

Development of an Environmental Management Framework for the Msunduzi Municipality Final Inception Report

**Report Prepared for
Department of Environmental Affairs and Tourism,
KwaZulu-Natal Department of Agriculture and
Environmental Affairs,
Msunduzi Municipality**

Report No 376998-FIR

March 2008



Development of an Environmental Management Framework for Msunduzi Municipality

Final Inception Report

SRK Project Number 376998

**SRK Consulting
Suite 201 Sinodale Centre
345 Burger Street
Pietermaritzburg, 3201
South Africa**

**P O Box 460
Pietermaritzburg
3200
South Africa**

Tel: (033) 345-6311

Fax: (033) 345-6403

pemanuel@srk.co.za

March 2008

Compiled by:



Philippa Emanuel

Reviewed by:



Kirsten King

Table of Contents

1	Introduction.....	1
2	Inception Phase.....	1
2.1	Purpose of the Inception Phase.....	1
2.2	Purpose of this Report.....	1
3	Approach.....	2
3.1	Project Objectives.....	2
3.2	Work program.....	3
3.3	Project team.....	3
4	Literature Review.....	4
5	Detailed Project Methodology.....	4
5.1	Situational Analysis.....	4
5.1.1	Floodlines.....	5
5.1.2	Geotechnical.....	5
5.1.3	Surface Water Resources.....	6
5.1.4	Wetlands.....	7
5.1.5	Agriculture.....	8
5.1.6	Biodiversity.....	8
5.1.7	Air quality.....	9
5.1.8	Resource Economics.....	10
5.1.9	Service Capacity.....	10
5.1.10	Socio-economic analysis and planning policy review.....	12
5.1.11	Cultural Heritage Assessment.....	13
5.1.12	Institutional Framework.....	14
5.1.13	Compilation of the Situational Analysis Report.....	14
5.2	Strategic Environmental Assessment.....	15
5.2.1	Desired State of the Environment.....	15
5.2.2	Issues Identification.....	15
5.2.3	Identify development trends and strategic land use patterns and conflicts.....	15
5.2.4	Determine environmental constraints and opportunities to development.....	16
5.2.5	Impact Assessment of Development Scenarios.....	16
5.2.6	SEA Report.....	16
5.3	Municipal Open Space System.....	16
5.4	Environmental Management Framework.....	16
5.5	Environmental Policy and Strategic Environmental Management Plan.....	17

6	Communication Strategy	18
6.1	Stakeholder Identification	18
6.2	Stakeholder Classification	18
6.3	Stakeholder Analysis	19
6.4	Public Involvement Strategy	19
7	Budget	21
8	Conclusions and Recommendations	21
9	References	23
	Appendix 1: Project Terms of Reference	24
	Appendix 2: Project Gantt Chart	25
	Appendix 3: Issues Identified	26
	Appendix 4: Indicators	27
	Appendix 5: Stakeholder Analysis	28

List of Tables

Table 1: Proposed Project Timing	3
Table 2: Proposed Project Team.....	3
Table 3: Public Involvement Tasks and Timing.....	20
Table 4: Project Budget.....	21

List of Figures

Figure 1: Stakeholder analysis matrix template.....	19
---	----



18 March 2008

386998

Final Inception Report for the development of an Environmental Management Framework for the Msunduzi Municipality

1 Introduction

The Msunduzi Municipality, in partnership with the national Department of Environmental Affairs and Tourism (DEAT) and the KwaZulu-Natal Department of Agriculture and Environmental Affairs (DAEA), has recognised that to support sustainable social, economic and environmental development within the Municipality, the adoption and implementation of an appropriate policy to inform development planning and approval is required. A comprehensive environmental policy framework will allow systematic conservation planning and management of the use of environmental resources, while safeguarding important components and viable representative samples of the natural environment. To address these requirements, the preparation of an Environmental Management Framework (EMF) is proposed for the Msunduzi municipal area. In August 2007 SRK Consulting (SRK) was appointed to prepare the Msunduzi EMF to include a Strategic Environmental Assessment (SEA), a Municipal Open Space System (MOSS), a Strategic Environmental Management Plan (SEMP) and the EMF for the Msunduzi Municipality.



Partners JCJ Boshoff, MJ Braune, JM Brown, JAC Cowan, CD Dalglish, JR Dixon, DM Duthie, T Hart, PR Labrum, DJ Mahlangu, RRW McNeill, HAC Meintjes, BJ Middleton, MJ Morris, GP Murray, GP Nel, VS Reddy, PN Rosewarne, PE Schmidt, PJ Shepherd, VM Simposya, AA Smithen, PJ Terbrugge, KM Uderstadt, AJ van der Merwe, DJ Venter, HG Waldeck, A Wood
Directors AJ Barrett, S Mayekiso, BJ Middleton, MJ Morris, PE Schmidt, PJ Terbrugge
Associates AN Birtles, BM Engelsman, R Gardiner, WC Joughin, SA McDonald, WA Naismith, D Visser, AC White, ML Wertz,
Consultants AC Burger, BSc (Hons); IS Cameron-Clarke, PrSci Nat, MSc; JH de Beer, PrSci Nat, MSc; GA Jones, PrEng, PhD; MEng, TR Stacey, PrEng, DSc; OKH Steffen, PrEng, PhD; RJ Stuart, PrTech Eng, GDE; DW Warwick, PrSci Nat, BSc (Hons)

Cape Town	+27 (0) 21 659 3060
Durban	+27 (0) 31 279 1200
East London	+27 (0) 43 748 6292
Johannesburg	+27 (0) 11 441 1111
Kimberley	+27 (0) 53 861 5798
Pietermaritzburg	+27 (0) 33 345 6311
Port Elizabeth	+27 (0) 41 581 1911
Pretoria	+27 (0) 12 361 9821
Rustenburg	+27 (0) 14 594 1280



Corporate Shareholder: Kagiso Enterprises (Pty) Ltd



SRK Consulting (South Africa) (Pty) Ltd

Reg No 1995.012890.07

Dar-es-Salaam	+25 (5) 22 260 1881
Harare	+263 (4) 49 6182

2 Inception Phase

2.1 Purpose of the Inception Phase

The inception phase of the project is the point at which the client's expectations in terms of the products are discussed and methodology adapted to meet these expectations in the most efficient manner.

A Steering Committee (SC) has been formed for the project which includes representatives from DEAT, DAEA, Msunduzi Municipality, uMgungundlovu District Municipality, Department of Water Affairs and Forestry (DWAF), Ezemvelo KZN Wildlife, the KwaZulu-Natal Department of Local Government and Traditional Affairs (DLGTA) and SRK. The SC will meet regularly over the project duration to provide comment on deliverables, offer strategic guidance regarding the direction of the project and resolve any conflicts, should they arise.

The first SC meeting was held on 23 August 2007 where it was agreed that the project scale, scope and methodology should be refined with the input of key stakeholders identified during the Inception Phase. A Planning Workshop was therefore held on 19 September 2007 at the Sinodale Centre in Pietermaritzburg. Representatives from a broad range of stakeholder groups including national, provincial and local government delegates, academics, non-governmental organisations and local conservancies were invited. The main focus of the workshop was to identify key environmental issues, goals and priorities affecting Msunduzi Municipality, generate an understanding of EMFs and their value and discuss the proposed project methodology including information sources, scale of mapping and stakeholder consultation.

The primary objective of inception phase of the project (from August 2007 to March 2008) is to ensure that the project team has a full understanding of the project scope and requirements, both technical and managerial. The key components include:

- Project Initiation Meeting with the Client namely Msunduzi Municipality, DAEA and DEAT
- First, second and third SC meetings;
- Data collection and review;
- A Planning Workshop held on 19 September 2007 with key stakeholders; and
- The preparation and finalisation of the Inception Report (this report).

2.2 Purpose of this Report

The Inception Report (this report) details the proposed methodology for the project and is informed by:

- DEAT's Terms of Reference (ToR) for the project, dated March 2007 (Refer to Appendix 1);

- SRK's proposal, dated March 2007;
- The first, second and third SC meeting held on 23 August 2007;
- The Planning Workshop held with key stakeholders on 19 September 2007;
- Discussion amongst the project team and key stakeholders; and
- Existing information sources identified.

This report provides the SC with a refined project methodology, budget and timeframe. It includes:

- Detailed information on the approach to various components of the project including detailed scope of work for the specialist assessments;
- A review of available literature and data;
- A preliminary list of issues and indicators developed to inform the methodology of the specialist assessments;
- A proposed communication strategy informed by the stakeholder identification and analysis process; and
- A detailed budget reflecting the prioritisation of environmental issues as determined through the inception phase consultation process.

3 Approach

3.1 Project Objectives

Part 1 of Chapter 8 (General Matters), of the Environmental Impact Assessment (EIA) Regulations, promulgated in terms of the National Environmental Management Act, Act No. 107 of 1998 (NEMA) allows for the development and adoption of EMFs. In terms of these Regulations the objective of an EMF is to identify suitable and unsuitable geographical areas for various types of development.

The scope of work for the Msunduzi EMF also includes the production of a MOSS and the objectives therefore stretch beyond those identified in the NEMA EIA Regulations. The intention of the preparation of an EMF for the Msunduzi Municipality is to assist with:

- development planning;
- identification and protection of sensitive or important natural attributes;
- adjudication of development applications; and
- facilitation of sustainable development.

While there is a requirement for producing reports, such as the SEA and SEMP, the intention is for the project to focus on developing an Electronic Environmental Information Management System (GIS based system) that can be queried to provide information on particular areas or cadastral boundaries within the Msunduzi Municipality.

3.2 Work program

A detailed Gantt chart has been prepared and is included in Appendix 2 of this report. A summary of the project timing is provided in Table 1 below.

Table 1: Proposed Project Timing

Key Activities	Estimated Dates
1 st SC Meeting	23 August 2007
Draft Inception Report	Mid October 2007
2 nd SC Meeting	30 October 2007
3 rd Steering Committee Meeting	13 February 2008
Finalisation of Inception Report	18 March 2008
Specialist Assessment	March – May 2008
Situational Analysis Report	June 2008
4 th Steering Committee Meeting	End June 2008
SEA	July 2008 – October 2008
5 th Steering Committee Meeting	November 2008
MOSS, EMF, Environmental Policy/ SEMP	November 2008 – February 2009
6 th Steering Committee Meeting	February 2009
Finalisation of MOSS, EMF & SEMP	March 2009

3.3 Project team

The proposed project team and their respective roles are detailed in Table 2 below.

Table 2: Proposed Project Team

Organisation	Team member	Project role
Core Team		
SRK Consulting	James Morris	SRK Project Partner, project manager, GIS
	Nick Holdcroft	Project Process Review
	Donald Gibson	Strategic Process Input
	Kirsten King	Advisory and Review Environmental Practitioner
	Philippa Emanuel	Project Co-ordinator and Environmental Practitioner
	Keshan Moodley	GIS analysis and Integrated Environmental Management System development
Specialist Team		
SRK Consulting	Murray Sim	Floodlines
	Raven Kisten	Geotechnical

	Rob McNeill	Service Capacity Review
Isibuko se-Africa	Sibongiseni Maseko	Planning & socio-economic
	Ravesh Govender	
Institute for Natural Resources	Chris Dickens	Riparian Environment and Water Quality and Quantity Analysis
	Douglas McFarlane	Wetland Identification Biodiversity(Forest, Grassland and Savanna) Municipal Open Space System
	Kate Van Niekerk	Biodiversity (Grassland and Savanna)
	Bridgid Letty	Agricultural Potential
Simpson Ryder and Associates	Andrew Simpson	Air Quality
	Dave McElwee	
Ethembeni Cultural Heritage	Len van Schalkwyk	Cultural Heritage
	Beth Walh	
Archaic Consulting	Debbie Whelan	
Palmer Development Group	Mike Goldblatt	Resource Economist
ThornEx	Marita Thornhill	Strategic Environmental Assessment
Phelamanga Projects	Rod Bulman	Public Facilitation

4 Literature Review

The purpose of the literature review is to inform the project approach by identifying available information and data to assist with the situational analysis. Further, the literature review informed the issues analysis, providing (along with the stakeholder engagement) a number of issues facing the Msunduzi Municipality (Refer Appendix 3). Existing indicators available were also identified (Included in Appendix 4) from which indicators for the Msunduzi Municipality will be produced. A list of references is included in Section 9 of this report.

A database of available literature and data forms one of the products of the Inception Phase, however due to the lack of metadata for the majority of datasets available, this database is still in the process of being produced. As such the database will be circulated separately from this document. The database will, where possible, include information regarding data source, scale and date.

5 Detailed Project Methodology

5.1 Situational Analysis

The situational analysis is to comprise a number of specialist assessments which will inform a situational analysis Report. The Terms of Reference for each specialist assessment is included below. The scale and format of the digital data to be provided by the various specialists has been extensively debated during the inception phase of the project. To finally resolve this issue a workshop with the client and the various specialists has been proposed to discuss the scale and format of the end product which will then inform the scale and format of the digital data to be

produced by the various specialists. As such, where possible an indication of the recommended scale for digital data has been provided, to be finalised during the proposed workshop.

5.1.1 Floodlines

Objectives

Model potential flood zones to identify areas where more accurate floodline investigations should be undertaken.

Information Sources

- Mapping of existing floodlines (Msunduzi, 2006);
- 2m, 5m and 10m contours as available for areas within the municipality;
- August 2006 aerial imagery with a resolution of 20cm²;
- Land use mapping from the Spatial Development Framework (SDF) produced in 2006 but not to scale; and
- Anecdotal information on historical flood events from Msunduzi staff.

Methodology

The centre line of rivers (assume a flow greater than 1.2m in diameter, should the river be canalised¹) will be mapped. This information will also be necessary for the surface water resources specialist study as detailed in Section 5.1.3, and therefore resource sharing is expected. The potential flood zones of the rivers mapped will be modelled using historical flood information, land use information, 2006 aerial imagery, contour data and information from the wetland specialist study, as detailed in Section 5.1.4, regarding the locality of potential wetland areas.

Products

The product will consist of modelled GIS-based floodline zonation, together with parameters relating to accuracy and scale and a supporting report that will outline the approach, methodology, assumptions used for the assessment and recommendations for future work.

5.1.2 Geotechnical

Objectives

Identify areas of geotechnical sensitivity that may limit certain types of development.

Information Sources

- 2 m, 5m and 10m contours as available for areas within the municipality;
- 1: 50 000 geological map of Pietermaritzburg;

- 1: 250 000 geological map;
- 1: 250 000 land type map;

Methodology

Geotechnical conditions can vary over small distances and it is not possible to determine detailed geotechnical conditions throughout the municipality without extensive groundtruthing. Existing information will be used to map areas of geotechnical sensitivity and this will then be workshopped with geotechnical specialists with experience in the study area, to identify areas of sensitivity through previous site specific studies.

Products

A map of geotechnically sensitive areas together with a report detailing information and methodology used for the assessment, a description of the general geotechnical conditions within the municipality and recommendations for further investigations.

5.1.3 Surface Water Resources

Objectives

The overall approach for the assessment of surface water resources is designed to match DWAF's approach to river classification and ecological status monitoring. The objective of the assessment is to determine the health, ecological importance and sensitivity of aquatic systems in the area and determine what opportunities and constraints this may pose to development.

Information Sources

- Ezemvelo KZN Wildlife Aquatic Biodiversity Plan (EKZWN, 2007);
- Umgeni Water and DWAF water quality and biomonitoring information (Umgeni Water, 2008);
- Umgeni Water State of Rivers Reporting for the Msunduzi Catchment Management Forum Areas of Interest (Groundwork 2002);
- DWAF gauging weirs (flow) information (DWAF, 2008); and
- August 2006 aerial imagery with a resolution of 20cm² (land use activities and anticipated impacts).

Methodology

Surface water resources will be assessed in terms of river reaches, namely 9 large units each containing several sub-catchments of similar nature and with similar anthropogenic influences.

Each river reach will be assessed using relevant indicators in terms of its pristine condition, ecological significance and sensitivity, current ecological status and hydrological flow. Targets and

¹ This sets a technical threshold for the scale of the investigation. No recommendations in this study will be to canalise the upper reaches of the rivers

pressures for surface water will then be determined and recommendations made to meet targets or maintain river health. These recommendations will take the form of implementation plans to address current responses and recommend systems to monitor, evaluate and report on progress made towards improving the state of rivers.

Products

The products will consist of a report describing the situational analysis of surface water resources and additional supporting information to inform the SEA and EMF. A spatial representation of the current and desired state of rivers within the Msunduzi Municipality will also be provided. The report will recommend management priorities to improve the health of the aquatic systems with a view to improving the delivery of free environmental services to the municipal area.

5.1.4 Wetlands

Objectives

The intention of the wetland assessment is to identify potential wetland areas that will require further investigation, such as delineation and functionality assessment, prior to development.

Information Sources

- Ezemvelo KZN Wildlife Wetland GIS information at a scale of 1:50 000 (EKZWN, 2000);
- Msunduzi Municipality wetland GIS information (no date or scale available);
- 2005 landcover data, commissioned by Ezemvelo KZN Wildlife, with a resolution of 20 m, specifically the wetland category; and
- August 2006 aerial imagery with a resolution of 20cm².

Methodology

Wetland areas will be identified and mapped using existing information sources, drawing on the local knowledge of municipal officials and aerial photography. Key areas, such as Edendale, Mkondeni; Vulindlela; Montrose and Ferncliff; where significant development pressure and uncertainty regarding the extent of wetlands has been identified will be ground-truthed to further verify the presence of wetlands. Each wetland will be buffered by a 'precautionary buffer' of between 20 and 30 m.

Products

The product will consist of a report describing the methodology followed and any observations resulting from previous wetland mapping relating to changes to the number, location and area of wetlands and additional supporting information to inform the SEA and EMF. A map showing the location of wetlands and buffer zones within the Msunduzi Municipality will be provided.

5.1.5 Agriculture

Objectives

The objective of the agricultural potential analysis is to identify areas with high agricultural value to inform development planning.

Information Sources

- Modelled agricultural potential data based on Bioresource Units at a scale of 1:50 000 (DAEA Natural Resources Unit, 1999); and
- Ezemvelo KZN Wildlife (2005) landcover data with a resolution of 20m.

Methodology

Existing modelled information available from the Natural Resource Unit of the DAEA together with 2005 (or later) landcover data will be used to identify and map priority agricultural zones within the study area.

Products

The products will consist of a spatial layer indicating high value agricultural land that should be considered during development planning and a report outlining the methodology applied and recommendations for further work to be undertaken to determine the state of agricultural land and current use levels.

5.1.6 Biodiversity

Objectives

The aim of the biodiversity assessment is to qualitatively assess and map the biodiversity importance of untransformed and partially untransformed land within the Msunduzi Municipality. The approach has been developed to add value to existing biodiversity information available for the study area.

Information Sources

- Ezemvelo KZN Wildlife SEA Conservation Plan and MinSet (1km grid resolution) ;
- Ashburton Strategic Environmental Assessment (Guy Nicolsom Consulting CC, 2006);
- Ezemvelo KZN Wildlife biodiversity databases (resolution of between 0.05-25 km) and modelled species distribution (EKZMW, 2007);
- Ezemvelo KZN Wildlife professional expertise within staff complement;
- Ezemvelo KZN Wildlife (2005) landcover data with a resolution of 20m;
- August 2006 aerial imagery with a resolution of 20cm²; and
- Municipal cadastral database (Msunduzi, 2008).

Methodology

The biodiversity assessment will firstly, determine Msunduzi Municipality's responsibilities for meeting national, provincial and municipal biodiversity conservation targets. Thereafter, untransformed and partially transformed areas will be mapped and evaluated, in conjunction with Ezemvelo KZN Wildlife, in terms of their importance for biodiversity conservation and health for both grassland areas and forests. The mapping and targets as discussed above will be used to inform a conservation planning approach to identify priority conservation areas and make recommendations for biodiversity conservation and management in the future. This information will be critical in the development of the biodiversity conservation component of the MOSS.

Products

Products of the biodiversity assessment are to include the following:

- Biodiversity report describing data sources, methodology applied, observations regarding the state of biodiversity, compliance with targets identified and recommendations to safeguard biodiversity elements and for further work to be undertaken;
- Map classifying all untransformed and partially transformed land at a scale of 1:3000; and
- Map indicating areas of biodiversity importance across the municipal area in terms of meeting identified conservation targets.

5.1.7 Air quality

Objectives

The objective of the assessment will be to inform the identification of opportunities and constraints to development, specifically development that would result in emissions, as a result of air quality constraints.

Information Sources

Information regarding sulphur dioxide and particulates has been collected over a five year period, however for many criteria pollutants such as nitrogen dioxide, hydrogen sulphide and volatile organic compounds, there is either no existing information or only sporadic measurements in limited areas. This information however will inform the air quality specialist study.

Methodology

All existing air quality information will be collected and reported on. This information together with dispersion potential modelling will then be used to classify the study area into different zones. Each zone will be categorized in terms of the air quality requirements for a new activity or the detail of information required during a development application such as an EIA. An action plan for appropriate air quality monitoring in the future will be developed to include suggested locations for monitoring stations and identification and explanation of the specific pollutants that should be monitored.

Products

The products will include a zoning map of air quality conditions and requirements with an associated report. The report will include the analysis of historical data and an action plan for future air quality data collection.

5.1.8 Resource Economics

Objectives

The objectives of the assessment are to allow for an enhanced ability to compare alternative land use options and demonstrate the real costs and benefits associated with resource conservation.

Information Sources

The resource economics study will utilise data provided by the other specialist studies such as the biodiversity and surface water analysis as well as case studies undertaken for other areas in South Africa and abroad.

Methodology

Provide an overview of biodiversity goods and services and their potential value related to the ecosystems identified in the other specialist studies such as biodiversity, wetlands and surface water resources. The review will be informed by case studies of other resource evaluations in South Africa and abroad and will attempt to apply these results to the Msunduzi municipal area. The review will outline the policy implications of the results, provide recommendations and assess the links between conservation and other local government initiatives, such as local economic development.

Products

The product will be a report that will provide an indication the potential economic value of the natural resources considered for conservation management within the municipal area. The report will also include observations regarding the challenges to resource conservation or reasons for resource decline and recommendations for further research to enhance integration of resource economics into the EMF in future revisions.

5.1.9 Service Capacity

Objectives

This study will determine the environmental implications of future development in terms of current service capacity and future service requirements.

Information Sources

- The service capacity review undertaken as part of the review of the Msunduzi Municipality SDF (Emanzini Engineers, 2007);
- Municipal demarcation board data to identify wards (Demarcation Board Website, 2008) ;
- Census 2001 data, specifically access to services information;

- Infrastructure Barometer Report (Development Bank of South Africa, 2006);
- State of Human Settlements Report (CSIR, 1999);
- Strategic Framework for Water Services (Ziyanda Consultants, 2003);
- uMgungundlovu Integrated Waste Management Plan (SRK, 2004);
- Msunduzi Local Municipal Transportation Plan (AFRICON Consulting, 2008),
- Edendale / Northdale Public Transportation Corridor Study (ARUP Consulting, 2007);
- GIS databases of services from the following sources:
 - South African National Roads Agency;
 - KZN Department of Transport;
 - Eskom;
 - Umgeni Water; and
 - The Msunduzi and uMgungundlovu Municipalities.

Methodology

To determine the potential environmental implications of further development in terms of service provision and the capacity of the following services will be reviewed:

- Water;
- Sanitation;
- Electricity;
- Waste removal/disposal; and
- Roads.

Existing spatial information for the services detailed above will be collated and spatially represented. Relevant planning documents will be reviewed to provide an indication of development opportunities and constraints and potential pressure areas in terms of service provision.

Products

The product will include a GIS layer for each service showing the spatial position of the service and proposed future development and additional attributes for each service relating to type, capacity etc. Further a map of the current percentage of the population with access to services will be produced to indicate the status quo. The mapping will be accompanied by a report that will indicate the methodology for the assessment; observations regarding service capacity and recommendations for further work.

5.1.10 Socio-economic analysis and planning policy review.

Objectives

The objectives of this review are to evaluate the environmental implications of the existing planning policy and socio economic conditions in the study area to identify potential development trends.

Information Sources

- 2002 Integrated Development Plans for the Msunduzi Municipality and the uMgungundlovu District Municipalities and subsequent annual reviews;
- Previous studies on various economic development aspects in the Msunduzi Municipality including the Draft SDF (Udidi Development Consultants, 2007/8), uMgungundlovu District Municipality Local Economic Development (LED) Strategy (Msunduzi, 2007), research undertaken by the University of KwaZulu Natal (UKZN) etc;
- Relevant national and provincial government policies and programmes e.g. the National Spatial Development Perspective (National Government, 2006);
- Pietermaritzburg Town Planning Scheme (Msunduzi, 2008);
- Census 2001 data;
- Provincial Growth and Development Strategy (KwaZulu-Natal Provincial Government, 2004);
- Provincial Spatial Economic Development Strategy (KwaZulu-Natal Provincial Government, 2006); and
- KwaZulu-Natal Land Use Management System: Guidelines for the Preparation and Implementation of Schemes (Provincial Planning and Development Commission (PPDC), September 2004)

Methodology

A review of existing planning policy at various scales will be undertaken to provide an indication of their implications in terms of the EMF. This will assist in identifying pressures from development and potential land use trends. A socio-economic profile will be developed to inform pressures on natural resources, implications for the natural environment specifically in terms of the lack of basic services and areas where future development is anticipated. This review will highlight potential conflicts in planning for the municipal area and make recommendations in terms of further analysis and planning requirements for the future.

Products

The product of this component will be a report providing an overview of the applicable planning laws and policies and their implications for the EMF, a concise socio-economic analysis of the Municipality and an indication of potential development trends that are expected within the Municipality.

5.1.11 Cultural Heritage Assessment

Objectives

The objective of the study is to identify potentially sensitive areas in terms of cultural heritage within the study area to inform opportunities and constraints to development.

Information Sources

- Sites of cultural importance as indicated in the Msunduzi Municipal/ Pietermaritzburg Town Planning Scheme (Msunduzi, 2008);
- Buildings of Pietermaritzburg, Volume One, Pietermaritzburg City Council 1986;
- Town and Regional Planning Commission, Environmental Atlas (<http://devplan.kzntl.gov.za/MapsGis/html/EnvironmentalAtlas.htm>);
- Natal Museum Database of Sites of Cultural Importance (Amafa, 2008); and
- Heritage Impact Assessments (Amafa, 2008).

Methodology

A description of the cultural heritage importance of Msunduzi Municipality will be produced to include the architectural importance of Pietermaritzburg and the cultural value of the Edendale and Georgetown areas. The following potentially sensitive areas will be mapped to provide opportunities and constraints for future development:

- Proclaimed National Monuments;
- Sites of Cultural Importance as indicated in the Msunduzi Municipal/ Pietermaritzburg Town Planning Scheme;
- Buildings rated as having National or Local Historical or Architectural Importance in terms of the book – Buildings of Pietermaritzburg, Volume One, Pietermaritzburg City Council 1986;
- Sensitive Cultural Heritage Areas identified in the Environmental Atlas produced by the Town and Regional Planning Commission;
- Sensitive areas as identified in the Natal Museum Database (where spatial information is available); and
- Sensitive areas identified in Heritage Impact Assessments submitted to Amafa (where spatial information is available).

Based on the mapping undertaken a workshop will be held with Amafa and relevant cultural heritage specialists to identify zones of cultural heritage importance.

Products

A report will be produced that outlines the methodology and outcomes of the spatial analysis and the history and cultural importance of the Municipality, focusing specifically on the Pietermaritzburg City Centre, Georgetown and Edendale areas. The report will also indicate pressures and potential impacts to cultural heritage resources and make recommendations for future conservation of these resources. This will include an action plan to further identify and map areas of cultural heritage value and determine the state of these resources. The report will be accompanied by a map of zones of sensitivity that will inform the identification of opportunities and constraints.

5.1.12 Institutional Framework

Objectives

The objective of this component of the study is to describe the organisational structure of the national, provincial and local organisations that will be involved in implementing the SEMP and describe how they should collaborate to achieve the goals of the EMF.

Information Sources

- Relevant national and provincial government policies and programmes;
- National Environmental Management Act, Act No. 107 of 1998 as amended;
- Msunduzi Municipality IDP and institutional organograms; and
- The Municipal Structures Act No. 117 of 1998.

Methodology

While Thornex will be responsible for this component, the majority of the information to inform the institutional framework resides with the municipality. As such Thornex will meet with Mr. R. Bartholomew of the Msunduzi Municipality to discuss the structure of the institutional framework and the information required. Mr. Bartholomew will be requested to collect and supply the information required while ThornEx will be responsible for compilation of the information into an institutional framework.

Products

The product will consist of a report that will provide an overview of the legislation that governs intergovernmental interactions and how national, provincial and local organisations should collaborate in terms of environmental management. The report will also provide a brief description of the relevant organisations and their internal structures and how this relates to the implementation of the EMF.

5.1.13 Compilation of the Situational Analysis Report

The specialist assessment to be undertaken will inform the Situational Analysis Report that will provide a baseline description of the municipal area. The Report will be circulated electronically to stakeholders for comment, amended based on comments received and circulated to the members of the SC for discussion at the Fourth SC meeting to be held in June 2008.

5.2 Strategic Environmental Assessment

It is important that the SEA product can easily be interpreted and utilised by decision makers and stakeholders. The outcomes of the situational analysis will to a large degree inform the format of the SEA. As such, as part of the situational analysis, a workshop will be held to refine the SEA methodology to achieve the objectives of the SEA and discuss the format of the products based on the information gathered during the situational analysis. This will include discussions regarding the scale of mapping and the GIS tools to be used.

5.2.1 Desired State of the Environment

While the product of the EMF will, to a large extent be spatial i.e. in (GIS) format, the ToR also require consideration of interactions between society's needs and the biophysical environment and the implications these may have for decision-making. Society's needs may be expressed in terms of a desired state of the environment. In order to develop the desired state of the environment, it is suggested that the existing vision from the environmental policy, as developed through extensive consultation in 2006 by the Municipality, be used together with legislated limits and policy targets identified through the specialist studies.

5.2.2 Issues Identification

A preliminary list of issues has been developed for the Msunduzi Municipality and classified into themes. These themes were determined through a review of other similar work such as the National State of the Environment Report (SRK, 2006), KwaZulu-Natal Provincial State of the Environment Report (DAEA, 2006), City of Johannesburg State of the Environment Report (City of Johannesburg, 2003), State of the Environment Report for the Cape Metropolitan Area (Cape Metropolitan Council, 1999) and the Mpumalanga State of Environment Report (Mpumalanga Department of Agriculture, Conservation and Environment, 2003).

The list of preliminary issues in Appendix 3 is drawn from existing resources such as the ToR for the EMF, the Msunduzi Municipality Environmental Policy (Msunduzi Municipality 2006), the Msunduzi Municipality IDP (Msunduzi Municipality 2006/2007) and the Planning Workshop held for this project with key stakeholders on 19 September 2007. This list will be enhanced during the specialist studies and the SEA process from observations evident from the spatial analysis and identified challenges to resource conservation and discrepancies between the situational analysis and targets or limits.

Note that the issues of noise and shock and vibration were identified as high priority environmental issues in the Msunduzi Environmental Policy, but have not been included as part of the ToR for this project, and therefore must be noted as an information gap.

5.2.3 Identify development trends and strategic land use patterns and conflicts

The spatial representation of the development trends and strategic land use patterns will be informed by a review of planning policy, most specifically the draft SDF and existing mapping of land use in the municipality. The methodology and format will be further refined once the information from situational analysis is available.

5.2.4 Determine environmental constraints and opportunities to development

Mapping of socio-economic and biophysical constraints and opportunities will be achieved through the use of GIS tools together with the mapping produced as part of the specialist studies as discussed above. Constraint areas such as floodline or wetland areas will be identified with 'window' or opportunity areas being identified where no or low constraints are observed. Further, constraints in terms of the targets or recommendations to address issues from the specialist studies will be detailed. As an example, should biodiversity targets not be met this would result in a potential constraint for further transformation of natural areas being identified.

5.2.5 Impact Assessment of Development Scenarios

The development trends as identified in Section 5.2.3 will be compared to the constraints and opportunities as per Section 5.2.4. In so doing, potential impacts of development trends will be identified. Recommendations and alternatives will be suggested to mitigate impacts.

5.2.6 SEA Report

A report detailing the outcomes of the SEA will be produced. A plain language executive summary of this report will also be produced to facilitate stakeholder involvement. The SEA report will be circulated to stakeholders for comment and a public meeting will be held to discuss the SEA report and facilitate stakeholder comment. Comments received from stakeholders will be taken into account in the revision of the report. The revised report will then be circulated to the SC for comment and discussion during the SC meeting, after which the report will be amended and finalized.

5.3 Municipal Open Space System

The INR, in conjunction with SRK and Ezemvelo KZN Wildlife will prepare a draft MOSS to include the development of criteria for land to be included in the MOSS, a classification system and spatial representation of the areas to be included in the MOSS. The MOSS will include areas and corridors of importance identified through the Biodiversity Specialist Study and proclaimed open space and conservation areas identified in the Pietermaritzburg Town Planning Scheme. The proposed MOSS will be workshopped with a task team from the municipality to determine additional areas to be included in the MOSS.

The product of this component of the EMF will be a Draft MOSS and the extensive public involvement required to adopt the MOSS will form part of the implementation of the EMF and will be undertaken by the municipality.

5.4 Environmental Management Framework

The aim of the EMF is to spatially identify, based on the GIS layers prepared during the situational analysis, the following geographical areas:

- Areas in which the undertaking of specific activities should be allowed to take place without further investigation;

- Areas in which the undertaking of specific activities may be allowed subject to an environmental authorization being granted in terms of the NEMA: EIA regulations; and
- Areas in which the undertaking of specific activities should not be considered.

An EMF report will be prepared that supports the spatial product and provides recommendations in terms of the EIA process for each geographical area identified. These recommendations will relate specifically to the activities listed in Government Notices R. 386 and 387 as discussed above, additional requirements for sensitive areas and possible exemptions from sections of the EIA process.

An Environmental Information Management System (EIMS) will be produced that will be housed with the Msunduzi Municipality. The EIMS will be compatible with the municipality's existing GIS system (ArcGIS) and will be accessible via a free GIS viewer package (probably Arc Explorer). All spatial layers produced for this project along with a full meta database (information about the data) will be provided, as well as action plans incorporating procedures with respect to the control, management and updating of the GIS data. Recommendations regarding training in terms of the EIMS will also be provided. The final format of the EIMS will be informed to a certain degree by the outcomes of the process and as such, this will be discussed on an ongoing basis with the client and the format will be agreed to by the SC.

5.5 Environmental Policy and Strategic Environmental Management Plan

The existing environmental policy produced by Msunduzi Municipality will be reviewed in light of the findings of the EMF and the outcomes of the stakeholder involvement. The vision will be amended if necessary and the targets or limits set in terms of the desired state of the environment will be incorporated.

Based on recommendations from the specialist assessments and the SEA, a number of implementation plans will be developed for the various issues identified, that will guide future investigations and information requirements. The implementation plans will link to indicators as identified and provide estimates of resources requirements and key roleplayers. The SEMP will include an Evaluation, Monitoring and Reporting Framework which will be based on indicators, be linked to measurable time-frames and assign responsibilities for implementation. At the national and provincial level, responsibility will be assigned at a departmental level i.e. DAEA, DWAF. However at the municipal level, responsibility will be assigned to a position within the municipality to facilitate incorporation into the municipality's performance management system. The individual/s appointed to that position will then become the champion for the implementation plan and will be responsible for obtaining funding and managing the proposed actions.

The outcomes of the MOSS, EMF and SEMP will be integrated into one document. A plain language executive summary of this report will also be produced to facilitate stakeholder involvement. The report will be circulated to stakeholders for comment and a public meeting will be held to discuss the outcomes of the MOSS, EMF and SEMP and facilitate stakeholder comment. Comments received from stakeholders will be taken into account in the revision of the report. The

revised report will then be circulated to the SC for comment and discussion during the final SC meeting, after which the report will be amended and finalized. Three hard copies and three electronic copies of final reports and maps will be provided to the client, namely one each for Msunduzi Municipality, DAEA and DEAT.

6 Communication Strategy

In terms of SRK's original proposal, full public involvement (PI) was excluded from the scope of work. The intention was to include only key stakeholder input in the drafting of the EMF (via two workshops) and then PI could be incorporated into the implementation phase of the EMF. However, during the first SC meeting, members indicated that full PI during the drafting of the EMF is critical in achieving the objectives and therefore the scope of work has been amended accordingly. In order to determine the appropriate level of consultation a stakeholder analysis was undertaken..

6.1 Stakeholder Identification

In order to identify stakeholders, members of the SC were requested to provide stakeholder lists and contact details which SRK then consolidated, updated and circulated to SC members for comment.

6.2 Stakeholder Classification

Stakeholder groups or individuals identified have been classified as follows:

- National and provincial government department;
- Local and district municipalities;
- Non-governmental organisation;
- General public;
- Community based organisations
- Business; and
- Research institution.

Each stakeholder group or individual has further been classified in terms of their interest/ impact and influence in terms of the EMF as detailed in Figure 1 below.

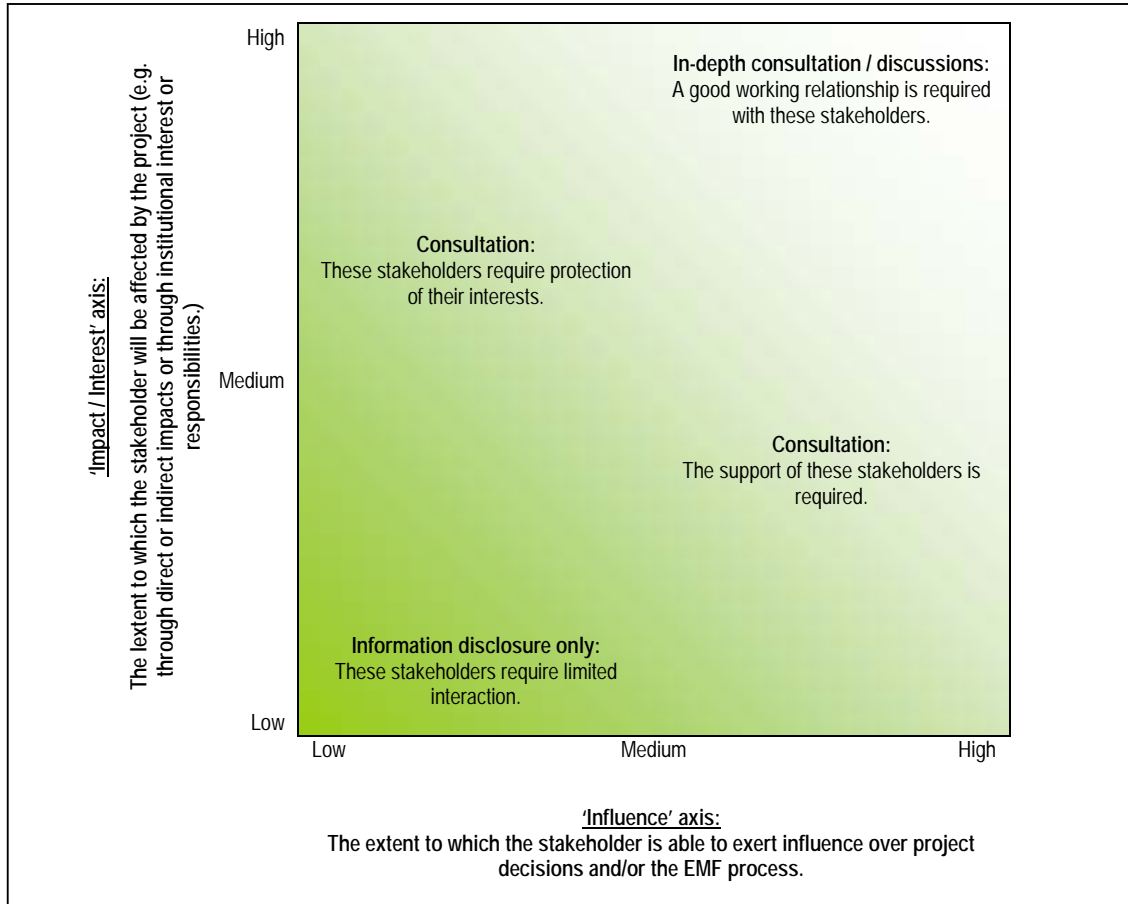


Figure 1: Stakeholder analysis matrix template

6.3 Stakeholder Analysis

Based on the stakeholder analysis matrix template the level of consultation required for each stakeholder group / individual has been identified and is included in Appendix 5. The stakeholder database forms a live document to be regularly updated and copies of the database are available to the SC on request.

6.4 Public Involvement Strategy

In order to provide notification and identification of all interested and affected parties (IAPs), including members of the general public, press releases in the publications listed below, are proposed at commencement of the second phase of the project. The initial press releases will include background information to the project and detail how IAPs may register in order to be included in the process. It is anticipated that the press releases will be in article or editorial format rather than legal notices however legal notices will be published in the Witness in English and the Echo in Zulu. Further press releases, towards the end of the second and third phases of the project, are proposed to provide an update on the progress of the project and notify IAPs as to the availability of draft reports and details of the public meetings.

It is proposed the following publications be contacted:

- The Witness;
- The Echo;
- The Mirror;
- The Maritzburg Sun; and
- My Week.

Questionnaires and notices will be circulated to identified IAPs as well as ward councillors informing them of the project, how they may participate and to determine key local issues and environmental priorities.

Executive summaries of key reports (Status Quo, SEA, MOSS, EMF and SEMP), in both English and Zulu, would be circulated to registered IAPs and councillors. This will include information regarding where the full set of documents and maps can be accessed and how comments can be submitted. Public meetings will be held at the end of both Phase 3 (Situational Analysis and SEA) and Phase 4 (MOSS, EMF, SEMP) to discuss draft documents and to allow IAPs to provide comment on the EMF process and products. All draft reports and maps will be provided electronically to stakeholders and the SC. A hard copy of draft reports will be housed at the SRK offices should stakeholders wish to access it.

In addition to the public meetings, presentations would be made to the following Msunduzi Municipal Portfolio Committees at the end of the second and third phases of the project:

- Community Services and Social Equity;
- Local Agenda 21; and
- Executive Committee (ExCo).

A summary of the timing of the various components of the PI Strategy is included in Table 3 below.

Table 3: Public Involvement Tasks and Timing

Phase	Task	Timing	Stakeholder Group
1 - Inception	Initiation Meeting	29 June 2007	Client
	1 st Steering Committee Meeting	23 August 2007	Steering Committee
	Planning Workshop	September 2007	Government Department, Municipality, Non Governmental Organisation, General Public – Institution, Research Institution
	2 nd Steering Committee Meeting	30 October 2007	Steering Committee
	3 rd Steering Committee Meeting	13 February 2008	Steering Committee
2 – Situational Analysis and SEA	Press Release and Notices	March 2008	IAPs
	Circulation of Situational Analysis Report to IAPs for Comment	May 2008	IAPs
	Report Amendment and Circulation of Situational Analysis Report to Steering Committee	June 2008	Steering Committee
	4 th Steering Committee Meeting	June 2008	Steering Committee

	Circulation of SEA Report to IAPs for Comment	September 2008	IAPs
	Public Meeting	October 2008	IAPs
	Presentations to Msunduzi Portfolio Committees and ExCo.	October 2008	Municipality
	Report Amendment and Circulation of SEA Report to Steering Committee	October 2008	Steering Committee
	4 th Steering Committee Meeting	November 2008	Steering Committee
3 – MOSS, EMF, SEMP	Circulation of MOSS, EMF and SEMP Report to IAPs for Comment	February 2009	IAPs
	Public Meeting	February 2009	IAPs
	Presentations to Msunduzi Portfolio Committees and ExCo.	February 2009	Municipality
	Report Amendment and Circulation of MOSS, EMF and SEMP Report to Steering Committee	March 2009	Steering Committee
	5 th Steering Committee Meeting	March 2009	Steering Committee
	Finalise MOSS, EMF & SEMP	March 2009	SRK

7 Budget

The budget has been included in Table 4 below.

Table 4: Project Budget

Phase	Professional Fees	Specialists Fees	Total
Inception	R 138,305	R 39,425	R 177,730
Situational Analysis	R 202,795	R 520,450	R 723,245
Strategic Environmental Assessment	R 165,500	R 29,400	R 194,900
EMF, MOSS & SEMP	R 259,575	R 84,688	R 344,263
Total Professional Fees	R 766,175	R 673,963	R 1,440,138
Disbursements			R 77,466
Sub Total			R 1,517,604
VAT			R 212,465
TOTAL (Incl VAT)			R 1,730,069

8 Conclusions and Recommendations

The methodology as detailed above provides a detailed description of the approach that the SRK Consulting Team proposes for the preparation of the Msunduzi EMF. The products that will be produced include the following:

- A Situational Analysis Report;
- A SEA;
- A MOSS;
- An EMF; and
- An SEMP.

The products will include reports as well as spatial databases to be presented as an Environmental Information Management System based on ArcGIS software.

Should you have any queries please do not hesitate to contact the undersigned.



Philippa Emanuel
Environmental Scientist



Kirsten King
Senior Scientist

SRK Consulting

9 References

Cape Metropolitan Council (1999) *State of the Environment Report for the Cape Metropolitan Area (Year One 1998)*. Cape Metropolitan Council, Cape Town.

City of Johannesburg (2003) *State of the Environment Report*. Department of Development Planning, Transportation and Environment, Environmental Planning Unit, City of Johannesburg.

DEAT & CSIR (2002) *Provincial and Local Government State of Environment Training Manual*. Department of Environmental Affairs & Tourism and Council for Scientific Research Institute, Pretoria

DEAT 2004, Development of a Core Set of Environmental Performance Indicators, Final Report and Set of Indicators

Department of Agriculture & Environmental Affairs (2006) Final List of Indicators for the KwaZulu-Natal Provincial State of Environment Report. Department of Agriculture & Environmental Affairs, Pietermaritzburg.

Mpumalanga Province & CSIR (2002) *State of Environment Report Key Environmental Indicators: Background Information Document*. Prepared by the CSIR for Department of Agriculture, Conservation and Environment, Mpumalanga Province.

Mpumalanga Department of Agriculture, Conservation and Environment (2003) *Mpumalanga State of Environment Report*. Mpumalanga Department of Agriculture, Conservation and Environment, Nelspruit.

Msunduzi Municipality, 2006, Msunduzi Municipality Environmental Policy

Msunduzi Municipality, 2006/2007, Integrated Development Plan Review

SRK Consulting, 2006, National State of Environment Reporting

Walmsley RD and Pretorius JR (1996) *State of the Environment Series*, Report No 1: Environmental Indicators. Department of Environmental Affairs and Tourism, Pretoria.

Appendix 1: Project Terms of Reference

**TERMS OF REFERENCE FOR OUTSOURCING THE DEVELOPMENT OF
AN ENVIRONMENTAL MANAGEMENT FRAMEWORK FOR
MSUNDUZI LOCAL MUNICIPALITY: KWAZULU-NATAL**

1. REQUEST FOR PROPOSAL (RFP)

1.1 OBJECTIVES

The objective of this RFP is to appoint a suitable independent Service provider/s that can support the Department Environmental Affairs and Tourism [DEAT], KwaZulu-Natal Department of Agriculture & Environmental Affairs [DAEA] and the Msunduzi Municipality with the development of an Environmental Management Framework (EMF) for the Msunduzi Municipality.

1.2 INTRODUCTION & STUDY AREA

Situated in a unique physical setting the Msunduzi Municipality (Pietermaritzburg) is surrounded by mountains and hills forming a basin. The diverse topography has influenced the pattern of development and most transport routes and the urban environment are concentrated at the bottom of the basin, spreading out along the valleys and slopes.

The Msunduzi Municipality is experiencing amongst the highest economic growth rates of any of the local Municipalities within KwaZulu-Natal and as the capital of KwaZulu-Natal, it can act as a Provincial flagship for sound environmentally sustainable development. The Municipality is promoting social and economic development for benefit of the people within the city, however development needs to be balanced with the need to ensure a healthy environment and the maintenance of environmental services. The area faces a wide range of environmental issues including air and water quality impacts and waste management issues. To promote sustainable development it is critical to ensure that clear environmental policies and strategies are put in place and that development is directed to areas where there is minimal environmental impact with maximum social and economic gain. There is a need for a comprehensive policy framework to protect, manage and optimise the environment.

The area of the proposed EMF is approximately 640 Km² and covers a wide range and diversity of land uses from urban, industrial and residential to large areas of afforestation and agriculture. . More detailed attention will be required in the planning and development of priority development area such as the Edendale Corridor, to ensure the integration and development of previously marginalized areas.

2. SCOPE AND EXTENT OF WORK

The role of the Service Provider/s is to assist the DEAT, DAEA and Msunduzi Municipality to develop an EMF for the area falling under the jurisdiction of the Msunduzi Municipality. To achieve this, the appointed service provider/s will undertake the following:

2.2.1 INITIAL MEETING WITH PROJECT TEAM

After appointment, the service provider/s will meet with the relevant officials to:

1. Establish a Project Steering Committee, which should include representatives from DEAT, DAEA and the Msunduzi Municipality.
2. Provide an Inception report and confirm the scope of work for the project.
3. Agree upon time frames for the deliverables.
4. Agree upon roles and responsibilities within the Project Steering Committee.
5. Agree upon the scope of stakeholder groupings that are to be included in the consultation process.
6. Agree on a communication strategy between the Service Provider/s, Project Steering Committee and Stakeholders.

2.2.2 LITERATURE REVIEW

The service provider/s should ensure that the project takes cognisance of all relevant legislation and guideline documentation, including, but not limited to the following:

Generic Environmental Legislation:

- The National Environmental Management Act (Act 107 of 1998, 'NEMA'), in particular Sections 2, 23 and 24, as well as its Implementation Acts and amendments.
- The NEMA EIA Regulations Government Notices 385, 386 and 387 promulgated in terms of chapter 5 NEMA, 1998. Of particular importance are the guidelines and regulations pertaining to Environmental Management Frameworks.
- The Guideline Document developed by the National Department of Environmental Affairs and Tourism on Strategic Environmental Assessment in South Africa, February 2000.
- Conservation of Agricultural Resources Act (Act 43 of 1983).
- Provincial legislations and ordinances
- NEM: Biodiversity Act (Act 10 of 2004)
- NEM: Air Quality Act (Act 39 of 2004)
- Provincial, National and Local air quality intervention strategies
- Municipal Systems Act (Act 32 of 2000)
- The Development Facilitation Act (Act 67 of 1995, 'DFA')
- National Water Act (Act 36 of 1998)
- The Water Services Act (Act 108 of 1997)
- The National Forest Act
- The National Veld and Forest Fire Act

Provincial and Municipal Documentation / Studies:

- Various spatial planning studies and policy documents to be sourced from the Msunduzi Municipality (including the Msunduzi IDP / SDF; GEDI initiative; etc);
- Msunduzi Draft Integrated Environmental Management Policy;
- Research works, studies, reports and investigations available from sources within the University of KwaZulu-Natal and other parastatals;
- Relevant provincial policies (including the KZN PGDS etc)

2.2.3 PROCESSES PHASES

The service provider/s will undertake the project in the following phases:

1) PHASE 1: INCEPTION REPORT

The service provider will prepare an Inception Report that will address the following items:

- A public and authority participation process that clearly defines the desired level of participation, who will be consulted, how and what stages in the process will participation will be undertaken.
- Project planning and management mechanisms, including the timing and sequences of phases and stages, and associated budgets as well as details of overall project administration.
- Method statements for the collection, analysis and presentation of information for the process and specialist studies.
- A literature review and identification of information sources for the status quo investigation.

2) PHASE 2: ENVIRONMENTAL STATUS QUO REPORT & STRATEGIC ENVIRONMENTAL ASSESSMENT

2.1 Status Quo Report:

- Research, assimilate and consolidate existing information and reports related to the state of the environment in Msunduzi
- Undertake research and data collection to determine the current state of the environment in the study area.
- Prepare an environmental baseline study report that defines and spatially represent the status quo of the environment in the study area.
- The baseline status quo report must including mapping at an appropriate scale of the relevant environmental attributes.
- Sensitive natural environments (such as riparian areas, wetlands, grassland areas and potential red data fauna and flora habitat), must be mapped and verified by ground truthing in areas where this is not already available.
- The baseline study must include relevant specialist input to support, verify and confirm the status of the receiving environment. This will include updating, collating and reviewing existing information relevant to the study area and its context; and research, investigation and data collection of the study area.
- Specific attention must be provided in terms of air quality, water quality, and biodiversity/ ecosystem goods and services
- Report on the current status of services provision/capacity in the Msunduzi Municipality, including transportation infrastructure, water and electricity supply, sewerage and waste treatment facilities etc.

2.2 Strategic Environmental Assessment:

- Identify and evaluate key environmental issues (opportunities and constraints) in the study area.
- Identify development trends and strategic land use patterns that are influencing the state of environment within the study area.
- Determine environmental constraints and opportunities to development and development pressures on the environment.

- Identify social, economic and biophysical resources that should be maintained or enhanced.
- Evaluate the possible environmental impacts of alternative development scenarios on the current state of environment considering direct, indirect, cumulative and synergetic effects which may be permanent, temporary, positive or negative in the short, medium and long term.
- Develop prevention and mitigation measures to avoid, reduce or compensate for negative environmental impacts.
- Based on consultation, determine the desired state of environment and permissible limits to change for the study area.
- List all uncertainties, technical and/or knowledge gaps and the anticipated consequences thereof.
- Provide linkage to the Msunduzi Municipality IDP/SDF and LUMS development processes

3) PHASE 3: ENVIRONMENTAL MANAGEMENT FRAMEWORK

3.1 Environmental Management Framework

- Develop an Environmental Management Framework [EMF] for the study area in accordance with the requirements of Chapter 8 of the NEMA: EIA regulations (GN No. R385 of 21 April 2006).
- The EMF must include:
 - i. A composite environmental constraints and opportunities map;
 - ii. Establish a biodiversity conservation and ecosystem goods & services map, indicating critical conservation nodes and attributes, and the necessary corridors and linkages between these nodes and attributes (See section 3.2 Open space system below);
 - iii. State the conservation status and environmental management priorities in the area and in the identified parts;
 - iv. Indicate what kind of activities or land uses would be undesirable/desirable in the area or in specific parts of the area.
 - v. Based on the spatial component of the desired state of the environment and environmental constraints and opportunities, the study area must be divided into environmental control zones. The purpose of such strategic environmental zoning would be to facilitate future decision-making on environmental requirements and acceptability of development applications. This must include a spatial representation of such zoning within the area in respect of one or more activities in a manner that will identify
 1. areas in which the undertaking of specific activities should be allowed to take place without further investigation;
 2. areas in which the undertaking of specific activities may be allowed subject to an environmental authorisation being granted in terms of the NEMA: EIA regulations; and
 3. areas in which the undertaking of specific activities should not be considered.
- Establish an electronic Environmental Information Management System to be used for decision making for development applications (Interactive GIS based system).

- Fully integrate the above electronic Environmental Information System with the Msunduzi Municipal GIS.

3.2 Open Space System

- Develop and refine the open space system for the study area.
- Identify and evaluate the goods and services provided by natural areas.
- Classify and rate vacant land in terms of the goods and services provided at the level of ecosystem, social and cultural importance.
- Identify areas that could or should be included in the open space system to promote ecological linkages and connectivity and enhance the provision of environmental goods and services

3.3 Environmental Policy & Strategic Environmental Management Plan

- Revise and update the existing environmental policy for the study area, with a clear vision and specific objectives, goals, policy statements and issue-specific guidelines.
- Develop a Strategic Environmental Management Plan [SEMP] that gives effect to the implementation of the environmental policy's vision and specific objectives & goals
- Identify sustainability objectives to achieve the desired state of environment and establish criteria and indicators for the resources identified.
- Develop a sustainability framework to guide and refine (evaluate) development plans.
- Determine strategies to attain the desired state of environment and sustainable development in accordance with determined sustainability objectives.
- Establish implementation plans (action plans) to achieve the strategies, including the establishment of responsibilities, timeframes, milestones and anticipated resources required.
- Reference all relevant legal, administrative and policy frameworks within which the SEMP and municipal functions must operate.
- Develop a system to monitor, evaluate and report on progress made towards improving the state of environment in the study area and to measure the success of the implementation of the strategies.

Draft copies of the EMF and relevant component reports must be circulated for comment to identified stakeholders. After incorporation of comments, the draft EMF would need to be work shopped with the project team and relevant authorities.

The service provider/s must then effect the changes derived from the workshop and produce a final EMF. The final EMF would then be supported by DAEA and the Msunduzi Municipality and should be incorporated in the next Integrated Development Plan and Spatial Development Framework for the study area. The outcomes of the EMF may also be used to demarcate exclusion areas or areas of particular sensitivity in terms of the NEMA EIA Regulations.

2.2.4 DELIVERABLES

1. After appointment the successful service provider/s will be required to submit an Inception Report with a detailed work plan, which will be agreed upon with the Steering Committee. The plan is to include an outline of the various draft and final reports to be produced, method

statements for data collection and analysis; expected delivery dates for the various phases and component reports, as well as the public and authority participation programme and methodology.

2. The service provider/s will provide the following documents as set out in the scope of work above:
 - Inception Report
 - Draft Environmental Status Quo/SEA Report.
 - Environmental Status Quo/SEA Report.
 - Draft Environmental Management Framework (including Draft Environmental Policy and Strategic Environmental Management Plan, Draft Open Space System)
 - Environmental Management Framework (EMF) and interactive GIS
 - A non-technical summary of the information above, in languages appropriate to the demographics of the study area
3. Progress reports at intervals agreed upon with the project team.
4. Documented workshops and Project Team meetings held and recorded.
5. Power Point presentation of the outputs of the project (a copy must be available for Departmental use).
6. The service provider/s may be required to provide hard copies of all draft reports, but must supply (DEAT, DAEA and Msunduzi Municipality) hard copies and electronic copies of the final documents.
7. The electronic copy must be produced in Word 2000/XP
8. All spatial information must be provided in a GIS format in compliance with the standards of DAEA and the Msunduzi Municipality.
9. The service provider/s shall submit a preliminary budget containing the hours and amount to be spent on each component of the project, before work can commence.
10. Service provider/s may be invited to give presentation as and when required.

3. TIMING OF ASSIGNMENT

All work is to be carried out in accordance with the time schedule as agreed with the Programme Manager.

4. PERFORMANCE MEASURES

The performance measures (Annexure A) for the delivery of the EMF will be closely monitored by **DEAT, DAEA and Msunduzi Municipality. Pay**

5. **REPORTING**

The service provider/s will submit monthly and quarterly progress reports to the Programme Manager, within 4 days after the end of each month and quarter for the duration of the project.

6. **MONITORING PROGRESS ON ASSIGNMENTS**

The Programme Manager shall do the ongoing management of the service agreement.

7. **CONTINUITY AND PROFILE OF SENIOR STAFF ON THE PROJECT**

The service provider/s must guarantee the presence of the senior in charge of fieldwork throughout the duration of the contract. If the senior has to leave the project, a period of at least a month is required in which the senior must work parallel with the next person (senior consultant with similar expertise and equal years of experience) appointed to be able to transfer skills and knowledge.

8. **CONDITIONS OF TENDER**

Bids will be subject to Supply Chain Management conditions as follows:

The Preferential Procurement Policy Framework Act, Act No. 05 of 2000 will apply to this tender. In accordance with this Act, submission will be adjudicated on the 90/10 points system. Price and technical scores will make up the total of 90 points. The remaining 10 points will be split in accordance with the SBD 6.1 documents as well as in terms of the evaluation criteria indicated on page 9 (in accordance with the specific goal of the department).

The proposal should include, amongst other, the following:

- 8.1 A proposed plan of action.
- 8.2 A list of references;
- 8.3 Ability to ensure continuing of staff on the project.

9. **SPECIAL CONDITIONS**

9.1 The Curriculum Vitae of the staff who will be available for the duration of the work;

NOTE: Failure to submit the CV's will invalidate your bid proposal.

9.2 The bid proposals should be submitted with all required information containing technical information as well as price information. The successful consultancy team's expertise should include but not be limited to the following (please provide relevant CV's):

- Environmentally management proficiency.
- Ecological and agricultural background.
- Planning skills (Town Planning, Landscape Architecture, Engineering).
- Resource Economics.
- Facilitation skills.
- Report writing skills.
- Administrative support.

- GIS Skills.
- Knowledge of applicable Environmental and Municipal Legislation
- Research skills.

Curriculum Vitae (CVs) for each member on the team, detailing their qualifications and experience relevant to this request, must be included in the proposal submitted to the Department. In addition each proposed member must submit a signed declaration that indicates his or her involvement with a project that may be affected by the Scope of Works for this project. This is required to ensure the objectivity of the team.

- 9.3 Only bidders who score at least (40 points) for the technical information will be preferred.
- 9.4 Supplier/s who claim any preference points for HDI is/are requested to submit certify copy/ies of shares certificate or a certified list of the Board of Directors or Trustees, as may be applicable. NOTE: **Failure to adhere to this condition will invalidate points claimed.**
- 9.5 Preferences will be given to BEE companies or companies/firms with strong BEE partnerships, in order to address South Africa's socio-economic disparities in line with the Broad Base Black Economic Empowerment legislation.
- 9.6 Preference will be given to service providers from the province of KwaZulu-Natal.
- 9.7 A service level agreement shall be signed with the preferred bidder. The successful bidder may not alter its (buy out HDI points) BEE status during the contract period. DEAT reserve the right to terminate the contract should the successful bidder no longer meet the BEE requirement.
- 9.8 **DEAT** reserves the right to invite short listed suppliers/companies to present their bid proposals for final decision.
- 9.9 Bidders must be prepared to work at rates not exceeding those prescribed by the office of the Auditor-General or the Department of Public Service and Administration (DPSA).
- 9.10 Suppliers are required to fill the information below:

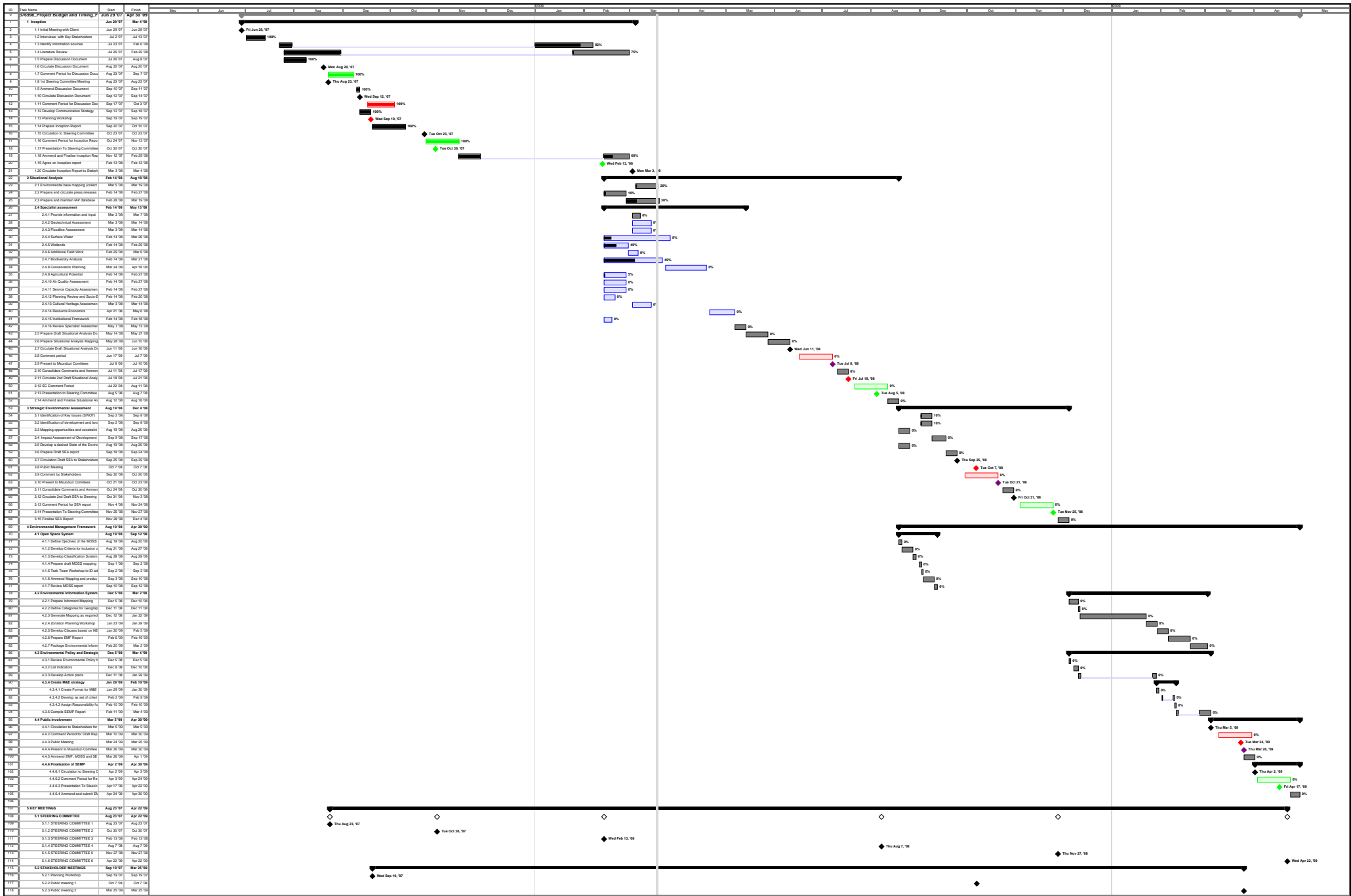
% Management by HDI groups.	
Number of consultants from HDI groups working on the project.	

10. ADDITIONAL INFORMATION ON BID PROPOSAL

- 10.1 The supplier / service provider should provide details of staff training, highlighting training and development policies and procedures, with specific reference to affirmative action policies and initiatives.

- Track Record – The bid provides clear information on previous, relevant projects that confirm that the bidder has the required experience and success track record in the area of general project management and management related projects.
- Quality of the Bid – The bid is structured, laid-out, formatted and organised in such a way that the evaluation committee is easily able to access the bid in accordance with the evaluation criteria and are provided with an insight into the quality of deliverables that may be expected from the bidder if successful.
- Affirmative action – The bid clearly describes the bidder's contribution to ensuring the transformation of this project (be specific) management services sector through affirmative action programmes and provides insight into the success, or otherwise, of these programmes.
- Skills transfer – The bid clearly describes the bidder's contribution to ensuring the transformation of this work (be specific) e.g. environmental management services sector through, among others, mentorship, bursary, on-the-job-training and/or other initiatives that successfully transfer skills to historically disadvantaged individuals.

Appendix 2: Project Gantt Chart



Appendix 3: Issues Identified

Source of Issues Identified	Themes						
	Human Environment	Cultural Heritage	Land and Open Spaces	Water Resources	Climate & Atmosphere	Biodiversity and Conservation	Governance
Msunduzi Environmental Policy	Noise, Shock and Vibration Waste Infrastructure, Urbanisation and Housing Economy	Cultural Heritage	Landscapes and townscapes	Water Resources	Air Quality Renewable and Non Renewable Resources Energy	Biodiversity Trees and Forests	Environmental Education
Identified during the Planning Workshop (19 September 2007)	Basic services and their impact on limits to change The current landfill site: security, access and dumping of hazardous waste N3 impact on the environment	Sensitivities around identifying the locality of cultural heritage resources. Lack of existing information Information for Edendale available	Impact of quarries, closure and rehabilitation	Unsustainable development such as settlement within flood areas Affect of development on water table Georgedale tannery Catchment based hydrological Assessment	Global Warming	Msunduzi's responsibility to meet National and Provincial Biodiversity Targets Current abuse of open space areas eg. Dumping, informal settlement and extension of private gardens Rehabilitation	The need for interventions for inappropriate development Environmental Education Little understanding of the EMF process and implications of inappropriate development The need to identify a home for the EMF and link responsibilities for implementation to the Municipal PMS.

Source of Issues Identified	Themes						
	Human Environment	Cultural Heritage	Land and Open Spaces	Water Resources	Climate & Atmosphere	Biodiversity and Conservation	Governance
Critical Issues arising from the IDP	Access to Basic Services to include Housing		Land Management	Environment	Environment	Environment	Revenue/ Financial Viability Cross Cutting Development Issues Intergovernmental Coordination Governance and Institutional Capacity Community Participation
Suggested Specialist Assessment	Socio Economic Analysis Service Capacity Analysis	Cultural Heritage Assessment	Review of Planning Policy Geotechnical Overview	River Health Assessment Geohydrological Survey Floodline Modelling	Air Quality Assessment	Biodiversity Assessment Resource Economics	Institutional Framework

Appendix 4: Indicators

Theme	National Indicators	Provincial Indicators	Local Indicators
Human Environment	<p>Human Settlements</p> <ul style="list-style-type: none"> • Green space per settlement • Contaminated land per settlement • Housing density • Urban / rural population • Proportion of urban area in South Africa <p>Vulnerability</p> <ul style="list-style-type: none"> • GDP / capita • Life expectancy • Adult literacy rate • Employment rate • Population growth rate • HIV / AIDS incidence • Household energy use • Access to water • Access to sanitation <p>Waste generation</p> <ul style="list-style-type: none"> • General waste produced per income group per year • General waste produced per capita per year • Hazardous waste produced per sector per year <p>Waste reduction</p> <ul style="list-style-type: none"> • Waste recycling • Value of waste recycled • General waste correctly disposed through landfill • Hazardous waste correctly disposed • Available landfill lifespan 	<p>KZN population and settlement patterns</p> <ul style="list-style-type: none"> • Change in population • Population density • Change in % of registered voters who vote <p>Economics</p> <ul style="list-style-type: none"> • Change in GDP per capita • Change in % of adults employed <p>Water and Sanitation</p> <ul style="list-style-type: none"> • Change in % of households with access to running water • Change in % of households with access to a toilet • Annual cholera deaths <p>Solid Waste</p> <p>Waste Generation</p> <ul style="list-style-type: none"> • Volumes of waste generated per capita per annum <p>Waste Management</p> <ul style="list-style-type: none"> • Locality, legal status and capacity of disposal sites • The number of District Municipalities that have approved Integrated Waste Management Plans (IWMPs) • Change in % of households with access to refuse removal <p>Recycling</p> <ul style="list-style-type: none"> • Volumes of waste recycled <p>Poverty and Vulnerability</p> <ul style="list-style-type: none"> • Poverty rate and poverty gap per district municipality • Gini-coefficient 	<p>Waste Management</p> <ul style="list-style-type: none"> • General waste produced per capita per year • Hazardous waste produced per sector per year • % of households eligible for kerbside refuse removal which receive this on a weekly basis • Number of incidents of illegal dumping • % of these incidents for which enforcement action was taken • Amount (tonnes) of illegal dumping cleared by the local authority • % of general waste recycled on an annual basis • % municipal landfill sites licensed according to the terms of the Environmental Conservation Act • Available landfill lifespan • % of licensed landfill sites that are being monitored for compliance (according to specification in license) <p>Water, Sanitation</p> <ul style="list-style-type: none"> • % households with access to potable water within 200m of dwelling (or on site) • % of households with at least a basic level of service as determined by the WSA service levels policy <p>Noise Pollution</p> <ul style="list-style-type: none"> • Number of noise pollution related

	<ul style="list-style-type: none"> Provincial expenditure on waste management Provincial waste collection capacity 	<ul style="list-style-type: none"> Income levels per district municipality in KZN <p>Vulnerable people and places</p> <ul style="list-style-type: none"> Vulnerable age groups per district municipality Levels of education Incidence of HIV/Aids No of people living in informal settlements <p>Managing Vulnerability</p> <ul style="list-style-type: none"> No of local municipalities with disaster management departments <p>Case studies</p> <ul style="list-style-type: none"> Durban South Industrial Basin 	<p>complaints received by the local authority</p> <ul style="list-style-type: none"> % of these complaints for which there was enforcement action <p>Storm Water Management</p> <ul style="list-style-type: none"> % of storm water drains that are maintained annually No. dwellings within the 50 year flood line
Cultural Heritage	<p>Natural heritage resources</p> <p>Status of natural heritage resources</p> <p>Investment into natural heritage resources</p> <p>Visitors to natural heritage resources</p>		
Land and Open Spaces	<p>Land use</p> <ul style="list-style-type: none"> Land cover Land productivity versus potential <p>Land condition</p> <ul style="list-style-type: none"> Desertification Soil loss Soil acidification Soil salinisation Land degradation Persistent organic pollutants 	<p>Land Degradation</p> <ul style="list-style-type: none"> Extent of land degradation Area of eroded land Change in the fertility of arable soils under sugar cane production Resources allocated to the National Landcare Programme Resources allocated to enforcement of CARA The number of prosecutions made and directives issued under CARA <p>Productivity</p> <ul style="list-style-type: none"> Loss of land with high production potential Decline in yield from areas under sugar-cane Rate of Adoption of Genetically Modified Crops 	<p>Municipal Parks & open space</p> <ul style="list-style-type: none"> Area (hectares) of municipal parks, recreation areas or other open spaces within the municipal area with conservation value % of this area infilled by development on an annual basis
Waster Resources	Water Quantity	Contamination of rivers with human waste	Water quality

	<ul style="list-style-type: none"> ● Intensity of use of surface water resources ● Intensity of use of ground water resources ● Total surface water used per sector ● Total ground water used per sector ● Total surface water resources per capita ● People dependent on ground water resources ● Surface water affordability <p>Water Quality</p> <ul style="list-style-type: none"> ● Surface water salinity ● Ground water salinity ● Surface water nutrients ● Ground water nutrients ● Surface water microbiology ● Ground water microbiology ● Surface water toxicity <p>Freshwater Ecosystem Integrity</p> <ul style="list-style-type: none"> ● Riparian vegetation ● Aquatic macro-invertebrate composition ● Fish community health ● Aquatic habitat integrity 	<ul style="list-style-type: none"> ● Maximum levels of faecal contamination in rivers ● Trends in faecal contamination over 10 years ● Contamination of river water with the Bilharzia parasite ● Faecal contamination of rivers in 2003 and its impact on the use of rivers for drinking (without treatment) ● Faecal contamination of rivers in 2003 and its impacts on the use of rivers for recreation <p>Nutrient pollution of rivers</p> <ul style="list-style-type: none"> ● Contamination of rivers with nutrient pollution ● Ten year trend in the contamination of rivers with nutrient pollution ● Pollution of rivers by sewage effluent. <p>River health</p> <ul style="list-style-type: none"> ● Health of rivers as indicated by the response of invertebrate biota ● Activities to protect the river resource ● Present Ecological Status Category <p>Declining quantities of freshwater resources</p> <ul style="list-style-type: none"> ● Damming of surface waters ● Volumes of water used for irrigation ● Volumes of water intercepted by commercial forests ● Volumes of water used for industry and general water supply services <p>Pollution of dams and reservoirs</p> <ul style="list-style-type: none"> ● Quality of water in reservoirs ● Historical trends in the quality of water in reservoirs/ dams <p>Degradation of wetlands</p>	<ul style="list-style-type: none"> ● Number of recorded cases of cholera ● % exceedence of DWAF guidelines for selected groundwater quality variables (DWAF*) ● % exceedence of DWAF guidelines for selected surface water quality variables (DWAF*)
--	--	---	---

		<ul style="list-style-type: none"> • Changes to the number, location and area of wetlands • Measurement of the Health of Wetlands • Integrity of wetlands as indicated by pairs of breeding Wattled Cranes • Measurement of the goods and services (benefits) provided by wetlands 	
Atmosphere	<p>Climate Change</p> <ul style="list-style-type: none"> • Greenhouse gas emissions (carbon dioxide, nitrous oxide and methane) • Energy use (fossil fuels vs. non-fossil fuels) • Size of the national net carbon sink • Malaria: morbidity and mortality • Mean annual temperature • Cost of carbon abatement • Cost of natural disaster relief • Energy intensity <p>Stratospheric ozone</p> <ul style="list-style-type: none"> • Consumption of ozone depleting substances • UV-B trends • Stratospheric ozone level <p>Air Quality</p> <ul style="list-style-type: none"> • Ambient Sulphur Dioxide Concentration • Ambient Nitrogen Dioxide Concentration 	<p>Climate Change</p> <ul style="list-style-type: none"> • Greenhouse gas emissions • Energy use (fossil fuels vs. non-fossil fuels) • Annual temperature deviations relative to the WMO standard • Annual rainfall deviations expressed relative to the WMO standard • Malaria occurrence <p>Stratospheric Ozone</p> <ul style="list-style-type: none"> • Consumption of ozone-depleting substances • Stratospheric ozone concentration • UV-B trends <p>Air Quality</p> <ul style="list-style-type: none"> • Ambient particulate (Smoke) concentration • Ambient sulphur dioxide (SO₂) concentration • Ambient lead (Pb) concentration • Inventory of scheduled processes <p>Energy</p> <ul style="list-style-type: none"> • Change in % of households with access to electricity for cooking • Change in % of households with access to electricity for lighting 	<p>Air Quality</p> <ul style="list-style-type: none"> • Is there an adopted Air Quality Management Plan? • % of licensed industries with did not comply with license conditions • % of these for which there was an enforcement response by the authority • % of key pollutants monitored according to the specifications in the National Air Quality Framework • Ambient Concentrations of Key Pollutants • Degree of exceedence of national standards for ambient concentrations of key pollutants • Number of air quality related complaints received by the local authority (no. /year) • % of these for which there was an enforcement action • Number of staff (FTEs) responsible for monitoring air quality in the municipality
Biodiversity and	<p>Species diversity</p> <ul style="list-style-type: none"> • Threatened and extinct species per taxonomic 	<p>Status of Biodiversity</p> <ul style="list-style-type: none"> • Transformation of natural land cover 	<p>Protected Areas</p> <ul style="list-style-type: none"> • Area (hectares) of municipal area under

<p>Conservation</p>	<p>group</p> <ul style="list-style-type: none"> • Endemic species per taxonomic group • Alien (non-indigenous) species per taxonomic group • Population trends of selected species • Distribution and abundance of selected alien species <p>Habitat change</p> <ul style="list-style-type: none"> • Extent of conserved areas • Extent of natural areas remaining • Disturbance regimes: fire frequency • Disturbance regimes: flood and drought <p>Resource value</p> <ul style="list-style-type: none"> • Contribution to job creation: conservation areas • Contribution to job creation: eradication of alien species • Economic contribution of commercially utilised indigenous species • Economic contribution of commercially utilised freshwater species • Economic contribution of commercially utilised terrestrial species 	<ul style="list-style-type: none"> • Number and area of applications under Conservation of Agricultural Resource Act (CARA) • Illegal use/trade in animals, birds and plants • Protection status of the terrestrial environment • Threat status of vegetation types • Change in the area of biomes • Fragmentation of biomes • Threat status of the biota of the three major biomes • Resources allocated to protected area management • Resources allocated to biodiversity protection outside of state protected areas • Implementation of the National Forest Act, No 84 of 1998 <p>Alien species invasion</p> <ul style="list-style-type: none"> • Permit applications for the introduction of alien animal species • The number, distribution and abundance of alien plant species • Resources allocated to the combating alien plants 	<p>‘local protected area’ status</p> <ul style="list-style-type: none"> • % of municipal area under local protected area status • % of land of ‘conservation importance’ in the municipal area under protected area status • % of local protected areas with a current/adopted management plan and authorised budget • % of dwellings that fall within a 2km radius of a municipal park or recreation area • Area (hectares) of municipal parks, recreation areas and other open space per capital within the municipal area • Level of community satisfaction with access to and quality of municipal parks and recreation areas • % of municipal budget allocated to the provision of and maintenance of municipal parks and recreation areas • Level of user satisfaction with access to and quality of local protected areas <p>Invasive Alien Species</p> <ul style="list-style-type: none"> • Area (hectares) of municipal land currently invaded by alien species • % of municipal land currently invaded by alien species • Area of IAS cleared from municipal land (this reporting year) • % of municipal land currently invaded by alien species which has been cleared (this reporting year)
----------------------------	--	---	--

			<ul style="list-style-type: none"> • Is there an adopted Invasive Species Monitoring, Control and Eradication Plan that is integrated and aligned to the IDP? <p>Species and Ecosystem Management and Change</p> <ul style="list-style-type: none"> • Threatened and extinct species per taxonomic group • Endemic Species per taxonomic group • Population trends of selected species • Area (hectares) of sensitive, vulnerable, highly dynamic and stressed ecosystems in the municipal area (by ecosystem type) • % of each of the above which is degraded or transformed on an annual basis
Governance	<p>Environmental management</p> <ul style="list-style-type: none"> • Multi-lateral environmental agreements • Budgetary allocation to natural resource management • Budgetary allocation to environmental education • Budgetary allocation to environmental research • Inclusion of Integrated Environmental Management (IEM) into IDPs and SDIs • Conciliation Cases • Voluntary adoption of environmental management systems • Voluntary use of environmental accounting and reporting • Government capacity for environmental management • Environmental reporting by government 	<p>Laws and Institutions</p> <ul style="list-style-type: none"> • No of environmental treaties and multilateral agreements that SA party to and that border KZN • Provincial legislation pertaining to environment drafted since 1997/2000 <p>Authority Level</p> <ul style="list-style-type: none"> • Assessment of IDPs per local/district municipality <p>Participation rights and representation</p> <ul style="list-style-type: none"> • Access to information (telephones, radios, cell phones, TV's and computers per dwelling) • No of information management systems <p>Accountability and transparency</p> <ul style="list-style-type: none"> • No of registered NGO's • Provincial budget expenditure on environmental management and biodiversity • Posts allocated vs. current posts filled 	<p>Environmental Governance</p> <ul style="list-style-type: none"> • Has the municipality audited its plans, policies and programmes for adherence to the NEMA principles? • Has a strategic environmental assessment of the impact of the Spatial Development Framework for the municipality been carried out? • For each of the following, is there a current, adopted plan that is integrated and aligned to the IDP?: Air Quality Plan, Integrated Waste Management Plan; Oil Spill Contingency Plan; Water Services Development Plan; Plan to provide access to basic water services; Invasive Species monitoring, control and eradication plan • Is the IDP aligned to the National Biodiversity Strategy and the Bioregional Plan?

	<p>departments 4 yearly</p>	<ul style="list-style-type: none"> • Guidelines for public on how to participate in decision-making <p>Property rights and tenure</p> <p>Markets and financial flows</p> <p>Science and risk</p> <ul style="list-style-type: none"> • No of companies based in KwaZulu-Natal listed on the Social Responsibility Index of the Johannesburg Stock Exchange • No of KZN companies that have been certified for ISO 14001 	<ul style="list-style-type: none"> • Has the municipality officially adopted the Agenda 21 process? • Is there an approved implementation plan for Agenda 21?
--	-----------------------------	--	---

Appendix 5: Stakeholder Analysis

Stakeholder Type	Stakeholder		'Impact / Interest'	Influence	Consultation level
Business	EnviroServe	Waste Management	M	M-L	Consultation
	FFS Refiners - Pietermaritzburg		M	M-L	Information Disclosure
	NCT		L	L	Information Disclosure
	PG Bison		M-L	M-L	Information Disclosure
	Pietermaritzburg Chamber of Business Air Quality Forum		M	L	Consultation
	PMB Tourism		M	M	Consultation
General Public - Individual	Brian Millard	Community member (Ward 25)	M-L	L	Information Disclosure
	Kamini Naidoo	UKZN Student	M-L	M-L	Information Disclosure
	General Public that register in response to press releases.		M-L	M-L	Information Disclosure
General Public - Institutional	Clealand Mkhondeni Conservancy		M	M	Consultation
	Ferncliffe Catchment Conservancy		M	M	Consultation
	Hesketh Conservancy		M	M	Consultation
	KwaMpumzu Tribal Authority		M	M	Consultation
	Maritzburg Environmental and Social Association (MESA)		M	M	Consultation
	Msunduzi Municipality	LA21 Forum	M	M	Consultation
	Preservation of the Mkhondeni Mpushini Biodiversity Trust.		M	M-H	Consultation
	Sobantu Environmental Desk Chairperson		M	M	Consultation
Government	Ward Councillors		H	M	In depth Discussions
	Amafa aKwaZulu-Natali		M-H	H	In depth Discussions
	DAEA - Agricultural Resources		H	H	In depth Discussions
	DAEA - Environmental Management		H	H	Guide Process
	Department of Health		L	M-H	Consultation
	Department of Land Affairs		M	M	Consultation
	Department of Transport		M	M	Consultation
	Dept of Water Affairs and Forestry - Catchment Management		H	H	Guide Process
	Ethekeweni Water		M-L	L	Consultation/ Discussions
	Ezemvelo KZN Wildlife		H	H	Guide Process
	South African National Botanical Insituite		M	M	Consultation
	South African National Roads Agency		M	M	Consultation
	Umgeni Water		H	M-H	In depth Discussions
	Umgungundlovu District Municipality - Planning		H	H	Guide Process
	Greater Edendale Development Initiative		H	H	Guide Process
	Greater Edendale Environmental Network (GREEN)		M	M-H	Consultation
	Msunduzi Municipality	Manager: Horticulture	L	M	Consultation
	Msunduzi Municipality	Legal Advisor	L	L	Information Disclosure
	Msunduzi Municipality	Area Manager: Central, Eastern & Imbali	M	M	Consultation
	Msunduzi Municipality	Senior Project Manager: Housing Delivery	M	H	Consultation
Msunduzi Municipality	Greater Edendale Dev Initiative	M	H	Consultation	
Msunduzi Municipality	Manager: Disaster Management	L	L	Information Disclosure	
Msunduzi Municipality	Manager: Area Based Management	M	M	Consultation	

	Msunduzi Municipality	Youth Desk	L	H	Consultation
	Msunduzi Municipality	Project Manager: Housing Delivery	M	H	Consultation
	Msunduzi Municipality	Conservation Officer	M	M	Consultation
	Msunduzi Municipality	IDP Manager	H	M	In depth Discussions
	Msunduzi Municipality	Landfill Site	M-L	M-L	Information Disclosure
	Msunduzi Municipality	Public Safety	L	L	Information Disclosure
	Msunduzi Municipality	Environmental Health	H	H	In depth Discussions
	Msunduzi Municipality	Manager: Waste Management	M-H	M-H	In depth Discussions
	Msunduzi Municipality	Licensing	L	L	Information Disclosure
	Msunduzi Municipality	Housing Unit	M	M	In depth Discussions
	Msunduzi Municipality	Public Management Unit	L	L	Information Disclosure
	Msunduzi Municipality	Roads and Stormwater	L	L	Consultation
	Msunduzi Municipality	Environmental Branch	H	H	Guide Process
	Msunduzi Municipality	Planning Dept	H	H	Guide Process
	Msunduzi Municipality	Environmental Health	H	H	In depth Discussions
	Msunduzi Municipality	Local Economic Development	M	M	Consultation
	Msunduzi Municipality	Strategic Services Planning	L	L	Consultation
	Msunduzi Municipality	Water and Sanitation	L	L	Consultation
	Msunduzi Municipality -	Environmental Health	H	H	Guide Process
Non Governmental Organisation	A Rocha		M	M	Consultation
	Canoeing SA		M	L	Consultation
	Dusi-uMngeni Conservation Trust (DUCT)		M	M	Consultation
	Environmental Justice Networking Forum		M	M	Consultation
	GroundWork		L	H	Consultation
	Keep Imbali Beautiful		M	M	Consultation
	Keep Pietermaritzburg Clean Association		M	M	Consultation
	Mondi Wetlands Group		M	L	Consultation
	WESSA		H	M-H	In depth Discussions
	Working for Wetlands		M	M	Consultation
Research Institution	CEAD		M	M	Consultation

SRK Report Distribution Record

Complete this form and include it as the final page for each copy of the report produced.

Report No.

Copy No.

Name/Title	Company	Copy	Date	Authorised by

Approval Signature:

This report is protected by copyright vested in **SRK Consulting**. It may not be reproduced or transmitted in any form or by any means whatsoever to any person without the written permission of the copyright holder, SRK.