1 INTRODUCTION

1.1 PROJECT BACKGROUND

The International Power Consortium South Africa (IPCSA) has developed a solution to Saldanha Steel's requirement for stable, economical electricity over the long term. This solution consists of a 1507 MW (net capacity) Combined Cycle Gas Turbine (CCGT) power plant to be erected adjacent to ArcelorMittal's Saldanha Steel site.

ArcelorMittal and IPCSA have signed a Power Generation and Natural Gas Project Development and Pre-Off Take Agreement that binds both parties to certain deliverables in developing the project up to the Bankable Feasibility Study (BFS) completion.

The Project will require Liquefied Natural Gas (LNG) as its main fuel supply and will consume about 76 Million Gigajoules of natural gas per year. LNG will be supplied by ship to the Port of Saldanha, where it will be regasified and then offloaded via a submersible pipeline either from a mooring area located off shore or a berthing location in the Port in Saldanha. Initial discussions have been held with Transnet National Ports Authority (TNPA) in Saldanha in this regard (1).

The Project will supply the power needs of ArcelorMittal Saldanha Steel (+/- 160 MW of base load energy, peaking up to 250 MW) and excess electricity will be made available to industries within the Saldanha Industrial Development Zone (IDZ) and/or Municipalities within the Western Cape Province.

1.2 PURPOSE OF THIS REPORT

Environmental Resources Management Southern Africa (ERM) has been appointed by ArcelorMittal to conduct the Environmental Impact Assessment (EIA) process in terms of the National Environmental Management Act (NEMA) (Act No. 107 of 1998, as amended). This EIA Report has been compiled as part of the EIA process in accordance with the regulatory requirements stipulated in the EIA Government Notice Regulations (GNR 982/2014) promulgated in terms of Section 24(5) of NEMA.

This EIA has been undertaken in three phases, namely Scoping Phase, Specialist Study Phase and Impact Assessment Phase. This EIA Report documents the findings of the Specialist Study and Impact Assessment Phases.

(1) The supply of fuel and import facilities have not been considered in this EIA. The Department of Energy initiated a project in 2015 to permit the construction of an LNG import terminal at the Port of Saldanha, it was understood that individual developers were not required to undertake the EIA for this component. Should this information change, a separate EIA for the import of gas will be undertaken.

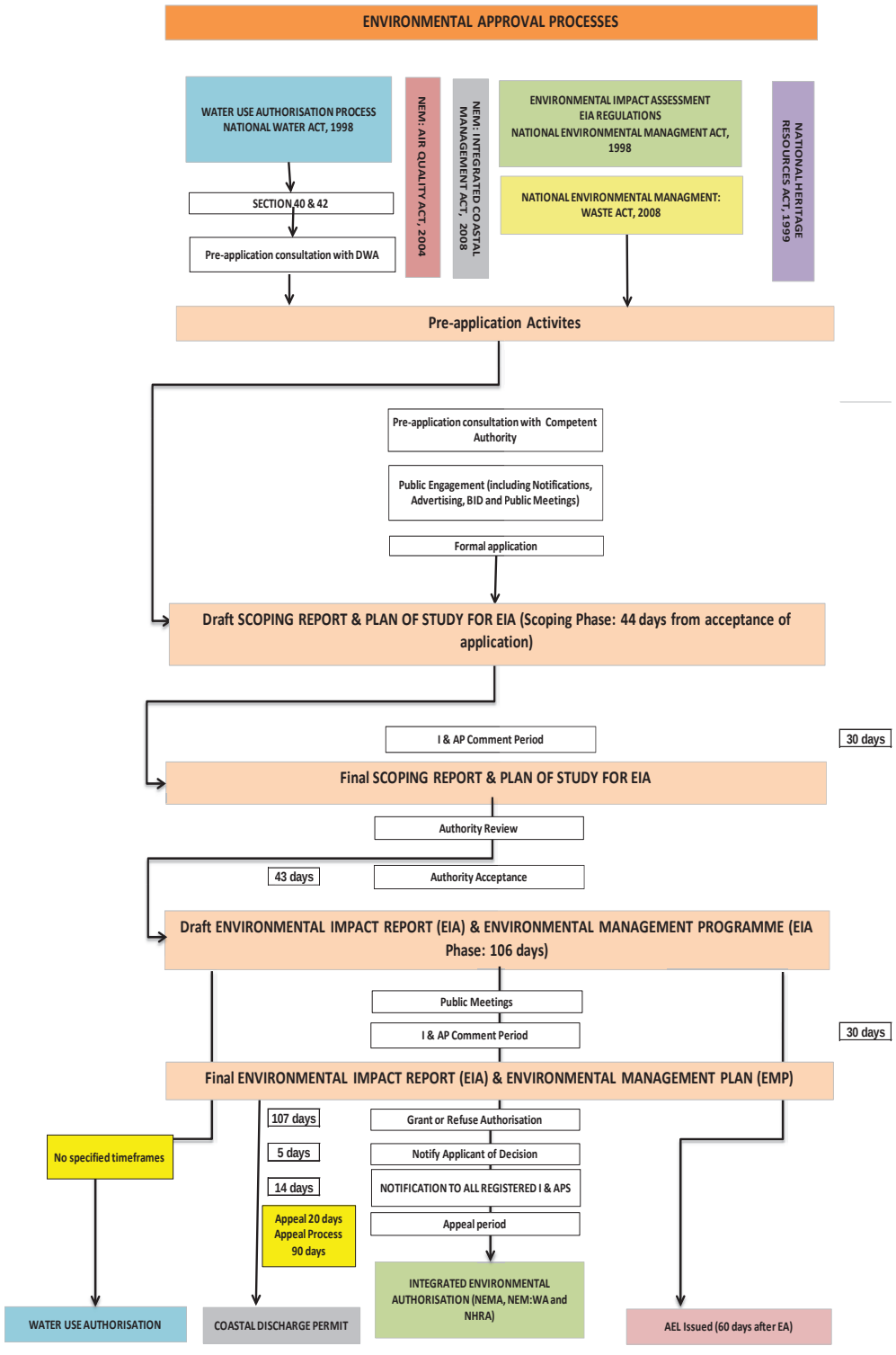
The purpose of this EIA is to present the following:

- A detailed description of the proposed Project and relevant Project alternatives;
- The EIA process and a legal review of legislation and guidelines pertinent to the proposed Project and associated EIA;
- The outcomes associated with stakeholder engagement activities carried out to date;
- A detailed baseline review of the physical, biological and socio-economic characteristics of the study area;
- An assessment of impacts to the physical, biological and socio-economic environments related with the different phases (construction, operational and decommissioning phases) of the proposed Project;
- Mitigation measures that aim to avoid /minimise/manage the severity of identified impacts; and
- An assessment of cumulative impacts associated with project-related developments in the study area.

1.3 OVERVIEW OF THE EIA PROCESS

The EIA process in South Africa is regulated by the NEMA Environmental Assessment Regulations (GNR R982/2014). The overall Scoping and EIR process is illustrated in *Figure 1.1.*

Figure 1.1 Integrated Environmental Impact Assessment Process



1.3.1 Pre Assessment Public Participation

The EIA process is initiated through a pre-assessment Public Participation Process (PPP). The pre-assessment process is not a mandatory requirement in terms of the EIA regulations (2014) but is beneficial in order to identify Interested and Affected Parties (I&APs). An open house meeting was held at

Hoedjiesbaai Hotel, Saldanha Bay on 16 February 2016 to present the proposed Project and solicit input from stakeholders into the scoping process.

1.3.2 Application

An application form for the Project was completed and submitted to the National Department of Environmental Affairs (DEA) on 22 February 2016. The application included the proposed listed activities for the Project. The DEA responded on the 25 February 2016 acknowledging receipt of the application.

1.3.3 Scoping

A principal objective of the scoping phase is to identify the key physical, biological and socio-economic issues and those Project activities with the potential to cause or contribute to impacts to the environmental and social receptors.

At the scoping stage, the key issues are identified (often together with input from key stakeholders) and understood to a level which allows the definition of the Plan of Study for the EIA.

Issues that are not relevant are scoped out. This enables the resources for the EIA to be focused on collecting required information and identifying significant impacts while carrying out specialist studies and stakeholder engagement activities in an effective and efficient manner.

The draft Scoping Report was made available to stakeholders through the Project website, selected libraries, and hard copies provided on request for a period of 30 days (4 March – 6 April 2016). After the 30 day public comment period, a Comments and Responses Report was compiled and included as an annex to the Final Scoping Report. The objective of the stakeholder engagement undertaken was to present the proposed Project and EIA process as well as identify associated issues, concerns and opportunities. Further details on the stakeholder consultation and engagement process are included in *Chapter 9*.

A Final Scoping Report, including ToR for the EIA, was submitted to the DEA on 11 April 2016. The letter of acceptance from DEA for the Scoping Report was received on 16 May 2016. The Final Scoping Report addressed comments received by the proponent on the draft Scoping Report during the 30 day public comment period mentioned above.

1.3.4 Baseline Data Collection

The EIA report provides a description of the existing biophysical, biological and socio-economic conditions as a basis against which the impacts of the Project can be assessed. The baseline includes information on receptors and resources that were identified during scoping as having the potential to be

significantly affected by the proposed Project. The description of the baseline has the following main objectives:

- to identify the key physical, biological and socio-economic resources and conditions in areas potentially affected by the Project;
- to describe, and where possible quantify, their characteristics (i.e. their nature, condition, quality and extent);
- to provide data to aid the prediction and evaluation of possible impacts;
- to inform judgements about the importance, value and sensitivity or vulnerability of resources and receptors; and
- to serve as a reference for future monitoring of impacts of the Project.

For the current Project, baseline data collection was obtained from existing sources including previous EIAs, government census data, and existing academic research documents.

Additional primary baseline data were collected by the noise, heritage, flora and fauna specialists (specialists details provided in *Section 1.5.3* below).

1.3.5 Quantitative Assessment

The following quantitative studies were undertaken by the EIA team to support the impact assessment:

- An assessment of the potential noise impacts of the construction and operations phases of the power plant and associated infrastructure.
- An assessment of the potential impacts on air quality during the construction and operation of the power plant, including cumulative impacts.
- A Quantitative Risk Assessment of the risks associated with the natural gas pipeline and the storage of Propane on site.

1.3.6 Impact Assessment

Impact assessment and development of mitigation measures is an iterative process that commences during the scoping stage and continues throughout the EIA process. The key objectives of this process are as follows:

- To analyse how the Project may interact with the baseline conditions in order to define, predict and evaluate the likely extent and significance of environmental, social and health impacts that may be caused by the Project.

- To develop and describe acceptable and cost effective mitigation measures that avoid, reduce, control, remedy or compensate for negative impacts and enhance positive benefits.

- To evaluate the predicted positive and negative residual impacts of the Project.

- To develop a system whereby mitigation measures will be integrated with the Project and will be taken forward as commitments. This is achieved through the development of a draft Environmental Management Programme, included in *Chapter 11*.

The objectives of the impact assessment process described above may thus be summarised by reference to the following four main steps:

- Prediction of what will happen as a consequence of Project activities;
- Evaluation of the importance and significance of the impact;
- Development of mitigation measures to manage significant impacts where practicable; and
- Evaluation of the significance of the residual impact.

Where significant residual impacts remain after mitigation measures are applied, further options for mitigation may be considered and impacts re-assessed until they are reduced to as low as reasonably practicable (ALARP) levels. This approach takes into account the technical and financial feasibility of mitigation measures.

In addition to predicted impacts from planned activities, those impacts that could result from an accident or a non-routine event within the Project are taken into account. In these cases the likelihood (probability) of the event occurring is considered. The impact of non-routine events is therefore assessed in terms of the risk, taking into account both the consequence of the event and the probability of occurrence.

1.3.7 Management Planning

The range of measures to mitigate impacts identified through the EIA process is reported in the EIA report within the project description and impact assessment chapters. These have been brought together in the draft EMPr for the Project (see *Chapter 11*).

The EMP consists of the set of management, mitigation and monitoring measures to be taken during implementation of the Project, to eliminate adverse environmental and socioeconomic impacts, offset them, or reduce them to acceptable levels. The plan details the specific actions that are required to implement the controls and mitigation measures that have been agreed through the EIA process, including details on monitoring, responsible parties, documentation and reporting and estimated costs.

1.3.8 Reporting and Disclosure

This draft EIA was released for a 30 day public comment period (22 July – 25 August 2016). Notifications were sent out to I&APs. The report was made available online on the Project webpage (www.erm.com/saldanhasteel) and in the Saldanha Bay Library.

Based on comments received on the Draft EIA Report in the above mentioned comment period, the report was revised and made available for comment for a further 30 days, from 16 September - 18 October. A notification letter has been sent to all registered I&APs on the project database and the report made available online on the Project webpage (www.erm.com/saldanhasteel) and in the Saldanha Bay Library. All comments received, along with responses, have been included in the final EIR in *Annex B*.

Comments received have been incorporated into this Final EIA report and documented in the Comments and Responses Report. The Final EIA report is to be submitted to the DEA for decision making.

1.4 THE APPLICANT

The contact details for the applicant are presented below:

Box 1.1 Contact Details of the Applicant

ArcelorMittal South Africa
Saldanha Works t/a Saldanha Steel Pty Ltd
Reg. No: 1995/00628/07
Private Bag X11
Saldanha
7395
Tel: 022 709 4000
Fax: 022 709 4296

1.5 THE EIA TEAM

1.5.1 ERM Southern Africa

ERM is a global environmental consulting organisation employing over 5,000 specialists in over 150 offices in more than 40 countries. In South Africa, ERM Southern Africa employs over 150 environmental consultants out of offices in Johannesburg, Durban and Cape Town.

Declaration of Independence

The requirement for environmental consultants to act independently and objectively is a well-established principle in South African law and elsewhere. The EIA regulations (GNR 982/2014), specifically state that:

"'independent', in relation to an EAP, a specialist or the person responsible for the preparation of an environmental audit report, means –

(a) that such EAP, specialist or person has no business, financial, personal or other interest in the activity or application in respond of which that EAP, specialist or person is appointed in terms of these Regulations; or

(b) that there are no circumstances that may compromise the objectivity of that EAP, specialist or person in performing such work;

excluding-

(i) normal remuneration for a specialist permanently employed by the EAP; or

(ii) fair remuneration for work performed in connection with that activity, application or environmental audit."

ERM is a privately owned company registered in South Africa. ERM has no financial ties to, nor is ERM a subsidiary, legally or financially, of ArcelorMittal. Remuneration for the services by the Proponent in relation to this EIA is not linked to an approval by the decision-making authority. Furthermore, ERM has no secondary or downstream interest in the development.

The role of the environmental consultants is to provide credible, objective and accessible information to government and other stakeholders, so that an informed decision can be made about whether the project should proceed or not.

1.5.2 The ERM Project Team

The ERM team selected for this Project possess the relevant expertise and experience to undertake this EIA. As such, ERM has signed the legally required declaration of independence to function as an objective Environmental Assessment Practitioner (EAP). The CVs and details of the independent EAP are presented in *Annex A*.

The contact details of the EAP for the application are presented in *Box 1.2.*

Box 1.2 Contact Details of the EAP

Environmental Resources Management Southern Africa (Pty) Ltd.
Postnet Suite 90
Private Bag X12
Tokai
7966

Mr Stuart Heather Clark
2nd Floor | Great Westerford | 240 Main Road | Rondebosch | 7700
Cape Town | South Africa
T +27 21 681 5400 | F +27 21 686 0736
E stuart.heather-clark@erm.com

The core EIA team members involved in this EIA are listed in *Table 1.1*.

Table 1.1 The EIA Team

Name	Role	Qualifications, Experience
Stuart Heather-Clark	Partner in Charge	BSc., MPhil. Registered EAP >20 years
Stephan van den Berg	Project Manager	BSc (Hons) > 9 years' experience
Claire Alborough	Environmental Specialist	BSc (Hons), MPhil, > 8 years' experience
Lindsey Bungartz	Social Specialist	BSocSc (Hons), >8 years' experience
Nadia Mol	Environmental Specialist	BSc (Hons) Pr.Sci.Nat > 17 years' experience

1.5.3 Specialist Team

The following specialists have been appointed to provide input into this EIA process. The specialists' reports are attached in *Annex D*. As required by the DEA, peer reviews have been undertaken for the specialist studies done internally by ERM.

Table 1.2 List of EIA Specialists

Specialist Study	Specialist
Air quality	uMoya-NILU Consulting (Pty) Ltd
Terrestrial flora	Nick Helme Botanical Surveys
Terrestrial fauna	Simon Todd Consulting
Noise	Enviro Acoustic Research cc
Cultural and heritage	ACO and Associates
Palaeontology	ACO and Associates
Socio-economic	ERM

Specialist Study	Specialist
Quantitative Risk Assessment	ERM
Climate change	ERM

1.6 UNDERTAKING BY EAP

ERM believes that the information provided in this EIA Report is correct, based on what has been received from the proponent and specialists thus far. Inputs and recommendations from the specialists' reports have been included into the report where relevant.

Proof of correspondence between the EAP and I&APs is included in *Annex C*.

1.7 ASSUMPTIONS AND LIMITATIONS

During the compilation of this EIA Report, the following limitations and assumptions were made:

- Information sourced from secondary sources was correct.
- The report was prepared based on the most up to date project description provided. However, it should be recognised that during the course of the design phase, the project description may be amended.
- All information received from the proponent and associated specialist team is accurate.

1.8 REPORT STRUCTURE

The remainder of this Report is structured as follows:

- Chapter 2: Project Motivation
- Chapter 3: Project Description
- Chapter 4: Project Alternatives
- Chapter 5: Administrative and Legal Framework
- Chapter 6: Biophysical Baseline
- Chapter 7: Social Baseline
- Chapter 8: Stakeholder Engagement
- Chapter 9: EIA Methodology
- Chapter 10: Impact Assessment and Mitigation
- Chapter 11: Environmental and Social Management Plan
- Chapter 12: Summary and Conclusion

The Report is supported by the following annexes:

- Annex A: Details of Environmental Assessment Practitioner and Declaration of Independence
- Annex B: Stakeholder Engagement Materials
- Annex C: Layout Plans and Maps
- Annex D: Specialist Reports

1.9 *EIA REPORT REQUIREMENTS AS PER EIA REGULATIONS GNR 982/2014*

Table 1.3 illustrates the legislated content of the EIA Report.

Table 1.3 Legislated Content of EIA Report (GNR 982/2014) and Corresponding Sections in this Report

Legislated Content- Appendix 3 Section 3	**Section in this Report**
(a) details of-	
(i) the EAP who prepared the report	*Annex A*
(ii) the expertise of the EAP, including a curriculum vitae	
(b) the location of the activity (i) the 21 digit Surveyor General code of each cadastral land parcel; (ii) where available, the physical address and farm name; (iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	*Chapter 3*
(c) a plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale, or, if it is- (i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or (ii) on land where the property has not been defined, the coordinates within which the activity is to be undertaken;	*Chapter 3 and Annex C*
(d) a description of the scope of the proposed activity, including-	
(i) all listed and specified activities triggered and being applied for; and	*Chapter 5*
(ii) a description of the associated structures and infrastructure related to the development;	*Chapter 3*
(e) a description of the policy and legislative context within which the development is located and explanation of how the proposed development complies with and responds to the legislation and policy context;	*Chapter 5*
(f) a motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred location;	*Chapter 2*
(g) a motivation for the preferred development footprint within the approved site;	*Chapter 4*
(h) a full description of the process followed to reach the proposed development footprint within the approved site, including:	
(i) details of all the development footprint alternatives considered;	*Chapter 4*
(ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;	*Chapter 8 and Annex B*
(iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;	*Chapter 8 and Annex B*
(iv) the environmental attributes associated with the development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	*Chapters 6 and 7*

Legislated Content- Appendix 3 Section 3	Section in this Report
(v) the impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts- (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated.	*Chapter 10*
(vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives	*Chapter 4*
(vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects	*Chapter 4 and Chapter 10*
(viii) the possible mitigation measures that could be applied and level of residual risk	*Chapter 10 and 11*
(ix) if no alternative development locations for the activity were investigated, the motivation for not considering such; and	*N/A*
(x) a concluding statement indicating the preferred alternative development location within the approved site;	*Chapter 4*
(i) a full description of the process undertaken to identify, assess and rank the impacts the activity and associated structures and infrastructure will impose on the preferred location through the life of the activity, including-	
(i) a description of all environmental issues and risks that were identified during the environmental impact process; and	*Chapter 10*
(ii) an assessment of the significance of each issue and risk and an identification of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;	*Chapter 10*
(j) an assessment of each identified potentially significant impact and risk, including-	*Chapter 10*
(i) cumulative impacts;	
(ii) the nature, significance and consequences of the impact and risk;	
(iii) the extent and duration of the impact and risk;	
(iv) the probability of the impact and risk occurring;	
(v) the degree to which the impact and risk can be reversed;	
(vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and	
(vii) the degree to which the impact and risk can be mitigated;	
(k) where applicable, a summary of the findings and recommendations of any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final assessment report;	*Chapter 10 and Annex D*
(l) an environmental impact statement which contains-	*Chapter 10 and 12*
(i)a summary of the key findings of the environmental impact assessment;	
(ii)a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and	
(iii)a summary of the positive and negative impacts of the proposed activity and identified alternatives;	
(m) based on the assessment, and where applicable, recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation;	*Chapter 10 and 11*
(n) the final proposed alternatives which respond to the impact management	

Legislated Content- Appendix 3 Section 3	Section in this Report
measures, avoidance, and mitigation measures identified through assessment;	
(o) any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;	*Chapter 10 and 12*
(p) a description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed;	
(q) a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;	*Chapter 12*
(r) where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required and the date on which the activity will be concluded and the post construction monitoring requirements finalised;	*N/A*
(s) an undertaking under oath or affirmation b the EAP in relation to:	*Chapter 1 and Annex A*
(i) the correctness of the information provided in the reports;	
(ii)the inclusion of comments and inputs from stakeholders and I&APs;	
(iii)the inclusion of inputs and recommendations from the specialist reports where relevant; and	
(iv)any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;	
(t) where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;	*N/A*
(u) an indication of any deviation from the approved scoping report, including the plan of study, including-	*N/A*
(i) any deviation from the methodology used in determining the significance of potential environmental impacts and risks; and	
(ii)a motivation for the deviation;	
(v) any specific information that may be required by the competent authority; and	
(w) any other matters required in terms of section24(4)(a) and (b) of the Act.	