
ENVIRONMENTAL IMPACT ASSESSMENT (EIA): SCOPING REPORT

PROPOSED SOLID WASTE DISPOSAL SITE FOR KEIMOES, NORTHERN CAPE

Applicant: Kai !Garib Municipality
Ref No: NC/SIY/KAI/KEI/01/2012
Date: January 2013



Town & Regional Planners,
Environmental & Development
Consultants

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1. INTRODUCTION

1.1. BACKGROUND TO THE STUDY

The applicant, namely the Kai !Garib Municipality, proposes to upgrade and formalize the existing solid waste disposal site (landfill site) in Keimoes. The licencing of all the landfills and operating according to their licence requirements is one of the Municipality's goals in terms of the Kai !Garib Municipality's Integrated Waste Management Plan, 2010. The existing solid waste site in Keimoes is currently not licensed and does not comply with the Minimum Requirements for Waste Disposal as stipulated by the Department of Water Affairs.

The Scoping Report focuses on the possible environmental impacts of the waste disposal site for Keimoes.

The site is located on Erf 3051, Keimoes, approximately 2 km north of the town, at the existing solid waste site.

1.2 TERMS OF REFERENCE

The objective of this study is to conduct a scoping exercise. The broad terms of reference for a scoping exercise are to:

- Scope for issues that would be associated with this planned project;
- Conduct an initial investigation into biophysical and socio-economic aspects, focusing on key issues;
- Identify potential impacts
- Advise the proponent about the potential impacts (positive and negative impacts) of their planned development, as well as the implications for the design, construction and operational phases of the project;
- Facilitate public input on environmental and social matters.

1.3 APPLICABLE LEGISLATION AND GUIDELINES

This process has been conducted in terms of the relevant legislative requirements, namely in terms of:

- National Environmental Management Act (Act No 107 of 1999)
- National Environmental Management: Waste Act (Act 59 of 2008)
- National Heritage Resources Act (Act No 25 of 1999)

- Health Act (Act 63 of 1977)
- National Environmental Management: Air Quality Act (Act 39 of 2004)

The proposed solid waste disposal site is listed as a waste management activity in Government Notice 718 of 2009 published in terms of Section 19 of the National Environmental Management: Waste Act (Act 59 of 2008).

The relevant activity is listed below:

Government Notice No. 718, Category B

Activity 10:

“The disposal of general waste to land covering an area in excess of 200m²”

Activity 11:

“The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity).”

An Environmental Impact Assessment (EIA) process is followed for activities listed in Category B and will therefore be prepared in accordance with the Environmental Impact Assessment Regulations, 2010 (Government Notice No. R. 543 of 18 June 2010) promulgated in terms of Sections 24(5), 24M and 44 of the National Environmental Management Act (Act No. 107 of 1998).

Application for Scoping and EIA has therefore been made to the Northern Cape Department of Environment and Nature Conservation (DENC).

2. ENVIRONMENTAL ASSESSMENT PRACTITIONERS

2.1 DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONERS (EAPS) WHO PREPARED THE REPORT

A multi-disciplinary team of specialists contributed to the information presented in this document:

Co-ordination, supervision, management

Mr. Neil Devenish - MDA Consultants

Public Participation and Report Writing

Me. Marguerite Cronje - MDA Consultants

2.2 EXPERTISE OF THE EAPS TO CARRY OUT THE SCOPING PROCEDURES

a) Mr. Neil Devenish

Key qualifications:

- Key competencies and experience include development control applications (applications and appeals pertaining to rezoning, consolidations, subdivisions etc.) township establishment applications, environmental management and control applications.

Education:

- B.A. (Sociology, Geography) University of the Free State, SA, 1994
- Master of Town and Regional Planning, University of the Free State, SA, 1996
- Managing the Environmental Impact Assessment Process, Environmental Management Unit, PU for CHE, 2000
- Environmental Management Consulting, South African Institute of Ecologists & Environmental Scientists, 2001
- Water Law of South Africa, The South African Institution of Civil Engineers (SAICE), 2006

b) Me. Marguerite Cronje**Key qualifications:**

- Key competencies and experience include environmental management and research in zoology.

Education:

- B.Sc. (Zoology), University of the Free State, SA, 2002
- B.Sc. Honnours (Zoology), University of the Free State, SA, 2003
- M.Sc. Diploma (Equine Science), University of Edinburgh, UK, 2005
- Masters in Environmental Management, University of the Free State, SA, 2008

Conferences:

- 10 years of Environmental Impact Assessments in South Africa – Somerset West (2008)
- Free State Provincial Waste Summit – Bloemfontein (2010)

3. PROJECT INFORMATION**3.1 PARTICULARS OF APPLICANT****Kai IGarib Municipality**

Private Bag X6
KAKAMAS
8870

Tel: 054 4616400
Fax: 086 5028887

3.2 DESCRIPTION OF SOLID WASTE DISPOSAL SITE

The estimated population figures for Keimoes are 14 842 for 2011 and expected to be 17 239 by 2040. The municipal solid waste currently being generated is approximately 8.9 tonnes of waste per day and is estimated to increase to 10.343 tonnes per day by 2040. The size of the site required for waste disposal is therefore 3.459 ha.

The proposed solid waste site is classified as G:C:B⁻ in terms DWAF's Minimum Requirements, where:

- G = General waste, which includes household waste, builders rubble, garden refuse and non-hazardous industrial waste.
- C = Communal, which means the site will accept less than 25 tonnes of waste per day.
- B⁻ = The climatic water balance of the area is negative as the evaporation exceeds rainfall and the solid waste site is therefore not expected to produce significant leachate.

A pre-constructed Cell Method is proposed as the method of waste disposal. Waste will be deposited directly into a working cell / trench, which are compacted and covered on a daily basis. The cells trap the waste, thereby improving the aesthetic appearance of the site and reducing the amount of litter generated. Once the cells have been filled, they are capped with a final cover and rehabilitated. Compacting is best achieved when waste is spread in layers not exceeding 500mm and passed over at least five times with a loader or other suitable equipment. This is an essential feature of the landfill operation and is necessary to maintain a well run and visually acceptable site.

Storm water will be diverted around the site in order to prevent contamination of the surrounding drainage area.

Associated infrastructure proposed for the site includes:

- Access road, parking and waste inspection area;
- External storm water diversion channels and internal run-off collection and retention system;
- Existing guard house will be upgraded to include a store room;
- A covered area to be constructed and bins provided for recyclable material;
- Palisade type fencing with access gate;
- Signage.

Refer to the proposed site development plan in **Annexure B**.

3.3 NEED AND DESIRABILITY OF PROPOSED ACTIVITY

The upgrading and formalising of the solid waste disposal site in Keimoes is required for the following reasons:

- Existing solid waste disposal site is not permitted;
- The existing solid waste disposal site does not comply with the Minimum Requirements for Waste Disposal stipulated by the Department of Water Affairs.
- Increase capacity and extend site life of waste disposal site.

3.4 DESCRIPTION OF FEASIBLE AND REASONABLE ALTERNATIVES

3.4.1 Site alternatives: The existing solid waste site was found to be favourable in terms of location and environmental considerations.

3.4.2 Activity alternatives: The proposed activity, namely a solid waste disposal site, is the only activity alternative, due to the need for this activity as part of the Municipality's waste management goals.

3.4.3 Design alternatives: Site classification, airspace and site life determine the conceptual design of a solid waste disposal site. The technical design is then based on the conceptual design, but also

includes detailed specifications on materials, measurements and procedures. The most appropriate design for landfill disposal for the site has therefore been determined by the engineers.

- 3.4.4 No-go option:** The no-go option means keeping the status quo, i.e. not expanding and upgrading the existing waste site. This option will be discussed in more detail in the EIA Report.

4. ENVIRONMENTAL ASPECTS

4.1 LITERATURE REVIEW

Literature pertinent to this area and its immediate environs has been reviewed. The literature included published and unpublished reports: Branch, 1998, Bredenkamp, *et al.* 1996, Brooke 1984, Bulpin 1980, Golding, 2002, Harrison *et al.* 1997, Henderson 2001, Hilton-Taylor 1996, Low & Rebelo 1996, Mucina & Rutherford 2006 and Smithers 1986.

4.2 INFORMATION ON THE METHODOLOGY OF SCOPING

This report addresses the biophysical as well as the socio-economic environments. The information was captured in the following manner:

- A site visit was conducted on 17 May 2012 to determine the setting, visual character and land-uses in the area;
- Site surveys to identify any plant and animal populations that could be impacted by the development;
- The project plans were superimposed onto the gathered baseline environmental information to identify possible impacts;
- Discussions were held with the client to identify specific aspects of the development which could affect the environment;
- Interested and Affected Parties (I & APs) were informed and consulted by notice boards and advertisements to capture issues that could affect the environment;
- Identification of positive as well as negative issues;
- Making recommendations and presenting guidelines for the mitigation of impacts identified during this exercise.

4.3 DESCRIPTION OF THE ENVIRONMENT

4.3.1 Biophysical Environment

The area consists of undulating plains on a slightly sloping plateau. The altitude in the area varies from 600 to 1200 m.a.s.l.

The site slopes north west towards a seasonal stream located approximately 30m from the site.

4.3.1.1 Climate

The area receives its rainfall mainly in summer and early autumn with an average annual rainfall in the range of 70 - 200 mm. There is a large difference between summer and winter average temperatures with frost occurring in winter. Dust devils (whirl winds) are a regular occurrence on hot summer days.

4.3.1.2 Geology

The underlying geological formations of the area are currently being determined and more detail regarding the geology and geohydrology of the site will be included in the EIA Report.

4.3.1.3 Terrain forms & habitats

Table 1: Terrain form and habitats area to be developed

Terrain form		Habitat types	
Hill top		Grassland	✓
Hill side		Karoo	
Flat	✓	Karroid (scattered)	
Valley		Natural forest	
River bank		Plantations	
Wetland		Ploughed or fallow fields	
Foot slope		Riparian	
		Savanna	
		Shrub	
		Wetland	
		Other	

4.3.1.4 Soils

A geotechnical investigation of the site will be undertaken and included in the EIA Report.

4.3.1.5 Vegetation of area

Mucina & Rutherford (2006) describe this area's vegetation as Bushmanland Arid Grassland (NKb 3).

The vegetation of the area consists of extensive to irregular plains on a slightly sloping plateau with sparsely vegetated grasslands dominated by white grasses (*Stipagrostis* species).

An ecological assessment of the site has been undertaken and will be included in the EIA Report.

4.3.1.6 Animals (moths, butterflies, reptiles, fish, birds & mammals)

As the site has already been transformed, it is unable to sustain a healthy faunal population. No animals, nor nesting and breeding sites were found.

An ecological assessment of the site has been undertaken and will be included in the EIA Report, which will also include a list of red data terrestrial animals that could possibly be found in the region.

4.3.1.7 Aquatic systems

A seasonal stream is present approximately 30 m to the north west of the waste disposal site.

4.3.1.8 1 : 100 year flood line

The proposed solid waste disposal site is located above the 1:100 year flood line.

4.3.2 Socio-economic Environment

The Kai !Garib Municipality, which covers an area of approximately 7500 km², falls within the Siyanda District Municipal area and comprises the towns Kakamas, Keimoes and Kenhardt and. Keimoes is located approximately 40 km west of Upington. The Orange River is the most important life source of the area in terms of natural and economic services that depend on it. Kakamas and Keimoes are situated in the centre of an intensive farming community with

agriculture being the most important economic sector with the largest economic growth potential. Commercial farming includes grapes for export, raisins and wine.

According to the Kai !Garib Municipality draft Integrated Development Plan (IDP) (2009), which cites STATS SA: Community Survey (2007), the total population of the Kai !Garib Municipal area is 55 501.

The upgraded solid waste disposal site will improve the existing waste management infrastructure at Keimoes. Although few, work opportunities will also be created during the construction phases and operation of the proposed site.

4.3.2.1 Surrounding land uses

The site is located on Municipal land at the existing landfill site. The Keimoes sewage treatment plant is located approximately 700m from the waste disposal site. There is no residential area near to the site. Also refer to the locality plan in **Annexure A**.

4.3.2.2 Historical, archaeological or cultural sites

An Archaeological and heritage specialist has been appointed to assess the site and determine whether any significant material or graves are present at or near the site. The assessment will be included in the EIA Report.

4.4 DESCRIPTION OF POSSIBLE ENVIRONMENTAL IMPACTS, ISSUES AND CUMULATIVE IMPACTS

Developments such as these do have, like many other types of developments, various direct but also indirect impacts on the environment. These impacts have to be managed in order to have the minimum environmental impact and the maximum benefit to man.

Issues identified during the Scoping process are listed below:

4.4.1 Vegetation destruction

Natural vegetation of the site has ultimately been destroyed by the operations of the existing landfill site. An ecological assessment has

however been undertaken to assess the sensitivity of the natural vegetation of the area to be extended as well as the for area in general. This study will be included in the EIA Report.

4.4.2 Soil suitability

A geotechnical study, to investigate the subsurface conditions and determine whether the site is suitable for waste disposal, is being compiled and will be included in the EIA Report.

4.4.3 Impact on groundwater

Waste disposal could have a detrimental impact on groundwater if not managed correctly. An assessment of the groundwater conditions in the area has therefore been undertaken. The findings of which will be discussed in the EIA Report.

4.4.4 Impact on nearby stream

The stream is relatively disturbed at present as dredging activities are taking place. Although the waste disposal site is currently not directly impacting on the stream, litter / waste blown into the stream will impact it negatively. Litter control and management options will be discussed in more detail in the in the EIA Report.

4.4.5 Visual Impact

The visual impact of the proposed development in the landscape is the function of several factors of which the viewing distance, visual absorption capacity and landform are measurable. Other factors are difficult to categorize because they are subjective viewpoints.

The visual impact for the proposed development is largely due to:

- The extent of the proposed development.
- Distance from roads.
- The low visual absorption capacity of the surrounding landscape.

There are no critical viewpoints for this development as the proposed site is not located near to a road, residential area, etc.

4.4.6 Impact on air quality

Due to the classification and extent of the proposed waste disposal site, a significant risk to air quality is not anticipated and an air quality assessment not deemed necessary. As an incinerator is not part of the proposed waste disposal site, Category 8 of the Minimum Emission Standards of the National Environmental Management: Air Quality Act (Act 39 of 2004) is not applicable.

4.5 SPECIALIST STUDIES AND SPECIALIZED PROCESSES

The necessary specialised studies and specialised processes will be performed according to Section 32 of the NEMA 2010 Regulations. Specialised studies relevant to the project include:

4.5.1 Ecological Assessment

An ecological study to assess the area for protected and endangered plant and animal species.

H2ON Environmental Specialists

Suite 158
Private Bag X01
Brandhof
Bloemfontein
9324
Tel: 051 4444700

Area of expertise: Environmental Practitioners, Botany and Ecology Specialists

4.5.2 Geotechnical Assessment

A geotechnical study to assess the soil conditions of the site.

Stabilis
P.O. Box 861
Kimberley
8300
Tel: 053 8331654

Area of expertise: Civil and structural engineers.

4.5.3 Geohydrological Assessment

Inputs and recommendations on the geohydrology (groundwater conditions) of the area will be obtained from:

MBB Consulting Services (South) (Pty) Ltd

P.O. Box 3011

Matieland

7602

Tel: 021 8871026

Area of expertise: Civil, structural and environmental engineering.

4.5.4 Archaeological Assessment

An Archaeological Study to investigate the archaeological, historical and cultural significance of the site. The study has been undertaken by:

Mr. Cobus Dreyer

P.O. Box 12910

Brandhof

9324

Tel: 051 444 1187

Fax: 051 444 4395

Cell: 083 3577982

Area of expertise: Archaeology and Heritage Specialist

5. PUBLIC PARTICIPATION

5.1 INTRODUCTION AND OBJECTIVES

As an important component of the EIA process, the public participation process involves public inputs from Interested and Affected Parties (I & APs) according to Section 56 of the NEMA 2010 Regulations. I & APs may comment during the EIA of the proposed project.

The key objectives of the public participation process are to:

- Identify a broad range of I & APs, and inform them about the proposed project.
- Understand and clearly document all issues, underlying concerns and suggestions raised by the I & APs, and
- Identify areas that require further specialist investigation

5.2 METHODOLOGY

The following actions have already been undertaken as part of this process:

- Advertisement in the local newspaper
- On-site notices

5.2.1 Identification of key I & AP's

Key I & AP's, are the following types of organizations:

- Surrounding landowners
- Environmental organizations
- Authorities
- GOs
- NGOs
- Business and civic organizations

See Annexure D3 for a list of I & AP's.

5.2.2 Notification of potential I & AP's of EIA:

i) **Newspaper advertisement: (Annexure D1)**

<i>Die Gemsbok</i>	25 May 2012
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ii) **On site notices:** On site notices were also placed at the site on 17 May 2012 allowing 30 days for public response (Annexure D2).

5.2.3 Comments

The draft Scoping Report was circulated for a 60-day comment period. No comments were received.

5.3 SUMMARY OF KEY ISSUES RAISED BY THE I & AP's

None to date.

6. PLAN OF STUDY (Proposed approach to EIA)**6.1 DESCRIPTION OF TASKS AS PART OF EIA****6.1.1 Proceeding with public participation**

After the acceptance of the Scoping Report by the Northern Cape Department of Environment and Nature Conservation (DENC), the public participation process for EIA can proceed according to Section 56 of the NEMA 2010 Regulations. See 6.5 for the steps to be taken as part of the process.

6.1.2 Steps in accordance with the Plan of Study for EIA

All activities and processes will be undertaken in accordance with the submitted Plan of Study for EIA for the relevant project. This process is subject to acceptance of the Scoping Report by the DENC.

6.1.3 Register Interested & Affected Parties (I & APs)**6.1.3.1 List of I & APs**

All departments and organisations having jurisdiction in respect of any aspect of the proposed development will be included in the list of I & APs. Also all persons giving written comments (positive or negative) or persons directly influenced by the proposed development will also be registered.

The initial list of I & APs is as follows:

- i. Stakeholders
- ii. Public registered
- iii. Surrounding landowners

6.1.3.2 Issues raised by I & APs

A summary of all issues raised by the I & APs, as well as the responses from the Environmental Assessment Practitioner (EAP) or relevant specialists will be included in the EIA report.

6.1.4 Development alternatives

Site and activity alternatives are not applicable for this project. Therefore the proposed activity and the alternative to not proceed with the proposed activity will be assessed. Also to be listed in this section

will be the advantages and disadvantages of the proposed activity and the no-go alternative, for the environment and the community.

6.1.5 Assessment of identified potentially significant impacts:

6.1.5.1 Potential Impacts

The identified potential impacts listed in the Scoping Report will be discussed in terms of its:

- Cumulative impact
- Nature of the impact
- Extent and duration of the impact
- The probability of the impact occurring
- Degree to which the impact can be reversed
- Degree to which the impact can cause irreplaceable loss of recourses
- Degree to which the impact can be mitigated

6.1.5.2 Summary of findings

A summary of all the significant findings in the previous section will be drawn up. Overall, this will include the following:

- Summary of the key findings of the EIA;
- An indication of the extent to which the issues could be addressed by the adoption of listed mitigation measures.
- Recommendations from the environmental practitioner and specialists;
- Any specialist reports or reports on specialized processes;
- Description of any assumptions, uncertainties and gapes in knowledge;
- Option to whether the activity should be authorized and any conditions that should be made in respect of the authorization.

6.2 SPECIALIST REPORTS AND SPECIALIZED PROCESSES

The required process regarding specialist reports and specialized processes for the relevant development is as follows:

- i. Specialists will be appointed either by the EAP or the developer;
- ii. The reports and processes will be performed and obtained from the relevant specialists as mentioned in section 4.5 of the Scoping Report;
- iii. Obtained reports and processes will be incorporated in the EIA Report;
- iv. Project plans will be reviewed according to recommendations of specialists to ensure minimum environmental impact;
- v. The relevant specialist input include the following:
 - Ecological Assessment
 - Geotechnical Assessment
 - Geohydrological Assessment
 - Archaeological Assessment

6.3 STAGES OF AUTHORITY CONSULTATION

The DENC will be consulted at stages when guidance is required in terms of clarification of listed activities, as well as correct processes to follow in the case of unusual projects or requests.

6.4 METHODOLOGY OF ASSESSING ENVIRONMENTAL ISSUES AND ALTERNATIVES

The EIA report will address the biophysical, as well as the socio-economic environments for all alternative site locations and activities. The information will be captured in the following manner:

- i. Site visits to determine the setting, visual character and land-uses in the area;
- ii. Site surveys to address the identified impacts of the development on any plant and animal populations;
- iii. The project plans will be superimposed onto the gathered baseline environmental information of identified impacts;
- iv. The project plans will be revised according to the identified environmental sensitive areas to ensure the least environmental impact possible;
- v. Detailed discussions will be held with the client to address specific aspects of the development which could affect environment;

- vi. I&APs will be consulted by phone, letters and meetings, if necessary, to capture additional issues of importance at this stage;
- vii. Making recommendations and presenting guidelines for the mitigation of impacts addressed during this exercise;
- viii. The option of not proceeding with the development will be considered and evaluated.

6.5 PARTICULARS OF PUBLIC PARTICIPATION PROCESS AS PART OF EIA

The public participation process will be continued as part of the EIA and the necessary steps will be included, which can be the following:

- i. Recording of I & APs comments, according to Section 57 of the Regulations;
- ii. Respond to any concerns or complaints from I & APs;
- iii. Public meetings if deemed necessary;
- iv. A draft EIA report will be compiled and will be made available for review by the I & APs for a period of 60 days;
- v. Notify I & APs of the outcome of the application in writing within a period determined by the DENC.

6.6 SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

Additional relevant information will be provided on request of the competent Authority.

6.7 CONSIDERATION OF SCOPING REPORTS

Steps to be taken by the competent authority after submission of the Scoping for EIA:

- i. Consider the Scoping Report within 30 days of receipt;
- ii. Accept the Scoping Report and the Plan of Study for EIA;
- iii. Advise EAP to proceed with tasks contemplated in the Plan of Study for EIA;
- iv. Request EAP to amend the Scoping Report or Plan of Study for EIA;
- v. Reject the Scoping Report or EIA if it:
 - does not contain material / information required;
 - has not taken the relevant guidelines into account.

7. CONCLUSION

The applicant, namely the Kai !Garib Municipality, proposes to upgrade and formalize the existing solid waste disposal site (landfill site) in Keimoes. The licencing of all the landfills and operating according to their licence requirements is one of the Municipality's goals in terms of the Kai !Garib Municipality's Integrated Waste Management Plan, 2010. The existing solid waste site in Keimoes is currently not licensed and does not comply with the Minimum Requirements for Waste Disposal as stipulated by the Department of Water Affairs.

The site is located on Erf 3051, Keimoes, approximately 2 km north of the town, at the existing solid waste site.

The Scoping Report focuses on the possible environmental impacts of the waste disposal site for Keimoes.

The overall terms of reference for this scoping exercise are to:

- Scope for issues that would be associated with this proposal;
- Do an initial assessment of the biophysical and socio-economic aspects, thus focusing on key issues;
- Identify and advise the client about the potential impacts (negative as well as positive) of the planned development, and the implications for the design, construction and operation of the project, and
- Facilitate public input on environmental matters.

Identified issues documented in this report are related to the biophysical environment, which will require appropriate mitigation by the proponent as will be specified in the EIA Report.

The following potential issues were identified during the scoping phase:

- Destruction of natural vegetation
- Soil suitability
- Impact on groundwater
- Impact on nearby stream
- Visual impact
- Impact on air quality

The identified issues will be addressed and mitigated by means of specialist assessments, which will be included in the EIA Report.

Specialist inputs include:

- Ecological
- Geotechnical
- Geohydrological
- Archaeological

The Plan of Study for EIA stipulates the steps to be taken and the information to be included in the EIA Report, which will be submitted after approval of the Scoping Report.

8. LITERATURE

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LIST OF ANNEXURES

ANNEXURE A : MAP OF REGION / LOCALITY PLAN

ANNEXURE B : SITE DEVELOPMENT PLANS

ANNEXURE C : SITE PHOTOS

ANNEXURE D : PUBLIC PARTICIPATION

ANNEXURE D1 : NEWSPAPER ADVERTISEMENT

ANNEXURE D2 : ON-SITE NOTICES

**ANNEXURE D3 : LIST OF INTERESTED AND AFFECTED PARTIES
(I&AP)**

ANNEXURE A


Map of Region / Locality Plan



TYPE OF PLAN:

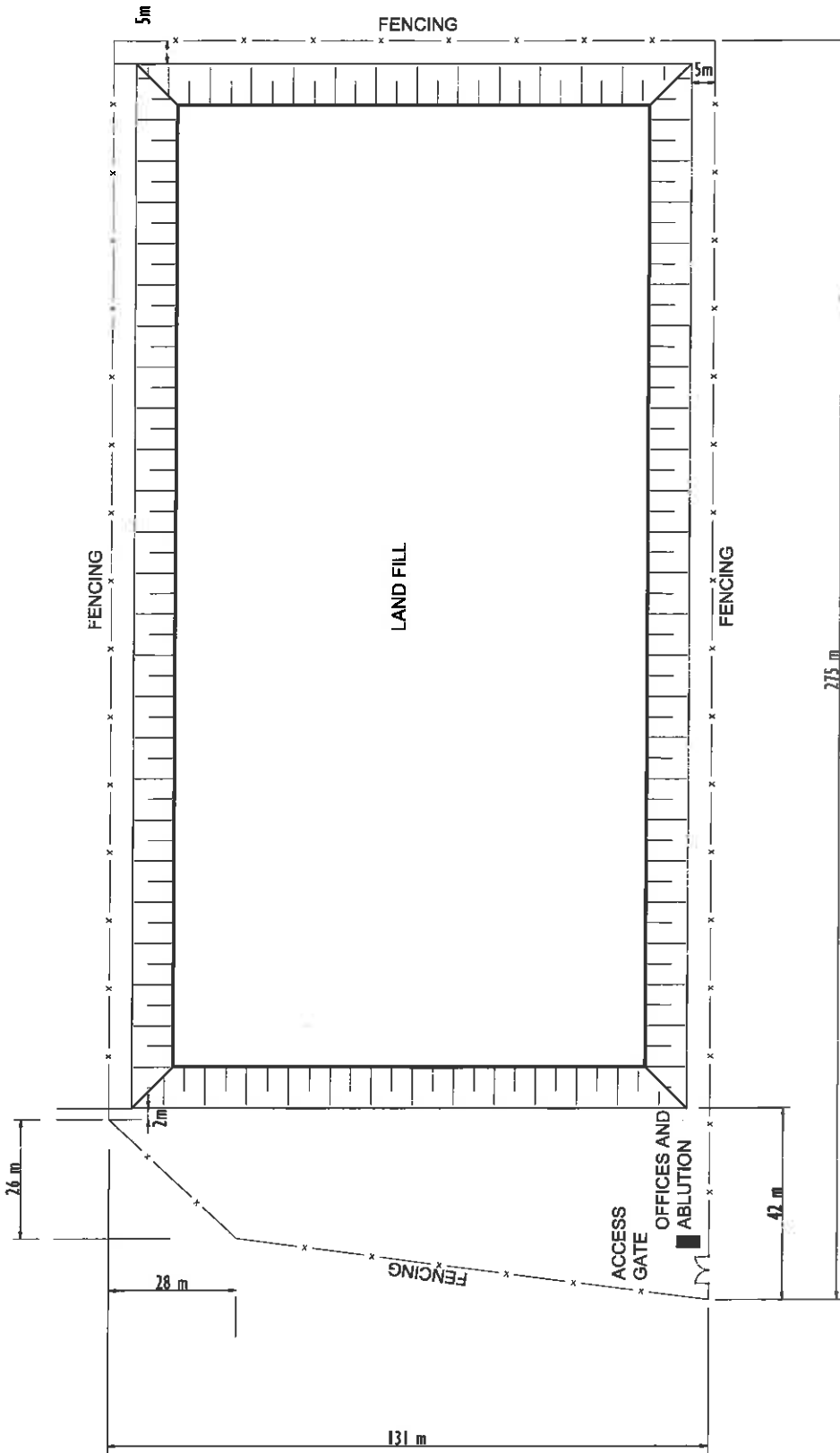
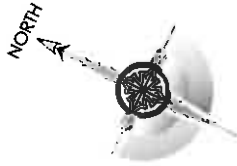
LOCALITY PLAN

APPLICATION SITE

 mda Town & Regional Planners, Environmental & Development Consultants 9 Barnea Street BLOEMFONTEIN Tel: +27(0)11 447-1683 Fax: +27(0)11 448-8839 E-mail: admin@mdagroup.co.za	PROJECT: PROPOSED SOLID WASTE DISPOSAL SITE FOR KEIMOES	SCALE: N.T.S.	DATE: 19/07/2012
	PROJECT BY: KAI IGARIB MUNICIPALITY	DRAWN BY: C.J.	DRG No.: 40596 MD50

ANNEXURE B

Site Development Plans



SITE DEVELOPMENT LAYOUT



SECTION THROUGH LANDFILL (WASTE BODY AND EXCAVATION)

		MBB CONSULTING SERVICES (SOUTH) (PTY) LTD		SCALE 1 : 1 000		DRAWING NUMBER		COPYRIGHT RESERVED	
PROPOSED LANDFILL SITE, KEIMOES		REVISION	DATE	Q.A	DATE	PROJECT NUMBER	DISC. CODE	SUB-ASST.	DRAWING CODE
			JUL. 2012		JUL. 2012	J 1 6 0 0 2 0 A 3 2 0 3	R 0 0	R 0 0	R 0 0
			DRAWN		HGB	J 1 6 0 0 2 0 A 3 2 0 3	R 0 0	R 0 0	R 0 0
			CHECKED		JVH	J 1 6 0 0 2 0 A 3 2 0 3	R 0 0	R 0 0	R 0 0

ANNEXURE C

Site Photos



Photo 1: View of waste site towards the north with the existing access road.



Photo 2: View of the proposed extension to the waste disposal site to the west of the existing landfill site. Arrows indicate the existing landfill.



Photo 3: View of site just west of the existing landfill operations.



Photo 4: View of existing landfill / waste site from the north.

ANNEXURE D

Public Participation

ANNEXURE D1

Newspaper Advertisement

Die Jeuggroep induiteer die dames met hul sang tydens die diens

TE LAAT VIR KLASSIFIKASIE

26. TE LAAT VIR KLASSIFIKASIE Vervolg van bl. 18

- 383 6805, Arns - 083 551 5492; F&N - 082 163 5497; Narna - 076 6000710; ALGEMEEN TE HUUR - 825705
PANGOLDING Unstekerde pangs, idel of gelyk te gassehuur/ kamers en ruim maak op, oop, seker, moesige stadige/leem, onteerbaar, 4 st., 2 blok, 3 lewensb., wasl. Onder R1 2 ml. Fion - 082 4856487; Arns - 083 581 5842; Dawid - 021 868 0815; Narna - 078 8000210

KENNISGEWING VAN VOORNAME EN KRAFTIGHEIT VAN DIE WET VIR IN LIGENSAANSOEKTE DOEN (Reg. 411) NOORD-KAAP DRAAN-WET, 2008

WILHELMUS ENSELBRECHT INLIK PALMANIGER, 4903 Centre Market Street, Private Bag 20028, Uprington 2680. Even 3483; Uprington

KALIGARIE MUNISIPALITEIT NOTICE NO 07/2012 TOWN PLANNING SERVICE PROPOSED SUBDIVISION PARTIAL REZONING, CONSENT USE AND REMOVAL OF RESTRICTIONS ON PORTION 68 OF THE FARM BLOKOPPELAND 343, KENHART RD., NORTHERN CAPE PROVINCE

Notice is given in terms of the provisions of the Northern Cape Planning and Zoning Act (Act 74 of 1998) and the applicable Scheme of Regulations for Kaligarie Municipality...

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Munisie is geënte in terms of Regulasie 54(2)(c) of Regulasie No. R. 543 publisieer in die Staatskoerant. Nieuws No. 33306 van 16 Junie 2011...

Public Participation Process Environmental Impact Assessment Scoring

Project 1: New solid waste disposal site for Kamooies Northern Cape. Project 2: New solid waste disposal site for Kamooies Northern Cape.

Project 3: Proposed waste transfer site in Augrabies, Northern Cape. Project 4: The new waste transfer site is planned adjacent to and to the north of the communal sports field located on the R539 road in Augrabies.

Project 5: Kaligarie Municipality

AMANDA logo and contact information: PO Box 80288, Willows, Bloemfontein. Tel: (051) 447 1503, Fax: (051) 449 8839

Contact person: Merguette Craipe

ANNEXURE D2

On-site Notices



Photo A: On-site notice placed on the boundary fence at the Keimoes waste disposal site on 17 May 2012.

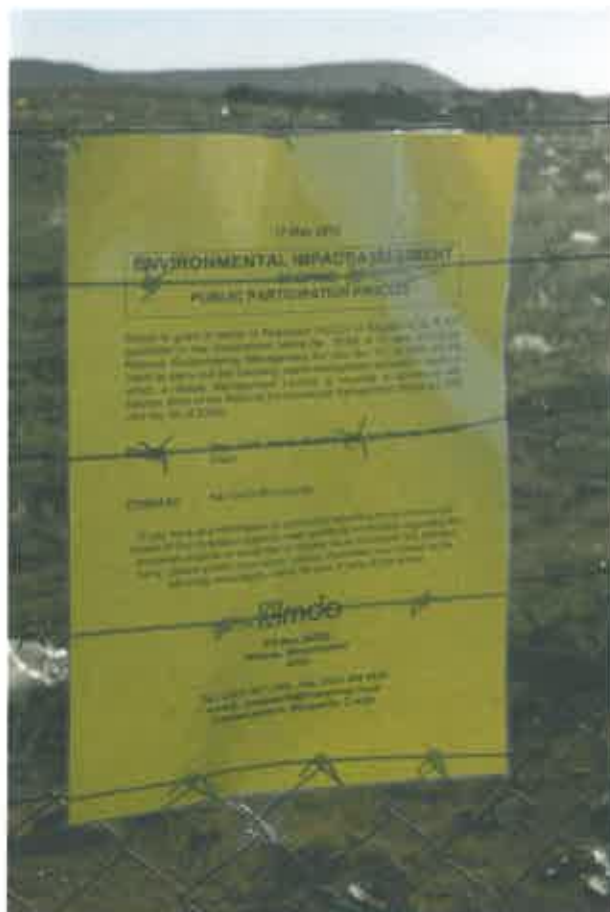


Photo B: Close-up of notice.

ANNEXURE D3

List of Interested and Affected Parties

LIST OF INTERESTED AND AFFECTED PARTIES

1. Kai Igarib Municipality: Ward Councillor

Private Bag X6
KAKAMAS
8870
Tel: 054 4616400

2. Department of Water Affairs

Private Bag X5912
UPINGTON
8800
Tel: 054 3385800