

ENVIRONMENTAL IMPACT ASSESSMENT/BASIC ASSESSMENT FOR THE RECOVERY AND RECYCLING OF PAPER WASTE, ENSTRA MILL, SAPPI, SPRINGS

Background Information Document

Introduction

The Sappi Paper and Paper Packaging – Enstra Mill (Sappi) intends to mothball their current pulp mill, which will make them totally reliant on bought-in pulp of various grades to ensure that sufficient pulp is supplied to the paper machines.

In order to meet the paper demands Sappi proposes to procure paper waste from local suppliers and to repulp it in order produce waste-grade recycled paper. This activity is required to keep the mill operational. By running waste based grades on the paper machines, the viability and profitability of the mill should improve significantly.

The high level process to achieve the objectives stated by Sappi is as follows:

1. The waste paper bales will be received and stored in the current wood cutting storage area (Figure 1).
2. From the storage area the bales will be transported with a forklift to the processing area. Once at the processing area it will be placed on a conveyor belt where it will be shredded before entering the existing repulper.
3. From the existing repulper, the pulped material will be screened into various sizes and any in order to remove contaminants, such as staples, sticky paper, etc, will be removed.
4. From the screening the pulp paper will move into the high-density chest.
5. Finally the pulp will make its way into the existing paper production area.



Figure 1

Purpose of the Document

The purpose of this Background Information Document (BID) is to provide information about the Waste License Application process being undertaken, and how Interested and Affected Parties (I&AP's) and Stakeholders may be involved.

This document provides:

- Background information;
- An overview of the operations on site and waste management activities;
- An overview of the legislative context within which the authorisation process is undertaken;
- An indication of how I&AP's may become involved in the authorisation process; and
- Contact details to who I&AP's may submit their comments associated with the authorisation process.

Legislative Framework

The objective of the project is to apply for a Waste Management License for the waste management activities, in terms of the National Environmental Management Waste Act (NEMWA) (No. 59 of 2008).

In terms of the procedure for waste management licensing applications (Section 47(2) of the NEMWA), it is required that the applicant must take appropriate steps to direct the attention of relevant organs of state, interested persons and the public to the proposed activities. This document hereby fulfills this requirement by giving I&AP's background information on the project, and providing the platform for the public to comment on the process.

The Waste Licence Application is made in terms of the Listed Activities in terms of the Waste Legislation: GN 718: Category A:

- 3(1) The storage, including the temporary storage, of general waste at a facility that has the capacity to store in excess of 100 m³ of general waste at any one time, excluding the storage of waste in lagoons.
- 3(5) The sorting, shredding, grinding or bailing of general waste at a facility that has the capacity to process in excess of one ton of general waste per day.
- 3(7) The recycling or re-use of general waste of more than 10 tons per month.
- 3(18) The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity).

Category A applications require a Basic Assessment Environmental Impact Assessment (BA EIA) to support the application.

Who is conducting the Basic Assessment and Waste Licence Application?

SRK Consulting (Pty) Ltd has been appointed by Sappi Southern Africa Pty Ltd, as an independent consultant to undertake the Waste License Application for the project, and to undertake the associated Basic Environmental Impact Assessment.

Who will evaluate the Basic Assessment and Waste Licence Application?

The basic environmental impact assessment and waste licence application entails information collection, impact assessment, reporting and stakeholder involvement.

The BA EIA and Waste Licence Application will be prepared for submission to Gauteng Department of Agriculture and Rural Development (GDARD) who will decide whether or not to authorise the project.

GDARD will consult with various other government departments before making a decision, and to take into account other legislation.

Approach to the Basic Environmental Impact Assessment

A BA EIA seeks to identify the environmental consequences of a proposed project from the beginning and helps to ensure that the project, over its life cycle, should be environmentally acceptable and integrated into the surrounding environment in a sustainable way.

Baseline Environment Description

Key aspects of the baseline environment that are likely to impact on the scope of the impact assessment and management measures that are implemented as well as project decisions regarding alternatives are listed below.

Geology

The Sappi Enstra Mill is underlain by dolomite of the Chuniespoort Group – Transvaal Sequence. Locally, Karoo outliers are present, but Karoo sediments are not present below the Mill area. Dolerite/diabase intrusives are present in the Enstra Mill area, and two well defined dykes trending roughly north-west and a sill (commonly referred to as the green syenite sill) are encountered. The dominant dyke, the Modder dyke, is located adjacent to the eastern boundary of the Licenced Sappi Waste Disposal (SWD) facility. The green sill is an anticlinal feature that outcrops below the north western portion of the facility. To the north of the SWD facility, the sill has a moderate north dip and is overlain by near surface dolomite. The southern limb is overlain by alluvial soils, residual dolomitic soils and hard rock dolomite. Well defined clay layers, with significantly low permeabilities, underlie the entire landfill site.

Climate

Rainfall in the area varies between 650 and 750 mm per year. The average is 719 mm. Most rain falls in the summer months between October and March with heavy falls commonly associated with thunderstorms. The average wind direction is North to North-East, while average monthly temperatures are between 2.7 °C and 25.9 °C.

Topography

The Sappi Enstra Mill is situated at an altitude of between 1600m and 1650 m Above Mean Sea-Level (amsl). The topography in the area is mostly flat and slopes gently to the south-east.

Soils

The site is underlain by drained red, apedal soils of the Hutton form (Hu) overlying weathering and hard rock and various other unconsolidated materials.

Land Capability

The project site is located within an industrial complex and as such the land capability of the site is extremely poor. The majority of the Enstra Mill surrounding area, is potentially arable, and has few limitations which will reduce the choice of plants or require moderate conservation practices, with farming practices being easy to apply. Cultivation can thus occur.

Land Use

Erf 12 on which the mill is situated is zoned as industrial land.

Surrounding Land Uses

Industrial activities exist to the south of Enstra Mill, while agricultural activities occur to the north and east. Residential areas, namely Rowhill, East Geduld and Dersley are located approximately 1.5 km south, 2 km south east and 2 km north-west of Enstra Mill respectively.

Kimberly Clark, a paper towelling manufacturing company, is situated to the south west of the facility and comprises a mill, production facilities, warehouses and administration offices. Aurora owns the gold mine directly to the west of the Sappi site, known as East Geduld Proprietary mine. Impala Platinum Refinery is located to the south of the site, on East Geduld Road. The property comprises of a refinery, warehousing and administration offices.

Biodiversity

Enstra Mill site falls within the Soweto Highveld Grassland vegetation type. The land uses surrounding the site include mixed residential, industrial and agricultural. There are no sites of ecological interest within the vicinity of the site. Both sites considered for this waste management project are situated within Enstra Mill industrial complex and are devoid of any visible flora or fauna habitation. Therefore impacts to flora and fauna resulting from these existing activities can be considered negligible.

Affected Catchments

The nearest surface water body to the Sappi Enstra Mill site is Cowles Dam which is located directly to the southeast of the site but is within Sappi Enstra land ownership. This dam stores water flowing from the west within the Blesbokspruit which is located 500 m directly to the south of the site. The Blesbokspruit flows through the Alexander Dam approximately 1.5 km to the west of the site. A section of the Blesbokspruit, to the East of Sappi operations, has been classified as a Ramsar Site since 1986 and covers approximately 60 km². The Blesbokspruit runs from Kempton Park through Boksburg, Brakpan, Springs, Nigel and Heidelberg where it flows into the Vaal River at the Barrage. Approximately 45% of the catchment is urbanized while the remaining land is utilized for agricultural, mining and industrial activities.

According to the Nature Conservation Directorate, the water quality of the Blesbokspruit is generally poor due to artificial inputs from mines, sewage treatment works and other industrial activities (i.e. point source discharges). The quality of the water is mainly influenced by total dissolved salts in the previously mentioned effluents. The "fingerprint" of the water chemistry is similar throughout the wetland (high sulphate, phosphate, nitrite/nitrate and ammonia concentrations).

The surface water drainage within the Sappi Enstra site has been engineered as follows:

- Unaffected runoff is directed off-site into the Blesbokspruit; and
- Affected runoff is collected and treated within the Sappi water treatment facilities for reuse or disposal with the mill effluent to Cowles Dam.

Groundwater

Although the site is underlain by low permeability clays, the groundwater in the vicinity of the Sappi Enstra landfill site (including the groundwater from upslope areas with higher elevation than the groundwater level beneath or down slope of the site) has been impacted upon. Groundwater flows generally in a south easterly direction, but anomalies, such as the northwest/southeast anomaly, restrict the groundwater potential of the area. Groundwater yield to the west of the anomaly is lower than to the east of the anomaly. The groundwater levels to the west of the anomaly are also lower than to the east thereof.

The site is underlain by residual soil and very highly weathered rock to a depth of over 15 m before fresh dolomite is encountered. The Malmani dolomites are considered to be potentially high yielding groundwater aquifers and are considered sensitive to contamination from surface sources of pollution, particularly if low permeability soil cover is thin or absent. Groundwater quality is naturally variable in dolomites and is not always of potable quality with a tendency for high magnesium concentrations, high calcium hardness and high concentrations of total dissolved salts.

Air Quality- Existing Regional Sources of Emissions to Atmosphere

Existing air pollution sources in the area include the Impala Platinum refinery, Geduld Proprietary Mines and Government Gold Mines and their associated slimes dams. These activities contribute to both particulate matter and gaseous airborne pollutants in the ambient air.

The nature of the paper production process is relatively intensive with regards to air emissions, thus air quality impacts from the mill are of high importance. Sappi currently sources ambient air quality monitoring data from the station located between Impala Platinum Refinery and the mill. Sappi has an Air Emissions license in place and in addition, Sappi undertakes annual monitoring of their stacks and continually monitor their boilers with regards to particulate matter, SO₂ and NO_x.

Ambient Noise Levels

Potential onsite receptors include Sappi Mill employees and visiting contractors. The noise impacts will mainly be due to vehicular movements to and from the waste facilities and also that from loading and offloading wastes. Given the existing noise levels at certain parts of the Mill, the sound levels from these activities will be considered negligible in comparison.

Heritage

No sites of archaeological, cultural and heritage interests will be affected by the existing facilities.

Visual Quality

The Waste Processing and Storage Areas should have minimal visual impact as they will be situated within the context of the existing Enstra Mill facility. Therefore the facilities are not perceived to be visually detrimental to their surroundings.

Existing Traffic Capacities

In terms of existing traffic capacities, all roads and intersections in the Sappi Enstra Mill area show acceptable handling for existing traffic.

Socio Economic

According to the Statistics of South Africa (2003), the population for Ekurhuleni Metropolitan Municipality was 2 480 277 persons in 2001. The average population density was 1 304 people/m², and the unemployment rate is approximately 40%. The majority of the population is black (78%), followed by Coloured (15%), Asian (6%) and white (1%). The site is situated in Ward 72 within the Ekurhuleni Metropolitan Municipality.

Anticipated Impacts

Issues identified through the preliminary phase of the project will be considered and/or assessed as part of the Impact Assessment Phase. The most significant issues of current consideration include:

- Waste management/recycling and reuse
- Water and energy consumption;
- Transport related impacts;
- Noise pollution; and
- Windblown litter.

Environmental Management

For the Sappi Repulper and Paper Waste Recovery and Recycling project specifically, environmental impacts will be managed and mitigated or enhanced through the implementation of the environmental management plan.

Sappi Enstra Mill is responsible for ensuring that all environmental obligations pertinent to the project are met. The implementation of Environmental Management Programmes and the meeting of environmental objectives and targets is also a responsibility of Sappi Enstra Mill.

Conclusion

To date, there are no fatal flaws that have been identified for the Sappi Repulper and Paper Waste Recovery and Recycling project. However, certain impacts require careful mitigation and monitoring. The most relevant of these are:

- Waste management/recycling and reuse
- Water and energy consumption;
- Transport related impacts;
- Noise; and
- Windblown litter.

An environmental management plan will be developed as part of this EIA to ensure the mitigation of these impacts as well as others. It is anticipated that it will be possible to successfully mitigate the majority of the environmental impacts to acceptable levels and the implementation will be monitored and audited to determine its effectiveness.

It is recommended that the Sappi Repulper and Paper Waste Recovery and Recycling project is allowed to proceed, given the relatively small potential contribution of the project to cumulative impacts (given appropriate environmental management) and also considering the positive social impacts associated with the project.

Public Participation

Public involvement has become an integral part of the license application process, triggered by Section 47 of the NEMWA. The Public Participation process is initiated by notifying I&AP's of the proposed licence application, and inviting the submission of issues and concerns.

This BID forms part of the public involvement programme (PIP), and informs on the opportunities to be involved in the license application process, should they so wish.

I&AP's will be identified and collected from responses to advertisements, previous studies undertaken at Sappi Enstra Mill and any new surrounding landowners/activities.

I&APs will be introduced to the process as follows:

- Advertising. In accordance with the EIA Regulations, advertisements will be placed in a local newspaper. A notice board will also be placed at the entrance to the development site;
- The BID is made available to all registered I&AP's.
- Public review of Environmental Assessment Report. The Draft Environmental Assessment Report will be made available (at a suitable location such as a public library) for public review; and
- Advertise the Record of Decision (RoD) in the local newspaper.

No engagement and feedback to I&AP's and authorities in a public meeting is planned.

The aim of the Public Participation Process is to:

- Consult relevant authorities and I&AP's on the proposed license application.
- Enable involvement of I&AP's in the environmental assessment process so that their issues, concerns and comments are incorporated in the license application.
- Identify and confirm relevant possible impacts that need to be investigated, and appropriately investigate them, identifying mitigation and management measures as necessary to address the identified impacts.
- Ensure transparency and informed decision making.

Notification of I&AP's

- An advertisement will be placed in 1 local newspaper in English, notifying I&AP's of the proposed license application, and inviting them to register their interest with SRK.
- Notices will also be placed at the Sappi Enstra Mill and at the local library.
- BID's will be circulated to all registered I&AP's and response form on which to record their issues and concerns.

Interaction with I&AP's

- A database of I&AP's will be established and used, and updated during the process so that they can be kept informed about the project development;
- Key regulatory authorities will be consulted on the licence application;
- Councillors, community organizations representing the Sappi Enstra Mill area will be informed about the licence application and given an opportunity to give an input;
- All issues and concerns raised by the I&AP's will be captured in the report;
- The Draft License Application and supporting documents will be accessible for a 40 day comment period at the library before being re-submitted to GDARD.

I&AP's will be notified of receipt of their contribution following any interaction, typically in the form of a letter or email. All I&AP's submission will be reflected in the License Application Supporting Documents. Should you be aware of I&AP's who may have an interest on this licence application, please contact SRK (contact details below).

FOR ALL SUBMISSIONS AND ENQUIRIES

All queries related to this notification letter and the project can be directed to **Dr Laetitia Coetser** or **Ian Minnaar** at **SRK Consulting on the following contact details:**

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