



**NOTICE OF APPLICATION FOR
ENVIRONMENTAL AUTHORISATION
AND ATMOSPHERIC EMISSIONS
LICENCE AMENDMENT FOR THE
EXXARO FERROALLOYS EXPANSION
PROJECT
(GDARD Ref: 002/12-13/E0259)**

This Background Information Document (BID) provides Interested and Affected Parties (IAPs) with information and invites them to participate in the public consultation process for the Environmental Authorisation (EA) and Atmospheric Emissions Licence (AEL) Application for the FerroAlloys Expansion Project. You are invited to:

1. Register as an IAP for the Ferroalloys Expansion Project;
2. Raise concerns and ask questions about the project.

Please send us your initial comments and questions by 2nd April 2013. There will be additional opportunities in the future for you to participate and provide comments.

Please complete the registration/comment sheet (last page of this document) and send to the contact details below. You can also request further project details.

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(You are welcome to leave a message and we will gladly call you back)



Background Information Document

Environmental Authorisation for the Exxaro Ferroalloys Expansion Project. March 2013

FerroAlloys (Pty) Ltd (FerroAlloys) has proposed to further expand their Ferrosilicon Plant which is located in an industrial area at Roger Dyason Road, Pretoria West. The FerroAlloys Expansion Project will increase the ferrosilicon production further from 8 100 tons per annum to 13 000 tons per annum.

FerroAlloys has appointed Synergistics Environmental Services (Pty) Ltd (Synergistics) as the independent Environmental Assessment Practitioner to assist with the applications required under South African environmental legislation. The initial legal review has indicated that the FerroAlloys Expansion Project will require an Environmental Authorisation from the Gauteng Department of Agriculture and Rural Development (GDARD) and an amendment to their AEL from the City of Tshwane Metropolitan Municipality (CTMM).

PURPOSE OF DOCUMENT

This BID provides initial information to IAPs and stakeholders about the environmental applications and studies being undertaken for the proposed FerroAlloys Expansion Project.

This document forms the first part of the public consultation process which is required as part of the environmental application processes and aims at eliciting comments, questions and responses regarding the proposed project. This information is used to plan the studies to be undertaken as part of the application processes.

Registered IAPs will be requested to provide comments and be given an opportunity to review reports.

PROJECT LOCATION

The FerroAlloys Expansion Project will be located on the existing Ferrosilicon Plant Site (Figure 1). The plant is located in an existing warehouse and the footprint of the plant will not increase as a result of the expansion. The existing plant is on Portions 86 and 124 of Pretoria Town and Townlands 351 JR, Pretoria West.

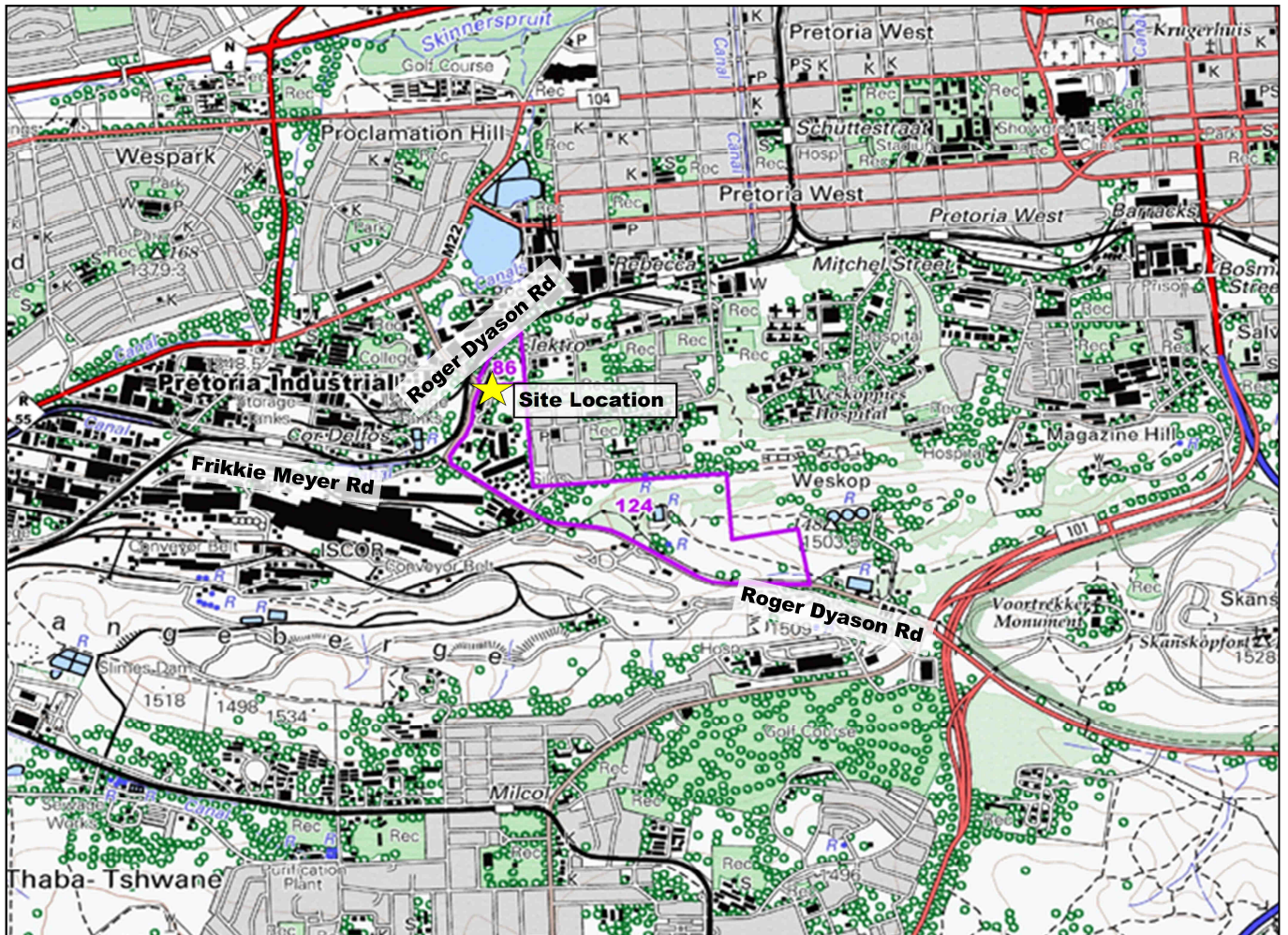


Figure 1. Location of the Expanded FerroAlloys Plant.

PROJECT DESCRIPTION AND PLANT INFRASTRUCTURE

FerroAlloys owns and operates the existing Ferrosilicon Plant site. The plant produces ferrosilicon powder which is made by atomising molten ferrosilicon with a high-pressure stream of inert nitrogen gas. The result is a high-grade powder, used in dense medium separation for mineral extraction processes, particularly in the iron ore industry. The demand from the current Ferrosilicon plant is currently exceeding the supply capacity. It is thus proposed to increase the production of the facility instead of building an additional plant. The current site has an Atmospheric Pollution Prevention Act (Act 45 of 1965) (APPA) registration certificate which is currently being converted to an AEL; this licence will need to be amended to include this increase in ferrosilicon production from 8 100 tons per annum to 13 000 tons per annum.

The plant also existing Environmental Authorisation which will now need to be replaced with a new authorisation.

Ferrosilicon is manufactured using the following industrial process:

Scrap steel and ferrosilicon 75 (75% silicon, 25% iron) is delivered to the plant by means of road transport. A front end loader or grab is then used to offload these materials into a covered storage facility with a concrete floor. The rust (approx. 5%) is removed from the steel and taken to the municipal landfill.

The raw ferrosilicon and scrap low-carbon steel is weighed to obtain the correct mixture of materials and then fed into the induction furnace for melting and casting via an automated feeding system (Figure 2). In this way the iron in the steel combines with the ferrosilicon 75 to form ferrosilicon 15 (15% silicon, 85% iron).

The molten metal is poured through a narrow nozzle (600 mm) and blasted with high-pressure nitrogen gas (at a rate of 1.8 to 2.2 tons N₂/hour) to atomise the metal. This results in small, roughly spherical, particles of ferrosilicon. This powder is then fed through a cyclone to a cooling bed. Any dust particles from the cyclone are extracted using a vacuum system and filtered into a bag house. The filtered dust is periodically discharged into the product hopper. After the dust has been filtered out, the remaining nitrogen and air exits via a 15 m high stack. The quality of the air exiting the stack is monitored.

The ferrosilicon particles from the cooling bed are passed through a 212 micron (micrometre) screen. The particles greater than 212 microns are returned back into the system for further processing. The ferrosilicon product is the particles between 5 and 212 microns in size. The product is collected in the product hopper, from where it is further separated into 3 size fractions and then dispensed into 1 ton bags for shipment.

The nitrogen gas used in this process is piped from Afrox which is located to the south-east of the Ferrosilicon plant.

The FerroAlloys Expansion Project will involve minor expansions and additions to the ferrosilicon production infrastructure within the existing warehouse and footprint. As the production capacity for ferrosilicon is increasing, the atmospheric emissions may increase slightly and thus the environmental assessment process is required to assess the potential environmental and social impacts.

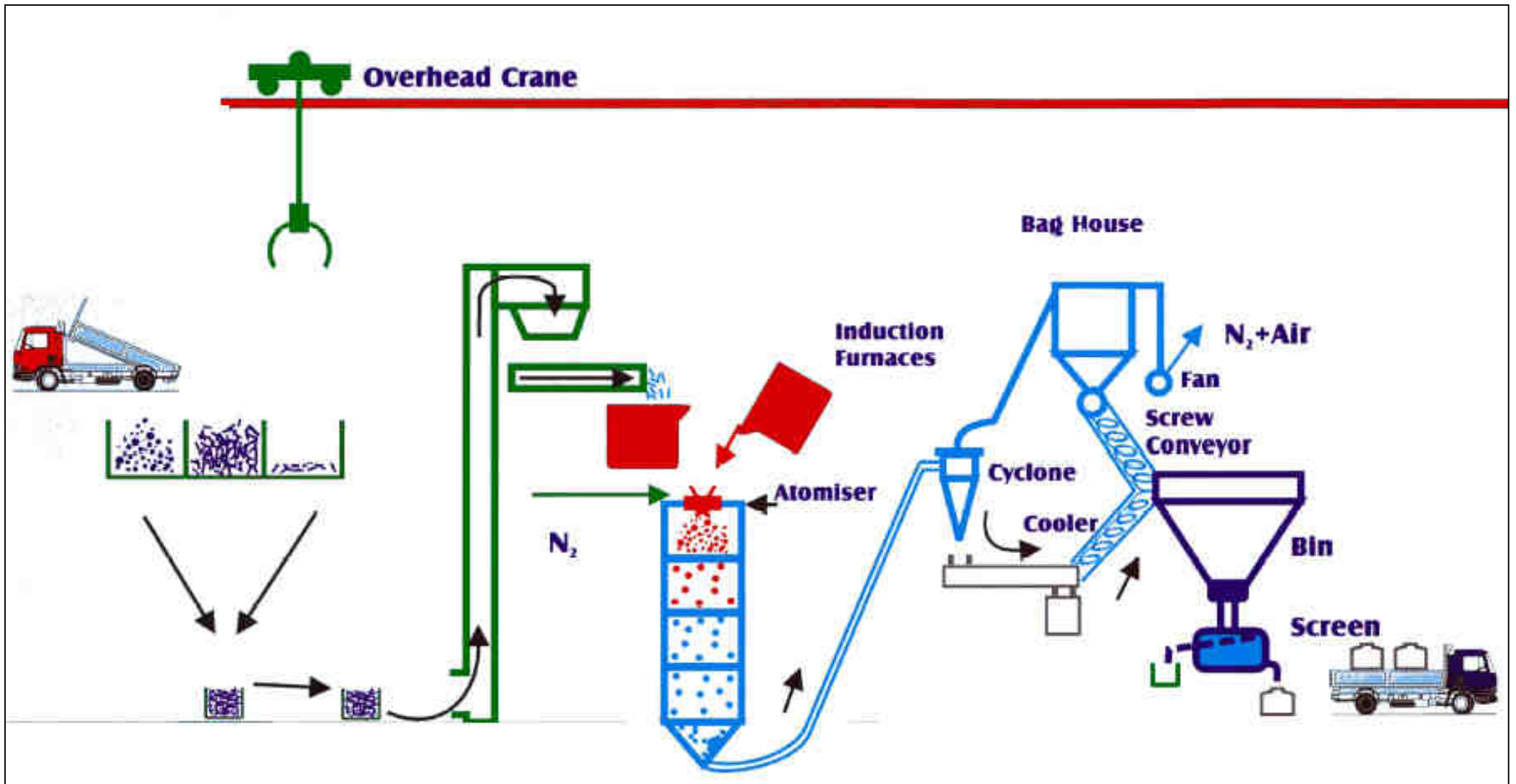


Figure 2. Flow Chart of the FerroAlloys Production Process (Simplified).

ENVIRO-LEGAL REQUIREMENTS

The initial legal review has indicated that the FerroAlloys Expansion Project will require an Environmental Authorisation under the National Environmental Management Act, 1998 (NEMA) and an amendment to the AEL under the National Environmental Management: Air Quality Act, 2004 (NEMAQA).

Exxaro FerroAlloys has submitted an application for a NEMA environmental authorisation to GDARD and an AEL application will also be submitted to the CTMM. Notice is hereby given in terms of the following legislation, that applications for required authorisations have been/will be submitted to the relevant government authorities listed below:

Legislation	Listed Activities (preliminary list)	Process Required	Competent Authority
National Environmental Management Act, 1998. (NEMA)	Government Notice (GN)R 544 (Activity 28)	Submission of application form for NEMA Authorisation; Basic Assessment	GDARD
National Environmental Management: Air Quality Act, 2004 (NEMAQA)	GNR 248 Category 4; subcategory 4.9 and 4.15	Submission of AEL application form	CTMM

ENVIRONMENTAL CONSULTANTS

Synergistics has been appointed as the independent environmental consultants responsible for undertaking the environmental work on behalf of FerroAlloys, as required by the applicable legislation, detailed above.

APPLICATION PROCESS

Synergistics has compiled the application required to commence with a Basic Assessment (BA) process as stipulated in terms of the EIA Regulations (GN R 543) made under section 24(5) of the NEMA (Figure 3).

A BA is a study that is undertaken to determine the effect that a planned operation will have on the environment and surrounding communities.

Basic Assessment

This involves the review of available environmental information and the collation of additional information to identify sources of environmental impacts and to assess the level of the potential impacts. Specialists may be involved to provide expert opinion on the likely impacts and often use computer modelling to assist with their studies. For the purposes of this assessment, specialist studies will be undertaken to assist in predicting the impacts on air quality.

Environmental Management Programme

An environmental management programme (EMP) will be developed aimed at addressing impacts identified and developing mitigation measures to reduce risks to acceptable levels. Recommendations of the specialists are used to assist in developing the EMP.

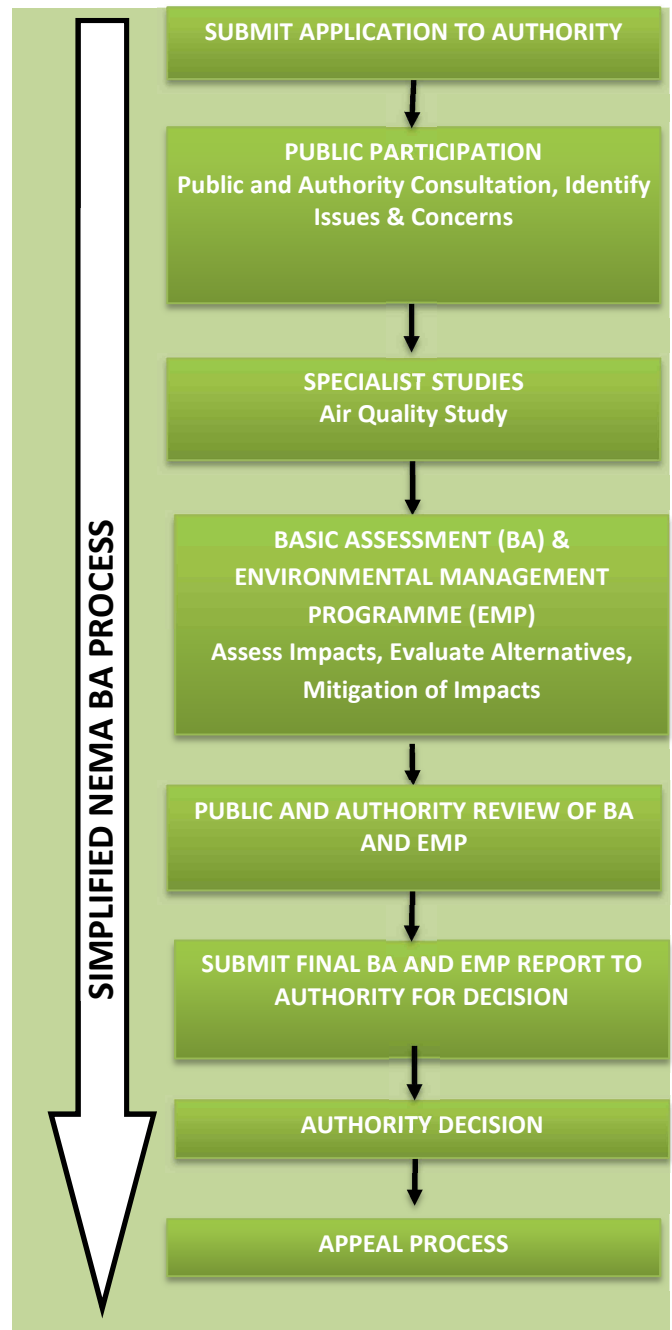


Figure 3: A simplified representation of the BA process (in terms of NEMA)

