DRAFT ENVIRONMENTAL IMPACT ASSESSMENT

APPLICATION FOR RECTIFICATION OF UNLAWFUL CONSTRUCTION AND
AUTHORISATION OF A SMALL WOODEN DECK,
IN TERMS OF SECTION 24G OF NEMA (107 OF 1998),
AT OLD MAC DADDY RESORT, REMAINDER OF FARM 465 (JAN NIEMANDS
BOSCH), CALEDON, WESTERN CAPE

DEA&DP Ref No.: E18/2/3/2/2-FARM 465 (S24G)

OCTOBER 2011
# TABLE OF CONTENTS

| TABLES: | .................................................................................................................. | 4 |
| FIGURES: | .................................................................................................................. | 5 |
| ANNEXURES | .................................................................................................................. | 6 |
| ABBREVIATIONS | .................................................................................................................. | 7 |
| 1. INTRODUCTION | .................................................................................................................. | 8 |
| 1.1 DESCRIPTION OF UNAUTHORISED ACTIVITIES GIVING RISE TO THE APPLICATION | .................................................................................................................. | 8 |
| 1.2. SCOPE OF THE WORK TO BE UNDERTAKEN | .................................................................................................................. | 11 |
| 1.3. ASSUMPTIONS AND LIMITATIONS | .................................................................................................................. | 12 |
| 1.4. THE NEED AND DESIRABILITY OF THE PROPOSED DEVELOPMENT | .................................................................................................................. | 12 |
| 1.4.1 Need | .................................................................................................................. | 13 |
| 1.4.2 Desirability | .................................................................................................................. | 15 |
| 2. LEGAL AND POLICY REQUIREMENTS | .................................................................................................................. | 18 |
| 2.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA (108 OF 1996) | .................................................................................................................. | 19 |
| 2.3 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (10 OF 2004) | .................................................................................................................. | 25 |
| 2.4 NATIONAL WATER ACT (ACT 36 OF 1998) | .................................................................................................................. | 26 |
| 2.5 CONSERVATION OF AGRICULTURAL RESOURCES ACT (43 OF 1983) | .................................................................................................................. | 27 |
| 2.6 LAND USE PLANNING ORDINANCE (15 OF 1985) | .................................................................................................................. | 28 |
| 2.7 THE WESTERN CAPE PROVINCIAL DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING (DEA&DP) GUIDELINES | .................................................................................................................. | 29 |
| 2.8 THE DRAFT WESTERN CAPE RURAL LAND-USE PLANNING AND MANAGEMENT GUIDELINES | .................................................................................................................. | 30 |
| 2.9 CAPENATURE’S REQUIREMENT WITH RESPECT TO BIODIVERSITY IN DEVELOPMENT APPLICATIONS | .................................................................................................................. | 32 |
| 2.10 THE WESTERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (2009) | .................................................................................................................. | 32 |
| 2.11 THE WESTERN CAPE INTEGRATED TOURISM DEVELOPMENT FRAMEWORK (2001) | .................................................................................................................. | 33 |
| 3. THE RECEIVING ENVIRONMENT | .................................................................................................................. | 35 |
| 3.1 LOCATION | .................................................................................................................. | 35 |
| 3.2 GEOMORPHOLOGY, GEOLOGY AND SOILS | .................................................................................................................. | 38 |
| 3.3 CLIMATE | .................................................................................................................. | 39 |
| 3.4 BIODIVERSITY CONTEXT | .................................................................................................................. | 40 |
| 3.5 VEGETATION | .................................................................................................................. | 40 |
| 3.6 ECOLOGICAL PROCESSES IN MIDLAND AND MOUNTAIN FYNBOS | .................................................................................................................. | 41 |
| 3.7 THREATS TO MIDLAND AND MOUNTAIN FYNBOS | .................................................................................................................. | 42 |
| 3.8 CRITICAL BIODIVERSITY AREAS (KOGELBERG BIOSPHERE) AND ECOLOGICAL SUPPORT AREAS | .................................................................................................................. | 42 |
3.9 AQUATIC ECOSYSTEMS ...................................................................................................................... 44
3.14 SOCIO-ECONOMIC CHARACTERISTICS.................................................................................................. 46

4. ALTERNATIVES ........................................................................................................................................ 48
4.1 IDENTIFICATION OF ALTERNATIVES .................................................................................................. 48
  4.1.1 ALTERNATIVE 1: Continued Operation “leave site as it is” ................................................................. 49
  4.1.2 ALTERNATIVE 2: Restoration ........................................................................................................... 51

5. IDENTIFICATION, ASSESSMENT AND EVALUATION OF IMPACTS ARISING FROM UNAUTHORISED ACTIVITIES ON REMAINDER OF FARM 465, CALEDON ......................................................... 53
5.1 ASSESSMENT AND EVALUATION METHODOLOGY ........................................................................ 53
  5.1.1 THE ASSESSMENT METHOD ............................................................................................................. 53
  5.1.2 THE EVALUATION METHOD ............................................................................................................. 54
5.2 GAPS IN KNOWLEDGE AND UNCERTAINTY OF PREDICTIVE METHODS AND ASSUMPTIONS .......... 56
5.3 A NOTE ON ‘MITIGATION’ AND ‘RESTORATION’ ................................................................................. 56
5.4 IMPACT ASSESSMENT AND EVALUATION OF SIGNIFICANCE OF IMPACTS .................................. 57
  5.4.1 IMPACTS ON INDIGENOUS VEGETATION ....................................................................................... 57
  5.4.2 IMPACTS ON HYDROLOGY: EPHEMERAL WATERCOURSE AND WETLAND ......................... 58
  5.4.3 IMPACTS ON THE SOCIO-ECONOMIC ENVIRONMENT: ............................................................... 61
5.5 SUMMARY OF IMPACT ASSESSMENT AND EVALUATION OF SIGNIFICANCE OF IMPACTS .......... 62

6. PROCESS FOLLOWED WITH RESPECT TO APPLICATION FOR RECTIFICATION OF UNLAWFUL COMMENCEMENT AND CONTINUATION OF ACTIVITIES ......................................................... 62
7. PUBLIC PARTICIPATION PROCESS ........................................................................................................ 62
8. COMMENTING PERIOD ON DRAFT EIR ............................................................................................. 63
9. REFERENCES .................................................................................................................................................. 64
TABLES:

Table 1: Activities for which authorisation should have been sought: .......................................................... 11
Table 2: Procedures relating to environmental assessment in support of this application ............................. 22
Table 3: Assessment criteria for the evaluation of impacts ............................................................................. 54
Table 4: Definition of significance ratings ........................................................................................................ 55
Table 5: Definition of probability ratings ......................................................................................................... 56
Table 6: Definition of confidence ratings ......................................................................................................... 56
Table 7: Table of Alternatives showing mitigation and conclusions regarding environmental impact on vegetation ........................................................................................................................................................ 58
Table 8: Table of Alternatives showing mitigation and conclusions regarding environmental impact on ephemeral water course (soil contamination & water quality) .......................................................................................................................... 60
Table 9: Table of Alternatives showing mitigation and conclusions regarding impact on the ephemeral stream – ecological connectivity and habitat quality ........................................................................................................ 60
Table 10: Table of Alternatives showing mitigation and conclusions regarding impact on the environment - socio-economic ................................................................................................................................................ 61
Table 11: Summary of impact assessment and evaluation of significance of impacts .................................... 62
FIGURES:

Figure 1  Old Mac Daddy wooden deck ................................................................. 9

Figure 2  The wooden deck set among the alien invasive pine trees and the surroundings covered with pine needle litter ............................................................................................................. 9

Figure 3  The wooden deck, constructed around pine trees .................................. 10

Figure 4  The wooden deck constructed to utilise the existing pathways leading to the dam ................................................................. 10

Figure 5  The timber deck, constructed around the alien invasive pine trees and utilising the existing pathways leading to the dam is surrounded by agricultural land, and a forest of invasive alien species ...... 15

Figure 6: The deck at Old Mac Daddy featured on the cover of the British Airways inflight magazine Horizons, gives some indication as to the deck's desirability as part of the resort's attractiveness .......... 16

Figure 7  Locality map depicting Old Mac Daddy Resort (Red Balloon A), Grabouw (map sourced from Google) ................................................................................................................................. 35

Figure 8  Locality satellite image depicting Old Mac Daddy Resort (Red Balloon A), in the context of the surrounding agriculture, forestry and natural veld (map sourced from Google) ................................................................................................. 36

Figure 9  Satellite image depicting Old Mac Daddy Lease Area (Red outline), in the context of the surrounding farms and State Forests (map sourced from Google, dated October 2009) ................................................................. 37

Figure 10  Satellite image depicting Old Mac Daddy Lease Area (Red outline), showing pre-existing recreational infrastructure, footpaths, roads, irrigation dams & wooden deck (map sourced from Google Earth, October 2009) ................................................................................................................................. 37

Figure 11  Extract from the Vegetation Map of South Africa (2006), showing the ecosystem status of the development site (red circle). The red area depicts critically endangered ecosystems, and the development site is clearly within the green area which is a least threatened ecosystem ........................................................................... 40

Figure 12  Extract from the Vegetation Map of South Africa (2006), showing the location of the development site (red circle) within the Kogelberg Sandstone Fynbos vegetation type ................................................................. 41

Figure 13: Map depicting the Kogelberg Biosphere with the locality of Old Mac Daddy Resort indicated. After http://www.kogelbergbiospherereserve.co.za/Content_1100100000_maps.htm ................................................................. 42

Figure 14: Map depicting the location of the deck on the lower dam on the Overberg District Municipality Critical Biodiversity Areas Assessment 2010. Terrestrial CBAs are indicated on the adjacent Houwhoek properties. After SANBI GIS website, 2011 ................................................................................................................................. 43

Figure 15: Map depicting the location of the deck on the lower dam (upper dams and wetlands areas have not been mapped) on the Overberg District Municipality Critical Biodiversity Areas Assessment 2010. Terrestrial CBAs are indicated on the adjacent Houwhoek properties. After SANBI GIS website, 2011 ......... 45

Figure 16: Map depicting the location of the deck with respect to the aquatic and vegetation ecological corridor between the State Forests to the north and the Kogelberg Biosphere Reserve to the east. Map sourced from Google Earth, imagery dated April 2004 ................................................................................................................................. 46
ANNEXURES

Annexure A: Locality Maps

Annexure B: Old Mac Daddy Site Plan and Deck Design

Annexure C: Notification of Environmental Process to Owner

Annexure D: Site Photographs

Annexure E: Correspondence related to the Section 24G Process

Annexure F: Public Participation Process

Annexure G: Supplementary Information
- Affidavit from the Project's Architect and Project Manager

Annexure H: Previous Commercial Camping Operation Forest hills 1999 - 2006

Annexure I: Floodline Determination Report

Annexure J: CVs of Environmental and Specialist Team
## ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARA</td>
<td>Conservation of Agricultural Resources Act, 1983 (Act no. 43 of 1983)</td>
</tr>
<tr>
<td>CBA</td>
<td>Critical Biodiversity Area</td>
</tr>
<tr>
<td>W: DEA&amp;DP</td>
<td>Western Cape Department of Environmental Affairs and Development Planning</td>
</tr>
<tr>
<td>DWA</td>
<td>Department of Water Affairs</td>
</tr>
<tr>
<td>EAP</td>
<td>Environmental Assessment Practitioner</td>
</tr>
<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
</tr>
<tr>
<td>EIR</td>
<td>Environmental Impact Report</td>
</tr>
<tr>
<td>EMP</td>
<td>Environmental Management Programme</td>
</tr>
<tr>
<td>GN</td>
<td>Government Notice</td>
</tr>
<tr>
<td>I&amp;APs</td>
<td>Interested and Affected Parties</td>
</tr>
<tr>
<td>IDP</td>
<td>Integrated Development Plan</td>
</tr>
<tr>
<td>IEM</td>
<td>Integrated Environmental Management</td>
</tr>
<tr>
<td>ITDF</td>
<td>Integrated Tourism Development Framework</td>
</tr>
<tr>
<td>NEMA</td>
<td>National Environmental Management Act (Act no. 107 of 1998)</td>
</tr>
<tr>
<td>NEMBA</td>
<td>National Environmental Management: Biodiversity Act (Act no. 10 of 2004)</td>
</tr>
<tr>
<td>NHRA</td>
<td>National Heritage Resources Act (Act no. 25 of 1999)</td>
</tr>
<tr>
<td>NWA</td>
<td>National Water Act (Act no. 36 of 1998)</td>
</tr>
<tr>
<td>PSDF</td>
<td>Provincial Spatial Development Framework</td>
</tr>
<tr>
<td>SAHRA</td>
<td>South African Heritage Resources Agency</td>
</tr>
<tr>
<td>SDF</td>
<td>Spatial Development Framework</td>
</tr>
<tr>
<td>SPC</td>
<td>Spatial Planning Categories</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

This section introduces the activities for which rectification is sought, discusses their need and desirability, describes the scope of work and records the assumptions and limitations that informed and defined the environmental assessment.

1.1 DESCRIPTION OF UNAUTHORISED ACTIVITIES GIVING RISE TO THE APPLICATION

The Daddy Long Legs Hotel (Pty) Ltd, represented by Mr Jody Aufrichtig, (the ‘applicant’), as owner of the Old Mac Daddy Resort situated on a leased portion of the Remainder of the Farm Jan Niemands Bosch No 465, Caledon, (the ‘property’), rented the farm with the intention of expanding and operating an existing campsite on the Property. The property is owned by the Vuki Trust (IT 3228/2002) and is located approximately 84 km east-south-east of Cape Town and 13 km east of Elgin / Grabouw in the Valley area.

The property is characterised by extensive agricultural activities, and the particular portion in question (the ‘subject land’), was used for a number of years prior to 2006 as a “zip” slide associated with an accommodation facility. The total leased area measures 3,2ha in size. Camping took place on and around a number of cement slabs positioned across a forested south-west facing hillside. See photographs of previous Forest Hills campsite operation on the property in Annexure D – figure 10.

The Old Mac Daddy Resort identified development included the establishment of a more formal campsite facility, substantially upgrading the accommodation and recreational facilities previously used for luxury tented accommodation.

The Western Cape Department of Environmental Affairs and Development Planning (WC: DEA&DP) on receipt of complaints issued a Compliance Notice to Old Mac Daddy, subsequently on submission of a number of substantive responses the Department agreed that the only activity that requires environmental authorisation prior to commencement. Is the construction of a wooden deck with 32 m of a watercourse (Activity 1(m) of GN 386 2006).

The small wooden deck of 72 m² was built at the edge of a dam close to a stream and natural wetland area. The deck was positioned on a previously disturbed area, which had been used for recreational purposes as the terminus for a suspension slide or “zip” slide. The site plan is shown in Annexure B.

The deck was constructed using non-invasive construction methods in order to minimise the impact on the immediate environment. The contractor described the installation process as “consisting of a 210 litre drum cut in half and submerged to lie on the dam floor, a sharpened
wooden pole was then driven into the dam floor through the centre of each empty half litre drum, and held in place by the addition of a concrete slurry through a 110 mm PVC pipe which was inserted into the dam to the level of the drum” (H. Van der Bank, pers.com, September 2010). The concrete hardened around the pole in each submerged drum to provide a stable framework for the deck. The number of submerged half drums employed by this method equals eight and the resulting total “infilling” is calculated as 840 litres or 0.874m³. See affidavit from the project’s architect and project manager in Annexure G - Supplementary Info. The deck is supported by a further seven wooden poles driven into the bank of the dam (outside the water) – these do not have concrete foundations. See site figures 11 – 14 in Annexure D.

Figure 1 Old Mac Daddy wooden deck

Figure 2 The wooden deck set among the alien invasive pine trees and the surroundings covered with pine needle litter
No further work has been done on the deck and associated infrastructure since commencement of this process for rectification.
The activities triggered by this unauthorised development is listed below. Construction of the deck commenced in January 2010 and was completed in June 2010.

Table 1: Activities for which authorisation should have been sought:

<table>
<thead>
<tr>
<th>Government Notice No. R386 Activity No(s):</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1(m)</td>
<td>The construction of facilities or infrastructure, including associated structures or infrastructure for any purpose within the one in ten year flood line of a river or stream, or within 32 metres from the bank of a river or stream, where the flood line is unknown, excluding purposes associated with existing residential use, but including –</td>
</tr>
<tr>
<td></td>
<td>(i) canals;</td>
</tr>
<tr>
<td></td>
<td>(ii) channels;</td>
</tr>
<tr>
<td></td>
<td>(iii) bridges;</td>
</tr>
<tr>
<td></td>
<td>(iv) dams; and</td>
</tr>
<tr>
<td></td>
<td>(v) weirs</td>
</tr>
</tbody>
</table>

1.2. SCOPE OF THE WORK TO BE UNDERTAKEN

The scope of the study is determined with reference to the requirements of the relevant legislation namely section 24G of the National Environmental Management Act (Act 107 of 1998) (NEMA), as amended by section 3 of Act 56 of 2002 and substituted by section 12 of Act 46 of 2003.

The main responsibilities of the Environmental Assessment Practitioner (EAP) would include but not be limited to, the following:

- Submission of the required Application Form to the relevant authority to register the proposed project;
- Consultation with the relevant authorities and stakeholders, through the EIA process, to ensure that identification of relevant issues or concerns are undertaken in accordance with the EIA Regulations;
- Ensure the assessment of and response to the issues that are raised throughout the process;
- Compile a report containing —
  (i) an assessment of the nature, extent, duration and significance of the impacts of the activity on the environment, including the cumulative effects;
  (ii) a description of mitigation measures undertaken or to be undertaken in respect of the impacts of the activity on the environment;
  (iii) a description of the public participation process followed during the course of compiling the report, including all comments received from interested and affected parties and an indication of how issues raised have been addressed; and
  (iv) an environmental management plan (this will be part of the EMP for the proposed resort extension);
• Provide such other information or undertake such further studies as the relevant authority may deem necessary;
• Submission of the above-mentioned report (draft) to the public and commenting authorities for comment, and
• Submission of the final report to the competent authority, specifically the Department of Environmental Affairs and Development Planning (DEA&DP), for a decision.

1.3. ASSUMPTIONS AND LIMITATIONS

• This is an application for the continuation in terms of section 24G of the NEMA (as amended) of certain listed activities that were commenced without authorisation.
• The type, extent, duration, magnitude and significance of impacts can be predicted with a moderate to high degree of confidence due to (a) a sound understanding of the site in its pre-disturbance condition, (b) the availability of reliable contextual information about the site's relative importance for biodiversity conservation, and (c) the well-documented nature of impacts, resulting disturbance, and prospects for effective restoration.
• Overall, there are no evident limitations that would detract from the reliability of this EIA.
• It is assumed, unless indicated otherwise, that the EAPs conducting this EIA have been provided with all information that is relevant to this investigation and the decision that it must inform.

1.4. THE NEED AND DESIRABILITY OF THE PROPOSED DEVELOPMENT

‘Need’ is understood to mean requiring something because it is essential or very important, and not just desirable. ‘Desirability’, in turn, refers to wanting or wishing for something owing to its attractiveness, utility or necessity (cf. The New Oxford Dictionary of English, 1998). The draft DEADP guideline on need and desirability (2009) suggests that ‘need’ refers to the ‘timing’ of a proposed development, and ‘desirability’ to place. Jointly, the concepts raise questions about “wise use of land”.

Here, the ‘need’ for a proposed development would depend on the degree of social or public harm that would result from the development not going ahead. ‘Desirability’ can reflect both a private desire that, if not met, will result in disappointment, as well as a more objective aspect – namely, would a proposed development be strategically and contextually appropriate?
1.4.1 Need

The ‘need’ for the deck is reflected in the degree of social or public harm that will result if it has to be removed.

This social or public harm is being measured for the purposes of this application by evaluating:

1) The financial loss caused by:

   a) a negative impact on visitors to the resort over time

Before the development of the deck, a terminus for a “zip” slide had been installed in the same position. This installation resulted in localised disturbance to the water’s edge, where an anchor (a concrete filled 210 litre drum) is still in place along with the steel cable which had been cut off. While these items are no longer in use, they prove that the deck was constructed on a partially impacted area, and also that if the deck were to be removed this will not prevent visitors from using the dam for recreational purposes.

The deck is a simple and relatively small installation, with an area of approximately 72m² (12m x 6m) within the total resort area of 3,2 ha of which 0,186 ha (1853,7 m²) can be included in the total development footprint.

The deck and the communal centre, along with footpaths and indigenous gardens and landscaped areas provide the visitors with outdoors facilities to explore and enjoy.

The deck provides access to the dam as an extension of other outdoor “social” areas, and is a very popular attraction within the resort. If it was removed, visitors would still make use of the dam, but may have a greater direct negative impact on the dam environment as there will be no formal area provided from which to enjoy the dam and its surroundings.

The deck provides a safer environment for the visitor which is more easily controlled and maintained by the resort staff members.

   b) the expenditure of funds on the original installation of the deck

The Applicant spent significant resources (time and money) redeveloping the existing (tented) accommodation. The accommodation was upgraded substantially, and a range of additional leisure activities were introduced which include the renovation, upgrading and installation of the deck at the dam.

This small wooden deck represents a financial investment of approximately R35, 000.00 spent on materials, labour and design in the period up to June 2010. Effort was invested in ensuring that
eco-friendly materials and construction methods were being used to install the deck. This was in keeping with the applicant’s commitment to the need to enhance and stabilise the natural environment within the resort.

c) the expenditure of additional funds to remove the deck and reinstate the surroundings to a natural state, represents a twofold loss for the applicant as money will be spent on removing the deck, and the potential income generated directly from utilisation of the deck for specific activities, will also be lost.

2) The loss of tourism business development and local economic activity:

The expansion of tourism activities due the applicant's investment has created local jobs, contributed to HDI ownership of tourism resources and supported the Vuki Trust Land Reform Project. All of these outcomes meet the local and regional need for economic and tourism development.

The continued operation of the deck is intended to meet the visitor’s need to access and experience the outdoors in safety. This will in turn contribute to the success of the resort as a tourism enterprise, and have a positive effect on return on investment for years to come.

3) Potential loss of initiative in continuing the clearing of invasive alien plant species

The applicant has also identified the need to remove invasive alien species from the wetland, watercourse, and dam surroundings as part of the maintenance plan for deck operation. He plans to encourage the establishment of indigenous plants which are naturally suited to the local biome. This will improve and strengthen natural habitats for indigenous birds and small fauna, in turn making the tourism facility even more attractive.

The need to control and eradicate invasive alien plant species and restore natural eco-systems is a national objective.
1.4.2 Desirability

The ‘desirability’ for the deck is reflected in the private desire of the applicant and associates in the Old Mac Daddy Resort and partner enterprises to retain the deck as an important part of the whole development.

1) Contributing to the Tourism “basket of products” in the Overberg

The site subject to this Application is located on land currently zoned Agricultural Zone 1 with an application for Consent Use and Departure for all existing tourist facilities (pending DEA&DP Planning Department’s decision). A rezoning application, conducted by BolandPlan Town and Regional Planners, is being run concurrently with the environmental process to rezone the proposed site to Resort Zone 1 with Consent Use for Tourist Facilities in compliance with the Land Use Planning Ordinance (Ordinance No. 15 of 1985).

The land owner, Vuki Trust has a Certificate of Completion / Occupation from Theewaterskloof Municipality for the already built structures as part of Phase 1 dated 15 December 2010. Theewaterskloof Municipality issued Old Mac Daddy a Section 7(6), allowing them to continue with the development “at their own risk”.

The deck is desirable in its current position and form in that it affords access to an existing farm dam for social activities. The deck is operated as an outdoor lounge area, where visitors may converse and share refreshments while enjoying the outdoors. Visitors to the resort enjoy the fact...
that there is access to a safe and well appointed natural area on the water's edge, without which the resort would be less attractive.

The deck is constructed out of wooden planks and poles, is visually non-intrusive and was built with non-permanent construction methods. The sensitive approach behind the construction of the deck reflects the applicant’s desire to create a resort atmosphere that allows nature to become a focal experience for the visitor. Indigenous plants are being established throughout the resort area as the removal of alien vegetation is being systematically achieved.

Figure 6: The deck at Old Mac Daddy featured on the cover of the British Airways inflight magazine Horizons, gives some indication as to the deck's desirability as part of the resort's attractiveness.

The deck development, as part of the Old Mac Daddy resort, is also strategically and contextually appropriate within the context of the Theewaterskloof Municipal Integrated Development Planning processes and the broader strategic focuses of the Overberg District and the Western Cape's Provincial Growth and Development Strategy where tourism is seen as turnkey investment opportunity through which to secure local economic development through diverse sector-wide job opportunities.
2) Providing direct local investment and opportunities for economic development

The applicant is committed to ensuring that the enterprise remains attractive and profitable, which results in employment and business opportunities for the local farm workers and Vuki Trust members who also benefit directly from the monthly rental paid to them by Old Mac Daddy. This illustrates reason for substantive desire on the part of the landowners and HDI community in the area for the continued operation and profitability of the resort.

Furthermore, the applicant is a successful business leader in the Western Cape tourism sector. His experience, business skills and insights into tourist expectations, are directly translated into jobs and opportunities for the local people at the Old Mac Daddy resort.

The applicant’s vision is that the Old Mac Daddy resort “will ultimately result in about 10 independent business units that function and operate as a whole”. The direct beneficiaries of the applicant’s mentorship and investment include the members of the Vuki Trust who own the property, and the local farm workers.

The deck is a small but desirable improvement to the natural area in which it is operated.
2. LEGAL AND POLICY REQUIREMENTS

This Environmental Impact Assessment (EIA) is being undertaken in terms of Section 24G of the National Environmental Management Act (Act 107 of 1998), which relates to the rectification of the unlawful commencement of listed activities.

Other legislation and policy may, however, also apply to this application. Other potentially relevant regulatory and policy instruments include:

- The Constitution of the Republic of South Africa (Act 108 of 1996);
- The National Environmental Management Act (Act 107 of 1998);
- The National Environmental Management Act: Environmental Impact Assessment Regulations (GN 386 of 2006 and GN543 of 2010);
- The National Environmental Management: Biodiversity Act (Act 10 of 2004);
- The National Water Act (Act 38 of 1998);
- The Conservation of Agricultural Resources Act (Act 43 of 1983);
- The Land Use Planning Ordinance 15 of 1985;
- The draft Western Cape Rural Land-use Planning and Management Guidelines (2009);
- CapeNature’s requirements and recommendations with respect to applications for environmental, mining, agriculture, water, and planning-related authorisations (2009);
- Western Cape Provincial Spatial Development Framework (PSDF) (2009 Directives and Guidelines);
- Western Cape Integrated Tourism Development Framework (ITDF) (2001);
- Theewaterskloof Municipal Spatial Development Framework (2005); and
- Theewaterskloof Municipal Integrated Development Plan (T-IDP) (2010/2011 Revision)

Several technical and interpretive guidelines may also apply to aspects of the application. These include:

- DEA&DP. 2010. Guideline on Need and Desirability, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP);

The implications of each of these regulatory or policy instruments are set out below.
2.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA (108 OF 1996)

The Constitution of the Republic of South Africa (Act 108 of 1996) states that everyone has a right to a non-threatening environment and to have the environment protected for the benefit of present and future generations through reasonable measures. This includes preventing pollution and promoting conservation and environmentally sustainable development, while promoting justifiable social and economic development.

Chapter 2 of the Constitution constitutes a Bill of Rights that includes an environmental clause.\(^1\) Section 24 of the Bill of Rights states that “everyone has the right to have the environment protected through reasonable laws or other means that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development”.

Constitutional provisions relating to the promotion of administrative justice and promotion of access to information have a direct bearing on the environmental regulatory dispensation, which obtain statutory expression through framework legislation in the form of the National Environmental Management Act 107 of 1998, as amended.


The interpretation and application of environmental legislation is governed by the Constitution of the Republic of South Africa Act 108 of 1996.

The National Environmental Management Act (NEMA) (107 of 1998) is enforced by the national Department of Environmental Affairs, but certain powers have been assigned to the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP), which in this instance is the recognised competent authority.

**NEMA Chapter 1: The National Environmental Management Principles**

Chapter 1 of NEMA (the National Environmental Management Principles) lays down principles\(^2\) that apply the actions of all organs of state that may significantly affect the environment. These principles serve as guidelines by reference to which any organ of state must exercise any function

---

\(^1\) s 24, The Constitution of RSA  
\(^2\) Section 2, Act 107 of 1998 as amended
when taking any decision in terms of any statutory provision concerning the protection of the environment.\textsuperscript{3}

**The National Environmental Management Principles therefore apply to this application.**

The National Environmental Management Principles place people and their needs at the forefront of environmental management, and require that development must be socially, environmentally and economically sustainable.\textsuperscript{4} They also endorse the participation of all interested and affected parties in environmental governance.\textsuperscript{5}

The principles that would have particular relevance to decisions relating to the transformation of undisturbed habitats and ecosystems are those that require that environmental management must (in paraphrased format):

- Avoid, minimise or remedy disturbance of ecosystems and loss of biodiversity;
- Avoid degradation of the environment;
- Avoid jeopardising ecosystem integrity;
- Pursue the best practicable environmental option by means of integrated environmental management; and
- Pay specific attention to management and planning procedures pertaining to sensitive, vulnerable, highly dynamic or stressed ecosystems.\textsuperscript{6}

**NEMA Chapter 5: Rectification of unlawful commencement of listed activities**

NEMA section 24(F)(1) specifies that no-one may undertake a listed or specified activity without environmental authorisation and, in terms of NEMA s 24F(2)(a), it is an offence to do so.

NEMA, through s 24G, provides a process that can lead to the rectification and/or continuation of listed activities. The ‘rectification process’ entails submission of an environmental impact assessment to the competent authority that, in turn, can have two potential outcomes:

- An instruction to cease the activity, either wholly or in part, and to rehabilitate the environment (i.e. rectification),\textsuperscript{7} or
- Authorisation, subject to conditions, of the activity/ies that had been commenced unlawfully (i.e. continuation),\textsuperscript{8}

\textsuperscript{3} Section 2(1)c), Act 107 of 1998 as amended
\textsuperscript{4} Section 2(2), Act 107 of 1998 as amended
\textsuperscript{5} Section 2(4)(f), Act 107 of 1998 as amended
\textsuperscript{6} Cf. sub-sections 2(4)(a)(i), (ii), (vi); (b); and (r)
\textsuperscript{7} s 24G(2)(a), NEMA
\textsuperscript{8} s 24G(2)(b), NEMA
The prescribed EIA process may, depending on what the competent authority requires, entail:

- An environmental impact assessment;
- A description of mitigation measures;
- A description of the public participation process, the issues raised by interested and affected parties, and how these had been addressed; and
- An environmental management programme.  

The findings of any other studies that may be been required by the relevant authorities would also have to be recorded in the environmental impact report.

It is assumed for this purposes of this application that s 24G rectification applications culminate in ‘environmental authorisations’ as defined by NEMA, namely: “(The) authorisation by a competent authority of a listed activity or specified activity in terms of this Act....”

If this interpretation is correct, this application for rectification of an unlawful activity would be subject to the NEMA section 24(4) procedures for the investigation, assessment and communication of potential environmental impacts of activities on the environment. These are presented below.

**NEMA Chapter 5: Integrated Environmental Management**

One of the primary objectives of integrated environmental management is to promote the integration of the National Environmental Management Principles into all decision making that may significantly affect the environment. Section 24(4)(a) of NEMA, in turn, lays down minimum, non-discretionary procedures that apply to every application for an ‘environmental authorisation’, i.e. a listed or specified activity.

---

9 s 24G(1)(a), NEMA  
10 s 24G(1)(b), NEMA  
11 s 24(1)(g), NEMA  
12 “An application (or EIA process followed) in terms of section 24G of NEMA is also subject to the minimum requirements of section 24(4)(a) and (b) of NEMA. As such, the requirement to investigate the impact of alternatives is applicable. The requirement for public participation is applicable, but the extent thereof is left to the discretion of the competent authority.” Paul Hardcastle, DEA&DP, by e-mail 01.04.2010.  
13 s 23(2)(a), NEMA  
14 As amended by the National Environmental Management Amendment Act 62 of 2008
Mandatory and discretionary procedures relating to applications for environmental authorisation

The mandatory and discretionary procedures relating to environmental assessment in support of applications for environmental authorisation are summarised as follows:

Table 2: Procedures relating to environmental assessment in support of this application

<table>
<thead>
<tr>
<th>NEMA s 24(4)(a)</th>
<th>NEMA s 24(4)(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum, non-discretionary requirements that apply to every application for environmental authorisation</td>
<td>Minimum, discretionary requirements that may apply with respect to every application for environmental authorisation</td>
</tr>
<tr>
<td>There must be co-ordination and co-operation between organs of state where an activity may fall under the jurisdiction of more than one organ of state.</td>
<td>All applications for an environmental authorisation must include, where applicable:</td>
</tr>
<tr>
<td></td>
<td>− Investigation of the potential consequences or impacts of alternatives to the activity on the environment; and</td>
</tr>
<tr>
<td></td>
<td>− Assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity.</td>
</tr>
<tr>
<td>Any decision by an organ of state must take into account:</td>
<td>Where applicable, measures must be investigated to mitigate adverse consequences or impacts to the minimum.</td>
</tr>
<tr>
<td>− The findings and recommendations flowing from an environmental assessment;</td>
<td></td>
</tr>
<tr>
<td>− The general objectives of integrated environmental management as provided for in Chapter 5 of NEMA</td>
<td></td>
</tr>
<tr>
<td>− The national environmental management principles (section 2, NEMA).</td>
<td></td>
</tr>
<tr>
<td>An application must contain a description of the environment likely to be significantly affected by the proposed activity.</td>
<td>Where applicable, potential impacts on heritage resources (the ‘national estate’ in terms of section 3(2) of the National Heritage Resources Act 25 of 1999) must be investigated, assessed and evaluated.</td>
</tr>
</tbody>
</table>
### Table 2: continued

<table>
<thead>
<tr>
<th>NEMA s 24(4)(a) Minimum, non-discretionary requirements that apply to every application for environmental authorisation</th>
<th>NEMA s 24(4)(b) Minimum, discretionary requirements that may apply with respect to every application for environmental authorisation</th>
</tr>
</thead>
</table>
| There must be an investigation of:  
- The potential environmental consequences for, or impacts on, of the activity; and  
- The significance of those potential consequences or impacts.  
The public and all organs of state with jurisdiction over any aspect of the activity must be given a reasonable opportunity to participate in public information and participation procedures. | Where applicable, gaps in knowledge, the adequacy of predictive methods and underlying assumptions and uncertainties arising from the compilation of information must be reported. |
| Where applicable, arrangements for monitoring and managing environmental consequences and impacts must be investigated and formulated, as must the effectiveness of such arrangements. | Where applicable, applications must consider information and maps that specify the attributes of the environment in particular geographic areas where such information and maps have been complied by either the national Minister of Water and Environmental Affairs or a provincial MEC |
| Where applicable, environmental assessments must also adhere to the requirements prescribed in other environmental management Acts that may be relevant to the listed or specified activity in question. |

### NEMA section 24: Listed activities that require environmental authorisation

‘Listed activities’ refer to activities listed or specified in terms of, respectively, NEMA s 24(2)(a) or (b) that may not be commenced without environmental authorisation issued in terms of section 24(1) of NEMA and which are defined by Listing Notices 1, 2 and 3 of the NEMA Environmental Impact Assessment Regulations (GN R. 544, 545 and 546, of 18 June 2010). The 2010 regulations replaced the 2006 regulations as published in GN 386 & GN 387 of June 2010.
The NEMA EIA regulations and listing notices

NEMA section 24(5) provides for regulations that establish procedures for applications for environmental authorisations and which are generally known as the ‘EIA regulations’ (GN R. 543 of 18 June 2010). Whereas the three listing notices identify activities that require environmental authorisation, the EIA regulations (GN R. 543 of 18 June 2010) stipulate ‘the rules of the game’ for applications for environmental authorisation. The unlawful activity took place prior to the effective date of the 2010 regulations and thus the triggered activity is listed in the 2006 regulations.

The EIA regulations provide, depending on the type of activities that may be triggered by a proposed development, for two types of application procedures: the basic assessment (for activities reflected in Listing Notice 1 (GN 544) and Listing Notice 3 (GN546 / GN 386 of 2006)), and the more comprehensive scoping and EIA process for activities on Listing Notice 2 (GN545 / GN 387 of 2006).

The developments that occurred on the subject property, and for which rectification is being sought, appeared to entail the following listed activities and their respective listing notices:

<table>
<thead>
<tr>
<th>Government Notice No. R386 Activity No(s):</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1(m)</td>
<td>The construction of facilities or infrastructure, including associated structures or infrastructure for any purpose within the one in ten year flood line of a river or stream, or within 32 metres from the bank of a river or stream, where the flood line is unknown, excluding purposes associated with existing residential use, but including –</td>
</tr>
<tr>
<td></td>
<td>(i) canals;</td>
</tr>
<tr>
<td></td>
<td>(ii) channels;</td>
</tr>
<tr>
<td></td>
<td>(iii) bridges;</td>
</tr>
<tr>
<td></td>
<td>(iv) dams; and</td>
</tr>
<tr>
<td></td>
<td>(v) weirs</td>
</tr>
</tbody>
</table>

Applicability of the NEMA EIA regulations to s 24G applications

The NEMA EIA regulations only apply to applications as defined by chapters 3, 4 and 5 of GN R. 543. Of most relevance here is Chapter 3 of the regulations, which deals with applications for environmental authorisation.

Regulation 12(1) stipulates that applications apply to environmental authorisation for the *commencement* (own emphasis) of listed activities, i.e. not for listed activities that have already been commenced without environmental authorisation. The NEMA EIA regulations also seem to
apply exclusively to the basic assessment and scoping/EIA options and therefore not, to section 24G applications. It is understood that the NEMA section 24G dispensation was specifically created to deal with the eventuality of listed activities that had been commenced illegally, i.e. without authorisation and outside of the prescribed regulatory dispensation.

The NEMA EIA regulations therefore do not, in our understanding, apply to rectification applications in terms of section 24G of NEMA. Failing further instruction in this regard from the Department of Environmental Affairs and Development Planning, this application is guided by the minimum mandatory and discretionary requirements of NEMA, i.e. as articulated in sections 24(4)(a) and 24(4)(b).

**NEMA Chapter 7: The Duty of Care**

Chapter 7 of the National Environmental Management Act 107 of 1998 prescribes a general ‘duty of care’ and requirement to remediate environmental damage. Section 28(1) of NEMA states:

> Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, insofar as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment....

The Duty of Care can, *inter alia*, be enforced through directives issued by the competent authority.\(^\text{s 28(4), NEMA}\)

**Appeals**

In terms of section 43(1) of NEMA, any affected person may appeal to the Minister against a decision taken by any person acting under a power delegated by the Minister under Act of 107 of 1998.

### 2.3 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (10 OF 2004)

The National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA) has the purpose to provide for the:

- Management and conservation of South Africa’s biodiversity within the framework of the National Environmental Management Act, 107 of 1998;
- Protection of species and ecosystems that warrant national protection;
- Sustainable use of indigenous biological resource;

\(^{15}\)
- Fair and equitable sharing of benefits arising from bio-prospecting involving indigenous biological resources; Establishment and functions of a South African National Biodiversity Institute; and
- For matters connected therewith.

Chapter 3 of NEMBA provides a framework for integrated and co-ordinated biodiversity planning, monitoring of conservation status and promote research in biodiversity.

Chapter 4 deals with threatened and protected ecosystems and species and related threatening processes and restricted activities.

Section 73 deals with Duty of Care relating to invasive species, while Section 76(2) calls for development of invasive species monitoring, control and eradication plans by all organs of state in all spheres of government, as part of environmental management plans required in terms of Section 11 of NEMA.

**2.4 NATIONAL WATER ACT (ACT 36 OF 1998)**

The National Water Act (NWA) (Act 36 of 1998) has the purpose to ensure that South Africa's water resources are protected, used, developed, conserved, managed and controlled in ways which inter alia (b) promotes equitable access to water, (c) redress for past racial discrimination, (e) facilitates social and economic development, (g) protects aquatic and associated ecosystems and their biological diversity, (h) reduces and prevents pollution and degradation of water resources and (k) manages floods and droughts.

Section 4 of the NWA describes the entitlement to water use, (2) whereby a person may continue with an existing lawful water use, (3) a persons may use water in terms of a general authorisation or license (4) (a) to take or use water, (b) to obstruct or divert a flow of water, (c) affect the quality of water ... (f) construct, operate or maintain any water work.

Section 39 describes how general authorisations that are gazetted by the responsible authority, describe conditions under which water may be used.

Government Notice 398 (26 March 2004) published General Authorisations in terms of Section 39. The General Authorisation 1 - *Impeding or diverting the flow of water in a watercourse* – has the purpose to replace the need for a water user to apply for a license in terms of the National Water Act. The notice states 1.7. (1) that a person who owns or lawfully occupies land, may on that property impede or divert the flow of water in a watercourse if:
(i) the diversion of flow (aa) does not impact on a water resource or on another person water use, property or land;
(ii) the natural migration patterns of aquatic biota and sustainable ecological functioning of the system are not interfered with;
(iii) any structure built fully or partially in or across a water course does not – (aa) exceed a foundation width of 15m, (bb) exceed a length of 200 metres measured from the one side of the watercourse to another or (cc) occur within a distance of 500 metres upstream or downstream of another structure that impedes or diverts flow on the same watercourse, measured along the same watercourse;
(vi) strict erosion control measures are to be taken during and after construction to ensure no erosion of the bed or banks of a watercourse takes place, and
(vii) all necessary measures are taken to stabilise the diversion structure and surrounding area, which will include:

(aa) rehabilitation of the riparian habitat integrity by ensuring that during rehabilitation only indigenous shrubs and grasses are used in restoring the bio-diversity;
(bb) rehabilitation of disturbed and degraded riparian areas to restore and upgrade the riparian habitat integrity to sustain a bio-diverse riparian ecosystem;
(cc) removal of alien vegetation and all new alien vegetation recruitment must be controlled; and
(dd) annual habitat assessment must be carried out to monitor the sustainability of the diversion and compliance with the above conditions. Action must be taken to rectify any impacts.

The General Authorisation 2 - Altering the bed, banks or characteristics of a watercourse has a similar purpose to 1, in that (2.7) a person who owns or occupies land may alter the beds, banks or characteristics of a watercourse ... except (iii) that the alteration should not extend for more than 50 metres continuously or a cumulative distance of 100 metres on that property or land measured along the watercourse, and (vii) any structure built in or across a watercourse does not exceed (aa) height of 10 metres or, (bb) width of 10 metres, or (cc) length of 50 metres or, (dd) occur within 500 metres upstream or downstream of another structure that alters the watercourse.

2.5 CONSERVATION OF AGRICULTURAL RESOURCES ACT (43 OF 1983)

The Conservation of Agricultural Resources Act (CARA) (Act 43 of 1983) has the objectives of conserving the natural agricultural resources of South Africa, through the maintenance of the production potential of the land, by combating and preventing erosion and the weakening of water sources, the protection of vegetation and the combating of weeds and invader plants.
CARA provides for prescribed Control Measures,\textsuperscript{16} enforced through regulations\textsuperscript{17}. A directive also may be issued in order to compel landowners to comply with a Control Measure.\textsuperscript{18}

\textit{Section 6} describes how that the Minister to achieve the objects of the Act, may prescribe control measures which may relate to (a) cultivation of virgin soil, (b) the utilisation and protection of land which is cultivated, (c) the irrigation of land, (d) the prevention or control of water logging or salination of the land, (e) the utilisation and protection of vleis, marshes, water sponges, water courses and water sources, (f) the regulating of the flow pattern of run-off water, (g) the utilisation and protection of vegetation ... (l) the control of weeds and invader plants, (m) the restoration or reclamation of eroded land or land which is otherwise disturbed or denuded, ... (o) the construction, maintenance, alteration or removal of soil conservation works or other structures on land.

The CARA regulations give regulatory effect to the Section 6 Control Measures. They inter alia deal with the cultivation of virgin soil (i.e. soil that has not been mechanically disturbed for 10 years or more), cultivation of land with a slope, protection of cultivated land against erosion through the action of water and wind, and utilisation and protection of vleis, marshes, water sponges and water courses.

Permits for the cultivation of virgin soil are issued in terms of Regulation 2, R1048 of 25 May 1984. CARA is enforced by the Department of Agriculture, Forestry and Fisheries (DAFF).

It is understood that CARA would only be applicable if the proposed change in land use was for agricultural purposes which, in this case, would not apply.

\textbf{2.6 LAND USE PLANNING ORDINANCE (15 OF 1985)}

The Land Use Planning Ordinance 15 of 1985 (LUPO) provides a framework for strategic spatial planning as well as land use control.

Chapter 1 of LUPO provides for structure plans that lay down guidance for the future spatial development of an area, such as a municipality. Structure plans do not confer or take away rights in land. However, applications for rezoning must be consistent with an applicable structure plan. Structure plans must give regard to the preservation of the natural and developed environments.

Chapter 2 of LUPO deals with zoning schemes which form the core of municipal land use regulation. Zoning schemes determine land-use rights, provide for control over these rights and the utilisation of land in the area of jurisdiction of a municipality. Scheme regulations give effect to
control over zoning, and scheme regulations may authorise the granting of departures and sub-divisions by a municipal council.

Land use must be consistent with its zoning, and the province or a municipal council – if authorised by the provisions of a structure plan – may grant or refuse an application for rezoning. Rezoning applications are dealt with by municipal councils and must follow prescribed procedures. Land must first be rezoned before it can be sub-divided.

Farm Jan Niemands Bosch no 465, Caledon is zoned as Agriculture I. In terms of the 1988 Scheme Regulations (Provincial Notice 1048/1988), Agriculture I provide for a primary dwelling unit, and Council consent must be obtained for the erection of additional dwellings up to a maximum number of five further units at a density of one unit per 10 ha.

2.7 THE WESTERN CAPE PROVINCIAL DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING (DEA&DP) GUIDELINES

There are a number of guideline documents and conservation plans that must inform the work of both the environmental practitioner and specialists. Of direct relevance are:

- The Department of Environmental Affairs and Development Planning Guidelines on Public Participation (2010);
- DEA&DP guideline on involving biodiversity specialists in EIA (2005);
- DEA&DP guideline on Need and Desirability (2010)

Salient aspects of each of the guidelines are summarised below.

Public participation
The public participation guideline provides information on the DEA&DP’s interpretation of the public participation requirements of the EIA regulations (2010). Of direct relevance here are the guidelines relating to appropriate mechanisms for notifying interested and affected parties of their right to comment on applications for environmental authorisation and rectification (e.g. use of notice boards on site, or the placement of notices in local or regional newspapers). Also applicable are the minimum periods for public comment: 40 days in the case of draft reports, and 21 days for final documents.

Biodiversity
The DEA&DP guideline on involving biodiversity specialists in EIA processes (2005) places a very strong emphasis on pre-empting irreversible loss of biodiversity and ecological functioning through proactive planning and impact avoidance.
These considerations can no longer apply, however, once transformation has occurred and mitigation through remediation – not avoidance – is the only alternative strategy.

Key elements of the DEA&DP biodiversity guidelines that do apply to the application in question, and have been implemented, are:

- Adoption of an ecosystem approach to impact assessment;
- Addressing impacts on biodiversity at the major levels of hierarchical organisation (species, communities/habitats, and the landscape);
- Reference to the *Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape* (De Villiers et al, 2005); and
- Relating impact significance to ecological management objectives and the thresholds that underpin Critical Biodiversity Areas,

The environmental assessment also makes explicit the substantive and qualitative differences between environmental rehabilitation and ecological restoration.

### 2.8 THE DRAFT WESTERN CAPE RURAL LAND-USE PLANNING AND MANAGEMENT GUIDELINES

The draft Western Cape Rural Land-use Planning and Management Guidelines (DEA&DP 2009a) are based on the Western Cape Provincial Spatial Development Framework, an approved section 4(6) structure plan in terms of the Land-use Planning Ordinance 15 of 1985. They aim to:

- Promote sustainable development in appropriate rural locations throughout the Western Cape;
- Safeguard the functionality of the province’s life-supporting ecosystem services;
- Maintain the integrity, authenticity and accessibility of the province’s significant farming, ecological, cultural and scenic rural landscapes and natural resources;
- Assist Western Cape municipalities to plan and manage their rural areas more effectively; and
- Provide clarity to the province’s social partners on what kind of development is appropriate beyond the urban edge, suitable locations where it could take place, and the desirable form and scale of such development.

These guidelines delineate Spatial Planning Categories (SPCs) in terms of, among others, the biodiversity categories that are used by CapeNature’s Critical Biodiversity Area maps for

---


20 Cf. [http://bgis.sanbi.org](http://bgis.sanbi.org)
Western Cape municipalities (Pence, 2008). Such SPCs indicate the type of land use that should be accommodated in the SPC and where these land use should take place. CBA maps, in turn, provide desired management objectives for the various mapped biodiversity categories that underpin SPCs.

<table>
<thead>
<tr>
<th>CBA category (Spatial planning category)</th>
<th>Desired conservation management objective</th>
<th>Appropriate activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic OESA – Other Ecological Support Area (Core 2)</td>
<td>- Maintain ecological processes</td>
<td>- Biodiversity – compatible and low impact conservation land uses, but allowing for a limited increase in scale of development in less sensitive areas (provided ecological processes not disrupted).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- No further extensions of intensive or extensive agriculture.</td>
</tr>
</tbody>
</table>

The CBAs and SPCs are particularly relevant to evaluation of the significance of potential impacts on biodiversity and ecosystems.
2.9 CAPENATURE’S REQUIREMENT WITH RESPECT TO BIODIVERSITY IN DEVELOPMENT APPLICATIONS

The Western Cape Nature Conservation Board Act (15 of 1998) designates CapeNature as the statutory custodian of biodiversity in the Western Cape.

CapeNature requires that a biodiversity assessment must be undertaken if a development may result in the loss of habitat or ecological functioning in any of the following situations, or if there is any doubt about the biodiversity value of an area (CapeNature 2008):

- Rivers, wetlands, groundwater-dependent communities and estuaries;
- Critical Biodiversity Areas and Ecological Support Areas;
- Viable or connected Critically Endangered and Endangered ecosystems;
- Any area identified by a systematic conservation plan as important for biodiversity conservation;
- Any special habitat with unique signature of species;
- Any habitat with rare, threatened or range-restricted plant or animal species;
- Natural habitat in ecological corridors or along vegetation boundaries, including frontal dune systems; or
- Mountain Catchment Areas.

CapeNature recommends that CBA maps be used as the primary biodiversity informant in the Western Cape Province. Although the CBA maps represent the best available information, they need to be ground-truthed and do not replace the need for a specialist assessment (Ralston et al., 2009). Ground-truthing is also needed to identify potential errors in land cover mapping.

2.10 THE WESTERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (2009)

The purpose of the Western Cape’s Provincial Spatial Development Framework (PSDF) is to:

- Be the spatial expression of the Provincial Growth and Development Strategy (PGDS).
- Guide (metropolitan, district and local) municipal integrated development plans (IDPs) and spatial development frameworks (SDFs) and provincial and municipal framework plans (ie sub-SDF spatial plans).
- Help prioritise and align investment and infrastructure plans of other provincial departments, as well as national departments’ and parastatals’ plans and programmes in the Province.
- Provide clear signals to the private sector about desired development directions.
- Increase predictability in the development environment, for example by establishing no-go, conditional and "go" areas for development and redress the spatial legacy of apartheid.
The wooden deck forms part of a larger tourism facility that is well within the policy and guidelines of the PSDF listed to include:

- One of the primary points of departure of the Western Cape’s PSDF is that new development rights should be approved or refused according to the principle of sustainability – developments must not be to the detriment of elements of nature or mankind.
- The Western Cape’s natural environment is unique and both the natural environment and the pattern of human-made rural and agricultural development must be protected and preferably enhanced.
- There is a need to increase access to tourism opportunities, create jobs and increase economic participation.
- The PSDF recognizes that Intensive Agricultural areas offer opportunities for low impact recreational and tourist activities.
- Priority should be given to the re-use of previously developed sites in preference to greenfield sites.
- To diversify the Western Cape’s rural economic base into the tourism and recreation sectors, and develop these sectors on a sustainable and equitable basis; and
- To offer a range of appropriate nature, cultural and agri-based rural tourism facilities, and recreational opportunities across the rural landscape.
- Whilst tourist and recreational facilities should be accommodated across the rural landscape the nature and scale of the facility provided needs to be closely aligned with the environmental characteristics of the local context.

2.11 THE WESTERN CAPE INTEGRATED TOURISM DEVELOPMENT FRAMEWORK (2001)

The Western Cape Integrated Tourism Development Framework aims to provide a basis for delivery of product development and marketing strategies through a market led approach and focus upon prioritisation. It provides a context for intervention and practical direction to all private and public sector role players.

- The Western Cape has the strongest tourism products in South Africa.
- Agri tourism is a key objective because of the beautiful natural environment.
- More tourists want to see the country-side and participate in diverse and unique activities.
- Tourists are interested the region and its products, for example wine and the history.

The deck at the Old Mac Daddy resort is part of a response to the need for comfortable, luxurious, safe and accessible nature-based activities in the countryside of the Western Cape.

The wooden deck forms part of a bigger tourism facility that is well within the guidelines of the IDP and SDF wherein:

- Agri-tourism should be promoted where such activities are not detrimental to the primary agricultural activities and the general environment, and where such activities make a sustainable contribution to agricultural activities.
- Tourism plays an important role in the development of the region.
- Certain agricultural areas lend themselves to development, such as areas of natural recreation facilities e.g. rivers, which allow opportunities for boating or birding. At the same time, a balance between conservation and development must remain the overarching goal.
- The scale and type of development must compliment the aesthetic qualities of the environment.

The Applicant’s town and regional planners, BolandPlan, is of the opinion, that since the zoning scheme regulations do not make provision for a “wooden deck” as such, the building of a wooden deck structure can be accommodated under the existing Agricultural zone I. The Theewaterskloof Municipality requested BolandPlan Town and Regional Planned to apply for a temporary use because of the non-permanent nature of the deck.
3. THE RECEIVING ENVIRONMENT

3.1 LOCATION

The property (Remainder of Farm Jan Niemands Bosch No. 465) is located approximately 84 km east-south-east of Cape Town and 13 km east of Elgin / Grabouw in the Valley area. The property is situated in the Magisterial District of Caledon (Theewaterskloof Municipality).

![Locality map depicting Old Mac Daddy Resort (Red Balloon A), Grabouw (map sourced from Google).](image)

The extent of the Remainder of Farm 465 is 198.7653 ha, and of this only a small portion of the property is not used for intensive fruit and vegetable agriculture. The surrounding topography can be described as a closed valley. A large number of dams have been constructed on the property storing winter water for use in the dry summer months. The neighbouring farms to the south and west are similarly intensively farmed, while the area to the north of the property is cultivated pine forest plantations. The neighbouring area to the east forms part of the Kogelberg Biosphere Reserve.

The Elgin area has a Mediterranean climate, with cool wet winters and dry hot summers. An unnamed ephemeral stream rises in the forest covered plantations found on the north of the
property. According to the information provided by the Vuki Trust and the applicant, the dams are predominantly fed by springs and boreholes, with the stream contributing relatively little water. The ephemeral stream is a tributary to the Ribbok (Krom) River which flows westward to join the Palmiet River, which enters the Indian Ocean at Kleinmond.

The hydrological specialist report found the stream to have a small catchment of less than 1km², and calculated the discharges for a design storm with a return period of 10, 50 and 100 years of 16.95, 27.8 and 32.91 m³/s respectively (See Annexure I for the full Flood Line Determination Report)

Figure 8 Locality satellite image depicting Old Mac Daddy Resort (Red Balloon A), in the context of the surrounding agriculture, forestry and natural veld (map sourced from Google).
Figure 9  Satellite image depicting Old Mac Daddy Lease Area (Red outline), in the context of the surrounding farms and State Forests (map sourced from Google, dated October 2009).

Figure 10  Satellite image depicting Old Mac Daddy Lease Area (Red outline), showing pre-existing recreational infrastructure, footpaths, roads, irrigation dams & wooden deck (map sourced from Google Earth, October 2009)
The deck site subject to this application is located at 34° 13' 53.53"S; 19° 7' 7.08"E, on a south-south-east-facing slope about 290 m amsl. The wooden deck was constructed on a pre-existing recreational facility on the shallower northern shore of the Lower Dam, at an elevation of approximately 290 metres above mean sea level, and approximately 1 m above the dam level at 100% capacity. Access to the area is via an existing gravelled footpath leading down from lawns and gardens established by the previous tented camp operations. The slope here measures 7.4% or a 1 meter drop over 13.5m. The slopes close to the deck are 8.6% upstream, 12.5% eastward and 0.7% westward.

The deck site is within the leased portion of land, measures approximately 72m² (12m x 6m), and was positioned on the dam’s edge at the site of an existing “zip” slide terminus. An existing network of pathways provided access to the slide, and has been retained to provide access to the deck.

### 3.2 GEOMORPHOLOGY, GEOLOGY AND SOILS

Topographically, the area consists of mainly shales and sandstones of the Bokkeveld Group which weather into the undulating hills and fertile soils typical of the Overberg region. The area to the east of the property consists of sandstones and quartzites of the Pakhuis and Peninsula formations. These formations weather to the sandy, acidic soils and are covered by natural mountain fynbos vegetation.

The small wooden deck was built at the edge of an irrigation dam. At full capacity, approximately half of the deck (39 m²) extends over the dam’s water surface and half over bare soil. The soil around the base of the deck was bare soil at the onset of the development, and somewhat impacted upon by the previous development.

The geology of the area is dominated by the rock formations of the Table Mountain Supergroup, specifically the Silurian-aged Nardouw Group and the Devonian-aged Bokkeveld Group. The Skurweberg Formation (Nardouw Group) consists of light grey, thick bedded coarser grained quartzitic sandstone, cross-bedded with grit and pebbles. The Rietvlei Formation (Bokkeveld Group) consists of light grey, thick bedded coarse grained quartzites and feldspathic sandstones, with subordinate shale and mudstones. The Kogelberg forms the centre of the syntaxis domain of the Cape Fold Belt, which resulted from major tectonic movement. Sandstones, quartzites and mudstones are more resistant to weathering than the softer, more pliable shales, which present as rounded, valleys surrounded by more rugged sandstone formations. See Figure 10 below for geological map and Gresse and Theron, (1992) for more detail.

Sandy loam soils are typically well drained, leached and acidic lithosols, derived from the sandstones of the Table Mountain Group (Rebelo et al/2006 in Mucina and Rutherford (eds)).
3.3 CLIMATE

The site is located in the winter rainfall region of South Africa and has a Mediterranean climate (i.e. cool, wet winters and dry, windy summers). Late summer fires, are not uncommon.

Elgin normally receives about 949mm of rain per year. It receives the lowest rainfall (22mm) in January and the highest (160mm) in June. The average midday temperatures for Elgin range from 15°C in July to 34.9°C in February. The region is the coldest during July when 6.3°C is the average temperature during the night. (After SA Explorer.co.za Website)

![Average rainfall (mm)](chart1)
![Average midday temperature (°C)](chart2)
![Average night-time temperature (°C)](chart3)

**Figure 7:** Climate graphs for Elgin depicting monthly distribution of average rainfall and temperatures (After SA Explorer.co.za website).
3.4 BIODIVERSITY CONTEXT

The site in question is located in the Cape Floristic Region, one of 34 ‘global biodiversity hotspots’ – areas of great natural wealth that are under extreme pressure. At a regional scale, ecosystems and habitats would be those associated with the south-western parts of the Fynbos Biome.

The fynbos component accounts for 70-80% of the region’s flora with a high degree of plant diversity at a local scale and between sites (Manning, 2007).

The Kogelberg Sandstone fynbos was typically found in the area and is classified least threatened (2006 Vegetation Map (C.A.P.E)).

The site in question lies within an established agricultural area that has significantly transformed the natural vegetation.

3.5 VEGETATION

According to the South African Vegetation Map (Rutherford and Mucina, 2006) the site is located within Kogelberg Sandstone Fynbos and the ecosystem status for the site is Least Threatened (NSBA, 2004).

Figure 11  Extract from the Vegetation Map of South Africa (2006), showing the ecosystem status of the development site (red circle). The red area depicts critically endangered ecosystems, and the development site is clearly within the green area which is a least threatened ecosystem.
The vegetation is heavily infested with alien invasive plants (pines *Pinus spp.*, Port Jackson *A. saligna* and Black Wattle *A. mearnsii*). The natural vegetation is largely smothered by pine needle leaf litter which inhibit the germination of indigenous plants.

This impact assessment takes the view that habitat or local land classes can serve as a defensible surrogate for biodiversity, and impacts on biodiversity pattern are consequently reflected and assessed as impacts on habitat (cf. Cowling and Heijnis, 2001).

Impacts on ecological processes (see below) also follow a surrogacy approach; particular processes (e.g. pollination or whole-patch fires) are expressed spatially, in terms at the geographic scale at which they need to operate (cf. Rouget et al., 2003; De Villiers et al., 2005).

### 3.6 ECOLOGICAL PROCESSES IN MIDLAND AND MOUNTAIN FYNBOS

The *Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape* (De Villiers et al., 2005) assign Kogelberg Sandstone Fynbos to ‘Midland and Mountain Fynbos Ecosystems’ (Helme et al., 2005).

The main ecological drivers in these ecosystems are fire (late summer, early autumn) and edaphic conditions, especially in terms of nutrient status, depth and the availability of water. Rockiness can also be an important determinant of community diversity.
3.7 THREATS TO MIDLAND AND MOUNTAIN FYNBOS

Woody invasive alien species such as pine and wattle represent a key threat in fynbos ecosystems (Helme, *et al.*, 2005). Fynbos is particularly prone to the spread of invasive alien species after physical disturbance and unseasonal and too-frequent fires. Appropriate fire and alien control regimes must be maintained, and development must be designed to avoid fragmentation and reduction of ecological corridors. Seeps and marshes should not be disturbed.

3.8 CRITICAL BIODIVERSITY AREAS (KOGELEBERG BIOSPHERE) AND ECOLOGICAL SUPPORT AREAS

The property lies adjacent to the Kogelberg Biosphere Reserve, within a terrestrial transition zone. Areas where people live and work - farms, forestry, towns and villages, fall within the transition zone.

![Map depicting the Kogelberg Biosphere with the locality of Old Mac Daddy Resort indicated.](http://www.kogelbergbiospherereserve.co.za/Content_1100100000_maps.htm)
The Overberg District Municipality Critical Biodiversity Areas Assessment 2010 (SANBI GIS website, 2011) indicates that there are no Critical Biodiversity Areas or Ecological Support Areas on the property.

CBA maps are derived from systematic conservation planning methods (Margules and Pressey, 2000; Pence, 2008) and identify the most efficient network of sites that are required to ensure the continued persistence of:

- Biodiversity pattern (e.g. species, habitats, vegetation types and ecosystems);
- The ecological processes and disturbance regimes by which the biodiversity pattern is maintained (e.g. seasonal migration of sunbirds or fire in fynbos); and
- The services nature provides to society, such as supplying water, pollination in support of fruit production, and providing protection against floods.

CBA maps depict spatially-explicit biodiversity categories that are linked to desired management objectives.

The categories indicate the importance that is attracted to a site owing to its contribution to meeting biodiversity objectives, and therefore serves as an explicit indication of a site’s contextual significance. The desired management objectives, in turn, provide the test for determining the appropriateness of a proposed development – development that is consistent with a site’s desired management objectives would be appropriate.

![Map depicting the location of the deck on the lower dam on the Overberg District Municipality Critical Biodiversity Areas Assessment 2010. Terrestrial CBAs are indicated on the adjacent Houwhoek properties.](image)

**Figure 14:** Map depicting the location of the deck on the lower dam on the Overberg District Municipality Critical Biodiversity Areas Assessment 2010. Terrestrial CBAs are indicated on the adjacent Houwhoek properties. After SANBI GIS website, 2011
The assessment and evaluation of impacts associated with the unlawful activity is informed by this background to CBA mapping.

3.9 AQUATIC ECOSYSTEMS

The relatively steep and pine-tree-afforested catchment falls within quaternary catchment G40D. This quaternary catchment has an average rainfall of 983.8 mm/annum (Midgley et. al, 1994). The stream flows from its origin in a generally southerly direction through the study area. The catchment area for the purposes of this study was calculated at less than 1km² (75.849ha). The unnamed stream is a tributary of the Ribbok River (alias Krom River), which flows in a generally westerly direction up to its confluence with the Palmiet River, which enters the Indian Ocean at Kleinmond.

The unnamed stream can be characterised as being an ephemeral channel of a second order drainage line in a valley bottom setting, originally fed in part from sandstone fynbos seeps. Seeps are defined as a concave or convex area that is permanently or periodically saturated, usually on a slope, where groundwater or interflow meets the surface (Jobs, et. al, 2008).

The ephemeral water course and the associated dams form important riparian support areas, and alien invasive plants should be controlled.

A number of invasive fish species were seen in the Lower Dam, probably Rainbow Trout (Oncorhynchus mykiss), Brown Trout (Salmo trutta) and Black Bass (Micropterus spp).

Field visits conducted in August 2010, November 2010 and February 2011, with focus on geomorphology, vegetation and direct presence of water, concluded that the wetland is as a result of anthropogenic activity more than natural origins. The wetland was formed as a result of a man-made earth barrier pushed across the watercourse, by previous owners, in an attempt to create a small dam. The Lower Dam is constantly fed water from the Upper Dam and this water passes through the wetland “dam” area.

The unnamed stream is not recognised as an aquatic or other critical biodiversity area (CBA) nor as Critical Ecological Support Area (CESA) in the Overberg District Municipality Critical Biodiversity Areas Assessment 2010 (SANBI GIS website, 2011).

The CAPE fine-scale planning project mapping aquatic ecosystems of the Upper Breede River (Job et. al, 2008), classifies all remaining (i.e. non-CBA and non-CESA) wetlands and rivers as Other Ecological Support Areas (OESAs), which are essential supporting areas required for preventing the degradation of CBAs and CESAs.
Minimum standards for managing aquatic and wetland OESAs include (Day and Job, 2005):

- Flow regimes must be maintain the wetland at its present extent and habitat quality, as well as downstream ecosystems;
- Water quality must be controlled in relation to specific objectives (for example, not to decline to a lower management class);
- Hydrological connectivity must be persevered;
- Existing connectivity must be maintained at an appropriate scale; and
- Buffers should protect wetlands against specific identified threats.

The richness of species diversity established in the wetland, however deserves protection. The deck was fortunately constructed outside the wetland area, on a dry, previously disturbed bank and thus does not have any direct impact on the wetland hydrology or the species present.

These factors, together with the fact that the affected area does not fall within an aquatic CBA, the impacts of the unlawful activity is not considered to be of major significance from an environmental impact perspective, provided that appropriate management measures are implemented.

The resort is already eradicating all alien invasive trees within the water course and wetland area. Many alien invasive trees had been removed between the August 2010 and February 2011 visits. The operational environmental management plan (as part of the EMP for the proposed resort extension) should ensure that the wetland area remains free of invasive plants, is demarcated as a No-Go area and it protected from any disturbance or degradation.
3.14 SOCIO-ECONOMIC CHARACTERISTICS

The area in question is predominantly rural in character, with agriculture representing the most prevalent land use.

Although the work was contracted to local contractors, it made a minimal contribution to the local economy. During the original construction of the deck, one carpenter and two assistants were employed for 10 days to complete the deck.

The ongoing maintenance and environmental management tasks related to the deck’s continued operation will be included as part of the tasks assigned to the permanently employed personnel that work at the resort.

The local economy and labour will thus benefit from the project.
Noteworthy socio-economic features of the Old Mac Daddy development of which the deck is question forms a small part, include:

- The development initiative in the Elgin Valley, known as Old Mac Daddy currently operates on a leased portion of the Remainder of the Farm Jan Niemands Bosch No 465, totaling just under 3.2ha in size. The lease for the land is held with the Vuki Trust (IT 3228/2002), owners of the property.

- The property was, prior to its ownership by the Vuki Trust, operating as a farming joint venture, which resulted in the liquidation of the joint venture in November 2001. The employees (farm workers) were retained by the liquidator to ensure the continued operation of the farming activities. The successful undertaking of these activities led to the farm workers establishing the Vuki Trust, a Black Economic Empowerment initiative, which managed to purchase the property after raising sufficient finance. The Vuki Trust, is thus totally owned by local farm workers.

- Vuki Trust operated the farm as an agricultural concern, with tented tourist accommodation and facilities established by the previous owners of the farm (Remainder of the Farm Jan Niemands Bosch No 465).

- The Old Mac Daddy development provides additional income to the Vuki Trust from a portion of land that was not suitable for agriculture.

- The resort continues to provide employment opportunities to local historically disadvantaged individuals.

- It is the vision of Old Mac Daddy to provide skills and mentorship support to local people to develop and run their own small business in support of the needs of visitors to the facility. One such self-employment opportunity has been successfully established in the form of a mountain bike rental operator. All services and supplies needed to successfully and attractively operate the Old Mac Daddy are sourced locally.
4. ALTERNATIVES

One of the central principles of environmental management is that it must seek the best practicable option, i.e. the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as the short term. The primary mechanism for doing so is through the identification and examination of alternatives that provide a basis for choice among options available to the decision-maker (Preston et al., 1996, p 755).

In terms of the DEA&DP Guideline on Alternatives (2007), “alternative” means “different means of meeting the general requirements of the activity” and can include location, activity, design or layout, technological and operational alternatives. The DEA&DP guideline emphasises that alternatives must be ‘feasible’ and ‘reasonable’, and the ‘feasibility’ or ‘reasonableness’ must be weighed up against:

- The general purpose, requirements and need of the activity;
- How the activity impacts on the affected environment; and
- How the activity impacts on the affected human community.

The New Oxford English Dictionary (Pearsall (ed), 1998) defines ‘feasible’ as meaning “possible to do easily or conveniently” and ‘reasonable’ as, variously, “fair and sensible... based on good sense.... as much as it is appropriate or fair”, etc.

4.1 IDENTIFICATION OF ALTERNATIVES

During the initial phase of Old Mac Daddy’s development, the applicant considered several alternatives to the deck construction.

1) No Development - Leave the dam area in the state in which it was found: This option was decided against as the “zip” slide impacts were unsightly, untidy and dangerous.

2) Wooden floating deck constructed using temporary methods and materials – Tidy the dam area and construct a floating platform on the surface of the dam: This option was considered less favourable after considering the variance in dam levels during the winter and summer seasons. The raft would sink to the bottom of the dam during the hot summer months and float at the 100% dam level during the rainy winter period. Managing the flotation devices effectively was considered too complicated, and there were too many risks associated with “unknowns” on how effectively the raft would perform as part of the tourism facility.

21 Cf. sections 1(1)(iii) and 2(4)(b) of the National Environmental Management Act 107 of 1998 as amended.
3) **Fixed wooden deck constructed using temporary methods and materials** - Construct a deck using materials and methods that minimize environmental impact: This was the option that was adopted, and the small wooden deck, with an area of approximately 72m² (12m x 6m), was constructed between 15 December 2009 and 31 May 2010. The deck was constructed from Chromated Copper Arsenate (CCA) treated “green” poles, beams and planks, built onto a framework of timber beams supported by 15 poles driven either into the soil embankment (7 poles) or encased by half-drums filled with concrete and submerged into the dam (8 poles).

4) **Concrete pier and platform constructed using permanent methods and materials** - Construct a small permanent pier and platform on the dam, using concrete, timber and steel. It would have allowed for several pillars to be built into the dam, to support a “platform”. This design would have been the most stable and permanent structure option, but would also have cost more money, and taken longer to construct. The option was disregarded soon after the planning phase was initiated since the impacts on the environment would have been significant.

Currently, the wooden deck is used by visitors, mostly tourists, for recreational purposes such as sunbathing, lounging and small functions.

Considering the alternatives discussed above two alternatives are proposed, namely:

- The preferred option is to “do nothing” and leave the site as it is seeking environmental authorization (**Continued Operation**).

- The second option is to demolish the deck and completely restore the disturbed area (**Restoration Alternative**).

Each option is evaluated against the criteria of feasibility and reasonableness.

### 4.1.1 ALTERNATIVE 1: Continued Operation “leave site as it is”

**Feasibility**

This option is feasible. The degradation that has occurred to the site is not of an extensive nature, the applicant is prepared to rectify unlawful construction, obtain environmental authorisation and apply for the continued operation of the deck.

The hydrological specialist found that the wooden deck “falls wholly within the 100 year flood line area”, but concluded that this is of “no consequence as this structure is not to be a permanent structure used for residential purposes”. Regardless of this conclusion the construction of the
wooden deck triggered a listed activity in terms of Government Notice R 386 of the Environmental Impact Assessment Regulations promulgated in 2006 in terms of the NEMA Act 107 of 1998, specifically Activity 1(m) “The construction of the deck within 32 m of the bank or a river where the floodline is unknown”, and was constructed without the requisite environmental authorisation.

The construction phase (already completed) is described below to illustrate how non-invasive (temporary) methods were used in order to substantially reduce environmental impacts:

- The new wooden deck was built on a site previously used as a terminus of an elevated cable-slide (“zip”) which was used by the previous tented camp as a recreational facility.
- The vegetation in the immediate proximity of the deck was already largely disturbed by previous recreational activities, including concrete-filled drums, metal poles and cables.
- The area was heavily infested with alien invasive plants (pines *Pinus* spp, Port Jackson *A. saligna* and Black Wattle *A. mearnsii*).
- Evidence of the recreational facility and the invasive trees are still evident next to and underneath the deck construction.
- All except two of the alien invasive trees were cleared to make room for the deck. No sand, soil or rock was moved nor was the area flattened in any way in preparation for the deck.
- The 72m$^2$ wooden deck was built onto 15 wooden poles. Seven of the wooden poles were driven into the dry bank. The remaining eight wooden poles were concreted into drums submerged onto the dam floor, using the following methodology:
  - Eight 210 litre drums was cut in half and submerged to lie on the dam floor.
  - A sharpened wooden pole was then driven into the dam floor through the centre of each empty half drum.
  - The pole was held in place by the addition of concrete slurry through a 110 mm PVC pipe which was inserted into the dam to the level of the drum.
  - The concrete hardened around the pole in each submerged drum.
- The timber used for the deck construction was treated, by the supplier / manufacturer, to prevent rotting and insect damage using Chromated Copper Arsenate (CCA) method. Chromated Copper Arsenate (CCA) is a chemical mixture consisting of three pesticidal compounds (arsenic, chromium, and copper) registered for wood preservative uses. CCA treated “green” tinted timber is commonly used outdoor for decks, jetty’s and footpaths. Research has shown that over time the arsenic tends to leach from the wood, especially when buried in acidic soil conditions such as those found in the Western Cape.
- 15 Poles were used to construct the deck. The amount of toxic arsenic leached from these poles into the soils and dam, when compared to the vast numbers of poles used in typical farming operations, is insignificant.
- The access to the wooden deck is via a pre-existing footpath.
No mechanical excavation was undertaken in the dam or surrounding slopes, and there was no irreversible transformation of the habitat. Thus no rehabilitation of disturbed areas is required due to the sensitivity with which construction was planned and executed.

The alien vegetation is being cleared from the area and natural vegetation is being planted and encouraged to grow.

Photographs of the deck in its existing position illustrate how it was designed and scaled to fit into the natural scenery (see Annexure D). The applicant argues that the design and intention of the deck was guided by the nature of the broader environment and the aesthetics of the surrounding area. The approach to the development was underpinned by a vision for an improved landscape free of invasive alien vegetation in which the wetlands can be restored and the slopes covered with indigenous vegetation. Principles such as ‘touch the earth lightly’ and ‘design with nature’ were applied to the design and construction of the deck (J. Aufrichtig, pers.com. 2010).

Overall, this option is deemed the most desirable and most feasible when measured against the negligible environmental gains that would be incurred by attempting an ecological restoration programme. This is described further below.

It is feasible to allow the deck site to remain in operation.

**Reasonableness**

Continued operation would mean that human impacts on the site will be managed to close to zero intrusion as visitors will be encouraged to remain on the pathways and to the deck itself, which is safer and more comfortable than scrambling through the vegetation and along the muddy banks of the dam.

No adverse aesthetic effects have been caused by the development and operation of the deck to date, and the structure provides a framework for the management of litter.

Continued operation would appear to be the most beneficial course of action from an environmental perspective.

**4.1.2 ALTERNATIVE 2: Restoration**

**Feasibility**

Rehabilitation with complete restoration of the site as its goal could be easily achieved since the impact of the deck on the environment, as this assessment will show, virtually negligible.
The decommissioning of the wooden deck in order to rehabilitate the site to its pre-construction condition will consist of:

- The removal of the 72m² wood deck (planks and supporting timber framework).
- Removal of the seven supporting poles on the dry bank.
- Removal of eight submerged supporting poles, including concrete-filled half-drums.
- Infilling of holes on the dry bank.

The site can easily be rehabilitated without permanent effect to the environment as:

- Pre-development conditions of the natural vegetation would already have been degraded / sparse due to the presence of alien invasive plant species such as Pine (*Pinus spp*), Port Jackson (*A. saligna*) and Black Wattle (*A. mearnsii*).
- The development footprint on the dry bank of the dam is surrounded by natural vegetation, which should naturally recover after the invasive plants and pine leaf litter is removed. In other areas of the resort, the applicant has already successfully re-established local fynbos, replacing substantial areas of pines.
- Approximately 60% of the deck area extended over water.
- Temporary and non-invasive construction methods were employed.

Potential environmental impacts that are associated with the decommissioning phase will include:

- Soil erosion (albeit limited).
- Damage to indigenous vegetation.
- Establishment of alien invasive vegetation.
- CCA Treated timber should be removed and safely disposed of – burning of treated wood is to be avoided at all costs.

Decommissioning of the wooden deck will be a short term activity (1 – 2 weeks) and is feasible if undertaken during the drier summer months when the dam is at its lowest level. The overall goal for the decommissioning is to undertake the activity in a way that is properly managed in respect of environmental aspects and impacts. Rehabilitation of the impacted area will be subject to longer term mitigation. The overall goal of a rehabilitation plan is to restore the site to its original condition prior to the construction activities, rather than to its pristine natural condition.

**Reasonableness**

This option is viewed as unreasonable because, on a balance of probabilities, it is will have a negligible effect on the improvement of the natural dam environment. The option is neither sensible nor appropriate as the risk is that the site will revert to its previous untidy state once the deck has been decommissioned.
The dam is an artificial structure in itself, constructed in a watercourse for irrigation purposes. Visitors to the facility will most likely trample the vegetation on the dam’s edge, which is currently avoided by keeping them to the foot paths and deck area.

Should the Applicant be forced to discontinue operation of the deck, decommission it and rehabilitate the site to its original condition prior to the construction activities, rather than to its pristine natural condition, there will be negligible gains for the environment.

5. IDENTIFICATION, ASSESSMENT AND EVALUATION OF IMPACTS ARISING FROM UNAUTHORISED ACTIVITIES ON REMAINDER OF FARM 465, CALEDON

This section sets out to identify, assess, and to evaluate the significance of environmental impacts that may have arisen as a result of the unauthorised construction of a wooden deck on the bank of a dam at the Old Mac Daddy resort. This is followed by recommendations with respect to effective mechanisms to alternatively avoid, minimise or, where appropriate, remedy loss of biodiversity and disturbance to ecosystems. The treatment of mitigation measures only applies to Alternative 1 Continued Operation (which is the preferred option).

5.1 ASSESSMENT AND EVALUATION METHODOLOGY

5.1.1 THE ASSESSMENT METHOD

Three alternatives have been identified, namely:

- Alternative 1: Continued Operation - Retention of the ‘status quo’ (‘do nothing’);
- Alternative 2: Restoration

Each of these alternatives is assessed and evaluated in relation to,

- Impacts on indigenous vegetation (i.e. habitat, as a surrogate for biodiversity pattern)
- Impacts on the ephemeral watercourse and wetland, with respect to:
  - Soil contamination and water quality.
  - Ecological connectivity and habitat quality.
- Impacts on the socio-economic environment
Impacts on biodiversity include those impacts that may affect the composition, structure or functioning of biodiversity at the different scales of assessment.

For non-CBAs designated as ‘other ecological support areas (OESAs) and natural vegetation’, the loss of habitat would not subvert the achievement of biodiversity targets and thresholds, and would therefore not automatically be as significant as loss of habitat in CBAs. However, non-CBA status does not mean that the significance of loss of biodiversity would automatically be reduced. All that it means is that the contextual importance of a site is not linked to the achievement of national biodiversity conservation targets or thresholds.

Overall, environmental management and planning must deliberately seek to avoid further loss of biodiversity and disturbance to ecosystems. Where this is demonstrably not possible, or feasible or reasonable, residual impacts on biodiversity must be mitigated and where loss has occurred, it should be remedied through appropriate compensatory strategies.

5.1.2 THE EVALUATION METHOD

The potential impacts associated with each of the two alternatives will be evaluated in terms of spatial extent, magnitude and duration (Table 3), which provides a significance rating for each impact (Table 4). The probability of an impact occurring, and the confidence of that prediction, will be recorded (Tables 5 & 6 respectively). This method employed here was developed by the Ninham Shand (Aurecon) Environmental Section, which is hereby acknowledged as the authors of this approach.

The SIGNIFICANCE of an impact is derived by taking into account the temporal and spatial scales and magnitude. The means of arriving at the different significance ratings is explained in Table 4.

Table 3: Assessment criteria for the evaluation of impacts

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>CATEGORY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent or spatial influence of impact</td>
<td>National</td>
<td>Areas greater than 12 km in radius or where loss of habitat takes place in a Critical Biodiversity Area or threatened ecosystem</td>
</tr>
<tr>
<td></td>
<td>Regional</td>
<td>Area radius of between 7 to 12 km</td>
</tr>
<tr>
<td></td>
<td>Local</td>
<td>Directly neighbouring properties</td>
</tr>
<tr>
<td></td>
<td>Site specific</td>
<td>The subject property</td>
</tr>
<tr>
<td>Magnitude of impact (at the indicated spatial scale)</td>
<td>High</td>
<td>Natural and/or social functions and/or processes are severely &amp; irreplacably altered (including irreversible loss of habitat in CBA or threatened ecosystem)</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>Natural and/or social functions and/or processes are notably altered but reversible (including reversible loss of habitat in CBA or threatened ecosystem)</td>
</tr>
</tbody>
</table>
Table 4: Definition of significance ratings

<table>
<thead>
<tr>
<th>SIGNIFICANCE RATINGS</th>
<th>LEVEL OF CRITERIA REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>• High magnitude with a national or regional extent and long-term duration.</td>
</tr>
<tr>
<td></td>
<td>• High magnitude with either a regional extent and medium term duration or a local extent and long term duration.</td>
</tr>
<tr>
<td></td>
<td>• Medium magnitude with a national or regional extent and long-term duration.</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>• High magnitude with a local extent and medium term duration.</td>
</tr>
<tr>
<td></td>
<td>• High magnitude with a regional extent and short term duration or a site-specific extent and long term duration.</td>
</tr>
<tr>
<td></td>
<td>• High magnitude with either a local extent and short-term duration or a site-specific extent and medium term duration.</td>
</tr>
<tr>
<td></td>
<td>• Medium magnitude with any combination of extent and duration except site specific short term or regional and long term.</td>
</tr>
<tr>
<td></td>
<td>• Low magnitude with a regional extent and long term duration.</td>
</tr>
<tr>
<td></td>
<td>• Very low magnitude with any combination of extent and duration except national/regional and medium or long term.</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>• High magnitude with a site-specific extent and short-term duration.</td>
</tr>
<tr>
<td></td>
<td>• Medium magnitude with a site-specific extent and short-term duration.</td>
</tr>
<tr>
<td></td>
<td>• Low magnitude with any combination of extent and duration except site specific and short term.</td>
</tr>
<tr>
<td></td>
<td>• Very low magnitude with a regional extent and long term duration.</td>
</tr>
<tr>
<td><strong>Very low</strong></td>
<td>• Low magnitude with a site-specific extent and short-term duration.</td>
</tr>
<tr>
<td></td>
<td>• Very low magnitude with any combination of extent and duration except regional and long term.</td>
</tr>
<tr>
<td><strong>Neutral</strong></td>
<td>• Zero magnitude with any combination of extent and duration.</td>
</tr>
</tbody>
</table>

Once the significance of an impact has been determined, the PROBABILITY of this impact occurring as well as the CONFIDENCE in the assessment of the impact, are estimated using the rating systems outlined in tables 3 and 4 respectively. It is important to note that the significance of an impact should always be considered in concert with the probability of that impact occurring.
Table 5: Definition of probability ratings

<table>
<thead>
<tr>
<th>PROBABILITY RATINGS</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definite</td>
<td>Estimated greater than 95% chance of the impact occurring.</td>
</tr>
<tr>
<td>Highly probable</td>
<td>Estimated 80 to 95% chance of the impact occurring.</td>
</tr>
<tr>
<td>Probable</td>
<td>Estimated 20 to 80% chance of the impact occurring.</td>
</tr>
<tr>
<td>Possible</td>
<td>Estimated 5 to 20% chance of the impact occurring.</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Estimated less than 5% chance of the impact occurring.</td>
</tr>
</tbody>
</table>

Table 6: Definition of confidence ratings

<table>
<thead>
<tr>
<th>CONFIDENCE RATINGS</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certain</td>
<td>Wealth of information on and sound understanding of the environmental factors potentially influencing the impact.</td>
</tr>
<tr>
<td>Sure</td>
<td>Reasonable amount of useful information on and relatively sound understanding of the environmental factors potentially influencing the impact.</td>
</tr>
<tr>
<td>Unsure</td>
<td>Limited useful information on and understanding of the environmental factors potentially influencing this impact.</td>
</tr>
</tbody>
</table>

A summary of the significance of the potential impacts is presented in Table 11.

5.2 GAPS IN KNOWLEDGE AND UNCERTAINTY OF PREDICTIVE METHODS AND ASSUMPTIONS

- The EAPs were unable to view the site before the unlawful activity took place.
- A floodline report was compiled by a hydrologist, appointed by the Applicant. The report includes aspects on catchment area, flood volumes, etc. There certain assumption made with respect to the hydrological model used.

5.3 A NOTE ON ‘MITIGATION’ AND ‘RESTORATION’

Management interventions are defined and shaped by their intended objectives.

Here, ‘mitigation’ is understood to be guided by the objective of preventing further environmental degradation and rehabilitation of some of the original, pre-disturbance condition of the affected environment or ecosystem.
Mitigation can ‘soften’ some of the negative effects of a particular set of disturbances and, to some extent, restore an element of environmental amenity such as visual integrity or a use value such as grazing.

Mitigation may include keeping a site clear of alien vegetation. Full ecological recovery would not, however, be the objective.

‘Restoration’ is not treated as a strategy for mitigation, but is rather understood to constitute an objective and alternative in its own right. It would be tautologous to suggest that a restoration programme can be mitigated. ‘Restoration without mitigation’ is therefore not assessed.

Restoration is defined as management to return a damaged ecosystem to its pre-disturbance condition, both functionally and structurally. It is recognised, though, that complete restoration is unlikely (cf. Cairns, 1993, p 193).

5.4 IMPACT ASSESSMENT AND EVALUATION OF SIGNIFICANCE OF IMPACTS

5.4.1 IMPACTS ON INDIGENOUS VEGETATION

The affected vegetation type, Kogelberg Sandstone Fynbos, is Least Threatened and moderately protected according to the National Spatial Biodiversity Assessment 2004. The biodiversity target for Kogelberg Sandstone Fynbos is 30%. A total of 83% remains of which 58% is well conserved (Mucina et. al, 2006).

The total area of disturbance at the subject property is approximately 72m\(^2\) (0.0072 ha), lying within a narrow corridor of intact indigenous riparian vegetation in a near-natural condition. The corridor links the Lebanon State Forest to the north to the Kogelberg Biosphere to the east of the subject land.

For the purposes of this application keeping the area clear of alien vegetation is important.

Proposed mitigation measures

The preferred alternative, Continued Operation, would entail the management of the site with an emphasis on:

- Preventing further environmental degradation; and
- Managing the site and surrounds for fire and against invasive alien plant species.
The Restoration alternative would be aimed at returning either the site to its pre-disturbance condition, and in addition to preventing further degradation and managing the site in terms of fire and invasive plants, would aim to re-establishing the pre-disturbance vegetation community;

**Assessment of impacts on habitat supporting Kogelberg Sandstone Fynbos**

The loss of vegetation at the site as a result of the construction of the deck is highly localised and, in the absence of any threats to plant species of special concern, or special habitats, viewed as of limited significance – without and with mitigation. Kogelberg Sandstone Fynbos is non-threatened and well represented in the adjacent Kogelberg Biosphere Reserve.

Complete restoration to a pre-disturbance condition is viewed as undesirable, effective steps can be taken to prevent further degradation, mitigate edge effects and buffer untransformed veld from the deck area. These questions are addressed in depth in the draft environmental management programme.

**Table 7: Table of Alternatives showing mitigation and conclusions regarding environmental impact on vegetation**

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1 (Preferred)</th>
<th>Alternative 2 Restoration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Continued operation</strong></td>
<td></td>
</tr>
<tr>
<td>Extent</td>
<td>Site specific</td>
<td>Site specific</td>
</tr>
<tr>
<td>Magnitude</td>
<td>Very low</td>
<td>Very low</td>
</tr>
<tr>
<td>Duration</td>
<td>Long term</td>
<td>Long term</td>
</tr>
<tr>
<td>Significance</td>
<td>Very low (-)</td>
<td>Very low (-)</td>
</tr>
<tr>
<td>Probability of impact occurring</td>
<td>Definite</td>
<td>Highly probable</td>
</tr>
<tr>
<td>Confidence</td>
<td>Certain</td>
<td>Sure</td>
</tr>
</tbody>
</table>

|                          |                          |                           |
|                          | No mitigation            | With mitigation           |
| Extent                   | Site specific             | n/a                       |
| Magnitude                | Very low                  | Very low                  |
| Duration                 | Long term                 | Long term                 |
| Significance             | Very low (-)              | Very low (-)              |
| Probability of impact occurring | Highly probable | n/a                       |
| Confidence               | Certain                   | Sure                      |

**5.4.2 IMPACTS ON HYDROLOGY: EPHEMERAL WATERCOURSE AND WETLAND**

The watercourse in which the unlawful activities took place is classified as an ephemeral channel of a second order drainage line in a valley bottom setting. The watercourse and wetland is maintained mainly from water releases from an upper dam down the drainage line and possibly from lateral seeps. According to information provided from the landowners and applicant, the upper dam is filled predominantly from groundwater pumped from a borehole.
A hydrologist was appointed to undertake a flood line assessment of the water course and made a number of recommendations regarding dam safety, including the construction of a spillway in the upper dam and regular dam safety checks to the lower dam wall. Risks associated with dam safety are dealt with in the Socio-Economic Impact section below. The full report is found in Annexure I.

Potential impacts on the watercourse and wetland at the site are assessed in terms of:

- Soil contamination and water quality.
- Ecological connectivity and habitat quality.

**Impacts on the ephemeral watercourse and wetland: Soil contamination and water quality**

Changes in water quality could be attributed to through localized contamination of the soil by the leaching of wood preservative chemicals, from the treated poles used to construct the deck. Research has shown that wood treated with copper-chromium-arsenic (CCA) preparations, leach into soils (Robinson et. al, 2006). Their study showed that the below ground wood samples of the posts had significantly lower CCA concentrations than the aboveground portions, which were not significantly different from new posts. Soils surrounding the posts had significantly higher CCA concentrations than control soils.

The 15 treated poles used in the construction of the deck in question, when seen in context of the widespread common use of CCA-treated poles in orchards and vineyards, is virtually insignificant. Any contamination of soils will probably be at very low concentrations considering the small footprint and the dynamic receiving environment, i.e. the climate (relatively high rainfall), hydrology (surface and groundwater) and the permeable sandy soils.

**Proposed mitigation measures**

The preferred alternative, Continued Operation, no mitigation is proposed due to the small amount of pollutant expected. Should the deck be repaired or replaced in future, environmentally friendlier alternatives should be sourced and the CCA treated timber replaced.

The Restoration alternative would entail the removal and safe disposal of the treated poles and wooden planks, thus removing the point source of future pollution. The high rainfall, permeable soils and high water table would in a relatively short time flush the pollutants down slope, into the dam where they would be significantly diluted.
Table 8: Table of Alternatives showing mitigation and conclusions regarding environmental impact on ephemeral water course (soil contamination & water quality)

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1 (Preferred)</th>
<th>Alternative 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Continued operation</strong></td>
<td><strong>Restoration</strong></td>
</tr>
<tr>
<td>Extent</td>
<td>No mitigation</td>
<td>No mitigation</td>
</tr>
<tr>
<td></td>
<td>With mitigation</td>
<td>With mitigation</td>
</tr>
<tr>
<td>Magnitude</td>
<td>Very low</td>
<td>Very low</td>
</tr>
<tr>
<td>Duration</td>
<td>Long term</td>
<td>Long term</td>
</tr>
<tr>
<td>Significance</td>
<td>Very low (-)</td>
<td>Very low (-)</td>
</tr>
<tr>
<td>Confidence</td>
<td>Certain</td>
<td>Sure</td>
</tr>
<tr>
<td>Probability of impact</td>
<td>Highly probable</td>
<td>Highly probable</td>
</tr>
</tbody>
</table>

Impacts on the ephemeral watercourse and wetland: Ecological connectivity and habitat quality

Ecological connectivity would be affected when organisms are prevented from occupying or negotiating ecotones between the bed and banks of watercourses or their core and buffer components. Changes to habitat quality would be reflected in changes to the functioning of the ephemeral watercourse, and the diversity and abundance of species or communities associated with these channels (and wetlands).

Proposed mitigation measures

Re-vegetation of the disturbed area around the wooden deck, combating invasive alien plants and prevention of erosion and other environmental degradation, would constitute the most feasible strategy for reducing the impact on ecological connectivity and habitat quality.

Table 9: Table of Alternatives showing mitigation and conclusions regarding impact on the ephemeral stream – ecological connectivity and habitat quality

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1</th>
<th>Alternative 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Continued operation</strong></td>
<td><strong>Restoration</strong></td>
</tr>
<tr>
<td>Extent</td>
<td>No mitigation</td>
<td>No mitigation</td>
</tr>
<tr>
<td></td>
<td>With mitigation</td>
<td>With mitigation</td>
</tr>
<tr>
<td>Magnitude</td>
<td>Very low</td>
<td>Very low</td>
</tr>
<tr>
<td>Duration</td>
<td>Long term</td>
<td>Long term</td>
</tr>
<tr>
<td>Significance</td>
<td>Low (-)</td>
<td>Very Low (-)</td>
</tr>
<tr>
<td>Probability of impact</td>
<td>Highly probable</td>
<td>Highly probable</td>
</tr>
<tr>
<td>Confidence</td>
<td>Certain</td>
<td>Probable</td>
</tr>
</tbody>
</table>

DEA&DP Ref No: E18/2/3/2/2-Farm 465 (S24G), CALEDON
5.4.3 IMPACTS ON THE SOCIO-ECONOMIC ENVIRONMENT:

The assessment of socio-economic environment associated with the use of the wooden deck are assessed in terms of:

- Risks, health and safety associated with the use of the deck for recreational purposes,
- Economic contribution of the deck to Old Mac Daddy’s tourism product.

The impact of the existing deck on visitors to the resort, using this recreational facility, permits controlled and safer access to the dam. It is also easier for staff to clean and maintain specific, demarcated areas, which is difficult to achieve when visitors roam freely.

**Proposed mitigation**

There is no mitigation with respect to the preferred Continued operation, as the deck contributes positively to the health and safety of the visitors and staff, while serving as an attraction. Mitigation related to the Restoration Alternative, would entail demarcating and preferably fencing off access to the rehabilitated area.

**Table 10: Table of Alternatives showing mitigation and conclusions regarding impact on the environment - socio-economic**

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1 Continued operation</th>
<th>Alternative 2 Restoration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent</td>
<td>No mitigation</td>
<td>No mitigation</td>
</tr>
<tr>
<td>Magnitude</td>
<td>Very low</td>
<td>Very low</td>
</tr>
<tr>
<td>Duration</td>
<td>Long term</td>
<td>Long term</td>
</tr>
<tr>
<td>Significance</td>
<td>Low (+)</td>
<td>Low (-)</td>
</tr>
<tr>
<td>Probability of impact occurring</td>
<td>Highly probable</td>
<td>Highly probable</td>
</tr>
<tr>
<td>Confidence</td>
<td>Certain</td>
<td>Sure</td>
</tr>
</tbody>
</table>
5.5 SUMMARY OF IMPACT ASSESSMENT AND EVALUATION OF SIGNIFICANCE OF IMPACTS

Table 11: Summary of impact assessment and evaluation of significance of impacts

<table>
<thead>
<tr>
<th>Impact</th>
<th>Alternative 1: Continued operation</th>
<th>Alternative 2: Restoration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No mitigation</td>
<td>Mitigation</td>
</tr>
<tr>
<td>Indigenous vegetation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of habitat</td>
<td>Very low (-)</td>
<td>Very low (-)</td>
</tr>
<tr>
<td>Hydrology (watercourse &amp; wetland)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil contamination &amp; water quality</td>
<td>Very low (-)</td>
<td>n/a</td>
</tr>
<tr>
<td>Ecological connectivity &amp; habitat quality</td>
<td>Low (-)</td>
<td>Very Low (-)</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>Low (+)</td>
<td>n/a</td>
</tr>
</tbody>
</table>

6. PROCESS FOLLOWED WITH RESPECT TO APPLICATION FOR RECTIFICATION OF UNLAWFUL COMMENCEMENT AND CONTINUATION OF ACTIVITIES

- BolandEnviro submitted the Section 24G Application Form on 1 July 2011.
- The Department of Environmental Affairs & Development Planning approved the application and advised to continue with the process on 12 August 2011. The Department issued the Reference Number E18/2/3/2/2-Farm 465 (S24G) (Annexure E).
- A hydrologist was appointed and compiled a Floodline report which includes aspects such as catchment area and flood volumes (Annexure G).

7. PUBLIC PARTICIPATION PROCESS

A detailed Public Participation Process (PPP) was followed in terms of the 2010 EIA Regulations. The following tasks have been completed up to date (Annexure F):

- The addresses of adjacent landowners around Farm 465/RE (Jan Niemandsbosch) were obtained from the Theewaterskloof Municipality records office and entered into the Interested and Affected Party database.
• An advert describing the Section 24G application, unlawful commencement of listed activities, the PPP, and including an invitation to comment, was placed in English and Afrikaans in the local newspaper, the Theewaterskloof Gazette, on the 1st of November 2011.

• An A1 sized site notice, in English and Afrikaans, describing the Section 24G application as above, was erected at the site on the 1st of November 2011 for the duration of the environmental assessment process.

• Notices (letters), in English and Afrikaans, describing the Section 24G application as above, were sent to neighbours and relevant commenting authorities in the form of registered letters on the 31st October 2011.

• A copy of the draft Environmental Impact Report was available for public review for a period of 40 days (31 October – 09 December 2011) at the Grabouw Public Library (1 Ryke Street, Grabouw), the Old Mac Daddy Resort, BolandEnviro offices (74 Stockenstroom Street, Worcester) and the website www.BolandEnviro.co.za (project documents).

• The Final Environmental Impact Report and Environmental Management Programme will be made available for review to registered Interested and Affected Parties (I&APs) and commenting authorities for a final 21 day commenting period early in 2012.

• Comments received during the public participation periods will be submitted to DEA&DP for consideration along with the Final Environmental Impact Report and Management Programme.

• Registered I&APs will be notified of the DEA&DP decision and Appeal Process.

8. COMMENTING PERIOD ON DRAFT EIR

Please Note: All comments / suggestions must be submitted to BolandEnviro as well as to the Department of Environmental Affairs and Development Planning (DEA&DP), see addresses below. The closing date for comments is 09 December 2011.

Should you have any questions regarding this report, please contact Charl de Villiers or BolandEnviro at the contact numbers provided below.

**Boland Environmental Consultants**
Attention: Mr. Nik Wullschleger
P.O. Box 250
Worcester, 6849
Tel: 023 347 0336
Fax: 023 347 5336
Cell: 083 735 2038
Email: comment@Bolandenviro.co.za

**Department of Environmental Affairs and Development Planning**
Attention: Shafeeq Mallick
Private Bag X9086,
Cape Town, 8000
Tel: 021 483 8339 / 5113
Fax: 021 483 2797
Email: shafeeq.mallick@pgwc.gov.za
9. REFERENCES


