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10 Environmental Management and Reporting

10.1 Introduction

This EIS and the draft Environmental Management Plan (incorporating Construction and Operations, Appendix C) aim to address the issues of concern highlighted in the *Guidelines for the Preparation of an Environmental Impact Statement, Roper Bar Iron Ore Project* dated March 2012 (see Appendix A).

The EMP more specifically addresses management objectives and targets for all relevant environmental factors, and lists how monitoring and actions can be used to minimise adverse impacts and maximise opportunities. The EMP identifies actions to result from known non-compliance to assist in early identification of potential environmental harm and ensure that problems do not reoccur. This chapter is designed to introduce readers to the EMP and outline the management structure that will ensure that the EMP objectives are achieved by allocating responsibility of EMP implementation and auditing.

Specifically, the key risks identified in relation to this project are:

- Potential negative impacts on surface/ground water quality, and on groundwater dependant ecosystems due to pit dewatering;
- Habitat disturbance resulting in impacts on terrestrial, aquatic and marine biodiversity;
- Potential for poor mine site rehabilitation and mine closure outcomes;
- Potential negative impacts on local communities (social and cultural impacts); and
- Potential cumulative impacts of large scale development/s in a remote area.

10.1.1 Environmental Management

An essential part of WDRL's commitment to environmental management will be their compliance with environmental performance obligations, which will be demonstrated throughout the Project by monitoring; auditing and inspection, conducted internally by WDRL and an appointed independent auditor, and externally via relevant authorities (refer to Draft EMP at Appendix C).

Additional to the EMP, WDRL has a number of management plans to maintain environmental standards at the project site. These include:

- Weed and Pest Management Plan (Appendix F);
- Acid Mine Drainage Management Plan (Appendix K);
- Erosion and Sediment Control Plans (Appendix L);
- Biting Insect Management Plan (Appendix O); and
- Rehabilitation and Closure Management Plan (Appendix P).

These management plans have been developed specifically for the WDRL Roper Bar Iron Ore Project and will be utilised in the development of a Mining Management Plan (MMP) for the project. All management plans detail the monitoring programs and control measures employed to mitigate identified environmental issues. These plans have been developed to be implemented across the entire life of the project from construction through to mining and eventually rehabilitation.

In addition, two further management plans focussing on potential high risk issues have been developed prior to any works on site for the management of water and acid mine drainage (AMD). These plans are the Water Management Plan and Acid Metalliferous/Mine Drainage (AMD) and Management Implications Report and will be attached to the EMP as appendices.

10.1.2 Introduction to the WDRL Draft EMP

The EMP incorporates a CEMP (Pre Start-Up Construction Environmental Management Plan) which has been prepared to cover all construction activities associated with the WDRL Roper Bar Iron Ore Project. Potential environmental issues present during construction will be ongoing into the operational phase, therefore aspects of the CEMP are carried into the ongoing EMP resulting in a smooth transition between construction and operational phases.

The EMP is in draft form to allow for updating post EIS. The EMP will be continually referred to as a draft to allow progressive updating as necessary with the aim of achieving best practice environmental management.

The draft EMP has been prepared and designed to:

- Be in accordance with industry best practice;
- Summarise each commitment detailed in this EIS;
- Be strategic, ensuring appropriate environmental protection and impact minimisation techniques are implemented throughout and following construction and operational activities; and
- Describe the safeguards and controls to be employed to prevent, manage and monitor identified and potential impacts of WDRL's Project.

10.1.3 Current and Future Locations of the EMP

It is anticipated that ongoing changes to the EMP will be necessary throughout construction and the life of the mine:

- To reflect newly available research or information;
- To keep up with best practice environmental management; and
- To respond to monitoring results with an adaptive management approach.

Thus, although the draft EMP may be finalised at the conclusion of the assessment, the EMP will be updated each year, and submitted to N.T. Government authorities as part of WDRL's annual MMP. The annually updated EMP will be provided in a form suitable for inclusion in the MMP, as required under the *Mining Management Act*.

As the pre-start up construction phase is likely to be complete within 12 months there will not be the requirement for further updates, however a report on compliance will be presented within the first MMP review.

10.2 Management Structure

It is important to align organisational structure, including tasks, workflow, responsibility and authority, with the overall business objectives. The following section details the responsibilities of different levels of personnel and the tools that are used to support the management structure.

10.2.1 Responsibilities

WDRL and its personnel are responsible for implementation of, and compliance with, the EMP. WDRL may engage contractors to carry out activities such as process plant and haul road construction, upgrades or pit excavations at the mine.

Key personnel (i.e. Field Logistics and Operations Manager, Project Manager and Field Supervisors) are responsible for communicating environmental matters and ensuring management practices and procedures are being implemented.

Specific environmental roles and responsibilities are detailed in the following sections.

10.2.2 Managing Director – WDRL

The Managing Director is responsible for the standard of all management, including environmental management. To assist in fulfilling this responsibility, the Managing Director is supported by a series of specialist personnel (refer to hierarchy in Figure 10-1).

10.2.3 Field Logistics & Operations Manager – WDRL

The Field Logistics and Operations Manager is responsible for actioning all required surveys, monitoring, consultations, reporting requirements and community support as committed to within this EMP. Local contractors and employees will be sourced through the Field Logistics and Operations Manager. The Field Logistics and Operations Manager will receive feedback from the Field Supervisor regarding on-ground achievements and conditions, and will liaise directly with higher management for financial guidance and company direction (see Figure 10-1).

10.2.4 Field Supervisor – WDRL

The Field Supervisor is responsible for ensuring that onsite environmental safeguards, surveys and monitoring, inspections and remediation are all carried out as committed to within the EMP and as directed by the Field Logistics and Operations Manager. The Field Supervisor will report back directly to the Field Logistics and Operations Manager with outcomes and on-ground suggestions.

10.2.5 Environmental Contractors

Externally contracted environmental consultancy staff will conduct or supervise required audits and surveys. Environmental consultants will provide reports on this work, including recommendations on environmental management backed by extensive environmental training and experience. Communications regarding logistics will be directed to the Field Supervisor, and management recommendations will be directed to the Field Logistics and Operations Manager for consideration. Environmental consultants will also work closely with the Field Logistics and Operations Manager with respect to annual EMP reviews and annual submission of the Mining Management Plan.

10.3 Environmental Induction, Training and Awareness

All Managers (including the Field Logistics and Operations Manager, Field Supervisor, and Project Manager – Iron Ore) are responsible for identifying training and competency requirements for personnel under their control, and for ensuring that personnel have the requisite competencies, skills and training to carry out their assigned tasks. Managers are also responsible for ensuring training records are maintained.

10.3.1 Induction

All staff, contractors, and consultants will complete a comprehensive Site Induction. The induction will include safety requirements, site behaviour rules, access protocols and restrictions, cultural requirements and commitments, and a comprehensive review of environmental risks, responsibilities and standards. All project managers will have an additional training session on the use and implementation of the EMP.

It is the responsibility of the Managers to ensure records of the training of relevant personnel are maintained.

10.3.2 Toolbox Meetings

The Field Supervisor will hold regular toolbox talks with staff and crews to discuss issues associated with the scheduled work. The toolbox meetings will involve highlighting and discussing relevant environmental and safety issues and monitoring results. Toolbox Meeting Agendas, attendance and outcomes will be recorded and maintained, as they will form the main stream of communication between the upper management and on-site staff.

10.3.3 In-House Training

Regular training will be offered for personnel; this will include, but not be limited to, training in pollution/spill management and response, incident reporting, fire-fighting and weed identification.

10.4 Reporting Requirements

It is important that records and reports are maintained to ensure that the objectives of the EMP are being achieved. The Field Supervisor will be required to record daily and weekly activities on pre-prepared checklists addressing relevant EMP requirements.

All reports, reviews, and audits will be maintained by the Field Logistics and Operations Manager, copied to the Managing Director, and made available to appropriate staff (Environmental Officer, Geologists and Field Supervisor) and, when relevant, the Regulatory Authorities. Audit results will be used to review management practices, and the EMP will be updated yearly to accommodate changes in management practices.

10.4.1 Mining Management Plan and Environmental Management Plan

WDRL will submit an annually updated Mining Management Plan (MMP) as required under section 41 (1) of the *Mining Management Act 2011*. The MMP will include an annually revised version of the EMP.

The EMP is a live document and as such will be updated annually to ensure commitments remain effective and applicable. The NT Department of Resources (DoR) will be notified of any significant changes to approved mining activities by amending the MMP, this may occur at any time, outside of the above commitment.

10.4.2 Audits

Annual audits of EMP compliance will be conducted and reported as part of the annual MMP review and renewal process. WDRL operations will be annually audited against the EMP and the results provided to the DoR, who may also audit the site from time to time.

Any reasonable environmental practices, procedures or standards recommended after an environmental audit or assessment will be implemented at the first available opportunity. WDRL understands the importance of high environmental standards and is committed to achieving this.

10.4.3 Incident Reporting and Non-Conformance

Incident reporting will be implemented to record any safety or environmental non-conformances or incidents. These shall be recorded on an incident report form and forwarded to the Field Supervisor and Field Logistics and Operations Manager. Reporting of incidents externally will be undertaken in accordance with relevant legislation (e.g. Section 29 of the *Mining Management Act 2011*). Incidents will be investigated and followed up and, where relevant, corrective actions nominated and implemented. The Field Supervisor is responsible for ensuring all incidents are thoroughly investigated and managed accordingly.

10.4.4 Complaints Register

The Field Supervisor will be required to report and record any complaints from the public or specific Project stakeholders to the Field Logistics and Operations Manager. The Field Logistics and Operations Manager will record any complaints received from the Field Supervisor and enter these on the WDRL Complaints Register in accordance with a Complaints Management Procedure (to be developed). The Field Logistics and Operations Manager shall review each complaint upon receipt and agree with the Field Supervisor on how the complaint will be addressed. Corrective actions and other recommendations including, where applicable, modifications to practices and procedures shall be made and closed out under the direction of the Field Logistics and Operations Manager. A summary of complaints and subsequent investigations, including monitoring results and corrective actions, will be prepared and reported within the MMP.

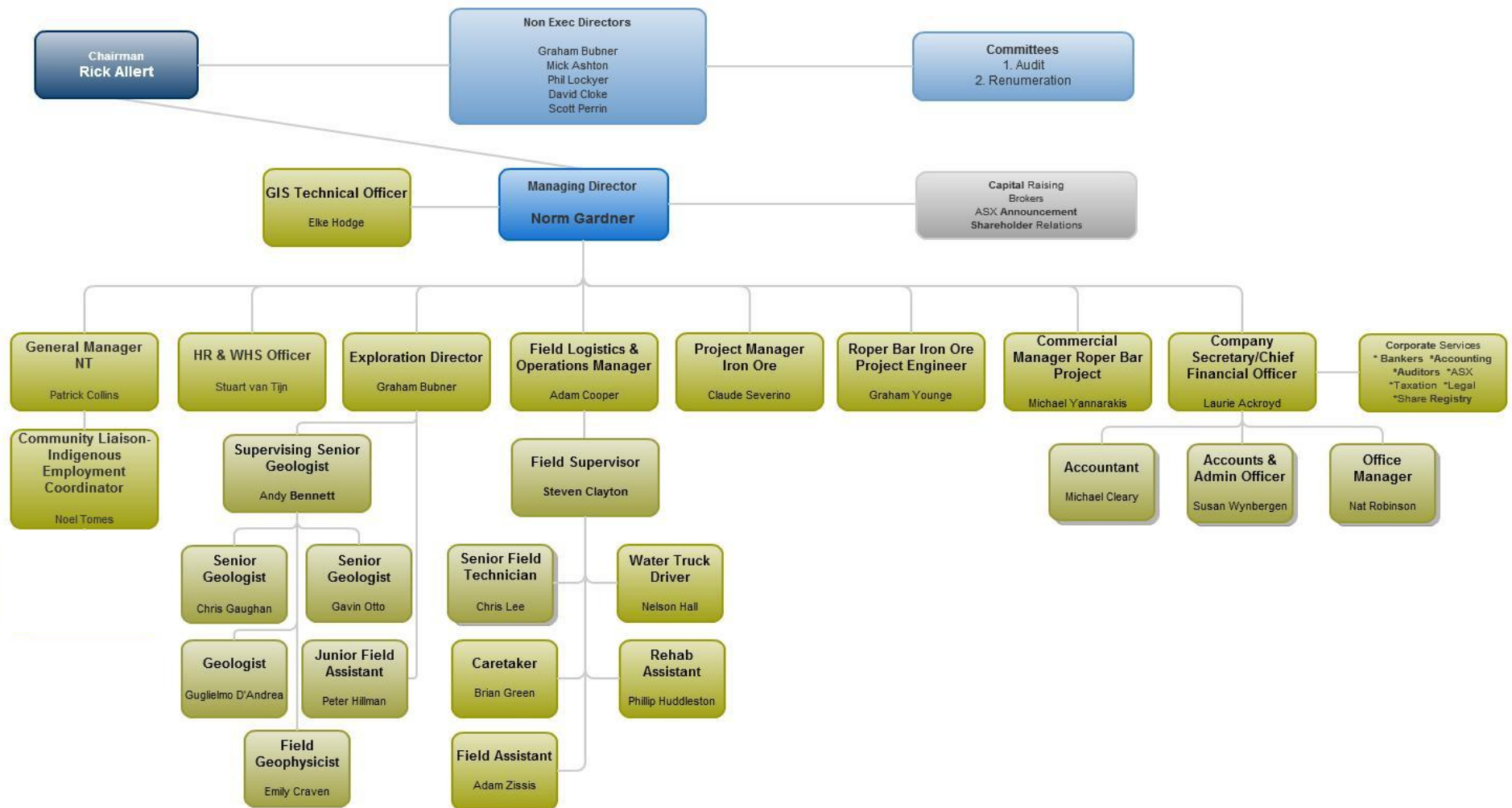


Figure 10-1. WDRL Personnel Management Structure

10.5 Monitoring

Monitoring will be undertaken to verify compliance with environmental conditions and commitments, satisfy regulatory and reporting requirements, track environmental performance and measure the effectiveness of environmental management measures.

WDRL will establish an environment monitoring program specific to its operations at Bing Bong Port, the mine site and haul road. WDRL will also participate in the environmental monitoring programs currently run by Xstrata and expand these programs if necessary for the WDR operation.

Results from any monitoring undertaken will be presented within the MMP, with an assessment of compliance against commitments made in the EMP.

Provision will be made for changes in monitoring requirements throughout the proposal including those following the implementation of the Rehabilitation and Closure Plan. Changes will be captured within the MMP.

10.6 Document Management

10.6.1 Review

The EMP shall be annually reviewed and updated as required and these changes summarised within the MMP. Both the MMP and EMP shall be provided to DoR for review and approval.

10.6.2 Document Control

A document control system will be implemented to ensure that copies of the EMP are updated as revisions occur.

Mechanisms will be employed to ensure the EMP reflects any changes to WDRL construction and/or operations and supporting documents including relevant legal documentation (including licences, permits and approvals applications), and any other requirements.