ENVIROSERV
WASTE MANAGEMENT

RAISING THE WASTE GAME

NOTICE OF APPLICATION FOR INTEGRATED ENVIRONMENTAL AUTHORISATION FOR THE CHLOORKOP MUNICIPAL SOLID WASTE TO ENERGY PROJECT
(DEA ref. 14/12/16/3/3/3/69, NEAS ref. DEA/EIA/0001640/2013)

This Background Information Document (BID) provides Interested and Affected Parties (IAPs) with information and invites them to participate in a public consultation process regarding the Chloorkop Municipal Solid Waste to Energy (MSWtE) Project. You are invited to:

1. Register as an IAP for the Chloorkop MSWtE project;
2. To raise concerns and ask questions about the project; and
3. Attend the public information-sharing meeting.

The information-sharing meeting will be held to give further details about the project:

Place: LORD'S VIEW INDUSTRIAL PARK, ALLANDALE ROAD, NEXT TO KLIPFONTEIN VIEW
(From Allandale N1 off-ramp, travel 7.2 km towards Kempton Park. The entrance is a dirt road on the left-hand side.)
Date: SATURDAY 6 APRIL 2013
Time: OPEN DAY 8:30 – 11:30; PUBLIC MEETING 11:30

Please send us your initial comments and questions by 12 April 2013. There will be additional opportunities in the future for you to participate and provide comments.

If you are interested, please complete the registration/ comment sheet (last page of this document) and return to Synergistics. Note that you must register in order to be a participant in the process. Register with:
Matthew Hemming
Chloorkop Municipal Solid Waste to Energy Project
Synergistics Environmental Services (Pty) Ltd
Tel: 011 326-4158
Fax: 011 326-4118
Post: P.O. Box 68821, Bryanston, 2021
Email: matthew@synergistics.co.za
(you are welcome to leave a message and we will gladly call you back)

Synergistics Environmental Services

Background Information Document (BID)

Integrated Environmental Authorisation for the Chloorkop Municipal Solid Waste to Energy (MSWtE) Project

March 2013

EnviroServ Waste Management (Pty) Ltd (EnviroServ) has proposed the development of a MSWtE Project on, and immediately adjacent to, the Chloorkop GLB^{+} Landfill Site in Ekurhuleni, Gauteng. The Chloorkop MSWtE facility will process up to 2000 tons per day of suitable general wastes and produce a up to 35 MW of electricity for local use.

EnviroServ 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 Chloorkop MSWtE Project will require multiple authorisations under a number of different sets of legislation administered by different competent authorities.

PURPOSE OF DOCUMENT

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

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

Registered IAPs will be invited to meetings and given an opportunity to review reports.

PROJECT LOCATION

The Chloorkop MSWtE project will be located on, and immediately adjacent to, the existing Chloorkop GLB^{+} Landfill Site (Figure 1). The existing waste site is on portion 63 of the farm Klipfontein 12 IR. The neighbouring property that may also be used for the project is portion 23 of the farm Klipfontein 12 IR (Figure 1).

(Note that portion 23 is currently in the process of being converted to a township called Chloorkop Extension 72. This MSWtE project may be located on Erfs 5532, 5531 or 5530 of an industrial park within Chloorkop Extension 72 .)

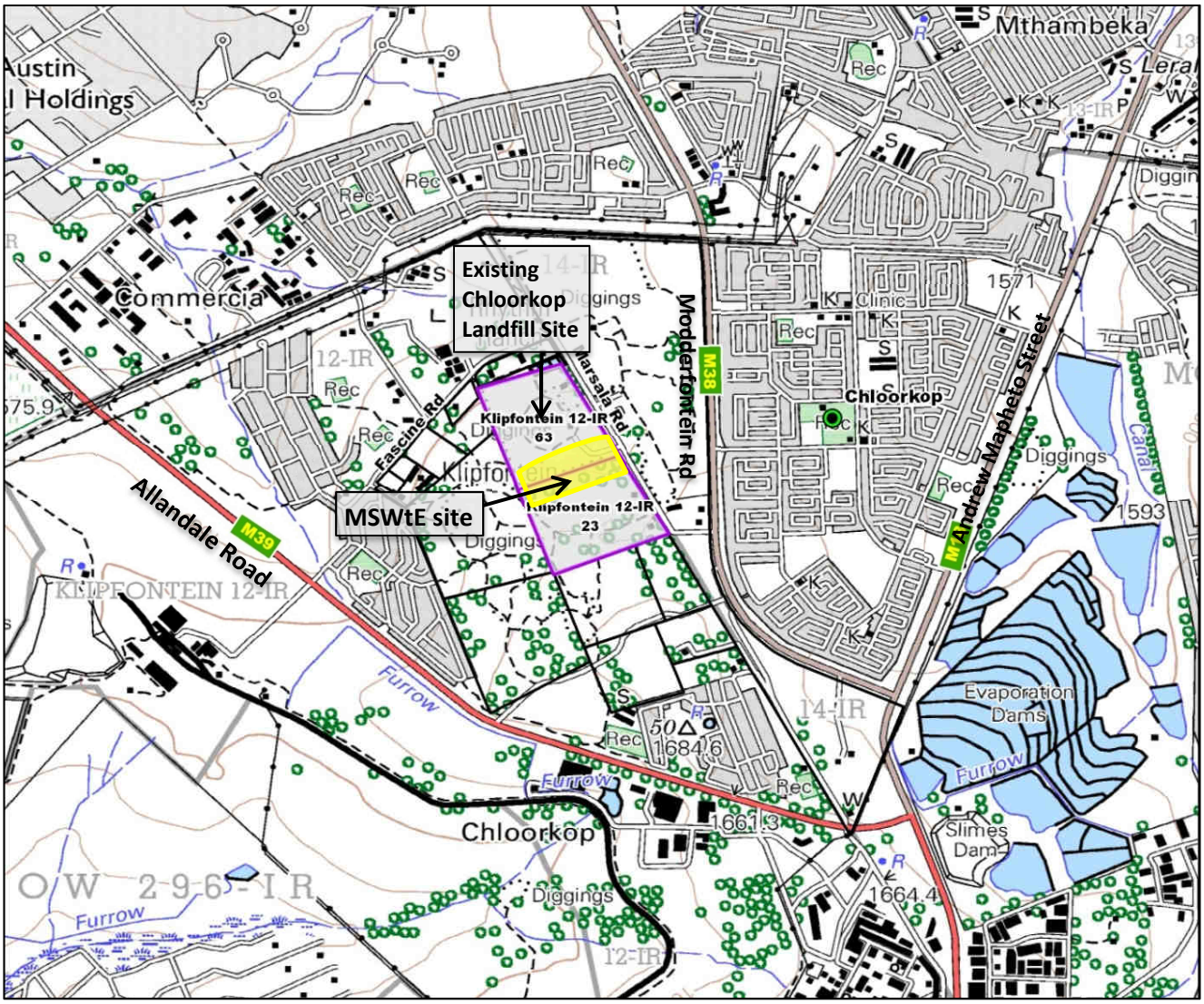

Figure 1. Approximate location of the Chloorkop Municipal Solid Waste to Energy Plant (yellow area).

PROJECT DECRIPTION AND PLANT INFRASTRUCTURE

EnviroServ owns and operates the existing Chloorkop GLB^{+} Landfill Site. The site is operated for the disposal of general waste in terms of a section 20 permit (with amendments) issued in terms of the Environment Conservation Act (1989). The Chloorkop MSWtE Project is intended to ensure adequate waste disposal capacity in the region when the current disposal capacity at the landfill site has been fully utilised in the next 2-4 years.

The proposed Chloorkop Municipal Solid Waste to Energy Power Plant will incinerate general wastes to provide steam to power a turbine that will generate electricity. The facility will supply up to 35 MW of electricity to an adjacent industrial park and may also provide steam for use by the industrial tenants.

Up to 2000 tons per day of municipal waste would be received for use at the facility. The maximum capacity for waste storage at the facility will be approximately 7200 tons. The throughput capacity of the incinerator will be approximately 50 tons/hour.

The facility will make use of moving grate incineration technology and will be fitted with suitable emissions control technology to ensure that the emission limits published under the National Environmental Management: Air Quality Act (NEM:AQA), 2004 are not exceeded. Air for the incinerator will be drawn by fan from the waste storage area to assist with odour control.

The proposed plant consists of two identical furnace/ boiler lines, two identical flue gas treatment systems, a common waste reception and storage system and a common steam turbine (Figure 2). The facility will consist of:

- Waste reception and waste storage bunker area;
- Two overhead travelling cranes for moving and mixing waste;
- Hopper for feeding waste into incinerator;
- Moving grate fired incinerator;
- DeNOx system for the removal of nitrogen oxides;
- Vertical steam boiler generating steam at approximately 400˚C and at a pressure of 40 bar-g;
- Steam turbine/ generator system with air cooled condenser;
- Semi-dry flue gas treatment system (reactor and bag house filter) that will use lime to remove acidic gases, and activated carbon for the removal of dioxins;
- Flue gas stack;
- Ash handling system including collection and storage of bottom ash and fly ash. The ash is collected in an ash bunker managed by a travelling overhead crane; and
- 11 kV sub-station for transmission of electricity.

Output wastes anticipated to classify as hazardous will be disposed of at the Holfontein H:H Hazardous Waste Disposal Site. These wastes would include spent activated carbon, spent lime and spent ammonia from the air emissions control system. Ash from the incinerator will be disposed of at a licenced general waste landfill or at the Holfontein Hazardous Waste Landfill Site.

Please refer to the next page for the process flow diagram which includes the inputs and outputs of the processes and the composition and quantity of emissions.

No wastewater is produced as water added will leave the system in the flue gas (as water vapour). Thus there will be no process water emissions to surface water, groundwater or sewers.

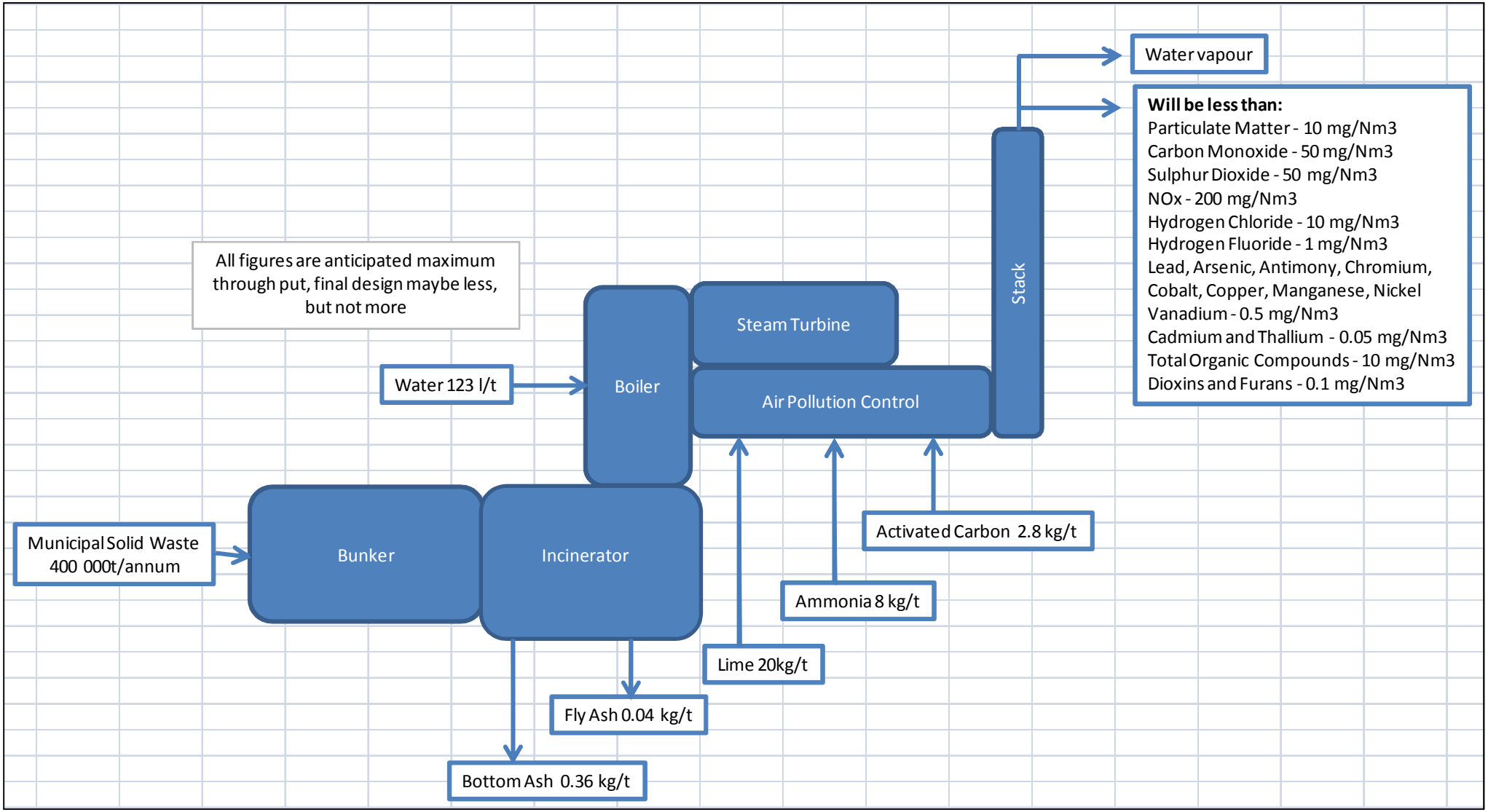

Figure 2. Flow Chart of the Waste to Energy Operations at Chloorkop (note that the values are initial estimates and may change during the final design of the plant).

ENVIRO-LEGAL REQUIREMENTS

An initial legal review has indicated that the Chloorkop MSWtE Project will require multiple authorisations under three different sets of legislation administered by different competent authorities.

EnviroServ has submitted an application for an integrated environmental authorisation to the Department of Environmental Affairs (DEA). The integrated application includes a Waste Management Licence (WML) and Environmental Authorisation (EA) for the Chloorkop MSWtE Project. An Atmospheric Emissions Licence (AEL) application will also be submitted to the Ekurhuleni Metropolitan Municipality (EMM). 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 Regulation (GNR) 544 (activities 9, 10 and 13) and GNR 545 (activities 1 and 5)	Submission of integrated application form, Scoping and Environmental Impact Report (EIR)	DEA
National Environmental Management: Waste Act, 2008 (NEMWA)	GNR 718 (Category A (1), (5), (8), (9), (18) and Category B (8) and (11))	Submission of integrated application form, Scoping and EIR	DEA
National Environmental Management: Air Quality Act, 2004 (NEMAQA)	GNR 248 Category 8.	Submission of AEL application form and NEMA authorisation	EMM

ENVIRONMENTAL CONSULTANTS

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

APPLICATION PROCESS

Synergistics has compiled the application required to commence with a scoping and EIA process as stipulated in terms of the EIA Regulations (GN R 543) made under section 24(5) of the NEMA (Figure 3). This process is also required in terms of NEMWA.

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

Scoping

Scoping involves the identification of environmental issues and concerns. Public input is a key component of the scoping phase of the assessment. The methods to be used in conducting the EIA study are planned, to ensure that the identified issues will be adequately addressed.

Environmental Impact Assessment

This involves the review of available project and environmental information to identify potential environmental impacts and to assess the level of significance of these impacts. Specialists may be involved to provide expert opinion on the impacts and often use computer modelling to assist with their studies. For this assessment, a specialist study will be undertaken to assist in predicting the impacts on air quality and health risks.

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.

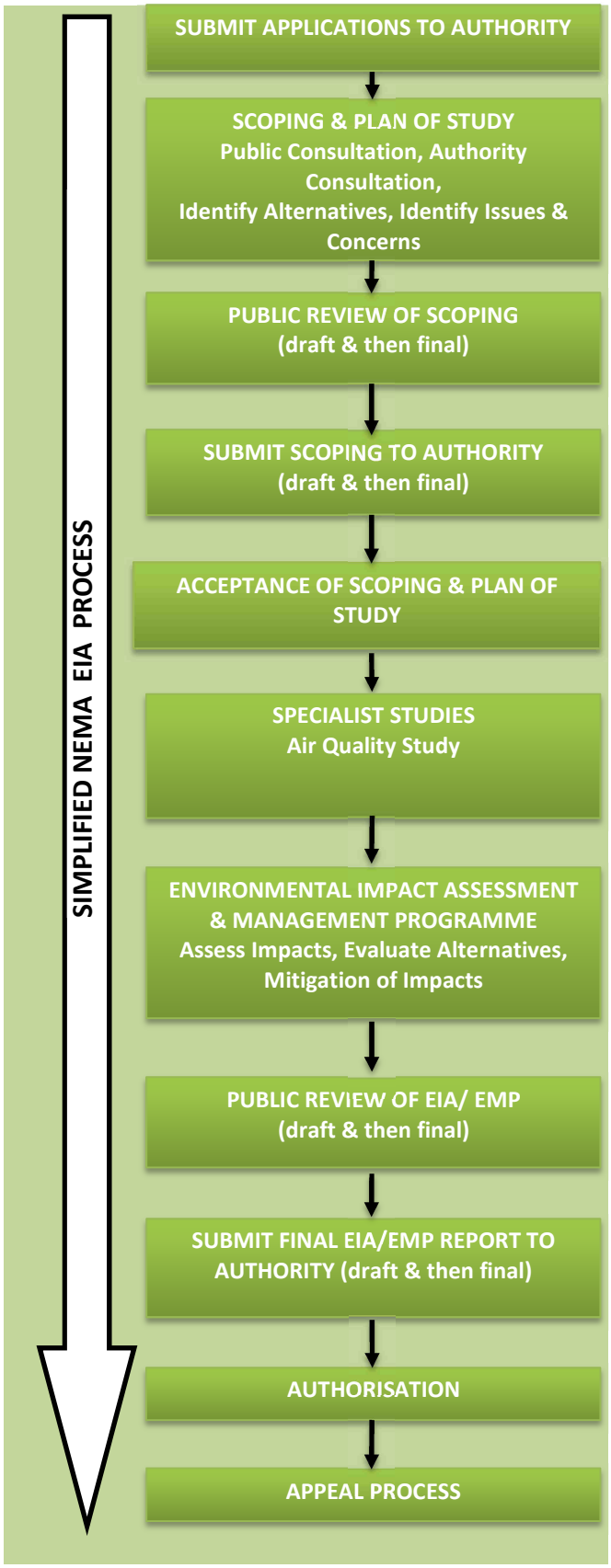

Figure 3: A simplified representation of the EIA process (NEMA)

PUBLIC INPUT SHEET FOR CHLOORKOP MUNICIPAL SOLID WASTE TO ENERGY PROJECT

Name:	
Address:	
Telephone/cell phone:	
Fax:	
E-mail:	
Date:	
Signature:	

*** Please indicate your preferred method of receiving information.**

If you know of others who should be informed of the project, please provide us with their contact details:

Name:	
Address:	
Telephone/cell phone:	
Fax:	
E-mail:	

If you have any direct business, financial, personal or other interests in the approval or refusal of the application, please disclose these:

ISSUES, CONCERNS AND QUESTIONS (use additional pages if required) **All initial comments must reach us by 12 April 2013 to be considered in the process.**

RETURN COMPLETED SHEET TO:
Matthew Hemming
Chloorkop Municipal Solid Waste to Energy Project
Synergistics Environmental Services (Pty) Ltd
Fax: (011) 326-4118
E-mail: matthew@synergistics.co.za
Post: P.O. Box 68821, Bryanston, 2021, South Africa

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