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### 17.1 EMS Framework

BOPL is developing an EMS to assist them in managing their environmental responsibilities across both construction and operational phases, for all of its operations, and to allow for continuous improvements of their environmental management programs.

Over the life of operations the EMS will enable BOPL to systematically assess and review its environmental impacts and obligations, develop targets which will enable them to measure their environmental performance, and implement EMPs to manage their impacts and obligations.

BOPL is basing its EMS on the AS/NZ ISO 14001:2004 Environmental Management System Standards. This standard has been chosen as it is the most recognised standard and works on a continuous improvement model.

Fundamental to the implementation of the EMS at an operational level is the development of EMPs. These EMPs have been developed to address aspects of the organisation's operations that have the potential to significantly impact on the environment. They include consideration of legal and other obligations, and objectives and targets to measure environmental performance. BOPL's draft EMPs that are proposed to manage activities at Princess Louise and North Point Mine Sites are presented in Section 18.

### 17.2 Environmental Policy

BOPL has taken on the Environmental Policy of its parent company, GBS. BOPL and GBS have strong commitments to responsible environmental management, with high standards of rehabilitation and site management.

BOPL's Environmental Policy has been endorsed at the highest level of management, and is signed by GBS' Chief Operating Officer (Figure 17.1).





## GBS GOLD AUSTRALIA Pty Ltd

### ENVIRONMENTAL POLICY

#### POLICY:

The Environmental objective of GBS GOLD AUSTRALIA Pty Ltd is to develop and maintain the culture, protocols and procedures that ensure the integrity of the environment, for all external stakeholders, employees and contractors associated with the company's activities.

#### OBJECTIVES:

- To ensure compliance with all environmental legislation;
- To be committed to maintain and improve the environmental management of all facets of the operations, in order to reduce or eliminate any environmental impacts;
- To identify, act upon and mitigate potential environmental impacts upon their recognition;
- Ensure any impacts, however minor, are reported, recorded and investigated;
- To implement a culture where all environmental, social, cultural and economic considerations are integrated into all the planning and decision making processes;
- To encourage workforce awareness of environmental management procedures and promote a positive personal environmental attitude in the workplace;
- To be responsive and responsible with regard to establishing environmental credibility with external stakeholders, communities and regulatory bodies;
- To encourage and develop internal and external research to reduce environmental impacts and improve long term management.

Tony Simpson  
Chief Operating Officer,

**GBS Gold International Pty Ltd.**

Figure 17.1 GBS' Environmental Policy



### 17.3 Management Structure

In order to implement the company's policy and achieve BOPL's environmental objectives in practice, an Environmental Manager has been appointed to develop an EMS for all of BOPL's sites including Princess Louise and North Point Mine Sites. The Environmental Manager will be provided with appropriate resources, including specialised skills, infrastructure and funds, to establish and maintain the EMS at each mine site. The EMS will cover both the construction and operational phases at both mine sites, as the construction phase is effectively integrated into the operational phase.

The Environmental Manager reports directly to the Operations Manager, and is responsible for advising management on the outcomes of the various monitoring programs. The Environmental Manager also provides an advisory and co-ordination role to support the other managers, superintendents, employees and contractors. The Environmental Manager may recommend a preventive or corrective course of action, while the appropriate manager or supervisor is responsible for:

- Initiating the action if monitoring programs or incidents indicate non-compliance with established procedures; and
- Ensuring that all incidents that may result in an adverse environmental impact are recorded, investigated and corrected.

All staff and contractors at the Princess Louise and North Point Mine Sites will be required to follow operational procedures defined in the EMS, as directed by the Environmental Officer. These will be communicated in inductions and training, as described in Section 17.8.

### 17.4 Risk Management

BOPL will build procedures into its operations that will allow for the identification of environmental aspects of activities, processes, inputs and outputs, associated with their operations, that impact on the environment.

These impacts will be risk assessed on a regular basis and appropriate management plans and operational procedures will be developed for significant and high risk impacts to manage, mitigate and prevent these impacts.

A risk assessment, based on Australian Standard AS/NZS 4360:2004 for Risk Management, was undertaken as part of the preparation of this EIS (Section 16). The results of this assessment are presented in Section 16.2. This assessment has been used to advise the development of the draft EMPs presented in Section 18.

The risk assessment model presented in Section 16 will be used as a basis for future environmental risk assessments of proposed operations or proposed changes to operations.



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### 17.5 Aspects and Impacts Register

BOPL will systematically document the results of risk assessments of the environmental aspects of their operations. These assessments will be documented in an Environmental Aspects and Impacts Register.

Methods for gathering information for inclusion in the register will include but not be limited to:

- Site visits;
- Operational observations;
- Interviews with key personnel; and
- Literature reviews.

For the purposes of this PER, environmental issues and potential impacts have been drawn from information gathered whilst preparing the BOPL MMP and the Princess Louise and North Point EPBC Referral, undertaking baseline field surveys, consultation with key stakeholders and reviewing the requirements listed in the PER guidelines.

### 17.6 Objectives, Targets and Program

BOPL is establishing strategic objectives and targets for the significant environmental risks identified in its Environmental Aspects and Impacts Register. For the purposes of this PER, objectives and targets have been developed based on baseline field surveys, consultation with key stakeholders and the requirements listed in the PER guidelines. Environmental risks will be reassessed on a regular basis during the operational phases of mine development.

Draft EMPs that list objectives and targets are contained in a series of tables presented in Section 18. The objectives and targets are designed to be measurable and practical, and include key performance indicators (KPIs) that define variables to be monitored for each environmental impact. These objectives and targets are consistent with BOPL's Environmental Policy and take into account legal and other obligations.

The objectives and targets are also designed to facilitate monitoring and reporting on BOPL's performance over time. However, it is noted that obligations, environmental risks and objectives and targets may change over the life of the operations.

Based on a preliminary assessment of the data gathered to date BOPL has developed the following draft EMPs for inclusion in this PER:

- Groundwater
- Surface Water
- Flora



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- Fauna
  - Weeds and Pests
  - Dust and Noise
  - Fire and Fuel
  - Hazardous Substances
  - Domestic and Industrial Waste
  - Waste Rock and Ore Stockpiling
  - Heritage Site Protection

These draft EMPs also list the proposed measures to minimise adverse impacts, to monitor the performance of these measures, reporting requirements and corrective action requirements.

### 17.7 Legal and Other Obligations

Legal requirements and other requirements to which BOPL subscribes (such as standards, approval conditions, licence conditions and permits) are incorporated into BOPL's EMS, and will be reviewed as the approval process progresses and the EMS is finalised.

A Legal Register is being developed to identify applicable Acts and Standards relating to the environmental aspects of mine operations. This register will be regularly reviewed by the Environmental Officer, and is likely to contain, at a minimum, the legislation listed in Section 1.11.

### 17.8 Training and Awareness

Training and competency are key components of an EMS. BOPL has recognised this and has developed a formal inductions program that includes presentation of appropriate environmental information.

All staff and contractors working at Princess Louise and North Point will have BOPL's Environmental Policy explained to them during site inductions. Other environmental topics covered by the induction will include:

- Environmental Objectives;
- Environmental Rules and Regulations;
- Land Management;
- Fire Management;



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- Vegetation Protection;
  - Weed and Pest Management;
  - Fauna Protection;
  - Water Management;
  - Waste Management;
  - Hazardous Materials Management; and
  - Heritage Site Protection;

The BOPL Mine Manager will ensure that all employees, contractors or visitors complete a site induction prior to being able to enter BOPL operations. Completion of the assessment questionnaire within the induction requires an 80% pass mark.

Ongoing awareness of environmental issues will be reinforced through refresher courses and awareness programs over the life of the Princess Louise and North Point Mine Sites operations. These programs will be developed to focus on significant risks to ensure management measures are in place prior to the sites becoming operational.

### 17.9 Environmental Incident Reporting

Environmental incidents and hazards will be reported using the existing Incident Reporting Procedure, which BOPL has adopted from its parent company GBS. This procedure requires that:

- All incidents are to be reported to the appropriate BOPL supervisor as soon as the incident is identified;
- All significant environmental incidents will be recorded and reported to DPIFM as required by the *Mining Management Act* 2001; and
- Incidents will be investigated to improve systems and prevent recurrences.

Reportable incidents may include spillages, burst pipelines, bund failures, significant dust issues, and unapproved clearing of vegetation. In the event of a major environmental incident the matter will be reported to the Operations Manager, who will coordinate any necessary containment and remediation measures in consultation with the Environmental Manager.

Checks by the Senior Managers and routine inspections by the Environmental Manager will ensure prompt reporting and remediation of any problems.

BOPL's Incident Reporting Procedure is presented in Figure 17.2.



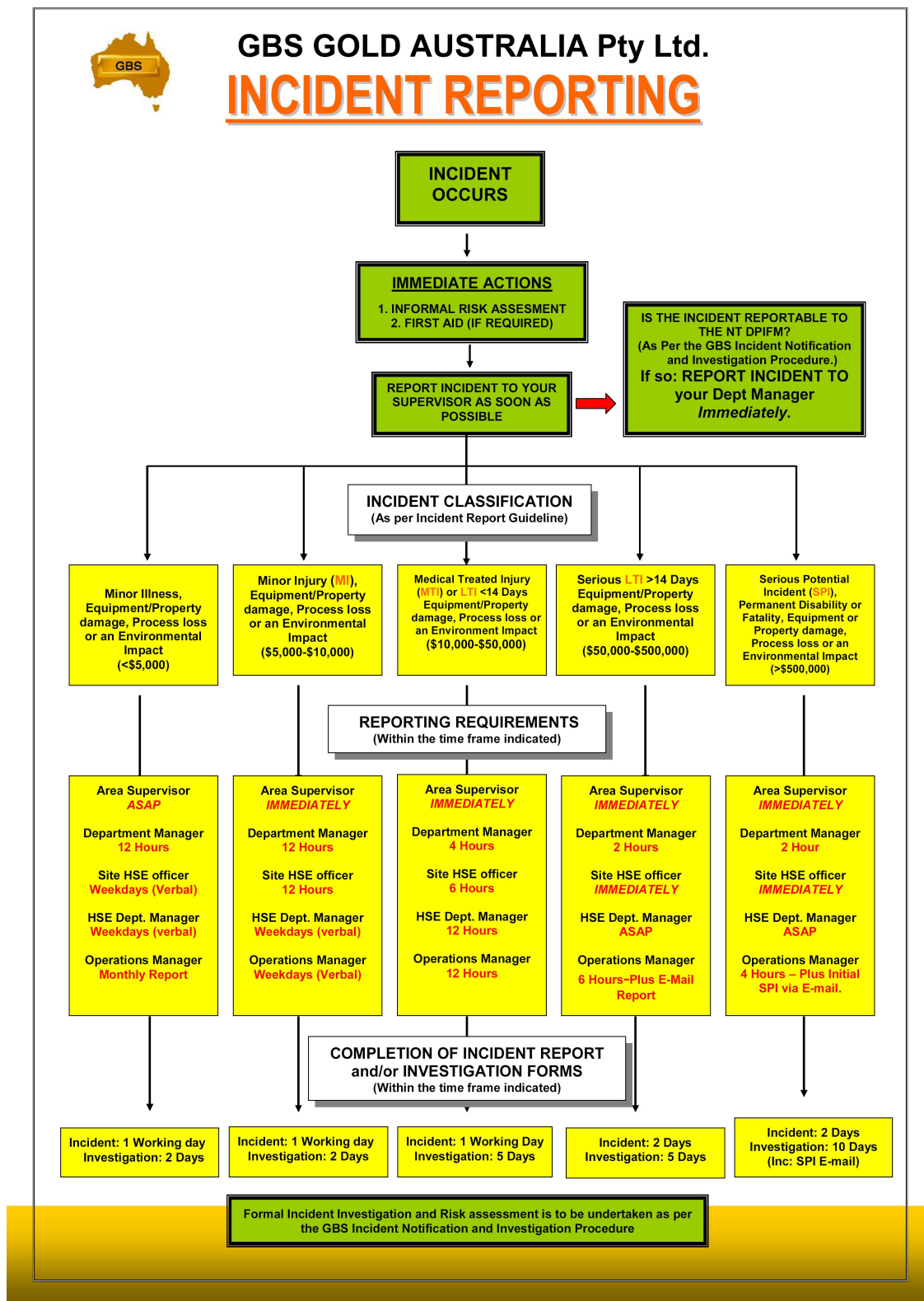


Figure 17-2 BOPL's Incident Report Procedure



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### 17.10 Checking and Review

BOPL is developing monitoring, inspection and internal audit procedures to ensure the effectiveness of their EMS and EMPs. These procedures identify where contingency plans and remedial or corrective action plans need to be developed to prevent incidents or address issues raised during inspections, monitoring and reviews. Currently the primary means of identifying potential issues and hazards is via the risk assessment process (Section 16.2), which has led to the development of the draft EMPs presented in Section 18.

Following the commencement of the operations, the incident reporting procedure will form an important input into refining the EMPs. This procedure will be complemented by periodic audits and structured monitoring programs, which may also identify potential areas of improvement. BOPL will ensure that the Aspects and Impacts Register is reviewed periodically and updated accordingly. The EMS will also be reviewed by BOPL management on an annual basis.

The monitoring programs that have been developed will be documented in BOPL's Monitoring Programs Manual and incorporated into the draft EMPs. In this way BOPL will be able to keep an ongoing check on specific risks that are identified as being significant, and identify performance management measures so that actual and predicted risks can be compared.

The need for remedial or corrective action can be considered in the event that impacts reach an unacceptable level. Alternatively, monitoring programs may indicate low levels of risk for some impacts, and resources may then be channelled to other areas.

### 17.11 Commitments

*BOPL commits to conducting regular risk assessments, and to developing appropriate management plans and operational procedures for significant and high risk impacts.*

*BOPL commits to the systematic documentation of risk assessment results in an Environmental Aspects and Impacts Register.*

*BOPL commits to establishing strategic objectives and targets for the significant environmental risks identified in its Environmental Aspects and Impacts Register.*

*BOPL commits to the development of a Legal Register to identify applicable Acts and Standards relating to the environmental aspects of mine operations.*

*BOPL commits to ensuring all personnel complete a site induction program prior to commencing work at the mine sites.*

*BOPL commits to reporting all environmental incidents through its Incident Reporting Procedure.*

*BOPL commits to developing monitoring, inspection and internal audit procedures to ensure the effectiveness of its EMS.*

