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Department :
Economic Development, Tourism and
Environmental Affairs
PROVINCE OF KWAZULU-NATAL

Enquiries : Ms Vanessa Maclou	Telephone : 031 302 2800	Private Bag : X9152
Imibuzo :	Ucingo :	Isikhwama Seposi : Pietermaritzburg
Navrae :	Telefoon :	Privaat Sak : 3200
Reference : DM/0002/2013	Fax : 031 302 2824	Date : 13 / 08 / 2014
Inkomba :	iFeksi :	Usuku :
Verwysing :	Faks :	Datum :

Fax Transmission

eThekwini Municipality – Water and Sanitation Department
3 Prior Road
Durban
4000

Attention: Mr. Frank Stevens
Fax no: 031 311 8549

Dear Sir

DM/0002/2013: ENVIRONMENTAL AUTHORISATION FOR THE CONSTRUCTION OF THE NTUZUMA E SEWER OUTFALL ON FARM 4579 OF INANDA MISSION, LOWER MANAZA, MATABETULE, FARM 0449 OF ERF 1492 OF NTUZUMA E, NTUZUMA AND FARM 17504 OF NTUZUMA, LINDELANI D, NTUZUMA, WHICH IS LOCATED WITHIN THE ETHEKWINI MUNICIPALITY.

The KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs has **authorised** the above-mentioned project. This environmental authorisation and reasons for the decision are attached herewith.


ENQUIRIES

Please note that:

- All queries regarding this application for environmental authorisation (including the Department's decision) must be directed to the official of this Department with contact details provided on the letterhead above.
- **Only** queries regarding appeals must be submitted to the Office of the MEC (details provided below).

APPEALS

In terms of sub-regulation 10(2) of the EIA Regulations, 2010, you are instructed to notify all registered interested and affected parties in writing within **12 days** of this Department's decision in respect of your application. You are required to comply with the requirements of sub-regulations 10(2)(a)-(d) with regard to this notification. This includes drawing the attention of registered interested and affected parties to the fact that an appeal may be lodged against the decision in terms of Chapter 7 of the EIA Regulations, 2010.

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includes drawing the attention of registered interested and affected parties to the fact that an appeal may be lodged against the decision in terms of Chapter 7 of the EIA Regulations, 2010 as amended.

In accordance with the provisions of sub-regulation 60(1) of the EIA Regulations, 2010 as amended, a notice of intention to appeal must be lodged with the **KwaZulu-Natal MEC of the Department of Economic Development, Tourism and Environmental Affairs** within **20 days** of the date of this decision by posted, faxed, e-mailed or hand delivered to the following address:

POSTAL/ FAX/ E-MAIL:	PHYSICAL:
Private Bag X001 Bishopsgate Durban 4008 Tel: 031 310 5300 Fax: 031 310 5416 E-Mail: mecpa@kznded.gov.za (Bongani Mkhabela)	9 th Floor The Marine Building 22 Dorothy Nyembe Street Durban 4001

The appellant is reminded of the requirements of sub-regulations 60(2) and 60(3) in the EIA Regulations, 2010 as amended with regard to the notification of registered interested and affected parties and the applicant (if the appellant is not the applicant) of the notice of intention to appeal.

Yours faithfully


 13/08/2014

for: **Head of Department:**

KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs

Signed by: Ms. Vanessa Maclou

cc: Mr. Jon Marshall Messrs Environmental Planning and Design cc. Fax No.: 031 266 8241

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Department :

Economic Development, Tourism and
Environmental Affairs

PROVINCE OF KWAZULU-NATAL

Environmental Authorisation

In terms of sub-regulation 25(1)(a)(i) of Government Notice Regulation (GNR) 543 of the
Environmental Impact Assessment (EIA) Regulations, June 2010 (as amended)

Project Title:

The construction of the Ntuzuma E Sewer Outfall on Farm 4579 of Inanada Mission, Lower
Manaza, Matabetule, Farm 0449 of Erf 1492 of Ntuzuma E, Ntuzuma and Farm 17504 of
Ntuzuma, Lindelani D, Ntuzuma

Local Municipality: eThekwini

Application Number : DM/0002/2013

NEAS Number : KZN/EIA/0000997/2013

Date of Issue : 13/08/2014

Environmental Authorisation Holder : eThekwini Municipality - Water and Sanitation
Department

Location of Activity : Farm 4579 of Inanda Mission, Lower Manaza,
Matabetule, Farm 0449 of Erf 1492 of Ntuzuma E,
Ntuzuma and Farm 17504 of Ntuzuma, Lindelani D,
Ntuzuma

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Decision

The **KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs** (hereafter referred to as the 'Department') is satisfied on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation that the holder is authorised to undertake the activity specified below.

Details regarding the basis on which the Department reached this decision are set out in **Annexure 1**.

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and Government Notice Regulation (GNR) 543 of the Environmental Impact Assessment (EIA) Regulations, June 2010 (as amended), the Department hereby authorises:

eThekwini Municipality - Water and Sanitation Department

(hereafter referred to as 'The Holder')

Contact person : Mr. Frank Stevens
Postal address : 3 Prior Road
Durban
3000
Telephone number : (031) 311 8602
Facsimile number : (031) 311 8549
E-mail address : frankst@dmws.durban.gov.za

to undertake the following activity (hereafter referred to as 'the activity') as described below:

1. Activity authorised

The construction of a HDuPVC (comprising of plastic and steel) sewer outfall on Farm 4579 of Inanda Mission, Lower Manaza, Matabetule, Farm 0449 of Erf 1492 of Ntuzuma E, Ntuzuma and Farm 17504 of Ntuzuma, Lindelani D, Ntuzuma, located within the eThekwini Municipality, **Refer to Annexure 2: Locality Map** attached herewith. The sewer outfall will be approximately 2180m in length, with an internal diameter of 250mm and a development footprint of 39115m², **Refer to Annexure 3: Site Layout Plan** attached herewith. Precast ring manholes with an internal diameter of 1m will be constructed at all changes in direction or in straight sections at approximately 75m centers for maintenance purposes. The sewer outfall will be laid below ground with a possibility of elevated watercourse crossings. It will gravitate from higher development areas down valley slopes and into

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Environmental Authorisation
The Ntuzuma E Sewer Outfall

natural valley lines where it will connect into the existing municipal sewer pipeline/reticulation system at Ihobe Road, Ntuzuma. The working width will extend 10-20m.

The Department is granting environmental authorisation for Activities 11(xi) and 18(i) of GNR 544 of the EIA Regulations, June 2010 (as amended):

Component (or phase) of the project:	Listing Notice and Activity Number:
<i>The construction of the sewer outfall will require the construction of infrastructure or structures covering greater than 50m² within 32m of a watercourse.</i>	GNR 544 Activity 11(xi): 'The construction of - (xi) infrastructure or structures covering 50 square metres or more Where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line'.
<i>The construction of the sewer outfall will require the excavation and removal of more than 5m³ of soil, sand, pebbles and rock from a watercourse, as well as, the infilling of excavated trenches with more than 5m³ of material within a watercourse.</i>	GNR 544 Activity 18(i): 'The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from: (i) a watercourse'.

as described in the Basic Assessment Report (BAR), prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014. The site details are as follows:

Province:	KwaZulu-Natal	
Magisterial District:	eThekweni Municipality	
Name of property:	Farm 4579 of Inanada Mission, Lower Manaza, Matabetule, Farm 0449 of Erf 1492 of Ntuzuma E, Ntuzuma and Farm 17504 of Ntuzuma, Lindelani D, Ntuzuma, located within the eThekweni District	
GPS co-ordinates captured along the sewer outfall alignment/route: (Refer to Annexure 4, attached herewith)	Starting point:	29° 43' 27.13" S; 30° 55' 10.37" E
	Middle point:	29° 43' 45.18" S; 30° 55' 12.36" E
	End point:	29° 43' 50.02" S; 30° 55' 38.69" E
Total length of the sewer outfall:	approximately 2180m	
Total development footprint:	approximately 39115m ²	
Present land-use zonation:	Residential with some portions un-zoned (no planning scheme)	

The granting of this environmental authorisation is subject to the conditions set out below. This environmental authorisation does not exempt the holder from compliance with any other relevant legislation that may be applicable to the carrying out of the activity as described on Page 3 and 4 of this environmental authorisation.

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2. General

2.1 Compliance with the conditions of this environmental authorisation

In terms of section 24F of the National Environmental Management Act, 1998 (Act No. 107 of 1998) failure to comply with the conditions of this environmental authorisation constitutes an offence for which a convicted person may be liable to a fine not exceeding R10 million or imprisonment for a period not exceeding 10 (ten) years or both such fine and such imprisonment.

2.2 Contact details for the Department

All correspondence pertaining to the development must clearly include the EIA reference number, i.e. DM/0002/2013. Unless otherwise stated in the condition, where documentation must be submitted to the Department it must be submitted to the **Control Environmental Officer for the Compliance Monitoring and Enforcement (CME) Component** of the Department's **eThekweni District office**. The contact details are as follows:

Fax Number : 031 302 2824

Tel Number : 031 302 2800

Postal Address : Private Bag X54321
Durban
4000

Please note that it is the responsibility of the EA holder to ensure that the above details are correct at the time of submitting any documentation, and that the documentation reaches the relevant official.

2.3 This environmental authorisation is only applicable to the activity as described in **section 1** herewith.

2.4 This environmental authorisation and the conditions are binding on the holder. The holder is responsible for adherence to the conditions stipulated in this environmental authorisation.

2.5 Amendments to the project

Should the need arise to expand the development or make changes to the project description, which fall within the ambit of GNR 544, 545 and 546 of the EIA Regulations¹, June 2010 (as amended) the holder must obtain environmental authorisation from the EIA Component of this Department as per the contact details specified in condition 2.2 herewith **prior** to the commencement of the expansion activities or changes to the project description. In assessing whether to grant such approval or not, the Department may request information, as it deems necessary, to evaluate the significance and impacts of such changes.

¹ The holder is advised to contact the Department to determine if any proposed changes are regarded as material or substantive prior to commencement of such changes.

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- 2.6 Where any of the holder's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the holder must notify the EIA Component of this Department, in writing, as per the contact details specified in condition 2.2 herewith, as soon as the new details become known.
- 2.7 This environmental authorisation must be produced to any authorised official of this Department who requests to see it and must be made available for review by any employee or agent of the holder who works or undertakes work on the site.
- 2.8 In the event of any dispute concerning the significance of a particular impact the opinion of this Department in respect of its significance will prevail.
- 2.9 The Department shall not be held responsible for any damages or losses suffered by the holder in any instance where any phase of the development is temporarily or permanently stopped for reasons of non-compliance by the holder with the conditions of the environmental authorisation or any other subsequent document emanating from these conditions of environmental authorisation.
- 2.10 All correspondence pertaining to this application must clearly include the EIA reference number, i.e. DM/0002/2013.

3. Conditions of environmental authorisation

- 3.1 The activity authorised must only be carried out at the location as described in **section 1** above and as indicated in **Annexure 2: Locality Map** attached herewith.
- 3.2 The holder is responsible for ensuring compliance with the conditions of this environmental authorisation by any person acting on his or her behalf, including but not limited to, an agent, contractor, sub-contractor, employee or person rendering a service to the holder.
- 3.3 **Period of Validity:** The listed activities authorised must commence within **05 (five) years** from the date of issues of this environmental authorisation. If commencement of the authorised activities does not occur within that period, this environmental authorisation lapses and the holder must re-apply for an environmental authorisation should he or she wish to carry on the activities; unless the holder has requested an extension of time, in writing, at least **60 (sixty) calendar days** before the expiry of this environmental authorisation.
- 3.4 Any alteration to the bed, banks, course or character of a watercourse; the impedance or diversion of flow of a watercourse or the abstraction and or storage of water from either surface or ground is prohibited. Should it become necessary, Mr. Norman Ward of the Department of Water Affairs (DWA): Water Resources Management Section must be contacted on (031) 336 2700 in order to embark on the process to obtain the necessary authorisation.
- 3.5 No structures older than 60 (sixty) years or parts thereof are allowed to be demolished, altered or extended without a permit from Amafa aKwaZulu-Natali. Should any heritage objects or any sites of archaeological

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and cultural significance be discovered during the construction phase, all activity on site must cease immediately and the discovery must be reported to Amafa aKwaZulu-Natali for investigation. Work on the site may only re-commence following written approval from Amafa aKwaZulu-Natali.

- 3.6 The removal, cutting, pruning or relocation of any indigenous or protected plant species must be authorized or permitted by the Department of Fisheries and Forestry (DAFF) and/or Ezemvelo KZN Wildlife, if applicable. If authorisation or a permit is not required, then the activities must be authorised by the appointed Environmental Control Officer (ECO) as per condition 3.54 herewith.
- 3.7 Any pollution must be reported to the Pollution and Waste Management (P&WM) Component of this Department as per the contact details specified in condition 2.2 herewith, and the appropriate mitigation measures must be undertaken.
- 3.8 Existing infrastructure within the sewer outfall route and working width (eg. electricity lines) must be identified and visibly demarcated **prior** to the commencement of the construction phase. Should the need arise to disrupt these services for any reason, the relevant authority must be contacted for permission.

Notification of Interested and Affected Parties (I&APs)

- 3.9 The holder must notify every registered I&AP, in writing, and within **12 (twelve) calendar days** from date of the Department's decision to authorise the activity.
- 3.10 The notification must:
 - 3.10.1 Specify the date on which this environmental authorisation was issued;
 - 3.10.2 Inform I&APs of the appeal procedure provided for in Chapter 7 of GNR 543 of the EIA Regulations, June 2010 (as amended); and,
 - 3.10.3 Advise I&APs that a copy of this environmental authorisation will be made available on request from the holder.
- 3.11 The holder must place an advertisement in The Isolezwe newspaper (which was used during the public participation process) detailing the outcome of the application and methods by which a copy of this environmental authorisation can be obtained.

Approval of the Environmental Management Programme (EMPr)

- 3.12 The draft EMPr submitted together with the BAR, both prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014 complies with regulation 33 of GNR 543 of the EIA Regulations, June 2010 (as amended) and is **hereby approved**. Non-compliance with the EMPr will constitute non-compliance with the conditions of this environmental authorisation.
- 3.13 The EMPr must be:
 - 3.13.1 Considered as an extension of the conditions of this environmental authorisation;
 - 3.13.2 Implemented, adopted and adhered to throughout the lifespan of the development;

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- 3.13.3 Made binding on all parties operating on the site throughout the lifespan of the development;
 - 3.13.4 Kept on site during all phases of the development;
 - 3.13.5 Made available to I&APs on request;
 - 3.13.6 Included in all contractual documentation; and,
 - 3.13.7 Appended to this environmental authorisation.
- 3.14 Authorised officials of the Department reserve the right to:
- 3.14.1 Review the approved EMPr and amend/add any condition to the EMPr as it is deemed necessary; and,
 - 3.14.2 Inspect the site throughout the lifespan of the development.
- 3.15 Any amendments to the approved EMPr must be submitted, in writing, to the EIA Component of this Department as per the contact details specified in condition 2.2 herewith. The amendments must only be implemented after being approved by this Department.

Written notice of the commencement of the construction and operational phases

- 3.16 **Fourteen (14) calendar days** written notice must be given to the CME Component of this Department (as per the contact details specified in condition 2.2 herewith) and the surrounding community that the construction phase will commence. The notice must include a date on which it is anticipated that the construction phase will commence and the EIA reference number for this environmental authorisation, i.e. DM/0002/2013.
- 3.17 **Fourteen (14) calendar days** written notice must be given to the CME Component of this Department (as per the contact details specified in condition 2.2 herewith) and the surrounding community, that the operational phase will commence. The notice must include a date on which it is anticipated that operation will commence and the EIA reference number for this environmental authorisation, i.e. DM/0002/2013.

Construction phase

- 3.18 The development must comply substantially with the **Site Layout Plan** prepared by Messrs Environmental Planning and Design cc., as depicted in **Annexure 3** attached herewith.
- 3.19 All staff and contractors/sub-contractors/suppliers/service providers must be trained on the environmental, occupational safety and/or legal responsibilities expected from them. The training must take into account language and literacy requirements. Proof of the training must be forwarded to the CME Component of this Department as per the contact details specified in condition 2.2 herewith.
- 3.20 An indigenous flora and fauna, search and rescue must be conducted by a qualified biologist **prior** to commencing with clearing activities. Species to be relocated must be done so within suitable areas within the boundaries of the site. These areas must allow for the ecological sustainability of the species. Proof of the biologist's appointment and, the search and rescue must be forwarded to the CME Component of this Department as per the contact details specified in condition 2.2 herewith.

- 3.21 All construction work must be supervised by a qualified civil engineer. Proof of the civil engineers appointment must be forwarded to the CME Component of this Department as per the contact details specified in condition 2.2 herewith, **07 (seven) calendar days** prior to the commencement of the construction phase.
- 3.22 All materials must be obtained from a registered and sustainable source and all delivery notes and slips must be made available to the ECO e.g. mined material such as stone must only be obtained from licensed quarries.
- 3.23 The site must be:
- 3.23.1 Clearly demarcated and cordoned off to the public to prevent injury; and,
- 3.23.2 Construction activities and camps must be kept within the demarcated area.
- 3.24 Adequate signage notifying the public of the construction activities being undertaken on site must be erected along the road and foot paths leading to the site.
- 3.25 All excavated trenches must be demarcated with barrier tape.
- 3.26 All earthworks must be carried out in accordance with SANS 1200.
- 3.27 When backfilling the soil profile must be restored to the natural structure with topsoil and sub-soil being replaced in sequence.
- 3.28 The backfill must be compacted to a similar permeability of the surrounding soils.
- 3.29 Access of heavy vehicles and construction machinery must be strictly controlled and restricted to the construction area to minimize impacts on neighbouring sites and sensitive environmental features on site.
- 3.30 Noise suppressors must be used on machinery during construction.

Dust and erosion control

- 3.31 Dust control measures, such as, shade cloths/screens must be erected along the construction area to minimize the spread of dust across the site and onto neighbouring sites.
- 3.32 Soil erosion prevention measures must be implemented in sensitive areas, such as, a watercourse, the edge of slopes and excavated trenches, for all phases of the development. These measures may include, but not be limited to, the following:
- 3.32.1 The suitable use of sand bags, hessian sheets or gabion baskets and mattresses;
- 3.32.2 The removal of vegetation only as it becomes necessary for work to proceed; and,
- 3.32.3 The retention or prompt rehabilitation of bare soil with indigenous vegetation.
- 3.33 Stockpiles must be positioned away from the watercourse and seepage areas.

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- 3.34 The erosion of stockpiles must be prevented by measures, such as, the use of synthetic covers, mulching or vegetation.

Stormwater and wastewater management

- 3.35 Stormwater leaving the site must in no way be contaminated by any substance, whether such substance is a solid, liquid, vapour or gas or a combination thereof which is produced, used, stored, dumped or spilled on the site. All contaminated stormwater must be captured in a dirty water attenuation tank for safe disposal. Safe disposal certificates must be submitted within **14 (fourteen) calendar days** of its issue to the CME Component of this Department as per contact details specified in condition 2.2 herewith.
- 3.36 Increased runoff must be managed and suitable mitigation measures must be undertaken to ensure that stormwater leaving the site does not exceed pre-development levels.
- 3.37 Any wastewater (i.e. dirty construction water) generated must not be discharged into the natural environment. All contaminated wastewater must be captured in a dirty water attenuation tank for safe disposal. Safe disposal certificates must be submitted within **14 (fourteen) calendar days** of its issue to the CME Component of this Department as per contact details specified in condition 2.2 herewith.

Spill management

- 3.38 The holder must ensure that all personnel/workers during the construction phase are appropriately trained to deal with a spill or an emergency situation on site.
- 3.39 A Spill Contingency Plan must be compiled and must include the following actions that need to be taken into account in the event of the spillage of chemicals, fuel, or other hazardous substances during the construction phase:
- 3.39.1 Stop the source of the spill;
 - 3.39.2 Contain the spill;
 - 3.39.3 The necessary environmental precautions must be implemented to contain or absorb any spillage;
 - 3.39.4 Remove the spilled product for treatment or authorised disposal;
 - 3.39.5 Determine if there is any soil, groundwater or other environmental impact;
 - 3.39.6 If necessary, remedial action must be taken in consultation with the relevant stakeholders; and,
 - 3.39.7 The incident must be documented.
- 3.40 Any petrochemical spills that occur must be stored in skips and taken to a hazardous landfill site. Safe disposal certificates must be submitted within **14 (fourteen) calendar days** of its issue to the CME Component of this Department as per contact details specified in condition 2.2 herewith.
- 3.41 In the event of a significant spillage that cannot be contained and which poses a serious threat to the environment, the following Departments must be informed within **48 (forty-eight) hours** of the incident and in accordance with Section 30 of the National Environmental Management Act 1998, (Act No. 107 of 1998):

- 3.41.1 The P&WM Component of this Department as per the contact details specified in condition 2.2 herewith;
 - 3.41.2 The eThekweni Municipality;
 - 3.41.3 The DWA;
 - 3.41.4 The Local Fire Department; and,
 - 3.41.5 Any other affected Department and/or stakeholder.
- 3.42 Any wastewater generated as a result of a spillage and associated clean-up must be disposed off safely and in accordance with environmental legislation. All safe disposal certificates must be attached to the relevant audit reports and forwarded to the CME Component of this Department as per the contact details specified in condition 2.2 herewith.
- 3.43 The following conditions refer to the storage of hazardous substances on site during the construction phase:
- 3.43.1 Hazardous substances must be stored under lock and key;
 - 3.43.2 Chemical storage areas must be protected by bunded areas of a volume equal to 110% of the volume of the container storing the substance. Bunded areas must be constructed of concrete blocks lined with suitably dense plastic sheeting. Fuel and oil storage tanks and drums, including internal installations and waste oil tanks, must be situated on an impermeable base within an oil-tight bund; and,
 - 3.43.3 Chemicals or hazardous substances must not be allowed to contaminate the soil, groundwater or watercourses. In the event of this occurring, the necessary clean up measures must be undertaken immediately. Any soil/groundwater contaminated must be removed, stored in a sealed container and disposed off at a licensed disposal facility. All safe disposal certificates must be attached to the relevant audit reports and forwarded to the CME Component of this Department as per the contact details specified in condition 2.2 herewith.
- 3.44 Chemical ablation facilities used during the construction phase must:
- 3.44.1 Not cause any pollution to water resources neither should it be a health hazard to the general public;
 - 3.44.2 Be cleaned regularly and waste disposed off at a registered waste disposal facility; and,
 - 3.44.3 Be removed from site once the construction phase has been completed.

Solid waste management

- 3.45 Any form of waste generated must be disposed off at a licensed waste disposal facility in terms of section 20(b) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008). No waste material of any kind may be buried (for the sole purpose of final disposal) or burnt. The contractor responsible for the removal of the waste must supply the holder with a certificate indicating safe disposal. All safe disposal certificates must be attached to the relevant audit reports and forwarded to the CME Component of this Department as per the contact details specified in condition 2.2 herewith. Furthermore, contaminated/hazardous materials must be disposed off at a landfill site licensed to receive such waste.
- 3.46 All solid waste material prior to being collected for safe disposal must be stored under cover and within designated solid waste collection/storage areas which must be bunded and hard surfaced.

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- 3.47 The recycling of suitable material (i.e. glass, paper and plastic) is encouraged provided it is properly managed and does not cause any secondary pollution.

Operational phase

- 3.48 An 'as built layout plan' must be forwarded to the CME Component of this Department as per contact details specified in condition 2.2 herewith within **21 (twenty-one) calendar days** of completion of the construction phase.
- 3.49 All alien invasive vegetation must be removed from the sewer outfall route and working width, and be replaced with indigenous vegetation suitable to the landscape within **07 (seven) calendar days** of completion of the construction phase.
- 3.50 Operation of the sewer outfall must only commence once the CME Component of this Department (as per contact details specified in condition 2.2 herewith) has received written proof from the Phoenix Treatment Works stating that there is sufficient capacity and will accept waste from this development.
- 3.51 A Sewer Leak and Overflow Contingency Plan must be compiled and must include the following actions that need to be taken into account in the event of a sewer leak or overflow during the operational phase:
- 3.51.1 Stop the source of the leak or overflow;
 - 3.51.2 Contain the leak or overflow;
 - 3.51.3 The necessary environmental precautions must be implemented to contain or absorb any leakage or overflow;
 - 3.51.4 Remove the product for treatment or authorised disposal;
 - 3.51.5 Determine if there is any soil, groundwater or other environmental impact;
 - 3.51.6 If necessary, remedial action must be taken in consultation with the relevant stakeholders; and,
 - 3.51.7 The incident must be documented.
- 3.52 In the event of a significant leak or overflow that cannot be contained and which poses a serious threat to the environment, the following Departments must be informed within **48 (forty-eight) hours** of the incident and in accordance with Section 30 of the National Environmental Management Act 1998, (Act No. 107 of 1998):
- 3.52.1 The P&WM Component of this Department as per the contact details specified in condition 2.2 herewith;
 - 3.52.2 The eThekweni Municipality;
 - 3.52.3 The DWA; and,
 - 3.52.4 Any other affected Department and/or stakeholder.
- 3.53 The holder is responsible for the rehabilitation, management, landscaping and general upkeep of the site.

Monitoring

- 3.54 The holder must appoint an experienced and independent Environmental Control Officer (ECO)² prior to the commencement of the construction phase to ensure that the mitigation and rehabilitation measures and recommendations referred to in this environmental authorisation are implemented and to ensure compliance with the provision of the approved EMPr.
- 3.55 Upon appointment of the ECO, his/her details must be communicated, in writing, to the CME Component of this Department as per the contact details specified in 2.2 herewith.
- 3.56 The responsibilities of the ECO must include *inter alia*:
- 3.56.1 Performing all tasks assigned to the ECO in the approved EMPr;
 - 3.56.2 Keeping record of all activities on site, problems identified and transgressions noted;
 - 3.56.3 Ensuring the holder in enforcing the implementation of the approved EMPr; and,
 - 3.56.4 Providing guidance/advice that ensures implementation of appropriate environmental management measures and adherence with environmental legislation/regulations.
- 3.57 Records relating to monitoring and auditing must be kept on site and made available for inspection to this Department and other relevant authorities upon request.
- 3.58 Should the ECO for the development change at any time, this must be communicated, in writing, to the CME Component of this Department as per contact details specified in condition 2.2 herewith within **14 (fourteen) calendar days** of appointing the new ECO.
- 3.59 The notification in terms of conditions 3.55 and 3.58 herewith must include contact details for the ECO, details pertaining to the ECO's relevant experience and reasons for the change in ECO (in terms of condition 3.58 herewith).

Recording and reporting to the Department

- 3.60 The holder must submit monthly environmental audit reports within **14 (fourteen) calendar days** of the following month during the construction phase and a post construction environmental audit report of the entire sewer outfall within **21 (twenty-one) calendar days** of completion of the construction phase. The environmental audit reports must be forwarded to the CME Component of this Department as per contact details specified in condition 2.2 herewith.
- 3.61 The holder must submit monthly environmental audit reports for the first **six (06) months** of operation of the sewer outfall to monitor its functioning and vegetation rehabilitation. The environmental audit reports must be forwarded to the CME Component of this Department as per contact details specified in condition 2.2 herewith within **14 (fourteen) calendar days** of the following month.

² The ECO must be independent and have the necessary experience and qualifications to understand, interpret, monitor, audit and implement the EMPr and, the conditions of this environmental authorisation. Feedback must be given in the form of an audit report which must address any non-compliance that may have risen from the audit.

- 3.62 The environmental audit report must:
- 3.62.1 Be prepared by an independent environmental auditor (may be the ECO);
 - 3.62.2 Indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions and requirements of the approved EMPr;
 - 3.62.3 Include, but not limited to, any adverse changes made to the environment including the implementation of mitigation measures;
 - 3.62.4 Identify actual impacts that have occurred versus those predicted, including an evaluation of the success of mitigatory measures implemented;
 - 3.62.5 Recommend changes to be made in the approved EMPr for cases where unmitigated impacts have been discovered;
 - 3.62.6 Include supporting documentation needed to confirm compliance with the environmental authorisation and approved EMPr;
 - 3.62.7 Include measures to be implemented to address any non-compliances or degradation noted;
 - 3.62.8 Report back on measures implemented to address any non-compliances or degradation noted;
 - 3.62.9 Include copies of any approvals granted by other authorities that are relevant to the development; and,
 - 3.62.10 Be submitted as a hard-copy (unless otherwise agreed with) to the CME Component of this Department as per the contact details specified in condition 2.2 herewith.

Site closure and decommissioning

- 3.63 The construction camp, access routes and any other areas that are disturbed during the construction phase must be rehabilitated within **07 (seven) calendar days** of completion of the construction phase.
- 3.64 Should the development ever cease or become redundant, the holder must contact the EIA Component of this Department as per the contact details specified in condition 2.2 herewith to determine the required actions for the rehabilitation and closure of the site.
- 3.65 The holder is responsible for compliance with the provisions for *Duty of care and remediation of damage* in accordance with section 28 of National Environmental Management Act, 1998, (Act No. 107 of 1998). Determination of damage vests in this Department.

Availability of the environmental authorisation

3.66 A copy of this environmental authorisation must be kept by the holder and made available to any official of the Department on request.

Date of environmental authorisation: 13 August 2014



for Acting Head of Department:

KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs

Signed by : Ms. Vanessa Maclou

Annexure 1: Reasons for Decision

1. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration –

- a) The Botanical Report prepared by G. J. McDonald, dated December 2012;
- b) The information contained in the prescribed application form compiled by Messrs Environmental Planning and Design cc., received by the Department on 14 January 2013;
- c) The Wetland Delineation Study prepared by Messrs GroundTruth, dated February 2013;
- d) The comments from Ezemvelo KwaZulu-Natal Wildlife (EKZNW), dated 20 March 2013, 30 August 2013 and 04 March 2014;
- e) The Geotechnical Assessment Report prepared by Messrs Geomeasure Group, dated 12 April 2013;
- f) The consolidated comments from the eThekweni Municipality, dated 12 April 2013 and 31 October 2013;
- g) The comments from the Department of Human Settlements, dated 18 April 2013 and 05 August 2013;
- h) The Heritage Impact Assessment Report prepared by Messrs eThembeni Cultural Heritage, dated 21 May 2013;
- i) The information contained in the BAR and draft EMPr, both compiled by Messrs Environmental Planning and Design cc., received by the Department on 04 March 2014;
- j) The comments from the Department of Water Affairs, dated 29 March 2013, 06 August 2013, 14 January 2014 and 14 April 2014;
- k) The findings of a site visit undertaken by Ms. Adika Rambally, Ms. Sinethemba Mtolo and Ms. Natasha Brijlal representing this Department in the presence of the EAP - Mr. Jon Marshall on 04 June 2014;
- l) The electronic mail correspondence received from the EAP on 05 June 2014, 09 June 2014 and 10 June 2014;
- m) The comments from the eThekweni Municipality - Parks, Recreation, Cemeteries and Culture Service Unit; Parks, Leisure and Cemeteries Department, Natural Resources Division, dated 09 June 2014; and,
- n) The objectives and requirements of relevant legislation, policies and guidelines, including Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

2. Key factors considered in making the decision

a) Basic Assessment Report

- i. The BAR compiled by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014 complies with the requirements of Chapter 6 of GNR 543 of the EIA Regulations, June 2010 (as amended) and has been accepted by this Department.
- ii. The BAR compiled by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014 included a description of the environment that may be affected by the development and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the development.
- iii. The methodology used in assessing the potential impacts identified in the BAR compiled by Messrs Environmental Planning and Design cc. and the specialist studies (both received by the Department on 04 March 2014) have been adequately indicated.

b) Public Participation


The public participation process complies with the requirements of Chapter 6 of GNR 543 of the EIA Regulations, June 2010 (as amended) and, the comments from stakeholders and I&APs have either been included in the BAR prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014 or were received after the BAR was submitted.

c) Need and desirability (as per the BAR, prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014)

The activity is desirable in order to provide the community with formal sewage disposal services. The community currently relies on pit latrines which pose a sewage contamination risk to surface and groundwater. The sewer outfall will minimise the contamination risk and improve the communities' standard of living. Furthermore, it will allow for the upgrade/formalisation of housing in the area which has been earmarked by the eThekweni Municipality.

d) Alternative sites and layouts (as per the BAR, prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014)

As the development is intended to address problems associated with lack of sewage disposal services in a specific area there are no site alternatives. However, the alternatives discussed below are deemed to be layout alternatives as they serve the same catchment and are in close proximity to each other. The preferred layout alternative is to run the sewer outfall on the northern side of the stream for its entire length as it will avoid stream crossings and the eThekweni Municipality has been earmarked this area for the upgrade/formalisation of housing. An alignment on

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the southern side of the stream will result in a number of stream crossings and it is estimated that 40% of each alignment will require benching. Hence, the preferred alternative is the northern side of the stream.

e) Botanical Report (as per the BAR, prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014)

A Botanical Report was prepared by G.J. McDonald, dated December 2012. According to the report the riparian zone has been cleared of natural vegetation and has become heavily re-colonised by alien species with a preponderance of *Tithonia diversifolia* (Mexican Sunflower). Although there was an abundance of *Tithonia diversifolia* (Mexican Sunflower) up-stream other species were encountered and the density of *Tithonia* was not as great as on the slopes downstream. Many of the cultivated species found were associated with homesteads where the owners have cleared the natural vegetation to plant what appeared to be subsistence crops of Bananas, Sweet Potatoes, Pumpkins, *amaDumbe*, Mangos, Avocados, Pawpaws, Peach and Citrus. Riverine vegetation was near-absent, and vegetation associated with wetlands and flood plains were absent, with the exception of *Cyperus* species which were abundant between the numerous exotic species. A single plant of *Crinum macowanii* (River Lily) was identified on site. The plant is protected by the KZN provincial conservation ordinance (15 of 1974) and is classified as 'Declining' on the Red List of Threatened Plants.

The necessary recommendations from the Botanical Report have been added as conditions of this environmental authorisation.

f) Wetland Assessment Report (as per the BAR, prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014)

A Wetland Delineation Study was prepared by Messrs GroundTruth, dated February 2013. According to the study the site is characterised by a riparian wetland and its associated hillslope seepage wetlands. The wetland habitat is characterised mostly by temporary zones of wetness and an incised B-channel, which is eroding. The site has undergone significant changes from a diverse landscape to a peri-urban setting, and has led to the infestation of alien invasive plant species including *inter alia* *Syringa* (*Melia azedarach*), Lantana (*Lantana camara*), Job's tears (*Coix lacryma-jobi*), Triffid Weed (*Chromolaena odorata*), Bugweed (*Solanum mauritianum*), Canna (*Canna indica*), and Mauritius Thorn (*Caesalpinia decapetala*).

The necessary recommendations from the Wetland Assessment Report have been added as conditions of this environmental authorisation.

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g) Geotechnical Assessment Report (as per the BAR, prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014)

A Geotechnical Investigation Report was compiled by Messrs Geomeasure Group, dated 12 April 2013. According to the report the site is underlain by (clayey) sands and sandy clays of the Glenrosa Form, with the former typically considered loose to medium dense to an average depth of approximately 1.00 m bgl. Much of the upper 1.20m of the soil profile across the sewer line route consists of loose to medium dense sand. Evidence of minor slope instability was observed on-site, whilst collapse is considered possible should a perched groundwater table be intercepted (which is unlikely across much of the site). Although seepage appears uncommon across much of the site, deformation of the underlying clays is considered highly possible as a result of increased plasticity, should an increase in moisture content occur. Vegetation growth and topography will likely restrict access near the end of the pipeline route (toward the south-east) and, as such, it is recommended that the pipeline be installed on the eastern/northern bank of the river. The sand was considered appropriate as "selected fill material" and satisfactory for use as backfill.

The necessary recommendations from the Geotechnical Assessment Report have been added as conditions of this environmental authorisation.


h) Heritage Impact Assessment (as per the BAR, prepared by Messrs Environmental Planning and Design cc. and received by the Department on 04 March 2014)

A Heritage Impact Assessment was compiled by eThembeni Cultural Heritage, dated 21 May 2013. The findings of the assessment revealed no heritage resources on the site. The specialist stated that the lack of traditional burial places within the site is likely due to the cultural taboos associated with burial close to flowing or standing bodies of water.

The necessary recommendations from the Heritage Impact Assessment have been added as conditions of this environmental authorisation.

i) No-go alternative

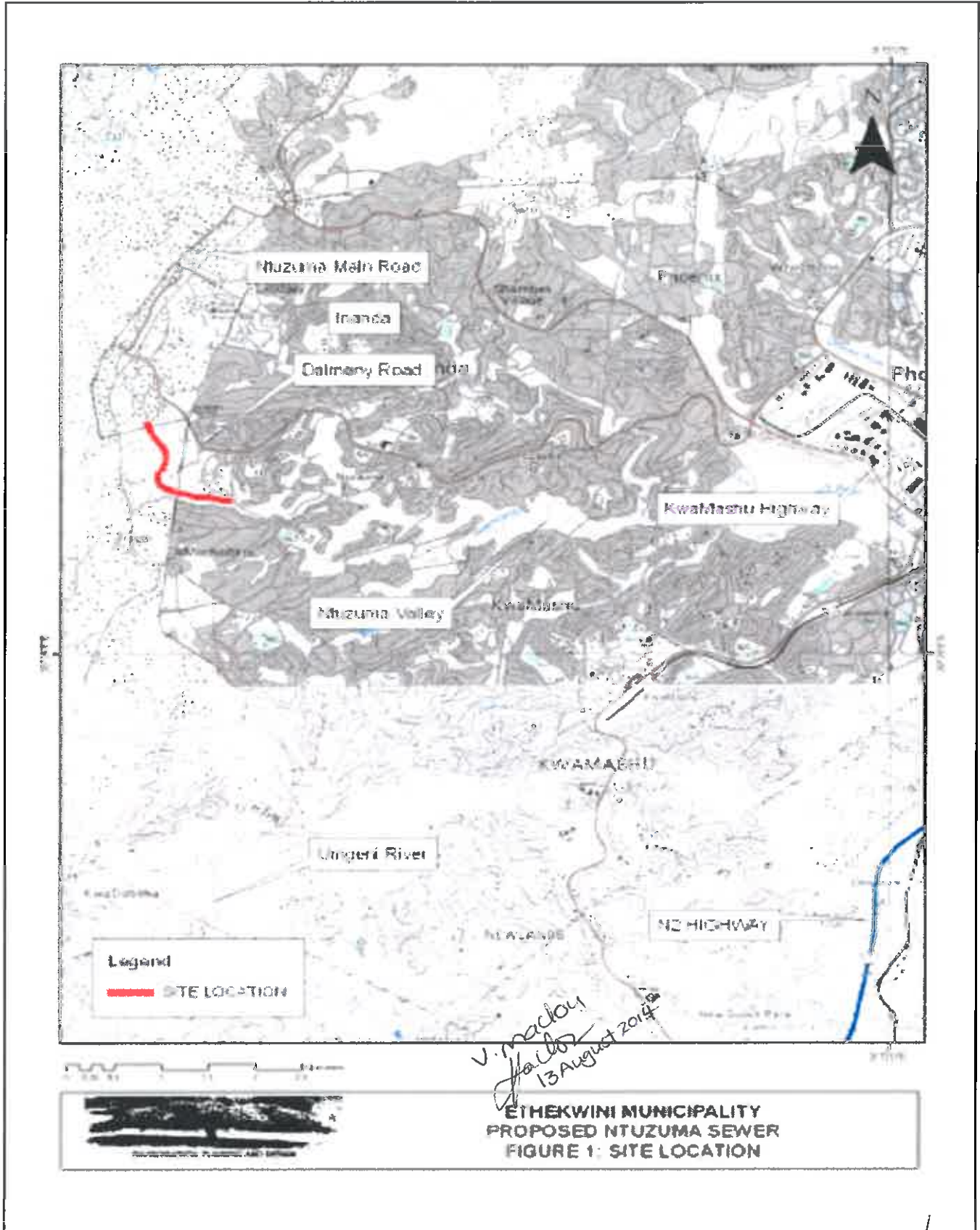
The No-Go alternative will result in the sewage disposal services of the community remaining undeveloped and informal (by use of pit latrines). Sewage contamination of surface and groundwater will likely continue and increase with the densification of the community. The upgrade/formalisation of existing housing in the area will not be viable due to the lack of infrastructure for the provision of basic services. Furthermore, the No-Go alternative will infringe the basic human rights of the community in respect of the provision and access to sewage disposal services. The recommendations made by specialists and stakeholders aimed at ensuring the ecological management and sustainability of the site, with particular reference to soil erosion control and the removal of alien invasive vegetation will not be pursued.

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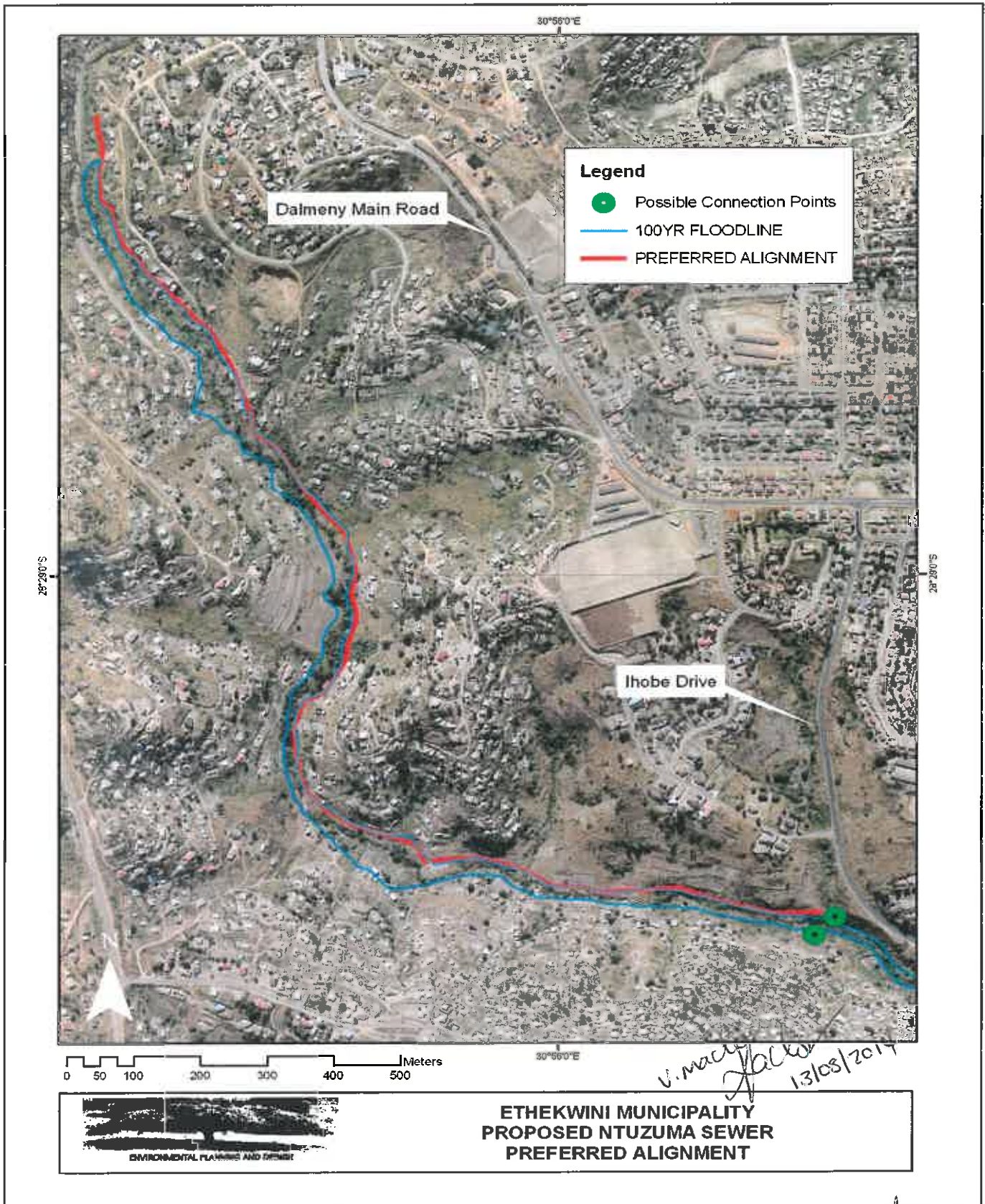
j) Objectives of Integrated Environmental Management

The Department is satisfied that subject to compliance with the conditions contained in this environmental authorisation the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) will be met.

ANNEXURE 2: LOCALITY MAP



ANNEXURE 3: SITE LAYOUT PLAN



ANNEXURE 4: GPS CO-ORDINATES CAPTURED ALONG THE SEWER OUTFALL ALIGNMENT/ROUTE

----- MODEL MAKER -----

Ethekewini Water and Saniton 0313118190 Date : 2/12/2013 Time : 10:3

Coordinate Conversion : Datum (WGS84 to WGS84)

: Coordinate System (Gauss Conform (LO) to Geographical)

: Conversion method (2 : MMS)

System Settings : Southern Hemisphere - Degrees - WGS84 - LO31

*V. Magon
Kallon
13/08/2014*

Base Meridian for Y = LO 31

Pro#	Code	Tag	Y	X	Lat. D M S	Long. D M S
1	NTU1		8119.670	3288904.340	-29 43 06.34962	30 54 57.89621
1	NTU2		8118.260	3288932.450	-29 43 07.26258	30 54 57.94791
1	NTU3		8106.210	3288947.750	-29 43 07.75976	30 54 58.39583
1	NTU4		8106.570	3288976.410	-29 43 08.69054	30 54 58.38167
1	NTU5		8112.130	3288991.350	-29 43 09.17561	30 54 58.17439
1	NTU6		8111.970	3289039.240	-29 43 10.73094	30 54 58.17905
1	NTU7		8108.420	3289049.980	-29 43 11.07982	30 54 58.31085
1	NTU8		8093.980	3289061.820	-29 43 11.46469	30 54 58.84780
1	NTU9		8087.470	3289093.310	-29 43 12.48754	30 54 59.08917
1	NTU10		8073.280	3289128.940	-29 43 13.64503	30 54 59.61618
1	NTU11		8050.940	3289147.720	-29 43 14.25547	30 55 00.44688
1	NTU12		8026.730	3289180.100	-29 43 15.30764	30 55 01.34680
1	NTU13		8038.110	3289187.350	-29 43 15.54283	30 55 00.92319
1	NTU14		8009.280	3289221.830	-29 43 16.66331	30 55 01.99496
1	NTU15		7974.240	3289268.850	-29 43 18.19119	30 55 03.29746
1	NTU16		7958.400	3289267.760	-29 43 18.15615	30 55 03.88686
1	NTU17		7943.650	3289273.120	-29 43 18.33057	30 55 04.43553
1	NTU18		7920.250	3289321.860	-29 43 19.91404	30 55 05.30490
1	NTU19		7904.730	3289361.860	-29 43 21.21347	30 55 05.88131
1	NTU20		7896.830	3289371.800	-29 43 21.53647	30 55 06.17499
1	NTU21		7893.430	3289396.020	-29 43 22.32314	30 55 06.30086
1	NTU22		7884.010	3289405.520	-29 43 22.63189	30 55 06.65111
1	NTU23		7881.930	3289431.130	-29 43 23.46367	30 55 06.72784
1	NTU24		7846.990	3289458.270	-29 43 24.34589	30 55 08.02718
1	NTU25		7833.560	3289479.300	-29 43 25.02919	30 55 08.52634
1	NTU26		7822.920	3289495.950	-29 43 25.57017	30 55 08.92180
1	NTU27		7805.220	3289528.330	-29 43 26.62218	30 55 09.57955
1	NTU28		7781.140	3289547.750	-29 43 27.25342	30 55 10.47502
1	NTU29		7740.760	3289602.630	-29 43 29.03667	30 55 11.97609
1	NTU30		7732.660	3289635.990	-29 43 30.15276	30 55 12.27660
1	NTU31		7720.940	3289667.130	-29 43 31.13187	30 55 12.71191
1	NTU32		7731.290	3289706.400	-29 43 32.40701	30 55 12.32579

Environmental Authorisation
The Ntuzuma E Sewer Outfall

1	NTU33	7725.870	3289735.570	-29 43 33.35448	30 55 12.52671
1	NTU34	7729.410	3289755.120	-29 43 33.98933	30 55 12.39449
1	NTU35	7731.150	3289792.130	-29 43 35.19126	30 55 12.32879
1	NTU36	7740.280	3289819.180	-29 43 36.06955	30 55 11.98837
1	NTU37	7771.270	3289871.620	-29 43 37.77195	30 55 10.83389
1	NTU38	7803.450	3289885.540	-29 43 38.22330	30 55 09.63613
1	NTU39	7814.340	3289931.520	-29 43 39.71634	30 55 09.22972
1	NTU40	7813.670	3289980.300	-29 43 41.30058	30 55 09.25338
1	NTU41	7812.010	3290011.730	-29 43 42.32136	30 55 09.31433
1	NTU42	7799.120	3290040.150	-29 43 43.24465	30 55 09.79323
1	NTU43	7772.130	3290068.880	-29 43 44.17832	30 55 10.79679
1	NTU44	7728.090	3290095.140	-29 43 45.03216	30 55 12.43486
1	NTU45	7663.360	3290114.930	-29 43 45.67632	30 55 14.84298
1	NTU46	7633.990	3290127.600	-29 43 46.08846	30 55 15.93552
1	NTU47	7622.950	3290147.040	-29 43 46.72005	30 55 16.34546
1	NTU48	7592.940	3290154.140	-29 43 46.95130	30 55 17.46234
1	NTU49	7545.610	3290150.060	-29 43 46.81984	30 55 19.22362
1	NTU50	7508.960	3290159.030	-29 43 47.11196	30 55 20.58716
1	NTU51	7464.530	3290175.050	-29 43 47.63320	30 55 22.24003
1	NTU52	7429.350	3290196.360	-29 43 48.32605	30 55 23.54857
1	NTU53	7376.710	3290198.380	-29 43 48.39278	30 55 25.50729
1	NTU54	7340.760	3290197.070	-29 43 48.35101	30 55 26.84505
1	NTU55	7305.280	3290194.440	-29 43 48.26635	30 55 28.16535
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1	NTU57	7230.110	3290204.630	-29 43 48.59888	30 55 30.96223
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1	EXSTMH	7009.250	3290251.930	-29 43 50.13960	30 55 39.17933

V. Maclean
13/05/2014