

MEETING NOTES

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|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| Job Title | Proposed Installation of Sulphur Dioxide Abatement Equipment at Mortimer Smelter |
| Project Number | 31101 |
| Date | 17 May 2017 |
| Time | 10:00 – 11:00 |
| Venue | DWS Kurperoord Offices, Kosmos |
| Subject | Proposed Installation of Sulphur Dioxide Abatement Equipment at Mortimer Smelter – Department of Water and Sanitation (DWS) |
| Client | Anglo American Platinum Limited |
| Present | See Attached Attendance Register (Appendix A) |
| Apologies | None |
| Distribution | As per the Attendance Register |

ACTION

1.0 WELCOME AND INTRODUCTIONS

- 1.1 Anri Scheepers thanked the Department of Water and Sanitation (NWREAD) for the opportunity to meet with them to discuss the Proposed Installation of Sulphur Dioxide Abatement Equipment at Mortimer Smelter.
- 1.2 A round of introductions was done, including:
- DWS – Esmý Madumo and Nametso Kgabileng
 - Anglo American Platinum Limited – Pierre Malan
 - WSP | Parsons Brinckerhoff, Environment & Energy, Africa (WSP | Parsons Brinckerhoff) – Anri Scheepers
- 1.3 Anri Scheepers mentioned that the presentation (**Appendix B**) would be attached to the minutes together with the attendance register (**Appendix A**).

2.0 PROJECT BACKGROUND

- 2.1 Anglo American Platinum Limited (Anglo) owns and operates the Mortimer Smelter, which is located at the Union Section (RPM-US). The Mortimer Smelter is an existing metallurgical industrial furnace where sulphide ores are smelted.
- 2.2 The off- gas from Mortimer Smelter is currently being treated via 3 electrostatic precipitators (ESPs); exhaust from the ESPs is vented into the atmosphere via a stack at 80m above the ground. The emissions include particulate matter (PM), SO₂, and nitrogen oxide (NO_x).
- 2.3 The National Environmental Management Air Quality Act (No. 39 of 2004) (NEM:AQA) requires that furnaces at metallurgical industries be operated with efficient SO₂ abatement systems by 2015, however Mortimer Smelter has been given an extension until 2020. In order to comply with new South African legislation, and associated more stringent emission standards, an SO₂ abatement system must be installed at the Mortimer Smelter.
- 2.4 The proposed strategy to reduce SO₂ to achieve the Minimum Emission Standards (MES) is the installation of a Wet Gas Sulphuric Acid (WSA) Plant that will convert the SO₂ contained in the off-gas into commercial-grade concentrated sulphuric acid (H₂SO₄). The exhaust from the WSA plant (containing reduced SO₂ concentrations) will be vented into the

| | | ACTION |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| | atmosphere, and the commercial grade sulphuric acid will be temporarily stored before being despatched into the commercial market. | |
| 3.0 | SITUATIONAL ANALYSIS | |
| 3.1 | The Mortimer Smelter is situated approximately 350 m from the Mortimerspruit and associated wetland. The construction are will be approximately 250 m from the Mortimerspruit. | |
| 3.2 | The wetland is part of the dirty water system of the Rustenburg Platinum Mines – Union Section (RPM-US) as per the Integrated Water and Waste Management Plan (IWWMP) and RPM-US has an existing Water Use Licence (03/A24D/ABCGIJ/18929). Due to the historical nature of the mine and use of in-stream return water dams, Mortimerspruit within the mine lease area is operated as a dirty water channel and flows to the Barbers return water dam where dirty water is contained under normal operating conditions. Overflows from Fraser Alexander return water dam will drain to Barbers return water dam via Mortimerspruit. | |
| 4.0 | WATER USE LICENCES | |
| 4.1 | It was agreed that a Section 21b water use licence will not be required for the potable water reservoir. | |
| 4.2 | It was noted by EM that even though the wetland is considered part of the dirty stormwater management a Section 21 c and i water use licence may be required and this will have to be discussed with Pieter Ackerman. DWS agreed to urgently arrange a meeting with Pieter Ackerman. | DWS |
| 4.3 | It was agreed that AS will, via email, provide EM with the IWWMP, WUL and wetland assessment for the Mortimerspruit. Subsequent to the meeting, this was submitted to EM via email on 22 May 2017. | AS |
| 5.0 | DESIGNS | |
| 5.1 | EM requested that the following civil designs be submitted to the DWS: <ul style="list-style-type: none"> Acid Storage Area Effluent Treatment Plant | WSP |
| 5.2 | EM requested the detailed water balance be submitted to the DWS. | WSP |
| 6.0 | STAKEHOLDER ENGAGEMENT | |
| 6.1 | It was agreed that a 30 day public participation period as specified in the EIA Regulations will be acceptable, should a water use licence be required. | WSP |

7.0 DOCUMENTATION SUBMISSION

7.1 It was agreed that 1 Hard copy and 1 electronic copy of all documentation will be submitted to the DWS.



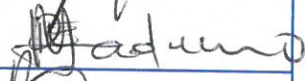

ACTION

WSP

Appendix A – Attendance Register

ATTENDANCE REGISTER

Project: Proposed Installation of Sulphur Dioxide Abatement Equipment at Mortimer Smelter
Applicant: Anglo American Platinum Limited
Meeting Title: Authority Meeting (Department of Water and Sanitation)
Venue: DWS - Kurperoord
Date: 17 May 2017

| Name | Company Name | Email | Tel | Signature |
|--------------------|--------------|--------------------------------|-----------------------------|--------------------------------------------------------------------------------------|
| Anri Scheepers | WSP | Anri.Scheepers@WSPCoop.co.za | 011 3006089 |  |
| Pierre Malan | Anglo Pt. | pierre.malan@angloamerican.com | 083 252094 |  |
| Madumo Esmay | DWS | Madumoe@dws.gov.za | 087 322 5124 02 392 1534 |  |
| Kgabiteng Nameriso | DWS- Harties | Kgabiteng N@dws.gov.za | 07 3 778 3330 |  |
| | | | | |
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Appendix B - Presentation

Proposed Installation of Sulphur Dioxide Abatement Equipment at Mortimer Smelter

Anglo American Platinum Limited



17 May 2017
DWS Meeting

AGENDA

- 1. Welcome and Introduction**
- 2. Role Players**
- 3. Project Background**
- 4. Project Location**
- 5. Project Description**
- 6. Alternatives**
- 7. Legislative Requirements**
- 8. Specialist Studies**
- 9. Proposed Schedule**
- 10. Questions and Discussions**

WELCOME AND INTRODUCTION

Competent Authority

Department Mineral Resources

Under the One Environmental System, the Minister of Mineral Resources will issue environmental authorisations in terms of the NEMA for mining activities related to the primary extraction and/or primary processing of ore material. The Minister of Environmental Affairs will form the appeal authority

Applicant

Anglo American Platinum Limited

Environmental Assessment Practitioner

WSP | Parsons Brinckerhoff, Environment & Energy, Africa

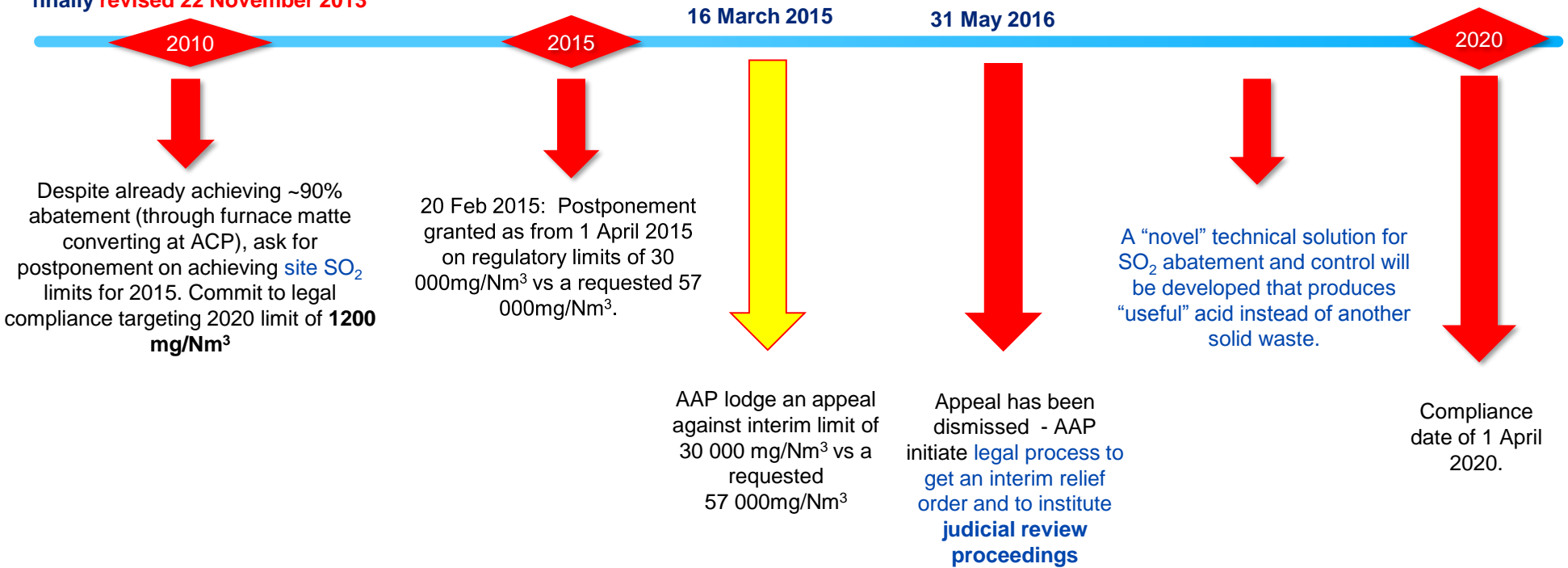
PROJECT BACKGROUND

SO₂ postponement & related appeal

Government notice of Minimum Emission Standards (MES) are published in the Government Gazette: 1 April 2010, then amended for Parliamentary Portfolio Review, and finally revised 22 November 2013

MES: SO₂ for existing facility: 3500mg/Nm³

MES: SO₂ for new/all facility: 1200mg/Nm³



| SO ₂ Compliance requirements | Mortimer Smelter |
|--------------------------------------------------|-----------------------------------------------------------|
| Pre-2015 AEL condition | 2500 mg/Nm ³ |
| 1 April 2015 MES requirement | 3500 mg/Nm ³ |
| 1 April 2015 – 31 March 2020 postponement limit | 30 000 mg/Nm ³ (can comply with interim limit) |
| 1 April 2020 MES requirement (require abatement) | 1200 mg/Nm ³ |

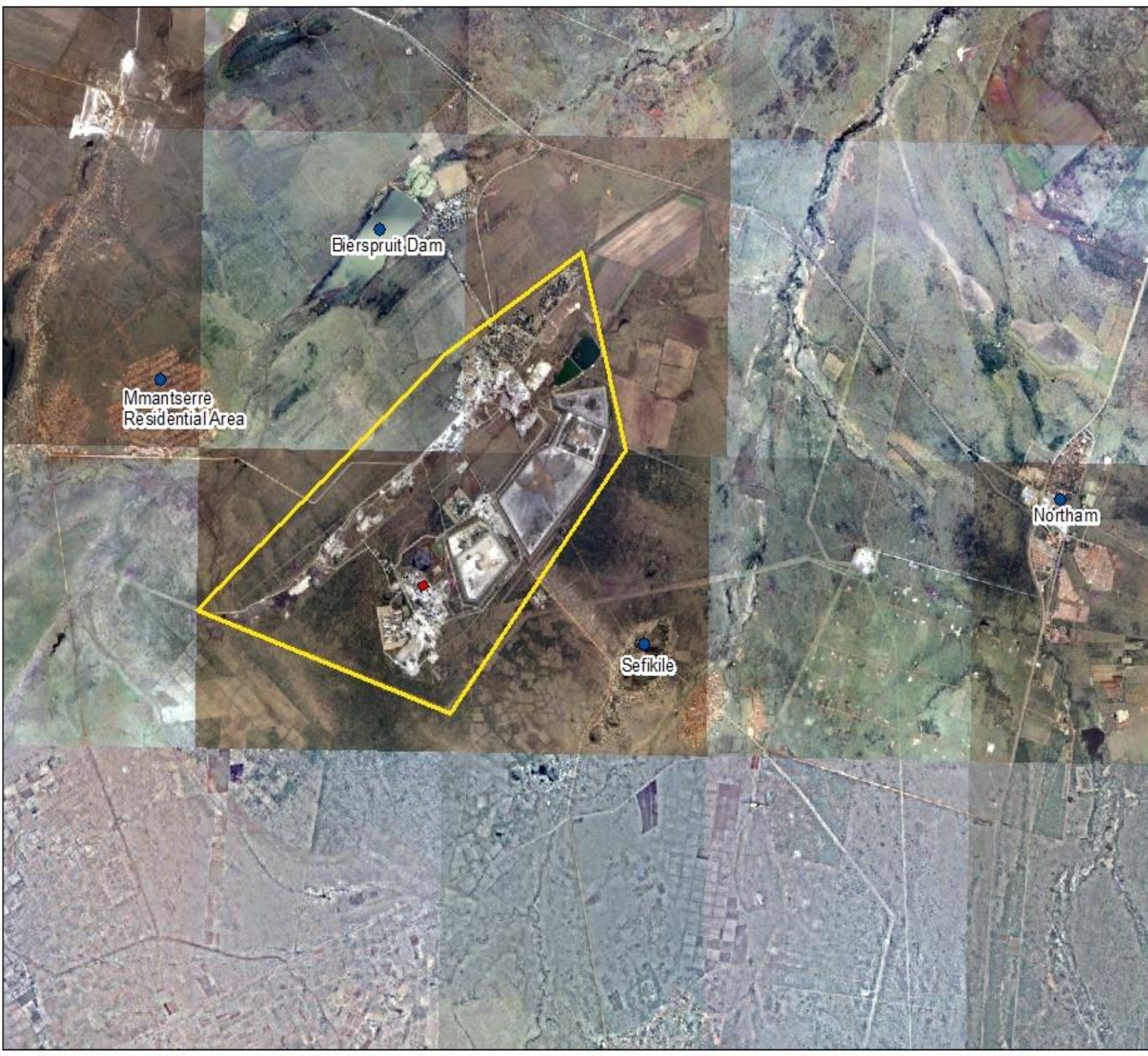


**ANGLO AMERICAN
PLATINUM LIMITED**

MORTIMER SMELTER
LOCATION: AERIAL IMAGERY

Legend

-  Union Mine
-  Mortimer Smelter

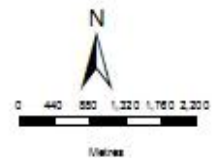


Mmantserre
Residential Area

Bierspruit Dam

Sefikile

Northam



DATA SOURCE: URCSG 10.22

PROJECTION: WGS 1984 UTM ZONE 36Q

PROJECT TITLE: PROPOSED INSTALLATION OF SULPHUR
DIOXIDE TREATMENT EQUIPMENT AT ANGLO AMERICAN
PLATINUM LIMITED: MORTIMER SMELTER

PROJECT NO: 2101

SCALE: 1:60,716 UTM

DATE: 2016/09/16

DRAWN BY: ANRI SCHNEPERS

REVIEWED BY: NIGEL SIBED

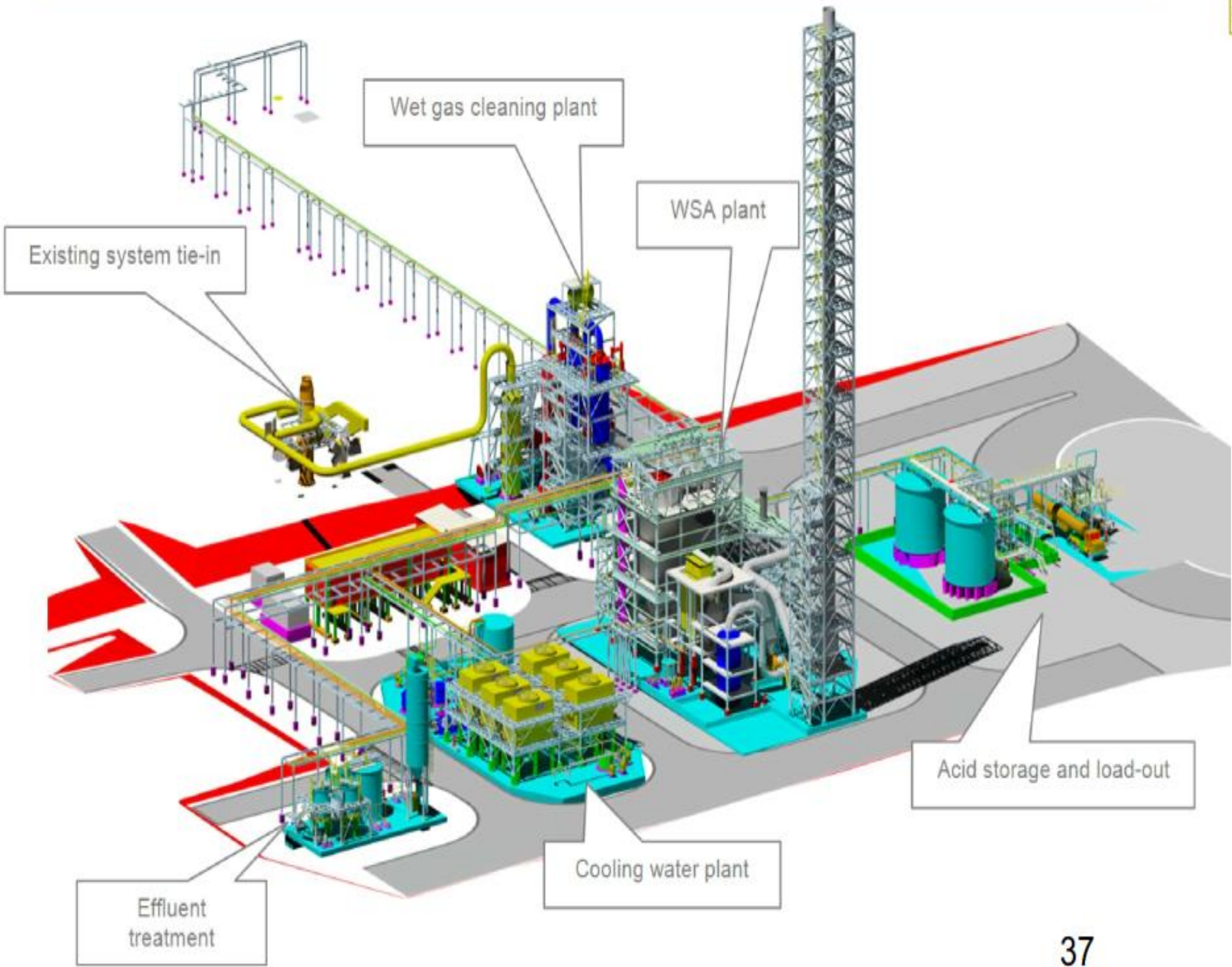


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DISCLAIMER

The information on this report was derived from the information provided to WSP by Anglo American Platinum Limited. WSP has not conducted any fieldwork or other investigations to verify the accuracy of the information provided. The information is provided for informational purposes only and should not be used for any other purpose. WSP is not responsible for any errors or omissions in this report or for any consequences arising from the use of the information. The information is provided as a service to the client and is not intended to constitute an offer of any financial product or service. The information is provided on an "as is" basis and without any warranty, express or implied. The information is provided for the use of the client and is not intended to constitute an offer of any financial product or service. The information is provided on an "as is" basis and without any warranty, express or implied.







PROJECT DESCRIPTION

- Electric Furnace Primary Gas Cleaning (Existing)
- Secondary Gas Cleaning (new additional cleaning)
- WSA Acid Plant
- Effluent Treatment Plant (204m³/day)
- Acid Concentrating Plant
- Acid Plant Cooling Water
- Dangerous Goods Storage and Handling
 - Acid – 560m³
 - LPG – 22.5m³
- Water Usage and Storage
 - Required - 468m³/day
 - Storage – 2 500m³
- Roads



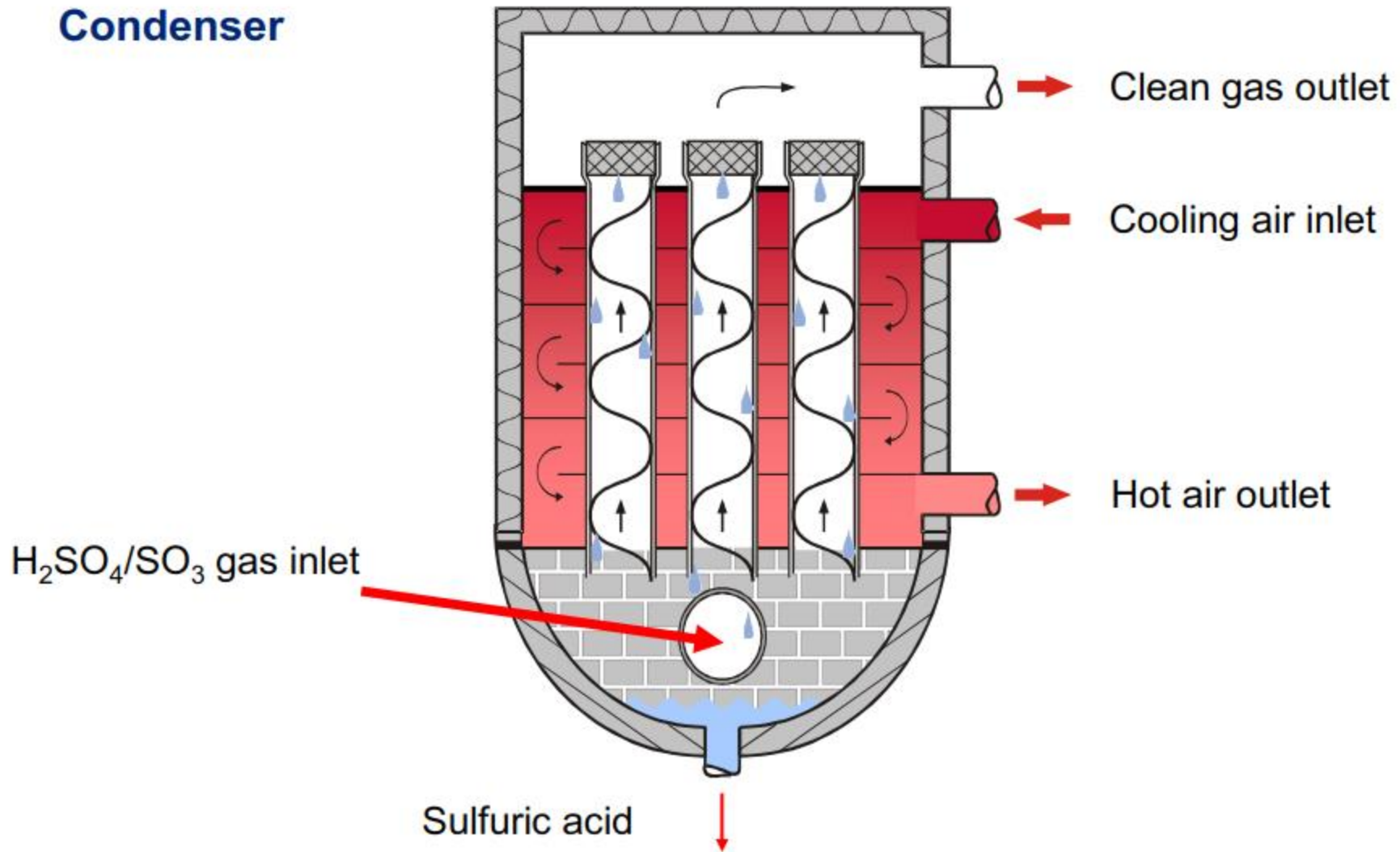
ALTERNATIVES

- **Location – None**
- **Type of activity – None**
- **Design or Layout of Activity**
 - Contractor facilities
 - Operational
- **Technology**
- **Operational Aspects – None**
- **No-Go**
 - Legal non-compliance



Process / Metallurgy

Condenser





Process / Metallurgy



terter



LEGISLATIVE REQUIREMENTS

National Environmental Management Act (No. 107 of 1998)

→ EIA Regulations (GNR 982)

→ Listing Notice 1 (GNR 983)

- Activity 24 - The development of a road with a reserve wider than 13,5 metres
- Activity 34 - The existing Atmospheric Emissions Licence (AEL) for Mortimer Smelter will have to be amended

LEGISLATIVE REQUIREMENTS

National Environmental Management Act (No. 107 of 1998)

→ Listing Notice 2 (GNR 984)

■ Activity 4

The development of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.

The facility will store in excess of 500 cubic metres of dangerous goods.

→ Scoping and Environmental Impact Reporting Process

LEGISLATIVE REQUIREMENTS

**National Environmental
Management Air Quality Act (No. 59
of 2008)**

Due to the changes in emissions (positive) from the Mortimer Smelter an amendment to the existing Atmospheric Emissions Licence as well as a revised emissions inventory will be required for the proposed project (once authorised)

- Subcategory 4.1: Drying and Calcining
- Subcategory 4.16: Smelting and Converting Sulphide Ores

LEGISLATIVE REQUIREMENTS

National Water Act (No. 36 of 1998)

- **Union Mine Water Use Licence
No: 03/A24D/ABCGIJ/18929**
- **Storage of 2 500 m³ of potable
water**
- **No Water Use Licence Required**

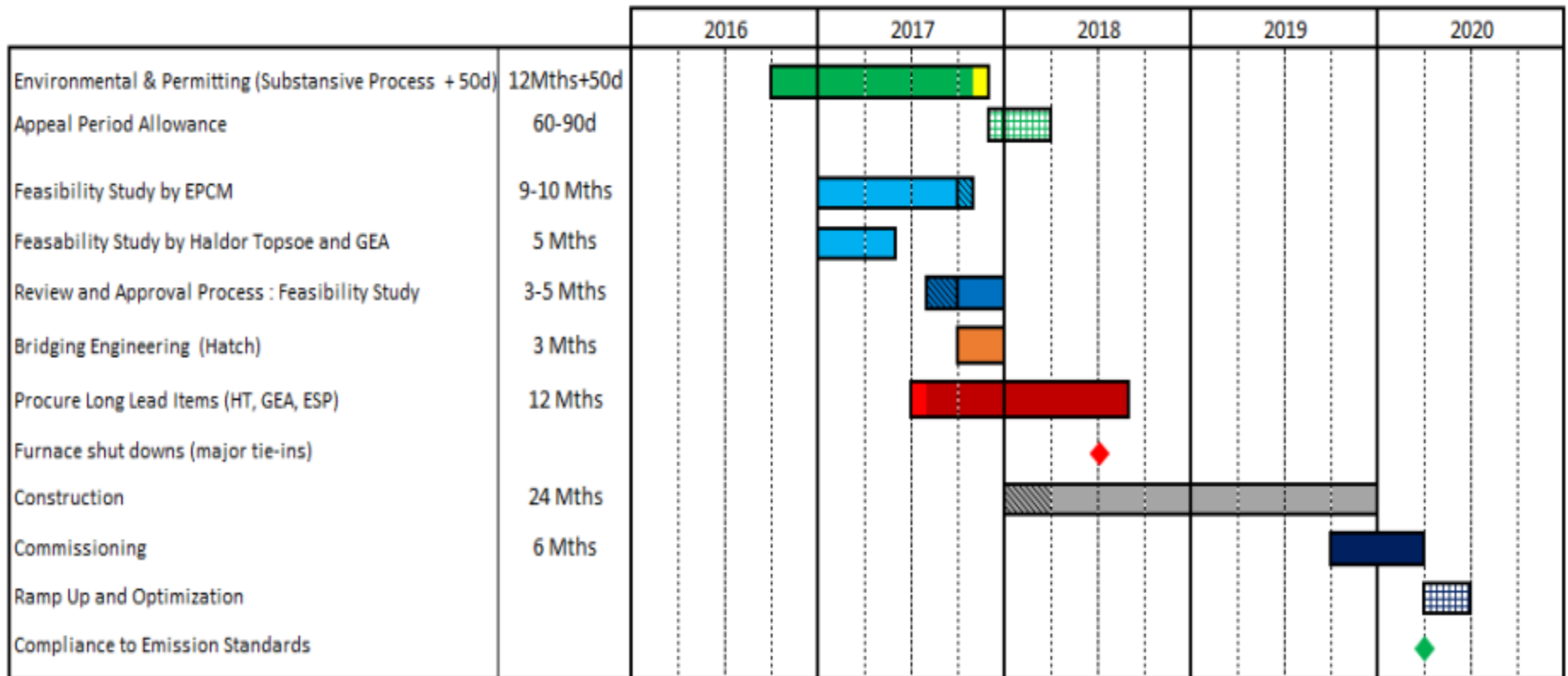
SPECIALIST STUDIES

- **Air Quality Impact Assessment**
- **Noise Impact Assessment**
- **Biodiversity Assessment**
- **Heritage Assessment**
- **Major Hazard Assessment**
- **Social Impact Assessment**
- **Climate Change Assessment**
- **Closure Assessment and Plan**

PROJECT SCHEDULE

| Task | Dates |
|--------------------------------------------|--------------------------------|
| Stakeholder Review of Draft Scoping Report | 31 January 2017 – 3 March 2017 |
| Authority Approval of Scoping Phase | 19 March 2017 – 2 May 2017 |
| DWS Meeting | 16 May 2017 |
| Stakeholder Review of Draft EIAR | 27 May 2017 to 25 June 2017 |
| Authority Approval of EIAR | 4 July 2017 to 1 November 2017 |

HIGH LEVEL OVERALL SCHEDULE



QUESTIONS AND DISCUSSIONS