

EZEMVELO KZN WILDLIFE Conservation, Partnerships & Ecotourism

ORIBLGORGE

ORIBI GORGE NATURE RESERVE *MANAGEMENT PLAN* 2009 - 2013





Oribi Gorge Nature Reserve

KwaZulu-Natal South Africa

Integrated Management Plan: 2009-2013

Reviewed and edited by Ezemvelo KwaZulu-Natal Wildlife Management Planning Unit

Based on the Draft Integrated Management Plan (2008 – 2013) by Arcus Gibb (Pty) Ltd

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PREFACE

This Integrated Management Plan for OGNR is the primary and overarching management document for the Nature Reserve for the period 2009-2013. It forms the framework within which the Nature Reserve will be managed and developed towards the achievement of its management objectives derived in collaboration with the Nature Reserve's stakeholders during 2009.

The protected area management planning process and the resultant planning documents (elaborated on in the next few pages, has been designed to meet the statutory requirements of the National Environmental Management: Protected Areas Ac and other relevant legislation.

The protected area management planning process requires participation from the Nature Reserve's stakeholders, the general public and specialists during the various stages of plan development and implementation. Although the Integrated Management Plan and its sub-components are five year planning documents, an annual review process will ensure an active adaptive management planning approach.

A long term business approach has also been introduced that ensures that the Nature Reserve's management objectives are operationalised and reflected through a Strategic Management Plan in the Park's operational budget over the next five years. A Business Plan will at the same time actively pursue additional and improved funding and income towards the achievement of the natural and cultural heritage conservation objectives of the Nature Reserve over the next five years.

Emzemvelo KwaZulu-Natal Wildlife as the appointed Management Authority for Oribi Gorge Nature Reserve hereby commits itself to the implementation of this plan.

Dr Bandile Mkhize Chief Executive Officer Date:

EXECUTIVE SUMMARY AND PURPOSE OF PLAN

This Integrated Management Plan (IMP) includes the management as well as developmental guidelines for the Oribi Gorge Nature Reserve and is the primary and overarching management document for the Oribi Gorge Nature Reserve for the period 2009 to 2013. The IMP forms the framework within which the reserve will be managed, aligned and developed in an endeavour to achieve the biodiversity conservation, ecotourism and partnership objectives as envisaged and set by the various stakeholders, and refined by the Technical Task Team members during the consultative planning process.

The IMP is based on the Protected Area Reserve Management Planning Process, as required by the National Environmental Management Act (Act No.107 of 1998) and the National Environmental Management: Protected Areas Act (Act No. 57 of 2003), and can only be modified with Ezemvelo KZN Wildlife (EKZNW) approval after consultation with all relevant stakeholders.

The principles underlying the IMP for the Oribi Gorge Nature Reserve are based on general principles guiding the attainment of sustainability – protecting biodiversity; sound resource management; equitable and appropriate community involvement and beneficiation; the creation of viable and sustainable business opportunities; and clear policies, objectives and operational guidelines.

The rationale of an IMP for protected area management is to assist the Oribi Gorge Nature Reserve in ensuring sustainability by protecting the integrity and value of environmental resources, providing measurable benefits to host communities, and enhancing the satisfaction of visitors.

By addressing the needs and expectations of resource managers, communities, and users by defining the processes that contribute to sustainability and monitoring the performance of these processes, EKZNW can ensure that their objectives, as well as those of relevant stakeholders are attained in an acceptable and appropriate manner, consistently.

Related to the IMP is the development the Concept Development Plan which will be developed using the specified zonation process which aims to guide current and future land and activity use in Oribi Gorge Nature Reserve, for the purpose of effecting management and recreation opportunities. The zonation also sets a framework within which conservation programmes for the protected area are implemented.

Through the utilisation of the IMP as guide for the compilation of the Reserve's Strategic Management Plan and Operational Budget, it is envisaged that Oribi Gorge Nature Reserve's management objectives can be operationalised and reviewed annually, providing timeous changes to the five year plan.

As a document to guide the management of the Oribi Gorge Nature Reserve, based on the inputs of all stakeholders, the IMP also serves as the base document for monitoring both performance and compliance regarding the various management objectives of the Oribi Gorge Nature Reserve.

Recognising the important role the Oribi Gorge Nature Reserve plays in local conservation initiatives, EKZNW, as the conservation authority, commits itself to the implementation of this plan.

PROTECTED AREA MANAGEMENT PLANNING PROCESS FRAMEWORK FOR

PROTECTED AREAS

The Integrated Management Plan, its components and authorisation

The **Integrated Management Plan (IMP)** is the overarching protected area integrated planning document that describes the administrative and legal framework, contextual background, public participation processes followed, vision / mission statements, management objectives, zonation as well as a management policy framework and guidelines, for a protected area, for a specific 5 year period. The **IMP** forms the framework within which all the other planning components, such as the **Conceptual Development Plan (CDP)**, **Strategic Management Plan (SMP)** and **Business Plan (BP)** are developed. The National Environmental Management: Protected Areas Act 57 of 2003 (NEMPA) considers these plans to be components of the **IMP**.

The **Conceptual Development Plan (CDP)** is an integrated planning document and provides a strategic guideline for the development and maintenance of conservation management infrastructure and visitor facilities / activities within the constraints of the protected area receiving environment. This component will be developed further during the IMP's five-year period. To ensure operational effectiveness, protected areas may require specific Operational plans, programmes and procedures such as Fire management Plans, Wilderness Areas Management Plans, Elephant Management Plans etc, that support the IMP and CDP. These will be compiled where they do not already exist.

The **Strategic Management Plan (SMP)** is an operational management component that identifies the order of priority of IMP action projects, activities and tasks that need to be undertaken in the achievement of the protected area objectives and attaches key performance areas, responsibilities, timeframes, budgets and resources to each activity. This plan usually takes the form of a Microsoft Access database that 'actions' the Reserve's management objectives and any projects identified by the **IMP, CDP** and **Business Plan (BP)**. The **SMP** is a key planning document that also informs the Annual Budgeting Estimates and provides information for Annual Reports.

The **Business Plan (BP)** is primarily aimed at describing the manner in which the **IMP** and **CDP** are to be both financially resourced as well as manpower and capacity needs. It may address issues of operational efficiency and the optimisation of income generated opportunities in order to bridge any possible shortfalls between required operational expenditure and committed provincial government budget allocations. Five year expenditure estimates will inform the development of the **Business Plan (BP)**.

Once the **BP** has been approved, the **SMP** is finalised according to the committed five-year provincial budget allocations for the protected area and other expected financial income.



The process by which the **IMP** plans are developed is in accordance with the requirements of South Africa's environmental legislation, in particular the NEMPA, requiring public consultation and participation, as follows:

- The Protected Area Mission and Objectives contained in the **IMP** are derived in consultation at a Stakeholders' Workshop, the outcomes of which are advertised both regionally and provincially for comment in the next step.
- The IMP will be advertised provincially and regionally for public comment before being authorised.
- The **SMP** and **BP** will form the basis for regular progress reporting to the protected area Management Authority and its structures.

The **IMP** and its subsidiary plans are required to be authorised by the Provincial Minister for the Department of Agriculture, Environmental Affairs and Rural Development, in terms of the National Environmental Management: Protected Areas Act 57 of 2003. The IMP and any subsidiary plan is to be forwarded to the MEC on recommendation from the EKZNW Board.

IMP Planning & Review

The IMP requires both annual and five year revision cycles to ensure that the management objectives remain relevant and that management actions are continually improved. The figure below illustrates how the annual and five year planning and review cycles are to be integrated.



Figure 1: Integrated Management Plans: Aligning Annual and Five year Cycles

DEFINITIONS

Alien Species:

Means species or genotypes, which are not indigenous to Oribi Gorge Nature Reserve and the surrounding area including hybrids and genetically altered organisms.

Amafa:

Amafa aKwaZulu-Natali (KwaZulu-Natal Provincial Heritage Agency)

Biodiversity / Biological Diversity:

Means the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems (as per the National Environmental Management: Biodiversity Act, 2004 [Act No. 10 of 2004]).

Bioprospecting:

In relation to indigenous biological resources, means any research on, or development or application of, indigenous biological resources for commercial or industrial exploitation, and includes –

The systematic search, collection or gathering of such resources or making extractions from such resources for purposes of such research, development or application (as per the National Environmental Management: Biodiversity Act, 2004 [Act No. 10 of 2004]).

Board:

Means the KwaZulu-Natal Nature Conservation Board as defined by the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No.9 of 1997).

Buffer Zone:

Means an area surrounding Oribi Gorge Nature Reserve that has restrictions placed on its use or where collaborative projects and programmes are undertaken to afford additional protection to the Nature Reserve.

Co-management:

The term ⁶Co-management' must be understood within the context of Section 42 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).

Cultural Heritage:

As defined in Article 1 of the World Heritage Convention (UNESCO) 1972¹, 'cultural heritage' is considered as "monuments, architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of value from the point of view of history, art or science, groups of buildings, groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of significance from the point of view of history, art or science, sites, works of man or the combined works of nature and man, and areas including archaeological sites which are of value from the historical, aesthetic, ethnological or anthropological point of view." For the purpose of this IMP, living heritage features such as mountains, pools, rivers, boulders, etc. as well as palaeontological features are included under this definition.

Eco-cultural Tourism (ecotourism):

Means the travel to natural areas to learn about the way of life and cultural history of people, the natural history of the environment, while taking care not to change the environment and contributing to the economic welfare of the local people (adapted from a definition of ecotourism by Hecto Ceballos Lascurain).

Ecological Integrity

Means the sum of the biological, physical and chemical components of an ecosystem and its products, functions and attributes (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).

¹*Convention concerning the protection of the World Cultural and Natural Heritage*. UNESCO. Adopted by the General Conference at its seventeenth session, Paris, 16 November 1972. Paris, France.

Ecosystem:

Means a dynamic complex of animal, plant and micro-organism communities and their non-living environment interacting as a functional unit (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).

Ecosystem Services:

As defined in Section 1 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) as "environmental goods and services" meaning:

- a. benefits obtained from ecosystems such as food, fuel and fibre and genetic resources;
- b. benefits from the regulation of ecosystem processes such as climate regulation, disease and flood control and detoxification; and
- c. cultural non-material benefits obtained from ecosystems such as benefits of a spiritual, recreational, aesthetic, inspirational, educational, community and symbolic nature;"

For the purposes of this IMP, sustainable water production is also specifically included under this definition.

Environmental Degradation:

Means the deterioration of the <u>environment</u> through depletion of resources such as <u>air</u>, <u>water</u> and <u>soil</u>; the destruction of <u>ecosystems</u> and the loss of species or undesirable reduction of species population numbers from a specific area from an environmental health perspective.

Indigenous Species:

In relation to a specific protected area, means a species that occurs, or has historically occurred, naturally in a free state of nature within that specific protected area, but excludes a species introduced in that protected area as a result of human activity (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).

Invasive Species:

Means any species whose establishment and spread outside of its natural distribution range -

- a. threaten ecosystems, habitats or other species or have a demonstrable potential to threaten ecosystems, habitats or other species; and
- b. may result in economic and environmental harm or harm to human health.

(as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).

Local Community:

Means any community of people living or having rights or interests in a distinct geographical area (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).

Management:

In relation to a protected area, includes control, protection, conservation, maintenance and rehabilitation of the protected area with due regard to the use and extraction of biological resources, community-based practices and benefit sharing activities in the area in a manner consistent with the Biodiversity Act (as per the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).

Management Authority:

In relation to a protected area, means the organ of state or other institution or person in which the authority to manage the protected area is vested (as per the National Environmental Management: Protected Areas Act, 2003 [Act No. 57 of 2003]).

Nature Conservation:

Means the conservation of naturally occurring ecological systems, the sustainable utilisation of indigenous plants and animals therein, and the promotion and maintenance of biological diversity (as per the KwaZulu-Natal Nature Conservation Management Act, 1997 [Act No.9 of 1997]).

Nature Reserve

Means Oribi Gorge Nature Reserve

Neighbouring Community:

Means the communities and people permanently living in the local municipal area / s bordering onto the Nature Reserve.

Natural Heritage:

As defined in Article 2 of the World Heritage Convention (UNESCO) 1972² 'natural heritage' is considered as: "natural features consisting of physical and biological formations or groups of such formations, which are of value from the aesthetic or scientific point of view, geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of value from the point of view of science or conservation, natural sites or precisely delineated natural areas of value from the point of view of science, conservation or natural beauty." For the purposes of this IMP, this would include the required ecological integrity of the protected area for the production of ecosystem services.

Partnership/s:

Means a co-operative and / or collaborative arrangement between the Nature Reserve management / EKZNW and a third party that supports the achievement of the Nature Reserve management objectives.

Protected Area:

- Means any area declared or proclaimed as such in terms of section 3 or listed in the Second Schedule to the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997); or
- Means any of the protected areas referred to in section 9 of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003).

Stakeholders / Interested Parties³:

These are interested individuals or groups concerned with or affected by an activity and its consequences. These include the authorities, local communities, investors, work force, consumers, environmental interest groups and the general public. According to the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), "stakeholder" means a person, an organ of state or a community contemplated in section 82 (1) (a), or an indigenous community contemplated in section 82(1) (b).

Sustainable:

In relation to the use of a biological resource, means the use of such resource in a way and at a rate that would not lead to its long-term decline; would not disrupt the ecological integrity of the ecosystem in which it occurs; and would ensure its continued use to meet the needs and aspirations of present and future generations of people (as per National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).

² UNESCO 1972 *Convention concerning the Protection of the World Cultural and Natural Heritage*. Adopted by the General Conference at its seventeenth session, Paris, 16 November 1972. UNESCO, Paris, France

ABBREVIATIONS

BP	Business Plan (Component of EKZNW protected area management planning process)
CDP	Concept Development Plan (Component of EKZNW protected area management planning
	process)
DAE&RD	KwaZulu-Natal Provincial Department of Agriculture, Environmental Affairs and Rural
	Development
DLA	Department of Land Affairs
DPW	Department of Public Works
DWEA	National Department of Water and Environmental Affairs
EIA	Environmental Impact Assessment
EKZNW	Ezemvelo KwaZulu-Natal Wildlife
FPA	Fire Protection Association in terms of the National Veld and Forest Fire Act, 1998 (Act No.101
of	1998)
GIS	Geographical Information Systems
IAP	Interested and Affected Parties
IDP	Municipal Integrated Development Plan
IEM	Integrated Environmental Management
IMP	Integrated Management Plan
IUCN	International Union for Conservation of Nature or The World Conservation Union
JMC	Joint Management Committee
KZN	KwaZulu-Natal Province of the Republic of South Africa
LDP	Local Development Plan
MCM	National Department of Marine and Coastal Management
MEC	Member of the Executive Council for DAEA&RD, KwaZulu-Natal Provincial Government
MoA	Memorandum of Agreement
MoU	Memorandum of Understanding
NEMBA	National Environmental Management Biodiversity Act (No. 10 of 2004)
PAMC	Protected Area Management Committee / Reserve Planning Committee
OGNR	Oribi Gorge Nature Reserve
PPP	Private Public Partnership
ROC	EKZNW Regional Operations Committee
ROS	Recreational Opportunity Spectrum
SA	Republic of South Africa
SAHRA	South African Heritage Resources Agency
SDF	Municipal Spatial Development Framework
SMME	Small, Micro and Medium Enterprises
SMP	Strategic Management Plan (Component of EKZNW protected area management planning
	process)
SUP	Sustainable Utilisation Plan
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WUA	Water User Association

ABBREVIATIONS USED FOR STATUTES (LEGISLATION)

KZN HRA KwaZulu Heritage Resources Act, 1997 (Act No. 10 of 1997) CARA Conservation of Agricultural Resources Act (No. 43 of 1983) ECA Environment Conservation Act (No. 73 of 1989) NEMA National Environmental Management Act (No.107 of 1998) NHRA National Heritage Resources Act (No. 25 of 1999) NWA National Water Act (No. 36 of 1998) PAA National Environmental Management: Protected Areas Act (No. 57 of 2003) PFMA Public Finance Management Act (No. 1 of 1999)

1 PURPOSE AND SIGNIFICANCE OF ORIBI GORGE NATURE RESERVE

1.1 Purpose

The purpose of Oribi Gorge Nature Reserve (OGNR) is to:

- Contribute to the achievement of Provincial and National conservation targets through
 protecting a representative portion of the area and their associated biodiversity, including the
 ecological and evolutionary processes that generate and maintain this diversity;
- Protect endangered, rare and endemic species indigenous to the area;
- Preserve and conserve its ecological and cultural heritage integrity;
- Provide controlled and equitable access by the public to the area and its resources;
- Contribute to local and regional economies through sustaining water production by providing a
 public amenity;
- Support systems for the sustainable use of natural resources;
- Provide a destination for eco-cultural tourism in the KwaZulu-Natal Province.

1.2 Significance

The significant values of OGNR include:

- Ø **Natural and cultural values.** Various Oribi Gorge Nature Reserve natural and cultural heritage features are of provincial significance, and incorporate the following:
 - The outstanding natural beauty and aesthetic value of the area;
 - The biological diversity of species and habitats with some presently only being protected within this Nature Reserve; and
 - Shelters that are in and around the gorge.
- Ø Outdoor Recreation and Eco-cultural Tourism. OGNR provides sustainable outdoor recreation and eco-cultural tourism activities in an area of significant natural and aesthetic beauty, and thus significantly contributes to enhanced tourism opportunities for visitors.

2 ADMINISTRATIVE AND LEGAL FRAMEWORK

2.1 Institutional Arrangements

2.1.1 OGNR Management Authority

Ezemvelo KwaZulu-Natal Wildlife is the appointed Management Authority responsible and accountable for the Oribi Gorge Nature Reserve (OGNR). This must be confirmed in terms of Section 38(2) of the National Environment Management: Protected Areas, 2003 [Act No.57 of 2003] (PAA) which requires that the provincial MEC assign the management authority for a Protected Area.

Action Project 2.1.1 (i): Obtain written assignment from the MEC re - appointing EKZNW as the management authority for OGNR in terms of Section 38(2) of PAA.

As the current Management Authority, EKZNW is responsible for reporting on the management of the Nature Reserve to the designated KwaZulu-Natal Provincial Member of the Executive Committee and the Premier thus ensuring co-ordination of those matters that may affect OGNR through the relevant provincial departments, District and Local Municipalities.

2.1.2 Land Claims and Co-management

There are no known land claims against OGNR.

2.1.3 Separation of Authority Functions

Other public service providers within OGNR include electricity provided by Eskom and telephone lines provided by Telkom.

Action Project 2.1.3 (i): Update and compile a list of all other public service providers

2.2 Legislation Guiding the Administration of Oribi Gorge Nature Reserve

It is important to note that Oribi Gorge Nature Reserve is a protected area in terms of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003 [PAA]). In terms of this Act, any conflicts with other legislation will be dealt with in accordance with Section 7 of PAA. In essence it stipulates that - where a provision of PAA specifically concerns the management or development of protected areas, and there is conflict with other national legislation, the relevant section of PAA prevails.

The operational administration and management of the Nature Reserve is subject to the following key statutes – it is acknowledged that this list is not exhaustive. Managers will familiarize themselves with the purpose and contents of these statutes as well as their subsequent amendments and regulations. Many of these statutes can be downloaded from the following SA Government Documents internet website:

http://www.info.gov.za/view/DynamicAction?pageid=528.

Not only do these Acts and Ordinances guide the specific decisions and actions, they also provide the framework for monitoring performance and compliance, and provide guidelines regarding contravention, offences and penalties.

Within the South African context, ensuring compliance to relevant legislation is a must. Therefore it is imperative that all actions undertaken by management are compliant with all relevant legislation such as:

Natural and Cultural Heritage / Resource Management and Development:

- Amafa aKwaZulu Natali Heritage Act, 1997 (Act No.10 of 1997)
- Animals Protection Act, 1962 (Act No. 71 of 1962)
- Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965)
- Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)
- Constitution of the Republic of South Africa, 1997 (Act No. 108 of 1997)
- Environment Conservation Act, 1989 (Act No. 73 of 1989)
- Forest Act, 1984 (Act No. 122 of 1984)
- Forest Act, 1994 (Act No. 122 of 1994)
- Game Theft Act, 1991 (Act No 105 of 1991)
- KwaZulu Animal Protection Act, 1987 (Act No. 4 of 1987)
- KwaZulu Nature Conservation Act, 1975 (Act No. 8 of 1975)
- KwaZulu-Natal Heritage Act, 2008 (Act No. 4 of 2008)
- KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997)
- Management of State Forests Act, 1992 (Act No. 128 of 1992)
- National Environmental Management Act, 1998 (Act No. 107 of 1998)
- National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
- National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)
- National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).
- National Forests Act, 1998 (Act No. 84 of 1998)
- National Heritage Resources Act, 1999 (Act No. 25 of 1999)
- National Veld and Forest Fire Act, 1998 (Act No.101 of 1998)
- National Water Act, 1998 (Act No. 36 of 1998)
- National Water Amendment Act, 1999 (Act No. 45 of 1999)
- Nature Conservation Ordinance, 1974 (Act No. 15 of 1974)
- Traditional Health Practitioners Act, 2004 (Act No. 35 of 2004)

General Management:

- Broad based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003)
- Communal land Rights Act, 2004 (Act No. 11 of 2004)
- Criminal Procedure Act, 1977 (Act No. 51 of 1977)
- Development Facilitation Act, 1995 (Act No. 67 of 1995)
- Disaster Management Act, 2002 (Act No. 57 of 2002)
- Fencing Act, 1963 (Act No. 13 of 1963)
- Fire Brigade Services Act, 1987 (Act No. 99 of 1987)
- Firearms Control Act, 2000 (Act No. 60 of 2000)
- Intergovernmental Relations Framework Act, 2005 (Act No.13 of 2005)
- KwaZulu Ingonyama Trust Act, 1994 (Act No. 3 of 1994)
- KwaZulu-Natal Planning and Development Act, 1998 (Act No. 5 of 1998)
- Local Government: Municipal Structures Act, 1998 (Act No. 117 of 1998)
- Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000)
- Natal Town Planning Ordinance, 1949 (Act No. 27 of 1949)
- National Building Standards Act, 1977 (Act No. 103 of 1977)
- National Road Traffic Act, 1996 (Act No. 93 of 1996)
- Occupational Health and Safety Act No, 1993 (Act No. 85 of 1993)
- Restitution of Land Rights Act (Act No. 22 of 1994)
- Restitution of Land Rights Act, 1994 (Act No. 22 of 1994)
- State Land Disposal Act, 1961(Act No. 48 of 1961)
- Water Services Act, 1997 (Act No. 108 of 1997)

Financial Management:

• Public Finance Management Act, 1999 (Act No. 1 of 1999)

Human Resource Management:

- Basic Conditions of Employment Act, 1997 (Act No. 75 of 1997)
- Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993)
- Employment Equity Act, 1998 (Act No. 55 of 1998)
- Labour Relations Act, 1995 (Act No. 66 of 1995)
- Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)
- Pension Funds Act, 1956 (Act No. 24 of 1956)
- Skills Development Act, 1998 (Act No. 97 of 1998)
- Skills Development Levies Act, 1999 (Act No. 9 of 1999)
- Unemployment Insurance Act, 2001 (Act No. 63 of 2001)

Nature Reserve / Game Reserve / Park Regulations:

EKZNW protected area regulations are enforced in accordance with Section 15 of the Nature Conservation Ordinance, 1974 (Act No. 15 of 1974) read together with the KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997).

2.3 Regional Planning Context and Principles

OGNR is a core conservation area forming part of the KZN protected area network. As with all EKZNW protected areas, the intention is to continually improve management effectiveness of OGNR in line with the levels adopted for all protected area within the EKZNW protected area network.

In the KwaZulu-Natal Province, the Nature Reserve is situated within the Ugu District Municipality and the Hibiscus Coast Local Municipality.

Alignment with regional plans will assist in developing an effective buffer zone around OGNR. Protected area management in collaboration with the designated EKZNW officials, will be tasked to make the relevant inputs whenever these municipalities' Integrated Development Plans and Spatial Development Frameworks are reviewed and updated.

Through the integrated planning procedure, as well as participation in other planning initiatives, the IMP has been directly aligned with:

- Ugu District Integrated Development Plan (IDP)
- Hibiscus Coast Integrated Development Plan (IDP)
- Hibiscus Coast Land Use Management System (LUMS)
- Hibiscus Coast Spatial Development Plan (SDP)

Action Project 2.3(i): Management, in collaboration with other relevant EKZNW officials, will be tasked with active participation in the review processes of the municipal Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs) in order to ensure an effective buffer zone surrounding OGNR through an alignment of appropriate land use adjacent to the Nature Reserve.

Action Project 2.3 (ii): Establish relationships with neighbouring properties including Hibiscus Coast Municipality to plan and restore fragmented corridors and to enable the continued functioning of existing ones.

2.4 Proclamation Status of OGNR

The OGNR was proclaimed on 22 March 1950 (Proclamation 50 of1950). On 11 June 1957, the Reserve was enlarged by the Lot GL. 12833 Proclamation No. 35 of 1957 and again on the 12th September 1972 Proclamation No/ 167 of 1972, when the area of the rest camp and a part of the Kloof through which Baboon's Spruit flows were proclaimed (Proclamation No. 167 of 1972).

Subsequently in 1987 the rest camp area was linked to the rest of the Nature Reserve when Rem of 7 of Farm Baboon Spruit No. 6727 was acquired. Also in 1987 the Farm Wyatt No. 15864 (consolidation of Sub 6 Farm Fredheim No. 11152, Sub 7 Farm Fredheim No. 11152 and Sub 2 of Lot 9 B Oribi Flats No. 12282) was obtained, in exchange for Sub 4 (of 1) of Lot GEL No. 12833.

The Protected Area was established to conserve and maintain the Oribi Gorge as a natural feature of the landscape. The area has remained virtually untouched by man. It is largely inaccessible, unsuitable for agriculture, and naturally protected against fire. Floristically it is exceptionally rich and more than 500 different plant species have already been identified and the vegetation types vary from evergreen forest to grassland and lithophytic communities. This includes the spectacular cliff faces, waterfalls open grasslands, dense forest patches, clear running streams and rivers and the diverse wildlife species associated with all of these. In the context of altered landscape and ecosystems initiated by agricultural activities surrounding the Gorge it will cause the nature reserve to become more valuable over time. The reserve will contribute as a biodiversity resource and for educational, recreational and spiritual activities.

Action Project 2.4 (i): Obtain the services of a land surveyor to register the consolidated OGNR with the Surveyor General and seek the proclamation of the area by the MEC.

2.5 Local Agreements, Leases, Servitude Arrangements and MoUs

The formal documentation and maintenance of all local agreements, leases, servitude arrangements and MoUs concerning the authorised use of OGNR area by beneficiaries other than EKZNW will be undertaken to promote transparency and good governance. All such agreements will be scrutinized by the Manager: EKZNW Legal Services for direction, prior to any appointed EKZNW executive member signing such documents.

The OGNR Manager will be familiar with the content of such authorised documents and will ensure that there is compliance with the conditions contained therein. Copies of all documentation will also be filed manually and digitally at the OGNR management and regional management offices for easy reference. These copies will be updated in accordance with any authorised amendments.

The servitudes for OGNR are as follows:

Remainder of the Farm baboon Spruit No. 6727

• Subject to Notarial Deed of Servitude of a 12, 19 metre right of way and dam pipe line servitude

Sub 15 (of Penrith) of the Farm Baboon Spruit No. 6727

• Rights of Way Servitude of 4, 57 and 6, 10 metres wide

Remainder of 10 of the Farm Baboon Spruit No. 6727

Right of Way Servitude of 9, 14 metres wide

Sub 6 of the Farm the Prairie No. 7107

Benefit of a Pipeline Servitude 5 feet wide

Portion 5 of the farm Highlands No. 8613

• Benefit of Water Rights with a pump site and Pipe Line Servitude

Sub 3 of the Farm Highlands No. 8613

• Benefit of Water Rights with a pump site and Pump Line Servitude

Sub 4 of the Farm Highlands No. 8613

• Benefit of Water Rights with a pump site and Pump Line Servitude

Hells Gate No. 10763

- Benefit of Water Rights with a pump site and Pump Line Servitude
- Rights to the Electricity Supply Commission to convey electricity over the property

The Remainder of Thorndale No. 6844

• Rights to the Electricity Supply Commission to convey electricity over the property

The Remainder of Farm B of Mary Land No. 9025

• Subject to Electricity Supply Power Transmission Line Servitudes

Sub 1 of Lot Gel Oribi Flats No. 12833

Benefit of two Servitude Roads
 Subject to a perpetual general Servitude of Pipe Line and Aqueductus

Action Project 2.5 (i): Obtain and review all formal and informal local agreements, leases, servitude arrangements *etc.* pertaining to OGNR and document, update, maintain and monitor these appropriately authorised agreements. All informal agreements are to be formalised and approved by the Executive.

2.6 Extending Conservation Land Use Management in Areas Surrounding OGNR

Opportunities may arise that will enable the establishment of new formal protected areas or other conservation management areas on land bordering or in vicinity of OGNR in collaboration and cooperation with the relevant communities and landowners. This is likely to contribute to the EKZNW conservation planning targets through more effective natural and cultural heritage conservation. Indirectly, new tourism opportunities could also develop with the resulting socio-economic benefits.

All EKZNW officials associated with OGNR should remain sensitive to these opportunities and ready to engage with the relevant role-players, assisting them with the most appropriate options for establishing conservation areas. This may be in the form of conservancies, private, community or local authority protected areas, contractual protected areas, public open space or even incorporation of land into OGNR and in so doing increasing the extent of core protected areas within KZN and increasing protected area representivity. Alignment with the municipal IDPs will also be actively sought to ensure appropriate land use on the borders of OGNR.

Action Project 2.6 (i): Annually explore and investigate opportunities to extend conservation land use in and around OGNR.

3 BACKGROUND

3.1 Origin of the Name of the Oribi Gorge Nature Reserve

The first positive evidence that Oribi Gorge had been discovered is found in a hand-drawn map in 1867. This shows the Umzimkulwana River flowing due east through a gorge before joining the Umzimkulu River. The map was published in Dobie's "South African Journal" (Hattersley, 1945).

However, during his four journeys between Pietermaritzburg and Queenstown between 1862 and 1866, Dobie did not move further downstream than the point where Harding is today (Glen, 1972). It is thus clear that Oribi Gorge had been discovered before 1867, but had not been reconnoitred. Mr H C Lugg got to know Oribi Flats in 1893 (Lugg, 1970). He stated that Oribi and other game, especially birds, were very abundant on the Flats at that time. The gorge was thus named after the surrounding plains, which in turn were named after the oribi.

3.2 Location and Extent of the Nature Reserve

The reserve is situated 21km west of Port Shepstone, between -30°40'35.832"S to -30°45'00.904"S and 30°10'00.505"E to 30°18"40.424"E. The GIS flat surface area of OGNR amounts to 1881ha. The altitude at the highest point in OGNR is 680 metres above sea level with the lowest point being 120 metres above sea level. The proclaimed road No. 345 gives access to the reserve. This road turns off from the main road between Port Shepstone and Harding at the station, Plains, 30km out of Port Shepstone.

The reserve is bounded by private farms where mainly sugar-cane is farmed, but wattle and cattle also occur. On the eastern side it is bounded by a commercial game farm. The reserve is 1 917 ha in extent and lies mostly within the Umzimkulwana river gorge.

Maps and aerial photographs for the reserve include:

- (a) 1:50 000 maps No. 3030CA and CB
- (b) 1 : 50 000 aerial photographs Job 766 of 1976
- (c) 1 : 10 000 orthophotos : 3030CA 24, 3030CA 25, 3030CB 16, 3030CB 17, 3030CB 20, 3030CB 21.

The nearest airstrip is on the Farm "Twinstreams" which is ± 5 km's from the rest camp. There are also airstrips at Langton and Margate (Oribi Gorge Nature Reserve, Environmental management Plan, 1985).

3.3 Previous Land Use

Land use prior to proclamation included commercial farming (grazing), subsistence farming (Livestock) and rural dwellings. Most of the reserve had very little formal land use as the gorge was remote, not easily accessible and not viable for agriculture.

Action Project 3.3 (i): Update the previous land use of OGNR.	
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3.4 Conservation History of the Nature Reserve

In 1917, a Government Commission visited the gorge with a view to the proclamation of a Nature Reserve, but unfortunately nothing came of this (Glen, 1972).

On 3 August 1920, The Rocks was reserved by the Executive Board Minute No. 2124 for forestry purposes. Emjajeni Forest was declared a demarcated forest by Government Notice No. 1289 of 3 August, 1928. The two areas mentioned above were together known as the Umzimkulwana State Forest, Block III Lower Umzimkulu (later Port Shepstone) district, with Emajajeni Forest being 1 668 morgen (1 394,348 ha) in extent, and The Rocks being 86 morgen 484 sq. yds (73,120 ha).

Until 1937, the State Forest was under the nominal control of the South African Police at Paddock. They could act only in the course of their normal patrols if they came across someone hunting or cutting down forest products. As a result of a resolution passed at the 1947 conference of the S A Publicity Association, the Provincial Secretary made formal application for the transfer of the State Forest to the Province. As the care of the area which was Crown land, was at the time entrusted to the Forestry Department in the absence of any other competent authority, Forestry agreed to the transfer.

On 21 October 1949, Emjajeni Forest was withdrawn from demarcation by Government Notice No. 2216 and the reservation of The Rocks for forestry purposes was cancelled by Executive Board Minute No. 157 of 31 January, 1950.

In March 1950, the Oribi Gorge Nature Reserve was proclaimed under the Nature Conservation Ordinance Act (Act No. 15 of 1974). The reserve was proclaimed to protect the remains of the Pondoland Endemic Species. Floristically it is exceptionally rich and more than 500 different plant species have already been identified and the vegetation types vary from evergreen forest to grassland and lithophytic communities. This includes the spectacular cliff faces, waterfalls open grasslands, dense forest patches, clear running streams and rivers and the diverse wildlife species associated with all of these.

After proclamation, the Natal Parks Board was the appointed management authority for OGNR. Portions of the reserve had pre-existing conditions and agreements; these were namely water extraction from the Umzimkulwana River and an Eskom Power Line. Since proclamation, OGNR has encountered, and is the process of addressing, several key challenges. These include opposition from the neighboring communities, land transformation (services through the Protected Area), crime (such as illegal harvesting of medicinal plants, poaching with dogs and arson fires) and a shortage of finances.

Action Project 3.4 (i): Update the conservation history for OGNR indicating the importance of the proclamation.

3.5 Climate and Weather

There are very few climatic records for the reserve itself. A rain gauge was installed in the OiC's house in 1968. Previously, the rain had been measured at the farm "Success", of the Murchison's Plains Wattle Company, approximately 3km away from the present gauge.

Currently rainfall is measured at the OiC's office and rainfall figures for Oribi Gorge from 1954 are held at the OIC's station. Average rainfall has varied from 570 to 1625 mm per year. Rainfall reaches a maximum in the summer (October to March). The driest month of the year is July. However, rainfall in this month is very variable, between 0 and 198 mm. In some parts of the reserve, especially the eastern cliffs (in the direction of the sea) the rainfall is supplemented by regular mist during the summer. The quantity of moisture from this and its effect on the vegetation have not yet been determined.

Average maximum daily temperatures for a year period is approximately 23°C, average minimum daily temperature for a year period is approximately 13°C. February is the month with the highest average daily maximum temperature at Paddock, although the highest extreme maximum was measured in November. The coldest month is July, with both the lowest average minimum and the lowest extreme minimum temperature. Temperatures never reach freezing point. These temperatures will be representative of the area round the gorge, but in the gorge the temperature will undoubtedly vary a great deal, and in the summer it will, in general be hotter there.

Prevailing winds are southerly to south westerly and north easterly. Berg winds seldom occur on the South Coast (Oribi Gorge Nature Reserve, Environmental management Plan, 1985).

Action Project 3.5 (i): Maintain the collection and storage of climatic data records. Include the Predictive Mean maximum and minimum temperatures in conjunction with mean rainfall for OGNR.

3.6 Physical Description

3.6.1 Topography

The South Coast of Natal consists of three "steps" rising towards the midlands (King 1942). The lowest "step" is at or just above sea level and thus is relevant to Oribi Gorge. The middle step is a low plateau between 150 and 200 metres in height, and approximately 11km from the sea it rises to a higher plateau of about 500 metres in height (Glen, 1972).

King maintains that the Oribi and Murchison Flats (north and south of the reserve respectively) are structural plains or pseudo-peneplains, which were formed by the weathering and erosion of a layer of softer rock on top of a harder layer (Glen, 1972).

Through this 500 metre plateau, between these plains, the Umzimkulwana River has eaten out a gorge through the Table Mountain sandstone down to the granite - the Oribi Gorge. The cliffs at The Rocks (at the western most point of the reserve) which face westwards, were caused by faulting. Pieces of broken sandstone can be seen in a strip 50m wide along this fault (du Toit, 1946) (Oribi Gorge Nature Reserve, Environmental management Plan, 1985). (See Map 3 for aerial photograph)

3.6.2 Geology

The Oribi/Murchison area is situated on Table Mountain sandstone of the early Devonian period, underlaid with old granite. This has subsequently been reclassified to Msikaba Sandstone Formation. Current studies have shown that this formation has a marine origin. Faulting occurred in the Middle Cretaceous and this caused the fault at The Rocks, Hell's Gate and the Chalk Mine (east of the reserve) (Glen, 1972). Bews (1920) suggests that the downward curve of the land on the seaward side of Natal occurred in the Cretaceous. It is possibly the direct cause of the faults mentioned above.

The only mineral mined near Oribi Gorge is lime, at the Umzimkulu Lime Works, near the confluence of the Umzimkulu and Umzimkulwana Rivers (Glen, 1972). So far no geological survey has been carried out in the Oribi Gorge Nature Reserve.

It would appear that the Msikaba sandstone block in which the gorge was etched out, came about at approximately the same time as the first occupation of the ground by plants (Andrews, 1961). Further, until the Upper Cretaceous, it is not known what lived there during the formation of Oribi Gorge.

The Mzamba rock formations in the Transkei near Port Edward contain remnants of a forest of this Upper Cretaceous period (Muller-Stohl and Madel, 1962). They mention 76 fragments of gymnosperm wood, 59 of Monimiaceae wood and 3 of Euphorbiaceae wood, which they investigated. The 59 specimens of Monimiaceae wood can be referred to so many genera and species, that they suggest that South Africa was possibly the point of origin of this family. One of them, a genus named Hedycaryoxylon, points to the same sub-family (Monimioideae) as Xymalos, which is found in both the Oribi Gorge Reserve (7km from Umzamba) and Oribi Gorge (50km away). It is thus at least possible that Xylamos and its forebears have been in Oribi Gorge since that time.

Apparently Euphorbiaceae wood is not distinguishable from wood belonging to the families Flacourtiaceae, Violaceae, Celastraceae, Apocynaceae, Rubiaceae and Burseraceae, so that the specimens from Umzamba, although traced back to specific form genera, could have belonged to any of these families. All these families, except Violaceae, are represented in the modern flora of Oribi Gorge.

On the basis of the above findings, it can be postulated that in the period 70 to 100 million years ago a forest occurred in this area in which at least seven of the present families could be found. It is also possible that some of the descendants of these trees are still present in the area.

The greater part of Oribi Gorge could have been covered during the Tertiary period by vegetation similar to that found in the Cape mountains (Wild, 1964, 1968). An indication of this would be species endemic in Natal (and possibly the Transkei), but related to Cape species. The only species of this kind found in Oribi Gorge are Crotalaria natalensis and Chironia laxa.

In the same way it can be postulated that Oribi Gorge was formerly covered by a tropical forest. An indication of this would again be endemic species related to species in tropical forests. Examples of these are *Thynchocalyx lawsonioides, Indigofera micrantha, Millettia grandis, Heywoodia lucens, Diospyros simii* and the three species of *Brachylaena* occurring in Oribi Gorge.

Plant fossils are usually found in sedimentary rock formations in reducing environments, such as marine, salt and freshwater shales, limestone, bituminous coal, lignite and peat. Sandstone, on the other hand, usually contains no fossils, because the coarse grain allows oxygen and soil-water to penetrate and weathering can thus take place (Felix, 1961). The rock formations in Oribi Gorge consist mainly of sandstone, and no fossils of any kind have been found here so far (Oribi Gorge Nature Reserve, Environmental management Plan, 1985).

3.6.3 Soils

Although the soils of the Natal Sugar Belt have already been studied thoroughly (Beater, 1970), no survey has been made in the reserve itself. On the basis of the parent rock, namely, Msikaba Formation sandstone in the higher parts of the reserve and granite in and around the river-bed, the following three soil types can be expected - Cartref, on the sandstone of well-drained parts, e.g. on the plateau near the line of cliffs. The diagnostic horizons of this form are an orthic A on an E on a lithocutanic B horizon. In the wetter places, the Cartref may merge into a Longlands, where the lithocutanic B horizon is replaced by a soft plinthic B horizon as a result of a fluctuating water table. This form can be expected near the river, and especially in Baboon's Spruit. On the eastern side of the reserve along the river, a Glenrosa, comprising an orthic A on a lithocutanic B horizon, can be expected (Oribi Gorge Nature Reserve, Environmental management Plan, 1985).

Action Project 3.6.3(i): Identify the biodiversity importance and implications of immature soil profiles for management.

Action Project 3.6.3 (ii): Map the soils showing areas susceptibile to erosion.

Action Project 3.6.3 (iii): Write and submit for approval, a soil erosion control plan.

3.7 Geomorphology

The geomorphology of OGNR requires investigation, particularly with regards to its role in contributing to the significance of the protected area.

Action Project 3.7 (i): Investigate the geomorphology for OGNR.

3.8 Hydrology

The Umzimkulwana River is mature, with a bouldery substrate and short, shallow rapids with a few low waterfalls. Three artificial weirs span the river in the Reserve. Still pools along the edges of the main stream are limited. The water is clear during the winter months, but carries a silt load during the rainy period.

The flow of the perennial Umzimkulwana River is controlled mainly by the Gilbert Eyles dam. Six tributaries provide much water, especially in the rainy season. Of these, the Imbabala Stream, Baboon's Spruit and Outpost Stream are the most important and also have water for the greatest part of the year. In the winter months the tributaries normally cease flowing. During severe droughts the Umzimkulwana River stops flowing, but large pools remain to supply the needs of wildlife.

Action Project 3.8 (i): Write the management plan in order to maintain and monitor the quantity and quality of water in the rivers.

3.9 Flora

3.9.1 Vegetation Types

The Nature Reserve is characterised by an elevated coastal sandstone plateau deeply incised by the Umzimkulwana River. The forest-filled gorge is dominated by Pondoland Scarp Forest, an EKZNW sub-type of Scarp Forest. Historically, Scarp Forests acted as Afrotemperate refugia and are a contemporary overlap zone between Afrotemperate and coastal forest, resulting in higher species richness in Scarp Forests than in either the Afrotemperate or Indian Ocean Coastal Belt forests (MacDevette et al., 1989; van Wyk, 1990). Furthermore, these forests house numerous endemic taxa. Thus, in terms of floral biodiversity, Scarp Forest is considered the most valuable forest type in South Africa (Mucina and Rutherford, 2005). To maintain the current extent and integrity of Pondoland Scarp Forest, it is necessary to control alien plant invasion and prevent the spread of uncontrolled fires into the forest.

Succeeding Pondoland Scarp Forest (928ha) in the area occupied, South Coast Bushland occupies the next largest area of OGNR (567ha). The Reserve is critical for the conservation of this Endangered vegetation type.

Pondoland – Ugu Sandstone Coastal Sourveld (287 ha) is the most threatened vegetation type in OGNR and as such needs to be carefully managed. Although fire is an important management tool in maintaining savannah/grassland habitats, frequent fires, as well as high levels of grazing, are not conducive to the recruitment of many of the shrubs, herbs and generic fynbos elements that are a feature of this nutrient–poor, species-rich vegetation type. Dry Ngongoni Veld (73 ha) has a similar savannah/grassland structure to Pondoland – Ugu Sandstone Coastal Sourveld, but is dominated by the grassland feature and is characterised by low species diversity. Similarly, correct fire and grazing regimes are important for the persistence of this vegetation type.

A strictly savannah biome, Eastern Valley Bushveld (26 ha) is characterised by semi-deciduous thickets and woodlands, often dominated by *Euphorbia* and *Aloe* species. Small patches occur in OGNR and are most at threat from invasion by alien plant species.

3.9.2 Conservation Targets

- Pondoland Ugu Sandstone Coastal Sourveld (Critically Endangered): The provincial target is 30% of the original distribution for this vegetation type, however only 17% remains untransformed. Only 33% of the remaining 17% occurs within protected areas, and OGNR safeguards 4.5% of this. The conservation target has **not** been met.
- Dry Ngongoni Veld (Endangered): The provincial target is 25% of the original distribution for this vegetation type, however only 27% remains untransformed. Only 3% of the remaining 27% occurs within protected areas, and OGNR safeguards 0.1% of this. The conservation target has **not** been met.
- South Coast Bushland (Endangered): The provincial target is 25% of the original distribution for this vegetation type, however only 6% remains untransformed. Only 2.4% of the remaining 6% occurs within protected areas, and OGNR safeguards 2.2% of this. The conservation target has **not** been met.
- Eastern Valley Bushveld (Least Threatened): The provincial target is 25% of the original distribution for this vegetation type, however 61 % remains untransformed. Only 1% of the remaining 61% occurs within protected areas, and OGNR safeguards 0.02% of this. The conservation target has **not** been met.
- Pondoland Scarp Forest (Least Threatened): The provincial target is 67% of the original distribution for this vegetation type, however 97% remains untransformed. Only 41% of the remaining 97% occurs within protected areas, and OGNR safeguards 17.8% of this. The conservation target has **not** been met.

3.9.3 Priority Species

The following Red Data listed plant species occur in the reserve:

•	Acalypha sp. nov Clivia robusta Crassula obovata var. dregeana Crassula sarmentosa var. integrifolia Crassula streyi Craterostigma papum var. papum	Stonecrop	Endangered Vulnerable Vulnerable Rare Rare Vulnerable
•	Crinum moorei	Moore's crinum	Vulnerable
•	Dahlgrenodendron natalense		Endangered
٠	Encephalartos caffer	Wolkop cycad	Near Threatened
٠	Encephalartos natalensis		Near Threatened
٠	Eucomis autumnalis	Pineapple lily	Declining
٠	Eugenia simii		Vulnerable
٠	Gasteria croucheri		Vulnerable
٠	Gymnosporia bachmannii	Willow koko tree	Vulnerable
٠	Leucadendron spissifolium oribinum	Oribi spear-leaved conebush	Vulnerable
٠	Manilkara nicholsonii	South coast milkberry	Endangered
٠	Maytenus abbottii		Endangered
٠	Maytenus oleosa		Rare
٠	Monsonia natalensis		Vulnerable
٠	Phylica natalensis		Least Concern
٠	Plectranthus oribiensis	Spur flower	Rare
٠	Pseudoscolopia polyantha		Near Threatened
٠	Rhynchocalyx lawsonioides		Near Threatened
•	Scilla natalensis		Vulnerable
•	Tridactyle bicaudata bicaudata	Tree orchid	Vulnerable
	-		

Action Project 3.9 (i): Develop a plant species list. This list will be filed with the Conservation Manager at OGNR.

Action Project 3.9 (ii): Develop a flora monitoring programme for OGNR.

Action Project 3.9 (iii): Compile and implement a flora management plan that addresses the threats to priority flora and their associated habitats.

Action Project 3.9 (iv): Compile a flora map and diagnostics species list.

3.10 Fauna

The EKZNW Biodiversity Database provides a relatively comprehensive list of the terrestrial fauna of the Oribi Gorge Nature Reserve. Species checklists will be updated as data becomes available (**Appendix 1, Item 3**).

Action Project 3.10 (i) : Copies of the Species Checklists will be updated and filed manually and digitally at the OGNR Management and Regional Offices as well as the Conservation Manager for easy reference. The copies will be updated in accordance with any authorised amendments. A fixed protocol for compiling and maintaining these checklists needs to be developed to ensure that they provide accurate, comparable and contemporary baseline data for management and scientific purposes.

3.10.1 Invertebrates

Invertebrates play critical roles in the functioning of all ecosystems as they are responsible for maintaining soil fertility, waste disposal, water purification, pest control, pollination and may even influence the structure of plant communities. In some cases the survival of locally endemic plant species may be linked to a single pollinator.

The EKZNW Biodiversity Database provides a relatively comprehensive invertebrate list. Red data listed species include: Strong black millipede (*Doratogonus infragilis*) – Vulnerable, and the Whitish Amakosa rocksitter (*Durbania amakosa albescens*) – Rare.

Action Project 3.10.1 (i): Compile through further research and collecting a checklist of the invertebrate species found in OGNR.

3.10.2 Fish

A total of seven indigenous fish species have been recorded within OGNR, none of which are listed as Red Data species. However, two are endemic to KwaZulu Natal; Redtail barb (*Barbus gurneyi*) and KwaZulu-Natal yellowfish (*Labeobarbus natalensis*).

Action Project 3.10.2 (i): Identify the major threats to Fish Species in OGNR.

Action Project 3.10.2 (ii): develop and implement a Fish Species Monitoring Programme.

3.10.3 Herpetofauna (Amphibians and Reptiles)

The presence/absence of certain frog and reptiles species is indicative of the state of health of an ecosystem. Furthermore, it is important to determine whether any rare species occur on OGNR in order to determine management strategies to prevent their extinction from the Nature Reserve.

Eighteen species of frogs are listed as occurring in the Reserve. The Kloof frog (*Natalobatrachus bonebergi*) is listed as Endangered. The KZN endemic Natal moss frog (*Anhydrophryne hewitti*) also occurs in the Reserve.

Kloof frog (*Natalobatrachus bonebergi*) Requires slow-moving sections of forest streams in which to breed. Endangered

Thirteen species of reptiles are listed as occurring in the Reserve; 7 lizards/geckos, 3 snakes and 3 terrapins. No Red Data species are listed. However, the KZN endemic Gorge dwarf chameleon (*Bradypodion angustiarum*) occurs in the Nature Reserve.

Action Project 3.10.3 (i): Compile through further research and monitoring, checklists of the Herpetofauna. Identify the major threats to Herpetofauna in OGNR.

Action Project 3.10.3 (ii): Develop and implement a Herpetofauna Species Monitoring Programme.

3.10.4 Avifauna (Birds)

The EKZNW Biodiversity Database lists 238 bird species for the Nature Reserve. Of particular importance are:

Spotted ground-thrush (Zoothera guttata)

Oribi Gorge supports an important population of breeding birds. This species is a local migrant, overwintering in coastal forests before returning to the OGNR scarp forests for the summer breeding season. It is important to ensure uninterrupted breeding through appropriate management of the indigenous scarp forest. The degradation and alteration of the forest is the primary threat to this species.

Southern ground-hornbill (*Bucorvus leadbeateri*) Vulnerable Ground-hornbills require a large area (ca. 100km² per group) in which to forage and find suitable breeding trees. The NR has ensured that protection is afforded to this species by safe-guarding suitable habitat in an area where habitat alteration due to development and human pressures are high.

Swamp nightjar (*Caprimulgus natalensis*) Vulnerable The nightjar breeds in short coastal grassland habitat and forages over marshes, floodplains and grasslands. Records of this species occurring here are questionable.

Grey crowned crane (Balearica regulorum)

Vulnerable

Endangered

14

Cranes require wetlands and the associated grasslands for breeding, habitat not found in OGNR. However, significant numbers of birds use the area for foraging, and it is thus important to maintain the area as short to medium-height open grasslands.

African finfoot (Podica senegalensis)

This species is most at risk from clearing of riverine vegetation, as well as reduced water flow in catchments. It is therefore necessary to ensure perennial flow of rivers if this species is to persist.

Martial eagle (*Polemaetus bellicosus*)

The total area available for foraging is too small to support a breeding pair (require ca. 300 km²). Martial eagle are probably rare, if they still occur. Its persistence in this region depends on adjacent patterns of land use and transformation. The Reserve has limited open woodland preferred for nesting although forest and pylons may be used. The ability of the region to support a breeding pair will depend on future habitat loss around the reserve.

African marsh-harrier (Circus ranivorus)

The habitats in the reserve are probably not sufficient to support breeding African marsh-harriers. The grassland and wetlands may provide foraging opportunities.

African grass-owl (Tyto capensis)

Vulnerable Grass-owls favour tall, dense and rank patches of grassland. Nesting takes place on the ground in a tunnel of dense grass from March - April with juveniles fledging 3 months later. Management protocols need to take this breeding cycle into account when planning burning regimes.

Cape vulture (Gyps coprotheres)

Vultures may be seen moving through the area, but there are no active breeding sites in the cliffs of OGNR. This reserve has been suggested as a 'Vulture Restaurant' site due to the decreasing amount of food available to these scavengers.

Denham's bustard (Neotis denhami)

This species favours the grassland biome, preferring high-lying open grassland and frequently occurs on plateaux. OGNR is marginal for this species on account of the limited area of grassland. However, the existing grassland should be maintained in a mosaic of tall and short areas to support foraging. Primary causes of species decline include habitat loss and human disturbance.

Action Project 3.10.4 (i): Determine which of the bird species breed in the Nature Reserve, and ensure that management protocols are set in place to maintain and conserve these breeding sites for the long – term persistence of the species.

Action Project 3.10.4 (ii): Identify the major threats to Avifauna in OGNR.

Action Project 3.10.4 (iii): Develop and implement an Avifauna Species Monitoring Programme.

3.10.5 Mammals

The EKZNW Biodiversity Database for OGNR confirms the presence of twenty-five mammal species. The Red Data listed species include:

Oribi (Ourebia ourebia)

Endangered Oribi require open grassland with both short grass for grazing and long grass in which to take cover during resting and breeding. The primary threats to this species are illegal hunting and inappropriate burning regimes.

Vulnerable Blue duiker (*Philantomba monticola bicolour*) Blue duiker are specialised in their habitat requirements and are confined to forests (with a well developed understorey), thickets or dense coastal bush, and are most at risk from poaching or illegal hunting.

Tree hyrax (*Dendrohyrax arboreus arboreus*)

Vulnerable

Vulnerable

Vulnerable

Vulnerable

Vulnerable

Vulnerable

This species is suggested as occurring in the Reserve. Hyrax require well-developed woodland, forest or thickets along the coastal regions of KZN. They are selective browsers, feeding on a range of tree species. The primary threat to this species is the destruction of their tree food species.

Sykes' monkey (*Cercopithecus albogularis labiatus*) Vulnerable Closely confined to forest habitat, these monkeys feed primarily on fruit, flowers and leaves of a range of tree species. The primary threat to this species is the destruction of their tree food species.

Action Project 3.10.5 (i): Identify the major threats to Mammals in OGNR.

Action Project 3.10.5 (ii): Develop and implement a Mammals Species Monitoring Programme.

3.11 Cultural Heritage

OGNR's cultural resources include:

- Graves, and
- Shelters

In 1965, Dr G.R Hughes discovered a rock shelter with paintings on the inside. In 1975, these paintings were confirmed. The first shelter is located above the tributary of the Umzimkulwana River. It measures approximately 18m wide and 3m deep. Inside the shelter, is found approximately 17 paintings. The second cave is located on the western boundary of the OGNR. It is divided into two sections, namely the eastern and western halves. The eastern half of the shelter has approximately 14 recorded paintings and the western half has 9 recorded paintings.

Bona Fida researchers are allowed to view sites with the provision of obtaining permits from Ezemvelo KZN Wildlife and AMAFA.

Action Project 3.11 (i): Map the GPS Co-ordinates and provide Management Plans for these sites.

Action Project 3.11 (ii): Identify the archaeological, historical, paleontological and cultural heritage sites at OGNR. Ensure compliance with requirements of heritage legislation.

3.12 Socio-Cultural History of the Area

The first evidence that Oribi Gorge had been discovered is found in a hand-drawn map in 1867. This shows the Umzimkulwana River flowing due east through a gorge before joining the Umzimkulu River. The map was published in Dobie's "South African Journal" (Hattersley, 1945). However, during his four journeys between Pietermaritzburg and Queenstown between 1862 and 1866, Dobie did not move further downstream than the point where Harding is today (Glen, 1972). It is thus clear that Oribi Gorge had been discovered before 1867, but had not been reconnoitered. Mr H C Lugg got to know Oribi Flats in 1893 (Lugg, 1970). He stated that Oribi and other game, especially birds, were very abundant on the Flats at that time. The gorge was thus named after the surrounding plains, which in turn were named after the oribi.

Action Project 3.12 (i): Conduct research on the archaeology of the OGNR.

Action Project 3.12 (ii): Make use of archaeology and evidence of the past cultures inhabited the area in describing the cultural heritage value of OGNR.

3.13 Sociological Context

The reserve is surrounded by high income residential developments, light industry and private commercial sugar cane, wattle and cattle farms. The eastern side of the reserve is bordered by a Game Farm.

Action Project 3.13 (i): Update the socioLogical context and its importance to OGNR.

3.14 Economic Context

The Nature Reserve contributes to the economy in the following ways:

Recreational activities that are offered by OGNR include:

- Self guided trails;
- · Camping;
- Bird Watching; and
- Picnicking

Facilities and services that are offered by OGNR include:

- Overnight accommodation;
- Braai Facilities;
- Employment opportunities to the local community for the eradication of alien plants; and
- The levy which is used for the upliftment and development of the local community

Ecosystem services that are provided by OGNR, but not restricted to, include:

- Recreational experiences (ecotourism);
- · Meets people's sense of cultural, spiritual and intellectual needs;
- Nutrient cycling;
- Water filtration;
- · Regulation of ground water and river channel flow
- Climate regulation;
- · Seed dispersa;I
- Maintenance of soil health;
- Prevention of soil erosion; and
- Carbon sequestration

Action Project 3.14 (i): Update the economic context and its importance for OGNR.

3.15 Developed Infrastructure

It is imperative that the necessary appropriate standard of infrastructure be developed and maintained as soon as possible to support the effective management of OGNR and promote eco-cultural tourism to the reserve. Concept future development will be detailed in the OGNR Concept Development Plan. [See **Action Project 6.11.3 (ii)**]

Action Project 3.15 (i): Identify and map infrastructure using GIS and include in a spatial database. Develop standard protocols and procedures for infrastructure in OGNR.

Action Project 3.15 (ii): Repair, where necessary, the standard and state of the existing infrastructure provided in the OGNR.

3.15.1 Eco-cultural Tourism Infrastructure

Tourism (and related wholesale and retail activities) is the most important economic activity in the UGU District, contributing some 17.7% of GDP. In addition, the tourism industry employs some 15% of the economically active population.

The UGU District's main tourism assets include its Blue Flag beaches on the coastline, as well as other attractions in the area such as the Oribi Gorge.

Eco-cultural tourism infrastructure in the Park consists of:

- Six two bedroom huts with a communal kitchen and lounge. Each hut has ablution facilities
- Six bed chalet
- 10 bed rustic cottage
- · Five campsites with a central ablution facility and electricity
- Two day visitor picnic sites. One site has an ablution facility.

3.15.2 Management Infrastructure

Management infrastructure consists of:

- One Conservation Managers house with ablution facilities
- Two staff accommodation blocks with separate ablution facilities
- One gas shed
- Main office with ablution facilities
- Staff washbay

3.15.3 Bulk Infrastructure:

Bulk infrastructure consists of:

- Approximately eight kilometers of public roads. There are no management tracks in OGNR.
- One waste handling site where solid waste is collected, sorted and removed to the Margate dump site.
- Three conservancy septic tanks
- Borehole water is purified and distributed in the Reserve through gravity.
- Electricity is provided by Eskom
- There are two Telkom lines and four Telkom booths in OGNR
- No helipads

3.15.4 Conservation Infrastructure

Other conservation infrastructure outside the developed centres consists of:

- Approximately 23.5 km of self guided trails
- One viewing site
- There is an internal fence around the staff accommodation and Conservation Managers house
- There is no perimeter boundary fence at OGNR

Action Project 3.15.4 (i): Develop a maintenance plan for all trails and fences.

3.15.5 Water Supply Infrastructure

Water is pumped from the borehole to tanks where it is purified and distributed via gravity.

All water supply infrastructure will be appropriately screened to reduce its detrimental aesthetic impact. For management purposes it is essential that all water supply infrastructure be indicated on the reserve map.

Action Project 3.15.5 (i): Update OGNR Map to include the location of all water supply infrastructure.

3.15.6 Infrastructure Maintained by other Organisations

Public services such as telephone lines and electricity are provided by Telkom and Eskom respectively.

The repeater is located on the SAPS tower. The tower is maintained by the SAPS.

Action Project 3.15.6 (i): Compile MoA between different service providers and OGNR. Manager needs to ensure that he is familiar with all agreements.
4 MISSION STATEMENT, MANAGEMENT OBJECTIVES and CONSERVATION TARGETS

4.1 Introduction

Ezemvelo KwaZulu-Natal Wildlife has a legislative mandate which rests the custodianship of biodiversity conservation within the organisation. In alignment with this mandate, EKZNW has adopted a Five Year Strategic Plan and Performance Plan for 2009-2014 which has identified the following corporate Vision, Mission, Goals and Core Values (see Text Box below):

EKZN WILDLIFE STRATEGIC VISION, MISSION, GOALS AND CORE VALUES					
	VISION				
"То	be a world renowned leader in the field of biodiversity conservation"				
	MISSION STATEMENT				
"To ensure effective conservation and sustainable use of KwaZulu Natal's biodiversity in collaboration with stakeholders for the benefit of present and future generations."					
	STRATEGIC GOALS				
 To conserve indigenous biodiversity in KwaZulu-Natal both within and outside of protected areas. To be a sustainable, well resourced and capacitated biodiversity conservation and ecotourism organisation. To foster the value of biodiversity conservation with stakeholders. To be an efficient, effective and compliant organisation with good governance. To effectively promote the mandate of the organisation to stakeholders. 					
	CORE VALUES				
Integrity Respect	 at all times we act morally, ethically and with honesty. we treat stakeholders with patience, politeness and acknowledge and value their right and those of the environment. 				
Accountability – we involve stakeholders in the organisation's activities with a culture of openness a answerable for the outcome of our actions and activities					
Team Work	 working together to achieve our vision through goals. 				
Innovation	 an adaptable organisation that embraces the culture of creativity and learning. 				
Excellence	 we are a progressive organisation applying best practices to achieve the highest quality and standards. 				
Commitment	 at all times we undertake our activities with passion, loyalty and dedication. 				
Productivity	 we undertake to produce results timeously, efficiently and effectively. 				

Cognisant of EKZNW's legislative mandate as well its corporate Vision, Mission, Goals and Core Values, this OGNR Integrated Management Plan (IMP) has been developed in consultation with stakeholders.

4.2 Stakeholder Participation

The public participation process followed in developing this IMP included public meetings with stakeholders and management staff, resulting in the development of the draft IMP. The draft IMP was then reformatted into a standardized EKZNW IMP format and advertised and distributed for further public comment. The document was then finalized while undertaking further consultation. The details of the public participation process for this IMP's development is contained in the Public Participation Report (see **Appendix 1, Item 7**).

Action Project 4.2 (i): Implementation of EKZNW IEM Policy. Create awareness of or inform surrounding landowners on the IEM process and legislation through fora.

Action Project 4.2 (ii): Participate as a key stakeholder in EIA applications for developments near the Nature Reserve that may impact on the protectecd area.

Action Project 4.2 (iii): Participate in existing liason fora.

4.3 Vision

The vision of the Oribi Gorge Nature Reserve is:

"A consolidated, managed and legally protected Nature Reserve, providing sustainable and tangible benefits to visitors, neighbours and the metropolitan area through the provision of appropriate access to the cultural and natural resources"

4.4 Mission

The mission of the Oribi Gorge Nature Reserve is:

"To sustainably manage and conserve the natural and cultural resources of the Oribi Gorge Nature Reserve, based on sound environmental principles and management, for the equitable benefit of both visitors and of the stakeholders."

4.5 Management Objectives

Management Objectives for OGNR are set out below and are not ranked according to priority:

- Conserve rare and endemic ecosystems and species
- Conserve the Oribi Gorge Nature Reserve, its associated biodiversity and maintain its developed infrastructure
- Contribute to sub-regional eco-tourism initiatives
- Contribute to the achievement of national and provincial conservation targets
- Facilitate controlled access to cultural heritage sites
- Facilitate environmental and cultural activities, education and awareness, including access to historical information related to the history of the reserve and the surrounding area
- Identify and control threats to biodiversity
- Minimise threats to the sense of place (retain the aesthetic value of the area)
- Participate as a key stakeholder in local environmental management initiatives
- Play a key role in local eco-tourism initiatives
- Play a notable role in local, regional, national and international conservation initiatives
- Promote and encourage community involvement in biodiversity conservation
- Promote and ensure effective communication between the local communities and EKZNW through integrated, shared and co-operative working relationships
- Promote conservation as a viable and sustainable land use option
- Promote supervised access to the reserve and its resources, both natural and cultural, and promote responsible use of the facilities by the public
- Provide appropriate recreational opportunities
- Safeguard the archaeological, historical, palaeontological and living cultural heritage of the Reserve

The above objectives can be aligned with the following overarching management objectives for OGNR (not ranked in order of priority):

- **Conservation** of key biodiversity features, biophysical processes, landscapes, abiotic, historical and archaeological resources
- The provision of **socio-economic benefits** (benefit flow) to the Reserve's neighbours and to contribute to the local economy and the efforts of conservation in a sustainable manner based on sound business principles (EKZN Business Plan)
- The provision of appropriate ecotourism **business** opportunities in the natural and cultural environment based within the influence sphere of OGNR
- The formation of functional **partnerships** to integrate the OGNR with regional development plans and other initiatives which underwrite the vision of OGNR

4.6 Conservation Targets

In order to assist in developing a conservation management strategy more effectively linked to budget and resources, it is necessary to have specific conservation objectives (or 'targets' in conservation planning terms) in place. Monitoring of status relative to these targets will then allow for measurement of success of management interventions (and consequent budget and resource adjustments where required), and to trigger management interventions when certain thresholds are reached. This removes the 'monitoring to extinction' problem that has arisen in many organisations.

Apart from the need to monitor the success of implementation of the strategy in terms of achievement of conservation targets, a basic requirement for a systematic approach to conservation planning, impact assessment and protected area management effectiveness assessment is the identification of a clear set of provincial goals for the province, which for operational use needs to be translated into a more specific set of quantitative 'targets' (Margules & Pressey 2000). A key (but faulty) assumption often made with provincial Systematic Conservation Plans in terms of conservation priorities outside the protected area network is that protected areas continue to conserve key species and habitats at the same levels at which they occurred when the plan was developed. Where protected areas have failed to do so, it will result in an underestimate of conservation requirements outside protected areas and hence the real possibility of provincial conservation objectives and targets not being achieved. It is therefore essential to design and implement management and monitoring strategies to ensure that OGNR continues to conserve those species and habitats which are important at a provincial level.

Conservation targets for biodiversity are not easily set, and indeed, conservation managers, scientists, decision makers and politicians have been reluctant to formalise and agree to targets. In reality our understanding of 'how much is enough', in what spatial configuration this should be, what the most critical processes are for the maintenance of biodiversity and how one can conserve these is poor, and the debate and research around this topic will continue for some time to come. This information will be continuously updated over time as our knowledge of area, connectivity and other process requirements improves for the conservation of ecosystems, communities and species. However, management has to take place despite these deficiencies so it is necessary to make best use of available information, stating the assumptions and limitations, and to see conservation targets as a set of working hypotheses around which conservation planning and evaluation can take place. Another advantage of developing strategies around targets is that this process serves to highlight the critical knowledge deficits thus guiding future research and monitoring priorities.

Conservation Targets for the Reserve

Specific conservation targets for the OGNR are required to develop a strategy linked to budget and resources, to allow for monitoring and evaluation, as well as policy improvement.

Conservation targets for the UNR are presented in Table 1.

Element of Concern	Key Attribute (Threats)	Indicator	Current Status	Target
Conserve the endange	red and critically endange	red Veld types in OGN	ÎR.	•
The Pondoland-Ugu Sandstone Coastal Sourveld is critically endangered.	 The provincial target is 30%, however only 17.1% is untransformed. Only 32.5% of this vegetation type remains within protected areas. Decline of veldtype. 	 Land transformation. Alien species invasion. Poor veld management. Arson Fires. No recruitment. Illegal harvesting of plants. 	OGNR contributes 4.5% to the provincial remains.	TBD
Dry Ngongoni Veld is endangered.	 The provincial target is 25%, however only 26.6% is untransformed. Only 2.8% of this vegetation type remains within protected areas. Decline .of veld type 	 Land transformation. Alien species invasion. Poor veld management. Arson Fires. No recruitment. 	OGNR contributes 0.1% to the provincial remains.	TBD
Southcoast Bushland	The provincial target	 Land 	OGNR	TBD

Table 1: Biodiversity Targets

Element of Concern	Key Attribute (Threats)	Indicator	Current Status	Target
is endangered.	 is 25%, however only 29.5% is untransformed. Only 2.4% of this vegetation type remains within protected areas. Decline of veldtype. 	 transformation. Alien species invasion. Poor veld management. Arson Fires. No recruitment. 	contributes 2.2% to the provincial remains.	
To conserve critically e	endangered, endangered a	and rare Red Data plar	nt species.	
Acalypha Sp.Nov is endangered.	There is a loss of plant species.	 Land transformation. Alien species invasion. No recruitment. 	OGNR needs to conserve this species in good condition	TBD
Manilkara Nicholsonii is endangered.	There is a loss of plant species.	 Land transformation. Alien species invasion. No recruitment. 	OGNR needs to conserve this species in good condition	TBD
<i>Maytenus Abbottii</i> is endangered.	There is a loss of plant species.	 Land transformation. Alien species invasion. No recruitment. 	OGNR needs to conserve this species in good condition	TBD
Dahlgrenodendron Natalense is endangered.	 There is a loss of plant species. 	 Land transformation. Alien species invasion. No recruitment. 	OGNR needs to conserve this species in good condition	TBD
<i>Maytenus Oleosa</i> is rare.	There is a loss of plant species.	 Land transformation. Alien species invasion. No recruitment. 	OGNR needs to conserve this species in good condition	TBD
<i>Crassula Sarmentosa Bar.Intergrifolia</i> is rare.	There is a loss of plant species.	 Land transformation. Alien species invasion. No recruitment. 	OGNR needs to conserve this species in good condition	TBD
<i>Crassula Streyi</i> is rare.	There is a loss of plant species.	 Land transformation. Alien species invasion. No recruitment. 	OGNR needs to conserve this species in good condition	TBD
Plectranthus Oribiensis is rare.	 There is a loss of plant species. 	 Land transformation. Alien species invasion. No recruitment. 	OGNR needs to conserve this species in good condition	TBD
To conserve rare ecos	ystems and species.			
Durbania Amakosa Albescens is a Rare invertebrate	There is a loss of individuals.	Decrease in condition.	OGNR needs to conserve this species in good condition	TBD
Natalobatrachus Bonebergi is an Endangered	 Fhere is a loss of individuals. 	Decrease in condition.	 OGNR needs to conserve this species in good 	IBD

Element of Concern	Key Attribute (Threats)	Indicator	Current Status	Target
amphibian			condition	
Zoothera guttata is an Endangered bird.	 There is a loss of individuals. 	Loss of suitable habitat.	OGNR needs to conserve this species in good condition	TBD
<i>Ourebia ourebia</i> is a Rare mammal.	 There is a loss of individuals. 	Decrease in condition.	OGNR needs to conserve this species in good condition	TBD

Action Project 4.6 (i): Set conservation targets and monitoring strategies for the identified species.

Action Project 4.6 (ii): Develop conservation targets and monitoring strategies for Cultural, Business and Partnerships Objectives.

5 ZONATION

The Recreational Opportunity Spectrum (ROS) has been used for zoning of the Nature Reserve. This system was developed by the United States Forest Service and has been applied by Parks – Canada amongst others.

The ROS system enables the protected area to be zoned, in context, according to seven categories. These categories are spread along a continuum, from Wilderness to rural recreational development namely: Pristine Wilderness, Primitive Wilderness, Semi-Primitive Wilderness, Semi-primitive Non-Motorised, Semi-Primitive Motorised, Roaded Natural and Rural.

Each category within the ROS is defined in terms of activity, setting and experience opportunities which guide both the manager and the recreationist. The manager can provide the opportunity for obtaining the experiences that the recreationist expects within a particular category. The ROS zonation system recognises and reflects:

- the sensitive features associated with the reserve (*i.e.* biophysical, cultural and sense of place)
- the range of existing and potential visitor experiences in and surrounding the Reserve
- the influence of existing development and use on these features and experiences
- the opportunities and constraints (biophysical, social or managerial constraints) for use
- the existing / potential threats to the Reserve either within or adjacent to the Reserve
- the opportunities for extending the Reserve and linking with surrounding reserves, conservancies and open spaces

As a result, the final management zonation is a composite of ecological zonation (based on natural and cultural resource sensitivity), sense of place, cultural features, patterns of environmental settings, and existing development and use patterns. The final zonation map is represented as a desired state, *i.e.* directing management towards a vision for each zone, which reflects and respects the broader conservation and ecotourism objectives for the reserve.

A zonation table (**Appendix 3**) detailing the boundaries and rationale for each zone, as well as the zone's natural and cultural features supports the zonation map. Biophysical features that are readily located on the ground have been used to demarcate and delineate the zone boundaries. The zones are indicated spatially on Zonation Map 3. Thease zones are recognised in OGNR.

(Source: ROS User Guide, United States Forest Service, as in the Advanced Wilderness Course Manual)

Action Project 5 (i): Revise the existing OGNR zonation plan in accordance with the new EKZNW standard zonation system as soon as it is developed and approved.

6 OPERATIONAL MANAGEMENT POLICY FRAMEWORK AND GUIDING PRINCIPLES

The following predominant existing or potential threats to the Nature Reserve have been identified:

- Inadequate financial and human resources.
- Illegal activities in and around the Nature Reserve such as poaching, illegal gathering of medicinal plants and arson fires.
- Loss or degradation of cultural heritage sites (Rock falls in the shelters that have paintings)
- Alien species invasion.

The OGNR operational policy framework, guidelines and strategies have been developed to support the achievement of the stated Nature Reserve management objectives and where possible to address the existing or potential threats as listed above.

6.1 Financial and Human Resources

6.1.1 Financial Resources

Capital and operational funding for OGNR is sourced primarily from the KwaZulu-Natal Provincial Government. Funding is furthermore generated from commercial operations within the Nature Reserve and various external sources.

Levels of funding have remained stable, however, over time the management of the Nature Reserve cannot be sustained at required levels and capital assets, including infrastructure, are not being effectively maintained.

It is necessary therefore to develop a realistic five-year Strategic Management and Business Plans in an attempt to secure funding to effectively support the achievement of the mission and management objectives for the Nature Reserve.

The development of a OGNR Business Plan is a priority and will indicate past income and expenditure trends, a five year projection of income and expenditure targets that will allow for effectively achieving the OGNR management objectives. In addition, planning will be put in place to address any budget shortfalls after the annual grants from the KwaZulu-Natal Provincial Government have been accounted for.

The total self-sufficiency of commercial operations within the Nature Reserve is a minimum requirement, while it will be expected that commercial operations will respect the natural and cultural heritage values of OGNR and that any operational profit will be used to subsidise the Nature Reserve's conservation and community programmes.

The value of ecosystem services that OGNR provides as well as the direct and indirect economic value of the Nature Reserve to the local and regional economy will be determined in order to market the Nature Reserve, ensure continued government funding and where appropriate, leverage additional funding from other sources.

Action Project 6.1.1 (i): Develop a five-year Strategic Management Plan and Business Plan for OGNR.

Action Project 6.1.1 (ii): Initiate a resource economics study of the Nature Reserve to determine its economic value regarding the provision of ecosystem services and its contribution to the local and regional economy.

6.1.2 Human Resource Capacity

The existing human resource structure and capacity is insufficient to fully meet OGNR Management Objectives. The following objectives in particular are emphasised:

- Safe and secure environment for staff and visitors.
- Cultural heritage management.
- Efficient and profitable tourism management

- Stakeholder liaison.
- Environmental education and awareness programmes.

In order to effectively address the full spectrum of OGNR management functions it is imperative that the human resource needs are fully investigated with a view to developing a new and effective human resource structure for OGNR.

To improve accountability, efficiency, co-ordination and reporting significantly, an option would be to consider a staff structure situated under a single Nature Reserve Manager. This investigation needs to be undertaken urgently in order to inform the OGNR Business Plan.

Action Project 6.1.2 (i): Investigate and develop an appropriate human resource structure and capacity of OGNR with a view to improving effectiveness and efficiency in achieving OGNR objectives and informing the Business Plan.

6.1.2.1 OGNR Employment Policy Guidelines

OGNR Management Commitee and local leaders (not a formal board) will always be informed in advance of impending recruitment of staff.

- Ø Appointments will be made in accordance with the:
 - relevant employment legislation;
 - employment policy framework of EKZNW;
 - required experience, skills, proven ability and qualifications of applicants.
- Ø Entry-level or temporary appointments requiring no specific skills will be employed from neighbouring communities after consultation with the OGNR Management Committee and local leaders.

6.2 Local Community Involvement

EKZNW will strive to work collaboratively with institutions and adjacent landowners / communities to improve communication as well as conservation management in and around the Nature Reserve for the benefit of all. Neighbour relations and partnerships are guided by EKZNW Board Policies No. 4.8 and 4.11.

EKZNW encourages community involvement in the management of the Nature Reserve through collaboration with adjoining communities in the following programmes and projects.

Action Project 6.2 (i): EKZNW will continue to work collaboratively with landowners and surrounding communities to improve conservation management of OGNR for the benefit of all.

6.2.1 Local Board

Community participation in the Nature Reserve is realised, mainly, through a Local Board which is established in terms of Chapter 5 of the KZNNCMA. The EKZNW Board Policy No.4.9 (Appendix I-Conservation Partnerships Policies) provides an operational relationship framework between the Nature Reserve and its Local Board to ensure effective community participation in the management of the Nature Reserve. This Local Board will still be established.

Action Project 6.2.1 (i): Establish a Local Board for OGNR.

6.2.2 Community Levy Trust Fund

Communities adjacent to the OGNR benefit from income generated by the Nature Reserve through a community levy paid by visitors. These funds are administered through the Community Trust Fund and provided to communities for development needs as prescribed by EKZNW Board Policies No. 4.16 and No. 4.6 (Appendix 2).

Action Project 6.2.2 (i): The Community Levy will continue to be collected for the development and upliftment of the local communities.

6.2.3 External Funding Projects

OGNR procures external funding for specific Nature Reserve related projects; priority is given to training members of the community and the creation of community small, micro and medium enterprise (SMME) business and employment opportunities.

Action Project 6.2.3 (i): Training of members of the local community will continued to be practiced. Investigate other employment opportunities that will benefit the surrounding local communities of OGNR.

6.2.4 Land Claims

There are no known land claims against OGNR.

6.2.5 Environmental Education

It is EKZNW policy to provide environmental education programmes for communities adjoining OGNR. These programmes will be conducted in accordance with **Board Policy No. D 2.34**. Access to the material and spiritual benefits of the Nature Reserve is facilitated in accordance with Neighbour Relations **Board Policy D 4.1** (See **Appendix 2**). Environmental education programmes are addressed further under **Par. 6.8**.

Action Project 6.2.5 (i): Investigate and implement additional environmental education programmes for communities surrounding OGNR.

6.2.6 Transfrontier Partnerships

OGNR has no Transfrontier Partnerships.

6.2.7 Informal Participation

Local community involvement will not only occur through formal structures like the OGNRLocal Board but also through an annual public meeting where informal community participation will be encouraged.

Action Project 6.2.7 (i): Annually in March of each year arrange a public meeting to give feedback on progress, planned projects and encourage informal local community participation.

Informal communication between the general public / stakeholders and reserve management will be encouraged at all times within practical limits (Open door policy).

6.3 Security and Safety

EKZNW recognises that illegal activities within and around OGNR can be a severe threat to the integrity of its natural and cultural heritage, its water storage and supply infrastructure, as well as the safety of OGNR users, neighbouring communities and the attainment of its stated Mission and Management Objectives.

Nature Reserve management will therefore initiate and institutionalise a security strategy that ensures co-ordinated participation in all possible local, regional security forums and networks while optimising security in and around OGNR. This strategy will ensure sufficient capacity to deal with conservation-related illegal activities in OGNR (See also **Par. 6.4.7**) and contribute to a network of provincial, national and international law enforcement intelligence.

Action Project 6.3 (i): Develop an integrated security strategy for the Nature Reserve that ensures collaboration with all relevant institutions.

Action Project 6.3 (ii): Develop and implement a Civil Emergency Procedures Plan.

6.4 RESOURCE MANAGEMENT

6.4.1 Introduction

The management philosophy is one of adaptive management. This includes implementing management actions according to the stated objectives, policies and operational plans, monitoring progress and adapting the management strategy accordingly. This is done using a participatory, team approach and making use of the best scientific understanding in collaboration with partners and stakeholders. The principle of sustainable use of natural resources is implicit in the philosophy.

Management aims to conserve biodiversity through addressing threats and ensuring the maintenance and/or re-instatement of ecological processes that are considered the main determinants of ecosystem structure and function. Where these processes or regulatory mechanisms have been disrupted and cannot be re-instated, management should attempt to simulate their effects; otherwise Management intervention in the system should be minimised. In particular, the function of sustained water delivery of quality water is paramount.

Fire is a key ecological process influencing biodiversity in OGNR. Given the above, the objective is to actively manage for a shifting mosaic of vegetation patches with high basal cover but different ages and sizes - thereby creating a diversity of habitats that should ensure the conservation of the biodiversity representative of the area. This approach will also provide the best insurance policy for the majority of organisms for which habitat requirements and response to fire are unknown. The mosaic is achieved is through controlling the spread of fire in the landscape and the conditions under which fires are ignited.

The other key interventions required to conserve biodiversity are the control of invasive species and man-induced soil erosion, as well as wildlife management and minimising illegal activities (*e.g.* illegal hunting and plant collecting).

6.4.2 Fire Management

Nature Reserve Management shall convene and chair a **Fire Workshop** in February each year. This workshop shall include Conservation Partnerships and Ecological Advice staff, and invited experts where appropriate

At this Fire Workshop the burns of the previous fire season (planned and unplanned) will be reviewed and, based on the Nature Reserve **Fire Management Plan**, management units will be scheduled for burns in the upcoming fire season and recorded as the **Annual Burning Plan** for implementation. In preparation for the Fire Workshop all fire returns will be with Ecological Advice by 30 November each year to allow for digital capture and analysis of the data.

The **Fire Management Plan** is to be based on the OGNR management objectives and guided by 'best practice' linked to scientific understanding, legal context and risk management.

Action Project 6.4.2 (i): Develop an OGNR Fire Management Plan that provides comprehensive fire management objectives, scientific understanding, management actions, legal compliance, personnel training requirements, monitoring and research required and resources needed.

Action Project 6.4.2 (ii): Develop a computerized decision support tool linked to GIS that will be included in the Fire Management Plan, to assist in the planning of burns at the annual Fire Workshop. This rule-based tool will ensure that OGNR- wide and area-specific fire management objectives can be simultaneously achieved wherever possible, and will allow for flexibility in response to unplanned fires.

In this regard Management will actively champion the establishment and maintenance of FPA's on and bordering OGNR in order to gain the full legal advantages of being a member of the FPA and to promote, where possible, fire management regimes surrounding OGNR that would benefit the conservation of biodiversity and ecological processes.

Action Project 6.4.2 (iii): Promote and champion (in cooperation with DWAF and the "Working on Fire" programme) the establishment of FPAs on the borders of OGNR.

Action Project 6.4.2 (iv): Arrange an OGNR Fire Management Workshop in February of each year.

6.4.3 Alien Species Control and Management

The requirements of NEMBA (Sections 76 and 77) in terms of **invasive species** and the relevant legal obligations of protected area management authorities will be noted. The following is the OGNR strategy to deal with alien and alien invasive species in the Nature Reserve.

Action Project 6.4.3 (i): Compile and implement an Alien Species Management Plan. Identify and itemise indicator species and determine their current species densities for OGNR.

6.4.3.1 Alien Plants

Alien plant species have been planted or have established themselves within OGNR over time because they can, to varying degrees, impact negatively on water production, the natural environment and biodiversity as well as the natural landscape character of the Nature Reserve, their control and management is considered a management priority.

Wherever possible and appropriate these plants will be removed from OGNR.

The following management guidelines apply:

Alien Plant Introductions

Introductions of alien plants to OGNR will not be tolerated except for non-invasive vegetables, garden plants, fruit trees, or herbs (for domestic consumption) planted within staff accommodation plots or non-invasive pot plants used indoors for decorative purposes, provided these plants in no way impact negatively on the ecological processes or disrupt normal animal behaviour patterns (e.g. fruit trees and baboons / monkeys).

Only plants indigenous to the OGNR and surrounds will be used outdoors in landscaping projects within the demarcated development zones.

Declared Alien Weeds and Invasive Plants

Alien plants declared **weeds and invader plants** under section 29 of CARA (Act No. 43 1983) are a serious threat to the ecological functioning of natural systems as well as groundwater storage and water production from catchments. They will be controlled in terms of the relevant CARA regulations. An ongoing time-bound programme to effectively control these alien weeds and invader plants within the OGNR and up to 1km beyond (buffer area) the Nature Reserve boundary will be developed in collaboration with neighbours and the relevant municipalities.

State poverty relief programs such as 'Landcare', 'Working for Water', 'Working on Fire' and 'Working for Wetlands' should be used to full effect to complement the Nature Reserve budget for this management task.

OGNR management will be accountable for all invasive alien plant clearing and therefore will strictly supervise control operations to ensure that the correct methodologies are used and to avoid environmental damage.

Alien species are regarded as species or genotypes that are not indigenous to the Reserve, including hybrids and genetically altered organisms. Alien plants which have been declared weeds and invader plants (according to Section 29 of CARA) are a serious threat to the ecological functioning of natural systems.

The alien plant species of relevance within and immediately surrounding the Nature Reserve are the following:

- Acacia longifolia Long-leaved wattle
- Arundo donax
- Bidens biternata
- Bidens pilosa
- Canna sp.
- Chromolaena odorata
 Triffid weed
- Circium vulgare
- Eleusine indica
 - Lantana camara
- Opuntia ficus-indica
- Passiflora subpeltata
 Granadilla spp
- Saccharum officinarum
- Shinus terebinthefolius
 Brazilian pepper
- Verbena bonariensis

A further species, which is not known to occur in the Nature Reserve at present, but which is spreading in gardens in South Broom, is *Clusia rosea*.

Lantana

Project 6.4.3.1 (i): Develop an ongoing time-bound programme to effectively control declared alien weeds and invader plants within OGNR and 1 km beyond (buffer area) the Nature Reserve boundary.

Existing Non-invasive Alien Plants

A phased 3-year plan to address the existence and spread of **non-invasive alien plants** (including grasses) that already exist within OGNR will be developed. Where required, this plan will also address the re-planting of relevant areas with indigenous plants for horticultural purposes. If considered appropriate by the PAMC, certain non-invasive alien plants may be demarcated and retained for horticultural or cultural-historical purposes. They will, however, not be replaced should they die, unless recommended by the PAMC for cultural-historical reasons. All seedlings of demarcated alien plants will be removed annually.

Project 6.4.3.1 (ii): Develop a phased 3-year plan to address the existing non-invasive alien plants in OGNR.

6.4.3.2 Alien Animals

Because alien animal species can threaten the ecological, genetic or natural aesthetic integrity of the Nature Reserve and can be vectors for the spread of diseases, their control and management are considered a management priority. Wherever possible and appropriate these animals will be removed from the OGNR.

The following management guidelines apply:

Alien Animals Present in OGNR

Alien animals that are present and are a threat / potential threat to the ecological processes / tourism experience in the Nature Reserve will be dealt with as necessary according to a control programme developed and approved by the PAMC.

There are currently no grazing concessions that have been made regarding alien animals in OGNR.

Mallard ducks, alien wild ungulates, 'domesticated' guinea fowl and feral species are all potential threats and could be found in the Nature Reserve sporadically. They will be destroyed as soon as possible after their presence is detected (humanely as practically possible and with due regard for the tourist experience).

Action Project 6.4.3.2 (i): Develop a control programme for alien animals present in OGNR.

Alien Animal Introductions

Introductions of alien animals to OGNR will not be accepted except:

- as part of culture-based, community-based or management projects approved by the PPC / PAMC; or
- for domestic animals and livestock (incl. donkeys and horses) kept for official purposes or privately by staff according to specific rules for each management centre / protected area, and
- in accordance with relevant EKZNW policies.

It is critically important that these exceptions do not negatively influence the integrity and sustainability of Nature Reserve's biodiversity and ecological processes. A new, standardised and equitable OGNR policy for keeping domestic animals and livestock is required and will also include procedures to deal in a consistent manner with alien animals that stray into OGNR.

Action Project 6.4.3.2 (ii): Develop a new, equitable policy for keeping personal and official domestic animals and livestock in the Nature Reserve that includes procedures for dealing in a consistent manner with alien animals that stray into the Park. This policy will, *inter alia* clearly address:

- Threats to biodiversity conservation as a priority.
- Reducing the numbers of such animals to an absolute minimum.
- Designating areas where these animals will be kept. They will not be allowed to roam or feed in the Park (except for official patrol horses when on patrol) or interfere in any way with tourists.
- The proper and hygienic care of these animals.
- Minimum standards (aesthetic acceptability, sizes, neatness and cleanliness) of facilities housing these animals e.g. stables, camps, cages etc.
- Disciplinary measures for staff transgressing these regulations or failing to enforce these measures.

6.4.4 Catchment /Groundwater / River Management

In order to ensure a sustained flow of good quality water from this natural catchment it is essential that throughout the catchment (both in and outside OGNR).

- A good vegetative canopy and basal cover is maintained to maintain a sustained flow of water and reduce turbidity caused by accelerated soil loss
- Strict pollution control and waste management standards will be applied especially in the Nature Reserve
- Invasive alien plants are removed and controlled
- Aquifer and surface water quality and quantity is monitored

Action Project 6.4.4 (i): Obtain all standards for water quality from the Municipality, review monitoring results against these standards and take appropriate actions should any standard not be met.

6.4.5 Soil Erosion Control

Gradual natural soil erosion processes will be allowed to continue unless this is a threat to the achievement of the Nature Reserve's management objectives. However, in the case of humaninduced and / or aggravated erosion, appropriate remedial management action will be taken. Potential human impacts will be avoided through appropriate planning and maintenance of infrastructure, especially trails/ pathways.

Human-induced soil erosion in OGNR is primarily the result of the presence of invasive alien vegetation and roads of the Nature Reserve. Old quarry sites / borrow pits and areas that have been cleared of invasive alien vegetation need rehabilitation plans primarily to prevent soil erosion.

Extensive sites of potential or aggravated soil erosion will be mapped, and the rehabilitation prioritised annually.

Rehabilitation of soil erosion sites should follow the guidelines presented by Coetzee (2005) and the EKZNW Track and Trail Maintenance Manual.

Action Project 6.4.5 (i): Map all extensive or potential human-induced / aggravated soil erosion sites and annually monitor the condition of these sites in order to prioritise rehabilitation work.

Reference:

Coetzee, K. 2005. Caring for Natural Rangelands. University of KwaZulu-Natal Press, Scottville, South Africa.

6.4.6 Wildlife Management

The primary objective of wildlife management at OGNR will be to maintain, within the ecological carrying capacity of the Nature Reserve, viable indigenous wildlife populations that historically occurred in the area and are suited to the particular habitats offered by OGNR.

Where possible, a minimal intervention management strategy will be followed in terms of indigenous wildlife management. Exceptions would be the specific strategies identified in terms of the National Norms and Standards for the management of specific species in accordance with NEMBA and / or this IMP and / or additional actions recommended by the PAMC. The latter interventions will only be considered for the following purposes:

- safeguarding populations of Rare and Endangered species;
- achieving OGNR's Management Objectives and set Conservation Targets;
- complying with OGNR's IMP Management Guidelines;
- the maintenance of populations of wildlife species to avoid the over-utilisation of the available natural resources;
- research and monitoring purposes;
- translocation to other state or private protected areas;

Wildlife that have been injured and are highly unlikely to survive are to be destroyed on the authority of the OGNR Manager. The Reserve Manager will, however ensure that all relevant information is recorded and the relevant data / specimens / material provided is provide to the Ecological Advice component staff responsible for processing and recording such information. A copy of these records will be kept in the reserve office record system. The by-products such as meat and horns will be disposed of according to tariffs and procedures determined by EKZNW and in accordance with the relevant legislation.

Action Project 6.4.6 (i): Compile and implement a Wildlife Protection Management Plan

Action Project 6.4.6 (ii): Compile and implement Priority Species Management Plan and determine status of priority species.

6.4.6.1 Introductions of Indigenous Animal Species into OGNR

The introduction of indigenous animal species into the Nature Reserve will be considered in terms of **Corporate Policy D2.21** (See **Appendix 2, Table of Policies**) and taking into account their natural distribution range, genetic compatibility, social behaviour characteristics, impacts on existing populations, habitat requirements, practical management and possible interaction with human communities adjacent to OGNR.

The introduction of **any** animal species (individual or group) will be done in collaboration with the responsible Ecological Advice staff, with the approval of the PAMC. The introduction will be adequately documented. A species introduction policy for OGNR is needed for the effective application of this policy guideline.

Action Project 6.4.6.1 (i): Develop a policy that addresses the introduction and population monitoring of animal species into the Nature Reserve.

6.4.6.2 Game Population Management

Ongoing game population management will be aimed at maintaining a diversity of species without negatively affecting vegetative diversity and cover. The objective of this management is production orientated but to control numbers as far as possible within the ecological carrying capacity of the Nature Reserve. Ungulate game species populations that are not strongly territorial will be subject to a population management programme as their population numbers have the potential to increase to unsustainable numbers within the confines of OGNR. This could result in overgrazing and trampling of the vegetation and eventually accelerated soil erosion and biodiversity losses. To guide game population management, it is therefore necessary to develop an OGNR Game Management Policy Guideline document that is reviewed and recommended by the OGNR PAMC.

The OGNR PAMC will annually in February determine and recommend game removal or augmentation in terms of the Game Management Policy Guideline

Game removal from OGNR will only be undertaken by means of:

- Live Capture; or
- Culling Programmes

At present, game removal is not practiced at the OGNR.

Action Project 6.4.6.2 (i): Develop an OGNR Game Introduction and Monitoring Programme with guidelines in terms of the EKZNW Wildlife Introduction Policy and implement.

6.4.6.3 Fishery Management

No fishery monitoring is conducted at the OGNR.

Action Project 6.4.6.3 (i): Develop and implement a Fishery Monitoring Programme.

6.4.6.4 Bird Management

No bird monitoring is conducted at the OGNR.

Action Project 6.4.6.4 (i): Develop and implement a Bird Monitoring Programme.

6.4.6.5 Problem Animal Management (Damage Causing Animals)

Animals that become a danger or excessive nuisance to persons and property due to either habituation or aberrant behaviour may be destroyed humanely or captured and removed from OGNR. This also applies to animals that escape or leave and return periodically and cause damage outside OGNR.

To minimize the need to control problem animals, pro-active and preventative measures (*e.g.* fencing) would be considered as a priority, while affected public, visitors or neighbours need to be informed appropriately regarding the relevant animal behaviour and / or dangers. Where the only solution to the problem lies in destroying or capturing animals, the methods decided upon will be with due regard to avoiding possible public criticism.

All human / wildlife conflict matters relating to problem animal management (damage causing animals) will be dealt with in terms of the **NEMBA Norms and Standards for Management of Human and Wildlife Conflict in SA**. This is applicable to animals within and outside of the Nature Reserve.

Action Project 6.4.6.5 (i): The OGNR Conservation Manager will ensure that all complaints and incidents reported are investigated by the relevant staff and or District Conservation Officer (DCO) as soon as possible. Complaint details, investigation findings and remedial action taken is to be recorded in the prescribed Damage Causing Animals Complaints Register kept on station.

Investigations and incident reporting is to be carried out in accordance with **EKZNW's DCO Control Protocol and Guidelines.**

6.4.7 Control over Illegal Use of Natural Resources

Illegal utilisation of OGNR's natural resources is not quantified and is to be considered a threat that has the potential to increase significantly if not adequately controlled.

Ongoing vigilance through cost-effective surveillance, monitoring programmes and reaction capabilities is to be undertaken. Direct illegal use of natural resources will be dealt with by OGNR management while high risk criminal activities will be monitored and communicated to the relevant security forces as part of a broader co-operative security strategy [See Action Project 6.3(i)].

A standing staff component of field rangers, primarily tasked with law enforcement, has been appointed, is operative. Should illegal activites increase then it will be necessary for the staff component to be increased accordingly.

To assist in maintaining the Nature Reserve's ecological integrity and safeguarding staff and visitors, it is essential that the effectiveness of the field ranger component and their deployment is regularly and critically assessed. A well maintained statistical incident register will be used in such assessments (See also **Monitoring and Evaluation under Par. 6.9.1**).

Action Project 6.4.7 (i): Assessment of the field ranger component will be done monthly.

To resolve illegal utilisation of natural resources by neighbouring communities understanding and awareness through pro-active education amongst these communities is to be undertaken (See Local Community Involvement: Environmental Education under Par. 6.2.5).

Action Project 6.4.7 (ii): Management will prosecute people that illegally utilise natural resources for commercial or other purposes in accordance with the legislation.

6.5 Cultural Resource Management

Management of the cultural heritage is guided by the National Heritage Resources Act and as well as the Amafa / EKZNW Co-operative Conservation Management of Cultural Heritage Agreement (signed July 2005) and aims to promote the conservation and public appreciation of the cultural heritage found in OGNR. See **Appendix 2, Policy B7.** The policy also provides guidelines in terms of monuments and memorials.

There is a critical need to develop a comprehensive cultural heritage management plan for OGNR that would meet national requirements. This plan will cover archeological, historical sites as well as palaeontological features and living heritage sites.

The cultural heritage of the OGNR is non-renewable and importantly may shed further light on the socio-cultural history of the area. These resources are fragile and therefore the Cultural Heritage Management Plan should, in addition, address institutional specialist capacity to guide cultural heritage management on OGNR.

Action Project 6.5 (i): Develop a comprehensive Cultural Heritage Inventory and Management Plan for OGNR in collaboration with SAHRA and Amafa. Institutional capacity will also be addressed by this plan.

Action Project 6.5 (ii): Identify archeological, historical, palaeontological and cultural heritage sites at OGNR. Ensure compliance with the requirements of Amafa.

6.6 Resource Utilisation

Requests for extractive use of plant, animal and abiotic resources will be considered provided that such resource use is sustainable, controlled and the natural or cultural heritage conservation management objectives of OGNR are not compromised. Resource use will not be allowed to degrade the aesthetic

landscape character of OGNR or be permitted if management staff lack adequate capacity to ensure effective control over the resource utilisation or by compromising essential functions.

Action Project 6.6 (i): Control or 'bench mark' areas within OGNR will be identified where no extractive resource utilisation of indigenous species will take place.

6.6.1 Plants and Animals

Extractive resource use will be undertaken in accordance with **EKZNW Board Policy Nos. D2.15** and D3.12 to D3.19.

The PAMC are to evaluate applications with due consideration of:

- any applicable land restitution or other agreements,
- the precautionary principle,
- ecological and social acceptability,
- impact on the aesthetic character of the landscape,
- impact on eco-cultural tourism,
- sustainable and wise use of the resource,
- benefit to neighbouring communities,
- equitable access to the resource,
- any benefit transaction that is acceptable within the PFMA framework,
- harvesting operations that are effectively controlled and monitored,
- a written agreement stipulating resource price and /or conditions of harvest, and
- viable alternatives.

Action Project 6.6.1 (i): Evaluate Resource Use in OGNR in terms of EKZNW policies for the Evaluation of Extractive Resource Use. If possible, sustainable and feasible in terms of this guideline, develop a resource use management plan and implement.

6.6.2 Bioprospecting

Requests to collect biological material / samples from OGNR will be considered by the PAMC in accordance with, amongst others, **EKZNW Board Policy D2.15 (Appendix 2)** from *bone fide* South African research institutions until national (NEMBA) and provincial legislation governing bioprospecting is in place.

Bioprospecting activities within the Nature Reserve will be closely monitored and regulated in terms of present environmental legislation.

6.6.3 Abiotic Resources

The extraction of abiotic resources from the protected area will not be permitted unless it has direct bearing on achievement of the OGNR management objectives and any application for extraction by an external body will be referred to the EKZNW Board.

6.7 Eco-Cultural Tourism and Marketing

Eco-cultural tourism and marketing will be considered within the framework of, amongst others, **Board Policy E1** to **E19** with regard to Commercial Operations.

EKZNW has the mandate to sustainably develop the OGNR within the framework of its approved IMP and Concept Development Plan CDP. This will be undertaken to fully realise its eco-cultural tourism and associated income-generating potential, while respecting and giving access to the Nature Reserve's natural and cultural heritage features.

To fulfil this mandate, and in accordance with PAA, EKZNW will initiate the compilation of a CDP. It will address future new development as well as the upgrading and maintenance of all existing infrastructure including tourist facilities.

The CDP will be guided by the framework of the OGNR Mission, Management Objectives, Zonation and Management Policy Guidelines as adopted and approved for this IMP. The approach adopted in the compilation of the CDP will involve an objective and integrated assessment of the Nature Reserve in terms of its natural and cultural heritage sensitivities, management and bulk infrastructure, its particular sense of place and its visitor infrastructure and facilities

EKZNW will strive to provide a quality eco-cultural tourism experience for visitors to the OGNR. A range of appropriate facilities and services will be provided for the use of visitors to OGNR. While some of these will serve recreational and social needs, emphasis will be placed on facilities and services that enrich the visitor's understanding and appreciation of the Nature Reserve.

In order for OGNR to realise its full income-generating potential:

- The quality and standard of facilities will be maintained at a high level.
- Professional standard tourism service delivery will be provided.
- Its tourism opportunities will be competitively and effectively marketed.
- Cultural heritage tourism will require emphasis.
- A partnership strategy, that takes full advantage of appropriate opportunities for outsourcing (joint venture or otherwise) needs to be put in place while linkages will be sought with other regional tourism initiatives.
- A visitor orientation and interpretation strategy will be developed and implemented.

The above policies and values will be supported by a OGNR Eco-cultural Tourism Development and Marketing Strategy that will be compiled and approved.

Action Project 6.7 (i): Cognisant of the OGNR IMP and CDP policy guidelines, develop OGNR Ecocultural Tourism Development and Marketing Strategy that addresses:

- the attainment of professional tourism service delivery standards
- branding and marketing
- linkages with other regional tourist initiatives
- public / private partnerships
- cultural heritage tourism
- visitor awareness, orientation and interpretation

Action Project 6.7 (ii): Develop and communicate formal procedures for local tourism user groups.

Action Project 6.7 (iii): Develop and implement Visitor Management Plan. Undertake analysis of available recreational facilities and identify opportunities to improve these.

6.8 Environmental Interpretation, Awareness and Education

Environmental interpretation, awareness and education of OGNR's natural and cultural resources will be aimed at creating an awareness, understanding and appreciation of the value of these resources among the general public and visitors to the Nature Reserve.

Action Project 6.8 (i): Compile educational material on environmental and cultural aspects of the Nature Reserve.

An environmental awareness and education programme will be developed to pro-actively engage, inform and benefit the Nature Reserve's range of neighbouring communities and visitors. **Board Policies D 2.34** (Environmental Education) and **D 4.1** (Neighbour Relations) apply (See Appendix 2).

Programmes should not be primarily aimed at children, but provision should be made for developing various programmes, applicable to a wide spectrum of ages and education levels.

Programmes for groups and communities from other areas will be accommodated on request whenever possible. "The Kids and Parks" Programme requires school groups visiting the Nature Reserve's, to submit a lesson plan before the visit to qualify for a concession. The visit takes place during schooling days.

Action Project 6.8 (ii): Engage in biodiversity and cultural education with schools, communities, interest groups and staff.

Action Project 6.8 (iii): Facilitate access to educational information pertaining to the history of the Nature Reserve and surrounding areas.

Where and whenever possible members of the local community (*e.g.* community tour guides) should empowered and used to run appropriate environmental education tours.

Action Project 6.8 (iv): Develop an OGNR environmental awareness education programme specifically for neighbouring communities and the general public interest groups.

An interpretation programme using signage, displays and information media will be developed to effectively direct and inform visitors in respect of appropriate natural and cultural features of the area. The format of these signs will be standardised and trail marking will be a priority.

Action Project 6.8 (v): Develop an interpretation programme in a standard format for the Nature Reserve.

An investigation to identify synergies in the needs of various government or other institutions in the area to develop awareness programmes (*e.g.* social education of the youth) will be undertaken and if feasible, to combine environmental awareness education with these other programmes. In this way, it will be possible to combine resources to reach a wider target audience.

Action Project 6.8 (vi): Investigate the possibility of combining environmental awareness programmes with social programmes offered by other institutions in the general area of the Nature Reserve.

6.9 Research

Priority will be given to research that will provide information and understanding that is of direct benefit to OGNR and will guide management interventions required to achieve the protected area's conservation targets as well as natural and cultural heritage management objectives in the most costeffective manner. Opportunities will, however, be considered and provided for both applied *and* theoretical research of local, provincial or national importance.

Long term research and monitoring is desirable and necessary as a result of the dynamic and stochastic nature of the ecosystem and to ascertain whether management actions are having their desired affect in terms of achieving conservation targets as well as natural and cultural heritage management objectives.

Partnerships and agreements with appropriate academic and research institutions will be promoted to stimulate and encourage the desired research in OGNR. In order to achieve this, the following will be undertaken:

- Management and scientific staff as well as external researchers will identify and prioritise research requirements. This research priority list will then be circulated to tertiary research institutions and made available on the web site.
- All baseline abiotic and biotic data collected will be collated and stored in databases as well as GIS data layers to assist researchers in the planning of research projects and interpretation of data.
- Appropriate permanent research facilities will be developed within or bordering the Park in order to facilitate research work.

Action Project 6.9 (i): Develop a prioritised OGNR natural and cultural heritage research project list.

Action Project 6.9 (ii): Develop procedures that will ensure that all abiotic and biotic data collected are captured in managed databases and GIS data layers for interrogation by researchers and managers.

Action Project 6.9 (iii): Investigate the potential in or near OGNR for the development of permanent research facilities.

All proposals to undertake research within the Nature Reserve will be submitted and evaluated using the procedures outlined in the *Guidelines for the Registration and Administration of Research Projects Undertaken by or through Ezemvelo KZN Wildlife (August 2002).* Where research requires the collection of biological material, a collection permit will also be required.

A copy of all publications will be lodged within the Nature Reserve, the Regional Office as well as the Head Office library and details captured using appropriate keywords into the Region's bibliography.

An OGNR bibliography and reference library facilities will be developed together with procedures to maintain a hard and digital copy of all OGNR related research work, all documents listed as IMP supporting documentation in **Appendix 1** as well as any new supporting management documentation produced. Libraries will be maintained at the Nature Reserve and at the Regional Office. Strict curation rules will apply and the ultimate responsibility for the curation of this library at OGNR will be allocated to the most senior reserve management position and the Regional Co-ordinator: Ecological Advice.

Action Project 6.9 (iv): Identify and develop reference library facilities and procedures to maintain hard and digital copies of all OGNR related research work, all documents listed as IMP supporting documentation in **Appendix 1** as well as any new supporting management documentation produced. Strict curation rules will apply and the ultimate responsibility for the curation of this library at OGNR will be allocated to the most senior reserve management position and the Regional Co-ordinator: Ecological Advice at the Coastal Regional Office.

6.9.1 Monitoring and Evaluation

Baseline data collection, monitoring and evaluation will be undertaken in order to determine whether conservation targets, natural and cultural heritage management objectives, as well as, eco-cultural tourism objectives and targets are being achieved, and to ascertain the effectiveness of management interventions. Much of this information is required in order to meet the legal reporting requirements of the NEMBA and PAA.

Due to (a) the stochastic (random behaviour) nature of the environment, (b) the effects of long-term climate cycles and change, and (c) the length of time for treatment effects to manifest themselves, it is necessary to implement long term baseline collection and monitoring programmes. It is also important to monitor and record all management interventions and the biophysical environment in order to understand the causes for any biological and environmental changes that may occur.

All existing monitoring programs are to be maintained. No programme is to cease and may only do so if a specific decision recorded in writing by the PAMC minutes to terminate a particular monitoring programme is recommended and is submitted to BCOM for approval.

The Ecological Advice component is responsible for:

- Designing all biodiversity monitoring and baseline collection programmes (including the data capture and storage procedures) and ensuring that these will provide data of the right precision and accuracy, and at the right frequency, in order to guide management decision making and to allow for reporting at the required frequency.
- Biodiversity data management, secure storage, analysis, reporting and regular feedback to management.
- Undertaking scientific monitoring and data collection.

The Biodiversity Conservation Management component is responsible for:

- The accurate collection of biodiversity baseline data, monitoring and data storage as agreed with the Ecological Advice component.
- Monitoring the use of natural areas by visitors through Limits of Acceptable Change criteria.
- Monitoring cultural sites as outlined in approved and implemented cultural heritage management plans in collaboration with Amafa/SAHRA as the case may be.

- Monitoring energy and water use by conservation management facilities.
- Monitoring development or land use change in the Nature Reserve and in its buffer zone for compliance with set environmental conditions linked to authorisation.
- Monitoring compliance by outside parties with conditions as specified in agreements, contracts etc. in collaboration (where practical and as agreed) with the Ecotourism and Marketing component.

The Ecotourism and Marketing (Commercial Operations) component is responsible for:

- Monitoring eco-cultural tourism statistics and revenue generation and reporting against revenue targets.
- Monitoring energy and water use by eco-cultural tourism and associated management facilities.
- Monitoring compliance by outside parties with conditions as specified in agreements, contracts etc. in collaboration (where practical and as agreed) with the Biodiversity Conservation Management component.

Action Project 6.9.1 (i): An appropriate monitoring and evaluation programme for each of the above components is to be developed for the Nature Reserve and implemented.

6.10 Infrastructure

EKZNW has the mandate to maintain, remove, expand or develop infrastructure within OGNR for natural and cultural heritage management as well as eco-cultural tourism purposes. However, development projects will only be undertaken if they are:

- aligned with the Nature Reserve's Zonation and Management Guidelines.
- listed as an approved Action Projects either in this IMP or in the Nature Reserve's Concept Development Plan (CDP).
- recommended for implementation by the PPC / PAMC and approved by the EKZNW Board's Development Committee.
- development is compliant with the relevant NEMA regulations and other applicable legal requirements, particularly regarding Environmental and Heritage Impact Assessments.

Infrastructure development outside OGNR or on its periphery should always be considered as a preferred option, where practical, to reduce the amount of infrastructure and its resultant impacts on the environment within the Nature Reserve.

OGNR management is responsible for infrastructure within the Nature Reserve and will at all times ensure that it is maintained in a safe, sound, clean, serviceable and aesthetically acceptable condition. Tourist accommodation, campgrounds and other facilities are at all times to be maintained to appropriate world-class standards regarding appearance, cleanliness and serviceability.

Utility service providers (e.g. Telkom, Eskom), concessionaires or other groupings that may, through agreements, develop, use and /or maintain infrastructure within OGNR, are to be closely monitored by management to ensure that they abide by conditions contained in the relevant agreements and servitude conditions. Management will ensure that their activities do not negatively impact on the achievement of the natural and cultural heritage management objectives as well as landscape character of OGNR and that they maintain the same values as expressed above.

All structures are to be (as far as possible) harmonised with the surrounding environment and landscape character through appropriate siting, use of colour, building materials, landscaping and screening.

To create a sound foundation for future planning, all infrastructure will be listed on a maintained database and their positions plotted with GPS points on an associated OGNR Infrastructure Map. Furthermore, the desirability and effectiveness of this infrastructure will be assessed with a view to reducing the impact of these structures on the OGNR environment and landscape.

Action Project 6.10 (i): Develop and maintain an OGNR Infrastructure database and map.

Action Project 6.10 (ii): Review the desirability and effectiveness of all present infrastructure associated with the Nature Reserve with regard to:

- Adequacy
- State of repair
- Existing maintenance plans and programs
- Visitor and staff use, requirements and values
- Financial
- Environmental impact (negative and positive)
- Income generation
- Possibilities of outsourcing

6.10.1 Entrance Points and Gates

All road entrance points to the OGNR will be under the control of management, certain functions may, however be outsourced. It is important that the entrance gates be secure at all times to discourage illegal entry to OGNR.

6.10.2 Boundary Fence

The purpose of the boundary fence is to keep game in and live stock out of the reserve while demarcating reserve boundaries to assist in preventing illegal entry. There is no boundary fence around the OGNR.

Action Project 6.10.2 (i): The need for a boundary fence must be assessed and a fence erected if necessary.

6.10.3 Internal Fences

There are no internal fences except around staff accommodation.

6.10.4 Signage

All access routes to OGNR are to be appropriately signposted.

Four groups of signage are identified, namely:

Public Entrance Gate and Boundary Signage

A standard for this signage is to be developed that clearly depicts that one is entering the OGNR with any camp /office names in a secondary position.

Management Infrastructure Area Signage

Interpretation, directional and information signage in OGNR will have a standardised format. *Trail Signage*

The trail signage format is currently a wooden sign with the name of the trail direction.

Memorial Plaques

In terms of the Public Monuments and Memorials Policy and the Names of Protected Areas Under the Control of EKZNW Policy, all applications for such memorials are to be made to the Board who would approve or not in terms of design and location. All such applications are subject to and EIA. The key legislation includes the KwaZulu – Natal Heritage Act, 1997 (Act No.10 of 1997) and the KwaZulu – Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997).

6.10.5 Roads, Tracks and Paths

Map 6 indicates the existing vehicle roads / tracks and footpaths used for public access, recreational use or management purposes.

Roads and tracks will be kept to a minimum to maintain the natural character of the landscape as far as possible and to avoid unnecessary negative impacts on the natural and cultural heritage of OGNR. In terms of this management guideline, a critical evaluation of the existing road / track and footpath network needs to be undertaken to identify any that need to be closed or re-aligned. Any section that is approved for closure will be rehabilitated according to a rehabilitation programme. Proposed development of new roads / tracks and footpaths or their closure will be aligned with the Zonation specified in this IMP and will follow the appropriate legal and other procedures after recommendation from the PAMC.

Management will ensure that the existing vehicle road / tracks and footpaths on OGNR are effectively maintained to the appropriate standards in order to support the relevant use and avoid soil erosion as well as other negative impacts on the environment.

Roads and tracks that are heavily used by vehicles or sections prone to accelerated soil erosion will be tarred, paved, concreted or upgraded to 'all-weather' gravel roads that have been treated with a dust repellent (sealer).

Action Project 6.10.5 (i): All vehicle roads and tracks will be evaluated for the suitability of their alignment and recommendations made for new vehicle roads and tracks, repair or closure (with rehabilitation measures) of existing ones.

6.10.6 Staff Accommodation

Where essential for the efficient functioning of OGNR, management will consider the provision and maintenance of staff accommodation, according to Corporate Norms and Standards. Accommodation is to meet standards as set by EKZNW's Technical Division and any development or maintenance in this regard will form part of the CDP.

Staff will be encouraged to acquire their own housing and live outside OGNR, where practically possible and financially viable. In such cases, official transport to and from OGNR may be considered depending on site specific circumstances and applicable corporate policies.

6.10.7 Offices, Workshops, Stables and other Infrastructure

OGNR management will ensure that all infrastructure within the Nature Reserve, is always maintained in a clean, neat and functional state and that these work areas meet Occupational Health and Safety Act standards.

All service areas (e.g. workshops, waste management and storage areas) will be effectively screened from public view using indigenous plantings.

Management will also be responsible for ensuring that any facility for keeping animals encamped or in captivity on OGNR are legally compliant or maintained at generally accepted standards for keeping and caring for such animals.

6.10.8 Services

Management will strive to ensure that wherever possible, service infrastructure such as electricity, telephone, water supply *etc.* are located appropriately in the landscape or effectively screened to minimise their aesthetic and / or other environmental impacts. Reserve management will also strive to ensure that such infrastructure is maintained in a safe, serviceable and aesthetically acceptable condition by the relevant service providers.

6.10.9 Radio Communication and other Communication Equipment

OGNR management uses a two-way radio system for efficient management. Any future radio repeater stations or similar communication towers will comply with EIA conditions.

6.10.10 Waste Management

6.10.10.1 Domestic Solid Waste

All domestic waste is to be sorted for recycling. The recyclable waste is to be removed to authorized recycling depots/ companies. The use of organic waste for compost purposes

permitted but will be subject to strict conditional approval on the recommendation of the OGNR PAMC. All historical waste disposal sites in OGNR are to be rehabilitated.

Solid waste management procedures will be closely monitored by management to prevent pollution and other adverse impacts, especially of the water resources. All waste receptacles (for staff or the public) will be animal-proof (especially against baboons and monkeys) and maintained as such.

Action Project 6.10.10.1 (i): Develop an integrated waste management plan for OGNR.

Action Project 6.10.10.1 (ii): Develop, install and maintain effective standardized solid waste receptacles for OGNR that are animal and baboon / monkey-proof.

6.10.10.2 Sewage

All sewage systems are to be investigated and their compliance verified. New systems will be installed where there is non-compliance with legal requirements.

Existing infrastructure at OGNR has septic tank / French drain sewage systems that can possibly be contaminating ground and surface water. These systems will be replaced with more environmentally friendly systems.

Action Project: 6.10.10.2 (i): All sewage systems in OGNR will be investigated for legal compliance. A phased development plan to upgrade existing systems and septic tank / French drain systems will be put in place.

6.10.11 Water- and Energy-saving Measures

Energy saving light bulbs are used.

Action Project 6.10.11 (i): Develop a phased plan to install standardised (reliable and tested) water- and energy-saving devices throughout OGNR as soon as practically possible.

6.10.12 Aircraft Landing Fields

No airstrips are permitted inside OGNR except for helicopter landing pads (if required) maintained to the minimum aviation standards at selected sites within the Natural Zone. These are primarily for emergency purposes or for such other purposes on the approval of PAMC after taking into account the effect on biodiversity and the environment, 'sense of place' values and tourist disturbance aspects.

Action Project 6.10.12 (i): Determine the requirement for helicopter landing pads on OGNR. If required and approved, select site/s and maintain according to minimum aviation standards.

6.10.13 Staff and Visitor Safety

All requirements of the Occupational Health and Safety Act and other applicable legal requirements will be met to provide for the safety of staff and visitors in and around infrastructure installations at OGNR (*e.g.* fire and electricity).

Action Project 6.10.13 (i): Management will maintain a secure entry controls system and maintain a high level of internal security in order that visitors and their belongings can be safe and secure.

Action Project 6.10.13 (ii): All Reserve staff will receive appropriate training regarding all health and safety aspect and will receive refresher course training as required on a regular basis.

6.11 Concept Development Plan

6.11.1 Institutional Framework for Implementation of Development Projects contained in this CDP

The OGNR management has the mandate to manage and sustainably develop the protected area to fully realise its ecotourism and associated income-generating potential, while respecting and giving access to the protected area's biodiversity and cultural values. Infrastructural planning and development of the protected area will be undertaken cognizant of the requirements the National Environmental Management Act (No. 107 of 1998) and the National Heritage Resources Act (No. 25 of 1999) and the KwaZulu-Natal Heritage Management Act (No. 10 of 1997).

The OGNR is guided by the framework of the OGNR's Vision, Mission, Management Objectives, Zonation, Policy Framework and the Guiding Principles of this IMP. The approach adopted in the compilation of the CDP involves an objective and integrated assessment of the Reserve in terms of its natural and cultural heritage sensitivities, management and bulk infrastructure, its particular sense of place and its visitor infrastructure and facilities.

6.11.2 Strategic Considerations and Management Guidelines

The general strategic direction for the protected area set by the CDP for 2009 to 2013 is essentially one of consolidating and improving existing management and tourism infrastructure within the protected area while also seeking to improve links with local and regional conservation and tourism initiatives.

The emphasis in the CDP is on the improvement of the standard of existing infrastructure and improving the camp site as well as day visitor facilities throughout the protected area. Facilities for people with disabilities are to receive attention through specific policy formulation which will be applied to built infrastructure and related visitor amenities. It is envisaged that the implementation of the CDP will be instrumental in broadening access to the Reserve by a greater spectrum of the public and will provide a platform towards improving income generation, benefit flow management and inform any further appropriate development during the next five year planning period. The following strategic management considerations, of which the majority have been identified by the IMP, are critical to support and effectively implement the protected area's CDP.

6.11.3 Alignment of CDP with Local Authority Integrated Development Plans

Emphasis has been placed on the importance of a cooperative governance relationship between OGNR management and the Hibiscus Coast Municipality, to ensure that continuous development planning in and around the OGNR is appropriately aligned as required by the National Environmental Management: Protected Areas Act and the Local Government: Municipal Systems Act.

It is critical from a biodiversity conservation, tourism and benefit flow perspective to preserve the aesthetic qualities of the natural landscape or "sense of place" which is strongly linked to retaining the natural character of the landscape both in and adjacent to the protected area.

In compliance with PAA and in order to initiate the development of new infrastructure as well as the strategic maintenance of existing infrastructure, EKZNW will initiate the compilation of a Conceptual Development Plan (CDP). The CDP will address the future development, improvement and maintenance of all infrastructure including eco-cultural tourism facilities.

The CDP will be guided by the framework of the OGNR Mission, Management Objectives, Zonation and Management Policy Guidelines as adopted and approved for this IMP. The approach adopted in the compilation of the CDP will involve an objective and integrated assessment of the Nature Reserve in terms of its natural and cultural heritage sensitivities, management and bulk infrastructure, its particular sense of place and its visitor infrastructure and facilities.

Action Project 6.11.3 (i): Compile and implement an Infrastructure Management Plan.

Action Project 6.11.3 (ii): Develop a Concept Development Plan and align with Municipal Planning.

7 IMP REVIEW AND AMENDMENT PROCEDURES

7.1 Five-Yearly Review and Amendment Procedures

This OGNR IMP will be reviewed every five years with the next review period planned for 2013 to revise and amend the IMP for the following five years, namely 2014 to 2018. If deemed appropriate by the PAMC, the review can take place sooner.

The EKZNW Management Planning Steering Committee in collaboration with the Co-ordinator: Management Planning will give guidance on the extent of public / stakeholder participation required before submitting the amended / updated IMP for approval to the MEC. The extent of the public / stakeholder participation (apart from that undertaken with the Local Board) will depend on the nature and extent of amendments recommended by the relevant OGNR PAMC.

Action Project 7.1 (i): The PAMC will undertake a five-yearly review of this IMP in 2013 to revise and amend the IMP for the following five years.

7.2 Annual Review and Amendment Procedures

The PAMC will convene annually in November to monitor and evaluate IMP progress, plan and, if necessary, recommend the re-prioritisation of management activities for the next year. The PAMC will, as record of these meetings, submit a report to the EKZNW Management Planning Co-ordination Unit which contains the following:

- Any recommended <u>minor amendments or corrections</u> to the IMP that do not affect the substance of the Mission, Management Objectives, Zonation, Management Policy Framework and Guiding Principles;
- The result of an annual evaluation by the PAMC of the Management Effectiveness Level achieved for OGNR. This will be calculated using the World Bank Protected Area Management Effectiveness Evaluation Tool (Stolton *et al*, 2007);
- The cumulative number of Action Projects per Management Objective that have been completed, activated or not activated; as well as
- An indication of progress towards achieving Conservation Targets set in the IMP.

The PAMC will also be responsible for the recommendation of any policies, projects and plans that are developed as a result of the implementation of this IMP or other *ad hoc* projects *etc.* not covered by the IMP that have operational, financial and human resource or ecological implications (*e.g.* research projects that have not been identified according to IMP guidelines, or *ad hoc* funding received for the development of unplanned recreational facilities).

Any proposed <u>significant amendments</u> that are deemed necessary / urgent and that are likely to result in the amendment of the Mission, Management Objectives, Management Policy Framework and Guiding Principles contained in the OGNR IMP will be supported by the PAMC, the Integrated Management Planning Steering Committee and BCOMM before being subjected to the appropriate public /stakeholder participation process and before BCOMM recommends that the proposed amended IMP is submitted for authorisation through the EKZNW Board to the MEC.

The EKZNW Management Planning Co-ordinator will ensure that any minor or significant IMP amendments that are appropriately approved, are duly noted / recorded and that a new digital 'master copy' (Word) version is generated and archived with the EKZNW Management Planning Co-ordination Unit as well as ensuring that updated 'read only' copies are distributed to the relevant Head Office sections and Regional General Manager who will ensure that the updated 'read only' digital and / or hard copies are distributed to all staff requiring these. The EKZNW Management Planning Co-ordinator will furthermore be responsible to ensure that website / intranet copies are updated at the same time.

Action Project 7.2 (i): Convene a PAMC meeting annually in November to monitor, evaluate and report on progress in terms of this IMP, plan and, if necessary, recommend the re-prioritisation of management activities or amendments to the IMP. Ensure all resource needs are submitted when budgets are being prepared.

8 PROJECTS FOR ACTION CORRELATED WITH MANAGEMENT OBJECTIVES

While the tables below indicate the list of identified Action Projects that support the achievement of the specific objectives, it must be recognised that a number of other actions relating to ongoing protected area management, take place. Such actions would relate particularly to security, maintenance (buildings, roads, fences, veld management, etc) and relationships with stakeholders. It is important that they be detailed and included when developing budgets and business strategies.

8.1 List of IMP Action Projects

Table 2 below lists the Action Projects identified in the IMP. The Action Project number corresponds to the relevant paragraph in the text of the IMP.

This is a comprehensive list of Action Projects identified as requiring attention for the management of the protected area. Management will identify, review and act on the identified priority Action Projects that will impact on the achievement of the protected area's objectives. These priorities will be regularly reviewed during this five year period.

It is important to note that these IMP Action Projects will not be interpreted in isolation but will be interpreted and operationalised within the context of the associated narrative that precedes the articulation of the Action Project in the relevant paragraph.

No.	IMP Action Project No.	Project Description
1	2.1.1 (i)	Obtain written assignment from the MEC re - appointing EKZNW as the management authority for OGNR in terms of Section 38(2) of PAA.
2	2.1.3 (i)	Update and compile a list of all other service providers
3	2.3 (i)	Management in collaboration with other relevant EKZNW officials, will be tasked with active participation in the review processes of the municipal Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs) in order to ensure an effective buffer zone surrounding OGNR through an alignment of appropriate land use adjacent to the Nature Reserve.
4	2.3 (ii)	Establish relationships with neighbouring properties including Hibiscus Coast Municipality to plan and restore fragmented corridors and to enable the continued functioning of existing ones.
5	2.4 (i)	Obtain the services of a land surveyor to register the consolidated OGNR with the Surveyor General and seek the proclamation of the area by the MEC.
6	2.5 (i)	Obtain and review all formal and informal local agreements, leases, servitude arrangements <i>etc.</i> pertaining to OGNR and document, update, maintain and monitor these appropriately authorised agreements. All informal agreements are to be formalised and approved by the Executive.
7	2.6 (i)	Annually explore and investigate opportunities to extend conservation land use in and around OGNR.
8	3.3 (i)	Update the previous land use of OGNR.
9	3.4 (i)	Update the conservation history for OGNR indicating the importance of the proclamation.
10	3.5 (i)	Maintain the collection and storage of climatic data records. Include the Predictive Mean maximum and minimum temperatures in conjunction with mean rainfall for OGNR.
11	3.6.3 (i)	Identify the biodiversity importance and implications of immature soil profiles for management.
12	3.6.3 (ii)	Map the soils showing areas susceptible to erosion.
13	3.6.3 (iii)	Write and submit for approval, a soil erosion control plan.

Table 2: List of IMP Action Projects

14	3.7 (i)	Investigate the geomorphology for OGNR.
15	3.8 (i)	Write a management plan in order to maintain and monitor the quantity and quality of water in the rivers.
16	3.9 (i)	Develop a plant species list. This list will be filed with the Conservation Manager at OGNR.
17	3.9 (ii)	Develop a flora monitoring programme for OGNR.
18	3.9 (iii)	Compile and implement a flora management plan that addresses the threats to priority flora.
19	3.9 (iv)	Compile a flora map and diagnostics species list.
20	3.10 (i)	Copies of the Species Checklists will be updated and filed manually and digitally at the OGNR Management and Regional Offices as well as the Conservation Manager for easy reference. The copies will be updated in accordance with any authorised amendments. A fixed protocol for compiling and maintaining these checklists needs to be developed to ensure that they provide accurate, comparable and contemporary baseline data for management and scientific purposes.
21	3.10.1 (i)	Compile through further research and collecting a checklist of the invertebrate species found in OGNR.
22	3.10.2 (i)	Identify the major threats to Fish Species in OGNR.
23	3.10.2 (ii)	Develop and implement a Fish Species Monitoring Programme.
24	3.10.3 (i)	Compile through further research and monitoring, checklists of the Herpetofauna. Identify the major threats to Herpetofauna in OGNR.
25	3.10.3 (ii)	Develop and implement a Herpetofauna Species Monitoring Programme.
26	3.10.4 (i)	Determine which of the bird species breed in the Nature Reserve, and ensure that management protocols are set in place to maintain and conserve these breeding sites for the long – term persistence of the species.
27	3.10.4 (ii)	Identify the major threats to Avifauna in OGNR.
28	3.10.4 (iii)	Develop and implement an Avifauna Species Monitoring Programme.
29	3.10.5 (i)	Identify the major threats to Mammals in OGNR.
30	3.10.5 (ii)	Develop and implement a Mammals Species Monitoring Programme.
31	3.11 (i)	Map the GPS co-ordinates and provide Management Plans for these sites.
32	3.11 (ii)	Identify the archaeological, historical, paleontological and cultural heritage sites at OGNR. Ensure compliance with requirements of heritage legislation.
33	3.12 (i)	Conduct research on the archaeology of the OGNR.
34	3.12 (ii)	Make use of archaeology and evidence of the past cultures that inhabited the area in describing the cultural heritage value of OGNR.
35	3.13 (i)	Update the Sociological context and its importance to OGNR.
36	3.14 (i)	Update the economic context and its importance for OGNR.
37	3.15 (i)	Identify and map infrastructure using GIS and include in a spatial database. Develop standard protocols and procedures for infrastructure in OGNR.
38	3.15 (ii)	Repair, where necessary, the standard and state of the existing infrastructure provided in the OGNR.
39	3.15.4 (i)	Develop a maintenance plan for all trails and fences.
40	3.15.5 (i)	Update OGNR Map to include the location of all water supply infrastructure.
41	3.15.6 (i)	Compile MoA between different service providers and OGNR. Manager needs to ensure that he is familiar with all agreements.
42	4.2 (i)	Implement a EKZNW IEM Policy. Create awareness of or inform surrounding landowners on the IEM process and legislation through fora.
43	4.2 (ii)	Participate as a key stakeholder in EIA applications for developments near the Nature Reserve that may impact on the protected area.

44	4 2 (iii)	Participate in existing liason fora
	4.2 (iii)	Set conservation targets and monitoring strategies for the identified
45	4.2 (i)	species.
46	4.2 (ii)	Develop conservation targets and monitoring strategies for Cultural, Business and Partnerships.
47	4.6 (i)	Set conservation targets and monitoring strategies for the identified species.
48	4.6 (ii)	Develop conservation targets and monitoring strategies for Cultural, Business and Partnerships Objectives.
49	5 (i)	Revise the existing OGNR zonation plan in accordance with the new EKZNW standard zonation system as soon as it is developed and approved.
50	6.1.1 (i)	Develop a five-year Strategic Management Plan and Business Plan for OGNR.
51	6.1.1 (ii)	Initiate a resource economics study of the Nature Reserve to determine its economic value regarding the provision of ecosystem services and its contribution to the local and regional economy.
52	6.1.2 (i)	Investigate and develop an appropriate human resource structure and capacity of OGNR with a view to improving effectiveness and efficiency in achieving OGNR objectives and informing the Business Plan.
53	6.2 (i)	EKZNW will continue to work collaboratively with landowners and surrounding communities to improve conservation management of OGNR for the benefit of all.
54	6.2.1 (i)	Establish a Local Board for OGNR.
55	6.2.2 (i)	The Community Levy will continue to be collected for the development and upliftment of the local communities.
56	6.2.3 (i)	Training of members of the local community will continued to be practiced. Investigate other employment opportunities that will benefit the surrounding local communities of OGNR.
57	6.2.5 (i)	Investigate and implement additional environmental education programmes for communities surrounding OGNR.
58	6.2.7 (i)	Annually in March of each year arrange a public meeting to give feedback on progress, planned projects and encourage informal local community participation.
59	6.3 (i)	Develop an integrated security strategy for the Nature Reserve that ensures collaboration with all relevant institutions.
60	6.3 (ii)	Develop and implement a Civil Emergency Procedures Plan.
61	6.4.2 (i)	Develop an OGNR Fire Management Plan that provides comprehensive: Fire management objectives, scientific understanding, management actions, legal compliance, personnel training requirements, monitoring and research required and resources needed.
62	6.4.2 (ii)	Develop a computerized decision support tool linked to GIS that will be included in the Fire Management Plan, to assist in the planning of burns at the annual Fire Workshop. This rule-based tool will ensure that OGNR- wide and area-specific fire management objectives can be simultaneously achieved wherever possible, and will allow for flexibility in response to unplanned fires.
63	6.4.2 (iii)	Promote and champion (in cooperation with DWAF and the "Working on Fire" programme) the establishment of FPAs on the borders of OGNR.
64	6.4.2 (iv)	Arrange an OGNR Fire Management Workshop in February of each year.
65	6.4.3 (i)	Compile and implement an Alien Species Management Plan. Identify and itemise indicator species and determine their current species densities for OGNR.
66	6.4.3.1 (i)	Develop an ongoing time-bound programme to effectively control declared alien weeds and invader plants within OGNR and 1 km

		beyond (buffer area) the Nature Reserve boundary.
67	6431(ii)	Develop a phased 3-year plan to address the existing non-invasive
60		alien plants in OGNR.
68	6.4.3.2 (I)	Develop a control programme for alien animals present in OGNR.
69	6.4.3.2 (ii)	 Develop a new, equitable poincy for keeping personal and official domestic animals and livestock in the Nature Reserve that includes procedures for dealing in a consistent manner with alien animals that stray into the Park. This policy will, <i>inter alia</i> clearly address: Threats to biodiversity conservation as a priority. Reducing the numbers of such animals to an absolute minimum. Designating areas where these animals will be kept. They will not be allowed to roam or feed in the Park (except for official patrol horses when on patrol) or interfere in any way with tourists. The proper and hygienic care of these animals. Minimum standards (aesthetic acceptability, sizes, neatness and cleanliness) of facilities housing these animals <i>e.g.</i> stables, camps, cages <i>etc.</i>
70	6.4.4 (i)	Obtain all standards for water quality from the Municipality, review monitoring results against these standards and take appropriate actions should any standard not be met.
71	6.4.5 (i)	Map all extensive or potential human-induced / aggravated soil erosion sites and annually monitor the condition of these sites in order to prioritise rehabilitation work.
72	6.4.6 (i)	Compile and implement a Wildlife Protection Management Plan
73	6.4.6 (ii)	Compile and implement a Priority Species Management Plan and determine the status of priority species.
74	6.4.6.1 (i)	Develop a policy that addresses the introduction and population monitoring of animal species into the Nature Reserve.
75	6.4.6.2 (i)	Develop an OGNR Game Introduction and Monitoring Programme with guidelines in terms of the EKZNW Wildlife Introduction Policy and implement.
76	6.4.6.3 (i)	Develop and implement a Fishery Monitoring Programme.
77	6.4.6.4 (i)	Develop and implement a Bird Monitoring Programme.
78	6.4.6.5 (i)	The OGNR Conservation Manager will ensure that all complaints and incidents reported are investigated by the relevant staff and or District Conservation Officer (DCO) as soon as possible. Complaint details, investigation findings and remedial action taken is to be recorded in the prescribed Damage Causing Animals Complaints Register kept on station. Investigations and incident reporting is to be carried out in accordance with EKZNW's DCO Control Protocol and Guidelines .
79	6.4.7 (i)	Assessment of the field ranger component will be done monthly.
80	6.4.7 (ii)	Management will continue to prosecute those people that illegally utilise natural resources for commercial or other purposes in accordance with the legislation.
81	6.5 (i)	Develop a comprehensive Cultural Heritage Inventory and Management Plan for OGNR in collaboration with SAHRA and Amafa. Institutional capacity will also be addressed by this plan.
82	6.5 (ii)	Identify archeological, historical, paleontological and cultural heritage sites at OGNR. Ensure compliance with the requirements of Amafa.
83	6.6 (i)	Control or 'bench mark' areas within OGNR will be identified where no extractive resource utilisation of indigenous species will take place.
84	6.6.1 (i)	Evaluate Resource Use in OGNR in terms of EKZNW policies for the Evaluation of Extractive Resource Use. If possible, sustainable and feasible in terms of this guideline, develop a resource use

		management plan and implement.
		Cognisant of the OGNR IMP and CDP policy guidelines, develop OGNR Eco-cultural Tourism Development and Marketing Strategy
85	6.7 (i)	 that addresses: the attainment of professional tourism service delivery standards. branding and marketing.
		 Inkages with other regional tourist initiatives. public / private partnerships. cultural heritage tourism. visitor awareness, orientation and interpretation.
86	6.7 (ii)	Develop and communicate formal procedures for local tourism user groups.
87	6.7 (iii)	Develop and implement Visitor Management Plan. Undertake analysis of available recreational facilities and identify opportunities to improve these.
88	6.8 (i)	Compile educational material on environmental and cultural aspects of the Nature Reserve.
89	6.8 (ii)	Engage in biodiversity and cultural education with schools, communities, interest groups and staff.
90	6.8 (iii)	Facilitate access to educational information pertaining to the history of the Nature Reserve and surrounding areas.
91	6.8 (iv)	Develop an OGNR environmental awareness education programme specifically for neighbouring communities and the general public interest groups.
92	6.8 (v)	Develop an interpretation programme in a standard format for the Nature Reserve.
93	6.8 (vi)	Investigate the possibility of combining environmental awareness programmes with social programmes offered by other institutions in the general area of the Nature Reserve.
94	6.9 (i)	Develop a prioritised OGNR natural and cultural heritage research project list.
95	6.9 (ii)	Develop procedures that will ensure that all abiotic and biotic data collected are captured in managed databases and GIS data layers for interrogation by researchers and managers.
96	6.9 (iii)	Investigate the potential in or near OGNR for the development of permanent research facilities.
97	6.9 (iv)	Identify and develop reference library facilities and procedures to maintain hard and digital copies of all OGNR related research work, all documents listed as IMP supporting documentation in Appendix 1 as well as any new supporting management documentation produced. Strict curation rules will apply and the ultimate responsibility for the curation of this library at OGNR will be allocated to the most senior reserve management position and the Regional Co-ordinator: Ecological Advice at the Coastal Regional Office.
98	6.9.1 (i)	An appropriate monitoring and evaluation programme for each of the above components is to be developed for the Nature Reserve and implemented.
99	6.10 (i)	Develop and maintain an OGNR Infrastructure database and map.
100	6.10 (ii)	 Review the desirability and effectiveness of all present infrastructure associated with the Nature Reserve with regard to: Adequacy. State of repair. Existing maintenance plans and programs. Visitor and staff use, requirements and values. Financial.
		 Environmental impact (negative and positive). Income generation. Possibilities of outsourcing.

101	6.10.2 (i)	The need for a boundary fence must be assessed and erected if necessary.
102	6.10.5 (i)	All vehicle roads and tracks will be evaluated for the suitability of their alignment and recommendations made for new vehicle roads and tracks, repair or closure (with rehabilitation measures) of existing ones.
103	6.10.10.1 (i)	Develop an integrated waste management plan for OGNR.
104	6.10.10.1 (ii)	Develop, install and maintain effective standardized solid waste receptacles for OGNR that are animal and baboon / monkey-proof.
105	6.10.10.2 (i)	All sewage systems in OGNR will be investigated for legal compliance. A phased development plan to upgrade existing systems and septic tank / French drain systems will be put in place.
106	6.10.11 (i)	Develop a phased plan to install standardised (reliable and tested) water- and energy-saving devices throughout OGNR as soon as practically possible.
107	6.10.12 (i)	Determine the requirement for helicopter landing pads on OGNR. If required and approved, select site/s and maintain according to minimum aviation standards.
108	6.10.13 (i)	Management will maintain a secure entry controls system and maintain a high level of internal security in order that visitors and their belongings will be safe and secure.
109	6.10.13 (ii)	All Reserve staff will receive appropriate training regarding all health and safety aspect and will receive refresher course training as required on a regular basis.
110	6.11.3 (i)	Compile and implement an Infrastructure Management Plan.
111	6.11.3 (ii)	Develop a Concept Development Plan and align with Municipal Planning.
112	7.1 (i)	The PAMC will undertake a five-yearly review of this IMP in 2013 to revise and amend the IMP for the following five years.
113	7.2 (i)	Convene a PAMC meeting annually in November to monitor, evaluate and report on progress in terms of this IMP, plan and, if necessary, recommend the re-prioritisation of management activities or amendments to the IMP. Ensure all resource needs are submitted when budgets are being prepared.

8.2 Alignment of IMP Action Projects with Prioritised Management Objectives

The 113 IMP Action Projects from **Table 2** have been aligned with the Management Objectives and are listed in **Table 3** below.

The IMP Action Projects in many cases are cross-cutting in achieving more than one objective. To aid prioritisation they have been placed (listed in number sequence) under the objective where they are likely to make the greatest contribution.

Table 3: IMP Action Projects aligned with and supporting the various OGNR Management Objectives.

Conservation				
Conservation of key biodiversity features, biophysical processes, landscapes, abiotic, bistorical and archaeological resources				
Conserve the O	ribi Gorge Nature Reserve and its associated biodiversity			
3.6.3 (i)	Identify the biodiversity importance and implications of immature soil profiles for management.			
3.6.3 (ii)	Map the soils showing areas susceptible to erosion.			
3.6.3 (iii)	Write and submit for approval, a soil erosion control plan.			
3.8 (i)	Write the management plan in order to maintain and monitor the quantity and quality of water in the rivers.			
3.10.4 (i)	Determine which of the bird species breed in the Nature Reserve, and ensure that management protocols are set in place to maintain and conserve these breeding sites for the long – term persistence of the species.			
Facilitate enviro	nmental and cultural activities, education and awareness, including access to historical			
	Investigate and implement additional environmental education programmes for			
6.2.5 (i)	communities surrounding OGNR.			
6.8 (vi)	Investigate the possibility of combining environmental awareness programmes with social programmes offered by other institutions in the general area of the Nature Reserve.			
Contribute to the	e achievement of national and provincial conservation targets			
4.6 (i)	Set conservation targets and monitoring strategies for the identified species.			
4.6 (ii)	Develop conservation targets and monitoring strategies for Cultural, Business and Partnerships.			
Identify and con	trol threats to biodiversity			
3.10.2 (i)	Identify the major threats to Fish Species in OGNR.			
3.10.3 (i)	Compile through further research and monitoring, checklists of the Herpetofauna. Identify the major threats to Herpetofauna in OGNR.			
3.10.4 (ii)	Identify the major threats to Avifauna in OGNR.			
3.10.5 (i)	Identify the major threats to Mammals in OGNR.			
Safeguard the archaeological, historical, paleontological and living cultural heritage of the Reserve.				
3.11 (ii)	Identify the archaeological, historical, paleontological and cultural heritage sites at OGNR. Ensure compliance with requirements of heritage legislation.			
3.12 (i)	Conduct research on the archaeology of the OGNR.			
3.12 (ii)	Make use of archaeology and evidence of the past cultures that inhabited the area in describing the cultural heritage value of OGNR.			
6.5 (ii)	Identify archaeological, historical, paleontological and cultural heritage sites at OGNR. Ensure compliance with the requirements of Amafa.			

Other Action Projects supporting OGNR Conservatuion Management.			
2.1.1 (i)	Obtain written assignment from the MEC re - appointing EKZNW as the management authority for OGNR in terms of Section 38(2) of PAA.		
2.4 (i)	Obtain the services of a land surveyor to register the consolidated OGNR with the Surveyor General and seek the proclamation of the area by the MEC.		
2.6 (i)	Annually explore and investigate opportunities to extend conservation land use in and around OGNR.		
3.3 (i)	Update the previous land use of OGNR		
3.4 (i)	Update the conservation history for OGNR indicating the importance of the proclamation.		
3.5 (i)	Maintain the collection and storage of climatic data records.		
3.7 (i)	Investigate the geomorphology for OGNR.		
3.9 (i)	Develop a plant species list. This list will be filed with the Conservation Manager at OGNR.		
3.9 (ii)	Develop a flora monitoring programme for OGNR.		
3.9 (iii)	Compile and implement a flora management plan that addresses the threats to priority flora.		
3.9 (iv)	Compile a flora map and diagnostics species list.		
3.10 (i)	Copies of the Species Checklists will be updated and filed manually and digitally at the OGNR Management and Regional Offices as well as the Conservation Manager for easy reference. The copies will be updated in accordance with any authorised amendments. A fixed protocol for compiling and maintaining these checklists needs to be developed to ensure that they provide accurate, comparable and contemporary baseline data for management and scientific purposes.		
3.10.1 (i)	Compile through further research and collecting a checklist of the invertebrate species found in OGNR.		
3.10.2 (ii)	Develop and implement a Fish Species Monitoring Programme.		
3.10.3 (ii)	Develop and implement a Herpetofauna Species Monitoring Programme.		
3.10.5 (ii)	Develop and implement a Mammals Species Monitoring Programme.		
3.11 (i)	Map the GPS Co-ordinates and provide Management Plans for these sites.		
3.15 (i)	Identify and map infrastructure using GIS and include in a spatial database. Develop standard protocols and procedures for infrastructure in OGNR.		
3.15 (ii)	Repair, where necessary, the standard and state of the existing infrastructure provided in the OGNR.		
3.15.4 (i)	Develop a maintenance plan for all trails and fences.		
3.15.5 (i)	Update OGNR Map to include the location of all water supply infrastructure.		
3.15.6 (i)	Compile MoA between different service providers and OGNR. Manager needs to ensure that he is familiar with all agreements.		
5 (i)	Revise the existing OGNR zonation plan in accordance with the new EKZNW standard zonation system as soon as it is developed and approved.		
6.3 (i)	Develop an integrated security strategy for the Nature Reserve that ensures collaboration with all relevant institutions.		
6.3 (ii)	Develop and implement a Civil Emergency Procedures Plan.		
6.4.2 (i)	Develop an OGNR Fire Management Plan that provides comprehensive fire management objectives, scientific understanding, management actions, legal compliance, personnel training requirements, monitoring and research required and resources needed.		
6.4.2 (ii)	Develop a computerized decision support tool linked to GIS that will be included in the Fire Management Plan, to assist in the planning of burns at the annual Fire Workshop. This rule-based tool will ensure that OGNR- wide and area-specific fire management objectives can be simultaneously achieved wherever possible, and will allow for flexibility in response to unplanned fires.		
6.4.2 (iii)	Promote and champion (in cooperation with DWAF and the "Working on Fire" programme) the establishment of FPAs on the borders of OGNR.		
6.4.2 (iv)	Arrange an OGNR Fire Management Workshop in February of each year.		
6.4.3 (i)	Compile and implement an Alien Species Management Plan. Identify and itemise		

	indicator species and determine their current species densities for OGNR.
6.4.3.1 (i)	Undertake a full species survey for alien plant species present and map this.
6.4.3.1 (ii)	Develop an ongoing time-bound programme to effectively control declared alien weeds and invader plants within OGNR and 1 km beyond (buffer area) the Nature Reserve boundary.
6.4.3.1 (iii)	Develop a phased 3-year plan to address the existing non-invasive alien plants in OGNR.
6.4.3.2 (i)	Develop a control programme for alien animals present in OGNR.
6.4.3.2 (ii)	Develop a management strategy that will minimize the negative impact of alien fish and promote the establishment of sustainable populations of fish species indigenous to OGNR.
6.4.3.2 (iii)	 Develop a new, equitable policy for keeping personal and official domestic animals and livestock in the Nature Reserve that includes procedures for dealing in a consistent manner with alien animals that stray into the Park. This policy will, <i>inter alia</i> clearly address: Threats to biodiversity conservation as a priority. Reducing the numbers of such animals to an absolute minimum. Designating areas where these animals will be kept. They will not be allowed to roam or feed in the Park (except for official patrol horses when on patrol) or interfere in any way with tourists. The proper and hygienic care of these animals. Minimum standards (aesthetic acceptability, sizes, neatness and cleanliness) of facilities housing these animals <i>e.g.</i> stables, camps, cages <i>etc.</i> Disciplinary measures for staff transgressing these regulations or failing to enforce these measures.
6.4.4 (i)	Obtain all standards for water quality from the Municipality, review monitoring results against these standards and take appropriate actions should any standard not be met.
6.4.5 (i)	Map all extensive or potential human-induced / aggravated soil erosion sites and annually monitor the condition of these sites in order to prioritise rehabilitation work.
6.4.6 (i)	Compile and implement a Wildlife Protection Management Plan.
6.4.6.1 (i)	Develop a policy that addresses the introduction and population monitoring of animal species into the Nature Reserve.
6.4.6.2 (i)	Develop an OGNR Game Introduction and Monitoring Programme with guidelines in terms of the EKZNW Wildlife Introduction Policy and implement.
6.4.6.3 (i)	Develop and implement a Fishery Management Plan for OGNR.
6.4.6.4 (i)	Develop and implement a Bird Management Plan for OGNR.
6.4.6.5 (i)	The OGNR Conservation Manager will ensure that all complaints and incidents reported are investigated by the relevant staff and or District Conservation Officer (DCO) as soon as possible. Complaint details, investigation findings and remedial action taken is to be recorded in the prescribed Damage Causing Animals Complaints Register kept on station. Investigations and incident reporting is to be carried out in accordance with EKZNW's DCO Control Protocol and Guidelines .
6.4.7 (i)	Assessment of the field ranger component will be done monthly.
6.4.7 (ii)	Management will continue to prosecute those people that illegally utilise natural resources for commercial or other purposes in accordance with the legislation.
6.5 (i)	Develop a comprehensive Cultural Heritage Inventory and Management Plan for OGNR in collaboration with SAHRA and Amafa. Institutional capacity will also be addressed by this plan.
6.6 (i)	Control or 'bench mark' areas within OGNR will be identified where no extractive resource utilisation of indigenous species will take place.
6.6.1 (i)	Evaluate Resource Use in OGNR in terms of EKZNW policies for the Evaluation of Extractive Resource Use. If possible, sustainable and feasible in terms of this guideline, develop a resource use management plan and implement.
6.9 (i)	Develop a prioritised OGNR natural and cultural heritage research project list.
6.9 (ii)	Develop procedures that will ensure that all abiotic and biotic data collected are captured in managed databases and GIS data layers for interrogation by researchers and managers.

6.9 (iii)	Investigate the potential in or near OGNR for the development of permanent research facilities.				
6.9 (iv)	Identify and develop reference library facilities and procedures to maintain hard and digital copies of all OGNR related research work, all documents listed as IMP supporting documentation in Appendix 1 as well as any new supporting management documentation produced. Strict curation rules will apply and the ultimate responsibility for the curation of this library at OGNR will be allocated to the most senior reserve management position and the Regional Co-ordinator: Ecological Advice at the Coastal Regional Office.				
6.9.1 (i)	An appropriate monitoring and evaluation programme for each of the above components is to be developed for the Nature Reserve and implemented.				
6.10 (i)	Develop and maintain an OGNR Infrastructure database and map.				
6.10 (ii)	 Review the desirability and effectiveness of all present infrastructure associated with the Nature Reserve with regard to: Adequacy. State of repair. Existing maintenance plans and programs. Visitor and staff use, requirements and values. Financial. Environmental impact (negative and positive). Income generation. Possibilities of outsourcing. 				
6.10.2 (i)	The need for a boundary fence must be assessed and erected if necessary.				
6.10.5 (i)	All management tracks will be evaluated for the suitability of their alignment and recommendations made for new vehicle roads and tracks, repair or closure (with rehabilitation measures) of existing ones.				
6.10.10.1 (i)	Develop an integrated waste management plan for OGNR.				
6.10.10.1 (ii)	Develop, install and maintain effective standardized solid waste receptacles for OGNR that are animal and baboon / monkey-proof.				
6.10.10.2 (i)	All sewage systems in OGNR will be investigated for legal compliance. A phased development plan to upgrade existing systems and septic tank / French drain systems will be put in place.				
6.10.11 (i)	Develop a phased plan to install standardised (reliable and tested) water- and energy- saving devices throughout OGNR as soon as practically possible.				
6.10.12 (i)	Determine the requirement for helicopter landing pads on OGNR. If required and approved, select site/s and maintain according to minimum aviation standards.				
6.10.13 (i)	Management will maintain a secure entry controls system and maintain a high level of internal security in order that visitors and their belongings will be safe and secure.				
6.10.13 (ii)	All Reserve staff will receive appropriate training regarding all health and safety aspect and will receive refresher course training as required on a regular basis.				
7.1 (i)	The PAMC will undertake a five-yearly review of this IMP in 2013 to revise and amend the IMP for the following five years.				
7.2 (i)	Convene a PAMC meeting annually in November to monitor, evaluate and report on progress in terms of this IMP, plan and, if necessary, recommend the re-prioritisation of management activities or amendments to the IMP. Ensure all resource needs are submitted when budgets are being prepared.				
Socio-Economic Benefits The provision of socio-economic benefits (benefit flow) to the Reserve's neighbours and to contribute to the local economy and the efforts of conservation in a sustainable manner based on sound business principles (EKZN Business Plan)					
Other Action Projects supporting OGNR Socio-Economic Management Objective.					
3.13 (i)	Update the Sociological context and its importance to OGNR.				
3.14 (i)	Update the economic context and its importance for OGNR.				
6.1.1 (ii)	Initiate a resource economics study of the Nature Reserve to determine its economic value regarding the provision of ecosystem services and its contribution to the local and regional economy.				
6.2.2 (i)	The Community Levy will continue to be collected for the development and upliftmer				
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	Of the fold community will continued to be practiced, investigate				
6.2.3 (i)	other employment opportunities that will benefit the surrounding local communities				
6.2.7 (i)	Annually in March of each year arrange a public meeting to give feedback progress, planned projects and encourage informal local community participation.				
Business					
The provisi	on of appropriate ecotourism business opportunities in the natural and cultural				
environmen	t based within the influence sphere of OGNR				
Other Action Pre	ojects supporting OGNR Business Management Objective.				
2.5 (i)	Obtain and review all formal and informal local agreements, leases, servitude arrangements <i>etc.</i> pertaining to OGNR and document, update, maintain and monitor these appropriately authorised agreements. All informal agreements are to be formalised and approved by the Executive.				
6.1.1 (i)	Develop a five-year Strategic Management Plan and Business Plan for OGNR.				
6.1.2 (i)	Investigate and develop an appropriate human resource structure and capacity of OGNR with a view to improving effectiveness and efficiency in achieving OGNR objectives and informing the Business Plan.				
Partnersh	ips				
The forma	tion of functional partnerships to integrate the OGNR with regional development				
plans and	other initiatives which underwrite the vision of OGNR				
Promote a	and ensure effective communication between the local communities and EKZINW				
tinough int	Implementation of EKZNW IEM Policy. Create awareness of or inform surrounding				
4.2 (i)	landowners on the IEM process and legislation through fora.				
4.2 (iii)	Participate in existing liason fora.				
Participate as a	key stakeholder in local environmental management initiatives.				
4.2 (!!)	Participate as a key stakeholder in EIA applications for developments near the				
4.2 (II)	reserve that may impact on the protected area.				
Other Action Pre	ojects supporting OGNR Partnershiip Management Objective.				
2.1.3 (i)	Update and compile a list of all other service providers				
	Management in collaboration with other relevant EKZNW officials will be tasked with				
	active participation in the review processes of the municipal Integrated Development				
2.3 (i)	Plans (IDPs) and Spatial Development Frameworks (SDFs) in order to ensure an				
	effective buffer zone surrounding OGNR through an alignment of appropriate land				
	use adjacent to the Nature Reserve.				
	Establish relationships with neighbouring properties including Hibiscus Coast				
2.3 (ii)	Municipality to plan and restore fragmented corridors and to enable the continued				
	functioning of existing ones.				
6.2 (i)	EKZNVV will continue to work collaboratively with landoweners and surrounding				
	communities to improve conservation management of OGNR for the benefit of all.				
0.2.1 (I)	Establish a Local Board for UGNR.				
	Cognisant of the OGNR IMP and CDP policy guidelines, develop OGNR Eco-cultural				
	I ourism Development and Marketing Strategy that addresses:				
	Ine attainment of professional tourism service derivery standards.				
6.7 (i)	 branding and marketing. linkages with other regional tourist initiatives 				
	 minages with other regional tourist initiatives. public / private partnerships 				
	public / private parties illps. cultural beritage tourism				
	 visitor awareness orientation and interpretation 				
6 7 (ii)	Develop and communicate formal procedures for local tourism user groups				
67(11)	Develop and implement Visitor Management Plan. Undertake analysis of available				
0.7 (11)	Develop and implement visitor management Flan. Undertake analysis of available				

	recreational facilities and identify opportunities to improve these.	
6.8 (v)	Develop an interpretation programme in a standard format for the Nature Reserve.	
6.11.3 (i)	Develop a Concept Development Plan.	

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APPENDIX 1

List of References for Unpublished Supporting Documentation OGNR - Integrated Management Plan 2009 - 2013

Copies available from:

Coastal Regional Office of Ezemvelo KZN Wildlife. Private Bag X3. Congella. 4013 Contact person: Ecological Advice Coordinator, Coastal Region

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- 1. EKZNW Corporate Strategic Plan and Performance Plan for 2009-2014.
- 2. EKZNW Corporate Policies (Norms & Standards) listed in Appendix 2.
- 3. EKZNW Biodiversity Database Checklists for OGNR.
- 4. Amafa / EKZNW Co-operative Conservation Management of Cultural Heritage Agreement (signed July 2005).
- 5. List of local agreements, leases and other servitude arrangements pertaining to OGNR.
- 6. Guidelines for the Registration and Administration of Research Projects Undertaken by or through Ezemvelo KZN Wildlife (August 2002).
- 7. Public Participation Report for Oribi Gorge Nature Reserve.

EKZNW CORPORATE POLICIES (NORMS & STANDARDS)				
Policy File				
<u>No.</u>	CORPORATE AFFAIRS			
B 2	Access to Ezemvelo KZN Wildlife Areas and Employment.			
B 5	Outsourcing of Functions and Services			
B 7	 Monuments, Memorials and Names of Protected Areas under the control of EKZNW. 			
<u> </u>	Restricted use of Board Theatres, Halls and Conference Facilities etc.			
B 9	Code of Ethics / Conduct.			
B 10	Photography in Board Protected Areas.			
B 13	Mission Statement			
B 14	Access to Information.			
No				
<u>C 5</u>	Management Control			
	BIODIVERSITY CONSERVATION OPERATIONS			
	1. NATURAL RESOURCE SUSTAINABILITY			
Policy File				
No.	Threatened Species and Ecosystems			
D 1.1	Disposal of Black Rhino.			
D 1.2	Disposal of Surplus White Rhino.			
D 1.3	Strategy for the Management of Southern White Rhino in KwaZulu-Natal.			
D 1.4	Strategy for the Biological Management of Black Rhino in KwaZulu-Natal.			
D 1.5	Rhinoceros Products.			
D 1.6	Crocodilians			
D 1.7	Cycads.			
D 1.8	Disposal of Threatened Species.			
Policy File	Exotic and Invasive Species			
	Exotic and invasive Species			
D 1 10	Control Measures for Red billed Queles			
D 1.10	Grass Carp			
D 1 13	Establishment of Alien Plantations			
Policy File				
No.	Migratory Species			
D 1.14	Black Wildebeest and Blue Wildebeest Hybridization and Conservation.			
D 1.15	Permit authorising the collection of Biological Material within Board Areas.			
	2. CONSERVATION EFFECTIVENESS			
Policy File				
<u>No.</u>	Strategic Applications			
D 2.1	 Involvement of the Kwazulu-Natal Nature Conservation Board in Project 8 of the MAB (Man and Biosphere) Programme. 			

Policy File			
<u>No.</u>	Conservation Management: Protected Area Management		
D 2.2	Management of Wilderness Areas.		
D 2.3	Protected Area Development.		
D 2.4	Prohibition of Works and Servitudes in Board Areas.		
D 2.5	 Zonation and Regulations for the control of off-road vehicles on beaches controlled by the Board. 		
D 2.6	Quarries in KZN Protected Areas.		
D 2.7	 Re-establishment and Management of Vegetation on Development Sites in the Ezemvelo KZN Wildlife Protected Areas. 		
D 2.8	Ecotourism and Protected Areas.		
D 2.9	Solid Waste Management within Protected Areas.		
D 2.10	State Security Service Activities within Board Areas.		
D 2.11	Shark Nets in or bordering KwaZulu-Natal Nature Conservation Board Controlled Areas.		
Policy File			
No.	Integrated Environmental Management		
D 2.12	Integrated Environmental Management - incorporating the procedure for the assessment of the impact of proposed development projects on nature conservation concerns.		
D 2.13	Precautionary Principle.		
D 2.14	Shark Net Installations.		
D 2.15	Bioprospecting in KwaZulu-Natal.		
D 2.17	Use of Pesticides by the Ezemvelo KZN Wildlife: Safety to Humans and the Environment.		
D 2.18	Interference with the Mouth of a Lagoon or River (Breaching).		
Policy File			
No.	Ex Situ Wild Animal Management		
D 2.21	Re-establishment of Terrestrial Mammals in Board Areas.		
D 2.22	1		
D 2.25	Translocation of Animals.		
	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. 		
D 2.27	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. 		
D 2.27	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs 		
D 2.27 D 2.28 D 2.29	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Ealconry 		
D 2.27 D 2.28 D 2.29	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Falconry. 		
D 2.27 D 2.28 D 2.29 Policy File <u>No.</u>	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Falconry. 		
D 2.27 D 2.28 D 2.29 Policy File No. D 2.30	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Falconry. Human Animal Conflict - Inside and Outside Protected Areas Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas. 		
D 2.27 D 2.28 D 2.29 Policy File <u>No.</u> D 2.30 D 2.31	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Falconry. Human Animal Conflict - Inside and Outside Protected Areas Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas. Problem Animal Control. 		
D 2.27 D 2.28 D 2.29 Policy File <u>No.</u> D 2.30 D 2.31 D 2.32	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Falconry. Human Animal Conflict - Inside and Outside Protected Areas Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas. Problem Animal Control. Compensation claims in respect of damage caused by Lion, Cheetah, Wild Dog and Elephant to Stock and Crops.		
D 2.27 D 2.28 D 2.29 Policy File No. D 2.30 D 2.31 D 2.32 D 2.33	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Falconry. Human Animal Conflict - Inside and Outside Protected Areas Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas. Problem Animal Control. Compensation claims in respect of damage caused by Lion, Cheetah, Wild Dog and Elephant to Stock and Crops. Instances of Death as a result of an Unprovoked Attack by a Wild Animal Normally contained and originating from within a Fenced Protected Area under the Control of the KwaZulu-Natal Nature Conservation Board.		
D 2.27 D 2.28 D 2.29 Policy File <u>No.</u> D 2.30 D 2.31 D 2.32 D 2.33	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Falconry. Human Animal Conflict - Inside and Outside Protected Areas Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas. Problem Animal Control. Compensation claims in respect of damage caused by Lion, Cheetah, Wild Dog and Elephant to Stock and Crops. Instances of Death as a result of an Unprovoked Attack by a Wild Animal Normally contained and originating from within a Fenced Protected Area under the Control of the KwaZulu-Natal Nature Conservation Board.		
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D 2.27 D 2.28 D 2.29 Policy File <u>No.</u> D 2.30 D 2.31 D 2.32 D 2.33 Policy File <u>No.</u> D 2.34	 Translocation of Animals. Elephant Introductions and Elephant in Enclosures. Introduction and Keeping of Large Predators in Enclosures in KZN. Use of Narcotic Drugs. Falconry. Human Animal Conflict - Inside and Outside Protected Areas Disposal of Leopard from Ezemvelo KZN Wildlife Protected Areas. Problem Animal Control. Compensation claims in respect of damage caused by Lion, Cheetah, Wild Dog and Elephant to Stock and Crops. Instances of Death as a result of an Unprovoked Attack by a Wild Animal Normally contained and originating from within a Fenced Protected Area under the Control of the KwaZulu-Natal Nature Conservation Board. Environmental Education Policy.		

	3. BIODIVERSITY PROTECTION		
Policy File			
<u>No.</u>	Co-management		
D 3.1	 Supply of Game to Conservancies, Community Conservation Areas and Biosphere Reserves in KwaZulu-Natal 		
D 3.2	Establishment and Management of Community Conservation Reserves (CCR)		
D 3.4	Community Conservation Programmes		
D 3.5	Neighbours' Access to Board Protected Areas		
D 3.6	Relationship with Local Boards		
D 3.7	 Conservation Partnerships Between KwaZulu-Natal Nature Conservation Board and Adjacent Landowners 		
D 3.8	Community Trust		
D 3.9	Community Levy Policy and Guidelines		
D 3.10	Land Claims on Proclaimed and Unproclaimed Provincial and Assigned National Protected areas in KwaZulu-Natal		
D 3.11	Amafa Policy Guidelines for the access of rock art sites in KwaZulu Natal		
Policy File			
<u>No.</u>	Resource-use benefits		
D 3.12	Disposal of Venison from Ezemvelo KZN Wildlife Management Operations.		
D 3.13	Sustainable use of wildlife resources.		
D 3.14	Freshwater Angling.		
D 3.15	Freshwater species utilisation.		
D 3.16	Use of plant resources from protected areas.		
D 3.17	Use of doomed biological material.		
D 3.19	Provision of hunting by Ezemvelo KZN Wildlife.		
Policy File No.	4. RELATIONSHIPS		
D 4.1	Neighbour Relations.		
D 4.2	Participation - Non Government Organisations.		
D 4.3	Data Access.		
D 4.4	Consultation and Communication with Stakeholders: Policy and Guidelines.		
Policy File			
<u>No.</u>	COMMERCIAL OPERATIONS		
E 1	Concessions for Welfare Groups.		
E 2	Hiking and Mountaineering.		
E 3	Educational Concessions.		
E 4	Club Facilities within Board Areas.		
E 5	Hutted Camps.		
E 6	Joint Venture Scheme.		
E 7	Allocation of Sites in terms of the Joint Venture Scheme.		
E 8	Access to Protected Areas through Unofficial Entry Points.		
E 9	Visitor Facilities Management by Ezemvelo KZN Wildlife.		
E 10	Lease of Lakeshore at State Dam Protected Areas.		
E 11	• Execution, Control and Management of Leases and Concession Contracts (excluding Biodiversity Conservation Partnerships and Leases of Wildlife).		
E 12	Private Sector Reservations Policy.		
E 13	Partnerships for Eco-Tourism Development within or Adjacent to Protected Areas		
E 14	Discounting of Tariffs for Walk-in Guests.		

E 15	•	Ecotourism Discounting Strategy.	
E 16	•	Travel Trade Commissions: Tour Operator/ Travel Agency.	
E 17	•	Policy and Procedure for the establishment and monitoring of Commercial Operations Public Private Partnership (PPP) Agreements.	
E 18	•	Administrative and operational policy on Professional hunting in South Africa.	
E 19	•	Commercialisation.	

CATEGORY	DESCRIPTION OF CRITERIA TO BE USED FOR ZONATION	SETTING DESCRIPTIONS (AS FROM ROS HANDBOOK)
Semi-	Closely related to the above zone.	Area is characterised by a
Primitive	but usage of formalized trails at a	predominantly natural or natural-
Non-	high intensity – concreting/rock-	appearing environment of
motorised	packing of trails	moderate to large size
motorised	Natural environment experience	interaction between users is low
	non-motorised use usually a buffer	but there is often evidence of
	between Wilderness and semi-	other users. The area is managed
	primitive wilderness/roaded natural	such that minimum on-site
	areas	controls and restrictions may be
	Visual and audio impact from	present but are subtle
	outside at a short distance (< 5 km)	Motorised use is not permitted
	May be hiking buts or other types of	motorised use is not permitted.
	low-scale accommodation possible	
	field ranger outposts	
Semi-	4x4 trails and their area of impact	Area is characterised by
Primitive	(audio and visual)	predominantly natural or natural-
Motorised	Visitor and management tracks and	appearing environment of
motorioou	their zone of visual and audio impact	moderate to large size.
	(GIS to be used to determine exact	Concentration of users is low.
	range of impact hence an initial	but there is often evidence of
	distance of 100m other side has	other users. The area is managed
	been set)	in such a way that minimum on-
	Rustic accommodation, or low-level.	site controls and restrictions may
	low intensity tourism nodes (no	be present, but are suitable.
	bigger than 10 – 20 beds).	Motorised use is allowed.
Rural	A rural recreational node/area, rather	Area is characterised by a
	than as a nature-based experience.	substantially modified natural
	Resort type development rather than	environment. Resource
	a nature-based tourism facility.	modifications and utilisation
		practices are to enhance specific
		recreation activities and to
		maintain vegetative cover and
		soil. Sights and sounds of
		humans are readily evident and
		the interaction between users is
		often moderate-high. A number
		of facilities are designed for use
		by a large number of people.
		Facilities are often provided for
		special activities. Moderate
		densities are provided far away
		from developed sites. Facilities
		for intensified motorized use and
		parking are available.



Map 2a: Topographical Map of OGNR



Oribi Gorge Nature Reserve Integrated Management Plan 2009-2013 (version 1.0)





Map 3: Zonation Map of OGNR



Map 4a: Vegetation Map of OGNR



Map 4b: Vegetation Map of OGNR



Map 5: Infrastructure Map of OGNR



Oribi Gorge Nature Reserve Integrated Management Plan 2009-2013 (version 1.0)

Map 6: Trails Map of OGNR

