

Scoping Report

relating to Makathini Sugar Cane Project
Environmental Impact Assessment (EIA)



Prepared October 2009

Revised February 2010

Notice

This scoping report has been prepared by Phatisa Equity (Phatisa) on behalf of the Makhathini Sugar Cane Project (MSCP) in connection with an irrigated sugar cane project on the Makhathini Flats in Northern KwaZulu-Natal (the Assignment) focussing on the Environmental Impact Assessment (EIA) of the proposed project.

The information in this report has been compiled by Phatisa with the care and diligence normally associated with assignments of this nature. The report is based on information supplied by the MSCP and that gathered from a variety of other sources during the investigations, including Interested and Affected Parties (I&APs). Neither Phatisa nor any of their respective directors, officers, agents, employees or advisors makes any representation or warranty, express or implied, or shall have any responsibility or liability whatsoever in respect of the achievement of projected results.

Contributing authors to the report are:

- Duncan Pringle;
- Matt Williams;
- Dr Sazile Mtshali; and
- David Ashton.

For any follow up please contact:

Duncan Pringle
Head Agri Business South Africa - Phatisa
Hillcrest
KwaZulu-Natal
South Africa

Direct telephone: +27 (0) 31 765 2442
Mobile: +27 (0) 82 807 5587
Facsimile: +27 (0) 86 620 2181
Email: dpringle@phatisa.co.za

Matt Williams
Consultant - Phatisa
Umtentweni
KwaZulu-Natal
South Africa

Direct telephone: +27 (0) 39 695 0460
Mobile: +27 (0) 83 631 9331
Facsimile: +27 (0) 88 039 695 0460
Email: mattwilliams@phatisa.co.za

Table of contents

	Page
1. Project proponents	3
2. Structure and role of the environmental and social study team	4
3. Background information on the proposed project	6
4. Project description and footprint	7
5. Consideration of sugar against other alternatives	9
6. The affected environment	11
7. Overview of land ownership profile and context	19
8. Policy and legislation	20
9. Scoping and EIA process followed	24
10. List of potential environmental issues and impact	26
11. Plan of study and methodology	33
12. Public participation	38
List of annexures:	
Annexure A.1:	- Table showing existing land use and target areas (ha)
Annexure A.2:	- Potential irrigable blocks
Annexure B.1:	- Target areas
Annexure B.2:	- Irrigable areas within target areas
Annexure C.1:	- Makhathini land use map
Annexure C.2:	- Phongolo Floodplain
Annexure D:	- Makhathini existing and proposed irrigation infrastructure
Annexure E:	- Makhathini proposed road infrastructure
Annexure F:	- Eskom infrastructure
Annexure G:	- Makhathini C Plan
Annexure H:	- EIA process flow diagram
Annexure I:	- Copy of poster advert (English)
Annexure J:	- Copy of poster advert (isiZulu)
Annexure K.1:	- Scoping comments
Annexure K.2:	- Scoping questionnaire
Annexure L.1:	- Stakeholder comments - Ingonyama Trust
Annexure L.2:	- Stakeholder comments - KZN Wildlife
Annexure L.3:	- Stakeholder comments - WESSA
Annexure L.4:	- Stakeholder comments - Amafa
Annexure L.5:	- Stakeholder comments - DWA
Annexure L.6:	- Stakeholder comments - KZN Department of Agriculture, Rural Development and Environmental Affairs
Annexure L.7:	- Landowners consent to EIA
Annexure M.1:	- Copy of <i>Mercury</i> newspaper EIA advert
Annexure M.2:	- Copy of <i>Zululand Observer</i> newspaper EIA advert
Annexure M.3:	- Copy of <i>Ilanga</i> newspaper EIA advert
Annexure N:	- I&AP database
Annexure O:	- Stakeholder database
Annexure P:	- Comments report
Annexure Q:	- Institutional analysis report
Annexure R:	- Makhathini Sugar Cane Project Biodiversity Report

Environmental Impact Assessment Scoping Report

Makhathini Sugar Cane Project

1. Project proponents

The project proponents are a consortium represented by the following organisations/ companies:

- Department of Trade and Industry (DTI);
- Industrial Development Corporation (IDC);
- Tongaat Hulett (TH); and
- Development Bank of Southern Africa (DBSA);

Beki Hlatshwayo of Tongaat Hulett is the Chairman of the Project Steering Committee and is the Project Manager.

Contact details:

Makhathini Sugar Cane Project

Private Bag 3
Glenashley 4022
1 Amanzimnyama Hill Road
KwaZulu-Natal
Tongaat 4399
Telephone: (032) 439 4324
Fax: (086) 686 4546
Email: Beki.Hlatshwayo@huletts.co.za

The Traditional Councils (TCs) have indicated their support to the initiative and the following traditional councils have written to indicate there is land available for the proposed project:

- Nyawo TC;
- Mathenjwa TC;
- Siqakatha TC;
- Mashabane TC;
- Kwa-Jobe TC; and
- Ntsinde TC.

In addition current sugar cane farmers are registering with the sugar association, through the local mill cane committee, which participates as a member of the Project Stakeholder Committee.

The KwaZulu-Natal Provincial Cabinet has adopted the project in November 2006. The project was identified as a special project that would have a major impact on accelerating and sharing growth in the KwaZulu-Natal (KZN) province. The KwaZulu-Natal Premier formed a task team, comprising various provincial government departments, to become involved in the project, specifically to identify those areas where government involvement was critical to the success of the project.

2. Structure and role of the environmental and social study team

Phatisa in association with environmental consultants is a firm of agricultural and environmental consultants whose members individually have over 20 years of experience in the design and management of projects in South Africa.

Phatisa is responsible as land consultants for the project and also for managing the EIA process, identifying and assessing environmental impacts and making recommendations regarding the mitigation of negative impacts and optimisation of positive impacts.

The team members are listed below:

Duncan Pringle: Duncan is Phatisa's Head Agri Business South Africa. He is an agricultural economist with 20 years' experience in agribusiness development and development finance. In addition he has provided a number of specialist reports into EIA scoping and EIA assessments for agri business developments. He has previously held the position of Divisional Manager: Agri Business, Ithala Development Finance Corporation RSA for thirteen years. During this time the division financed the transfer of over 30,000 ha of land to black farmers, invested in a number of share equity schemes and innovated finance products in support of land reform. Duncan's areas of specialty are in agricultural development planning and EIA agricultural economic assessments, agricultural finance and financial products, project planning, business strategy and financial modeling of business operations and value chain analysis. He has served on a number of Boards of agricultural companies, development Trusts and community trusts as vice-chairman, chairman of the audit committee and non-executive director. Currently managing BEE transactions in agriculture in South Africa and has executed assignments in Swaziland, Zimbabwe and Zambia.

Responsibilities: Overall project manager and report production.

Matt Williams: Matt is an agricultural and environmental consultant with qualifications in agriculture, project management, credit management and sugar cane agriculture.

He attended a certificate course in Integrated Environmental Management at University of KwaZulu-Natal.

Matt presently works for Phatisa on various agricultural assignments and EIA projects. Prior to this Matt worked for Ithala in the Agri-Business department for a period of 12 years and prior to this as a farm planner and environmental auditor whilst employed at South African Sugar Association (SASA) assessing and auditing farms in terms of CARA (Conservation of Agricultural Resources Act) and ECA Act 1970.

Responsibilities: EIA application, scoping report, public participation and report production.

Dr Ed Granger: Ed holds a BSc and PhD from the University of KwaZulu-Natal and diplomas in Principles of Environmental Auditing (1996), Environmental Auditing to ISO 14 001 Standards (1996) and Environmental Law (1996). He has 30 publications in journals, has contributed three chapters to books and has produced 72 specialist environmental consulting reports.

Ed's areas of professional interest cover rehabilitation ecology, biogeography, eco-archaeology and biophysical planning for development.

Responsibilities: EIA specialist, natural resource assessment reports and mitigation measures.

Craig Saunders: Craig is a GIS (Geographic Information System) consultant working for QuarteX Technologies who provide business solutions through the innovative use of technology.

Qualifications: National Diploma Surveying, National Diploma Civil Engineering and Diploma in Datametrics.

Craig's services relate to, the integration of Geographical Information into business using GIS technologies, and development of mobile, business applications and business process consulting, application development and open source solution implementation.

Responsibilities: GIS mapping and advice and civil engineering advice.

Dr Sazile Mtshali: Sazile has over 20 years' experience in poverty reduction research and strategy development for in rural areas of KwaZulu-Natal, Eastern Cape and Limpopo. She has held the chair in the Exxaro Centre for Integrated Rural Development at the University of Zululand. Dr Mtshali has lectured and consulted in Agricultural Extension and Rural Development with emphasis on: socio-economic research, sustainable rural livelihood approaches, household food security, household resource management, appropriate technologies, communication and information technologies, agricultural education and development, gender analysis and training, land policy and land reform, social facilitation, and management of knowledge systems in rural and urban areas.

Responsibilities: Social probe and EIA public facilitation.

Andries Malwane: Andries runs Bukhathani Project Facilitation (BPF) CC Consultants who are a locally based firm on the Makhathini Flats and BPF is contracted to Phatisa for various EIA tasks, facilitation and public participation events.

Responsibilities: EIA advertisements, facilitation, conducting meetings and EIA public participation.

Edward Malu: Edward has been an extension officer within the sugar industry with 26 years of experience and has provided community training to projects. Edward is a local Makhathini Flats resident with excellent knowledge of local issues.

Responsibilities: GIS fieldwork, social probe and public participation.

Additional specialists who can be called upon if needed are:

Roger Davis: Roger is a planning and environmental consultant. Roger holds the following qualifications Dip. Environmental Law - University of KwaZulu-Natal (1998), MA (Geography) - University of KwaZulu-Natal (1989), BA (Hons) - University of KwaZulu-Natal (1980), BA - University of KwaZulu-Natal (1978).

Roger works with a team of specialists with expertise in the arena of project management, spatial and strategic development planning, institutional development, local economic development, EIA and facilitation

He has experience in project management and administration as well as the planning and compilation of scoping reports and environmental management plans and worked in the following countries: South Africa, Mozambique, Zimbabwe and Botswana.

Responsibilities: Project consultant on EIA matters.

3. Background information on the proposed project

The Makhathini Sugar Cane Project is a socio-economic development project aimed at establishing an agri-processing business cluster on the Makhathini Flats comprising sugar

Land use	Total (ha)
Annual commercial crops irrigated	4.3
Bare sand	0.5
Bushland (< 70cc)	1,107.3
Degraded bushland (all types)	4,893.3
Degraded forest	16.1
Degraded grassland	669.1
Dense bush (70-100 cc)	413.5
Forest	30.9
Grassland	574.4
Grassland/bush clumps mix	975.4
KZN main and district roads	45.1
Old cultivated fields - bush land	413.6
Rural dwellings	160.2
Sugar cane - commercial	40.0
Sugar cane - emerging farmer	64.5
Subsistence (rural)	2,159.6
Urban	3.5
Water - natural	42.2
Wetlands	167.6
Woodland	9.2
Grand total	11,790.4

cane farming, a fuel ethanol distillery, electricity co-generation and/or sugar milling. This will be a world-class competitive sugar cane project, with the appropriate economies of scale.

The project will be implemented in a phased manner, with the envisaged initial investment being sugar cane farming on 8,220 ha net irrigated area not currently under cane farming and 1,200 ha currently being farmed to sugar cane, a fuel ethanol distillery and electricity co-generation.

Ultimately Phase 2 could take the area under sugar cane to some 15,000 ha. The full-scale capital investment is envisaged to expand the fuel ethanol production or include raw sugar production.¹

This EIA application is for the Phase 1 agricultural component on the proposed 8,220 ha net irrigated area established to sugar cane.

The factory EIA will be a separate application and process initiated once more clarity is available on the potential location and design; the latter being informed by the confirmation by local farmers' committing themselves to growing sugar cane, coupled with the extent and location thereof.

The agricultural element refers to the development of irrigated sugar cane on land that has either not been cultivated before or which has to some extent been used for dry-land cotton farming or is currently being irrigated to both sugar cane and other crops. The potentially irrigable blocks are shown in Annexure A.2. The local communities have pointed out various target areas, which they would like to see developed (refer Annexure B.1 and B.2)

The analysis of the current land use within these targeted areas (refer Annexure A.1 for the full tabular results and Annexure C.1 for a map of land use. Note map Annexure C.1 also shows the river and water bodies and Annexure C.2 the delineation of the floodplain as determined prior to the Pongolapoort Dam) indicates much is subsistence agriculture (2,159 ha) and degraded bush land (4,893 ha). The water bodies (rivers) and wetlands fall in areas within the floodplain (210 ha) and will be avoided by the development.

¹ Project Plan Overview – B Hlatshwayo, June 2008

Included in the target areas is an area of about 150 ha under sugar cane that is not irrigated and an area of about 2,700 ha of existing irrigated land on the Mjindi Irrigation Scheme. Some 1,055 ha of the irrigation scheme is already under sugar cane with the potential that others on the scheme may elect to convert to cane production.

The 8,220 ha would be located mainly on the alluvial terraces east and west of the Phongolo River and to the south of the Mjindi Irrigation Scheme. These areas fall in areas outside of the Phongolo Floodplain as determined by the regulated flood releases from the Pongolapoort Dam for ecological purposes and which were identified in the Lonhro Report of 1977, as updated by various subsequent studies in the mid 1990s and early 2000s. The areas have been mainly used for extensively scattered dry-land cotton production. The targeted project area is by no means pristine having being impacted on by the following factors:

- Human settlement on the Makhathini Flats;
- Livestock agriculture – mainly communal; and
- Crop farming – commercial and subsistence areas.

The supportive linear project elements that are of a supportive infrastructural nature such as roads and electrification will be implemented under separate EIA processes, which fall within the ambit of Department of Transport (DoT) and Eskom respectively. Note that both parties are represented on the project stakeholder committee.

4. Project description and footprint

The area to be targeted in this project lies on the west bank, the east bank and immediately south of the present irrigation scheme. This EIA application relates to the agricultural elements of Phase 1 proposed to be 8,220 ha of irrigated land. Phase 2 is proposed at 6,066 ha. This would give a total of 14,286 ha in addition to the existing 1,200 ha under sugar cane. (Refer Annexure A.2 for the map of potentially irrigable land areas suited to the production of sugar cane). Refer Annexure A.1.

The anticipated baseline of the full-scale project with approximately 15,000 ha under sugar cane producing 1.5 million tons of sugar cane, will be the feedstock to a factory producing approximately 72 million litres of fuel grade ethanol, 132 GWh electricity for export and approximately 86,000 tons of sugar (or an ethanol equivalent of 43 million litres).

The project will be implemented such that the initial investment during Phase 1 of the project comprises:

- Sugar cane farming – 1,200 ha of existing sugar cane plus 8,220 ha of new sugar cane;
- Fuel ethanol distillery – 43 million litres; and
- Electricity co-generation.

Of the total hectares developed, 2,000 hectares is proposed to be on the basis of a Joint Venture (JV) with local farmers, serving as:

- a nursery to produce good quality seed cane for Makhathini growers; and
- for training and development of Makhathini growers.

The balance will be farmed in economically sized production units by local farmers, either individually or as part of a business entity such as a company or co-operative.

The study area for the project includes areas that fall within the following TC areas:

- Nyawo TC;
- Mathenjwa TC;
- Siqakatha TC;
- Mashabane TC;
- Kwa-Jobe TC; and
- Ntsinde TC.

The proposed project area falls within the following municipalities:

- Umkhanyakude District Municipality; and
- Jozini Local Municipality.

The rationale and benefits of the project are:

- **Sugar cane yield potential:** The area has the potential to produce high yields of sugar cane under irrigation;
- **Ethanol production:** The ethanol produced can contribute to South Africa's fuel needs, with substantial savings in foreign exchange and off-take agreements will have to be secured through the offices of CEF/DTI/IDC with the major fuel companies;
- **Electricity;** The co-generation of electricity can contribute to South Africa's electricity requirements and the REFIT (Renewable Energy Feed In Tariff) regulations now provide for biomass as a source of renewable energy;
- **Direct investment:** Provisional estimates are that the investment will be of the order of R1.4 billion, excluding public infrastructure investment in roads, bridges, bulk water supply, electricity and communication grids and the like:
 - Phase 1 – R800 million
 - Phase 2 – R600 million
- **Employment;** The following estimates of employment creation and indirect benefit have been made:
 - Direct employment, Phase 1
 - Agriculture – 2,140
 - Factory – 170
 - Direct employment, Phase 2 (additional to Phase 1)
 - Agriculture – 2,100
 - Factory – 45
 - Indirect
 - Phase 1 – 10,870
 - Phase 2 – 2,930
 - Dependents – 59,000
- **Remuneration:** It is estimated that about R100 million will be spent on salaries and wages in both the farming and factory operations;
- **Farm economy:** The local economy will be stimulated by approximately R400 million per annum in farm income;
- **Farmer development:** Development of local farmers will take place, following correct farming and business management practices;
- **Community development:** Community empowerment and upliftment will occur as more revenue flows through the community and businesses are developed;
- **Skills development:** The project will be a draw card for attracting expertise into the area, which will facilitate skills transfer to local people;

- **Agri business development:** There will be secondary spin-offs in the development of local businesses (planting, harvesting, transport, shops, etc.) and other services; and
- **Contributor to energy needs:** The project will play a significant role in meeting the medium and long term power supply needs of the country. This is set within the context of Government's directive that 30% of new generation capacity will be developed by the private sector.

Phase 1 priority target areas

The area of interest for the MSCP is shown in Annexure A. However the study area for Phase 1 was more targeted. The choice was based on the potential irrigable blocks as per the Lonhro study and the Campbell de Korte Thorburn et al (Camdekon) report, combined with a high level visual assessment of the spatial distribution of the household settlement pattern, sourced from Eskom rural household mapping studies. The priority target area for the assignment as part of Phase 1 of the project is shown in Annexure B.1 and B.2 and the Camdekon design proposals that fall within the priority target area in Annexure D.

In addition the balance of the Makhathini Irrigation Scheme, not currently under sugar cane was also targeted.

Identified target areas

Through a process of consultation with local authorities, community and farmers a total of some 19,506 ha of land was pointed out and measured using GPS (Geographic Positioning System).

Of this a total of 11,700 ha are considered arable and suited to sugar cane farming.

The data per identified area is shown in the adjacent figure with arable areas highlighted in light green. This map is presented in larger format in Annexure B.2.

5. Consideration of sugar against other alternatives

Choice amongst options: The following alternatives have been assessed in terms of reasonableness, practicality, feasibility and viability.

- **Status quo** – the natural resource base without the development of irrigation has limited ability, given the low rainfall and high summer temperatures, of providing a sustainable agricultural production platform that has the capacity to address the endemic poverty experienced by the people of the area. The population is on record of being one of the poorest in South Africa and the area has been demarcated as a presidential poverty node, in need of development.
- **Tourism and eco/adventure tourism** – this is considered as one of the few economic options available to those portions of Maputaland not suitable for agriculture. These areas are along the coast, the northern game parks of Ndumu and Tembe, near the Pongolapoort Dam and along the floodplain, where pans occur. This activity can exist as a stand-alone activity to that of the irrigated sugar cane and is not considered an alternative to the project but an activity that can co-exist with the project.
- **Conservation** – the floodplain conservation efforts are hampered by survivalist pressure on the population with few other alternatives combined with the impact of the dam in controlling and regulating river flows. This approach without the

development of irrigation and economic development opportunities on the alluvial terraces away from the sensitive pan system along the river will result in a continued degradation of the floodplain with further encroachment pressure by the growing population. In short conservation of the Phongolo River system of pans will only be successful if local people can have alternate income generating opportunities, which the project will provide.

- **Cattle production systems** – these are extensive with low level of productivity and commercial off-take at about 4 % of herd size annually. This compares with a 20% norm for commercial herds. The KwaZulu-Natal Department of Agriculture is promoting the commercialisation of livestock but again this activity can co-exist and even be supported by the project as sugar cane tops could be used as a source of feed and the creation of irrigation infrastructure provides the infrastructure that could support pasture and animal feed production.
- **Other cropping options** – irrigated cotton has been tried with limited success since the late 1970s. It can reasonably be expected that farmers on dry land will continue to grow cotton without other better options. Food crops such as vegetables and maize are expected to benefit from the irrigation infrastructure and be grown in areas adjacent to the cane production areas.

Choice within the sugar cane option. Within the option to grow sugar cane there are various options that are considered:

- **Consideration of “no-go” option** – this option would consign the local community to continued grinding poverty, which will be exacerbated by further population growth.
- **Site alternatives** – identification of sites have been done on the basis of initial potential irrigation blocks, followed by consultations with local communities to identify lands that are preferred to be put under sugar cane. A strategic bulk water supply design, conducted by Campbell de Korte on behalf of the DAE&RD (provincial Department of Agriculture, Environment and Rural Development), to these irrigation blocks has been used as the point of reference for proposed bulk water supply systems. During their investigations they compared various alternatives and have proposed the most cost effective and flexible from the perspective of a phased and incremental approach as communities are ready for the development. On the basis of this proposal, suggested road networks as per an earlier sugar cane project feasibility study have been referred to the DoT for planning.
- **Demand alternatives** – ethanol is a strategic imperative from a government policy perspective and sugar cane offers the best economic option as a feedstock to such a factory.
- **Location alternatives** – different permutations of the field layout to achieve the initial 8,220 ha of irrigated sugar cane can only be explored in a more detailed farm layout design within the areas pointed out by the community and measured with GPS.
- **Process alternatives** – alternative irrigation systems have been considered (flood and overhead) and the recommended system is overhead irrigation, with the most cost effective being centre pivot. However individual farmers may use variants of overhead irrigation dependent on their personal situation..
- **Infrastructure alternatives** – the identification of alternatives for; transport/infrastructure corridors to link with existing main roads, service infrastructure such as pipelines, canals (limited in use), Eskom and Telkom infrastructure:
 1. Eskom on re-routing of transmission lines and siting of substations;

2. DoT on location of bridges, roads and development of this infrastructure; and
 3. DWA (Department of Water Affairs) and DAE&RD on key bulk water infrastructure.
- **Inputs alternatives** – Vinasse produced in the ethanol production process can be used as an alternative fertiliser to expensive Potassium derived from chemical fertilisers and is the preferred option to save costs and return what the plant has taken up from the soil.

6. The affected environment

The affected environment is a rural area that is inhabited by permanent residents, migrant workers, subsistence and emerging commercial farmers.

The area to be targeted in this project lies on the west bank, the east bank and immediately south of the present Mjindi Irrigation Scheme. Local communities have identified about 11,700 ha of irrigable land within which Phase 1 is proposed. Given norms for irrigation project planning 70% of this area will provide 8,220 ha for the project.

The project footprint has been the subject of varying degrees of impact in terms of habitation/dwellings, subsistence farming; including growing of crops and grazing of cattle and harvesting of natural resources.

Due to these impacts the area cannot be considered undisturbed or pristine in its natural state. Refer to Annexure A.1 and Annexure C.1 for a depiction of the current land use within the project area, which indicates a large amount of existing subsistence cultivation.

Soils

According to Campbell de Korte Thorburn et al:

“Highly irrigable soils of the form Hutton and Shortlands are dominant in the study area and are found in large homogeneous blocks. These soils are red in appearance, non-calcareous and have an average soil depth in excess of 1,5 m, have very high infiltration rates and offer a high available moisture content.

Alongside the banks of the Phongolo and Ingwavuma Rivers, soils of the form Dundee and Oakleaf occur in a bank of varying width. These soils can be described as clayey, loamy and sandy alluvial soils with an irrigation classification rated as good to excellent. Smaller pockets of other non-irrigable soils also occur throughout the study area but comprise a small percentage of the total area.”

The various soils within the study area are addressed in more detail under the report “Resource Development Study of the Western half of the Ingwavuma/Ubombo Region” compiled by the KwaZulu Finance and Investment Corporation.

The extent of irrigable soils in the target areas is indicated on the enclosed map Annexure B.2.

Water

The available water sources of the potential irrigation area are the Phongolo River, sustained by the Pongolapoort Dam, the Ndumu/Msunduzi Dam situated on the Msunduzi River and

Usuthu River. The potential development impact on these water sources will be dealt with under Section 7.

Pongolapoort Dam/Phongolo River

The Pongolapoort Dam provides storage for irrigation, ecological releases, Mozambique allocation, upstream utilisation and industrial and domestic demands.

According to information, the estimated annual yield of the dam in 1991 was 920 million cubic metres with 490 million cubic metres allocated to potential downstream utilisation and the balance, viz. 430 million cubic metres for upstream use.

The intended use of the 490 million cubic metres annual downstream allocation was as follows:

- | | |
|---------------------------|--|
| • Irrigation | 318 million cubic metres} |
| • Ecology | 126 million cubic metres} to be |
| • Industrial and Domestic | 31 million cubic metres} verified |
| • Mozambique release | 15 million cubic metres} by DWA |

At present the Pongolapoort Dam supplies water to approximately 3,900 ha irrigation development on the Makhathini flats, ecological releases and domestic supply to Jozini.

The current annual allocations from the Pongolapoort Dam are as follows:

- Mjindi Farming 33 million cubic metres;
- Makhathini Cotton 40 million cubic metres;
- Senekal Farming 32.6 million cubic metres;
- New sugar farmer development 60 million cubic metres (provisional); and
- Nyawo Traditional Authority 1 million cubic metres.

Water available for additional allocation according to DWA is only 2 million cubic metres of water. The remaining 2 million cubic metres of water equates to approximately 200 hectares of development under sugar or 400 hectares under cotton, if this additional water was made available.

Ndumu/Msunduzi Dam

This existing dam is situated on the Msunduzi River immediately upstream of the confluence with the Ngwavuma River and was repaired and raised in about 1990. This dam is located approximately 1 km from Ndumu and adjacent to the Ndumu A cultivation block, labelled block J in the Camdekon report. This dam has fallen into disuse and would have to be revived if block J were ever to be realised as an irrigable block in the future.

Inflow to the Ndumu/Msunduzi Dam is supplemented by transferring water from the Ngwavuma River via a canal. The estimated yield of this dam is 4,7 million cubic metres per annum according to a report "Ndumu Dam: Storage – Draft Analysis" compiled by consultants Watermeyer Legge Piesold and Uhlmann and submitted during November 1990.

This dam could sustain the irrigation demands of Irrigation block J, totalling a new area of approximately 424 ha.

It is understood that this canal and dam referred to is in need of rehabilitation before this area could be developed.

Ngwavuma River

The Ngwavuma River rises in Swaziland and flows eastward through the Lebombo Range into the Mngomezulu Traditional Authority (TA) and thence along the northern boundary of the Nyawo TA to join the Phongolo River at the Mandlankunzi Pan.

As a result of irrigation development in Swaziland, low flow during winter is negligible. It is thus evident that storage will be required to effect any meaningful irrigation development from this river.

In view of the above, this river is considered as an unreliable water source for major irrigation development in the study area, except for its present role as a supplementary water source during high flow periods.

Usuthu River

This river forms the northern boundary between KwaZulu-Natal, Swaziland and Mozambique. It could be an important source of water supply to irrigation blocks K1 to K5 shown on the Camdekon report maps. At present the rightful share of water to which the KwaZulu-Natal is entitled, is unknown.

Climate

The climate is sub-tropical. Mean annual maximum temperature is 28.6°C, with the maximum mean average occurring in January at 32.4 °C. The mean annual minimum is 15.9 °C with the mean minimum of 8.6 °C occurring in June/July.

The climate is characterised by high humidity.

Rainfall and evaporation

The rainfall recording station at the Mzinyeni Pan is regarded as the most representative of the study area and was used to determine the average irrigation requirement value for the different crops. The 30 year mean rainfall at Mzinyeni Pan is 584 mm. The rainfall pattern can typically be heavy downpours followed by long dry spells.

The only long term evaporation data available is that for Makhathini Agricultural Research Station where the average annual recorded evaporation is 1,983 mm.

The mean monthly rainfall and evaporation adopted for the study are indicated in Table 1 next page.

Table 1: Mean monthly rainfall and evaporation (Class A pan)

Month	Rainfall (mm)	Evaporation (mm)
January	117	225
February	82	171
March	52	169
April	29	137
May	24	124
June	10	105
July	5	116
August	13	157
September	22	170
October	78	191
November	81	199
December	71	219
TOTAL	584	1,983

Potential bulk water delivery systems

Campbell, De Korte, Thorburn, Du Toit and Prinsloo (Camdekon) was commissioned in January 1991 by the Department of Agriculture and Forestry, KwaZulu Government, to conduct the above mentioned study in consultation with the KwaZulu Finance and Investment Corporation's – Agriculture Planning Division who compiled the report "Resource Development Study of the Western Half of the Ingwavuma/Ubombo Region"; submitted in August 1991. The objective of the de Korte study at the time was "... to investigate a strategic bulk water supply infrastructure to sustain a people orientated and environmental friendly irrigation based on flexibility and the judicious use of scarce capital resources as the primary aims." This remains as relevant today as it was then.

The study took cognisance of the three available water sources that serve the study area, viz. the Pongolapoort Dam, the Ndumu/Msunduzi Dam and the Usuthu River. The water requirements of the proposed development are such that no detrimental impact on the environment or the yield from these sources is envisaged.

To cover the full spectrum of irrigation requirements, two design crops were investigated, viz. sugar cane, with an annual gross requirement of 1,739 mm, and cotton with an annual gross requirement of 628 mm.

The available water was at the time of the report sufficient to sustain irrigation of both the design crops on the net available irrigable area of 17,654 ha contained in 11 independent irrigation blocks ranging in size from 424 ha to 2,937 ha.

The dominant irrigable soil forms in the study area are Hutton and Shortlands with limited deposits of Dundee and Oakleaf forms along the banks of the rivers.

Each of the irrigation blocks was considered as an independent unit with the majority of the bulk supply by means of river abstraction in combination with booster stations, primary distribution canals and low-pressure gravity mains.

The upgrading of the available energy infrastructure would make the electrification of all the proposed pump stations possible and would also enhance the operational efficiency of the infrastructure.

The Camdekon study was presented in 1991 values. Using the construction industry price indexes the current 2009 equivalent pricing would be in the order of 4.31 times that of the 1991 value. The result provides an indication of the public fixed investment that will be required to provide for the bulk water supply infrastructure. The exact value would only be able to be determined through an updated design exercise.

At the ruling 1991 prices (**2009 estimated prices in bold**) the unit capital cost of the proposed infrastructure development ranges from R7,222 (**R29,827**) to R7,921 (**R32,920**) per ha, pending the final canal option, with the total investment in the proposed infrastructure development ranging from R127.48 million (**R526.49 million**) to R140.71 million (**R581.13 million**).

The extreme flexibility of the design renders the further investigation and/or development of any one of the proposed blocks possible in order to verify the cost parameters used in the study.

This study will be required to be updated and customised to the areas identified for development in the MSCP.

Outline development plan

The bulk water development plan as proposed by Camdekon (1991) aims to make best use of the water, soils and infrastructure of the region in a people centred way within commercial principles.

The proposed development plan contains the following:

- identification of potential irrigation blocks; and
- subsequent bulk water supply infrastructure to serve these blocks.

Proposed irrigation blocks

In total some 52 irrigation blocks, totalling a gross area of approximately 25,227 ha were identified in the study area and those falling within the MSCP priority study area are indicated in Annexure B.2 and Annexure D. Note that these blocks are indicative of the gross potential area. The ultimate area required in Phase 1 of the MSCP is 8,220 ha and therefore priority blocks, resulting from choices made by communities resident on the land in question to participate in the project, are also identified.

The extent of each block is dictated by several factors such as the irrigable rating of the soils, topography, bulk water supply criteria, and flexibility regarding a staged development and the ability to be economically developed as a single unit.

Irrigation requirements

For the purpose of this report sugar cane was selected to determine a range of potential irrigation demands within the study area, as well as to evaluate the design requirements for the bulk water supply components.

Irrigation requirements are based on the average climatic values and crop factor values as contained in the report "Estimated Irrigation Requirements of crops in South Africa" compiled by Soil and Irrigation Research Institute (SIRI).

The monthly distribution of water requirements for sugar cane are summarised hereunder.

Peak month:

Net irrigation requirements (per annum)	1,304 mm
(peak month - December)	144 mm
Gross irrigation requirements (per annum)	1,739 mm
(peak month - December)	192 mm

An overall irrigation efficiency of 75% has been assumed.

General approach

Bulk water supply to the proposed irrigation blocks, as identified on the map in Annexure D could be effected by means of a combination of strategically placed pump stations mainly along the Phongolo River, rising mains delivering into balancing dams or canals and the subsequent provision of water under gravity to field edge by means of gravity mains or canals.

The configuration of the relevant bulk supply components offers flexibility towards phased development of independent irrigation blocks and does not impose a rigid development pattern.

The relevant bulk water supply components affecting each proposed irrigation block are provided and quantified in the Camdekon Report.

Design criteria

The following criteria were accepted for macro planning and costing purposes, viz.:

- River abstraction rate $q = 0.84$ l/s/ha
- Peak Infield demand $= 1.05$ l/s/ha
- Balancing dams:
 - direct storage 12 hrs storage
 - transfer storage 2 hrs storage
- Gravity mains and canals
- Supplying to field edge $q = 1.05$ l/s/ha
- Design crops sugar cane and cotton

Total water demand

As an indication of water consumption for different cropping options the total annual water demand for the study area, for purpose of illustration based on an area of 17,652 ha as identified in the Camdekon Report, ranges between 110,9 million cubic metres and 306,9 million cubic metres for cotton and sugar cane respectively.

This project aims at 8,220 ha of new land and consequently will consume far less water than proposed in the above mentioned report. Applying strict water management and conservation principles will further reduce water consumption.

Impact on available water sources

Pongolapoort Dam: The originally assigned annual allocation of 318 million cubic metres out of the Pongolapoort Dam for downstream irrigation development could sustain a total area of 18,290 ha under sugar cane. This potential has now been significantly reduced with the changes in allocations made as per Section 4.2.2.

Use of water is dependent on the effectiveness in irrigation application systems and associated water conservation orientated farming practices. The current level of allocation of water by DWA for the Phase 1 new development is 60 million cubic metres. (Refer Annexure L.5). In addition there is 40 million cubic metres allocated to the existing 3,500 ha Mjindi Irrigation Scheme.

Usuthu River: The potential annual irrigation demand from the Usuthu River ranges from 12.7 to 35.17 million cubic metres.

Ndumu/Msunduzi Dam: Based on an assured annual yield of 4.7 million cubic metres from the Ndumu/Msunduzi Dam, sufficient water is available to irrigate some 424 ha cotton or alternatively, 270 ha sugar cane thus complying with the present area under cultivation.

Electricity demand

Present supply: At present two main supply routes have been defined by Eskom for the development in the region, namely:

Rural 1: Jozini - Ingwavuma - Ndumu - Kwa-Ngwanase

Rural 2: Jozini - Makhathini - Tshongwe - Mbazwane - Sodwana

Both lines have recently been completed over the total route and are both designed for 33 kV, but operate at 22 kV until the demand increases. According to Eskom provision has been made on the Rural 1 route for 850 kV to cater for irrigation developments. It was indicated by Eskom that a new 132 kV power line would be necessary to provide for the energy demands of major irrigation development in the study area.

Anticipated power demand: Reference is made to the enclosed map, Annexure D and Annexure F, indicating the localities of the proposed bulk pump stations. The capacities of the pump stations have also been quantified.

The power demands relate to a macro level planning and the estimated figures could serve as an input parameter into the responsible authority's (Eskom) strategic long term power grid plan for the region. Micro level reticulation would depend on subsequent development studies.

Capital investment estimates

General: For the purpose of this study, the quantification of capital costs is limited to those primary components affecting bulk water supply to the respective irrigation blocks. The quantification of the total development capital required will thus entail the addition of those infrastructural components that have not been account for above, viz. power supply to the various pump-stations and the full infield development.

A factor of 1.5 has been incorporated in the costs to cater for overheads such as preliminary and general contract costs, engineering & administration costs and contingencies.

Capital investment: The capital required to effect bulk water supply to the study area, of some 17,652 ha (at 1991 values with 2009 estimated values in **bold**), ranges from R127.48 million (**R526.49 million**) to R140.71 million (**R581.13 million**) at the ruling 1991 prices (**2009 estimate**), pending canal option and subject to the constraints identified above.

The unit cost of bulk water supply thus ranges from R7,222/ha (**R29,827/ha**) to R7,971/ha (**R32,920/ha**) averaging R7,596/ha (**R31,371/ha**).

Farmer viability model

The summary cash flow and graphical representation of the key funding flows for five farm size scenarios in combination with centre pivot and sprinkler irrigation systems are shown in Table 2 below.

The five scenarios selected for illustration purposes of the financial sustainability and the requirements for a grants and loan finance package were:

- **10 ha overhead sprinkler model:** Given that some existing farmers are operating on 10 ha overhead sprinkler systems on the Makhathini Irrigation Scheme a model to reflect the likely financial position of these growers has been prepared.
- **31 ha five tower centre pivot model:** A 31 ha area was considered to be a realistic smallest centre pivot system for sugar cultivation practices. Although there is a smaller three tower (15 ha) system available the logistics of moving harvesting and logistics equipment onto such small areas was not considered practical.
- **31 ha overhead sprinkler model:** To compare with the centre pivot option a 31 ha sprinkler system model was prepared.
- **69 ha eight tower centre pivot model:** This is the next size up from the five tower system and closest to the 60 ha size requested by some of the local farmers as a size they would wish to operate on.
- **138 ha two eight tower centre pivot model:** To assess the financial performance of larger systems a two times eight tower (138 ha in total) financial model was prepared.

Table 2: Comparison of the five selected illustrative business models for farmers who will participate in the Makhathini Sugar Cane Project

Description	10 ha overhead sprinkler	31 ha overhead sprinkler	31 ha centre pivot	69 ha centre pivot	138 ha centre pivot
AUC	10 ha	31 ha	31 ha	69 ha	138 ha
Full capital dev. cost	R 413,953	R 1,782,171	R 2,078,255	R 3,742,096	R 6,707,306
Cost/ha	R 41,395	R 57,490	R 67,040	R 54,233	R 48,604
Grant/ha	R 10,500	R 28,181	R 30,615	R 21,587	R 19,461
Loans required/ha	R 30,895	R 29,309	R 36,425	R 32,646	R 29,143
Grant %	25.4%	49%	45.7%	40%	40%
IRR (20 yr)	16.54%	8.3 %	10.7%	15.21%	19.7%
Land rental/ha	R 60	R 777	R 1,362	R 1,434	R 1,446
Dividend/ha	Nil	R 150	R 895	R 1,229	R 2,217
Social return/ha (20 yr)	R 50,873	R 64,235	R 40,348	R 81,614	R 97,222

7. Overview of land ownership profile and context

The review area initially reported on is defined broadly by the lands located on the alluvial beds adjacent to the Phongolo River and its floodplain, between the Ndumu Game Reserve in the north and the Mkuze River in the south, incorporating the Makhathini Flats and the land between the boundary of Reserve No. 16 No. 15836 – HV in the west and, roughly speaking, the road running northwards and reasonably parallel to the Phongolo River linking Madonela, Mboza and Zama Zama to around Makane's Drift.

The land to the west of the Phongolo River running from the river in the east to the boundary of Reserve 16 No. 15836 in the west and from Ndumu Game Reserve in the north to the Makhathini Flats irrigation scheme in the south has long been subdivided into 22 farms, all currently registered in the name of the Minister of Land Affairs.

A diagram has been approved by the Surveyor General (7.1.1998) to consolidate these farms, together with a newly surveyed farm, The Gap No. 16447 – HV, (which is presently state land), into The Farm Pongola West No. 16637 – HV measuring 60 268.3308 hectares (SG No. 2679/1997).

Two farms in the north abutting the Ndumu Game Reserve, Wisteria 13122 – HV and Ndumu A 13147 – HV are registered in the name of the Trustee of the Ingonyama Trust.

Remainder Ndumu 9714 – HV is registered in the name of the Republic of South Africa.

A consolidation diagram has been approved by the Surveyor General (7.1.1998), which will consolidate these three farms, together with a small piece of land along the Phongolo River into The Farm Ndumu B No. 16638 – HV measuring 2936.0097 hectares (SG No. 2684/1997).

There is a triangle of land east of the intended Ndumu B, south of the Ndumu Game Reserve and west of the Phongolo River which is unregistered state land but designated as Ndumu South No. 16455 – HV in the records of the Surveyor General.

Reserve No. 15 No. 15835 – HV is registered in the name of the Trustee of the Ingonyama Trust. It abuts the east bank of the Phongolo River just north east of the Makhathini Flats irrigation scheme and is allocated to the Siqakatha Traditional Community.

There appears to be two land claims accepted and settled in the area, but, presumably at the time of the preparation of the Makathini Integrated Development Plan (2007), they were being challenged by tribal councils.

The state land around the existing irrigation area has been settled for many years and people will have established "rights" to the land. (Interim protection of Informal Land Rights Act applies).

Numerous people have settled close to the Phongolo River and have cultivated fields right down to the rivers edge and close to the pans. The floodplain is sensitive and it is desirable that the lower reaches, especially, be maintained as a conservation wetland area.

The proposed project area falls within the following municipalities;

- Umkhanyakude District Municipality;
- Jozini Local Municipality; and
- Umhlabuyalingana Local Municipality.

These municipalities in turn fall within the Ubombo and Ingwavuma magisterial districts

The proposed project area falls within the following TC areas;

- Nyawo TC;
- Mathenjwa TC;
- Siqakatha TC;
- Mashabane TC;
- Kwa-Jobe TC; and
- Ntsinde area restored through the restitution process.

The DWA drainage catchment assigned identification W.

Refer also to the following 1:50 000 topo-cadastral maps.

2632 CC Abercorn Drift 2632 CD Ndumo 2731 BB and 2732 AA Ingwavuma 2732 AB Sihangwane	2732 AC Jozini 2732 AD Tshongwe 2732 CA Ubombo 2732 CB Lower Mkuze
--	---

Consent of all landowners has been obtained and in giving consent they are supportive of the project.

Refer Annexure L.7 and L.1 respectively: Consent for EIA Study from DAE&RD and Ingonyama Trust Board

8. Policy and legislation

Development policy for the Maputaland region is encapsulated in the Makhathini Development Master Plan.

Makhathini Development Master Plan

The plan identifies the irrigation developments in the area. The Makhathini Irrigation Scheme was developed over a period of time, starting in 1979 when a 600 hectare commercial project was established to serve as a nucleus for development in the area. The first small-scale farmers were established in 1984. According to Mjindi Farming records, there are currently 3,927 hectares developed to smallholder irrigation. This includes 37 hectares to vegetable plots and 13 hectares to rice paddies. Recently 618 hectares were developed to commercial irrigation by Makhathini Cotton Company in block 6C, block 7 and block 8. The above block area identifiers correspond with the original numbering of irrigable blocks in the Lonhro Report.

The report noted "...the current scheme is in an advanced state of disrepair with major infrastructure, drainage and salinity problems..." which will have to be taken account of in the planning of the MSCP.

Environmental legislation

Under the National Environmental Management Act, No. 107 of 1998 (NEMA), as amended by the National Environmental Management Act No. 8 of 2004 an environmental impact assessment is required to establish the potential positive and negative impacts of the proposed development.

The purpose of the EIA regulations is to regulate procedures and criteria governing the submission, processing, consideration and decision of applications for environmental authorisation of activities.

NEMA provides two lists of activities that require environmental authorisation. Government Notice R386 define the activities that require a basic assessment, while Government Notice R387 identifies activities that may have a substantial detrimental effect on the biophysical and/or social environmental and therefore require the full scoping and environmental impact assessment process.

This process is guided by Part 3 of the EIA regulations that stipulates the required steps and actions that must be undertaken in the EIA process.

The EIA process comprises three phases, namely the scoping phase, environmental impact assessment phase, which is concluded with the production of the Environmental Impact Report (EIR), and the Record of Decision (RoD) and appeal phase.

8.1. The principles of Integrated Environmental Management

The EIA will be undertaken according to the principles of Integrated Environmental Management (IEM) and in accordance with EIA regulations. The IEM principles include informed decision making, taking accountability for decisions; a broad meaning given to the term environment (i.e. including biophysical, social and economic components); due consideration of alternative options; ensuring the opportunity for public and specialist input into the decision-making process.

8.2. Identification of all legislation

The following pieces of legislation and related strategy apply to this application:

- National Environmental Management Act (No.107 of 1998);
- National Water Act (No. 36 of 1998) and the National Water Resources Strategy;
- National Veld and Forest Fire Act (No. 101 of 1998);
- National Environmental Management Amendment Act (No. 46 of 2003);
- National Environmental Management Second Amendment Bill (No. 56 of 2003);
- National Environmental Management: Biodiversity Act (No.10 of 2004);
- National Heritage Resources Act (No. 25 of 1999);
- National Heritage Council Act (No. 11 of 1999);
- Kwazulu-Natal Heritage Act (No. 4 of 2008);
- Conservation of Agricultural Resources Act (No. 43 of 1983);
- Agricultural Pests Act (No. 36 of 1983); and
- Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (No. 36 of 1997).

8.3. Listed activities

LIST OF ACTIVITIES AND COMPETENT AUTHORITIES IDENTIFIED IN TERMS OF SECTIONS 24 AND 24D OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998

The Minister of Environmental Affairs and Tourism has in terms of Sections 24 and 24(D) of the National Environmental Management Act (No. 107 of 1998), listed the

activities in the Schedules below as requiring environmental authorisation from the competent authority.

This Notice came into effect on the date of commencement of the EIA regulations, 2006, made under Section 24(5) of the Act, and published in Government Notice No. R385 of 2006.

No. R386

Activity no.	Activity description	Identification of competent authority
1	<p>(k) the bulk transportation of sewage and water, including storm water, in pipelines</p> <p>(i) an internal diameter of 0,36 metres or more; or</p> <p>(ii) a peak throughput of 120 litres per second or more;</p> <p>(m) any purpose in the one in ten year flood line of a river or stream, or within 32 metres from the bank of a river or stream where the flood line is unknown, excluding purposes associated with existing residential use, but including:</p> <p>(i) canals;</p> <p>(ii) channels;</p> <p>(iii) bridges;</p> <p>(iv) dams; and</p> <p>(v) weirs.</p>	<p>The competent authority in respect of the activities listed in this part of the schedule is the environmental authority in the province in which the activity is to be undertaken unless it is an application for an activity contemplated in Section 24C(2) of the Act, in which case the competent authority is the Minister or an organ of state with delegated powers in terms of Section 42(1) of the Act, as amended.</p>
12	<p>The transformation or removal of indigenous vegetation of three hectares or more or of any size where the transformation or removal would occur within a critically endangered or an endangered ecosystem listed in terms of section 52 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).</p>	<p>The competent authority in respect of the activities listed in this part of the schedule is the environmental authority in the province in which the activity is to be undertaken unless it is an application for an activity contemplated in Section 24C(2) of the Act, in which case the competent authority is the Minister or an organ of state with delegated powers in terms of Section 42 (1) of the Act, as amended.</p>
16	<p>The transformation of undeveloped, vacant or derelict land to:</p> <p>(b) residential, mixed, retail, commercial, industrial or institutional use where such development does not constitute infill and where the total area to be transformed is bigger than one hectare.</p>	<p>The competent authority in respect of the activities listed in this part of the schedule is the environmental authority in the province in which the activity is to be undertaken unless it is an application for an activity contemplated in Section 24C(2) of the Act, in which case the competent</p>

		authority is the Minister or an organ of state with delegated powers in terms of Section 42 (1) of the Act, as amended.
17	<p>Phased activities where any one phase of the activity may be below a threshold specified in this Schedule but where a combination of the phases, including expansions or extensions, will exceed a specified threshold.</p> <p>Definition: “phased development” means an activity that is developed in phases over time on the same or adjacent properties to create a single or linked entity through interconnected internal vehicular or pedestrian circulation, sharing of infrastructure, or the continuum of design, style or concept by the same proponent or his or her successors.</p>	Same as above.

No. R387

Activity no.	Activity description	Identification of competent authority
2	Any development activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be, 20 hectares or more.	The competent authority in respect of the activities listed in this part of the schedule is the environmental authority in the province in which the activity is to be undertaken unless it is an application for an activity contemplated in Section 24C(2) of the Act, in which case the competent authority is the Minister or an organ of state with delegated powers in terms of Section 42(1) of the Act, as amended.
10	Any process or activity identified in terms of Section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (No. 10 of 2004).	Same as above.

8.4. Planning regulations and policy

The Makhathini Integrated Master Development Plan is a plan focusing on the development of the two local municipalities of Jozini and Umhlabuyalingana in the District Municipality of Umkhanyakude in the North Eastern corner of KwaZulu-Natal. The plan was developed on instruction of the Member of the Executive Council (MEC) Oversight Committee for the Lebombo Spatial Development Initiative (SDI) and the Economic Cabinet Cluster. The plan aims to integrate all government activities and develop the two main economic driving sectors in the area; agriculture and tourism.

This plan consists of two parts, the first covering the environmental issues, land related matters, agricultural development, supporting infrastructure for the plan as a whole including road development, telecommunications and electricity and then the conclusion and recommendations for the whole plan. The second part focuses on the conservation and tourism sector.

This project is included as one of the identified in the plan that is a desirable development vehicle for the region.

Considering the human and environmental vulnerability of the area the Makhathini Integrated Master Development Plan and related projects is committed to environmentally sustainable agricultural development.

9. Scoping and EIA process followed

9.1. Project initiation and pre-application consultation

Phatisa was engaged in December 2008 and work was initiated on a desktop basis to research prior studies appropriate to the assignment. As a result areas of potential land were identified and mapped. This information was used to prepare a Project Brief, which was approved by the project Stakeholder Committee.

On the basis of this Project Brief presentations were made in early 2009 to the various Traditional Authorities, introducing the project team and securing consent to work with communities in the area.

9.2. Screening

A site visit to the proposed project target areas was made during the period 30/03/2009 – 1/04/2009. During this visit an assessment was made of various orientation maps.

The location of the proposed project target areas, population distribution in terms of proposed project target areas (use of SAT 5 data) was assessed on a desktop basis.

In addition an assessment of KZN Wildlife/Ezemvelo “C Plan” data in relation to proposed target areas was made and there appear to be no significant impacts on biodiversity or areas of “irreplaceability” within the proposed project target areas.

Based on the Project Brief and initial local consultations a Background Information Document (BID) was prepared to present to the Provincial Environmental Authority.

9.3. Pre application meeting

A meeting held on 17 March 2009 with Siboniso Mbense, Assistant Manager Environmental Impact Assessment, DAE&RD at Mtubatuba. The following was discussed:

- Presentation of the BID, listed activities and types of EIA applications; and
- Assessment of which activities will be triggered In terms of R385, R386 and R387.

9.4. Social probe

Dr Sazile Mtshali and Edward Malu conducted the social probe. This was completed from March to August 2009. The following steps were taken for the social probe:

- Interviews with selected authorities and interest groups.
- Confirmation from local communities of support for the project in their areas.
- Pointing out of land by the community that would be available for the project.
- Identification of any issues.

This information will also be used in the scoping and public participation process.

Refer Annexure Q.

9.5. Scoping plan

The EIA application for his project was submitted to Siboniso Mbense, Assistant Manager Environmental Impact Assessment DAE&RD at Mtubatuba on 21 July 2009, after landowners consent was secured. The application was assigned the following reference no. (EIA/DC27/0041/09: KZN/EIA/5679/2009).

This application was subsequently transferred to DEA (National Department) in Pretoria by DAE&RD on the basis of their opinion that a potential conflict of interest may arise, given the participation of the provincial department in the project stakeholder committee. DEA allocated the following new reference no. 12/12/20/1658.

Scoping refers to the process of identifying, as early as possible:

- the appropriate boundaries of an EIA study;
- the important issues and concerns requiring further investigation (i.e. key issues); and
- the information necessary for decision-making (UNEP, 1996).

Scoping is a process where various methods are applied to:

- identify community and scientific concerns about a proposed project or action;
- evaluate these concerns to determine the key issues for the purpose of the environmental impact assessment (and to eliminate those issues which are not significant); and
- organise and communicate these to assist in the analysis of issues and the ultimate making of decisions (UNEP, 1996).

The scoping process facilitates an efficient EIA process by identifying key issues, concerns and alternatives which require investigation. This information will allow the EIA project manager to properly brief the study team (specialist) on the matters which should be addressed in the study. It will also reduce the likelihood that the EIA document will have serious deficiencies and the attendant delay if it needs to be revised. Scoping is done to make sure that neither time nor money is wasted collecting unnecessary baseline data or undertaking excess analysis, and that important issues are not neglected (UNEP, 1996).

9.6. Press notices

Advertisements were placed in the *Mercury*, *Ilanga* and *Zululand Observer* newspapers. Refer Annexure M – copies of adverts.

9.7. Scoping workshops

Public meetings/workshops/open days have been conducted on 29 September at Mjindi Centre, 30 September (am) at Mboza (Welcom/Hlazane area), 1 October at Kwa-Jobe and 8 October (am) at Kwa-Shukela.

These meetings covered the following aspects:

- Objectives and description of the proposed activity;
- The legal, policy and planning context and setting of the proposed activity;
- Environmental opportunities and constraints, including the characteristics and importance of an area;
- Feasible alternatives;
- Predicted impacts on the environment;
- Public involvement - how I&APs can participate; and
- A timetable of the process to be followed.

10. List of potential environmental issues and impact

The project will have a significant positive socio-economic impact on farmers and the community.

The project should demonstrate that the targeted production areas will have the least possible impact on the Phongolo River Floodplain, defined as consisting of the river and adjacent pans and the area of inundation determined by the regulated flood releases controlled by the Department of Water and Environmental Affairs; and the functioning of the river system, pans and wetlands which support the production of grasses, survival of fish and other wildlife. In the regard the project is not planned to impact on either the Floodplain or areas of Sand Forest as the target irrigable blocks are not in these areas.

Cultivation and processing of sugar cane and the impacts of the production and management practices, which include potential for soil erosion, loss of natural habits, extent of water consumption, risk of water pollution, runoff and leaching of nutrients will be assessed.

Primary, secondary and tertiary impacts will be assessed including cumulative impacts, which occur when:

- Impacts on the environment take place so frequently in time or so densely in space that the effects of individual impacts cannot be assimilated; or
- The impacts of one activity combine with those of another in a synergistic manner. Reference: DEA (2004).

10.1. Issues related to the river, wetlands and Ramsar Site

Activities/Issues

- Wetlands and watercourses (KZN Wildlife Ndumu Ramsar site);
- Riparian vegetation;
- Irrigation (licensing) and efficient application;
- Riverside erosion and sedimentation;
- Water quality , run off including agro-chemicals and hydrocarbons (fuel/oil/diesel);
- Salinity;
- Irrigation bulk water supply;
- Irrigation with by-products of any factory process i.e. vinasse/stillage;
- Other water users,;
- Catchment management issues, CMA (Catchment Management Authority) and WUA (Water User Authority); and
- Providing irrigation water off the flood plain provides economic and livelihood alternatives to communities currently dependent on the flood plain and causing environmental damage to lack of such alternative currently.

Impact

- Poor catchment management practices could impact on the Ramsar site.
- The “corridor” role that rivers, watercourses and natural areas play in migration/movement of fauna and flora could be negatively affected by poor irrigation layout design and poor management practices.
- Return flows from irrigated fields can lead to increased salinisation of receiving water bodies leading to ecosystem changes and loss of spp
- Increased eutrophication of water bodies from elevated nitrogen and phosphorous loads in run-off and seepage water
- Possible reduction in downstream flows in the event irrigation quotas are exceeded.

Cumulative impact

- Impacts of poor catchment management practices upstream of the Ndumu Ramsar site will have international implications for South Africa as it is a signatory to the Ramsar convention on conservation of important wetlands.
- The impact of poor catchment management practices and agricultural practices could affect the conservation of aquatic fauna and flora of the Makhathini System.
- Unsustainable water use could compromise downstream environments and other water users especially communities living downstream who depend on the river for their livelihoods.
- The removal of alien vegetation would represent a beneficial impact of the development.
- Long term protection of the flood plain from over-exploitation by communities currently dependent on it for survival through offering alternative means of development.

10.2. Issues related to the terrestrial environment

Activities/Issues
<ul style="list-style-type: none">• The loss of natural vegetation, which will take place on previously undeveloped land.• Some clearing of vegetation for new fields is required.
Impact
<ul style="list-style-type: none">• The loss of natural vegetation is a concern in any development, which is taking place on previously undeveloped land.• Despite the target area being relatively heavily impacted upon by human and animal pressures small pockets of pristine vegetation may remain.• It is necessary to determine the impact of the loss of these areas and the conservation priorities
Cumulative impact
<ul style="list-style-type: none">• Monoculture leads to a loss of species diversity.• Population explosions of rodents i.e. greater cane rat (<i>Thryonomys swinderianus</i>).• Permanent loss of vegetation, habitat fragmentation, interruption of ecological corridors and migration paths, erosion and stream sedimentation.• Potential for spread of alien plants in wider area.

10.3. Issues related to the socio-economic environment

Activities/Issues
<ul style="list-style-type: none">• Employment.• Business development.• Economic productivity of the land.• Social services infrastructure – roads, electricity, and key strategic bridge crossings over the Phongolo River.• Skills in agriculture and business.• Changes to sense of place.• Visual impact – especially residents bordering the proposed development• Impacts on local residents – supply of survivalist activities such as cattle grazing, harvesting of medicinal materials, firewood and building materials (thatching).• Natural heritage sites/sites of conservation significance.
Impact
<ul style="list-style-type: none">• Increased employment for the local communities.• Increased opportunities for business development by local people.• Increased economic productivity of the land.• Improved social services infrastructure – roads, electricity, and key strategic bridge crossings over the Phongolo River.• Increased levels of skill in agriculture and business.• Increased circulation of money within the local economy leading to multiplier effects in other sectors.• The development will result in changes in the perception of the local community of their surroundings.• The impact of poor management of the natural areas could lead to a decrease in biodiversity, loss of corridors for the movement/migration of birds and animals and even loss of habitat for fauna and flora.• The occurrence and significance of any cultural or heritage sites/objects need to be determined and an Environmental Management Plan (EMP) prepared to address these.

Cumulative impact

- The growth in the local economy and wealth creation.
- Poor management of the natural resource base could lead to a disruption, decline or collapse in the functioning of the ecology. Loss of (especially river corridors) can have long term impact on ecological connectivity and loss of refuge by wildlife in times of drought and fire.

10.4. Issue related to associated project activities

Activities/Issues

- Water reticulation – impoundment, controlled release, water transfer and canal/pipeline operation.
- Electricity supply
- Storm water Management
- Increase in traffic - haulage and spillage,
- Road safety near schools/clinics

Impact

- Choice of irrigation system is an important part of the design of the development and needs to be done in away which does not place unnecessary pressure on the local water reticulation and services.
- The impact of electricity demand required for the agricultural components will be off-set by the production of fuel-grade ethanol that returns to the transportation sector and the co-generation of electricity that returns to the national Eskom grid. The future electricity demand will need to be determined.
- Some soil types are highly susceptible to erosion, particularly if subjected to concentrated surface flows. An appropriate land use conservation plan will need to be developed as part of the EMP.
- The development will result in a significant increase in the transportation of agricultural produce in the surrounding areas (haulage), which by the nature of the crop will result in some spillage of biomass but there are accepted management practices to minimize this.
- Besides road safety issues, traffic related to movement of agricultural vehicles and machinery especially during harvest season could impact on those living immediate adjacent to main transportation routes who could be exposed to increased traffic noise and dust from dirt roads.

Cumulative impact

- The project will impact on the need for improved infrastructural services (roads, bridges and the electricity grid) in the district.
- A land use conservation plan for the irrigation areas as part of the EMP is required.
- Increased road traffic can result in increased accidents.

10.5. Agricultural issues

10.5.1. Field practices

Activities/Issues
<ul style="list-style-type: none">• Choice of crop;• Soil conservation;• Land use planning;,,• Cane extraction;• Management practices (weed, pest and disease control);• Agrochemicals;• Harvesting;• Burning versus trashing;• Crop nutrition; and• Fire protection.
Impact
<ul style="list-style-type: none">• Impacts of poor field practices could lead to soil erosion, land degradation from poor access roads, alien and invasive plants/weeds, smoke pollution from burning affecting neighbours.• The impact and danger of runaway fires during burning and from arson could pose a danger to communities living nearby.• The incorrect concentration or dosage, excessive use of agrochemicals could cause chemical poisoning impacting on fauna and flora and communities living nearby.
Cumulative impact
<ul style="list-style-type: none">• There could be a build up of toxic agrochemicals over time.• The cumulative impact of poor agricultural management practices is land degradation, loss of productivity, lower economic output and a downward economic spiral.

10.5.2. The soil

Activities/Issues
<ul style="list-style-type: none">• Limitations;• Erosion hazard;• Compaction;• Nutrient levels for sugar cane; and• Drainage
Impact
<ul style="list-style-type: none">• The impact of poor soil management practices could have a negative impact on long term agricultural productivity, in terms of compaction, depletion of soil nutrients and increase in soil erosion.• The impact of too high applications of fertilizers could lead to increased run-off of nutrients, pollution, weed infestation leading to choking of drainage areas.
Cumulative impact
<ul style="list-style-type: none">• Poor agricultural practices could lead to land degradation, loss of productivity, lower economic output and a downward economic spiral.

10.5.3. Crop diversity

Activities/Issues
<ul style="list-style-type: none">• Choice of crop• Monoculture vs. diversified agriculture - crop diversity to complement sugar cane and contribute to food security.
Impact
<ul style="list-style-type: none">• The impact of a “single crop” economy is increased risk from drought and economic downturns and market failure whereas a diversified agricultural economy can cushion against risks.
Cumulative impact
<ul style="list-style-type: none">• A “diverse agricultural economy” will be less risky from natural elements and economic factors leading to better long term livelihoods.

10.6. Issues related to construction and implementation

Activities/Issues
<ul style="list-style-type: none">• Upgrade and development of district roads – Department of Transport will develop the local road infrastructure as part of their dub-regional development plans.• Construction of in-field roads.• Development of the electricity grid – Eskom will develop new transmission lines (a positive).• Communications – upgrading of cellular/telephone services (a positive).• Bulk water – DAE&RD and DAWF will be expected to contribute to certain key elements of bulk water supply so as to bring water to irrigation blocks for further reticulation by the project within blocks to farm level.• Waste management – proper disposal during construction.• Clearance of vegetation.• Topsoil stripping.• Trench excavation.• Blasting and tunnelling – only if required.• Quarrying for fill material.• Water diversion.• Construction of access roads and tracks.• Fence construction.• Contractors camp/yard.• Bulk earthworks.• Building and plant construction.• Concrete batch plant.• Installation of temporary and permanent services (water, sewage, power, telecoms).• Construction of farm buildings, sheds, loading zones.
Impact
<ul style="list-style-type: none">• Temporary and permanent loss of vegetation in those areas where pipelines and canals are developed and in areas where irrigation lands are developed.• District roads developed by DoT will be covered by a separate EIA process.• Electricity grid development will be managed through Eskom within their EIA regulation framework.• Habitat fragmentation.• Local loss of species.• Introduction of alien species.

Cumulative impact

- Direct loss of habitat as a result of the development of the areas under sugar cane.
- Habitat fragmentation which can result in changes to predator/prey relationships and can result in the interruption/loss of migration corridors.
- Canals can act as death traps or barriers if not constructed with steps or fenced with overpasses.

10.7. Issues related to the planning and the built environment

The development needs to be placed in the context of national development policy (development of a Presidential Poverty Node), local development policy and evaluated in terms of the provisions and regulations of various documents including the Jozini LM Spatial Development Framework (SDF) and Integrated Development Plan (IDP) and the prevailing environmental legislation.

10.8. Specific issues raised by key I&APs

Mr S T Mabika at the Hlazane meeting raised the issue of problems in the past with cotton farming where pesticides and herbicides had a negative affect on the surrounding fauna and flora. He asked if this would be considered with this sugar cane project.

The EAP responded that this will be recorded as an issue in the EIA study and that the application of agro-chemicals is safe if used by well trained staff/farmers who may only apply chemicals at the prescribed application rates and concentrations and under the correct climatic conditions, that is no application during windy conditions, so as to prevent “drift” of chemicals.

Wildlife and Environment Society of SA raised the issue of the removal of indigenous vegetation and use of vinasse. Vinasse is a by-product of the processing of sugar cane and its management and handling will be an issue when the factory EIA application is processed.

KZN Wildlife/Ezemvelo raised the issue of any affect on the Phongolo Floodplain and Ndumu Ramsar Site.

The Ramsar Convention is an intergovernmental treaty providing for international co-operation for the conservation of wetlands. Ramsar sites (wetland areas) are wetlands of particular significance which have been designated under Convention of Wetlands of International Importance. The Ramsar Convention was adopted in 1971 in Ramsar, Iran and came into force in 1975. An important objective of this convention is the wise use of wetland areas which is defined as the sustainable utilisation for the benefit of humankind in a way compatible with the maintenance of the natural properties of the eco-system.

The development is targeted to take place off the flood plain using a specific water allocation. The Ndumu Ramsar site is downstream of the development and the water allocation does not impact current flow releases that form part of the Pongolapoort Dam, dam management protocols and so will have no direct impact. Potential indirect impacts will be addressed in the bio-sphere specialist report.

Amafa advised that archaeological, heritage and cultural issues require to be addressed in a specialist study.

A detailed study of the impact on heritage and cultural resources within the proposed project area will be undertaken and included in the final EIA study.

General: The most significant impact of the proposed irrigation scheme is the transformation of the landscape and complete destruction of plant communities and loss of grazing resources on the area that will be irrigated.

However this vegetation type is well represented in the Mkuze, Ndumo and Tembe Elephant Game Reserves and in private reserves like Phinda and therefore does not have a high conservation priority.

Alternatives include game ranching and ecotourism but these land uses are not compatible with the existing rural settlement and subsistence farming land uses.

With the introduction of irrigation there could be a rapid spread of weeds and invader plants if not managed as part of the agricultural management practices. This will be part of a sound EMP.

A nursery could be set up to transplant and propagate trees and muthi plants during clearing of vegetation and this could even be run as an SMME/s by local entrepreneurs.

In summary, it can be said that this is not an area of high conservation importance and this proposed irrigation scheme development will not detract from the provincial conservation authority's conservation goals.

Refer to Annexure O: EIA meeting attendance comments report.

11. Plan of study and methodology

The EIA will be conducted in four phases as described below:

11.1. Initial consultation

Key authorities have been consulted in order to establish which legislation is applicable to the proposed project and the responsibilities and roles of the various authorities.

The distribution of this Background Information Document constitutes part of this initial phase of consultation with key authorities and I&APs.

11.2. Scoping

During the scoping phase, I&APs were informed of the scope of the project and have an opportunity to comment on the project proposal. An important output of this phase will be a clear understanding of the main issues that need to be addressed in the EIA.

A specialist land report, a public meeting, the distribution of the draft scoping report and the compilation of a final scoping report with inputs from the comments report has been dealt with during scoping.

Although the scoping aims to achieve closure on the issues related to the project, the heritage and specialist studies are required, an opportunity will be provided for ongoing consultation and communication with I&APs throughout the EIA process.

- Key results of scoping report presented to I&APs; and
- Finalise issues for draft EIA report.

11.3. Plan of study for the EIA phase

The key objectives of this EIA process include the following:

- **Undertake a Public Participation Process (PPP):** The Public Participation Process (PPP) initiated in the scoping phase will continue in the EIA Phase. Once again the PPP will provide a forum within which all I&APs have the right to voice their concerns and issues regarding the project. An expanded process will be adopted to increase consultation with key stakeholders who have a significant role within the project.
- **Undertake specialist studies:** Specialist studies in environmental, agricultural and heritage issues will need to provide a detailed and thorough examination of key issues and environmental impacts. Specialists will gather relevant data to identify and assess environmental impacts that might occur on the specific component of the environment that they are studying.
- **Provide mitigation measures and recommendations:** The EIA will include practical and reasonable mitigation measures and recommendations. These recommendations will establish the actions that are needed in order to avoid, minimise or offset any negative impacts from the development and enhance positive impacts.
- **Provide planning input:** The EIA will actively engage and contribute to the planning process so as to mitigate environmental impacts through improved design and layout. Such input has taken place in the scoping phase and will be reviewed in detail in the EIA phase with input from the specialist studies.
- **Produce an Environmental Impact Report (EIR):** An EIR will be produced in order to provide a synthesis of the environmental setting, the nature of the project and specialist studies. The overall objective of the EIR is to provide the relevant authorities with sufficient information regarding the project and its associated environmental and social impacts to make an informed decision.
- **Produce Environmental Management Plans (EMPs):** EMPs will be produced and provide a set of practical and actionable mitigation, monitoring and institutional measures to be taken into account during the implementation and operation of the proposed development should environmental authorisation be granted. The aim of EMPs is to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels.

11.4. Specialist study methodology

Two specialists have been appointed to provide specialist reports on issues that have been identified.

- (i) A terrestrial specialist will study the terrestrial and aquatic issues; and
- (ii) cultural/heritage practitioner will conduct a study/survey of heritage and cultural resources that may occur in the area.

The terrestrial specialist study will comply with the following and the regulations GN Regulation 385 of Section 33 published under Section 24 of the NEMA.

- Identify the person who prepared the report.
- Specify the expertise of that person to carry out the specialist study or specialised process.

- A declaration that the person is independent in a form as may be specified by the competent authority.
- An indication of the scope of, and the purpose for which, the report was prepared;
- A description of the study approach and methodology adopted in preparing the report or carrying out the specialised process and the sources of information;
- A description of any assumptions made and any uncertainties or gaps in knowledge;
- A description of the affected environment and its sensitivity in terms of the study findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives (in terms of Section 5 of the Scoping Report), on the environment;
- Identify current and potential future sources of risk to the environment during construction, commissioning and operation of the project;
- Quantify, wherever possible, the potential direct and cumulative environmental effects;
- Assess the significance of the impacts.
- Recommendations in respect of any mitigation measures that should be considered by the applicant and the competent authority;
- A description of any consultation process that was undertaken during the course of carrying out the study;
- A summary and copies of any comments that were received during any consultation process; and
- Any other information requested by the competent authority.

The Heritage/Cultural Impact Assessment specialist study is required in terms of the following legislated listed developments:

- Developments (roads, walls, power lines, pipelines) greater than 300 m linear in length;
- Bridges greater than 50 m in length;
- Proposed developments exceeding 10,000 m²;
- Proposed developments exceeding three or more erven;
- Proposed developments exceeding three or more existing erven consolidated within past five years;
- Proposed development will exceed a cost set in terms of regulations; and
- Any other category provided for in regulations.

In terms of the stipulations of the National Heritage Resources Act No. 25 of 1999, Section 38(1) requires a heritage impact assessment in cases of:

- the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- the construction of a bridge or similar structure exceeding 50 m in length;
- any development or other activity which will change the character of a site:
 - (i) exceeding 5,000 m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by South African Heritage Resources Agency (SAHRA) or a provincial heritage resources authority;
- the re-zoning of a site exceeding 10,000 m² in extent; or

- any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

The Act defines a heritage resource as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This includes, but is not limited to, the following wide range of places and objects:

- ecofacts (non-artefactual organic or environmental remains that may reveal aspects of past human activity);
- living heritage (cultural tradition; oral history; performance; ritual; popular memory; skills and techniques; indigenous knowledge systems; and the holistic approach to nature, society and social relationships);
- places, buildings, structures and equipment;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds;
- sites of significance relating to the history of slavery in South Africa;
- movable objects, but excluding any object made by a living person;
- battlefields; and
- traditional building techniques.

Furthermore, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of:

- its importance in the community, or pattern of South Africa's history;
- its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; and
- its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.

Reports in fulfilment of Section 38(3) of the Act must include the following information:

- the identification and mapping of all heritage resources in the area affected;
- an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations;
- an assessment of the impact development on such heritage resources;
- an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

- the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- plans for mitigation of any adverse effects during and after completion of the proposed development.

11.5. Assessment of the significance of impacts

The EIA will assess the significance of impacts based on specialist input. The significance ratings will include the spatial and temporal scale, the likelihood of the impact occurring and the severity of impacts or potential benefits.

The significance of the impact will be assessed both with and without mitigation actions. The significance of the impacts on components of the affected environment (and where relevant, with respect to potential legal infringement) will be determined through a synthesis of the criteria below and should be described as follows:

- *Low*: Where the impact will not have an influence on the decision or require to be significantly accommodated in the project design;
- *Medium*: Where it could have an influence on the environment which will require modification of the project design or alternative mitigation;
- *High*: Where it could have a “no-go” implication for the project regardless of any possible mitigation.

11.6. Criteria to assess significance

- *Extent*: A description of the scale of impact: i.e. on a scale limited to the immediate areas of development activity (the site); limited to within 5 km of the development; affecting the region as a whole; or occurring at a national or international scale.
- *Duration*: A prediction of the lifetime of the impact: i.e. be short term (0 to 5 years); medium term (5 to 15 years); long term (> 15 years, with the impact ceasing after the operational life of the development); or considered permanent.
- *Intensity*: A description of the intensity (magnitude/size) of the impact: i.e. will it be high, medium, low or negligible (no impact). The specialist studies must attempt to quantify the magnitude of impacts and outline the rationale used. Where appropriate, national standards are to be used as a measure of the level of impact.
- *Probability*: A description of the probability of the impact actually occurring as either improbable (low likelihood); probable (distinct possibility); highly probable (most likely); or definite (impact will occur regardless of prevention measures).
- *Reversibility*: This describes the ability of the impacted environment to return to its pre-impacted state once the cause of the impact has been removed as: low, medium and high.

- *Legal requirements:* An identification and listing of the specific legislation and permit requirements which potentially could be infringed upon by the proposed project. Provide reference to the procedures required to obtain permits.

11.7. Integration and assessment

The results of any specialist studies and all other information will be integrated into a draft Environmental Impact Report (EIR).

The draft EIR will be published for comment by I&APs and its release will be published for comment through the media. An open day will be hosted to coincide with the release of the report. I&APs comments will be included in the final EIR which will be submitted to the authorities for decision making.

The final step in the EIA process will be to give I&APs feedback on the decision taken by the authorities.

12. Public participation

12.1. Key objective of the consultation process

This will be to ensure that all relevant individuals, organisations and public representatives participate in the project. The participation by local people in the development planning and project implementation process is an objective of the project, which has as its objective the socio-economic development of the area. As such the management of expectations and participation during implementation is of importance. This will include any servitude issues for linear activities such as bulk water conveyance systems (pipelines, pump stations).

12.2. Communication methods, treatment of comments and feedback

12.2.1. Steps taken to notify I&APs

Specific steps that have been undertaken as part of the public participation programme include the following:

- Identification and compilation of an I&AP database, invited to attend the stakeholder meetings (Refer Annexure O);
- Consultations have been held with each Tribal Council in the proposed project target area during July, August and September 2009;
- Public notices – the EIA and scoping poster advertisement was placed at all prominent places throughout the Makhathini Flats area during the months of July and August 2009. I&APs had until 14 September 2009 to comment. (Refer Annexure J);
- Distribution of the Background Information Document to the stakeholder meeting attendees in September;
- Notification of all participants in the Stakeholders Committee – refer Annexure K.1, letter of invitation to comment;
- Public notification through the press (Newspaper EIA adverts placed in *Mercury, Ilanga* and *Zululand Observer*), municipalities (BID emailed to Municipal LED managers);
- The EIA and scoping process was also advertised in the newspaper press including the following registered newspapers (*Mercury* –

English language *Ilanga* – isiZulu, *Zululand Observer* – English, Afrikaans and Zulu readership). (Refer Annexure M);

- Radio advert on Radio Maputaland of the public meetings/workshops schedules for 29 & 30 September and 1 & 8 October 2009;
- Direct public interaction in the form of combined open day/public meetings held at Mjindi Centre on 29 September 2009, Hlazane Mboza on 30 September 2009, Kwa-Jobe area on 1 October 2009 and Kwa-Shukela on 8 October 2009;
- Collation of comments and compilation of an issues trail;
- Final feedback letter; and
- Copies of this scoping report will be made available at the Jozini LM and Umhlabuyalingana LM from 1 March 2010.

Refer Annexure N for I&AP database.

Other key institutional role players and social groups have been identified and consultations have taken place with them. These include KZN Wildlife/Ezemvelo, Wildlife and Environment Society of SA (WESSA), iSimangaliso Wetland Park and KZN AMAFA Heritage Agency. Refer Annexure L.

- Ezemvelo KZN Wildlife was contacted on 27 May 2009 and sent a copy of the BID document. Refer Annexure L.2.
- Wildlife and Environment Society of South Africa (WESSA) as contacted on 27 May 2009 and sent a copy of the BID document. Refer Annexure L.3. Response dated 28 May and 22 June 2009 was received.
- iSimangaliso Wetland Park was contacted on 23 July 2009 and sent a copy of the BID document. Response dated 5 August 2009 was “The project area falls outside of iSimangaliso's Buffer Zone. iSimangaliso would therefore not be a relevant commenting authority in this case”.
- Amafa was contacted on 12 September 2009 and sent a copy of the BID document. Response dated 28 September 2009. Refer Annexure .4.

12.2.2. Display of EIA notices and posters

The procedure which was followed during the display period of EIA posters, was to meet the Tribal Council leaders namely Izinduna and amakhosi. It was crucial to explain to leaders the activity and the purpose of putting up EIA posters. It was also emphasised that they must tell their community members that they must not take the posters down unnecessarily.

It is very important that before doing anything in the community, the leadership should be made aware. This eliminates suspicion that the communities may arrive at if their leadership is in the dark as to what is happening. In this case the leadership was told that the activity of putting up the EIA posters, was still part of the facilitation and the presentations which were done by Mr E. Malu and Dr Sazile Mtshali.

At the following meetings, Cwezwane community meeting in Kwa-Jobe TC and Nondabuya community in Kwa-Nyawo TC a presentation was made and awareness about the process of putting up the EIA posters. I&APs had until the 30 September 2009 to comment on the BID document and make comments towards the Scoping and EIA process.

EIA notice posters were displayed in the following TCs:

- Kwa-Jobe TC;
- Ntsinde TC;
- Mjindi Area;
- Nyawo TC;
- Siqakatha TC; and
- Mashabane TC;

The target areas where posters were displayed are places, which were being frequented by the communities such as:

- Shops;
- Community halls;
- Residential clinics;
- Tribal councils;
- Municipalities;
- Schools;
- Government offices; and
- Other places of community gatherings.

Specifically the posters were put up in the following areas:

1. Kwa-Jobe Traditional Council - dated 10/08/09
Contact person: Mr Siyaya (Mobile: 0799085735)

GG Area community meeting presentation made on project and EIA process.

- Kwa-Jobe Traditional Authority Building;
- Ecezwane H P School;
- GG Shop (Induna Sibya);
- Bawa Shop (Gobindlovu B.); and
- Gedleza Clinic,

2. Kwa-Nsinde Traditional Council - dated 11/08/09
Contact person: Mr Z S Nkosi (Mobile: 0833486623)

The posters were put up in the following areas:

- Kwansinde Traditional Authority Building (Tribal Secretary: Nokuthula Nkosi, mobile: 0764354538);
- Ophande Shop;
- Ezinkunini Shop;
- Block 6 Tuck Shop; and
- the main gate along the road.

3. Mjindi area - dated 12/08/09

The posters were put up in the following areas:

- Mjindi Clinic;
- Mjindi School;
- Makhonyeni Shop;
- Mjindi Hall; and
- Makhonyeni Filling Station.

a. Jozini town

The posters were displayed in the following area:

- Jozini District Health and Environmental Offices;
- Jozini District Agricultural Office and Invasive Plant Control Section (Ms Dudu, telephone: 035 572 1280);
- Jozini Municipality (Municipal Manager: Mr N Nkosi, telephone: 035 5721292);
- Mkhuze Town; and
- Umkhanyakude District Municipality (Ndumiso Mthiyane, mobile: 082 9210287).

4. Kwa-Nyawo Tribal Council - dated 13/08/09 Induna Konya Gumede

- Makwakwa Gate Shop;
- Nyawo Stone;
- Shemula Clinic;
- Khwambuzi Shop; and
- Khwambuzi Clinic.

Induna Totoza Gumede

- Emathayini Shop;
- Bhambanana Education Offices; and
- Bhambanana Shopping Complex.

Induna Z Mpontshane

- Emadanishini Shop;
- Emkhayeni Cross Road;
- Mabheswini Shop; and
- Mpokonyane Shop.

Induna Mr M Gumede (Mobile: 0762937624)

- Kwashukela Community Hall; and
- Kwashukela Shop.

Contact person: Mr T Gumede (Mobile: 0783869046)

- Nondabuya General Dealer Shop;
- Nondabuya Clinic (Mr N S Manukuza, telephone: 035 5725591); and
- Othobothini Shop.

**5. Siqakatha Traditional Council - dated 18/08/09
Induna J E Nhlenyama (Mobile: 0824764727)**

NB. Nondabuya community meeting presentation made on project and EIA process.

- Makhathini Research Station (K N Mavundla, telephone: 035 5725308);
- Kwamabaso Shop;
- Balamhlanga Shop; and
- Emseni Shop.

6. Mashbane Traditional Council - dated 19/08/09

NB. Cezwane community meeting presentation made on project and EIA process.

- Madonela Clinic (T P Z Jobe, telephone: 035 572 5050);
- Madonela Primary School;
- Welcome Shop;
- Hlazane School; and
- Tembe KZN Wild Life (Mandla Tembe, mobile: 0822568816).

Refer to collection of photographs of EIA notices.

- The EIA and scoping process was also advertised in the newspaper press including the following registered newspapers (*Ilanga, Mercury and Zululand Observer*). Refer Annexure M;
- An electronic newsletter including this scoping report will be emailed to I&APs from 1 March 2010;
- Public meetings/workshops/open day to be held on 2 September at Mjindi Centre and 30 September at Hlazane and 1 October at Mboza and KwaShukela. Refer to copies of attendance registers (Annexure N) and meeting attendance comments report (Annexure O) .
- Copies of this scoping report will be made available at the Jozini LM and Umhlabuyalingana LM from March 2010.

12.3. Public facilitator

The public facilitator had the following responsibilities:

- Compiling and maintaining an up-to-date database of I&APs involved in the study;

- Administrative tasks: compiling, sending out letters and other correspondence material to I&APs as well as receiving communication and correspondence;
- Public relations: liaison with the media, prepare adverts and press releases;
- Establish and maintain a "hot-line" (telephone/fax and email) for I&AP responses;
- Organising and facilitating workshops and keeping records (minutes) of meetings and workshops;
- Distribution of all EIA documentation to I&APs;
- Compiling comments reports on all documents resulting from the study (noting concerns, issues, alternatives and responses where necessary);
- Ensuring sufficient participation by all I&APs.

12.4. Information recorded at all stakeholders meetings

Detailed records of all interactions with stakeholders during the EIA process are available.

Records include the following information:

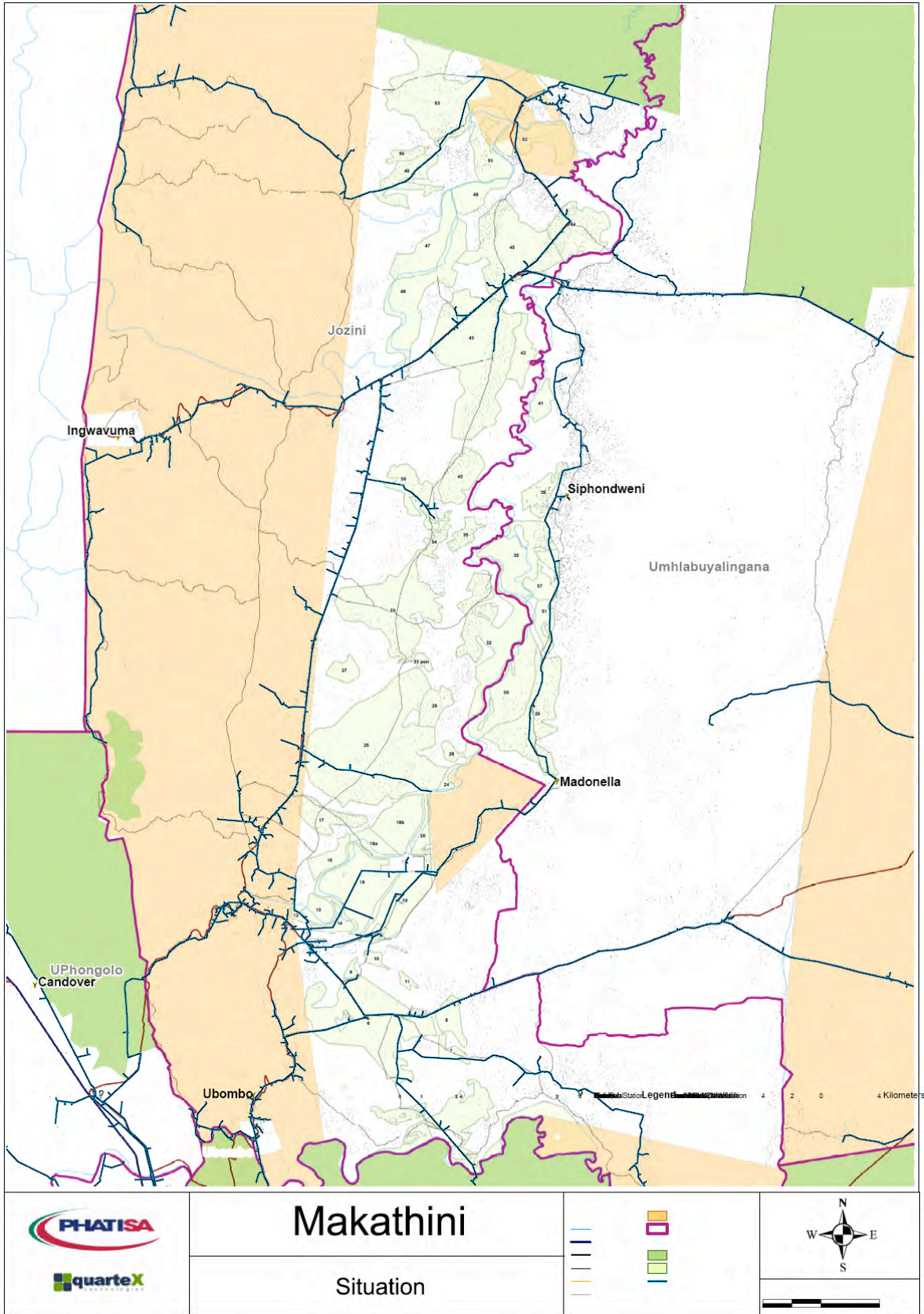
- Date, time and venue of meeting;
- Register of who attended the meeting (name, affiliation, contact details - telephone, fax, email and postal address);
- Brief description of the project;
- Issues and questions that were raised;
- Name and affiliation of the person that raised the issue; and
- Responses given to the issues or concern that were raised.

END

Annexure A.1: Table showing existing land use and target areas (ha)

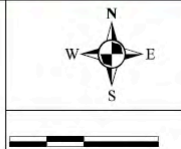
Land Use	Bhekindoda	Hlazane	Khwehle (Nyawo)	KwaJobe	KwaJobe (Ophansi)	KwaMbosi	KwaNyawo (Masabe)	KwaShukela	Nondabuya (Hlokoma)	Nondabuya (Mfongosi)	Nondabuya (Ohlwalwini)	Ntsinde	Othobothini (Nyawo)	Sigakatha	Welcome	Grand Total
annual commercial crops irrigated												0.5	3.8			4.3
bare sand					0.0										0.5	0.5
bushland (< 70cc)	40.5	30.2	41.7	131.7	20.5	134.1	48.1	160.8	51.9	11.0	15.2	116.5	50.6	140.1	114.4	1107.3
degraded bushland (all types)	277.3	168.8	118.3	204.2	103.8	61.9	551.9	1037.3	203.6	47.5	46.0	641.0	95.3	615.0	721.3	4893.3
degraded forest			0.4		15.7											16.1
degraded grassland	7.4	18.7	21.6	49.0	77.1	2.6	14.0	233.7	11.5	1.9	3.2	34.5	40.2	52.6	101.1	669.1
dense bush (70-100 cc)		5.0	15.0	82.0	43.2	0.0	0.2	10.6	19.6	1.9	6.0	7.9	8.5	187.3	26.2	413.5
forest			1.3		20.7				0.2		0.3	0.9		7.5	0.2	30.9
grassland	7.3	11.1	13.4	22.3	1.2	7.3	106.8	98.3	56.1	20.8	7.4	55.1	8.1	83.0	76.3	574.4
grassland/bush clumps mix	97.3	13.4	20.8	69.4	22.2	100.8	78.5	236.7	10.0	5.0	4.8	84.1	26.6	69.9	135.7	975.4
KZN main and district roads	0.4	0.7	0.6	0.6	0.4		10.6	30.6				0.3			0.9	45.1
old cultivated fields - bush land				12.9			394.8					5.8				413.6
rural dwellings	0.3			7.9	26.6	1.1	5.0	92.6				14.0		4.6	8.1	160.2
sugar cane - commercial								0.0				23.4	8.3	8.2		40.0
sugar cane - emerging farmer		7.4			1.0			5.2							50.8	64.5
subsistence (rural)	76.2	39.8	32.1	37.0	196.7	17.9	425.4	397.7	189.0	58.3	24.8	38.4	23.4	305.2	297.8	2159.6
urban					2.4							1.2				3.5
water-natural		4.0			22.2				0.0	10.0	1.1		0.0		4.9	42.2
wetlands		3.0			57.4			1.4						2.0	103.9	167.6
woodland				0.1	0.0		6.8	0.9				1.4				9.2
Grand Total	506.6	302.2	265.2	617.1	611.3	325.7	1642.0	2305.7	541.8	156.5	108.7	1025.1	264.8	1475.4	1642.1	11790.4

Annexure A.2 : Potentially irrigable blocks

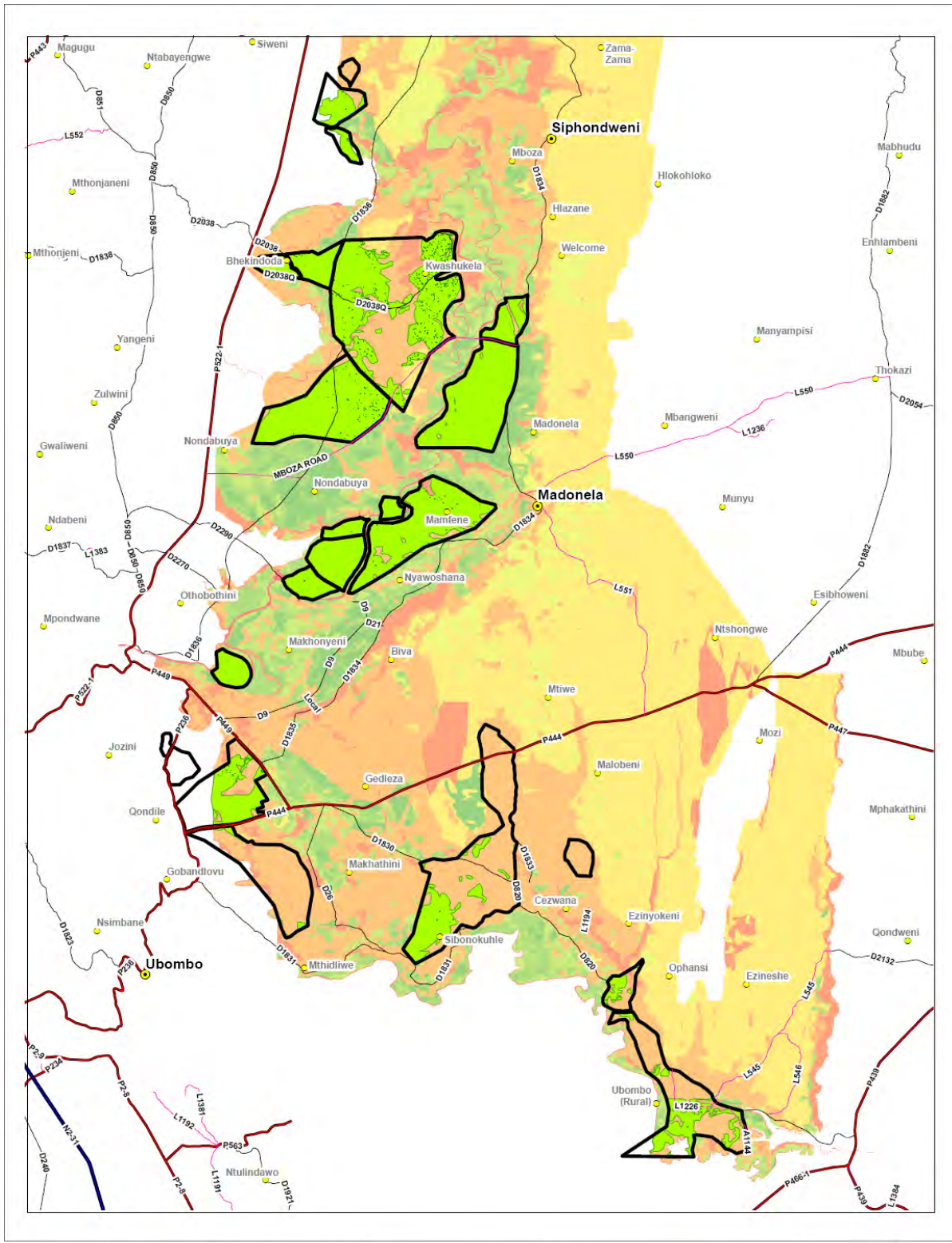


Makathini

Situation

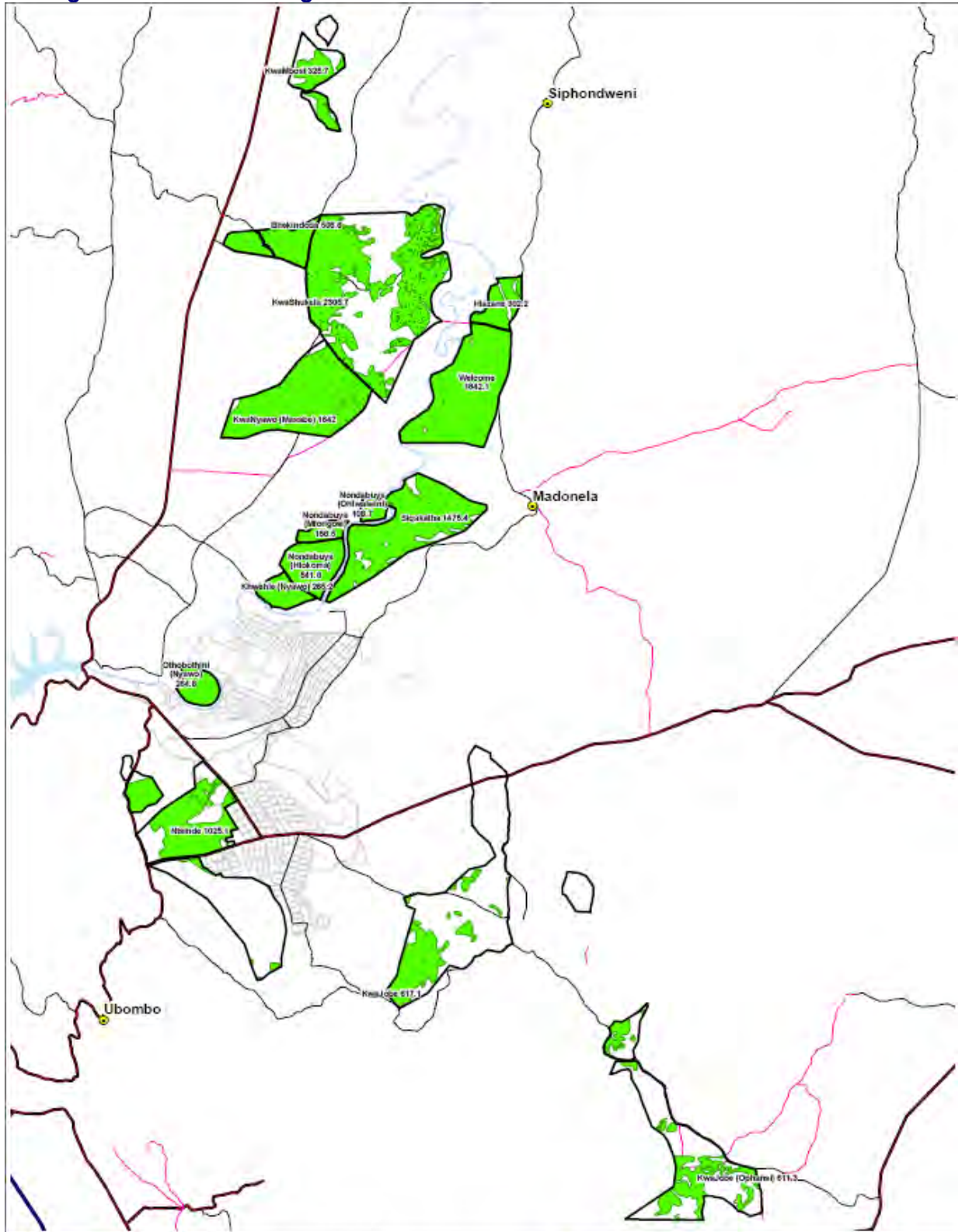


Annexure B.1: Target areas



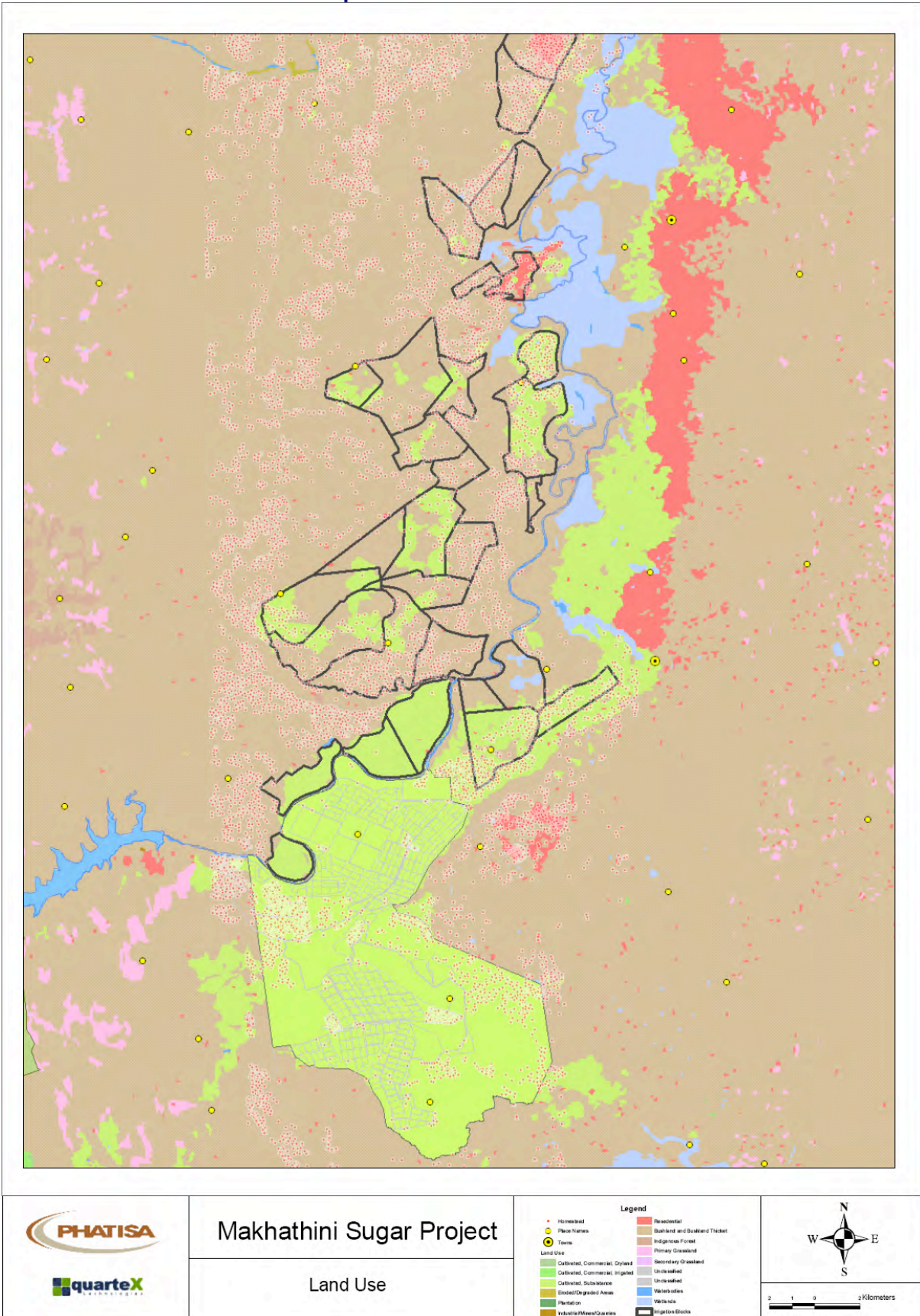
<p>Confidentiality The information presented on and associated with this map is confidential and may in no way be distributed or used without the written consent of the Makhathini Sugar Cane Project.</p>	<p>Mapping prepared on behalf of: Makhathini Sugar Cane Project</p> <p>Community Survey - Agreed Irrigation Areas</p> <p>Total Agreed Area = 19,506.5 Ha Total Arable Area = 11,386 Ha</p>	<p>Legend</p> <ul style="list-style-type: none"> Agreed Irrigation Blocks Agreed Arable Area Soils Excellent Very Good Good Moderate Poor Very Poor No Use Unknown 	<p>Scale: 0 to 2 Kilometers</p>
---	--	--	---------------------------------

Annexure B.2: Irrigable areas within target areas



	Mapping prepared on behalf of: Makhathini Sugar Cane Project	<ul style="list-style-type: none"> Towns National Province District Access Local Agreed Irrigation Blocks Arable Areas 	<p>Kilometers 0 1.25 2.5 5</p>
<p>Confidentiality The information presented on and associated with this map is confidential and may in no way be distributed or used without the written consent of the Makhathini Sugar Cane Project.</p>	<p>Community Survey - Agreed Irrigation Areas</p> <p>Total Agreed Area = 19,526.5 Ha Total Arable Area = 11,790 Ha</p> <p style="text-align: center;">Arable Areas</p>		

Annexure C.1: Makhathini land use map

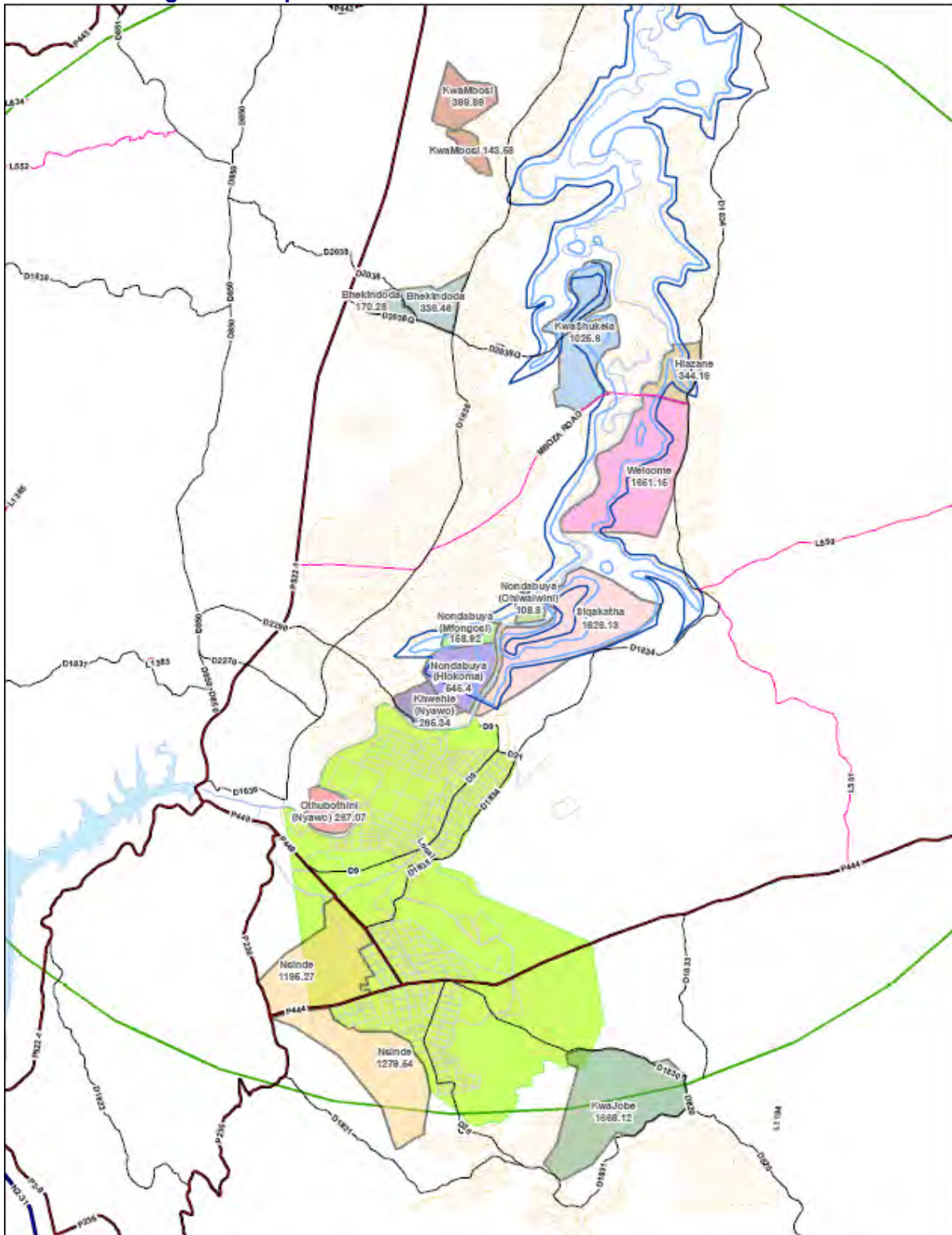


Makhathini Sugar Project



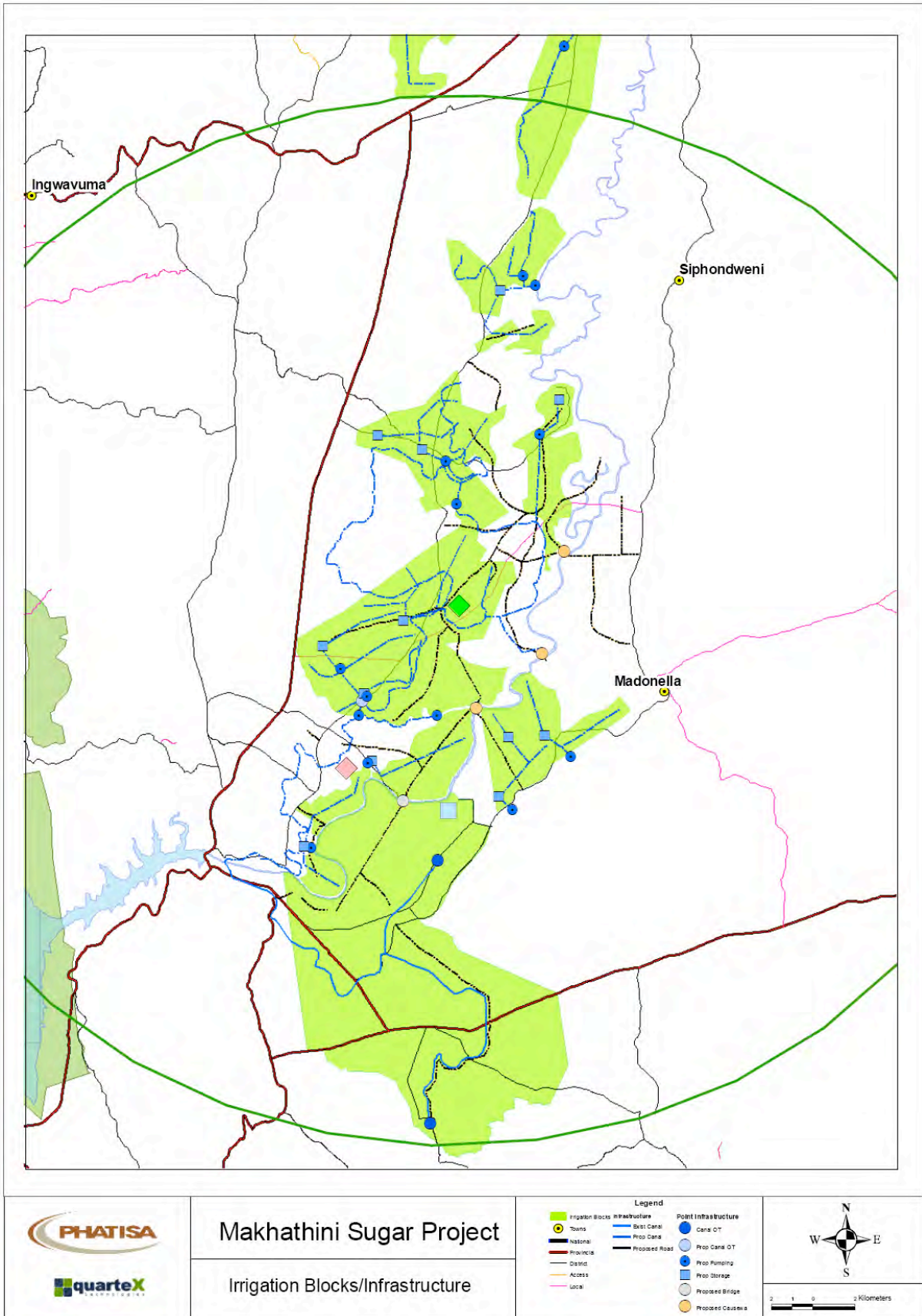
Land Use

Annexure C.2: Phongolo Floodplain

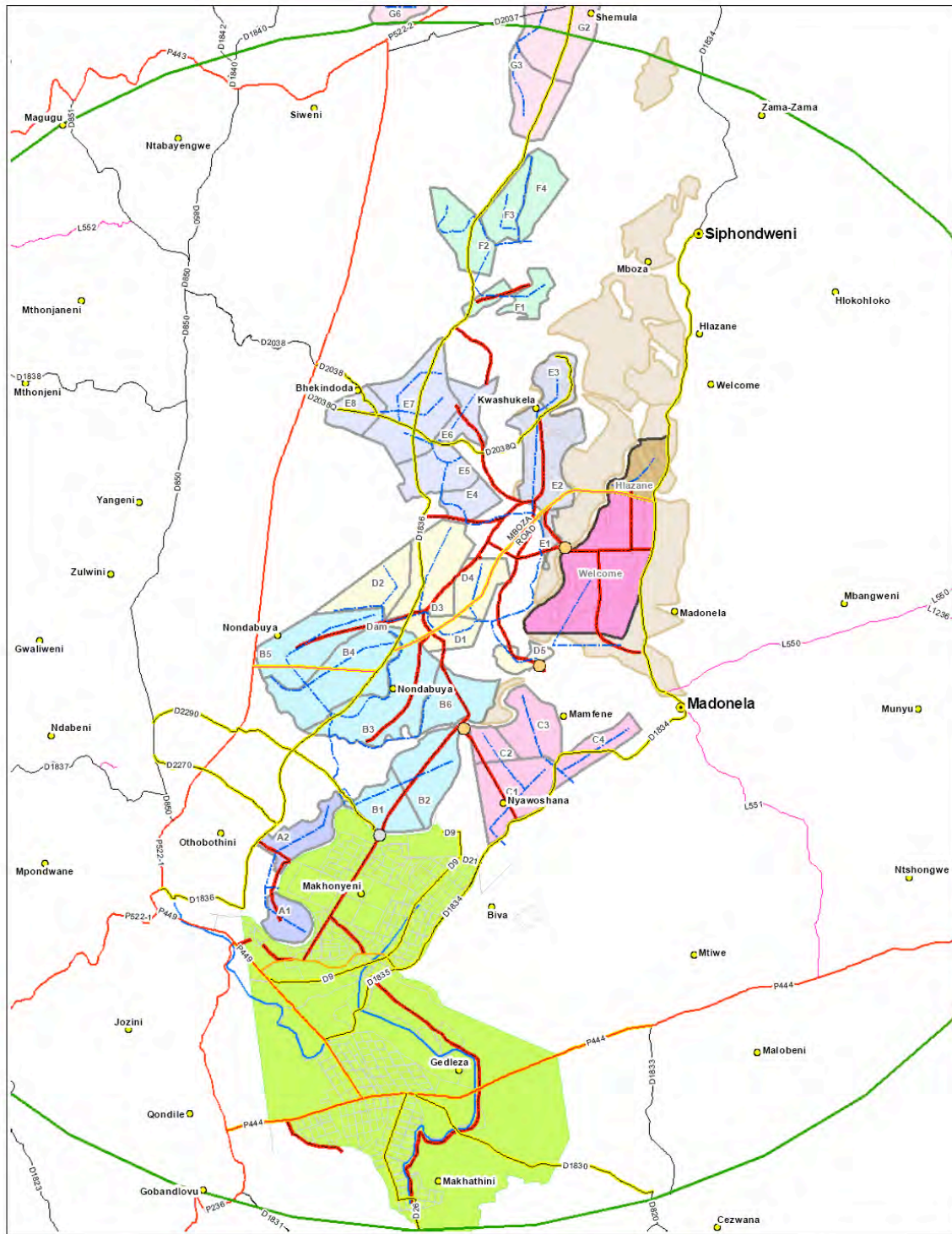


	Mapping prepared on behalf of: Makhathini Sugar Cane Project	Legend ■ Ehkekindoda ■ Hazane ■ Khwehle (Nyawo) ■ KwaJobe ■ KwaMbosi ■ KwaShukela ■ Nondabuya (Hlokoma)	■ Nondabuya (Mfongosi) ■ Nondabuya (Chiwaiwini) ■ Nalinde ■ Chhuthobhini (Nyawo) ■ Sitqakatha ■ Welome ■ 800M3 Floodline ■ 100 Year Floodline	
Confidentiality Information presented on and associated with this map is confidential and may in no way be distributed or used without the written consent of the Makhathini Sugar Cane Project.	Community Survey - Agreed Irrigation Areas Total Agreed Area = 11,186 Ha			

Annexure D: Makhathini existing and proposed irrigation infrastructure

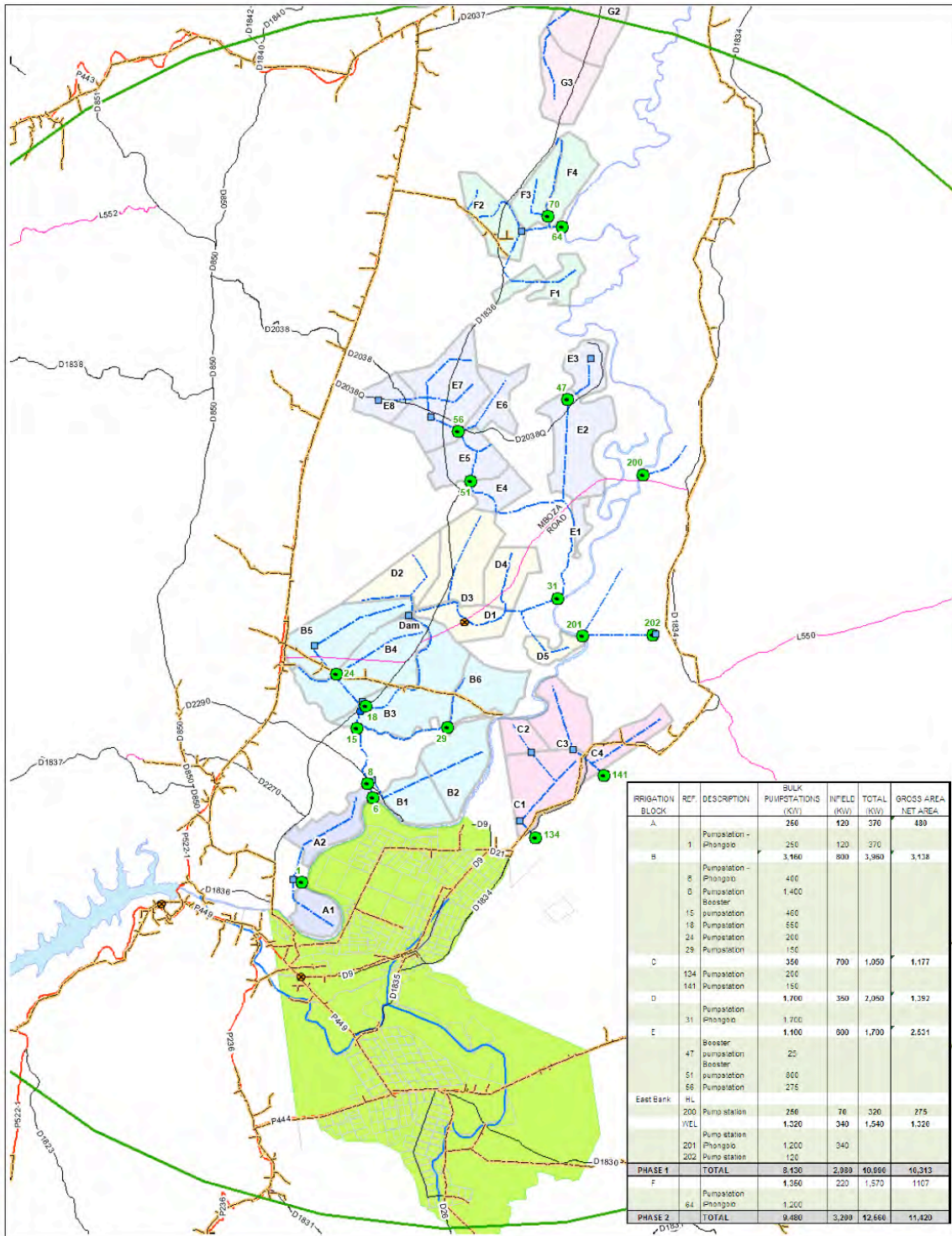


Annexure E: Makhathini proposed road infrastructure



	Mapping prepared on behalf of: Makhathini Sugar Cane Project	<table border="0"> <tr> <td>DOT Roads</td> <td>Linear Infrastructure</td> </tr> <tr> <td>National</td> <td>Exist Canal</td> </tr> <tr> <td>Provincial</td> <td>Prop Canal</td> </tr> <tr> <td>Provincial (Upg Req)</td> <td>Proposed H/O Road</td> </tr> <tr> <td>District</td> <td>Exist Road</td> </tr> <tr> <td>District (Upg Req)</td> <td>Exist Infrastructure</td> </tr> <tr> <td>Access</td> <td>Proposed Bridge</td> </tr> <tr> <td>Local</td> <td>Proposed Causeway</td> </tr> <tr> <td>Local (Upg Req)</td> <td></td> </tr> </table>	DOT Roads	Linear Infrastructure	National	Exist Canal	Provincial	Prop Canal	Provincial (Upg Req)	Proposed H/O Road	District	Exist Road	District (Upg Req)	Exist Infrastructure	Access	Proposed Bridge	Local	Proposed Causeway	Local (Upg Req)		
DOT Roads	Linear Infrastructure																				
National	Exist Canal																				
Provincial	Prop Canal																				
Provincial (Upg Req)	Proposed H/O Road																				
District	Exist Road																				
District (Upg Req)	Exist Infrastructure																				
Access	Proposed Bridge																				
Local	Proposed Causeway																				
Local (Upg Req)																					
<p>Confidentiality The information presented on and associated with this map is confidential and may in no way be distributed or used without the written consent of the Makhathini Sugar Cane Project.</p>	Irrigation Blocks/ Roads Infrastructure																				

Annexure F: Eskom infrastructure



Mapping prepared on behalf of:

Makhathini Sugar Cane Project

Irrigation Blocks/ Eskom Infrastructure
Excluding Factory

Point Infrastructure

- Proposed Canal Off Take
- Proposed Pumping
- Proposed Storage

Linear Infrastructure

- Exist Canal
- Prop Canal/Pipe

Exist Substations

- Exist Supply

DOT Roads

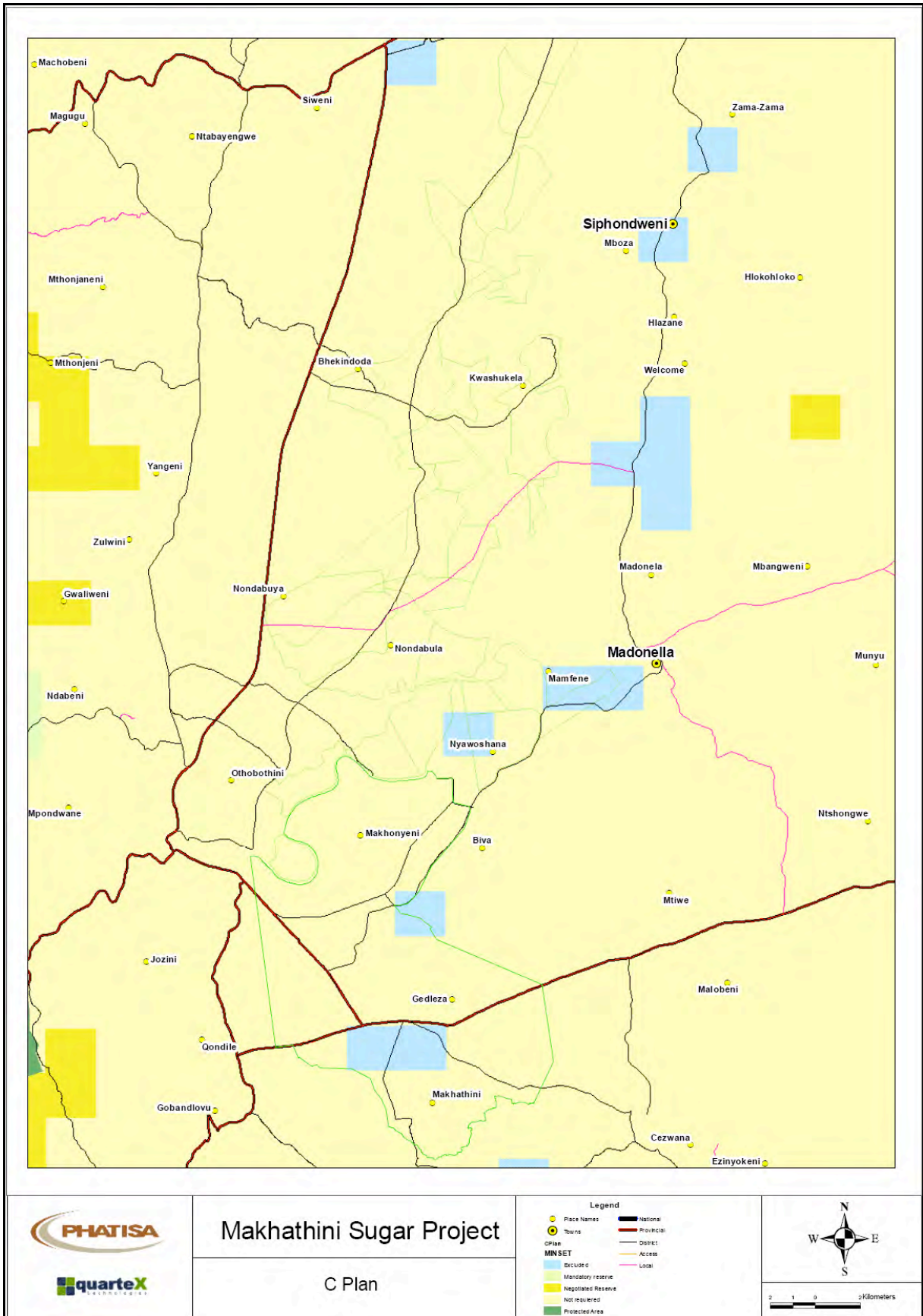
- National
- Provincial
- District
- Access
- Local

Kilometers

25 125 250

Confidentiality
The information presented on and associated with this map is confidential and may in no way be distributed or used without the written consent of the Makhathini Sugar Cane Project.

Annexure G: Makhathini C Plan



Annexure H: EIA process flow diagram

Diagram 1: Abbreviated process flow

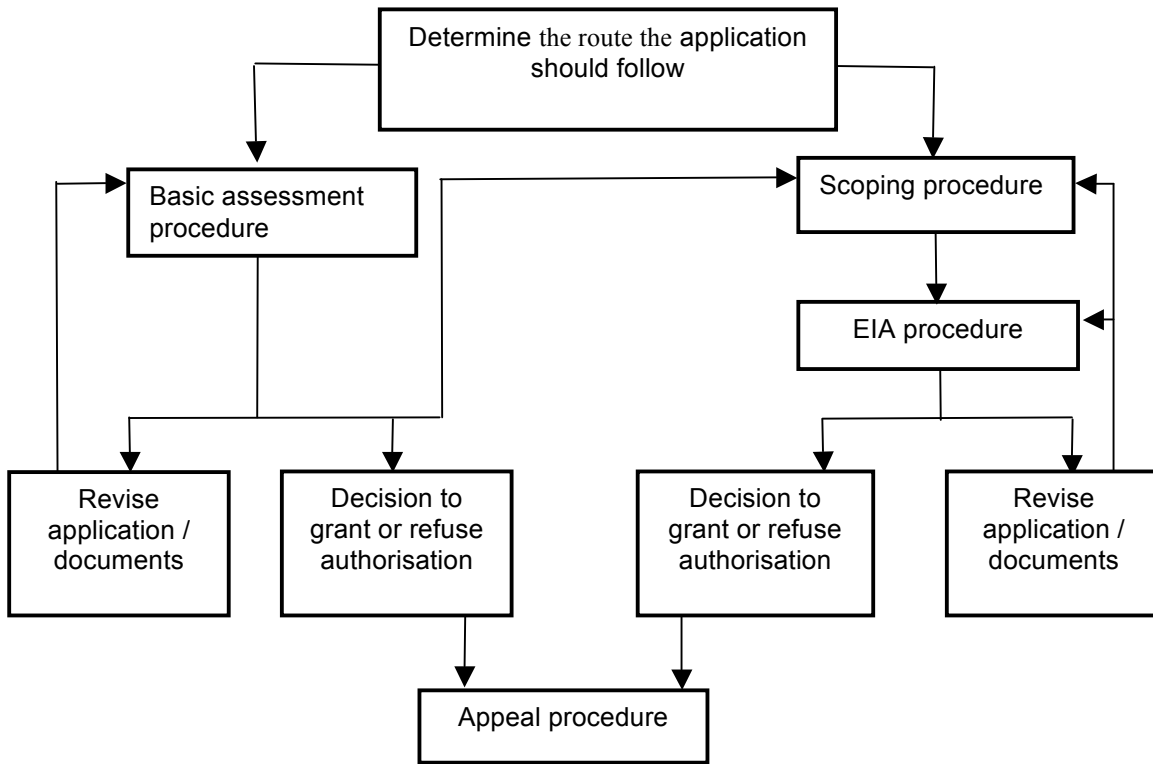
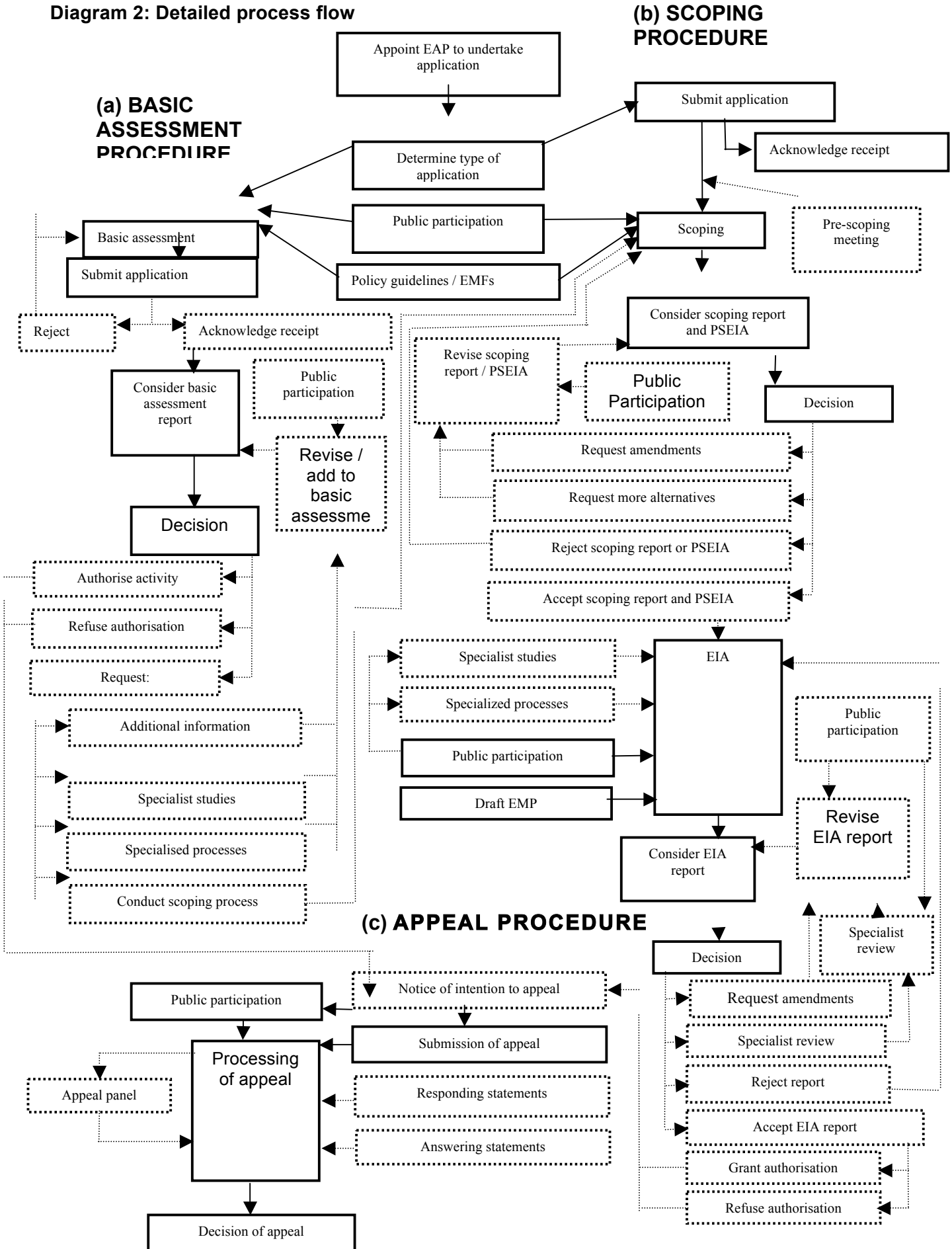


Diagram 2: Detailed process flow



Annexure I: Copy of poster advert (English)

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) PROCESS MAKHATHINI SUGAR CANE PROJECT (EIA/DC27/0041/09: KZN/EIA/5679/2009).

Notice is hereby given in terms of Regulations R385, R386 and R387 published in Government Notice No 28753 dated 21 April 2006 under Sections 24D and 24 of the National Environmental Management Act (NEMA), No 107 of 1998 of intent to carry out the following activity:

- Proposed establishment of 8,220 ha of irrigated sugar cane as the first phase of an envisaged 15,000 ha project on portions of the Makhathini Flats.
- Proposed lands are mainly situated on the alluvial terraces to the west of the Phongolo River. In addition some already established irrigation lands on the Mjindi irrigation project are also proposed to be used for the production of sugar cane.
- Project Proponent: Makhathini Sugar Cane Project Consortium
- Environmental/Social Consultants:

Dr Sazile Mtshali	Mr Edward Malu
Cell: 084 407 1669	Cell: 072 115 5865
Fax: 086 652 6118	Fax: 086 652 6118
Email: sazilemtshali@phatisa.co.za	Email: sazilemtshali@phatisa.co.za
Address: PO Box 2725 Esikhaleni 3887	Address: PO Box 6899 Ndumo 3996

- Notice Dated: 14 August 2009.

In order to ensure that you are identified as an interested and/or affected party (I&AP) please submit your name, contact information and interest in the matter to the contact persons above within 14 days of this advertisement.

Annexure J: Copy of poster advert (isiZulu)

ISAZISO SOCWANINGO LOKUNGENZEKA EMVELWENI IPROJEKTHI YOKUKHIQIZA UMOBA EMAKHATHINI (MAKHATHINI SUGAR CANE PROJECT) EJOZINI, KWAZULU-NATAL

Lesisaziso sikhishwa ngokweMithetho R385, R386 no R387 esakazwe ngesaziso sikaHulumeni esinguNamba 28753 somhlaka 21 April 2006 ngaphansi kweSigaba 24D no 24 woMthetho weSizwe wokuPhatha Ezemvelo (National Environmental Management Act (NEMA), onguNamba 107 ka 1998 omayelana nenhloso yokufeza lomsebenzi olandelayo:

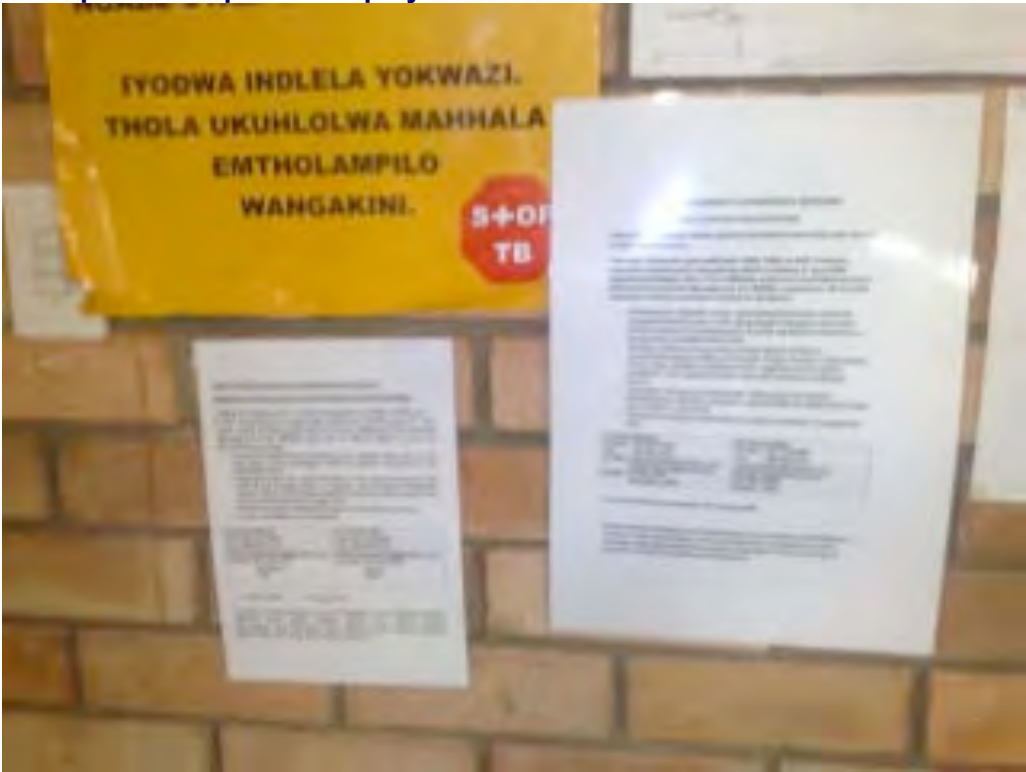
- Ukuhlongoza ukutshala umoba ngokusebenzisa inkasa endaweni engangamahektha angu- 8 220 njengesigaba sokuqala sokutshala umoba endaweni okucatshangelwa kuyona leprojekthi ezokwenziwa ezingxenyeni zaseMakhathini Flats.
- Izindawo ezihlongozwayo yilezo ezingamathala amafenya ngaseNtshonalanga yoMfula uPhongola. Ezinye izindawo zokwengeza kulezi, yilezo ezilapho kutshalwa khona ngenkasa kwiprojekthi yaseMjindi. Nazo ziphakanyiselwa ukusetshenziselwa ukukhiqiza umoba.
- Leprojekthi ihlongozwa izinkampani neMinyango kaHulumeni nezinhlangotho zabalimi ezisebenza ngokubambisana (Makhathini Sugar Cane Project Consortium).
- Abeluleki bezemvelo nokuhlalisana kwabantu endaweni okungabuzwa kubo:

Dr Sazile Mtshali	Mr Edward Malu
Ucingo: 084 407 1669	Ucingo: 072 115 5865
Fax : 086 652 6118	Fax : 072 115 5865
E-mail: sazilemtshali@phatisa.co.za	N/A
Mtshali.Sazile@gmail.com	
Ikheli: P O Box 2725	P O Box 6899
Esikhaleni 3887	Ndumo 3996

Usuku Lokukhishwa kwesaziso: 14 August 2009

Ukuze ubhalise njengeQembu Labathintekayo noma abafisa ukubambiqhaza, ukuthola ulwazi ngeprojekthi, noma ukuphakamisa izingqinamba, sicela uthintane nabeluleki ababhalwe ngenhla, zingakapheli izinsuku ezingu-14 kusukela osukwini lokukhishwa kwalesisaziso.

Example of EIA poster displayed at Makhathini Clinic



Example of EIA poster displayed at uMkhayakude District Municipality



Annexure K.1: Scoping comments



7th October 2009
Ref: MSCP Ref EIAL01

Dear Stakeholder

Environmental impact assessment (EIA) for the proposed Makhathini Sugar Cane Project – (EIA: 12/12/20/1658)

This letter serves to provide you with information regarding the EIA process for the proposed Makhathini Sugar Cane Project in the Maputaland region of KwaZulu-Natal, which is subject to an Environmental Impact Assessment and associated public participation process (PPP).

Environmental Requirements

The project comprises a number of activities that are identified as listed activities in terms of Government Notice R386 and R387 Environmental Impact Assessment Regulations of 2006 and therefore require environmental authorisation from the National Department of Water and Environment Affairs.

Phatisa have been engaged by IDC as the Environmental Assessment Practitioner to undertake an EIA for the proposed project in accordance with the National Environmental Management Act (Act 107 of 1998) (as amended) environmental Impact Assessment in terms of

An application has been made to the Environmental Affairs Department within the Department of Water and Environmental Affairs supported by a Background Information Document (BID), a copy of which is available from Mr Matt Williams mattwilliams@phatisa.co.za of the Public Participation Office.

Way forward

Interested and Affected Parties (I&APs), including government departments are encouraged to submit their comments, concerns and/or suggestions concerning the proposed project in writing to the Public Participation Office, Mr Matt Williams. These comments will assist the project team in the identification and assessment of issues that will be carried forward for further detailed investigation. Comments may be submitted using the **enclosed comment sheet**, or alternatively, by using your own format and sending it to Phatisa.

Please make use of the following opportunities to participate:

- Examine and respond to information provided in the Draft Scoping Report or at meetings.
- Register as an I&AP in order to receive information and to record your comments.
- Complete the comment sheet and return by mail, fax or email.
- Contact the Public Participation Office to obtain further information and raise relevant issues and concerns.

Please submit comments to Phatisa on or before the 21 October 2009.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Duncan Pringle".

Duncan Pringle
Head Agri Business South Africa

Website www.phatisa.co.za

> **Phatisa Equity (Pty) Ltd** Company Registration no. 2005/010499/07
PO Box 1534 Hilcrest Durban 3650 KwaZulu-Natal South Africa
Telephone +27 (0) 31 765 2442 Facsimile +27 (0) 86 620 2181

Directors: Duncan Pringle (Managing), Prof Sazile Mtshali, Duncan Owen* *British

Annexure K.2: Scoping questionnaire

Environmental Impact Assessment (EIA) for Makhathini Sugar Cane Project.

SCOPING QUESTIONNAIRE

Your comments will help to ensure that all likely concerns associated with the alternatives are identified. After being informed about the project, please answer the questions and return the form immediately or by post or by fax, by 30th April 2009 to:

Dr Sazile Mtshali, Telephone No , Fax No , Cell Phone No , Email Address ,
Postal Address:

1. **What is your opinion of the proposed Makhathini Sugar cane Project?**

Comment:

.....
.....
.....

2. **Do you understand the EIA scoping process and the role you can play in scoping? If not, then what further information do you need to enable you to participate?**

Comment:

.....
.....

3. **The following potential issues have been identified in relation to the proposed sugar cane project. Please comment on any of these issues or add your own issues to the list:**

- Benefits from new development through job creation
- Impacts on Phongolo River system.
- Land use (e.g. loss of other agricultural land, roads, pipelines)
- Social Issues – impact on location of settlements, gravesites etc.

Comment or add other issue(s):

.....
.....

4. **The attached list of I&APs shows the organisations and individuals to whom a Background Information Document has been sent. Are there any other organizations or individuals that you feel should be invited to comment? If so, please provide their contact details:**

Contact name:Telephone:.....

Organisation
(if applicable):Fax:.....

Address;E Mail:

5. **Your Contact details**

Contact name:..... Telephone:

Organisation
(if applicable):..... Fax:

Address;E Mail:

Annexure L.1: Stakeholder comments - Ingonyama Trust

INGONYAMA TRUST BOARD

ESTABLISHED IN TERMS OF THE KWAZULU-NATAL INGONYAMA TRUST ACT
(ACT NO. 3 OF 1994) VAT REGISTRATION No.: 4340182098

188 HOOSEN HAFEEJEE STREET - P.O. BOX 601, PIETERMARITZBURG, 3200
TEL: 033 355 4315 - FAX: 033 342 5045
E-MAIL: BDZONDI@DLA.GOV.ZA - WEBSITE: INGONYAMATRUST.ORG.ZA



OUR REF.: KN8/5/11/18

YOUR REF.:

ENQUIRIES: Chris Aitken

14 May 2009

Dr. Beki Hlatshwayo
Makhathini Sugar Cane Project
Private Bag 3
Glenashley
4022

Dear Sir

Makhathini Sugar Cane Project

I refer to your consultant's request for landowner's consent as required in terms of section 16(1) of the Environmental Impact Assessment Regulations 2006.

Whilst we have no objections in principle to your application this is conditional upon the following:

- You obtaining the formal consent to the project from the various Traditional Councils that have jurisdiction.
- Approval and support by the Board to the project – note that we have not as yet been afforded the courtesy of being consulted on your proposals.
- You entering into formal tenure rights agreements with the Board should they support the project and if appropriate also with any occupiers of the land or other interested parties.

The consent form has accordingly been signed subject to these conditions.

Yours faithfully

CHRIS AITKEN
INGONYAMA TRUST BOARD SECRETARIAT

Annexure L.2: Stakeholder comments - KZN Wildlife



Planning Division: IEM Section

Enquiries: Dominic Wieners
Manager: Makhathini Sugar Cane Project
C/O: Environmental Assessment Practitioner Private Bag
3

Glenashley
4022

Your Ref: None Provided

10th July 2009

ATTENTION: MATT Williams

Dear Mr Williams

PROPOSED MAKHATINI SUGAR CANE PROJECT District Municipality:
Umkhanyakude

The background information document (BID) for the abovementioned application (dated March 2009) has been reviewed by the Ezemvelo KZN Wildlife (EKZWN) IEM Planning Committee. Ezemvelo KZN Wildlife has concerns with the project, but not enough clarity has been provided at this point to enable us to make an informed decision, or response.

Ezemvelo KZN Wildlife's concerns pertain *inter alia* to the potential negative impacts on floodplain geohydrology (for both the Pongola and Mkuze river systems), and cumulative effects on the Isimangaliso World Heritage site, and the Ndumo Ramsar site, which will require a full investigation.

Please note that this does not constitute EKZWN's final comment. Final comment will be issued upon review of further information. Should you wish to discuss any of the points raised above or should any further biodiversity issues arise please do not hesitate to contact our offices.

Yours, sincerely

Mr Andy Blackmore
Coordinator IEM
For CEO: EZEMVELO KZN WILIDLIFE
DATE : 10 July 2009
C:\Dom\Agriculture\BVL IMakhatiniSugar\IMakhatiniSugar_PrelimCommenC
100709

Annexure L.3: Stakeholder comments - WESSA

KwaZulu Natal Region,

100 Brand Road,
Durban.
4001
Tel: (031) 201 3126
Fax: 031 201 9525
Email: conservation@wessakzn.org.za
Website: www.wildlifesociety.org



**WILDLIFE AND
ENVIRONMENT
SOCIETY OF SA**
People caring for the Earth

(Please make use of contact details set out below. Fax line available on request only)

15 June 2009

Makhathini Sugar Cane Project
Private Bag 3
GLENASHLEY
4022

For Attention: Mr M Williams
mattwilliams@telkomsa.net

Dear Mr Williams

Makhathini Sugar Cane Project

WESSA has been informed of the environmental impact assessment currently underway for the establishment of a renewable energy plant at Jozini and the description provided in your Project Information Brief suggests that this is aligned with your project. Also, we feel it is unlikely that two similar projects are proposed in the region. Although WESSA has expressed grave concerns regarding the abovementioned impact assessment we state that we are not opposed to the project. Our concerns pertain to the potential impacts which we feel have not been satisfactorily identified for further investigation.

An issue which is of concern is the identification of land for the cultivation of the required amount of sugar cane for the renewable energy project and we have been informed that the land which will be used is already transformed land from the failed cotton farming initiatives. We are satisfied with the use of this already transformed land for the cultivation of sugar for the project, however, your information does not wholly support this fact and we would like detail on the additional approx 14 000 ha of land which are required. As there are large areas of previously cultivated land in the area we are not in favour of further transformation of natural areas.

Should our assumption be correct that the Jozini Renewable Energy Project forms part of the Makhathini Sugar Cane Project we find that there is a need to integrate the environmental impact assessment from the beginning. This will enable an overall assessment to be conducted and will enable issues such as the production of vinasse as a by-product to be addressed.

Should our assumption be incorrect we query the viability of two such projects in the region.

Thank you for the information and we look forward to receiving more detail.

Yours sincerely

C Schwegman (Mrs)
EIA Co-ordinator, WESSA KZN Region

P O Box 343
4184 Pennington
Email: afromatz@telkomsa.net
Tel: 039 9752147 (Fax on request)
083 9814814

Department of Agriculture and Environmental Affairs, North Division

Annexure L.4: Stakeholder comments - Amafa

Dear Matt

Both Provincial and national heritage legislation require that any development in excess of 0.5ha (5000 m²) be subject to a heritage impact assessment. Given that disturbance of ~ 14000 ha (new cane) would occur, Amafa's permit process would most certainly require a full heritage impact assessment to be carried out by an accredited heritage practitioner. Application forms can be downloaded from the Amafa website (permits) (www.heritagekzn.co.za).

Please liaise with Mr. Sello Mokhanya (0333 946543) - PHO Archaeology(amafa.pmb2@mweb.co.za) if you need any further information. He will be able to give you a list of accredited heritage practitioners, and also assist with regard to the permit process.

James van Vuuren
Deputy Director: Amafa

12. Jul. 2007 19:25

maintanance

No. 9677 P. 1

DW 1



water & forestry

Department:
Water Affairs and Forestry
REPUBLIC OF SOUTH AFRICA

Private Bag X313, Pretoria, 0001, Sedibeng Building, 185 Schoeman Street, Pretoria
Tel: (012) 336-7500 Fax: (012) 323-4472/(012) 326-2715

Tel: (031) 336 2718

Fax: (031) 305 9927 E-mail: perkinsjc@dwa.gov.za

Enquiries: Mr J C Perkins

Ref: W45A Sugar Mill

12 July 2007

Tongaat-Hulett Sugar / Irrimec Co-operation Project
Private Bag 3
GLENASHLEY
4022

Attention : Mr M Mohale / Mr G Maingard

By Fax : (032) 439 4392

Dear Sirs

APPLICATION FOR A LICENCE FOR 60 000 000 M³ FROM THE PONGOLA RIVER GWS (PONGOLA DAM); QUARTENARY SUB-CATCHMENT W45A: DEVELOPMENT OF A SUGAR MILL: TONGAAT-HULETT SUGAR LTD/ IRRIMEC CO-OPERATION AGREEMENT

I refer to your water use license applications dated 10 February 2003 and 29 March 2004 respectively.

It gives me great pleasure to inform you that approval is hereby granted for the allocation of 60 million cubic metres per annum of water from the Pongolapoort Dam.

This allocation is for the joint Tongaat-Hulett / Irrimec Co-operation Project as described in your presentation to the Department's Management on 16 March 2007.

The allocation is for a 3-year period from the date of this letter, following which, the Department intends to issue a license to the Water User Association, comprising the irrigators who will grow the sugar cane for the project.



KZN Agriculture, Environmental Affairs and Rural Development

uMnyango:weZolimo, ezeMvelo nokuThuthukiswa kweMiphakathi yase Makhaya

ISIFUNDAZWE SAKWAZULU-NATALI

Directorate: Investments & Partnerships

Enquiries :	Telephone:	Private Bag	: X9059
Imibuzo :	Ucingo :	Isikhwama Seposi	: Pietermaritzburg
Navrae :JT van Rooyen	Telefoon :0333559632	Privaat Sak	: 3200
Reference:	Fax :	Date :	
Inkomba :	iFaksi :	Usuku :	
Verwysing:	Faks :0333559113	Datum	: 16 November 2009

Mr Matt Williams
Consultant –Phatisa
PO Box 1354
Hilcrest
Durban
3650

FAX: 0866202181

Dear Mr. Williams

RE: REQUEST FOR KZNDAE&RD COMMENTS ON MAKHATHINI SUGAR CANE PROJECT

Your letter dated 11 November 2009 addressed to Mr. Van Rooyen refers.

This comment is written as co-chairman of the Makhathini Integrated Master Development Plan Implementation Steering Committee.

The sugar cane to ethanol project is one of the projects mentioned in the Makhathini Integrated Master Development Plan initiated by the farmers on the Makhathini and driven by a steering committee lead by investors from private and parastatal organisations.

The Makhathini Integrated Master Development Plan was adopted by the Department and approved by the Executive Committee of the KZN Provincial Legislature, thus giving their support to the plan and therefore to the specific project.

It is estimated that around 15 000 employment opportunities will be created with the implementation of this Makhathini Integrated Master Development Plan and the sugar industry is considered to be one of the subsectors of agriculture that will contribute substantially to this target.

The project is supported, subject to relevant legislation being complied with.

Yours truly,

H.E. STRAUSS
DEPUTY DIRECTOR GENERAL: INVESTMENTS, PARTNERSHIPS & COOPERATION

"A champion for a prosperous agricultural productive land use, food security and environmentally sustainable livelihoods"



KZN Agriculture and Environmental Affairs

*uMnyango:
weZolimo neZemvelo*

ISIFUNDAZWE SAKWAZULU-NATALI

Mr. H.B. Strauss - I.P.C. Branch
Address:
Private Bag x 9059
PIETERMARITZBURG
3201

Tel: 033 - 3559 114
Fax: 033 - 3559 113
Ref: Land

Mr. D. Pringle
Phatisa
P.O. Box 396
UMTENTWENI
4235

Dear Mr. Pringle

LAND OWNERS CONSENT TO UNDERTAKE A LISTED ACTIVITY.

Herewith please find, the Land Owners Consent to undertake the EIA in terms of Section 16 (1) of the Environmental Impact Assessment Regulations. Further to this, we would like to confirm the following which was discussed at the Makhathini Integrated Master Development Plant Implementation Steering Committee on 2 July 2009.

1. That farmers will be given the information to make a choice of crops that they wish to plant.
2. That the total area of the Makhathini Irrigation Scheme have a water allocation for approximately 15 000ha only and that your investigation will cover an area of approximately 6 000ha.
3. That some of the areas mentioned may not be State Land for which this Department has Power of Attorney and that this consent covers Power of Attorney Land only.
4. That some of the land has been claimed by the Ntsinde Trust and has been transferred to the new land owners. That the Siqakatha Trust has also claimed part of the existing irrigation scheme and surrounding area.
5. That your investigation will take into consideration the Makhathini Integrated Master Development Plan.

I trust that the above serves as a record of the discussions which took place on 2 July 2009.

HEAD OF DEPARTMENT: AGRICULTURE AND ENVIRONMENTAL AFFAIRS

DATE: 8/7/09



KZN Agriculture and Environmental Affairs
Mnyango: eZolimo neZemvelo
SIFUNDAZWE SAKWAZULU-NATALI

**Landowner's consent to undertake a
listed activity**

**in terms of the requirements of section 16(1) of the
Environmental Impact Assessment Regulations, 2006**

Kindly note that:

1. This document should be attached as an appendix to the application form for environmental authorization in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (as amended).

1. DETAILS OF APPLICANT

Project applicant:	Makhathini Sugar Cane Project	
Trading name (if any):		
Contact person:	Mr. Beki Hlatshwayo	
Physical address:	1 Amanzimyama Hill Road, Tongaat	
Postal address:	Private Bag 3, Glenashley	
Postal code:	4022	Cell: N/A
Telephone:	032-4394324	Fax: 086 686 4546.
E-mail:	Beki.Hlatshwayo@huletts.co.za	

2. DETAILS OF LANDOWNER

(where the applicant is not the landowner)

Landowner:	KZN Department of Agriculture and Environment Affairs by virtue of Power of Attorney over State Land.		
Contact person:	Mr Harry Strauss of KZN DAEA based at Cedara		
Postal address:	Private Bag X9059, Pietermaritzburg		
Postal code:	3200	Cell:	N/A
Telephone:	033-3559100	Fax:	033-3559122
E-mail:	Marcel.Lee@kzndae.gov.za		

3. PROJECT DETAILS AND ACTIVITIES APPLIED FOR

Project title:

Activities applied for:

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant notice) :	Describe each listed activity:
NEMA Act No 107 of 1998. GG No.28753, Regulation No. R. 386, dated 21 April 2006 Sections 24 and 24 (D).	1 (m)	-any purpose in the 1:10 year flood line of a river or stream or within 32 m from the bank of a river including: (i) canals; (ii) channels; (iii) bridges; (iv) dams; and (v) weirs
	16 (b)	The transformation of undeveloped, vacant or derelict land to- where the total area to be transformed is bigger than 1 hectare
	17	Phased activities where any one phase of the activity may be below a threshold but where a combination of the phases exceed a specified threshold.
NEMA Act No 107 of 1998. GG No.28753, Regulation No. R.387, dated 21 April 2006 Sections 24 and 24 (D).	2	Any development activity, including associated structures and infrastructure, where the total area of the developed areas, or is intended to be 20 hectares or more.

5. CONSENT BY LANDOWNER

H. B. Strauss, declare under oath that, we:-


- are the owner of the properties described in Section 4 (Appendix 1) of this document; and
- hereby give my consent to:

Makhathini Sugar Cane Project, the applicant as described in Section 1 of this document to undertake the proposed activity/ies as described in Section 3 of this document on the abovementioned property.


Ad. HoD
Signature of the landowner

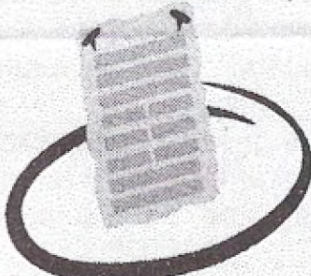
14/7/09
Date

Note: This must be read in conjunction with the letter: Ref. hand, dated 8/7/09.



14/7/09

FILE! MSCP EIA

NATAL Mercury
WED 26 August 2009



Public Notices



Notice of Environmental Impact Assessment (EIA) Process

Makhathini Sugar Cane Project. KwaZulu-Natal
EIA Reference: NODC/27/06+11000: KZN/EIA/5679/2009

Notice is hereby given in terms of Regulations R385, R386 and R387 published in Government Notice No. 28753 dated 21 April 2006 under Sections 24 and 24D of the National Environmental Management Act (NEMA), No. 107 of 1998 of intent to carry out the following activity:

- **Type of activity:** Proposed establishment of 8,220 ha of irrigated sugar cane on portions of the Makhathini Flats.
- **Location:** Proposed lands are mainly situated on the alluvial terraces to the west and east of the Pongola River. In addition some already established irrigation lands on the Mjindi irrigation project are also proposed to be used for the production of sugar cane.
- **Project proponent:** Makhathini Sugar Cane Project Consortium
- **Environmental/Social Consultants:**

Matt Williams, Consultant Agri Business - Phatisa
Mobile: 083 631 9331
Tel: 039 695 0460
Fax: 088 039 695 0460
Email: mattwilliams@phatisa.co.za
Address: PO Box 396, Umtentweni, 4235

- **Notice dated:** 21 August 2009

In order to ensure that you are identified as an interested and/or affected party (I&AP) please submit your name, contact information and interest in the matter to the contact person above within 14 days of this advertisement.

Phatisa Concepts


Zululand OBSERVER

Reg No. 69/09390/07

Vat Reg. No. 4700107297

P.O.Box 554
Empangeni 3880
Tel: 035 799 0500
Fax: 035 772 5596

CERTIFICATE OF PUBLICATION



Notice of Environmental Impact Assessment (EIA) Process

Makhathini Sugar Co. Project, KwaZulu-Natal
EIA Reference: NODC/ 0041/09: KZN/EIA/5679/2009

Notice is hereby given in terms of Regulations R385, R386 and R387 published in Government Notice No. 28753 dated 21 April 2006 under Sections 24 and 24D of the National Environmental Management Act (NEMA), No. 107 of 1998 of intent to carry out the following activity:

- **Type of activity:** Proposed establishment of 8,220 ha of irrigated sugar cane on portions of the Makhathini Flats.
- **Location:** Proposed lands are mainly situated on the alluvial terraces to the west and east of the Pongola River. In addition some already established irrigation lands on the Mjindi irrigation project are also proposed to be used for the production of sugar cane.
- **Project proponent:** Makhathini Sugar Cane Project Consortium
- **Environmental/Social Consultants:**

Matt Williams, Consultant Agri Business - Phatisa
Mobile: 083 691 9331
Tel: 039 695 0460
Fax: 088 039 695 0460
Email: mattwilliams@phatisa.co.za
Address: PO Box 396, Umtentweni, 4235

- **Notice dated:** 21 August 2009

In order to ensure that you are identified as an Interested and/or affected party (I&AP) please submit your name, contact information and interest in the matter to the contact person above within 14 days of this advertisement.

JP018893-35-09T Phatisa Concepts

Our Reference



.....
for Zululand Observer (Pty) Ltd

**Directors: Mrs R ANTHONY (Managing), G ANTHONY,
T MOOLMAN, Mrs K MOODLEY**

Annexure M.3: Copy of Ilanga newspaper EIA advert

KWA SANI MUNICIPALITY

CALL FOR PROPOSALS TO CONTRIBUTE TO RURAL DEVELOPMENT OPPORTUNITY INTERVENTIONS IN THE KWA SANI MUNICIPAL AREA

The Kwa Sani Municipality (KSM) requires the services of competent and innovative service providers with appropriate knowledge, experience and expertise to contribute to sustainable rural development through the creation of social and economic activities in nine rural settlements in Kwa Sani.

The following expertise is required to supplement the current capacity of the municipal team:

- Sustainable livelihood and tenure
- Tourism development
- Agricultural development
- GIS and Natural Systems Analysis

Evaluation Criteria will be 90/10, 90 points for technical capacity and 10 for affirmative procurement status.

Terms of Reference may be obtained from the municipal offices and closing date for submission is 12:00 on Friday 11 September 2009.

Enquiries may be directed to Sus McAlister on 033-702 1060/ 082 908 6340.

MR S.P. GWACELA
MUNICIPAL MANAGER

INVITATION TO TENDER

TENDER NO: ZDM 637/2007 - PR 1

GUMBI EMERGENCY WATER SUPPLY - WATER PURIFICATION AND STORAGE TANKS (PHASE 2)

Scope of Work: The supply, delivery and installation of: (a) Water purification package with flow rate of 150L/h; (b) Raw water storage tank of 5000 for water treatment works; (c) Clean water storage tank of 5000; (d) Elevated tank of 1500 with all associated valves, pipe work, manholes, access roads and include all construction related fittings and structures i.e. air-valves, surge valves, check-off valves, access roads;

The Contractor's should have a CIDB contractor grading of 6/CEPE or higher. Tenderers that have not done similar work before will not be considered.

All those requiring tender documents must fax to the relevant tender number, their company details and contact numbers to: (041) 981 3448, before 12:00h, Wednesday, 02 September 2009. Tenderers who did not receive a document in time will not be issued with a document at the compulsory site meeting. Additional tender documents can be arranged with the Registrar after the meeting. A R100 fee non-refundable deposit is required for each tender document.

Tender documents will be handed out at the compulsory site meeting, which will be held at 08:00 on Friday, 04 September 2009 at Ugu District Municipality. Tenderers are required to meet at 08:00 on the site of the works (at the Gumbi (Cousins)) PLEASANT, ensure to allow ample time for most maintenance works between (NT) Progress and Port Kaituma.

Enquiries can be directed to: Mr G. Lushant, tel: 0344 981 3444 during office hours.

TENDER CLOSING TIME & DATE: 12:00 on Friday, 11 September 2009.

Duly completed tender documents sealed in an envelope marked with the tender number and the closing date are to be deposited into the tender box at ZuluLand District Municipality, Lot 14-400 Capene Street, Umtata, 6139, no later than 12:00 on the closing date where they will be opened in public. The original, sealed, opened or late tenders WILL NOT be accepted. Tender may only be submitted on the tender documentation that is issued. Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

The ZuluLand District Municipality does not bind itself to accept the lowest or any tender, provided or to furnish any reason for the acceptance or rejection of a tender.

JH DE KLERK: MUNICIPAL MANAGER

ZuluLand
District Municipality

(buys) Place of Worship business or a going concern to FOUR PROPERTIES LIMITED. Registration Number: 2008/017830/07, who shall thereafter conduct the said business for its own account and benefit after a period of 30 days after publication of this notice.

ONLY Tenderers with CIDB category and classification grading of 5/CEPE, 4/CE or Higher will be considered for award. In addition, the Expanded Public Works Programme (EPWP) has been incorporated into the contract.

Ugu District Municipality does not bind itself to accept the lowest or any tender.

L. MAHLAKA
THE MUNICIPAL MANAGER
UGU DISTRICT MUNICIPALITY

VCT, Rape Crisis General Counselling

23 Stratford Road
Warwick Junction

031 202 9132
031 202 4968

Project of LifeLine Durban

PHATISA

Isaziso Socwano Lokukenzeka Emvelweni

Izinqubo Yokukhetha (In-choicethings)

(Makhathini Sugar Cane Project) eJozini, KwaZulu-Natal

Imibono Ye-IFA: 000227/004/08: KZN/IFA/007/08

Lombard Street, 20753 eMantla: 21 April 2009 ngaphambi kweligiqo 240 no 24 wefutsho weSizwe eKupheleni Ezenzako (National Environmental Management Act (NEMA), ngaphantsi 107 ka 1998 ngaphantsi imithetho yokulawula izinqubo ezinyanzelisiwe)

- Umbono lomabonisi: Ukuhlonza ukuthi ubono ngokusebenzisa inkqubo yomabonisi ngokusebenzisa imithetho 8/201 ngokusebenzisa isigaba seSizwe emvelweni okuzibangela kuzona kugqibela ezokwenza ezinyanzelisiwe zamaMantla ezise.
- Izinqubo ezihlonzwayo: Ubono okuzibangela amabonisi ngokusebenzisa inkqubo yomabonisi. Ezinye izinqubo zokwenza kuzona kugqibela kuthobisa ukuthi iphelele kuzona kugqibela. Kuzona kugqibela ukuthi iphelele kuzona kugqibela amabonisi.
- Ababhi beqeqeshi: Iqoqo lokuqoqoswa ezinkampani zeMnyango kaMabonisi ezizibangela izidambani ezobonisa ngokusebenzisa (Makhathini Sugar Cane Project) ezinyanzelisiwe.
- Umbono lokuqoqoswa: Umbono lokuqoqoswa ngokusebenzisa izinqubo ezizibangela kuzona kugqibela.

Dr Sazile Mshali - Head Rural & Community Development, Phatisa
Umgqo: 034 487 6599
Fax: 036 662 9118
Email: s.mshali@phatisa.co.za
Ibheli: PO Box 2725, Eshikabeni, 3857

Ukuqoqoswa kokukhethwa kwenzeka: 21 August 2009

Ukuze ubhalise njengeDambu Labathintekayo noma abafanele ukubambisana, ukuthi ubhalise ngokujekeli, noma ukuphakamisa izingqinamba, sicela ubhalise ngokujekeli obhalise ngokujekeli, zingqinamba izimiso sango-14 kuzimiso ezizibangela kokukhethwa kwenzeka.

stipulated in the bid documents.

(ii) Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the tender data.

(iii) Telephone, facsimile and late tenders will not be accepted.

(iv) All tenderers must be registered on the Provincial Suppliers Database and on CIDB.

Service: Port Shepstone: Mlinganiswa Primary School: Repairs, renovations and additions (Masakhe Project)

CIDB Grading: 4 GB or if a joint venture of 3x3 GB

Bid number: ZNTM00414W

Closing time: 2009-09-23

Compulsory Site Inspection Meeting: 11:00

Date: 2009-09-08

Time: 10:00 am

Venue: Tenderers to meet at the school

Technical queries: Mr J. Steyn Telephone: (039) 882 2316

Service: Margate: Margate Middle School: New classrooms, Library and Administration block

CIDB Grading: 7 GB or if a joint venture 2x6 or 1x5GB

Bid number: ZNTM00424W

Closing time: 2009-09-23

Compulsory Site Inspection Meeting: 11:00

Date: 2009-09-10

Venue: Tenderers to meet outside Mica Hardware parking, at South Coast Mall/Sheilly Beach, just off main highway south coast at 09:00am for meeting on site at 10:00 am

Technical queries: Mr E. Misaahon Telephone: (033) 897 1357

Service: Pietermaritzburg: Department of Local Government and Traditional Affairs - Refurbishment of the 14th floor, Natalia Building

CIDB Grading: 6 GB or if a joint venture 2x5GB or 1x5GB

Bid number: ZNTM00327W

Closing time: 2009-09-23

Compulsory Site Inspection Meeting: 11:00

Date: 2009-09-09

Venue: Tenderers to meet outside the main entrance to Natalia at 09:45am for 10:00

Technical queries: Mr E. Misaahon Telephone: (033) 897 1357

Award of Bid

Service: Inkanyizwi Primary School - Repairs and renovations to entire school

Tender No.: ZNTM00374W

Contractor: Golden Empire Trading 580c T/A Kadebonjelen Construction

Projects placed on hold

Service: Jago Clinic: Alterations and additions

Tender No.: ZNTM00424W

Service: Kwampantsi Clinic: New clinic building residential buildings, visitors toilet, gate house and a double carport

Tender No.: ZNTM00414W

Service: St Andrews Hospital : New CSSD Building

Tender No.: ZNTM00280W

Documents available from: Department of Public Works, Southern Regional Office, 10 Prince Alfred Street Extension, Pietermaritzburg

Contact Person: Ms G. Ncanana Telephone: (033) 897 1434

Tender No.: ZNTM00141 and ZNTM00424 from

Contact Person: Department of Public Works, Ugu District 17 Andrasen Road, Port Shepstone

Mr S. Ngubane Telephone: (039) 882 2316

MTHONJANENI MUNICIPALITY

Invitation to Tender

MTHONJANENI MUNICIPALITY

Tender 12 / 08 / 09 - Supply and delivery of new LDV (Vehicle) for Town Estate

Bidders are hereby invited, in terms of Section 110 of the M.F.M Act 56 of 2003 read with clause 12d (1) of the Mthonjaneni SCM Policy to submit bids in respect of the Supply and Delivery of a LDV (New vehicle) for the Town Estate. Details of which are a white, 2700 litre petrol, single cab and 4x4 as per tender document. Only Service Providers that are registered on Mthonjaneni Municipality's suppliers database will be considered.

All enquiries regarding this tender should be directed to Mr. N. Zikha - Asst. Technical Director, from this office. Tel: 034502095 ext 218

Tender documents can be obtained during normal office hours from the procurement Section's office at the Mthonjaneni Municipality's offices. An R 150.00 (Hundred and fifty Rand and nil cents) non-refundable cash deposit, per document, must be paid in advance, to the cashier in the cashier's hall, the receipt must be shown at the SCM Office, before a document will be issued. No document will be handed out, unless the bidder pays the deposit.

This invitation to bid is subject to the Mthonjaneni Municipality's Preferential and Procurement Policy. It is solely the responsibility of the prospective bidders, who desire to avail themselves of the preference under this policy, to familiarize themselves with the contents and to comply with its conditions, to be able to make a claim for preference. It is the service provider's / prospective bidder's responsibility to provide all data and information requested completely and in the form required. It is therefore essential that the bid documents must be used. Failure to do so may be regarded by the Mthonjaneni Municipality as a non-responsive bidder.

Sealed proposals clearly marked "Tender 12/08/09 LDV" must be placed in the Tender Box in the reception area of the Mthonjaneni Municipality Main Office, 21 Hatfield Street, Malmuth, on or before 12:00 on Thursday 10 September 2009. No late, faxed or e-mail proposals will be accepted. Mthonjaneni Municipality will not accept any responsibility for the delivering of bids by courier services or any other means that are not places in the Bid Box, on or before the closing date and time of bid.

The Bid Adjudication Committee reserves the right not to accept the lowest tender or any tender.

Caravising is strictly prohibited.

Mr. F.A. Ebb
Municipal Manager
Mthonjaneni Municipality
Malmuth
3855

Annexure N: I&AP database

MAKHATHINI SUGAR CANE PROJECT EIA PROCESS

**(Mjindi Centre – 09:00)
29 September 2009**

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
H S Gumede	Kuzashukela	076293 7624	P/Bag X009 Jozini 3969	
G Manukuza	Kwashukela	083 535 1968	P/Bag X009 Jozini 3969	n/a
T B MPontshawe	Kwashukela	076 754 9546	P/Bag X009 Jozini 3969	
A Mabuyakeula	Kwashukela	079 994 7934	P/Bag X009 Jozini 3969	
M Z Nkanini	Kwashukela	072 102 7949	P/BX009 Jozini 3969	
Tobias	Mlambo	n/a	P/B X009 Jozini 3969	
M D Nyawo	MADC	076 963 0010	PO Box 662 Jozini 3969	
Ndwandlse Thokozile	Zamokwakhe	076 688 7683	-	
Irene Siyaya	Zamokwakhe			
Musa Nkosi	Zamokwakhe		Mjindi	
Sihlulekile Masondo	Zamokwakhe		Mjindi	
Lusi Dlamini	Zamokwakhe		PO Box 144 Jozini 3969	
Sibongile P Mbokazi	Zamokwakhe	083 759 5791	PO Box 29 Jozini 3969	
Ntombi Dansa	Zamokwakhe	073 505 5350	PO Box 375 Jozini 3969	
N Zwane	Zamokwakhe	076 191 4278	PO Box 375 Jozini 3969	
S J Zikhali	Kzwdaea	079 276 2421	P/Bag X06 Jozini 3969	
F Sibiya	Zamokwakhe	072 346 6553		
K Bhengu	Umhlosing Dev Agency	082 965 1721		
Silutente Msibi	Zamokwakhe	072 969 7163	PO Box 8 Jozini 3969	
D M Myeni	Siyophombili	079 559 1105	PO Box 375 Jozini 3969	
Zamharia Mpontshane	Nyamo T/C	082 966 6321	PO Box 322 Jozini 3969	n/a
Myeni	Ntsinde T/C	072 250 4853	PO Box 207 Ubombo 3970	
Myeni	Ntsinde T/C	072 015 5297	PO Box 207 Ubombo 3970	
Sipho Ngxongo	MADC	072 373 8388	PO Box 358 Jozini 3969	Ngxongo358@gmail.com
Matheyne Japher	Zamokuqlus ?????	073 790 5086	PO Box 555 Jozini 3969	
Bim	Fakude		PO Box 209 Sbhayi 3967	
Bongani ??????	MADC	082 479 0131	PO Box 736 Jozini 3969	

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mazwi Simeleie	MADC	082 630 0743	PO Box 736 Jozini 3969	
Elias Nhlelo	Gamokwakhe	079 461 7623	PO Box 55 Jozini 3969	
J Nkosi	Khulukeka			
C Sithole	Khulukeka	072 891 4931	PO Box 101 Jozini 3969	
M R Simelane	Khululeka	083 956 6220	PO Box 616 Jozini 3969	
T P Magagula	Zethembe	079 199 7187	PO Box 144 Jozini 3969	
T G Phakathi	MADC	073 609 4998	PO Box 144 Jozini 3969	
Z Nxumalo	Zamokwakhe	n/a	n/a	
M R Mkhonto	Umhlabuydu???	083 272 8444	PO Box 609 Kwantgwanase 3973	[illegible]
B Gumbi	Zamokwake	076 858 7482	PO Box 99 Jozini 3969	
N Sithole	Zamokwake	076 717 0117	PO Box 155 Jozini 3969	
M R J E	Siq [illegible]	082 476 4727	PO Box 452 Jozini 3969	
T Gumede	Siqaktha	082 709 6696	PO Box 1 Jozini 3969	
J P Willemse	EVH Africa	082 875 3925	PO Box 27 Mkuze 3965	cobuswillemse@gmail.com

ATTENDANCE REGISTER

Makhathini Sugar Cane Project

Date: Thursday, 01 October 2009

Time: 09:00 – 11:30

Venue: Cezwana Clinic, KwaJobe

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Manzi Melisiwe	Gobinellovu	076 290 3281	P/Bag X603 Ubombo 3970	
Qwabe Thokozile	Community	n/a	P/Bag X603 Ubombo 3970	
Mbatha Elba	Gobindlovu	079 225 3103	P/Bag X603 Ubombo 3970	
Thwala Thembu	Gobindlovu	078 513 9181	P/Bag X603 Ubombo 3970	
Dlamini Thandazie	Community	073 884 9023	P/Bag X603 Ubombo 3970	
Buthlezi Sibongile	Community	078549 3110	P/Bag X603 Ubombo 3970	
Dlamini Gaster	Community	n/a	P/Bag X603 Ubombo 3970	
Siyaya Maloma	Gobindlovu	076 159 7778	P/Bag X603 Ubombo 3970	
Myeni Tholakele	Gobindlovu	073 784 139?	P/Bag X603 Ubombo 3970	
Zikhali Gugu	Phumuzakhele	082 351 8043	P/Bag X603 Ubombo 3970	
Msami S'Funido	Phumuzakhele	078 9274321	P/Bag X603 Ubombo 3970	
Ngwenya Elizabeth	Lindokuhle		P/Bag X603 Ubombo 3970	
Mpotshane Lucia	Phumuzakhele	072 566 5533	P/Bag X603 Ubombo 3970	
Myeni Phumzile	Phumuzakhele	n/a	P/Bag X603 Ubombo 3970	
Mpotshane Ester	Community	072 718 0017	P/Bag X603 Ubombo 3970	
Xaba Thamdazile	Lindokuhle	072 331 8904	P/Bag X603 Ubombo 3970	
Zulu Gcinile	Gobindlovu	n/a	P/Bag X603 Ubombo 3970	
Nkosi Agness	Gobindlovu	079 486 7803	P/Bag X603 Ubombo 3970	
Mlambo Nester	Gobindlovu	n/a	P/Bag X603 Ubombo 3970	
Buthlezi Goodness	Gobindlovu	078 273 4942	P/Bag X603 Ubombo 3970	
Dlamini Nelly	Phumauzakho	072 668 8058	P/Bag X603 Ubombo 3970	
Mkhize Nhombini	Community	n/a	P/Bag X603 Ubombo 3970	
Khaknonina Gumede	Community	n/a	P/Bag X603 Ubombo 3970	
Zikhali Lucy	Gobindlovu	079 092 2317	P/Bag X603 Ubombo 3970	
Luke Dlamini	Ilunga lomphakathi		PO Box 603 Ubombo 3970	
Mpopoli Thwala	Phumzakhele	078 810 0463	PO Box 603 Ubombo 3970	
Eric Simelane	Phumzakhele		PO Box 603 Ubombo 3970	
Mandlakayise Ndamanda	Phumzakhele	071 907 4972	PO Box 603 Ubombo 3970	
Nkomo Simelane	Gobindlovu		PO Box 603 Ubombo 3970	
Ellout Dlamini	Ilunga lomphakathi Kathi		PO Box 603 Ubombo 3970	
Simon Jobe	Gobindlovu	072 914 0709	PO Box 603 Ubombo 3970	
Zikliele Dlamini	Ilunga lomphakathi	076 393 3414	PO Box 603 Ubombo 3970	
Mbokade Qwabe	Ilunga lomphakathi		PO Box 603 Ubombo 3970	
Babane Dlamini	Gobindlovu	074 746 2522	PO Box 603 Ubombo 3970	
Mabhalne Simelane	Ilunga lomphakathi		PO Box 603 Ubombo 3970	
Sabelo Buthlezi	Gobindlovu	076 437 0009	PO Box 545 Ubombo 3970	
Manda Ntshakala	Ilunga lomphakathi		PO Box 603 Ubombo 3970	
Fabilete Machava	Phumzakhele	076 916 1244	PO Box 603 Ubombo 3970	

Phillamon Qwabe	Ilunga lomphakathi	072 469 0660	PO Box 603 Ubombo 3970
Mlungu Nsukuni	Goblindlovu		PO Box 603 Ubombo 3970
Mona Mngomezulu	Phumzakhele		PO Box 603 Ubombo 3970
Samson Qwabe	Phumzakhele		PO Box 603 Ubombo 3970
Simon Dlamini	Ilunga lomphakathi		PO Box 603 Ubombo 3970
Johannes Qwabe	Ilunga lomphakathi		PO Box 603 Ubombo 3970
Jabulan Mngomezulu	Ilunga lomphakathi		PO Box 603 Ubombo 3970
Mhawu Qwabe	Ilunga lomphakathi		PO Box 603 Ubombo 3970
Bongani Zulu	Ilunga lomphakathi		PO Box 603 Ubombo 3970
Sibonelo Phakathi	Goblindlovu	072 981 5779	PO Box 603 Ubombo 3970
Ace Malwane	Ilunga lomphakathi	079 850 7357	PO Box 603 Ubombo 3970
Mhleka Nkosi	Isiphahleni		PO Box 603 Ubombo 3970
Nicholas Siyaya	Goblindlovu		PO Box 603 Ubombo 3970
Makhosini Dlamini	Ilunga lomphakathi	082 537 2647	PO Box 603 Ubombo 3970
Thulani Phakqthi	Gobindlovu		PO Box 603 Ubombo 3970
Mandla Gumede	Gobindlovu	072 780 3505	PO Box 603 Ubombo 3970
Sithembiso Dlamini	Gobindlovu	073 062 9640	PO Box 603 Ubombo 3970
Nkwishi Donda	Ilunga lomphakathi	071 981 1246	PO Box 603 Ubombo 3970
Bhekani Sibiya	Isiphahleni		PO Box 603 Ubombo 3970
Jabulani Qwabe	Phumzqkhele	072 927 2899	PO Box 603 Ubombo 3970
Vulindlela Mthembu	Phumzqkhele		PO Box 603 Ubombo 3970
Dumisani Ngwenya	Ilunga lomphakathi	072 699 0253	PO Box 144 Jozini 3969
Msawenkosi Mafuleka	Gobindlovu	072 176 6164	PO Box 603 Ubombo 3970
S M Zikliali	Gobindlovu	072 684 4490	PO Box 160 Jozini 3969
Mnyewo M	Esiphahleni		PO Box 603 Ubombo 3970
Qwabe Z	Esiphahleni		PO Box 603 Ubombo 3970
Madoda Mkhwanazi	Phumzqkhele	072 035 4884	PO Box 25 Ophansi 3970
Sikhonyane Dlamini	Phumzqkhele	073 638 8517	PO Box 25 Ophansi 3970
M G Msweli	Phumzqkhele		PO Box 629 Ubombo 3970
G Masondo	Siphahleni	079 988 8371	PO Box 603 Ubombo 3970
M Qwabe	Gobindlovu	076 552 7701	PO Box 603 Ubombo 3970
E Nhlebela	Phumzqkhele	076 076 542?	PO Box 603 Ubombo 3970
Mbonambi M B	Ilunga lomphakathi	072 073 3940	PO Box 603 Ubombo 3970
Salafina Gina	Ilunga lomphakathi		PO Box 603 Ubombo 3970
Goodness Dlamini	iVukani	073 157 1214	PO Box 603 Ubombo 3970
Fanawaye M Nkosi	Gobindlovu	072 197 7397	PO Box 603 Ubombo 3970
Zulu Losta	Gobindlovu	n/a	P/Bag X603 Ubombo 3970
Masuku Maves	Gobindlovu	076 908 6178	P/Bag X603 Ubombo 3970
Khumalo Sundu	Community	076 930 7151	P/Bag X603 Ubombo 3970
Jobe Nkosingiphile	Seluleko	083 330 3516	P/Bag X603 Ubombo 3970
Gumede Khombile	Gobindlovu	079 908 5720	P/Bag X603 Ubombo 3970
Nkosi Fundu	Gobindlovu	071 213 2833	P/Bag X603 Ubombo 3970
Siyaya Nelly	Community	n/a	P/Bag X603 Ubombo 3970
Virginiah Siyaya	Gobindlovu	076 931 2888	P/Bag X603 Ubombo3970
Gumede Themba	Community	072 686 7183	P/Bag X603 Ubombo3970
Khumalo Mirimam	Gobindlovu	n/a	P/Bag X603 Ubombo3970
Khumao Ngilandi	Gobindlovu	n/a	P/Bag X603 Ubombo3970
Nxongo Bheki	Gobindlovu	n/a	P/Bag X603 Ubombo3970

Mbuyazi Goodman	Phumzakhele	n/a	P/Bag X603 Ubombo3970	
Gumdede Bhidlibani	Gobindlovu	n/a	P/Bag X603 Ubombo3970	
Buthelezi Elay	Gobindlovu	n/a	P/Bag X603 Ubombo3970	
Zulu Viginia	Community	n/a	P/Bag X603 Ubombo3970	
Gumede Jane	Community	n/a	P/Bag X603 Ubombo3970	
Shongwe Hluphi	Community	n/a	P/Bag X603 Ubombo3970	
Msweg Qatha	Community	n/a	P/Bag X603 Ubombo3970	
Gumede Skhumbuzo	Community	072 335 4749	P/Bag X603 Ubombo3970	
Thwala Malabela	Community	n/a	P/Bag X603 Ubombo3970	
Nyawo Ntombi	Community	n/a	P/Bag X603 Ubombo3970	
Dalton Qwabe	Community	073 721 5036	P/Bag X603 Ubombo3970	
Sfiso Mdluli	Community	078 180 9654	P/Bag X603 Ubombo3970	
Zulu Ernest	Gobindlovu	072 115 8407	PO Box 754 Jozini 3969	

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
B J Qwabe	Community	0768912618	PO Box 678 Jozini 3969	
Mtshali Eliot	Phumzakhele	082 595 4536	PO Box 629 Ubombo 3970	
Mngomezulu B	Gobindlovu	n/a	P/Bag X603 Ubombo 3970	
Ndlovu Handry	Esphahleni	076 536 8586	PO Box 01 Cezwane 3980	
Ndwandwz Dingan	Community	n/a	P/Bag X603 Ubombo 3970	
Mtshali Jabulani	Phumzakhele	083 420 1246	PO Box 629 Ubombo 3970	
Siyaya Timoty	Gobindlovu	071 295 9089	P/Bag X603 Ubombo 3970	
Bower Kevin	Gobindlovu	(035) 572 5653 079 319 8746	PO Box 422 Mkuze 3970	
Herbert Ndlazi	Gobindlovu	072 317 0569	PO Box 422 Mkuze 3970	
Mhlangu Mbhuku	Gobindlovu Farmers Ass	082 979 7357	Mthulwe School	
Qwabe Sigawule	Gobindlovu Farmers Ass	n/a	Cezwane School	
Dlamini	Velaphi	073 132 240?	PO Box 190 Ubomo 3079	
Dlamini Amos	Phumzakhele	072 274 7745	PO Box 16 ??? 3970	
Zikhali Simon	Phumakhele Farmers Ass	082 9543542	P/Bag X271 Ophandi 3979	
Thwala Elias	Community	n/a	P/Bag X603 Ubombo 3970	
Musa Mtshali	Lima Famasi	072 940 5226	P/Bag X 618 ???	
Dlamini Phumzile	Phumakhele Farmers Ass	073 334 687?		
Sibiya Sarnon	Gobindlovu	072 0272 019	PO Box 01 Cezwane 3980	
Ndlovu Samson	Gobindlovu	071 340 3351	PO Box 442 Jozini 3969	

ATTENDANCE REGISTER

Makhathini Sugar Cane Project

Date: Wednesday, 30 September 2009

Time: 09:00 – 11:30

Venue: Hlazane Community Hall

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
S T Mabika	WardCLLR	082 956 6158	PO Box 15144 Jozini 3969	
M Z Makukuzie	Hlokohloho	082 672 7388	PO Box 2 Uckuze	
M Gumede	Hlaza???	n/a	PO Box 2 Mkuze 3970	
M Khoza	Hlazane	082 3538976	PO Box 2 Mkuze 3970	
M M Gumede	Welcome	072 401 7690	PO Box 15084 Jozini 3969	
Irene Gumede	Hlazane	n/a	PO Box 15204 Hlazane 3969	
T Khoza	Hlazane	071 464 7252	PO Box 15204 Hlazane 3969	
D Mtambo	Hlazane	076 490 5038	PO Box 15204 Hlazane 3969	
P F Mabika	Welcome	071 266 8652	PO Box 292 Mkuze 3965	
N Khumalo	Hlazane	076 749 0628		
H Mabika	Mkoza	n/a		
T S Gumede	Hlazane	079 195 0147		
P Jobe	Hlazane	071 352 5672		
N J Gumede	Hlazane	082 471 0255	PO Box 15204 Jozini 3969	
T L Nkosi	Hlokohlolo	082 760 0835	PO Box 371 Mkuze 3965	
N Khumalo	Hlazane	071 287 2603	n/a	
N Mdluli	Hlazane	082 255 4619	PO Box 129 Mkuze 3965	
G Gumede	Hlazane	073 400 4071	n/a	
N Gumede	Hlazane	071 202 7525	n/a	
N Gumede	Hlokohlolo	n/a	n/a	
N Nxumalo	Hlokohlolo	n/a	n/a	
J Jobe	Mboza	n/a	n/a	
I Mkhumbiyi	Hlazane	071 262 4473	PO Box 15204 Jozini 3969	
V Gumede	Hlazane	n/a	PO Box 15204 Jozini 3969	
J Marteng	Welcome	n/a		
S Mamtengu	Welcome	079 9245831	PO Box 15204 Jozini 3969	
V Mlamba	Hlazane	072 877 9011	PO Box 15204 Jozini 3969	
P Mlambo	Hlokohlolo	n/a	n/a	
N Mabika	Hlokohlolo	076 505 2145	PO Box 15024 Hlokohlolo 3965	
M Gumede	Hlazane	072 540 7606	PO Box 15024 Jozini 3969	
M Ntuli	Hlokohlolo	n/a	PO Box 129 Hlokohlolo 3965	
S Mamkuza	Mboza	073 227 1189	PO Box 120 Mkuze 3965	
J Gumede	Mboza	079 259 4092	PO Box 120 Mkuze 3965	
B Gumede	Hlazane	079149 4826	PO Box 15024 Jozini 3969	
A Khoza	Hlazane	n/a	PO Box 15024 Jozini 3969	
M Jobe	Hlazane	n/a	PO Box 2 Mkuze 3965	
Z N Hlabisa	Welcome	n/a	PO Box 15204 Jozini 3969	
N Khumudo	Mboza	076 297 3614	PO Box ??????????	

M Sikombo	Hlazane	n/a	PO Box 1502 Hlanze 3969
V Mlambo	Welcome	n/a	n/a
M Mlambo	Welcome	071 362 5027	PO Box 502 Mkuze 3965
J Mlambo	Hlazane	n/a	PO Box 1502 Jozini 3969
N Nxumalo	Hlokohloko	n/a	n/a
D Jobe	Hlokohloko	072 767 3866	n/a
T Jobe	Hlokohloko	n/a	n/a
N Mawikuza	Hlokohloko	n/a	n/a
S Ndlovu	Hlokohloko	072 175 5174	n/a
G Mlambo	Hlokohloko	079 649 4357	n/a
N Mlambo	Hlokohloko	084 045 0144	n/a
Isaac Mkhumbizi	Hlazane		PO Box 15204
W W Ntuli	Hlazane		PO Box 15204
Simon Mhlongo	Hlazane Farmers Ass	076 106 7294	PO Box 15134 Jozini 3969
Japhet Sibiyi	Mboza Farmers Ass	082 781 2177	PO Box 508 Jozini 3969
N Manukuza	Hlokohloko Farmers Ass	071 163 4131	PO Box 2 Mkuze 3965
B Khoza	Mfunda Farmers Ass	082 5114341	PO Box 15204
B Mavundla	Hlazane Farmers Ass	079 323 6561	PO Box 15204
M Gumede	Welcome Farmers Ass	071 113 4265	PO Box 15457
J B Mavundla	Hlazane Farmers Ass	072 399 44?	n/a
Sam Jobe	Zizamele Farmers Ass	076 238 0410	PO Box 2 Mkuze 3965
Timothy Gumede	Mfunda Farmers Ass	079 748 6128	PO Box 371 Jozini
F Nxumalo	Hlazane	076 261 9587	076 261 9587
T Gumede	Hlazane	072 015 2317	072 015 2317
B Nkanini	Madonela	073 419 6344	PO Box 184 Mkuze 3964
B Khumalo	Madonela	083 566 0262	PO Box 184 Mkuze 3964
N Mhlongo	Mdonela	072 840 8918	PO Box 184 Mkuze 3964
N ?????????	Welcome	n/a	n/a
S Mthembu	Hlazane	072 888 7569	n/a
E Mhlenyama	Welcome	071 639 3807	n/a
M Sibiyi	Welcome	n/a	n/a
S Mthembu	Mboza	076 906 9496	n/a
N Mlambo	Madonela	n/a	n/a
P Gumede	Hlazane	n/a	n/a
Getrot Ntuli	Hlazane Community		PO Box 15204
Neli Gumede	Hlazane Community	074 609 2833	PO Box 15204
Mdayige Mhlongo	Hlazane Community		PO Box 15204
D Jobe	Hlokohloko Community		
B Qwabe	Hlazane Community		PO Box 15204
Landiwe Ndlazi	Hlazane Community		PO Box 15204
Sebethe Nxumalo	Hlazane Community		PO Box 15204
Fuzile Ndimende	Hlazane Community	082 094 9818	PO Box 15204
Thulisiwe Mdluli	Hlazane Community	076 944 8198	PO Box 15204
Mgntombi Mebika	Hlazane Community		PO Box 15204
Nemasoke Mesoso	Hlazane Community		PO Box 15204
Dudu Mghendile	Hlazane Community	079 543 0030	PO Box 15204
Rigiener Qmebe	Hlazane Community		PO Box 15204
Sikile Ncam????	Hlazane Community	076 227 7213	PO Box 15204

Rose Mkhabele	Hlazane Community		PO Box 15204
Moses Gumede	Hlazane Community	082 4065420	PO Box 15204
Sgbelo Mthumbu	Hlazane Community	076 192 1853	PO Box 15204
Khubikile Gumede	Hlazane Community	072 257 0555	PO Box 15204
Shengile Msbike	Hlazane Community	079 711 1880	PO Box 15204
Joseph Gumede	Hlazane Community	083 725 7411	PO Box 15204
Mangobe Mthembu	Hlazane Community	082 406 5420	PO Box 15204
Santo Nxumalo	Hlokohloko		
F Gumede	Hlazane	074 277 0125	PO Box 15204
Jabula Makendula	Hlazane	079 596 87??	PO Box 15204
M Gumede	Hlokohloko		?
Mseleni Mbuyisa	Hlazane	076 961 5788	
M Mxumalo	Welcome	072 982 9835	PO Box 15082
Amos Mthembu	Mboza	072 720 7751	PO Box 508 ???
G Gumede	Mboza	079 583 7023	PO Box 508 ???
Mdbandla Gumede	Welcome	071 648 4487	PO Box 292 ???
Mica Jobe	Hlokohloko	072 292 5005	PO Box 1259
Mavis Mdluli	Hlokohloko	072 292 5005	PO Box 1259
N Mlambo	Madonela	076 386 4286	PO Box 27
I Nxumalo	Hlokohloko	072 292 5003	PO Box 129
Busisiwe Nyawo	Mboza	079 748 6187	PO Box 508
Z E Nkanini	Mboza		PO Box 386
Jeremaya Sibiyi	Madonela		PO Box 115
M A Nkanini	Mboza		Jozini
V S Ngubani	Zizamele		
Lungile Mahlangu	Mboza	071 081 5432	
Bheki Mlambo	Mboza	076 236 3146	
Lindiwe Mkhonto	Welcome	079 644 4908	
Thembisile Gumede	Welcome	071 639 3807	
Zodwa Nhlenyama	Madonela	078 462 7921	
Dikilile Sibiyi	Welcome	071 644 87??	
N Mlambo	Madonela		Jozini
M Ndlazi	Zizamele	079 756 4809	
J H Mlambo	Zizamele	072 870 1008	

ATTENDANCE REGISTER
Makhathini Sugar Cane Project

Date: 08 October 2009

Venue: KwaShukela

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mbshane ???	Kwashukela		PO Box X 009 Jozini 3969	
S M Ndlazi	Kwashukela	072 867 1773	PO Box X 009 Jozini 3969	
M M ???????	Kwashukela	072 324 9659	PO Box X 009 Jozini 3969	
Z Jobe	Kwashukela	071 ?????	PO Box X 009 Jozini 3969	
A ???	Kwashukela	079 994 7954	PO Box X 009 Jozini 3969	
S Mthambeni	Kwashukela		PO Box X 009 Jozini 3969	
M Manikuza	Kwashukela		PO Box X 009 Jozini 3969	
N Mabika	Kwashukela	076 913 99967	PO Box X 009 Jozini 3969	
N G Nyathi	Kwashukela	072 884 5906	PO Box X 009 Jozini 3969	
N Ngomane	Kwashukela	072 267 3378	PO Box X 009 Jozini 3969	
M Qwabe	Kwashukela		PO Box X 009 Jozini 3969	
N J Mabika	Kwashukela		PO Box X 009 Jozini 3969	
S H Gumede	Kwashukela	076 298 7624	PO Box X 009 Jozini 3969	
M G ?????	Kwashukela	083 ?????	PO Box X 009 Jozini 3969	
A Mdzuli	Kwashukela		PO Box X 009 Jozini 3969	
N ????	Kwashukela	076 339 3124	PO Box X 009 Jozini 3969	
I Mthembo	Kwashukela		PO Box X 009 Jozini 3969	
B Gumebe	Kwashukela		PO Box X 009 Jozini 3969	
B Khanyile	Kwashukela	079 806 1586	PO Box X 009 Jozini 3969	
J L Gumede	Kwashukela	079 422 9811	PO Box X 009 Jozini 3969	
M S Gumede	Kwashukela	072 397 0983	PO Box X 009 Jozini 3969	
T Gumede	Kwashukela	082????	PO Box X 009 Jozini 3969	
N P Mgudhla	Kwashukela	072 262 ???	PO Box X 009 Jozini 3969	
M E Gumede	Kwashukela	076 980 5669	PO Box X 009 Jozini 3969	
B E Dlamini	Kwashukela	073 315 7856	PO Box X 009 Jozini 3969	
J Menyake	Kwashukela	079 970 9403	PO Box X 009 Jozini 3969	
S Mthembu	Kwashukela	072 888 7569	PO Box X 009 Jozini 3969	
S V Gumede	Kwashukela	076 161 8789	PO Box X 009 Jozini 3969	

ATTENDANCE REGISTER

Makhathini Sugar Cane Project

Date: 08 October 2009

Venue: KwaShukela

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
E Jobe	Kwashukela	072 910 5909	PO Box X 009 Jozini 3969	
N Mlambo	Kwashukela	072 360 1326	PO Box X 009 Jozini 3969	
A Mabika	Kwashukela		PO Box X 009 Jozini 3969	
T Malinga	Kwashukela	071 ????	PO Box X 009 Jozini 3969	
T ????	Kwashukela	?????	PO Box X 009 Jozini 3969	
M Tembe	Kwashukela	????	PO Box X 009 Jozini 3969	
M Ndlazi	Kwashukela	071 ????	PO Box X 009 Jozini 3969	
B Gamede	Kwashukela	072 ????	PO Box X 009 Jozini 3969	
S Ngwenya	Kwashukela		PO Box X 009 Jozini 3969	
T S Jobe	Kwashukela	079 ???	PO Box X 009 Jozini 3969	
Z N ????	Kwashukela		PO Box X 009 Jozini 3969	
A Ndlovu	Kwashukela	076 411 8982	PO Box X 009 Jozini 3969	
N Khumalo	Kwashukela		PO Box X 009 Jozini 3969	
H Ndlovu	Kwashukela	079 ????	PO Box X 009 Jozini 3969	
H Ndlovu	Kwashukela	071 564 902?	PO Box X 009 Jozini 3969	
N Mtubane	Kwashukela		PO Box X 009 Jozini 3969	
F Ngwenya	Kwashukela		PO Box X 009 Jozini 3969	
S Nk????	Kwashukela	082 424 3722	PO Box X 009 Jozini 3969	
M Mkhwenzi	Kwashukela		PO Box X 009 Jozini 3969	
T Mlambo	Kwashukela		PO Box X 009 Jozini 3969	
M J Mthembu	Kwashukela		PO Box X 009 Jozini 3969	
F Mthobani	Kwashukela		PO Box X 009 Jozini 3969	
G Mthombani	Kwashukela		PO Box X 009 Jozini 3969	
M F Gumede	Kwashukela	???	PO Box X 009 Jozini 3969	
B Mamaza	Kwashukela	079 3133196	PO Box X 009 Jozini 3969	
T S Dlalmini	Kwashukela	084 838 2135	PO Box X 009 Jozini 3969	

Makhathini Sugar Cane Project

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Ms Lize McCourt	Department of Environmental Affairs	012 310 3004	Department Environmental Affairs Republic of South Africa	mimphahlele@deat.gov.za
Mr Andy Blackmore	Ezemvelo KZN Wildlife	033 845 1346	PO Box13053 Cascades 3202	blackmorea@kznwildlife.com www.kznwildlife.com
Dominic Wieners	Ezemvelo KZN Wildlife	033 845 1346	PO Box13053 Cascades 3202	wienersd@kznwildlife.com www.kznwildlife.com
Carolyn Schwegman	WESSA	039 9752147 (Fax on request) 083 9814814	P O Box 343 Pennington 4184	afromatz@telkomsa.net
Chris Aitken	Ingonyama Trust Board	033-3554315	PO Box 601 Pietermaritzburg	cjaitken@ingonyamatrust.org.za

Annexure O: Stakeholders database

Stakeholder Name	Contact Person	Title	Cell Phone	Telephone	Fax	E-mail Address
Farmer Associations	Major farmers' association need to be identified, these in turn representing smaller associations					-
Makhathini Agricultural Development Cooperative (Consultative Forum)	Sipho Ngxongo		072 373 8388	035 572 5006	031 305 1228; 035 572 5039	
	Dennis Nyawo					
	Charl Senekal			034 413 1737	034 413 1317	sensugar@lantic.net
Makhathini Mill Cane Committee	Mr MD Myeni	Chairman				-
	Mr T J Buthelezi					-
	Dr T. Dlamini					-
Ushukela / Makhathini Cotton Company	Patrick Sokhela					-
Makhathini Agricultural Development Forum	Mrs Ndimande	Chairperson				-
Phumelobala & Phathigeja Farmers						-
Ndumu Farmers	Mr Mponjwana					-
Sibonelo Farmers	Mr Sikhakhane					-
Water Users Associations						-
Uphongolo Water Users Association	Mr Zeph Nyathi	The Chairperson				-
Imfunda Yophongolo Water Users Association		The Chairperson				-
Irrigation Scheme Management						-
Mjindi Farming (Pty) Ltd	Harry Strauss					-
	Protas Sokhela	Chairperson				-
Corporate						-
Irrimec (Pty) Ltd	Patrick Maingard			032 947 0600	032 947 0606	irrimec@iafrica.com
	Gilbert Maingard			032 947 0600	032 947 0606	irrimecsa@iafrica.com
Tongaat Hulett Sugar Ltd	Martin Mohale			032 439 4301	032 439 4390	martin.mohale@hulett.co.za
	Dave Meadows	Director: Technology Management		032 439 4311	032 439 4392	dave.meadows@hulett.co.za

	Beki Hlatshwayo	Project Support Specialist	082 443 7613	032 439 4324	032 439 4396	beki.hlatshwayo@hulets.co.za
Development Finance Institutions						-
IDC	Rian Coetzee	Snr Project Manager	083 445 1244	011 269 3133	011 269 3126	rianc@idc.co.za
	Noel Kamrajh	SBU Head		011 269 3546	011 269 3125	noelk@idc.co.za
CEF (EDC)	Manny Singh					MannyS@cef.org.za
	Sibusiso Ngubane					-
	Thuthukile					-
BAE Systems (SANIP)	Johan Williams					-
	Martin Parry			082 554 2269	032 525 8805	m.parry@sanip1.co.za
DBSA	Mark Lewis			011 313 3381	011 313 3473	markl@dbsa.org
Sector Wide Enterprise, Employment and Equity Programme (SWEEEP)						-
NFD (France)						-
Ithala Bank (Ithala Finance and Development Corporation)	Dr Sibusiso Dlodla	Divisional Manager Agri Business	+27 82 454 5235			sdludla@ithala.co.za
	Mr Joseph Mubonderi	Divisional Manager Special Projects	+27 72.546.6685	031 907 8735		jmubonderi@ithala.co.za
Land Bank						-
National Government						-
The DTI	Elize Koekemoer			012 394 1142	012 394 2142	elizek@thedti.gov.za
	Imameleng Mothebe			012 394 1160	012 394 2160	imamelengm@thedti.gov.za
DLA	Mr Mduduzi Shabane			012 312 9552		MSHABANE@dla.gov.za
DME	Mr Sandile Tyatya					-
Dept of Agriculture	Dr Sizwe Mkhize			012 319 6446		-
KZN Provincial Government						-
KZN Office of the Premier: Special Projects						-

KZN Dept of Local Government, Housing and Traditional Affairs	Frikkie Brooks	General Manager		033-3952172	033-3421623	frikkie.brooks@kznlgtta.gov.za
KZN Dept of Agriculture and Environmental Affairs	Theo van Rooyen	Manager: Investments & Partnerships	082 570 1983	033 355 9577	033 355 9203	Theo.vanrooyen@dae.kzntl.gov.za
	Harry Strauss					-
	Thuledu Khumalo	Acting General Manager, North Region	082 333 2158	034 780 6700		khumalotp@daerbay.kzntl.gov.za
	??	Manager Land Administration				
	Mfusi	General Manager North				
	Khoza	Asst General Manager North				
KZN Dept of Arts, Culture and Tourism						-
KZN DLA	Thembeke Ndlovu	Deputy Manager, Richards Bay	082 574 9154	035 789 1035	035 789 1092	tpndlovu@dla.gov.za
	Kheta Nzimande					-
KZN Dept of Finance and Economic Development	Thati Tladi	Deputy Manager	082 377 6162	031 310 5454		Tladi@kznded.gov.za
KZN Dept of Transport						-
KZN Dept of Public Works						-
KZN Dept of Water Affairs	James C Perkins	Senior Specialist Engineer	083 625 6248	031 336 2718	031 305 9927	perkinsic@dwaf.gov.za
	Vusi Kubheka	Chief Director	082 908 2587	031 336 2862		-
Local Government						-
Umkhanyakude District Municipality		The Mayor				
	Ndumiso Mthiyane	LED Officer	082 921 0287	035 573 8613	035 573 1386	
	Khosi Bhengu	Agricultural Manager Officer	082 963 1721			kbhengu@umkhanyakude.org.za
Jozini Local Municipality	Mrs T Mthethwa	Madam Mayor				-
	Mr Siyaya	Agricultural councilor				-
	Mr N. Nkosi	Municipal Manager				-
	Mr A. Mabaso	L.E.D. Manager				-

	Mr D Makika	Councilor Ndumu				-
uMhlabuyalingana Local Municipality		The Mayor				-
Zululand District Municipality		The Mayor				-
Phongolo Local Municipality		The Mayor				-
False Bay Big 5 Local Municipality		The Mayor				-
Makhathini Traditional Council	Nondabuya Khwehle					
- Nyawo Traditional Authority						-
- Ntsinde Traditional Authority						-
- Siqakatha Traditional Authority						-
- Jobe Traditional Authority						-
- Mathenjwa Traditional Authority						-
- Mngomezulu Traditional Authority						-
Mashabane Traditional Council						-
Ngwenya Traditional Council						-
Gumbi Traditional Council	(Zululand, Phongolo)					-
Service Providers						-
Eskom						-
ICT Firms						-
Other Interest Groups						-
Ntenga Community Trust	Mr Phondo Dlamini	Chairman				-
Ntsinde Community Trust						-

Siliwane Development Communiy Trust						-
SASA						-
SACGA						-
Special interest groups: Environmental						-
Ezemvelo KZN Wildlife	James Wakelin			033 845 1465	033 845 1499	

Annexure P: Comments report

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Dominic Wieners	KZN Wildlife/Ezemvelo	Tel : (033) 845 1455 Fax: (033) 845 1499	Ezemvelo KZN Wildlife Queen Elizabeth Park, No 1 Peter Brown Drive, PO Box 13053, Cascades, 3202	wienersd@kznwildlife.com
<p>Comments:</p> <p>The background information document (BID) for the abovementioned application (dated March 2009) has been reviewed by the Ezemvelo KZN Wildlife (EKZNW) IEM Planning Committee. Ezemvelo KZN Wildlife have concerns with the project, but not enough clarity has been provided at this point to enable us to make an informed decision, or response.</p> <p>Ezemvelo KZN Wildlife's concerns pertain <i>inter alia</i> to the potential negative impacts on floodplain geohydrology (for both the Pongola and Mkuze river systems), and cumulative effects on the Isimangaliso World Heritage site, and the Ndumo Ramsar site, which will require a full investigation.</p> <p>Please note that this does not constitute EKZNW's final comment. Final comment will be issued upon review of further information. Should you wish to discuss any of the points raised above or should any further biodiversity issues arise please do not hesitate to contact our offices.</p>				
Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Miss Thuthukile Mosia Project Officer	Central Energy Fund (CEF)	0102014784 0102014934	152 Ann Crescent Strathavon Sandton	thuthkilem@cefgroup.co.za
Please note that CEF Pty Ltd forms part of the consortium of organizations/companies taking part in the project (to be included on page 2 of draft scoping report)				

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Carolyn Schwegman	Wildlife and Environmental Society of South Africa (WESSA)	039 9752147 (Fax on request) 083 9814814	P O Box 343 Pennington 4184	afromatz@telkomsa.net
<p>Comments:</p> <p>WESSA has been informed of the EIA currently underway for the establishment of a renewable energy plant at Jozini and the description provided in your Project Information Brief suggests that this is aligned with your project. Also, we feel it is unlikely that two similar projects are proposed in the region. Although WESSA has expressed grave concerns regarding the abovementioned EIA we state that we are not opposed to the project. Our concerns pertain to the potential impacts which we feel have not been satisfactorily identified for further investigation.</p> <p>An issue which is of concern is the identification of land for the cultivation of the required amount of sugar cane for the renewable energy project and we have been informed that the land which will be used is already transformed land from the failed cotton farming initiatives. We are satisfied with the use of this already transformed land for the cultivation of sugar for the project, however, your information does not wholly support this fact and we would like detail on the additional approx 14 000 ha of land which are required. As there are large areas of previously cultivated land in the area we are not in favour of further transformation of</p>				

natural areas. Should our assumption be correct that the Jozini Renewable Energy Project forms part of the Makhathini Sugar Cane Project we find that there is a need to integrate the EIA from the beginning. This will enable an overall assessment to be conducted and will enable issues such as the production of vinasse as a by-product to be addressed. Should our assumption be incorrect we query the viability of two such projects in the region. Thank you for the information and we look forward to receiving more detail.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr S Ngxongo	Chairman of MADC and Zamokwakhe Farmers' Association.	072 373 8388	PO Box 358 Jozini 3969	Ngxongo358@gmail.com

COMMENTS:
 This project was initiated by farmers and we should make sure that it changes the state of poverty in this area for the better improved quality of life based on economic development. As farmers we are keen to see bush clearing of open areas so that farmers could access more land to plant sugar cane for the project.
 We would like to see farmers producing sugar cane on bigger unit fields of a minimum of 60 ha. We expect farmers to earn adequate income to empower them economically and to enhance household food security.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Louis /Marie Joseph Gilbert Maingard.....	IRRIMEC (PTY) LTD.	032 944 5679 032 944 5687 082 553 6465	No 9 Walter Reid Road, Tongaat Industrial Park	irrimec@iafrica.com

COMMENTS:
 The following issues must be addressed during Scoping:
 There are many but those mentioned below are more in my field of expertise.
 Water –re burning or trash – 60 million cubic meters one can only irrigate +/- 6500H if cane is burned, and 6500H is to little to feed a mill and 8200 hectares if one cuts in trash.
 Bulk water to new areas – pipeline should be considered and investigated for comparative costs
 For 1) safety to people and animals
 2) Use water pressure and save on electricity
 3) Less cost of plumping stations and eventual maintenance in the future.
 Trash burn – trashing could result in using Bio degradable herbicides such as Paraquat or glyphosate, with no effect on the environment.
 Fertilizer – using rock phosphate (a slow release natural product not readily soluble in water), Vinasse also a natural product from the mill for potash and foliar feed of nitrogen- hence no run off in the ground water.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Japhet Mathenjwa	Vice-Chairman Zamukuqhubeka Farmers Association in Block 6B		PO Box 358 Jozini 3969	

COMMENTS:

We believe that the Lord has helped us to reach this stage of planning for the implementation of the MSCP. We welcome the facilitation of this project which is expected to open up job opportunities in Makhathini. As farmers and community members we support the project because of its objective to promote socio-economic development of our area. Both men and women will benefit from the project thus we support the project without any reservations.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Dennis Nyawo	A local farmer and a member of Makhathini Agricultural Development Cooperative	076 963 0010	PO Box 662 Jozini 3969	

COMMENTS:

I would like to point out that some farmers produce food and commercial crops in flood plains and river banks without using fertilizers. I am interested to know whether these areas have been measured for inclusion in the project.

Was all productive land measured in traditional areas?

Since MSCP is the first broad based Black Economic Empowerment project in the area, who are the shareholders?

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Ms Khosy Bhengu	A representative of Mhlosinga Development Agency and Mkhanyakude Local Economic Development (LED) Unit	082 965 1721 035- 573 8600/83	P O Box 449 MKHUZE 3965	

COMMENTS:

Will the communities in the study area get potable water for household consumption?

It is known that capitalists in the private companies, such as Hulett and Irrimec do not have interest in ensuring that local farmers benefit from projects like MSCP.

When will the project start?

Local farmer's individuals and cooperatives should be given priority of buying shares.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Dumisani Myeni	Chairman of Silwane Trust (Myeni/Ntsinde) and Deputy Chairman of Myeni Traditional Authority	079 559 1105	PO Box 375 Jozini 3969	

COMMENTS:

There is a need for MSCP to sign a written legal agreement with prospective shareholders.

Community members and leaders often get confused about MSCP initiative because there are two sugar cane production initiatives in Makhathini. These are Ubuhle Capital sponsored by Brazilian funders and MSCP supported by Industrial Development Corporation (IDC). Both initiatives require land from the same communities and farmers.

When will the project commence. Our area has been investigated by numerous researchers, including preparations for the Agricultural Development Master Plan.

In Myeni Traditional area, we plan to produce food crops and sugar cane.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Raphael Mhlongo	Representative of the Local Economic Development (LED) unit of Umhlabuyalingana Local Municipality	035- 5920669/680	Private Bag X901 KWANGWANASE 3973	

COMMENTS:

We recommend that the community should be given a copy of the final report of the research and EIA process.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Mpontshane	Councillor from Nyawo Traditional Authority			

COMMENTS:

Nyawo Traditional Council would like to request researchers to go back to its traditional court and give a report of the size of land that was measured in KwaNyawo.

Farmers should inform traditional authorities about the project they support because Ubuhle Capital is looking for more land for its project.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr S Ngxongo	Chairman of MADC	072 373 8388	PO Box 358 Jozini 3969	Ngxongo358@gmail.com

COMMENTS:

It is very difficult to think about environmental considerations when our basic needs of food, health, education and housing are not met. Therefore we find it unthinkable to think about what the project impact would be on birds and wild animals. We like the natural attributes of the environment but we are starving and focusing on obtaining food.

It takes time to plant seed cane hence we are eager for the project to commence.

No EIA is actually needed in the Makhathini agricultural scheme.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr J Mthembu	Member of Gobindlovu			

	Cooperative			
COMMENTS: We do not know what the impact of the project on the environment will be. Right away we are concerned about household food security and sugar cane production. We will deal with future environmental challenges when they emerge in future. We want burial sites and tombs to be preserved.				
Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Herbert Ndlanzi	Member Gobindlovu Farmers' Cooperative			
COMMENTS: The negative effects of the project on the environment are air pollution; noise caused by automobile vehicles and machinery; water pollution and more mosquitoes. KwaJobe has good agricultural potential hence we are not very much concerned about the impact of the project on the environment. We look forward to the implementation of the project because there will be more job opportunities.				

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Qwabe	Community member from MaNgwenya	n/a	P/Bag X603 Ubombo 3970	
COMMENTS: We thank all the information shared with us by facilitators. KwaJobe is an extremely poor area. Several people, organizations and businessmen had come to this area and made promises about the establishment of a sugar cane mill. Some of these people stated that the location of the mill is in Siqakatha area. We need the sugar cane project urgently. We want livestock production to be provided with adequate grazing camps.				
Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mrs Sibongile Buthelezi	Community member from Mthule sub-ward, representing <i>induna</i> Mbongeni Nxumalo.	078 549 3110		
COMMENTS: What will happen to fields in state land? Will they be taken away from farmers who are currently leasing them?				
Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr M Sibiya <i>induna</i>	Member of Gobandlovu Farmers' Association	072 0272 019		

COMMENTS:

The community will work out a plan to put livestock in fenced grazing camps.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr G Masondo	Member of Esiphahleni Farmers' Cooperative	079 988 8371		

COMMENTS:

We have disappointed that the implementation project will commence in 2012, we thought it would be earlier.

Tombs and burial sites should be fenced and respected.

We do not have wild animals in this area but we are concerned about availability of enough land for livestock.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Henry Ndlovu member of Esiphahleni Trading Primary Cooperative	Member of Esiphahleni Trading Primary Cooperative		PO Box X 009 Jozini 3969	

COMMENTS:

The planners of MSCP should have involved the community from the initial stage of the project.

What will be done about tombs and homestead burial sites as planners had not involved the community in the planning stage.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Elliot Mtshali (<i>induna</i>)	Member of Phumuzakhele Farmers' Association	082 595 4536	PO Box 629 Ubombo 3970	

COMMENTS:

We are happy that there is hope that the MSCP will be implemented in 2012.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Sonto Mabika	Ward Councillor and farmer in Umhlabuyalingana Municipality.	082 956 6158	PO Box 15144 Jozini 3969	

COMMENTS:

The negative impact of the project on the environment will include the following:

Air pollution.

Confinement of livestock, particularly cattle and goats in grazing camps.

River and dam pollution.

Some fruit will be extinct as it happened when cotton production was introduced in Makhathini.

Some of the wild animals will disappear as a result of pesticide usage.

Will the project sponsors help with clearing of the bushes free of charge?

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Enock Mabika	Member of Welcome Farmers' Association			

COMMENTS:

We like the idea that wild trees will be removed and new trees planted to replace them.

Will the KZN Department of Agriculture ensure that new trees are planted? We use some trees for traditional medicinal remedies.

We recommend that provision of water dams for cattle and goats be considered. Windmills will be appropriate.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Mthakathi Manukuza	Member of HlokoHloko Farmers' Association			

COMMENTS:

We thank Phatisa for keeping us informed about the EIA process. Numerous studies have been conducted in this area without much positive outcome.

We trust that the objectives of the project will be accomplished for the benefit of local farmers and communities.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Mandlenkosi Gumede	Member of Welcome Farmers' Association			

COMMENTS:

Our wish to become commercial farmers will be achieved.

Unemployed local people will benefit if the project were to be implemented.

We have already made a plan for livestock grazing camps.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Mabandla Gumede	Member of Welcome Farmers' Association	071 113 4265		

COMMENTS:

As a community we appreciate all the facts presented by researchers on EIA but we are not sure whether the mill will be established in state land.

We want to produce sugar cane and the project should take care of birds and wild animals.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Norman Mhlongo	Member of Madonela Farmers' Association	072 840 8918	PO Box 184 Mkuze 3964	

COMMENTS:

We have been waiting for the project to commence for many years and 2012 is too late to implement the project.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Mr Sam Jobe	Member of Mboza Farmers' Association	076 238 0410	PO Box 2 Mkuze 3965	

COMMENTS:

We need special fencing materials for the flood plain.

Name	Organisation/ Community	Telephone/ Cellular	Postal Address	E Mail Address
Ms Busisiwe Nyawo	Member of Mboza Farmers' Association	079 748 6187	Ms Busisiwe Nyawo	

COMMENTS:

As women we would like to see our local youth getting employment and business opportunities instead of people from far away areas, particularly in big cities.

**MAKHATHINI SUGAR CANE PROJECT
REPORT ON INSTITUTIONAL ANALYSIS**

1. INTRODUCTION

In most smallholder agricultural development projects, including Makhathini Sugar Cane Project (MSCP) more than one institution is involved in spearheading the development process. It is therefore important to understand who these institutions are and the role they play. Thus it is essential to undertake an institutional analysis in order to identify functioning farmer associations, agricultural cooperatives, commodity organisations and their influence in the study area. These include individuals, groups of farmers, institutions and other organisations that have something to do with the project.

In the past organisations, such as government departments, private companies and educational centres used to be defined as institutions. However, this line of thought has changed over the last few years. Thus institutions are used in the context of institutional rules which are now defined as rules of society that govern the behaviour of individuals or people or organisations in public, private and civil sectors. These rules are socially devised, recognised and generally followed by the community. They are either formally written or enforced by government agencies or unwritten and informally sanctioned. The rules are predictable, stable and applicable in repeated situations as they form a pattern of behaviour.

Organisations as distinguished from institutions are recognised legal entities or associations representing groups of individuals. These organisations are established with a common purpose to achieve set objectives. They are also governed by institutional rules of society.

In the context of institutional analysis, social relations are a critical mediating factor for socio-economic development and sustainable livelihoods. Social factors, such as gender relations, age, class and others mediate people's access to resources of agricultural production and development. An assessment of the social context of rural livelihoods is likely to yield information relevant both to the social capital status of individuals, households or communities, and to the constraints and opportunities represented by local level customs, rules and organisations (Ellis, 2000).

Institutional rules can be categorised at macro-level, micro-level and community level and it is within these rules that the different organisations and individuals operate. Macro-level institutions affect behaviour throughout the economy hence they assist in the governance of people and their behaviour. Therefore rules are laid down in the form of parliamentary laws, defined relations between government departments or parastatal organizations. Furthermore, micro-level institutions affect behaviour in the economy through rules and regulations or by-laws specific in relation to organizations, markets for goods and services and contracts. Community institutions regulate behaviour of individuals in the community, for example they set days of the week when no work is done in the fields, set fines for unsocial behaviour such as stealing and contribute help and participate at funerals or traditional ceremonies. Traditional Councils, farmer organizations and water users associations are important for regulating behaviour in the community regarding the proposed MSCP.

In the context of this project, a number of organisations, operating within the macro, micro and community institutional environment support the MSCP. These include project sponsors made up of funders, local cane farmers and technology partners and a number of project stakeholders consisting of the public, parastatal, private and civil sectors.

The following sections set out the authority structure and the participatory organisations functioning in the area and some of the key institutional rules influencing behaviour and decision-making between individuals and organisations as applicable to the MSCP.

The paper concludes with a discussion of the risks and management strategies interfacing between

2. AUTHORITY STRUCTURE

2.1 Provincial administration: KwaZulu-Natal

KwaZulu-Natal ranks third out of nine provinces with regard to poverty level as it has the majority of households living in poverty. An analysis of nationwide household income data shows that the majority of poor households in South Africa are situated in rural areas of former KwaZulu homeland.

The administration has a number of departments that have a development support mandate. The most active as regards the MSCP is the Department of Agriculture and Rural Development.

2.1.1 Government Departments

Field researchers were introduced to the Traditional Councils by senior officials of the Department of Agriculture and Rural Development (DAE&RD) in the North Region and to the local municipalities of Jozini and Umhlabuyalingana. The co-operation of the Traditional Authorities was good. They were all eager for the project to commence sooner than the 2012 indicated.

2.2 District Municipality: Umkhanyakude District

Umkhanyakude District is located along the north coast of KwaZulu-Natal and extends over 12,818km². It is bounded by the Indian Ocean to the East, Mozambique to the North, Swaziland to the Northwest and the Districts of UThungulu and Zululand to the south and West, respectively. Umkhanyakude has a population of approximately 504,000 people who are distributed among five local municipalities in KwaZulu-Natal that were selected as Presidential Nodes for implementation of the Integrated Sustainable Rural Development Programme (ISRDP). Umkhanyakude forms part of the strategic initiatives for social and economic development involving South Africa, Mozambique and Swaziland. This district has a high level of poverty and has experience many years of neglect in terms of economic development. Its main urban service centres are Hluhluwe, Jozini and Mkuze. Agriculture in traditional authority areas has not developed beyond subsistence level. However, the district is endowed with natural assets and resources, namely, good soils, game reserves and water (INR, 2003). Unemployment is one of the major challenges facing this district. Over 50% of people who are able and willing to work are unemployed. The majority (27.6%) of the employed are involved in social services. However, only 20.4% and 13.2% work in the agricultural and trade sectors, respectively. In this district there is general lack of appropriate skills and education for economic diversification. The majority (31.5%) of the employed are involved in various types of elementary activities and unskilled work which do not require formal education and training. Umkhanyakude has a high level of functional illiteracy as shown by 35.4% of the total population who have not received any formal education. Subsistence agriculture takes up approximately 10% of the district and commercial agriculture covers 2.15% of the land. The latter occurs in the irrigation schemes (predominantly the Makhathini Irrigation Scheme in areas with high potential soils).

2.3 Local Municipalities: Jozini and Mhlabuyalingana

2.3.1 Jozini Local Municipality (KZ272)

This Local Municipality (LM) forms part of Umkhanyakude District Municipality (DM). It covers an area of approximately 3,073.08 km² with a population of 184,052 and has two towns, namely Mkuze and Jozini. These towns are surrounded by rural areas associated with a lack of development, poverty and poor service provision. Jozini town is a small business centre situated close to the Jozini Dam.

The LM has a number of strategies to improve agricultural and rural development. These include provision of areas for development of market gardens, improvement in economic infrastructural development, for example building of market stalls. The LM also plans to provide agricultural extension services and farmer training programmes in partnership with the DAE&RD. In addition to promotion of agricultural development, Jozini Municipality plans to institutionalise the tourism industry by promoting development partnerships with the Department of Economic Development and Tourism and DAE&RD. This municipality has a number of historical and cultural places of interest, such as Jozini Dam, Mkuze Game Reserve, Ndumo Game Reserve, King Dingane's Grave and Usuthu Gorge.

2.3.2 Umhlabuyalingana Local Municipality

This LM is one of the five municipalities under the jurisdiction of Umkhanyakude District Municipality situated in the northern east area. It covers an area of 3,673 km² and has a population of 140,963. Umhlabuyalingana Municipality is one of the poorest municipalities in South Africa. It is extremely rural with informal settlements at its towns, namely Mbazwana and Manguzi. The area is influenced by the influx of people who migrate from Swaziland and Mozambique.

Agriculture dominates the economy followed by government sector, informal sector and community and social services. The poverty problem is further exacerbated by the decrease in employment in combination with an increase in population figures. Subsistence agricultural activities make a limited contribution to the local economy. There are key constraints facing the agricultural development sector, such as lack of access to water resources despite the abundance of natural resources; lack of road access to agricultural production areas and internal and external markets. The municipality provides agricultural extension services in partnership with DAE&RD. In addition to agriculture, tourism contributes to the local economy. Umhlabuyalingana Municipality encompasses a World Heritage Site, namely iSimangaliso Wetland Park and several areas under environmental protection, such as Lake Sibaya, Kosi Lake System, Sodwana Bay and Tembe Elephant Park.

2.4 Umhlosinga Development Agency

The Umhlosinga Development Agency (UDA) is a municipal entity, and a registered private company, dedicated to the planning and implementation of a program of sustainable economic growth and development in the district of Umkhanyakude. This includes creating investment opportunities for the district. Key development areas are property, industry, tourism and agribusiness sectors. UDA also aims to develop institutional partnerships and networks to support and optimize development interventions.

In order to foster local action to remove barriers and blockages to equitable and sustainable economic growth and development of the local economy, UDA has initiated four projects: Makhathini Agribusiness Hub; The Jozini Hydro Project; Elephant Coast Tourism and The Mkuze Regional Airport Project.

2.5 Traditional Authorities/Councils

The Project Information Brief relating to MSCP (March 2009) was used as a guideline for presenting the proposed project to six Traditional Councils, namely Nyawo, Mathenjwa, Siqakatha, Mashabane, Kwa-Jobe and Ntsinde²

Two out of five Traditional Authorities have lodged land claims over land in and around the Makhathini Irrigation Project, namely Ntsinde and Siqakatha TCs. This matter is discussed elsewhere in the Land Report under the Land Legal section.

2.6 Farmers' organisations

Social relations, institutions and organisations are critical mediating factors for sustainable socio-economic development because they encompass the agencies that inhibit or facilitate the exercise of capabilities and choices by individuals, households and farmer associations. In numerous agricultural projects of smallholder farmers, it is evident that social capital is an asset that is closely related to social factors mediating people's access to resources and productive activities.

In Makhathini Flats there are farmer groups bound by some common purpose to achieve their main objective to produce commercial and food crops for marketing and household food security. There are nine farmers associations affiliated to the Makhathini Mill Cane Committee (MMCC) and Makhathini Agricultural Development Cooperative (MADC). Three farmer associations are organised as the Thumamina Mill Cane Committee. These farmer associations' key respondents stated that they work closely or in collaboration with other organisations, such as government departments and agencies, district and local government structures, non-governmental organisations (NGOs), community-based organisations (CBOs) and private companies or firms, (see Appendix E.1 for details on community organisations who have been consulted and who are in support of this project).

Farmer organisations played a critical role in identifying and articulating their felt needs, strengths, weaknesses, opportunities and current challenges. They organised farmer meetings and mobilised support of the Traditional Authorities, particularly sub-ward headmen (*izinduna*) who are custodians of customary rights of access to land.

Farmers in Makhathini Flats are both men and women who combine many different livelihood activities in an integrated manner. These include farming activities of food and commercial crops, fruit trees and animal husbandry, home-based production of handicrafts, food processing and sometimes off-farm employment. They also depend on formal and informal trading of commercial crops and food produce. Women were often involved in informal trading which included selling of vegetables, fruit, second-hand clothing, homemade clothes and crafts and money lending. Men also diversify their farming activities and were involved in building and maintenance of housing structures, shoe repairing, fencing of kraals, fields and homesteads.

As reported by farmer association members, farmers in the area practice multi-cropping. Maize is the main staple crop. Other subsistence crops are sweet potatoes, *amadumbe*, peanuts and a variety of vegetables, such as tomatoes, beetroot, spinach, cabbage, green pepper, onions, butternuts, lettuce and other. Mono-cropping is mainly used for sugar cane and cotton to a lesser extent. Thus farmers were mainly organised into associations with the aim to produce sugar cane for the market. Only farmer associations that were affiliated to Makhathini Agricultural Cooperative Limited stated that being members of an organisation helped them to receive transport subsidies and specialist services from Tongaat Hulett Sugar Limited. These farmers transported their sugar cane to the Felixton Sugar Mill in Empangeni. Some of the farmers in the area send their sugar cane to Pongola and Umfolozi

² Note this is spelt Nsinde locally but Ntsinde in government reports. For this report Ntsinde has been used throughout. This community is also referred to as the Myeni Community

Mills. TSB has recently taken over the Pongola Mill and a consortium of Commercial Farmers and NCP are the main shareholders of the Umfolozi Mill.

The proposal to establish a sugar cane growing project with an ethanol factory in the Makhathini Flats was welcomed by all farmer associations affiliated to MADC. Despite receiving transport subsidies and support from Tongaat Hulett Sugar Limited, the farmers felt that they would only make profit if they were able to expand their farming operations and be able to deliver to a local processing plant. Farmers who have less than 10 hectares stated that they could not reach their full potential of sugar cane production due to shortage of land and high transport costs.

In order to understand farmers' decision-making processes, field researchers became aware of the farmers' position and the role they play in community organisation structures. It was observed that farmers generally belonged to various groups or units. Their decision-making processes were often influenced by the units described below:

5. Household

Farm households comprise people who regularly live together within a homestead who share food, resources and activities. These people include a nuclear family, relatives and other individuals unrelated to the family. Many decisions including farming activities were taken within the household with different members having different influences based on their age, gender, educational level, health status and other socio-economic factors.

6. Household Networks

Many farmers worked together and exchange goods and services freely within a more or less well-defined network of several households, particularly for larger agricultural operations. When making decisions related to these activities, members of the network tended to consult one another.

7. Clan or larger Kinship Structure

Cultural and religious activities traditionally play a role in maintaining and defending local law and order. All farmers are required to respect all decisions taken at a clan level. For example, if there was a funeral in a sub-ward, farmers meetings and activities were suspended irrespective of how urgent they were. Hence some scheduled meetings with farmers during the field-work were cancelled unexpectedly and without any warning.

8. Local development organisations

In the study area there are several organisations formed with common interests for improving the livelihood of families, households and communities. These may include burial clubs, savings and credit groups, health promoting groups and others. Some of these organisations may imply automatic membership for all farmers in a sub-ward.

9. Regional and national organisations

These include government committees and councils, religious organisations, political parties, etc. Farmers' decisions were often influenced by some of these organisations. Even the decision by farmers to participate in MSCP was made and taken at local community level.

4. INSTITUTIONAL RISKS

4.1 Community facilitation strategy

In order to reach out to the existing and prospective farmers in communities of the study area, the facilitators arranged initial meetings with the managers of the Provincial DAE&RD at regional and district levels. The MSCP manager sent a letter to the General Manager of the North Region to

introduce the research project and community facilitators. The aim of the letter was to ask DAE&RD to assist community facilitators to find an acceptable entry point into the study area and to identify relevant traditional authorities to approach in order to secure appointments in different traditional wards.

4.1.1 Consultative meetings with DAE&RD

The first meeting was held with the Acting director of DAE&RD in the Jozini Local Municipality. The aim of this meeting was to identify critical stakeholders and key respondents who were knowledgeable about sugar cane production, agricultural and rural development issues. A consultative meeting was held with Mr J Msibi, Acting Director of DAE&RD in Jozini to discuss a draft of the stakeholder document and key respondents. In this meeting reasons for inclusion of stakeholders were outlined. This meeting was followed by another one with DAE&RD Regional Acting Manager Mr Khoza and Mr J Msibi. In this meeting, a community facilitation strategy was discussed and recommended. First, field researchers made appointments to introduce themselves and the project to the Traditional Authorities of all wards in the study area to include: Nyawo, Siqakatha, Ntsinde (Myeni), KwaJobe, Mashabane and Mathenjwa

4.1.2 Local Consultative Meetings

Meetings with six Traditional Councils were arranged and held to ask for permission to conduct a feasibility study on the proposed MSCP. This was done in the presence of a representative from DAE&RD. In these meetings field researchers were given dates of the next Traditional Council (TC) meetings where they would present the project. Generally TA meetings are held once a month but in some cases special TC were arranged to address urgent matters.

All TCs had the opportunity to listen to the presentations of MSCP as outlined in the Information Brief dated March 2009, prepared by the project manager and approved by the MSCP Stakeholder Committee. Questions and answers sessions were held after presentations. In TA meetings the researchers asked the traditional leadership to nominate one contact person who would help them arrange meetings with farmers in sub-wards led by headmen. This approach was considered an appropriate entry point into the local communities where farmers lived. This approach was however not successful because of poor attendance by farmers and community members. After two failed meetings Mr F Myeni, a member of MADC suggested that researchers should change the approach and rather consult with farmer associations' chairperson to organise farmer meetings in consultation with traditional leaders at sub-ward level.

4.1.3 Consultative meetings with farmers associations

The first meeting to present MSCP was held with chairpersons of farmers' associations affiliated to MADC and Makhathini Mill Cane Committee (MMCC). The chairpersons agreed to arrange farmer meetings with farmers at sub-ward level and in the irrigation scheme surrounding areas.

After the first farmer meeting another one of all farmers associations was held at Mjindi Hall but the attendance was poor. Hence a second meeting of all farmers was convened at the same place where attendance was fairly good but many farmers did not attend the meeting due to numerous socio-economic factors, such as family commitments, farming activities, lack of transport fare, health and collection of social security payments.

The next process was to reach out to all farmers and communities at sub-ward level. Appointments for meetings were made with chairpersons of farmer associations who convened farmer meetings. Although researchers had not planned to do two consultative meetings to present the project, they held their first meeting with committee members of the farmers associations. This meeting was followed by a general meeting with farmers and interested community members. Headmen

(*izinduna*) attended most of these meetings and were very supportive. Unforeseen circumstances led to the cancellation of some meetings, for example if there were funerals in the sub-wards and changes in the social security pay out dates and times.

4.1.4 Understanding social and cultural contexts

The field researchers tried as much as possible to be sensitive to cultural context, gender issues and power relations in communities. Despite the fact that the interpersonal nature of the scoping interviews with key respondents and focus group interviews allows for much give and take of information and knowledge, the local communities preferred group discussion sessions as compared to individual scoping key respondent interviews. They had a sense of security in group meetings rather than individual interviews. In all meetings opportunity was given to answer questions and clarify issues for those attendees who were interested in the MSCP. Therefore the audience was always provided with a formal opportunity to express their views. Existing power relations of men over women and of the old over the young affected the participation process in meetings. Generally, women and youth would not comment or raise questions in these meetings. The latter two groups' views and inputs need to be included in the implementation process going forward.

4.1.5 Telephone interviewing

An effort was made to interview some key respondents by telephone to save time and transport costs. However, this method of data collection was not acceptable to the interviewees. They preferred face-to-face personal contact. It was difficult to build up the required rapport and trust between the researcher and scoping interview respondent over the telephone. People wanted to be persuaded to be interviewed. It was much easier for someone to refuse an unseen voice at the end of a phone than a real person that pays them a visit and interviews them in their own familiar environment.

4.1.6 Consultative meeting with Makhathini Agricultural Development Forum (MADF)

Several attempts were made to introduce the MSCP concept to MADF but only one opportunity was able to be provided by MADF for one of the field researchers to present in one of their scheduled meetings. In July 2009 the project was presented to a group of five farmers organised as the Thumamina Mill Cane Committee (TMCC), chaired by Mrs B K Ndimande. The meeting agreed to invite the researcher to the general meeting which was to be held in August 2009 in order to present the MSCP. Due to frequent postponed meeting dates a presentation was not able to be given by the end of the information gathering period of end August.

4.1.7 Facilitation of the communication process

The researchers used a participatory approach to stimulate interest and interaction between farmers and community leaders about MSCP. The role of the researchers was to present the project and facilitate discussions regarding MSCP in order to identify institutional and social risks. At the end of the research project the chairpersons of the farmers associations expressed their appreciation for the manner in which they work co-operatively with the field researchers.

4.1.8 Limitations to community facilitation

The following limitations and obstacles in the community facilitation process were identified. These issues will also be constraints in the implementation of the MSCP and will need to be accommodated in the implementation phase

1. The study area's infrastructure is poorly resourced for dissemination of information and communication with farmers and local people.

2. The majority of farmers cannot read and write. Basic levels of literacy, numeracy and reading are fundamental for accessing appropriate information and communication. Illiteracy is a barrier to income generation through agribusiness and wage employment. Therefore, human capital of farmer households is negatively affected by low educational levels, particularly among adults.
3. There seems to be a growing number of ill and dying household members to provide labour to earn a living. Probably HIV/AIDS related illnesses impact negatively on community households. This was evident by a number of funerals held during the week and on week-ends during the facilitation process. As a result of funeral ceremonies a number of activities were cancelled including scheduled meetings. The impacts of this situation are that illnesses and deaths disrupt agricultural activities by taking away time of the economically active to provide nursing care to the sick. Financial resources are spent on medical treatment and traditional remedies instead of on resources for productive activities. This situation results in poor performance of agribusiness activities and constrains people's ability to receive information because of poor attendance of farmer meetings.
4. Poor physical infrastructure, particularly poor road condition and lack of access roads inhibited movement of local people and outsiders who bring development in the area.
5. Poor or lack of access to telecommunication and electricity constrained community facilitation. Thus farmers were unable to access appropriate agricultural information, particularly on MSCP.
6. Unspoken personal differences between people and groups that limit their willingness to co-operate and collaborate together to reach the common agribusiness goal of supporting the establishment of a sugar cane Factory in the study area.
7. Lack of financial capital or cash to buy resources of agricultural production, such as inputs, technologies and extension services to facilitate diverse activities. Farmers stated that they did not have access to credit facilities and satisfactory extension services. They also could use their land as collateral because they did not own it.

5. PROPOSED MANAGEMENT STRATEGY

According to district and local municipal survey data most of the rural households are food insecure and lack some of the basic requirements for livelihood security. They do not have adequate access to assets and resources. It was also evident in the data collected from farmer association profiles and scoping interview key respondents that there are weaknesses in agricultural service providing institutions in terms of extension support offered by DRD&LR and financial support offered by DFI and/or commodity organisations. These weaknesses and lack of resources for agricultural production are a constraint to achieving increased smallholder agricultural productivity. Therefore organisations established to support local farmers with extension and farming technology transfer will need to be appropriately structured with the ability to be effective in supporting a small-holder production environment within the context of the local conditions. Generally farmers do not have appropriate access to essential assets and resources, such as human, social, physical, financial and natural capital. They do not have access to extension services, technology, inputs, markets, credit facilities and capacity building educational programmes.

During the community facilitation process, field researchers learnt that in any intervention agricultural development strategy, the entry point is institutional capacity building using participatory methodologies with farmers at the centre. Thus farmers' needs, constraints and challenges should be addressed through an integrated and co-ordinated approach of role players in facilitating agribusiness activities. This approach entails crafting new rules of doing agribusiness and creating effective linkages between organisations, policymakers, farmer associations that foster development of sugar cane farmers.

5.1 Issues to be addressed

4.1.1 Human Capital

Human capital comprises health, education and training and labour of farming households and community.

Health: Good health is a core component of human capital because rural people and farmers rely mostly on their physical labour for income in cash and in kind. Health impairment or illness and premature death which prevail in the study area cause a severe drain on household and farm resources. This situation would affect the economic viability of any agribusiness initiative. In view of the HIV/AIDS epidemic in the country, an opportunity exists for the Department of Health to work in close collaboration with the various role-players (participating institutions) in the MSCP in supporting a comprehensive HIV/AIDS management programme to provide education in awareness and prevention. The programme should have some of the following elements:

- Risk assessment and disease profile within farming households and groups;
- Transparent education to help people realize the importance of voluntary and submission to testing;
- Individual and confidential counselling and treatment;
- Lifelong medical management of each individual case;
- Household food and nutrition security.

Education): Skilled individuals are critical to successful agri business and required to provide productive labour. Education and functionally literate labour is essential in agribusiness. Improving literacy level in the project area would deliver significant economic benefits both for farmers and their households. Therefore adult literacy programmes will play a critical role in reducing the spread of HIV/AIDS affecting every dimension of people's life, including agribusiness. Literacy initiatives should build on pre-existing agricultural practices. Furthermore, a strong political will to support adult education and training is vital for the improvement of the quality of life in the study area. A collaborative effort should be made to ensure that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes. These programmes should include relevant training in:

- Business management skills with emphasis on record keeping and financial management.
- Technical skills and appropriate technologies in sugar cane production.
- Institutional capacity building.
- Environmental education.
- Disaster management.

4.1.2 Gender Relations

Gender relations are the social relationships between men and women. They are concerned with how power is distributed between the sexes. Gender relations define the way in which responsibilities and claims on household resources are allocated and the way in which each is given a value. They are simultaneously relations of co-operation, connection and mutual support, and of conflict, separation and competition, of difference and inequality. In agricultural development promoting equality between men and women is critical. Issues that women say are of particular concern to them should be placed on the main agenda of institutional capacity building of both women and men farmers.

In most societies, particularly in the project area gender power relations are skewed in favour of men. Men and women are assigned tasks, activities and responsibilities according to their sex. Both men and women perform productive agricultural work for income and subsistence. In addition to this productive work, women do household work (sometimes referred to as reproductive work), which encompasses the care and maintenance of the household and its members, such as food

preparation, washing clothes, cleaning, bearing children and looking after them, caring the sick and building and maintaining shelter. Often women have access or the opportunity to make use of resources but do not have control over them or the power to decide how resources are used and who has access to them.

Full participation of women farmers is essential in agricultural development. Therefore capacity building should include gender analysis and mainstreaming in order to integrate gender concerns in every aspect of farmer organisations' priorities and procedures. The design of the community development and farmer organisation project elements should aim to transform existing distributions of power and resources to create a more balanced relationship between men and women, particularly of farming households. Capacity building should include gender awareness training for men and women; literacy and numeracy; women in leadership; gender mainstreaming in agriculture.

4.1.3 Youth in Agriculture

Youth in rural areas, including Makhathini Flats have negative attitude and perception of agricultural development and agriculture as a career choice. They associate agriculture with poverty, low social status and the elderly hence they do not view it as profitable. Agriculture is considered in a very narrow context and is equated solely with primary production as opposed to a profitable business. Generally, among young girls, school drop-out rate and early motherhood are serious problems in the study area. This situation has a substantial impact on skills development. Despite gender policies that promote equality, young women have more difficulty accessing employment opportunities and resources of agricultural production as they lack appropriate skills, knowledge and experience. There are a high number of young adults who finish schooling at Grade 12 but lack financial resources to study further at tertiary institutions. Most of these young people do not participate in agricultural activities or help their parents to produce food and commercial crops.

To enhance the sustainability of the MSCP, agricultural development capacity building programmes should ensure youth participation in the project from the initial stage. The youth programme should aim to:

- Create awareness of agriculture as a livelihood strategy to generate income and make it an attractive enough option for youth to engage in, including moving away from subsistence to commercial agriculture.
- Give access to proper training in technical business management and organisational governance skills.
- Promote economic equality for the youth through Agricultural Black Economic Empowerment (AgriBEE).
- Explore diversification of on-farm and non-farm activities for job and wealth creation.
- Develop a culture of self-reliance

4.1.4. Environmental concerns

The negative impact of human activity on the physical environment is one of the cross-cutting issues in agricultural development. Environmental issues include climate change, land degradation, de-forestation, and air and water pollution. Rural households and farmers in Makhathini Flats have access to some of the most important assets for agricultural development, namely water, areas of good soils and a climate, conducive to high levels of production within the study area. During the environmental impact assessment (EIA) public meeting sessions, it was clear that rural

communities were not aware of the importance of conserving the environment and the impact that household and economic activities have on the natural resource base. Thus capacity building programme on environmental and natural resource management should be prioritised to promote environmental sustainability.

4.1.5 Agribusiness Management Structure

The main objective of MSCP is “to create a sustainable socio-economic development aimed at facilitating broad based Black Economic Empowerment in the Makhathini area”. This objective entails agricultural and rural development efforts directed towards employment and income generation, food security and natural resource conservation and environmental protection to enhance rural livelihood security.

In the Makhathini area, there are numerous community based organisations to which most farmers are affiliated. However, the majority of farmers who attended meetings facilitated by researchers stated that they would prefer to have Makhathini Agricultural Development Cooperative Ltd as the farmers’ organisational structure to which sugar cane farmer associations and individual farmers will join. They felt it would be better to strengthen and build capacity of the existing co-operative than to form a new organisational structure for MSCP.

Capacity building as an intervention to enhance human and social capital and to improve business profitability and sustainability of communities in the area is critical to ensure the realisation of the positive impact of the sugar cane project. Training of farmers should include the following aspects:

- Historical background of agricultural co-operatives.
- Legal Framework for agricultural co-operatives.
- Membership and organisational structure of co-operatives in the agricultural sector.
- Business scope and performances (activities of agricultural co-operatives (credit, savings, marketing, purchasing)).
- Governance system and management performance.
- Collaboration with stakeholders (public and private sectors community-based organisations, non-governmental organisations).

Active participation of farmers in the study area will promote sustainability of the socio-economic project. MSCP should be monitored and evaluated for changes and impact on rural livelihoods in Makhathini area.

It is likely that farmers will be willing to participate in business structures that have a strong commodity focus so as to achieve scale economies of production.

Annexure R: Makhathini Sugar Cane Project Biodiversity Report

Biodiversity Report for Makhathini Sugar Cane Project

Vegetation

The proposed irrigation scheme falls within the Maputaland Centre of Plant Endemism (MC) (Van Wyk 1994) although the MC focuses more on the Sand forest and grassland areas to the east and outside of the proposed target areas for the Makhathini Sugar Cane Project (MSCP) irrigation scheme.

The area within which the proposed irrigation scheme is to be developed is described by Acocks (1988) as Lowveld and by Granger as Subhumid Lowveld Bushveld (Savanna Biome) and by Camp (1975) as within Bioresource Group 22 (BRG 22).

This vegetation type is described as *Acacia Nigrescens-Scleocarya birrea-Themeda triandra* savanna. This is a dense bushveld related to forest, comprised of large trees with a dense shrub layer.

The principle trees are Flat Crown *Albizia adianthifolia*, Largeleaf Falsethorn *A. versicolor*, Knob Thorn *A nigrescens*, *Scelorcarya birrea subsp. caffra*, *Ziziphus mucronata*, *Dichrostachys cinerea subsp. africana*, *Maytenus (now Gymnosporia) senagalensis*, *Schotia brachypetala*, *Dombeya rotundifolia*, *Peltophorum africanum*, *Spirostachys Africana*, *Euclea crispa subsp. crispa*.

The dominant shrubs are Giant Rasin *Grewia hexamita*, Small white-leaf Crossberry *G. tenax*, and Pride of De Kaap *Bauhinia galpinii*,

The grass layer is poorly developed and includes the following species: Guinea grass *Panicum maximum*, Broadleaf panic *P deustum*, Pinhole grass *Bothrichloa insculpta*, *Eragrostis superba*, *Aristida bipartia*, *Cymbopogon excavatus* and *Sporobolus fimbriatus*

Along the rivers and drainage lines a narrow belt of near forest occurs including *Acacia robusta subsp robusta*, *A. albida*, *A. xanthophloea*, *Euphorbia tirucalli*, *Rauvolfa caffra*, *Phoenix reclinata*, *Hyphaene coriacea* and *Ficus sycamorus*.

Key Environmental Parameters

The high rainfall, lack of frost, coupled with deep soils with frequent fires and general grazing by cattle shape this bushveld type. This is further impacted by the considerable influx of people into this area over recent years.

Fauna and Flora

According to Rowe-Rowe (1994), no indigenous ungulates are likely to be found in the area.

Birds

A preliminary bird list for the quarter degree square 2732AC, which is roughly in the centre of the proposed irrigation scheme was extracted from Roberts Multimedia Birds of Southern Africa Version 3 (Gibbon et al 2008). This provisional list comprises 449 species.

In terms of listing in the Red Data Book of Birds (Barnes 200), this includes one endangered, 22 vulnerable and 31 near threatened Red Data Species.

In terms of endemism there are 13 endemics and 14 near endemic species.

Savanna is considered to be the third most important vegetation type in Southern Africa for the conservation of threatened bird species.

List and Description of Issues and Impacts

Issues	Impact	Mitigation
Landscape	Transformation	<ul style="list-style-type: none"> No mitigation
Soils	Potential for erosion	<ul style="list-style-type: none"> Maintain indigenous vegetation in intercropping, corridor areas
Vegetation	Complete destruction of vegetation on areas put under irrigation	<ul style="list-style-type: none"> No mitigation possible to prevent total destruction. Maintain indigenous vegetation in intercropping areas Aggressive alien plant control Careful application of herbicides at correct dosages and avoiding wind drift
Fragmentation of Maputaland Lowveld	Fragmentation	<ul style="list-style-type: none"> Vegetation type is well conserved Maintain indigenous vegetation in corridors and intercropping areas 10 m set back lines along drainage lines/watercourses
Fauna	Poisoning of insects, rodents and birds and vegetation	<ul style="list-style-type: none"> Access to agrochemicals should be restricted to qualified personnel

Conservation Status

This vegetation type is well conserved in the Mkuze, Ndumo and Tembe Elephant Game Reserves and according to KZN Wildlife the conservation representation targets for this vegetation community have been met within the existing protected areas. The current land use in this area (maize, sugar cane, cotton in the past, urban/rural settlement and subsistence development has already transformed the vegetation.

Data from the KZN Wildlife Strategic Environmental Assessment data (Goodman, 2000) indicate two economically important medicinal plants are to be found in this area, namely *Haworthia limifolia* and *Warburgia salutaris*

No red data or endemic plant species are to be found in this area.

Conclusion

The most significant impact of the proposed irrigation scheme is the transformation of the landscape and complete destruction of plant communities and loss of grazing resources on the area that will be irrigated.

However this vegetation type is well represented in the Mkuze, Ndumo and Tembe Elephant Game Reserves and in private reserves like Phinda and therefore does not have a high conservation priority.

Alternatives include game ranching and ecotourism but these land uses are not compatible with the existing urban/settlement and subsistence farming land uses.

There is a definite danger that with the introduction of irrigation there will be a rapid spread of weeds and invader plants. Care must be taken to prevent this rapid spread of weeds and alien plants and erosion by the adoption of an aggressive control programme which should be part of a sound Environmental Management Plan (EMP).

A nursery could be set up to transplant and propagate trees and muthi plants during clearing of vegetation and this could even be run as an SMME/S by local entrepreneurs.

In summary, it can be said that this is not an area of high conservation importance and this proposed irrigation scheme development will not detract from the provincial conservation authority's conservation goals.

References:

Camp K.G.T. 1975. The Bioresource Units of KwaZulu-Natal. Cedara Report No. N/A/95/32. KwaZulu-Natal Dept. of Agriculture, Cedara.

Brouse James & Associates. 2002. Terrestrial Biodiversity report for Environmental Scoping Investigation, Makhathini Cotton.

A. Barrie Low and Tony G. Rebelo .1996, Vegetation of South Africa, Lesotho and Swaziland, Editors, Published by DEAT Pretoria.

Acocks, J.P.H. 1975. Veld Types of South Africa. 2nd ed. Mem. Bot. Surv. S. Afr. No. 40. Dept. Agric. Tech. Serv., Pretoria.

A.E. van Wyk and G. F Smith. 2001. Regions of Floristic Endemism in Southern Africa, A review with emphasis on succulents. Umdaus Press Hatfield South Africa

Barnes 2000, Red Data Book for Birds,

G Gibbon and others.2008, Roberts Multimedia Birds of Southern Africa Version 3.