Draft Basic Assessment Report

Proposed Decommissioning of the Shell Aboveground Storage Tanks at Mondi Merebank Mill, Durban, Kwa-Zulu Natal

February 2015

Shell South Africa Marketing (Pty) Ltd

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Abbreviations

Abbreviation	Description
AST	Aboveground Storage Tank
BAR	Basic Assessment Report
BID	Background Information Document
DWA	Department of Water Affairs
EA	Environmental Authorisation
EDTEA	Kwa-Zulu Natal Department of Economic Development, Tourism and Environmental Affairs
EMPr	Environmental Management Programme
ERM	Environmental Resources Management Southern Africa (Pty) Ltd
HFO	Heavy Fuel Oil
HSSE&SP	Health, Safety, Security, Environment & Social Performance
HWDC	Hazardous Waste Disposal Contractor
I&AP	Interested and Affected Party
NEMA	National Environmental Management Act
PPE	Personal Protective Equipment
SANS	South African National Standards
Shell	Shell South Africa Marketing (Pty) Ltd

1 INTRODUCTION

1.1 PROJECT OVERVIEW

Shell South Africa Marketing (Pty) Ltd (Shell) currently own two bulk Heavy Fuel Oil (HFO) above ground storage tanks (ASTs) with capacities of 1,000 m^3 each at the Mondi Merebank Mill, Travancore Drive, Merebank, Durban (*Figure 1.1*). The site historically utilised HFO in the furnaces, but converted to coal fire boilers in 2008. This meant the two ASTs were no longer used. Mondi has therefore requested Shell to decommission and remove the HFO tanks.

The proposed project falls within the jurisdiction of the Kwa-Zulu Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA) – the competent authority. This Basic Assessment (BA) has been conducted to obtain Environmental Authorisation (EA) in terms of the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended) and associated Environmental Impact Assessment Regulations (18 June 201) for the proposed decommissioning of the ASTs.

1.2 DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

1.2.1 ERM Southern Africa

Environmental Resources Management Southern Africa (Pty) Ltd (ERM) is a global environmental consulting organisation employing over 5,000 people with 150 offices in 40 countries worldwide. Founded in 1971, ERM has built an organisation based on the supply of a full range of environmental and social policy, scientific, technical, and regulatory expertise. ERM's primary focus is to provide quality work and service to our clients in these areas.

From a regional perspective, ERM has been involved in numerous projects in Africa over the past 30 years and in 2003 established a permanent presence in Southern Africa to meet the growing needs of our clients. The Southern African ERM offices are based in Cape Town, Johannesburg and Durban. ERM Southern Africa has a staff complement of 160 comprising dedicated environmental professionals offering expert skills in EIA, EMP, EMS, risk assessment, EHS management and auditing, corporate social responsibility and socio-economic impact assessment, climate change services, specialist groundwater services as well as contaminated site management.

1.2.2 Project Team

A list of the key BA project team members is provided in *Table 1.1*, together with the associated qualifications and experience. No specialists have been appointed during the compilation of this BAR.

ERM have no financial ties to, nor are they a subsidiary, legally or financially, of Shell. Remuneration for the services by the applicant (Shell) in relation to this BA is not linked to an approval by the decision-making authority. Furthermore, ERM has no secondary or downstream interest in the development.

Table 1.1 ERM Core Project Team

Name	Max Clark
Role	Partner in Charge
Qualifications	• B. Sc B. Sc Honours • M. Sc PhD
Professional Affiliations	• South African Council for Natural Scientific Professions as a Professional Natural Scientist in Ecological, Environmental and Zoological Science (Registration Number: 400333/04)
Years of Experience	25
Experience	Max has experience in the environmental sector working on projects in both the public and private sectors and with all tiers of government, in environmental management and sustainable development. He has undertaken or managed many environmental projects related to mega-project developments in the infrastructure, mining and minerals processing sectors.

Name	Margaret Duddington
Role	Project Manager
Qualifications	• BSc Honours (Geology) • BSc Geology and Chemistry
Professional Affiliations	Professional Scientist (SACNASP) 40026/12
Years of Experience	9
Summary	Margaret Duddington is a Senior Consultant with ERM's Contaminated Site Management (CSM) team based in Durban, South Africa. She is the Shell point of contact (Cluster Manager) for the Durban office. She has over nine years of experience, primarily in the oil and gas sector.

Name	Lisa Otten
Role	Project Consultant
Qualifications	• BSc (Environmental Science and Ecology) • BSc (Hons) Environmental Management
Years of Experience	2
Summary	Lisa is an Environmental Consultant at ERM Southern Africa where she has gained significant experience in undertaking environmental regulatory processes for various clients. Lisa has worked primarily within the oil and gas and manufacturing sectors.

1.3 STRUCTURE OF THIS REPORT

The Basic Assessment Report (BAR) is structured as follows:

- Administrative framework – national, provincial and local legislative requirements associated with the decommissioning of infrastructure that store dangerous goods;
- project components – description of the proposed project and project rationale;
- the identification of alternatives in terms of activity, location and technology;
- description of the receiving environment – the biophysical and social economic context of the proposed site;
- resource use and process details that will be associated with the decommissioning of the ASTs;
- the public participation process followed to date; and
- impact assessment including cumulative impacts, impact statement and recommendations of the practitioner.

Figure 1.1 Satellite Imagery of Mondi Merebank Mill

Source: © 2015 Image, © 2015 DigitalGlobe, © 2015 AfriGIS Pty (Ltd)

The decommissioning of infrastructure for the storage of a dangerous good is subject to a number of legislative permitting requirements at the national, provincial, regional and local level. The following list of legislation, policies and/or guidelines were taken into consideration for the compilation of this BAR:

National

- National Environmental Management Act (Act No. 107 of 1998), as amended;
- Environmental Impact Assessment Regulations, 8 December 2014 and associated Listing Notices;
- Occupational Health and Safety (OHS) Act (Act No. 85 of 1993);
- National Environmental Management Waste Amendment Act (Act 26 of 2014) which replaced the National Environmental Management: Waste Act (Act No. 59 of 2008);
- National Water Amendment Act 27 of 2014 which replaced the National Water Act (Act No. 36 of 1998);
- National Environmental Management: Air Quality Act (No 39 of 2004);
- National Heritage Resources Act (Act No. 25 of 1999);
- Petroleum Products Act (Act No. 120 of 1977);
- National Building Regulations and Standards Act (Act No. 103 of 1977);
- Noise Control Regulations (PN 5309 of 1998); and
- Employment Equity Act (Act No. 55 of 1998).

With respect to the Environmental Impact Assessment Regulations of 2014, the proposed project triggers **Activity 31** of Listing Notice 1 (Government Notice No. R 983 of 8 December 2014):

> *"The decommissioning of existing facilities, structures or infrastructure for-*
> *(i) any development and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014"*

As the Activity falls under Listing Notice 1, a Basic Assessment process must therefore be undertaken to obtain Environmental Authorisation (EA) prior to decommissioning.

Shell's Corporate Policy

Shell is committed to the following principles according to their Health, Security, Safety and the Environment and Social Performance (HSSE & SP) Policy and Framework:

- pursuing the goal of no harm to people;
- protecting the environment;

- use material and energy efficiently to provide products and services;
- respect their neighbours and contribute to the societies in which they operate;
- develop energy resources, products and services consistent with these aims;
- publicly report on their performance;
- play a leading role in promoting best practice in their industries;
- manage HSSE & SP matters as any other critical business activity; and
- promote a culture in which all Shell employees share this commitment.

3 PROJECT COMPONENTS

The HFO AST's are located within the Mondi Merebank Mill which is accessible from Travancore Drive, Merebank, Durban (see Locality Map in *Appendix A*). The property is located on Erf 106 and the GPS co-ordinates for the site are 29° 57' 35.60" S and 30° 58' 4.49"E. Photographs of the AST's, the site and the surrounding area are included as *Appendix B*.

The physical floor area of the two AST tanks and ancillary equipment (including the bunded area) is approximately 200 m^2 while the total area of the Mill is approximately 684 764 m^2. The site layout including project components is included in *Appendix C.*

The decommissioning of the ASTs involves the following:

- Draining, purging and spading all product feeder lines to the existing bulk HFO tanks; and
- Dismantling the aboveground HFO storage tanks and all associated pipework, valves, residual bund walls, bund flooring and tank plinths.

3.1 PROJECT RATIONALE (NEED AND DESIRABILITY)

3.1.1 Project Objective

There are currently two Shell-owned bulk HFO ASTs on-site with capacities of 1 000 m^3 each. The site historically utilised HFO in the furnaces but converted to coal fired boilers in 2008 which resulted in the discontinuation of HFO delivery to the site by Shell.

HFO was delivered to the site through an underground pipeline from the nearby South African Petroleum Refineries (Pty) Ltd (SAPREF) refinery which fed directly into the HFO tanks. Mondi has requested Shell to decommission and remove the redundant HFO tanks.

3.1.2 Environmental Consideration

Potential impacts to the environment are described and assessed in *Section 7* of the BAR while mitigation and management measures that Shell and its appointed Contractor(s) will implement are detailed in the Environmental Management Programme (*Appendix E*).

3.1.3 Social Consideration

The site currently operates as a paper mill and produces various paper products. The site is located in a mixed residential and light industrial area.

Any risks of explosion and/or fire associated with any remaining fuel oils in the ASTs are negated with the decommissioning of the ASTs.
The decommissioning activities will provide limited local employment opportunities (2-3 local, semi-skilled people may be employed by the appointed Contractor).

3.2 IDENTIFICATION OF ALTERNATIVES

Alternatives should be identified to find the most effective way of meeting the need and purpose of the proposal, either through enhancing the environmental benefits of the proposed activity, and/or through reducing or avoiding potentially significant negative impacts.

As the process of decommissioning is site specific, there is no location alternative suggested. Likewise, technology alternatives for decommissioning are limited; therefore alternatives in the context of this Basic Assessment process are only discussed in terms of the option of the no-go alternative.

3.2.1 No-Go Alternative

The alternative of not decommissioning the ASTs means that there would be no change to the existing environmental conditions at the site and therefore no impacts to the environment associated with the decommissioning process. However, the unused ASTs would remain restricting redevelopment and future land-use options and pose economic constraints.

The no-go alternative is not considered feasible as the area the tanks occupy is required by Mondi for redevelopment.

4 DESCRIPTION OF THE RECEIVING ENVIRONMENT

This section describes the environmental and socio-economic baseline conditions for the study area (i.e. the general region around the proposed site).

4.1 SITE SETTING

As described above, the ASTs are located within the Mondi Merebank Mill. The surrounding land use of the mill is as follows:

North: Municipal sewer treatment works is located to the north-east of the site while the medium density residential suburb of Merebank lies to the north.

East: Abandoned office buildings, municipal yard and further eastward the area is residential.

West: Vacant land with residential development further westward.

South: The Mlazi River Canal lies immediately adjacent to the southern boundary of the Mondi Merebank Mill, across Travancore Drive. The canal flows to the east and enters the Indian Ocean approximately 1 km to the east of the site.

4.2 REGIONAL GEOLOGY

According to the 1:250 000 Geology Map (2930) of Durban, the site is underlain by Quarternary beach sand of the Berea Formation. The Berea Formation consists of red sand; sub-ordinate white, yellow, brown and purple sand; and basal conglomerate underlies the beach sand.

4.3 HYDROGEOLOGY

The 1: 500,000 Hydrogeological Map of Durban (2928) shows that the site is underlain by an intergranular and fractured aquifer with typical borehole yields of between 0.5 and 2.0 ℓ/s. Groundwater quality is reported to be good with an electrical conductivity between 70 and 300 mS/m.

The Aquifer Classification of South Africa (CSIR, 1999) classifies the regional aquifer as a minor aquifer, which indicates that it is a moderately-yielding aquifer system of variable water quality. Furthermore, the regional aquifer is considered to have a moderate vulnerability rating, which indicates the tendency or likelihood for hydrocarbon impact to reach a specified position in the groundwater system.

The classification of the aquifer (minor) in combination with its vulnerability rating (moderate) can be used to determine its susceptibility rating using the matrix provided in the Aquifer Classification of South Africa (CSIR, 1999). The susceptibility rating in this classification system is defined as the qualitative measure of the relative ease with which a groundwater body can be potentially impacted by anthropogenic activities. This site is underlain by an aquifer of medium susceptibility.

A search of the National Groundwater Archives (NGA) returned approximately 13 potential boreholes within a 700 m radius, however, a walkover hydrocensus of the area indicated that the NGA locations were not boreholes but groundwater monitoring wells. It was therefore established that the site and its surroundings are supplied with piped potable water by the municipal water supplier.

The inferred groundwater flow direction is to the south east (assuming groundwater flow direction emulates topography).

4.3.1 Hydrology

There is a canal of the Mlazi River directly to the south of the site, across Travancore Drive. The canal flows to eastward and enters the India Ocean approximately 1 km to the east of the site.

4.4 VEGETATION

The site for the ASTs falls within an industrial area (the Merebank Mill) therefore there is no vegetation in the immediate vicinity of where decommissioning will take place. For this reason, the potential impact of the Activity on vegetation has been screened out of the Basic Assessment Process.

4.5 CULTURAL/HISTORICAL FEATURES

The decommissioning of the ASTs will not involve any excavation activities. It is therefore unlikely that there any culturally or historically significant elements, as defined in Section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999) will be discovered. For this reason, the potential impact of decommissioning on this resource has been screened out of the Basic Assessment Process. The following mitigation measure has been advised:

- If an artefact of potential heritage significance is uncovered during the decommissioning of the ASTs, the Provincial Kwa-Zulu Natal Heritage Resources Agency must be notified immediately.

5 RESOURCE USE AND PROCESS DETAILS

The following section details the resources that will be used during the decommissioning process. Further management measures for these resources are provided in the Environmental Management Programme (*Appendix E*).

5.1 WASTE, EFFLUENT AND EMISSION MANAGEMENT

5.1.1 Solid Waste Management

General solid waste that is expected to be generated during the decommissioning process includes:

- household waste from the construction workforce e.g. paper, plastic, glass;
- rubble e.g. bricks, concrete from the ringbeam; and
- the ASTs and associated fuel infrastructure (e.g. fuel lines).

All solid waste generated during decommissioning will be stored in designated waste receptacles. The waste will either be removed by a licensed waste contractor or by the Local Municipal waste collection services The ASTs will be disposed of as scrap metal.

Litter collection bins will be provided within the Contractors camp at convenient intervals and will be regularly cleared. Separation and recycling of waste will be encouraged where possible.

Solid hazardous materials that require disposal (e.g. fuel product lines) will be disposed of at a registered hazardous landfill site. These materials must be removed by an appropriate hazardous waste disposal contractor (HWDC).

5.1.2 Liquid Effluent

Liquid effluent produced during the decommissioning process will be from the remaining sludge in the ASTs. This sludge will be drained by the service provider dismantling the ASTs in conjunction with an accredited Waste Disposal company. All hazardous waste will be disposed of at an accredited waste disposal site and a Certificate of Safe Disposal will be obtained from the waste disposal facility.

5.1.3 Atmospheric Emissions

The decommissioning activity is expected to generate minor amounts of dust which may be a nuisance to the construction workforce, Merebank Mill personnel and surrounding landowners.

5.2 *WATER USE*

The decommissioning of the ASTs does not require additional water (other than what is provided at the facility). Potable water for the construction workforce will be provided by the appointed Contractor.

5.3 *ELECTRICITY SUPPLY*

Where electrical supply may be required, it will be sourced directly from main electrical supply points provided by Mondi. The actual dismantling of the ASTs will be conducted by hot work techniques in accordance with SANS Codes of Practice.

6 PUBLIC PARTICIPATION

This section describes the activities undertaken to engage and consult with key stakeholders during the public participation process. It describes:

- the process by which stakeholders were identified;
- the means by which they were consulted;
- the outcomes of the consultations to date;
- the actions taken to disclose pertinent information to stakeholders; and
- the intended approach to ensuring that stakeholders continue to be engaged during the Basic Assessment process.

6.1 PUBLIC PARTICIPATION PROCESS

The first step in the public participation process was to identify key stakeholders, including:

- central and provincial government representatives;
- local authorities;
- affected and surrounding landowners;
- ward councillor; and
- community-based organisations.

All stakeholder information, including contact details, has been recorded in a database (refer to *Appendix E_1)*. This database is updated on an on-going basis throughout the project, and will serve as a record of the communication/public involvement process.

6.1.1 Proof of Notification

Site Notice

Site notices were placed at conspicuous locations at the site and site access points. The notices were put up on 01 December 2014, and replaced with notices updated with the applicable trigger from the new EIA regulations (2014) on 19 January 2015. The notice will be displayed for the duration of the prescribed 40 day notification period. Photos showing the site notices are attached in *Appendix E_2*.

Newspaper Advertisement

In accordance with the 2010 EIA Regulations, the commencement of the basic assessment process for the project was advertised in the Berea Mail & Northglen News (page 40) on 09 December 2014 (see *Appendix E_3*). This advert informed the public of the project, and requested them to register as interested and affected parties (I&APS) if they would like to participate in the

BA process. The primary aim of the advert was to ensure that the widest possible group of stakeholders were informed of the project, and to elicit comments from the public and the authorities regarding the proposed project.

Background Information Document

A Background Information Document (BID) was compiled and made available to stakeholders. The purpose of the BID was to provide stakeholders with relevant project information including the project rationale, background information on the BA Process and the public participation process. The BID invited people to register as I&APs and provide the consultants with written comments on the proposed project. The BID is included in *Appendix E_4.*

During the initial site visit (01 December 2014), a copy of the BID was given to neighbouring landowners, and made available in public areas near the site (including the Merebank Library). The BID document was updated with the applicable trigger as per the new EIA regulations (2014) and re-issued on 19 January 2015. An electronic copy of the updated BID was sent to relevant Organs of State via email on 20 January 2015 (*Appendix E_5*). *Appendix E_1* contains a database of all stakeholders including state departments to which a copy of the BID was sent.

6.2 SUMMARY OF ISSUES/COMMENTS AND RESPONSE REPORT

A summary of the comments and responses received to date are included in *Table 6.1*, and the full Comments and Responses Report can be found in Appendix E_6.1. These tables will be updated throughout the process, but no comments have been received to date.

Table 6.1 Summary of Comments and Responses

Stakeholder Name	Organisation	Date Comment Received	Comment	Response

6.3 *STAKEHOLDER MEETINGS*

No meetings with stakeholders have taken place. Should I&APs request to meet the EAP, one or more meetings will be considered.

6.4 *AVAILABILITY OF THE BASIC ASSESSMENT REPORT FOR COMMENT*

The draft Basic Assessment Report (DBAR) will be made available for public comment from **09 February** to 20 **March 2015**. Registered I&APs were notified of the availability and location of the report at Merebank Library located at Bombay Sq 12 Natraj Lane, Merebank, Durban, and on the ftp internet site (*Appendix E_5.2*). A week prior to the close of the commenting period, emails will be sent to all registered I&APs and commenting authorities reminding them of the closing date for submission of comments.

6.5 *ON-GOING COMMUNICATION*

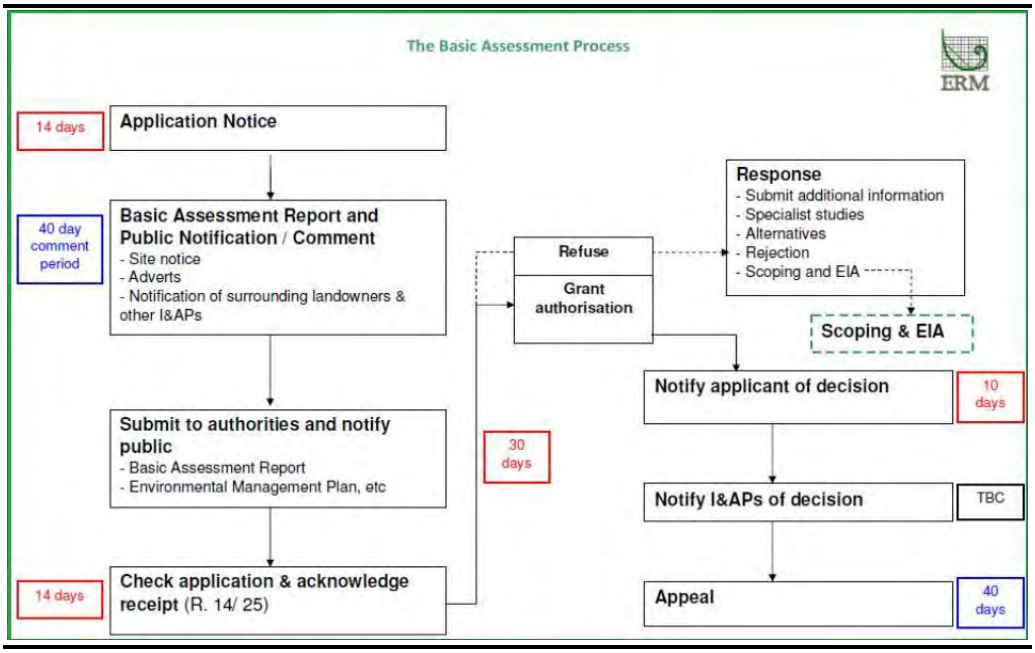
ERM's contact details have been provided on all communications to the public. I&APs are encouraged to continue providing their comments on the process and the project. These issues and comments will be forwarded directly to the KZN-EDTEA for their review and consideration. .

Once a decision has been made by the KZN-EDTEA, all registered I&APs will be notified and provided with an opportunity to appeal this decision.

7 IMPACT ASSESSMENT

A Basic Assessment is a process for identifying, predicting and assessing the potential positive and negative impacts of a proposed project (including reasonable alternatives) on the biophysical and socio-economic environment and to propose appropriate management actions and monitoring programmes. Management actions should follow the mitigation hierarchy. The Basic Assessment process is used to inform decision-making by the project proponent and relevant authorities. The basic assessment process outlined in the 2010 EIA regulations will be followed as the application was submitted prior to the promulgation of the 2014 EIA regulations. A schematic representation of the Basic Assessment Process is shown in *Figure 7.1*

Figure 7.1 Basic Assessment Process



7.1 IMPACT ASSESSMENT METHODOLOGY

ERM's approach to impact assessment can typically be divided into four steps, as described below:

1. **Site Visit** - A site visit was carried out by ERM on 07 April 2014 in order to better understand the site setting in terms of the biophysical and social context and identify sensitive receptors on or around the site.

2. **Impact/ Opportunity Identification and Specialist Studies** – Based on past experience and what was identified on site, the consultants assessed potential impacts and opportunities associated with the proposed decommissioning of the HFO tanks at Mondi Merebank Mill.

3. **Impact Assessment –**All potential impacts and opportunities identified have been described and assessed in this BAR. The methodology used to assess the potential impacts is outlined below.

4. **Identification of Mitigation Measures –** ERM (together with the Applicant) identified measures that will be taken to avoid or minimise any potential adverse effects on the biophysical and social environment and to enhance potential opportunities during the design, construction, operation and decommissioning phases. These mitigation measures have been included in the Environmental Management Programme (EMPr) attached as *Appendix F.*

The adequate assessment and evaluation of the potential impacts and opportunities associated with the proposed project necessitates a rigorous approach that will reduce the subjectivity involved in making such evaluations. ERM have developed a clearly defined impact assessment methodology that is used by ERM offices globally. It is our opinion that the impact assessment methodology is sound and adequate to assess the potential impacts and opportunities associated with the proposed decommissioning.

The significance of a potential impact can be described in terms of its importance. Importance relates to one or multiple factors including:

- potential cumulative effects;
- the extent, duration, nature, severity and likelihood of occurrence;
- the effect of the impact in terms of the degree of change to the biophysical and socio-economic environment;
- the sensitivity of the receiving environment; and
- an indication of whether the impact meets legal or policy requirements.

Table 7.1 Impact Magnitude Description

Impact Magnitude	
Extent	**Local** – impacts that are limited to the boundaries of the development site or that affect an area in a radius of 1km around the development site. **Regional** – impacts that affect regionally important environmental resources or are experienced at a regional scale as determined by administrative boundaries, habitat type/ecosystem. **National** – impacts that affect nationally important environmental resources or affect an area that is nationally important/ or have macro-economic consequences.
Duration	**Temporary** – impacts are predicted to be of short duration and intermittent/occasional. **Short-term** – impacts that are predicted to last only for the duration of the construction period. **Long-term** – impacts that will continue for the life of the Project, but ceases when the project stops operating. **Permanent** – impacts that cause a permanent change in the affected receptor or resource (e.g. removal or destruction of ecological habitat) that endures substantially beyond the project lifetime.
Intensity	BIOPHYSICAL ENVIRONMENT: *Intensity can be considered in terms of the sensitivity of the biodiversity receptor (i.e. habitats, species or communities).* **Negligible –** the impact on the environment is not detectable. **Low –** the impact affects the environment in such a way that natural functions and processes are not affected. **Medium –** where the affected environment is altered but natural functions and processes continue, albeit in a modified way. **High –** where natural functions or processes are altered to the extent that they will temporarily or permanently cease. ***Where appropriate, national and/or international standards are to be used as a measure of the impact.*** *Specialist studies should attempt to quantify the magnitude of impacts and outline the rationale used.* _____ SOCIO-ECONOMIC ENVIRONMENT: *Intensity can be considered in terms of the ability of people/communities affected by the Project to adapt to changes brought about by the Project.* **Negligible –** there is no perceptible change to people's livelihood. **Low** - people/communities are able to adapt with relative ease and maintain pre-impact livelihoods. **Medium –** people/communities are able to adapt with some difficulty and maintain pre-impact livelihoods but only with a degree of support. **High** - affected people/communities will not be able to adapt to changes or continue to maintain-pre impact livelihoods.
Likelihood - the likelihood that an impact will occur	
Unlikely	The impact is unlikely to occur.
Possible	The impact is likely to occur under most conditions.
Definite	The impact will occur.

In addition to characterizing the magnitude of impact, the other principal step necessary to assign significance for a given impact is to define the sensitivity/vulnerability/importance of the impacted resource/receptor.

As in the case of magnitude, the sensitivity/vulnerability/importance designations themselves are universally consistent, but the definitions for these designations will vary on a resource/receptor basis. The universal sensitivity/vulnerability/importance designations are:

- Low
- Medium
- High

Once magnitude of impact and sensitivity/vulnerability/importance of resource/receptor have been characterized, the significance can be assigned for each impact. Impact significance is determined using the matrix below.

		Sensitivity/Vulnerability/Importance of Resource/Receptor		
		Low	**Medium**	**High**
Magnitude of Impact	**Negligible**	Negligible	Negligible	Negligible
	Small	Negligible	Minor	Moderate
	Medium	Minor	Moderate	Major
	Large	Moderate	Major	Major

Mitigation measures are then developed to appropriately address the impacts. Once mitigation measures are declared, residual impact significance is assigned. This is essentially a repeat of the IA methodology considering the assumed implementation of the mitigation measures.

Underlying Assumptions

The conclusions presented in this BAR assume that site conditions as experienced and documented during the site visit are representative of general and average conditions.

Uncertainties

An impact assessment will always contain a degree of subjectivity, as it is based on the value judgment of specialists and the Environmental Assessment Practitioner. The evaluation of significance is thus contingent upon values, professional judgment, and dependent upon the environmental and social context.

7.2 ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES

This section describes the potential environmental and social impacts that may result from the proposed decommissioning of the ASTs. The potential impacts on environmental and social resources arising from the proposed development include direct and indirect impacts.

Table 7.2 Significance of Impacts before and after Mitigation of Decommissioning of ASTs

Potential Impacts:	Significance Rating of Impacts:		Proposed Mitigation:	Significance Rating of Impacts after Mitigation:	
Biophysical Impacts					
Reduced Air Quality: Dust Decommissioning activities may generate dust in the immediate environment. This impact would occur for the duration of the decommissioning period which is between 4-6 months however the dust will occur intermittently between 8am – 5pm during the working day and depending upon the activity being undertaken. The dust may be a nuisance to the Merebank Mill employees, surrounding pedestrians, motorists and Merebank residential area, but is not expected to adversely affect their health or visibility.	**Duration**	Short Term	• Dust suppression methods, such as wetting, should be applied where there are large tracts of exposed surfaces. • Stockpiles should have a maximum height of about 2m or lower and should be covered with an effective covering during rain or high wind conditions (e.g. tarpaulins). • If possible, dust generating activities should be avoided on particularly windy days. • A grievance procedure will be established whereby complaints of dust can be received, recorded and responded to appropriately. • Construction workers and personnel must wear dust protection masks when required.	**Duration**	Short Term
	Extent	Local		**Extent**	Local
	Frequency	Low		**Frequency**	Low
	Likelihood	Likely		**Likelihood**	Unlikely
	Magnitude	Small		**Magnitude**	Negligible
	Sensitivity of Resource/Receptor	Medium		**Sensitivity of Resource/Receptor**	Low
	Significance Rating	Minor		**Significance Rating**	Negligible
Increased Noise Decommissioning activities will include machinery, vehicles and excavation equipment all of which may result in an increase in noise disturbance during the decommissioning. This potential impact would only occur during working hours affecting mostly personnel of Merebank Mill and potentially residents of Merebank.	**Duration**	Short Term	• Inform surrounding landowners about the decommissioning and the expected length of the site works. • Activities to occur during working hours only (8am- 5pm). • Contractors to be conscious of the noise generated during their activities, and should limit excessive noise wherever possible. • The contractors will adhere to local authority by-laws relating to noise control. • Mechanical equipment with lower sound power levels will be selected to ensure that the permissible occupation noise is not exceeded. • Equipment will be fitted with silencers as far as possible to reduce noise. • All equipment will be adequately maintained and	**Duration**	Short-term
	Extent	Local		**Extent**	Local
	Frequency	Medium		**Frequency**	Low
	Likelihood	Likely		**Likelihood**	Unlikely
	Magnitude	Medium		**Magnitude**	Small
	Sensitivity of Resource/Receptor	Low		**Sensitivity of Resource/Receptor**	Medium
	Significance Rating	Minor		**Significance Rating**	Negligible

Potential Impacts:	Significance Rating of Impacts:		Proposed Mitigation:	Significance Rating of Impacts after Mitigation:	
			kept in good working order to reduce noise. • A grievance procedure will be established whereby noise complaints can be received, recorded and responded to appropriately. • Construction workers and personnel will wear hearing protection when required.		
Contamination of Storm water Drainage Systems Stockpiling of material and accidental spills/leaks has the potential to migrate towards the storm water drainage channels and pollute this system.	**Duration**	Long-term	• All surface spillages must be contained by routing the spillage using channels and trenches to a containment system (oil water separator or containment vessel). • No fuels/ oils are allowed to be discharged directly into storm water pipes/drains and sewage manholes/pipes. • All waste oils, greases, fuels, chemicals etc. should be collected and disposed of in an appropriate manner off site. • Temporary stockpiles should be located away from storm water drains. • All construction vehicles will be properly maintained to prevent leaks. • Any fuel stored on site must be kept in a bunded containment area. • Drip trays are to be utilised during daily greasing and re-fuelling of machinery and to catch incidental spills and pollutants. • Regular servicing and maintenance of machinery must be done at appropriate workshop facility and not on site. • Drip trays are to be inspected on a weekly basis for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Ablution facilities (i.e. chemical toilets) during the decommissioning period must be regularly maintained and cleaned by the service provider.	**Duration**	Long-term
	Extent	Local		**Extent**	Local
	Frequency	Occasional		**Frequency**	Occasional
	Likelihood	Possible		**Likelihood**	Unlikely
	Magnitude	Small		**Magnitude**	Negligible
	Sensitivity of Resource/Receptor	Medium		**Sensitivity of Resource/Receptor**	Medium
	Significance Rating	Minor		**Significance Rating**	Negligible
Socio-Economic Impacts					
Creation of Employment Opportunities	**Duration**	Permanent	The following measures should be implemented to	**Duration**	Permanent

Potential Impacts:	Significance Rating of Impacts:		Proposed Mitigation:	Significance Rating of Impacts after Mitigation:	
The decommissioning activity will create limited employment opportunities (2-3 local, unskilled labourers) as appointed contractors are likely to utilize existing employees.			ensure that this positive impact is enhanced: • Appointed contractors must comply with Shell's recruitment policy and employment equity policy. • As far as possible, local employment must be used to fill any vacant jobs. Where possible, this should include on-the-job skills development. • No employment applications may take place at the entrance to the site; formal employment channels must be used.		
	Extent	Local/Provincial		**Extent**	Local/ Provincial
	Frequency	Occasional		**Frequency**	Occasional
	Likelihood	Definite		**Likelihood**	Definite
	Magnitude	Medium		**Magnitude**	Small
	Sensitivity of Resource/Receptor	Low		**Sensitivity of Resource/Receptor**	Low
	Significance Rating	Minor (+)		**Significance Rating**	Minor (+)
Community and Workforce Health and Safety The decommissioning of the ASTs will carry a health and safety risk to the workforce (working at heights; working within a confined space etc.) and the local community (increased movement of heavy vehicles to and from site).	**Duration**	Short-term	• The site for decommissioning must be fenced off to prohibit unauthorised access. • All access to site must be strictly controlled. • All employees, contractors and sub- contractors must wear appropriate PPE. • Open excavations must be clearly demarcated and fenced-off. • All employees, contractors and sub- contractors must comply with Shell's Health and Safety Policy. • Appropriate health and safety signage must be displayed on site.	**Duration**	Short-term
	Extent	Local		**Extent**	Local
	Frequency	High		**Frequency**	High
	Likelihood	Possible		**Likelihood**	Likely
	Magnitude	Medium		**Magnitude**	Small
	Sensitivity of Resource/Receptor	Medium		**Sensitivity of Resource/Receptor**	Medium
	Significance Rating	Minor		**Significance Rating**	Negligible
Increased Traffic Vehicle traffic around the AST site within the Mill and on Travancore Drive may increase during times of removal of waste and materials from the site. This may impede the traffic flow.	**Duration**	Temporary	• Co-ordination of movement of vehicles on and off site to reduce risks and prevent congestion on roads in the vicinity of the site. • Erect construction signage so that drivers are aware of decommissioning activities. Signage should include Contractor's details, duration of activity and work hours. • The work area must be fenced to prevent	**Duration**	Temporary
	Extent	Local		**Extent**	Local
	Frequency	Low		**Frequency**	Low
	Likelihood	Definite		**Likelihood**	Unlikely
	Magnitude	Small		**Magnitude**	Negligible

Potential Impacts:	Significance Rating of Impacts:		Proposed Mitigation:	Significance Rating of Impacts after Mitigation:	
			unauthorized access to working areas. Only designated workers, supervision and nominated personnel will be allowed in work areas. • Movement of vehicles and machinery on and off-site for the decommissioning activities should be done at off-peak times. • Large vehicle turning must take place onsite and not in the adjacent roads. • In cases where activities may obstruct traffic, local traffic officials must be consulted.		
	Sensitivity of Resource/Receptor	Low		**Sensitivity of Resource/Receptor**	Low
	Significance Rating	Negligible		**Significance Rating**	Negligible

Table 7.3 Significance of Impacts before and after Mitigation of the No-Go Alternative (ASTs Remains on Site)

Potential Impacts:	Significance Rating of Impacts:		Proposed Mitigation:	Significance Rating of Impacts after Mitigation:	
Future Land Use Restrictions: The disused ASTs will be a hindrance to Mondi for the use of this site for other purposes. Ultimately, Shell is performing its duty of care by removing / decommissioning unused equipment from the site and restoring the site to a condition suitable for re-use within the current industrial land-use for Mondi.	**Duration**	Permanent	No mitigation measures are proposed, as the status quo will remain.	**Duration**	Permanent
	Extent	Site specific		**Extent**	Site specific
	Frequency	-		**Frequency**	-
	Likelihood	Definite		**Likelihood**	Definite
	Magnitude	High		**Magnitude**	High
	Sensitivity of Resource/Receptor	High		**Sensitivity of Resource/Receptor**	High
	Significance Rating	Major		**Significance Rating**	Major
Increased Occupational Health and Safety Risks: There is potential that the structure of the ASTs may degrade over time. This could result in health and safety risks associated with infrastructure collapse.	**Duration**	Permanent	• An engineer/specialist in ASTs should be appointed to determine the structural integrity of the ASTs and monitor this accordingly.	**Duration**	Permanent
	Extent	Site specific		**Extent**	Site specific
	Frequency	Low		**Frequency**	Low
	Likelihood	Likely		**Likelihood**	Possible
	Magnitude	Large		**Magnitude**	Medium
	Sensitivity of Resource/Receptor	Medium		**Sensitivity of Resource/Receptor**	Medium
	Significance Rating	Major		**Significance Rating**	Moderate

7.3 IMPACT STATEMENT

Having assessed the significance of impacts of the proposed decommissioning of the ASTs at Mondi Merebank Mill, this environmental impact statement summarises the impact that the proposal and the no-go alternative may have on the environment. The management and mitigation of impacts have been taken into account with specific reference to types of impact, duration, likelihood and the significance of impacts.

Proposed Activity:

This alternative presents the option to remove the ASTs and the associated fuel infrastructure. The biophysical and socio-economic impacts associated with this alternative are reported in Table 7.2

All biophysical impacts have either a minor or a negligible residual significance rating should they be adequately mitigated, as per the Environmental Management Programme (EMPr) (*Appendix E*). The socio-economic impacts including traffic congestion and health and safety impacts also have negligible residual significance ratings.

This alternative is the preferred alternative as it will not result in any significant biophysical or socio-economic impacts that cannot be mitigated through implementation of the EMPr.

No-Go Alternative:

The no-go alternative is the option of not implementing the activity, i.e. Shell fuel infrastructure will not be decommissioned at the Mondi Merebank Mill.

If not decommissioned the ASTs may pose a safety risk to Mill employees. Further, the disused ASTs will be a hindrance to the use of the site for other purposes. Shell is therefore performing its duty of care by decommissioning fuel infrastructure from the site and restoring the site to a condition suitable for re-use within the current industrial zoning.

In light of the above, the no-go alternative is not a feasible alternative.

The following recommended conditions, including mitigation measures, should be considered for inclusion in the authorisation that may be granted by the KZN-EDTEA in respect of the application.

Hazardous Waste:

- Effluent (sludge) produced from flushing the ASTs must be considered impacted and be properly disposed in accordance with local by-laws.
- The sludge must be disposed of by a registered Hazardous Waste Disposal Contractor to a registered landfill site.
- Any hazardous waste generated must be disposed of at an appropriately classified waste site. In all cases proof of safe disposal should be obtained and kept.

Noise:

- Inform surrounding landowners and occupiers of land about the decommissioning and the expected duration of the activity.
- Decommissioning activities to occur during working hours only (08:00 – 17:00)
- Contractors to be conscious of the noise generated during their decommissioning activities, and should limit excessive noise wherever possible
- Ear plugs will be used by workers onsite as required.
- The applicant will adhere to local authority by-laws relating to noise control.

Dust generating activities:

- Use dust minimizing techniques such as dampening of surfaces with water.
- Complaints received from neighbours must be reported to Shell by the Contractor/Sub-Contractors.

Traffic:

- Peak traffic hours for the movement of machinery on and off site should be avoided.
- In cases where activities may obstruct traffic, local traffic officials must be contacted.

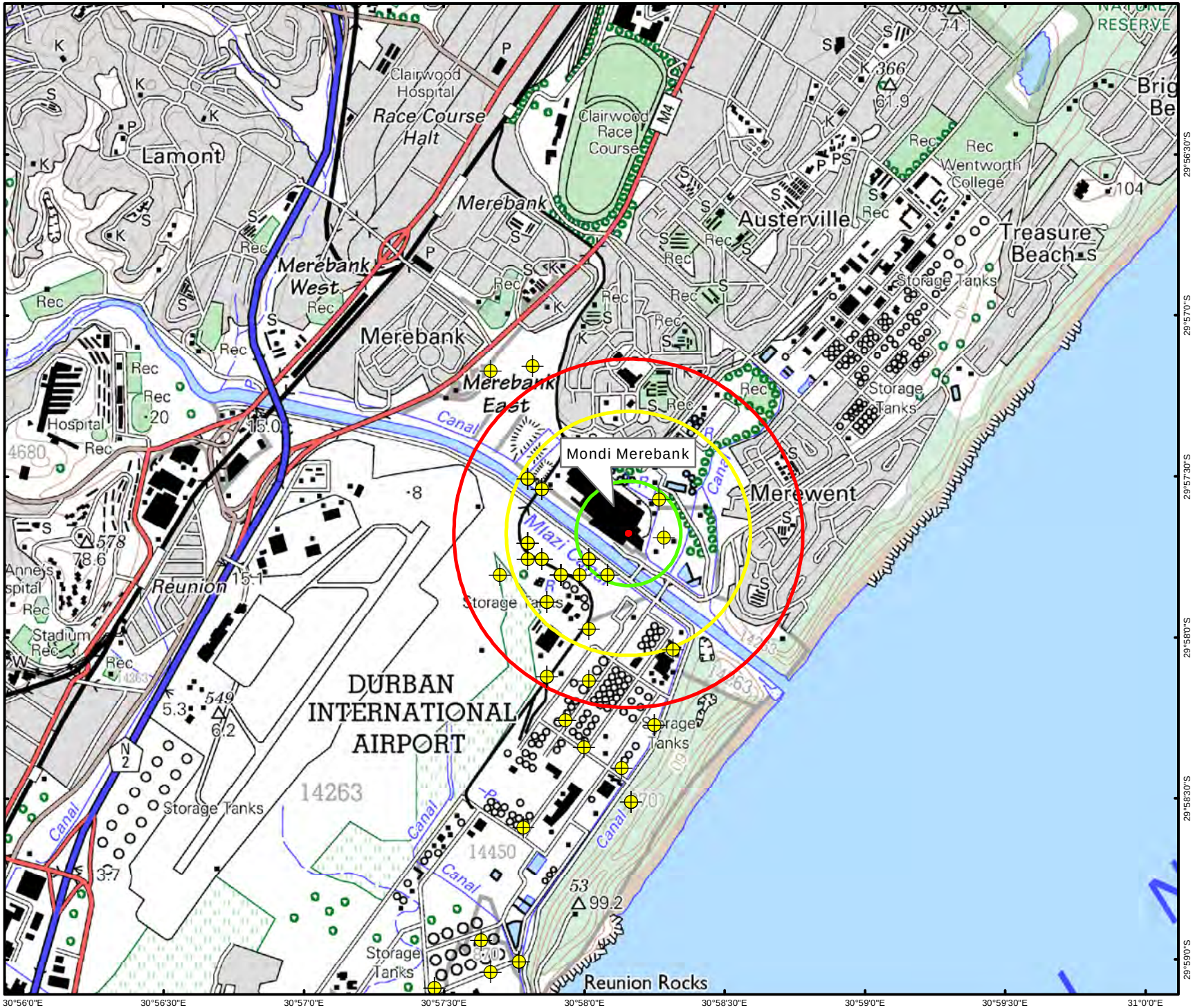
General Health and Safety Requirements during site works:

- All relevant Health and Safety legislation as promulgated in South Africa should be strictly adhered to, including but not limited to the Occupational Health and Safety Act, 1993 (No. 85 of 1993).

- Comply with relevant Shell Health, Safety, Security, Environment & Social Performance Policy and Procedures.
- Fire extinguishers must be readily available onsite and easily accessible. Fire equipment must also comply with SANS and be inspected regularly.
- No smoking may be permitted on site.
- Provide adequate first aid kits to treat emergencies to staff.
- Ensure that construction equipment is under the control of competent personnel.
- The correct PPE should be used on the site.

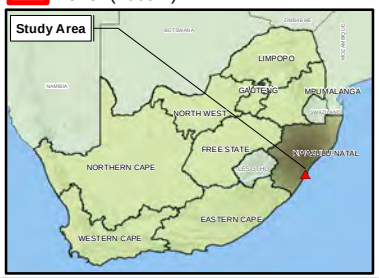
Appendix A

Topographical Locality Map



Legend

- HFO Tanks
- Possible Boreholes
- NGA Query Date (29/04/2014)
- Contours
- Rivers
- National Freeway/Routes
- Arterial Route
- Main Roads
- Secondary Roads
- Other Roads
- Track and Hiking Trail
- Railway
- Buildings
- Built up Areas
- Cultivated Lands
- Open Areas
- Water Bodies
- Buffer (300m)
- Buffer (700m)
- Buffer (1000m)



SCALE:

0 250 500 750 1 000

Metres

N

TITLE:

Figure 2.1: Topo Locality Map of Shell HFO Installation at Mondi Merebank, Merewent, Kwa-Zulu Natal

CLIENT:

Shell South Africa

DATE: Apr 2014	CHECKED: MP	PROJECT: 0242971
DRAWN: AB	APPROVED: MD	SCALE: 1 : 30 000

DRAWING: Topo Locality Map of Mondi Merebank.mxd

REV: 0

ERM
Great Westerford Building
240 Main Road
Rondebosch, 7725
Cape Town, SOUTH AFRICA
Tel: +27 21 681 5400
Fax +27 21 686 073

Projection: Transverse Mercator, CM 31, Datum: WGS 84
Source: Chief Directorate National Geo-Spatial Information 2930DD_2931CC_2000_ED8_GEO.TIF. DWA - NGA Geosites
Inset: ESRI Data and Maps

SIZE: A4

T:\GIS Projects\0242971_Shell_Mondi_Merebank_KZN\Mapping\MXD\Topo Locality Map of Mondi Merebank.mxd

Appendix B

Site Photographs

1 SITE PHOTOGRAPHS

The following photographs were taken of the HFO Tanks and the site surrounds by Ms Brittany Purves of Environmental Resources Management (Pty) Ltd on the 23 January 2015.

Figure 1.1 HFO Tanks

Figure 1.2 View from the HFO tanks facing north

Figure 1.3 View from the HFO tanks facing south

Figure 1.4 View from the HFO tanks facing east

Figure 1.5 View from the HFO tanks facing west

Figure 1.6 View from the HFO tanks facing north-east

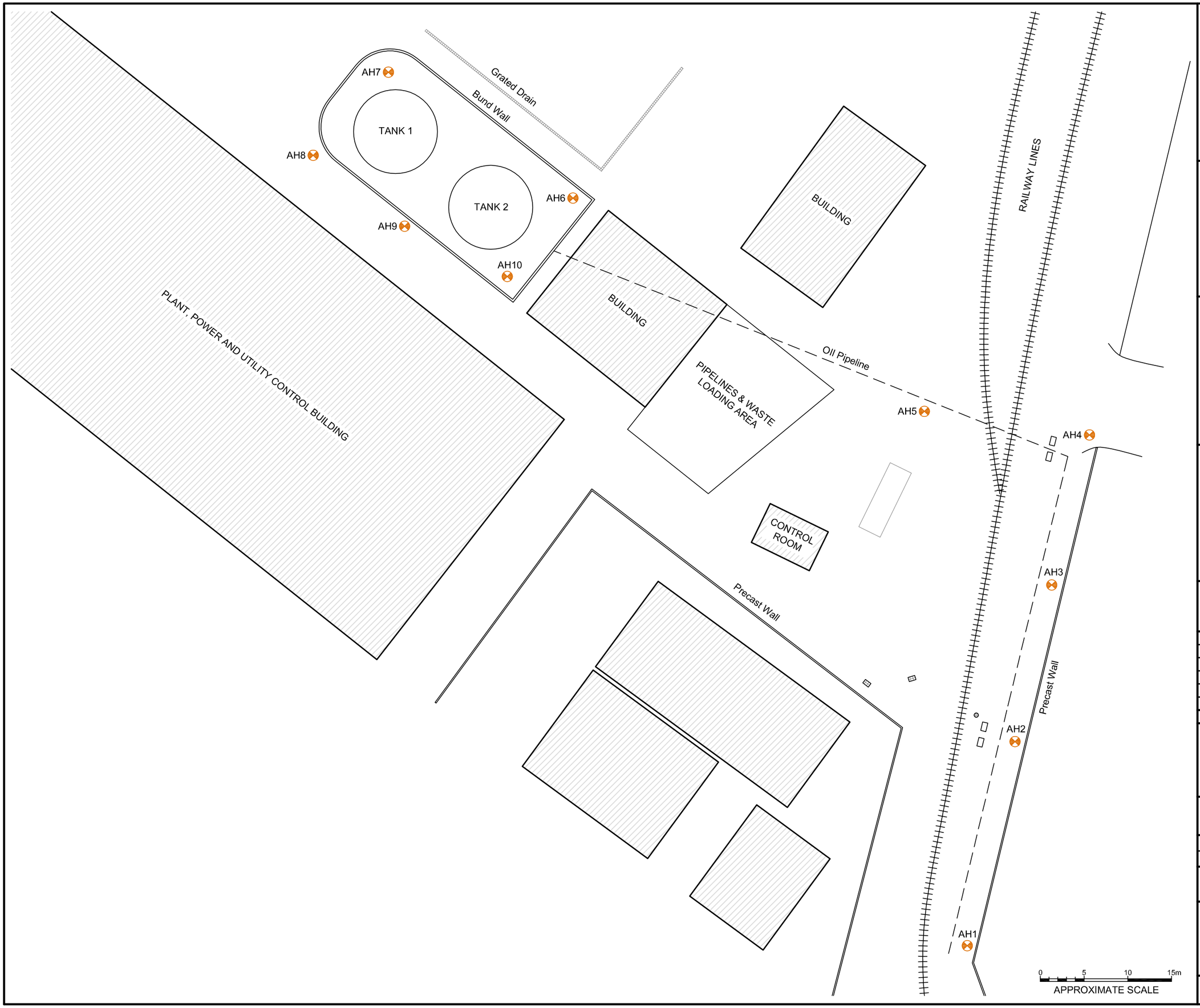
Figure 1.7 View from the HFO tanks facing north-west

Figure 1.8 View from the HFO tanks facing south-east

Figure 1.9 View from the HFO tanks facing south-west

Appendix C

Facility Illustration



LEGEND- PRODUCT INFRASTRUCTURE

AST - ABOVEGROUND STORAGE ATNK

LEGEND- SITE INFRASTRUCTURE

BUILDINGS

MANHOLES

LEGEND - SAMPLING, ANALYSIS AND INTERPRETATION

SOIL BORE

Disclaimer:
All aboveground and underground utilities shown on this figure show the approximate location of the services for reference purposes only. This figure does not constitute an "as built " plan of the services and on - site verification is required from the appropriate service provider.

REV	DESCRIPTION	BY	DATE
A	ORIGINAL DRAWING	LS	04/14

TITLE:

MONDI SOIL ASSESSMENT
KWAZULU - NATAL
Site Layout Plan

CLIENT:	SIZE:
SHELL SOUTH AFRICA	A3

DATE: Apr 2014	CHECKED: MD	PROJECT: 0242971
DRAWN: LS	APPROVED: JKr	SCALE: 1:400

DRAWING:	REV:
0242971 - SP - 01	A

ERM
2nd Floor
Great Westerford Building
240 Main Rd,
Rondebosch 7700
Cape Town, South Africa
Tel: +27 (021) 681 5400
Fax: +27 (021) 686 0736

SIZE A3

Appendix D

Public Participation Documents

Appendix D_1

Stakeholder Database

Stakeholder Database	
Shell GESS - Mondi Merebank Mill	
Name	**Organisation/Company**
Provincial/National Government	
Bonginkosi Dlamini	Department of Environmental Affairs (National)
Lucas Mahlangu	
Mavis Padayachee	KwaZulu-Natal: Department of Agriculture, Environmental Affairs and Rural Development (DAEARD)
Terisa Balmith	Department of Water Affairs - KwaZulu-Natal
Local Government	
Munipal Manager Sibusiso Sithole	eThekwini Municipality
Diane van Rensburg	Ethekwini Municipality
Miya Sfanele	eThekwini Municipality: Environmental Planning & Climate Protection Department (EPCPD)
Neil Macleod	eThekwini Municipality: Water & Sanitation
Neeri Govender	eThekwini Municipality: Cleansing And Solid Waste
Cllr Zandile Gumede	Committee Chairperson: Health, Safety and Social Services
Mrs Lindiwe Msomi	AMAFA
Landowner/Occupier	
Nuresh Naidoo	Mondi Merebank Mill
Rafiq Gafoor	Mondi
Surrounding Landowners/Occupiers	
Interested and Affected Party	
Yureka Singh	South Durban Basin: Area Based Management
Aubrey Desmond	Local Ward Councillor (Ward 68)
Jonathan Lawrenz	Senior Draughtsman / GIS Technician
Bernadet Pawandiwa	Senior Heritage Officer

Appendix D_2

Proof of Site Notices

Ms. Brittany Purves, an independent Environmental Assessment Practitioner of Environmental Resources Management (Pty) Ltd (ERM) placed site notices and Background Information Documents (BIDs) at the following locations on 19 January 2015:

- Mondi main reception area and entrance to the site;
- Neighbouring garden refuse dump site;
- Merebank library;
- nearby pharmacy; and
- Merewent public pool.

Figure 1.1 Site Notice at entrance to Mondi Merebank Mill

Figure 1.2 Site Notice at reception area of Mondi Merebank Mill

Figure 1.3 Site Notice at Merewent Public Pool

Figure 1.4 Site Notice and Background Information Documents at Merebank Pharmacy

Figure 1.5 Site Notice at Merebank Library

Figure 1.6 Background Information Documents at Merebank Library

Appendix D_3

Proof of Newspaper Advertisements

Woman (50) arrested for drug dealing

The members who were responsible for the arrest.

A 50-year-old woman, believed to be a drug dealer, was recently arrested after she was found in possession of dagga at her home in Merebank.

The Wentworth Crime Prevention team led by commander, Lt Lynton Houston were the individuals who made the successful apprehension. It is believed that the officers received a tip-off informing them of drug dealing in the area. The super-sleuth team then made their way to the residence, where they found plastic packets filled with dagga. The woman was also then found and immediately arrested for the possession and dealing of dagga.

The accused was brought before the court and the case is still pending. Lt Houston said that the drug dealer will be prosecuted.

Meanwhile, the stop and search operations also led to the arrests of men dealing and smoking drugs at the Merebank swimming pool area as well.

Wentworth SAPS communications officer, Lt Gumede said, "Drugs are destroying our youth and anyone found dealing in any type of drugs will be charged."

Members of the Crime Prevention team were commended for their hard work and for the efficient arrests made due to the high visibility stop and search operations.

Durban is definitely the place to be this festive season as one million people are expected to descend upon the KZN shores. eThekwini Municipality launched its festive season campaign at the ICC on Tuesday which saw various stakeholders, police personnel, and partners in attendance. This year, the municipality has embarked on an intensive marketing campaign to attract visitors from all over the world, with the overall message being, 'We are Ready to Host You' together with 'Sunsational Durban, 100 % Pure Summer.' All systems have been put in place to ensure that locals, national and international visitors have a safe and enjoyable summer break, whilst they unwind and enjoy the lineup of world-class events that will take place in various parts of the city. All law enforcement agencies will be deployed at various areas within the municipal area to ensure that law and order is maintained and that patrons feel safe and protected at all times.

Members of DAFTA gather outside the DSSC Regional Hall.

DAFTA hires out DSSC hall

`The Durban Association for the Aged (DAFTA) has established a new day-care centre at the Merebank Regional Hall, 43 Juggernaut Road, for senior citizens from the communities of Durban South areas.

DAFTA encourages members of the community 55 years of age and older from south of Durban areas who have not already joined to become members of the new DAFTA Durban South Service Centre. It is essentially a day-care centre which is open to senior citizens from Monday to Friday with breakfast and lunch being provided on a daily basis. The day-care centre provides a safe and secure venue for activities and enables members to be engaged in various empowering and recreational programmes including sewing, games, literacy programmes, fitness programmes, food gardening and access to social work services.

"We appeal to the community, including youth, university students, members of religious organisations etc. to volunteer at the day-care centre. Your time, skills and expertise can make a difference in the lives of our elderly folk. Let us as a community allow our senior citizens to grow old gracefully with love, compassion and respect." chief social worker- said, Ms Anitha Pillay, chef social worker at DAFTA

As a means of generating income to sustain the project and to meet the day-to day costs of the centre- the main hall which can seat 800 and the basement hall which can seat 200 is available for hire. Contact the organisation (details below) for more information or to make a booking

For further information on joining the day-care centre on volunteering or regarding hire of the hall, please contact chief social worker Anitha Pillay on 0314044821.

Headboy scoops 15 awards

Headboy, Aaryikh Rawthee of Parsee Rustomjee Primary School scooped 15 internal and external awards including the Dux and the Most Outstanding Achievers Award.

In his speech he attributed his success to the nurturance and dedication of the staff and his parents as well as being a good listener in class. The teachers and pupils from Parsee Rustomjee Primary School congratulates the dux winner on his achievements.

Aaryikh Rawthee proudly showcases his winnings.

ZN/EIA Reference Number: DM/0081/2014 *ERM Reference Number: 0261609*

Environmental Basic Assessment Process for the proposed Decommissioning of Shell Fuel Infrastructure at Mondi Limited, Merebank Mill, Durban

INVITATION TO REGISTER AND COMMENT

Notice is hereby given that Shell South Africa Marketing (Pty) Ltd (Shell) has submitted an application for Environmental Authorisation with the Department of Economic Development, Tourism and Environmental Affairs (DEDTEA) in accordance with the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment (EIA) Regulations, June 2010 GNR544: "Activity 27 "The decommissioning of existing facilities or infrastructure, for – (v) storage, or storage and handling, of dangerous good of more than 80 cubic metres".

Environmental Resources Management Southern Africa (Pty) Ltd (ERM) has been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the Basic Assessment (BA) process in accordance with the EIA regulations.

Shell South Africa Marketing (Pty) Ltd currently own two bulk Heavy Fuel Oil (HFO) above ground storage tanks (ASTs) with capacities of 1,000 m^3 each at the Mondi Merebank Mill located in Durban. The site historically utilised HFO in the furnaces but converted to coal fired furnaces in 2008 which resulted in the discontinuation of HFO delivery to the site by Shell. Mondi wants to redevelop the parcel of land on which the HFO tanks are currently located and has therefore requested Shell to decommission and remove the HFO tanks.

The scope of work therefore involves:

- Dismantling the aboveground HFO storage tanks and all associated pipework, valves, residual bund walls, bund flooring, tank plinths;
- Draining, purging and spading all product feeder lines to the existing bulk HFO tanks.

Stakeholders are invited to register as Interested and Affected Parties (I&APs) and to participate in the environmental authorisation process by identifying issues of concern and raise suggestions. To register and to obtain more information, please contact ERM:

Tougheeda Aspeling
Environmental Resources Management
Postnet Suite 90, Private Bag X12, Tokai, 7966
Tel: 021 681 5400 | Fax: 086 5404 072
Email: tougheeda.aspeling@erm.com

50-mrs-ERM-sw

Appendix D_4

Background Information Document (BID)

Background Information Document and Invitation to Comment

BASIC ASSESSMENT PROCESS FOR THE DECOMMISSIONING OF SHELL FUEL INFRASTUCTURE AT MONDI LIMITED, MEREBANK MILL, DURBAN

KZN/EIA Ref Number: DM/0081/2014

ERM Ref Number: 0261609

OVERVIEW OF THE PROJECT

Notice is hereby given that Shell South Africa Marketing (Pty) Ltd (Shell) has submitted an application for Environmental Authorisation with the Kwa-Zulu Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA) in accordance with the National Environmental Management Act (Act No 107 of 1998) and the Environmental Impact Assessment Regulations of 2014.

Shell currently own two bulk Heavy Fuel Oil (HFO) above ground storage tanks (ASTs) with capacities of 1 000m^3 each at the Mondi Merebank Mill, Travancore Road, Merebank, Durban. The site historically utilized HFO in the furnaces, but decommissioned the HFO boilers in 2008 due to the installation of the multi-fuel boiler. This meant the HFO was no longer used and the supply and storage of HFO to the site by Shell was stopped. Mondi has therefore requested Shell to decommission and remove the tanks.

The scope of work therefore involves:

- Draining, purging and spading all product feeder lines to the existing bulk HFO tanks; and
- Dismantling the aboveground HFO storage tanks and all associated pipework, valves, residual bund walls, bund flooring, tank plinths.

The proposed project triggers Activity 31 of Listing Notice 1 (Government Notice No. R 983 of 8 December 2014):
Activity 31:*"The decommissioning of existing facilities, structures or infrastructure for–(i) any development and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014 "*

The triggered activity requires that a Basic Assessment (BA) Process be undertaken. Environmental Resources Management Southern Africa (Pty) Ltd (ERM) has been appointed as the Independent Environmental Assessment Practitioner (EAP) to undertake the BA.

ERM's Role

Environmental Resources Management Southern Africa (Pty) Ltd (ERM) has been appointed by Shell to undertake the Basic Assessment (BA) and associated Public Participation Process.

You are invited to register as an I&AP and comment on this project .

Please complete the enclosed registration/comment sheet and/or contact:

Tougheeda Aspeling
Tel: 021 681 5400
Fax2Email: 086 5404 072
Email: tougheeda.aspeling@erm.com

Postal Address:
Postnet Suite 90,
Private Bag X12,
Tokai, 7966

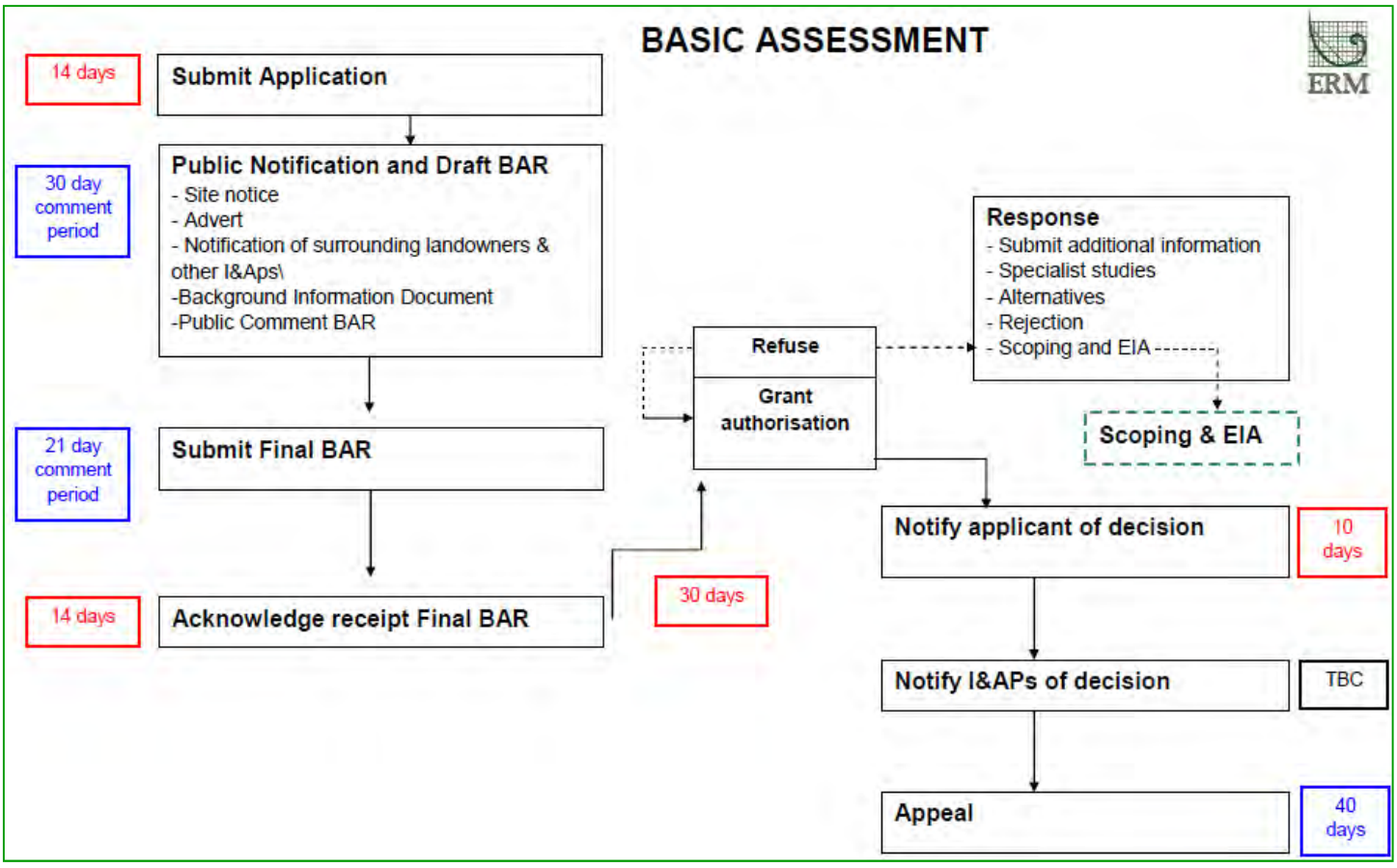
PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to provide Interested and Affected Parties (I&APs) with background information about the proposed project and to outline the Environmental Basic Assessment (BA) process to be undertaken. Further, this document intends to inform I&APs about how to participate in the process. You are encouraged to register as an I&AP so that you can be kept informed about the project throughout the BA process.

THE BASIC ASSESSMENT PROCESS

The BA process is a simplified Environmental Impact Assessment (see below) and involves a concise identification and assessment of potential impacts that the proposed project may have on the bio-physical and socio-economic aspects of the site, supported by input from specialists, as required.

The Basic Assessment Report (BAR) and Environmental Management Programme (EMPr) will be made available for your comment.



HAVE YOUR SAY

You are invited to be part of the BA process! As a stakeholder, you are invited to identify issues and raise concerns that you have about the decommissioning of Shell Fuel Infrastructure at Mondi Limited, Merebank Mill, Durban. Any member of the public may register as a stakeholder throughout the process. Opportunities to comment on the BAR will be communicated to all registered stakeholders. The project team will provide a response to the questions, and all comments and responses will be submitted to the EDTEA for their consideration.

REGISTRATION AND COMMENT SHEET

Shell Fuel Infrastructure at Mondi Merebank Mill, January 2015

Should you have any queries, comments or suggestions regarding the proposed project, please note them below.

Return this comment sheet to Tougheeda Aspeling of ERM Southern Africa: Tel: 021 681 5400 Fax2Email: 086 5404 072
Email: Tougheeda.aspeling@erm.com
Postal address: Postnet Suite 90, Private Bag X12, Tokai, 7966

Please formally register me as an interested and affected party (I&AP) and provide further information and notifications during the BA process		**Yes**	**No**
I would like to receive my notifications by:	**Email**	**Post**	**Fax**

Comments:

Title and Name:			
Organisation:			
Telephone:		**Fax:**	
Cell:		**Email:**	
Postal Address:			

Please fill in your contact details for the project database.

Name	*Signature*	*Date*

Thank you for your participation!

Appendix D_5

Notification Letters to Authorities and I&APs

From:	Tougheeda Aspeling
To:	Tougheeda Aspeling
Bcc:	"BRDlamini@environment.gov.za"; "lmahlangu@environment.gov.za"; "Mavis.padayachee@kzndae.gov.za"; "BalmithT@dwa.gov.za"; "dovec@durban.gov.za"; "diane.VanRensburg@durban.gov.za"; "Sfanele.Miya@durban.gov.za"; "Neil.Macleod@durban.gov.za"; "neeri.moodley@durban.gov.za"; "PretoriusA@durban.gov.za"; "lindim@amafapmb.co.za"; "Nuresh.naidoo@mondigroup.co.za"; "rafiq.gafoor@mondigroup.co.za"; "snymanad@durban.gov.za"
Subject:	Environmental Basic Assessment Process for the proposed Decommissioning of Shell Fuel Infrastructure at Mondi Merebank Mill, Durban
Date:	23 January 2015 01:21:00 PM
Attachments:	Mondi Background Information Document.pdf image001.png

Dear Sir/Madam,

Notice is hereby given that Shell South Africa Marketing (Pty) Ltd (Shell) has submitted an application for Environmental Authorisation with the Kwa-Zulu Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA) in accordance with the Environmental Impact Assessment Regulations of 2014.

Shell currently own two bulk Heavy Fuel Oil (HFO) above ground storage tanks (ASTs) with capacities of 1 000m3 each at the Mondi Merebank Mill, Travancore Road, Merebank, Durban. The site historically utilized HFO in the furnaces, but converted to coal fire boilers in 2008. HFO was therefore no longer utilized and the supply and storage of HFO to the site by Shell was stopped. Mondi has therefore requested Shell to decommission and remove the tanks. The scope of work therefore involves:

- Draining, purging and spading all product feeder lines to the existing bulk HFO tanks.
- Dismantling the aboveground HFO storage tanks and all associated pipework, valves, residual bund walls, bund flooring, tank plinths.

The proposed project triggers Activity 31 of Listing Notice 1 (Government Notice No. R 983 of 8 December 2014): Activity 31: "*The decommissioning of existing facilities, structures or infrastructure for – (i) any development and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014*".

The triggered activity requires that a Basic Assessment (BA) Process be undertaken. Environmental Resources Management Southern Africa (Pty) Ltd (ERM) has been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the BA in accordance with the EIA regulations.

Your Department has been identified as a stakeholder for the proposed activity and are entitled to receive information and comment on the project and associated Basic Assessment process. For further detail on the proposed project, please refer to the Background Information Document (BID) attached.

Regards

Tougheeda Aspeling
Stakeholder Engagement Consultant

ERM Southern Africa (Pty) Ltd
2nd Floor | Great Westerford | 240 Main Road | Rondebosch | 7700 | Cape Town | South Africa
T +27 21 681 5400 | **F** 086 5404 072 | **M** +27 84 2066187

E Tougheeda.Aspeling@erm.com| **W** www.erm.com

The world's leading sustainability consultancy

Appendix D_6

Comments and Responses received by Authorities and I&APs

Appendix D_6.1

Comments and Responses Report

N/A. No comments have been received upon submission of the DBAR.

Appendix D_6.2

Comments received during the Application Phase

N/A. No comments have been received upon submission of the DBAR.

Appendix E

Environmental Management Programme (EMPr)

Environmental Management Programme

Decommissioning of the Shell Fuel Infrastructure at Mondi Merebank Mill, Durban, Kwa-Zulu Natal

Shell South Africa Marketing (Pty) Ltd

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ERM

GLOSSARY

Companies and Organisations

Abbreviation	Company / Organisation	Role
DEA	National Department: Environmental Affairs	Regulator
ERM	Environmental Resources Management Southern Africa (Pty) Ltd	Environmental Consultant
HWDC	Hazardous Waste Disposal Contractor	Waste Management
KZN-EDTEA	Kwa-Zulu Natal Department of Economic Development, Tourism and Environmental Affairs	Regulator
PMC	Project Management Company	Project Management
PMC HSSE Specialist	Project Management Company Health, Safety, Security and Environment Specialist	Health and Safety Management
PMC Sub-Supplier	Project Management Company Sub-Supplier	Principal Contractor
Shell	Shell South Africa Marketing (Pty) Ltd	Client

General Abbreviations

Abbreviation	Description
AST	Aboveground Storage Tank
EA	Environmental Authorisation
EAPSA	Environmental Assessment Practitioners of South Africa
EMPr	Environmental Management Programme
HASP	Health and Safety Plan
HDPE	High-density Polyethylene
HFO	Heavy Fuel Oil
HSE	Health, Safety and Environment
HSSE&SP	Health, Safety, Security, Environment & Social Performance
LEL	Lower Explosive Limit
NEMA	National Environmental Management Act
PPE	Personal Protective Equipment
SANS	South African National Standards
VOC	Volatile Organic Compound

Glossary of Terms

Mitigation measure	a feature, procedure or other action that the project commits to implement to avoid or reduce the magnitude of an adverse impact, or to enhance the magnitude of a positive impact.
Management measure	the activities which constitute the implementation of mitigation measures.
Embedded controls	physical or procedural controls that are planned as part of the Project design. These are described from the start of the Project rather than as mitigation measures.
Site works	activities that form part of the Project from its inception to the end.
Potential impact	any potential alteration of existing conditions, adverse or beneficial, caused directly or indirectly by the Project.

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1 INTRODUCTION

This Environmental Management Programme (EMPr) has been prepared by Environmental Resources Management Southern Africa (Pty) Ltd (ERM), for Shell South Africa Marketing (Pty) Ltd (Shell). The EMPr has been compiled in support of the Environmental Authorisation (EA) application for the decommissioning of Shell Fuel Infrastructure at Mondi Merebank Mill, Travancore Drive, Durban. The EMPr describes the activities required to achieve compliance with the conditions of the Environmental Authorisation during construction.

The listed activities that therefore require an EA in terms of the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended) and associated listing notice which is relevant to this project is **Activity 31** of Listing Notice 1(Government Notice No. R 983 of 8 December 2014):

"The decommissioning of existing facilities, structures or infrastructure for –
(i) any development and elated operation activity o activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014"

Shell currently own two bulk Heavy Fuel Oil (HFO) above ground storage tanks (ASTs) with capacities of 1 000m^3 each at the site which are no longer in use. . Mondi wants to redevelop the parcel of land on which the HFO tanks are currently located and has therefore requested Shell to initiate the decommissioning and removal of the HFO tanks. **Activity 31** of Listing Notice 1 is therefore triggered necessitating an EA before the activity can commence. The application for this activity was submitted to the relevant authority [Kwa-Zulu Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA)] with reference number **DM/0081/2014**. This EMPr is therefore submitted as an annex to the Basic Assessment Report.

Prior to the commencement of the decommissioning of the fuel infrastructure, this EMPr will be made available to relevant parties including Shell, the site owner, site operator, project manager, contractor(s) and relevant local authority. This EMPr remains a 'live' document and may be updated periodically to ensure relevance and applicability. Shell remains responsible for the accuracy and relevance of the information contained herein, and shall inform all relevant parties of changes to this.

The site details are as follows:

Name of the site: Mondi Merebank Mill

Site co-ordinates: 29°57'35.60"S and 30°58'4.49E"

Date of last EMP Revision: 26 January 2015

1.1 *DETAILS OF ENVIRONMENTAL PRACTITIONER*

ERM was appointed to prepare an EMPr in support of the Environmental Authorisation application. ERM is an independent environmental consulting firm appointed by Shell for this work.

The project has been conducted in terms of the code of ethics promulgated by the Certification Board for Environmental Assessment Practitioners of South Africa (EAPSA), which requires that the environmental consultant be independent of the proponent. The ERM personnel responsible for completing this EMPr include Max Clark, Margaret Duddington and Lisa Otten, details for whom are provided in *Table 1.1*.

Table 1.1 Details of Environmental Assessment Practitioners

Name	Max Clark
Responsibility	Partner in Charge
Degree	• B. Sc B. Sc Honours • M. Sc PhD
Professional registration	• South African Council for Natural Scientific Professions as a Professional Natural Scientist in Ecological, Environmental and Zoological Science (Registration Number: 400333/04)
Experience in years	25
Experience	Max has experience in the environmental sector working on projects in both the public and private sectors and with all tiers of government, in environmental management and sustainable development. He has undertaken or managed many environmental projects related to mega- project developments in the infrastructure, mining and minerals processing sectors.

Name	Margaret Duddington
Responsibility	Project Manager
Degree	• BSc Honours (Geology) • BSc Geology and Chemistry
Experience in years	9
Experience	Margaret is a Senior Consultant with experience since 2005 and is currently in ERM's Contaminated Site Management (CSM) team based in Durban, South Africa.

Name	Lisa Otten
Role	Project Consultant
Qualifications	• BSc (Environmental Science and Ecology) • BSc (Hons) Environmental Management
Years of Experience	2
Summary	Lisa is an Environmental Consultant at ERM Southern Africa where she has gained significant experience in undertaking environmental regulatory processes for various clients. Lisa has worked primarily within the oil and gas and manufacturing sectors.

1.2 *PURPOSE OF THE EMPR*

This EMPr is a delivery mechanism for environmental mitigation measures that should be implemented during the site works. The overall aims of this EMPr are as follows:

- Enable compliance with South African environmental legislation and Shell's policies and procedures.
- Provide assurance to regulators and stakeholders that their requirements with respect to environmental and social performance will be met.
- Allow employees and contractors to become familiar with the environmental procedures to be followed and facilitate their compliance with the recommendations made within this document.
- Define roles and responsibilities for employees and contractors.
- Facilitate monitoring to evaluate the success of management actions implemented.
- Identify potential environmental impacts associated with the proposed activities and the relevant mitigation measures.

1.3 *LEGAL FRAMEWORK*

The site works should be guided by the following overarching legislation, which includes:

- National Environmental Management Act (NEMA) (Act No. 107 of 1998), as amended, including associated Listing Notices 1, 2 & 3 (GN 544, 545 & 546).
- National Water Act (Act No. 36 of 1998).
- National Environmental Management: Waste Act (Act No. 59 of 2008).
- Occupational Health and Safety Act (Act No. 85 of 1993).
- Department of Environmental Affairs: Framework for the Management of Contaminated Land. (May 2010).
- Noise Control Regulations (PN 5309 of 1998).
- Employment Equity Act (Act No. 55 of 1998).

2 IMPLEMENTATION OF THE EMPR

2.1 ROLES AND RESPONSIBILITIES

The table below outlines the roles and responsibilities relevant to this EMPr. Shell has formal contracts in place with all the relevant contractors and consultants.

Table 2.1 Roles and Responsibilities

Party	Role	Responsibility
EDTEA	Authority	• The provincial environmental authority must be copied in on discussions where required; and • The EDTEA may conduct a site visit/inspection during the course of the site works to monitor compliance.
Shell South Africa Marketing (Pty) Ltd	Client	• Ultimate responsibility to ensure the protection of the environment throughout the site works; • Conversant on the contents of the EMPr; • Revise the EMPr as required and inform the relevant parties of the changes; • Appoint qualified contractors to implement the EMPr; • Make sufficient budget available for implementation of the EMPr; • Secure all necessary permits for appropriate disposal of hazardous waste, if necessary; and • Communicate with relevant parties associated with the site works.
Project Management Company (PMC)	Project Management	• Overall project management of the works; • Ensure that the approved and signed EMPr is available on site; • Appointment of the PMC Sub-Supplier and Hazardous Waste Disposal Contractor (HWDC) (if required); • Review the PMC Sub-Supplier's safe work practices and procedures and undertake random compliance audits; • Inform Shell of any accidental spills, leaks, potentially impacted soil or groundwater if and when encountered; • Review and approve the site Health and Safety Plan (HASP); and • Ensure that the PMC Sub-Supplier complies with the requirements of the Occupational Health and Safety Act and the requirements of the Shell HSSE & SP Control Framework.
Project Management Company Sub-Supplier	Principal Contractor	• Responsible for all work performed on site, including overseeing the excavation works where necessary; • Ensure accordance with the HASP, Shell's HSSE & SP control framework and relevant best practice; • Discuss possible soil stockpile locations with the PMC before any site works begin; • Notify the PMC of impacted soil and/or groundwater if encountered; and • Issue original disposal certificates to Shell and copies to the Environmental Consultant.
Environmental Consultant	Environmental Consultant	• Assess and advise on any identified soil and groundwater impact on site; and • Provide regular progress and feedback to the PMC Project Manager and Shell.

2.2 COMMUNICATION AND RECORD KEEPING

All records related to the implementation of this EMPr (e.g. audit reports, incident reports, etc) must be filed by Shell in a safe place where they can be easily retrieved. These records should be kept for two years and should be available for scrutiny by relevant authorities at any time.

2.2.1 *Training*

Training concerning the Shell Health, Safety, Security, Environment & Social Performance Policy (HSSE & SP) and high risk activities must be given to site personnel if and when necessary. Training needs should also be identified through regular toolbox talks. Records of training, including a register, must also be kept on site.

2.2.2 *Stakeholder Engagement*

Open liaison channels must be established between Shell, the PMC, PMC Sub-Supplier, contractors and the public such that any queries, complaints or suggestions can be dealt with timeously and by the appropriate person(s). A comments register must be established and maintained to record any complaints or comments received from the public during the site works.

2.2.3 *Method Statements and Emergency Response*

Contractors will be required to provide method statements for specific activities on request of the PMC or Shell. A method statement provides a step-by-step description of the intended work including the overall scope and desired outcomes, and aims to ensure that all involved understand the contractor's intentions. This will facilitate discussions between Shell and the contractor to devise mitigation measures which would minimise adverse environmental impacts and enhance positive impacts, as per the requirements of the Occupational Health and Safety Act (Act No. 85 of 1993).

This includes the procedures to be followed in the event of a spill or environmental incident (ie contacting the relevant emergency response personnel and emergency services). The spill response procedure (*Annex A*) must be completed by the PMC prior to the site works and kept on site at all times.

2.2.4 *Photographs*

It is recommended that photographs be taken of the site by the PMC Sub-Supplier, the PMC and/or environmental consultant prior to, during and immediately after undertaking the site works to serve as a visual reference. These photographs should be stored with other records related to this EMPr.

3 SITE BACKGROUND INFORMATION

3.1 INTRODUCTION

As discussed in *Section 1*, the proposed decommissioning activity involves the decommissioning of the two ASTs so that Mondi may redevelop the parcel of land on which the tanks are currently located. The scope of work therefore involves:

1) Draining, purging and spading all product feeder lines to the existing bulk HFO tanks; and

2) Dismantling the aboveground HFO storage tanks and all associated pipework, valves, residual bund walls, bund flooring and tank plinths.

3.2 SITE SETTING

The site is located at Travancore Drive, Merebank, Durban at the approximate geographical coordinates 29° 57′ 36.49″S, 30° 58′ 02.22″E. The location of the site is shown on *Figure 3.1*. The site currently operates as a paper mill and produces various paper products.

The site is located in a mixed residential and heavy industrial area. Details of the properties immediately adjacent to the site are as follows:

North: Municipal sewer treatment works are is located to the north-east of the site while the medium density residential suburb of Merebank lies to the north.

East: Abandoned office buildings, municipal yard and further eastward the area is – residential.

West: Vacant land with residential development further westward.

South: The Mlazi River Canal lies immediately adjacent to the southern boundary of the Mondi Merebank Mill, across Travancore Drive. The canal flows to the east and enters the Indian Ocean approximately 1 km to the east of the site

Regional Geology

According to the 1:250 000 Geology Map (2930) of Durban, the site is underlain by Quartenary beach sand of the Berea Formation. The Berea Formation consists of red sand; sub-ordinate white, yellow, brown and purple sand; and basal conglomerate underlies the beach sand.

Hydrogeology

The 1: 500,000 Hydrogeological Map of Durban (2928) shows that the site is underlain by an intergranular and fractured aquifer with typical borehole yields of between 0.5 and 2.0 ℓ/s. Groundwater quality is reported to be good with an electrical conductivity between 70 and 300 mS/m.

The Aquifer Classification of South Africa (CSIR, 1999) classifies the regional aquifer as a *minor* aquifer, which indicates that it is a moderately-yielding aquifer system of variable water quality. Furthermore, the regional aquifer is considered to have a *moderate* vulnerability rating, which indicates the tendency or likelihood for hydrocarbon impact to reach a specified position in the groundwater system.

The classification of the aquifer (*minor*) in combination with its vulnerability rating (*moderate*) can be used to determine its susceptibility rating using the matrix provided in the Aquifer Classification of South Africa (CSIR, 1999). The susceptibility rating in this classification system is defined as the qualitative measure of the relative ease with which a groundwater body can be potentially impacted by anthropogenic activities. This site is underlain by an aquifer of *medium* susceptibility.

A search of the National Groundwater Archives (NGA) returned approximately 13 potential boreholes within a 700m radius, however, a walkover hydrocensus of the area indicated that the NGA locations were not boreholes but groundwater monitoring wells. It was therefore established that the site and its surroundings are supplied with piped potable water by the municipal water supplier.

The inferred groundwater flow direction is to the south east (assuming groundwater flow direction emulates topography).

Hydrology

There is a canal (Mlazi River) directly to the south of the site, across Travancore Drive. The canal flows to the east and enters the India Ocean approximately 1 km to the east of the site.

Figure 3.1 *Satellite Imagery of the Mondi Merebank Mill*

Source: © 2015 Image, © 2015 DigitalGlobe, © 2015 AfriGIS Pty (Ltd)

The following section and associated tables (*Table 4.1* and *Table 4.2*) describe the mitigation and management measures that must be adhered to by the responsible party during the site works. The site works are described by those activities that are planned as part of the Project while unplanned events are not included in the site activities.

The site works described have the potential to impact both the biophysical and social environment. These potential impacts include but are not limited to the following:

- Potential stormwater system contamination;
- Noise disturbance to surrounding landowners caused by site activities;
- Fugitive dust emissions that may affect air quality;
- Potential health and safety impacts associated with the site activities (to both the public and site personnel); and
- Potential impact of unplanned events such as accidental spills of hazardous substances.

The measures described are features, procedures or other actions that the project commits to implement to avoid or reduce the magnitude of an adverse impact, or to enhance the magnitude of a positive impact. The responsible party for each measure is also described.

Table 4.1 Potential Impacts, Mitigation Measures and Responsible Parties

Potential Impact		Mitigation Measure	Management Measure	Responsibility
#	Description			
GENERAL POTENTIAL IMPACTS				
1.	Destruction or damage to existing infrastructure, services and servitudes.	Avoid damage or destruction to existing infrastructure at and in the near vicinity of the site.	• All underground services such as water, electricity, sewage, gas, compressed air, communication and close circuit television must be identified and marked prior to any excavation or drilling. • Cordon off the site works area so that the construction crew are familiar with the area in which they are to work.	PMC PMC Sub-Supplier
POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS				
2.	Contamination of Stormwater Drainage Systems	Management of stormwater and stormwater infrastructure to reduce the risk of polluting surface water during the site works.	• All surface spillages must be contained by routing the spillage using channels and trenches to a containment system (oil water separator or containment vessel). • No fuels/ oils are allowed to be discharged directly into stormwater pipes/drains and sewage manholes/pipes. • All waste oils, greases, fuels, chemicals etc. should be collected and disposed of in an appropriate manner off site. • Temporary stockpiles should be located away from stormwater drains. • All construction vehicles will be properly maintained to prevent leaks. • Any fuel stored on site must be kept in a bunded containment area. • Drip trays are to be utilised during daily greasing and re-fuelling of machinery and to catch incidental spills and pollutants. • Regular servicing and maintenance of machinery must be done at appropriate workshop facility and not on site. • Drip trays are to be inspected on a weekly basis for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow. • Ablution facilities (i.e. chemical toilets) during the decommissioning period must be regularly maintained and cleaned by the service provider.	PMC PMC Sub-Supplier
3.	Increased noise disturbance	Manage any potential noise disturbances during the site works.	• Inform surrounding landowners about the decommissioning and the expected length of the site works. • Activities to occur during working hours only (8am- 5pm). • Contractors to be conscious of the noise generated during their activities, and should limit excessive noise wherever possible. • The contractors will adhere to local authority by-laws relating to noise control.	PMC Sub-Supplier

Potential Impact		Mitigation Measure	Management Measure	Responsibility
#	Description			
			• Mechanical equipment with lower sound power levels will be selected to ensure that the permissible occupation noise is not exceeded. • Equipment will be fitted with silencers as far as possible to reduce noise. • All equipment will be adequately maintained and kept in good working order to reduce noise. • A grievance procedure will be established whereby noise complaints can be received, recorded and responded to appropriately. • Construction workers and personnel will wear hearing protection when required.	
4.	Generation of dust which may affect air quality	Limit fugitive dust emissions that have the potential to affect air quality.	• Dust suppression methods, such as wetting, should be applied where there are large tracts of exposed surfaces. • Stockpiles should have a maximum height of about 2m or lower and should be covered with an effective covering during rain or high wind conditions (e.g. tarpaulins). • If possible, dust generating activities should be avoided on particularly windy days. • A grievance procedure will be established whereby complaints of dust can be received, recorded and responded to appropriately. • Construction workers and personnel must wear dust protection masks when required.	PMC PMC Sub-Supplier
5.	Increase in traffic	Manage any potential traffic congestion.	• Co-ordination of movement of vehicles on and off site to reduce risks and prevent congestion on roads in the vicinity of the site. • Erect construction signage so that drivers are aware of decommissioning activities. Signage should include Contractor's details, duration of activity and work hours. • The work area must be fenced to prevent unauthorized access to working areas. Only designated workers, supervision and nominated personnel will be allowed in work areas. • Movement of vehicles and machinery on and off-site for the decommissioning activities should be done at off-peak times. • Large vehicle turning must take place onsite and not in the adjacent roads. • In cases where activities may obstruct traffic, local traffic officials must be consulted.	PMC Sub-Supplier

Table 4.2 Site Works and associated Management Measures

#	Site Work Activity	Management Action Commitment / Actions Required / Key Controls	Parameters for Monitoring	Responsibility	Frequency / Timing
GENERAL ACTIVITIES PRIOR TO SITE WORKS					
1.	Site Clearance	• Prior to excavation or drilling activities, personnel must be familiar with the location of buried utilities including water, electricity, sewage, gas, compressed air, communication and close circuit television. • Cordon off the area in which site works are to occur so that the construction crew are familiar with the area in which they are to work	Utility Survey Visual inspection	PMC PMC Sub-Supplier	Prior to the start of the works
SITE WORK ACTIVITIES					
2.	AST Removal	• Residual product must be removed from the ASTs and pipelines and the ASTs degassed prior to removal. • Follow Shell's standard HSSE&SP Control Framework • Where backfill material is to be used, it must be unimpacted. • The ASTs removed from the Site must be removed off site and recycled for scrap metal.	Visual inspection Waste manifest documentation	PMC Sub-Supplier AST Contractor	Prior to and during AST Removal
3.	Generation of domestic and hazardous waste	• All waste material must be contained and disposed of according to the relevant legal requirements. • Recycling bins should be placed on site for any domestic waste generated during the decommissioning process such as paper, plastic and glass. • Contractors and their staff must be trained in recycling methods used on site. • The excavated ASTs will be cut up and recycled as scrap metal. • Effluent (sludge) produced from flushing the ASTs must be considered impacted and be properly disposed in accordance with local by-laws. • Disposal of the sludge by a registered Hazardous Waste Disposal Contractor to a registered landfill site. <u>Domestic waste</u> • Domestic waste is to be collected and disposed of in accordance with the municipal waste management system. Rubble will be disposed of at the regional landfill site. • Littering, discarding or burying of any materials must not be allowed on site. <u>Hazardous Waste</u> • Any hazardous waste generated must be disposed of at an appropriately classified waste site. In all cases proof of safe disposal should be obtained and kept.	Visual inspection Waste Disposal Certificates (for hazardous waste)	PMC Sub-Supplier	Throughout site works

#	Site Work Activity	Management Action Commitment / Actions Required / Key Controls	Parameters for Monitoring	Responsibility	Frequency / Timing
		• All employees must be trained with regard to procedures for the handling of hazardous waste.			
4.	Other - general management of site works	• No fuels/ oils must be allowed to be discharged directly into stormwater or sewage pipes, manholes or drains. • All waste oils, greases, fuels, chemicals etc. should be collected and disposed of in an appropriate manner off site. • The movement of vehicles on and off site must be co-ordinated to reduce risks and prevent congestion on roads in the vicinity of the site. Use signal men, if necessary. • The site works must be cordoned off to prevent unauthorised access by the public during the works.	Visual inspection	PMC PMC Sub-Supplier	Throughout the works
HEALTH AND SAFETY REQUIREMENTS					
5.	General Health and Safety Requirements during site works	• All relevant Health and Safety legislations as promulgated in South Africa should be strictly adhered to, including but not limited to the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993). • Comply with relevant Shell Health, Safety, Security, Environment & Social Performance Policy and Procedures. • The PMC must train safety representatives, managers and workers in workplace safety. • The Spill Response Procedure (*Annex A*) must be available on site and employees must be familiar with the plan. • Fire extinguishers must be readily available onsite and easily accessible and must comply with SANS and be inspected regularly. • No smoking may be permitted on site. • Provide adequate first aid kits to treat emergencies to staff. • Ensure that construction equipment is under the control of competent personnel. • Ensure the provision and proper utilisation, maintenance and management of toilet, wash and waste facilities for staff. • Raise awareness with staff for the need to refrain from indiscriminate waste disposal and/or pollution of local soil and water resources. • Site barricades and access control points will be implemented at excavation points to avoid unauthorized entry. • Health and safety signage must be clearly displayed all-round the site. • All machinery should be clearly marked and should remain within work areas, where possible. • Personal Protective Equipment (PPE) must be used at all times within work areas in order to ensure the protection and safety of workers.	Spill Response Procedure on site Visual Inspection Health and Safety signage Training records	PMC PMC Sub-Supplier	Throughout the works

#	Site Work Activity	Management Action Commitment / Actions Required / Key Controls	Parameters for Monitoring	Responsibility	Frequency / Timing
6.	Unplanned events (eg accidental spills)	• A Spill Response Procedure (*Annex A*) must be completed which clearly describes the emergency procedures and includes emergency contact numbers. • Accidental spills that occur outside of a bunded area must be contained and prevented from entering the stormwater system. • Record(s) of any environmental related incidents that are unplanned should be maintained and communicated to Shell. • In the event of any spill requiring the use of absorbent materials during clean-up operations, impacted material is to be disposed of at an appropriately registered and classified waste site. The resulting chain of custody documentation is to be retained on file together with a record of the spill details.		Shell PMC PMC Sub-Supplier	Unplanned Event

5 CONTACT DETAILS AND SIGNOFF

Table 6.1 Relevant Contact Personnel

Name	Contact Person	Contact Numbers
Project Management Company		
Shell contact person		
Environmental Consultant		
PMC Sub-Supplier		
Hazardous Waste Disposal Contractor		

SIGNATURES

Shell PM_____

Signature Date

PMC_____

Signature Date

Environmental Consultant_____

Signature Date

PMC Sub Supplier_____

Signature Date

Annex A

Spill Response Procedure

SPILL RESPONSE PROCEDURES DURING THE WORKS

The PMC Sub-Supplier should keep to the emergency response procedures described in the contract documentation, and as specified in Shell policies and procedures, and these must be available on site at all times. Contact details of the various parties to be informed in the event of an emergency are to be provided in *Table 1.1* by the project manager. In addition, the following emergency procedures must be adhered to in order to manage the impact of hazardous chemical spills on soil and water resources:

- The immediate response by the PMC Sub-Supplier must be to contain the spill, identify the source of the spill and attempt to prevent further spillage.
- All spills must be reported immediately to the PMC and Shell.
- Information that shall be provided must include the type of product involved, the size and cause of the spill, the nature of the affected area, prevailing weather conditions, equipment and resources available for clean-up, and details of clean-up activities performed.
- Spills exceeding 10ℓ in capacity must be reported to the Department:
- Water Affairs (DWA) and the Local Municipality within 48 hours of the incident and in accordance with Section 30 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.
- If soil becomes impacted by a spill it must be excavated and appropriately disposed of at a registered hazardous waste disposal site. Excavation and transportation of the impacted soil must be done in consultation with a HWDC.
- If necessary, remediation measures must be performed following consultation with DWA and the Provincial Environmental Authority.

Table 1.1 ***Relevant Contact Details***

Organisation	**Contact Number**
Shell:	
PMC:	
HWDC:	
Provincial Dept. of Environmental Affairs:	
Department: Water Affairs:	
Name of the Municipality:	
Fire Department:	
Emergency Number:	

Appendix I

Other Information

ERM has 145 offices across the following countries worldwide

Argentina
Australia
Belgium
Brazil
Canada
Chile
China
Colombia
France
Germany
Hong Kong
Hungary
India
Indonesia
Ireland
Italy
Japan
Kazakhstan
Korea
Malaysia
Mexico
The Netherlands
New Zealand
Panama
Peru
Poland
Portugal
Puerto Rico
Romania
Russia
Singapore
South Africa
Spain
Sweden
Taiwan
Thailand
United Arab Emirates
UK
US
Venezuela
Vietnam

ERM's Johannesburg Office

Building 32, 1st Floor
The Woodlands Office Park, Woodlands Drive
Woodmead, Johannesburg
South Africa
T: +27 11 798 4300
F: +27 11 804 2289

www.erm.com