

NOTIFICATION OF AN ENVIRONMENTAL AUTHORISATION PROCESS IN TERMS OF THE AMENDED NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) (NEMA) AND THE WATER USE LICENSE APPLICATION (WULA) IN TERMS OF THE NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998) FOR THE PROPOSED DEVELOPMENT OF THE PRASA MANUFACTURING PLANT ON PORTION 23 OF THE FARM GROOTFONTEIN 165 IR, EKURHULENI METROPOLITAN MUNICIPALITY (EMM), GAUTENG



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BACKGROUND INFORMATION DOCUMENT (BID) AND INVITATION TO COMMENT

Date of Publication: 08 October 2014

Client Name: GIBB Engineering and Architecture on behalf of the Passenger Rail Agency of South Africa (PRASA)

SEF Project Number: 506014 / DEA Reference Number: 14/12/16/3/3/2/735

What is an Environmental Impact Assessment (EIA)?



An EIA is an assessment of the possible positive and negative impacts that a proposed project may have on the environment, consisting of the biophysical, social and economic aspects

What is an Environmental Authorisation (EA) Process and what does it entail?

The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) prescribes the processes to be followed when applying for EA in respect of listed activities. The process aims to ensure that all relevant factors are considered when evaluating the potential environmental impacts of a proposed project, as well as developing appropriate environmental management measures to mitigate these impacts.

The purpose of the EA Process is to assess the current environment in which a proposed activity will take place and assess all potential impacts in terms of its extent, duration, intensity, probability and significance relating to the specific activity.

The process should also provide goals and objectives for environmental management to minimise or eliminate the potential negative environmental impacts, the procedures to be implemented to ensure integration of environmental management into the daily operations, as well as a plan to raise awareness of employees and the surrounding community with regards to environmental management.

Introduction and Background

The Passenger Rail Agency of South Africa (PRASA) was established in 2009 when the operations, assets and personnel of the South African Rail Commuter Corporation, Metrorail, Shosholozza Meyl, Intersite Property Management Services and Autopax Bus Company were merged. The main objective of PRASA is to provide an excellent service that is both safe and secure to people who make use of the

public railway systems.

PRASA intends to establish a manufacturing plant on Portion 23 of the Farm Grootfontein 165-IR in Dunnottar, north of Nigel, within the Ekurhuleni Metropolitan Municipality (EMM) in Gauteng (Figure 2). The proposal is for the development of a factory for manufacturing new rolling stock of train carriages. Examples of trains to be manufactured are shown in Figure 1 below.

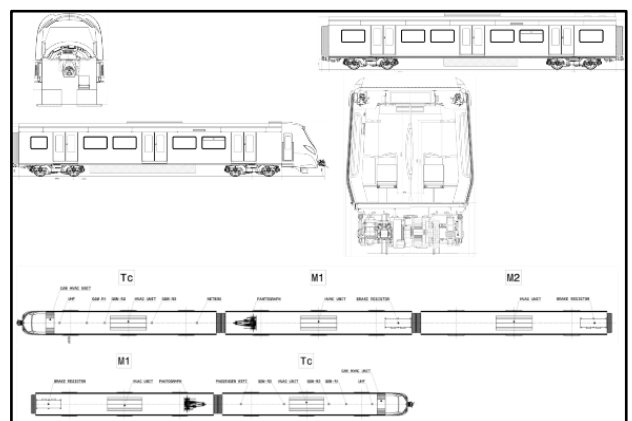


Figure 1: PRASA products to be manufactured

The entire farm portion is approximately 295 hectares (ha) in extent; however the development footprint will be that of approximately 104.197 ha being used for the construction of the proposed manufacturing plant. The proposed development is to be called Dunnottar Extension 7.

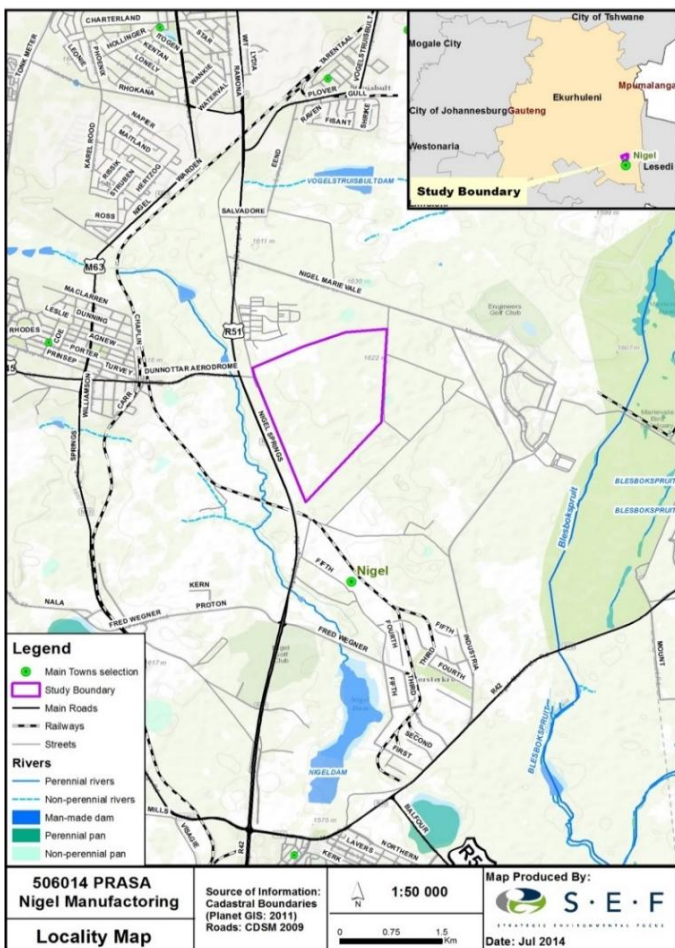


Figure 2: Locality Map



Figure 3: Aerial view of the proposed site

GIBB Engineering and Architecture (GIBB) on behalf of PRASA have appointed Strategic Environmental Focus (Pty) Ltd (SEF) as an independent Environmental Assessment Practitioner (EAP) to facilitate the Environmental Authorisation process- Scoping and Environmental Impact Reporting (S&EIR) and Water Use Licence Application (WULA) processes to ensure that the environmental impacts that may be associated with the proposed project are taken into consideration.

Project Description

▪ **Location**

The proposed site is located on Portion 23 of the Farm Grootfontein 165-IR adjacent to Dunnottar military base, Dunnottar, north of Nigel. The plant is proposed to be

parallel to the existing Nigel Springs road (R51) (please refer to Figure 2 adjacent).

▪ **Access**

There will be two access points to the proposed development i.e. main access and the emergency access. All trips will be assigned to the main access. Access to the main road access will be via the M45 intersection along R51.

▪ **Project Details**

The proposed facility development area will comprise of two main construction areas:

- The main train manufacturing site; and
- A nearby Industrial Park to integrate main suppliers and partners of the Site's activities.

The proposed project will involve the following main manufacturing site infrastructure:

The entire perimeter will be secured with a compound wall. Size and the location of buildings will be based on environmental and technical considerations. The design approach will be to have a single building structure basis identical for all aisles. The only exception will be the car body shell workshop and the training centre, which will both have the same structure as the others, but slightly higher for operational requirements. The tracks will have several characteristic depending on the area where they are installed.

Stainless Steel car body shell manufacturing:

- Material warehouse;
- Primary parts and small sub-assemblies preparations;
- Large sub-assemblies and car erection; and
- “Closing” fittings (doors and windows) and water leakage test.

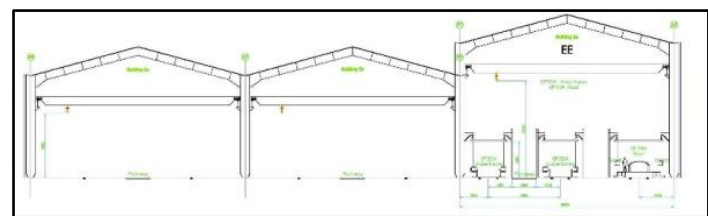
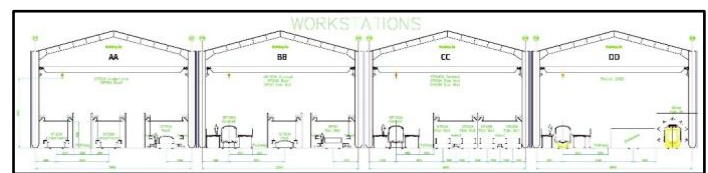


Figure 4: Stainless Steel car body shell manufacturing warehouse

Warehouse and Fitting workshops:

- Main warehouse;
- Preparations workshop (large looming, driver cab assembly); and
- 2 Fitting lines.

Coupling and Static Test workshop:

- 2 Coupling lines; and
- 6 Static tests lines (tracks on pillars on integral pit).

Dynamic tests:

- 1 Dynamic test track.

Manufacturing site environment and common infrastructures:

- Offices, utilities and common services (canteen, cloak rooms, sanitary);
- Waste management area;
- Rain Water and other Water tanks (including firefighting normative reserves); and
- Parking (cars, buses & two-wheelers).

The proposed project will also involve the following Supplier Park activities:

- The Supplier Park is intended as an industrial zone, which will initially comprise 10 buildings, each building comprising of 4 x 1000m² units (complete with their own offices and ablutions). This will include the initial infrastructure development. There will be a capability to extend the supplier park with identical units at a later date if it is deemed necessary.
- The total area for the Supplier Park equals 40 000 m² (4 ha) which will include all infrastructure and basic 'shells' in the form of workshop-type buildings.
- The building will be built to easily reconfigure to allow for capacity improvement or new train products to be built, i.e. easily extendable in length and in width.

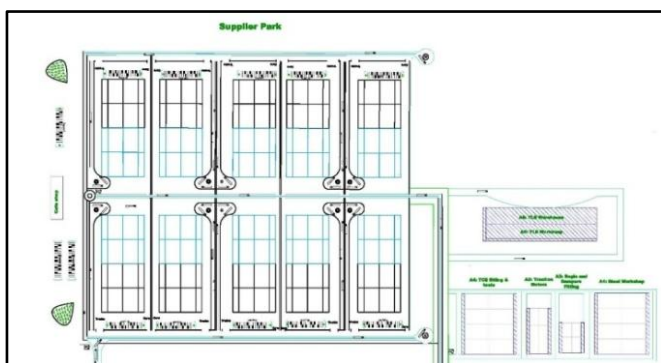


Figure 5: Supplier Park and components

The proposed project will also entail the construction of a railway line to the south west of the proposed site. Please refer to Figure 6 adjacent. The proposed railway line will join the existing Transnet railway line currently running south of the site.

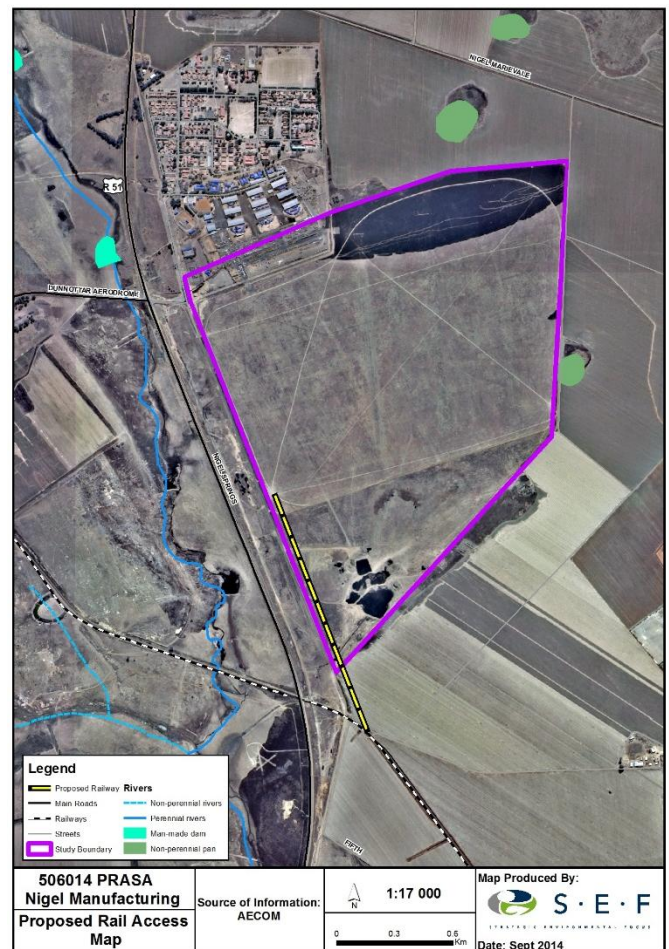


Figure 6: Proposed railway line

▪ **Services**

Water Supply:

Bulk water demand is estimated at 450 kl/day. It is currently assumed that the process water will be 3 m³/day. The water connections will be connected to the municipal system. Connection will either be at the main entrance road at R51 intersection, or at a position to the north east corner of the site.

Waste Management (Sewer):

The bulk sewer discharge is estimated at 340 kl/day (excluding any savings that can be achieved through grey water harvesting). The sewer connections will be connected to the municipal system. Connection will either be at the main entrance road at R51 intersection, or at Southern corner of the site, with a possibility of dedicated outfall sewer align the eastern bank of the river to the Waste Water Treatment Works (WWTW).

Stormwater Management:

Stormwater generated by the proposed development will have a low runoff factor. Stormwater runoff will be influenced mainly by the internal road network, structures and paved areas, and mitigation measures will focus on limiting the effect that the internal road network will exert on the post-development flood risk. Gutter systems will be installed to capture all stormwater falling on the structure's roof and redirecting it into the proposed

stormwater open channels, pipes, retention ponds, attenuation ponds etc.

Stormwater discharge will be at the southern corner of the proposed site, possibly, to discharge at the main entrance area at the R51 intersection, and also possible discharge points alongside the western site boundary.

The attenuation pond will be situated at the lower corner of the proposed site.

Electricity:

The bulk power supply is estimated to have a total load of ± 20 Megavolt Ampere (MVA).

▪ **Project Alternatives**

Design Alternatives:

Alternative 1: Leadership in Energy and Environmental Design (LEED) (preferred alternative)

LEED is a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes and neighbourhoods. Developed by the U.S. Green Building Council (USGBC), LEED is intended to help building owners and operators be environmentally responsible and use resources efficiently. LEED is transforming the way we think about how buildings and communities are designed, constructed, maintained and operated across the globe.

LEED certified buildings save money and resources and have a positive impact on the health of occupants, while promoting renewable, clean energy.

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognises best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Prerequisites and credits differ for each rating system, and teams choose the best fit for their project.

Each rating system groups requirements that address the unique needs of building and project types on their path towards LEED certification. Once a project team chooses a rating system, they'll use the appropriate credits to guide design and operational decisions.

There are five rating systems that address multiple project types:

- Building Design; and Construction;
- Interior Design and Construction;
- Building Operations and Maintenance;
- Neighborhood Development; and
- Homes.

Buildings can qualify for four levels of certification:

- Certified: 40–49 points
- Silver: 50–59 points
- Gold: 60–79 points
- Platinum: 80 points and above

Alternative 2: Green Star SA - Office V1/ Green Building

Green building (also known as green construction or sustainable building) refers to a structure and using process that is environmentally responsible and resource-efficient throughout a building's life-cycle: from siting to design, construction, operation, maintenance, renovation, and demolition. This requires close cooperation of the design team, the architects, the engineers, and the client at all project stages. The Green Building practice expands and complements the classical building design concerns of economy, utility, durability, and comfort.

Although new technologies are constantly being developed to complement current practices in creating greener structures, the common objective is that green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water, and other resources;
- Protecting occupant health and improving employee productivity; and
- Reducing waste, pollution and environmental degradation.

Sustainably designed buildings cost less to operate and have excellent energy performance. The environment is required to be sustainable and the facility should aim for a minimum of a 4-star Green Star Certified Rating as regulated and awarded by Green Building Council of South Africa (GBCSA).

Compared with the other buildings, the Green building will consume about 30% less electricity because of interventions including efficient lighting, solar water heating, and most importantly, the use of the chilled beam air conditioning systems. The building has water savings of about 79% when compared with the other buildings.

Alternative 3: Conventional Building

This will involve the construction of a conventional building, and will thus not entail the implementation of Greenstar principles.

The following philosophies will thus not be achieved by this alternative namely:

- Optimal energy efficiency;
- Greenhouse gas emission abatement;
- Water conservation;
- Waste avoidance, reuse and recycling;
- Pollution prevention - noise, water, air, soil and light;
- Enhanced biodiversity;
- Reduced natural resource consumption;
- Productive and healthier environments; and
- Flexible and adaptable spaces

Although energy efficient measure will still be considered as part of the proposal, it will not achieve the level of energy efficiency as with the LEED design.

Site Alternatives:

Portion of land to be developed is approximately 104.197 hectares on Portion 23 of the Farm Grootfontein 165 IR.

Three site alternatives below are being investigated:

- The proposed plant being situated west of the site.
- Plant and residential development on the entire Portion 23.
- Plant and other Industrial 1 development on the entire Portion 23.

Motivation of the Project

PRASA have finalised a R51 billion contract with the Gibela empowerment consortium (GIBELA), of which Alstom Southern African Holdings is the largest shareholder, to deliver 600 Alstom trains consisting of six wagons each. The first 20 trains are being manufactured at Alstom’s Lapa plant in Brazil.

The proposed plant would be designed to house an engineering centre and a training facility. Project goals included that a portion of the budget be spent on subcontracting to black-empowered entities, subcontracting to qualifying small enterprises, and subcontracting to entities owned by black women, training artisans and technicians, drivers during the life of the project, skills development initiatives.

A high demand for industrial and employment provision exists in this area, especially with respect to the proposed development characteristics. Should the site not be developed, a very viable opportunity to exploit the industrial market in the immediate area will be negated. Illegal squatters or vagrants may potentially settle on the site, as severe pressure for housing in the lower income brackets also exist. Due to the presence of extensive development throughout the greater area it is possible that undeveloped, un-managed land may be illegally settled.

Legal requirements for this Scoping and Environmental Impact Assessment (S&EIR)

The NEMA as amended provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions exercised by State Departments and to provide for matters connected therewith. The NEMA Environmental Impact Assessment (EIA) Regulations of 2010 define two broad categories for an EIA, namely: BA and S&EIR. S&EIR is applicable to all projects likely to have significant environmental impacts due to their nature or extent, activities associated with potentially high levels of environmental degradation, or activities for which the impacts cannot be easily predicted. In comparison, and on the other hand, a BA is required for projects with less

significant impacts or impacts that can easily be mitigated.

The proposed project will entail the undertaking of the EIA – S&EIR in terms of the EIA Regulations 2010; promulgated in terms of the NEMA as listed in Government Notice (GN) No R. 544, 545 and 546. These activities are identified as actions that may not commence without an EA from the relevant Specific Authorities, in this case, the Department of Environmental Affairs (DEA), see below.

GN R 544, 18 June 2010

Activity Numbers 9, 11, 13,22,24,26 and 47.

GN R 545, 18 June 2010

Activity Numbers 3, 5, 11, 15, and 17.

GN R 546, 18 June 2010

Activity Numbers 3, 4, 10, 12, 13, 14, 16, and 19.

S&EIR Process

S&EIR process typically has four phases as illustrated by the figure below



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

According to the National Water Act, 1998 (Act No. 36 of 1998) [NWA], water use is defined broadly, and includes taking and storing water, activities which reduce stream flow, waste discharges and disposals, controlled activities (activities which impact detrimentally on a water resource), altering a watercourse, removing water found underground for certain purposes, and recreation. In general, a water use must be licensed (Water Use License- WUL) unless it is listed in Schedule I, as an existing lawful use, is permissible under a general authorisation, or if a responsible authority waives the need for a licence. An application and a technical WUL Report will be submitted to the Regional Department of Water Affairs (DWA) for a WUL. A WUL will be applied for in terms of Section 21 of the NWA.

The following listed activities in Section 21 of the National Water Act, 1998 (Act No. 38 of 1998) are triggered by the proposed project:

- b) Storage of water;
- c) Impeding or diverting the flow of water in a watercourse; and
- i) Altering the bed, banks, course or characteristics of a watercourse.

▪ **Specialist Investigations**

The following specialist studies will be executed as part of the S&EIR process:

Specialist Study	Company Specialist
Ecological and Wetland Assessment	SEF
Heritage Impact Assessment (Phase 1)	
Soil and Agricultural Potential Assessment	

▪ **Public participation process and scheduling**

The key objective of public participation during an EIA is to assist stakeholders to identify issues of concern and suggestions for enhanced benefits, and to comment on the project. The following preliminary process will be followed:

Step 1: Notify I&APs and identify issues

- Consultation meeting in which the project stakeholders will be informed about the proposed project;
- Provide I&APs with a Background Information Document (BID) on the project, including a locality map and a Registration and Comment Sheet; and
- I&APs are required to register their interest in the project to receive further project information.

Step 2: I&AP review of Draft Scoping Report

- Comments and concerns raised by I&APs are included in the Draft Scoping Report;
- The report is released for a 40 day commenting period; and
- All registered I&APs on the project database are notified in writing of the opportunity to comment.

Step 3: Final Scoping Report

Comments received from I&APs during the review process are considered in the compilation of the Final Scoping Report before it is submitted to the Competent Authority (in this case, the DEA) for their decision making.

- I&APs have an opportunity to comment on the Final Scoping Report for a period of 30 calendar days.

Step 4: Draft Environmental Impact Assessment Report (EIR) for I&AP review

- Compilation and release of a Draft EIR for a 40 day review period

Step 5: Final EIR

- Comments received from I&APs during the review process are considered in the compilation of the Final EIR before it is submitted to the Competent Authority for their decision making; and
- I&APs have an opportunity to comment on the Final Scoping Report for a period of 30 calendar days.

Step 6: Notify I&APs of EA and Appeal Period

All registered I&APs will be notified in writing of the environmental authorisation for the project and the appeal period, as well as the manner of appeal.

A major part of the Public Participation Process is to notify members of the public of the proposed activities, particularly those who may be directly or indirectly affected by the proposed project. This will be achieved via the following means:

- The placement of an advertisement in a local newspaper, i.e. the Heidelberg Nigel Herald;
- Notices, in English will be placed at the site;
- Distribution of BIDs to landowners and occupiers of land adjacent to the proposed prospecting area and to I&APs on request; and
- Local authorities will be notified in writing and automatically registered as I&APs.

▪ **Documents for Public Review**

The Draft Scoping Report will be made available for public review and comment from **Wednesday, 08 October 2014 to Monday, 17 November 2014** at the public venue listed below and on the SEF website (see below for more information) the review dates will be communicated with the I&APs.

Public venue	Dunnottar Public Library, 47 Rhodes Street, Dunnottar
contact person and numbers	Mr Vincent Moabelo Tel: 011 999 9118/ 9116
Viewing times	08:00- 18:00 Mon- Thurs; 08:00- 16:30 Fri; 08:00 – 13:00 Sat

The Draft Scoping Report can also be accessed on the SEF's website at www.sefsa.co.za. To register as an I&AP or comment on the project using SEF's website, click on "**Stakeholder Engagement**". Click on the "register" button and complete the compulsory fields to register as an I&AP. On completion of these fields, click on the "register button" and you will see "**REGISTRATION SUCCESSFUL**". Use your login details to login in and view the Draft Scoping Report for the proposed **PRASA Nigel Manufacturing Plant** and associated appendices. Should you have any problems

in obtaining the information from the Internet, please feel free to contact SEF for assistance.

Following the commenting period, the Scoping Report will be updated and submitted to the DEA for consideration. After the acceptance of the Scoping Report, the EIR phase will be initiated. The flow diagram below highlights the phases in the project where I&APs have the opportunity to participate within the process.

▪ **How can I get involved?**

A S&EIR process is being conducted to ensure that the environmental impacts that may be associated with the proposed project are taken into consideration. Should you wish to participate in the S&EIR process by contributing issues of concerns/comments, please register as an I&AP by completing the enclosed Registration and Comments Sheet or you can visit SEF's website at <http://www.sefsa.co.za> and register online.

I&APs include any person who will be directly or indirectly involved and/or affected by the proposed project. To be recognised as an I&AP one must register with SEF to be added to the stakeholder database for the project and may communicate via post, fax, email or telephone to obtain further information or comment on the proposed project. If you have any queries or if you would like to acquire more information on the project please contact the following persons:

Mpho Manyabe/ Ms Kagiso Motlhasedi



Strategic Environmental Focus (Pty) Ltd
PO Box 74785, Lynnwood Ridge, 0040
Tel (012) 349 1307, Fax (012) 349 1229 or
E-mail mpho@sefsa.co.za or kagiso@sefsa.co.za

Please send us your comments/views so that we can address them during the S&EIR process. Once you register, SEF will keep you informed of the availability of the final Scoping Report and draft and final EIA Report and invite you to any public consultation meetings should they be applicable. Please note that should you require any one else to be contacted, please provide their contact details as well.

Your comment is important to us!!



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REGISTRATION AND COMMENT SHEET

SEF PROJECT NUMBER: 506014 / DEA REFERENCE NUMBER: 14/12/16/3/3/2/735

Name:		Surname:	
Organisation / Interest:			
Postal / Residential address			
Area:			Code:
Contact details	Tel:	()	Fax:
	Mobile:	()	
	Email:		

Please mark with an X if you would like to participate in the S&EIR and Public Participation Processes:

Yes , I would like to participate in this process and receive periodical updates	
No , I am not interested in participating and do not wish to receive further information	
Preferred method of communication	Email Fax Post
Date commented	(DD / MM / YYYY)

Please indicate any issues, comments and concerns with regards to the proposed project:

Please indicate in which aspects you would require more information:

Please indicate the contact details of any I&APs whom you think should be contacted:

Name:		Surname:	
Tel:	()	Fax:	()
Mobile:	()		
Email:			

In order to register as an I&AP for this project, kindly fax, mail, or e-mail the completed registration form to Kagiso Motlhasedi at:

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