



# COASTWATCH KZN

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1 July 2014

Royal HaskoningDHV  
P O Box 55  
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3600  
[novashni.moodley@rhdhv.com](mailto:novashni.moodley@rhdhv.com)

**DM/WML/0050/2014; DM/0032/2014**  
**SOLIDS REMOVAL AND TREATMENT FACILITIES UPGRADE AT**  
**SOUTHERN WASTE WATER TREATMENT WORKS, eTHEKWINI**

**COMMENT ON THE DRAFT SCOPING REPORT (SR)**

**Coastwatch, WESSA Durban Branch and Birdlife Port Natal**, non-governmental organisations formed by volunteers and operating with support of people interested and/or affected by issues relating to the area share interest in development and change of land use applications in the eThekwini area. The organisations serve to ensure that development in the eThekwini area is appropriate, sustainable and legally compliant. The following comments are submitted on behalf of these organisations.

## **1. REQUIRED AUTHORISATIONS**

The environmental impact assessment is aimed at meeting the requirements of the following:

- 1.1 NEMA EIA Regulations (requires environmental authorisation for listed activities)
- 1.2 NEM: Waste Act (waste management licence required)
- 1.3 Coastal Waters Discharge Permit (amendment required)
- 1.4 Water Use Licence (amendment required)

Please provide the details of the existing Coastal Water Discharge Permit and Water Use Licence and discuss the activities in context of the requirements for the amendments ie in relation to the specific conditions of permit and licence.



## 2. PROCESS AND PROJECT MOTIVATION

The proposed project has as the objective the primary treatment of effluent from the Jacobs and Wentworth Valley trunk sewers (combined domestic and industrial effluent). The Project Motivation (SR 4.2), while notes the option of sea disposal as a financially viable and good economical solution, it recognises that environmental pressure is building and eThekweni Water and Sanitation (EWS) Department is *“planning for the likelihood that the current authorisations could be withdrawn or made more restrictive”*.

The project activities include the construction and operation of primary treatment infrastructure for mixed sewage. Basically this involves the removal of solids prior to discharge to sea and while we regard the improvement of the standard of effluent discharged to the marine environment as positive we find that this is but a single step in addressing the sustainable management of resources and waste. This proposal deals with end-of-pipe treatment, which is technologically archaic, and therefore does not align with accepted best practice. The project (end-of-pipe) needs to form part of an assessment of the sources of sewage and effluent, the flow rates and the type of treatment that is most applicable (from an environmental perspective) – however, it is being viewed in isolation of the bigger picture of resource use and waste management. In addition,

- The intention should be to get to secondary treatment for the WWTW and not continue to regard the sea as a dump site;
- How is the Metro dealing with the problem of using water to convey our wastes, when we should be reducing this type of wastage?
- As more people migrate to the Metro, will water-borne sewage continue to be appropriate or should all new high-end developments have dry toilets and grey water recycling prescribed?
- The WWTW should investigate how to treat industrial effluent independently of the sewage, as there are synergistic impacts from mixing these effluents which have not been considered and are in addition to the impacts related to solids as is reported. Should discharge to sea continue, there needs to be a separate process for industrial effluents and sufficient space between the two pipelines to avoid these additional impacts that occur at sea.

## 3. ISSUES

- Ecological Threat

The project motivation describes clear evidence in the 2011 Durban outfalls survey of benthic macro-faunal community structure having been modified in close proximity to the outfall because of enrichment with particulate organic material. There is reduced biodiversity and this trend has developed over the past decade. We accept this outcome and support EWS attempting to address this aspect through the proposed activities.

However, we have concerns that the impact assessments are fundamentally flawed and are unable to pinpoint that the source of the problem is only the solids. In our opinion this should be the subject of an international peer review (and Coastwatch is able to provide names of recognised experts in the field) for the following issues of concern:

- The assessment process must be representative and reproducible;
- The assessments need to differentiate between the communities that are stressed by identifying the meio- and macro-fauna correctly in order to be able to determine which are sensitive and which are tolerant species;
- The sampling grid must be set correctly;
- Toxicity testing must follow international best practice (it currently involves just one set of tests - sea urchin fertilisation).

- Cumulative and downstream impacts on coastal waters

Cumulative and downstream impacts on coastal waters is listed in different sections in the report as a key finding of the scoping process yet it is not addressed in the Plan of Study for impact assessment. This aspect of the operation of the facility needs further attention.

- Integrated Waste Water Management Plan (IWWMP)

The IWWMP is described as a strategic process to achieve the goals of sustainable and integrated water and waste resources, planning and management. The SR section 9.2.3.6 lists specific and relevant topics to explore - waste assessment and characterisation, process water use and treatment, stormwater management,

groundwater management, water reuse and reclamation, and waste minimisation and adds the proviso "*as it may be applicable*". It needs to be explained what will be applicable to which topic and at what stage of eThekweni's management of resource use and waste.

Further, has climate and developmental change been considered? The following -

- How will the changes in weather (increased rainfall, and increased intensity) be taken into account?
  - How will the changes in the absorptive capacity of the catchment be taken into account (more development, less absorption of rainfall with more hardened surfaces and increased peak runoff)?
  - The WWTW is situated in a flood plain. How will it be able to deal with flood waters and will the designs take this into account by ensuring sufficient allowance for stormwater drainage systems on site to allow for the collection and slow release of peak flows, without impacting the Works, to protect neighbours?
  - How will power outages affect the WWTW and how will the impacts be minimised?
- Sludge

Anaerobic digestion of sludge is appropriate for conditioning sludge for recycling / reuse and minimising odour. As sludge processing forms part of the proposed activities the submission of dried sludge for analysis according to DWA guidelines is needed upfront ie before the process of evaluating options for sludge disposal (as part of this assessment) goes further. The results of the analysis would be critical to the selection of options for sludge disposal.

- Air Quality

The contribution of odour to health and lifestyle challenges in the South Durban Basin cannot be ignored. Improvements must be made rather than the just the *status quo* being maintained.

- Risk Analysis

Risks to the WWTW induced by climate change (as listed above) need to be discussed.

- Zinc Reduction

It has been identified that the levels of zinc in the effluent discharged to sea are elevated and it is said that pollution control efforts will be made to reduce the point source of zinc based effluent discharges. Details of how this will be addressed are required including what timeframes apply?

Thank you for the information and we look forward to receiving further detail on the management of effluent discharged from the Southern WWTW.

Yours faithfully

A handwritten signature in black ink that reads "C. Schwegman". The signature is written in a cursive style with a large initial 'C'.

C SCHWEGMAN

**SOUTH DURBAN COMMUNITY  
Environmental Alliance  
SDCEA  
028-964-NPO**



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P O Box 211150  
Bluff, 4036  
Kwazulu-Natal  
South Africa

**The Right to Know, the Duty to Inquire, the Obligation to Act**

No 2 John Dunn  
Home  
224 Gouritz Crescent  
Austerville  
4052

July 2, 2014

Ms Novashni Sharleen Moodley  
Royal Haskoning DHV  
6 Payne Street, Pinetown, 3610  
Tel: (031) 719 5500  
Fax: (031) 719 5500

**RE: COMMENTS ON EIA AND WASTE MANAGEMENT LICENCE APPLICATION FOR THE PROPOSED SOLID REMOVAL AND TREATMENT FACILITIES UPGRADE AT THE SOUTHERN WASTE WATER TREATMENT WORKS, MEREWENT, KWAZULU-NATAL**

**EIA REFERENCE NUMBER: T01.DUR.000274**

**Public Participation Process**

There has been limited public participation process in the process with regard to the affected residents who lived in close proximity to the SWWTW. Residents have complained that they have not seen any knock and drop pamphlets informing them about the upgrade and how is going to impact on the quality of their lives. They further complained that the stench in the air of sewage and volatile organic compounds has increased over the years and therefore proper and meaningful consultation and participation is of the outmost importance to the community. The residents stated the

**SDCEA** : Members include: Airport Farmers; Athlone Park Civics; Austerville Clinic Committee; Bluff Ridge Conservancy; Christ the King Church Group; Clairwood Ratepayers Association; Earthlife Africa, eThekweni Branch.; House of Worship; Isipingo Environmental Committee; Isipingo Ratepayers Association; Joint Action Committee of Isipingo; Merebank Clinic Committee; Silverglen Civic Association; Subsistence Fishermen of KwaZulu Natal; Treasure Beach Environmental Forum; Wentworth Development Forum

eThekwini Municipality policy of the Batho Principle and a caring city is been ignored by the consultants.

### **Appointment of an Independent Reviewer**

The major problem we have with this whole document is that from the onset we have called for an independent reviewer who should have been appointed in conjunction with the community from the local universities (University of KwaZulu- Natal or Durban University Technology) who can make comments on our behalf as this EIA has the potential to increase the poor quality of lives of local residents. Local residents are already affected with high level of sewage odours, strong chemical emissions from this southern sewage treatment works and any upgrade that is not planned properly will affect the community and the environment. With regard to the appointment of an independent reviewer, we refer you to the letter from your document from the Department of Agricultural and Environmental Affairs; we therefore request that an independent reviewer be appointed from the local university.

### **Air Quality and Noise Pollution**

According to residents, the odour levels around the premises and the area is unacceptable and any upgrade that will increase the level of sewage at the treatment works should not be approved. Moreover, you indicated at the public hearing that no raw sewage effluent will come from other parts of Durban and we request that this be documented in the final EIA outcome. We noticed that there is no proper plan in the document stating on how the odour is going to be monitored on a monthly basis. The data on air quality is not been forth coming, despite the fact that we have being requesting data since 2010 and we have not received any data yet from the Municipality. This act infringe on our right to information. Thought the air quality data is captured in the document we feels is vague and out dated and no new data from 2010 until June 2014. We want to see an indication on how data on air quality will be forthcoming and will give us an indication whether the environment is improving and whether the upgrade will increase the emissions.

Secondly, noise pollution is a big concern to the residents, yet we didn't see any proper

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plan on how the noise levels would be minimized. Additionally, there is no indication on how the SWWTW is going to conduct fence line monitoring and how that information is going to be communicated to the public.

### **Biodiversity and Climate change**

With the current global warming and the adverse effect on the planet, we think the project has not taken in to consideration the destruction of a vast area to make room for the project. We think the project will impede on the biodiversity and the ecosystem. We noticed in the document you refer to offsetting, however we are requesting for a proper plan which will consider the heritage of the site. We also noticed that there is no official letter from the Amafa Heritage, despite the fact that no approval has been given and your information in the document is showing a nod of approval of the project.

### **Health**

You failed to consider the health studies conducted in south and north Durban looking at the health status of children. We have attached the summary report and the recommendation of the 2002 and 2006 health studies conducted by the Nelson Mandela Medical School, University of KwaZulu Natal. We noticed that your document just glance over the health issues and did not properly mentioned the addition emission and pollution that would deteriorate the poor health of already affected community members who live in the neighborhood. We request that more work be done on the effect the upgrade is going to have on the health status of the community. We request for permanent monitoring stations by independent people and also free access to information. Information must be accessible and if possible should be given without going through the processes of PAIA.

### **Water Quality**

The aim of the proposed SWWTW upgrade is to reduce the quantity of suspended solids being disposed of to the sea. We have witnessed a number of incidents such as pollution

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of the rivers and the ocean, fish and other marine lives dying due to discharge. We however, request that period and times for water testing must be documented and also regular water samples results must be made available to the community and interested parties. More than 12000 fisherfolks in Durban depends on the water resources for their daily livelihoods and leisure and we request that proper contingency measure have to be placed in the document in case of any pollution of the sea and the rivers. No documents or reports are provided by the eThekweni Municipality Water Waste Sanitation and Pollution Department to the SDCEA, despite the fact we have brought the pollution complains to their attention. We do not see any mention of how the officials will deal pollution incidents or provide written feedback to interested and affected parties once this upgrade is approved.

### **Way Forward**

We request that knock and drop pamphlets be sent to people living around the SWWTW and in addition, a local meeting be called at the Settlers Primary School in Merebank to inform people about the upgrade and take further comments from the affected community.

Thank you

Kind Regards

Desmond Matthew D'Sa  
2014 Goldman Prize Recipient, Africa

Coordinator, SDCEA

Tel: +2783982-6939

[Email:desmond@sdcea.co.za](mailto:desmond@sdcea.co.za)

Web: [www.sdcea.co.za](http://www.sdcea.co.za)

Goldman Prize Link: <https://www.youtube.com/watch?v=3muunffGG54>

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**edtea**

**Department :**  
Economic Development, Tourism and  
Environmental Affairs

**PROVINCE OF KWAZULU-NATAL**

Royal HaskonongDHV  
P.O. Box 55  
Pinetown  
3600

Attention: Ms Novashni Sharleen Moodley

Sub Directorate: Coastal and Biodiversity Management: Head Office

**RE: COMMENTS ON THE DRAFT ENVIRONMENTAL SCOPING REPORT: IN SUPPORT OF THE EIA AND WASTE MANAGEMENT LICENCE APPLICATION FOR THE PROPOSED SOLIDS REMOVAL AND TREATMENT FACILITIES UPGRADE AT THE SOUTHERN WASTE WATER TREATMENT WORKS, MEREWENT, KWAZULU-NATAL**

The following comments were extracted from the above-mentioned draft environmental scoping report.

1. **The aim of the proposed Southern Waste Water Treatment works (SWWTW) is to reduce the quantity of suspended solids being disposed off to sea.**
  - (a) The expected percentage change in quantity of the suspended solids disposed off to sea should to be indicated.
  - (b) Any additional improvement to the quality of the sea outfall effluent such as pH, COD, chemical concentrations, discolorations etc., need to be discussed.
  - (c) Any likely changes in volumes of effluent to the sea (litters per day) need to be highlighted.
2. **The site does not hold Coastal Water Discharge Permit**
  - (a) The current and future monitoring plans of the sea outfall need to be included.
  - (b) The compliance monitoring analysis between the current SWWTW system and the Coastal Waters Discharged Permit conditions need to be discussed.
  - (c) Any improvement to the compliance of effluent outfall, this project is proposing need to be discussed.
3. **ANNEX 1 lists the priority heavy metals for analysis in the sludge**
  - (a) Current chemical analysis of the effluent disposed off to sea need to be indicated
4. Should you wish to discuss the points raised above, do not hesitate to contact the Department

Yours sincerely



.....  
Ms Bonisiwe Sithole

Control Environmental Officer: Marine pollution

Sub directorate: Coastal and Biodiversity Management

Department of Economic Development Tourism and Environmental Affairs

Date: 04/08/2014

## Moodley, Novashni ( Sharleen )

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**From:** Deepchund Ramchurren <deepchund@mweb.co.za>  
**Sent:** 12 June 2014 11:30 AM  
**To:** Moodley, Novashni ( Sharleen )  
**Cc:** desmond@sdceango.co....  
**Subject:** Southern Sewer Works. Merebank

Hullo

Ref: EIA for SS Works

1. Please provide more details on the need for the HDPE pipe at Cuttings Beach (32 m from Umlaas Canal), ie need for the pipe, will the beach be closed during construction, is it a new pipe or replacing an existing pipe.
2. Second dam of 23 megalitre capacity. Actual location, what chemicals(toxic or innocuous) will be released from the dam, odour levels expected to be emitted from the dam.
3. The location of the future pelletizing of sludge plant. (although not part of the current EIA)- the exact location needs to be determined with due consideration IRO prevailing winds and proximity to the residents. A situation should not arise whereby the present expansion is completed and the pelletizing plant is built near residents due to a lack of space.
4. Appendix A1- I notice zinc levels are way above the legislated requirements. I do understand this is the current situation, hence pass this deviation onto Neil Mc Cloud's team. What is the water / waste department doing to rectify this problem. My view is there is insufficient monitoring by waste water personnel at the sites of the industries that contribute to this problem (basically lack of enforcement of permit requirements).
5. A layman's presentation on odour threshold.. There is lot written making various comparisons about odours / carcinogens - it seems your air quality consultants are just trying to present a lot of information to confuse the public (my view).
6. Has the community of the south coast been made aware of the project as it would negatively impact on the quality of the water. (tourism industries including the Aliwal Shoal dive schools in the Umkomaas area) - consider the current flow.
- 7 Methane gas- the gas will be flared- indicate the emissions from the combustion as a worst case scenario.  
  
Can this gas not be converted to produce electricity to feed into the grid as is currently practiced at the Bissasar Rd and Marianhill Land fill sites. I suggest you request this issue be referred to waste water Dept for transmission to the Council's Energy Office.
- 8 I suggest that vehicles involved during construction use the Mondli Route to the sewer works to avoid congestion at Badulla Drive / Tara Rd intersection.
9. Appendix C3- Fig 1/2/3. Consideration should be given to some sort of barrier to prevent residents being affected by an explosion. Furthermore, this specific area will fall within the ambit of an MHI (OHS Act section 2.2 & 9.3)

Regards

Deepchund

Sent from MWEB Centre - CONNECT AND -YOU CAN



# transport

Department:  
Transport  
Province of KwaZulu-Natal

Street Address: 224 Prince Alfred Street,  
Pietermaritzburg, 3200  
Postal Address: Private Bag X9043,  
Pietermaritzburg, 3200  
Tel: (27)(33) 355 0570  
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## TRANSPORT INFRASTRUCTURE AND REGIONAL SERVICES

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Royal HaskoningDHV  
P.O. Box 55  
PINETOWN  
3600

Enquiries: Mr R Ryan  
Extension: 033-3550570  
Reference: T10/2/2/1136/203  
27 May 2014

### NOTIFICATION OF APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND WASTE MANAGEMENT LICENCE

1. Your letter dated 23 May 2014 refers.
2. The application was received on 23 May 2014
3. You are advised that the application is in the process of being investigated and that You will be advised accordingly of this Department's comments.
4. When communicating with this office, please supply the above mentioned file reference.

**MRS J. REDDY**

MANAGER: ROAD INFRASTRUCTURE  
DEVELOPMENT & MANAGEMENT  
RR/jr

*'Prosperity through mobility'*

*'Prosperity through mobility'*



# transport

Department:  
Transport  
Province of KwaZulu-Natal

Street Address: 224 Prince Alfred St,  
Pietermaritzburg, 3200  
Postal Address: Private Bag X9043,  
Pietermaritzburg, 3200  
Tel: (27)(33) 3558600  
Fax: (27)(33) 3423962

## TRANSPORTATION ENGINEERING SUB - DIRECTORATE

Royal HaskoningDVH  
P.O. Box 55  
**PINETOWN**  
**3600**

Enquiries: Mr. R Ryan  
Extension: 0570  
Reference: T10/2/2/1136/203  
Your Ref No.: DM0032/2014  
DM/WML/0050/2014

Attention: Novashni S Moodley

Date: 30 May 2014

Dear Madam,

**ENVIRONMENTAL IMPACT ASSESSMENT PROCESS: PROPOSED SOLIDS REMOVAL AND TREATMENT FACILITIES UPGRADE AT THE SOUTHERN WASTE WATER TREATMENT WORKS, MEREWENT: SITUATE IN THE ETHEKWINI METROPOLITAN MUNICIPALITY: SITUATE IN THE ADMINISTRATIVE DISTRICT PROVINCE OF KWAZULU-NATAL.**

1. With reference to your application dated 23 May 2014, in connection with the abovementioned proposed **SOLIDS REMOVAL AND TREATMENT FACILITIES UPGRADE** application, I have to inform you that the Minister as the Controlling Authority as defined in the Kwazulu-Natal Roads Act No. 4 of 2001, has in terms of section 21 of the said Act, no objections to the proposed application as represented in the Environmental Impact Assessment reference No. DM0032/2014 as this does not affect our Provincial Road Network.
2. This correspondence does not grant authorization or exemption from compliance with any other relevant and applicable legislation.

Yours faithfully,

**f HEAD : TRANSPORT**

RR/rh

Ribdev.2014.Dbn\_Metro\_Envr\_002

CC. Regional Manager: Durban  
Cost Centre Manager: Metro

*'prosperity through mobility'*



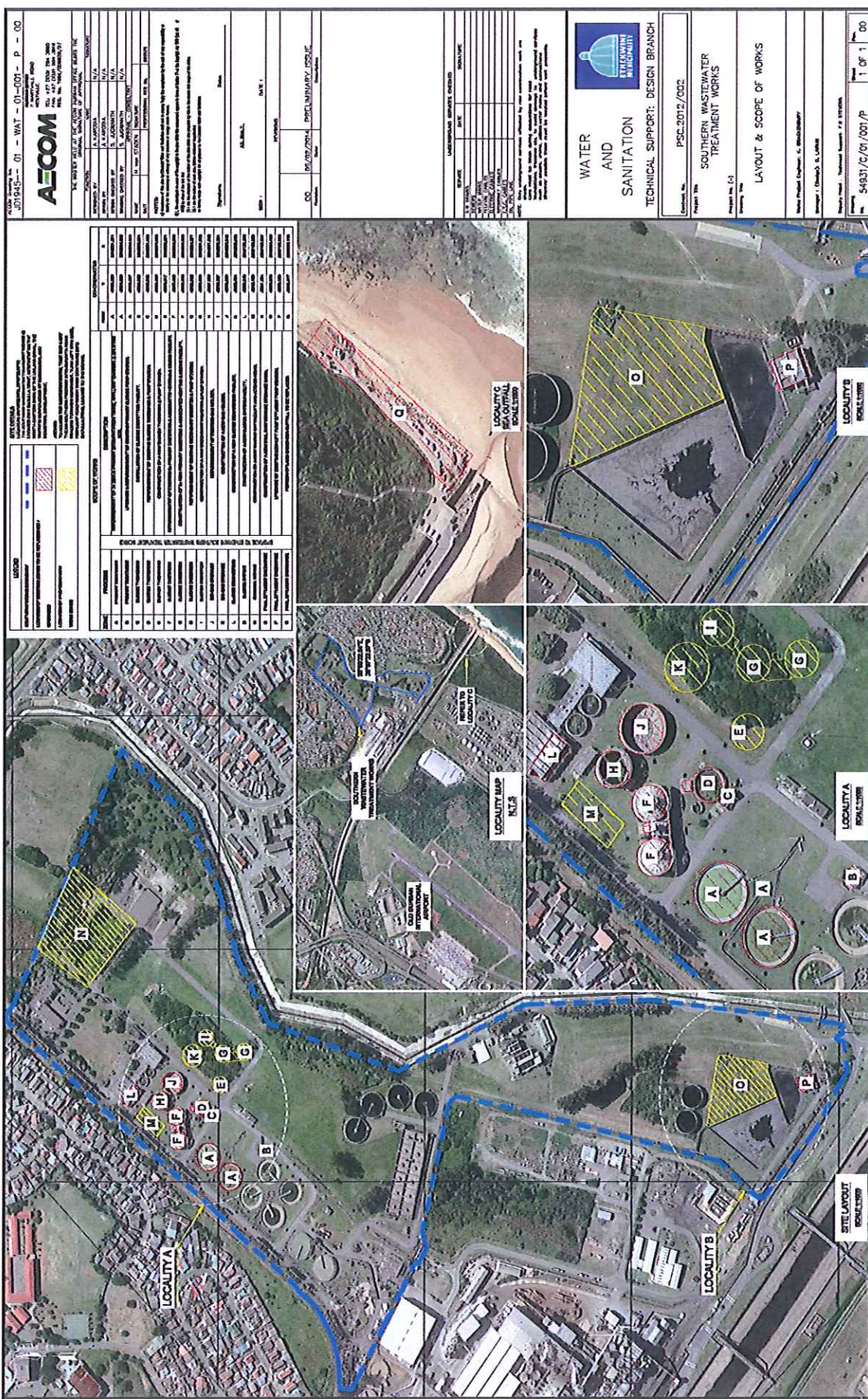


Figure 4-1: Proposed scope of works





Figure 5-1: Preferred alternative design and layout



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## Planning Division: IEM Section

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Enquiries: Andy Blackmore

Your Ref: DM/0032/2014

Ezemvelo KZN Wildlife  
P O Box 13053  
Cascades  
3202

22 August 2014

**ATTENTION: Novashni (Sharleen) Moodley**

**PROPOSED SOLIDS REMOVAL FACILITIES UPGRADE AT THE SOUTHERN WASTE WATER TREATMENT WORKS, NEAR MEREWENT**  
**District Municipality: eThekweni**

Thank you for forwarding the abovementioned application to Ezemvelo KZN Wildlife (Ezemvelo) for review and comment.

The Ezemvelo KZN Wildlife Planning staff, following a fleeting review of the documentation, is of the opinion that this application made in terms of the National Environmental Management Act 107 of 1998 is unlikely to have a significant residual impact on biodiversity provided that the mitigation (both recommended and implied in your assessment) is included in the authorisation – should this application be approved.

Naturally, Ezemvelo KZN Wildlife reserves all rights in this matter.

Should any biodiversity issues arise, please do not hesitate to contact this office

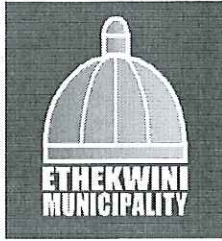
Yours sincerely

pp

Manager Integrated Environmental Management  
For CEO: EZEMVELO KZN WILDLIFE

Ezemvelo KZN Wildlife Official Comment	Ref No: DM/0032/2014	Proposed Solids Removal Facilities Upgrade at the Southern Waste Water Treatment Works, Near Merewent	Page 1 of 1
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## Development Planning, Environment & Management Unit Environmental Planning & Climate Protection Department

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Deputy Head: Dr D Robert

Attention: Novashi Moodley  
Royal HDHV

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OUR REFERENCE: EIA/833  
DAEARD: DM/WML/0050/2014 &  
DM/0032/2014

### CONSOLIDATED CITY COMMENT: DRAFT SCOPING REPORT: PROPOSED SOLID REMOVAL AND TREATMENT FACILITIES UPGRADE AT THE SOUTHERN WASTE WATER TREATMENT WORKS, MEREWENT.

Herewith find the consolidated City comment on the **draft Scoping Report** for the upgrade of the Southern Waste Water Treatment Works in Merewent.

#### 1. ETHEKWINI ELECTRICITY:

This Department has checked this application against its records and has no objections or comments to the proposed upgrade of the waste treatment works. The department's services are not affected. In saying that, Should there be any upgrading of the sewer pipe systems that feed the plant, then the department would like to see those plans as we have existing underground cables that might be affected by, should there be any trenching, digging etc.

#### 2. FRAMEWORK PLANNING BRANCH:

The Framework Planning Branch has no objection to the proposed upgrade of the southern treatment works as there is no proposed change in land use.

#### 3. DISASTER MANAGEMENT (DM):

No concerns from Disaster Management.

#### 4. ETHEKWINI TRAFFIC AUTHORITY (ETA):

No comment.

**CONSOLIDATED CITY COMMENT: PROPOSED SOLID REMOVAL AND TREATMENT FACILITIES UPGRADE AT THE SOUTHERN WASTE WATER TREATMENT WORKS, MEREWENT.**

**5. ETHEKWINI FIRE AND EMERGENCY PLANNING UNIT:**

**This department has no objection to the proposed development subject to:**

1. Full compliance of the waste storage facility with the Interim Code Relating to Fire Prevention and Flammable liquids and Substances.
2. The option of MHI status being declared by an MHI specialist.
3. Full compliance with other applicable legislative requirements.

**6. ENVIRONMENTAL PLANNING & CLIMATE PROTECTION DEPARTMENT:**

Following review of the draft Scoping Report, this Department has the following comment:

**Alternatives:**

This Department supports the upgrade of the works since it will reduce the amount of suspended solids being disposed off to sea. The no-go alternative is therefore not desirable as it will mean that the long-term ecological threats to the receiving environment in close proximity to the outfall will increase.

**Plan of study for EIA:**

The proposed biodiversity impact assessment study must include mitigation measures to remediate and rehabilitate the areas in close proximity to the outfall as well as alien plant control.

**Impact Assessment and mitigation measures:**

The identified potential environmental impacts of the proposal, including levels of current contamination must be assessed. Feasible measures to mitigate the identified impacts must be evaluated and presented on the Environmental Management Plan.

**7. CITY HEALTH: ENVIRONMENTAL HEALTHSERVICES:**

Environmental Health Department has no objection to the proposed treatment facilities upgrade subject to the following mitigation measures being considered:

**Noise:**

Noise levels during construction phase will increase significantly. All mitigation measures to reduce the frequency of noise events to levels that would not constitute a noise nuisance must be documented prior construction phase. All activities must only operate 08h00 - 16h00 to

further reduce impacts on the neighbouring community. Noise emissions must be minimized to comply with SANS 10103:2008.

**Air Quality:**

An air quality study must be conducted by an independent air quality specialist. The report must contain inter alia but not limited to the following:

- Current emission levels
- Throughputs/ volumes of exhaust fumes/ dust generated by vehicles and construction activities.
- Projected emission levels after construction.
- The greatest concern is the increase in odour emissions related to the processing, storage, transportation and disposal of sludge
- Planned mitigation controls

**Waste Management:**

Details are required in relation to storage, treatment, transportation and disposal of sludge generated onsite.

All waste removed during the construction phase must be documented, transported and disposed of in a manner that does not contravene with the National Environmental Management Waste Act of 2008.

**Occupational Health and Safety:**

It is recommended that an Occupational Health Risk Assessment be conducted to identify potential stressors and all controls be engineered into the project.

**Vectors:**

The processing, storage, transportation and disposal of sludge will attract flies and in this regard, a detailed mitigation plan is required to prevent impacts to the community.

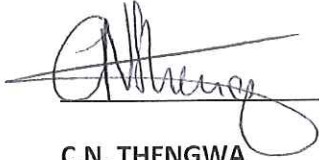
**General:**

The environmental Management Plan (EMP) must take into account odour emissions from the processing, storage, transport and disposal of sludge.

It must be noted that the proposed treatment facilities upgrade is conducted in such a manner as not to impose undue risk or negative impacts on the quality of lives of the employees or the

surrounding industrial or residential community. Should any problems arise, this department reserves the right to call for further mitigation measures.

Yours sincerely,



C.N. THENGWA

Manager: Biodiversity Impact Assessment

Environmental Planning and Climate Protection Department

Date: 01/07/2014





# water affairs

Department:  
Water Affairs  
**REPUBLIC OF SOUTH AFRICA**

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The Director  
Royal HaskoningDHV  
P.O. Box 55  
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## **ATTENTION: MS. SHARLEEN MOODLEY**

Dear Madam

### **RE: DRAFT ENVIRONMENTAL SCOPING REPORT IN SUPPORT OF THE ENVIRONMENTAL IMPACT ASSESSMENT AND WASTE MANAGEMENT LICENCE APPLICATION FOR THE PROPOSED SOLID REMOVAL AND TREATMENT FACILITIES UPGRADE AT THE SOUTHERN WASTEWATER TREATMENT WORK, MEREBANK, KWAZULU NATAL.**

Reference is made to the aforementioned Report as received by this Office on 28 May 2014.

This Department has no objections with regard to the Environmental Impact Assessment (EIA) plan of study for the proposed application for upgrades at the Southern Wastewater Treatment Works (SWWTW) and has the following comments:

#### **1. WATER USE AND AUTHORISATION**

- 1.1. It is noted from the Report that at the northern portion of the study area, there is a wetland that borders the boundary fence. Please note that the occurrence of a wastewater treatment works (WWTW) within a 500m radius from the boundary of a wetland constitute water use in terms of Section 21(c) and (i) of the National Water Act, 1998 (Act 36 of 1998) (NWA) and must be authorised as such. Section 21 (c) & Section 21(i) water uses are defined as "*impeding or diverting the flow of water in a watercourse*" and "*altering the bed, banks, course or characteristics of a watercourse*" respectively in terms of the NWA.
- 1.2. Should an activity be identified as a possible Section 21(i) water use the application must delineate the watercourse and riparian habitat using the Departmental guideline, '*A practical field procedure for identification and delineation of wetlands and riparian areas*' and indicate the proposed activity location in relation to the riparian area, the 1:50 and 1:100 year floodlines on a map of appropriate scale. The application will require an authorisation from the Department for any activity within the riparian habitat or 1:100 year floodline, whichever is the greatest distance from the watercourse. It is mentioned in the Report that the SWWTW is lies within the 1:100 year floodline.



- 1.3. The construction of facilities for the storage and/or handling of wastewater and the storage of waste in a lagoon constitutes a water use in terms of Section 21(g) of the NWA and must be authorised as such. The disposal of sewage sludge and/or waste on land also constitutes a Section 21(g) water use. Section 21(g) of the NWA is defined as *'the disposing of waste in a manner which may detrimentally impact on a water resource'*.
- 1.4. The following supporting documents are required for a Section 21(c) & (i) water use licence application which must be submitted for the attention of Regional Head:
- Licence applications forms for Section 21 (c); (i) and (g) water uses.
  - Supplementary water use forms
  - Section 21 (c) & (i) water use supplementary information questionnaire
  - Legible map
  - Master layout plan
  - Design drawings
  - Environmental authorisation reports (EIA; BAR, etc.) and Record of Decision
  - Environmental management plan/ programme
  - Proof of Public participation including minutes
  - Detailed stormwater management plan
  - Design report for water routing structures
  - Geohydrological investigation report
  - Geotechnical investigation report
  - Work Method statement
  - Riparian/wetland delineation and functional assessment
  - Riparian/wetland management and rehabilitation plan
  - Management and rehabilitation plan (watercourse; rivers, etc.)
  - Monitoring programme (for rivers and wetlands)
  - Integrated Water and Waste Management Plan (IWWMP) report.
  - Section 27 motivation
  - R114.00 licencing administration fee payable to this Department upon request from this Department once the application is complete.
- 1.5. It must be noted that all water uses at the SWWTW will need to be applied for in a one Integrated Water Use Licence (IWUL) application.
- 1.6. The conditions for the discharge of treated effluent into the marine environment as authorised by this Department under a Water Use Licence (WUL) for SWWTW remain binding until the applicant is issued with Coastal Waters Discharge Permit.
- 1.7. It is mentioned in the Report that options for the management of dewatered sludge include the provision of the dewatered sludge to a pelletizing plant that situated outside the premises of SWWTW and the disposal of the sludge to agricultural land or landfill.
- 1.7.1. Please note that sewage sludge must be classified and disposed of in accordance with to the "Guidelines for the Utilisation and Disposal of Wastewater Sludge" (Volumes 1-5) and as amended from time to time.
- 1.8. In terms of Section 117 of the NWA:
- (c) *"dam with a safety risk"* means any dam
- (i) *which can contain, store or dam more than 50 000 cubic metres of water, whether that water contains any substance or not, and which has a wall of a vertical height of more than five metres, measured as the vertical difference between the lowest downstream ground elevation on the outside of the dam wall and the non-overspill crest level or the general top*

*level of the dam wall;*

1.8.1. The Water Resource Management section of this Department must be contacted (031 336 2700) with regards to the requirements and registration of dams with dam safety risk.

1.9. The onus is on the applicant to submit a complete water use licence application to this Department for water uses under Section 21 of the NWA occurring, and those that will be exercised in time to avoid unnecessary delays.

## **2. WATERCOURSES**

2.1. The wetlands must be included as part of the detailed Stormwater Management Plan should a certain percentage of stormwater from the site be allowed to drain towards the wetlands. It is vitally important that any stormwater discharging to the wetland is dissipated prior to entering the permanent, seasonal or temporary zone of the wetland so that it does not cause gully erosion or negatively impact on the hydrological functioning of the wetland.

2.2. Adequate measures must be put in place to protect the water resource(s) that flow next to as well as through the said property from being polluted and/or degraded. **Visible markings showing/demarcating the buffers must be provided on site during the construction phase.**

2.3. Any development that takes place within the 1:100 year floodline of a watercourse must be authorised by this Department.

## **3. SEWAGE AND WASTEWATER MANAGEMENT**

3.1. The use of temporary chemical toilets during the construction phase of the development must not cause any pollution to water resources as well as pose a health hazard. The contents of these toilets must be emptied and safely disposed of. In addition, these toilets must be situated out of the 1:100 year floodline of a watercourse or outside 100 metres from the watercourse, whichever is greatest.

3.2. It is also this Department's experience that projects of this nature may result in the generation of small volumes of water containing waste being generated during the construction phase. In this instance, the following is applicable:

- Water containing waste must not be discharged into the natural environment.
- Measures to contain the water containing waste and safely dispose of it must be implemented.

## **4. SOLID WASTE MANAGEMENT**

4.1. All waste areas must be demarcated and stored within a designated waste collection/storage area. Access control to this area must be properly managed and the removal and disposal of the waste to a permitted waste disposal site must be carried out by a certified waste contractor or the eThekweni Municipality.

4.2. Should the applicant wish to make use of a private contractor to dispose of the waste generated from the development, the following would apply:

4.2.1. The details of the contract must be made available to this Department.

- 4.2.2. Safe disposal certificates from a permitted waste disposal site must be kept on hand and must be furnished to this Department when requested.
- 4.3. Contaminated/hazardous materials are to be disposed of at a permitted hazardous landfill site that is authorised to accept such waste material.
- 4.4. All waste generated at the site during construction should be disposed of in a suitable manner so as not to cause any surface and groundwater pollution or a health hazard.
- 4.5. The recycling of suitable material (i.e. glass, paper, plastic, etc) is encouraged by this Department, provided it is properly managed.
- 4.6. The management of sewage sludge on site must be outlined.

## **5. STORMWATER MANAGEMENT**

- 5.1. It is vitally important that stormwater is managed on site both during and after construction. The development and implementation of a stormwater management plan will facilitate this.
- 5.2. The Stormwater management plan must be approved by the eThekweni Municipality.
- 5.3. The stormwater drainage network system must be kept separate from the waste water (water containing waste) system.
- 5.4. After construction, the site should be contoured to ensure free flow of runoff and to prevent ponding of water.
- 5.5. Drainage must be controlled to ensure that runoff from the site will not culminate in off-site pollution or result in damage to properties downstream of any stormwater discharge. The applicant must also address the management of stormwater discharged to the wetland in the water use licence application.

## **6. EROSION**

- 6.1. Soil erosion on site must be prevented at all times i.e. pre-, during- and post- construction activities. Extra precautions must be taken in areas where soils are deemed as highly erodible. If soil erosion cannot be prevented, it must be minimised.
- 6.2. Erosion control measures to be implemented in areas sensitive to erosion such as near water supply points, edges of slopes, etc. These measures could include the use of sand bags, hessian sheets, retention or replacement of vegetation.

## **7. GENERAL**

- 7.1. No forms of secondary pollution should arise from the disposal of sewage and refuse. Any pollution problems arising from the above development are to be addressed immediately by the applicant.
- 7.2. The storage of materials, chemicals, fuels etc to be used during the construction phase must not pose a risk to the surrounding environment. Such storage areas must be located out of the 1:100 year floodline of any water resource and unauthorised access to these areas must be controlled. Temporary bunds must be constructed around chemical or fuel storage areas to contain possible spillages.

- 7.3. It is important that any significant spillages of chemicals, fuels, etc. during the construction phase are reported to this office and other relevant authorities. In the event of a spill, the following steps can be taken:
- Stop the source of the spill
  - Contain the spill
  - All significant spills must be reported to this Department and other relevant authorities
  - Remove the spilled product for treatment or authorised disposal
  - Determine if there is any soil, groundwater or other environmental impact
  - If necessary, remedial action must be taken in consultation with this Department
  - Incident must be documented
- 7.4. The development must comply with all relevant local municipal plans and Bylaws.
- 7.5. An Environmental Management Programme (EMPr) must be developed for the project. Compliance to the final approved EMPr must be audited regularly by the designated Environmental Control Officer.
- 7.6. Notwithstanding the above, the responsibility rests with the applicant to identify any sources or potential sources of pollution from his undertaking and to take appropriate measures to prevent any pollution of the environment. Failure to comply with the requirements of the National Water Act, 1998 (Act 36 of 1998) could lead to legal action being instituted against the applicant.

Please do not hesitate to contact this Office should you have any concerns, comments or queries.

Yours faithfully



for REGIONAL HEAD: KWAZULU-NATAL  
NL/nl/ 13166