DIGBY WELLS
ENVIRONMENTAL

BACKGROUND INFORMATION DOCUMENT

Environmental Regulatory Process for Sigma Colliery Ash Backfilling

October 2013

Project Number:
SAS1691

Prepared for:
Sasol Mining (Pty) Ltd

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NEMA: DETEA ref: EMB/9(i)(ii)11(iii)(iv)/13/42 NEAS ref: FSP/EIA/0000324/2013
NEM:WA: DETEA ref: WML/BAR/04/2013 NEAS ref: FSP/EIA/0000034/2013

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1 PURPOSE OF THE DOCUMENT

Sasol Mining (Pty) Ltd (Sasol) proposes to undertake a project which involves the backfilling of old underground voids in the northern defunct area at the Sigma Colliery (Sigma) with ash. This is intended to mitigate risk associated with subsidence of the surface caused by historical underground mining activity at Sigma.

This Background Information Document (BID) has been developed in order to:

- Share information about the proposed project;
- Present the Environmental and Social Impact Assessment process to be undertaken according to South African legislation;
- Provide more detail about the Public Participation process which will be followed; and
- Explain which specialist studies will be carried out.

1.1 Appointed Environmental Assessment Practitioners

It is important to investigate potential impacts the proposed project will have on the environment and people. Sasol has appointed Digby Wells Environmental (Digby Wells) as independent Environmental Assessment Practitioners (EAP) to complete the required environmental components for the proposed project.

2 BACKGROUND

Sasol's Sigma Colliery commenced operations in 1952 and holds mineral rights to coal deposits in the Sasolburg district. Underground mining was the primary method of extracting these reserves including board-and-pillar and rib pillar methods. Access to the underground operations was via the Uitkomst shaft and coal was brought to the surface at the Boshbank incline shaft and then conveyed to a 'dry' coal handling plant at 3 Shaft where the coal was screened and fed to silos. In 1992, the Wonderwater strip mining was developed to extract coal from the north-eastern side of the reserves and the underground mining was scaled down and ceased by 1999.

As a result of the underground mining activity, subsidence of the surface was identified as a major risk. An Assessment Report on Surface Areas of Old Sigma Workings (Potential Failure Report) was compiled in 2012 and analysed the probability of incident occurrence on the Sigma working properties, their current preventative or mitigatory measures, the proposed next steps and immediate actions required. This Report informed that some properties / areas, such as the Parys road (R59), are rated as having a very high risk potential due to incidences which can lead to possible fatalities. Sigma Colliery backfilled mine workings located beneath the Sasolburg-Parys Road (R26) and certain privately owned farms to minimise the safety risk in the area.

2.1 Sigma Colliery locality setting

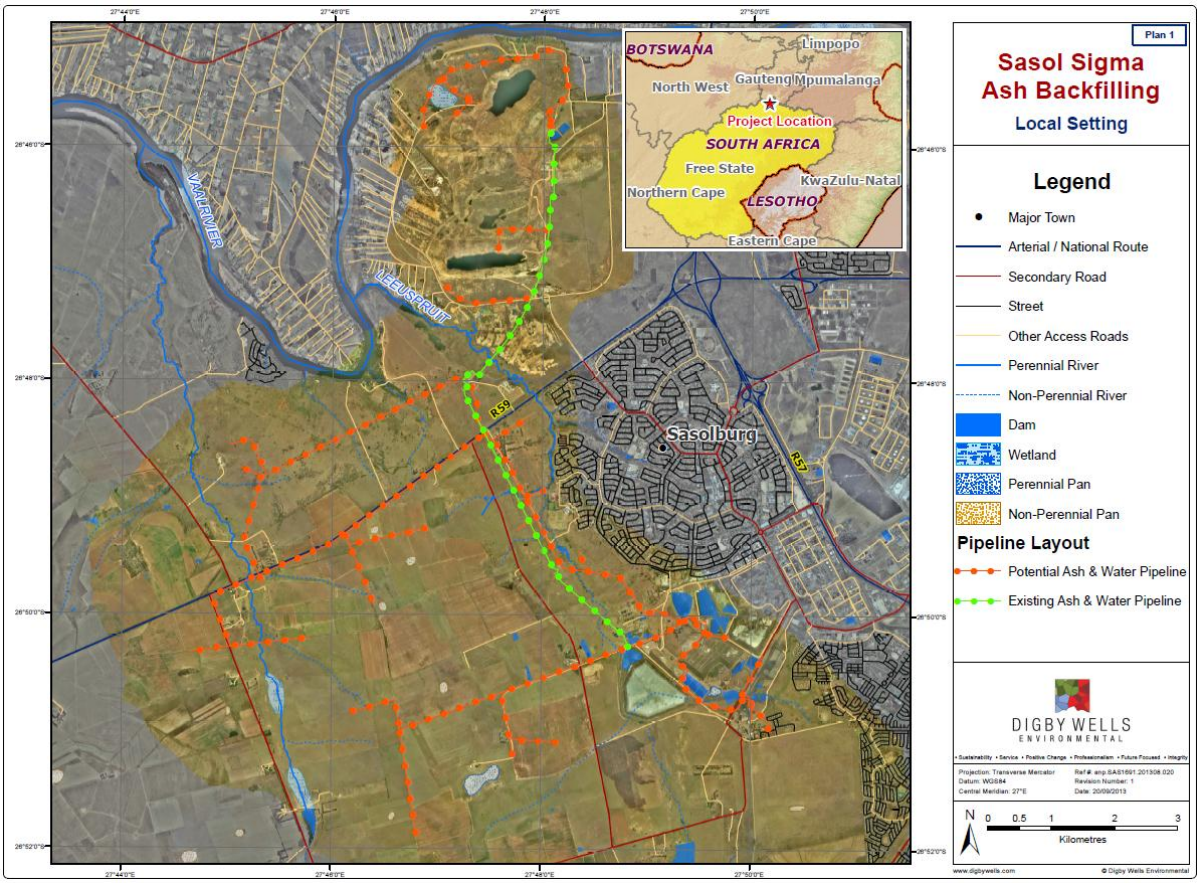
The ash backfilling project falls under the jurisdiction of the Metsimaholo Local Municipality (MLM), situated in the Fezile Dabi District Municipality (FDDM) in Free State, and is located close to Sasolburg (*Plan 1* on page 2 provides a local setting).

3 PROJECT DESCRIPTION

The proposed project is aimed at backfilling additional high risk mine voids with ash from the Sasol Chemical Industries. The project will be undertaken in order to stabilise old underground mine workings which are considered to have a high potential risk for land subsidence, as determined in the Assessment on Surface Areas of Old Sigma Workings Report. The ash backfilling process will use several pipelines located above-ground to transport the ash slurry (comprising 20% fine ash and 80% water) from the Sasol Ash pump station at Sasol Chemical Industries, to the mined out voids.

Return water pipelines (already in place) will be used to dewater the voids before backfilling starts to prevent decant as a result of hydrostatic pressure. The water that will be pumped out will be sent for treatment at a planned Sasol Group water treatment plant (authorisation for this plant is not part of this project). Sasol have approximately 10 million cubic meters (Mm^3) of ash to use for backfilling and stabilising the surface.

The pipelines transporting slurry will run aboveground on Sasol owned property and within existing servitudes where possible. Where this is not possible, existing culverts and crossings will be used; alternatively new agreements will be entered into with land owners. The pipeline route will be specifically selected to ensure that the pipes run along existing servitudes, linear infrastructure and disturbed areas to minimise the impact on the receiving environment.



Plan 1: Sigma Ash Backfilling Local Setting

4 BA PROCESS, IWUL APPLICATION AND PUBLIC PARTICIPATION

4.1 Legislation

For the proposed project, the following needs to be completed in order to adhere to the required legislation:

- Basic Assessment (BA) for an integrated Environmental Authorisation in terms of the National Environmental Management Act, Act 107 of 1998 (NEMA);
- BA for a waste license in terms of the National Environmental Management: Waste Act, Act 59 of 2008 (NEM: WA) and Government Notice 718 of 2009; and
- Integrated Water Use License Application (IWULA) in terms of the National Water Act, Act 36 of 1998 (NWA).

The Free State Department of Economic Development, Tourism and Environmental Affairs (DETEA) is the decision-making authority for both Basic Assessments and for the IWULA, the Department of Water Affairs (DWA) in Gauteng is the decision-making authority.

4.2 Specialist Studies

Specialist studies will be conducted for the proposed project to determine potential impacts on the environment and people. Results of these studies will be shared with stakeholders for comments. The various specialist studies that will be conducted include the following:

- Geohydrological
- Surface water
- Wetlands
- Noise
- Archaeology
- Fauna and Flora
- Social baseline
- Visual and Topography
- Aquatics

4.3 Public Participation

Stakeholder affected by or are interested in the proposed project are invited to register as an Interested and Affected Party (I&AP) in order to become involved in the Public Participation (PP) Processes. The following aniticipated dates are importnt to note for the PP process going forward:

- Availability of Draft Reports for public comment: *November 2013*
- Stakeholder meetings to be held during the public comment period: *November / December 2013*
- Availability of Final BA Reports for public comment: *January 2014*

Registered I&APs will be informed about availability of reports and scheduled stakeholder meetings via their preferred means of communication (SMS, email, post or fax). Contributions from stakeholders will assist in informed decision-making for authorities and provides information to be considered by the project team and specialists conducting studies. All comments can be submitted using the contct details which appear on the cover page or as part of the Comment and Registration Sheet.