be the case if they were dealt with on a sector-specific or basis.

3.1 Contribution to the local economy

Grant Thornton was appointed to undertake an independent assessment of the economic aspects of golf course developments. This analysis is based on two surveys conducted amongst golf developments (one by the project team and one by the Golf Estate Developers Forum), previous research for other projects and Grant Thornton's knowledge of the tourism industry. Input was also provided by Horwath Tourism & Leisure Consulting and Urban-Econ on behalf of the Golf Estate Developers Forum.

Questions to be answered in respect of the economic impact assessment of golf course developments include:

- ◆ What is the impact of golf estates in the economy relating to both income and employment?
- ◆ Where do golf developments spend their money? On what and how much?
- ◆ What kinds of jobs are being contributed to the local economy?
- ◆ What kinds of commercial activity are being created?
- ◆ What is the impact of the golf industry on the economy?
- ◆ What is the impact of golf tourism on the economy?
- ◆ What links are there between golf and the tourism industry?
- ◆ What kind of impact does the golf events such as the Presidents Cup and the Nelson Mandela Invitational have on the economy?
- ◆ Does the Western Cape need to develop more golf courses and golf estates?

In order to address these questions the following has been undertaken:

- ◆ An economic impact assessment of the golf industry as a whole;
- ◆ An economic impact assessment of a golf course;
- ◆ An economic impact assessment of a residential unit on a golf estate;

Each element of the above-mentioned impact assessments is based on the use of income and employment multipliers to project the indirect and induced

impact of the direct expenditure. Direct expenditure refers to the first round of expenditure, indirect expenditure to the second and subsequent rounds of expenditure, while induced expenditure reflects consumers' expenditure of earnings derived from the various rounds of expenditure constituting a particular economic activity. For example, the expenditure by a golfer on a golf course (direct) results in expenditure by the golf course development on maintenance (indirect) and expenditure by the golf course's employees in local shops (induced). The multiplier expresses the relationship between initial spend and changes in total local income and employment.

3.1.1 Limitations of Economic Analysis

The methodology that is typically used to measure the economic impact of a new development is based on projection of the total direct expenditure. Income and employment multipliers are then applied to determine the indirect and induced contribution to income and employment. Direct expenditure refers to the first round of expenditure, indirect expenditure to the second and subsequent rounds of expenditure, while induced expenditure reflects consumers' expenditure of earnings derived from the various rounds of expenditure constituting a particular economic activity. For example, the expenditure by a golfer on a golf course (direct) results in expenditure by the golf course development on maintenance and the increase in maintenance employees (indirect) and expenditure by the golf course's employees in local shops and the increase in employees of the local shops (induced). The multiplier expresses the relationship between initial spend and changes in total local income and employment.

PROJECTED
INDIRECT AND
INDUCED
IMPACTS
DEPENDENT ON
MULTIPLIERS USED

The limitation of the economic analysis is that the indirect and induced impacts are based on multipliers that have been calculated utilising methods such as input-output models. These multipliers are averages for an industry on a national level and may vary from development to development which make the evaluation of their validity difficult. Different consultants also apply different multipliers. Hence, there is not one set of uniform multipliers that are applicable to golf course developments. Consequently indirect and induced economic impact projections for the same development may differ due to the multipliers applied in these calculations. Also, income and employment multipliers relate to an industry and the analysis of a single development may vary considerably from these industry averages.

The indirect and induced impacts are also difficult to allocate for a specific golf development. For example, a golf development may lead to the increase in employment of a local landscaping enterprise (indirect impact) but it is difficult to precisely determine whether that additional employment is 100% due to the development or 50% or even 25%. The landscaping enterprise may work for several clients, not only the new golf development and unless the additional employees are spending 100% of their time at the golf development, it could be argued that part of that new indirect employment/job can be allocated to another types of developments i.e. other clients of the landscaping enterprise.

Notwithstanding, indirect and induced impact of golf developments are real impacts and have therefore been included in the analysis presented in this section. It should be noted that it is not impossible to verify the indirect and induced impacts of golf developments and that these impacts are real. However, the time, effort and expertise required to verify these impacts for each development are not always available to the decision-makers that are required to consider these applications. Direct impacts are much more certain and easier to verify than indirect and induced impacts.

3.2 Contribution to the local economy

The three main channels through which money flows from golf courses and estates into the local economy are construction, employment and procurement. Other channels include tourism, tournaments and the households on estates. When money is continuously injected into a local economy it has the effect of creating more money by virtue of how many cents of each Rand is spent on goods and services that are available locally. Construction does not provide a continuous flow of expenditure in the local economy for that particular development.

Employment and procurement during the operation of a facility are forms of continuous injection of capital into an economy, which if spent locally creates an income for someone else. This is referred to as the multiplier effect (a given amount of money that grows as it circulates, the end result being a sum that is larger than the original amount). Tourism and tournaments are not regular sources of money flows because of fluctuations in numbers and the frequency with which they occur. Households may not provide a continuous flow if residents are mobile and spend only a part of the year on the estate.

3.2.1 Golf Industry Economic Impact Analysis

Various factors need to be assessed in order to quantify the economic impact of the golf industry in the Western Cape. These factors include:

- ◆ Expenditure by golfers on playing a round of golf i.e. green fees;
- ◆ Expenditure on the construction of golf developments, including golf courses, golf estates, hotels & wellness centres etc;
- ◆ Expenditure by golfers on auxiliary items during a round of golf such as food & beverage, caddies, etc;
- ◆ Expenditure by golfers on membership fees;
- ◆ Expenditure by golfers on golf equipment;
- ◆ Expenditure on golf events; and
- ◆ Expenditure by golf tourists.

The reality is that there is virtually no information available to quantify these factors. Broad assumptions can be made based on various components of research conducted, but a detailed study is required to provide an accurate

economic impact assessment of the golf industry. The items listed below were quantified by Grant Thornton to determine the impact of the golf industry (calculations in Appendix C). As a consequence of the limited information available, this quantification has had to draw on a number of assumptions:

- ◆ Expenditure on rounds of golf played/green fees;
- ◆ Expenditure on auxiliary items by golfers;
- ◆ Expenditure on membership fees.

Due to insufficient information the following was not quantified:

- ◆ Construction costs of golf developments;
- ◆ Operational expenses of residential units in golf developments including levies, household expenditure, etc;
- ◆ Expenditure on golf equipment and clothing;
- ◆ Expenditure on golf tournaments and events;
- ◆ Expenditure on accommodation, travel, food and beverage and shopping by golf tourists;
- ◆ Expenditure on and at golf driving ranges.

Visits to a selection of golf course facilities revealed that various financial models are being applied:

- ◆ In present circumstances, most golf course operators agree that a golf course is a cost centre (i.e. this comment does not apply to long established courses). As a result, new developments are based on a combination of the golf course with other development (residential, tourism), which is what makes these projects financially viable.
- ◆ Golf estates are applying various financial models:
 - One approach is to obtain income from a combination of sources, namely membership fees, contribution from levies attached to residential properties and green fees from non-members. The golf courses that apply this model, pitch their fees for non-members at a level that is considered affordable. This serves to increase the volume of rounds played, with the result that the golf course can be run at a profit. Hence, viability is achieved through ensuring a high volume of rounds played and deriving of income from more than one source.
 - Some apply an approach where it is accepted that the golf course will not be run at a profit (i.e. increasing the volume of players is not a focus) and profits for the development are generated from other sources such as hotels, restaurants and spa facilities.
 - Some use a system of selling debentures and this serves to support the maintenance and running costs of the golf course.

DIFFERENT
FINANCIAL
MODELS USED

Grant Thornton project that in total 2 392 500 rounds of golf are played in the Western Cape per annum, whereas Horwath projects that 2 582 065 rounds of golf are played in the Western Cape per annum. For the purpose of this analysis it has been assumed that 2 500 000 rounds of golf are played in the Province per year. The following assumptions were made for the purposes of the economic impact assessment:

- ◆ If it is assumed that the average green fee is R110 in the Western Cape then around R275 million is spent on green fees per annum.
- ◆ If it is assumed that the auxiliary spend of each golfer is R90, then around R225 million is spent on food and beverage, caddies, etc per annum.
- ◆ If it is assumed that the average annual membership fee is R3 000 and that there are around 50 000 members⁶ of golf clubs in the Western Cape, then a total of R150 million is spent on membership fees per annum. Golf club members do not represent the only players as many people that play golf are not members of a club. Hence, it was not possible to estimate the total number of people that play golf in the Province.

Direct expenditure in the Western Cape through the golf industry is:

Expenditure Item	Expenditure per Annum
Rounds of Golf/Green Fees	R275 million
Auxiliary Spend	R225 million
Membership Fees	R150 million
Total Direct Expenditure	R650 million

The results of the economic impact assessment are shown below:

Total Direct Expenditure	R650 million
Total Direct, Indirect and Induced Expenditure	R961 million
Total Contribution to Employment (Direct)	6 906
Total Contribution to Employment (Indirect and Induced)	1 726
Total Contribution to High-Level Occupations	1 557
Total Contribution to Mid-Level Occupations	2 670
Total Contribution to Semi-Skilled & Unskilled Occupations	4 406
Total Salaries Paid	R250 million
Estimate VAT on Direct Spend	R80 million
Estimated VAT on Indirect and Induced Spend	R8 million
Estimated PAYE/SITE on Payroll	R45 million
Estimated RSC Levies on Payroll	R877 000
Estimated RSC Levies on Turnover	R915 000
Estimated Corporate Tax	R29 million

⁶ This projection is based on a survey of the number of members at all golf clubs and differs from the 2003 membership figure for the W Cape from the South African Golfing Association which is 26 000 (Refer Section 2 of this report). The difference could be due to some golf club members not being members of the South African Golfing Association.

Based on this analysis it can be assumed that the golf industry has a significant impact on the economy of the Western Cape (about R650 million, which excludes expenditure on new golf developments, golf events, etc).

3.2.2 Golf Course Economic Impact Analysis

An economic impact assessment on the construction and operation of an 18-hole golf course was undertaken. This excluded a residential or leisure component (calculations in Appendix D). It was assumed that construction of a typical 18-hole golf course would cost R20 million over a period of two years. Furthermore, the same figures as those applied to the economic impact assessment for the golf industry (Section 3.2.1) for expenditure on green fees, auxiliary items and membership were applied, but that the round of golf played and number of members would obviously relate to just one golf course. The benefits during the construction period will accrue over the two-year construction period. The economic impact results **during construction** are:

Total Direct Expenditure	R20 million
Total Direct, Indirect and Induced Expenditure	R9,7 million
Total Contribution to Employment (Direct)	254
Total Contribution to Employment (Indirect and Induced)	64
Total Contribution to High-Level Occupations	57
Total Contribution to Mid-Level Occupations	98
Total Contribution to Semi-Skilled & Unskilled Occupations	162
Total Salaries Paid	R10,8 million
Estimate VAT on Direct Spend	R2,5 million
Estimated VAT on Indirect and Induced Spend	R238 000
Estimated PAYE/SITE on Payroll	R1,9 million
Estimated RSC Levies on Payroll	R38 000
Estimated RSC Levies on Turnover	R28 000
Estimated Corporate Tax	R891 000

The results of the economic impact assessment for a typical 18-hole golf course **during operation** is shown below:

Total Direct Expenditure	R8,8 million
Total Direct, Indirect and Induced Expenditure	R13 million
Total Contribution to Employment (Direct)	77
Total Contribution to Employment (Indirect and Induced)	19
Total Contribution to High-Level Occupations	17
Total Contribution to Mid-Level Occupations	30
Total Contribution to Semi-Skilled & Unskilled Occupations	49
Total Salaries Paid	R3,4 million
Estimate VAT on Direct Spend	R1 million
Estimated VAT on Indirect and Induced Spend	R104 000
Estimated PAYE/SITE on Payroll	R609 000
Estimated RSC Levies on Payroll	R12 000
Estimated RSC Levies on Turnover	R12 000
Estimated Corporate Tax	R391 000

Based on these assumptions and our assumed income and employment multipliers we project that a typical 18 hole golf course will generate R8,8 million in direct expenditure from green fees, auxiliary spend and membership fee. This R8,8 million will lead to an additional R4,2 million in indirect and induced expenditure.

The estimated direct employment of 77 is higher than the study by Blij who concluded that an 18-hole golf course provides jobs for 72 persons (including caddies – some golf courses do not employ or allow caddies). The discrepancy points to the need for further scientific primary research on the employment created by golf developments.

Points for consideration:

- ◆ The economic benefits of golf course developments need to be compared to the economic benefits of other potential land uses when determining the ideal use for available land.
- ◆ The economic benefits of a golf course need to be compared to the intangible benefits of not developing a golf course, such as the availability of natural vegetation and topography.

3.2.3 Residential Unit Economic Impact Analysis

An economic impact assessment on the construction and operation of a single residential unit that is constructed in a golf estate was undertaken (Calculations included in Appendix E). The following assumptions were made for the construction of the residential unit.

Expenditure Per Annum	Amount
Average Developer Construction Expenditure	R270 000
Average Income from Sale of Stand	R1 200 000
Average Individual Owner's Construction and Furnishing Spend	R1 800 000
Total Construction Expenditure per Residential Unit	R3 270 000

It was also assumed that the buyer would make a number of trips to the development to purchase the unit and to oversee construction. The assumptions are detailed below.

Number of Purchase Trips	A	1
Number of Construction Trips	B	3
Number of Days per trip	C	4
Average number of people per trip	D	2
Spend per Day Per Person	E	1 500
Trips for Purchasing and During Construction ((A + B) x C x D x E)		R48 000

For the operational period of the residential unit, the following assumptions were applied:

Expenditure Per Annum	Amount
Annual Levy per Residential Unit	R18 000
Average Household Expenditure per annum (including rates and taxes)	R300 000
Total Operational Expenditure	R318 000

The results of the economic impact assessment for a typical residential unit in a golf development **during construction** is shown below:

Total Direct Expenditure	R3,3 million
Total Direct, Indirect and Induced Expenditure	R4,9 million
Total Contribution to Employment (Direct)	43
Total Contribution to Employment (Indirect and Induced)	11
Total Contribution to High-Level Occupations	10
Total Contribution to Mid-Level Occupations	17
Total Contribution to Semi-Skilled & Unskilled Occupations	28
Total Salaries Paid	R1,8 million
Estimate VAT on Direct Spend	R407 000
Estimated VAT on Indirect and Induced Spend	R39 000
Estimated PAYE/SITE on Payroll	R322 000
Estimated RSC Levies on Payroll	R6 000
Estimated RSC Levies on Turnover	R5 000
Estimated Corporate Tax	R148 000

The results of the economic impact assessment for a typical residential unit in a golf development **during operation** is shown below:

Total Direct Expenditure	R318 000
Total Direct, Indirect and Induced Expenditure	R536 000
Total Contribution to Employment (Direct)	37
Total Contribution to Employment (Indirect and Induced)	1
Total Contribution to High-Level Occupations	1
Total Contribution to Mid-Level Occupations	1
Total Contribution to Semi-Skilled & Unskilled Occupations	2
Total Salaries Paid	R135 000
Estimate VAT on Direct Spend	R39 000
Estimated VAT on Indirect and Induced Spend	R5 000
Estimated PAYE/SITE on Payroll	R24 000
Estimated RSC Levies on Payroll	R475
Estimated RSC Levies on Turnover	R448
Estimated Corporate Tax	R16 000

⁷ Omniplan refer to 0.56% household employment, rather than three direct employment opportunities as suggested by Grant Thornton. This discrepancy can probably be attributed to the type of facility, that is whether it is middle to upper income or whether it is a facility aimed at the top end of the market.

Based on these assumptions and the resultant income and employment multipliers, it is projected that a typical residential unit on a golf estate will generate R1,6 million in indirect and induced expenditure during the construction period and R218 000 indirect and induced expenditure per annum during the operational stage.

Whilst households are a form of indirect investment in the local economy, their contribution is dependent on a number of factors:

- ◆ The percentage of household income spent locally
- ◆ The existing capacity of businesses within a town or region
- ◆ The price/earning ratio acceptable to the market within any economic cycle.

Indirect investment is determined by the income of the households on the estate and the percentage of that income that will be spent locally. Depending on the capacity of the businesses in the town, money will either be spent locally or else residents will travel to larger centres. The fewer the businesses and the less variety of goods and services the more likely that the income of the households on the estate will leak out of the local economy i.e. they will spend their money in other towns or cities.

3.2.4 Leisure Developments Economic Impact Analysis

An economic impact assessment on the leisure component of a golf estate was not undertaken, as the number of assumptions that would need to be made would have made the exercise ineffectual. Even if a broad assumption could be made as to the number of facilities that would be included in a typical leisure component such as a hotel, wellness centre, conference facilities and food and beverage facilities, assumptions still would need to be made as to the extent of each facility and its typical utilisation.

The survey conducted by the Golf Estate Developers Forum quantifies the total development value of hotels in golf developments in the Western Cape. The development value or capital value is placed at R639 million. This value only represents the capital cost and does not quantify the utilisation of these facilities i.e. expenditure by tourists on rooms, food & beverage, etc, which would increase the economic impact of these leisure developments. An indication of the economic impact of leisure developments included in golf developments can be demonstrated by the economic impact assessment conducted for a hotel and spa development included in a golf development, whereby the projected annual turnover of the hotel and spa is R19,5 million per annum. The economic impact study projected that the number of new jobs created is 368. This means that for every R1 million that is spent around 19 employment opportunities are being created.

The economic impact study estimated that the addition to the gross geographical product is R15,6 million per annum, meaning that for every R1 that is spent another 80 cents of income are being generated. In addition, it is estimated that 80% of the additional gross geographical product would impact on the local economy and 20% will impact on the regional economy, meaning that 80% or 294 of the employment creation would be in the local economy or area.

The leisure component of a golf estate is usually aimed at the top end of the tourism and residential market and is not always accessible for the general public – due to high prices and/or exclusive guest/resident use and public access is generally highly restricted.

Points for Consideration:

If local municipalities need to evaluate the indirect and induced economic impact of a new golf development they would need to conduct an extensive economic analysis of the development which includes primary research that includes the outsourcing policies of the new development, the increase in other economic activity in the area, etc. This would be a lengthy and costly exercise.

It is recommended that when local municipalities evaluate applications for development, that they concentrate on the number of direct employment created and the direct expenditure of the development in their local area as these are the easiest to verify for a local municipality. Direct employment and expenditure can be checked in the financial statements of a development. However, these impacts are difficult for a local municipality to verify and it is recommended that local municipalities concentrate on the direct impact of developments when evaluation applications for development. Direct impacts are much more certain and easier to verify than indirect and induced impacts.

3.3 Golf Tourism

SOUTH AFRICA 8th
MOST POPULAR
WITH GERMAN
GOLF TOURISTS

Research by the International Association of Golf Tour Operators (“**IAGTO**”) (Table 10, overleaf) indicates the top destinations for golfers from the UK, German, Swedish and French markets in 2001. For the German market, Spain is the most popular destination for amateur golfers, followed by Portugal and the United States while South Africa is ranked eighth. These data indicate that South Africa does not rank highly as a golf destination amongst the traditional tourism markets of the UK, Germany and France and that the country does not currently attract a large number of dedicated golf tourists.

TABLE 11: Destination preferences of golfers from European countries

Ranking	UK	German	Swedish	French
1	England	Spain	Sweden	France
2	Spain	Portugal	Spain	Morocco
3	Scotland	USA	USA	Spain
4	Portugal	Germany	Ireland	USA
5	France	Morocco	Thailand	Scotland
6	USA	Tunisia	Italy	Tunisia
7	Ireland	Turkey	England	Caribbean
8	Wales	South Africa	Portugal	Ireland

Research undertaken by the National Golf Federation in the United States of America confirms the importance that golfers place on playing golf when away from home. The NGF puts the number of annual 'travel rounds' at about 78 million, which is about 15% of all rounds played in the US. This is an average of roughly six 'travel' rounds per year for the 11,8 million golfers who now take at least one overnight trip per year during which they play golf. Research by the NGF indicates that golf travel spending in the US (up from US\$18 billion ten years ago) currently totals around US\$24 billion a year, with roughly 75% of these dollars going into the hotel, transportation and food and beverage industries. Other findings by the NGF include:

- ◆ Since 1989, there has been a 50% increase in the number of golf travellers. One out of every two adult golfers today plays at least one round of golf while travelling for business or pleasure and,
- ◆ Nearly 65% of all golf travellers have household incomes of more than US\$50 000.

3.3.1 Golf Tourism in South Africa

NO DATA ON
GOLF TOURIST
FIGURES FOR SA

No national data currently exists to quantify the number of foreign or domestic golf tourists as the surveys conducted amongst tourists have not included a questions such as: "Was your main motivation for visiting South Africa to play golf? Have you played golf during your trip? How many rounds of golf have you played?"

Horwath has projected the number of foreign and domestic golf tourists based on the survey of golf developments conducted by the Golf Estate Developers Forum. For 2004 the number of foreign golf tourists are projected at 120 000 (or 8% of all foreign tourists to the Western Cape), while the domestic golf tourists are projected at 85 000 (or 2% of all domestic tourists to the Western Cape). Discussions by Grant Thornton with golf tour operators during other research projects indicate that the South African golf tourism market is currently in its infancy stage but should grow exponentially within the next few years. Golf tour operators believe that a major advantage and selling point of

the South African golf tourism industry is that golf is an all year round sport in South Africa and is therefore less likely to suffer from peaks and troughs in demand as experienced by some European countries.

Industry specialists report that the first time golf tourist to South Africa tends to favour 7-day trips with the two most frequently chosen courses being Fancourt and Sun City. The average length of stay of overseas golfing tourists at any one golf resort is between 2 and 3 nights, however, golfers visiting Cape Town tend to stay about 4 nights in one hotel due to the variety of courses available. A positive factor for South African golf tourism is that despite the recent investment in infrastructure, green fees have remained relatively low in comparison overseas courses. For most foreigners, this represents excellent value. Japanese golfers state that it is cheaper to fly to South Africa, stay in 5-star accommodation, purchase golf gear (golf clubs and bag), and pay golf daily at top rated golf courses for 1 week, than for them to play one round of golf at top rated courses in Japan. Most foreigners state that besides being relatively cheap, top rated golf courses in the country are generally accessible, whereas the top rated courses in their countries are often not, due to strict membership criteria (e.g. Japan, Hong Kong).

3.3.2 Economic contribution of golf tourism

CURRENT
EXPENDITURE
CONTRIBUTES
R300-R400 million

Information on the economic contribution of golf tourism to the Western Cape economy has been obtained from the study undertaken by Blij (2003) and the Golf Industry Study undertaken for the City of Cape Town (2004). Whilst the latter study focused on the metro, Blij’s study included facilities in the Garden Route and Winelands. Blij assumes a daily tourist spend of R1 270 to determine the financial contribution of golf tourism. This gives a total of R373 million. It is estimated that the growth potential is R911 million with the total potential number of golf tourists, based on the following:

Current golf tourists	29,389 X R1 270 = R373 million
If no. of tourists increases as per Blij’s estimate	71 763 X R1 270 = R911 million

Blij notes that only 20% of this will go to the golf industry, with the rest flowing into general tourism expenditure. In the City of Cape Town study it is estimated that golf contributes between R300 and R400 million to the economy of the Western Cape, with the largest share going to Cape Town. Interestingly, this report notes that the present infrastructure could easily cope with a doubling of tourist numbers.

Golf tour operators interviewed by Grant Thornton during other research projects informed us that 2004 has been slower than 2003. Research shows that competition from Portugal and Spain may be the reason for this. Both countries offer warm weather when it is cold in Northern Europe, have newly developed high quality golf courses, and compete on cost with South Africa due to the recent strengthening of the Rand. Operators also believe that South African golf courses and tour operators have to ensure that their prices

remain competitive otherwise it will be a lot easier for European tourists to visit destinations closer to home.

W CAPE WELL
PLACED TO TAKE
ADVANTAGE OF
GROWTH IN GOLF
TOURISM

The Western Cape is well placed to take advantage of the growth in golf tourism due to the number of top golf courses in the province. Golf courses in the province are consistently placed in the top 10 rankings by golf magazines and golfing associations. South African Tourism International Tourism Surveys for 1998 and 1999 indicate that the Western Cape and Gauteng are the most popular golfing destination provinces amongst overseas visitors followed by KwaZulu-Natal and the Eastern Cape.

3.3.3 Golf Events

Golf events can range from a corporate golf day on a 9-hole municipal golf course in a rural area to the President's Cup or Nelson Mandela Invitational. Major golf events can generate significant tangible and intangible benefits ranging from spend by tourists to marketing of the province as a tourism and business destination. To quantify the economic impact of all the golf events held in the Western Cape would require various assumptions and much more research. An economic impact assessment of all golf events has not been conducted, but information on the single-largest international golfing event that has been hosted in the Province has been obtained. Research conducted by Worldsport South Africa, Datavision Marketing Research Consultants and Newscip Media Marketing Service has quantified the "legacy" of the Presidents Cup held in 2003 at Fancourt. The main findings of the study are:

PRESIDENT'S CUP
SHOWED A
SIGNIFICANT
ECONOMIC
IMPACT

- ◆ The total economic impact was R285 million for the Garden Route region including R185 million from domestic and foreign tourists;
- ◆ There was an estimated 60 000 domestic and foreign tourists;
- ◆ The event generated 20 hours of live television coverage reaching a potential 800 million viewers across 120 countries;
- ◆ Editorial exposure worth over R22 million in national print and electronic media was achieved;
- ◆ The event generated dedicated tourism footage within global television broadcasts worth over R20 million;
- ◆ R3,3 million was invested in SA Golf Development and the Sunshine Tour;
- ◆ R3,12 million was received in contributions to South African charities by players.
- ◆ Approximately R14m (\$2m) was raised for charities around the world

Golf events such as the President's Cup can be compared to other international events such as the Cape Argus Cycle Tour, which had an estimated economic impact of R213 million in 2000 and the Comrades Marathon, which had an estimated economic impact of R226 million in 2000.

LACK OF LOCAL
COMMUNITY
BENEFITS FROM
PRESIDENT'S CUP
REPORTED

It has been reported to the project team, during interviews with representatives of labour unions and community organisations, that caddies from the local area were not used during the President's Cup. Furthermore, most services required for the event were either not procured from local companies and therefore the community is of the view that they did not experience any direct economic benefits from this event. The project team has not reviewed specific procurement data from golf estates to determine exactly where services are procured for major events.

Points for consideration:

- ◆ Approach tourism bodies such as S A Tourism to structure tourism surveys to include items that will provide data on golf tourism trends. This will assist future planning of facilities (e.g. upgrading of existing facilities, need for new facilities).
- ◆ Specify the setting up of a database of local service providers and a system of monitoring procurement practices for new developments as part of the IDP of local authorities. This is in line with the Provincial Spatial Development Framework (PSDF) principles and this approach could also be incorporated into the PSDF strategies.

3.4 Employment opportunities

SOCIAL
WELLBEING IS
MORE THAN JOB
CREATION

This section deals with employment that is created by golf course developments both during the construction phase and when the facility is operational. There is limited information on construction employment creation. Files relating to EIA applications were consulted, and for the most part no hard data on employment was available. Hence, the information in this section is largely presented in a case study format, since it applies to individual developments and therefore cannot be generalised. The quality and accuracy of the figures referred to in this section need further investigation and verification and should therefore be considered as indicative of the employment creation potential of golf course developments. One of the strong claims of the proponents of golf courses and estates is that they create a considerable number of jobs, which in the face of high unemployment, especially in small towns and rural areas, brings some relief to impoverished communities. Whilst employment creation is an imperative, it is simplistic to assume that job creation is synonymous with social wellbeing (Malan, 2004).

Blij (2003) considered permanent employment creation in his golf industry study of 31 clubs and concluded that an 18-hole course provides jobs for 72 persons, made up as follows:

- ◆ Management 2
- ◆ Administration 5
- ◆ Hospitality 10
- ◆ Outdoors 15

◆ Caddies 40

This amounts to 2 232 jobs across the 31 clubs that he used in his study. For indirect employment, Blij uses the figure of 29 389 tourists and assumes that for every 8 tourists one job is created. This amounts to 3 674 indirect jobs at present, which increases to a potential of 12 644 jobs if the number of tourists rises to 71 763 (the optimal number of tourists). The City of Cape Town study (2004) employment estimates is 1 368 jobs across the city’s 19 golf courses, using Blij’s average number of employees per golf course (i.e. 72 persons).

18-hole GOLF COURSES EMPLOY AN AVERAGE OF 30 PEOPLE

A comparative analysis of 5 golf courses, of which 4 are in the Western Cape, was undertaken by Omniplan (2004) for a motivation report that was submitted with a planning application for a golf estate, shows similar results. It was found that an average of 30 people are employed at an 18-hole course, excluding caddies. This correlates with Blij’s figure of 72 people, of which 40 are caddies. It must be noted that some golf courses have stated that they do not employ caddies or allow caddies to operate as self-employed people, citing security concerns as the reason for this.

TABLE 12: Number of golf course employees (excluding caddies)

	Erinvale	Sparrebosch	Atlantic Beach	Fancourt*
Green Keeper	1	1	1	
Assistants	2			
Admin	3	3	3	
Labour	25	22	16	
Total	31	26	20	30*

CASE STUDY

The study undertaken by Omniplan (2004) included 600 residential erven. Projected capital investment is R393 million and it is estimated that 3035 jobs would be provided as follows:

- 860 skilled jobs
- 2175 semi-skilled and unskilled jobs

Assuming an average of 4 people per household, Omniplan conclude that this will provide a living for approximately 12, 000 people. The contribution can be calculated by determining a realistic assumption in relation to the proportion of wages spent locally. Hence, assuming that 60% of the wages and salaries earned are spent in the local area, the following applies:

- A skilled worker would be buying roughly R76, 800 worth of goods and services for the duration of the construction period;
- An unskilled worker’s portion would be R7 857.

Thus, not only do these workers provide a living for their families during this period, they also create an income for others to the value of R83 million.

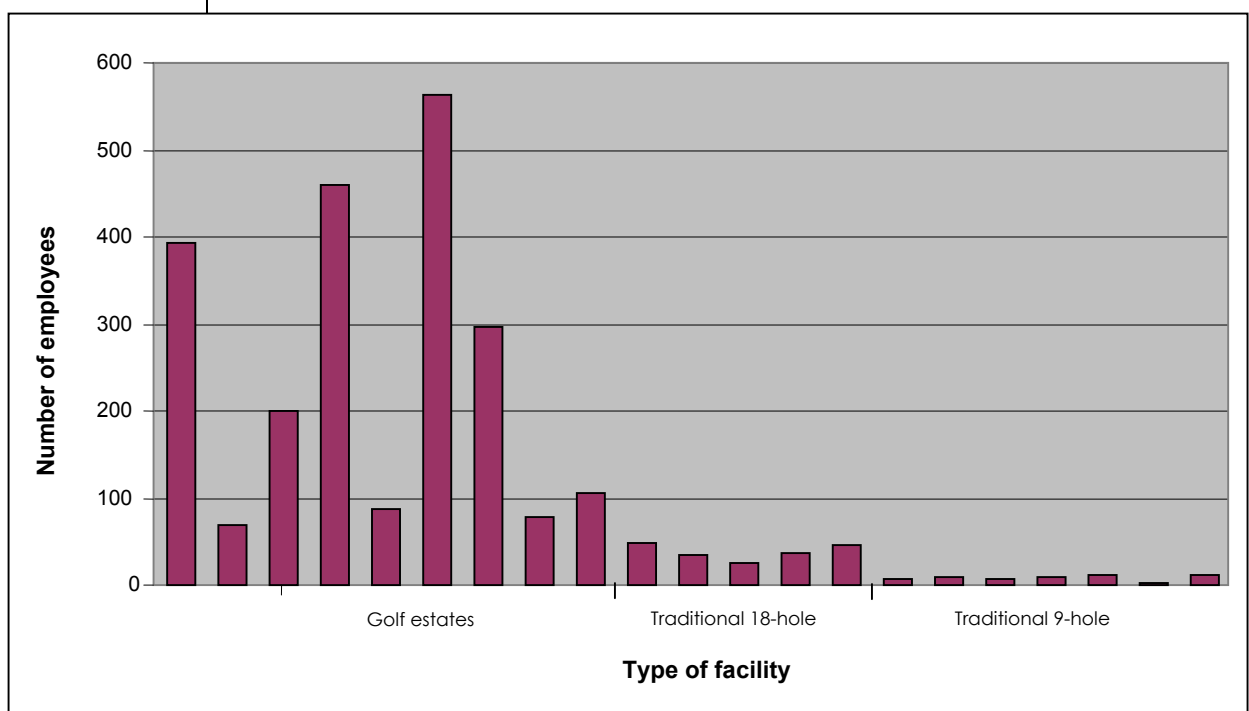
Fancourt has 4 courses with gardens and approximately 120 people are employed (pers comm. HR Manager). Omniplan also note that 29 people are employed on the golf course at Steenberg. Job opportunities associated with the residential estate component of golf course developments was also considered by Omniplan. Two cases were used – Steenberg and Erinvale.

TABLE 13: Job Opportunities: Erinvale Golf Estate

	Job Opportunities	Remarks
ERINVALE		
Home Owners Association	20	
Clubhouse	33	
Pro Shop	4	
Casuals	30	
Golfdata	31	three paid by club included
Cleaners	200	estimate by gate security
Garden Workers	150	estimate by gate security
Contractors	150	Includes building and maintenance
Total	618	
STEENBERG		
Golf Course Related	29	
Estate	14	
Workshop	4	
Casuals	30	
House Cleaners	110	
Cleaners	200	
Building Contractors	12	
Other Contractors	28	
Total	310	

Data in relation to employment was obtained through the survey. These data show that golf estates show the highest level of employment, with those facilities that have hotel and other tourist facilities employing over 400 people. Golf estates that comprise only residential development with a course employ around 100 people. Traditional 18 hole golf courses were found to employ between 26 and 48 people, whereas traditional 9 hole courses reported figures of between 2 and 12 employees.

FIGURE 2: Employment (permanent) at golf course developments



Specific information that was obtained through discussions with HR Managers for Arabella Country Estate and Fancourt, is shown below.

CASE STUDIES

ARABELLA COUNTRY CLUB

Golf course maintenance has been outsourced and the contractor was unwilling to disclose information over the phone. The club has 20 caddies, a club manager, golf administrator, a human resource manager and cleaner. There is also a pro-shop with a manager and 2 assistants. The Halfway House (bar & restaurant) has a chef, 2 barmen and 4 waitresses.

FANCOURT

Fancourt has 4 golf courses and a hotel complex. 120 people are employed across the 4 courses. According to the human resource officer the complex, without the residential component, generates 470 jobs. The residential section generates 80 permanent jobs. The latter is small in number in comparison with Erinvale and Steenberg, which can be attributed to the fact that Fancourt is a holiday resort with the resultant seasonal fluctuations in occupancy. Fancourt report that up to 1000 employees were on site per day, during the construction phase.

Omniplan (2004) have presented an analysis of generic employment characteristics (Table 14), based on the 4 golf estates they studied.

TABLE 14: Generic Employment Characteristics

	No. of jobs	Comments
Average number of maintenance employees	27	Approx. 18 are unskilled
Caddies	10 - 60 casuals (Erinvale)	Varies according to season
Cleaners	Approximately 310	0.56 cleaners per household. 500 units employ 280 people
Contractors and garden staff	300	75% unskilled
Restaurants & tourist facilities	As high as 26	18 might be semi-skilled

In general, most jobs are created in the semi-skilled and unskilled categories. Some of the figures provided in the table above vary from those provided Grant Thornton⁸ in their economic assessment (Section 3.3). Omnipplan have argued that the more high-income residents that can be attracted to an estate the greater will be the indirect jobs created within a region and therefore the greater the benefit to the local community. In their economic impact assessment, Grant Thornton estimate the following in terms of job creation:

- ◆ The typical 18-hole golf course would contribute 318 employment opportunities during the two year construction period and 106 employment opportunities per annum during the operational stage. 54 of the employment opportunities during the operational stage would be for semi-skilled or unskilled occupations.

⁸ Note that Grant Thornton was commissioned to undertake an independent assessment of the economic impacts of the golfing industry. This assessment was undertaken within a limited timeframe. The result is that a number of assumptions had to be made in order to undertake the assessment, and these have not been verified. Some of the figures used in their assumptions differ from other reports and studies that have been done. These differences are noted in the report.

- ◆ A typical residential unit would contribute 54 employment opportunities during the construction period and 4 employment opportunities per annum during the operational stage (direct, indirect and induced employment), based on a home employing 2 domestics, whereas Omniplan’s figure (0.56) accounts for part-time employment (e.g. chars).

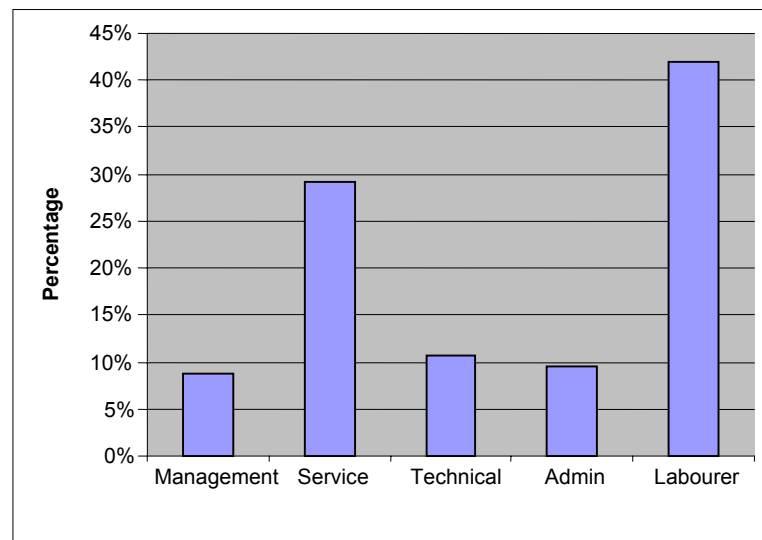
The differences in the employment data (particularly in terms of job creation) that have been reflected in this section are indicative of the scarcity and type of information available. In the project team’s view this highlights the complexity in predicting employment creation in the sector. More hard data is required to clarify employment rates in the golfing sector.

Analysis of employment trends from information received from the survey is shown in the following tables and graphs. The general pattern is that the high-income management level occupational categories are staffed predominantly by whites and that labourer category are staffed generally by blacks (Africans and Coloureds). Women predominate in the service and administration categories. The employment patterns reflect a relatively male bias with a high absorption capacity for semi-unskilled labourers. This is considered a benefit, since there is a high level of unemployment in the unskilled and semi-skilled labour force in the Province. The distribution of employment by occupational category is shown in the figure below. This is based on a sample of 21 golf course developments (i.e. of the 30 surveys received 21 provided data on employment by occupational category). Most of the employment opportunities are in the Labourer category.

HIGH ABSORPTION CAPACITY FOR SEMI SKILLED AND UNSKILLED LABOUR

MOST JOBS ARE IN THE LABOURER CATEGORY

FIGURE 3: Employment by Occupational Category



Distribution of total employment by race is given in the Table 15, which shows that the majority of people employed in the industry are Coloureds (56%), followed by Africans (23%), Whites (20%), and lastly Indians (1%). These patterns roughly reflect the demographics of the Western Cape Province.

TABLE 15: Employment by Race

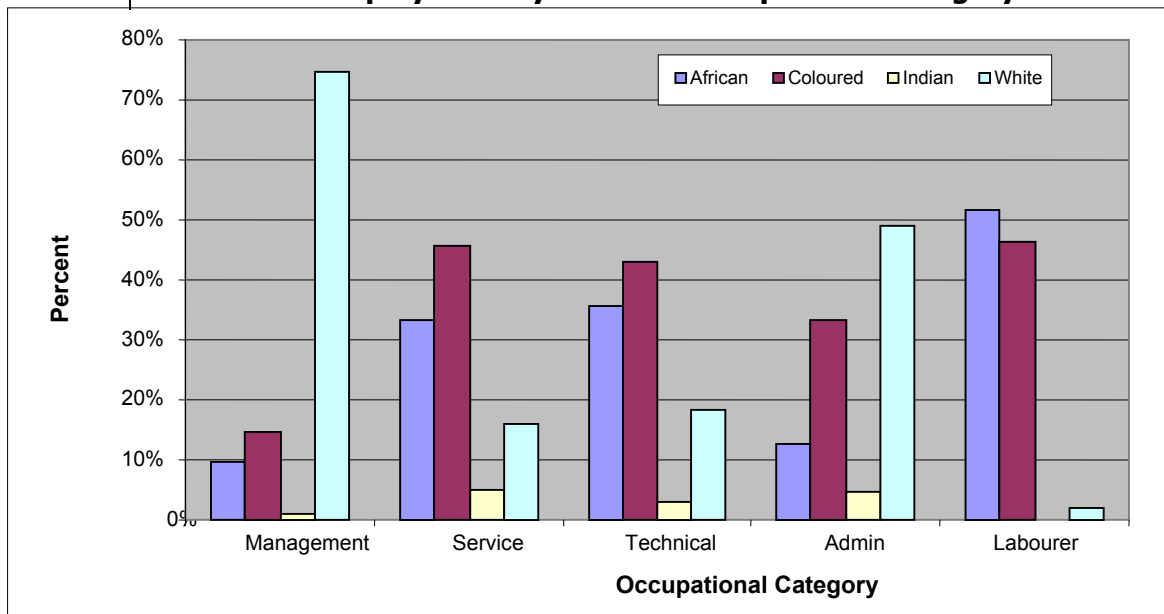
	Employment by Race group	W Cape Demographic Profile
African	23%	27%
Coloured	56%	54%
Indian	1%	1%
White	20%	18%
	100%	100%

The employment distribution by per occupational category by race is shown the following table and graph.

TABLE 16: Employment distribution by Race and Occupational Category

	Management	Service	Technical	Admin	Labourer
African	10%	33%	36%	13%	52%
Coloured	15%	46%	43%	33%	46%
Indian	1%	5%	3%	5%	0%
White	75%	16%	18%	49%	2%

FIGURE 4: Employment by race and occupational category

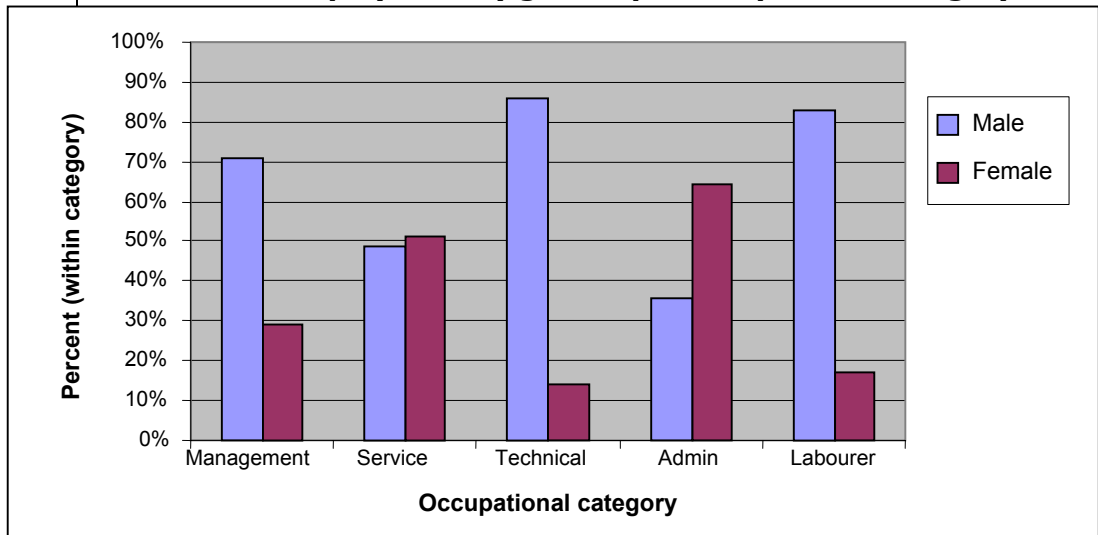


Seventy five percent of all management positions are held by Whites, whilst almost all labourer positions are held by Africans (52%) and Coloureds (46%). The majority of employees in the service, technical and administration categories are Coloureds. The industry has a male bias (Table 17 and Figure 5), with the ratio of female to male employees being 1:2.4. Most management staff are males (71%), with 29% of such positions held by females. Males also predominate in the technical and labourer categories. Administration positions are held mainly by females, and there are more females than males in services.

TABLE 17: Employment by Race, Gender and Occupational Category

	Management		Service		Technical		Admin		Labourer	
	M	F	M	F	M	F	M	F	M	F
African	8%	0%	18%	16%	32%	4%	9%	4%	44%	7%
Coloured	9%	17%	18%	27%	38%	5%	14%	20%	36%	10%
Indian	1%	0%	3%	2%	2%	1%	3%	2%	0%	0%
White	53%	22%	9%	7%	14%	4%	10%	39%	2%	0%
	71%	29%	48%	52%	86%	14%	36%	64%	83%	17%

FIGURE 5: Employment by gender per occupational category



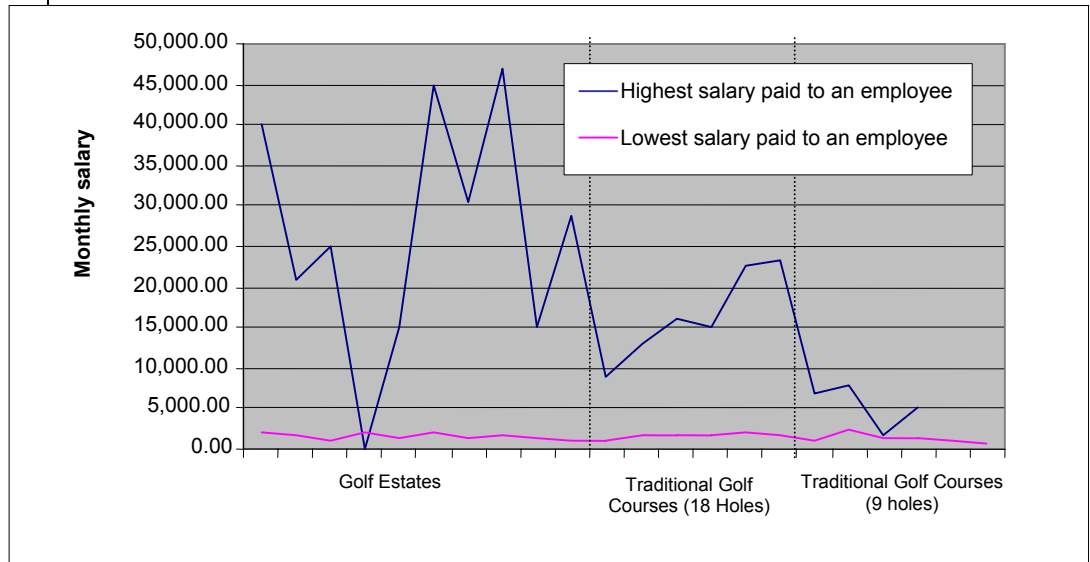
Average monthly incomes earned by the different occupational categories were found to be as follows:

- ◆ Management – R20 000 to R45 000
- ◆ Service – R15 000 to R2 500
- ◆ Technical – R20 000 to R1 200
- ◆ Administration – R14 000 to R1 800
- ◆ Labourer – R2 000 to R800
- ◆ Caddy – R2 000 to R1 600 or between R75 and R100 per day

Data on the highest and lowest salaries paid to employees are shown in Figure 6. The following general conclusions can be drawn from these data:

- ◆ Salaries at golf estates are generally the highest in both categories. The highest monthly income paid to an employee varies from R45 000 to R15 000, whilst the lowest range from R2 000 to R1 100 per month.
- ◆ Salaries are the lowest for traditional golf courses (9 hole) On average, the ratio of wages earned by Management relative to Labourers and Caddies varies between 10:1 and 20:1.

FIGURE 6: Highest and lowest salary levels



A number of points were raised regarding employment in interviews with representatives of community organisations and labour unions. These issues were also raised in an interview with the social scientist who has undertaken work in the Garden Route area. The following points emerged:

CONSTRUCTION EMPLOYMENT IS SIGNIFICANT

- ◆ A significant number of jobs are provided during the construction phase. There is concern in the Garden Route that large-scale developments will cause migration of job seekers into the area, and once construction is completed, this could further exacerbate unemployment. This issue is of particular concern as there is insufficient construction labour in the George area to deal with the extent of proposed development.
- ◆ Whilst there has been an increase in investment in the George area, there has also been an increase in unemployment. The reasons for this are not clear, but it has been suggested that it may be related to migration of people into the area. Furthermore, forestry and agriculture are in decline and for the most part people that have worked in these sectors, are not appropriately skilled to take up employment in construction or at golf estates.
- ◆ Although it is acknowledged that golf estates can provide significant employment, the general experience is that these jobs are at the lowest level and therefore only help at the 'survival level'. Data obtained from the survey does show that most employment is in the unskilled and semi-skilled categories, with average wages of R2 000 per month. This is not to undervalue this employment, particularly as the Western Cape has a high need for jobs in this category. Rather the question that has arisen is whether dependency is being perpetuated.
- ◆ Top-level golfers require experienced caddies and as a result many of these jobs are given to whites, as people in the local community do not have the required skills.

Points for consideration:

- ◆ Employment trends and figures in relation to golf course developments require more detailed analysis and investigation if a clear and comprehensive picture of the impacts of these developments in this regard is to be understood.
- ◆ In general, figures relating to direct employment, are those which provide the greatest certainty in terms of predicted job creation. These need to be compared on an ongoing basis with actual employment figures. Such data can be used to refine the economic model referred to elsewhere in this report (e.g. Section 5 – Recommendations).

3.5 Procurement

The golf industry's impact on the local economy can be further investigated by examining their expenditure on the procurement of goods and services. The golf estates/courses sampled indicated that they spent between 50 - 75% of their procurement budgets on local goods and services. Given that the largest golf estate sampled had a procurement budget of R100 million p.a., the multiplier effect of such expenditure can have a significant impact on the local economy. Although the size of the course/estate determines the size of the procurement budget, local procurement represents a healthy injection of capital into the local economy. The table below gives an indication of the total procurement budgets of some estates and the proportion of that spent on local economies.

TABLE 18: Procurement

	TOTAL PROCUREMENT EXPENDITURE	AMOUNT PROCURED FROM LOCAL COMPANIES#
ARABELLA	100 million	50 million
GOOSE VALLEY	3.3 million per annum	2.4 million per annum
FANCOURT	41 452 000 per annum	31 089 000 per annum
GEORGE	5 million	n/a

Note: Local is not defined

If it is assumed that households or businesses who receive R1 from Arabella spend 66 cents within the community. Of the 66 cents another six cents is spent on local goods and services, followed by another three cents and finally one cent. The expenditure of R1 in the local community generated a total income of R1.76 for other firms and residents. The multiplier therefore is R1.76. In this example R50 million generated an additional R38 million.

The information dealing with local procurement does not indicate what services are procured locally and what percentage of the total procurement this represents.

3.6 Spatial Implications of Golf Estates

There are many aspects relating to the spatial implications of golf courses. These range from issues relating to land use, to spatial planning, to services to those related to impacts on the local economy.

3.6.1 Location and spatial planning

GOLF ESTATES ARE
A RELATIVELY
NEW FORM OF
DEVELOPMENT

Many golf courses in the Western Cape, such as the Royal Cape, Milnerton, Paarl, Mowbray, Oudtshoorn and George date back to the early 1900s. These municipal courses were originally sited on the edges of towns, because of their land area requirement and role as a recreational resource. In many instances such as in the City of Cape Town, development has overtaken golf courses and these now form part of the city's green spaces. Golf *estates*, however, present a form of development that has been relatively recently introduced to South Africa.

Newly established golf estates typically include an 18-hole course and a relatively large number of single residential units (in excess of 200 units and in some instances up to 850 units) with a common architectural vernacular and restricted access to the entire development. In many instances additional short-term accommodation in the form of lodges or a hotel is also developed. From a spatial perspective these golf estates are characterised by low *gross* (i.e. when considering the golf course and residential components as one) densities (often at 1 to 2 dwelling units/ha), and can be described as 'internalised' in nature (i.e. there is very little or no integration with surrounding areas). A significant percentage of homebuyers on golf estates are non-golfers – estimated to be 30% on average by Horwarth (2004). This demonstrates that buyers are attracted to other aspects of these developments such as the lifestyle and security provided, with the golf course providing amenity value.

MANY PROPOSED
GOLF ESTATES
FOR LOCATIONS
OUTSIDE URBAN
AREAS

Some golf estates are situated on the outside edges of urban development such as Erinvale in Somerset West and Fancourt in George. In cases where estates have been developed around former municipal golf courses, they also tend to be situated on the edges of urban development, such as Boschenmeer in Paarl. Some of the more recently established estates are located outside of urban areas and most of the current proposals are for development outside of/or divorced from existing settlements. In the case of George, for example, the number of dwelling units proposed in new golf developments in rural areas in the municipal area, amounts to more than 2000.

It has been argued that golf estate developments are essentially rural in character, because of the extent of 'green' space or that they should be regarded as resorts. However municipal planners interviewed during the course of this investigation agree that the scale and nature of such developments, which include large numbers of free standing single title houses suitable for permanent occupation, result in urban land uses. Such low

density development on the periphery of urban areas or new settlements outside of existing urban areas could contribute significantly to urban sprawl.

Some comments on the draft report suggested that sprawl is defined as uncontrolled and unplanned urban growth, and that as golf estates are planned they could not be regarded as contributing to sprawl. It is however generally accepted that the phenomenon of sprawl is more complex than the above definition suggests. Urban sprawl refers to low-density suburban development with a high car-dependency that often results in a discontinuous pattern of development. It is regarded as undesirable because it often has the following direct and indirect consequences:

- ◆ An increase in the costs of infrastructure provision.
- ◆ Inefficient operation, maintenance and management of services and community facilities.
- ◆ Poor use of vacant land and poor definition of public open space.
- ◆ The ability to operate a viable public transportation system is reduced considerably due to the low population density and high dependence on private vehicles. Consequently accessibility is reduced for those, such as the poor, the youth and the aged, who have limited access to private transport.
- ◆ An increase in air pollution due to the increase in car usage.
- ◆ Loss of a 'sense of community' because the cohesiveness and identity of urban areas tend to decline with decreasing densities and increasing privatisation of individual private spaces.
- ◆ Loss of the 'green and rural' visual character of an area.
- ◆ Loss of productive farmland. Even land regarded as marginal in terms of agricultural potential could contribute towards a diverse local economy and add to food production in a region.
- ◆ Urban spill-over effects could result in farming operations being less profitable, causing farmers to disinvest and even abandon farming operations in anticipation of urban development.

Furthermore, low density, dispersed development, such as golf estates, results in the spatial dilution of people and thus the ability to support the supply of goods and services (CMC, 2000). In the South African context, this form of development is a contributing factor to the pressure for commercial development such as shopping centres on the peripheries of towns. Such developments in turn impact on the viability of traditional town centres, which serve a cross spectrum of the population, including the poor. Once town

centres decline the impacts on the poor are worse, as they do not have the resources to access other areas where more or improved choices are available. This is clearly a complex issue, and the problems raised could certainly not solely be attributable to golf estates and polo field developments. The question of impacts on traditional town centres is related to the principles and philosophies underpinning development, which should also inform the location of golf course and polo field development.

Golf estate development represents a fairly recent, market driven form of development and as such presents a form of unplanned growth⁹ for local authorities. Existing approved spatial planning (which include structure plans prepared in terms of the Land Use Planning Ordinance, 1985 (Ordinance 15 of 1985)) and the old Guide Plans (renamed Urban Structure Plans in the terms of the Physical Planning Act, 1991 (Act 125 of 1991)), are mostly outdated. Thus they do not provide explicit guidance on dealing with this form of development. Most municipalities in the Western Cape are at present preparing Spatial Development Frameworks (SDFs) and a number were available in draft form at the time of writing.

In general most reports cite the DFA principles, which include the imperative to address sprawl and promote efficient and integrated development as part of the underlying philosophy of the SDF. In addition, in line with Provincial policy SDFs include the concept of bio-regional planning, which aims to classify land according to environmental value and use with the view to promoting sustainable development. At present this concept is mostly used as a way of representing current land uses and values and as such provide an useful basis for forward planning. It cannot, however, be solely relied upon to provide the mechanisms for directing future growth and protecting valuable resources because environmental protection is only one aspect of regional planning. A particular concern that has been raised in this regard is that this concept tends to reward those who neglect their land by awarding a less restrictive spatial planning category to such land as it is already degraded. More importantly though the large variety of alternative resort and tourism related uses that could be allowed in the transitional land use categories such as the buffer and agricultural zones, which applies to a very large proportion of land in Western Cape, or through the introduction of a special management, illustrates the broadness of the policy. This framework is considered to be ineffective in addressing the potential negative spatial implications of consumptive land uses such as golf estates.

As a result the recent draft Provincial Spatial Development Framework (PSDF) has reviewed the spatial planning categories, and has suggested the removal of the agricultural zone. Instead it has grouped extensive agriculture with the buffer zone and created a new category for intensive agriculture, thus effectively controlling urban uses outside of urban areas. The draft policy is

⁹ The large scale migration of rural poor people to urban areas present a similar form of unplanned growth, especially in the South Cape.

DRAFT PSDF
CALLS FOR NO
URBAN
DEVELOPMENT
OUTSIDE URBAN
EDGES

focused on redressing past patterns of segregated and inefficient urban development or sprawl by creating higher density settlements that create opportunities for all people, including the poor. Thus the draft PSDF proposes that no form of urban development be allowed outside of urban areas, through the introduction of urban edges. In this regard the policy presents a further level of refinement of the National Spatial Development Perspective, which *inter alia* seeks to address the spatial distortions of the past by focussing capital investment on urban areas with growth potential. Although the PSDF policy is still being debated, it clearly argues for incisive measures needed to address the poor performing and inefficient settlements in Western Cape. This framework, if adopted in its present form would thus mean that all golf estate developments would have to be accommodated inside urban edges.

GOLF ESTATES
CAN CONTRIBUTE
TO GOOD URBAN
FORM BY
DEFINING URBAN
EDGES

In addition there are some recent SDFs such as the draft prepared for the George Municipality that have explicitly addressed the issue of golf estates. The draft George SDF has used the concept of an urban edge to accommodate an urban fringe area inside the edge line where uses such as country estates, smallholdings, resorts and golf estates can be accommodated. In particular golf estates are regarded as an appropriate use to define the edge of urban development and contain urban sprawl and provides guidelines for such developments. Some comments on the draft Rapid Review report suggested that golf estates are not appropriate in urban areas, because they take up land that should be used for higher density urban development and lead to further inefficiencies. Given the concerns raised related to locating such development outside urban areas, this begs the question if golf estate development could in fact be accommodated at all in the present scenario. The draft George SDF seems to have found a useful role for this type of development. In addition it should be considered that where estate type development is attached to an existing golf course, this could be regarded as form of efficient infill development.

Points for consideration:

- ◆ The cumulative impact of dispersed development on the spatial economy cannot be readily assessed by the impact studies undertaken for individual applications. Municipalities that experience pressure for decentralized development - typically these are municipalities on the edges of large urban areas - should ensure that forward planning also includes a thorough understanding of the operation and desired development of the spatial economy, which would in turn contribute to assessing development applications.
- ◆ Given the concerns raised about the negative spatial implications of golf estates, are there circumstances under which golf estates do not necessarily contribute to sprawl? Such consideration could be related to:
 - the scale of the development (i.e. it is small enough not generate large volumes of traffic),

- the nature of services used (e.g. no connection to urban service networks required), and
- its location (e.g on degraded land through mining for instance or as densification around an existing course).

It should also be considered if there are exceptional circumstances where the potential benefits of estate development, such as job creation, or rehabilitation and conservation of biodiversity or even investment in agriculture, may weigh heavier than the potential negative impacts related to sprawl.

- ◆ Municipalities should be encouraged to prepare comprehensive SDFs which includes urban edges in conjunction with growth management planning and which addresses the issues posed by estate type developments. When communities have agreed to such plans, politicians and communities will be empowered to assess and respond to development proposals more effectively.
- ◆ Consideration should also be given to award SDFs with some form of legal status that would ensure their enforceability. This is being considered for the Provincial Spatial Development Framework and is likely to be given effect via the proposed integrated environmental, planning and heritage resources law that is being developed by the province. A similar approach could be taken to municipal SDFs.

3.6.2 Agricultural land and activities

Agriculture is recognised as an important component of the Western Cape economy. Many new golf estate proposals involve development of agricultural land. From the survey results received, at least 10 existing estates and courses were developed on agricultural land and at least 22 of the current proposed developments will result in the loss of agricultural land. Most applicants argue that the production value of the land is marginal and declining when they make an application in terms of Act 70 of 1970 for the subdivision of agricultural land to the Department of Agriculture.

The Department of Agriculture is adamant that they will not allow the subdivision and development of prime and unique agricultural land. *Prime land is defined as the best land available, primarily from the national perspective, but with allowance of provincial perspectives; land best suited to, and capable of, consistently producing acceptable yields of a wide range of crops (food, feed, forage, fibre and oilseed), with acceptable expenditure of energy and economic resources and minimal damage to the environment (and is available for these uses); and "unique agricultural land" means land that is or can be used for producing specific high-value crops. It is usually not prime, but important to agriculture due to a specific combination of location, climate or soil properties that make it highly suited for a specific crop when managed with specific farming or conservation methods. Included is agricultural land of*

*high local importance where it is useful and environmentally sound to encourage continued agricultural production, even if some or most of the land is of mediocre quality for agriculture and is not used for particularly high-value crops.*¹⁰ Together these two categories are regarded as high potential agricultural land.

The criteria are based on three parameters namely present irrigation, moisture availability (rainfall) and soil type. Based on these definitions the Department has determined areas where high potential land is likely to occur for the whole of South Africa using the 1:50 000 topographical sheets. This categorisation then provides an indication to applicants who wish to develop their land as to the studies required for the purposes of an application. Even with this baseline information the Department has pointed out that the determination of agricultural potential is a complex matter. This is demonstrated by a case where two studies for the same piece of land, both undertaken by recognised experts, resulted in two very different interpretations of the agricultural potential of the land. This is often the result when the viability of a range of different and sometimes unsuitable crops are considered for the land. In addition the Department of Agriculture is concerned about the is also concerned about the use of water sources for non-agricultural purposes and the impact it may have on agricultural production in the medium to long term.

FRAGMENTATION
OF
AGRICULTURAL
LAND IS OF
CONCERN

The farming community has raised concerns about the long-term effects of the fragmentation of agricultural land, as this could impact on farmers' ability to expand farming operations. Furthermore, it reduces confidence in agriculture as a viable industry and dissuades farmers from investment in farming. Members of the Pacaltsdorp community expressed concern about prime agricultural land being converted into leisure developments. It was felt that this would impact negatively on the region's ability to produce vegetables and milk. As a result there would be an increase in the price of these goods as they would have to be obtained from elsewhere. This is of great concern for poor communities.

Also of particular concern are the inflated prices (i.e. beyond the agricultural value) that are often paid for agricultural land with a view to development as is illustrated by the case study below. It has been noted that small farms and smallholdings in the George area continue to sell at extremely high prices (Farmers Weekly, October 2004). This exacerbates the effects of fragmentation, as farmers are unable to afford the expansion of their operations. A further concern is that the increased land values will eventually impact on the cost of agricultural production and ultimately on the pricing of produce.

¹⁰ Department of Agriculture 2004: Criteria for High Potential Agricultural Land in South Africa
GOLF ESTATES AND POLO FIELDS IN THE WESTERN CAPE - RAPID REVIEW

CASE STUDY – INCREASE IN PRICE OF AGRICULTURAL LAND

The average price paid per hectare for agricultural land of 50ha or less in 2004 in the George area has been R42 751. In one instance in excess of R293 000/ha was paid for land apparently with the view to golf estate type development. For agricultural land units of 50ha – 300ha an average of R14 990/ha was paid in this year, however in an earlier transaction R74 923/ha was paid for land with the view to develop a residential estate on the land. The land in question had no development rights at the time of the sale.

This information has been obtained from a database of average prices kept by the Department of Agriculture with additional information from agricultural publications such as the Farmer's Weekly and Landbou Weekblad. Transaction information was obtained from the Deeds Office.

CRITERIA FOR SUBDIVISION OF AGRICULTURAL LAND BEING REVIEWED

Clearly the viability of farming and the impact of non-agricultural uses on farming are complex issues that are also influenced by factors such as exchange rates, cost of labour, and market preferences. Notwithstanding, the complex issues, the concerns raised about the impact of the loss of agricultural land are regarded as significant. The Department of Agriculture is, therefore, in the process of reviewing their criteria for assessing applications to subdivide agricultural land. At present the focus is on the agricultural value of the land concerned and the impact of the proposed development on water resources. The department is now also considering evaluating additional aspects, such as the impact that development could have on the character of an area and the impact of a non-agricultural use on surrounding agricultural uses.

Having stated the above, it is also recognised that changing market forces can have severe consequences for agriculture and that in some instances significant capital investment is required to establish viable agricultural units. There are some examples where limited property development was used to subsidise such capital investment, such as Diemersfontein Estate in Wellington. It is considered that such schemes can be acceptable provided that the scale, visual impact and impact on agricultural production is carefully controlled.

Internationally the potential negative impacts of non-agricultural uses and particularly golf developments are also regarded in a serious light. In Halton, Canada (Halton Golf Course Study, 2000) applicants are required to undertake an *agricultural* impact assessment when applying to develop agricultural land. In addition the regional authority has a number of policies aimed at protecting agricultural land from speculative buying, which includes not only restrictive measures such as defining areas of landform permanence in order to preserve agricultural land but they also actively support farming through signage, road improvements and financial support for farm organizations.

Points for consideration:

- ◆ Where forward planning indicates areas reserved for agricultural production for an agreed period of time (i.e. similar to land form permanence as in Halton), the speculative buying of agricultural land for development purposes and pressure for development may be reduced, as prospective buyers will have a clear understanding of the likely outcome of a development application based on agreed public policy. It is therefore critical for IDPs and the associated SDF (Spatial Development Framework) to give clear direction in this regard.
- ◆ The determination of what constitutes a viable agricultural unit when considering subdivision and development applications, should take into consideration issues such as the availability of water and the potential impact that development could have on adjoining agricultural units as described above. Applicants could be required to ensure that socio-economic impact assessments include investigations into the potential impacts on agriculture.

3.6.3 Heritage Resources and Sense of Place

Golf estates capitalise on the scenic and natural amenity of their location – that is largely why they locate where they do¹¹. In the Western Cape golf estates are largely concentrated in areas with a high scenic and amenity value, such as the Boland and Garden Route, both known for their exceptional natural and cultural landscapes. The location of these types of development outside of or on the periphery of urban areas have the potential to impact on the quality and value of the landscape, which provided the attraction for the development. This is of concern for the broader community in terms of loss of visual quality and cultural landscapes. SAHRA (South African Heritage Resource Agency) has noted their concern that large-scale developments such as golf estates in agricultural or rural settings are incongruent. Conversely golf courses in urban areas, such as in Cape Town Metropolitan area, can provide a visual and psychological respite from the built-area and so contribute to the quality of the urban environment.

LOSS OF VISUAL
QUALITY OF
LANDSCAPES OF
CONCERN

The impacts of golf developments on rural and natural landscapes are also of concern in areas such Hawaii and Minnesota in the USA, Halton in Canada and China and even in St Andrews, Scotland where golf courses could be regarded as part of the cultural landscape. In England, the English Heritage and Garden Team, are at present preparing guidelines for golf developments in historic landscapes in England and have called for public input.

In South Africa the visual impact of golf developments are often exacerbated by the security aspects of developments in the form of high walling and elaborate entrances. Where such developments are situated along higher

¹¹ Other factors would of course include the suitability of the soil and topography and climate to support a golf course, accessibility, etc.

order roads that connect settlements this continuous walling can be visually intrusive.

The National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA) provides for the protection of a range of resources of cultural significance, including cultural landscapes. Section 38 stipulates that any person who intends to undertake *inter alia*, any development which will change the character of a site exceeding 5000m² in extent, or involving 3 or more erven (their subdivision or consolidation etc.) may be required to commission an independent consultant to prepare a specialist report, which must:

- ◆ identify and assess the cultural significance of the property and its context;
- ◆ review statutory frameworks and constraints;
- ◆ identify potential negative and positive impacts on the cultural significance of the property and its landscape context;
- ◆ prevent/minimise adverse impacts;
- ◆ promote/enhance positive impacts;
- ◆ identify responses from the proposed development which respect the physical fabric and landscape context of the property;
- ◆ integrate the proposed development into the protection and management of the development proposals; and
- ◆ identify strategies that will minimise such conflict.

It is evident that almost all golf course and estate developments could be required to undertake a Heritage Impact Assessment (HIA) and according to the survey results to date, most of the recent developments did prepare such assessments. Most facilities where heritage resources are of concern are required to address these through environmental management measures during construction and operation (e.g. monitoring of construction activities). However, the concern is that the potential cumulative effect of the proliferation of residential estates and the increase in built-up areas along scenic routes and in natural and rural landscapes cannot be assessed by the current assessment system, which largely deals with applications in isolation.

Of particular concern is the cumulative impact of development, including golf estates, on the coastline. There are parts of the Southern Cape, where unspoilt coastlines between historic settlements, such as the bay between Vlees Bay and Mossel Bay, will be lined with development, albeit of low density, if proposals are approved. Such developments impact negatively on the very quality on which they wish to capitalise.

It has been argued that the proliferation of development along the Garden Route is impacting on tourists' enjoyment of the area. This view resulted in a workshop being convened by the Centre for Tourism Studies of the University of Port Elizabeth. At this workshop, participants (including representatives of the tourism industry) recognised the importance of the scenic and natural

beauty of the Garden Route in attracting visitors to the area and hence the importance of ensuring that this asset is not maintained.

Points for consideration:

- ◆ Policy planning such as undertaken by the City of Cape Town to identify and protect scenic routes could make a valuable contribution to the assessment and control of the visual impact of estate development. Municipalities with valuable natural and scenic landscapes, such as those along the Garden Route, should be encouraged to undertake such studies and develop policy guidelines, so as to be able to make more informed decisions about the impact of large scale developments on scenic routes, landscapes, and sense of place.
- ◆ Municipalities and the PGWC should also consider using section 29 of the National Heritage Resources Act (Act 25 of 1999) to provide stringent protection to valuable cultural landscapes and resources such as found in the certain parts of the Winelands. SAHRA has recently been successful in applying this provision to protect the farm Boschendal in the Simondium area as a cultural heritage resource.
- ◆ Authorities should consider the visual impact of walling carefully and insist on unobtrusive walling such as visually permeable fencing in an unobtrusive colour.

3.6.4 Services & Transportation

Services

Low-density development is generally considered to be inefficient in terms of infrastructure and service provision. It has been calculated that low-density development can increase the cost of infrastructure by between 40% and 400% (CMC, 2002). Although it is a generally accepted principle that developers carry the cost of extending service networks, this does not necessarily represent an efficient use of resources. It does, however, mean that there is no cost implication attached to the installation of these services for the municipality. The bulk external services, although provided by the developers, remain the responsibility of the municipalities to maintain. With reference to all development, municipalities need to periodically evaluate maintenance costs of roads and infrastructure when determining development levies, rates and cost of services so that they are in a position to adequately maintain these services.

The completed surveys received indicate that in all cases where upgrades or new construction of bulk (external) services and/or roads were required the developers were responsible for the cost. This could also benefit surrounding communities. In addition, more than 90 percent of residential golf estates surveyed indicated that services on the estate are private, i.e. the estate maintains the internal services. The municipalities therefore have one client,

DEVELOPERS PAY FOR SERVICES INSTALLATION
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the estate, for billing purposes, which according to City of Cape Town officials is a more efficient way of collecting services fees.

Transportation

Concerns that have been raised with respect of transportation are:

- ◆ Traffic generation from golf estate and polo field developments;
- ◆ Impact on public transport systems and efficiency;
- ◆ Impact on traffic flows associated with events such as golf and polo tournaments and polo events;
- ◆ Impact of construction vehicles on road surfaces and traffic flow.

At the time that this report was prepared, no Traffic Impact Assessments were available to the team, although some estates noted that they prepared such studies. Accordingly, internationally accepted traffic engineering guideline documents have been used to address the question of traffic generation from golf estate developments. International guidelines make a distinction between golf estates in rural areas and those located in urban areas. Residential units forming part of rural golf estates are generally considered to be second homes used periodically by the owner or rented on a seasonal basis. In comparison, residential units forming part of urban golf estates are seen as being similar in nature to residential units located outside of the estate (i.e. suburban areas) when considering traffic generation. Hence, the following points are relevant, based on the application of standard figures used locally and internationally (Trip Generation 7th edition Institute of Transportation Engineers, USA, 2003):

- ◆ A 200 unit rural residential estate will generate between 32 and 52 vehicle trips during either of the morning or evening peak periods, while an urban estate of similar size will generate approximately 300 vehicle trips.
- ◆ The traffic generated by a golf estate is dependant on the size of the golf course (number of holes). A golf course will generate between approximately 2 and 3 vehicle trips per hole during either the morning or evening peak periods, i.e. an 18 hole golf course will generate up to 50 vehicle trips as opposed to a 9 hole golf course's 25 vehicle trips.

Although rural residential estates generate on average 8 times less traffic than similar urban developments, their location outside of urban areas can impact on the potential for the implementation of efficient public transport systems, because population thresholds are diluted. This issue relates to economies of scale, meaning that the implementation of public transport systems is unlikely to be warranted outside of urban areas. In the South African context where public transportation systems are generally inadequate, the focus is on improving public transport in urban areas.

In feedback on the draft Rapid Review the point was made that the question of whether densification promotes efficient use of transport is subject to debate. It was noted that the ratio of densification in most American and European cities has not resulted in the same ratio of increase in public transport use. The car remains the transport mode of choice. It is likely that private cars will be the preferred mode of transport for golf estate households, notwithstanding improvements in public transport.

Employees, however, will be largely reliant on public transport. The location of large-scale developments such as golf estates outside of urban areas can be considered to be inefficient from this perspective. Most estates (based on the surveys received) provide organised transportation for workers to and from the site, due to lack of public transport.

Points for consideration:

Although many of the issues raised in this section apply to all large residential developments the following issues are listed for consideration:

- ◆ The long-term cost of service provision and maintenance to be borne by municipalities, should be calculated in detail upfront, to ensure that other residents in the municipal area do not subsidise golf estates.
- ◆ Traffic and transportation and socio-economic impact assessments should address the whole ambit of issues regarding the cost of transportation related to golf estates, including the impact of construction vehicles on public roads.
- ◆ The occasional large increase in tourists (both local and international) to the Garden Route area during international and local golf tournaments impacts on the road network and disrupts local commuter patterns and organizers should be required to prepare traffic management plans for such events. This issue is considered to be equally relevant to the peak holiday season.

3.6.5 Loss of Biodiversity

The Western Cape is renowned for its biodiversity and is home to one of the world's 6 plant kingdoms – the Cape Floral Kingdom (commonly referred to as fynbos). The importance of this system is internationally recognised with the result that significant funding has been allocated to developing a strategy and implementation programme for the area CAPE (Cape Action for People and the Environment). Furthermore, the international significance of the Cape Floral Kingdom is evidenced by the declaration of 8 protected areas within the Cape Floral Region as a World Heritage Site.

Cape Nature is the organ of state that is responsible for biodiversity conservation in the province and the organisation is particularly concerned about the extent of development on the Southern Cape coastline. This is due

to the prevalence of habitats that are endangered or critically endangered. In assessing the spatial relationship between development and these habitats¹², the concern that had been expressed about the continuing development pressure was highlighted, since many projects that are being planned are located within sensitive habitats.

MAJOR
CONCERN ABOUT
PLACEMENT OF
DEVELOPMENT IN
OR CLOSE TO
SENSITIVE
ECOSYSTEMS

Research has been conducted on the vegetation units that occur on this coast, through the CAPE and STEP (Sub-Tropical Thicket Ecosystem Planning). Many of the vegetation units between Still Bay and Plettenberg Bay, (e.g. Hartenbos Strandveld, Robberg Dune Thicket, Keurbooms Grassy Fynbos and Albertinia Sandplain Fynbos) have limited distribution ranges. Furthermore, these vegetation types are not well protected in that they are largely not incorporated into formal conservation areas. Accordingly, most of this area has been identified as being highly to totally irreplaceable (80% -100%) in both the CAPE and STEP projects. In terms of conservation status the entire region falls within the 'Endangered' or 'Critically Endangered' categories. The STEP-Project in particular emphasised the importance of establishing a coastal corridor (referred to as the Dune Megaconservancy Network), because many ecological processes are aligned along east-west climatic and biogeographic gradients (Vlok *et al* (2003)). The maps that have been developed through the STEP project are included in the STEP Handbook (Pierce 2003), which has been circulated to all local authorities for incorporation into IDPs and SDFs.

Coastal vegetation types are generally distributed in bands along the coastline. Consequently linkages are required within coastal vegetation systems and between them. For this reason, coastal corridors have been advocated (i.e. biodiversity corridors) as well as corridors that link coastal and inland systems. Such corridors are required to ensure that biodiversity processes are maintained. Development that results in disruption of ecological patterns and processes (referred to as fragmentation) is therefore of major concern. Fragmentation of natural systems in relation to golf course developments is of concern elsewhere in the world. In Minnesota, for example, problems have been experienced with respect to the fragmentation of forests. Whilst forest strips are maintained on the golf course, these have been found to be inadequate for uncommon and rare species, which have specific habitat requirements and are sensitive to disturbance.

PSDF DRAWING
ON NEW
THINKING IN
BIODIVERSITY

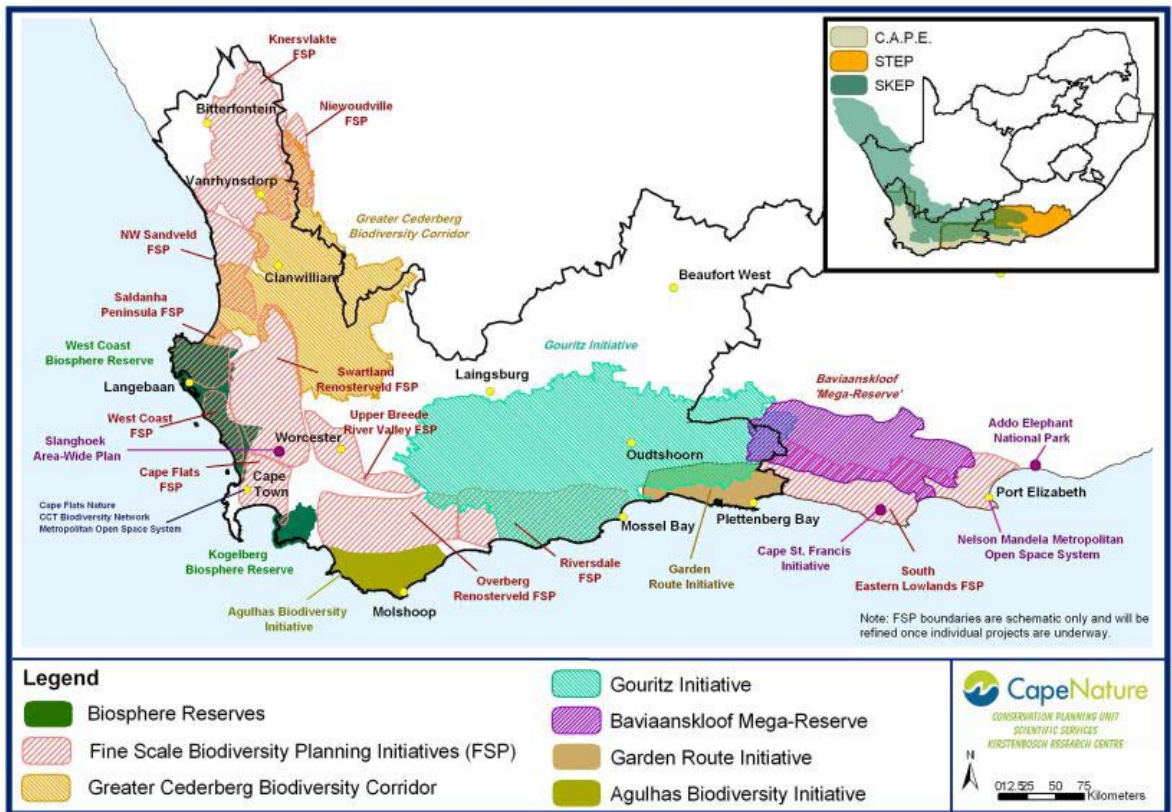
The focus in biodiversity conservation has shifted from the conservation of species, to that of protecting processes and patterns that are vital to the sustaining ecosystems. This means that the bioregional planning approach that has been applied in the Province (a core surrounded by a buffer and then transitional zone, which results in a circular spatial pattern) is considered inappropriate, since it does not account for the fact that ecology functions along, across and between landscapes. The bioregional approach has

¹² Article entitled, 'The demise of the Southern Cape Coast - a plea for intervention' available on the web at address http://www.globalgreen.org.za/org_cnc.htm

SPATIAL
DATABASE ON
BIODIVERSITY IS
GROWING

therefore been revised in the PSDF proposals and provision is made for biodiversity corridors.

Most information on biodiversity conservation is based on vegetation data and this is generally accepted as serving as an adequate proxy for determining the conservation status of ecosystems. It is recognized that this approach has limitations, particularly when it comes to dealing with riverine, aquatic and marine ecosystems. The information base on biodiversity has grown over the past few years as a result of CAPE and the information base will continue to grow as a result of this project. Increasingly, spatial information is being developed and improved. A series of fine scale plans have been completed (e.g. Riversdale Coastal Plain, Agulhas Plain). The fine scale planning exercise for the Garden Route is due to commence early in 2005 and it is intended to complete plans for the key priority areas by about the middle of next year. The fine scale planning areas for CAPE are shown on the map below.



With this background in mind, a number of specific concerns have been raised by conservation organisations and environmental NGOs:

- ◆ Golf courses and golf estates take up large areas, which can lead to habitat loss, depending on where the project is located. This issue has been raised in relation to a number of golf estates, particularly those located outside of the urban edge. Many golf estates promote their developments on the basis of their location in what is described in their advertising as a 'pristine natural environment.'

<p>FRAGMENTATION OF NATURAL SYSTEMS IS A KEY CONCERN</p>
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- ◆ Fragmentation of natural areas is probably of greatest concern from a biodiversity perspective. Large-scale developments can have a significant impact on some of the ecological processes that sustain the vegetation units, such as fire, pollination and migration of animal species:
 - Vegetation units that are dependent on fire (e.g. Hartenbos Strandveld, Herbertsdale Renoster Thicket, Blanco Fynbos Renosterveld Mosaic, Outeniqua Plateau Fynbos, Tsitsikamma Plateau Fynbos) are being affected. Fire plays an integral role in the maintenance of species diversity and ecological processes in fynbos and renosterveld. When fynbos vegetation is fragmented by developments (e.g. houses, buildings, infrastructure, etc.), it becomes almost impossible to burn the fynbos patches under optimal conditions, because of the potential risk this poses to houses and infrastructure. Lack of burning will lead to a change in the species composition. Thicket species become established, creating conditions less favourable to fynbos (e.g. shaded habitats) with a resultant loss of species in the area as has occurred in the Brenton Blue Butterfly Reserve. Likewise, if burns are undertaken under cool, wet conditions which are not optimal, the species composition will also change. In general in the EIA it is stated that fire management will be dealt with in the Environmental Management Plan. The project team has been unable to find an example of a controlled burn having taken place on a golf estate on the basis of such a fire management plan.
 - Fragmentation of natural areas by large-scale developments also affects the linkage between different vegetation units which is vital for the migration of genetic material of plants and animals. This linkage is critical for the maintenance of the integrity of many species. Fauna (especially seed-eating birds such as the Cape Bulbul, Southern Tchagra and Speckled Mousebird) play an important functional role in seed dispersion. Such frugivores, and nectarivores such as sunbird species, would serve as a vector for immigration and genetic migration (De Villiers, 2000). Furthermore, in considering the maintenance of ecological processes at a landscape scale in the Vleesbaai-Gourits region, Vlok and Euston-Brown (2002) found that it is important to maintain links between Dune Thicket and riverine Valley Thicket. Similarly Lombard and Wolf (2004), note a distinct biogeographic zone between Gouritsmond and Mossel Bay. In order to be maintained, connectivity in an E-W and SE–NW direction is required to ensure the maintenance of ecological processes across coastal areas and into the inland mountain fynbos complexes.
- ◆ In general, EIAs are not considered to be inadequate in terms of the way biodiversity impacts are addressed. They tend to focus on individual species (e.g. the occurrence of Red Data species on a site), rather than on habitats and ecosystem functioning. This means that EIAs do not deal with biodiversity impacts comprehensively as they do not address the question of how loss of a species or fragmentation of a habitat or

vegetation type as a result of development, will impact on the broader ecosystem and its functioning.

Points for consideration:

- ◆ Providing a legal mechanism to ensure that adequate consideration is given to biodiversity issues. This is catered for to some extent in the National Biodiversity Act (Act 10 of 2004). This issue should be considered in the provincial law reform project (i.e. project to develop integrated environmental, planning and heritage resources legislation) as well, particularly in the context of the outputs from the CAPE project, which includes the development of fine scale plans, on an ongoing basis.
- ◆ Establish minimum requirements or norms and standards for the assessment of biodiversity issues in EIAs¹³.
- ◆ Ensure that biodiversity is incorporated into decision-making criteria. In particular, development should not be permitted in habitats rated as being critically endangered in terms of the National Biodiversity Assessment. This is in line with the principles that have been proposed for the PSDF (Provincial Spatial Development Framework).
- ◆ Promote the use of fine-scale plans in the IDP process. In this regard, fine-scale plans prepared at 1:10000 and that are developed for each municipality would be the most effective.
- ◆ Placing a value on biodiversity is an extremely complex process and even questionable from a philosophical perspective, since much of what society gains from biodiversity is intangible (e.g. a wilderness experience cannot be readily quantified). Furthermore, healthy ecosystems are important for human wellbeing (e.g. pollution of a river affects fish stocks and hence a potential food source).

3.7 Water use and demand

Water consumption emerged as the key concern amongst NGOs, conservation organisations (e.g. Cape Nature and SANParks) and some community representatives. In an article¹⁴ relating to the rate of development on the Garden Route, Cape Nature noted that "The provision of water to these large-scale developments is a matter of serious concern. This is an issue which has been repeatedly raised by the WCNCB (Cape Nature). Consultants and developers usually respond by saying that it is the duty of the local authority to supply water to the development. For irrigation of the golf courses, developers often indicate that recycled sewerage water will be used. When they are informed about the fact that nutrient enrichment of the soils will be

¹³ It is understood that the Department has an initiative underway which is aimed at determining the terms of reference for specialist studies in this regard

¹⁴ Article entitled, 'The demise of the Southern Cape Coast - a plea for intervention' available on the web at address http://www.globalgreen.org.za/org_cnc.htm

detrimental to the fynbos (which is adapted to nutrient poor soils), they respond by saying that the issue will be dealt with in the environmental management plan of the development.” Cape Nature concludes with the statement, **“The potential impact of all developments on available water resources should be investigated before any approval is given.”** Examination of EIA documents indicates that the question of water demand is not addressed in sufficient detail. Furthermore, there is no evidence that the impact on municipal water supply systems are being evaluated where municipality’s indicate that they have adequate water supplies (i.e. this is not being interrogated in the EIA).

The concern about water use by golf course developments is not unique to the Western Cape. There are several international environmental management initiatives¹⁵, all of which recognise the importance of addressing water use at these facilities. An example of the level of concern that has been expressed is that by The Royal & Ancient Golf Club of St Andrews Club Secretary, Peter Dawson, “Control of water usage and its conservation is such a serious issue, especially in Southern Europe, that unless working solutions are found at acceptable cost, the growth of the game of golf will grind to a halt and may indeed be reversed” (Conference held at the Royal & Ancient Golf Club of St Andrews, 8-9 November 2001).

From the survey questionnaire 27 out of 30 (3 facilities did not respond to this question) of the respondents stated that existing water supply sources were sufficient to meet the current demand. Eleven respondents noted that their water demand had increased over time, mainly due to the phased nature of their residential development. Of these, eight noted that water demand will increase in the foreseeable future, primarily as a result of more houses being developed, summers becoming drier and / or the golf course expanding the number of fairways.

3.7.1 Supply requirements and sources

USE IS DEPENDENT
ON SEVERAL
FACTORS

ESTIMATED AT
BETWEEN 1 and 3
Million Litres/day

It is generally accepted that golf courses are high water users. According to the Golf Course Superintendents Association, US golf courses each use, on average, 414 500 000 litres a year, i.e. ~1.2 Ml/day per course. Information obtained during this Rapid Review, indicates that on average golf courses use (e.g. according to the City of Cape Town – Water Services) between 1.2 to 3 Ml/d depending on:

- ◆ Soil characteristics - sandy or clayey;
- ◆ The total area requiring irrigation, which is influenced by how the rough (off-fairway) areas are treated (type of vegetation planted, irrigated to look good or just left alone);
- ◆ Exposure - loss by evaporation both directly and during irrigation;
- ◆ Turf type;

¹⁵ Examples are the Committed to Green Foundation and the European Golf Association Ecology Unit

- ◆ Number of houses within the development – in the case of golf estates.

The City of Cape Town Water Services Department, provided as examples, the following information on water use by golf courses (18 holes). Each of these facilities makes use of treated effluent from municipal waste water treatment works:

- ◆ *Parow Golf Course:* This uses virtually the full flow of treated effluent from the Parow Wastewater Treatment Works of 1.2 MI/day. Usage in winter would be less.
- ◆ *Milnerton Golf Course:* Data for March 2004 shows an average usage of 2.9 MI/d. This is significantly more than Parow and could be attributable to a sandier soil at Milnerton and the fact that the area is more exposed to the wind, resulting in drying out of soil and a greater loss by evaporation during irrigation.
- ◆ *Atlantic Beach (Melkbosstrand) Golf Course:* This draws from the Melkbos WWTW¹⁶. When the treatment capacity was 1.8 MI/d, Atlantic Beach was drawing virtually all the water. Now that the treatment capacity has been increased to 2.2 MI/d, there is some discharge to the river.

Irrigation volumes were recorded in responses to the survey (24 of 30 respondents provided data), as summarised in the Table 19 below. Some golf course developments (7 respondents noted this) use a combination of treated effluent, stormwater detention ponds, rivers and dams. Only 2 of the 20 respondents use potable water for all water requirements on site, one of which is an 18 hole municipal golf course (1.3 kl/d) and the other a golf course estate (approximately 2400 kl/d).

TABLE 19: Water use information from survey

Source of irrigation water	Number of Respondents		Volume
Potable water	13	21 %	Range from about 56 Kl/day to 1500 Kl/day (1.5 MI/d, that is 45 million litres per month).
Groundwater	7	26 %	Only 1 facility reported data – 120m ³ /day
Municipal treated effluent	12	53 %	Variable depending on whether this is the sole source. Ranges from about 1.5 million litres /day (sole supply) to
Private treated effluent	2	11 %	Ranges between about 6 million and 21 million litres of treated effluent per month
Rivers, streams, detention ponds, dams	14	53 %	No data on volumes provided.

The following irrigation practices / sources were confirmed during a site visit to golf and polo facilities in the Southern Cape in February 2005:

¹⁶ WWTW = waste water treatment works

- ◆ *Pinnacle Point Golf Estate, Mossel Bay (under construction)*: It is proposed that treated effluent from an on site WWTW will be used for irrigation of the golf course. Subsoil drains are to be used around irrigated areas to collect excess irrigation water and returned to source for re-use. Subsoil drains will also be effective in preventing over-watering of adjacent areas and preventing high nutrient water from reaching these areas.
- ◆ *Fancourt Golf Estate, George*: Fancourt irrigate their four golf courses from water obtained from a dam on the estate, which was specifically constructed across a river that is present on the property. The design of the dam incorporates a low flow channel which maintains river flow downstream of the estate.
- ◆ *Simola Golf Estate, Knysna*: Simola irrigate their golf course with water from stormwater detention ponds on the property.
- ◆ *Pezula Golf Estate, Knysna*: Pezula use approximately 1 Ml/d treated effluent from Knysna WWTW for irrigation. There are stormwater detention ponds on the residential side of the site which may also be used for irrigation. Pezula is situated on the coast and stated to the Rapid Review team that they have investigated desalination as a water supply option. They have also investigated the use of water from the Knoetzie River, but were not granted permission to use this source.
- ◆ *Goose Valley Golf Estate, Plettenberg Bay*: Irrigation water is abstracted from a stream, downstream of Plettenberg Bay WWTW. Since treated effluent from the WWTW is discharged into this stream, the irrigation water is partially diluted treated effluent. The WWTW is considering stopping the discharge of treated effluent into the stream and distributing it in a piped network to prospective treated effluent clients. In this event the golf course will be required to investigate alternate water sources for irrigation.

The amount of potable water used by the residential component of golf estates is no different to any other residential dwelling of similar size. Generally residential units within an estate do not use potable water for irrigation purposes as is the case in most residential developments. The estate's irrigation source (e.g. treated effluent, stormwater, groundwater) is often available to the residential units.

As a general observation, the information on water usage from the survey is sparse and difficult to interpret in any detail. It appears that the majority of the golf courses and estates do not have a thorough understanding of their water use and on the sustainability of this use. This is supported by analysis of the number of responses to certain questions and, in some cases, conflicting answers, e.g. a site has a groundwater monitoring system but has not indicated that they make use of groundwater. Interestingly, the most

<p>WATER USE POORLY UNDERSTOOD DUE TO LIMITED DATA</p>
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comprehensive data on water use (volume only) has been obtained where treated effluent is utilised. No data on the volume of water used from dams, rivers or streams was provided by any of the facilities that use these resources. Data in relation to groundwater use is also limited. Hence, the availability of data is the weakest in relation to the question that is most important, namely that of understanding the impact of golf course developments on natural systems, where these form all or part of their water supply.

Based on the survey results and on discussions with personnel at golf estates, water use is generally not well understood. This can be attributed to the following:

- ◆ Most of the golf courses (i.e. not residential component) were established several years ago, when monitoring of environmental parameters such as water use was not common practice.
- ◆ A general weakness that was noted in EIAs that were reviewed is that water use was not comprehensively addressed (e.g. volume of water required for different aspects of the development not specified). This is particularly true of EIAs undertaken in the first 2-3 years after the promulgation of the EIA Regulations. The result is a poor understanding of the baseline situation and limited interpretation of the potential impacts. This means that a benchmark for tracking the impact of water use is lacking. In addition, monitoring requirements were not specified, which means that they have not been included in the approval.

Having stated this, there are exceptions, with some estates undertaking regular monitoring of water use. As a positive aspect, the survey in itself has raised the level of awareness of the types of water related issues each site should be considering. Furthermore, the survey has clearly demonstrated the importance of addressing water use issues in the EIA process and ensuring that monitoring requirements are clearly specified when authorising such projects. The questionnaire does, however, provide a 'broad' understanding of the water situation at golf course and golf course estates.

There is anecdotal evidence, now supported by responses in the survey questionnaire, which shows that the demand for water has increased and that some golf estates are experiencing problems with their water supply, as the demand is greater than anticipated when the facility was developed. Seven out of the 10 sites that reported an increase in demand note that it is due to more houses being developed, plus in 5 cases, also due to an increased number of fairways. Initial data suggests that in the case of golf estates, the average use per household is typical of upper income residential areas.

All the golf courses that have responded to the survey have stated that fairways and greens are planted with non-indigenous grass. Kikuyu and bent are the most commonly used species. Only one facility reported the use of

buffalo grass (which is indigenous), which has been planted in combination with other species. The project team has been advised that research into suitable indigenous grass species is being undertaken by one of the large golf estates. In general, indigenous grasses require less water than exotic species. Clearly, irrigation requirements will vary on a seasonal basis, with a relatively high demand during the hot, dry summers that characterise some areas of the Province compared to the rainy season. One facility has reported figures on a seasonal basis where peak irrigation demand during summer is 20 MI/month and in winter it drops to 0.5MI/month.

A concern that has been raised with regard to water use and demand is the fact that golf course developments compete with agriculture for the use of this scarce resource. It has been argued that golf courses use the same if not less water than agriculture (specifically in the south Cape) and therefore this is not an issue. The fact remains however that if golf courses continue to take up considerable amounts of water, less would be available for the production of crops as river systems are already stressed. This could have significant impacts on the agricultural industry and its ability to supply produce and employment in the Western Cape.

Furthermore, most of the coastal towns experience water shortage problems during peak holiday periods. For example, the Knysna Dam is currently less than 20 % full and the town predicts a major water crisis over the 2005/05 Christmas and New Year period. Community representatives have expressed concern about the water requirements of golf estates in light of water restrictions being implemented in George and Knysna. The executive mayor of George in his comments on the draft rapid review, states that water restrictions are not an issue. The view was also expressed (by some of the parties interviewed) that it is not lack of water that is a problem, but the fact that water storage facilities such as dams are not being managed appropriately.

Recently a River Health Programme (RHP) has been initiated in the Western Cape, which involves collaboration between Cape Nature and the Department of Water Affairs and Forestry (DWAF). This programme is being funded by the DWAF and run by the River Conservation Unit (RCU) within Cape Nature. Apart from the River Health assessments of the main river systems, stressed river systems are being identified and assessed to determine their Present Ecological State (PES) and the Ecological Integrity and Sensitivity Class (EISC). Initial results from these studies indicate that the rivers of the Southern Cape and Garden Route are already severely stressed. The assessments that are being conducted by the RCU form part of the ecological reserve determinations¹⁷, which are required in terms of the National Water Act (Act 36 of 1998). Cape Nature has also expressed concern about the pressure that

RIVER HEALTH
PROGRAMME
ESTABLISHED

¹⁷ Ecological use has been recognised as a water use in the National Water Act. Hence, there is a legal obligation to determine the ecological reserve for rivers. This is the responsibility of the DWAF.

could be placed on groundwater resources, as alternative water supply sources are sought.

This is further supported by discussion with the Department of Water Affairs and Forestry (Geohydrology Division) who notes that in the where the golf estate makes use of groundwater, the DWA&F are now getting enquiries from private residents of the estate who are also installing boreholes for garden irrigation purposes. The private use is permissible as a Schedule 1 use which does not require authorization under the National Water Act, unless it were impacting a neighbour and if the aquifer supply capacity was being exceeded. The problem in policing this 'private use' over and above the general authorization use of the golf course and / or estate is, (i) firstly knowing how many private users there are, (ii) who's responsibility would it then be to prove that the use is a valid Schedule 1 use, (iii) how would one monitor the private use and determine the cumulative effects?

IMPACT OF
GROUNDWATER
USE NOT WELL
UNDERSTOOD AS
MONITORING IS
LIMITED

Although certain golf courses do undertake groundwater monitoring, the impact thereof on the hydrogeological environment is not known at this stage. Unfortunately, monitoring is often limited to the golf course itself, in the vicinity of the abstraction wells, which means that data on the broader area impact is lacking, making it difficult to establish the effects of the use of this resource. Large-scale groundwater use for golf courses would have to be licensed with the Department of Water Affairs in terms of the National Water Act (Act 36 of 1998). All licensed boreholes are included in the national hydrogeological database. It may be possible to establish a clearer picture of the impact of groundwater use, using this data source, once more information in this regard has been obtained (i.e. a more comprehensive survey sample is available).

3.7.2 Water saving and conservation measures

Whilst golf course developments are considered to be high water consumers, this is not to suggest that no measures are being taken to reduce water use or to use recycled water. The City of Cape Town in its comment on the Rapid Review writes, that currently, few if any resource efficiency requirements (recycling, re-use of water etc) are imposed on golf estates or any other new development. Comments from the DWAF indicate that there are examples of sound water management practices on golf estates, such as the implementation of local water demand management strategies, conservation and restrictions and the undertaking of comprehensive monitoring of use to identify opportunities for water use savings.

Based on the information received from the survey and from visits to a number of golf and polo field developments, the following measures have been implemented:

- ◆ Use of treated effluent from WWTW, either from municipal or on-site plants;

- ◆ Retention of indigenous vegetation (which is adapted to local conditions) in the rough areas of the golf course.
- ◆ Implementation of irrigation management, involving use of an automatic timing system and/or measurement of soil moisture.
- ◆ Removal of alien vegetation, which is generally more water consumptive than indigenous vegetation. There are certain species that must be removed in terms of the Regulations under the Conservation of Agricultural Resources Act (Act 43 of 1983). Some golf estates are doing more than the minimum requirement (i.e. legal compliance) and are removing other exotic species. The removal of alien species is a benefit from a biodiversity perspective as well.

Points for consideration:

- ◆ Water conservation measures should be specified in the conditions of approval in the EIA Record of Decision, including restrictions on the type of grass species that can be used.

3.7.3 Planning relating to water demand and supply

Insufficient holistic planning has in the past been undertaken on a regional basis of the available water resources, their recharge potential (i.e. groundwater) and the expected increase in other demands being placed on these resources. Communication with the DWA&F has established that only recently, with the raised awareness of the water scarcity situation, is greater attention being paid to water supply issues.

The DWA&F Geohydrogeological Division in the Western Cape reports that their office has not had sight of any EIA applications and water related issues. It was also noted that, 'sometimes they do get a groundwater related query from the Manager of the Water Management Area, however, in general, have little involvement. He does note that a greater number of queries are now coming in. It has been reported to the project team that the expert review of water demand predictions for the proposed Lakes Eco development showed flaws in the calculation method, with the result that water requirements were underestimated.

Most municipalities have not compiled 'water services development plans', as required by the National Water Act (Act 36 of 1998). Furthermore, the reserve determinations for the rivers of the Southern Cape have not been finalised (i.e. are in progress), as previously mentioned. Studies to assess the regional carrying capacity in terms of water availability and the minimum ecological requirements for the healthy functioning of river ecosystems and estuaries in particular, are either in process or have not been done at all. A review of EIA applications indicates that inadequate investigation is undertaken at the development planning stage into the long term availability / sustainability of water supplies – both surface and groundwater.

Cape Nature refer to the 5, 10 and 15 year scenario plans that are undertaken, however, note that these are desk-top exercises and the demand situation can change markedly over a short period of time in an area due to rapid development growth. They make the comment that the scenarios are not tested at the local scale to see if they are 'realistic' and achievable. A further concern is that the impact of groundwater use on fynbos ecosystems is not well understood, particularly those that are associated with springs. In this regard, it is felt that a precautionary approach should be adopted.

Points for consideration:

- ◆ Hydrogeological potential maps are available from the DWA&F for the entire Western Cape and these should be used in the EIA process when submitting applications for, planning and developing golf course and estate water supplies. The maps show the geology type and potential yields of boreholes throughout the region. Structural geological features are also shown.
- ◆ Whilst some estates that utilise groundwater undertake comprehensive monitoring, other do not. Monitoring requirements need to be addressed in the EIA studies for such developments (if groundwater is to be utilised) and in the Conditions attached to the authorisation.
- ◆ Some estates that are known to use groundwater do not appear to have their wells registered on the DWA&F database. This situation requires clarification.
- ◆ The installation of boreholes or wellpoints at individual properties on estates needs to be carefully managed, as if this occurs on a large-scale, it can amount to a the equivalent of a wellfield. The consequences for water resources could be severe.

3.7.4 Municipal infrastructure capacity and maintenance

The preliminary finding from the questionnaires shows that in all cases where upgrading of existing municipal infrastructure has been required, the developer has paid for such upgrades. In general, however, it appears that the long-term implications for the municipality's finances in respect of ongoing operating and maintenance requirements is not taken into consideration. Unplanned for growth therefore has potentially severe implications for municipalities, in that it could result in their ability to meet service requirements in other parts of the local area being compromised.

Points for consideration:

- ◆ Up-front and in-depth investigation into water resources must be undertaken, within the context of forward planning and long term water

demand. The impact of large-scale developments must be assessed within the sustainability of water supply sources, both in terms of groundwater and surface water. This must be viewed in an integrated manner (i.e. relationship between surface and groundwater systems, ecological reserve, impacts of using recycled water and the like). This should always form part of the EIA process and should also be considered in planning decision-making.

- ◆ Setback lines for development next to rivers should be above the 1 in 100 year flood line and where possible should include a buffer area as an un-impacted corridor to facilitate the maintenance of ecological processes.
- ◆ Water should be considered as a limiting factor for development. This should form part of the municipality's growth management strategy as reflected in the IDP and SDF. It should also be a consideration when evaluating individual developments.
- ◆ Consideration should be given to increasing the development levy so that ongoing operating and maintenance costs associated with water supply infrastructure is borne by the developer and not society at large. This can be seen as an internalisation of social and environmental costs, which is in line with sustainable development principles.

3.8 Use of treated effluent and effluent generation

Treated wastewater is an under utilised resource which could be exploited to a greater degree. There are extensive opportunities for re-use of treated effluent for irrigation purposes of green areas such as sports fields and golf courses. The reasons for this are:

- ◆ Conservation of fresh water sources.
- ◆ Conservation of areas downstream of effluent discharge points at Waste Water Treatment Works (WWTW), which may be adversely impacted by treated effluent.
- ◆ It could be financially attractive.

Notwithstanding these potential benefits, there are a number of concerns related to the use of treated sewerage effluent, which are discussed in this section.

3.8.1 Use of treated effluent for irrigation

The trend is for golf course developments to make use of treated effluent from WWTW. Examples have been discussed in Section that deals with water supply sources (Section 3.7.1 of this report). Indications are that in some cases they use-up **all** the discharge from effluent treatment plants. Re-use of water is a sound principle from an environmental management point of view. In some cases the use of treated effluent for golf course irrigation is seen as

the only means of 'disposing' of this effluent. This is considered as a benefit from an environmental point of view, since it avoids direct discharge into rivers, streams or other natural water systems. Notwithstanding, the potential advantages of this practice from an environmental point of view, the impacts of this practice are currently not well understood. Data on potential water quality changes (e.g. groundwater) or on changes to ecosystems are lacking.

Conservation organisations such as Cape Nature and environmental NGOs have expressed concern about the use of treated effluent as this could impact on the quality of surface runoff and groundwater, thereby negatively affecting other water users. A specific concern in this regard, raised by a local farmer is the impact that such water could have on meeting export market requirements (namely the Eurogap standards). This is also a concern from a river ecology point of view, although it has been argued (in comments on the draft Rapid Review) that discharging treated effluent directly into a river is likely to have a greater ecological impact. As noted in the River Health Programme, of the few remaining rivers that are in a relatively undisturbed condition, most are present in the Southern Cape. These rivers are of high conservation value. Clearly, the effects described here cannot be solely attributed to the use of treated effluent by golf courses for irrigation purposes, as water quality is influenced by all activities that take place within a river catchment.

FYNBOS IS
ADAPTED TO
NUTRIENT POOR
SOILS

This issue is of concern from another perspective and that is the potential for nutrient enrichment of soil and water due to the use of treated effluent for irrigation purposes. Fynbos is adapted to nutrient poor soils and hence nutrient enrichment of soil and water in areas adjacent to these ecosystems is not desirable, as these nutrients enter the soil and groundwater. In its submission on golf courses, WESSA has raised concern about the potential for eutrophication of water bodies to occur, resulting in 'algal blooms' which cause stress to other aquatic organisms, due to the reduction of dissolved oxygen. Generally, treated effluent is discharged to natural water systems such as rivers, streams or wetlands. The use of treated effluent for irrigation purposes on golf courses (and other sports fields) reduces the volume discharged to natural water bodies and hence the potential for eutrophication.

3.8.2 Effluent generation

Large-scale developments, including golf estates can generate large volumes of effluent, as the number of dwelling units can be anything between 200 and 1000 units. This is an issue that is generally not addressed adequately in the EIA in terms of whether there is sufficient municipal treatment capacity to deal with the additional load. Furthermore, effluent discharge from treatment works will increase and where this is discharged into natural water systems (e.g. river, estuary, wetland) this can place further stress on already impacted river systems. This issue can be managed through the implementation of on site treatment technologies that result in improvement in the quality of effluent (see Points for Consideration at the end of this section).

3.8.3 Pollution of runoff

Pesticides used on golf courses include herbicides, fungicides, growth regulators, defoliants, dessicants and insecticides. The use of these substances is of concern as pesticides and herbicides used to kill off insects and weeds within the confines of the golf course estate can spread into nearby groundwater, dams or river systems. Most of the respondents to the survey indicate that they make use of herbicides, pesticides and fertilisers. The survey does indicate that volumes of pesticides, herbicides and fertilisers used are not well documented or known. Furthermore, there appears to be little or no monitoring of the effects of pesticide and fertiliser use on golf course runoff and groundwater quality. There are some exceptions, for example, where quality in stormwater retention dams is monitored. This is a requirement due to the location of the site in relation to a sensitive estuary.

There is considerable concern about the use of these substances at an international level, as well. For example, information from the Australian Environment Protection Authority (EPA) indicates that golf courses can contribute nutrient-rich runoff from the use of fertilisers as well as polluted runoff from the use of chemicals such as herbicides and pesticides. For example, EPA Staff from the Outer Sydney Region are frequently called out to inspect fish and duck kills on golf course dams. These events are likely to have been caused by the misapplication of insecticide and algaecides by golf course staff, although this has been difficult to prove conclusively.

Furthermore, use of pesticides may affect species higher up the food chain by either reducing the amount of food available, or through the accumulation of persistent poisons in their bodies. Since faunal species fulfil important ecological roles such as pollination, seed dispersal and soil aeration their removal may have serious long-term implications for habitat viability.'

Points for consideration:

- ◆ In terms of the National Water Act (Act 36 of 1998), treated effluent needs to comply with the General Standard and this is probably an unacceptable standard to apply where this water is used for irrigation purposes, because of the potential negative consequences. Development of a standard for treated effluent specific to the use of such effluent for irrigation purposes in areas where fynbos, agricultural activities and public health could be negatively impacted (i.e. a special standard applicable to developments that could impact on adjacent or nearby fynbos habitats, agricultural areas, water supply sources such as groundwater and rivers). Quality control can be implemented as follows:
 - *At municipal WWTW:* Treated effluent can be delivered directly to the end user in a pressure controlled distribution network similar to networks for potable water. This option involves infrastructure costs for municipality.

- *At point of application:* Treated effluent is received and treated in storage facilities (dams) on site before use. In this option a maintained pressure in the distribution network from the WWTW is not necessary and infrastructure and quality control costs for municipal WWTW is reduced. The receiving facility bears the cost of pressurised distribution.
- ◆ Measures that can be implemented to control runoff of treated effluent include:
 - Installation of subsoil drains around irrigated areas to collect excess irrigation water and returned to source for reuse. Subsoil drains can be effective around irrigated areas by preventing over-watering of adjacent areas and preventing high nutrient water (treated effluent) from reaching these areas.
 - Cut off berms can be constructed to prevent irrigation runoff into inappropriate areas and reduce irrigation requirements.
- ◆ Public / private partnerships should be encouraged through water resource management programs that are financially attractive to both parties. The purpose of such partnerships is to reduce the demands on municipalities so that they can allocate resources elsewhere.
- ◆ Establish water quality monitoring and evaluation criteria, in consultation with the Department of Water Affairs and Forestry (DWA&F) in respect of the use of chemical substances such as fertilisers, pesticides and herbicides. This issue should be addressed in the EIA and specifications for monitoring and evaluation set out in the ROD.

3.9 Social systems and local communities

The social issues raised in this report are by no means a description of the cumulative social impacts of golf estate developments. Instead they point to potential issues that require careful consideration when assessing impacts of large-scale developments, especially in rural areas. However it would seem that delicate social structure of vulnerable rural communities are often negatively impacted by non-agricultural uses in agricultural and rural areas, both through the displacement of rural dwellers and the impact that immigrants seeking employment has on such communities. Such communities are often poorly equipped to engage in the public participation process effectively.

Social impact studies have to consider a wide variety of factors, many of which are subjective and difficult to measure in scientifically verifiable ways. Even in cases where scientific methods of enquiry are used it is not always easy to relate findings to a particular event since the probable cause can have its

origins in any number of other social or economic process. According to Malan (2004) social sustainability is complex issue and encompasses:

SOCIAL IMPACTS
NEED TO BE SEEN
IN TERMS OF:

- Human capital
- Productive capital
- Social capital

- ◆ Human capital (e.g. health – factors that affect ability to work)
- ◆ Productive capital (e.g. infrastructure – factors that are required to get to a place of employment)
- ◆ Social capital (e.g. community networks – factors that provide support)

Increased employment generated by the development of golf estates do not necessarily result in an improved quality of life for the poor. A community's sense of space, its network of social relations, livelihood strategies, are but a few examples of what would have to be considered when undertaking an analysis of the social effects of golf course and estate development. The lack of definitive studies on this subject has meant that the consortium had to rely often on anecdotal reports to gain an understanding of *possible* social consequences of the rapid increase in the number of golf courses and estates. The EIA's that were reviewed contained some references to social effects but not sufficient to inform this study, as they did not include a specialist social impact study. Even where socio-economic studies are included, these tend to focus on economic issues and job creation.

The team was provided with a social impact assessment that had been undertaken for Lakes Eco (Malan, 2004). Due to the paucity of such studies, this proved to be the primary source of hard research. It should be pointed out, however, that since the social effects of large scale development are complex and that each situation differences, depending on the social structure of the area, the findings of this study cannot be generalised to all golf estates or large-scale developments.

The Eco Lakes study points out that when communities engaged in the public participation process they were not adequately empowered to do so, which alienated them even further. In her analysis Malan cited the lack of a shared vision between surrounding communities and the Developer as a major reason for lack of support for the development. There were also high levels of distrust from sectors of the community towards the Developer. Residents felt that their inputs were used against their will to support the vision of the Developer. According to community participants the public participation process undertaken for the development was of little value because of the differences in the vision for the area between the Developer and surrounding communities. This underscored the need for a professionally mediated process to arrive at a shared vision. During the public participation process, the Developer and the Project Manager expressed their willingness to debate the project with I&APs and to amend the planning if the debate warranted it. However, the *experience* of local residents was that the Developer was only open to slight alterations of his existing proposal. Feedback provided by other interest groups suggests that these experiences of mistrust are pervasive to all large developments of a similar nature.

3.9.1 Impacts on Vulnerable Communities

RURAL LIFESTYLES
CAN BE
SIGNIFICANTLY
AFFECTED

Large-scale developments such as golf estates could significantly alter the rural lifestyle of neighbouring communities and landowners and adds that the building of a high-income golf estate in an area characterised by low levels of income, lack of housing and basic services could further increase income inequality and attract migrants to the area which will, in turn, affect the social and cultural fabric of already delicate and vulnerable communities (Malan, 2004). One of the characteristics of rural communities, particularly those involved in the forestry and agricultural sector is their high level of cohesion. The placing of developments such as golf estates serves to introduce a new population into these communities, with a different lifestyle and standard of living. In addition, these developments are normally separated from surrounding areas, by fencing and controlled access. These aspects can impact on social cohesion and community lifestyles, norms and values.

A number of community representatives were interviewed during the course of the study. They raised similar issues to the potential social impacts noted by Malan (2004), particularly in relation to m poor communities that live in close proximity to these developments. The purpose of this exercise was to obtain insight into local community perceptions and experiences in relation to golf course developments. Some community leaders noted that the concerns they have in respect of golf course developments, particularly estates, are common to other upmarket, exclusive residential developments in the area. Issues that emerged from this study and submissions to the project team include the following:

- ◆ Large-scale non-agricultural development could significantly alter the rural lifestyle of neighbouring communities and landowners, which is intimately linked to the land.
- ◆ Some local people do not favour golf course developments because they are of the view that the benefits do not reach the broader community. This can be contrasted with the fact that some people support golf course developments on the understanding that jobs will be available for local people. It has been noted by some people have noted that these differing perspectives have resulted in divisions in communities, where there used to be coherence.
- ◆ The development of a high-income golf estate in an area characterized by low levels of income, lack of housing and basic services could further increase income inequality and add to marginalisation of the poor. Some community leaders have made the point that these developments are for the 'super rich' and feel uncomfortable having them on their doorstep. These developments are experienced as being divisive and compound the highlight the gap between the rich and poor.

- ◆ There is concern that local people will be pushed out of the area as the cost of living and of land becomes increasingly expensive.
- ◆ Organisations that work with rural communities report that they have had little positive experience of golf course developments, particularly in terms of long-term or sustainable benefits. Whilst some community projects do benefit from golf estates, this tends to be a result of short-term fundraising initiatives (e.g. hosting of golf days).. No sustainable rural development initiatives that are supported by a golf estate are known to community organisations or community leaders.
- ◆ Large developments exacerbate migration to an area, which, in turn, affects the social and cultural fabric of already delicate and vulnerable communities. The Western Cape in general and the southern Cape in particular experiences high levels of migration at present, the impacts of which are not clearly understood.
- ◆ Vulnerable communities find it difficult to engage in public participation processes as they are not adequately empowered to do so. They also find it difficult to engage with the work done as they are not equipped to deal with highly technical information.
- ◆ Promises of significant economic benefits to communities, in the form of development trusts, make it difficult for communities to consider potential negative social impacts adequately.
- ◆ Displaced farmworkers and rural dwellers do not necessarily benefit from increased employment opportunities presented by large-scale property development as they do have the necessary skills and language also can be barrier.

Points for consideration:

- ◆ Guidelines for EIA studies must include requirements for Social Impact Assessments.
- ◆ Social issues should also be included in decision-making criteria. In this regard, decision-makers must take account of the structure and cohesiveness of communities.

3.9.2 Social Investment Initiatives

While some reports have alluded to the adverse social effects of the property boom when golf estates are developed, a generalisation may not be entirely fair. There are also examples of where workers were accommodated on land and a number of developers and estates have shown a willingness to contribute to social development through their corporate social responsibility programs. The following information provides some idea of the types of social

responsibility programs that are undertaken and the money that golf estates allocate towards their surrounding communities.

TABLE 20: Examples of Social Responsibility Expenditure and Programmes

TOTAL AVERAGE ANNUAL EXPENDITURE ON CSR	TYPES OF CSR PROGRAMS	BENEFICIARIES
1 million	Local schools, local skills dev	Children Youth Women
100 000	Local golf, Courses for staff & workers league	Children Youth
1.5 million	Crèches Education in child welfare schools HIV/AIDS	Children (80%) Youth (20%)
600 000	Charities Schools, Juniors Thembelethu	Children Youth Women

Some golf estates are being planned on the basis of a Sustainable Development Initiative (SDI) model. According to documentation on this approach, it is based on a balanced promotion of environmental integrity, human well-being and economic efficiency. This model is built on the premise that the primary economic driver is development and in order to be effective, projects within the SDI must utilise the comparative economic advantages of an area. A key element of this model is the implementation of a Trust (variously terms as a Community Trust or a Treasury Trust), to which funding is contributed from various sources, including the core projects. This trust is seen as the vehicle for supporting community programmes, skills development and empowerment. There are differing views on such trusts, with some community members seeing them as beneficial and others stating that they are being used to manipulate support for golf estate developments.

Golf development is another area where golf estates contribute to community development. One of the objectives of the Government's White Paper - Sport and Recreation is to increase the level of participation in sport and recreation activities of schoolchildren particularly from previously disadvantaged areas. Golf development in the Western Cape is undertaken and managed by the South African Golf Development Board (SAGDB). There are 69 schools participating in this programme in the Province, involving 1029 schoolchildren of which 845 are male and 145 are female. Besides learning how to play golf, the programme includes general life skills and leadership development. Interaction between schools involved in the programme is encouraged through regional SAGDB tournaments. Golf days are an effective way to raise funds to support a local hospital, a local school or any other charity. Golf days are great for networking with current and future sponsors. Many companies sponsor golf days for specific charities.

69 SCHOOLS
PARTICIPATE IN
GOLF
DEVELOPMENT
PROGRAMMES

3.9.3 Impact on farm workers, emerging farmers and land reform

Two further issues related to the loss the agricultural land (in addition to issues discussed under 3.6.2) relate to the displacement of farm workers and the impact on land reform. Some people that were interviewed suggested that displaced farm workers do not necessarily benefit from developments such as golf estates as they are not always employable on these estates. In addition they are forced to move to urban areas, where they could potentially have access to services and housing, but find it hard to adapt to urban environments and often experience their social support structures disintegrating. It has been noted that in some cases the poor become even poorer as result of this displacement.

A further concern that has been raised by both communities and the agricultural sector is the effect that the inflated land prices (as discussed in the 3.6.2) could have on land reform, which is based on the concept of willing buyer and willing seller. It has been stated that land reform in the Western Cape is becoming increasingly unaffordable for the government due to the high cost of land. This point has been highlighted by the South Cape Land Committee, in a parliamentary submission (September 2004). They make the point that land prices have more than trebled over the past 5 years. The LRAD grants of the Department of Land Affairs are inadequate, forcing land reform beneficiaries to form large, unwieldy groups or access unaffordable loans from the Land Bank.

Other points that have been raised by the South Cape Land Committee are:

- ◆ It is increasingly difficult for emergent farmers to access municipal commonage or other privately owned land for lease purposes. There are numerous emergent farmer groups in the area (according to research undertaken by SCLC on behalf of the DoA at the beginning of this year there are at least 48 organised groups of emergent farmers). An emergent farmer has reported to the project team that he has been trying to gain access to land for farming activities for some 10 years.
- ◆ A consequence of lack of access to land is that emerging farmers lack areas for grazing of stock. There is a growing trend to impound livestock.
- ◆ Land under claim has been earmarked for development, which represents a new form of dispossession for communities that were forcibly removed from their land as a result of apartheid policies.

Points for consideration:

- ◆ Authorities should insist that socio-economic impact assessments address issues such as the employment and resettlement of displaced people in detail and the impact this will have on municipalities and the social development system.

- ◆ A land audit should be conducted to establish the availability of land for emerging farmers and to earmark land for these and land reform purposes. These areas should be specifically designated by the authorities and on the relevant SDF.

3.9.4 Municipal Land

The Southern Cape Land Committee has also raised concerns about the impact that the increased land values (as illustrated in 3.1.1) have on the use of municipal land. It is argued that municipalities sell off land in order to capitalize on the high value of land, whereas such land could have been used to serve poor communities in the form of housing or commonage for grazing (noted as dire need in the Southern Cape). However these claims have not been substantiated to date and the issue requires further investigation. Representatives of the Pacaltsdorp community noted that land that was utilised for the Le Grand development had originally been earmarked for the extension of the village.

3.9.5 Access to Public Spaces

An issue that has emerged in several Southern Cape coastal communities is that of the restrictions they are facing with regard to access to public spaces, particularly the coast. In Pacaltsdorp the community has been protesting the effective privatisation of the Gwaing River Mouth since the municipality leased the beach area to a private operator. This unhappiness has now been exacerbated by concerns that the proposed Le Grand Golf Estate Development adjacent to the beach may lead to continued restriction of access based on claims that the lease holder has sold his rights to the developer.

In the Mossel Bay area, communities are concerned that their traditional access to fishing and recreation areas will be curbed. A traditional access path, which has in recent years also been used as a hiking trail along the coastline has had to be rerouted due to the development of Pinnacle Point. Extreme concern about access to beach areas in the vicinity of Knysna (Noetzie), with one individual reporting being shot at when going to fish. According to several residents of this village as well as local fishermen, public access to this beach has been in place for "almost a hundred years" via a pathway, which is apparently shown in the former Noetzie Municipality's town planning scheme as a public footpath. The signboard at the parking area shows the path as an access route to the beach. This access path has been closed and a sign has been put up by Pezula, stating that it is private property. An agreement has been reached with the fishermen, whereby they obtain access to the coast between 06h00 and 18h00 through a permit system controlled by Pezula. The point was made to the project team by members of the local community, that access to the coast has not been improved as indicated in the Pezula EIA – rather it is being constrained and controlled on Pezula's terms.

Points for consideration:

The issues identified in this section are not easy to resolve because they involve making decisions about providing jobs and earning revenue on the one hand and allowing the enjoyment of space and the natural environment on the other. They also bring into sharp relief notions of individual property rights versus a community's right to protection of its living environment and access to the use of resources for economic or recreational purposes. With the advent of more vocal environmental groups and citizen's forums a question that has to be asked is: how should these problems be dealt with? In this regard the following should be considered:

- ◆ Creation of a social compact through which developers and civic groups reach common accord on needs and desired objectives for achieving them. The compact could also include a legally binding agreement in which parties that do not honour their commitments will be held liable for damages, costs or reparations.

3.9.6 Gated Communities

Most if not all golf estates are gated communities, i.e. the development is physically isolated by high walling and/or fences and access to the development is controlled with boomed and guarded gates. This form of development is largely attributed to perceived notions fear of crime, but some writers have also suggested that the phenomenon reflects post-modern urbanism, which as a reaction to the modernist search for utopia and perfection, accommodates post-industrial society (rather than shape it)¹⁸. The phenomenon of gated communities in South Africa is often compared with a country like Brazil, who has experienced a similar increase in the establishment of gated communities. Interestingly Brazil (who made the transition to democracy in the eighties) and South Africa, share many socio-economic characteristics, most notably high levels of inequality as well as high levels of violent crime.

Commentators on this phenomenon have raised the following concerns regarding gated communities:

- ◆ They contribute to spatial fragmentation, especially in urban areas.
- ◆ They represent a form of segregation and exclusion, which serves to reinforce existing social and economic inequalities. This leads to social exclusion and barriers to interaction between groups of different races, cultures, classes, thereby inhibiting the creation of social networks. In the UK the question is being asked how will long-term residents and children in gated communities deal with outsiders they meet in everyday life.

¹⁸ Ellin in Landman, 2002: 6.

- ◆ They result in the privatization of space that would normally have been public for the exclusive use by one homogenous group. In addition, people living in gated communities no longer share public streets and spaces – these are now left to the poor and vulnerable, making them increasing indefensible.
- ◆ In Brazil they have been shown to contribute to higher levels of inequality, fear, suspicion and feelings of vulnerability amongst those on the outside.
- ◆ In the UK researchers are considering whether the same planning criteria is being used for private and social communities. This question is equally relevant in the South African context where national planning and housing policy places significant emphasis on the need for spatial integration and efficiency.

Points for consideration:

The question that thus has to be considered, is whether the economic benefits of golf estate developments, as a form of gated communities, outweigh the broader socio-spatial concerns that may in the medium to long term impact on socio-political stability and nation building. In short will they have a positive net effect on creating a prosperous and just society?

3.10 Institutional aspects

3.10.1 The effect of local economic growth imperatives for municipalities

Private investment continues to be a powerful source of job creation and growth at both national and local levels. It is therefore natural that councillors and officials should be exploring ways to attract private investors for much needed capital to stimulate the local economy. Furthermore, proposals for large-scale developments can be very attractive as they promise a high level of revenue for services and rates provided. These problems are also experienced internationally – in China golf courses are seen as ‘image projects’ are considered by local authorities as a mechanism to improve the attractiveness of their area for investment.

Where the imperative of economic development is acutely felt by councillors and officials of local government, it is to be expected that at times they will be tempted to act hastily in order to demonstrate commitment to their constitutional obligations. Several people have reported to the project team that they are concerned that it is possible that regulations are sometimes compromised or the approval stage is short-circuited, but this could not be verified. Such pressures for development can render officials vulnerable to influence peddling, the result of which is the sacrifice of other, possibly more sustainable paths to growth. Some councillors and stakeholder groups have expressed concern at what they see as the aggressive “marketing” by lobbyists.

3.10.2 Limited role of Province

A further institutional issue that bears consideration, is the fact that the Constitution has done away with the principle of a hierarchy of authorities, in favour of the notion of spheres of government that have been allocated autonomous powers and functions. As a result local authorities are now responsible for land use planning and development control, with very limited reference to other authorities. In particular, local municipalities are rarely able to ensure that their SDFs correspond with frameworks created by other, especially provincial, authorities. Rather, it is left to the authorities to apply the principle of co-operative governance when preparing such plans.

Given the scale of golf estate developments and the potential impact on economic, land and environmental resources, this form of development is regarded as requiring assessment within a regional context, which should in particular indicate where sustainable growth could occur. This perspective is often lacking at a local level, with municipalities trying to accommodate development through economic investment in their own areas almost at any cost.

At present the PGWC has some power over land use decisions where Guide Plan (renamed as Urban Structure Plans) amendments are required – this will however fall away when the Guide Plans are replaced by local spatial development frameworks. The province also has responsibility for environmental authorisations in terms of the EIA Regulations. In general, there is consultation with planning officials, which means that this decision is informed by land use and planning considerations, but which do not necessarily reflect on applications from a regional perspective.

In terms of the Constitution, Province is responsible for provincial planning as well as having an oversight role with respect to local government matters that are of provincial relevance and significance. Furthermore, all spheres of government have a role to play in realising the objective of sustainable development in the Province, and more broadly in South Africa. In order to fulfil its obligations in this regard, the provincial government has embarked on a number of initiatives including the PSDF, the urban edge study and the law reform project. The latter is concerned with developing provincial legislation that will integrate matters relating to land use, environmental and heritage resources. These initiatives will serve to bring clarity and a level of certainty to various issues related to land use management, thereby assisting provincial and municipal decision-makers.

3.10.3 Role and effectiveness of EIA

Consideration has been given to the role and effectiveness of Environmental Impact Assessments (EIA) as a decision-making and environmental management tool in this study. The EIA applications relevant to golf course development applications that were available for review are listed in the table

below. Only applications for which a Record of Decision had been issued were considered, the reason being that the purpose of this exercise was to ascertain what impacts had been predicted in the EIA and to what extent these impacts had occurred (e.g. through comparison with data provided in the survey).

For the most part the cases listed in the table involve applications that were lodged relatively soon after the promulgation of the EIA Regulations. Many of the recent, controversial projects were not available for review, primarily because the EIA process was still underway for most of these cases, meaning that no decision had yet been made.

TABLE 21: EIAs that were reviewed

Project Description	Reference	EIA Process		Date of ROD	Decision
		Scoping	EIA		
Devonvale Hotel and conference centre (as part of Devonvale golf course and country club)	AN105/25/4	✓		9/4/98	Authorisation
Perlemoenpunt – Klipfontein Golf Estate	AN255/25/4 Farm 711/16	✓		2/10/00	Authorisation
Cairnbrogie Estate – Plettenberg Bay Golf Estate	SNO25/4/284	✓		17/7/98	Exemption
Arabella Change of land use from nature conservation and zoned Open Space for consolidation and subdivision for residential development	AN269/25/4 Farm542/3			8/1/01	Exemption
Boschenmeer Change of land use from agriculture to any other use (extension of existing estate)	AN87/25/4 Farm 845/2 & 4 Erf19605	✓		3/4/01	Exemption
Vleesbaai Golf Estate	EG12/2/1-74 Vleesbaai and Keerom Farms	✓	✓	3/11/03	Refused
Oubaai – George Golf Estate	EG12/2/1-37 Farm Oubaai	✓	✓	11/9/02	Authorisation
Pinnacle Point Casino (with hotel and spa facilities), involving a change of land use from agricultural or zoned undetermined or an equivalent zoning to any other land use	AN74/25/4	✓	✓	10/7/02	Authorisation
Pinnacle Point Upgrade of casino (inclusion of lodges)	EG12/2/1-74 Erf15387	✓		29/10/03	Authorisation
Stilbaai Golf Park Change of land use from agricultural to any other use to enable expansion of existing golf course from 9 to 18 holes and development of a residential component, to include a further Golf	EG12/2/1-355 Stilbaai	✓		15/4/03	Refused

From the table, it can be seen that some applications were approved on the basis of a scoping report. This seemed to be prevalent when the EIA Regulations had first been promulgated and was probably a result of uncertainties relating to how the Regulations should be administered and applied. It is interesting to note that it is only in recent years (2003 – five years after the promulgation of the EIA Regulations), that such developments have been refused. The reasons are summarised below:

- ◆ *Stillbaai*: the application was refused due to potential odour and other public nuisance concerns associated with the need to expand the sewerage treatment facilities to cater for development. The development would be located about 450m away from the sewerage treatment plant. Another factor that played a role in the refusal, was the presence of lowland fynbos, which is of high conservation status. The potential for fragmentation of the ecosystem was also considered.
- ◆ *Vleesbaai*: this application was refused on the basis of a number of what were considered to be 'fatal flaws.' These ranged from water supply concerns, to issues related to public access to the beach and visual impacts.

Observations that are of relevance to the question of the effectiveness of EIA as a decision-making and environmental management tool are as follows:

- ◆ The quality of EIA documentation is variable, with some reports being superficial and others being more comprehensive. Of the EIA applications that have been reviewed, many only progressed to the scoping phase. Consequently, there is little or no information on the predicted impacts.
- ◆ Whilst there has been some improvement in the quality of recent years, in general the EIA reports are considered below-standard for decision-making purposes¹⁹, for a number of reasons including:
 - Inadequate scoping of issues;
 - Lack of investigation of key issues (particularly social impacts and water use impacts);
 - Simplistic assumptions have been used to negate the significance of key impacts such as water use;
 - Lack of application of best practice in terms of the process through pre-empting the public participation process by undertaking specialist studies at an early stage. Several NGOs report that they are overloaded with specialist studies at the scoping phase. In addition, these studies are used as a mechanism to negate their concerns, the response being that the issue has been investigated, so they need not be concerned about it;

¹⁹ The comparative review of 3 EIAs relating to golf estate applications that was undertaken by Sue Lane and Associates, which was completed in July 2002, has identified similar weaknesses in EIA documentation.

- Lack of investigation into biophysical impacts, with these specialist studies being focused on species that occur on the site, rather than considering the site within the context of habitats and ecosystem processes;
 - Methodologies that are applied to the assessment of significance are often not rigorous and are inconsistent. This makes it difficult to gain a comprehensive and integrated picture of the negative and positive consequences of the development;
 - The implementation of standard public participation activities, which generally do not enable meaningful input or opportunities to influence the decision;
 - Lack of adequate information on mitigation measures, which renders the assessment of impacts before and after mitigation as being completely inadequate. In too many cases, mitigation measures are attributed to construction and operational Environmental Management Plans (EMPs), the assumption being that the EMP will be comprehensive and effectively implemented. Experience in the implementation of these plans suggest otherwise.
- ◆ There has been some inconsistency in the handling of applications due to changes in the manner in which the EIA Regulations have been implemented. Initially, when the EIA Regulations (from 1997) came into effect, the Department did not require an EIA where rezoning approval already existed. This situation has changed since about 2001, due to legal opinion showing that the EIA Regulations are triggered by the commencement of development. It is possible that this led to inadequate adherence to the EIA Regulations. In particular, exemptions from the Regulations were granted, which may have led to an expectation on the part of the developers that this was an acceptable course of action.
 - ◆ Monitoring and evaluation of the implementation of the Conditions of Approval is lacking. This includes monitoring of conditions that can readily be undertaken in the office (i.e. do not require site visits) such as the requirement to submit an Environmental Management Plan to the Department for approval prior to the commencement of construction. In cases where this is a condition of approval and has not been complied with, there is no evidence of follow-up by the Department on file. Whilst this is related to the capacity constraints of the Department, the result is that information on compliance levels is lacking and the extent to which predicted impacts have occurred is unknown. Furthermore, it is likely that the role of the Department as an enforcement agency is not taken seriously.
 - ◆ There has been inconsistency in decision-making, with conditions being more stringent for some developments than for others. Furthermore, some applications have been required to undertake an EIA, whereas others have not.

3.10.4 Advertising before Approval

An issue that has been raised frequently is that golf estate developments are advertised and even provisionally sold (i.e. offer to purchase agreed) before approval has been granted by authorities in terms of environmental, planning and agricultural legislation. Whereas authorities, and in particular the DEA&DP, are adamant that they are not unduly pressurised to grant approvals as a result, the effect that such advertising has on interested and affected parties and communities are of concern. It has been relayed to the project team that communities and individuals feel disempowered in the face of costly advertising campaigns and this often results in a perception that such developments are a *fait accompli* and thus people who would have commented on or objected to such applications do not do so.

In this regard it should be noted that both the Land Use Planning Ordinance, 1985 (Ordinance 15 of 1985) and the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) prohibits such advertising.

- ◆ Section 23(1) of the Land Use Planning Ordinance states that no subdivision of land may be undertaken without authorization in terms of the Ordinance and the Ordinance defines *subdivision* to include *the allocation, with a view to the separate registration of land units, of undivided portions thereof in any manner.*
- ◆ Section 3 (e)(i) and (ii) of the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) states *that no portion of agricultural land, whether surveyed or not, and whether there is any building on or not, shall be sold or advertised for sale, except for the purposes of a mine as defined in Section 1 of the Mines and Works Act, 1956 (Act 27 of 1956); and no right to such portion shall be sold or granted for a period of more than 10 years or for the natural life of any person or to the same person for periods aggregating more than 10 years, or advertised for sale with a view to any such granting, except for the purposes of a mine as defined in section 1 of the Mines and Works Act, 1956.*

It is therefore apparent that in many instances land owners and developers are acting unlawfully when advertising their development or provisionally selling even before they have subdivision approval in terms of LUPO or before the Minister of Agriculture has consented to the land being used for purposes other than agricultural land and may be liable for criminal prosecution.

3.10.5 Decision making regarding water supply

It appears that 'gaps' exist in the decision making process with regard to water use. These gaps come about due to confusion in the responsibilities regarding water supply, authorisations and policing of use between the DWA&F and local municipalities.

Points for consideration

- ◆ The regulations governing the code of conduct of municipal officials are quite strict and the penalties for breach are clearly defined. Strengthening adherence to these regulations may help to discourage councillors from accepting hospitality and other gifts from lobbyists associated with developers and promoters of golf estates.
- ◆ The PSDF is an important provincial initiative and consideration should be given to making provision for its resource protection aspects to be given legal standing through the Province's law reform project. Similar considerations apply to the outputs of initiatives such as CAPE (Cape Action for People and Environment).
- ◆ Clear criteria for the evaluation of the adequateness of EIA reports is required. This should include minimum standards for EIA studies for large-scale developments such as golf estates. Furthermore, the requirement for such developments to go through the entire EIA process should be adopted as a ground rule by the Department, except in cases where a refusal at the scoping stage is clearly warranted.
- ◆ The golf industry should be encouraged to implement international best practice procedures from an environmental and social responsibility point of view. This should be considered the minimum requirement and not used as a 'selling point' for the development.
- ◆ Action should be taken against developers and/or landowners that advertise developments prior to approvals being obtained.
- ◆ Consideration should be given to obtaining a legal opinion on the implementation of a moratorium on golf estate developments (and to include other large-scale developments such as regional shopping centre and residential estates). A moratorium does represent a potentially high-risk strategy. This means that it will need to be carefully motivated in terms of its basis and be linked to a specific timeframe. Arguably, the implementation of a moratorium can be justified within the context of the Province's stated intention to promote sustainable development.

4 Polo in the Western Cape

A number of concerns had been raised with the D:EA&DP regarding the development of polo fields and related facilities. There has been marked growth in such developments since about 1998. As a result of the level of concern that had been expressed, the D:EA&DP decided to include polo field developments in the scope of work of this study.

There are 9 known polo facilities in the Western Cape, including one that is under construction. Taken together, these facilities provide at least 18 polo fields, of which 16 are located in the Plettenberg Bay Area. Currently, none of these can be regarded as an estate type development as there is no residential component associated with any of them. One has a small hotel associated with it. Of the golf estate proposals (Section 2), two also include polo facilities. The potential for existing polo field developments to be upgraded to estates, an option that is apparently being considered by some establishments, was raised during interviews with various parties.

The project team visited polo field developments in the Plettenberg Bay area. In addition, a discussion on this sport and its development in South Africa was discussed with a representative of South African polo. The following points emerged, mostly with respect to the growth of polo field developments in the Garden Route, especially the Plettenberg Bay, area:

- ◆ There are 580 polo players in South Africa, of whom 5 are professionals.
- ◆ Existing polo field developments are focused on providing facilities for people who participate in this sport. Hence, most developments comprise polo fields on existing agricultural properties. Polo fields tend to be concentrated because it is a team sport.
- ◆ The sport has developed in the Plettenberg Bay area, due to the interest of individuals in the area in the sport. As a result there are several events that are hosted during summer (December to April). This includes an international (test) match and a South African Polo Festival, which takes place over the Easter period.
- ◆ There are 14 polo fields in the Plettenberg Bay area, with 18 to 20 considered the ideal number for the purposes of the sport.
- ◆ Most polo fields have been constructed on existing farms. Of these, only Kurland Estate and Bitou Polo (on N2 outside Plett) have spectator facilities, with the former also having a small hotel (12 room).
- ◆ Other 'polo' related activities are concerned with the provision of grazing and stabling for horses.

- ◆ A polo field is 4.5ha in size. The development of a polo field can involve extensive earthworks over this area, as the field must be level. Erosion problems have been experienced during the construction of these some of these facilities.
- ◆ Polo fields do require irrigation and the application of fertiliser. This tends to only be necessary in the drier period of the year (May/June) or when there is a drought. Rainfall is reasonably evenly spread throughout the year. The volume of water and fertiliser that is applied is unknown. Kurland use dam water to irrigate their polo fields. A river on the property feeds the dam via specially constructed channels. According to the estate manager, these fields are not irrigated all year round due to this being unnecessary in the rainy season.
- ◆ Some polo developments (e.g. Kurland Estate) are undertaking regular monitoring studies of the aquatic ecology. Such studies are conducted by specialists in aquatic ecology. Thus far, no adverse effects have been found.
- ◆ In terms of employment, 1 groom is required for every 4 horses. Up to 130 people are employed at a facility such as Kurland Estate, of which 30 are seasonal employees.
- ◆ Grooms have been brought in from KwaZulu-Natal and the Free State due to lack of these skills in the local area.

POLO FIELDS
MARKEDLY
DIFFERENT FROM
GOLF COURSE
DEVELOPMENTS

In general, therefore, the development of polo fields differs markedly from golf courses in terms of the scale and number of such facilities. The related activities for polo, namely that of grazing, stabling and breeding of horses are considered to be compatible with a rural or agricultural setting. Under these circumstances, polo fields *per se* are not considered to be of particular concern. This does not mean that such operations should not implement sound environmental and social programmes. What it means is that in general the scale, nature and number of polo field developments is such that they are not considered to be particularly problematic/of particular significance. Some argue that it is no different to the cultivation of grass for instant lawns.

This situation changes, however, when other developments such as tourism and spectator facilities and residential development go hand-in-hand with polo field development. Consideration is being given to residential development at some of these facilities. This appears to be driven by the capital and operating costs required to develop and maintain polo fields. Under these circumstances the issues that are relevant to golf estates are equally applicable to polo estates and the various issues applicable to land use changes in predominantly agricultural areas would pertain.

5 Summary and Conclusions

ISSUES COMMON
TO OTHER LARGE-
SCALE
DEVELOPMENTS

During the course of this rapid review it has been found that many of the issues that have been raised in respect of golf and polo field developments apply equally to other forms of large-scale low-density residential developments outside of existing urbanised areas. Such developments include game farm developments with a residential component or large residential developments within nature areas or on the coast. Most of these are based around the concept of a low-density security village in secluded or rural setting. Examples include equestrian estates, wine estates with a private residential estate and game farms with holiday accommodation or residences.

It has been found that in the South Cape in particular, concerns surrounding golf estate developments have become controversial and communities have become polarised around many of the issues relating to these developments. The team has taken great care in presenting a balanced view. Whilst hard data has been limited, this together with the written and verbal input from various parties has enabled the project team to establish a comprehensive understanding of the issues relevant to these developments. The varying views and experiences of people in relation to golf course and polo field developments have contributed to rich debate on questions relating to the sustainability of these developments.

It must be noted that the purpose of this Rapid Review was to obtain an understanding of the environmental and socio-economic impacts associated with golf course and polo field developments. Hence, this study's goal is not to answer the question as to whether there are too many or too few such developments, or indeed whether more golf course or polo field developments are justifiable. To determine the threshold for such developments is a complex and extensive exercise, beyond the scope of this study. Rather, this study has focused on understanding the relevant issues in order to provide policy guidelines that ensure that these are adequately addressed in the location of these developments and in the associated land use and environmental application and decision-making processes.

5.1 Some key observations and conclusions

The views and perceptions that organisations and individuals hold are informed by their values and principles, which in turn are influenced by their needs. Hence, tensions and conflicting views arise as a result as illustrated in the 'triple bottom line' illustration in Section 1.2. This variety of opinion is an essential contributor to the debate on the environmental and socio-economic impacts and the sustainability of golf course and polo field developments. Some of the tensions and contradictions that this study has highlighted include:

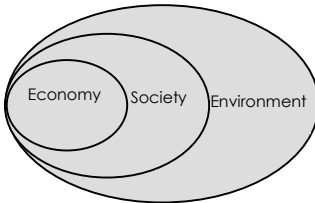
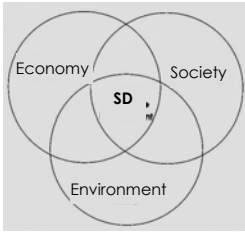
- ◆ Golf course and polo field developments are unlikely to be sustainable under certain circumstances (e.g. where water resources are scarce, where communities are rural in character (e.g. skills, traditions), also showing a high-level of social cohesion and mutual support). Conversely, they provide an appropriate form of development in particular settings (e.g. on the outer areas of urban centres, where land is severely degraded or is not of significant scenic, cultural, social or economic value). Furthermore, the fact that a golf course development is designed and managed in accordance with sustainable development principles does not necessarily mean that it will be sustainable. Sustainability is highly dependent on location and inappropriate location and cannot simply be 'designed out' of the development. Golf course and polo field developments are unlikely to be sustainable under certain circumstances (e.g. where water resources are scarce, where highly cohesive rural communities exist). Conversely, they provide an appropriate form of development in particular settings (e.g. on the outer areas of urban centres, where land is severely degraded or is not of significant scenic, cultural, social or economic value).
- ◆ For the most part, the EIA process is proving to be inadequate in terms of prediction of impacts. Furthermore, mitigation measures are too generalised. This means that the sustainability of golf course and polo field developments is not being thoroughly addressed through the EIA process. There is a need for the regulatory authorities (environmental and planning) to apply sustainable development principles more rigorously in the decision-making process, which is in line with the requirements of Section 2 and Section 24 of the National Environmental Management Act (Act 107 of 1998).
- ◆ Golf course and polo field developments do create employment, with a significant number of jobs associated with the construction phase (often between 2000 and 3000 jobs). Although these jobs are temporary, the construction phase can last between 3-5 years, on average. A complexity is that it is difficult to discern, from the available information, how many new jobs are created versus the number of existing jobs that are being maintained.
- ◆ Whilst permanent jobs are created by golf course developments, these tend to be primarily in the unskilled or semi-skilled categories. This can be viewed as a beneficial aspect of golf course and polo field developments, given the prevailing levels of unemployment, particularly as the highest levels of unemployment are in these categories. It is recognised that in a situation of high unemployment, every job is significant. However, unless active skills development and career development paths are implemented, unskilled and semi-skilled employees will almost inevitably remain in these categories of employment.

- ◆ Notwithstanding, the importance of job creation, the point has been made that it is simplistic to equate social well-being with simply obtaining any kind of employment. It is generally recognised by social scientists, that social impacts are much broader than job creation. The broader social impacts of golf course and polo field developments have not been extensively investigated and are therefore not well documented. Based on anecdotal evidence, however, the understanding of these impacts is becoming more definitive, which means that they can be more effectively investigated in future applications for such developments.
- ◆ Developers place emphasis on the job creation aspects of their development. This criterion has been used as a strong motivating factor for approval of the development, to the extent that developments are being positioned as being aligned to the priorities of the national government and the Premier of the Western Cape, by virtue of the fact that jobs will be created. Conversely, there are reports that job creation opportunities are overstated, that many people from outside the local area are employed on these estates and that opportunities to move out of the unskilled/semi skilled employment categories are limited. There are examples where employment in some unskilled/semi skilled categories (e.g. caddies) are not being provided, the reason cited as security concerns or where these jobs have been allocated to outsiders or whites (i.e. not local disadvantaged communities) when high-profile events are hosted. Furthermore, transformation in respect of management structures is considered to be limited.
- ◆ Golf courses are recognised as being significant water users. In some cases, particularly where these facilities are located within urban areas these facilities make use of treated sewerage effluent. Whilst, this can be seen as a benefit from a water conservation point of view, there are concerns about the long-term impacts on soil and water quality and on biodiversity. Some parties hold the view that treated sewerage water should be seen as a resource – not a waste product. It could therefore be used for other purposes and hence there is an opportunity cost associated with its use on golf courses.
- ◆ In cases where water is obtained from rivers or groundwater there is extensive concern about the potential opportunity costs in respect of water availability for other land uses that are considered more productive (e.g. agriculture), for future needs of urban and rural populations and for the maintenance of riverine ecosystems. This is of particular relevance to the Western Cape, where most rivers are considered to be stressed.
- ◆ The Western Cape, particularly its coastline, offers a comparative advantage for investors in such developments, because of its natural and scenic beauty. This is seen as an important factor in growing tourism products in the Province. Conversely, there are many parties who are of

the view that there are sufficient golf course developments, particularly in the Southern Cape. The development of more of these facilities is seen as a significant threat to the natural and scenic assets of the area – the very factors that attract these developments in the first place.

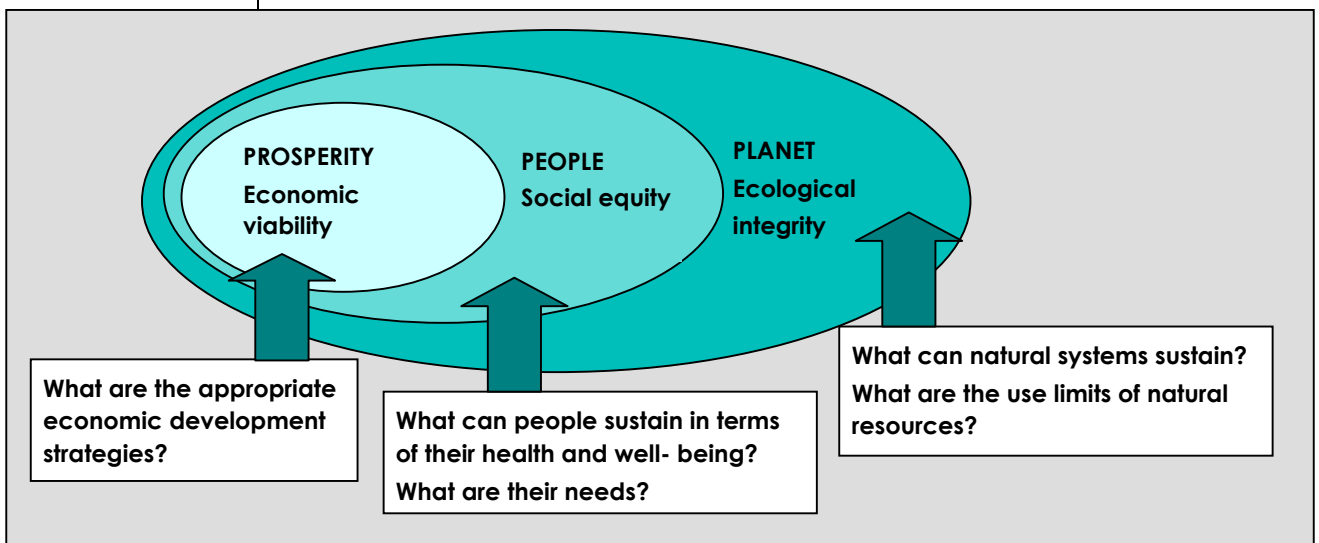
- ◆ Whilst golf estates have implemented various environmental management measures, many of them are located within or close to sensitive natural environments. There are golf estate developers that acknowledge the importance of responsible environmental management but this does not take account of the question of appropriate location. It does not hold that a development can be located anywhere as long as it is managed in an environmentally responsible manner.
- ◆ There are golf estates that have set aside areas of indigenous vegetation and that have rehabilitated ecologically degraded areas. This is beneficial to conservation on a site-specific level. In general, however, organisations in the biodiversity sector are of the view that this cannot be seen acceptable trade-off for impairing the functioning of ecological systems that are designated as being critically endangered, endangered or vulnerable. Generally, there is a lack of focus on the role a site plays in the overall ecological functioning of the system in which it is located, with the result that ecological impacts are often understated and inadequately assessed.
- ◆ The establishment of community trusts is a recent phenomenon and is seen as a mechanism for contributing to social upliftment within local communities. Some community leaders have reported that such proposals are causing divisions within communities that were traditionally characterised by a high level of social cohesion. There have also been reports to the project team of cases where community trusts and other financial benefits are disruptive as they are being used to create community support for development proposals.
- ◆ Many of the issues and findings related to golf course developments are equally relevant and applicable to other large-scale residential and/or resort developments. This has led to several developers and development professionals to query the focus on golf estate developments. The project team has also noted that a number of golf estate applications have recently been amended to exclude the golf course component, which does indicate that the residential component remains the primary driving force for many of these developments. This indicates the need for inclusion of any form of large-scale development in the initiatives undertaken by D:EA&DP to ensure that these are appropriately located, that decision-making is sound and that environmental and socio-economic impacts are responsibly managed on an ongoing basis.

5.2 Considering the Sustainable Development debate



One aspect that has been highlighted for the team in undertaking this study is that the debate on sustainable development needs to be shifted into a new domain. The sustainable development model that is typically applied (that of three intersecting circles) suggests that sustainable development can be achieved through balancing social, environmental and economic aspects of sustainable development. Arguably this model does not show a holistic approach to sustainable development, as demonstrated by the relatively small area of intersection between the three circles. Interestingly, there are calls for the sustainable development model to be re-examined, both internationally and in South Africa. An alternative model has been proposed, which has been endorsed by the environmental MINMEC, which is based on full integration of the three dimensions of sustainability. There is an increasing move towards this approach to sustainable development, internationally (Prescott-Allen, 2001; United Nations Division for Sustainable Development 2001):

The question of sustainability is considered to be an essential component of the debate on golf course and polo field developments, since sustainable development is central to the Provincial Spatial Development Framework (PSDF) and to the Western Cape’s iKapa Ehilumayo. The critical questions that need to be addressed in this regard are shown in the diagram below:



5.3 Recommendations

There are a number of key concerns that need to be addressed as a matter of priority.

5.3.1 Implementation of a moratorium

In the draft Rapid Review a moratorium was recommended. This was based on a view that it would be beneficial for the D:EA&DP to have ‘breathing space’ in terms of decisions relating to these developments, until the policy guidelines had been formulated. In this sense, this recommendation has been overtaken by events, since the policy guidelines are in final draft form. The

moratorium recommendation resulted in extensive debate and numerous responses were received on this matter in the comments on the draft Rapid Review report. Interestingly and not unexpectedly, those that supported the idea of a moratorium were largely civil society (organisations and individuals), whereas developers and professionals did not support this recommendation. Clearly, there were some exceptions to this general trend (Refer to Public Participation Supplementary Report).

5.3.2 Action against illegal advertising

There are cases where advertising of golf estate developments has taken place prior to approvals being obtained. In the case of agricultural land, this is illegal in terms of Section 3 (e) of Act 70 of 1970 the Subdivision of Agricultural Land Act (Act 70 of 1970) and Section 3 of LUPO. As mentioned elsewhere in this report, this is problematic as it places pressure on decision-makers to approve the development (due to the investment already made in promoting the project) and the public to not object to the development.

It is recommended that legal action be taken against developers who advertise before obtaining the necessary approvals, as a matter of urgency.

5.3.3 Memorandum of Understanding with financial institutions

It has been noted by the project team that some developments that are advertised without having obtained the required approval are being financed by banks. This is evidenced by the appearance of the relevant banks logo in the advertisements.

It is recommended that the Department enter into a Memorandum of Understanding with the banking sector, which is based on the agreement that developments that do not have the required approvals will not be financed. This Memorandum will have the effect of requiring banks to alter the development financing policies which are often based on financing up to 100% of a development provided a certain number of units are pre-sold. These pre-sales are considered to be illegal.

5.3.4 Addressing the question of community trusts

A number of golf estate developments have proposed setting up trusts linked to sale of properties, which are seen as vehicles for the funding of community projects, environmental rehabilitation and the like. Concerns have been raised that such proposals may unduly influence communities to support the proposed development. Whereas developers are of course free to establish such trusts, it is considered more appropriate that such funding be channeled through local authorities or existing NGOs, in order to ensure that funding goes towards developmental goals already agreed to by communities through their IDP, for instance.

An alternative consideration should be for a Provincial Development Fund to be created to which such funds can be allocated and for the province to decide how the money should be spent. This last recommendation is especially important in the context where the other institutions need to deal with the impact of golf estates.

5.3.5 Developing a standard economic model

It is recommended that a standard model be developed to assist local municipalities in evaluating the economic impact of golf developments. The standard model would provide a guideline on the expected revenue and employment that a golf development would be expected to generate.

It is acknowledged that economic conditions vary from municipality to municipality and from development to development, but a standard model for the Western Cape would provide a guideline to municipalities that currently do not have the capacity to evaluate economic impact assessments conducted by consultants.

The standard model should quantify the expected revenue generated from green fees, club house operations and other revenue generating operations such as a hotel and a residential unit. The model should also quantify the expected employment generated by these activities, taking into account outsourcing. Whilst it is acknowledged that golf developments do generate employment through outsourcing but care should be taken when evaluating the number of employment opportunities generated. A service provider to a golf development may have various other clients and not all of its employees may be attributed to the golf development. It is proposed that the guideline be the amount of time of an employee from a service provider spent on servicing the golf development. Should the employee spend 100% of its time servicing the golf development, then the employment opportunity could be counted as an employment opportunity generated by the golf development. For example, should a landscaping company employ a new landscaper to service a specific golf development on a fulltime basis then that new employment can be attributed to the golf development, but should the new landscaper be employed to service various clients, then the employment opportunity cannot be solely attributed to the golf development.

Furthermore, it is recommended that when local municipalities evaluate applications for development, that they concentrate on the number of direct employment created and the direct expenditure of the development in their local area as these are the easiest to verify for a local municipality. Direct employment and expenditure can be checked in the financial statements of a development. However, these impacts are difficult for a local municipality to verify and it is recommended that local municipalities concentrate on the direct impact of developments when evaluation applications for development. Direct impacts are much more certain and easier to verify than indirect and induced impacts.

5.3.6 Audit or review of actual impacts.

The information that was obtained from the surveys indicates that data on the environmental and socio-economic impacts is generally lacking and that most facilities do not undertake comprehensive monitoring in this regard. Furthermore, although recently developed facilities have been subject to an EIA, these studies only serve to predict impacts. There is little monitoring information to establish the nature and extent of these predicted impacts (i.e. whether they have occurred at all, the extent of their occurrence), particularly with respect to the operational phase of these developments. In general, monitoring of the construction phase is comprehensive (e.g. Environmental Site Officer). The development of a comprehensive database on the actual impacts of golf course developments is considered essential to decision-making and is applicable to other large-scale developments.

It is recommended that this be addressed as follows:

- ◆ That the D:EA&DP collate data reported in terms of the Conditions of Approval/Authorisation for these developments into a database. This could be built into the GIS database developed through this study.
- ◆ That a comprehensive performance assessment or audit be undertaken of a representative sample of golf course and polo field developments, covering environmental and socio-economic impacts.

5.3.7 Undertake tourism surveys

It is recommended that the Department approach tourism bodies such as S A Tourism and Cape Routes Unlimited to structure tourism surveys to include items that will provide data on golf tourism trends. This will assist future planning of facilities (e.g. upgrading of existing facilities, need for new facilities).

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