Environmental Compliance Standard

Environment

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Revision Register

REV	DATE	NAME	DESCRIPTION OF CHANGES
0	03/05/2024	[redacted]	[redacted] Use

[redacted]

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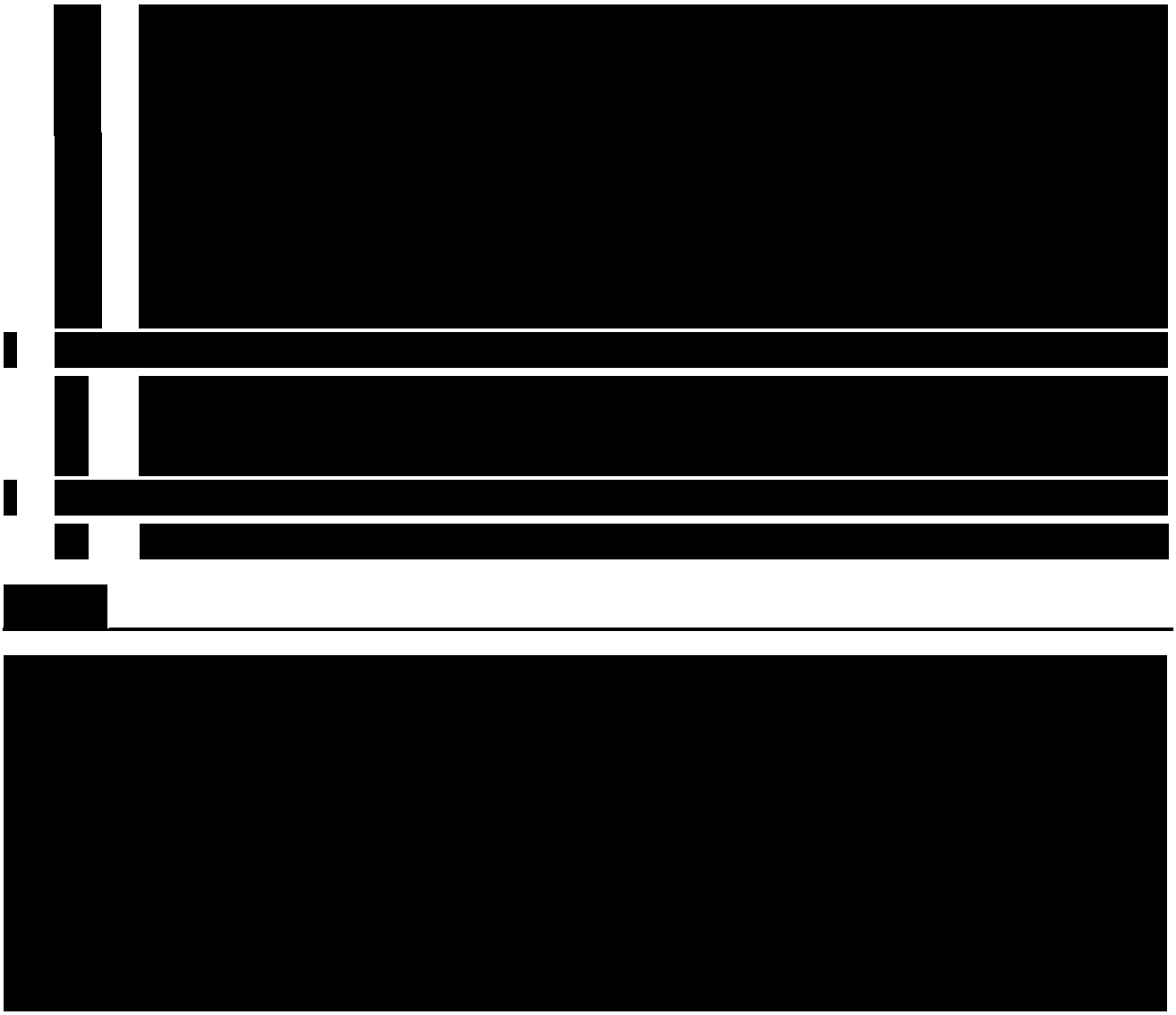


1 Purpose & Scope

This document provides guidance on, and outlines the minimum requirements for, environmental management within HanRoy. These environmental requirements are sourced from commitments, approvals, legislation, industry guidance and industry leading practice and are aligned with the Australian/New Zealand Standard for Environmental Management Systems ISO14001:2016.

It is not the intent of this document to override or duplicate the requirements of legislation, approvals, permits or licences. Should any requirement listed in this document be contradictory to legislation, regulations or an approval, the legislation, regulation or approval will prevail. Any Contractor employed to conduct works for or on a HanRoy site must undertake the steps necessary to ensure the works under their contract comply with all relevant legislation and regulation.

Compliance with the minimum environmental standards outlined in this document is mandatory to all personnel and contractors working on HanRoy. Compliance with the requirements of this document will ensure that environmental objectives are met during the construction of HanRoy Projects.

Included in this document are directions outlining the requirements for identifying obligations, planning, auditing, monitoring, reviewing, reporting and managing environmental performance.

Specific environmental compliance requirements are outlined in Section 4.2.

This document will be updated on a periodic basis as new approvals are received and compliance requirements are determined. It is the Contractors responsibility to ensure they are using the most up to date version of this document when carrying out works under their contract.

1.1 Compliance

The requirements stated in this document are considered a minimum standard and, along with relevant legislation, approvals, permits and licences, compliance is mandatory. Audits and inspections will be undertaken of all Contractors by HanRoy to ensure compliance with these requirements.

Approvals under various legislation including the *Environmental Protection Act 1986, Environment Protection and Biodiversity Conservation Act 1999,* the *Aboriginal Heritage Act 1972* and the *Aboriginal Cultural Heritage Act 2021* contain conditions that must be satisfied prior to the commencement and throughout construction of HanRoy Projects. Non-compliance with these conditions could result in fines or penalties being levied against individuals or companies. All personnel and Contractors must understand their legal obligations in relation to their scope of work and implement systems to monitor and ensure compliance with these requirements.

Statutory approvals for HanRoy Projects will be attained by HanRoy. Approvals granted for works associated with the projects will be maintained within a Project approvals register and compliance with all conditions is mandatory. This document will be amended and updated to incorporate additional minimum environmental standards as approvals for HanRoy Projects are granted. Performance against this document will be audited throughout the construction of HanRoy Projects.

Contractors are responsible for obtaining approvals specific to construction of their works, such as building permits and Department of Health approvals.

2 Contractor Management

2.1 Pre-mobilisation Requirements

Prior to mobilising to a HanRoy Project site all Contractors are required to submit an Environmental Management Plan [EMP] to HanRoy for review and approval. The Contractor EMP must:

- Align with all the requirements of this document as applicable to the Scope of Work [SOW];
- Include an assessment of risks relevant to the SOW and specifically address the management of the identified risk exposures; and
- Outline an environmental management system that is aligned with the requirements of the Australian/New Zealand Environmental Management Systems AS/NZS ISO 14001:2016. Note that certification is not necessary, but evidence of recent certification or surveillance audits will be viewed favourably provided there are no significant adverse findings.

Dependant on the Contractor Scope of Work additional management plans (and associated documentation) may be required to be submitted to HanRoy for review and approval. The requirements for these are outlined in Section 3.3.

Prior to mobilising to any HanRoy Project site all Contractors must coordinate a Hazard Identification [HAZID] workshop, or equivalent, detailing how specific health, safety, environmental and heritage risks associated with their SOW will be managed. The HAZID will be facilitated by an experienced facilitator appointed by the Contractor and will have relevant personnel from HanRoy involved.

At the completion of the HAZID, the Contractor must incorporate any additional environmental controls and management requirements identified into their EMP. HAZID actions required to be closed prior to mobilisation to any HanRoy Project site will be agreed with HanRoy.

All Contractors must ensure any subcontractors comply with the approved Contractor EMP and that subcontractor risks are addressed in the HAZID.

2.2 Contractor Environmental Management Plan

This section provides detailed guidance on the minimum environmental standards required to be met by the Contractor and incorporated into the Contractors EMPs.

2.2.1 Acceptance of Contractor EMP

The Contractor must develop a Project specific EMP and procedures to management the environmental aspects and impacts related to their activities. These documents must comply with the minimum environmental standards outlined in this guideline. The Contractor EMP must be reviewed and accepted by HanRoy prior to mobilising to any HanRoy site.

2.2.2 Environmental Risk

All Contractors are required to develop and maintain a construction risk register developed specific to the scope of work. Risks will be required to be reviewed on a quarterly basis and will also be reviewed in response to incidents, changes in legal requirements, change in project scope, findings of inspections and audits and management reviews.

At a task level, a Job Hazard Analysis [JHA] or similar process will be used to identify potential environmental, heritage, health and safety risks and appropriate control measures prior to the commencement of any task.

2.2.3 Environmental Objectives & Targets

The Contractor must specify environmental objectives and targets, relevant to the SOW, in the EMP. The Contractor objectives and targets must, as a minimum, align with the objectives and targets outlined in Section 2.2 and Section 4.2 of this document. Progress towards achieving these objectives and targets will be monitored.

2.2.4 Legal and Other Requirements

All relevant legal requirements must be complied with including legislation, regulations and any licences, approvals or permits issued under any relevant legislation. Relevant guidance or Australian standards should be complied with where possible. Should any requirement listed in this document be contradictory to legislation, regulations or an approval, the legislation, regulation, or approval will prevail.

Copies of licences, approvals and permits relevant to HanRoy Projects and the Contractors scope of work must be held on site with files available for audit and inspection purposes.

A Legal and Other Obligations Register [LOR] will be developed by HanRoy and will include all legal requirements and approval conditions. The LOR is a live document and will be updated regularly throughout Project construction.

The Contractor EMP and procedures must incorporate legal obligations and must be updated if necessary to align with future approvals and related conditions imposed on HanRoy Projects.

2.2.5 Training and Awareness

All Contractor personnel must be aware of and capable of implementing the environmental requirements of the Contractors EMP when performing their individual tasks.

The Contractor must organise for all its personnel to undertake environmental and heritage inductions prior to commencing works on any HanRoy site. The environmental and heritage inductions must include but not be limited to the following:

- Project approvals;
- Key legal obligations;
- Regulatory penalties and impacts of non-compliance;
- Ground Disturbance Permits [GDP];
- Land access restrictions;
- Dust management;
- Identification of weeds, management measures and reporting requirements;
- Issues associated with protection and preservation of fauna, identification of protected fauna species and reporting requirements (sightings & injuries);
- Identification of feral fauna species and reporting requirements;
- Water management (ground water and surface water) and water use efficiency;
- Fire risk, impacts, management, and response;

- Significant erosion events;
- Hazardous materials storage and use;
- Use of spill kits and other procedures for cleaning up spills of potentially contaminating materials and substances;
- Waste management;
- Fibrous minerals and materials management;
- Green House Gas [GHG] emissions and energy efficiency;
- Landscape scale impacts of works and management;
- Noise and light management;
- Aboriginal Cultural Heritage [ACH] demarcation and avoidance;
- Incident and hazard reporting; and
- Any special requirements relevant to the specific work location.

The Contractor must ensure its personnel have undertaken all HanRoy organised inductions as required. The Contractor must develop, implement, and maintain a training matrix to ensure that training requirements are identified and that relevant personnel receive the necessary training to implement environmental requirements in their work areas.

Training records must be maintained and include the following as a minimum:

- Records of training attendance (e.g. awareness training, toolbox meetings);
- Copies of the training materials;
- Competency assessments (where relevant to the training provided); and
- Training matrix.

2.2.6 Incident and Hazard Reporting

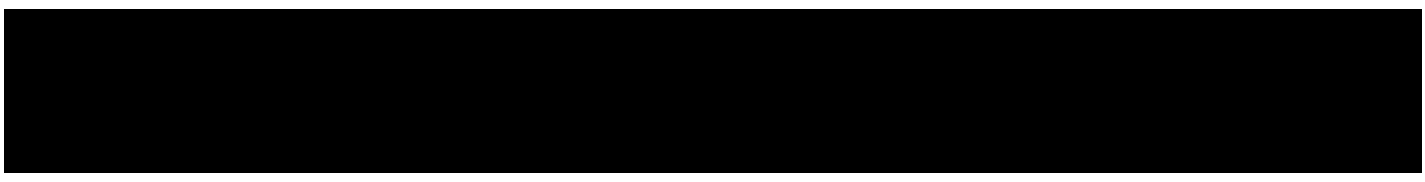
All environmental hazards and incidents must be reported and managed using the HanRoy Project incident management system. The Contractor accountable for the incident will be responsible for investigating, mitigating, and remediating the incident in consultation with HanRoy.

All environmental incidents must be reported within the specified timeframes, categorised, and investigated as outlined in the HanRoy Incident, Non-Conformance & Action Management Procedure (HNR-00000-HS-PRO-0023).

Any heritage incidents must be reported and investigated as outlined by the Aboriginal Cultural Heritage Incident Procedure (HNR-00000-HE-PRO-0001).

HanRoy will be involved in investigating incidents with an actual or potential consequence of high and above, including those that breach regulations, licence, or contractual conditions. External reporting of any incidents will be conducted by HanRoy only.

Corrective actions may be identified from a number of sources, including but not limited to incident investigations, audits, inspections and management reviews. Corrective actions will be systematically implemented and reviewed to ensure they adequately resolve the issue and minimise the risk of reoccurrence of the incident.



The Contractor must develop and maintain a Corrective Actions Register and record all corrective actions identified and implemented including review of corrective actions and close out details. The close out details must include the date closed and the name of the person verifying completion of the required action.

Corrective actions arising from audits and inspections conducted by HanRoy will be maintained in a HanRoy corrective action register. The Contractor is required to implement the actions and close them out within the required time period.

2.2.7 Review and Improvement

The Contractor EMP will be subject to periodic review by Contractor management and, if required, amended to reflect changes in project requirements to, ensure consistency with the conditions of various legislation, permits, approvals and licences as they are issued, or correct disparities identified during auditing.

2.2.8 Resourcing and Responsibilities

The Contractor must provide adequate, suitably qualified and experienced personnel on all HanRoy Project sites relevant to the scope of works, to coordinate the management of environmental issues. This requires a suitably qualified environmental representative for every 50 personnel on site, or on a case-by-case basis dependent on environmental risk associated with specific works. A minimum of one suitable qualified environmental representative is required to be employed onsite by the Contractor.

Any Contractor conducting works on site must demonstrate that responsibility for achieving sound environmental outcomes rests with Contractor senior construction management personnel with support from a suitably qualified HSE or environmental advisor. An organisational chart and job descriptions must be provided as part of the Contractors EMP.

2.2.9 Communication

2.2.9.1 Internal Communication

Contractors must discuss environmental and heritage issues as a regular component of toolbox, prestart meetings and site meeting agendas. Environmental (or integrated HSE) notice boards must be established to inform personnel of relevant environmental information such as minutes of meetings, results of monitoring, performance standards, environmental incident alerts and environmental notices. The notice boards must be refreshed periodically with up-to-date information.

Contractors must present environmental communications to the workforce on a weekly basis. These will present information on the management of environmental risks, key site environmental issues, and heritage issues and risk management. A record of the communication topic, names of employees in attendance and the presenter's name must be maintained as an auditable record.

2.2.9.2 External Communication

Only HanRoy is responsible for external communication in relation to matters concerning the environment. This includes but is not limited to communications with the media and government agencies and particularly in relation to reporting of incidents that may have occurred. All community or regulatory queries or complaints received by personnel must be directed to the Environment Manager of HanRoy for follow up.

2.2.9.3 External Incident Notification

Only HanRoy is authorised to notify external regulatory agencies of environmental incidents.

2.2.10 Monitoring and Reporting

Environmental monitoring is required under various permits, approvals, licences and legislation as outlined in Section 4.2.

HanRoy will provide the Contractor with a reporting template (Data Entry Form) to include environmental data relevant to any legislative requirement, approval, licence or permit associated with their SOW. All relevant data must be recorded, maintained and reported to HanRoy via the HanRoy environmental data management system (Envirosys) on a minimum monthly basis. The data provided by Contractors is required to be reviewed and quality controlled by the Contractor prior to reporting to HanRoy.

All incidents and non-conformances will be reported in accordance with the incident and hazard reporting procedure.

2.2.11 Management Plans and Procedures

Management plans and procedures must be developed by all Contractors for implementation during HanRoy Project construction relevant to the scope of works. These plans and procedures must detail how the Contractor will meet the minimum requirements outlined in this document, as well as any relevant legislation or approvals. Management plans and procedures can be incorporated into the Contractor EMP where appropriate. The plans and procedures to be developed by the Contractor, as relevant to their scope of works are outlined in Table 2-1 and must be reviewed and approved by HanRoy prior to mobilisation.

Table 2-1 Contractor Required Management Plans and Procedures

Management Section	Plan/Procedure
Overarching	Environmental management plan
Vegetation Clearing and Topsoil	Clearing and topsoil management procedure
	Spoil management procedure
Fauna	Trench inspection procedure
	Fauna rescue procedure
	Marine fauna observation procedure
Weed	Weed management procedure
	Weed hygiene certification procedure
Surface water	Surface water management procedure
Ground water	Groundwater monitoring procedure
Hazardous Materials Management	Chemical and hydrocarbon spill procedure
	Fibrous materials management procedure
Waste	Waste management procedure
Wastewater	Wastewater management and monitoring procedure
Dust	Dust management procedure
Noise and Vibration	Noise and vibration management procedure
Dredging, Marine and Near Shore works	Mangrove management procedure
	Mangrove and other benthic primary producer habitat management procedure
Borrow Pit	Borrow pit management plan
Acid Sulphate Soils [ASS]	ASS management procedure
Drill and Blast	Blasting management procedure

[redacted]

2.2.12 Control of Records

Records must be developed and maintained by the Contractor including:

- Training records;
- Incident report forms;
- Audit and inspection forms;
- Corrective Action Register [CAR];
- Monitoring results;
- Controlled waste receipts and tracking numbers; and
- Waste recycled and waste disposed of off-site.

The Contractor must maintain all records generated as a result of environmental management on site

files for audit and inspection purposes.

2.2.13 Emergency Response

The Contractor must develop an emergency management plan that includes the response to environmental emergencies, emergency drills and training related to the relevant scope of work.

Where works occur in, over or adjacent to water, a spill control management plan that aligns with Pilbara Port Authority requirements will be developed and implemented by the Contractor.

2.2.14 Audits and Inspections

2.2.14.1 Internal Audits & Inspections

Site audits will be conducted by HanRoy in accordance with the Audit and Inspection outlined in Table 2-2 during construction of each HanRoy Project. The audit schedule may be modified from time to time to suit changing construction activities and risk. Audits will be risk based whereby high-level risk activities will be the subject of more frequent audits and inspections.

The requirements contained within this document (and the documents referenced within it) and any approvals, licences or permits that are relevant to the works on site will be addressed during each audit. All relevant requirements will be audited on a regular basis.

HanRoy will conduct an EMS audit on the Contractor approximately 6 weeks post mobilisation to a HanRoy site. The Contractor is to achieve 85% in this audit. If the scope attained is less than 85% a re-audit will be organised two weeks later to assess the outstanding action items.

HanRoy will provide the Contractor with at least two-week advance audit notification (where possible) and audit table. HanRoy will provide the Contractor with a copy of the audit report and a table showing non-compliance actions as an outcome of the audit. The Contractor must return a signed copy of the audit report to HanRoy within three days of receiving the audit report, confirming agreement with or rejecting the audit findings. Audit findings and the associated required actions will be recorded for action and close out. The records will detail the source of the action (e.g. audit, inspection or other), the action required, target close out date, actual close out date and the person responsible for the action item.

Inspections of work sites will also occur on approximately a weekly basis depending on the environmental risk posed by the relevant activities. Any actions arising from the inspections will be recorded for action by the relevant personnel or Contractor. Inspections will be informed by a detailed inspection checklist that addresses the potential environmental issues that could occur within the scope and area of work.

All audit and inspection results will be maintained.

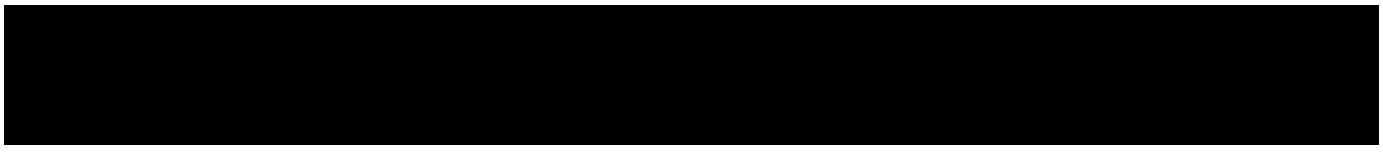


Table 2-2 HanRoy Environmental Audit and Inspection Schedule

Compliance Focus	Compliance Process	Frequency
HanRoy compliance with own systems which may result in the Project document updates and re-issue	Internal Standards review	Bi-annual
Contractor post mobilisation audit	Site audit ≥ 6 weeks after mobilisation	One off
Contractor compliance with own systems	Audit against Contractor Environmental Management Plans, Procedures and KPIs	Annual
Contractor compliance with Project environmental management systems	Audit against Environmental Compliance Standards (HNR-00000-EN-STD-0001)	Quarterly
Ground Disturbance Permit compliance inspection	Compliance with clearing limits and conditions (HNR-00000-EN-TEM-0011)	Monthly
Site Inspections	Compliance against General Area Environmental Inspection (HNR-00000-EN-TEM-0003)	Weekly

2.2.14.2 Contractor Audits and Inspections

The Contractor must conduct environmental inspections at least weekly and inspect work areas and activities of their personnel as well as their subcontractors. The Contractor must develop a suitable detailed inspection checklist that addresses the potential environmental issues that could occur within their scope of works. The Contractor must submit the inspection checklist to HanRoy for acceptance prior to its use on site.

The Contractor must conduct internal environmental audits monthly or at a frequency agreed with the HanRoy Environment Manager. The Contractor must submit an audit and inspection schedule for acceptance by HanRoy. All audits and inspections results must be maintained.

2.2.14.3 External Audits

HanRoy must give the Contractor a minimum two-weeks advance notice (where possible) of external audits and required attendees. The timing of such audits may be outside the control of HanRoy. External audits and inspections of HanRoy Projects may be conducted by regulators (such as Department of Water and Environmental Regulation) to ensure compliance with permits and licences as well as commitments made by HanRoy. For such audits and inspections, HanRoy site environmental advisor, environment manager and other representatives of HanRoy will accompany the regulator at all times.

The findings and recommendations arising from the external audit must be recorded as corrective actions and managed to close out in agreed time frames.

[redacted]

3 Environmental Management and Minimum Standards

This section provides details on the environmental management requirements to be applied in relation to any HanRoy Project.

3.1 General Principles

The following general environmental management principles must be complied with at all times:

- All works must be performed in a way that minimises impacts on the natural environment and complies with legislation, regulations, approvals, licence and permits as well as meeting the minimum requirements outlined in this document
- All works must be conducted in accordance with a GDP and must comply with the conditions of the GDP.
- Greenhouse gas emissions should be considered in design and reduced as far as practical over the life of project;
- There must be no unauthorised release of any pollutant to the atmosphere, water or land. Suitable equipment must be used and maintained and training, work practices and other necessary precautions must be taken to minimise the risk of pollution;
- Where the release of any pollutant occurs, an incident investigation and remediation of the affected area is to be conducted;
- Ground disturbance and vegetation clearing must be minimised at all times and conducted only in accordance with an approved GDP;
- Native fauna must be protected at all times and must not be fed, harassed or otherwise interfered with;
- Entry to known Aboriginal Cultural Heritage places is always prohibited, except in accordance with an approved GDP;
- Procedures must be implemented to manage vehicle hygiene and to control the importation or movement of weed species and plant pathogens;
- Waste generation must be minimised and all waste must be disposed of, recycled or reused in accordance with best practice and relevant legislation;
- Dust control measures must be implemented for all construction at site;
- Noise generation must be managed within regulatory and licence requirements;
- Rehabilitation must be carried out as soon as practical at any area of site disturbed during construction unless otherwise agreed with the HanRoy Environment Manager;
- Data must be captured, recorded and maintained for external environmental reporting and auditing;
- All incidents must be reported through the Incident Reporting System; and
- Contingency actions, corrective actions and recommendations identified through audits, inspections and incident investigations must be implemented.

3.2 Environment in Design

Environmental considerations must be incorporated into design to minimize impacts to the environment and comply with approvals, licences, application commitments, best practice and permits as well as meeting relevant standards.

3.2.1 General Project Environmental Design Requirements

Table 3-1 outlines the general requirements applicable to all Project areas.

Table 3-1 General Project Environmental Design Requirements

Aspect	Design Requirement
General	Design of all infrastructure is to be in accordance with the relevant Mining Proposal or Works Approval
Fauna	Barbed wire must not be used on the Project without specific authorisation from the HanRoy Environment Manager.
Vegetation Clearing, Flora and Topsoil Management	Clearing of vegetation must be kept to a minimum at all times. Design must consider vegetation types to minimise impact on Mulga vegetation and avoid priority flora where possible
Dust	Consideration should be given to the prevailing wind direction and potential for dust deposition at sensitive receptors or residences when designing roads and other infrastructure.
Weed	Weed wash-down facilities must meet the following requirements: ▪ The facility must enable a clear separation of vehicle/equipment wheels or tracks from the material that is being washed off; ▪ Dirty wash-down water must be able to drain efficiently to an earthen infiltration sump; ▪ Only water (no detergent) must be used for wash-down; ▪ The earthen infiltration sump must be accessible using a front end loader to periodically remove wash-down sediment; and ▪ Self-contained systems that recycle wash-down water are acceptable provided the water is filtered to prevent seeds from being circulated through the system.
Groundwater	All turkey's nests must be lined, fenced and fauna egress installed.
Surface Water	The Contractor must ensure that stormwater is adequately managed so that: ▪ It is diverted from areas of the site where there is waste or potential contamination; and ▪ Water that has come into contact with waste is to be diverted into a sump on the site, or otherwise retained on the site.
	Surface water management must include the following: ▪ Design, construct and implement measures that minimise disturbance to creeks and vegetation such as Mulga communities reliant on sheet flow or surface water flow ▪ Undertake culvert design and stabilisation including: ▪ Maintaining existing drainage patterns; ▪ Identifying drainage requirements and sizing culverts prior to construction; and ▪ Culverts designed to accommodate seasonal flows and appropriate flood levels. ▪ Install rip-rap rock protection to minimize erosion; ▪ Design final landforms in rehabilitation areas to be self-draining; ▪ Implement erosion control measures in disturbed areas (e.g. borrow pits) to ensure surface water runoff does not lead to erosion, sedimentation or ponding; ▪ All road infrastructure corridors are to incorporate floodways' drains, culverts and bridges; and ▪ Implement measures to reduce alterations in sheet flows and downstream sedimentation regimes from pits and infrastructure.
	Where stormwater sheet flow is concentrated due to mining activities, the following structures should be used downstream of the concentrated flow to minimise erosion: ▪ Flow diversion banks; ▪ Trench spreaders; and ▪ Level spreaders.
	No structure may obstruct the free flow of a river or creek.
	Watercourses crossings must be reduced to a minimum and crossings consolidated with other infrastructure, where practicable.
	The design of sheet flow structures will be undertaken in conjunction with the road/rail design.

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Aspect	Design Requirement
	Surface water diversion structures must be designed, installed and managed to enable non-contaminated water to be directed around disturbed and construction areas.
	Diversion channels must be constructed with similar gradients to the natural drainage systems in the Project area.
	Diversion channels must be constructed such that water is returned to the same downstream creek as it originated, where possible
	Storm water released from construction areas must be discharged via sediment reduction controls.
	Sedimentation controls must be constructed immediately around large areas of clearing at risk of generating runoff and erosion.
	Rock armouring must be used in areas with potentially high erosion (e.g. steep gradients and bends).
	At (diversion) channel outlets or culvert outlets energy dissipaters are recommended to minimise erosion at the outlets due to change in flow velocities.
	Linear infrastructure corridor design will consider the natural topography to minimise the number of culverts and bridges required.
	Design bridges, culverts and river crossings to reduce alteration of flows and water quality during flow events as far as practicable.
Noise and Vibration	Operating noise, vibration and potential mitigation measures (e.g. sound absorption devices) must be considered when selecting equipment for the Project.
	Noise reduction technologies and equipment is to be used where appropriate
	Noise sensitive design will be used to minimise the impacts during operation (e.g. sizing rail loops to facilitate the smooth approach of trains).
	Consider the potential for excessive noise and vibration at sensitive places/residences when designing roads, rail loop and other infrastructure.
Light Emissions	Low ultraviolet emitting fixtures on tall, mounted structures must be used.
	Light shields, amber filters and yellow lighting must be used at sensitive locations.
	Motion detectors must be utilised to trigger lights.
	Luminaries must be positioned to directly focus on the intended target. Light spill must be minimised.
	The use of tungsten, halogen, and low voltage dichroic or incandescent luminaries must be avoided.
	Highly efficient, long lamp life fittings must be used.
	T5 fluorescent lighting must be selected in lieu of T8 fluorescents.
	Minimum wattage, low flux output lamps which safely fulfill the needs of a specific task must be utilised.
	Electronic lighting control gear must be installed on Project luminaries to manage voltage, reduce energy consumption and increase lamp life.
	Light outputs must comply with Australian Standard and Building Code of Australia (The Building Code of Australia) maintenance levels.
	All outdoor lighting must be provided with automated control.
	Select lighting with beam characteristics applicable to the specific task at hand.
	Luminance at onsite accommodation must not exceed window luminance of 1 lux.
Fire	A firebreak at least 3 metres wide must be cleared and maintained around landfill boundaries at all times.
	Implement a fire break around camps, key infrastructure (e.g. telecommunications towers) and active construction locations.

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Aspect	Design Requirement
Hazardous Materials	Equipment will be designed and operated to prevent spills and leaks through the provision of inbuilt safeguards such as relief valves, overflow protection, and automatic and manual shut-down systems.
	Design infrastructure and select laydown areas to limit the potential for surface water and groundwater contamination, e.g. fuel tank locations, locomotive refuelling sites.
	Bunded storage areas must be graded to drain away from the storage tanks to a sump which can be emptied or pumped, as required.
	Distances between diesel fuel tanks and bunding must be maintained as described in Australian Standard AS 1940:2004 The Storage and Handling of Flammable and Combustible liquids (AS 1940-2004).
	All hydrocarbon and chemical transfer points must be secondarily contained.
	All bulk chemical and hydrocarbon storage facilities must comply with the requirements of the Dangerous Goods (Storage and Handling) Regulations 2000 and Australia Standard AS 1940 The Storage and Handling of Flammable and Combustible Liquids (AS 1940-2004).
	Where facilities hold multiple storage containers, bunding must be capable of holding no less than 110% of the volume of the largest storage vessel and at least 25% of the total volume of substances stored.
	All storage tanks and associated pipelines must be located above ground.
	Meters must be fitted to all hydrocarbon transfer pumps to enable volumes to be recorded.
	HDPE liners used for bunding must have maximum permeability of 1x10-9 m/s. Black 'builders plastic' must not be used for lining bunds.
Waste	Landfill sites will not be located between production bores used for drinking water supply and the camp.
	Landfills will be constructed such that a separation distance of at least 3m between the base of landfill disposal area and the highest level of groundwater can be maintained at all times.
	The proposed landfill will be designed to ensure leachates from the landfill do not enter the groundwater, and surface water is prevented from mixing with waste and carrying contaminants off-site.
	During operation of landfill, the tipping area of the landfill trenches must remain not greater than: ▪ 30 metres in length; and ▪ 2 metres above ground level in height.
	The following must be incorporated into landfill design: ▪ Diversion of storm water around the facility; ▪ Fencing and lockable gates around the landfill using 1.8m high security fencing; ▪ Appropriate signage for the landfill, including signage within the facility to designate specific areas e.g. recycling area, tipping area; and ▪ A firebreak of approximately 3m around the boundary of the landfill
Wastewater	Level indicators must be fitted on all demountable toilet blocks to indicate that the facility is nearing capacity.
	Wastewater treatment systems must not be in a trafficable area.
	Wastewater and sewage will be treated onsite via packaged Wastewater Treatment Plants (WWTP).
	WWTPs will be designed in accordance with the following: ▪ Water Quality Protection Note No.22 (DoW, 2008); ▪ Draft Guidelines for the use of recycled water in Western Australia (DoH, 2009); ▪ National Water Quality Management Strategy – Australian Guidelines for Sewage System: Effluent Management (ARMCA & ANZECC, 1997); and ▪ Works approval or operating licence issued for the facility.

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3.2.2 Mine Environmental Design Requirements

Table 3-2 outlines the environmental design requirements applicable to all Mine Project areas.

Table 3-2 Mine Environmental Design Requirements

Aspect	Design Requirement
Vegetation Clearing, Flora & Topsoil Management	Location of infrastructure must consider minimising impacts to Mulga vegetation. Diversion and redistribution of surface water flows will be implemented within the project area to maintain surface flows to Mulga areas where required.
	In areas where sheet flow dependent Mulga occur downstream of linear infrastructure, environmental culverts will be placed at 50m intervals and sized for a relevant rainfall event.
Dust	Water sprays are to be installed on the discharge end of the stacker boom at the plant crushed ore stockpile which operates continuously during discharged onto the stockpile.
	Design of the Mine Processing Plant such that the moisture content of ore from the mine will be loaded for transport to the Port facility at or above dust extinction levels.
Surface Water	Surface water management structure and drainage systems will be constructed to maintain surface water flows across the Mine project area and to ensure that surface water quality is maintained and trigger values are not exceeded.
	Infrastructure is to be located, where practicable, to avoid drainage lines.
	Avoid or minimise directional changes in flow regimes and structures that will increase flow velocities.
	Waste Rock Dump embankment slopes will be designed to encourage water infiltration and reduce erosion and water runoff.
	Design mine structures to avoid and minimise adverse impacts on ground and surface water quality.
	Design and install dispersion systems at the discharge point of diversion drains to reintroduce sheet flow, minimising the impact on the downstream environment.
	Redistribute diverted stormwater to natural water courses downstream of the Project area.
	The surface drainage across the mine will be constructed to direct stormwater away from infrastructure areas, cleared or rehabilitation areas, to prevent excessive erosion during storm events.
	Construct sedimentation controls prior to disturbing large areas for infrastructure or mining.
	Runoff from ore stockpiles will be diverted into sediment basins.
	Maintain the natural shape of creek banks and avoid altering the gradient of the bed whenever possible.
	Spreader ditches will be designed specific to each flow outfall location based on receiving flow.
	Design, install and manage surface water containment structures that will enable potentially contaminated water to be collected and managed.
	New tracks will be made at natural ground level to minimise disturbance to surface water flow.
	All rock armouring and protection required for surface water management structures should be designed in accordance with the relevant Mining Proposal.
Hazardous Materials	Diesel powered mobile equipment such as lighting towers and dewatering pump generators will be fitted with an integral self-bunded day tank for storage of fuel.
	As far as practical, underground pipelines for the transport and distribution of hydrocarbons will be avoided. In those situations where it is unavoidable, the pipelines will be contained within a secondary duct and containment facility. The duct and containment facility will be designed to facilitate pipeline inspection, leak and rupture detection and to allow for recover for any leakage that may occur.
	Best practice fuel supply options for generators, and for the generation of power for mobile lighting rids, will be considered during detailed design and at equipment selection stage (e.g. use biodiesel, solar generation).
	The site infrastructure will include storage facilities for Ammonium Nitrate [AN], emulsion-based explosives, boosters and detonators. Storage facilities will be located, designed and operated in accordance with AS

Aspect	Design Requirement
	2187.1:1998 Explosives – Storage, transport and use – Storage. The facilities will be licenced in accordance with Dangerous Goods Safety (Explosives) Regulations 2007 (Dangerous Goods Safety (Explosives) Regulations 2007).
	The Ammonium Nitrate facility will be located in a separate area as required in the Storage and handling of flammable and combustible liquids Guidelines (Standards Australia Publications, 29 October 2004).
	Boosters and detonators will be held in magazines. Site storage is determined by the requirement to maintain minimum inventory due to road closure.
	Boosters and detonators will be held in magazines. Magazines will be located to comply with required separation distances and mounding requirements. All explosives will be held within a dedicated facility that is licenced in accordance with Western Australian Dangerous Goods Safety (Explosives) Regulations 2007 (Government of Western Australia, July 2007) and Federal Government Guidelines for Security Sensitive Ammonium Nitrate (COAG, 2004).
Waste	Onsite landfill will be designed and operated in accordance with: ▪ Relevant Operating Licence; and ▪ Environmental Protection (Rural Landfill) Regulations 2002.
	Prior to operation of the landfill facility, a groundwater monitoring bore will be installed up gradient and down gradient of the groundwater flow at the landfill site, within approximately 30-40m of the landfill.
Rehabilitation and Closure	Waste Rock Dumps [WRDs] will be designed in accordance with the specifications in the relevant Mining Proposal.
	Permanent WRDs will be engineered to reduce the risk of erosion or major movement.
	The height of WRDs will be designed to be consistent with the surrounding terrain while minimising the footprint and area required for clearing.
	Potential impacts associated with the storage of overburden will be managed through the following strategies: ▪ Design and construct the WRD to blend with the natural landforms found within the Project area as far as practicable; ▪ Progressive rehabilitation and revegetation of the lower slopes during operation of the WRD; ▪ Direct surface water around the toe of the WRD to minimise the potential for stormwater to undermine the foundation of the structure; ▪ Embankments of the WRD to have an average slope of less than 18 degreed to minimise erosion and increase the revegetation and stabilisation of the slope; ▪ Use a store and release cover system to prevent stormwater overtopping the WRD and causing excessive erosion; ▪ Undertake an accurate assessment of the overburden volume available for backfill to ensure optimised backfilling of mined out pits to minimise the size of the out of pit storage facility; and ▪ Where surface depressions will remain post-closure they are to be free draining to prevent water ponding.
	WRD must be designed to ensure adverse material (dispersive material/PAF) is located within the centre of the WRD and above the predicted Probable Maximum Flood [PMF] level.
	The closure design of the WRDs will be based in part on the PMF to ensure stability post closure. This includes rock armouring of the base of the WRD above the PMF level that will be sized to withstand the PMF event.
	The WRD and Tailings Storage Facility [TSF] will be located, designed and constructed to ensure that they are non-polluting and so that their final shape, height, stability, surface drainage, resistance to erosion, ability to support native vegetation are comparable to natural landforms in the area.
	The detailed engineering of the proposed WRD and overburden back fill operations will require consideration to the management of PAF minerals should any be removed or exposed by mining operations.
	The final waste landforms will adhere to the design principles and rehabilitation practices outlined in the relevant Mining Proposal.
	The TSF must be designed and constructed in accordance with the relevant Mining Proposal.
	The Mine Processing Plant will be designed and constructed in accordance with the relevant Mining Proposal.

[redacted]

3.2.3 Rail Environmental Design Requirements

Table 3-3 outlines the environmental design requirements applicable to all Rail Project areas.

Table 3-3 Rail Environmental Design Requirements

Aspect	Design Requirement
Vegetation Clearing, Flora and Topsoil Management	Location of infrastructure must consider minimising impacts to Mulga vegetation. Diversion and redistribution of surface water flows will be implemented within the project area to maintain surface flows to Mulga areas where required.
Fauna	Crossings must be provided for livestock.
	Fauna friendly culverts will be constructed at locations where they maximise the benefit to listed threatened species (e.g. Bilby and Northern Quoll).
	To maximise fauna use of culverts, the diameter of culverts should be the largest possible that the depth of the rail line embankment will allow.
	It is recommenced that some soil substrate is placed in the culvert after construction to encourage fauna use of culverts.
	It is recommended that culverts be installed as close to ground level as possible to avoid vertical surfaces at culvert entrances that may obstruct entry by fauna, or make it difficult for fauna to locate culverts.
Surface Water	Culverts and bridges will be designed with consideration of the ecological water requirements for sensitive areas, particularly the Fortescue Valley and Mulga vegetation
	Design (bridge) crossings to accommodate at least 1:100 ARI year rainfall events. Note: Culvert crossings are to be designed to accommodate at least 1:20 ARI year rainfall events.
	Install scour protection blankets at inlets and outlets of culverts where practicable.
	Install stabilising material on steep areas that have been cleared adjacent to drainage channels.
Borrow Pit	Borrow pits must be: ▪ Designed, constructed and rehabilitated to not form permanent water bodies and to minimize ponding of water following rainfall events; ▪ Designed, constructed and rehabilitated so groundwater is not intercepted; ▪ Designed, constructed and rehabilitated so that fauna have easy egress from borrow pits; ▪ Rehabilitated to form stable landforms not prone to erosion, able to support self-sustaining native vegetation and comparable to surrounding environment; ▪ Designed, constructed and rehabilitated so that pit slopes are constructed to a 1V:5H or greater; ▪ Designed, constructed and rehabilitated so that no surface or batter slumping or collapse that impacts on local hydrology; ▪ Rehabilitated so that no new weed species exist and that the cover of weeds within the borrow pit area is comparable to the surrounding landscape; and ▪ Designed, constructed and rehabilitated to minimize risk to people and animals.

3.2.4 Port Environmental Design Requirements

Table 3-4 outlines the environmental design requirements applicable to all Port Project areas.

Table 3-4 Port Environmental Design Requirements

Aspect	Design Requirement
Vegetation Clearing, Flora and Topsoil	Design and construct the Port Ore Handling facilities [OHF] to minimise impact on mangroves and maintain existing ephemeral and tidal flows
Dust	Consideration should be given to the prevailing wind direction and potential for dust deposition at sensitive receptors or residences when designing roads and other infrastructure.
	Installation of dust monitoring equipment (e.g. weather station, BAM 1020 etc.) must be undertaken in accordance with relevant approvals.
	The Port OHF is to be designed such that the moisture content of ore received will be maintained at or above dust extinction levels of the ore.
	All machinery within the OHF must be designed for operation with minimum practical dust emissions.
	Car dumper facility and screening plant must be fitted with bag house dust extraction systems.
	The car dumper will be enclosed and include a close fitting cover that prevents the development of free dust.
	The lump and fines surge bins must be covered to reduce the egress of dust from the top of the bins. The bins area connected to the screening plant bag house dust extraction system.
	The OHF control system will be configured to prevent the overfilling of conveyors i.e. conveyor belt capacity will not be exceeded.
	All conveyors must include measures to reduce dust emissions as far as practicable, including using appropriate scrapers, sprays and/or belt wash stations to ensure each the belt is appropriately cleaned
	The elevated overland conveyor will be covered along its length with a cover designed to act as a wind break and minimise fugitive dust emissions.
	Where the overland conveyor crosses the BHP access corridor the conveyor must be fully enclosed to prevent spillages and interference. All other parts of the overland conveyor must be fitted with conveyor noise/dust covers only.
	All transfer stations are to be designed, constructed and operated to prevent dust generation and spillage or loss of material. Transfer stations must include: ▪ Dust tight covers are to be installed on all transfer chutes ▪ Dust curtains at the entry and exit of the belts into the chutes; ▪ Dust proof skirts prior and post the impact areas fitted with dust curtains; ▪ Two dust curtains a minimum of 150mm apart prior to the impact area; ▪ Double dust curtains must be provided at the belt discharge from the skirts and separated by a suitable length to enable the dust to settle and a misting spray to be used if required (approximately 1500mm); ▪ A rubber seal below the return belt, where the belt exits the discharge chute; ▪ Spray bars will be included at the exit chutes for all transfer stations; and ▪ Inspection and access doors must be sealed and ensure dust is not released.
	Transfer stations on the elevated overland conveyor include: ▪ Solid flooring; and ▪ Belt wash stations, if the return belt is not travelling over solid flooring.
	OHF stockpile area dust suppression system includes: ▪ Water cannons installed parallel to each row of stockpiles; ▪ Water cannons positioned to suit water spray trajectory, height and slope of stockpiles; and ▪ Consideration of chemical suppressants, if practicable.
	Stackers must include sprays at the boom discharge located to spray the outer surface of the ore stream after discharge from the boom. The stacker sprays must be adjustable for the stacking rate to prevent over wetting of the product.

[redacted]

Environmental Compliance Standard

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Aspect	Design Requirement
	The stackers must be fitted with a wind hood on the discharge.
	Discharge from the stacker boom conveyor must free fall from the conveyor head pulley with a dust curtain and spray bar required to control nuisance dust. The stackers will have a wind hood on the discharge. The location of dust suppression sprays must be selected to minimise dust emissions from machine operation.
	The Reclaimer must include sprays at the bucket wheel positioned to wet the stockpile at the digging face. Water sprays must be provided on the reclaimer boom conveyor prior to discharge into the central chute and at the end of the yard conveyor loading zone.
	The shiploader must include water sprays at the boom discharge to spray the outer surface of the ore stream after discharge from the boom.
	All primary and secondary scrapings from shiploader boom return belt must be directed into the main ore stream falling onto the boom conveyor, or the ships hold.
	A capping layer of sub-base quality material must be used to provide unsealed hardstands in the stockpile areas, conveyors and road corridors.
Surface Water	Stormwater and stockpile drainage collected from the stockpile areas is to be diverted to sedimentation ponds.
	Culverts within the existing OHF rail loop embankment are to be retained and not blocked
	Containment bunds must be graded to drain away from facilities to a lined sump via gravity feed or self-starting sump pumps. Wastewater will be treated with oily water separators with treated water being transferred to holding tanks and sludge waste pumped by a Controlled Waste Contractor on a periodic basis for offsite disposal to a licenced facility. Treated water will be returned to the process feed if deemed appropriate or removed for offsite disposal at a licenced facility.
	Containment bunds around certain facilities (car dumper, light vehicle washdown, screening plant and septic tanks) will be designed to minimise stormwater entry.

[redacted]

3.3 Management Plans & Procedures

Minimum environmental compliance standards relevant to HanRoy Projects are outlined in Section 4.2.

Various management plans and procedures will be developed by HanRoy for implementation during construction of each HanRoy Project dependant on risk and potential impact. Table 3-5 outlines management plans required for HanRoy Projects which will be developed by HanRoy. Contractors are to have regard to the contents of the Management Plans and ensure their works comply with the requirements of the management plans. Specific procedures may also be required to be developed and implemented and are to be communicated to all site personnel.

Table 3-5 HanRoy Developed Documentation

Document Title	Document Number	Project
Terrestrial Fauna Management Plan(s) [Project specific documents]	TBC	Hub Rail Mainline Rail Spur Mine
GHG Management Plan(s) [Project specific documents]	TBC	All
Social Cultural Heritage Management Plan(s) [Project specific documents]	TBC	Hub Rail Spur Mine
Dredge Management Plan	HNR-00000-EN-PLN-0001	Port
Car Dumper Dewater Discharge Monitoring and Management Plan	TBC	Port
Roy Hill Port Expansion Project: Offshore Disposal Management Plan	TBC	Port
Dewatering Outfall Management Plan	TBC	Port
Project Execution Plan [PEP] (Marine Environmental Monitoring)	HNR-00000-EN-PLN-0002	Port
Port Dust Management Plan	TBC	Port
Groundwater Operating Strategy	TBC	All
Rehabilitation Permit Procedure	TBC	All
Drill and Blast Activities near Aboriginal Heritage Sites Procedure	HNR-00000-HE-PRO-0002	Rail Spur Mine Rail Mainline
Newly Identified Aboriginal Cultural Heritage Procedure	HNR-00000-HE-PRO-0005	All
Aboriginal Cultural Heritage Demarcation Procedure	HNR-00000-HE-PRO-0004	All
Aboriginal Cultural Heritage Management Specification	HNR-00000-HE-SPC-0001	All
Incident and Hazard Reporting Procedure	HNR-00000-HS-PRO-0023	All
Ground Disturbance Permit Procedure	HNR-00000-EN-PRO-0005	All
Spill Response Procedure	HNR-00000-EN-PRO-0006	All
Hot Work Permit Procedure	TBC	All

Appendices

Appendix 1 provides a list of all HanRoy documentation, copies of documentation to be provided to the Contractor.

[redacted]

4 Reporting & Record Keeping

4.1 Monitoring & Reporting Requirements

Environmental monitoring is required under various permits, approvals, licences and legislation. A range of environmental data must be maintained and may be used in reporting under legislation, approvals or licences or as evidence of legal compliance. All data records must be correct and auditable.

HanRoy will provide the Contractor with a reporting template (Data Entry Form) to include environmental data relevant to any legislative requirement, approval, licence or permit associated with their SOW. All relevant data must be recorded, maintained and reported to HanRoy via the HanRoy environmental management system (Envirosys) on a minimum monthly basis. The data provided by Contractors is required to be reviewed and quality controlled by the Contractor prior to reporting to HanRoy.

The Contractor must be responsible for verifying and quality controlling all data reported in relation to their site activities. All relevant data must be recorded, maintained and reported to HanRoy on a minimum monthly basis. Data required to be recorded and maintained is detailed in Table 4-1. Additional data may be required to be collected under various approvals, licence or permits upon issue, upon which this document will be updated.

All incidents and non-conformances will be reported in accordance with the incident and hazard reporting procedure. HanRoy will conduct external reporting as required by regulatory approvals and legislation.

Table 4-1 Reporting Requirements

Reporting Requirements	Aspect	Information Required Includes:
Annual Environmental Report Compliance Assessment Report Impact Reconciliation Report	Land Clearing and Rehabilitation	Purpose or facility for which work was undertaken HanRoy Site Work location Corresponding GDP number Contractor company undertaking the works Area cleared and rehabilitated in hectares Methodology used for rehabilitation Shape file or coordinates (Eastings and Northings MGA50, GDA 94)
National Greenhouse and Energy Reporting National Pollutant Inventory	Greenhouse Gas Energy Consumption Energy Production	Diesel consumed: split by consumption into individual plant, vehicles and other engines Petrol consumed: split as with diesel usage Explosive usage: split by ANFO use, emulsion use or other use Receipts for fuel use (scanned copies)
National Pollutant Inventory	Switching Gear Insulation	Sulphur Hexafluoride (SF6) inventory (specific to switching insulation applications)
National Pollutant Inventory Annual Environmental Report	Waste Water Treatment Plants [WWTPs]	WWTP sludge removal volumes Controlled waste receipts and tracking numbers retained Daily volume discharged to spray field Water quality testing results that may include Total N, Total P, TSS, BOD, E-coli, pH
Compliance Requirement	Controlled waste	Records maintained on site for inspection, of all controlled waste types and quantities removed from site for disposal. This would typically include but is not limited to: ▪ waste oils; ▪ hydrocarbon contaminated waste; ▪ sewage sludge; and

[redacted]

Reporting Requirements	Aspect	Information Required Includes:
		▪ used cooking oils. Copies of tracking numbers and receipts retained for audit purposes throughout the construction period.
Compliance Requirement	Contaminated Soils	Volume and type of materials transported offsite.
Annual Environmental Report	Topsoil	Volume, location and placement date of topsoil stockpiles.
Annual Aquifer Review	Water Abstraction	Total water abstraction volumes for each operating bore. Records must include daily readings and be cumulative against the licensed abstraction limit for each bore.
Compliance Requirement	Fauna Mortalities	Records of deceased fauna related to Project works and fauna sightings.
Compliance Requirement	Fauna Rescue	Records of trench logs as per trench log templates. Records of morning and evening trench inspections using trench log templates. Records of fauna successfully removed from work areas including trenches. Evidence of suitably licenced/qualified personnel. All records required from trapping and translocation program.
Compliance Requirement	Hazards and Incidents	As per incident and hazard reporting procedure.
Compliance Requirement	Audits and Inspections	Environmental inspections planned. Environmental inspections completed. Environmental audits planned. Environmental audits completed.
Compliance Requirement	Training	Training sessions planned. Training sessions completed. Records of attendance are to be maintained onsite for audit purposes

4.2 Record Keeping

Auditable records for all environmental reporting will be retained throughout the construction period. All records are to be transmitted to HanRoy prior to the completion of construction or demobilisation of a Contractor from site. These records will be used as evidence of legal compliance and may be required to be produced during site audits. Records must be maintained including:

- Training records;
- Incident report forms;
- Audit and inspection forms;
- Corrective Action Register [CAR];
- Monitoring results;
- Monitoring equipment calibration results;
- Controlled waste receipts and tracking numbers; and
- Weights of waste to landfill, waste recycled and waste disposed of offsite.

All records generated as a result of environmental management must be maintained for audit and inspection purposes.

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5 Environmental Compliance Standards

This section details minimum environmental compliance requirements to be adhered to by all Contractors and company personnel, in addition to requirements of legislation, approvals, licences and permits relevant to the works.

5.1 Vegetation Clearing, Flora and Topsoil Management

Objectives	▪ **Minimise adverse impacts on the abundance, species diversity, geographic distribution, and productivity of vegetation communities.** ▪ **Maintain ecological integrity and seed viability in stripped topsoil and cleared vegetation for use in rehabilitation.**
Targets	▪ Zero clearing outside approved clearing areas. ▪ Soil stockpiles are identified, signposted, accessible and locations mapped. ▪ No significant erosion from soil stockpiles, cleared areas or rehabilitated landforms. ▪ Maximum clearing limits as per the relevant approval specific to each Project. ▪ Demonstrate that clearing of native vegetation is minimised to the extent practicable.

Environmental Compliance Standard		Project
1.01	No construction works, ground disturbance or vegetation clearing or damage, is permitted be undertaken without an approved Ground Disturbance Permit [GDP]. Conditions of GDPs must be complied with.	All
1.02	The Contractor is to submit the Ground Disturbance Application [GDA] at least two weeks prior to when the GDP is required for works to start. The GDA must include the following: ▪ Permit title ▪ Description of works to be completed under the GDP ▪ Commencement and Completion date of works ▪ Person Responsible for the works to be completed under the GDP ▪ Spatial data (shapefile, dxf etc) of the GDP boundary.	All
1.03	GDA can only be submitted for areas covered by HanRoy approvals and tenure.	All
1.04	Works cannot commence until a signed GDP release form has been completed (HNR-00000-EN-TEM-0009).	All
1.05	A copy of the GDP, associated maps and relevant documentation stating controls/conditions must be available in the field during ground disturbance activity.	All
1.06	The Contractor is to ensure a Spotter is present where clearing is being conducted within 10m of any of the following: ▪ A GDP boundary; ▪ A heritage or environmental avoidance site; ▪ A tenement boundary; or ▪ Any avoidance area. ▪ Direct contact between the Spotter and the Operator must be adhered to at all times.	
1.07	All supervisors and other relevant personnel must complete GDP training	All
1.08	Machine used for clearing activity are required to be fitted with a high-precision GPS (+/- 1m), with the GDP reference and clearing polygon uploaded to the in-cab system.	All
1.09	All GDP boundaries must be clearly delineated in the field by a qualified surveyor, pegged and flagged with blue and white tape at intervals where the next marker is visible, to a maximum of 30m intervals, when standing at the previous marker.	All

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Environmental Compliance Standard

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Environmental Compliance Standard		Project
1.10	A clearing and topsoil management procedure must be developed and implemented and include provisions ensuring only the minimum clearing is undertaken. The procedure must be submitted to, and approved by, HanRoy prior to clearing works being undertaken.	
1.11	Adequate resources, including training, must be provided on site for implementation of the GDP requirements.	All
1.12	Clearing and management of topsoil must be specified within the GDP to ensuring only the minimum clearing is undertaken.	All
1.13	Off road vehicle movement is prohibited, unless approved through the GDP process (e.g. earthmoving equipment).	All
1.14	Clearing of vegetation (i.e. damage to vegetation including driving over it) must not occur unless approved under a GDP and must be minimised wherever practicable. Where possible, more heavily vegetated areas, and vegetation along water courses should be avoided. Existing cleared areas and tracks must be preferentially utilised for temporary construction facilities.	All
1.15	Any non-compliance with GDPs is to be reported as an incident.	All
1.16	Progressive clearing and rehabilitation must be implemented where cleared areas are no longer required.	All
1.17	Topsoil must be removed prior to construction of all infrastructures except for surface laid pipes. Topsoil must be stripped to a minimum depth of 200mm unless otherwise approved within the GDP.	All
1.18	Stripping of topsoil will be conducted in accordance with GDP conditions.	All
1.19	Topsoil stockpiles will be paddock dumped to increase surface volume ratio and allow infiltration of rainfall in between stockpiles.	Mine Hub
1.20	Topsoil stockpiles on Rail / Port project are to be maximum 1.5m in height.	Rail Spur Rail Mainline Port
1.21	Topsoil stockpiles on Mine project are to be maximum 3m in height	Mine Hub
1.22	Vegetation is to be mixed and stockpiled with topsoil (larger trees/logs can be separated if required) unless otherwise specified in the GDP conditions.	All
1.23	Topsoil must be reused immediately or stockpiled for rehabilitation. Topsoil stockpile location must be planned to prevent topsoil stockpile rehandling until required for rehabilitation.	All
1.24	Where marked on GDPs declared rare flora must be flagged on site and avoided, and priority flora should be avoided as far as practicable.	All
1.25	A spoil management plan must be developed and implemented and include provisions for temporary storage, reuse opportunities and permanent disposal. The spoil management plan must be submitted to HanRoy for approval prior to commencement of works.	All
1.26	To prevent hard-setting of soils, do not use water for dust suppression on topsoil (including during clearing).	All
1.27	Removal of topsoil should be avoided during high wind conditions (winds over 50km/h or 14m/sec), to minimise dust lift off, loss of resource and seed bank.	All
1.28	To prevent hard-setting of soils, topsoil collection must not occur during rainfall events (>15mm) and avoided when saturated following rainfall events.	All
1.29	Topsoil and vegetation stripped from weed risk areas must remain within the weed risk area and should be treated as waste (e.g. buried and encapsulated) unless otherwise specified in the GDP conditions.	All
1.30	The following flagging must be used: ▪ GDP boundaries – blue and white as 2 strands ▪ Demarcation of clearing boundaries within GDPs – different colour to those already used for other purposes ▪ Environmental Restricted Area – red and yellow as 2 strands ▪ Priority Flora – blue and yellow as 2 strands	All

[redacted]

Environmental Compliance Standard		Project
	▪ Aboriginal heritage restricted area – pink and black striped tape, or pink and black as 2 strands	
1.31	Signs must be placed on topsoil stockpiles. The signs must be as follows: ▪ Black lettering on a white background, with a lettering size that can be clearly seen from a vehicle at 10m away; ▪ Size of the sign should be at least 400mm by 400mm ▪ "TOPSOIL STOCKPILE – large lettering ▪ "Identification Number" – small letters ▪ "Date Established" – small letters ▪ "Source Location" – small letters ▪ "KEEP OFF" – large letters	All
1.32	All clearing of, or impacts to, mangroves must only be undertaken in accordance with an approved through a GDP.	Port
1.33	A Ground Disturbance site inspection must be completed monthly (HNR-00000-EN-TEM-0011).	All
1.34	A GDP must be surrendered and closed out once all clearing and/or activities identified in the Purpose and Outline of Work on the GDP have been completed. Following completion of works a Ground Disturbance Close Out Inspection (HNR-00000-EN-TEM-0008) must be completed.	All
1.35	The final 'rehabilitation' spatial data is to be submitted within 1 month of Rehabilitation works completion.	All
1.36	The partial 'as cleared' spatial data of any ground disturbance is to be submitted monthly as outlined in GDP and environmental reporting requirements.	All
1.37	The final 'as cleared' spatial data of any ground disturbance is to be submitted within 1 month of ground disturbance completion.	All
1.38	The final 'as built' spatial data of any infrastructure installed including composite services is to be submitted within 2 months of works completion.	All
Monitoring		
1.39	Compliance audits and inspections.	All
1.40	GDP compliance inspections (HNR-0000-EN-TEM-0011)	All
1.41	Topsoil stockpile inspections for evidence of water erosion, weeds and any signs of interference (HNR-00000-EN-TEM-0003).	All
1.42	Topsoil and subsoil stockpile dates, locations, source location and estimated volumes (HNR-00000-EN-TEM-0005).	All
Reporting		
1.43	Incident and hazard reporting.	All
1.44	Reporting of as cleared data and rehabilitation data as per requirements of the GDP.	All
Training		
1.45	GDP System Training.	All
1.46	GDP/Clearing Awareness	All
1.47	Significant Flora, Fauna and Weed Species Identification Guide	All

[redacted]

5.2 Fauna Management

Objectives	▪ **Minimise the temporary and permanent reduction or fragmentation of existing fauna habitat.** ▪ **Minimise the direct impacts on fauna including through vehicle collision, entrapment in construction works, or extraordinary exposure to predators.** ▪ **Minimise disturbance to and mortality of all protected or conservation significant fauna within any Project site.**
Targets	▪ Zero clearing to occur outside approved clearing areas. ▪ Avoid impacts to identified critical habitat features for threatened species. ▪ No mortality of listed fauna of conservation significance.

Environmental Compliance Standard		**Project**
2.01	Fauna management conditions on GDPs must be complied with.	All
2.02	Where significant fauna habitat is identified through the GDP process, specific management measures may be required and will be outlined on the GDP.	All
2.04	Trenches must be stopped and started at regular intervals with plugs between the sections to allow for the unimpeded movement of fauna.	All
2.05	Where possible trenching will be delayed until completion of welding and joint coating to ensure that trenches are open for the minimum amount of time.	All
2.06	Open excavations must be backfilled as soon as practicable.	All
2.07	Open excavations must be constructed with a permanent means of fauna egress.	All
2.08	Open excavations, wherever practicable, will be covered, fenced or bunded to prevent injury to fauna. Covers, fencing and bunding must be maintained to ensure their effectiveness.	All
2.09	Ramps providing egress points and/or fauna refuges providing suitable shelter from the sun and predators for trapped fauna must be placed in trenches at intervals not exceeding 50m.	All
2.10	Trenches not exceed a length capable of being inspected and must be cleared of trapped fauna by experienced fauna handling personnel at the following times: ▪ Daily no later than three hours post sunrise; ▪ Daily between the hours of 3:00 pm and 6:00 pm; and ▪ No more than half an hour prior to the backfilling of trenches.	All
2.11	In the event of rainfall, following the clearing of fauna from an open excavation, any pooled water in the open trench (except for groundwater) must be pumped out and discharged via mesh (to dissipate energy) to adjacent vegetated areas.	All
2.12	Fauna egress devices must be placed in all open water storage areas (e.g. turkey's nests)	All
2.13	Evaporation ponds and turkey's nests must be fenced (star picket and ring lock mesh fence or the like) to protect native fauna and stock and prevent access by feral animals.	All
2.14	Mechanisms must be installed to deter birds from evaporation ponds and tailings storage facilities (e.g. reflectors, flagging, rotating beacons etc.).	All
2.15	Pipe ends must be capped during pipe-laying works to prevent fauna entrapment.	All
2.16	Pets, off-road recreational vehicles and firearms must not be permitted on site.	All
2.17	Feeding and / or capture of native fauna or feral animals must not be permitted on site unless in accordance with an approved fauna study or management exercise.	All
2.18	Significant fauna and their habitats must be avoided wherever practicable.	All
2.19	Dead animals (e.g. road kill) must be removed from the vicinity of works and buried where possible to reduce the risk of vehicle impact to scavenging species.	All
2.20	Observations of feral or conservation significant animal species will be reported to the site Environmental Advisor.	All

[redacted]

Environmental Compliance Standard

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Environmental Compliance Standard		Project
2.21	All injuries or fatalities of native fauna must be reported as an environmental incident.	All
2.22	If a sick or injured animal is found, the Site Environmental Advisor must be contacted to assist the animal. Sick or injured wildlife will be cared for and if necessary will be taken to a wildlife rehabilitation centre. Critically injured wildlife may be euthanised in accordance with the DPAW Code of Practice for Wildlife Rehabilitation in Western Australia (DPAW 2020).	All
2.23	Prior to the commencement of piling operations each day a marine fauna observer(s), with appropriate skills and experience, must inspect a 300m radius around the work area for the presence of turtles and marine mammals; Piling must not commence until the marine fauna observer(s) has designated the area as clear no more than 15 minutes prior to commencement; and The marine fauna observer(s) must maintain records of all sightings of turtles and marine mammals and any other unusual observations, such as fish kills.	Port
2.24	An information package on turtles and marine mammals potentially occurring in marine or estuarine work areas must be produced and distributed to all personnel.	Port
2.25	Track and roadside signage must be erected identifying significant habitat and posting appropriate speed limits.	All
2.26	Drill and bore holes must be capped immediately after their completion.	All
2.27	Drill muds on the drill pad surface or within sump covered with dry soil to prevent fauna entrapment immediately after their completion.	All
2.28	Fishing is prohibited from Roy Hill Port infrastructure, including overland conveyor and wharf.	Port
2.29	Barbed wire must not be used in the site without specific authorisation from HanRoy	All
2.30	Fauna relocation must only be performed by trained personnel. Any fauna required to be caught must be done so manually, species identified and relocated immediately to nearby suitable habitat.	All
2.32	The Significant, Flora, Fauna and Weed Species Identification Guide (HNR-00000-EN-MAN-0001) must be issued and promoted to all personnel.	All
Monitoring		
2.33	Compliance audits and inspections.	All
2.34	Daily trench monitoring (HNR-00000-EN-TEM-0001).	All
2.35	Daily marine fauna monitoring prior to piling (HNR-00000-EN-TEM-0015).	Port
2.36	Pre-clearing fauna survey	All
Reporting		
2.37	Incident and hazard reporting.	All
2.38	All opportunistic sightings of conservation significant fauna (e.g. Pilbara Olive Python, Northern Quoll, Bilby, Ghost bat, Pilbara Leaf-nosed bat etc.) and feral animals must be reported to the Environment team (HNR-00000-EN-TEM-0012).	All
2.39	All fauna translocations must be reported to the Environment team (HNR-00000-EN-TEM-0010).	All
2.40	All fauna mortalities must be reported through the incident and hazard reporting system.	All
Training		
2.41	Marine fauna training.	Port
2.42	Fauna Handling training.	All
2.43	Snake Handling training.	All
2.44	Training sessions for personnel on priority fauna and feral animal identification and reporting requirements for priority fauna and feral animals.	All

5.3 Weed Management

Objectives	▪ **Ensure construction activities do not result in the introduction of new weed species or spread of existing weed species within any Project site.** ▪ **Reduce existing weed populations within Project sites where possible.**
Targets	▪ No new weed species are introduced into any Project site. ▪ Identified weed infestations are not spread beyond current surveyed boundaries in construction areas. ▪ Existing weed infestations are reduced or eliminated within Project sites.

	Environmental Compliance Standard	Project
3.01	All machinery and vehicles must be cleaned down of all soil and vegetation material prior to arriving or entering on site. Any soil and vegetation removed from machinery or vehicles during clean down must be collected and disposed of offsite.	All
3.02	All vehicles and machinery mobilised to site must be inspected prior to entry to site and issued with a Vehicle and Mobile Equipment Weed Hygiene Inspection Form (HNR-00000-EN-TEM-0014).	All
3.03	Imported fill, ballast, gravel or other potential weed mediums to be certified by the supplier as being free from weed free sources prior to arrival on site. Certification and completed Imported Materials Weed Hygiene Inspection Form (HNR-00000-EN-EN-TEM-0004) is to be provided to HanRoy.	All
3.04	A weed species identification guide, educational material such as crib room posters other weed related training material will be displayed and promoted listing weed species and control measures.	All
3.05	Periodic weed spraying must be undertaken.	All
3.06	Temporary weed washdown facilities must be installed at exit points to all weed risk areas. They must be designed and constructed to ensure adequate separation of vehicle treads with the material being washed down, an adequate drainage system to contain all wash down materials as well as enabling wash down material to be periodically cleaned out and disposed.	All
3.07	Weekly work area inspections, including rehabilitated areas, topsoil stockpiles and cleared areas, are to be conducted and are to include weed infestations. Weed infestations are to be reported as an incident.	All
3.08	Rehabilitation areas are to be inspected at a minimum annually for weed infestations.	All
3.09	Topsoil and vegetation stripped from weed risk areas must remain within the weed risk area and should be treated as waste (e.g. buried and encapsulated) unless otherwise specified in the GDP conditions.	All
3.10	A weed management procedure must be developed and implemented and must include: ▪ Prevention of the introduction and spread of new species of weeds (including both declared weeds and environmental weeds); ▪ Quarantine and disposal of weed infested topsoil; ▪ Control of identified weeds; ▪ Certification of imported fill, gravel, sand and ballast as weed free; ▪ A vehicle and mobile equipment weed hygiene inspection procedure; ▪ Maintenance of records; ▪ Vehicle washdown bays where required; and ▪ Management of washdown waste. The procedure must be submitted to HanRoy and approved prior to relevant works commencing.	All
Monitoring		
3.11	Compliance audits and inspections.	All
3.12	Periodic inspections for Weed Hygiene Certificates in site machinery.	All
3.13	Weekly work area inspections are to be conducted and are to include weed infestations. Weed infestations are to be reported as an incident (HNR-00000-EN-TMP-0003).	All
3.14	Vehicle and Mobile Equipment Weed Hygiene Inspection Form (HNR-0000-EN-TEM-0014).	All
3.15	Imported Materials Weed hygiene Inspection Form (HNR-00000-EN-TEM-0004).	All

[redacted]

Environmental Compliance Standard

Environment

Environmental Compliance Standard		Project
Reporting		
3.16	Incident and hazard reporting.	All
3.17	Suspected weed outbreaks and coordinates of their location (in MGA94) must be reported.	All
3.18	Copies of Vehicle and Mobile Equipment Weed Hygiene Inspection Forms and Imported Material Weed Hygiene Inspection Forms to be provided to HanRoy.	All
3.19	Log of vehicles through the weed washdown areas.	All
Training		
3.20	Training sessions for personnel on weed species identification, weed management and reporting requirements for identified or suspected weeds.	All

[redacted]

5.4 Groundwater Management

Objectives	▪ **Maintain to the extent practicable the quantity and quality of groundwater to minimise environmental impacts on the surrounding environment.** ▪ **Ensure changes to groundwater quality and flows (hydrogeology) do not adversely impact on the environment.**
Targets	▪ No new weed species are introduced into any Project site. ▪ Identified weed infestations are not spread beyond current surveyed boundaries in construction areas. ▪ Existing weed infestations are reduced or eliminated within Project sites.

Environmental Compliance Standard		**Project**
4.01	Groundwater that has potentially been contaminated must be collected, contained and treated onsite or disposed to an appropriate offsite facility.	All
4.02	Flow meters must be fitted to all production bores prior to operation, the starting meter reading must be recorded.	All
4.03	Monitoring bores must be installed appropriately nearby to production bores to allow monitoring of standing water levels and water quality as required by approvals.	All
4.04	All turkey nests must be lined with a HPDE plastic liner.	All
4.05	Turkey nests should be designed so that excess water from tanker fill points drains back into the Turkeys Nest.	All
4.06	Groundwater abstraction must be undertaken in accordance with the relevant licences.	All
4.07	Install meters on pumping bores and cut-off switches to prevent over filling of turkey nests, containment structures and water tanks.	All
4.08	Review of water meter and abstraction data is to be undertaken to assist leak detection.	All
4.09	Groundwater dewatering discharge is to be managed in accordance with the relevant approval.	All
4.10	Install at least one fauna egress device in each open water storage area (e.g. turkeys nests and evaporation ponds). Fauna egress devices must extend to the bottom of the open water storage area.	All
4.11	The Contractor must develop and implement a groundwater monitoring procedure, which must be approved by HanRoy prior to commencing relevant works.	
Monitoring		
4.11	Compliance audits and inspections and continuous remote monitoring of the borefield equipment.	All
4.12	Standing water levels and water quality must be monitored as required by approvals.	All
4.13	Groundwater abstraction volumes must be recorded and monitored against groundwater licences weekly.	All
4.14	Data from groundwater bores must be maintained, including bore logs.	All
Reporting		
4.15	Incident and hazard reporting.	All
4.16	Reporting as per approval requirements.	All

[redacted]

5.5 Surface Water Management

Objectives	▪ **Maintain, to the extent practicable, the quantity and quality of surface water to minimize environmental impacts on the existing downstream environment.**
Targets	▪ No minimized release of any pollutant to surface water. ▪ No significant impact on Riparian or Mulga vegetation health because of altered hydrology.

	Environmental Compliance Standard	Project
5.01	Impacts to surface water drainage features must only be done in accordance with GDP conditions and relevant licences.	All
5.02	Surface water that has potentially been contaminated must be collected, contained and treated onsite or disposed to an appropriate offsite facility.	All
5.03	Disturbance to watercourses, Riparian vegetation, Riparian zones and flood plains must be avoided or minimised, wherever practicable.	All
5.04	Disturbance to permanent pools, bends or high velocity sections of watercourses must be avoided.	All
5.05	A minimum setback of 50 m from disturbed or cleared areas and drainage lines must be maintained unless approved by the Environment Manager.	All
5.06	No construction materials (e.g. gravel, blue metal, etc.) must be left in creek or river beds or on banks.	All
5.07	Natural drainage channels must be reinstated wherever possible following disturbance to a watercourse.	All
5.08	Surface water diversion structures must be designed, installed and managed to enable non-contaminated water to be directed around disturbance and construction areas.	All
5.09	Water emanating from disturbed areas will be treated to ensure discharge from these areas is clean and consistent with naturally occurring water quality. Install erosion and sediment control structures downstream of disturbance areas.	All
5.10	Dispersion systems at discharge points of diversion drains must be engineered to reintroduce sheet flow minimising the impact on the downstream environment.	All
5.11	Diversion channels must be constructed with similar gradients to the natural drainage systems in the area.	All
5.12	Rock armouring or other appropriate erosion controls must be utilised in areas of high erosion potential (e.g. steep gradients and bends).	All
5.13	Storm water must be captured and used for construction and mining activities and must be treated to meet legal discharge requirements before it leaves the Project boundary. Potentially contaminated storm water (e.g. runoff which contains hydrocarbons > 15 mg/L TRH) will not be discharged into the environment.	All
5.14	Storm water collected from construction areas that is considered not to be at risk from hydrocarbon contamination must be discharged via sediment reduction controls.	All
5.15	Sedimentation controls must be constructed prior to the clearing of any large areas at risk of generating runoff.	All
5.16	Equipment servicing should take place in designated areas. Field servicing must be undertaken in a manner that facilitates containment of all hydrocarbons and chemicals.	All
5.17	Culverts beneath site roads must be installed as required to minimise shadow effects on vegetation.	All
5.18	Stabilisation of disturbed areas and new drainage lines must be completed prior to the wet season.	All
5.19	Works in water ways must be conducted during the dry season as far as practicable to minimise environmental impact.	All
5.20	River crossings must be completed over the shortest time practicable to minimise the period of open trenches and subsequent environmental disturbance.	All
5.21	Sedimentation control measures must be used during the construction activities to minimise additional sediment loading on the rivers.	All
5.22	Minimise impacts to surface water dependent communities (mulga woodlands) from changes to surface water flows.	All

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Environmental Compliance Standard		Project
5.23	All sediment basins / ponds are to be regularly inspected and cleaned of debris and sludge so that their effective volume is maintained.	All
5.24	Containment bunds around certain facilities (car dumper, light vehicle washdown, screening plant and septic tanks) will be designed to minimise flood water entry and be inspected on a regular basis.	All
5.25	The Contractor must develop and implement a surface water monitoring and management procedure, which must be approved by HanRoy prior to commencing relevant works.	All
Monitoring		
5.26	Compliance audits and inspections.	All
5.27	Oily water separator discharge water must be monitored to ensure it contains <15 mg/L TRH before it can be used for dust suppression or discharged into the environment.	All
5.28	Surface water and sedimentation control devices must be inspected for damage or blockages, maintained and repaired where required.	All
Reporting		
5.29	Incident and hazard reporting.	All
5.30	Reporting as per approval requirements	All

5.6 Hazardous Materials Management

Objectives	▪ **Manage the transport, storage and use of chemicals associated with the Project to ensure no uncontrolled releases to the environment.** ▪ **Manage exposure to and release of naturally occurring hazardous materials including Fibrous materials.**
Targets	▪ Zero significant chemical spills in any Project work area. ▪ All spills cleaned up within 24 hours at all work sites. ▪ Zero chemical spills in the marine environment.

Environmental Compliance Standard		Project
6.01	Areas containing hazardous materials such as hydrocarbons must be situated within enclosed catchment systems.	All
6.02	All hazardous materials and chemicals are to be approved prior to being bought to site by HanRoy	All
6.03	All temporary chemical and hydrocarbon storage tanks must be double skinned and self-bunded, or provided with bunding capable of holding 110% of the whole tank's contents.	All
6.04	All secondary containment facilities must have a minimum capacity of 110% of the largest storage vessel within the containment facility, plus 25% of the capacity of all stored individual containers.	All
6.05	Prior to mobilisation of portable self-bunded (double skinned) tanks, a certificate of integrity of the interstitial skin must be obtained and kept on record.	All
6.06	All equipment holding > 20 L of hydrocarbon or chemical (e.g. generators, welders, stationary engines, lighting stands, pumps, refuelling trailers, service/fuel trucks) must be secondarily contained to 110% capacity of the total hydrocarbons or chemicals contained in the equipment except where all the following are demonstrated: ▪ Equipment is not being used in, above or within 10 m of water (including marine or estuarine high tide marks, creeks, rivers, man-made or natural drainage lines); ▪ There is an internal bund with 110% capacity of the maximum total hydrocarbon or chemical capacity of the equipment, any spillage in the tray can be readily seen and there is a mechanism for removal of any spillage in the tray; and ▪ The refuelling point is within the perimeter of the internal spill tray and, in the event of overfilling, all spillage will return to the internal spill tray.	All
6.07	Where possible, fuel for construction works must be stored in self-bunded (doubled-skinned) portable steel tanks located to meet construction demand. If single skinned hydrocarbon storage tanks are used, then they must be in bunded areas with impervious floors of concrete or HDPE lining.	All
6.08	HDPE liners used for bunding must have maximum permeability of 1x10-9 m/s. Black 'builder's plastic' must not be used for lining bunds.	All
6.09	Semi-permanent and permanent bunded storage areas must be graded to drain away from the storage tanks to a sump which can be emptied or pumped, as required.	All
6.10	Distances between tanks and bunding must be maintained as described in Australian Standard AS 1940:2004 The Storage and Handling of Flammable and Combustible Liquids.	All
6.11	All hydrocarbon and chemical transfer points must be secondarily contained.	All
6.12	All bulk chemical and hydrocarbon storage facilities must comply with the requirements of, and be registered and licenced under, the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007, Australian Standard AS 1940 The Storage and Handling of Flammable and Combustible Liquids and relevant licence requirements. Placarding should also comply with these and other legislative requirements.	All
6.13	Where facilities hold multiple storage containers, bunding must be capable of holding no less than 110% of the volume of the largest storage vessel and at least 25% of the total volume of substances stored.	All
6.14	All storage tanks and associated pipelines must be located above ground.	All
6.15	Current Safety Data Sheets must be readily available at all chemical or hydrocarbon storage areas.	All
6.16	If leaks are detected in storage facilities, the Area Supervisor must be immediately informed and arrangements made for the leak to be controlled and the vessel replaced or repaired.	All

[redacted]

Environmental Compliance Standard		Project
6.17	All chemicals and hydrocarbons must be transported according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (seventh edition).	All
6.18	Service trucks, re-fuelling trailers and other vehicles used for the transportation of hydrocarbons and chemicals must be fitted with spill kits and drip trays.	All
6.19	Drains or valves in bunds, drip trays and other containment equipment must be normally closed.	All
6.20	Appropriate licenses (e.g. Dangerous Goods Site Licence for storage of diesel on site) must be in place for the transport, handling, storage and disposal of hazardous materials prior to the activity being undertaken.	All
6.21	Storm water within bunding/spill trays must be removed immediately after a rain event. The contents of bunding/spills trays must be adequately treated through an OWS prior to discharge or disposed offsite to an appropriate facility.	All
6.22	Appropriate equipment must be available on site to remove water from bunds and other containment areas.	All
6.23	Activities involving the use or storage of hydrocarbons or chemicals near aquatic environments must be preceded with a documented JHA (or similar documented environmental risk and control assessment). Chemical toxicity to the marine environment must be assessed during this process.	All
6.24	A Chemical and Hydrocarbon Spill Procedure must be developed and implemented that includes: ▪ Type, size, and location of spill kits; ▪ Immediate clean up and removal of spills; ▪ Removal of contaminated material; ▪ Training; ▪ Reporting; and ▪ Specific requirements for all works over or adjacent to water bodies. The procedure must be submitted to HanRoy for approval prior to relevant work commencing.	All
6.25	Relevant personnel must be appropriately trained in spill response and to safely handle the chemicals and hydrocarbons relevant to their work. Records of training kept must be kept on site available for audits and inspections.	All
6.26	In the event of a spill, contaminated soil or surface water must be removed immediately, contained in a designated area, removed from site and disposed of to an offsite licensed facility.	All
6.27	Spill management equipment appropriate to the volume and type of hydrocarbons or chemicals being stored must be available, clearly labelled and highly visible at each chemical / hydrocarbon storage location at all times.	All
6.29	All hazardous materials must be handled in accordance with the Dangerous Goods Safety Act 2004 and supporting regulations.	All
6.30	All spills of hydrocarbons or chemicals must be reported as an incident.	All
6.31	Flammable products and combustible liquids must be stored in flammable goods storage cabinets in accordance with AS1940:1988. Flammable products and combustible liquids must be appropriately isolated.	All
6.32	Meters must be fitted to all fuel transfer pumps, and volumes are to be recorded.	All
6.33	All hazardous materials and hydrocarbons will be stored and managed in accordance with licence conditions and relevant legislation and standards.	All
6.34	Hydrocarbon and chemical transport, handling, storage and disposal will be strictly controlled and managed to ensure that contamination to the environment does not occur.	All
6.35	All hydrocarbon and chemical storage areas and refuelling areas will be equipped with spill kits and emergency response kits to minimise contamination in the event of a spill.	All
6.36	Locations of hydrocarbon-contaminated sites must be reported within the Project Incident Management System to and fully remediated. The locations must also be recorded in the GIS system.	All
6.37	Explosives must be stored, handled and used in accordance with statutory requirements and established practice.	All
6.38	Boosters and detonators will be held in secured magazines. Magazines will be located to comply with required separation distances and mounding requirements.	All

[redacted]

Environmental Compliance Standard		Project
6.39	Liners and drip trays must be used under drill rigs to minimise risk of hydrocarbon spillage.	All
6.40	Only biodegradable quick- break surfactants are to be used in response to hydrocarbon spillage. The disposal of surplus or discarded surfactant concentrate must be into solid general waste bins, not into the sewage system. This will ensure that HanRoy meet the ARMCA & ANZECC (1997) concentration levels for surfactants.	All
6.41	Any soil contaminated by minor spillages of hydrocarbons or chemicals must be removed from site to a licensed waste facility.	All
6.42	Appropriate procedures must be in place to ensure any spillages can be managed in a timely and efficient manner.	All
6.43	Hazardous Materials educational material such as crib room posters other hazardous materials, including spill response) related training material will be displayed and promoted.	All
Monitoring		
6.44	Compliance audits and inspections.	All
6.45	Site inspection of facilities and dangerous goods licence compliance inspection.	All
6.46	Monthly inspections of bulk combustible liquid and hazardous goods storage facilities are to be completed.	All
Reporting		
6.47	Incident and hazard reporting.	All
6.48	Reporting as per approval requirements and legislation.	All
Training		
6.49	Spill response training to relevant personnel.	All

5.7 Waste Management

Objectives	▪ **Minimise the generation of construction waste and maximise opportunities to reuse or recycle material in preference to disposal.**
Targets	▪ Commercially viable recyclable materials separated for recycling as far as practicable. ▪ All controlled waste removed from site and accounted for.

Environmental Compliance Standard		**Project**
7.01	The requirements of the Environmental Protection (Rural Landfill) Regulations 2002, Works Approval and Operating Licences where relevant must be complied with.	All
7.02	All construction waste and rubbish, packing material, timber, sewage, plastic, concrete, tyres and waste hydrocarbons must be removed off site. Such waste can be temporarily stored in appropriate centralised storage areas until there is enough to complete a load out. Construction rubbish is not to be disposed in onsite landfills.	All
7.03	Concrete waste must be re-used wherever possible.	All
7.04	Windblown waste around work sites and landfills must be regularly (at least monthly) cleaned up.	All
7.05	Implement a waste management hierarchy (i.e. elimination, reduction, reuse, recycling, treatment & disposal).	All
7.06	Waste skips and bins must have lids and must be kept closed to contain litter and prevent animal access.	All
7.07	Waste skips must have egress to prevent fauna entrapment.	All
7.08	Waste stations must be established around all sites and will include sufficient and appropriate bins to facilitate segregation (e.g. green waste, general rubbish, recycling, controlled waste etc.). All bins must be clearly labelled including waste oil storage tanks.	All
7.09	Chemical, hydrocarbon and other hazardous waste material must be appropriately segregated, stored and signed before being transported and disposed at an approved off-site location.	All
7.10	All controlled waste must be transported off site via a licensed controlled waste carrier. All receipts and tracking numbers must be maintained on site at all times for audit and inspection purposes.	All
7.11	Chemicals, hydrocarbons or other controlled wastes must be stored in bunded areas that comply with the requirements outlined in in this document.	All
7.12	Concrete wastes and concrete wash out must be contained in HDPE plastic lined bunds, which must be constructed before concrete pouring begins and allowed to dry before being broken up, reused where possible, or otherwise taken off site for disposal.	All
7.13	Fireproof receptacles must be provided at all crib rooms and offices for disposal of cigarette butts.	All
7.14	Littering is prohibited and all sites must be kept free from wind-blown waste generated from storage or transport.	All
7.15	All commercially viable materials from work areas [steel, cables, other metals and pallets] must be recycled.	All
7.16	Pre-sort domestic waste to recover recyclables (such as glass, aluminium, plastic, cardboard) for offsite recycling.	All
7.17	Waste from toilets and crib rooms must be treated as per the Health Act 1911 and local government guidelines.	All
7.18	A Waste Management Procedure must be developed and implemented that identifies opportunities for recycling, which incorporates the requirements of this document. The procedure must be submitted to HanRoy and approved prior to relevant works commencing.	All
7.19	Waste management educational material such as crib room posters other waste management related training material will be displayed and promoted.	All
Monitoring		
7.20	Compliance audits and inspections.	All
7.21	Visual inspection of worksites and waste storage & disposal facilities for littering/inappropriate waste disposal.	All
Reporting		
7.22	Incident and hazard reporting.	All
7.23	Waste volumes (including controlled waste tracking forms) as per approval and legislation requirements.	All

[redacted]

5.8 Wastewater Management

Objectives	▪ **Manage the collection and treatment of sewage to minimize the risk of environmental impacts.** ▪ **Manage the collection and treatment of potentially contaminated wastewater to minimize the risk of environmental impacts.**
Targets	▪ Wastewater treatment plants (WWTPs) produce effluent that is within operating licence limits. ▪ Compliance with the Environmental Protection (Controlled Waste) Regulations 2004. ▪ Compliance with the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974 ▪ All wastewater must be treated to an acceptable standard prior to discharge.

Environmental Compliance Standard		**Project**
8.01	WWTPs must be constructed and operated in accordance with approval requirements and manufacturers specifications.	All
8.02	Servicing and maintenance of WWTPs (including irrigation sprayfield) or sewage storage vessels are to occur in line with the manufacturer's Operation and Maintenance Manual, permits and approvals.	All
8.03	Wastewater volumes and camp population must be monitored to ensure the licenced limit of the WWTP is not exceeded.	All
8.04	The wastewater treatment system must be monitored regularly and a maintenance program implemented in accordance with the Maintenance Manual.	All
8.05	All temporary ablution blocks or port-a-loos must be of a model approved by Department of Health and must be individually approved in accordance with the Health (Treatment Of Sewage And Disposal Of Effluent And Liquid Waste) Regulations 1974. Ablution blocks must be operated and maintained in accordance with the conditions of the Local Government and Department of health approval.	All
8.06	Washdown facilities must comply with the requirements of the Water Quality Protection Note (WQPN) 68 Mechanical Equipment Washdown (Department of Water, 2013).	All
8.07	Washdown bay wastewater must either be disposed offsite or directed to an oily water separator prior re-use for dust suppression (maximum 15 mg/L TRH).	All
8.08	Regular maintenance of wash-down bays must be undertaken and include the removal of sediment and waste off site to a licensed facility for treatment and / or disposal.	All
8.09	Ensure no odour is emitted from any WWTP or its associated infrastructure that unreasonably interferes with the health, welfare, convenience, comfort or amenity of any person who is outside of the WWTP area.	All
8.10	Ensure all personal who have contact with wastewater from WWTP have been immunised for Hepatitis A, Hepatitis B and Tetanus.	All
8.11	Ensure no wastewater from other sources (e.g. Reverse Osmosis Plan reject water) is discharged to any irrigation area without prior approval from HanRoy.	All
8.12	Portable ablutions sewage and WWTP sludge must be removed off site by a licenced carrier.	All
8.13	Level indicators (visible and audible) must be fitted on all sewage storage vessels to indicate that the facility is nearing capacity.	All
8.14	Devices for measuring monthly cumulative volumes for all effluent that is discharged via the irrigation sprayfield must be installed and maintained.	All
8.15	All wastewater discharged to the irrigation sprayfield must consist only of water treated within the WWTP.	All
8.16	Fencing and warning signs must surround the perimeter of the WWTP irrigation sprayfields.	
8.17	A wastewater management and monitoring procedure must be developed and implemented that identifies opportunities for recycling, which incorporates the requirements of this document. The procedure must be submitted to HanRoy and approved prior to relevant works commencing.	All
Monitoring		
8.18	Compliance audits and inspections.	All

[redacted]

Environmental Compliance Standard		Project
8.19	Daily inspection of portable ablutions holding tanks to ensure adequate capacity is available for workforce.	All
8.20	Oily water separator discharge water must be monitored in accordance with relevant operating licenses and works approvals.	All
8.21	Wastewater volumes and camp population.	All
8.22	Wastewater quality as per approval requirements.	All
Reporting		
8.23	Incident and hazard reporting.	All
8.24	Reporting as per approval requirements, including controlled waste receipts.	All

[redacted]

5.9 Dust Management

Objectives	▪ **Minimise dust emissions from all work sites associated with any Project**
Targets	▪ Zero community complaints related to dust emissions.

Environmental Compliance Standard		**Project**
9.01	Dust suppression techniques (e.g. water trucks) must be used on unsealed roads and access tracks, cleared areas and at locations of high dust risk.	All
9.02	Dust suppression measures must be implemented where dust generation is visible, except during topsoil stripping.	All
9.03	Saline water (> 5000 mg/L TDS) must not be used for dust suppression unless approved by the Environmental Manager of HanRoy.	All
9.04	Where the use of saline water for dust suppression (> 5000 mg/L TDS) is approved, dribble bars must be used to control overspray onto adjacent vegetation.	All
9.05	Vehicle speeds on haul roads, work and camp sites must be reduced where necessary to minimise dust emissions.	All
9.06	The use of scrapers during high winds (>50 km/hr) should be avoided. Where scrapers are required to be used during high winds, additional management measures must be implemented to minimise and control dust emissions resulting from the use of scrapers during high winds.	All
9.07	Vehicles must remain within designated roads and park only in allocated areas.	All
9.08	The laying of ballast during high winds (>50 km/hr) should be avoided. Where ballast is required to be laid during high winds, additional management measures must be implemented to minimise and control dust emissions.	All
9.09	Vegetation clearing and earthworks during high winds (>50 km/hr) should be avoided. Where vegetation clearing and earthworks is required during high winds, additional dust management measures must be implemented.	All
9.10	Blasting during high winds (>50 km/hr) should be avoided. Where blasting is required to be conducted during high winds, additional dust management measures must be implemented.	All
9.11	Dust suppressant additives or methods to reduce overall water consumption must be used wherever practicable.	All
9.12	Prior to any works commencing at the Port, a works specific Port Dust Management Plan must be developed and implemented by the Contractor. The procedure must be submitted to HanRoy for approval prior to relevant works commencing.	Port
9.13	Dust Management educational material such as crib room posters and other related training material will be displayed and promoted.	All
9.14	Dust Management Procedure must be developed and implemented by the Contractor. The procedure must be submitted to HanRoy and approved prior to relevant works commencing.	All
Monitoring		
9.15	Compliance audits and inspections.	All
9.16	Visual inspections of dust generating activities.	All
Reporting		
9.17	Incident and hazard reporting.	All
9.18	Excess dust emissions (based on visual assessment) to be reported as an incident.	All
9.19	Report any community complaints regarding dust levels as an incident.	All
9.20	Where community complaints are received regarding dust emissions implement additional dust management measures and install dust monitors.	All
9.21	Reporting as per approval and licence requirements.	All
Training		

[redacted]

Environmental Compliance Standard		Project
9.22	Training on Port dust management and licence requirements.	Port

5.10 Greenhouse Gas Emissions

Objectives	▪ **Ensure greenhouse gas (GHG) emissions are adequately addressed and minimized in the planning, design, and construction phase of the Project.**
Targets	▪ Demonstrate that energy efficiency and a reduction in potential GHG emission has been made through construction, procurement and / or design decisions.

Environmental Compliance Standard		Project
10.01	Energy production must be quantified.	All
10.02	Energy consumption must be quantified.	All
10.03	Electricity usage will be metered as per commercial agreement with electricity supplier.	All
10.04	Use buses/carpooling to transport personnel between airport and site.	All
10.05	Regular inspection, maintenance and replacement of equipment so that energy efficiency is maximised during the life of the item.	All
10.06	Use of solar photo-voltaic panel powered lighting and pumps where possible.	All
10.07	To improve energy efficiency of site electricity generation implement a maintenance and renewal program of key power using equipment. Consider use of diesel-powered back-up generators and mobile lighting rigs, and plan infrastructure layout to minimise pump distances	All
10.08	Implement renewable energy where possible including Solar thermal and voltaic panels or hybrid systems, utilising more than one technology. Consider options for electricity generation for lighting and in accommodation camps and ancillary/support buildings	All
10.09	Optimisation of haul routes and truck operation.	All
10.10	Limit double handling to reduce the total material transported.	All
10.11	Trucks and construction plant entering the site should be maintained in accordance with the manufacturers specification and comply with smoke emission standards.	All
10.12	Maximise the efficiency of blasting operations.	All
10.13	Diesel usage to be recorded and maintained such that it can be audited.	All
10.14	Minimise production of waste materials and maximise efficiency of waste disposal and wastewater treatment.	All
Monitoring		
10.15	Compliance audits and inspections.	All
10.16	Monitoring performance against site specific GHG Management Plans.	All
Reporting		
10.17	Incident and hazard reporting.	All
10.18	Energy production and consumption, as per approval and licence requirements.	All
10.19	Scope 1 and Scope 2 emissions estimates, as per approval and licence requirements.	All
10.20	NGERS/ NPI reporting, as per approval and licence requirements.	All

5.11 Noise and Vibration

Objectives	▪ **Protect the amenity of fauna and nearby residents from noise impacts resulting from activities associated with the Project.**
Targets	▪ No noise complaints received from nearby residents. ▪ Compliance with Environmental Protection (Noise) Regulations 1997.

Environmental Compliance Standard		**Project**
11.01	All activities associated with a Project must be conducted in accordance with the Environmental Protection (Noise) Regulations 1997, Australian Standard 2436-1981: Guide to noise control on construction, maintenance and demolition sites and relevant occupational health and safety standards.	All
11.02	Operating noise, vibration and potential mitigation measures (e.g. sound absorption devices) must be considered when selecting equipment.	All
11.03	Equipment must be fitted with appropriate noise reduction devices (where necessary) to comply with Project HSE and regulatory requirements.	All
11.04	Blasting and piling activities must be undertaken in accordance with Mines Safety Inspection Regulations 1995 and Environmental Protection (Noise) Regulations 1997.	Port
11.05	Any noise complaints received must be reported to HanRoy and entered the incident management system.	All
11.06	Soft-start up procedures must be used for piling construction activities.	Port
11.07	Regularly inspect, maintain and replace mobile equipment so that noise levels are minimised during the equipment life.	All
11.08	A Noise and Vibration Management Procedure must be developed and implemented by the contractor. The procedure must be submitted to HanRoy and approved prior to relevant works commencing.	All
Monitoring		
11.10	Compliance audits and inspections.	All
Reporting		
11.11	Incident and hazard reporting.	All
11.12	Community complaints regarding noise levels must be reported as an incident.	All
11.13	Reporting as per approval and licence requirements.	All

5.12 Light Emissions Management

Objectives	▪ **To minimise potential impacts from light overspill on terrestrial and marine fauna.** ▪ **To maximise energy efficiency.**
Targets	▪ Lighting practices maximise energy efficiency. ▪ No negative impacts from light overspill to migratory avifauna associated with the Fortescue Marsh or marine fauna at Port Hedland.

Environmental Compliance Standard		**Project**
12.01	Luminance must be decreased to minimum safe operating levels.	All
12.02	A complaints register must be implemented to record Project related community complaints related to lighting.	All
12.03	Low ultraviolet emitting fixtures on tall, mounted structures must be utilised.	All
12.04	Light shields, amber filters and yellow lighting must be utilised at sensitive locations.	All
12.05	Motion detectors must be utilised to trigger lights.	All
12.06	Light mounting heights must be minimised.	All
12.07	Luminaries must be positioned to directly focus on the intended target. Light spill must be minimised without impacting on the legal requirement to provide a safe working environment.	All
12.08	Lighting with beam characteristics applicable to the specific task at hand must be selected.	All
12.09	The use of tungsten halogen, low voltage dichroic or incandescent luminaries must be avoided.	All
12.10	Highly efficient, long lamp life fittings must be utilised.	All
12.11	T5 fluorescent lighting must be selected in lieu of T8 fluorescents.	All
12.12	Minimum wattage, low flux output lamps which safely fulfill the needs of specific task must be utilised.	All
12.13	Electronic lighting control gear must be installed on Project luminaries to manage voltage, reduce energy consumption and increase lamp life.	All
12.14	Light outputs must comply with relevant Australian Standards and Building Code of Australia maintenance levels.	All
12.15	Expired luminaires must be appropriately disposed of.	All
12.16	Photo-electric cell sensors must be installed on all outdoor lighting.	All
12.17	When not in use, lighting deemed not essential to personnel safety must be switched off.	All
12.18	Night work lighting must minimise illumination of known fauna habitats outside working areas.	All
12.19	During work in the Port Hedland Port area lighting plant must be oriented so that light is directed away from coastal areas and the town of Port Hedland.	Port
12.20	Low wattage safety lighting and lighting with on/off switches must be used in conjunction with signage for "turn off the lights when you leave".	All
12.21	Luminance at onsite accommodation should not exceed window luminance of 1 lux.	All
12.22	Light overspill associated with construction and operations will be managed in accordance with the Australian Standard, AS4282-2019: Control of the Obtrusive Effects of Outdoor Lighting (AS 2019).	All
12.23	Downward-directed lights, shrouding and the use of 'Bug Yellow' fluorescent lighting (or similar) to limit attraction of flying insects to permanently lit areas will be used on site.	All
Monitoring		
12.24	Compliance audits and inspections.	All
Reporting		
12.25	Incident and hazard reporting.	All
12.26	Community complaints regarding light levels must be reported as an incident.	All

[redacted]

5.13 Fire Management

Objectives	▪ **To minimise the risk of fire events related to any activities associated with Projects.**
Targets	▪ Zero fire incidents resulting from any Project works

Environmental Compliance Standard		**Project**
13.01	An emergency management plan must be developed and implemented and must include methods for managing major environmental incidents, including but not limited to, fire, cyclone and flood events.	All
13.02	A hot work permit procedure must be developed and implemented and must include the following requirements; ▪ Risk assessment must be completed before commencement of any hot work; ▪ Exemptions sought from Bushfires Act 1954 for hot work on fire ban days; and ▪ Daily weather check for fire ban status prior to conducting hot works.	All
13.03	Smoking must be confined to designated smoking areas only.	All
13.04	All vehicles, buildings, vehicles, machinery and drill rigs must be fitted with serviced fire extinguishers.	All
13.05	Fire-control equipment must be available in fire-risk areas including but not limited to hazardous material storage areas, hot works job sites, service trucks.	All
13.06	An adequate number of personnel must be trained in basic fire awareness, fire response and use of fire suppression equipment.	All
13.07	No open fires must be permitted on site at any time.	All
13.08	In higher fire risk areas (e.g. spinifex), localised clearing should be conducted around working construction plant and inside GDP boundaries to assist with managing fire fuel loads.	All
13.09	Maintenance on hot machinery must be undertaken in designated cleared areas whenever possible.	All
13.10	Fire breaks must be established and maintained around camps, key infrastructure (e.g. telecommunication towers) and active construction locations.	All
13.11	All vehicles will be run on diesel.	All
13.12	A dust suppression vehicle will be equipped such that it is capable of also being used as a fire response vehicle.	All
13.13	Vehicle undersides are to be regularly (e.g. at daily pre-starts, during and after use in spinifex areas etc.) checked for any material stuck around the exhaust system, and any identified material removed.	All
13.14	Flammable material and explosives are to be appropriately stored and isolated at all times in accordance with Australian Standard 1940-2017 The storage and handling of flammable and combustible liquids.	All
Monitoring		
13.15	Compliance audits and inspections.	All
13.16	Regular inspections of work areas to ensure potential fuel loads are minimised.	All
13.17	Regular inspections of fire-fighting equipment must be conducted to ensure it is maintained in working order.	All
13.18	Regular vehicle and machinery inspections for a build-up of combustible materials	All
Reporting		
13.19	Incident and hazard reporting.	All

[redacted]

5.14 Dredging, Marine and Near Shore Works

Objectives	▪ **Minimise the impact of Project activities on the marine environment**
Targets	▪ No unauthorised release of any pollutant to the marine environment during construction works. ▪ Compliance with the requirements of the HanRoy Dredge Management Plan (DMP) (HNR-00000-EN-PLN-0001) and the PEP (marine environmental monitoring) (HNR-00000-EN-PLN-xxxx). ▪ Pilbara Port Authority [PPA] Procedures, Standards and Guidelines.

Environmental Compliance Standard		Project
14.01	Direct disturbance for Port infrastructure will be undertaken in a manner that minimises impact to mangroves and optimises the opportunity for recovery of mangrove individuals.	Port
14.02	A chemical and hydrocarbon spill procedure must be developed and implemented prior to construction and must incorporate specific marine spill prevention and response requirements. The procedure must align with any PPA requirements or guidelines.	Port
14.03	The discharge of materials into the marine environment, including liquid or solid wastes, must be always prevented unless approved in writing by the HanRoy Environmental Manager.	Port
14.04	Equipment or items that enter water must be recovered as soon as it is safe to do so.	Port
14.05	The management of ballast water must comply with DCCEEW guidelines for ballast water management and the ANZECC Code of Practice for Anti-fouling and In-Water Hull Cleaning and Maintenance.	Port
14.06	A risk assessment must be conducted prior to conducting activities which involve the use or storage of hydrocarbons or chemicals near the marine environment.	Port
14.07	Personal cigarette disposal containers must be provided to all smokers working over water.	Port
14.08	Hydraulic and drilling fluids must be non-hydrocarbon based and biodegradable, wherever possible, for all works over or adjacent to water.	Port
14.09	Dredging construction plant that minimises turbidity must be used where practicable.	Port
14.10	Dredge materials will only be disposed of at approved Dredge Material Management Areas [DMMA] or offshore Spoil areas.	Port
14.11	Weather and sea conditions must be monitored daily to ensure turbidity is minimised.	Port
14.12	Before beginning dredging, dredge disposal and piling activities, marine fauna observations are to be made in accordance with the requirements of this document and the DMP.	Port
14.13	If any turtles or marine animals are sighted in the monitoring zone (150 m radius), dredging/dredge disposal/piling activities must not commence in the monitoring zone until 20 minutes after the last marine species is observed to leave the monitoring zone. Alternatively the dredge must move to another area of the dredge/disposal site to maintain a minimum distance of 300 m between the vessel and any turtle or marine mammal.	Port
14.14	Records of all sightings of turtles and marine mammals and other unusual observations, such as fish kills must be maintained (HNR-00000-EN-TEM-0015).	Port
14.15	Equipment and vessels must operate in accordance with appropriate industry and equipment standards including specifications for noise levels. Regular maintenance must be conducted to the manufacturer's specifications. Equipment covers, mufflers and other noise suppression equipment must also be maintained and in good working order at all times.	Port
14.16	Any vessels coming to Port Hedland from overseas or domestically must be subject to a Biofouling risk assessment as per the National Biofouling Management Guidance for Non-Trading Vessels document. Vessels assessed as posing a risk must be inspected to ensure they are free of biofouling. Where these vessels are found to have biofouling, they must be cleaned (preferably dry-docked) and their antifouling system repaired/renewed immediately prior to departure for Australia.	Port
14.17	All areas where mud and sediments can collect, including anchor and chain lockers and hoppers, must be inspected and cleaned prior to a vessel's departure for Port Hedland. Anchor chains, cables, and other gear that has been deployed overboard must also be inspected and cleaned of any attached or entangled marine growth.	Port

Environmental Compliance Standard		Project
	These procedures must be repeated prior to departure from Port Hedland to prevent translocation of species away from the region.	
14.18	Hydrocarbon spills must be managed in accordance with the requirements of PPA's Port of Port Hedland Marine Pollution Contingency Plan.	Port
14.19	Vessel tanks and machinery must be equipped with measurement and overflow protection (i.e. flow and level meters, relief valves, overflow protection valves and emergency shut-off).	Port
14.20	Industry standards, PPA and pollution prevention regulations must be adhered to during: ▪ Refuelling; ▪ Transfer; ▪ Storage; and ▪ Handling of hazardous materials (e.g., bunding, level gauges, overflow protection, drainage systems and hardstands).	Port
14.21	Volumes of stored fuels and chemicals must be limited to day-use. Appropriately licensed mini-tankers must be used for refuelling.	Port
14.22	Hydrocarbons (including hydrocarbon wastes) must be stored in appropriately labelled drums or tanks and in bunded areas that can contain 110% of material stored within.	Port
14.23	Equipment must be designed and operated to prevent spills and leaks through the provision of inbuilt safeguards such as relief valves, overflow protection, and automatic and manual shut-down systems.	Port
14.24	All personnel must be familiar with the use of oil spill clean-up kits and dispose to an appropriate offsite facility.	Port
14.25	Chemicals carried in packaged, solid or bulk form must comply with the regulations of Part A of International convention for the Safety of Life at Sea (SOLAS) Chapter VII and the International Maritime Dangerous Goods [IMDG] Code regarding the classification, packing, marking, labelling and placarding, documentation, stowage, handling and emergency response action of dangerous goods.	Port
14.26	All waste designated as hazardous/dangerous requiring disposal must be packaged, stored and transported in accordance with IMDG requirements. Vessel documentation must include Safety Data Sheets for each substance carried.	Port
14.27	All vessels must comply with the compulsory insurance and insurance certificate requirements of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances [HNS] by Sea 1996.	Port
14.28	Vessels of 24 m or more in length but less than 400 gross tonnage engaged in international voyages must carry a Declaration on Anti-fouling Systems (prohibiting the use of harmful organotins in antifouling paints) in compliance with the International Convention on the Control of Harmful Antifouling Systems on Ships.	Port
14.29	All sewage and grey water treatment systems must be frequently checked, maintained and monitored to ensure systems are efficient, fully operational and discharging treated water in accordance with International Convention for the Prevention of Pollution From Ships (Marine Pollution) (MARPOL) 73/78 Convention Annex IV (sewage) and Annex V (garbage).	Port
14.30	No residues containing noxious substances must be discharged within 12 nautical miles of the nearest land mass, in compliance with MARPOL 73/78 Convention Annex II.	Port
14.31	Waste management requirements must be communicated to personnel (i.e. through inductions, pre-starts and/or JHAs).	Port
14.32	Hazardous substances handling must be carried out by suitably trained personnel only.	Port
14.33	Empty liquid waste containers must be segregated from other wastes and stored in designated areas.	Port
14.34	Incidents of waste entering the marine environment must be reported immediately. HanRoy will report to the PPA as soon as possible (but within 48 hours)	Port
14.35	Immediately prior to disposal of dredge material, it will be established by GPS that the vessel is within the approved Spoil Ground boundaries.	Port
14.36	Each load of dredged material must be dumped so that dumped material is distributed evenly within the approved Spoil Ground boundary.	Port

[redacted]

Environmental Compliance Standard

Environment

Environmental Compliance Standard		Project
14.37	Any dredge or barge used in connection with disposal activities and any associated towing vessels must comply with the relevant state, national and/or international standards with respect to seaworthiness, safety and environmental requirements, or any rules or conditions laid down by the certifying classification society and be capable of disposing the dredge material at the disposal ground.	Port
14.38	The volume of dredged material (in cubic metres) dumped at Spoil Ground must be estimated and compared daily to the disposal quantities.	Port
14.39	Regular progress surveys must be recorded and compared to the approved disposal quantities.	Port
14.40	Each load of dredged material must be dumped so that the dumped material is distributed evenly over an area located within the disposal site prescribed.	Port
14.41	All persons engaged in the dumping activities, including the owner(s) and person(s) in charge of the vessel, must comply with the applicable permit and the legislative requirements.	Port
14.42	All relevant works to complete biosecurity training in accordance with First Ports of Entry, Biosecurity Act 2015 requirements.	Port
14.43	A mangrove and other benthic primary producer habitat management procedure must be developed and implemented. The procedure must be submitted to, and approved by, HanRoy prior to works being undertaken.	
Monitoring		
14.43	Compliance audits and inspections.	Port
14.43	Turtles and marine mammal visual monitoring using Marine Fauna Observers (HNR-00000-EN-TEM-0015).	Port
14.45	Document any incidents involving the dumping activities that result in injury or death to any cetacean, dugong or turtles. The time and nature of each incident and the species involved, if known, must be recorded.	Port
14.46	Daily monitoring of weather and sea conditions.	Port
14.47	Monitoring as per approval and management plan requirements.	Port
Reporting		
14.48	Incident and hazard reporting.	Port
14.49	Maintenance of Dredge Vessel logs.	Port
14.50	Records comprising either weekly plotting sheets or a certified extract of the ship's log which detail the following must be kept on site in file available for audit and inspection: ▪ Times and dates of when each dumping run is commenced and finished; ▪ Position (as determined by GPS) of the vessel at the beginning and end of each dumping run, with the inclusion of the path of each dumping run; ▪ Volume of dredge material (in-situ cubic metres) dumped and quantity in dry tonnes for the specified operational period; and ▪ A comparison of these quantities with the total amount permitted under the permit daily.	Port
Training		
14.51	Marine fauna training.	Port
14.52	Biosecurity training.	Port

[redacted]

5.15 Fibrous Material Management

Objectives	▪ **Identify and appropriately manage any fibrous minerals encountered on the Project from an environmental perspective.**
Targets	▪ Zero significant environmental incidents associated with fibrous materials.

Environmental Compliance Standard		**Project**
15.02	Fibrous materials areas must be identified via onsite investigations and sampling as required, prior to commencement of earthworks.	All
15.03	Disturbance of fibrous materials should be avoided wherever possible.	All
15.04	A fibrous materials management procedure must be developed and implemented where fibrous materials are identified, or if there is a significant risk of encountering fibrous materials. The procedure must be submitted to HanRoy for approval prior to relevant work commencing.	All
15.05	Acid Sulphate Soil educational material such as crib room posters and other related training material will be displayed and promoted.	All
Monitoring		
15.07	Compliance audits and inspections.	All
15.08	Field testing in ASS areas as required in approvals or legislation.	All
Reporting		
15.10	Incident and hazard reporting.	All
15.11	Reporting as per approval requirements.	All
Training		
15.12	Fibrous material training.	All

[redacted]

5.16 Borrow Pit Management

Objectives	▪ **To ensure borrow pit areas are rehabilitated and left in a landscape condition that is consistent with the natural landscape.**
Targets	▪ All borrow pits rehabilitated and free draining post construction.

Environmental Compliance Standard		**Project**
16.01	Prior to undertaking any clearing works for borrow pits, a borrow pit management plan must be developed and implemented by the Contractor in accordance with the Borrow Pit Management Plan template (HNR-00000-EN-TEM-0002). The management plan must be submitted to HanRoy and approved prior to relevant works commencing for each individual borrow pit.	All
16.02	Borrow pits must be designed, constructed and rehabilitated: ▪ To not form permanent water bodies and to minimise ponding of water following rainfall events; ▪ So that groundwater is not intercepted; ▪ So that fauna has easy egress from borrow pits; ▪ So that pit slopes are constructed to a 1V:5H or gentler; ▪ So that no surface or batter slumping or collapse occurs that impacts on local hydrology; and ▪ To minimise risk to people and animals.	All
16.03	All borrow pits must be progressively rehabilitated: ▪ To form stable landforms not prone to erosion, able to support self-sustaining native vegetation and comparable to surrounding environment; and ▪ So that no new weed species exist and that the cover of weeds within the borrow pit area is comparable to the surrounding landscape. Be in accordance with the requirements of Section 5.3.	All
16.04	Drainage control measures must be implemented where necessary. Any drainage control measures implemented must take into consideration the possible erosion issues arising from channelled runoff.	All
16.05	The borrow pit floor must be left with a fall of approximately 1:300 to allow for drainage.	All
16.06	Borrow pits must be located to avoid significant flora and where possible significant fauna habitats.	All
16.07	Deep ripping to a depth of 1 metre of compacted areas including the borrow pit floor, battered walls and access roads must take place after landscaping. Rip lines should be spaced at approximately 1 metre between centres and must occur prior to placement of topsoil.	All
16.08	Previously stockpiled local topsoil (non-weed contaminated) and vegetation must be spread over the pit floor and battered walls as evenly as possible.	All
16.09	After topsoil spreading, the area must be scarified to a depth of 0.3 metres below the topsoil (along the contour and perpendicular to water flow) to prevent erosion. The rehabilitated pit surface must, as much as possible, blend in with the natural surroundings.	All
16.10	Locate all borrow pits a minimum of 50m away from any water course unless permitted under a Bed and Banks Permit.	All
16.11	Undertake testing of the materials in the proposed extraction area to confirm the suitability and extent of materials, prior to the development of a borrow pit.	All
Monitoring		
16.12	Compliance audits and inspections.	All
16.13	As cleared and rehabilitation data in dxf, dwg or other electronic format will be maintained.	All
16.14	Inspections of borrow pits are to be conducted during establishment, operation and rehabilitation of the borrow pit (HNR-00000-EN-TEM-0003).	All
Reporting		
16.15	Incident and hazard reporting.	All

5.17 Acid Sulphate Soil Management

Objectives	▪ **Minimise the risk of generating acid leachate from Acid Sulfate Soils exposed during any Projects works.**
Targets	▪ Identify all acid sulfate soils prior to commencement of work. ▪ Zero emissions of acidic leachate from Project work areas.

Environmental Compliance Standard		**Project**
17.01	Acid Sulfate Soil [ASS] risk areas must be identified via onsite investigations and sampling as required, prior to commencement of earthworks.	All
17.02	Disturbance of ASS soils should be avoided wherever possible.	All
17.03	An ASS management procedure that includes site investigations, sampling and analysis, monitoring and treatment must be developed and implemented where actual or potential ASS will be disturbed. The procedure should align with DWER guidelines for ASS.	All
17.04	Sediments that contain potentially acid-forming materials must not be used for construction.	All
17.05	Acid dewatering must be treated to an appropriate standard and pH must be monitored prior to discharge.	All
17.06	Acid Sulfate Soil educational material such as crib room posters and other related training material will be displayed and promoted.	All
Monitoring		
17.07	Compliance audits and inspections.	All
17.08	Groundwater extracted during dewatering within potential ASS areas is to be monitored for water quality (specifically pH and Total titratable acidity).	All
17.09	Field testing in ASS areas as required in approvals or legislation.	All
Reporting		
17.10	Incident and hazard reporting.	All
17.11	Reporting as per approval requirements.	All
Training		
17.12	Training sessions for personnel on acid sulphate soil identification, treatment and reporting requirements for potential acid sulphate soils.	All

[redacted]

5.18 Drilling and Blasting Management

Objectives	▪ **To minimise potential impacts from drilling or blasting on terrestrial fauna and flora.** ▪ **To minimise potential impacts from blasting on sensitive receptors.** ▪ **To minimise potential impacts from drilling and blasting activities on Aboriginal Cultural Heritage. .**
Targets	▪ All relevant Stakeholders are advised of blasting activities prior to any blast being conducted. ▪ Zero impacts on Aboriginal Cultural Heritage resulting from blasting. ▪ Zero impacts to terrestrial fauna and flora related to blasting. ▪ Zero community complaints related to blasting.

	Environmental Compliance Standard	Project
18.01	Blasting activities are to only be undertaken by suitably qualified and trained personnel holding appropriate certification (e.g. Explosive and Dangerous Goods licences etc.) and are to be approved by HanRoy prior to commencing.	All
18.02	A Drill and Blast Management procedure must be developed and implemented by the Contractor and must include: ▪ Blasting mitigation measures; ▪ Dust, noise and vibration mitigation measures; and ▪ Blasting controls. The plan must be submitted and approved by HanRoy prior to the commencement of blasting activities.	All
18.03	All plant and equipment associated with blasting activities will be fit for purpose, with documented service and compliance history, signed off by a competent/qualified person.	All
18.04	Efficiency of blasting operations is to be maximised.	All
18.05	Blasting must be undertaken in accordance with Environmental Protection (Noise) Regulations 1997 and be restricted to daylight hours and conducted to set schedules, with an air blast limit of 115 decibels (Db) linear at the nearest noise sensitive dwelling.	All
18.06	Best practice blast management processes and mitigation measures must be implemented by the Contractor to minimise ground vibrations levels, fly-rock, fume, dust and odour from blasting activities.	All
18.07	Vibrations, fly-rock and dust associated with Projects blasting activities must not adversely affect nearby Aboriginal Cultural Heritage.	All
18.08	All blast activities within 100 metres of Heritage sites must be conducted in accordance with Drill and Blasting Near Heritage Sites Procedure (HNR-00000-HE-PRO-0002).	All
18.09	Disturbances to adjacent landholders from blasting activities must be minimised as far as practicable.	All
18.10	Notifications must be provided to the relevant Stakeholders prior to the commencement of any blasting activities.	All
18.11	A drill log will be maintained to record the location of drill holes and capping of holes.	All
18.12	Drill holes or surface holes are to be capped, plugged or otherwise made safe immediately after completion.	All
18.13	Drill holes must be securely plugged below ground at minimum 400mm within 6 months of drilling unless being further used.	All
18.14	Sumps of an appropriate size must be used to contain water and sediment encountered during drilling. The sump must be located away from significant vegetation, GDP boundaries and water courses.	All
18.15	Excavations (e.g. sumps, costeans etc.) are to be backfilled as soon as practicable and rehabilitated.	All
18.16	Drill sample piles must be removed or buried.	All
18.17	Sample bags must be removed within 6 months of drilling.	All
18.18	No hydro-test water must be sourced from local groundwater what may cause a detrimental effect to any known priority flora.	All

Environmental Compliance Standard		Project
18.19	Any drill muds on the drill pad surface or within the sup are to be covered with dry soil to prevent any potential hazards to wildlife as soon as drilling of that hole is completed. There are to be inspected the following day to ensure no sticky substance has seeped through the dry soil to the ground surface.	All
18.20	Drilling muds and fluid are to be recycled where possible and disposed of within sumps. The sumps must be fenced to restrict access by fauna and feature a gentle incline (maximum 1V:4H) on at least one side to allow for fauna escape. The sumps must be filled in as soon as possible to minimise bird entrapment.	All
Monitoring		
18.21	Compliance audits and inspections.	All
18.22	Post blasting monitoring where known Aboriginal Cultural Heritage or environmental sites of significance fall within a stipulated Blast Zone.	All
18.23	Reporting as per approval and licence requirements.	All
Reporting		
18.24	Incident and hazard reporting.	All
18.25	Reporting as per approval requirements.	All
18.26	Any community complaints received regarding blasting activities must be promptly reported to HanRoy.	All

5.19 Demobilisation and Rehabilitation

Objectives	▪ **Stabilise disturbed landscapes to minimise erosion.** ▪ **Maximise opportunities for revegetation in a way that is compatible with surrounding landscapes.**
Targets	▪ All disturbed areas not required for ongoing operations are rehabilitated prior to completion of construction. ▪ No significant erosion from soil stockpiles or rehabilitated landforms.

	Environmental Compliance Standard	Project
19.01	The Contractor must complete a Rehabilitation Permit Application form (HNR-00000-EN-TEM-0016). The application must be submitted and approved (Rehabilitation Permit issued) by HanRoy prior to rehabilitation works commencing.	All
19.02	No rehabilitation works must be undertaken without an approved Rehabilitation Permit. Requirements of Rehabilitation Permit must be complied with.	All
19.03	Adequate resources including training, must be provided onsite for the implementation of the rehabilitation permit requirements.	All
19.04	Progressive rehabilitation must be undertaken at the earliest opportunity using local topsoil (up to 200mm where available) and materials to provide habitat to suit local native fauna.	All
19.05	Rehabilitated areas must be contoured to encourage infiltration and reduce flows, thereby reducing erosion potential.	All
19.06	Areas disturbed during construction that are no longer required for use must be ripped and progressively rehabilitated.	All
19.07	Disused compacted surfaces must be ripped to a depth of approximately 1 m, along contour lines where ground conditions and hydrology allow.	All
19.08	Access roads must be ripped with topsoil spreading as the final stage of rehabilitation.	All
19.09	Fauna habitat materials (e.g. boulders / hollow logs etc.) are to be stockpiled during clearing and must be placed in rehabilitated areas following the mustow ripping of replaced topsoil.	All
19.10	All rehabilitated areas must be: ▪ Erosion resistant, not form permanent water bodies and minimise ponding of water following rainfall events; ▪ Free of new weed species, and weed cover is similar to the undisturbed reference sites; ▪ Landscaped to be consistent with surrounding landforms and have a final shape, surface drainage, resistance to erosion and ability to support local native vegetation; and ▪ Safe, Stable and non-polluting.	All
19.11	Where available, vegetation should be dragged across ripped areas using an excavator or similar equipment with a long reach to minimise compaction of the ripped topsoil.	All
19.12	All temporary infrastructure, waste and materials (including flagging tape and survey pegs) associated with construction works must be removed from site at the completion of construction.	All
19.13	Sumps and other costean type temporary installations must be backfilled and rehabilitated as soon as practicable and prior to demobilisation from site.	All
19.14	Concrete wash out and waste areas must be removed to an approved landfill site.	All
19.15	Hydrocarbon contaminated soil and other material (e.g. blue metal and aggregate) present within the dedicated work area must be removed and disposed to an appropriate facility.	All
19.16	Depressed areas (e.g. borrow pits) must be landscaped and battered to blend in with the surrounding landform. Batter angles for borrow pit rehabilitation must not be steeper than 1V:5H and in all areas slopes must be stable, safe and must not exacerbate erosion risks.	All
19.17	Rehabilitated areas must be sign posted. The signage should read *Rehabilitation Area – Do not enter.*	All
19.18	A record must be kept of all rehabilitated areas, including GPS coordinates, details of rehabilitation works undertaken and dates of rehabilitation activities.	All

[redacted]

Environmental Compliance Standard		Project
19.19	Endemic plant species must only be used during revegetation.	All
19.20	Prior to demobilising from site, all Contractors must complete all open corrective or preventative actions, close all GDPs and provide all required information to HanRoy.	All
19.21	Any non-compliance with Rehabilitation Permit requirements is to be reported as an incident.	All
Monitoring		
19.22	Compliance audits and inspections.	All
19.23	Rehabilitated areas must be inspected following heavy rain events.	All
19.24	Demobilisation inspections (HNR-00000-EN-TEM-0013)	All
19.25	Rehabilitation Permit close out inspections (HNR-00000-EN-TEM-0007).	All
19.26	Ground Disturbance Permit Close Out Inspection (HNR-00000-EN-TEM-0008)	All
19.27	Areas rehabilitated, including GIS or equivalent survey data must be maintained.	All
19.28	Records of rehabilitation provided as part of GDP process.	All
Reporting		
19.29	Incident and hazard reporting.	All
19.30	Complete all reporting requirements required by the Rehabilitation Permit requirements.	All
19.31	Reporting as per approval requirements.	All
Training		
19.32	Rehabilitation Permit training.	All

[redacted]

5.20 Aboriginal Cultural Heritage Management

Objectives	▪ **To minimise potential harm to Aboriginal Cultural Heritage located within and adjacent to Project construction areas**
Targets	▪ Zero unauthorised impacts on Aboriginal heritage sites

Environmental Compliance Standard		**Project**
20.01	The Aboriginal Heritage Act 2072 (until date of repeal) and the Aboriginal Cultural Heritage Act 2021 must be complied with at all times.	All
20.02	Ground disturbance activities must not harm or impact Aboriginal Cultural Heritage unless authorised in writing by the HanRoy Heritage Team.	All
20.03	Personnel must not enter an Aboriginal Cultural Heritage place or a Heritage Restriction Zone (HRZ) without prior written authorisation from the HanRoy Heritage Manager.	All
20.04	Aboriginal Cultural Heritage, or suspected Aboriginal Cultural Heritage, must not be removed from any heritage place under any circumstance.	All
20.05	If any previously unknown Aboriginal Cultural Heritage or anything that is suspected to be Aboriginal Cultural Heritage is located during works, works must cease and the Newly Identified Aboriginal Cultural Heritage Procedure (HNR-00000-HE-PRO-0005) must be followed.	All
20.06	If any human remains or Aboriginal ancestral remains, or suspected human or Aboriginal ancestral remains, are identified during works: ▪ All works must cease; ▪ Notify immediate Supervisor and the HanRoy Heritage Team; and ▪ Follow section 2.4 of the Newly Identified Aboriginal Cultural Heritage Procedure (HNR-00000-HE-PRO-0005).	All
20.07	Aboriginal Cultural Heritage indicated on GDPs must be demarcated in the field as specified in the GDP and in accordance with the Aboriginal Cultural Heritage Demarcation Procedure (HNR-00000-HE-PRO-0004) prior to the commencement of any ground disturbing works.	All
20.08	Site inductions must include cultural awareness and specific Aboriginal Cultural Heritage inductions.	All
20.09	Any potential or actual impact to known Aboriginal Cultural Heritage must be reported to the immediate supervisor who must notify the HanRoy Heritage Team. The Aboriginal Cultural Heritage Incident Procedure (HNR-0000-HE-PRO-1) must be followed, and an incident report must be lodged through HanRoy's incident reporting system.	All
20.10	All drill and blast activities within 3500 metres of Aboriginal Cultural Heritage or a Heritage Restriction Zone (HRZ)must be conducted in accordance with the Drill and Blast Activities near Aboriginal Heritage Sites Procedure (HNR-00000-HE-PRO-0002).	All
20.11	If Aboriginal Cultural Heritage (ACH) or a Heritage Restriction Zone (HRZ) is located within the potential Blast Impact Zone, a Blast Management Plan must be developed and submitted to the Heritage Manager a minimum of 14 days prior to the commencement of the Drill and Blast works. The Blast Management Plan must identify controls and measures to reduce potential impact on ACH or HRZs and other details as identified in the Drill and Blast Activities near Aboriginal Heritage Sites Procedure (HNR-00000-HE-PRO-0002).	All
20.12	All personnel must be made aware of the known presence of Aboriginal Cultural Heritage (ACH) or a Heritage Restricted Zone [HRZ] within the works area.	All
Monitoring		
20.13	Compliance audits and inspections.	All
Reporting		
20.14	Incident and hazard reporting.	All
Training		
20.15	Heritage training.	All

[redacted]

6 Referenced Documents

6.1 Accountabilities

Table 6-1 Accountabilities

Role	Responsibility
Contractor	Compliance with legislation, approvals and this document

6.2 Abbreviations

Table 6-2 Abbreviations

Abbreviation	Definition
ACH	Aboriginal Cultural Heritage
ACHA	Aboriginal Cultural Heritage Act 2021
AHA	Aboriginal Heritage Act 1972
ANFO	Ammonium Nitrate Fuel Oil
ANZECC	Australian and New Zealand Environment Conservation Council
AS	Australian Standard
ASS	Acid Sulphate Soil
BOD	Biochemical Oxygen Demand
CAR	Corrective Actions Register
Db	Decibel
DCCEEW	Department of Climate Change. Energy the Environment and Water
DMMA	Dredge Material Management Area
DMP	Dredge Management Plan
DPAW	Department of Parks and Wildlife
DWER	Department of Water and Environmental Regulations
EMP	Environmental Management Plan
GDA	Geographic Datum of Australia
GDP	Ground Disturbance Permit
GHG	Greenhouse Gases
GIS	Geographical Information System
GPS	Global Positioning System
HAZID	Hazard Identification
HDPE	High Density Polyethylene
hr	hour
HRZ	Heritage Restriction Zone
IMDG	International Maritime Dangerous Goods Code
ISO	International Organisation of Standardisation
HSE	Health Safety & Environment
JHA	Job Hazard Analysis
km	Kilometre
LOR	Legal (and other) Obligations Register
m	Metre
mm	Millimetre
mg/L	Milligrams per litre
MARPOL	International Convention for the Prevention of Pollution From Ships (Marine Pollution)

Abbreviation	Definition
MGA	Map Grid of Australia
NGER	National Greenhouse and Energy Reporting
NPI	National Pollutant Inventory
OWS	Oily Water Separator
PEP	Project Execution Plan
PPA	Pilbara Port Authority
sec	second
SF_6	Sulfur Hexaflouride
SOLAS	International conventions for the Safety of Life at Sea
SOW	Scope of work
TDS	Total Dissolved Solids
Total N	Total Nitrogen
Total P	Total Phosphorus
TRH	Total Recoverable Hydrocarbons
TSS	Total Suspended Solids
WWTP	Waste Water Treatment Plant

6.3 Definitions

Table 6-3 Definitions

Term	Definition
Aboriginal Cultural Heritage	The ACHA 2021 defines ACH as: ▪ Either an (Aboriginal place), object (Aboriginal object), a group of objects or places (cultural landscape), or the bodily remains of a deceased Aboriginal person (Aboriginal ancestral remains); ▪ Important to Aboriginal people; ▪ May have tangible or intangible elements; and ▪ Important for its social, spiritual, historical, scientific, or aesthetic values.
Australian Standards	Standards published by Standards Australia which set out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently performed the way they were intended to.
Controlled Waste	Waste materials listed in Schedule 1 of the Environmental Protection, Controlled Waste Regulations 2004.
Contractor	A person, company, consultant supplier or otherwise that is engaged under a contract to do a job or provide materials or labour to perform a service or to provide that service itself.
Environment	The meaning given to that term at common law and in any legislation in force in the State or Territory of Australia in which the site is situated including any land, water, atmosphere, climate, sound, odour, taste, the biological factor of animals and plants and the social factor of aesthetic.
Hazardous Substance	Under the *Occupational Safety and Health Regulations 1996*, a substance is a 'hazardous substance' if it meets criteria under: The original system in the *Occupational Safety and Health Regulations 1996*, now called 'the AC classification system'; or An international system called, 'the GHS classification system'. Under the AC classification system, a substance is a 'hazardous substance' if: Any of its ingredients is entered in the http://hsis.ascc.gov.au/Default.aspx database at concentrations above the cut-off concentration. HSIS is available at http://hsis.ascc.gov.au/Default.aspx; or The substance meets the criteria in the document, Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008 (2004)] available at http://www.safeworkaustralia.gov.au/Pages/default.aspx

Term	Definition
	Under the GHS classification system (also called the GHS or the Globally Harmonised System of Classification and Labelling of Chemicals 3rd revised edition), a substance is a 'hazardous substance' if it meets any of the criteria in this system.
Heritage Restriction Zone	An area of heritage value where no works can take place.
Open Excavation	An open excavation is in the context of this specification is any hole, trench, excavation or void in which there exists the potential for entrapment of native fauna.
Must	Mandatory requirement.
Principal	HanRoy, HPPL, RHI or RHIO as relevant to the specific Project.
Should	Discretionary requirement, but ought to be done if practicable.

7 Appendices

7.1 Appendix 1 – HanRoy Documentation List

Document Number	Document Title
HNR-00000-EN-POL-0001	Environmental Policy
HNR-00000-EN-STD-0001	Environmental Compliance Standards
HNR-00000-EN-PLN-0001	Dredge Management Plan
TBC	Dewatering Discharge Management Plan
TBC	Project Execution Plan [PEP] (Marine Environmental Monitoring)
TBC	Port Dust Management Plan
HNR-00000-EN-MAN-0001	Significant, Fauna, Flora, Weed Species Manual
HNR-00000-EN-PRO-0001	Rehabilitation Permit Procedure
HNR-00000-EN-PRO-0006	Spill Response Procedure
HNR-00000-EN-TEM-0003	General Area Environmental Inspection Checklist
HNR-00000-EN-TEM-0007	Rehabilitation Permit Closeout Inspection Checklist
HNR-00000-EN-TEM-0008	Ground Disturbance Permit Closeout Inspection Checklist
HNR-00000-EN-TEM-0011	Ground Disturbance Permit Site Inspection Checklist
HNR-00000-EN-TEM-0013	Contractor Demobilisation Environmental Inspection Checklist
HNR-00000-EN-TEM-0014	Vehicle and Mobile Equipment Weed Hygiene Inspection Form
HNR-00000-EN-TEM-0004	Imported Materials Weed Hygiene Inspection Form
HNR-00000-EN-TEM-0005	Topsoil and Subsoil Tracking Form
HNR-00000-EN-TEM-0009	Ground Disturbance Permit Release Form
HNR-00000-EN-TEM-0016	Rehabilitation Permit Application Form
HNR-00000-EN-TEM-0012	Fauna Sightings Form
HNR-00000-EN-TEM-0010	Fauna Translocation Register
HNR-00000-EN-TEM-0015	Marine Fauna Observer Form
HNR-00000-EN-TEM-0001	Trench Inspection Register
HNR-00000-EN-TEM-0002	Borrow Pit Management Plan Template
HNR-00000-GT-STD-0001	Environmental Data Delivery Standards - GIS
HNR-00000-HE-SPC-0001	Aboriginal Heritage Management Specification
HNR-00000-HE-PRO-0001	Aboriginal Cultural Heritage Incident Procedure
HNR-00000-HE-PRO-0002	Drill and Blast near Aboriginal Heritage Sites Procedure
HNR-00000-HE-PRO-0004	Aboriginal Cultural Heritage Demarcation Procedure
HNR-00000-HE-PRO-0005	Newly Identified Aboriginal Cultural Heritage Procedure