

FINAL SCOPING REPORT FOR PUBLIC REVIEW

THE PROPOSED ESTABLISHMENT OF THE VUMANI RURAL HOUSING DEVELOPMENT NEAR VRYHEID, KWAZULU-NATAL

Prepared for:

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PURPOSE OF DOCUMENT

A period of **40 calendar days** (7 November 2013 to 6 January 2014) was provided to the **State Departments and the General Public** for the review and commenting phase of the Draft Scoping Report. All Interested and Affected Parties (I&APs) as well as State Departments have been notified of this review period.

The Final Scoping Report contains the following information:

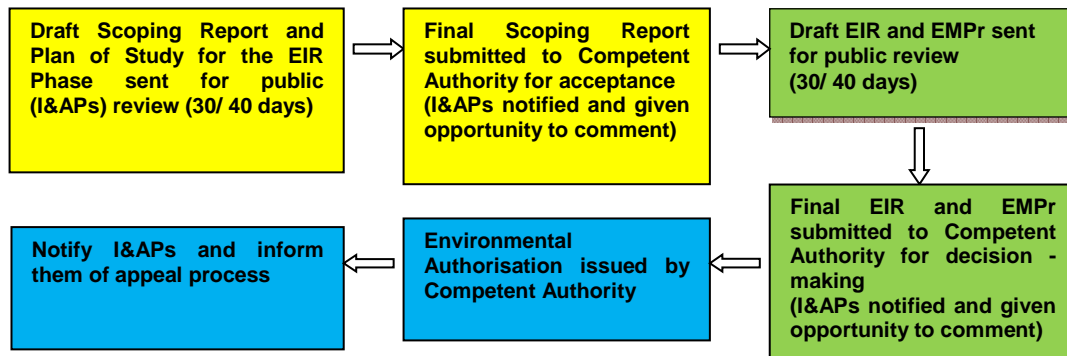
- A description of the project, including project motivation;
- Discussion of applicable alternatives;
- A description of the environment affected by the project;
- The public participation process; and
- The plan of study for the Environmental Impact Reporting (EIR) phase.

The Final Scoping Report can be viewed at the following venue:

| Name of public venue | Name of Contact Person | Contact Number(s) | Viewing Times |
|--|------------------------|--------------------------|--|
| Vryheid Library Cnr mark and High Street Vryheid 3100 | Ms. Buyisile Mtshali | (034) 982 2133 / 2288 | Vryheid Library Mondays to Fridays (09h00 to 17h30) Saturdays (08h00 to 11h45) |

Should you wish to participate in the Scoping and Environmental Impact Reporting (S&EIR) process by contributing issues of concerns/comments, please register as an Interested and Affected party (I&AP) by completing the enclosed Registration and Comment Sheet or you can visit SEF’s website at <http://www.sefsa.co.za>. To register as an I&AP or comment on the project, click on “Stakeholder Engagement”. Click on the “register” button and complete the compulsory fields to register as an I&AP. On completion of these fields, you will be logged in. Click on stakeholder engagement under categories on the right hand side of the page. Then click the Final Scoping Report for the **Proposed Vumani Rural Housing Development**, to view the report and the associated appendices. Should you have any problems in obtaining the information from the Internet, please feel free to contact Strategic Environmental Focus (SEF) for assistance.

Following the commenting period, the Scoping Report will be updated and submitted to the KwaZulu-Natal Department of Environmental Affairs (KZN DAEA) for consideration. After the acceptance of the Scoping Report, the EIR phase will be initiated. The flow diagram below highlights the phases in the project where I&APs have the opportunity to participate within the process.



| PROJECT SUMMARY | |
|--------------------------------|--|
| Project Name | Proposed Vumani Rural Housing Development |
| Farm Name and Portion | Portions 2 and 11 of the Farm Bloemendal No. 18, near Vryheid KwaZulu-Natal |
| Brief Development Overview | The Abaqulusi Local Municipality propose to construct 828 residential units and 172 infill housing units, as well as ancillary infrastructure. |
| Development Footprint | The site for the proposed development is approximately 170 hectares (ha) in extent. |
| Development / Structure Height | The height of the residential units will be provided within the EIR. |
| Lay Down Area Dimensions | To be addressed within the EIR. |
| Site Photographs | Refer to Appendix 2 |

ENVIRONMENTAL ASSESSMENT PRACTITIONER

Strategic Environmental Focus (Pty) Ltd (SEF) is a privately owned company and was formed in 1997 with the objective of providing **expert solutions to pressing environmental issues**. **SEF is one of Africa’s largest multi-disciplinary consultancies**, offering sustainable environmental solutions to private and public sector clients. With our integrated services approach in the management of natural, built and social environments; and with over a decade of experience, we bring a wealth of knowledge and expertise to each project.

SEF’s Vision

SEF is a national sustainability consultancy that provides integrated social, biophysical & economic solutions by forging strategic stakeholder relationships, underpinned by SEF’s core values.

SEF’s Mission

SEF offers holistic sustainable solutions in response to global change.

SEF has assembled a team of professionals, consisting of a core of environmental experts with extensive experience in dealing with Environmental Impact Assessments (EIAs), Public Participation Processes, Architectural and Landscape Architecture, Mining and Environmental Management. SEF also has a team of specialist practitioners such as specialists in Heritage Impact Assessments (HIA), Wetland Delineation and Functional Assessments; Wetland/ Riparian Rehabilitation, Aquatic Assessments; Ecological (Fauna, Avifauna and Flora) Assessment, Visual Impact Assessments (VIAs), Soils and Agricultural Potential Assessments, Socio-Economic Assessments, etc.

SEF is a Qualifying Small Enterprise and a **Level 2 contributor in terms of the Broad Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003)** and has a procurement recognition level of 135%.

SEF commits itself to comply with the requirements and the implementation of a Quality Management System (QMS). The QMS will be reviewed and implemented to continually improve efficiency and effectiveness of the organisation.

SEF uses a “green” approach to anything we embark on. We believe in using technology to our and the environment’s best advantage. We encourage the use of green alternatives such as telephone and video conferencing instead of travelling for workshops and meetings and CDs instead of printed material, where possible.

The following project team members are involved in this S&EIR application process.

Table 1: Project Team Members

| Name | Organization | Project Role |
|-------------------|--------------|-------------------------------|
| Mr Mark Ryan | SEF | Environmental Project Manager |
| Ms. Natasha Lalie | SEF | Environmental Manager |
| Ms Mamo Seliane | SEF | Public Participation |

Mr. Mark Ryan

Mr Mark Ryan is an environmental consultant at SEF with seven (7) years' experience in Environmental Impact Assessment. Mark has special interest in EIA, environmental auditing and strategic environmental processes such as Environmental management Frameworks. Mark has a Master of Social Science Degree (M.Soc.Sci) in Geography and Environmental Management from the University of KwaZulu-Natal. Mark is responsible for conducting environmental impact assessments for a wide range of projects that involve wastewater treatment plants, infrastructure such as bridges and roads, bulk water pipeline projects, residential and mixed use developments. Mark has experience in project management and administration as well as the planning and compilation of Scoping Reports, Environmental Impact Reports and Environmental Management Plans. Mark also has experience in environmental auditing of construction activities such as residential developments, office parks and golf courses.

Ms. Natasha Lalie

Natasha has an MSc. Environment and Society and has been an Environmental Assessment Practitioner (EAP) for almost ten years. She has undertaken numerous Scoping Reports, Environmental Management Programmes (EMPr's) and Exemption Applications, as required by the Environment Conservation Act, 1989 (Act No. 73 of 1989); Environmental Screening and Feasibility Studies; and S&EIRs as well as BAs, as required by NEMA and the EIA Regulations. She has been involved in a wide range of projects, which include waste management, industrial, township establishments, mixed-use development, road upgrades, infrastructure developments, change of land use, lodge developments, proposed bulk water pipelines, proposed transmission power lines, proposed filling stations, shopping centre developments and so on.

Ms. Mamoluoane Seliane

Mamoluoane Seliane holds an MSc in Environmental and Geographical Science from the University of Cape Town. She conducts both Heritage Specialist and Environmental Practitioner duties. As an environmental practitioner, she undertakes feasibility and environmental impact studies, public participation as well as Environmental Control Officer (ECO) duties.

She in particular has experience with conducting Environmental Audits of projects during construction and rehabilitation phases including the provision of professional guidance to enforce the implementation of Environmental Authorizations (EA) and Environmental Management Programmes (EMPrs) and monitoring the contractor's compliance with the EMPr, EA and any specialist requirements. In addition, she is a member of the International Association for Impact Assessments (IAIA) and is a professional member of the Association of Southern African Professional Archaeologists (ASAPA).

Table 2: Contact Details of Environmental Assessment Practitioner

| Name | Contact Details |
|---------------|--|
| Mr. Mark Ryan | Strategic Environmental Focus (Pty) Ltd Postal Address: PO Box 227, Pavilion, 3611 Tel: +27 31 266 1277 Fax: +27 31 266 6880 Email: mark@sefsa.co.za |

EXECUTIVE SUMMARY

1 INTRODUCTION

Strategic Environmental Focus (Pty) Ltd (SEF) has been appointed by Gibb Engineering and Science, to undertake an environmental application process for the proposed Vumani Rural Housing Development.

A Scoping and Environmental Impact Reporting (S&EIR) process will be conducted for this project based on triggered listed activities within the Environmental Impact Assessment (EIA) Regulations of 2010 (Government Notice (GN) No's 543; 544; 545 and 546) promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

The purpose of the Scoping phase is to describe the proposed activity and those reasonable alternatives that have been identified as well as the receiving environment that may be affected by the proposed project. The report also describes the required specialists studies, public participation process followed during the Scoping phase as well as how these will be carried out during the EIR phase. The Draft Scoping Report was available for public review and comment to Interested and Affected Parties (I&APs) from **7 November 2013 to 6 January 2014**. The purpose of this Final Scoping Report is to provide all I&AP with an opportunity to assess whether or not their comments/ concerns submitted have been included and adequately addressed. The Final Scoping Report is available for project review and comment from **20 January 2014 to 19 February 2014**. All comments on this Final Scoping Report are to be submitted directly to the KwaZulu-Natal Department of Agriculture and Environmental Affairs (KZN DAEA) as the review period of 30 days will run concurrently with the KZN DAEA review period.

The KZN DAEA will, based on this Final Scoping Report, issue a decision on whether or not the application may proceed to the Environmental Impact Reporting (EIR) phase.

2 BRIEF PROJECT DESCRIPTION

The proposed Vumani Rural Housing development will occur on the following properties:

- Portion 2 of the farm Bloemendal no 18; and
- Portion 11 of the farm Bloemendal no 18, in Vryheid KwaZulu-Natal

The site is approximately 28 kilometres southeast of the town of Vryheid (*as the crow flies*) and 2 kilometres east of the Enyati Anthracite mine and village, 5km east of the Natal Anthracite mine and 4km south of the Mount Ngwibi Anthracite mine. The site is bound by commercial forestry to the northern and eastern portions of the property. Commercial forestry activities are presently taking place on the site.

Access to the site has been provided in terms of the directions that follow below:

From the EB Cloete interchange (Spaghetti Junction), head north on the National Road 2 for approximately 110km. Take Exit 227 onto the R66 (Gingindlovu/Eshowe/Ulundi) and travel along this road for 100km. At the intersection where the R66 turns right towards Ulundi, keep straight and join the R34 and travel along this road for 70km. Turn right at the signboard indicating Leeunek and travel along this road. After 14km turn left (27° 52' 27.08"S & 31° 3' 57.87"E) and travel along this road for 3km. At the T Junction turn right and travel along this road for 1km and the site will be located on the right hand side.

The general co-ordinates of the centre of the site are as follows:

- Latitude: 27° 50' 0.31"S
- Longitude: 31° 4' 44.60"E.

Please refer to the Locality Map, which has been included in Appendix 1.

The current land use zoning of the site is 'agricultural' and the site is being utilised for commercial forestry purposes and low-scale informal residential development.

3 KEY IMPACTS

The following key impacts were identified and will be carried forward into the EIR phase for further investigation and assessment:

Biophysical Impacts:

- Potential impacts on surface water resources that occur in close proximity (various wetlands occur on site, perennial and non-perennial rivers traverse the site);
- Potential impacts of increased surface water run-off (viz. increased soil erosion) associated with the establishment of hard surfaces and vegetation clearing (mainly during the construction phase);
- Potential impacts on ground- and surface-water quality, and soils due to hydrocarbon spillages from vehicles during the construction phase of the development;
- Destruction of existing flora within the study area; and
- Faunal displacement, mainly during the construction phase of the project.

Socio-Economic Impacts:

- Increased dust and noise generation during the construction phase;
- Impact on loss of commercial forestry land;
- Change in the visual character of the area;
- Potential impacts on heritage resources; and
- Job creation during the construction and operational phases of the proposed project.

Cumulative Impacts:

- Possible increase in pressure/ demand on existing service infrastructure and capacity;
- Impact on loss of commercial forestry land; and
- Increased visual impacts associated with the proposed development as a result in change in sense of place.

4 PROJECT ALTERNATIVES

To give effect to the principles of NEMA and Integrated Environmental Management (IEM), an EIA should assess a number of reasonable and feasible alternatives that may achieve the same end result as that of the preferred project alternative. The following alternatives have been identified as part of this Scoping exercise:

Alternative 1: Site/ Location Alternatives:

The site was selected by the Ward Councilor in collaboration with the local community. Other sites exist in the vicinity of the proposed site, which belong to the Mnyathi Community Trust. The proposed site has been selected on the basis that it provides connectivity with another housing developments in the area, and is also in close proximity to the community clinic. Hence the site was established as the best option for the Vumani Housing development.

Alternative 2: Layout/ Design Alternatives:

Alternative layout/ design plans may evolve from the findings of specialist studies that will be undertaken to inform the EIR phase. Design and layout alternatives will be proposed based on the environmental sensitivities. Alternatives with regards to the design and layout of the proposed development will also be investigated and assessed within the EIR phase.

Alternative 3: Land-use Alternatives:

The Vumani development is aimed at providing housing opportunities in line with the mandate of the Department of Human Settlements, and as such, no alternatives contrary to residential requirements have been investigated. However, to supplement the proposed formalised housing development, ancillary services such as commercial and community facilities, as well as community gardens, grazing land and a primary school have been included in this proposal. Specific detail of the proposal will be provided in the forthcoming Draft Environmental Impact Report (EIR).

Alternative 4: No Development Alternative:

The 'no-go' or 'do nothing' alternative is encapsulated by the premise that the applicant abandons the project, or is not approved by the KZN DAEA. The no-go option has been broken down in terms of the three characteristics of sustainability:

Social

Should the development not proceed, the inhabitants of the area who have been identified through the beneficiary administration process in collaboration with the Ward Councillor and other community structures to receive RDP housing opportunities will remain in the same position that they are currently found. Additionally, the benefits associated with the development with respect to the provision of a commercial node, community gardens and school facility will also not be achieved

Economic

The economic profile of the local community would be unchanged. Unemployment is currently rife in this area.

Environmental

From a purely ecological perspective, should the housing development not proceed, the status quo will remain with the study area remaining unaffected by construction or operational related impacts.

5 CONCLUSIONS AND RECOMMENDATIONS

In accordance with GN No. 543, the draft Scoping Report is aimed at describing the proposed activity and those reasonable alternatives that have been identified as well as the receiving environment that may be affected by the proposed project. In accordance with the EIA Regulations, an identification of relevant legislation and guidelines is also given as well as a description of the public participation process that will be followed.

Comments and/or concerns identified by Interested and Affected Parties (I&APs) during the review period of the Draft Scoping Report (public review dates 7 November 2013 to 6 January 2014) have been incorporated into the Final Scoping Report for further investigation during the EIR Phase to follow. The final Scoping Report will now be submitted to the KZN DAEA for consideration, together with the Plan of Study for the EIR phase of the project and other relevant supporting information. All registered I&APs have been advised to submit any additional comments on the final Scoping Report directly to the KZN DAEA for consideration.

The EAP proposes that, on the basis of the information contained in this Scoping Report, that the KZN DAEA accept the Scoping Report and Plan of Study for the EIR phase and allow the EAP to proceed with the EIR phase of the project, such that the more pertinent issues can be thoroughly investigated and assessed, in terms of their significance and impact.

The ability to mitigate any of the potential impacts identified in this Scoping Report will also be investigated during the EIR phase and summarised into a working/ dynamic Environmental Management Programme (EMPr) for consideration by I&APs and ultimately by the KZN DAEA.

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LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|------------------|---|
| ALM | Abaqulisi Local Municipality |
| ASAPA | Association of South African Professional Archaeologists |
| ASGISA | Accelerated Shared Growth Initiative of South Africa |
| BA | Basic Assessment |
| CSDM | Chief Directorate Surveys and Mapping |
| CRR | Comments and Response Report |
| DEA | Department of Environmental Affairs (previously DEAT) |
| DEAT | Department of Environmental Affairs and Tourism |
| DEIR | Draft Environmental Impact Report |
| DWA | Department of Water Affairs |
| EAP | Environmental Assessment Practitioner |
| EA | Environmental Authorisation |
| EIA | Environmental Impact Assessment |
| EIR | Environmental Impact Reporting |
| EMPr | Environmental Management Programme |
| GN | Government Notice |
| ha | Hectares |
| HIA | Heritage Impact Assessment |
| IDP | Integrated Development Plan |
| I&APs | Interested and Affected Parties |
| IEM | Integrated Environmental Management |
| KSIA | King Shaka International Airport |
| KZN DAEA | KwaZulu-Natal Department of Agriculture and Environmental Affairs |

| | |
|--------------------|---|
| LED | Local Economic Development |
| ME | Mitigation Efficiency |
| NBSA | National Spatial Biodiversity Assessment |
| NEMA | National Environmental Management Act, 1998 (Act No. 107 of 1998) |
| NERSA | National Energy Regulator of South Africa |
| NHRA | National Heritage Resources Act (Act No. 25 of 1999) |
| NWA | National Water Act, 1998 (Act No. 36 of 1998) |
| PSEDS | Provincial Spatial Economic Development Strategy |
| PoS for EIR | Plan of Study for Environmental Impact Report |
| QMS | Quality Management System |
| RDP | Reconstructive Development Programme |
| SANBI | South African Botanical Institute |
| SEF | Strategic Environmental Focus (Pty) Ltd |
| SFM | Significance Following Mitigation |
| S&EIR | Scoping and Environmental Impact Reporting |
| SDF | Spatial Development Framework |
| SFM | Significance Following Mitigation |
| ToR | Terms of Reference |
| VIA | Visual Impact Assessment |
| WOM | Without Mitigation Measures |
| WSA | Water Services Authority |
| WM | With Mitigation Measures |
| ZDM | Zululand District Municipality |

GLOSSARY OF TERMS

| | |
|------------------------------------|---|
| Applicant | Any person who applies for an authorisation to undertake an activity or to cause such activity to be undertaken as contemplated in sections 24(5), 24M and 44 of the National Environmental Management Act, 19998 (Act No. 107 of 1998). |
| Ecology | The study of the interrelationships between organisms and their environments. |
| Environment | The surroundings within which humans exist and that are made up of – (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing. |
| Environmental Impact Assessment | Systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes basic assessment and S&EIR. |
| Environmental Management Programme | A working document on environmental and socio-economic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project. |
| Interested and Affected Party | Any person or groups of persons who may express interest in a project or be affected by the project, positively or negatively. |
| Key Stakeholder | Any person who acts as a spokesperson for his/her constituency and/or community/organization, has specialized knowledge about the project and/or area, is directly or indirectly affected by the project or who considers himself/herself a key stakeholder. |
| Stakeholder | Any person or group of persons whose live(s) may be affected by a project. |
| Study Area | Refers to the entire study area encompassing all the alternatives as indicated on the study area or locality map. |
| Succession | The natural restoration process of vegetation after disturbance. |
| State Department | Any department or administration in the national or provincial sphere of government exercising functions that involve the management of the environment. |

SECTION A: INTRODUCTION

Strategic Environmental Focus (Pty) Ltd (SEF) has been appointed to undertake an environmental application process for the proposed Vumani Rural Housing Project, near Vryheid, KwaZulu-Natal, situated on the following properties:

- Portion 2 of the Farm Bloemendal Number 18
- Portion 11 of the Farm Bloemendal Number 18

The above properties collectively form 'the site' which occurs within the Abaqulusi Local Municipality in KwaZulu-Natal. Vryheid is the nearest town to the site.

A-1 DESCRIPTION OF PROPOSED ACTIVITY

A-1.1 Locality

The site is approximately 28 kilometres southeast of the town of Vryheid (*as the crow flies*) and 2 kilometres east of the Enyathi Anthracite mine and village, 5km east of the Natal Anthracite mine and 4km south of the Mount Ngwibi Anthracite mine. The site is bound by commercial forestry to the northern and eastern portions of the property. Commercial forestry activities are presently taking place on the site.

Access to the site has been provided in terms of the directions that follow below:

From the EB Cloete interchange (Spaghetti Junction), head north on the National Road 2 for approximately 110km. Take Exit 227 onto the R66 (Gingindlovu/Eshowe/Ulundi) and travel along this road for 100km. At the intersection where the R66 turns right towards Ulundi, keep straight and join the R34 and travel along this road for 70km. Turn right at the signboard indicating Leeunek and travel along this road. After 14km turn left (27° 52' 27.08"S & 31° 3' 57.87"E) and travel along this road for 3km. At the T Junction turn right and travel along this road for 1km and the site will be located on the right hand side.

Alternatively, from the EB Cloete interchange (Spaghetti Junction), head north on the National Road 2 for approximately 110km. Take Exit 227 onto the R66 (Gingindlovu/Eshowe/Ulundi) and travel along this road for 100km. At the intersection where the R66 turns right towards Ulundi, keep straight and join the R34 and travel along this road for approximately 98km and then turn into right into R69. Travel along R69 for approximately 21km and then turn right into P274 (at this intersection there is a board written Enyathi). Travel along P274 for approximately 18.3km and the site will be on the right hand side.

The general co-ordinates of the centre of the site are as follows:

- Latitude: 27° 50' 0.31"S
- Longitude: 31° 4' 44.60"E.

Please refer to the Locality Map, which has been included in Appendix 1.

The current land use zoning of the site is 'agricultural' and the site is being utilised for commercial forestry purposes and low-scale informal residential development.

A-1.2 Surrounding Land Use

To further place the site in context, the land uses within all four major compass directions are described in the table below.

Table 3: Surrounding Land Use Table

| Direction | Land Use | Distance (m) |
|-----------|--|----------------------|
| North | Commercial Forestry | Adjacent to site |
| South | Agriculture at Vredenhof Farm | Adjacent to the site |
| East | Commercial Forestry and Bloemendal Farm and Aloeboom Farm. | Adjacent to the site |
| West | Natal Anthracite Processing Plant | 5km |
| | Enyati Anthracite Mine | 2km |

A-1.3 Details of the Project

The current land use zoning of the site is 'agricultural' and is used for commercial forestry and low-scale informal residential land uses. The Abaqulusi Local Municipality proposes the construction of 828 residential units and 172 infill housing units as well as ancillary infrastructure, such as water, sewerage, electricity and roads to service the proposed development. The site for the proposed development is owned by the Mnyati Trust and a process to transfer the property under the ownership of the ALM is presently underway.

As per the Draft Site Layout Plan, the following landuses are proposed viz, residential, community facility, commercial, community gardens, grazing land and a proposed primary school (refer to the Draft/Preliminary Site Layout Plan in Appendix 1).

The type of housing, densities, roads and services infrastructure that will be required for the proposed development will be discussed in more detail in the forthcoming Draft EIR.

The main access into site will be provided from the existing Road P274. Internal access roads will also be provided for the proposed development.

A-2 LEGAL REQUIREMENTS APPLICABLE TO THIS APPLICATION

The application form informing the Department of intent to obtain an Environmental Authorisation was submitted to the KZN DAEA on 03 October 2013. The KZN DAEA acknowledged receipt of the application form in a letter dated 3 October 2013. The following reference numbers were issued to the project viz, KZN DAEA Reference: DC26/0022/2013 and NEAS Reference No: KZN/EIA/0001296/2013.

The legislation, guidelines and policies applicable to this project are as follows:

A-2.1 NEMA and the Environmental Impact Assessment Regulations

The EIA Regulations, promulgated under NEMA, focus primarily on creating a framework for co-operative environmental governance. NEMA provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by State Departments and to provide for matters connected therewith.

In terms of the EIA Regulations of 2010 and activities listed in GN No. 544 and 546 (requiring a Basic Assessment process) and GN No. 545 (requiring a S&EIR process), the following listed activities are deemed by the EAP to be applicable to the proposed Vumani Rural Housing project based on the information provided

by the project proponent and their consulting engineers.

| Number and date of the relevant notice: | Activity No (s) (in terms of the relevant or notice): | Project Description |
|---|---|---|
| GN.R544 dated 18 June 2010 | 9 | <p>The construction of facilities or-infrastructure exceeding' 1000metres in length for the bulk transportation of water, sewage or storm water:</p> <ul style="list-style-type: none"> i. with an internal diameter of 0,36 meters or more; or ii. with a peak throughput of 120 litres per second or more, excluding where: <ul style="list-style-type: none"> a. such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or b. where such construction will occur within urban areas but further than 32meters from a watercourse, measured from the edge of the watercourse. <p><i>As part of the development, bulk sewer and water pipelines will be constructed internally which are likely to exceed 0.36m in diameter.</i></p> |
| GN.R544 dated 18 June 2010 | 11 | <p>The construction of:</p> <ul style="list-style-type: none"> i. canals; ii. channels; iii. bridges; iv. dams; v. weirs; vi. bulk storm water outlet structures; vii. marinas; viii. jetties exceeding 50 square metres in size; ix. slipways exceeding 50 square metres in size; x. buildings exceeding 50 square metres in size; or xi. infrastructure or structures covering 50 square metres or more <p>where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p> <p><i>It is likely that buildings are infrastructure will be proposed within 32m of the watercourses located in close proximity to the site.</i></p> |
| GN.R544 dated 18 June 2010 | 18 | <p>The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from</p> <ul style="list-style-type: none"> i. a watercourse; ii. the sea; iii. the seashore; iv. the littoral active zone, an estuary or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is the greater <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving</p> <ul style="list-style-type: none"> a. is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or b. occurs behind the development setback line. <p><i>It is likely that as part of the development, there may be the requirement to infill or deposit material into a watercourse.</i></p> |
| GN.R544 dated 18 June 2010 | 23 | <p>The transformation of undeveloped, vacant or derelict land to</p> <ul style="list-style-type: none"> i. residential, retail, commercial, recreational, industrial or |

| Number and date of the relevant notice: | Activity No (s) (in terms of the relevant or notice): | Project Description |
|---|---|---|
| | | <p>institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, or</p> <p>ii. residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares;</p> <p>except where such transformation takes place</p> <p>a. for linear activities; or</p> <p>c. for purposes of agriculture or afforestation, in which case Activity 16 of Notice No 545 applies.</p> <p><i>The property is currently undeveloped and being utilised for commercial agricultural land use. The change in use to greenfields and infill housing brings the development within the ambit of this activity.</i></p> |
| GN.R545 dated 18 June 2010 | 15 | <p>Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more; except where such physical alteration takes place for:</p> <p>i. linear development activities;</p> <p>ii. or agriculture or afforestation where activity 16 in this Schedule will apply.</p> <p><i>The property proposed for development is approximately 1.7km² in extent (170ha) and with the development plan contemplating approximately 1000 residential units and ancillary service infrastructure, it is more than likely that an area greater than 20ha will be altered.</i></p> |
| GN.R546 dated 18 June 2010 | 4 | <p>The construction of a road wider than 4 meters with a reserve less than 13.5 meters in KwaZulu-Natal, (gg) in areas within 10km from national parks or world heritage sites or 5km from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve.</p> <p><i>As part of the development, internal gravel roads, which are likely to be wider than 4m will be constructed within 6km of the Rendsburg Cycad Colony Natural and an area referred to as Lenjane (Natural Heritage Site).</i></p> |
| GN.R546 dated 18 June 2010 | 12 | <p>The clearance of an area of 300 square meters or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</p> <p><i>With respect to vegetation type classifications of South Africa, the site is expected to encounter grassland, thicket and bushland. An ecological assessment of the site will be commissioned for inclusion in the documentation, but it is likely that indigenous vegetation will need to be cleared as part of the application.</i></p> |
| GN.R546 dated 18 June 2010 | 13 | <p>The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</p> <p><i>With respect to vegetation type classifications of South</i></p> |

| Number and date of the relevant notice: | Activity No (s) (in terms of the relevant or notice): | Project Description |
|---|---|--|
| | | <i>Africa, the site is expected to encounter grassland, thicket and bushland. An ecological assessment of the site will be commissioned for inclusion in the documentation, but it is likely that indigenous vegetation will need to be cleared as part of the application.</i> |
| GN.R546 dated 18 June 2010 | 14 | The clearance of area of 5 hectares or more of vegetation where 75% or more the vegetative cover constitutes indigenous vegetation. <i>With respect to vegetation type classifications of South Africa, the site is expected to encounter grassland, thicket and bushland. An ecological assessment of the site will be commissioned for inclusion in the documentation, but it is likely that indigenous vegetation will need to be cleared as part of the application.</i> |

It must be noted that activities requiring a Basic Assessment process, as well as activities requiring a S&EIR process are triggered by the proposed development. Therefore, according to the above listed activities, a situation arises, whereby; the legal requirements of the activity listed in terms of Government Notice (GN) No. 545 of 2010 supersede those of the activities listed in terms of GN No. 544 and 546 of 2010, and as such **this application shall undergo a S&EIR process.**

The aforementioned listed activities are deemed to include activities that could potentially have a detrimental impact on the social and biophysical state of an area and as such, are required to undergo an EIA process.

A-2.2 National Water Act, 1998 (Act No. 36 of 1998)

The National Water Act, 1998 (Act No. 36 of 1998) (NWA) aims to provide management of the national water resources to achieve sustainable use of water for the benefit of all water users. This requires that the quality of water resources is protected as well as integrated management of water resources with the delegation of powers to institutions at the regional or catchment level. The purpose of the Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in responsible ways.

Of specific importance to this application is Section 19 of the NWA, which states that an owner of land, a person in control of land or a person who occupies or uses the land which thereby causes, has caused or is likely to cause pollution of a water resource must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring and must therefore comply with any prescribed waste standard or management practices.

Due to the various streams, tributaries and drainage lines that occur on site as well as the proposed storage of water on site, according to the NWA, the proposed Vumani Rural Housing Development may trigger the following water uses listed in Section 21:

- (c) impeding or diverting the flow of water in a watercourse; and
- (i) altering the bed, banks, course or characteristics of a watercourse.

Accordingly, the proposed project may thus require a water use licence, which is administered by the Department of Water Affairs (DWA).

A-2.3 Other Legal Requirements

A-2.3.1 Acts

Constitution of the Republic of South Africa

The Constitution of the Republic of South Africa has major implications for environmental management. The main effects are the protection of environmental and property rights, the change brought about by the sections dealing with administrative law, such as access to information, just administrative action and broadening of the locus standi of litigants. These aspects provide general and overarching support and are of major assistance in the effective implementation of the environmental management principles and structures of the NEMA. Section 24 in the Bill of Rights of the Constitution specifically states that:

Everyone has the right -

- To an environment that is not harmful to their health or well-being; and
- To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -
 - Prevent pollution and ecological degradation;
 - Promote conservation; and
 - Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)

The purpose of the Biodiversity Act is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection. As part of its implementation strategy, the National Spatial Biodiversity Assessment was developed.

This Act is applicable to this application for environmental authorisation, in the sense that it requires the project applicant to consider the protection and management of local biodiversity.

National Heritage Resources Act, 1999 (Act No. 25 of 1999)

This Act legislates the necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5 hectares (ha) and where linear developments (including roads) exceed 300 metres in length. The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the Amafa KwaZulu-Natal (Provincial Heritage Resources Authority).

National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)

The purpose of this Act is to provide for the protection, conservation and management of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes.

Subdivision of Agricultural Land Act, 1970 (Act No. 70 of 1970)

The purpose of the Act is to control the subdivision and, in connection therewith, the use of agricultural land. The Minister of Agriculture, Forestry and Fisheries ("Minister of Agriculture") must consent to the proposed subdivision.

Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)

To provide for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.

Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

To provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)

To reform the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development; to provide for institutional arrangements and planning matters; to provide for national norms and standards for regulating the management of waste by all spheres of government; to provide for specific waste management measures; to provide for the licensing and control of waste management activities; to provide for the remediation of contaminated land; to provide for the national waste information system; to provide for compliance and enforcement; and to provide for matters connected therewith.

Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)

The Act recognises that everyone has a Constitutional right of access to any information held by the state and by another person when that information is required to exercise or protect any rights. The purpose of the Act is to foster a culture of transparency and accountability in public and private bodies and to promote a society in which people have access to information that enables them to exercise and protect their rights.

Planning and Development Act, 2008 (No. 6 of 2008)

To provide for the adoption, replacement and amendment of schemes, to provide for the subdivision and consolidation of land; to provide for the development of land outside schemes; to provide for the phasing or cancellation of approved layout plans for the subdivision or development of land; to provide for the alteration, suspension and deletion of restrictions relating to land; to establish general principles for the permanent closure of municipal roads or public places; to provide for the adoption and recognition of schemes, to provide for compensation in respect of matters regulated by the Act; to establish the KwaZulu-Natal Planning and Development Appeal Tribunal; to provide for provincial planning and development norms and standards; and to provide for matters connected therewith.

A-2.3.2 Provincial Policies and/or Guidelines***Integrated Environmental Management (IEM)***

IEM is a philosophy for ensuring that environmental considerations are fully integrated into all stages of the development process. This philosophy aims to achieve a desirable balance between conservation and development (DEAT, 1992). The IEM guidelines intend encouraging a pro-active approach to sourcing, collating and presenting information in a manner that can be interpreted at all levels.

The DEA Integrated Environmental Management Information Series guidelines are also considered during this S&EIR application process.

The National Building Regulations and Building Standards Act, 1997 (Act No. 103 of 1997)

“To promote the promotion of uniformity in the law relating to the erection of buildings in the areas of jurisdiction of local authorities for the prescribing of building standards and for matters connected therewith”.

National Spatial Biodiversity Assessment

The National Spatial Biodiversity Assessment (NSBA) classifies areas as worthy of protection based on its biophysical characteristics, which are ranked according to priority levels.

Protected species – Provincial Ordinances

Provincial ordinances were developed to protect particular plant species within specific provinces. The protection of these species is enforced through permitting requirements associated with provincial lists of protected species. Permits are administered by the Provincial Departments of Environmental Affairs.

KwaZulu-Natal Heritage Act, 2008 (Act No. 4 of 2008)

KwaZulu-Natal Heritage Act provides for the conservation, protection and administration of both the physical and the living or tangible heritage resources of the Province of KwaZulu-Natal; and to establish a statutory Council to administer heritage conservation in the Province. Amafa / Heritage KwaZulu-Natali is the provincial heritage conservation agency for KwaZulu-Natal. Amafa was established as a statutory body in terms of the KZN Heritage Act of 1997, replaced by the KZN Heritage Act of 2008.

Provincial Spatial Economic Development Strategy (PSEDS)

The PSEDS is aimed at transforming the structure of the economy and narrowing and eventually eliminating the gap between the first and second economies. The four pillars of the strategy are as follows:

- Increasing investment in the province;
- Skills and capacity building;
- Broadening participation in the economy; and
- Increasing competitiveness.

The PSEDS identifies the sectors of the provincial economy which will drive the growth of the province and address unemployment and poverty as follows:

- Agriculture - including agri-industry (with opportunities to impact considerably on the economic needs of the poor through Land Reform);
- Industry - including heavy and light industry and manufacturing;
- Tourism - including domestic and foreign tourism; and
- Service sector - including financial, social, transport, retail and government.

The logistics and transport sector (including rail) in the services sector are also identified as important subsectors underpinning growth in all four sectors.

The PSEDS also acknowledges that the potential for industrial development in the province is anchored by the nodes of eThekweni and Umhlatuze. The corridors between these two nodes form the primary zone of industrial development in the province.

One of the principles of the PSEDS is that settlements and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or link the main growth centres. The eThekweni – Umhlatuze development corridor has been identified as having the potential for greatly impacting on economic growth and the development of impoverished areas.

Accelerated Shared Growth Initiative for South Africa (ASGISA)

ASGISA resulted from Government's commitment to halve unemployment and poverty by 2014 and was launched in February 2006. ASGISA is not a government programme but a national initiative supported by key groups in the economy viz, Business, Labour, State-owned enterprises, Government economic agencies, Entrepreneurs and all spheres of government¹.

1 <http://www.info.gov.za/asgisa/>

A-2.3.3 Local Policies and/or Guidelines

Draft Abaqulusi Local Municipality Integrated Development Plan (IDP) 2011/2012

The following challenges are faced in the Abaqulusi Area:

Settlement pattern: Spatially, the IDP must respond to the need for the development of hierarchy of settlements/ nodes, which will rationalise the regional distribution of investment in basic infrastructure and community services. The development of Rural Service Centres may go a long way in achieving a more equitable development and investment pattern and spatial integration in areas like Emondlo/Hlahlindlela, Hlobane and Khambi. There is a need to formalise the rural settlements surrounding the urban areas through the implementation of Framework Plans or precinct plans and for consistency in policies, land use management and by-laws.

Poor access to social facilities: Urban areas within the Abaqulusi Local Municipality are reasonably well developed with social facilities and services. However, the standards do need to be maintained and such facilities need to be expanded to reach the urban population due to high rate of urbanization and migration. The real challenge lies in creating similar standards of provision of facilities in the rural areas in order to achieve social upliftment and a general improvement of socio-economic conditions.

Service backlog: One of the main elements of socio-economic wellbeing is the access to basic services. Access to basic services is a huge challenge for rural parts of Abaqulusi Municipality, whereas the Vryheid town suffers from maintenance of existing services. This will be severely constrained by limited financial resources. Public transport plays an important role in the economy of Abaqulusi and deserves some attention in the planning efforts of the municipality.

a) Opportunities within the Abaqulusi Area

Commercial and Property Development

The Vryheid town has not experienced massive new developments in the past 10 years, despite the property industry boom, which has characterized other urban centres such as Richards Bay, Newcastle and Pietermaritzburg. As a result, Vryheid has not translated into new investments opportunities. Abaqulusi Municipality has taken cognizance of this investment, which it is critical for the survival of the Vryheid town and increase municipal tax base, however the major challenge facing the municipality is to provide support to the new investment in terms of infrastructure development. However, the municipality has reserved 134 residential stands for the high income earners next to Vryheid Hill opposite the Vryheid Provincial hospital. Other residential stands reserved by the municipality for middle income group are found at Edel Park (64 stands), Bhokuzulu township (250 stands), 70 stands at eMondlo township and 134 stands in Lakeside township. All the above mentioned stands require massive infrastructure development by the municipality given that the stands are not serviced. However, the venture for public and private partnership (PPP) by Abaqulusi Municipality would go a long way to assist the municipality to attract the new investments and address this challenge. Subsequently, this proposed investment co-incised with the Abaqulusi financial plan and will play a magnificent role to increase and expand the municipal rate base, which enables the Abaqulusi Municipality to deliver services to community in an efficient and effective manner.

b) Consolidation and Expansion of Vryheid town

Vryheid is Zululand's main commercial, industrial and business centre, with a reasonable well-developed physical, social and institutional infrastructure. It is well located at the intersection of the major transport routes, which traverse the region. The need for this type of development emanates from the concern that there is no place to do shopping from Richards Bay via Newcastle to Gauteng. This sector has enjoyed a good growth rate through the development of Vryheid as a regional service centre with increased interaction with its hinterland. The smaller towns around Vryheid have developed a dependence on the economy of

Vryheid. Many of the businesses are locally owned and the majority of clients are from within the Abaqulusi area. Vryheid has established itself as a superior provider of educational services in a wider catchment area, attracting learners and students from as far as Pongola, Ulundi, Nongoma, Paul Pietersburg and Dundee.

One of the IDP priorities is the provision of basic services and infrastructure, such as water and sanitation, roads and stormwater, housing and land, energy and electricity, waste management and social facilities. The proposed Vumani Rural Housing project will in some way achieve the goals for provision of basic services and infrastructure.

c) Service Delivery

Water Service Authority (WSA): Abaqulusi Municipality is not a WSA but has signed an agreement with Zululand District Municipality (Natal Spar Agreement) to service all the urban areas with water, sewer and roads and storm-water within the urban centres. The municipality has also implemented the boreholes in rural wards through the assistance of MIG funding. The water meters are being implemented in the townships in order to have accurate billing system and preserve water resource.

Housing Delivery: The municipality is currently putting services in the new residential stands for high and middle income with infrastructure in order to increase its rate base and revenue collection. There are a number of low cost houses that the municipality is implementing. These include extension 16 for 2500 slums clearance beneficiaries, Bhokuzulu 1096 beneficiaries and 1000 rural housing at Bhokumthetho outside eMondlo A and B areas.

Indigent Support Systems: The Abaqulusi Municipality is providing free basic services to indigent communities throughout its area of jurisdiction. The funding for indigent support comes through the Equitable Share from national government and applications from the indigent families are screened by the CFO, the Mayor and the Executive Committee for indigent qualification and registration.

Solid Waste Collection: The municipality has privatized the collection of solid waste in order to improve service delivery. This will now cover all urban areas including the former black township. This will be done concurrently with the development of the new solid waste site in compliance with the Department of Environmental Affairs regulations.

Abaqulusi Local Municipality Spatial Development Framework (SDF) of 2009

a) Rural Settlements

A number of small isolated rural settlements established in terms of the land reform program are scattered throughout the commercial farmlands, with large number of them concentrated to the north of the municipal area. This introduces a major challenge, as the expansion of these settlements in areas that are not provided with bulk services (water, sanitation, roads, etc) is neither desirable nor sustainable. The majority of rural settlements are located along the regional and district arterial routes.

b) Access to Public Facilities

Educational Facilities

Spatial distribution of education facilities in relation to the population density reveals that most of the settled areas are well developed with education facilities, particularly schools (refer to map 4). This is based on the application of a standard of 1200 households per secondary school and 600 households per primary school. The condition of these schools is unknown, but a review of the IDP suggests that some of them requires upgrading and maintenance. Some of the settlements located within commercial farms do not have sufficient

threshold to even warrant a school. As a result, most of the schools in these areas are small in both enrolment and the number of classrooms.

c) Access to Basic Services

Electricity

Eskom supplies bulk electricity and Vryheid provides an electrical service to surrounding areas. The urban areas of Vryheid, Louwsburg, eMondlo, Coronation, Hlobane, Gluckstadt, Bethel Mission and Boschoek mostly have access to household electricity connections. A small number of rural settlements also have access to electricity including Enyathi, Mountgwibi, Nkongolwane, Qweqwe 2, Mvuzini, Mhlangeni, Engilandi and Amahlathi. The existing informal homesteads at the Vumani site have access to electricity. The rest of the rural settlements have no access to electricity.

Water

Water supply infrastructure in Abaqulusi Municipality varies between areas reflecting the impact of separate development and urban bias of the past planning and development practices. 43% of the population has water above reconstruction and Development Program (RDP) standards while 7% just meet the RDP standards. This means that the area has water backlog of 50%. Only 27% receives water above Zululand District Municipality water standards. The responsibility for the delivery of water in Abaqulusi is shared between Zululand District and Abaqulusi Municipality. Zululand district provides water in the rural areas while Abaqulusi is in charge of water in the urban areas. Abaqulusi draws water from various sources including Bloemveld, Grootgewacht, Klipfontein, Boulder and Hlobane and Mvunyane Dams. The municipality is responsible for six plants, which are all located within the urban areas. There is minimal capacity left in most of the bulk water supply systems with the situation fast reaching critical level in Emondlo.

The rural areas are primarily served by boreholes. However, the District is presently implementing three major rural water schemes in the Abaqulusi municipal area, namely:

- eMondlo Hlahlindlela Water Scheme;
- Coronation Bulk Water Scheme; and
- Khambi Regional Water Supply Scheme

Sanitation

According to Abaqulusi Housing Sector Plan (2007), only Vryheid, eMondlo, Hlobane, Coronation, Ntumbane, Bethel Mission, Mount Gwibi and Enyathi have waterborne sewage reticulation. People in the remainder of the study area make use of pit latrines or do not have a proper sanitation system at all. Seventy-eight percent (78%) of the rural population use no sewage system. This is obviously a matter of great concern for reasons that include:

If infrastructure is not provided to cater for an increase in sewer and waste, the health and sanitation situation worsens dramatically as rural settlements grow and dwellings are built closer together.

Pit latrines and septic tanks pose a health threat where they are situated close to aquifers and water supplies used for domestic purposes. Samples taken along a stream flowing into the Ithala Game Reserve showed a faecal coli count that is double the acceptable health standards.

Rain water washes human waste into rivers and streams. Sanitation at public buildings and schools is of utmost importance to ensure good public health conditions. In addressing the sewage infrastructure backlog, priority should be given to such buildings.

Waste Management

Development and maintenance of regional waste disposal facilities is the function of Zululand District Municipality. The situation in respect of access to waste disposal facilities in Abaqulusi Municipality is as follows (ZDM, Waste Services Development Plan, 2002).

Vryheid: The site is fairly well operated but leachate poses a threat to the environment. The municipality applied for a permit in 1995. This site has a limited life span of approximately 5 years and a new site needs to be identified and permitted as soon as possible.

Enyati: There is no landfill. There is the possibility of disposal at the Vryheid landfill should this be required.

A principal informant derived from the built environment and the associated inefficiencies is the substantial housing backlog, both in rural and urban areas. Some of the settlements area located in areas that are not suitable for residential use because they are not provided services and facilities, but have been acquired in terms of rights based programs. The situation is compounded by the fact that current housing delivery projects have focused on low-density one-house one plot settlement form. This has produced sterile, inefficient and costly built environments with limited opportunities for the residents.

d) Developing Sustainable Human Settlements

Settlement pattern in Abaqulusi Municipality occurs in the form of low-density urban sprawl reflecting the texture of the existing urban centres and rural villages. This pattern is not sustainable and renders service delivery and development ineffective. It is critical in defining the structure and behaviour of settlements, it has given rise to a continuum of rural settlement that range from low density remotely located agrarian communities to centrally located relatively high-density settlements. A detailed consideration of the settlement pattern reveals a high level of disintegration and fragmentation. Higher density settlements should be located along the main transportation routes and held together by a web of local access roads and public facilities. At a regional level, they should be knit together by a system of regional access routes. However, settlements are also not static. They respond to change and are continuously in the process transformation. The key challenge is to turn them from being creations and remnants of the apartheid regime into sustainable human settlements. This has serious implications for detailed planning and development of these settlements:

A-3 DETAILS OF THE APPLICANT

The details of the project applicant are:

| Name of Applicant | Postal Address | Relevant Numbers |
|---|------------------------------|---|
| Ms. Nomsa Shabalala Abaqulusi Local Municipality | PO Box 57 Vryheid 3100 | Tel: 034 982 2133 Fax: 034 980 9637 E-mail: nshabalala@abaqulusi.gov.za |

A-4 NEED AND DESIRABILITY OF THE PROJECT

Housing delivery and development of sustainable human settlements

The Abaqulusi Municipal area is approximately 4 185km² in extent and it constitutes 30% of the area of the ZDM area of jurisdiction. The area incorporates the whole of the Vryheid and Louberg Magisterial Districts as well as part of the Nquthu Magisterial District. It is constituted by the following settlements:

Vryheid; Bhekuzulu; eMondlo Bhekumthetho/Hlahlindlela Coronation, Hlobane, Enyathi, Nkongolwane, Cliffdale, Vrede, Louwsburg, Dlomodlomo, Kwakhambi, Ngenetsheni, Cibilili, eSihlengeni, Ngome and Mountain View Gluckstadt and Zwart uMfolozi.

The rural population lives in two large concentrations, namely Hlahlindlela and Khambi Tribal Areas, accommodating 52 and 9% of the total population respectively. As such, about 63% of the population of the Abaqulusi Municipal area live in rural areas, most of which live in scattered homesteads known as Imizi in tribal areas. Homesteads are of a mixed nature including both modern dwellings and traditional thatched huts. The remainder of the population lives as tenants on farms or in towns, dormitory townships and shacks in the informal settlements around towns. The urban population is mainly concentrated in Vryheid, resulting in this town being the largest town in terms of services in Abaqulusi and therefore it plays an important regional role. The housing sector plan advocates for the adoption of rural service centre system (RSC) with a typical system of nodes ranging from regional to tertiary nodes, as a guide for housing delivery and spatial restructuring.

Directly linked to the establishment of a hierarchy of nodes in the Abaqulusi area and facing the challenge of providing services at grassroots level is the development of Rural Services Centres in areas with high population concentrations. This is particularly relevant for eMondlo, Khambi and Coronation/Hlobane. These emerging urban centres are where the greatest impact could be achieved in terms of sphere of influence for these Rural Service Centres. These are also the areas where the housing need is the greatest and would be the primary sites for housing delivery projects.

It further states that the RSCs will be a strong magnet in the physical environment, drawing people towards them and therefore strengthen the need for appropriate housing delivery projects in these areas. This will make each node an ideal location for small business and retail activities, due to the buying power associated with large numbers of people. It will also allow for an entry point to the formal market for small, medium and micro enterprises in a viable and affordable manner, supported by a mix of housing.

In short, the plan identified the following as priority areas for housing projects:

- Development nodes as identified in this Spatial Development Framework, particularly Vryheid, Emondlo and Hlobane.
- Rural settlements with a higher concentration of people. This includes areas such as Bhekumthetho, Hlahlindlela and Ambi.
- Eradication of informal settlements the majority of which are located just outside of Vryheid and Bhekuzulu.
- Higher density settlements located in the old mining areas, such as Hlobane, coronation, etc.
- Farm dwellers and other land reform beneficiaries. The location of these settlements should be based on a cluster approach.

In light of the strategies identified above, the proposed Vumani Rural Housing Project would achieve the objectives of provision of formal housing to the residents and improve their quality of life.

SECTION B: THE RECEIVING ENVIRONMENT

In order to, with any level of confidence, assess the potential impacts of the proposed Vumani Rural Housing Development on the receiving environment, one needs to first assess the baseline conditions found over the study area. Using this *Status Quo* one can then, broadly speaking, determine the likely impacts that will emanate from a specific development typology on a well-defined receiving environment.

B-1 BIOPHYSICAL ENVIRONMENT

B-1.1 Geology and Geotechnical Suitability

Geologically, the area is generally underlain by a mantle of fill, transported and residual soils overlying highly weathered Vryheid Formation sandstone bedrock. Pietermaritzburg Formation shale is present in the south eastern corner of the site and Karoo dolerite is likely to occur in the south western portion of the site. A Geotechnical Investigation will be conducted at the EIR phase to determine the suitability of the site for construction taking into consideration of the presence of collapsible soils, areas of anticipated shallow groundwater seepage less than 1.5m deep, areas of active soils, areas of erodible soils, intermediate to hard excavation requirements in shallow bedrock, and areas with steep slopes.

B-1.2 Soils and Agricultural Potential

According to the Department of Environmental Affairs (DEA): Environmental Potential Atlas, 2001, the site consists of red-yellow apedal, freely drained soils, red and yellow, dystrophic and/or mesotrophic soils. The soils are highly suited to arable agriculture, where climate permits.

B-1.3 Topography and Hydrology

Topographically, the site is predominantly gently sloping, but slightly inclined towards the north of the area. The site is however situated within undulating terrain, with a mountain namely Mnyati being located approximately 1 km east from the site. High ground is located to the north of the area, while a deep valley is located south of the site.

There are a number of wetlands and drainage lines on the site. The site falls within the quaternary catchments W22A and W21B. A Wetland Delineation and Functional Assessment will be conducted during the EIR phase and the findings thereof will be presented in the forthcoming Environmental Impact Report (EIR).

The proposed development may trigger water uses listed in Section 21(c) impeding or diverting the flow of water in a watercourse; and Section 21(i) altering the bed, banks, course or characteristics of a watercourse.

Accordingly, the proposed project may thus require a water use licence, which is administered by the Department of Water Affairs (DWA).

B-1.4 Climate

Vryheid receives approximately 688mm of rain per year, with most rainfall occurring during summer. It receives the lowest rainfall (3mm) in June and the highest (122mm) in December. The monthly distribution of average daily midday maximum temperatures for Vryheid, ranges from 19.6°C in June to 26.4°C in January.

The region is the coldest during June when the mercury drops to 3.5°C on average during the night².

B-1.5 Flora and Fauna

According to the South African National Botanical Institute (SANBI), 2006, the site falls within Income Sandy Grassland. This vegetation type will be verified during the vegetation study that will be conducted.

Floral and Faunal Assessments will be conducted during the EIR phase of the project and their findings shall be incorporated into the Environmental Impact Report.

B-2 SOCIAL ENVIRONMENT

B-2.1 Demographic Conditions

The 2001 census estimates that the total population of Abaqulusi Municipality is 191 019 individuals (i.e. 2.2% of the entire KwaZulu Natal province) or 24 814 households which are widely spread unevenly among the twenty municipal wards.

An annual growth rate of 1.44% is predicted for the Abaqulusi area. This rate is bound to decrease to 0.96% and less over the next decade if the impact of HIV/AIDS is considered. A steady decline in the average annual population compound growth rates for KwaZulu-Natal over the next 20 years can therefore be expected. Over the next 20 years a conservative total population increase of 31 438 (16%) persons and the need for 5 910 new housing units are therefore expected (Abaqulusi Housing Sector Plan, 2009: 7).

Approximately 60.1% of the population in Abaqulusi is younger than 25 years of age and only 4.4% are over 65 years of age. This represents a significantly higher percentage of the young population than for KwaZulu-Natal and South Africa. In KwaZulu-Natal, 55.8% of the population is younger than 24 years old and 4.7% is 65 years or older. Nationally, 51.8% of the population are younger than 24 years old and 4.9% are 65 years or older. The age profile shows a wide bell shaped distribution with a large proportion (74%) of the population being young people between 0-34 yrs old.

Abaqulusi Local Municipality has an average rate (22.31%) of people who have no formal schooling as represented in the graph below. The graph also indicates that the largest percentage (60.15%) of the population has some form of primary and secondary education. The percentage of population with some further education is however low (2.54%). This can be attributed to people not having funding to further their education or that the results being produced are not suitable for admission to tertiary institutions, whilst very few have formal tertiary training. 3.4% of the Abaqulusi population has an unspecified qualification, which can be interpreted as some form of skills training.

Certainly, one of the key challenges facing Abaqulusi Municipality is a relatively high rate of functional illiteracy. This has a significant impact on employability, the type of job opportunities that can be sought and the vocational distribution of the economically active population.

EMPLOYMENT LEVELS

Informal Sector

A large proportion (55.57%) of the economically active population is located within the tertiary employment sectors of Government Services 21.87%, Community Services 17.23%, Trade and Tourism 16.28%. The

² <http://www.saexplorer.co.za>

primary sectors of Agriculture (6.10 %), and Mining (4.47%), and tertiary sector of Transport (5.30%), employ smaller proportions of the economically active population. Approximately 6.11% of the economically active population is located in twelve secondary and tertiary sectors. The decline in employment figures in spite of a positive growth in some of the tertiary sectors such as Food and Beverages and primary Agricultural sector is of concern and needs to be investigated carefully in the strategies phase of the project so that local causal factors can be revealed.

Informal Sector

The two leading sectors in the informal economy are agriculture and trade. Informal sector Agriculture peaked in 2006 showing a large number (34,369) of employees. However, in 2007, this sector dropped steeply to 2,006 people which were half of the number of people employed in informal Agriculture in 2005. Similarly, employment in the informal trade sector peaked in 2006 and then dropped again in 2007 to 14, 999 which is slightly higher than the 2005 figure when 14, 513 people employed (Abaqulusi LED Sector Plan), 2009.

Income Profile

Thirty-two point eight percent (32.8%) of people do not have any secured source of income while 9.1% earns less than R4800 a month. This means that more than 1/3 of the population lives below poverty datum line and should be considered for assistance in terms of welfare grants and indigent policy of the municipality. Most of the poverty-stricken households of Abaqulusi are located in the two Tribal Areas. The urbanized population is generally better off than the rural community is where communities will probably not be able to afford housing and other services. The provision of basic and essential services to the communities of these rural areas would be one of the greatest challenges of the new Abaqulusi Local Municipality.

B-2.2 Visual

Scenic value can be described as the reaction to aesthetics of the environment as perceived by an individual or a group and therefore it is a very subjective perception. In terms of surrounding landscape compatibility, the proposed development will not be out of character, since there are existing low-scale rural homesteads surrounding the northern and southern portions of the site. Forestry is the predominant land use surrounding the site. Anthracite mining occurs to the west and east of the site. These land uses are not visible from the site. In light of this, there are few visual receptors in the surrounding rural landscape setting and the proposed development will not impact on the view shed of these land users as a change in the sense of place.

B-2.3 Heritage

As per the National Heritage Resources Act, 1999 (Act No. 25 of 1999), the proposed development will undergo a Phase 1 Heritage Impact Assessment, due to the size of the development exceeding 0.5 ha. Should any heritage artefacts be uncovered, the relevant heritage agency will be appropriately consulted.

B-2.4 Noise

Noise control must form part of the planning stage of any development. During the construction phase, noise may be generated as a result of construction related activities such as: the use of machinery and equipment, and the movement of construction vehicles, etc. These potential noise impacts must be mitigated, where possible. This will be investigated during the EIR phase of the project and suitable mitigation measures will be recommended.

B-2.5 Air Quality

Vehicles travelling on exposed surfaces, earthworks as well as wind are the main generators of dust. The nuisance and aesthetic impacts associated with the dust generated during the construction phase should be

minimal, if mitigating measures are implemented.

Dust generated off the earth's surface is generally regarded as a nuisance rather than a health or environmental hazard. On a large scale dust will impair atmospheric visibility; however, in the context of the proposed activity, the impact of dust production on air quality should be minimal taking into account that effective dust suppression techniques are available and will be recommended during the EIR phase.

SECTION C: ENVIRONMENTAL IMPACT ASSESSMENT (EIA) PROCESS

C-1 APPROACH TO THE EIA

An Environmental Impact Assessment (EIA) is an effective environmental planning tool. It identifies the environmental impacts of a proposed project and assists in ensuring that a project will be environmentally acceptable and integrated into the surrounding environment in a sustainable way.

The EIA for this project complies with the requirements of the National Environmental Management Act, 1998 (Act 107 of 1998) [NEMA] and the NEMA EIA Regulations, 2010 of the DEA. The guiding principles of an EIA are listed below.

Definition of the term “environment”

The term “environment” is used in the broadest sense in an environmental impact assessment. It covers the physical, biological, social, economic, cultural, historical, institutional and political environments.

C-2 GUIDING PRINCIPLES FOR AN EIA

The EIA must take an open participatory approach throughout. This means that there should be no hidden agendas, no restrictions on the information collected during the process and an open-door policy by the proponent. Technical information must be communicated to stakeholders in a way that is understood by them and that enables them to meaningfully comment on the project.

There should be ongoing consultation with Interested and Affected Parties (I&APs) representing all walks of life. Sufficient time for comment must be allowed. The opportunity for comment should be announced on an on-going basis. There should finally be opportunities for input by specialists and members of the public. Their contributions and issues should be considered when technical specialist studies are conducted and when decisions are made.

The eight guiding principles that govern the entire process of EIA are as follows (see Figure below):

- **Participation:** An appropriate and timely access to the process for all interested parties.
- **Transparency:** All assessment decisions and their basis should be open and accessible.
- **Certainty:** The process and timing of the assessment should be agreed in advanced and followed by all participants.
- **Accountability:** The decision-makers are responsible to all parties for their action and decisions under the assessment process.
- **Credibility:** Assessment is undertaken with professionalism and objectivity.
- **Cost-effectiveness:** The assessment process and its outcomes will ensure environmental protection at the least cost to the society.
- **Flexibility:** The assessment process should be able to adapt to deal efficiently with any proposal and decision making situation.
- **Practicality:** The information and outputs provided by the assessment process are readily usable in decision making and planning.

A S&EIR process is considered as a project management tool for collecting and analysing information on the environmental effects of a project. As such, it is used to:

- Identify potential environmental impacts;
- Examine the significance of environmental implications;

- Assess whether impacts can be mitigated;
- Recommend preventive and corrective mitigating measures;
- Inform decision makers and concerned parties about the environmental implications; and
- Advise whether development should go ahead.

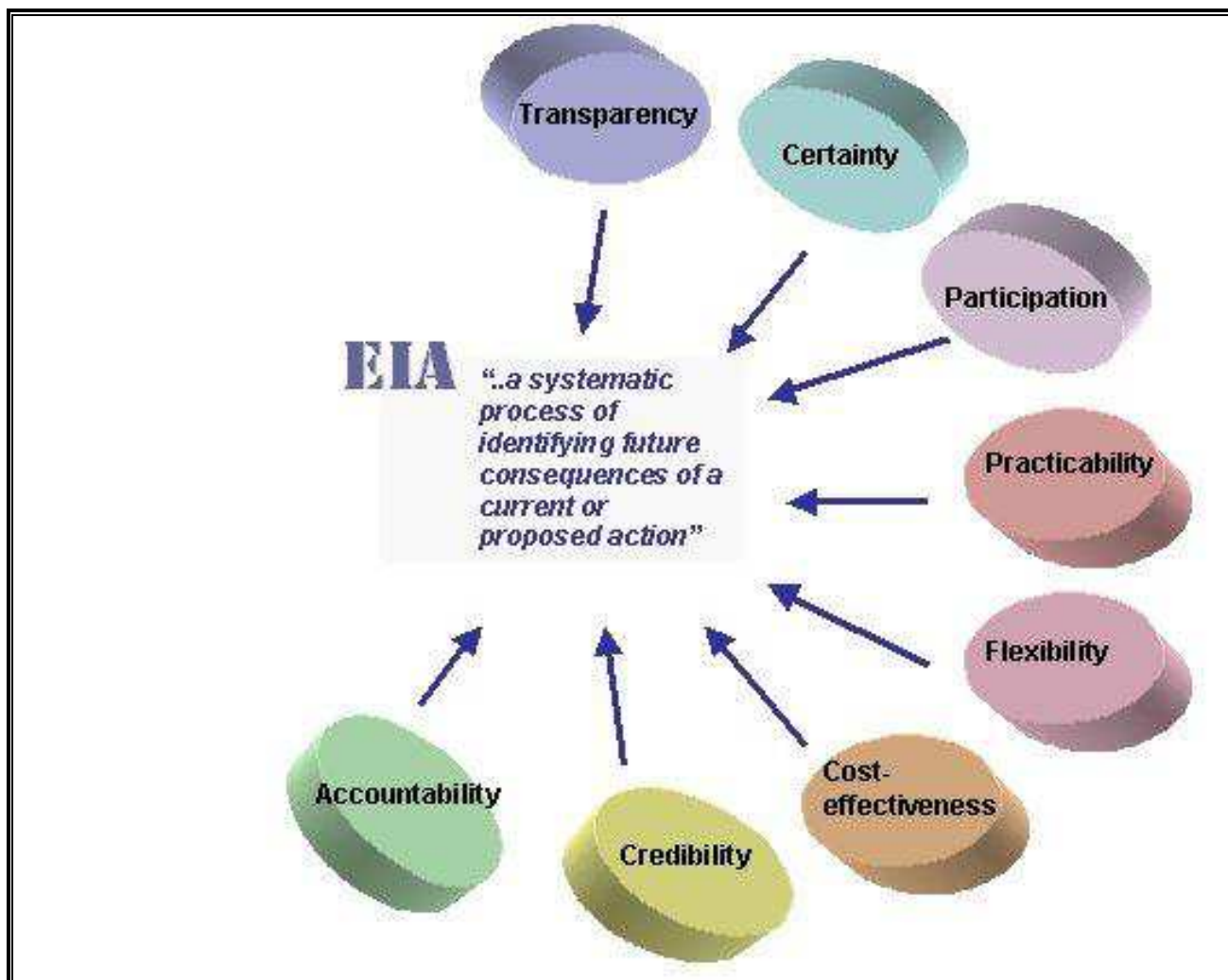


Figure 1: The eight guiding principles for the EIA process

A S&EIR process typically has four phases, as illustrated in the Figure below. The Public Participation process forms an integral part of all four phases and is discussed in greater detail in Section C – 4 of this final Scoping Report.

C-3 S&EIR TECHNICAL PROCESS

This section provides a summary of the technical process to be followed for this S&EIR process.

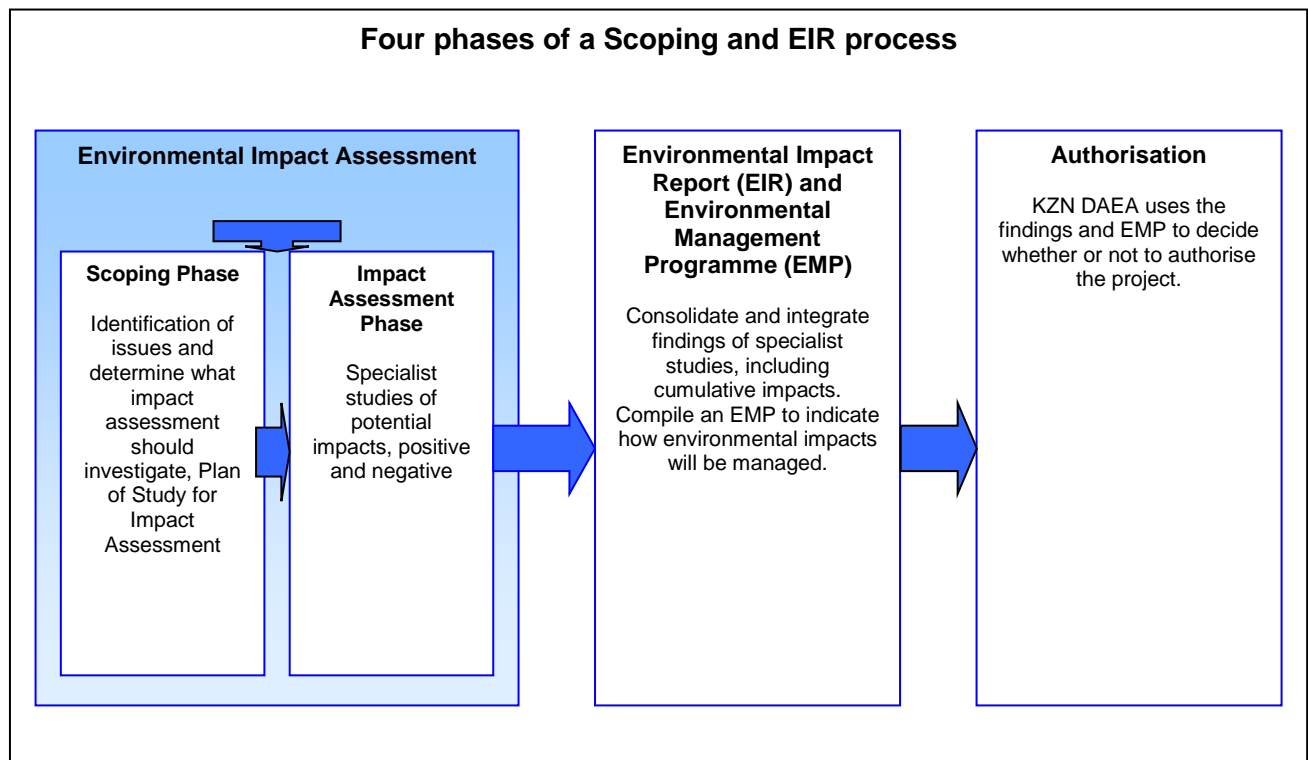


Figure 2: Flow diagram of the Scoping and EIR process

C-3.1 Pre-application Consultation with the KZN DAEA

No pre-consultation meeting was held between SEF and KZN DAEA. The EAP conducting the S&EIR process for the applicant, in support of their application for an environmental authorisation, is deemed to have a good understanding of the information requirements of the Department for the proposed Vumani Housing Development, such that the Department's specific information requirements are deemed to have been met for the scoping phase of this project.

C-3.2 Application for Authorization

The application form informing the Department of intent to obtain an Environmental Authorisation was submitted to the KZN DAEA on 3 October 2013. The KZN DAEA acknowledged receipt of the Application Form on 3 October 2013. KZN DAEA issued reference numbers DC26/0022/2013 and NEAS Reference: KZN/EIA/0001296/2013 to the project. Refer to the Authority Correspondence in Appendix 4.

C-3.3 Information Gathering

Early in the EIA process, the technical specialists identified the information that would be required for the impact assessment and the relevant data was obtained. In addition, the specialists sourced available information about the receiving environment from reliable sources, I&APs, previous documented studies in the area and previous EIA Reports.

C-3.4 Specialist Studies

The following specialist studies were identified to be undertaken during the EIR phase:

- Ecological Assessment (Floral and Faunal Assessment);
- Phase 1: Heritage Impact Assessment;
- Geotechnical Assessment; and
- Wetland/Riparian Delineation and Functional Assessment.

C-4 PUBLIC PARTICIPATION PROCESS

The principles of NEMA govern many aspects of the S&EIR process, including consultation with I&APs. These principles include the provision of sufficient and transparent information to I&APs on an on-going basis, to allow them to comment; and ensuring the participation of historically disadvantaged individuals, including women, the disabled and the youth.

The principal objective of public participation is thus to inform and enrich decision-making. This is also the key role in the scoping phase of the process.

C-4.1 Identification of Interested and Affected Parties

I&APs representing the following sectors of society have been identified in terms of Regulation 55 of the EIA Regulations R543 of 2010 (see Appendix 3 for a complete preliminary I&AP distribution list):

- National Authorities;
- Provincial Authorities;
- Local Authorities;
- Ward Councillors;
- Parastatal/ Service Providers;
- Non-governmental Organisations;
- Local forums/ unions; and
- Adjacent Landowners.

C-4.2 Public Announcement of the Project

The project was announced on Thursday, 7 November 2013, in the following manner (see Appendix 3 for public announcement documentation):

- Publication of media advertisement (in English) in the local newspaper, Vryheid Herald and in Zulu in the Ilanga Newspaper on 8 November 2013;
- On-site notices (in Zulu) advertising the S&EIR process were placed on and around the site;
- Distribution of letters by fax/ by hand/ post/ email to I&APs including Registration and Comment Sheets on 8 November 2013 to 12/11/2013.

C-4.3 Draft Scoping Report

A period of **40 calendar days** (7 November 2013 to 6 January 2014) was provided to the **State Departments** and the **General Public** for the review and commenting phase of the Draft Scoping Report. All Interested and Affected Parties (I&APs) as well as State Departments have been notified of this review period. I&APs and

relevant State Departments have had the opportunity to raise issues either in writing, by telephone or email on the Draft Scoping Report.

The availability of the Draft Scoping Report was announced by means of personal letters to all the registered I&APs on the distribution list, and by adverts placed in the abovementioned newspapers.

In addition, the Draft Scoping Report was distributed for comment as follows:

- Left in a public venue (Vryheid Library);
- Hand-delivered/ couriered to the relevant authorities; and
- Posted on SEF's website at <http://www.sefsa.co.za>.

All the comments and concerns raised by I&APs during the S&EIR process are captured in a Comment and Response Report (Refer to Appendix 3). I&APs will receive letters acknowledging their contributions.

C-4.4 Final Scoping Report

The Final Scoping Report has been updated with comments and/or concerns raised by I&APs during public review of the Draft Scoping Report. The Comment and Response Report is attached to the Final Scoping Report (Appendix 3). The Final Scoping Report has been submitted to the KZN DAEA and registered I&APs simultaneously for review and comment.

A period of **30 calendar days (Monday 20 January 2014 to Wednesday 19 February 2014)** has been provided to registered I&APs to comment on the Final Scoping Report. Registered I&APs have been advised to submit any additional comments on this final Scoping Report directly to the KZN DAEA prior to the lapsing of the 30 day review period. Refer to the notification letter in Appendix 3.

C-4.5 Public participation during the Impact Assessment Phase

Public participation during the Impact Assessment Phase of the S&EIR process will revolve around a review of the findings of the Environmental Impact Report (EIR) and inputs into the Environmental Management Programme (EMPr). The findings will be presented in a Draft Environmental Impact Report and EMPr (including the specialist studies conducted), which will be available for public review and comment.

SECTION D: IDENTIFICATION OF IMPACTS

D-1 IDENTIFICATION OF IMPORTANT ENVIRONMENTAL IMPACTS

The key environmental impacts listed in the following section have been determined through:

- Legislation; and
- Experience of the Environmental Assessment Practitioner (EAP).

The following issues were identified and will be carried forward into the EIR phase for further investigation and assessment:

D-1.1 Biophysical Impacts

- Potential impacts on surface water resources that occur in close proximity (various wetlands occur on site, perennial and non-perennial rivers traverse the site);
- Potential impacts of increased surface water run-off (viz. increased soil erosion) associated with the establishment of hard surfaces and vegetation clearing (mainly during the construction phase);
- Potential impacts on ground- and surface-water quality, and soils due to hydrocarbon spillages from vehicles during the construction phase of the development;
- Destruction of existing flora within the study area; and
- Faunal displacement, mainly during the construction phase of the project.

D-1.2 Socio-Economic Impacts:

- Increased dust and noise generation during the construction phase;
- Impact on loss of commercial forestry land;
- Change in the visual character of the area;
- Potential impacts on heritage resources; and
- Job creation during the construction and operational phases of the proposed project.

D-2 IDENTIFICATION OF CUMULATIVE IMPACTS

Cumulative impacts, as illustrated below, occur as a result from the combined effect of incremental changes caused by other activities together with the particular project. In other words, several developments with insignificant impacts individually may, when viewed together, have a significant cumulative adverse impact on the environment (see Figure below).

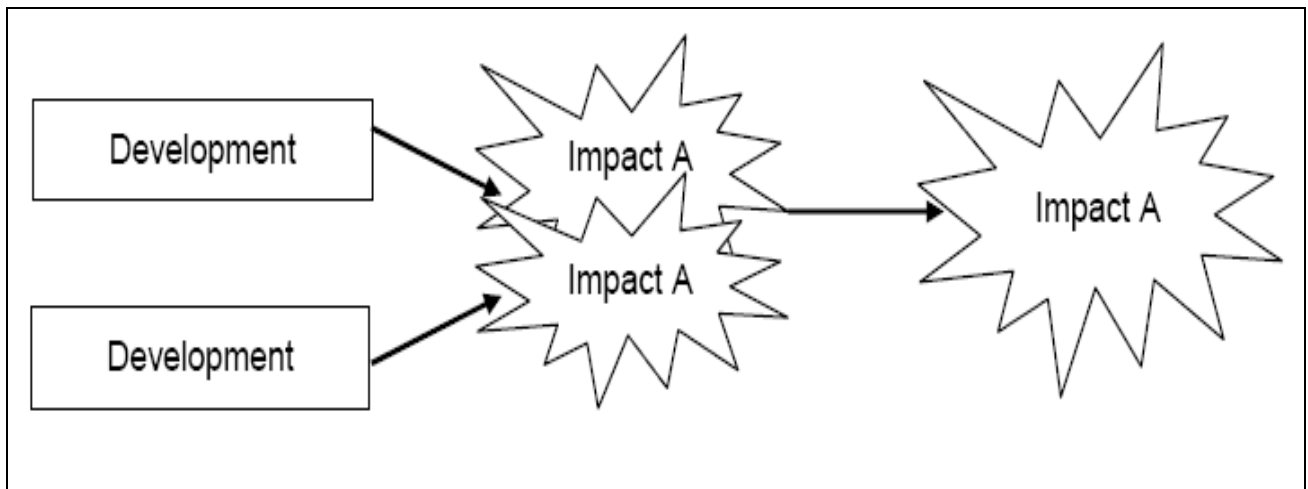


Figure 3: The identification of Cumulative Impacts

The following cumulative impacts have been identified in terms of the proposed development and warrant further investigation during the assessment phase:

- Possible increase in pressure/ demand on existing service infrastructure and capacity;
- Impact on loss of commercial forestry land; and
- Increased visual impacts associated with the proposed development as a result in change in sense of place.

SECTION E: ALTERNATIVES

E-1 IDENTIFICATION OF ALTERNATIVES

The EIA procedures and regulations stipulate that the environmental investigation needs to consider feasible alternatives for any proposed development. Therefore, a number of possible proposals or alternatives for accomplishing the same objectives should be identified and investigated. During the EIR phase of the project, the identified alternatives will be assessed, in terms of environmental acceptability as well as socio-economic feasibility. To define the term alternatives as per Government Notice No. 543 of the NEMA EIA Regulations 2010 means:

“...in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to:

- (a) The property on which or location where it is proposed to undertake the activity;*
- (b) The type of activity to be undertaken;*
- (c) The design or layout of the activity;*
- (d) The technology to be used in the activity;*
- (e) The operational aspects of the activity; and*
- (f) The option of not implementing the activity.”*

The alternatives below will be further investigated during the EIR phase of the project:

Alternative 1: Site/ Location Alternatives:

The site was selected by the Ward Councilor in collaboration with the local community. Other sites exist in the vicinity of the proposed site, which belong to the Mnyathi Community Trust. The proposed site has been selected on the basis that it provides connectivity with another housing developments in the area, and is also in close proximity to the community clinic. Hence the site was established as the best option for the Vumani Housing development.

Alternative 2: Layout/ Design Alternatives:

Alternative layout/ design plans may evolve from the findings of specialist studies that will be undertaken to inform the EIR phase. Design and layout alternatives will be proposed based on the environmental sensitivities. Alternatives with regards to the design and layout of the proposed development will also be investigated and assessed within the EIR phase.

Alternative 3: Land-use Alternatives:

The Vumani development is aimed at providing housing opportunities in line with the mandate of the Department of Human Settlements, and as such, no alternatives contrary to residential requirements have been investigated. However, to supplement the proposed formalised housing development, ancillary services such as commercial and community facilities, as well as community gardens, grazing land and a primary school have been included in this proposal. Specific detail of the proposal will be provided in the forthcoming Draft Environmental Impact Report (EIR).

Alternative 4: No Development Alternative:

The ‘no-go’ or ‘do nothing’ alternative is encapsulated by the premise that the applicant abandons the project, or is not approved by the KZN DAEA. The no-go option has been broken down in terms of the three characteristics of sustainability:

Social

Should the development not proceed, the inhabitants of the area who have been identified through the beneficiary administration process in collaboration with the Ward Councillor and other community structures to receive RDP housing opportunities will remain in the same position that they are currently found. Additionally, the benefits associated with the development with respect to the provision of a commercial node, community gardens and school facility will also not be achieved

Economic

The economic profile of the local community would be unchanged. Unemployment is currently rife in this area.

Environmental

From a purely ecological perspective, should the housing development not proceed, the status quo will remain with the study area remaining unaffected by construction or operational related impacts.

SECTION F: PLAN OF STUDY FOR EIR PHASE

F-1 SCOPE AND PURPOSE OF THE EIR PHASE

The EIR phase will focus on the proposed Vumani Rural Housing Development and the associated impacts thereof. The next step of the S&EIR process is the development of guidelines for the execution of the impact assessment and the compilation of an Environmental Impact Report, as well as an Environmental Management Programme (EMPr). The compilation of these documents will take into account all comments and concerns raised by I&APs which are captured within the CRR as well as the findings of various specialist studies.

The Final Environmental Impact Report and EMPr will be submitted to the KZN DAEA for consideration towards environmental authorisation.

F-2 METHODOLOGY OF THE EIR PHASE

F-2.1 Specialist Investigations and Terms of Reference

A team of specialists were identified to provide technical and scientific input in assessing the impacts of the proposed Vumani Rural Development. The following specialist studies will be incorporated into the Draft Environmental Impact Report:

- Ecological Assessment (Floral and Faunal Assessment);
- Phase 1: Heritage Impact Assessment;
- Geotechnical Assessment; and
- Wetland/Riparian Delineation and Functional Assessment.

The Environmental and Technical Investigation Team of Specialists will focus on discipline-specific problems and examine each significant issue in further detail through the relevant specialist studies.

As per the Environmental Management Guidelines, specialists' Terms of Reference (ToR) must be clearly defined and clarified. This is to ensure that the specialists have covered all the issues and topics in an appropriate manner and at an appropriate level of detail. The proposed studies will take into consideration the present state of the receiving environment and provide an assessment of the impacts likely to be associated with the proposed project, as well as mitigation measures to be used to minimise possible impacts. The ToR for each specialist study is explained in greater detail below.

F-2.1.1 Ecological Assessment

The Floral and Faunal Assessment will aim to:

- Describe the relevant baseline conditions relating to the natural vegetation communities and faunal species in the area of investigation;
- Describe the anticipated environmental impacts on the natural vegetation and fauna during the construction and operational phases of the project;
- Describe how the negative environmental impacts will be managed;
- Provide a description of the dominant and typical species occurring on site; and
- Provide a description of threatened, endemic or rare species to the Province, with an indication of the relative functionality and conservation importance of the specific community in the area under investigation.

F-2.1.2 Phase 1: Heritage Impact Assessment

A Heritage Impact Assessment will be undertaken in order to assess the impacts and significance in terms of culture and heritage on the site and propose mitigation measures. The ToR includes *inter alia*:

- A desk-top investigation of the area;
- A site visit to the proposed development site;
- Identify possible archaeological, cultural and historic sites within the proposed development area;
- Evaluate the potential impacts of construction and operation of the proposed development on archaeological, cultural and historical resources; and
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

F-2.1.3 Wetland/Riparian Delineation and Functional Assessment

The Wetland/Riparian Delineation and Functional Assessment will aim to:

- Verify the boundary of the wetland/riparian habitat;
- Report on the status quo and current state of the wetland/riparian areas;
- Provide mitigation measures against any potential impacts on the wetland/riparian system during the planning of the proposed development;
- Illustrate the wetlands/riparian areas and their recommended buffer distances on a map;
- Assess the cumulative impact on net loss of wetlands through infilling.
- Assess the opportunities and methods for offsets, if applicable;
- Determine whether, and to what extent, the proposed development will impact on (i) the bio-physical functioning and dynamics of wetland systems and (ii) wetland determinants should the wetland areas be retained;
- Impact assessment and mitigation including rehabilitation measures and potential offset areas.

F-2.1.4 Geotechnical Assessment

A Geotechnical Assessment will be undertaken to determine the underlying geological conditions of the site.

The suitability of the site for the intended development will be investigated against the geotechnical constraints such as the following:

- Areas of collapsible soils
- Areas of anticipated shallow groundwater seepage less than 1.5m deep,
- Areas of active soils,
- Groundwater seepage areas;
- Areas of erodible soils,
- Intermediate to hard excavation requirements in shallow bedrock, and
- Areas with steep slopes.

F-2.2 Approach to Assessment of Impacts

The EAP in association with the relevant specialists will provide an outline of the approach used in the study. Assumptions and sources of information will also be clearly identified.

F-2.2.1 Impact Identification and Assessment

The EAP must make a clear statement, identifying the environmental impacts of the construction, operation and management of the proposed development. As far as possible, the EAPs must quantify the suite of potential environmental impacts identified in the study and assess the significance of the impacts according to

the criteria set out below. Each impact will be assessed and rated. The assessment of the data must, where possible, be based on accepted scientific techniques, failing which the specialist is to make judgements based on his/ her professional expertise and experience.

F-2.2.2 Assessment Procedure: Proposed Impact Assessment Methodology

For the purpose of assessing impacts during the EIR phase of the project to follow, the project will be divided into two phases from which impacting activities can be identified, namely:

Construction Phase: All the construction related activities on site, until the contractor leaves the site.

Operational Phase: All activities, including the operation and maintenance of the proposed development.

The activities arising from each of these phases will be included in the impact assessment tables. This is to identify activities that require certain environmental management actions to mitigate the impacts arising from them.

The assessment of the impacts will be conducted according to a synthesis of criteria required by the integrated environmental management procedure.

| | | |
|--|-------------------|--|
| Extent The physical and spatial scale of the impact. | Footprint | The impacted area extends only as far as the activity, such as footprint occurring within the total site area. |
| | Site | The impact could affect the whole, or a significant portion of the site. |
| | Regional | The impact could affect the area including the neighbouring farms, the transport routes and the adjoining towns. |
| | National | The impact could have an effect that expands throughout the country (South Africa). |
| | International | Where the impact has international ramifications that extend beyond the boundaries of South Africa. |
| Duration The lifetime of the impact, that is measured in relation to the lifetime of the proposed development. | Short Term | The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than that of the construction phase. |
| | Short-Medium Term | The impact will be relevant through to the end of a construction phase. |
| | Medium Term | The impact will last up to the end of the development phases, where after it will be entirely negated. |
| | Long Term | The impact will continue or last for the entire operational lifetime of the development, but will be mitigated by direct human action or by natural processes thereafter. |
| | Permanent | This is the only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient. |
| Intensity Is the impact destructive or benign, does it destroy the impacted environment, alters its functioning, or slightly alter the environment itself? | Low | The impact alters the affected environment in such a way that the natural processes or functions are not affected. |
| | Medium | The affected environment is altered, but functions and processes continue, albeit in a modified way. |
| | High | Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases. |

| | | |
|---|---------------|---|
| Probability The likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time. | Improbable | The possibility of the impact occurring is none, due either to the circumstances, design or experience. The chance of this impact occurring is zero (0%). |
| | Possible | The possibility of the impact occurring is very low, due either to the circumstances, design or experience. The chances of this impact occurring is defined as 25%. |
| | Likely | There is a possibility that the impact will occur to the extent that provisions must therefore be made. The chances of this impact occurring is defined as 50%. |
| | Highly Likely | It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up before carrying out the activity. The chances of this impact occurring is defined as 75%. |
| | Definite | The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on. The chance of this impact occurring is defined as 100%. |

Mitigation – The impacts that are generated by the development can be minimised if measures are implemented in order to reduce the impacts. The mitigation measures ensure that the development considers the environment and the predicted impacts in order to minimise impacts and achieve sustainable development.

Determination of Significance – Without Mitigation – Significance is determined through a synthesis of impact characteristics as described in the above paragraphs. It provides an indication of the importance of the impact in terms of both tangible and intangible characteristics. The significance of the impact “without mitigation” is the prime determinant of the nature and degree of mitigation required. Where the impact is positive, significance is noted as “positive”. Significance will be rated on the following scale:

No significance: The impact is not substantial and does not require any mitigation action;

Low: The impact is of little importance, but may require limited mitigation;

Medium: The impact is of importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels; and

High: The impact is of major importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

Determination of Significance – With Mitigation – Determination of significance refers to the foreseeable significance of the impact after the successful implementation of the necessary mitigation measures. Significance with mitigation will be rated on the following scale:

No significance: The impact will be mitigated to the point where it is regarded as insubstantial; Low: The impact will be mitigated to the point where it is of limited importance;

Low to medium: The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels;

Medium: Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw;

Medium to high: The impact is of major importance but through the implementation of the correct mitigation measures, the negative impacts will be reduced to acceptable levels; and

High: The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option or entire project proposal unacceptable.

Assessment Weighting – Each aspect within an impact description was assigned a series of quantitative criteria. Such criteria are likely to differ during the different stages of the project’s life cycle. In order to establish a defined base upon which it becomes feasible to make an informed decision, it will be necessary to weigh and rank all the identified criteria.

Ranking, Weighting and Scaling – For each impact under scrutiny, a scaled weighting factor will be attached to each respective impact. The purpose of assigning such weightings serve to highlight those aspects considered the most critical to the various stakeholders and ensure that each specialist’s element of bias is taken into account. The weighting factor also provides a means whereby the impact assessor can successfully deal with the complexities that exist between the different impacts and associated aspect criteria.

Simply, such a weighting factor is indicative of the importance of the impact in terms of the potential effect that it could have on the surrounding environment. Therefore, the aspects considered to have a relatively high value will score a relatively higher weighting than that which is of lower importance (See Figure below: Weighting description).

| Extent | Duration | Intensity | Probability | Weighting Factor (WF) | Significance Rating (SR) | Mitigation Efficiency (ME) | Significance Following Mitigation (SFM) |
|--------------------|----------------------|--------------------|--------------------|-----------------------|--------------------------|----------------------------|---|
| Footprint 1 | Short term 1 | Low 1 | Probable 1 | Low 1 | Low 0-19 | High 0,2 | Low 0-19 |
| Site 2 | Short to medium 2 | Low to medium 2 | Possible 2 | Low to medium 2 | Low to medium 20-39 | Medium to high 0,4 | Low to medium 20-39 |
| Regional 3 | Medium term 3 | Medium 3 | Likely 3 | Medium 3 | Medium 40-59 | Medium 0,6 | Medium 40-59 |
| National 4 | Long term 4 | High 4 | Highly Likely 4 | Medium to high 4 | Medium to high 60-79 | Low to medium 0,8 | Medium to high 60-79 |
| International 5 | Permanent 5 | High 5 | Definite 5 | High 5 | High 80-100 | Low 1,0 | High 80-100 |

Figure 4: Description of bio-physical assessment parameters with its respective weighting

Identifying the Potential Impacts Without Mitigation Measures (WOM) – Following the assignment of the necessary weights to the respective aspects, criteria are summed and multiplied by their assigned weightings, resulting in a value for each impact (prior to the implementation of mitigation measures).

Equation 1: Significance Rating (WOM) = (Extent + Intensity + Duration + Probability) x Weighting Factor

Identifying the Potential Impacts With Mitigation Measures (WM) – In order to gain a comprehensive understanding of the overall significance of the impact, after implementation of the mitigation measures, it will be necessary to re-evaluate the impact.

Mitigation Efficiency (ME) – The most effective means of deriving a quantitative value of mitigated impacts is to assign each significance rating value (WOM) a mitigation effectiveness (ME) rating. The allocation of such a rating is a measure of the efficiency and effectiveness, as identified through professional experience and empirical evidence of how effectively the proposed mitigation measures will manage the impact.

Thus, the lower the assigned value the greater the effectiveness of the proposed mitigation measures and subsequently, the lower the impacts with mitigation.

Equation 2: Significance Rating (WM) = Significance Rating (WOM) x Mitigation Efficiency
 Or
 WM = WOM x ME

Significance Following Mitigation (SFM) – The significance of the impact after the mitigation measures are taken into consideration. The efficiency of the mitigation measure determines the significance of the impact. The level of impact will, therefore, be seen in its entirety with all considerations taken into account.

F-2.2.3 Integration of Specialist’s Input

In order to maintain consistency in the impact assessment, it is suggested that all potential impacts to the environment (or component of the environment under review) should be listed in a table similar to the example shown below (more than one table will be required if impacts require assessment at more than one scale). The assessment parameters used in the table should be applied to all of the impacts and a brief descriptive review of the impacts and their significance will then be provided in the text of the specialist reports and consequently in the EIR. The implications of applying mitigation are reviewed in Section F-2.2.4 below.

Table 4: Example of an Impact Table

| | | | |
|-----------------------|--------------------|--------|---|
| Nature | | Status | - |
| Impact source(s) | | | |
| Affected stakeholders | | | |
| Magnitude | Extent | | |
| | Intensity | | |
| | Duration | | |
| | Reversibility | | |
| | Probability | | |
| Significance | Without mitigation | | H |
| | With mitigation | | L |
| Confidence | | | |

F-2.2.4 Mitigation Measures

Mitigation measures will be recommended in order to enhance benefits and minimise negative impacts and they will address the following:

- **Mitigation objectives:** what level of mitigation must be aimed at: For each identified impact, the specialist must provide mitigation objectives (tolerance limits) which would result in a measurable reduction in impact. Where limited knowledge or expertise exists on such tolerance limits, the specialist must make an “educated guess” based on his/ her professional experience;
- **Recommended mitigation measures:** For each impact the specialist must recommend practicable mitigation actions that can measurably affect the significance rating. The specialist must also identify management actions, which could enhance the condition of the environment. Where no mitigation is considered feasible, this must be stated and reasons provided;
- **Effectiveness of mitigation measures:** The specialist must provide quantifiable standards (performance criteria) for reviewing or tracking the effectiveness of the proposed mitigation actions, where possible; and
- **Recommended monitoring and evaluation programme:** The specialist is required to recommend an appropriate monitoring and review programme, which can track the efficacy of the mitigation objectives. Each environmental impact is to be assessed before and after mitigation measures have been implemented. The management objectives, design standards, etc., which, if achieved, can eliminate, minimise or enhance potential impacts or benefits. National standards or criteria are examples, which can be stated as mitigation objectives.

Once the above objectives have been stated, feasible management actions, which can be applied as mitigation, must be provided. A duplicate column on the impact assessment tables described above will indicate how the application of the proposed mitigation or management actions has reduced the impact. If the

proposed mitigation is to be of any consequence, it should result in a measurable reduction in impacts (or, where relevant, a measurable benefit).

F-2.3 Approach to the Assessment of Cumulative Impacts

Cumulative impacts can arise from one or more activities. A cumulative impact may result in an additive impact i.e. where it adds to the impact which is caused by other similar impacts or an interactive impact i.e. where a cumulative impact is caused by different impacts that combine to form a new kind of impact. Interactive impacts may be either countervailing (the net adverse cumulative impact is less than the sum of the individual impacts) or synergistic (the net adverse cumulative impact is greater than the sum of the individual impacts).

Possible cumulative impacts of the project will be evaluated in the EIR. In addition, various other cumulative impacts e.g. other external impacts that could arise from the project will be further investigated in the EIR phase of the project.

The assessment of cumulative impacts on a study area is complex; especially if many of the impacts occur on a much wider scale than the site being assessed and evaluated. It is often difficult to determine at which point the accumulation of many small impacts reaches the point of an undesired or unintended cumulative impact that should be avoided or mitigated. There are often factors which are uncertain when potential cumulative impacts are identified.

F-2.3.1 Steps in Assessing Cumulative Impacts

The assessment of cumulative impacts will not be done separately from the assessment of other impacts. Cumulative impacts however, tend to have different time and space dimensions and therefore require specific steps. This may even mean that some of the actions in the assessment process, that preceded general impact identification, may have to be revisited after potential cumulative impacts have been identified. This will ensure that the scope of the EIR process is adequate to deal with the identified cumulative impacts.

Three (3) general steps, which are discussed below, will be recommended to ensure the proper assessment of cumulative impacts.

F-2.3.2 Determining the Extent of Cumulative Impacts

To initiate the process of assessing cumulative impacts, it is necessary to determine what the extent of potential cumulative impacts will be. This will be done by adopting the following approach:

- Identify potentially significant cumulative impacts associated with the proposed activity;
- Establish the geographic scope of the assessment;
- Identify other activities affecting the environmental resources of the area; and
- Define the goals of the assessment.

F-2.3.3 Describing the Affected Environment

The following approach is suggested for the compilation of a description of the environment:

- Characterise the identified external environmental resources in terms of their response to change and capacity to withstand stress;
- Characterise the stresses affecting these environmental resources and their relation to regulatory thresholds; and
- Define a baseline condition that provides a measuring point for the environmental resources that will be impacted on.

F-2.3.4 Assessment of Cumulative Impacts

The general methodology which is used for the assessment of cumulative impacts should be coherent and should comprise of the following:

- An identification of the important cause-and-impact relationships between proposed activity and the environmental resources;
- A determination of the magnitude and significance of cumulative impacts; and
- The modification, or addition, of alternatives to avoid, minimize or mitigate significant cumulative impacts.

F-3 PUBLIC PARTICIPATION PROCESS DURING THE EIR PHASE

F-3.1 Stakeholder Engagement

All I&APs registered on the project's database will be kept informed of the EIA process. Notification letters will be submitted informing all registered I&APs of the availability of draft and final Environmental Impact Reports and EMPr for review and comment.

All comments and/or concerns received via telephone, fax, email or post will be incorporated into a Comment and Response Report (CRR) and included within the Final Environmental Impact Report. All correspondence received will be acknowledged.

F-3.2 Public Review of the Draft Environmental Impact Report

It is proposed that the Draft Environmental Impact Report will be available for comment at the public venue towards April 2014. The report will also be available on SEF's website (www.sefsa.co.za).

F-3.3 Public Review of the Final Environmental Impact Report

It is proposed that the Final Environmental Impact Report will be available for comment at the public venue from around June 2014. The report will also be available on SEF's website (www.sefsa.co.za). The public review period of the final report will run concurrently with the submission of the final report to the KZN DAEA for consideration towards environmental authorisation.

SECTION G: CONCLUSION AND RECOMMENDATIONS

In accordance with GN No. 543, the Draft Scoping Report is aimed at describing the proposed activity and those reasonable alternatives that have been identified, as well as the receiving environment that may be affected by the proposed project. In accordance with the EIA Regulations, an identification of relevant legislation and guidelines was also given, as well as a description of the public participation process that was and will be followed.

In conclusion, the Final Scoping Report established the scope of the proposed project throughout its phases, as well as its key impacts on the receiving and surrounding environments. The project motivation has also been described. The Final Scoping Report also sets out the proposed scope of the EIR phase that will be undertaken for the proposed project (Section F).

Comments and/or concerns identified by Interested and Affected Parties (I&APs) during the review period of the Draft Scoping Report have been incorporated into the Final Scoping Report for further investigation during the EIR Phase to follow. The final Scoping Report will now be submitted to the KZN DAEA for consideration, together with the Plan of Study for the EIR phase of the project and other relevant supporting information. All comments received on the Final Scoping Report will also be forwarded to the KZN DAEA for consideration.

The EAP proposes that, on the basis of the information contained in this Scoping Report, that the KZN DAEA accept the Scoping Report and Plan of Study for the EIR phase and allow the EAP to proceed with the EIR phase of the project, such that the more pertinent issues can be thoroughly investigated and assessed, in terms of their significance and impact.

The ability to mitigate any of the potential impacts identified in this Scoping Report will also be investigated during the EIR phase and summarised into a working/ dynamic Environmental Management Programme (EMPr) for consideration by I&APs and ultimately by the KZN DAEA.

SECTION H: REFERENCES

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SECTION I: APPENDICES

Appendix 1: Locality Map

Appendix 2: Photograph plate

Appendix 3: Public Participation

Appendix 4: Authority Correspondence