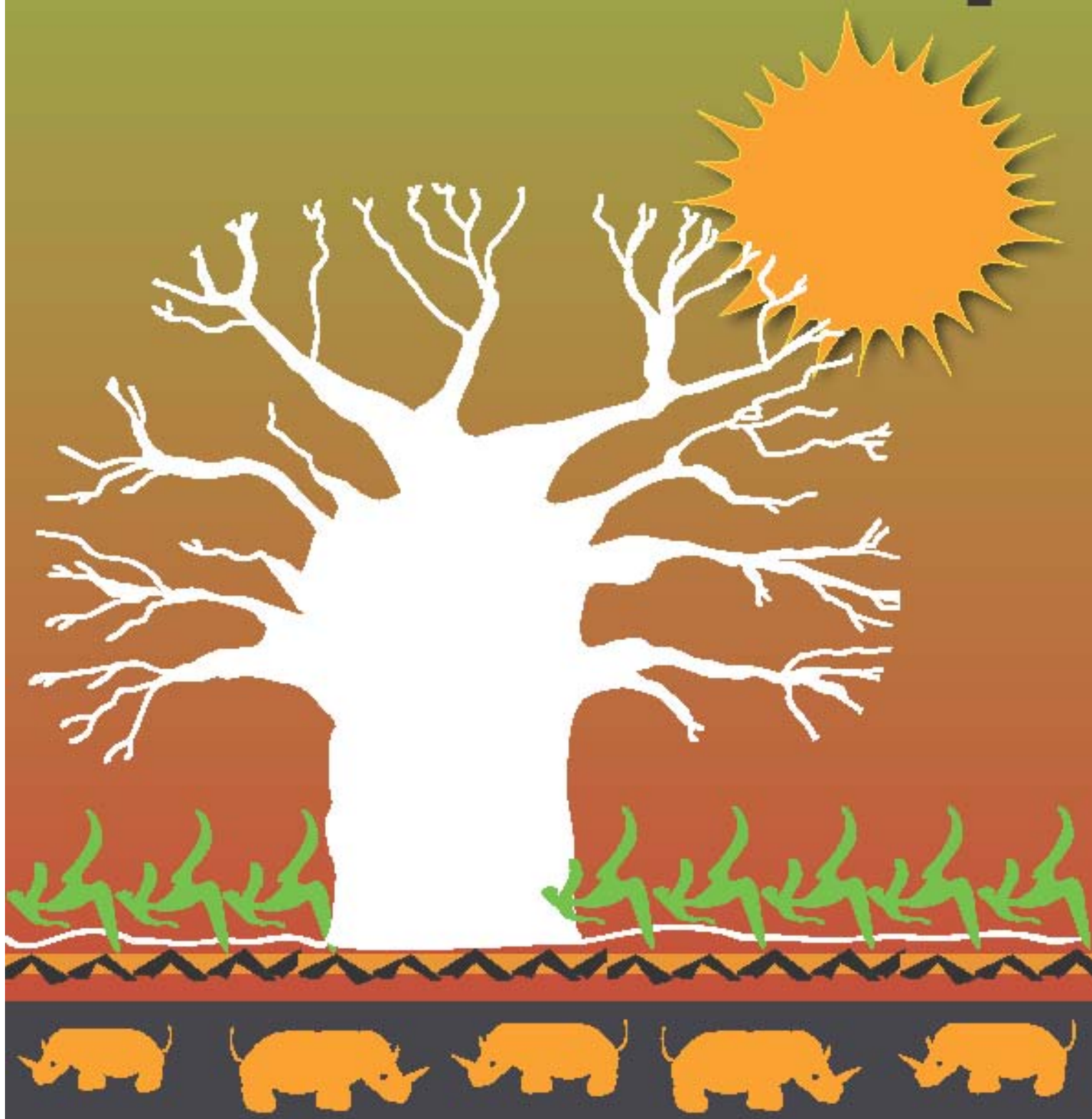


**Polokwane Municipality**  
**Greening Plan**  
**for the 2010**  
**Soccer World Cup**





**environment  
& tourism**

Department:  
Environmental Affairs and Tourism  
REPUBLIC OF SOUTH AFRICA



## **Polokwane Local Municipality Greening Plan for the 2010 FIFA World Cup**

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## ABBREVIATIONS / ACRONYMS USED IN THE TEXT

BMS	Building Management System
CBO	Community-based Organisation
CDM	Clean Development Mechanism (as per Kyoto Protocol)
CEF	Central Energy Fund
CER	Certifiable Emissions Reduction
CIDA	Canada International Development Agency
DANIDA	Danish International Development Agency
DEAT	National Department of Environment Affairs and Tourism
DBSA	Development Bank of Southern Africa
DLGH	Department of Local Government and Housing
DME	Department of Minerals and Energy
DWAF	Department of Water Affairs and Forestry
EIA	Environmental Impact Assessment
EMS	Environmental Management System
EPWP	Expanded Public Works Programme
FEDHASA	Federated Hospitality Association of Southern Africa
FIFA	Fédération Internationale de Football Association
GEF	Global Environment Facility
GWSSD	Greening the World Summit on Sustainable Development
HOV	High Occupancy Vehicles
IDP	Integrated Development Plan
IWMP	Integrated Waste Management Plan
LED	Local Economic Development
LEDET	Limpopo Department of Economic Development, Environment & Tourism
LOC	Local Organising Committee (appointed by FIFA)
NDPG	Neighbourhood Development Partnership Grant
NGO	Non-governmental Organisation
PLM	Polokwane Local Municipality
PPP	Public Private Partnership
PT	Public Transport
SANBI	South African National Biodiversity Institute
SBU	Small Business Unit
SESSA	Sustainable Energy Society of Southern Africa
SRPP	Social Responsibility Policy and Projects
TGCSA	Tourism Grading Council of South Africa
TM	Trade Mark
UNDP	United Nations Development Programme
VER	Verifiable Emissions Reduction
WESSA	Wildlife and Environment Society of Southern Africa
WWF	Worldwide Fund for Nature
WWTW	Wastewater Treatment Works

# INTRODUCTION

Polokwane has been selected as one of nine cities in South Africa to host the 2010 FIFA Soccer World Cup™. Four first round games will be hosted at the new Peter Mokaba Stadium situated ±4 km from the Polokwane CBD. The games will take place on the 13, 17, 22 and 24 June 2010 respectively.

All 2010 World Cup Host Cities have signed a “Host City Agreement” with FIFA. The Host City Agreement includes a commitment to environmental sustainability – which places the onus on all Host Cities to formulate a plan of action to ensure effective implementation of environmental sustainability principles and approaches in the lead up to, during and after the 2010 event. Throughout South Africa, these environmental sustainability initiatives associated with the hosting of the 2010 World Cup are commonly being called “Greening” programmes and projects.

The Polokwane Local Municipality (PLM) has committed to this requirement for “Greening” of the 2010 event in its area of jurisdiction, and has established a “2010 Greening Workstream” that will drive the implementation of the required greening programme and projects.

The purpose of this 2010 Greening Business Plan is to provide a clear action plan for the PLM's 2010 Greening Workstream - to minimize the environmental impact of hosting the 2010 Soccer World Cup and to leave a positive environmental legacy within the municipal area. In addition, the Business Plan aims to assist the PLM in allocating appropriate budgets for Greening activities, sourcing Greening project funding, and finding support networks for the implementation of Greening projects and activities.

At a broader level, the Department of Environment Affairs and Tourism (DEAT) is supporting the FIFA 2010 Local Organising Committee (LOC) in co-ordinating the National Greening Programme for the 2010 FIFA World Cup. The “Greening” plan, programmes and projects of the MLM, as one of the host cities, are aligned with the approaches and frameworks established by this National Greening Programme. The development of this Greening Plan for PLM has been facilitated and funded by the National Department of Environmental Affairs and Tourism.

**It should be noted that this Greening Plan is the responsibility of the PLM to finance and implement. For this reason, the PLM may need to go through a comprehensive process of prioritising the projects within this plan that it wishes to implement in time for 2010, and other projects that it may wish to implement post-2010 as legacy initiatives, or that it cannot implement for financial or other reasons.**

Zakumi – the official 2010 World Cup mascot – a Leopard with green hair. Interestingly, the mascot is a strong biodiversity icon for South Africa, with the Leopard being one of South Africa's most threatened animal species.



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# SECTION A: BACKGROUND AND CONTEXT - GREENING THE 2010 WORLD CUP IN SOUTH AFRICA

## A1 TRENDS IN EVENT GREENING

Since the early 1990's there has been a growing awareness of the potential negative impacts that major and mega events, such as large sporting events and conferences, can have on the people, environment and economy of the host country or city. These negative impacts may include:

- \* Change in land use through construction of event-hosting infrastructure, with associated destruction of natural environments and ecosystem services supply,
- \* The consumption of non-renewable resources (water, energy) to service the event,
- \* Pollution of soil, air and water,
- \* Greenhouse gas emissions that contribute to accelerated global warming and ozone layer depletion,
- \* Generation of large volumes of waste that take up valuable landfill space,
- \* Construction of expensive event-hosting infrastructure that is unsustainable to operate or maintain post-event.

This concern has given rise to a trend in “responsible event hosting”, which essentially involves the inclusion of key sustainability principles in the development of event-hosting infrastructure, and in the operational plans for the event. This approach has become commonly known as “event greening”, and most often includes the following aspects<sup>1</sup>:

- \* Implementation of environmental best practice,
- \* Maximisation of social and economic development,
- \* Building environmental awareness,
- \* Proactive monitoring, evaluation and reporting to ensure the greening process is a learning experience,
- \* Leaving a positive legacy.

## A2 THE NATIONAL 2010 GREENING CONTEXT – GREEN GOAL

As part of the 2006 FIFA Soccer World Cup event in Germany, an event greening programme, aptly named Green Goal, was developed. The key aim of this programme was to ensure that the event was climate neutral, but it also included targeted environmental sustainability interventions in the following sectors:

- \* Energy,
- \* Water,
- \* Waste and
- \* Mobility / transport.

FIFA has indicated that it would like to see similar event greening programmes implemented in all countries that are host to the Soccer World Cup. Accordingly, an environmental protection clause has been included in FIFA's standard Host City Agreement for the 2010 Soccer World Cup that commits all Host Cities to ensuring that environmental sustainability issues are addressed:

---

<sup>1</sup> These five principles of event greening are included in the 2004 edition of “Leaving a greening Legacy, guidelines for event greening”, produced by the Greening of the World Summit on Sustainable Development (GWSSD).



#### “CLAUSE 6.7: ENVIRONMENTAL PROTECTION

*The Host City undertakes to carry out its obligations and activities under this Agreement in a manner which embraces the concept of sustainable development that complies with applicable environmental legislation and serves to promote the protection of the environment. In particular, the concept of sustainable development shall include concerns for post-competition use of Stadia and other facilities and infrastructure”.*

So, in being awarded the opportunity to host the 2010 FIFA Soccer World Cup, South Africa has agreed to address issues of environmental sustainability associated with hosting this event. Apart from the commitment of all Host Cities to this through Clause 6.7 of the Host City Agreement, the National Department of Environmental Affairs and Tourism (DEAT) is supporting the 2010 FIFA Local Organising Committee (LOC) to coordinate the Green Goal Programme for the 2010 FIFA Soccer World Cup event at a national level. DEAT, in collaboration with numerous stakeholders, including the LOC has developed the National Greening Framework, which provides the outline for this initiative. DEAT has also developed the guideline for the greening of large sporting events.

In addition, the LOC has developed a set of environmental objectives and national targets for host cities for greening 2010.

The South Africa Green Goal Programme has adopted the following greening thematic areas:

- \* Energy efficiency,
- \* Water efficiency,
- \* Responsible waste water management,
- \* Biodiversity and ecology,
- \* Sustainable waste management,
- \* Transport, mobility and access,
- \* Communication and awareness-raising.

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## A3 INTERNATIONAL BEST PRACTICE IN EVENT GREENING

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Since the early 1990's, implementation of event greening has gained momentum internationally both in developing and developed countries. However, as there is no formally defined or recognised approach for event greening internationally, which has resulted in event greening programmes having different approaches and focal areas in each instance in which they are implemented. As this is still an emerging field, there is still much to be learnt about the most effective event greening approaches and strategies, and so most event greening programmes include a monitoring and evaluation component.

In terms of this learning to date, the following are generally considered to represent **best-practice in event greening programmes**:

#### Text Box 1: Summary of Best Practice Approaches in Event Greening Programmes

- \* *Focus on positive environmental legacy for the host city / country,*
- \* *A lifecycle approach to estimating and measuring environmental impacts,*
- \* *Carbon neutrality in event hosting – i.e. preventing global climate impacts – with a focus on event users contributing towards the cost of offsetting emissions; and using this as a platform for establishing carbon offset projects that have the capacity to offset greater amounts of CO<sub>2</sub> than produced by the event,*
- \* *Installation of energy efficient infrastructure to minimise carbon footprint,*

- \* *Use of green energy for event operations – especially where this involves installing infrastructure that both produces and uses green energy (e.g. solar water heating, photovoltaic energy) as this ensures that the operational carbon footprint of the infrastructure is reduced in the medium and long term,*
- \* *Incentives for increasing the use of public transport systems (aligned to improved public transport infrastructure / services),*
- \* *Promoting the use of vehicles that meet appropriate fuel efficiency and emissions standards,*
- \* *Sustainable waste management – with a primary focus on minimising waste at source, and recycling maximally the waste that can't be avoided,*
- \* *Recycling of buildings / construction materials,*
- \* *Installation of water efficient infrastructure and systems (including landscaping), water capture and re-use systems,*
- \* *Green procurement policies that address both social and environmental concerns,*
- \* *Investment into ecosystems services supply, green landscapes for a better quality of life / urban landscape;*
- \* *Awareness raising and education aimed at achieving positive behavioural changes in society at large,*
- \* *Monitoring and evaluation aimed at measuring performance and learning from the greening programmes strengths and weaknesses.*

Some of the **milestone event greening programmes** and their **associated achievements** are evaluated below:

### **A3.1 Olympic Games**

The Olympic Games have increased in number and extent over the last 20 years, with concomitant increasing environmental, social and economic impacts on the Host Cities. The environmental impact was recognised by the International Olympics Committee (IOC) when the Albertville Winter Games in 1992 stimulated a large public protest about environmental degradation and negative quality of life impacts on local people caused by the event. This resulted in environment being included as a third pillar of the Olympic Charter, along with sport and culture.

The Olympic Movement has since developed a Greening Policy, which has two main objectives:

- \* To promote the hosting of Olympic Games in such a way as to respect the environment and meet the standards of sustainable development,
- \* To promote awareness in the Olympic family and amongst other sports practitioners of the importance of a healthy environment and sustainable development.

The Sydney 2000 Olympics was the first to include an event greening programme. It set the benchmark for event greening by developing a green standard for major sporting events. There was an attempt to consider the environment in all aspects of planning, managing and staging of the games. It included remediation projects, transport systems, catering and waste management.

A summary of the greening approaches and best practices adopted at the Olympics is as follows:

### **Torino – 2006:**

- \* Carbon neutral event – all emissions offset through €3 million in energy efficiency projects
- \* Water-saving projects reduced water storage required for snow-making from 350,000 m<sup>3</sup> to 220,000m<sup>3</sup>,
- \* Sensitive wastewater handling that minimised pollution,
- \* Extensive construction monitoring and rehabilitation work,
- \* Tree planting, habitat creation and green engineering incorporated in infrastructure projects,
- \* Sustainable waste management planning,
- \* Sustainable transport planning,
- \* Eco-friendly buildings in Olympic Village,
- \* Green procurement policy,
- \* Promotion of European Eco-label for hospitality industry,
- \* Sponsors of the Games subject to voluntary “sustainability programme” – involving meeting a set of ethical and environmental standards.

### **Beijing – 2008:**

- \* Air quality a major area of focus:
  - o relocation and refitting major polluting industries
  - o switch away from coal-fired energy generation towards natural gas
  - o older buses, taxis and cars have been replaced by those using compressed natural gas or new vehicles and fuels that meet tougher, internationally recognized emissions standards such as the Euro III standard
- \* Acceleration of the phase-out of ozone depleting chemicals and for the provision of energy efficiency and green energy appliances at buildings and sports venues
- \* Sustainable waste management (target 50% waste recycled), including re-use of treated wastewater for heating and cooling systems in the Olympic Village,
- \* Water conservation and rainwater harvesting, including drought-resistant planting and intelligent irrigation,
- \* Cleaner transport systems,
- \* Promotion of public transport usage: ticketing allowing free rides on public transport,
- \* New urban green belts including a 580-hectare Olympic Forest Park,
- \* Olympic Model Schools Programme – promotion of environment action and awareness,
- \* Other environmental awareness initiatives.

### **Vancouver – 2010:**

The Vancouver Organizing Committee for the 2010 Olympic and Paralympic Winter Games has committed to enhance environmental performance at the 2010 Winter Games and increase public awareness of the importance of environmental protection and sustainable development, as well as to leave a lasting legacy in the host communities of Vancouver and Whistler, the province of British Columbia, Canada, and beyond, and to provide innovative ways to organize major events that minimize their environmental footprints before, during and after the Games.

### **London – 2012:**

Sustainability Plan developed aims for a “One Planet 2012”, including:

- \* Carbon neutral event,
- \* Standards for venue construction using environmental rating tools;
- \* Development of a sustainable food strategy that promotes local, seasonal and organic produce from environmentally responsible sources;
- \* Getting all suppliers and partners to sign a sustainability code, including sustainable sourcing and ethical trading.

### **A3.2 World Athletics Championships**

The 2005 World Championships in Helsinki was the first event run by the International Athletics Associations Federation (IAAF) which included an event greening approach. The greening approach adopted has since been used as a best practice model by many other Athletics Associations.

The 'Helsinki Model' for greening deals with the following:

- \* Lifecycle management of environmental impacts,
- \* Climate change impacts,
- \* Material flows and efficiency (including waste avoidance and management),
- \* Water, chemicals and noise).

It details four phases during which greening considerations need to be taken into account: bidding phase, winning the bid, planning and preparation, operation and post-event phase.

### **A3.3 FIFA Soccer World Cup**

The Green Goal programme established for the FIFA Soccer World Cup in Germany in 2006 included the following targets:

- \* To be the first "climate neutral" FIFA World Cup TM event.
- \* 20% reduction in refuse volumes in and around the stadiums
- \* 50% increase in spectators travelling to and from the stadiums on public transport
- \* 20% reduction in stadium energy consumption
- \* 20% reduction in stadium water consumption to relieve pressure on main water resources

The approach adopted in the Green Goal 2006 Programme was to first set national greening targets based on what could be achieved cumulatively across all Host Cities. Different greening activities were undertaken in each Host City depending on the strengths and resources of each, which then contributed to the achievement of the Green Goal targets nationally.

### **A3.4 World Summit on Sustainable Development**

Otherwise known as Rio+10, the United Nations World Summit on Sustainable Development took place in 2002 in Johannesburg (South Africa) and included an event greening programme called "Greening the World Summit on Sustainable Development" (GWSSD). The goal of GWSSD was to minimize the negative environmental impact of the WSSD on Johannesburg and maximize the positive sustainable development legacy. The key approaches adopted and achievements included:

- \* Sustainable / green procurement,
  - \* Energy efficiency,
  - \* Purchase of green energy – 26% of energy used was from this source,
  - \* Carbon fund established and carbon offset projects implemented – resulted in the establishment of the Johannesburg Climate Legacy (JCL) (40% of emissions offset),
  - \* Sustainable waste management (27% of waste was recycled),
  - \* Water conservation,
  - \* Public awareness and education (focusing on behaviour change),
  - \* Monitoring and evaluation.
-

## SECTION B: CONTEXT OF GREENING 2010 IN POLOKWANE

### B1 POLOKWANE HOST CITY – PROFILE AND ATTRACTIONS

The town of Pietersburg was founded in 1886. The British built a concentration camp here during the Boer War to house almost 4000 Boer women and children. The town officially became a city on April 23, 1992 and then on the June 11, 2003, the government of Limpopo changed the name of the city to "Polokwane". The city is now the major urban centre and capital city of the Limpopo Province.

According to the 2001 census conducted by Statistics South Africa, the population of the greater Polokwane Local Municipality (PLM) is 302,957, of which 91.2% are black, 7.2% white 0.9% coloured and 0.7% asian.

Despite its position on the tropic of Capricorn, the climate of Polokwane is tempered by its position on a plateau 1,230m above sea level. Average temperatures reach around 21-22°C in January and fall to 11°C in July. Polokwane has a dry climate with a summer rainy season and a pronounced dry spell during winter. Average annual rainfall is 495mm, with December or (less often) January the wettest month and July the driest.

The PLM area accounts for 3% of the total area of the province of Limpopo, but accommodates 10% of the province's population. Polokwane serves as the economic hub of Limpopo Province and has the highest population density in the Capricorn district. The majority of Polokwane's population is rural, i.e. the largest sector of the community within the municipality resides in rural tribal villages, followed by urban settlements.

To the tourist the area is steeped in "myths and legends" reflecting its rich cultural heritage. There are also many game viewing opportunities, making Polokwane a popular ecotourism destination in Southern Africa. Tourist attractions include the following:

- Hunting - Polokwane is considered the premier hunting destination in South Africa.
- *Eersteling Monuments* - The site of the country's first gold crushing site and its first gold power plant are marked by monuments.
- The *Bakone Malapa Northern Sotho Open-Air Museum*, which depicts the traditional and modern-day lifestyle of this people.
- The *Polokwane Game Reserve*, which has more than 21 species and offers scenic walks.
- The *Savannah Centre*, a modern shopping centre.

### B2 PREPARATIONS FOR HOSTING OF 2010 EVENTS IN POLOKWANE

Polokwane will host four first round matches at the new Peter Mokaba Stadium. As part of 2010 preparations, a new 45,000 seater stadium is being constructed adjacent to the existing Peter Mokaba Stadium, which will leverage existing sporting facilities, parking and administrative facilities. The Peter Mokaba sports precinct is located on the western side of the Tzaneen Bypass, between Dorp Street on the South, Webster Street on east and Magazyn Street on the North.

A site opposite the Tom Naude Highschool has been selected as the preferred site for the Fan Park. The Fan Park will be designed to accommodate approximately 30,000 fans. No parking will be provided at either the Stadium or the Fan Park, and to ensure fans will be able to access these venues several Park & Ride facilities will



Model of new Peter Mokaba Stadium



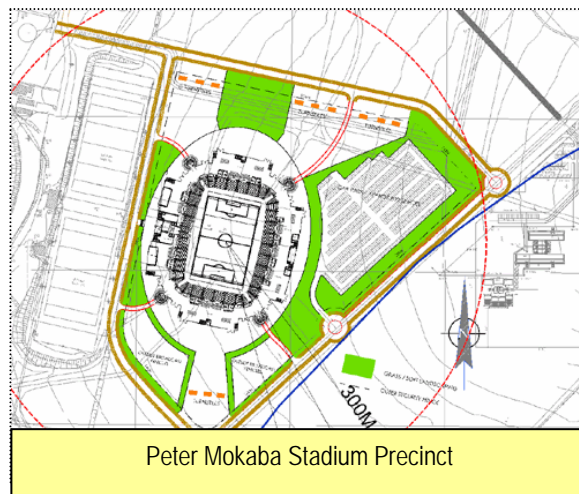
be constructed. As the stadium site is relatively near the Fan Park ( $\pm 3.4$  km) a Fan Mile is planned which will involve the closure of designated roads leading from the Fan Park to the stadium for the exclusive use of pedestrians.

Two Training Venues will be upgraded to meet FIFA's requirements, these are Seshego Stadium in Seshego township and Mankweng Stadium in Mankweng township. Seshego stadium is currently used by the Premier Soccer League (PSL) and has 10,000 seat capacity and whereas Mankweng Stadium, currently comprising only a fenced-off pitch requires 2,000 new permanent seats and 8,000 temporary seats (total 10,000 seat capacity). Vehicular and pedestrian access to Seshego Stadium will be improved as part of the required upgrades.



In gearing up for 2010 a number of infrastructure upgrading projects are being undertaken by the PLM. To ensure that a safe and efficient transportation system is provided in 2010, PLM has planned the following projects:

- \* Road section to link Biccard street with Landros Mare Street
- \* Extension of Magazyn Street from Suid Street to Webster Street
- \* Provision of special loading and off-loading facilities around the transport free perimeter of 1km at Peter Mokaba Stadium and 500m at Seshego Stadium
- \* Holding Facilities for Public Transport using Peter Mokaba Stadium
- \* Upgrading of Nelson Mandela Drive from Seshego Circle to New Era Drive
- \* Implementation of one way system around the CBD
- \* Internal walkways and bicycle lanes within the 1km clearance radius at Peter Mokaba Stadium and within 0.5km clearance radius at Seshego Stadium



In the water supply and sanitation sector an existing potable water supply mains will be upgraded from the eastern side of the town. A new 50 megalitre reservoir is also being constructed. Despite presently experiencing capacity constraints, there are no immediate plans to upgrade Polokwane's Wastewater Treatment Works (WWTW).

To meet the electricity demand of the new stadium and stadium precinct the ring feed power supply to the stadium and stadium precinct will be upgraded.

## SECTION C: GREENING APPROACH

### C1 GREENING FOCUS AND AIMS

The key focus of the 2010 Greening Plan for Polokwane is to ensure that environmental impacts are minimised and a positive environmental legacy is achieved. This infers that Greening activities should be specifically focused around the 2010 preparations and operations, and in particular the Greening Plan should include all aspects of environmental legal compliance associated with the hosting of the event (including the construction of key infrastructure). In addition to this, Greening activities can seek to address any existing environmental issues in the Municipality associated with services, waste management systems, biodiversity protection (and



associated ecosystem services supply) and cultural heritage protection – such that a positive environmental legacy is achieved.

There are a number of aims that the Polokwane 2010 Greening Plan is focused around achieving. These aims have been set in terms of international best practice in event greening, and the national context set by the South African Green Goal Programme.

#### **Text Box 2: Aims of Greening 2010 in Polokwane**

- \* Minimise ecological, social and economic impacts and costs;
- \* Maximise ecological, social and economic benefits;
- \* Minimise wastage of resources;
- \* Scale and type of installations and systems to service the event must be appropriate to the South African and Polokwane context;
- \* Financial sustainability;
- \* Leave a positive legacy;
- \* Establish iconic installations that showcase working examples of green (environmentally friendly) technologies;
- \* Promote environmentally sustainable behaviour and awareness.

## **C2 GREENING THEMATIC AREAS**

Polokwane's 2010 World Cup Greening Plan includes seven Thematic Areas with associated broad goals.

### **A. Carbon Emissions Management / Offsetting**

- i. Reduce carbon emissions from transport systems
- ii. Reduce carbon emissions through reducing energy consumption
- iii. Reduce embodied carbon in new event hosting buildings / infrastructure
- iv. Maximise opportunities for carbon offsetting and sequestration

### **B. Energy Efficiency**

- i. Minimise consumption of energy
- ii. Maximise use of renewable energy

### **C. Water Conservation and Management**

- i. Minimise consumption of water
- ii. Maximise capture and recycling of water
- iii. Avoid pollution of water resources

### **D. Sustainable Waste Management**

- i. Maximise the avoidance, reduction and recycling of waste

### **E. Efficiency of Transport and Access**

- i. Maximise availability, accessibility, efficiency and use of public transport systems
- ii. Reduce carbon emissions from public transport systems
- iii. Maximise availability and accessibility of non-motorised transport systems

### **F. Biodiversity and Ecosystem Services Management / Protection**

- i. Protect and enhance biodiversity and related ecological systems
- ii. Maximise recreational / tourist experiences associated positively with biodiversity

## G. Communication and awareness raising

- i. Raise awareness of greening in all sectors
- ii. Communicate greening progress made
- iii. Market greening and attract funding

All of these Thematic Areas align with those set by DEAT and the LOC in the national greening framework. The goals associated with each Focus Area are intended to reflect the aims of the Greening Programme. These are translated into a range of targets, strategies and interventions further on in this Plan.

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## C3 IMPLEMENTATION OF THE 2010 GREENING PLAN

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To achieve implementation of the requisite environmental protection and sustainability principles and goals in the hosting of 2010 Soccer World Cup events in Polokwane, greening interventions will need to be made in a multitude of municipal sectors as well as with the support from private enterprise and NGOs in some cases. For example, reviewing energy efficient design at the stadium will require collaboration between the Greening Workstream and the Stadium Workstream (and their appointed professional team) and the establishment of an environmentally sustainable waste management system for the stadium and hospitality industry servicing the event will need to be implemented by the relevant Municipal waste management sector in partnership with private recycling and waste contractor agencies.

Implementation of the 2010 Greening Plan needs to be allocated to a Programme Co-ordinator / Workstream Leader. In the PLM, the Greening Workstream Leader is the appropriate candidate for this responsibility.

**It should be noted that NOT ALL PROJECTS CONTAINED WITHIN THIS PLAN MUST NECESSARILY BE IMPLEMENTED. It is anticipated that the Greening Workstream Leader will liaise with municipal Treasury Department and other line functions in order to prioritise which projects can be accommodated financially and within human resource constraints in time for 2010. The option exists to implement the remaining projects post-2010 as legacy Greening projects for the municipality.**

Apart from co-ordinating and driving key Greening initiatives, one of the key roles of the 2010 Greening Plan (and Workstream) is to **facilitate the integration** of Greening approaches into the various infrastructural projects and operational systems established for hosting the 2010 Soccer World Cup in Polokwane (which are implemented by other 2010 Workstreams and non-environmental municipal departments). The Greening Workstream can play an important role in assisting other municipal sectors to source funding for implementing their projects in a “greener” way, linking them to Greening support agencies and accessing Greening technologies and information. The Greening Workstream can play the lead role in gathering information on what greening interventions are achieved by other sectors, and showcase this as part of the PLM’s media / communications campaign associated with the event.

All **funds for Greening Workstream activities** and projects that cannot be accommodated in the PLM’s 2010 Funding Stream may be procured from relevant government departments, private sector partners, or donor funders.

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## C4 SUMMARY OF GREENING PROGRAMME STRATEGIES

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In order to achieve action in the seven Thematic Areas (see Section C2), this Plan sets up eight Programme-level strategies which, when implemented by the relevant sectors, will achieve the common and overarching greening aims and purpose. These strategies are detailed in Section D of this Plan, but are summarised here as follows:

### 1. Climate Impact Management Strategy

- Addresses potential climate impacts by reducing carbon emissions, and offsetting emissions that cannot be avoided through carbon emissions reduction and sequestration projects.

### 2. Energy Efficiency Strategy

- Addresses energy efficiency and green energy imperatives.

### 3. Water Conservation and Management Strategy

- Addresses water conservation, recycling and rainwater harvesting requirements.
- Protection of natural water resources.

### 4. Sustainable Waste Management Strategy

- Addresses the sustainable management of waste through waste minimisation and recycling.

### 5. Sustainable Transport Strategy

- Addresses the requirement of increased use of public transport and non-motorised transport systems to service the event.

### 6. Biodiversity Strategy

- Addresses the requirement for avoiding / minimising impacts on biodiversity resources, and investment into ecosystem services supply to achieve a positive legacy.

### 7. Awareness Raising and Reporting Strategy

- Increases public awareness of greening and changes perceptions about the environment.
- Collects and disseminates information on what is achieved in the Greening Programme.
- Creates capacity for implementation of greening strategies in all sectors.
- Stimulates further greening action for a greater positive environmental legacy from the event.

### 8. Monitoring and Evaluation Strategy

- Monitors implementation of the Greening Programme.
- Critically evaluates achievements and failures of the Programme, and develops lessons for future event greening approaches in PLM and elsewhere.

## SECTION D: GREENING PROGRAMME WORK PLAN

### D1 CLIMATE IMPACT MANAGEMENT STRATEGY

The **Climate Impact Management Strategy** aims to address the potential impact on global climate of hosting the 2010 World Cup events in Polokwane through reducing carbon emissions as much as possible, and offsetting the emissions that cannot be avoided. Both carbon emissions reduction and sequestration projects are suggested as means to offsetting unavoidable carbon emissions.

\* **Carbon Emissions Reductions:** Reduction in carbon emissions through avoidance or permanent capture. The Clean Development Mechanism (CDM) under the Kyoto Protocol is one way to establish and fund projects that result in Certifiable Emissions Reductions (CERs). However, the costs of CDMs and the requisite certification process may be prohibitive. Projects that result in Verifiable Emissions Reductions (VERs) with a less onerous registration and certification process (and can be traded on the open market) may be a suitable alternative.

\* **Sequestration:** The capture of carbon in trees (one tree can capture approximately 500kg of carbon over a 15 year period). All tree planting done for 2010, as well as potential reforestation projects and avoided deforestation projects can be included and counted either as VERs or voluntary carbon emissions reductions for 2010.

The Climate Impact Management Strategy has its own actions, but is linked to the Energy Efficiency, Sustainable Transport and Sustainable Waste Management Strategies, as these all have components that will assist in **reducing** carbon emissions associated with the event to the maximum extent possible.

### **D1.1 Achievements to Date / Work in Progress**

The PLM plans a City Beautification Programme for 2010, which will involve the planting of a significant number of trees in the urban parts of Polokwane. The potential sequestration benefits of this Programme can be quantified as voluntary carbon sequestration achievements.

The national 2010 Greening Programme has commissioned the calculation of the national carbon footprint of the 2010 World Cup. This work will deliver an estimate of the applicable / proportional carbon footprint associated with hosting the 2010 World Cup in Polokwane. This can be used in the Climate Impact Management Strategy to measure the relative achievements of CER and sequestration projects in reducing the climate impacts of hosting the event.

### **D1.2 Strategy Table**

TARGETS	ACTIONS	PROJECT DRIVER & COLLABORATORS
1. Measure and report on Climate Impact Management Achievements	1A. CARBON FOOTPRINT Provide necessary information for the calculation of, and obtain Polokwane's Carbon Footprint estimate from national footprinting study. Or conduct own carbon footprinting exercise.	DRIVER: Greening Workstream
	1B. REPORTING ON CARBON FOOTPRINT REDUCTIONS AND BEST PRACTICE GUIDEBOOK Account for carbon sequestration potential of trees planted in City Beautification Programme, in stadium, practice stadia and fan park landscaping. Evaluate design and specifications and construction process of Peter Mokaba Stadium in respect of achievements in embodied carbon emissions reductions and reduction in energy footprint (with associated carbon savings). Also account for carbon savings from sustainable transport systems implemented to service the event and sustainable waste management systems implemented. Calculate carbon emissions reductions and sequestration achieved as a % of total estimated carbon footprint.  Produce best practice carbon emissions minimisation guide for use in Municipal construction tenders / contracts (including for Training Venue upgrades).	DRIVER: Greening Workstream  COLLABORATORS: Solid waste management Transportation Workstream Parks Department Beautification Workstream Stadium Design Team
2. Minimise / avoid carbon emissions wherever possible	2A. LOBBY FOR LOW EMISSIONS TRANSPORT FLEET Where possible, ensure that public transport vehicles servicing 2010 (and beyond) meet appropriate emissions standards (Euro II) and have maximum fuel economy.	DRIVER: Greening Workstream  COLLABORATOR: Transportation Workstream
3. Offset / sequester maximum unavoidable emissions possible.	3A. SUPPORT / MAXIMISE TREE PLANTING Collaborate with Beautification Workstream to maximise number of trees planted throughout the Municipal Area.	DRIVER: Greening Workstream  COLLABORATOR: Beautification Workstream Parks Department

	<b>3B. CARBON SEQUESTRATION PROJECT DEVELOPMENT</b> Identify potential carbon sequestration projects (reforestation, mass tree planting around 2010 venues etc) and develop these to business plan level. Submit business plans for funding.	<b>DRIVER:</b> Greening Workstream  <b>COLLABORATOR:</b> Environmental / Sustainability Department Parks Department
	<b>3C. CARBON EMISSIONS REDUCTIONS PROJECT DEVELOPMENT</b> Undertake a Carbon Emissions Reductions project identification, prioritisation and feasibility assessment process (using suitably qualified specialists). Develop funding applications and project implementation plans where appropriate.	<b>DRIVER:</b> Greening Workstream  <b>COLLABORATORS:</b> Environmental / Sustainability Department All other line departments with potential energy savings projects (traffic & transportation, housing, buildings management, architectural services, wastewater management, solid waste management etc)

## D2 ENERGY EFFICIENCY STRATEGY

The energy efficiency strategy aims to minimise energy usage during the hosting of the 2010 World Cup through appropriate demand management measures, and create a positive legacy for the PLM by developing energy efficient infrastructure as part of the preparations to host the event. In addition to this, the strategy aims to promote the development of renewable / green energy supply systems as part of the event hosting strategy. This will be done through the municipality including at least one renewable energy initiative in its 2010 infrastructure. Key users of energy at event hosting sites include:

- \* Floodlights (stadia and fan parks),
- \* Air-conditioning and heating systems,
- \* Internal lighting and external night and feature lighting,
- \* Water heating systems for ablutions and catering facilities,
- \* Cookers, ovens and refrigerators at event venues,
- \* Scoreboards, large screen TVs and broadcasting equipment.

Polokwane is regarded as having a properly designed and well maintained electrical supply system that ensures good quality electricity to the town itself. This contributes positively to industrial development and thus also to job creation. Outlying previously disadvantaged areas such as Seshego, however, do not have the same level of services - although initiatives are underway to address this.

### D2.1 Achievements to Date / Work in Progress

Given the anticipated energy demand associated with 2010, the PLM have focused their 2010 energy supply preparations around increasing supply through the upgrading of the ring feed power supply to the stadium. However, the national energy crisis remains a challenge with Eskom, the national energy utility, unable to guarantee a sustained supply. As a result Municipalities across the country are involved in initiatives to reduce their electricity consumption to meet the 10% reduction target set by Eskom. To this end Polokwane has been retrofitting street lights and traffic lights with energy-saving bulbs for a number of years. The new stadium and the required upgrades to the Training Venues and Fan Park all offer opportunities to fit energy-efficient technologies. At the Peter Mokaba stadium, all light fittings, with the exception of the floodlights, will be energy efficient. The opportunity of operating the entrance gates and the irrigation system in an energy efficient manner was investigated but found to be prohibitively expensive. PLM has no plans for renewable energy installations as part of 2010 but there is a possibility that an iconic / demonstration site could be established.

The fact that Eskom has its main administrative offices in Polokwane also presents an opportunity for a collaborative energy saving initiatives between the Municipality and the national energy utility. Eskom is already engaging the hospitality industry in Polokwane with a view to improving energy efficiency.

## D2.2 Strategy Table

TARGETS	ACTIONS	ACTION DRIVER & COLLABORATORS
1. Maximise & demonstrate energy use reductions: i. Energy efficiency measures implemented at stadium, training venues and fan parks. ii. Promote energy reductions in broadcasting, hospitality & catering service sectors & municipal and private sector buildings / facilities.	1A. MAXIMISE ENERGY EFFICIENCY AT 2010 VENUES & ALONG BEAUTIFICATION ROUTES Energy efficient designs and fittings to be incorporated into Training Venue upgrade plans, Fan Park plans and city beautification plans. This approach needs to be built into the tender brief and contract conditions.	DRIVER: Training Venue Workstream Fan Park Organisers Beautification Workstream  COLLABORATORS: Municipal Electricity Department Greening Workstream
	1B. PROMOTE ENERGY EFFICIENCY IN PRIVATE SECTOR Promote the adoption of DSM and energy efficiency approaches in all private sector agencies associated with 2010 and by individuals	DRIVER: Municipal Electricity Department  COLLABORATORS: Stadium operator Training Venue operators Fan Park operators MATCH FEDHASA
2. Implement at least one renewable energy project	2A. RENEWABLE ENERGY AT PETER MOKABA STADIUM Investigate possibilities for renewable energy supply initiatives for Peter Mokaba Stadium, Fan Park and at Training Venues (solar water heating and PV cells for lighting). Identify at least one feasible initiative and implement for 2010.	DRIVER: Greening Workstream  COLLABORATORS: Electrical Services Unit Stadium, Training Venues and Fan Park Design Teams

## D3 WATER CONSERVATION AND MANAGEMENT STRATEGY

The water conservation and management strategy aims to minimise water use in the hosting of the 2010 World Cup, and include sustainable water management systems in all 2010 infrastructure such that a positive legacy is achieved into the future. Key water users and potential sources of water resource pollution at event hosting venues include:

- \* Pitch irrigation,
- \* Landscape irrigation,
- \* Ablutions (toilets, urinals, hand basins, drinking fountains),
- \* Catering ablutions (sinks),
- \* Cleaning (spraying down of waste areas, spectator seating areas and all other public areas),
- \* Polluted run-off from parking areas.

### D3.1 Achievements to Date / Work in Progress

Meeting 2010's water supply demand presents a significant challenge to the PLM, as Polokwane has been under water restrictions for several years. Almost all of Polokwane's potable water comes from the Ebenezer dam which is almost 60 km away and is situated in a separate catchment. Aside from meeting the water supply



demands of 2010, Polokwane also plans extensive beautification in the city involving the planting of trees and flowers which will need irrigation water. Opportunities exist for grey water reuse for irrigation but this is constrained by the fact that the Municipality has a commitment to supply a large mine with all its treated effluent. With the construction of the new stadium there are opportunities to ensure that fittings are water efficient as these are not yet fitted.

Regarding sanitation, ablutions at the stadium and stadium precinct will all be connected to the municipal sewer while temporary ablutions are planned at the Fan Park and Training Venues. It is likely that the temporary ablutions will have to be emptied on a regular basis by the Municipality's "honey-sucker" fleet - thereby increasing carbon emissions associated with the motorized transport of sewage and increasing pressure on its wastewater treatment works (WWTW).

### D3.2 Strategy Table

TARGETS	ACTIONS	ACTION DRIVER & COLLABORATORS
1. Minimise water use at event hosting venues (Stadium, training venues and fan parks): i. Water wise landscaping, planting plan and irrigation systems to minimise irrigation requirements. ii. Maximise reductions through procurement of water-saving fittings / systems. iii. Water recycling systems for pitch irrigation / landscape irrigation.	1A. MAXIMISE WATER USE EFFICIENCY AT 2010 VENUES Water efficient designs and fittings (including consideration of grey water recycling, rainwater harvesting) to be incorporated into Training Venue upgrade plans, Fan Park plans. These need to be included in TOR for training venue and Fan Park operators.	DRIVERS: Infrastructure Workstream Training Venue and Fan Park Design Teams  COLABORATOR: Greening Workstream
	1B. REVIEW OF STADIUM PRECINCT LANDSCAPING PLAN Internal review of stadium precinct landscaping plan to ensure that only water-wise indigenous species are being used and that all opportunities for grey-water recycling are implemented. Irrigation system must be water use efficient.	DRIVER: Greening Workstream  COLABORATOR: Stadium Design Team Beautification Workstream Parks Department Environment Department
2. Prevent pollution of water resources and minimise impacts on aquatic ecosystems.	2A. STORMWATER MANAGEMENT PLAN FOR PETER MOKABA STADIUM Prepare and implement stormwater management plans for the Peter Mokaba Stadium that includes water quality protection measures. Plan must cover construction and operational period. Plan must be included in TOR / contract for venue operators.	DRIVERS: Infrastructure / Stadium Workstream  COLLABORATORS: Stadium Operators Stormwater Management Unit

## D4 SUSTAINABLE WASTE MANAGEMENT STRATEGY

The Sustainable Waste Management Strategy aims to develop an integrated waste management system which includes establishment, upgrading and expansion of facilities and resources for waste separation and recycling that can service the 2010 World Cup and beyond. It also aims to minimise waste generated by construction / refurbishment activities and the hosting of the 2010 events in the MLM. The private sector will be encouraged or incentivised to participate in achieving reductions in waste outputs and undertaking waste separation and recycling.

Waste management is arguably Polokwane's greatest challenge and this is possibly due to under-investment which has resulted in the Municipality's low capacity to manage its waste streams. International best practice for event greening typically requires progress being made with regard to waste minimization, reuse and

recycling. Polokwane's Waste Management Department needs prioritize a plan of action to gear up for 2010. Opportunities do exist with active formal and informal recycling operators and space being available for a waste separation facility at the City's landfill.

The key areas of waste generation associated with the 2010 event include:

- \* Demolition and construction of event hosting infrastructure,
- \* Waste generated at event hosting facilities associated with food and beverages, and catering,
- \* Waste generated at hospitality facilities associated with servicing spectators,
- \* Waste generated through operation of the 2010 event hosting facilities during and beyond the events (light bulbs, paper towels from toilet areas, cleaning materials waste).

#### **D4.1 Achievements to Date / Work in Progress**

The Polokwane Parks Department has made progress in waste minimization with a successfully operating composting facility. All 'garden waste' collected by the Parks Department as a result of their maintenance activities of municipal facilities is removed from the waste stream and composted.

As result of a national agreement between a private sector supplier and the LOC, Soccer Ball Pole Bins and job creating clean-up plan for all the host cities will be implemented. In order to facilitate waste separation at source the Soccer Ball Pole Bins will be colour coded. The Bins will be installed into the highest pedestrian areas in host cities, where the most litter is generated, at no cost to the host city.

#### **D4.2 Strategy Table**

TARGETS	ACTIONS	ACTION DRIVER & COLLABORATORS
1. Establish a waste management system that includes waste separation & recycling and creates jobs where possible – to service 2010 and beyond.	<p><b>1A. DEVELOPMENT OF A SUSTAINABLE WASTE MANAGEMENT STRATEGY FOR 2010</b></p> <p>Develop a Sustainable Waste Management Operational Plan for each 2010 venue to be included in the EMS for each venue. Must estimate waste volumes and types from all 2010 venues and system for servicing the 2010 event and beyond that meets stated targets. The plan must identify key infrastructural gaps / shortfalls for action in terms of achieving a positive waste management legacy after 2010.</p> <p>All non-recyclable waste from events with potential value for re-use (furniture, banners, signage etc) should be identified and either: auctioned off to fans as mementoes, re-used in the manufacture of memento products (e.g. bags from banners) and sold by the PLM. Funds from these sales should be allocated to an appropriate greening legacy project.</p> <p>Implement sustainable waste management plan.</p>	<p><b>DRIVERS:</b></p> <p>Greening Workstream</p> <p><b>COLLABORATORS:</b></p> <p>Waste Management Workstream Stadium / Infrastructure Workstream Fan Park Workstream and operators Training Venue Workstream and operators</p>
2. Minimise waste & maximise recycling during all municipal infrastructure development and refurbishment.	<p><b>2A. CONSTRUCTION WASTE RECYCLING</b></p> <p>All construction and demolition contracts must include a waste management programme that maximises recycling of waste, and responsible disposal of all non-recyclable waste. To be included in tender briefs and contract conditions.</p>	<p><b>DRIVER:</b></p> <p>Stadium Workstream Training Venue Workstream Fan Park organisers Transportation Workstream</p> <p><b>COLLABORATOR:</b></p> <p>Greening Workstream</p>

## D5 SUSTAINABLE TRANSPORT STRATEGY

The strategy aims to achieve an improved system and quality of public transport to service the 2010 event, to accommodate the maximum possible numbers of event participants. This will address the need for reduced carbon emissions from individual vehicle transport to events, and will ease problems of traffic congestion and inadequate parking space around the 2010 venues during events. This strategy looks to establishing a positive public transport and non-motorised transport legacy in Polokwane through the upgrading of public transport facilities and systems, and the establishment of a safe network of cycle and pedestrian routes.

### D5.1 Achievements to Date / Work in Progress

The most significant 2010 infrastructure development project that the PLM is investing in relates to efficient transport and access. In total 12 projects are being implemented by the Transportation Workstream, most of which focus on increasing the capacity of the local road networks. This includes plans to incorporate pedestrian walkways along key motorised transportation routes.

During 2010 it is anticipated that the majority of spectators will access Polokwane by bus. To ensure that there is adequate capacity for this form of public transport, 100 new busses are being purchased by the PLM. To limit privately-owned vehicles from causing excessive congestion around 2010 venues, PLM plans to implement a Park & Ride system. Fortuitously the Peter Mokaba Stadium is only around 4km from the Polokwane CBD and 3.4km from the proposed Fan Park site - which optimises the potential for pedestrian and bicycle access networks to be established. Existing roads from the CBD to the Stadium and Fan Park will be designated as the Fan Mile with all forms of motorised transport being prohibited from the route.

Regarding air travel there are no capacity constraints at the Polokwane Airport as this airport was previously upgraded to accommodate 747 Airliners. The other mode of transport by which fans, particularly those from neighbouring countries like Zimbabwe, are likely to use is rail. To ensure that the system is effective the railway operator and the PLM need to ensure that sufficient trains are available and are in good working order.

### D5.2 Strategy Table

TARGETS	ACTIONS	ACTION DRIVER & COLLABORATORS
1. Increase quality, accessibility & maximise levels of use of public transport for 2010 & beyond.	1A. LOBBY FOR FUEL EFFICIENT AND LOW EMISSION PUBLIC TRANSPORT Lobby for the purchase of fuel efficient and low emission buses.	DRIVER: Greening Workstream  COLLABORATOR: Transportation Workstream
2. Minimise traffic congestion & parking requirements at all event venues for 2010 & beyond.	2A. PARK & RIDE Plan and implement Park & Ride facilities for all 2010 events and to service maximum numbers possible as planned.	DRIVER: Transportation Workstream  COLLABORATOR: Greening Workstream
3. Increase non-motorised transport networks & safety (pedestrian & cycle routes).	3A. DESIGN AND CONSTRUCTION OF SAFE PEDESTRIAN AND CYCLE NETWORKS Design safe pedestrian and cycle networks around (and linking where appropriate) the stadium precinct, Fan Park / Fan Mile and Training Venues, shuttle stops and public transport nodes / stops.	DRIVER: Infrastructure Workstream  COLLABORATORS: Spatial Planning & Development Unit Roads & Stormwater Unit Greening Workstream Beautification

		Workstream Parks Unit
	<b>3B. PROVISION OF SAFE BICYCLE AND MOTORCYCLE PARKING</b> Internal review of all 2010 venue designs and transportation and access plans to ensure that safe bicycle and motorcycle parking facilities are provided at the various stadia, Fan Park and at key stopping / tourist points on cycle routes.	<b>DRIVER:</b> Infrastructure Workstream  <b>COLLABORATORS:</b> Transportation Workstream Stadium, Training Venue and Fan Park Design Teams Greening Workstream

## D6 BIODIVERSITY STRATEGY

The Biodiversity Strategy aims to ensure that local biodiversity and heritage is promoted and enhanced through the hosting of the 2010 World Cup in Polokwane. The strategy includes the development of landscaping approaches and guidelines for municipal and private developments that can be used for 2010 and beyond. It also includes turnkey projects that will create opportunities for PLM to showcase its biodiversity and heritage assets to visitors as a key eco-tourism experience and local tourism marketing initiative.

With the influx of tourists during 2010 the city's ecotourism and heritage sites will come under pressure and plans are needed to ensure that these are not negatively impacted. Local residents and ecologists are concerned that the site selected for the Fan Park may provide critical habitat for African bullfrogs as the site is approximately 1km from the existing bullfrog sanctuary and contains suitable bullfrog habitat.

The 2010 World Cup also presents local ecotourism development / profiling opportunities. The Polokwane Game Reserve is a short drive from the Peter Mokaba Stadium and contains over 21 species of game, including Rhino. The park is currently under-resourced, and with limited accommodation facilities. If these facilities were to be upgraded, a significant amount of revenue could be generated from the park during the 2010 World Cup and a number of new employment opportunities generated (e.g. trail guides, crafters etc).

Regarding cultural and historical sites which are being promoted as part of the provincial 2010 tourism strategy, there appears to be insufficient forward planning to ensure that these will be adequately protected during 2010. Also if nothing is done the legacy impact opportunity to develop these sites as places of tourist attraction beyond 2010 would be lost.

### ***D6.1 Achievements to Date / Work in Progress***

Under the Beautification Workstream the Environmental Management SBU plans to develop an extensive green belt which will follow the course of a river linking the north western and southern part of the town via the stadium precinct. Only local indigenous plants and trees will be planted to provide a local biodiversity experience. The proposed green belt will greatly enhance Polokwane's open space system and will, as a result of new basic amenities and infrastructure to be installed in the vicinity of the stadium, offer fans a recreational outdoor experience in close proximity to the stadium.

## D6.2 Strategy Table

TARGETS	ACTIONS	ACTION DRIVER & COLLABORATORS
1. Achieve 100% locally indigenous landscaping in the Stadium Precinct, training venues & all municipal facilities / tourist routes established for 2010 & beyond.	<b>1A. GREEN LANDSCAPING GUIDELINES</b> Develop green landscaping guidelines for the stadium precinct, training venues, major access routes and proposed green belt adjacent the stadium. The guidelines should contain locally indigenous species lists to be used in planting palettes, habitat creation guides, environmental rehabilitation guides, alien plant control information, environmental design for crime prevention and greening of landscape irrigation, lighting and street furniture.	<b>DRIVER:</b> Greening Workstream  <b>COLLABORATORS:</b> Environmental Management SBU Beautification Workstream
2. Protect local biodiversity and heritage sites, maximise ecotourism opportunities associated with it, and target job creation through ecotourism	<b>2A. REVIEW OF LOCAL AND PROVINCIAL TOURISM STRATEGIES FOR 2010</b> Specialist review of both the local and provincial 2010 Tourism Strategies to identify heritage and ecotourism sites within the PLM area that are being promoted for 2010 and give input if local sites have been missed.	<b>DRIVER:</b> Greening Workstream  <b>COLLABORATOR:</b> Tourism Workstream Environmental Management SBU Parks Department SAHRA Limpopo Tourism LED SBU
	<b>2B. REVIEW OF KEY ECOTOURISM AND HERITAGE SITES</b> Commission specialist review of all the key ecotourism and heritage sites promoted in the 2010 Tourism Strategy to ensure that facilities and infrastructure are adequate to service guests and that job creation opportunities are maximised. It is recommended that the Polokwane Game Reserve be assessed in this manner. 3 "must see" Natural and Cultural Heritage facilities to be selected for upgrading. Job opportunities for trail guides, bird guides, hospitality service persons etc to be identified and promoted.	<b>DRIVER:</b> Tourism Workstream Greening Workstream  <b>COLLABORATORS:</b> Tourism Facility owners / operators SAHRA Limpopo Tourism LEDET
	<b>2C. INFRASTRUCTURE UPGRADING AT 3 KEY ECOTOURISM AND HERITAGE SITES IN PLM</b> Seek funding, obtain legal authorisations and upgrade facilities and infrastructure / build new facilities and infrastructure at the 3 sites recommended.	<b>DRIVER:</b> Tourism Workstream Greening Workstream  <b>COLLABORATORS:</b> Venue owners / operators
	<b>2D. MARKETING AND PROFILING STRATEGY FOR 3 KEY ECOTOURISM AND HERITAGE SITES IN PLM</b> Develop a local marketing and profiling strategy for ecotourism and heritage sites identified as "must see" sites for all visitors to Polokwane. Incentives such as free entrance, special accommodation rates etc can be used to maximise use of these areas if necessary.	<b>DRIVER:</b> Tourism Workstream Greening Workstream  <b>COLLABORATORS:</b> Venue owners / operators

## D7 AWARENESS RAISING AND REPORTING STRATEGY

The 2010 Greening Programme introduces a range of environment friendly approaches and technologies that assist in creating more sustainable infrastructure and operational systems, and minimise local, regional and global environmental impacts. There is thus a key opportunity to promote the use of these "best practice" approaches to a broader audience as part of the 2010 profiling campaign. Over and above this, 2010 represents an opportunity to promote general environmental awareness and the need for all individuals to take action. In addition to this, the achievements of the 2010 Greening Programme need to be reported on. This will be done through an environmental awareness-raising campaign linked to the 2010 Communications Workstream.

In terms of the Framework for the National 2010 Greening Programme, appropriate levels of reporting on progress and achievements will be required from all Host Cities to LOC. LOC will use this information to report nationally on 2010 Greening Achievements in South Africa. In addition, DEAT will assist on compilation of the Legacy report where possible and within financial means.

### **D7.1 Achievements to Date / Work in Progress**

The Communication Workstream is in the process of developing their 2010 Communication Strategy for 2010. They plan to use a variety of media and materials and intend to include awareness-raising around greening and report on progress made and greening successes as part of their Communication Strategy.

### **D7.2 Strategy Table**

TARGETS	ACTIONS	ACTION DRIVER & COLLABORATORS	POSSIBLE FUNDERS / CONTRIBUTORS
1. Raise awareness and promote the adoption of eco-friendly technologies, systems & approaches before and through the 2010 World Cup.	1A. GREENING 2010 EXPO Organise at least one Greening 2010 Expo to showcase eco-friendly approaches and technologies to the 2010 event infrastructure and operational systems. Could combine with a local tourism / eco-tourism expo.	DRIVER: Greening Workstream  COLLABORATOR: Communications Workstream	DEAT FIFA sponsors LEDET
	1B. INFORMATION SHARING WITH COMMUNICATIONS WORKSTREAM Provide the 2010 Communications Coordinator (under the Communications Workstream) with material that can raise awareness of greening and provide regular updates of greening progress made.	DRIVER: Greening Workstream  COLLABORATOR: Communications Workstream	PLM
2. Report on greening achievements.	2A. LOCAL AND NATIONAL PRESS RELEASES AND RADIO TALK SHOWS Maintain positive presence in local and national press and radio through regular submission of articles and talk shows on what is being done / achieved.	DRIVER: Greening Workstream  COLLABORATOR: Communications Workstream	PLM

## **D8 MONITORING & EVALUATION STRATEGY**

Owing to the fact that event greening is an emerging field internationally, the Polokwane 2010 World Cup Greening Programme offers an important opportunity to critically evaluate and learn from the experience. In order to do this, implementation of the Greening Programme Work Plan must be monitored through its implementation. Information from this monitoring needs to be critically evaluated to determine the factors of success and failure during each phase of implementation - from event planning to hosting of the event, and for a period following to determine the legacy effects of the Programme. Owing to the fact that the Communication and Awareness Raising Strategy requires regular monitoring of the achievements of the programme for the purposes of reporting, this action is not repeated specifically in the Monitoring and Evaluation Strategy.

The outputs of the Programme Evaluation can be used by the PLM to develop greening approaches to other events hosted in Polokwane, and can be shared with other South African cities, FIFA and the international community.



## **D8.1 Strategy Table**

TARGETS	ACTIONS	ACTION DRIVER & COLLABORATORS
1. Monitor implementation of the Greening Programme during 2010 and for 6 months post event.	1A. MONITORING Collect and collate information on what is achieved in the Greening Programme throughout the build up to and hosting of the event.	DRIVER: Greening Workstream
2. Critically evaluate the successes and failures of the Greening Programme and make assessment information available to others.	2A. EVALUATION AND REPORTING Analyse factors of success and failure in the planning, hosting and post-event stages of the 2010 World Cup. Publish results to an appropriate level of public access.	DRIVER: Greening Workstream

## **D9 CROSS CUTTING PROJECTS / RESOURCES**

### **D9.1 Environmental Management Systems for 2010 Venues**

The Minimum Environmental Standards for greening the 2010 event in South Africa have included the need for an Environmental Management System (EMS) to be developed for each official 2010 venue (stadia, Fan Parks and Training Venues). These EMS's are intended mainly to guide the operational phases of these venues, and the closure phase where appropriate. The EMS's cut across the targets and objectives of the various Greening Strategies contained in this plan, and need to address the following key areas:

- Maximising efficiency of energy use, and maintenance of energy infrastructure (including renewable energy sources).
- Maximising efficiency of water use, and maintenance of water infrastructure. This includes ongoing prevention of water pollution.
- Maximising efficiency and sustainability of waste collection, handling and disposal.
- Minimising negative impacts on natural resources, ecosystems and biodiversity.
- Minimising local and global environmental impacts through an environment-focused procurement policy.
- Ensuring maximum financial sustainability.

The EMS's need to include the following components at a minimum:

- Energy Management Operational Plan
- Water Use Management Operational Plan
- Stormwater Management Plan
- Waste Management Operational Plan
- Landscape Development and Management Plan
- Procurement Policy

### **D9.2 Greening Programme Resources / Capacity**

Given the fact that most of the Greening projects contained within this Plan will need to be developed, owned and driven by a dedicated Greening Workstream or other resource within the Polokwane Local Municipality, it is believed to be absolutely necessary to ensure that additional human resources are obtained to perform or assist with this function (as currently there is one person allocated part-time to this task within the Municipality). It is therefore recommended that a dedicated Programme Manager / Co-ordinator is appointed to manage the various projects and ensure their delivery.

## SECTION E: PROJECTS AND FINANCIAL PLAN

This section contains estimated budgets needed to implement the various Projects identified in the Greening Strategies contained within this Plan, and contains project briefs for each of the projects that needs to be contracted out of the PLM.

**It should be noted that NOT ALL PROJECTS CONTAINED WITHIN THIS PLAN MUST NECESSARILY BE IMPLEMENTED. It is anticipated that the Greening Workstream Leader will liaise with municipal Treasury Department and other line functions in order to prioritise which projects can be accommodated financially and within human resource constraints in time for 2010. The option exists to implement the remaining projects post-2010 as legacy Greening projects for the municipality.**

### E1 CROSS-CUTTING PROJECTS

These projects cross-cut a range of the Greening Strategies outlined in this Plan.

#### ***A. Environmental Management Systems for 2010 Venues***

##### **1. Project Description / Overview**

This project responds to the national Minimum Environmental Standards for Greening as developed by the LOC and involves the establishment of an Environmental Management System (EMS) at each of the official FIFA venues which ensure that the environmental sustainability and efficiency concepts of the Greening Programme are implemented. This includes the Peter Mokaba Stadium in Polokwane, the Training Venues and Fan Park.

##### **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project. Requires close collaboration with the Infrastructure Workstream and Stadium Design and Construction teams, Training Venue Workstream, Fan Park organisers and operators of these venues.

##### **3. Scope of Work**

- Undertake energy, water and waste baseline assessments of all official 2010 Venues.
- Develop an EMS for each of the official 2010 Venues that address the operational management phase of the facilities (and the construction, set up and / or closure where appropriate). These must include Energy Management Operational Plans, Water Management Operational Plans, Sustainable Waste Management Operational Plans. The EMS's must address maximised environmental sustainability and efficiency, as well as appropriate types and levels of monitoring / metering and measurement systems.

##### **4. Outputs**

- Baseline water, energy and waste reports for each 2010 Venue.
- EMS for each 2010 Venue containing Water, Waste and Energy Management Operational Plans.

##### **5. Skills / Resources Required for Completion of the Work**

Architect (with "Green Buildings" experience)

Electrical Engineer

Mechanical Engineer

Integrated Waste Management Specialist

Landscape Architect / Irrigation Specialist

##### **6. Key Partnering Agencies**

DBSA

DANIDA

DEAT

CEF

## 7. Timeframe

Start: First Quarter 2009, completed by mid-2009.

## 8. Budget

OPERATING BUDGET will need to be used for this Project.

TASKS (from scope of work)	Budget			TOTAL BUDGET
	2009	2010	2011	
Baseline assessments - Peter Mokaba Stadium	R 60 000	R 0	R 0	R 60 000
Baseline assessments - Training Venues	R 60 000	R 0	R 0	R 60 000
Baseline assessments - Fan Park	R 30 000	R 0	R 0	R 30 000
EMS - Peter Mokaba Stadium	R 350 000	R 0	R 0	R 350 000
EMS - Training Venues	R 300 000	R 0	R 0	R 300 000
EMS - Fan Park	R 100 000	R 0	R 0	R 100 000
<b>TOTAL</b>	<b>R 900 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 900 000</b>

## B. Greening Programme Co-ordinator

It is proposed that a person is appointed on an 18 month contract to co-ordinate the Greening Programme within the PLM. The selected individual needs to have the following skills:

Project Management

Experience in working in a local municipal environment

Experience in environmental-related projects

It is suggested that remuneration come from operating budget and be structured as follows:

2009: Monthly remuneration R25,000 / month X 12 months = R300,000

2010: Monthly remuneration R26750 / month X 6 months = R160,500

TOTAL COST: R460,500

# E2 CLIMATE IMPACT MANAGEMENT

## Project 1A: Carbon Footprint Calculation

### 1. Project Description / Overview

This project responds to the Greening Programme target of measuring and reporting on Climate Impact Management achievements. The national Greening 2010 Programme co-ordinated by DEAT and the LOC has a process in which the national carbon footprint of the 2010 World Cup is being calculated. Nelspruit's footprint should be included in this, and this information should be available back to the Mbombela Municipality such that they have their local carbon footprint for the 2010 World Cup.

The Greening Workstream should lead the process of providing the necessary information to DEAT and their appointed specialists for the carbon footprint calculation. Should this process not be able to provide a detailed carbon footprint for Mbombela Local Municipality, a separate project may be undertaken for this.

## Project 1B: Reporting on Carbon Footprint Reductions and Best Practice Guidebook

## **1. Project Description / Overview**

This project responds to the Greening Programme target of minimising or avoiding carbon emissions wherever possible and measuring and reporting on Climate Impact Management achievements.

The purpose of the project is to account for the carbon sequestration potential of trees planted in City Beautification Programme, in the stadium, practice stadia and Fan Park landscaping. It involves a review of the design and specifications of Peter Mokaba Stadium in respect of achievements in embodied carbon emissions reductions through the materials used and construction methods employed. It should also account for carbon savings from sustainable transport systems implemented to service the event and sustainable waste management systems implemented. The project should calculate the carbon emissions reductions and sequestration achieved as a % of total estimated carbon footprint.

The outcomes of this review should be used to produce a best practice carbon emissions minimisation guide for use in the training venue upgrades, but also for future Municipal construction tenders / contracts (thus positive legacy impact).

## **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project. Requires close collaboration with the Infrastructure Workstream and Stadium Design and Construction teams, Fan Park organisers and operators. Also requires close collaboration with:

- Solid waste management
- Transportation Workstream
- Parks Department
- Beautification Workstream

## **3. Scope of Work**

- Consult with city Beautification Workstream, Parks and Environment Department to determine the number of trees and shrubs planted in preparation for 2010.
- Estimate the carbon sequestration potential of the identified carbon sequestration and carbon offset projects.
- Review Stadium Bill of Quantities and calculate embodied carbon emissions associated with the materials used.
- Review stadium design to identify good / best practices that have reduced the installed energy capacity and carbon footprint of the stadium (e.g. natural ventilation and lighting).
- Review engineering design and specification to determine the energy footprint of the stadium and associated carbon footprint (this can be calculated on the basis of energy use anticipated during the 2010 World Cup events).
- Through consultation with the professional design team, evaluate how / whether the installed energy capacity of the stadium and / or actual energy footprint of the stadium has been reduced through climate / environmentally sensitive design and specifications of the stadium – and quantify this (in terms of actual energy saved and how this has reduced the carbon footprint).
- Evaluate the construction process to determine examples of energy efficient practice and how this might reduce the carbon footprint / climate impacts of this process.
- Calculate and produce a report on the carbon footprint reductions / sequestration potential of the above. The project should calculate the carbon emissions reductions and sequestration achieved as a % of total estimated carbon footprint. The report should point to best practices and good approaches used.
- Produce a best practice guidebook on design, construction and energy specifications for reducing impacts on global climate – that uses positive examples from the above review – and that can be used in municipal construction contracts and for the training venues.

## **4. Outputs**

- Review Report

- Best Practice Guidebook

## 5. Skills / Resources Required for Completion of the Work

- Architect (with “Green Buildings” experience)
- Electrical Engineer
- Carbon Footprinting Specialist

## 6. Key Partnering Agencies

DBSA

DANIDA

DEAT

Green Building Council of SA

## 7. Timeframe

Start: July 2009 – December 2009.

## 8. Budget

OPERATING BUDGET will need to be used for this Project.

TASKS (from scope of work)	Budget			TOTAL OPEX BUDGET
	2009	2010	2011	
Collection of information and consultation	R 50 000.00	R 0	R 0	R 50 000
Stadium design review	R 20 000	R 0	R 0	R 20 000
C footprint calculations	R 80 000	R 0	R 0	R 80 000
Production of Review Report	R 60 000	R 0	R 0	R 60 000
Production of Guidebook	R 150 000	R 0	R 0	R 150 000
<b>TOTAL</b>	<b>R 360 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 360 000</b>

## ***Project 2A: Lobby for Low Emissions Public Transport Fleet***

### 1. Project Description / Overview

This project responds to the Greening Programme target of minimising or avoiding carbon emissions wherever possible. It involves the Greening Workstream lobbying the relevant Transportation unit or workstream to ensure that public transport vehicles servicing 2010 (and beyond) meet appropriate emissions standards (Euro II) and have maximum fuel economy.

This is an internal function that can be completed by municipal staff members and does not require the appointment of specialist consultants.

### 2. Timeframe

Start immediately and lobby through to completion of purchase of transport fleet.

## ***Project 3A: Support / Maximise Tree Planting***

### 1. Project Description / Overview

This project responds to the Greening Programme target of offsetting the unavoidable carbon emissions associated with hosting the event to the maximum extent possible. It involves the Greening Workstream providing a support function to the City Beautification Workstream in terms of maximising the number of trees planted in the Municipal Area. These trees will perform an important role in sequestering carbon.

It should be noted here that the Greening Workstream can also assist by seeking funding for tree planting from agencies such as Department of Water Affairs and Forestry’s “Million Trees Programme”, which is providing

funding for tree planting initiatives in many of the 2010 Host Cities. Food and Trees for Africa may also be approached to assist with finding tree planting sponsors.

## **2. Timeframe**

Start immediately – to June 2010.

### ***Project 3B: Carbon Sequestration Project Development***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of offsetting the unavoidable carbon emissions associated with hosting the event to the maximum extent possible. It involves the Greening Workstream working with the Parks Department and local SANBI office to identify any deforested areas, or areas around the stadium, that could be viable sites for establishing / re-establishing forests through mass tree planting. These areas will be key carbon sequestration zones within the municipal area that can assist in offsetting the carbon footprint.

The Greening Workstream should lead the process of developing a project business plan and taking this out to potential project funders. The budget for the project will be dependant mainly on the size and location of the identified Tree Planting area.

It is suggested that the project development process is also assisted by possible implementation partners such as Wildlands Conservation Trust's Trees for Life / Treepreneurs Programmes, such that job creation and other social objectives associated with such projects can be maximised.

## **2. Timeframe**

First quarter 2009.

### ***Project 3C: Carbon Emissions Reductions Project Development***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of offsetting the unavoidable carbon emissions associated with hosting the event to the maximum extent possible. It involves a process of identifying, evaluating and prioritising potential carbon offset projects that can be implemented in the municipal area. The purpose is to achieve maximum possible offsets locally, with maximum associated social and economic benefits.

#### **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project. Requires close collaboration with Environmental / Sustainability Department and all other line departments with potential energy savings projects (traffic & transportation, housing, buildings management, architectural services, wastewater management, solid waste management etc).

#### **3. Scope of Work**

The development of the carbon offset project must include a process to identify potential carbon emissions reductions projects that will offset the carbon emissions associate with the 2010 World Cup in Polokwane, and evaluation and prioritization of these. It is a requirement that all potential projects identified and evaluated be located within the Polokwane Municipal Area. It is not a requirement that projects identified / prioritized must qualify as Certifiable Emissions Reductions projects (i.e. by the UNFCCC), or as Verifiable Emissions Reductions projects; however, the specialist consultant will be expected to advise on the qualification criteria, benefits and options of selecting projects that can be certified or verified for emissions trading.

It is intended that the project identification and development process will include:



- Development of a set of criteria for evaluating potential carbon sequestration and offset projects, to include:  
Maximum carbon emissions mitigation (to meet and / or exceed the emissions associated with hosting the 2010 World Cup locally);  
Maximum long term and financial sustainability;  
Project precedents for achieving carbon accreditation for trading of any excess carbon credits (over and above those needed to offset the 2010 emissions) - CER's or VER's depending on which is considered appropriate;  
Affordability and potential interest from funders / donors;  
Social benefits from the project, including job creation;  
Location of project within municipality.
- Consultation with relevant municipal service departments in the identification of appropriate and implementable local carbon sequestration and offset projects (possibly including biogas projects, energy efficiency initiatives etc).
- Consultation with relevant carbon trading authorities / market players to determine likelihood of obtaining CER certification from the UNFCCC and / or establishing VER's that can be traded on the open market (note that this may be one mechanism for funding the project if carbon credits over and above those required to offset the 2010 carbon footprint can be achieved).
- Development of a project business plan for the preferred and most viable carbon offset project. This plan must be ready for taking to potential project funders.

#### **4. Outputs**

- Project evaluation criteria
- Workshop / meeting reports
- Project identification and prioritisation report
- Project Business Plan (for preferred project)

#### **5. Skills / Resources Required for Completion of the Work**

- Specialist expertise in carbon emissions reductions project identification and planning, preferably with some experience in carbon credits registration and trading

#### **6. Key Partnering Agencies**

DANIDA  
DEAT  
World Bank  
FirstClimate

#### **7. Timeframe**

Start: First Quarter 2009, completed by end-2009.

#### **8. Budget**

CAPITAL BUDGET will need to be used for this Project.

TASKS (from scope of work)	Budget			TOTAL CAPEX BUDGET
	2009	2010	2011	
Development of project selectio criteria	R 40 000	R 0	R 0	R 40 000
Workshops / meetings with municipal sectors	R 60 000	R 0	R 0	R 60 000
Consultation with UNFCC etc	R 15 000	R 0	R 0	R 15 000
Project prioritisation process & report	R 60 000	R 0	R 0	R 60 000
Project Business Plan	R 150 000	R 0	R 0	R 150 000
<b>TOTAL</b>	<b>R 325 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 325 000</b>

## E3 ENERGY EFFICIENCY

### ***Project 1A: Maximise Energy Efficiency Energy at 2010 Venues & City Beautification Routes***

#### **Project Description / Overview**

This project responds to the Greening Programme target of maximising and demonstrating energy use reductions through efficiency, but also through the use of renewable energy where possible. The Greening Workstream needs to ensure that the Training Venue, Infrastructure Workstream, Beautification Workstream and the Fan Park organisers include the need for maximum energy efficiency in the terms of reference, tender and contract documents for the Training Venues, Fan Park, Park & Rides and Intermodal Transport Facilities, as well as along city beautification routes. In addition to this, contractors and consultants need to investigate the possibilities for use of renewable energy sources (PV cells, solar water heating, wind energy etc) as a more sustainable supply source where possible and feasible. CFL's should be installed to replace standard street lighting along the approximately 20km of city beautification routes.

The Greening Workstream needs to ensure that appropriate energy efficiency and renewable energy criteria are included in the tender documentation and contracts of all parties involved in the development, design, upgrading, establishment and operation of these facilities. The Greening Workstream may also assist by lobbying Eskom and the CEF for funding for CFL's as a DSM initiative in the PLM.

### ***Project 1B: Promote Energy Efficiency in Private Sector***

#### **Project Description / Overview**

This project responds to the Greening Programme target of maximising and demonstrating energy use reductions. The Greening Workstream needs to ensure that the Municipal Electricity Dept / Infrastructure Workstream and the Fan Park organisers include the need for energy efficiency in all agreements with private service providers (caterers, hospitality, media and broadcasting) that will be operating at FIFA venues during the 2010 World Cup. In addition, the tourism and hospitality sector should be lobbied to maximise their energy savings.

### ***Project 2A: Renewable Energy at Peter Mokaba Stadium***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of implementing at least one renewable energy supply initiative for 2010 at either the Peter Mokaba Stadium, Fan Park or at the training venues (e.g. solar water heating and PV cells for lighting). Appropriate specialists would need to be hired to undertake feasibility investigations into potential renewable energy supplies at the 2010 venues; prioritise feasible projects and identify funding sources for implementation.

#### **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project. Requires collaboration with the stadium, Fan Park and training venue design teams and a range of municipal service departments.

### 3. Scope of Work

- Scope potential renewable energy supply opportunities at the various 2010 venues
- Evaluate feasibility and cost of implementation of priority projects
- Identify and canvass potential project funders
- Prepare business plan for at least one selected priority project

### 4. Outputs

- Project Scoping Report
- Business Plan

### 5. Skills / Resources Required for Completion of the Work

Electrical Engineer

Mechanical Engineer

Carbon Trading and Registration Expert / Specialist

### 6. Key Partnering Agencies

DANIDA

World Bank

DBSA

GEF

### 7. Timeframe

July 2009 – June 2010.

### 8. Budget

CAPITAL BUDGET will need to be used for this Project.

TASKS (from scope of work)	Budget			TOTAL BUDGET
	2009	2010	2011	
Scope potential renewable energy projects	R 50 000	R 0	R 0	R 50 000
Test feasibility and cost of priority projects	R 30 000	R 0	R 0	R 30 000
ID and canvas potential funders	R 0	R 15 000	R 0	R 15 000
Prepare business plan for preferred project	R 0	R 80 000	R 0	R 80 000
<b>TOTAL</b>	<b>R 80 000</b>	<b>R 95 000</b>	<b>R 0</b>	<b>R 175 000</b>

## E4 WATER CONSERVATION & MANAGEMENT

### *Project 1A: Maximise Water Use Efficiency at 2010 Venues*

#### **Project Description / Overview**

This project responds to the Greening Programme target of minimising water use at event hosting venues – including efficiency of use, rainwater harvesting and grey water recycling. The Greening Workstream needs to ensure that the Training Venue, Infrastructure Workstream and the Fan Park organisers include the need for maximum water use minimisation in the terms of reference, tender and contract documents for the Training Venues, Fan Park, Park & Rides and Intermodal Transport Facilities. In addition to this, contractors and consultants need to investigate the possibilities for use of harvested rainwater and recycled grey water as a more sustainable supply source where possible and feasible.

The Greening Workstream needs to ensure that appropriate water conservation and management criteria are included in the tender documentation and contracts of all parties involved in the development, design, upgrading, establishment and operation of these facilities.

## ***Project 1B: Review of Stadium Precinct Landscaping Plan***

### **1. Project Description / Overview**

This project responds to the Greening Programme target of minimising water use at event hosting venues – including efficiency of use and grey water recycling. The project entails the review of Peter Mokaba stadium precinct landscaping plan by the Greening Workstream to ensure that only water-wise indigenous species are being used and that all opportunities for grey-water recycling are being implemented and that the irrigation system must be water use efficient. The project will ensure that water use at 2010 venues is kept to an absolute minimum.

### **2. Project Drivers and Collaborators**

The project is to be driven by the Greening Workstream in close collaboration with the Stadium Design Team. Other collaborators include:

Beautification Workstream

Parks Department

Environmental Department

### **3. Scope of Work**

- Greening Workstream to review landscaping plan for the Peter Mokaba Stadium precinct.
- Revision of landscaping plan by appointed landscape architect in accordance with Greening Workstream recommendations.

### **4. Outputs**

- Report on findings of review.
- Revised landscaping plan.
- Water use efficient landscaping including, where feasible, grey-water recycling and water use efficient irrigation systems.

### **5. Skills / Resources Required for Completion of the Work**

The work can be conducted in-house by the municipality provided an official in the Environment Department has expertise in indigenous plants.

### **6. Key Partnering Agencies**

Limpopo University Herbarium

WESSA

### **7. Timeframe**

The project must start in February 2009 and be completed by March 2009.

### **8. Budget**

This project falls within the mandate of the Environmental Department and should be funded out of their normal operating budget.

## ***Project 2A: Stormwater Management Plan for Peter Mokaba Stadium***

### **1. Project Description / Overview**

This project responds to the Greening Programme target of avoiding increased flood peaks and pollution of natural water resources as a result of the construction and operation of the Peter Mokaba Stadium.

## 2. Project Drivers and Collaborators

Stadium / Infrastructure Workstream to own and drive the project with assistance from the Greening Workstream. Key collaborators will be the Stadium Operators, Municipal Stormwater Management Department.

## 3. Scope of Work

- Review EIA Record of Decision for upgrading of Peter Mokaba Stadium to define the requirements of the Stormwater Management Plan.
- Develop a Stormwater Management Plan for the construction and operational phases of the development that ensure that flood peaks are not exacerbated and that local water resources are protected.
- Inclusion of Plan in TOR for Stadium Operator.
- Implementation of Stormwater Management Plan.

## 4. Outputs

Stormwater Management Plan.

Relevant component of Stadium Operator TOR.

## 5. Skills / Resources Required for Completion of the Work

Stormwater Engineer

## 6. Key Partnering Agencies

DWAF

DBSA

## 7. Timeframe

February to October 2009.

## 8. Budget

CAPITAL BUDGET will need to be used for this Project.

TASKS (from scope of work)	Budget			TOTAL BUDGET
	2009	2010	2011	
Review ROD and consult with DWAF	R 8 000	R 0	R 0	R 8 000
Development of Stormwater Management Plan	R 60 000	R 0	R 0	R 60 000
Inputs to Stadium Operators TOR	R 8 000	R 0	R 0	R 8 000
Implementation of Plan	R 250 000	R 0	R 0	R 250 000
<b>TOTAL</b>	<b>R 326 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 326 000</b>

# E5 SUSTAINABLE WASTE MANAGEMENT

## *Project 1A: Development of a Sustainable Waste Management Strategy for 2010*

### 1. Project Description / Overview

This project responds to the Greening Programme target of establishing a waste management system for 2010 that minimises waste at source, includes waste separation and recycling, and creates sustainable jobs. Note that this is not the Waste Management Plan for 2010, the development of which is the responsibility of the Waste Management Workstream. The Sustainable Waste Management Strategy is an add-on to this Plan which ensures that waste management during is “greener”.

### 2. Project Drivers and Collaborators

Greening Workstream to own and drive project. Requires close collaboration with the municipal solid waste department, stadium workstream, infrastructure workstream, Fan Park workstream and operators, training venues workstream and operators. Implementation of the Strategy will need to be done either by the municipality's own waste management department or selected waste contractor / s.

### 3. Scope of Work

- Utilise waste baseline assessments conducted under Project A of "Cross-Cutting Projects" to estimate waste volumes and types from the various 2010 venues.
- Undertake estimation of increase in waste volumes (and types) from tourism and hospitality facilities within the area.
- Evaluate current infrastructural capacity to handle the anticipated waste volumes, and determine the capacity of existing recycling / waste separation facilities within the area.
- Determine and cost additional infrastructure and facilities required.
- Develop protocol for waste minimisation at the official 2010 venues.
- Develop adapted protocol / guideline for tourism and hospitality sector to use in minimising their waste outputs.
- Develop a Sustainable Waste Management Strategy including the above information.
- Implement strategy.

### 4. Outputs

Waste minimisation protocol for 2010 Venues

Waste minimisation guideline for tourism and hospitality sectors

Sustainable Waste Management Strategy.

Refurbished or installed waste management infrastructure.

### 5. Skills / Resources Required for Completion of the Work

Integrated Waste Management Specialist

Waste Systems Expert

### 6. Key Partnering Agencies

FIFA Sponsors (food and beverage)

Recycling agencies

DLGH

DEAT

DBSA

### 7. Timeframe

February 2009 to July 2010.

### 8. Budget

CAPITAL BUDGET will need to be used for this Project.

TASKS (from scope of work)	Budget			TOTAL CAPEX BUDGET
	2009	2010	2011	
Collection of waste information	R 25 000	R 0	R 0	R 25 000
Evaluation of infrastructure capacity	R 30 000	R 0	R 0	R 30 000
Costing of additional infrastructure and systems re	R 40 000	R 0	R 0	R 40 000
Develop waste minimisation protocols	R 200 000	R 0	R 0	R 200 000
Develop waste management strategy	R 200 000	R 0	R 0	R 200 000
Implementation	R 0	R 1 500 000	R 0	R 1 500 000
<b>TOTAL</b>	<b>R 495 000</b>	<b>R 1 500 000</b>	<b>R 0</b>	<b>R 1 995 000</b>



## ***Project 2A: Construction Waste Recycling***

### **Project Description / Overview**

This project responds to the Greening Programme target of minimising waste and maximising recycling during all municipal infrastructure development and refurbishment. The Greening Workstream needs to ensure that the Training Venue, Infrastructure Workstream and the Fan Park organisers include the need for waste minimisation and recycling in the construction / demolition terms of reference, tender and contract documents for the Training Venues, Fan Park, Park & Rides and Intermodal Transport Facilities.

The Greening Workstream needs to ensure that appropriate sustainable waste management criteria are included in the tender documentation and contracts of all parties involved in the development, design, upgrading, establishment and operation of these facilities.

## **E6 SUSTAINABLE TRANSPORT**

### ***Project 1A: Lobby for fuel efficient and low emission public transport for 2010***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of minimising traffic congestion and parking requirements at all event venues for 2010 and beyond by increasing Polokwane's public transport fleet.

The project will be driven and owned by the Greening Workstream. The Greening Workstream will lobby for the purchase of new fuel efficient busses that meet the appropriate emission standards. The purchase of new fuel efficient and low emission vehicles will influence the PLM's carbon footprint and therefore information in this regard (e.g. the number of new fuel efficient busses) will be used in calculating PLM's carbon footprint reduction (project 1B in the Climate Change Strategy).

### ***Project 2A: Park & Ride***

#### **Project Description / Overview**

This project responds to the Greening Programme target of minimising traffic congestion and parking requirements at all event venues for 2010 and beyond by promoting the use of Park & Ride systems.

The Greening Workstream needs to provide a support function to the Infrastructure Workstream to ensure that this is implemented such that it meets the required greening targets and objectives.

### ***Project 3A: Design and Construction of Safe Pedestrian and Cycle Networks for 2010***

#### **Project Description / Overview**

This project responds to the Greening Programme target of improving pedestrian linkages and cycle networks between public transport nodes and 2010 venues. The Greening Workstream can play a supporting role to the Infrastructure Workstream in the implementation of this.

### ***Project 3B: Provision of Safe Bicycle and Motorcycle Parking for 2010***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of improving non-motorised transport modes between public transport nodes and 2010 venues. The Greening Workstream can play a supporting role to the Infrastructure Workstream in the implementation of this project.

## E7 BIODIVERSITY

### ***Project 1A: Green Landscaping Guidelines***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of enhancing and promoting local biodiversity through green landscaping. The Green landscaping guidelines are intended to inform the various city beautification and landscaping projects that will be undertaken for 2010 and beyond. The guidelines should also be made available to the public to promote a more environmentally friendly form of landscaping in the MLM as a positive legacy initiative. The green landscaping guidelines should cover hard and soft landscapes, and address broadly the environmental issues that can be associated with landscaping (water and energy efficiency, use of environmentally friendly plants and materials etc).

#### **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project. Requires collaboration with the Parks Department.

#### **3. Skills / Resources Required for Completion of the Work**

Specialist landscaper / environmental rehabilitation specialist

#### **6. Key Partnering Agencies**

DWAF

Limpopo University Herbarium

WESSA

SANBI

#### **7. Timeframe**

First quarter 2009.

#### **8. Budget**

OPERATING BUDGET will need to be used for this Project.

TASKS (from scope of work)	Budget			TOTAL BUDGET
	2009	2010	2011	
Develop guideline	R 200 000	R 0	R 0	R 200 000
Print and distribute to public	R 200 000	R 0	R 0	R 200 000
<b>TOTAL</b>	<b>R 400 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 400 000</b>

### ***Project 2A: Review of the Local and Provincial 2010 Tourism Strategies***

#### **1. Project Description / Overview**

This project (and projects 2B, C & D below) responds to the Greening Programme target of enhancing and promoting local biodiversity and cultural heritage. The project entails commissioning an specialist review of both the local and provincial 2010 Tourism Strategies to identify heritage and ecotourism sites within the PLM area that are being promoted for 2010 and give input if local sites have been missed. The project, along with Projects 2 B & C, aim to ensure that ecotourism opportunities associated with 2010 are maximised while at the same time ensuring that local biodiversity and heritage sites are adequately protected by identifying sites that are being promoted.

#### **2. Project Drivers and Collaborators**

The project is to be driven by the Greening Workstream with close collaboration with the Tourism Workstream. Other collaborators include:

Environmental Management SBU

### 3. Scope of Work

- Review of local and provincial tourism strategies for 2010 to identify local (i.e. in PLM) ecotourism and heritage sites being promoted.
- Determine if any key local ecotourism and heritage sites missed and make recommendations for the inclusion of any key sites missed.

### 4. Outputs

- Report listing local ecotourism and heritage sites being promoted and recommendations for the inclusion of any additional sites (if appropriate).

### 5. Skills / Resources Required for Completion of the Work

The work must be outsourced to a professional in the tourism sector who has a knowledge of local heritage and ecotourism sites in the PLM.

### 6. Key Partnering Agencies

No agencies need to be involved from a technical input perspective (although these will be required in Projects 2B & C. The Greening Workstream (and the appointed specialist) will have to collaborate with the provincial tourism agency (Limpopo Tourism) and the PLM's LED SBU as these are the custodians of the provincial and local tourism strategies respectively.

### 7. Timeframe

The project must start early in 2009 and be completed by February 2009.

### 8. Budget

The budget is OPERATING EXPENDITURE.

TASKS (from scope of work)	Budget			TOTAL BUDGET
	2009	2010	2011	
Review of tourism strategies	R 10 000	R 0	R 0	R 10 000
Prepare report detailing findings	R 20 000	R 0	R 0	R 20 000
<b>TOTAL</b>	<b>R 30 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 30 000</b>

## ***Project 2B: Review of Key Ecotourism and Heritage Sites Promoted for 2010***

### 1. Project Description / Overview

The project entails the commissioning of a specialist review of all the key ecotourism and heritage sites promoted in the 2010 Tourism Strategy to ensure that facilities and infrastructure are adequate to service guests and that job creation opportunities are maximised. It is recommended that the Polokwane Game Reserve be assessed in this manner, regardless of whether it is listed as a key 2010 ecotourism site. Job opportunities for trail guides, bird guides, hospitality service persons etc are to be identified and promoted. The primary output of the project are recommendations for the upgrading and/or installation of new facilities that optimise the tourism potential of the site's while at the same time as ensuring that they are adequately protected. The project also has potential legacy impacts because the upgraded / new infrastructure will remain in place beyond 2010 and as a result sites will have a greater potential to attract tourists.

### 2. Project Drivers and Collaborators

The project is a combined initiative to be driven by both the Tourism Workstream and the Greening Workstream. A representative from each workstream should be involved in managing the specialist study.

Collaborators include the following:

Tourism Facility owners / operators (as access to the sites will be required and information regarding the status of existing services will be required).

SAHRA (as the government agency delegated with protecting heritage resources and potential funder).

Limpopo Tourism (the custodian of the provincial strategy and authority mandated with promoting tourism in the Limpopo province).

Economic Development SBU (to provide input regarding employment creation opportunities).

### **3. Scope of Work**

Assessment of all Natural and Cultural Heritage sites promoted in the tourism strategy in terms of:

- Capacity to accommodate visitors
- Actual visitor numbers per annum
- Revenue generated
- Quality of services provided and need for upgrade / improvement (access, parking, signage, ablutions, educational and kiosk facilities, recreational infrastructure, and interpretive signage)
- Advertising and promotions strategy

Select 3 key Natural and Cultural Heritage facilities for upgrading. Selection of these facilities will be on the basis of:

- Quality / uniqueness of experience offered to visitors
- Accessibility to the central areas and accommodation nodes
- Ability to accommodate high numbers of visitors with limited threat to the natural / cultural heritage assets

Develop business plans for the upgrading of these facilities that can be submitted to the provincial department of tourism and other potential funders. The business plans must address the upgrading of visitor facilities to maximise the number of visitor numbers that can be accommodated, diversify the range of offerings to visitors, improved advertising and marketing for 2010, improved signage and interpretive materials etc where appropriate. The business plans must contain detailed costings for the required upgrades.

### **4. Outputs**

- Specialist report assessing local sites promoted and identifying 3 key sites for upgrading.

### **5. Skills / Resources Required for Completion of the Work**

The project must be outsourced to an appropriately qualified specialist team. The specialist team must include a tourism specialist with demonstrated capabilities to prepare tourism plans and a civils engineer who can review the capacity of service infrastructure, facilities etc and make recommendations for upgrading and/or construction of new infrastructure and facilities.

### **6. Key Partnering Agencies**

No agencies need to be included in the project team from a technical input perspective as the specialist team should have the necessary expertise. Potential funders for the specialist review include DBSA, WWF-SA, LEDET. These agencies need to be approached at the project inception stage to secure the necessary funds.

### **7. Timeframe**

The specialist assessment must be completed in the first half of 2009 (i.e. by July 2009) to allow time for any building / infrastructure upgrading to be completed before the 2010 event.

### **8. Budget**

The budget required for the specialist review is CAPITAL expenditure.

TASKS (from scope of work)	Budget			TOTAL BUDGET
	2009	2010	2011	
Assessments of facilities (X10)	R 200 000	R 0	R 0	R 200 000
Business plans for 3 facilities	R 180 000	R 0	R 0	R 180 000
<b>TOTAL</b>	<b>R 380 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 380 000</b>

## ***Project 2C: Infrastructure Upgrading at 3 Key Ecotourism and Heritage Sites in PLM***

### **1. Project Description / Overview**

The project entails infrastructure construction / upgrading projects recommended in the specialist review which will ensure that local ecotourism opportunities are and job creation opportunities are maximised while at the same time the biodiversity and heritage sites are adequately protected.

As above the project should be jointly driven by the Tourism Workstream & Greening Workstream. Collaborators include the venue owners / operators. Potential funders include the Limpopo Tourism DEAT (under the EPWP if sites are of national significance), DBSA and SAHRA (for heritage sites).

The budget for this project is CAPITAL EXPENDITURE and an amount of R6 000 000. should be allocated.

## ***Project 2D: Development and Implementation of a Marketing and Profiling Strategy for 3 Key Ecotourism and Heritage Sites in PLM***

### **1. Project Description / Overview**

The project entails the development and implementation of a marketing and profiling strategy for local ecotourism and heritage sites identified as “must see” sites for all visitors to Polokwane. Incentives such as free entrance, special accommodation rates etc can be used to maximise use of these areas if necessary.

### **2. Project Drivers and Collaborators**

The project should be driven by the Tourism Workstream with close collaboration from the Communications Workstreams. Other collaborators include the venue (local ecotourism and heritage sites) owners / operators. The Greening Workstream should provide a facilitatory role.

### **3. Scope of Work**

- Specialist to develop a marketing and profiling strategy for the 3 local ecotourism and heritage sites selected for upgrading (see Projects 2B & C).
- Tourism Workstream in collaboration with the Communications Workstream to implement strategy.

### **4. Outputs**

- Report detailing marketing and profiling strategy.

### **5. Skills / Resources Required for Completion of the Work**

The work must be outsourced to an appropriate specialist. The appropriate candidate should be a tourism specialist who has experience in developing marketing strategies for tourism sites.

### **6. Key Partnering Agencies**

There are no agencies who need be involved from a technical perspective.

### **7. Timeframe**

The project can start once the specialist review of key ecotourism and heritage sites (Project 2B) has been completed (i.e. after July 2009) and should be completed by December 2009.

## 8. Budget

The budget is OPERATING expenditure.

TASKS (from scope of work)	Budget			TOTAL BUDGET
	2009	2010	2011	
Development of marketing strategy	R 150 000	R 0	R 0	R 150 000
Production of marketing materials	R 250 000	R 0	R 0	R 250 000
Advertising	R 100 000	R 0	R 0	R 100 000
<b>TOTAL</b>	<b>R 500 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 500 000</b>

## E8 AWARENESS RAISING AND REPORTING

### *Project 1A: Greening 2010 Expo*

#### 1. Project Description / Overview

This project responds to the Greening Programme target of raising public awareness of greening. The project involves the organisation of at least one Greening 2010 Expo to showcase eco-friendly approaches and technologies for the 2010 event infrastructure and operational systems. As there is a project entailing marketing of key ecotourism and heritage sites (see Biodiversity Strategy – Project 2D), if appropriate, the Greening 2010 Expo could be combined with a local tourism / eco-tourism expo.

#### 2. Project Drivers and Collaborators

Greening Workstream to own and drive project. Requires collaboration with Communications Workstream.

#### 3. Scope of Work

- Organiser to secure venue.
- Organiser to secure exhibitors (to include public sector [government agencies involved in greening] and private sector [businesses selling 'green' products] and the Greening Workstream [present overview of greening initiatives for 2010]).
- Host Expo over a 1 week period.

#### 4. Outputs

- Host 2010 Greening Expo.

#### 5. Skills / Resources Required for Completion of the Work

The work should be outsourced to an event organiser.

#### 6. Key Partnering Agencies

No agencies need to be included in the project team from a technical input perspective. Potential funders for the Expo include DEAT, FIFA sponsors and LEDET.

#### 7. Timeframe

To allow the opportunity of the event to be combined with a tourism / eco-tourism expo the event can only be held after completing of the local marketing and profiling strategy for ecotourism and heritage sites which is to be completed by December 2009. It is therefore expected that a combined Greening / tourism / eco-tourism expo will take place early in 2010.

## 8. Budget

The budget is OPERATING expenditure.



TASKS (from scope of work)	Budget			TOTAL BUDGET
	2009	2010	2011	
Hosting of Expo	R 600 000	R 0	R 0	R 600 000
<b>TOTAL</b>	<b>R 600 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 600 000</b>

### ***Project 1B: Information Sharing with Communications Workstream***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of raising public awareness of greening. The project entails providing the 2010 Communications Coordinator (under the Communications Workstream) with material that can raise awareness of greening and provide regular updates of greening progress made.

#### **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project. Requires collaboration with Communications Workstream.

### ***Project 2A: Local and National Press Releases and Radio Talk Shows***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of reporting on greening achievements. The Greening Workstream is required to draft regular press releases that report on the Greening Programme achievements, advertise the availability of the various greening guidelines produced, and generally promote greener behaviour before and during the event.

#### **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project. Requires collaboration with Communications Workstream.

## **E9 MONITORING AND EVALUATION**

### ***Project 1A: Monitoring***

#### **1. Project Description / Overview**

This project responds to the Greening Programme target of monitoring the implementation of the Greening Programme during 2010 and for 6 months post-event. A specialist environmentalist should be appointed to conduct this function. The process must include collection of information on energy and water use (and savings) at the various venues, the management of waste, the successes and failures of the projects implemented under this programme and the public (and fans) perceptions of the greening programme and its achievements.

#### **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project.

#### **3. Timeframe**

June 2010 – December 2010.

#### **4. Budget**

R100,000 – OPERATING budget.

## ***Project 2A: Evaluation and Reporting***

### **1. Project Description / Overview**

This project responds to the Greening Programme target of critically evaluating the successes and failures of the Greening programme. An assessment report should be produced which is published at an appropriate level of public accessibility.

### **2. Project Drivers and Collaborators**

Greening Workstream to own and drive project.

### **3. Skills / Resources Required for Completion of the Work**

Suggest using the same specialist appointed for project 1A.

### **4. Timeframe**

January – March 2011

### **5. Budget**

An OPERATING BUDGET of R150,000 will need to be used for this Project.

## **E10 FINANCIAL PLAN**

The following notes apply to the financial plan:

PLM Budget:	Funds that need to be allocated from the PLM budget (in the absence of alternative funding sources)
2009, 2010, 2011:	Denote calendar years in which budget should be allocated
Non-PLM Budget:	Only funds that have already been allocated from other sources have been reflected

Yellow shading denotes work to be completed in-house with no additional budget required for hiring of specialists or purchase of materials.

Strategy	Project	PLM Budget			Non-PLM Budget	Total	
		2009	2010	2011		Capex	Opex
Cross-Cutting	A - EMS for 2010 Venues	R 900 000	R 0	R 0	R 0	R 0	R 900 000
	B - Greening Programme Manager	R 300 000	R 160 500	R 0	R 0	R 0	R 460 500
<b>Sub-total</b>		<b>R 1 200 000</b>	<b>R 160 500</b>	<b>R 0</b>	<b>R 0</b>	<b>R 0</b>	<b>R 1 360 500</b>
Climate Impact Management	1A - Carbon Footprint Calculation	R 0	R 0	R 0	R 0	R 0	R 0
	1B - Reporting on Carbon Footprint reductions & Best Practice Guidebook	R 360 000	R 0	R 0	R 0	R 0	R 360 000
	2A - Lobby for Low Emissions PT Fleet	R 0	R 0	R 0	R 0	R 0	R 0
	3A - Support / Maximise Tree Planting	R 0	R 0	R 0	R 0	R 0	R 0
	3B - Carbon Sequestration Project Development	R 0	R 0	R 0	R 0	R 0	R 0
	3C - Carbon Offset / Emissions Reductions Project Development	R 325 000	R 0	R 0	R 0	R 325 000	R 0
<b>Sub-total</b>		<b>R 685 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 0</b>	<b>R 325 000</b>	<b>R 360 000</b>
Energy Efficiency	1A - Maximise Energy Efficiency at 2010 Venues	R 0	R 0	R 0	R 0	R 0	R 0
	1B - Promote Energy Efficiency in the Private	R 0	R 0	R 0	R 0	R 0	R 0
	2A - Renewable Energy Supply	R 80 000	R 75 000	R 0	R 0	R 175 000	R 0
<b>Sub-total</b>		<b>R 80 000</b>	<b>R 75 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 175 000</b>	<b>R 0</b>
Water Conservation & Management	1A - Maximise Water Use Efficiency at 2010 Venues	R 0	R 0	R 0	R 0	R 0	R 0
	1B - Review of stadium landscaping plan	R 0	R 0	R 0	R 0	R 400 000	R 0
	2A - Stormwater Management Plan: Peter Mokaba Stadium	R 326 000	R 0	R 0	R 0	R 326 000	R 0
<b>Sub-total</b>		<b>R 326 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 0</b>	<b>R 726 000</b>	<b>R 0</b>
Sustainable Waste Management	1A - Sustainable Waste Management Strategy for 2010	495 000	1 500 000	0	0	R 1 995 000	R 0
	2A - Construction Waste Recycling	0	0	0	0	R 0	R 0
<b>Sub-total</b>		<b>R 495 000</b>	<b>R 1 500 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 1 995 000</b>	<b>R 0</b>
Sustainable Transport	1A - Lobby for fuel efficient & low emission public transport	0	0	0	0	R 0	R 0
	2A - Park and Ride	0	0	0	0	R 0	R 0
	3A - Safe pedestrian and cycle networks	0	0	0	0	R 0	R 0
	3B - Safe bicycle and motorcycle parking	0	0	0	0	R 0	R 0
<b>Sub-total</b>		<b>R 0</b>	<b>R 0</b>	<b>R 0</b>	<b>R 0</b>	<b>R 0</b>	<b>R 0</b>
Biodiversity	1A - Green Landscaping Guidelines	400 000	0	0	0	R 0	R 400 000
	2A - Review of local and provincial tourism strategies for 2010	30 000	0	0	0	R 0	R 30 000
	2B - Review of key ecotourism and heritage sites promoted for 2010	380 000	0	0	0	R 380 000	R 0
	2C - Infrastructure upgrading at 3 key ecotourism and heritage sites	3 000 000	3 000 000	0	0	R 6 000 000	R 0
	2D - Marketing and Profiling Strategy for 3 key	500 000	0	0	0	R 0	R 500 000
<b>Sub-total</b>		<b>R 4 310 000</b>	<b>R 3 000 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 6 380 000</b>	<b>R 930 000</b>
Awareness Raising & Reporting	1A - Greening 2010 Expo	600 000	0	0	0	R 0	R 600 000
	1B - Information sharing with Communications	0	0	0	0	R 0	R 0
	2A - Press Releases & Radio Talk Shows	0	0	0	0	R 0	R 0
<b>Sub-total</b>		<b>R 600 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 0</b>	<b>R 0</b>	<b>R 600 000</b>
Monitoring & Evaluation	1A - Monitoring	0	100 000	0	0	R 0	R 100 000
	2A - Evaluation	0	0	150 000	0	0	150 000
<b>Sub-total</b>		<b>R 0</b>	<b>R 100 000</b>	<b>R 150 000</b>	<b>R 0</b>	<b>R 0</b>	<b>R 250 000</b>
<b>TOTALS</b>		<b>7 696 000</b>	<b>4 835 500</b>	<b>150 000</b>	<b>0</b>	<b>9 601 000</b>	<b>3 500 500</b>
<b>TOTAL MUNICIPAL BUDGET REQUIRED</b>							<b>13 101 500</b>

## SECTION F IMPLEMENTATION PLAN

### F1 IMPLEMENTATION AGENTS

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There are a number of Sectors mentioned in the Greening Strategies that have a role to play in implementation.

#### ***F1.1 Greening Workstream***

The PLM 2010 Greening Workstream will play the lead role in driving the implementation of this Plan. For many of the projects, the Greening Workstream is the project DRIVER – indicating leadership of the project but not necessarily the conducting of the required work – which may be subcontracted to appropriate specialists or undertaken by other 2010 Workstreams or municipal departments. In some of the projects the Greening Workstream will be a COLLABORATOR – in such instances the work will be lead by another Sector but the Greening Workstream will provide input into the project where appropriate and monitor performance and outputs.

#### ***F1.2 Stadium Workstream and Project Team***

The Stadium Team comprises the Professional Consortium appointed to design and construct the Peter Mokaba Stadium and to plan and upgrade the surrounding stadium precinct. Included in this team are the municipal project managers that also lead and co-ordinate the Polokwane 2010 World Cup event planning and hosting.

The Stadium Team has an important role to play in investigating, designing and implementing appropriate greening technologies at the stadium and in the stadium precinct. It also has a role to play in evaluating and reporting-back on its achievements and compliance with the Greening Plan's principles and approaches.

#### ***F1.3 Polokwane Local Municipality (PLM) Service Departments***

There are a number and range of **municipal departments** (called small business units or SBUs) that will play a role in the planning, design and servicing of the 2010 World Cup events in Polokwane. Many of these business units are represented in the various 2010 Workstreams that have been set up and are specifically involved in actions related to the 2010 World Cup events. There are also other units that have a role to play in the implementation of the Greening Programme through their day-to-day development planning and control, transport systems planning and development, environmental management, waste management, contracts and procurement management, plant production and landscape management functions. It is all of these departments that are called on in this Greening Programme to implement or assist with greening actions and communications specific to the 2010 World Cup events.

#### ***F1.4 National Government & Agencies***

The **Department of Environment Affairs and Tourism (DEAT)** is the key national department with a role to play in the PLM 2010 Greening Programme. DEAT will be expected to take leadership in all interventions that require a national-scale directive. This will include, for example, the following:

- offsetting the balance of carbon emissions associated with hosting the 2010 World Cup in Polokwane that cannot be offset by local initiatives,
- procurement of funding and expertise to assist host cities in achieving their greening targets where possible and within financial means,
- establishing a national hospitality and tourism framework that sets criteria and standards for greening of tourism service sectors; etc.

DEAT has close links with the UNDP, GEF and DANIDA, which would put it in a strong position to assist with procuring project finance for greening initiatives associated with 2010. DEAT also administers the **National**

**Poverty Alleviation Fund** and **Working for Wetlands Programme**, both of which may be approached for project funding associated with the 2010 World Cup.

The **Department of Water Affairs and Forestry (DWAF)** is the custodian of South Africa's water and forestry resources. It is primarily responsible for the formulation and implementation of policy governing these two sectors. As such DWAF is a key roleplayer at a national level in managing water consumption, preventing the pollution of surface and groundwater resources and supporting reforestation and tree planting initiatives. At a local level and relating to 2010 DWAF has allocated funding support to city beautification and mass tree planting for carbon sequestration.

### **F1.5 Provincial Government**

The Limpopo Provincial **Department of Economic Development, Environment and Tourism (LEDET)** has been tasked to assist and support 2010 World Cup host cities in the province. This role can include assistance with procurement of greening project funding, assistance with technical expertise and advice on legal frameworks under their jurisdiction etc.

The **Limpopo Tourism and Parks Authority** can play a role by promoting environmentally responsible tourism, and in particular promoting the observance of the Greening Principles that form part of the Polokwane Greening Programme in the Limpopo Province.

### **F1.6 Private Sector**

For the purposes of implementation of the Greening Programme, the private sector includes:

- ➔ National Energy Supplier - Eskom
- ➔ Private developers that will service and benefit from 2010
- ➔ Hospitality industry
- ➔ Catering industry
- ➔ Tourism / leisure industry
- ➔ Public transport industry (private taxi's and buses)
- ➔ Private business that wishes to partner, fund or participate in greening interventions<sup>2</sup>
- ➔ Recycling agencies

**Eskom** is a private company that is wholly owned by the South African government. It is the national supplier of electricity to South Africa. Eskom has a number of initiatives underway to manage electricity demand in the face of a current bulk energy supply crisis. In addition, Eskom has been undertaking research into renewable energy systems. Eskom may thus contribute knowledge to assist in the Energy Strategy of the Greening Programme. Their support will be sought through DEAT, who is liaising with them regarding national-scale interventions for the greening of the 2010 FIFA World Cup™. Noteworthy is the fact that Eskom has its Head Offices located in Polokwane.

Many Polokwane-based **hospitality, catering and tourism / leisure businesses** stand to benefit substantially from the hosting of the 2010 World Cup in Polokwane. However, unless these businesses are direct suppliers to the 2010 event under the control of the event organisers, there is limited means to force them to assist in achieving the city's greening targets, but the RLM may wish to consider incentivising positive greening action.

**The Federated Hospitality Association of Southern Africa (FEDHASA)** represents the hospitality sector in South Africa. It is a key point of contact for any intervention that involves the promotion of greener tourism for 2010 and beyond.

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<sup>2</sup> Important here are the FIFA official sponsors of the 2010 World Cup™. Coca-cola is currently supporting a WWF fresh water conservation initiative in the USA; McDonalds have a sustainable waste management strategy that they implement in some countries that could be drawn on for SA; Budweiser supports a range of conservation and stewardship programmes internationally.

**Recycling agencies** such as Mondi, Reclam and Collect-a-Can will have an important role to play in the Waste Strategy, as it is likely that their services will be used in the sustainable waste management system established for the event and beyond.

**Private developers** may be encouraged to participate in the greening approach by adopting the various greening guidelines developed through the Greening Programme.

### ***F1.7 Parastatals, NGO's & CBO's***

There are a number of parastatals, NGO's and CBO's that can contribute to the targets and actions of the Greening Programme. These include:

**WESSA** – The Wildlife and Environment Society of Southern Africa is an NGO lobby group focusing on environmental protection. It includes an environmental education arm that could assist with the design and development of educational and awareness materials as part of the Greening Programme. WESSA is a potential partner in the establishment of an environmental education centre at the Green Resources Hub proposed as part of the Biodiversity Strategy.

**IZWA** – The Institute for Zero Waste is a NGO promoting sustainable waste management in South Africa. IZWA can be co-opted to assist in designing a sustainable waste management system for Polokwane to service 2010, and may be able to assist in providing volunteers and trained people to create awareness around waste separation and recycling during the 2010 World Cup event, and assist with development of educational displays on waste management.

**SANBI** - The South African National Biodiversity Institute is mandated to promote the sustainable use, conservation, appreciation and enjoyment of South Africa's exceptionally rich biodiversity, for the benefit of all people. SANBI thus has a role to play in identifying, designing and collaborating in the implementation of the Biodiversity Strategy of this 2010 Greening Plan.

**Birdlife SA** - BirdLife South Africa one of the largest conservation NGO's in the country and affiliated to BirdLife International (one of the largest conservation organisations in the world). The Greater Limpopo Birding Routes, one of Birdlife SA's projects, is involved with promoting the Limpopo Province as a birding destination on choice to both international and local birders. Polokwane has a rich diversity of birds and has a bird sanctuary associated with the town's WWTW's which has great ecotourism potential.

**Limpopo University Herbarium** – The herbarium at the Limpopo University can provide expertise and resources with regard to landscaping projects (particularly in correct plant selection and showcasing local biodiversity) and environmental education and awareness raising, all key elements of Polokwane's Greening Programme.

### ***F1.8 Twinning Partners***

Polokwane is twinned with the **City of Plzen** in the Czech Republic. An in principle agreement exists between the two cities that indicates that Plzen will offer Polokwane institutional support with the primary focus being on socio-economic issues, but it is likely that greening could be placed on the agenda.

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## **F2 GREENING WORK TEAM**

A Greening Work Team should be established to co-ordinate the Actions required for implementation of the Greening Plan. The whole or part of the Work Team may meet regularly where co-ordination is required between different Projects, but if this is not required then relevant members of the team may be called to



meetings to discuss specific issues, problems or make decisions. This Work Team is the key mechanism for implementation the required COLLABORATION during implementation of this Plan.

The Work Team will be chaired by the 2010 Greening Workstream Co-ordinator. The membership of the Work Team is proposed as follows:

2010 Co-ordinator: Mr R. Nдавhe  
CHAIR: 2010 Greening Co-ordinator: Kalie Lotz (Environmental Management SBU)

Municipal Departments Represented on Task Teams:

- Stadium team representatives (called on as required)
- Training Venues Workstream
- Fan Park Workstream
- Transportation Workstream
- City Beautification Workstream
- Tourism Workstream
- Communications Workstream
- Skills Development Workstream
- Electrical Services SBU
- Water & Sanitation SBU
- Waste Management SBU
- Spatial Planning & Development SBU
- Roads & Stormwater SBU
- Environmental Management SBU
- Communications and Public Participation SBU

Non-Municipal Roleplayers:

- WESSA
- IZWA
- SAHRA
- Birdlife SA / International
- University of Limpopo
- Eskom
- Provincial Department of Economic Development, Environment and Tourism
- Recycling Companies
- Polokwane Chamber of Business
- Specialists

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## **F3 POSSIBLE SUPPORT / FUNDING SOURCES**

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All Host Cities are expected to provide their own funding for the preparations associated with hosting the 2010 World Cup. It is therefore expected that the PLM will allocate a funding stream to the 2010 Greening Workstream and the implementation of this Plan (or priorities contained within in).

Although this is the case, all Host Cities are finding this financial commitment a heavy one, and it is therefore imperative that supplementary funding is obtained from other agencies wherever possible.

This section provides a brief description of potential funding and partnering agencies that can be canvassed for greening project funding and technical support under the Greening Programme. Agencies already mentioned in

Section F1 as possible implementation partners may be approached to provide funding to Programme initiatives.

### ***F3.1 DEAT and National Treasury***

DEAT does not have funds available to give to municipalities for the implementation of their 2010 Greening Programmes. However, they do have access to a range of funding streams that could be used to contract consultants and implementation agents for key projects. In addition, DEAT may facilitate funding allocations from:

- \* Working for Water (alien plant clearing funding),
- \* Working for Wetlands (wetland rehabilitation programmes), and
- \* The National Poverty Alleviation Fund.

National treasury is also the source of the Neighbourhood Development Partnership Grant (NDPG). This fund is mainly directed at beautification of previously disadvantaged areas and additional funds can be sourced within existing NDPG awards that National Treasury has issued to the Municipality. In the PLM area the townships of Mankweng and Seshego have been awarded beautification funds in terms of the NDPG.

### ***F3.2 DBSA***

The Development Bank of Southern Africa (DBSA) is one of several development finance institutions in South and Southern Africa. Its purpose is to accelerate sustainable socio-economic development by funding physical, social and economic infrastructure. DBSA's goal is to improve the quality of life of the people of the region. DBSA plays a multiple role of Financier, Advisor, Partner, Implementer and Integrator to mobilise finance and expertise for development projects. Their focus is mainly on supporting the establishment of good practice in development and capital development projects. They may provide funding as a grant or loan finance. The DBSA would be approached in the Greening Programme for funding of capital projects and installations.

### ***F3.3 FIFA Sponsors***

The official FIFA Sponsors for the 2010 FIFA World Cup™ include: Adidas, Hyundai, Coca-Cola, Sony, MTN, First National Bank, McDonalds and Budweiser. These sponsors could be approached through the Local Organising Committee (LOC) to provide technical assistance, partnerships of specific funding for greening initiatives.

### ***F3.4 GEF***

The Global Environment Facility (GEF) helps developing countries fund projects and programs that protect the global environment and promote sustainable livelihoods in local communities. GEF grants support projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. GEF funding into South Africa is largely co-ordinated through the UNDP, which liaises directly with DEAT. Potential GEF funding for the PLM's 2010 Greening Projects would best be sought through the assistance / representation of DEAT, and currently seem to be directed towards the transport sector.

### ***F3.5 SANBI***

The South African National Biodiversity Institute (SANBI) aims to promote the sustainable use, conservation, appreciation and enjoyment of the exceptionally rich biodiversity of South Africa, for the benefit of all people. SANBI undertakes biodiversity-related research and co-ordinates a range of advisory groups. SANBI could be approached for funding of biodiversity-related studies or research for the Greening Programme. SANBI would also be a valuable partner to the PLM on design and implementation of the Biodiversity Strategy projects.

### **F3.6 World Bank**

The World Bank provides financial and technical assistance to developing countries providing low interest loans, interest-free credit and grants. A key focus area of the World Bank is currently in supporting CDM projects where developing countries benefit from trading carbon credits to first world countries.

### **F3.7 WWF - SA**

The Worldwide Fund for Nature (WWF) has become one of the world's largest independent organizations dedicated to the conservation of nature. In South Africa, five programmes are being established for Marine, Freshwater, Grasslands, Fynbos and Conservation Education, with a Climate Change sub-programme. Although WWF has limited funding of its own, it could be approached assist the Greening Programme through educational partnerships and assistance with access to funding from a range of donor agencies.

### **F3.8 Eskom**

Eskom has a Demand Side Management (DSM) Programme that includes a specific component for 2010 Host Cities. Eskom offers a “package of incentives” to official 2010 venues that is effectively a subsidised rate on energy saving / renewable energy devices such as solar water heaters and energy saving light bulbs. Eskom could be approached for subsidisation of energy saving initiatives at all 2010 venues, but may also be approached to contribute technically to the development and roll out of energy saving initiatives for 2010 and beyond.

### **F3.9 SAHRA**

The South African Heritage Resources Agency (SAHRA) is a statutory organisation established under the National Heritage Resources Act, No 25 of 1999, as the national administrative body responsible for the protection of South Africa's cultural heritage. SAHRA has established the National Heritage Resources Fund to provide financial assistance in the form of a grant or a loan to an approved body or an individual for any project which contributes to the conservation and protection of South Africa's heritage resources which form part of the national estate.

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## SECTION G REFERENCES / BIBLIOGRAPHY

### G1 DOCUMENTS CONSULTED

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Oko-Institut e.V. 2003. **Green Goal: Environmental Goals for the 2006 FIFA World Cup.** Oko-Institut e.V. Report.

Oko-Institut e.V. 2004. **Green Goal™ - the environmental concept for the 2006 FIFA World Cup™.** Organising Committee of the 2006 FIFA World Cup, Frankfurt.

### G2 USEFUL WEBSITES

CIDA Website. [www.acdi-cida.gc.ca](http://www.acdi-cida.gc.ca)

Collect-a-Can Website. [www.collectacan.co.za](http://www.collectacan.co.za)

DANIDA Website. [www.um.dk](http://www.um.dk)

DBSA Website. [www.dbsa.org/](http://www.dbsa.org/)

DEAT Website. [www.environment.gov.za](http://www.environment.gov.za)

Eskom Website. [www.eskom.co.za](http://www.eskom.co.za)

FEDHASA Website. [www.fedhasa.co.za](http://www.fedhasa.co.za)

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GEF Website. [www.gefweb.org](http://www.gefweb.org)

GreenStay SA Website. [www.greenstaysa.org.za](http://www.greenstaysa.org.za)

IZWA Website. [www.izwa.org.za](http://www.izwa.org.za)

Limpopo Provincial Government Website. [www.limpopo.gov.za](http://www.limpopo.gov.za)

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Nampak Website. [www.nampak.co.za](http://www.nampak.co.za)

Polokwane 2010 Website. [www.polokwane.gov.za/2010/](http://www.polokwane.gov.za/2010/)

Reclam Website. [www.reclam.co.za](http://www.reclam.co.za)

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