



CHAPTER 17 – NON-MINING WASTE

STANMORE ID EXTENSION PTY LTD
ISAAC DOWNS EXTENSION PROJECT

TABLE OF CONTENTS

17.1	Introduction.....	17-1
17.2	Regulatory Framework	17-1
17.2.1	Environmental Protection Act 1994.....	17-1
17.2.2	Waste Reduction and Recycling Act 2011.....	17-1
17.2.2.1	Waste Reduction and Recycling Plan	17-2
17.2.3	Application Requirements for Activities with Waste Impacts (ESR/2015/1836)	17-2
17.2.4	Public Health Regulation 2018	17-2
17.2.5	Guidelines and Policy	17-3
17.2.6	Environmental Objectives and Performance Outcomes.....	17-3
17.2.7	EIS Information Guideline — Waste.....	17-4
17.3	Description of Existing Values	17-5
17.3.1	Environmental Values	17-5
17.3.2	Existing Environment.....	17-5
17.3.3	Regional Waste Management Facilities	17-6
17.3.4	IDM and IPM Waste Management.....	17-6
17.4	Assessment Methodology.....	17-7
17.5	Waste Strategy.....	17-8
17.5.1	Cleaner Production.....	17-8
17.5.2	Material and Energy Flow Analysis	17-8
17.5.3	Waste Avoidance and Reduction	17-10
17.5.4	Waste Reuse and Recycling.....	17-10
17.5.5	Reprocess and Reclaim.....	17-10
17.5.6	Waste to Energy	17-10
17.5.7	Treatment and Disposal	17-11
17.6	Waste Characteristics and Potential Impacts	17-11
17.7	Project Waste Management Facilities	17-17
17.7.1	Waste Handling and Storage Facilities	17-17
17.8	Environmental Values and Potential Impacts	17-17
17.8.1	Environmental Values	17-17
17.8.2	Project Waste Impacts	17-18
17.8.3	Cumulative Waste Impacts	17-22
17.9	Waste Management Plan	17-22
17.10	Mitigation and Management Measures	17-23
17.10.1	Measuring Volumes Generated	17-23
17.10.2	Waste Generation Monitoring	17-24
17.10.3	Records and Reporting.....	17-25
17.11	Conclusion	17-25
17.12	References	17-26

Tables

Table 17-1	Environmental Objectives and Performance Outcomes – Non-Mining Waste	17-3
Table 17-2	EIS Information Guideline - Waste.....	17-4
Table 17-3	IPC Waste Integration	17-7
Table 17-4	Waste Inventory Estimates	17-12
Table 17-5	Qualitative Risk Assessment - Non-mining Waste	17-19

Table 17-6	Non-mining Waste Volume Monitoring	17-24
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Figures

Figure 17-1	Waste and Resource Management Hierarchy (Department of Environment, Science and Innovation, 2024)	17-2
Figure 17-2	Materials Flowchart Analysis	17-9

17. NON-MINING WASTE

17.1 Introduction

This chapter addresses the sustainable management of non-mining wastes likely to be generated through the construction, operation and closure phases of the Project. It identifies the anticipated volumes of each waste type, their source, details of storage and treatment facilities and discharge points, as well as, strategies to avoid, reduce, reuse, recycle and otherwise manage these non-mining waste streams for the full life cycle of the Isaac Downs Extension Project (the Project).

Non-mining waste streams from the Project will consist of gases (e.g. emissions from fuel burning equipment), liquids (e.g. waste oils and fluids), and solids (e.g. construction, regulated and general waste). Mining wastes are assessed in the follow chapters of the environmental impact statement (EIS):

- **Chapter 7** – overburden, rejects and tailings
- **Chapter 14** – greenhouse gas (GHG) emissions
- **Chapter 8** – mine affected water.

17.2 Regulatory Framework

The legislation and policies relating to waste management in Queensland are outlined below.

17.2.1 Environmental Protection Act 1994

The *Environmental Protection Act 1994* (EP Act) defines waste as anything left over or unwanted by-product from an industrial, commercial, domestic or other activity, surplus to the industrial, commercial, domestic or other activity. It can be a solid, liquid, gas, energy or a combination of any of them. A thing can be waste whether or not it is of value, unless approved as an end of waste resource through the *Waste Reduction and Recycling Act 2011* (WRR Act), refer to Section 17.2.2.

Schedule 19 of the *Environmental Protection Regulation 2019* (EP Regulation) defines ‘general waste’ as waste other than regulated waste. Regulated waste is commercial and industrial waste listed in Chapter 5 Part 1 of the EP Regulation and includes for an element, any chemical compound containing the element and anything that contains residues of the waste (e.g. empty containers). Regulated waste requires a higher level of management reflecting the potential level of risks from this type of waste on the environment. The Department of Environment, Tourism, Science and Innovation (DETSI) have a risk-based waste classification framework which has regulated waste classified as either:

- Category 1 regulated waste – highest risk
- Category 2 regulated waste – moderate risk, or
- Not regulated waste / general waste – lowest risk.

The EP Regulation controls regulated waste transportation through a prescribed waste tracking system. Trackable wastes are the responsibility of the generator and are reported to DETSI for monitoring. The *Environmental Protection (Air) Policy 2019* (assessed in **Chapter 15**) and *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* (assessed in **Chapter 8**) also set out criteria for air quality and water quality which are applicable to the quality of emissions to air and water from the Project.

17.2.2 Waste Reduction and Recycling Act 2011

The WRR Act prioritises waste management practices to achieve the best possible environmental outcome via the waste and resource management hierarchy. This sets up a framework from the most

preferred to least preferred alternative, being: waste avoidance, reuse, recycling, energy recovery, treatment and waste disposal as outlined in Figure 17-1.

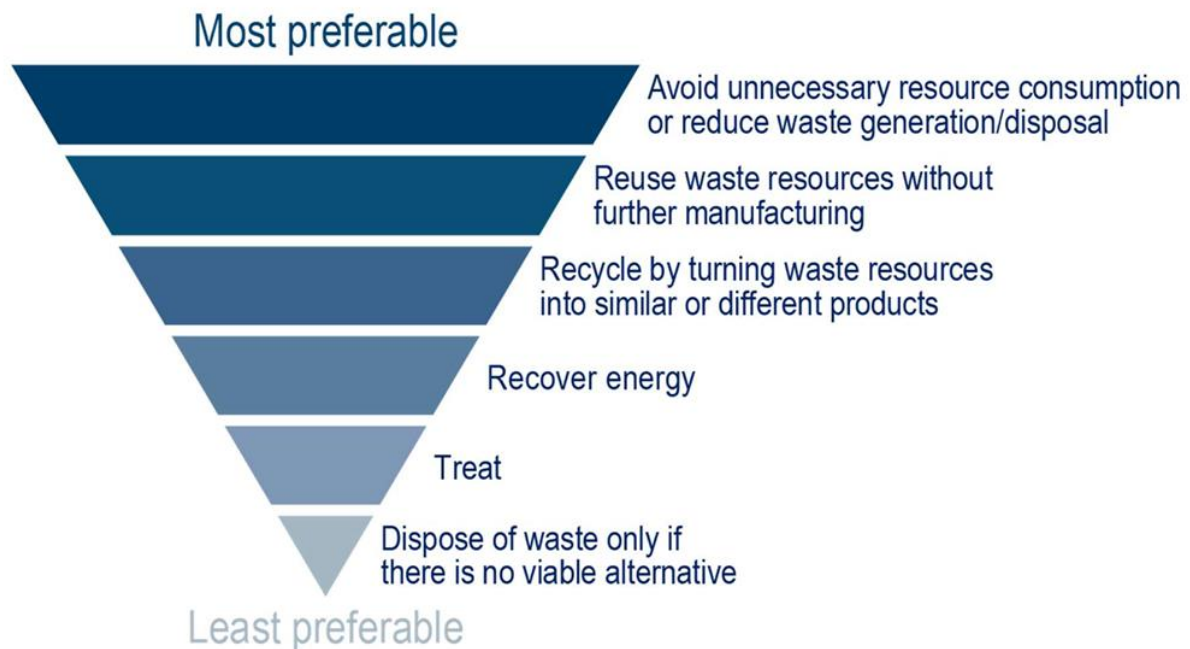


Figure 17-1 Waste and Resource Management Hierarchy (Department of Environment, Science and Innovation, 2024)

17.2.2.1 Waste Reduction and Recycling Plan

The Waste Reduction and Recycling Plan (2024–2030) sets out the agency’s commitment to align with the WRR Act and the broader state strategy by focusing on three overarching objectives:

1. minimise generation of waste to avoid environmental harm and greenhouse gas emissions;
2. maximise opportunities for recycling, diversion and reuse of materials; and
3. embed circular economy values across operations, including procurement, staff culture and reporting.

There are no identified end of waste codes under the WRR Act which are relevant to the Project.

17.2.3 Application Requirements for Activities with Waste Impacts (ESR/2015/1836)

The Application Requirements for Activities with Waste Impacts is a Queensland guideline that sets out the technical information an applicant must provide with an environmental authority application where the proposed activities may generate, manage or impact waste, including how waste will be minimised and managed to protect environmental values. The EIS assessment has been undertaken in accordance with the Application Requirements for Activities with Waste Impacts Guideline (Queensland Government, 2025).

17.2.4 Public Health Regulation 2018

The Public Health Regulation 2018 sets out the classes of recycled effluent quality standards. This regulation requires any recycled water to meet the water quality criteria appropriate to the intended use or supply. The criteria set out in the regulation solely addressed public health requirements and does not address environmental requirements.

17.2.5 Guidelines and Policy

- The National Waste Policy 2018 (Cth) provides direction to better the economy, protect the health of communities and reduce environmental impacts by harnessing the value of materials disposed of, and returning them to productive use.
- The National Waste Policy 2009 to 2050 (Cth) gives direction for Australia’s waste management and resource recovery and promotes product stewardship, packaging covenant as well as specific schemes, including the National Tyre Product Stewardship Scheme 2014 and the Television and Computer Recycling Scheme 2011. Waste treatment and management has been developed in line with these schemes.
- The National Environment Protection (Used Packaging Materials) Measure 2011 (Cth) supports the operation of the Australian Packaging Covenant, which is a co-regulatory arrangement between all levels of government and industry to manage the environmental impacts of packaging.
- Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) (2006) (AGWR Phase 1) provides guidance on how such recycling can be safely and sustainably achieved within industry through the application of a risk management framework.

17.2.6 Environmental Objectives and Performance Outcomes

Table 17-1 outlines the environmental objectives and performance outcomes as required under Schedule 8 of the EP Regulation and the ToR, as relevant to non-mining waste.

Table 17-1 Environmental Objectives and Performance Outcomes – Non-Mining Waste

Requirement	Environmental Objectives and Performance Outcomes	EIS Reference
EP Regulations	Any waste generated, transported, or received as part of carrying out the activity is managed in a way that protects all environmental values.	17.5, 17.7, 17.8, 17.9, 17.10
Terms of Reference		Refer to Chapter 7 for mining waste
Performance Outcomes		
1 Both of the following apply—		17.5
(a) waste generated, transported or received is managed in accordance with the waste and resource management hierarchy under the Waste Reduction and Recycling Act 2011;		
(b) if waste is disposed of, it is disposed of in a way that prevents or minimises adverse effects on environmental values.		17.8, 17.9, 17.10
		Refer to Chapter 7 for mining waste
Requirement	Environmental Objective	EIS Reference
EP Regulation	The design of the facility permits the site at which the activity is to be carried out to operate in accordance with best practice environmental management.	17.5, 17.7
Performance Outcomes		

Requirement	Environmental Objectives and Performance Outcomes	EIS Reference
1 The activity does not involve the storage, production, treatment or release of hazardous contaminants, or involve a regulated structure.		Not applicable
2 All of the following apply— (a) all storage provided for hazardous contaminants includes secondary containment to prevent or minimise releases to the environment from spillage or leaks;		17.7.1 Also refer to Chapter 8
(c) containers are provided for the storage of hazardous contaminants that are secured to prevent the removal of the containers from the site by a flood event;		17.10 Also refer to Chapter 8
(d) the design of the facility prevents or minimises the production of hazardous contaminants and waste;		17.5, 17.7, 17.10 Refer to Chapter 7 for mining waste
(e) if the production of hazardous contaminants and waste is not prevented or minimised under paragraph (d)—the design of the facility contains and treats hazardous contaminants rather than releasing them.		17.9, 17.10 Refer to Chapter 7 for mining waste

17.2.7 EIS Information Guideline — Waste

The EIS assessment has been undertaken in accordance with the EIS information guideline — Waste Management¹ (Department of Environment, Tourism, Science and Innovation, 2026). The EIS information guideline - waste management advises on the information and assessment requirements in relation to waste management as part of preparing an EIS. The relevant EIS sections where the requirements of this guideline have been addressed are provided in Table 17-2.

Table 17-2 EIS Information Guideline - Waste

Guideline Requirement	EIS Reference
Waste and resource management hierarchy	17.5
Waste and resource management principles	17.5
Waste generation	17.6
Regulated waste	17.6
General waste	17.6
Excavated waste	Chapter 7
Tailings and fine rejects	Chapter 4 and Chapter 7
Potable water treatment waste	Not applicable
Mine affected water	Chapter 8
Coal seam gas water	Not applicable

¹ https://www.detsi.qld.gov.au/_global/policy-register/policy-register-pdf?getdoc=5311&name=eis-tm-waste-information-guide.pdf

Guideline Requirement	EIS Reference
Waste storage	17.7, 17.7.1
Waste handling and transportation	17.7, 17.7.1
Waste treatment, reuse, recycling and recovery	17.5
Waste disposal	17.6, Chapter 7
Waste rock	Chapter 7
Co-disposal of rejects	Chapter 4 and Chapter 7
Tailings	Chapter 4 and Chapter 7
Evaporation pond	Not applicable
Regulated and general waste	17.6
Sewage treatment waste	17.6
Discharge	Chapter 8, Chapter 14
Liquid	Chapter 8
Gas	Chapter 14

17.3 Description of Existing Values

17.3.1 Environmental Values

According to the EP Act, an environmental value refers to any attribute or characteristic of the environment that supports ecological integrity, public enjoyment, or safety. In the context of this Project, waste generated during construction, operation, and decommissioning could affect environmental values, including:

- health and wellbeing of sensitive receptors
- natural environment, including land, water resources, flora and fauna
- available capacity of regional waste management facilities and services.

17.3.2 Existing Environment

As described in **Chapter 7 – Land** the existing land use for the Project area is cattle grazing. In the vicinity of the Project, mining and pastoral activities (grazing) are the predominant land uses.

Winchester Downs Homestead is the only sensitive receptor in close proximity (< 2 km) to the Project's planned mining operations.

Chapter 15 and **Chapter 16** respectively describe in detail how identified air quality and noise and vibration impacts from mining operations at Winchester Downs Homestead will be mitigated and managed over the life of the Project. In addition, under the *Mineral Resources Act 1989*, the proponent will enter into a legally binding 'compensation agreement' with the owner of Winchester Downs to facilitate access to the property for the purpose of mining and to address other related factors that will occur because of the Project's planned mining activities (e.g. loss of amenity).

17.3.3 Regional Waste Management Facilities

Surrounding the Project within the Isaac Regional Council (IRC) catchment there are currently nine operational waste facilities (Isaac Regional Council, 2025). These waste facilities include both landfills and waste transfer stations.

Landfill sites (where waste can be buried on site):

- Moranbah Waste Management Facility
- Dysart Waste Management Facility
- Clermont Waste Management Facility.

Transfer stations (where waste must be transported to a landfill for final disposal):

- St Lawrence Waste Management Facility
- Carmila Waste Management Facility
- Greenhill Waste Management Facility
- Middlemount Waste Management Facility
- Nebo Waste Management Facility
- Glenden Waste Management Facility.

The waste management facilities that the Project is likely to utilise for general waste disposal are:

- Moranbah Waste Management Facility landfill on Goonyella Road
- licensed regulated waste facilities (Mackay, Townsville and Narangba)
- material recycling facility in Mackay
- transfer station at Nebo.

These facilities do not accept regulated waste. A licensed contractor, who is approved under the EP Act, will be used to handle and transport regulated waste for the Project, in the same manner as it currently implemented for Isaac Downs Mine (IDM) and Isaac Plain Mine (IPM).

Consultation was undertaken with the relevant IRC representatives in Moranbah on 9 February 2026 to confirm landfill capacity. Based on this consultation, it is understood that the Moranbah Waste Management Facility has sufficient ongoing capacity to continue accepting waste generated by the Project.

17.3.4 IDM and IPM Waste Management

IDM and IPM together comprise the Isaac Plains Complex (IPC), and the Project will be integrated into IPC. This chapter addresses all non-mining waste generated throughout the Project within IPC. IDM and IPM implement a Waste Management Plan (WMP) (Stanmore IP Complex, 2021) for non-mining waste, aligned with their environmental authorities (EAs). The WMP outlines waste management procedures at both operations and will be updated to include the Project's non-mining waste streams (which are expected to be similar to the existing waste streams at IPM and IDM). Waste that is produced at IDM and IPM, and removed by a licensed contractor, is recorded, tracked and reported monthly. This data is used to provide trends and guide improvement opportunities.

For the Project, waste management will not operate in isolation. Instead, it will be fully integrated into the existing IPC framework. This integration will occur through shared infrastructure which is outlined in Table 17-3. As is evident from Table 17-3, the Project will result in minimal changes to infrastructure areas that have the potential to generate non-mining waste at IPC.

Non-mining waste management, as per the WMP, at IDM and IPM will continue to be implemented for all Project related waste (e.g. Project related waste generated from the mine infrastructure area (MIA) at IDM).

Table 17-3 IPC Waste Integration

Area / Facility	Location	Role in the Project
CHPP	IPM	The Project will utilise the existing CHPP at the IPM.
Train Load-Out Facility (TLO)	IPM	The Project will utilise the existing TLO at the IPM.
Mining Infrastructure Area (MIA)	IDM	The Project will utilise the IDM MIA for workshops and maintenance.
Administration Area	IPM	Existing administration area at IPM will be utilised by the Project.
Crib Hut / Amenities	The Project, IPM and IDM	Crib huts and amenities will be utilised across the Project, IDM and IPM.
Explosive Storage Area	IDM	The existing explosive storage area will be utilised by the Project.
Fuel Farm	The Project, IDM	Self bundled fuel storage area for the Project, at the go-line area. The Project will also utilise the IDM fuel farm.
Workshop	IDM	The Project will utilise the IDM workshop.
Temporary Construction Areas	The Project	Support the construction activities for the Project.
Sewage Treatment Plant (STP)	IDM	The Project will utilise the existing STP at IDM.

17.4 Assessment Methodology

This non-mining waste assessment was based on desktop research and includes the Project aspects for the construction, operation and rehabilitation phases. The desktop methods used for the assessment of potential non-mining waste generation and management were:

- A review of the Commonwealth and State regulatory framework relating to waste classification and management.
- Review of available design documentation.
- Review of waste types, their characteristics, and risks posed to environmental values.
- Review of production efficiency, circular economy opportunities to improve resource consumption and minimise wastage within the Project stages.
- Review of concept design systems and products to avoid waste, conserve resources and maximise the value of all materials used at every stage of a product's life.
- Identify and address opportunities across municipal solid waste, commercial and industrial waste, and construction and demolition waste streams for improved collection, recycling and energy recovery, to deliver ongoing improvements in diversion from landfill, improved quality of recycled content and use of the waste hierarchy.
- Investigations into locations, availability and capacities of local and regional waste transport, recycling and disposal facilities.

To identify the anticipated Project waste quantities, waste generation recorded from the IPM and IDM operations were analysed. As the Project will replace mining at IDM there is not expected to be material change in the types or quantities of non-mining waste generated as result of the Project.

There is no new sewage treatment plant or irrigation facility proposed as part of the Project, therefore the waste associated with a STP has not been assessed. There are no end of waste codes under the WRR Act that are relevant to the Project.

17.5 Waste Strategy

The principal objective of the waste management strategy for the Project is to minimise the impacts on land resources, water quality and air quality, and to manage waste in a manner that avoids any direct or indirect impacts on the environment or health of people working at the Project and the community.

The main strategies that will be adopted for the Project include waste minimisation (including waste segregation for re-use or recycling), cleaner production and ensuring wastes are disposed of at appropriate facilities. These strategies will be consistent with those being utilised at IPM and IDM and apply over early works, site preparation, construction, operations and rehabilitation Project phases.

17.5.1 Cleaner Production

The Project has adopted a cleaner production approach through the planning phase of the Project. These cleaner production approaches include:

- Process design has been optimised to reduce resource inputs by utilising existing water supply and transfer pipelines and powerline infrastructure.
- Use of materials with lower environmental impact (through a longer service life) will be built into procurement specifications to minimise replacement frequency and resource consumption.
- Operational housekeeping and maintenance regimes targeting leak and spill prevention, early identification of inefficient processes and substitution of inputs that generate less waste.

17.5.2 Material and Energy Flow Analysis

Improving sustainability includes the efficient management of resources, in particular the material and energy consumption utilised for production. A simple material and energy flows analysis has been developed of the flows of resource, materials and energy inputs and waste outputs for the Project. This analysis assists in identifying potential wastage areas of natural resources and other materials and is presented in Figure 17-2.

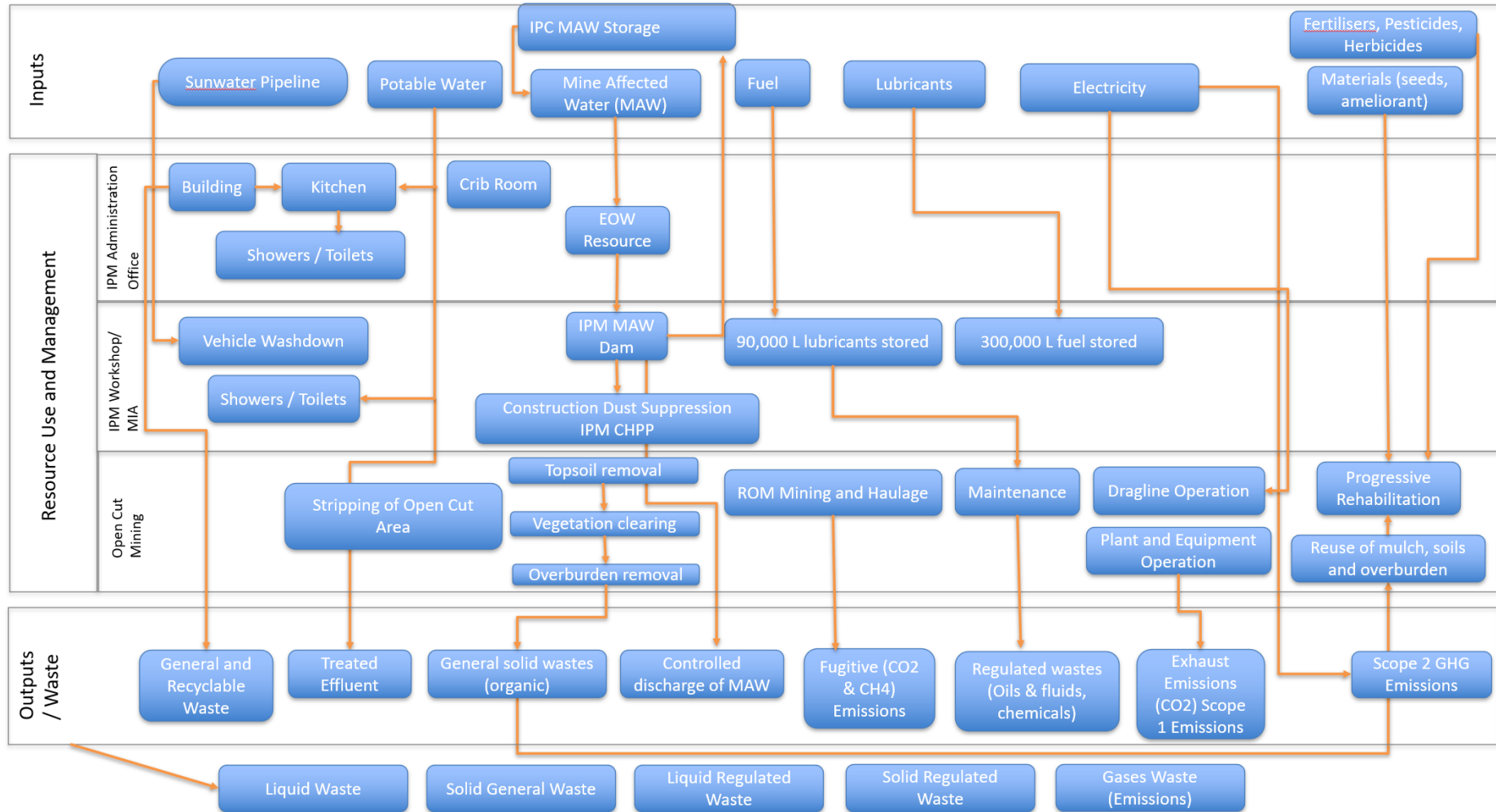


Figure 17-2 Materials Flowchart Analysis

17.5.3 Waste Avoidance and Reduction

Waste minimisation through avoidance has been considered throughout the initial planning and conceptual design, and will continue during detailed design, construction and operations. The waste avoidance strategies include:

- Integration and utilisation of the existing infrastructure at IPM and IDM. This includes the use of the CHPP, train loading facility, haul roads, MIA, administration buildings, workshops, explosive storage area, water supply and the existing mining fleet.
- Procurement policy to consider minimisation of packaging when purchasing or manufacturing goods and services and promote domestic demand for recycled materials and products containing recycled materials.
- Encourage efficient re-use and repair.
- Administrative policies and practices to avoid the generation of general waste.
- Purchase in bulk where practicable to reduce the amount of packaging waste and costs.
- As part of rehabilitation, ensure all stakeholders are consulted to assess future uses of mine infrastructure and equipment.

17.5.4 Waste Reuse and Recycling

Onsite reuse of waste or re-purposing will be encouraged to extend the product life of materials (within the confines of safety requirements). Onsite reuse of mine affected water is described in **Chapter 8**. The following waste reuse and recycling measures will be implemented:

- Excess materials such as drums, buckets, and used chemical containers will be returned to suppliers under product stewardship or return schemes or provided to other local users for reuse where appropriate.
- Packaging materials including pallets, plastics and cardboard will be segregated and recycled through local waste contractors where practicable.
- Recyclable materials such as scrap metal, used oil, batteries, tyres, and waste lubricants will be collected and transported offsite by licensed contractors to approved recycling facilities.

Other measures to improve offsite recycling include:

- Increase use of recycled material and build demand and markets for recycled products through procurement policies and materials purchases.
- Improve resource recovery by improving material collection systems and processes for recycling.
- Implement coordinated knowledge sharing and education initiatives, focused on the waste hierarchy and the circular economy, that address the needs of governments, businesses and individuals, and encourages the redesign, reuse, repair, resource recovery, recycling and reprocessing of products.

17.5.5 Reprocess and Reclaim

Mining waste that will be rehabilitated, and therefore used to create post mining land uses, as described in **Chapter 5**.

17.5.6 Waste to Energy

The Project will consider opportunities to recover energy from suitable waste streams where practical and environmentally appropriate. Waste to energy initiatives will focus on converting residual, non-recyclable waste into usable energy to reduce reliance on external energy sources and minimise landfill disposal. These implementation measures may include:

- Assessment of waste streams to identify materials with energy recovery potential (e.g. hydrocarbon-contaminated wastes, oily rags, waste oils, timber offcuts).
- Periodic review of available technologies and service providers to identify cost-effective and compliant energy recovery options.

Where direct energy recovery onsite is not feasible, the Project will prioritise partnerships with licensed offsite facilities that apply approved waste-to-energy technologies in accordance with Queensland regulatory requirements and the WRR Act.

17.5.7 Treatment and Disposal

The Project will apply appropriate treatment and disposal methods for remaining waste streams once opportunities for avoidance, reduction, reuse, recycling and waste to energy have been exhausted. The determination of disposal facilities will consider the sustainability of the facility, the distance and transport requirements as well the capacity and services available within government and private waste facilities.

The Moranbah Waste Management Facility is the largest facility and is the closest to the Project. The centre can accept commercial waste for a fee, including green waste, concrete materials, e-waste, general solid loose and compacted waste, biosolids, waste oil, construction and demolitions waste, contaminated soil and asbestos materials. They have a recycle shop that includes industrial materials and also offer recycling of batteries, timber, metal, aluminium, glass, tyres, plastic and steel.

On site disposal at IPM and IDM is limited to those waste types explicitly allowed under the EA and only where geotechnically and environmentally appropriate.

Private waste companies service mine sites throughout Queensland, providing a range of waste management services to the industry depending on the requirements of individual sites. JJ Richards currently service the IDM and IPM operations and it is likely that similar services will continue for the Project. Periodic review of disposal capacity in the region and the status of licensed facilities will continue to be carried out to confirm that the Project's disposal requirements can be met without capacity shortfalls or unacceptable environmental impacts.

17.6 Waste Characteristics and Potential Impacts

Based on the identified waste sources and a review of the activities expected throughout the construction, operational and decommissioning phases of the Project, Table 17-4 presents a waste inventory of each expected waste type, its source, category, environmental risk characteristics and potential management options, in line with the waste hierarchy. The waste inventory in Table 17-4 is for the whole of IPC (unless otherwise noted) once the Project is operational, with waste largely attributable to Project related activities, as mining at IPM and IDM will have ramped down or ceased. Consideration is given to circular economy opportunities and national waste policies to recapture and recirculate resources within the economy.

It should be noted that the waste estimates included in this inventory are based on expected Project activities, and data provided from the IRC Waste Services which provided details on the amount of waste collected from IPC. This inventory will be reviewed following detailed design, and during construction and operational phases.

Consultation with IRC representatives on 9 February 2026 confirmed that the Moranbah Waste Management Facility has sufficient ongoing capacity to accept waste generated by the IPC, including the Project, as per the forecasts in Table 17-4.

Table 17-4 Waste Inventory Estimates

Waste Type	Source	Project Phase and Estimated Quantities (per annum)			Environmental Risks	Management Methods
		Construction	Operation	Closure		
Recyclables						
Green waste	Construction and clearing in advance of open cut mining at the Project area	Approx. 50 ha of remnant vegetation	Approx. 300 ha of remnant vegetation	N/A	Emissions from burning, fire fuel risk if excessive volumes stockpiled. Potential weed and fire ant spread.	Onsite reuse – stockpiling and / or mulching of waste vegetation / timber onsite and used for stabilising disturbed areas and during rehabilitation.
Recyclable waste - aluminum cans, glass, paper, cardboard, plastic.	Kitchenettes, administration area and workshop, packaging across IPC	<40 t	<150 t	<20 t	Litter. Incorrect disposal increases resource consumption.	Offsite recycle / disposal. For materials not able to be recycled, store in allocated waste disposal bins for collection by a licensed waste contractor for disposal at a licensed facility.
Timber	IDM Workshop and IPC administration area	<10 t / 50 m³	<10 t / 50 m³	N/A	Fire fuel risk if excessive volumes stockpiled.	Offsite reuse - those that are recyclable are returned to the supplier. Offsite disposal - any unserviceable pallets will be sent to general offsite landfill.
Refurbishable items: Operational activities - hoses, cables and pipe work, steel mesh, manifolds, couplings, conveyor rollers, pump and hydraulic parts, plastic guards and liners and other plastic waste	IDM Workshop IPM Administration area (MIA)	<5 t / 25 m³	<40 t / 200 m³	250 t	Increases resource consumption.	Onsite reuse - excess waste (material that has not been used during construction) will be stored in the workshop or storage shed for future use (for example for maintenance or servicing). Offsite recycle/dispose - other items (not deemed usable) will be temporarily stored in their designated area/skip/bin for recycling or disposal at a landfill or licensed facility.

Computer and electrical waste – televisions, computer parts, mobile phones other electronic devices, etc.	IPM Administration area, MIA, IDM workshop.	<1 t / 5 m ³	<1 t / 5 m ³	Negligible	Increases resource consumption. Precious metal consumption.	Offsite recycle - store in allocated waste disposal bins for collection by a licensed waste contractor for recycling at an offsite licensed facility.
Scrap metal - steel, copper, brass, cast iron, stainless, aluminium, wire and other ferrous or non-ferrous metal	Structures and equipment not suitable to be reconditioned across IPC.	<95 t	<20 t	> 500 t	Environmental impacts from mining and processing. Low risk of heavy metal mobilisation from solid state metals, however, corrosion overtime can mobilise metals.	Offsite recycle - store in allocated waste disposal bins for collection by a licensed waste contractor for recycling at an offsite licensed facility.
General Waste						
General waste - food scraps, packaging waste, non-regulated general waste, non-recyclable plastics and timber	Kitchenettes, administration area and workshop across IPC.	<150 t	<170 t	70 t	Landfill impacts including land use impacts, leachate off contaminates. Energy capture opportunities.	Offsite disposal - stored onsite in sealed green bins for transportation to offsite municipal landfill. Engage contractor that disposes general waste to a landfill with methane capture facilities and leachate collection systems, where feasible.
Personal protective equipment (PPE) and other small items	Operational activities across IPC	<1 t / 5 m ³	<1 t / 5 m ³	<1 t / 5 m ³	Landfill impacts	Onsite reuse - routine checks on PPE for damages and / or faults. Reuse water coolers and other equipment that is not deemed damaged and unusable. Offsite recycle - a licensed contractor will transport plastic or glass items offsite to a recycling facility. Offsite dispose - only sufficiently used / damaged PPE is disposed of where possible. Waste that cannot be recycled will be disposed offsite in a municipal landfill.

Regulated Waste - Category 2 (moderate risk)						
Mineral oils	Machinery maintenance, interceptors within MIA and workshop across IPC	<45 kl	< 150 kl	<45 kl	Contaminate mobilisation into surface or ground water or surrounding soils.	Offsite recycle / dispose – collected and stored in tanks or appropriately sealed containers within dedicated bunded areas for removal and recycling / disposal by licensed waste contractor with vacuum truck (licensed contractor).
Oil filters	Maintenance of vehicles and machinery at IDM workshop	<10 t	<60 t	<10 t	Contaminate mobilisation into surface or ground water or surrounding soils.	Offsite dispose – oil filters will be temporarily stored in the appropriate oil filter bin. Transportation offsite by a licensed regulated waste transporter. Disposal of waste will be to a regulated waste receiver.
Tyres	Tyres from light and heavy vehicles at IDM workshop	<40 t	<100 t	<40 t	Fire hazard. Litter.	Onsite disposal - tyres will be disposed in the dumps onsite.
Oily water	Wash pads, workshop, refuelling station, wash downs and fuel farm across IPC	120 t	450 t	120 t	Contaminate mobilisation into surface or ground water or surrounding soils.	Offsite recycle / dispose - removed by vacuum truck by licensed contractor for recycling or disposal at licensed facility.
Contaminated soil	Spills across IPC	100 m ³ / 120 t	100 m ³ / 120 t	500m ³ / 600 t	Contaminate mobilisation into surface or ground water or surrounding soils.	Onsite remediation or disposal within mine pit.

All other miscellaneous oily / hydrocarbon wastes - oily rags, materials from oil / fuel spillage clean ups	Maintenance and mine pit activities and spill clean ups across IPC	<10 t	<15 t	<5 t	Soil or water contamination	Offsite recover / dispose - materials will be stored within designated bins for collection by licensed contractor and transported to a licensed waste disposal facility for energy recovery and/or disposal.
Paints (Dried paint containers)	IDM Workshop and maintenance activities	<0.15 t / 1 m ³	<0.15 t / 1 m ³	N/A	Soil or water contamination	Offsite disposal - sealed and disposed of with other general waste in dedicated storage bins for collection and disposal offsite. Waste paints collected, stored and transported in accordance with a product stewardship, unless the paint— • is a bagged render • is texture coating • contains isocyanates • is paint stripper is an industrial paint • is anti-fouling paint.
Vehicle batteries – lead acid	Vehicle maintenance at IDM workshop	<1 t / 0.9 m ³ (2 pallets)	<2 t / 1.8 m ³	<1 t / 0.9 m ³ (2 pallets)	Corrosion of surrounding materials if leakage. Consumption of resources. Volatile vapours hydrogen sulphide which can cause health impacts and explosive atmosphere.	Offsite recycle / dispose - stored onsite in designated area within weatherproof battery storage containers. Licensed contractor to collect and transport offsite for recycling.
Regulated Waste - Category 1 (higher risk)						
Clinical waste	First aid and medical administration across IPC	<0.01 t	<0.01 t	<0.01 t	Soil or water contamination. Human health risks from exposure. Litter.	Offsite disposal – clinical waste will be stored in yellow labelled receptacles and removed by licensed contractor to a medical waste facility for treatment and disposal.

Chemical containers / drums	Administration area, surface facilities across IPC	<8 t	<8 t	N/A	Soil or water contamination	Offsite recycle - containers and drums to be emptied of contents sealed and stored in a designated area for collection by licensed contractor, for transport and recycling offsite.
Septic	Crib huts and administration areas at the Project (and elsewhere at IPC)	<100 t	<520 t	<100 t	Soil or water contamination	Offsite or through existing approved IDM STP. Raw sewage will be either taken off site to a licensed facility or treated through the IDM STP. The raw sewage and biosolids will be collected by a licensed waste contractor vacuum truck.
Miscellaneous chemicals (various surplus/miscellaneous chemicals such as coolant, solvents, sealants)	Surface activities and administration area across IPC	<5 t	<10 t	<2 t	Soil or water contamination	Offsite recover/dispose - oily rags and oil spill kit materials will be collected within regulated waste wheelie/industrial bins, before being transported by a licensed waste transport contractor to a licensed waste disposal facility for energy recovery and/or disposal.
Biosecurity waste	Declared weed or pests across IPC	Not anticipated	Not anticipated	Not anticipated	Ecological impacts from release	Weeds and pests managed in accordance with relevant site management plans, government protocols and standards.
Fire debris or wash waters	Emergency fire event – workshop, MIA or administration	Not anticipated	Not anticipated	Not anticipated	Soil or water contamination	No fire debris or wash waters are anticipated at the Project.

17.7 Project Waste Management Facilities

Facilities and processes for managing mine affected water are described in **Chapter 8**, and the process for mining waste management is described in **Chapter 7**. This section describes the non-mining waste handling and storage areas.

17.7.1 Waste Handling and Storage Facilities

Non-mining waste will be collected onsite from IDM, IPM and the Project. The waste will be transferred to an appropriately licenced waste disposal facility locally or regionally. The key waste and storage areas have been designed to enable separation of waste types, storage and collection for offsite transporters in a manner that prevents waste from being released to the environment. The IDM and IPM workshops have been designed to effectively manage waste, particularly regulated wastes where there has been no history of non-compliance with waste related EA conditions.

Materials will be segregated during handling and storage onsite. If materials can be re-used, such as metals, solvents, oils, and wood products, then this will be undertaken where practicable. Skip bins and other containers used to separate and transport the wastes, will be provided by the contractor with the appropriate colouring and labelling to identify the waste stream for the container. Based on the existing waste management at IDM and IPM, the likely following containers and vehicles will be used for waste storage and transportation for the Project:

- General waste – collection and disposal of 1.5 m³, 3 m³ and 4.5 m³ front-lift bins and 15 m skips using front lift truck.
- Recyclable waste – collection and transfer of 1.5 m³, 3 m³ front-lift bins using front lift truck.
- Oil filters – collection and disposal of 1.5 m³ front-lift bins using front lift truck.
- Regulated waste – collection and disposal of 1.5 m³, front-lift bins and 15 m skips using front lift truck.
- Waste oil – collection and transport of bulk waste oil with liquid vacuum tankers.
- Clinical waste – collection and disposal of 28 L sanitary waste bins.

Putrescible wastes generated from meals in the IPC administration and workshop areas will be collected in lidded bins which are emptied daily into the waste management area general skip bins with the lids closed to ensure pests, vermin and other animals are not attracted to the storage area. General wastes will be collected regularly by a contractor. All bins except for steel recycling or construction and demolition waste skips will be covered to prevent litter.

There are suppliers, including Raw Metals Mackay, that provide a scrap metal collection service which can also occur on an 'as-needed' basis.

Storage of wastes will differ according to the specific waste and is discussed further in the following sections. Flammable and combustible liquid wastes will be stored within facilities designed in accordance with 'AS 1940 – The Storage and Handling of Flammable and Combustible Liquids', to prevent contamination of land, surface water and groundwater.

17.8 Environmental Values and Potential Impacts

17.8.1 Environmental Values

Wastes generated by the Project have the potential to impact environmental values if they are not appropriately managed, this includes:

- **Visual amenity** – Project waste facilities are unlikely to be visible to the public due to separation distance from the closest general waste storage area (approximately 3 km) and the vegetation corridor along the Peak Downs Highway.
- **Land** – Land values are discussed in detail within **Chapter 7**. Waste contamination occurring onsite may diminish the suitability of land for farming and livestock grazing. Only inert non-mineral waste will be permanently disposed onsite, which reduces the risk of contaminants affecting the quality of land.
- **Surface water quality** – Stream flow is ephemeral, and further details are provided in **Chapter 8** on the Project's water management systems. Waste handling and storage could impact surface water values through contaminant mobilisation in stormwater or non-biodegradable objects finding their way into watercourses.
- **Groundwater** – The groundwater environment and management of potential impacts to groundwater are described in **Chapter 10**. The potential exists for groundwater quality to be altered by any accidental release of contaminants to shallow groundwater. This may be caused by unintended spillage of fuels, mobilisation of surface contaminants by stormwater (and subsequent recharge) and seepage of contaminants from temporary waste storages. These activities have the potential to locally degrade groundwater quality if not properly managed.
- **Ecological values** – The ecological values within the Project area are described in **Chapter 11**. The Project area and immediately surrounds comprise disturbed habitats that have previously undergone significant clearing for cattle grazing, with some areas of remnant vegetation. Waste may impact on ecological values through litter or by causing an increase in pest and feral animals if waste areas and good stores are not properly managed, or through contamination ingestion or fire.
- **Health and safety of the community** – There are no residences within 5 km of areas where non-mining waste management will be undertaken and therefore there is a very low risk of hygiene or health related issues as a result of management of wastes.

17.8.2 Project Waste Impacts

Potential impacts from waste generation during the construction and operation phases are presented in Table 17-5. The impact assessment is based on the risks posed by non-mining wastes prior to and after mitigation, and is defined as extreme, high, medium or low based on the following:

- **Extreme** – works are not to proceed. Activity or processes must be revised to reduce the risk.
- **High** – works must not proceed until suitable mitigation measures have been adopted to minimise the risk.
- **Medium** – acceptable with a formal review. Documented action plan to manage risk is required.
- **Low** – acceptable with a review.

The residual risk to environmental values from non-mining waste management has been assessed as low. Therefore, with the proposed management, the environmental objectives and performance outcomes described in Section 17.2.6 will be achieved.

Table 17-5 Qualitative Risk Assessment - Non-mining Waste

Hazard and Mechanism	Potential Impacts	Potential Risk	Mitigation Measures	Residual Risk
General Waste				
Inappropriate storage and disposal of putrescibles waste	Human health affected. Increase in pest numbers.	Medium	All construction and operation waste storages will be designed to minimise exposure to waste and any health impacts from the waste. Correct disposal of waste products in sealed skip bins. Regular collection and disposal offsite by licenced waste transfer services. Regular inspection, maintenance and cleaning of waste storage areas	Low
Reduction in visual amenity of surrounding area	Moranbah township is approximately 9 - 12 km north west of mining activities. Other receptors greater than 3 km away from the Project's closest general waste collection area. However, it is not anticipated that the visual amenity of the surrounding area will be impacted by waste storages.	Low	General housekeeping maintained and regular collection service to ensure there is no overflow of bins.	Low
Fire from poorly managed waste storage	A fire in the waste storage area could result in health impacts from the emission of toxic gases, damage to surrounding infrastructure and place the safety of workers in danger from smoke inhalation or burns.	Low	Management measures such as an Emergency Response Plan (Chapter 19) will be developed to manage onsite fires appropriately (if they occur), and offsite impacts are unlikely. Waste segregation and dedicated bunded waste storage areas. Firefighting equipment near any flammable or combustible waste material, such as waste oils.	Low

Hazard and Mechanism	Potential Impacts	Potential Risk	Mitigation Measures	Residual Risk
Litter diminishing ecological value of this habitat	Litter and waste can blow or be spread into habitat areas, this causes injury risks to animals and degrades the habitat value. This can generate from waste storage areas or human disposal from work areas or vehicles. Waste management areas will be within areas that are already cleared for the construction onsite.	Low	Training and education on litter and waste management. Regular checks surrounding work sites and main trafficable roads for levels of litter and clean ups if required.	Low
Introduction and dispersal of pests and weed species	Waste storages and disposal sites have the potential to encourage pest and weed establishment.	Low	A range of measures will be developed to monitor and manage pest and weed densities throughout the site. Refer to Chapter 11 .	Low
Increased pressure on existing waste infrastructure	All waste disposed offsite will be at disposal locations that are already established and have capacity to receive such waste. The Project will endeavour to reduce offsite waste disposal, using measures outlined in Section 17.5.	Low	Waste disposed at local facilities will be subject to the disposal fees to assist council or private operators managing infrastructure capacity.	Low
Regulated Wastes				
Inappropriate disposal of regulated waste	Human health affected and land contamination may occur.	Low	General wastes and regulated wastes will be transported offsite for disposal at Council facilities or other appropriately licensed facilities, other than tyres (a limited regulated waste) which may be disposed of within the pit area. Regulated wastes capable of being economically recycled (e.g., waste oil, light vehicle tyres, used batteries) will be sent to a licensed recycling facility.	Low

Hazard and Mechanism	Potential Impacts	Potential Risk	Mitigation Measures	Residual Risk
			Any sites that become contaminated will be investigated and managed in accordance with the requirements of the contaminated land provisions of the EP Act.	
Contamination and adverse impacts from liquid wastes	Liquid hazardous wastes have the potential to spill or leak from storages and cause contamination.	Medium	Specific waste bins and bunding will be used to isolate waste liquids, chemicals and hazardous wastes. Minimal quantities will be kept onsite. Empty drums and other storage containers will be stored sealed and in bunded areas. Containers will be reused or recycled where possible. An inventory of safety data sheets for hazards substances will be maintained. Licensed contractors will be engaged to regularly remove waste to the appropriate facility. Spill kits will be available close to areas where chemicals are being used or kept.	Low
Surface water and groundwater contamination	There is potential for surface water contamination due to poor housekeeping of waste storage areas.	Low	Waste storage areas will be bunded and sealed with drainage of the area through an oily waters separator or grease trap. All wastes will be stored within bunded areas to prevent contamination of surface water overland flows.	Low

17.8.3 Cumulative Waste Impacts

IRC has nine waste management facilities across the region (Isaac Regional Council, 2025). These facilities include three waste management facilities at Moranbah, Clermont and Dysart. The other six facilities are refuse transfer stations (RTS) being Middlemount, Glenden, Carmila, Greenhill, Nebo and St Lawrence. Moranbah Waste Management Facility has an annual maximum tonnage limit of 100,000 t, under its EA and can accept various waste types (e.g. solid municipal, construction, demolition, commercial and general waste). Other waste management facilities accept general waste, with capacities between 2,000 t and 5,000 t per annum.

For the 2024-2025 financial year IRC managed nearly 35,000 t of landfill across the nine waste management facilities (Isaac Regional Council, 2025). As outlined in the Isaac Waste Management Strategy 2020 – 2025 the Moranbah Waste Management Facility is the primary landfill for the region and is the only engineered landfill with a lined cell and leachate management system (Isaac Regional Council, 2020). Moranbah has an estimated remaining capacity of 1.1 million cubic metres between the current cell and three future cells and is forecast to reach capacity beyond 2045 (Isaac Regional Council, 2020).

As at June 2024, the Isaac region hosts 31 operating mines, including IDM and IPM and several associated resource operations (Queensland Treasury, 2024). While IRC does not publicly report a breakdown of exactly how much waste each mine contributes to the Moranbah facility, its 2023 waste audit indicates that approximately 70–75% of the waste landfilled in the region consists of commercial & industrial sources, with only about 5% from construction & demolition (Isaac Regional Council, 2024). Assuming all operating mines and related operations dispose of their waste at the Moranbah Waste Management Facility, the average contribution per operation equates to several thousand tonnes per annum. The overall waste volumes sent to the Moranbah Waste Management Facility remain within its existing licensed capacity, with long term planning indicating sufficient remaining capacity to support waste from the Project.

The IDM and IPM operations currently utilise JJ Richards for waste disposal, with waste understood to be sent to the Moranbah Waste Management Facility. As the existing IDM operation winds down and transitions into the Project, the Project is effectively a continuation of IDM's operational waste generation and disposal activities. Accordingly, no increase in waste generation is anticipated. Instead, the Project will maintain the same waste profile and disposal arrangements currently associated with IDM, with waste volumes expected to remain consistent as operational activities shift to the Project.

17.9 Waste Management Plan

As the Project is a continuation of the existing IDM operations, the existing WMP will be updated to include the Project's non-mining waste based on the methodologies currently used at IDM:

- All materials, products and processes will be selected to minimise the generation of waste to landfills, minimise impacts on the environment, and incorporate materials that are recyclable wherever possible.
- All waste will be disposed of appropriately, with due regard for the waste management hierarchy, as defined in the WRR Act and detailed in section 17.5.

The below waste management measures are currently implemented at IDM and will continue to be implemented for the Project:

- Supply contracts will include requirements to reduce packaging wastes and acceptance of returned packaging.
- Recycling bins will be set up at strategic locations on site.
- Efforts will be made to reduce the quantity of waste produced and to reuse and recycle waste at every opportunity, in accordance with the waste management hierarchy.

- Hazardous liquid wastes awaiting disposal, such as hydrocarbons and oils, will be stored appropriately in accordance with AS1940:2004 'The Storage and Handling of Flammable and Combustible Liquids'.
- Correctly signed waste receptacles will be provided at appropriate locations.
- Waste tracking certificates will accompany trackable regulated wastes.
- Wastes will be collected by a licensed waste disposal contractor for disposal on a regular basis, and additional services are arranged if required.
- Waste volumes will be measured, recorded and reviewed monthly to allow sustainability reporting and to monitor the effectiveness of waste mitigation programs and performance.

The updated WMP will:

- identify all waste streams and volumes of each waste stream
- set measurable performance targets for waste reduction based on volumes generated across mining areas and waste streams
- describe the management and control of construction and operational activities to ensure that all parties involved are aware of their environmental obligations in relation to waste management
- address all waste related environmental aspects and impacts for each phase of the Project
- incorporate best management practice and mitigation measures into all Project activities and consider sustainable management principles and opportunities where appropriate.

The WMP will adhere to all local, State and Commonwealth regulations in relation to the handling, processing, recycling, transport and disposal of all waste streams which may be generated. The WMP will also include measures designed to comply with the relevant industry standards and will be designed in response to the predicted impacts with detailed design measures to address localised impacts where necessary. Mitigation measures may include change in work procedures and practices, and physical interventions to separate or buffer specific areas from predicted impacts.

The updated WMP will require review of the current program and procedures for monitoring the effectiveness of existing controls and mitigation measures. If the current program is found to be effective, it will be carried forward for the Project. Any updates to the monitoring program may include additional activities such as sampling of specified parameters, visual inspections, event recording and stakeholder communication.

17.10 Mitigation and Management Measures

17.10.1 Measuring Volumes Generated

To ensure that the Project's WMP is continually updated and implemented throughout the entire Project lifecycle, waste monitoring and auditing will be undertaken. The purpose of monitoring waste management activities and outcomes onsite include the following:

- Obtaining baseline data so waste generation and subsequent potential impacts can be analysed.
- Monitoring to ensure compliance with the regulatory and Project framework. Monitoring will also reduce the potential for harm to the environment.
- Collation of data to enable continuous improvement in carrying out the WMP.

The methods used and frequency of these audits will be defined in the Project's WMP and will be regularly reviewed as the Project progresses to ensure they are appropriate to Project staging.

17.10.2 Waste Generation Monitoring

The volumes of each waste stream will be monitored as outlined below in Table 17-6. There is a combination of qualitative and quantitative measurement data that will be collected.

Table 17-6 Non-mining Waste Volume Monitoring

Waste Type	Monitoring	Performance Measure
General Wastes	- General waste bin utilisation at time of collection and the date, location and sizes of general waste bins emptied. - Total monthly volume in cubic meters. - The number and percentage of contaminated general waste bins (containing waste that is not compliant with general waste).	- Trends which increase or decrease waste generation volumes. - Determine response to implemented reduction initiatives. - Staff and contractor awareness of waste segregation requirements in various mine domains. - End management of waste is in accordance with hierarchy. - Metrics for stakeholder collaboration on waste generation, quality and sources.
Recyclable wastes	- Co-mingled waste bin utilisation at time of collection and the date, location and sizes of co-mingled waste bins emptied. - Total monthly volume in cubic meters. - The number and percentage of contaminated co-mingled waste bins (containing waste that is not compliant with general waste).	
Steel	Location, date of collection, bin size and volume of waste in cubic meters.	
Regulated wastes – general skip	- Location, date of collection, bin size and volume of waste in cubic meters and utilisation. - Waste Tracking Certificate register and certificates.	
Regulated wastes – Bulk Waste Oil	- Location, date of collection, litres removed and monthly total volume in litres. - Waste Tracking Certificate register.	
Regulated wastes – Oil filters	- Location, date of collection, litres removed and monthly total volume in litres. - Waste Tracking Certificate register.	
Regulated waste – bulk grease trap or oils	- Location, date of collection, litres removed and monthly total volume in litres. - Waste Tracking Certificate register.	
Waste efficiency or reduction measures	Monthly notes on any waste mitigation innovations or measures and how and where they were implemented.	Effectiveness of different strategies.
Toolbox sessions	Feedback loop on waste management, performance metrics, targets achievements, and issues or hurdles in innovation implementation.	Effectiveness of different strategies.

17.10.3 Records and Reporting

Records will be maintained of the following:

- volume measurements as outlined in Table 17-4 will be documented and kept on record
- key activities
- weather conditions
- new or unknown waste stream identified and how they have been / will be managed
- water and waste quality records from treatment processing
- inspection of waste storage and management area for litter, pest, weeds, staining, broken containers or other issues or risks that could pose harm.

This data will be collated, analysed and presented in regular reports, including:

- trend analysis and performance tracking to reach performance targets in the waste management plan
- overview of waste reduction achievements, initiatives and mitigation measures
- key highlights on the reduced environmental impacts and cost savings from the performance achievements
- review of new waste management, treatment technologies, and viability of application for the Project

Stanmore will assess the Project's obligations under the National Environment Protection (National Pollutant Inventory) Measure 1998 (NPI NEPM) and the associated reporting framework annually throughout operations. The NPI NEPM requires facilities to consider emissions and transfers of listed substances to air, land and water, including substances contained in on-site and off-site waste transfers, where relevant activity, usage or emission thresholds are exceeded. During operations, Stanmore will identify relevant reportable substances and, where applicable thresholds are triggered, report the type and estimated annual quantity of each substance in accordance with NPI requirements and the NPI Manual. Emissions and transfers associated with waste will be managed through the following systems:

- Waste will be managed through the mining and non-mining waste management systems.
- Air emissions will be managed and monitored through the air quality monitoring and management plans.
- Water-related emissions and releases will be managed through the water management plan.

The EIS identifies the types and amounts of potential emissions in the following sections:

- **Chapter 15** describes emissions to air from dust, from which NPI Manual emissions factors are used to calculate other emissions to air.
- **Chapter 8** describes potential controlled releases of mine-affected water.
- **Chapter 4** and **Chapter 7** describe mining waste management, including tailings and rejects.
- **Chapter 17** describes non-mining waste management, including potential transfers to waste management facilities.

17.11 Conclusion

The sustainable management of non-mining waste for the Project is underpinned by a comprehensive framework that aligns with Queensland's legislative requirements, the waste and resource management hierarchy, and best practice environmental standards. The chapter demonstrates that the Project's approach to non-mining waste management is robust, with clear objectives to minimise waste generation, maximise recycling and reuse, and ensure all waste streams are managed to protect environmental values throughout the construction, operation, and closure phases.

Key strategies include:

- Integration of existing infrastructure and procurement policies to reduce packaging and promote recycled materials.
- Onsite segregation, reuse, and recycling of materials, supported by licensed contractors for regulated and hazardous waste streams.
- Regular monitoring, auditing, and reporting of waste volumes and management effectiveness, enabling continuous improvement and compliance with regulatory obligations.

The risk assessment confirms that, with the proposed mitigation and management measures, the residual risks to environmental values from non-mining waste are low. The Project's waste management plan will be regularly updated to reflect operational changes and regulatory developments, ensuring ongoing protection of land, water, ecological, and community health values.

In summary, the Project is positioned to meet its environmental objectives and performance outcomes related to non-mining waste, demonstrating a commitment to responsible waste management and sustainability for the life of the Project.

17.12 References

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