



# Nyrstar Hobart

New Cellhouse

Construction Environmental Management Plan (CEMP)

Version 3

Submitted: 5 July 2023

## Table of Contents

1	Introduction .....	3
2	Proposed Development .....	4
2.1	Project Description .....	4
2.2	Timeline .....	4
2.3	Legislative Requirements.....	6
2.4	Approval Requirements.....	6
3	Environmental Management .....	7
3.1	Relevant Environmental Issues .....	7
3.1.1	Surface Water .....	7
3.1.2	Groundwater.....	7
3.1.3	Erosion and Sediment.....	7
3.1.4	Noise .....	7
3.1.5	Dust .....	7
3.1.6	Hazardous Materials .....	8
3.1.7	Solid Waste (excluding excavation spoil).....	8
3.1.8	Excavation Material .....	8
3.1.9	Quality Control.....	8
4	Environmental Diligence.....	9
4.1	Inductions .....	9
4.2	Environmental Monitoring .....	9
4.3	Non-compliance actions.....	9
4.3.1	Incident Response.....	9
4.3.2	Incident Reporting .....	9
4.3.3	Reporting.....	10
4.4	Emergency Response.....	10
4.5	CEMP Review .....	10
	Appendices .....	11

---

## 1 Introduction

This Construction Environmental Management Plan (CEMP) has been developed by Nyrstar Hobart (NH) for the construction of a new 300,000 tonnes per annum electrolysis plant (a Cellhouse) that will replace the existing Cellhouse on the NH site. The existing Cellhouse has been in operation for over 100 years and consequently its replacement presents a range of environmental, work health and safety, economic and social benefits affecting the long-term viability of the operation.

As per the requirement stipulated with Permit Conditions – Environmental No. 10449 issued by the Environment Protection Authority on 5 April 2022, a CEMP containing a detailed description of the proposed timing and sequence of the major construction activities, and of the proposed management measures to be implemented to avoid or minimise environmental impacts during the construction phase, must be submitted to the Director for approval prior to the commencement of construction.

This CEMP is a management tool to be followed to mitigate potential environmental impacts arising from the project, including the following identified environmental aspects:

- Impacts on surface water and waterways
- Groundwater
- Erosion and sediment control
- Noise control
- Dust control
- Management of hazardous materials
- Solid waste management
- Quality control

Nyrstar Hobart is located in the suburb of Lutana, approximately 10 km north of Hobart. The site primarily produces zinc metal and alloys. The site was commissioned in 1917 and has been in operation since commissioning. It is one of the world's largest and most efficient zinc producers.

## 2 Proposed Development

### 2.1 Project Description

The project construction work includes:

- The demolition of a shed and cooling towers
- Earthworks involving both cut and fill preparing the site for the construction of a new cellhouse and the placement of the excavated material across two areas
- Realignment of a roadway that will involve the construction of a retaining wall
- Construction of a pipe bridge
- Construction of a new cooling tower system
- New services corridor and relocation of services
- New truck turning bay at casting
- Demolition of the mercury filter cake bund
- Bulk Earth Works (BEW)
- Piling
- Civil Works and Foundations
- Building Erection
- Structural Mechanical Piping (SMP) Installation
- Electrical, Control and Instrumentation (ECI) Installation
- Commissioning

### 2.2 Timeline

The project requires a significant amount of early works to be completed prior to the construction of the new Cellhouse. The proposed early works dates have been summarised in Table 1. Due to the scale of the project, the dates for the large construction works have been provided in a draft schedule shown in Figure 1. Though it is worth noting dates may vary from this schedule.

*Table 1: Proposed dates for early works construction activities*

<b>Early Works Schedule</b>	<b>Proposed Timing</b>
Demolition of shed and cooling towers	TBA Q2 24
Bulk earthworks	TBA Q2 24
Realignment of roadway and retaining wall construction	17/08/23 - 20/02/24
Construction of pipe bridge (Civil)	10/11/23 – 10/12/23
Construction of a new cooling tower system (Civil)	20/11/23 – 20/01/24
New services corridor and relocation of services	15/09/23 – 30/02/24
Truck turning bay at casting	01/08/23 – 15/09/23
Demolition of mercury filter cake bund	31/07/23 – 07/08/23

# NYRSTAR CELLHOUSE PROJECT - JUNE 2023

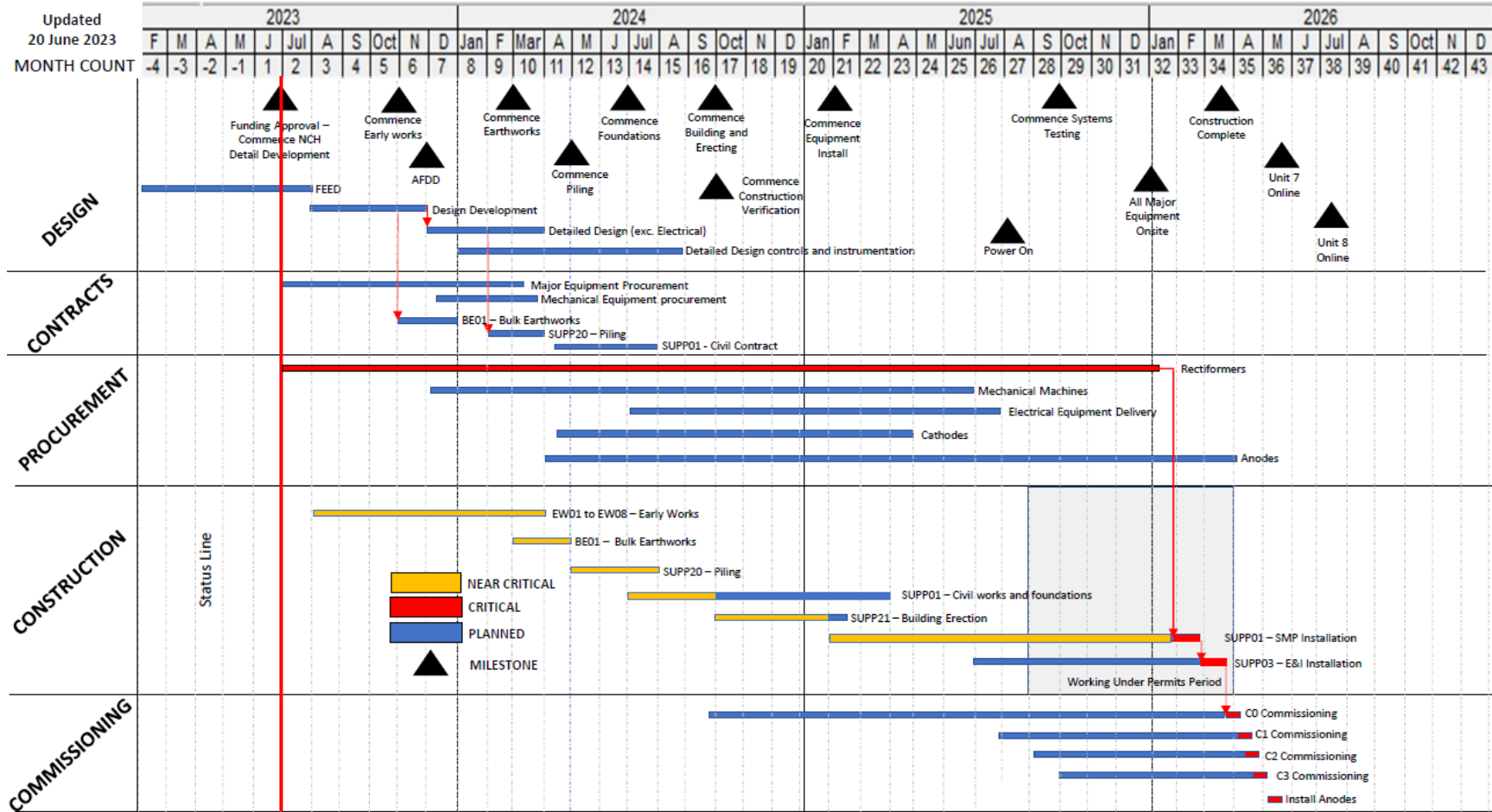


Figure 1 Single Page Summary of Proposed Cellhouse Project

---

### 2.3 Legislative Requirements

The Nyrstar Hobart Cellhouse proposed development required an application for a permit under the *Land Use Planning and Approvals Act 1993* (LUPAA). The proposal has been assessed as a level 2 activity under the *Environmental Management and Pollution Control Act 1994* (EMPCA). The main environmental protection and pollution control legislative obligation for the Cellhouse project is EMPCA. Tasmania enacts the requirements under EMPCA through a suite of legislation which forms the framework for Tasmania's resource management and planning system and includes the following.

- *Land Use Planning and Approvals Act 1993;*
- *Environmental Management and Pollution Control Act 1994;*
- *Resource Planning and Development Commission Act 1997;*
- *Resource Management and Planning Appeal Tribunal Act 1993;*
- *State Policies and Projects Act 1993;*
- *Historic Cultural Heritage Act 1995; and*
- *Major Infrastructure Development Approvals Act 1999.*

### 2.4 Approval Requirements

The approval requirements for this project are contained in Planning Permit (PLN-21-506) Permit Conditions – Environmental No. 10449. NH must comply with the conditions contained in Schedule 2 of the Permit Part B.

---

## 3 Environmental Management

### 3.1 Relevant Environmental Issues

The following section provides a brief overview of each of the identified environmental aspects associated with the construction of the new Cellhouse. The management measures that will be implemented so as to minimise environmental impact have been detailed in Appendix A.

#### 3.1.1 Surface Water

NH maintains a completely closed circuit stormwater system. No stormwater from the operational site is discharged into the local council stormwater system. Except in the event of an emergency, generally during extreme rainfall events, all stormwater is retained on site, and managed via a network of retention dams, pipes and pumps, which ultimately directs the surface water to the sites effluent treatment plant (ETP), where it is treated prior to discharge into the Derwent estuary.

All water generated from the project will be directed towards the on-site drainage system via stormwater pipes and concrete spoon drains, and treated through the on-site ETP.

The stormwater and effluent treatment system is regulated by the EPA via the sites Permit (former Licence to Operate Scheduled Premises) No. 3314, as varied by Environment Protection Notice No. 7043/5 (hereafter referred to as 'the NH site permit').

#### 3.1.2 Groundwater

Significant groundwater contamination has occurred across the NH site as a result of over 100 years of operation. Sources of this contamination is through leakage of process solutions, infiltration through stockpiled concentrates and residues and leaks from above and below ground storage tanks and pipes. During the construction phase mitigation measures should be followed ensuring any groundwater found during early works is discarded or correctly and spills are prevented from reaching groundwater.

#### 3.1.3 Erosion and Sediment

The project involves significant bulk earthworks, and thus controls will be required to ensure sediment and erosion risks are managed. It is recognised that on the majority of development sites, erosion and sediment control risks are associated with offsite impacts. However, NH maintains a completely closed stormwater circuit, therefore no stormwater from the operational site is discharged into the local council stormwater system.

#### 3.1.4 Noise

NH monitors noise continuously at three locations within the neighbouring community (Birch Road, Delwood Drive and Saunderson's Road). Whilst the new Cellhouse noise output will be similar to the current output, there may be times of increased volume during the construction period.

#### 3.1.5 Dust

The high level of contaminants in NH soil poses a potential environmental and health risk. During the construction period, dust generation should be kept to a minimum ensuring the safety of workers, community and environment. The planning phase plays a significant role in mitigating dust generation.

### 3.1.6 Hazardous Materials

During construction, the chemicals on site will be primarily sealants, paints, compressed gases for welding, concrete and associated additives. During earth and civil works, hydrocarbons, concrete, grouting materials and chemical markers will be present. The main performance requirement is ensuring that all goods and materials are managed in line with the existing approved site standards and procedures. The Australian standards followed on site are as follows:

- AS 1940-1993 The storage and handling of flammable and combustible liquids
- AS 4326-1995 The storage and handling of oxidising agents
- AS/NZS 4452-1997 The storage and handling of toxic substances

Dangerous Goods and Environmentally Hazardous Materials must be managed to prevent unauthorised discharge, emission, or deposition of pollutants into the surrounding environment.

### 3.1.7 Solid Waste (excluding excavation spoil)

The project will generate a large amount of solid waste. NH's waste management plans and procedures for site waste management follow a hierarchy of controls to minimise the generation of wastes.

1. AVOID unnecessary resource consumption.
2. REDUCE waste generation and disposal.
3. RE-USE waste resources without further manufacturing.
4. RECYCLE waste resources to make the same or different products.
5. RECOVER waste resources, including the recovering of energy.
6. TREAT waste before disposal, including reducing the hazardous nature of waste.
7. DISPOSE of waste only if there is no viable alternative.

### 3.1.8 Excavation Material

The Cellhouse project will involve significant earthworks, which will result in the generation of approximately 32,000 m<sup>3</sup> of excavation spoil.

The excavated material is to be used to create additional usable spaces in two areas of the site. The re-use of the excavation spoil is subject to the requirements of Environmental Approval (EA) 11426/1, issued by the EPA on 8 March 2023.

### 3.1.9 Quality Control

Quality control is essential in ensuring the construction project is following the actions listed in the CEMP. Quality control refers to the process of ensuring that the Cellhouse project meets the requirements of the CEMP and project. It will involve inspections, monitoring and documentation management.

- Daily inspections of CEMP actions completed by contractor.
- Weekly site inspection from NH Environment Department.
- Auditing of appropriate records (SDS etc)
- Monthly meetings with the Cellhouse team, discussing environmental concerns.
- Verify contractors' implementation of control measures and to provide management feedback for the initiation of further controls if required.



---

## 4 Environmental Diligence

### 4.1 Inductions

All project personnel will receive a site induction into the requirements of the following, prior to commencing work on this project:

- Environment Protection Notice No. 7043/5, or any subsequent versions
- Permit Conditions – Environmental No. 10449 issued by the EPA on 5 April 2022
- Environmental Approval 11426/1 for the re-use of excavation spoil
- This CEMP

The induction will be appropriate to their level of involvement with the project. Site inductions will be developed to induct personnel into the broad aspects of the Project. The environmental component of this induction will reinforce that it is the responsibility of all personnel to adhere to all identified environmental requirements and site procedures.

### 4.2 Environmental Monitoring

Monitoring of the implementation of the CEMP is required to ensure control measures and procedures are meeting all the conditions and commitments approved and are being implemented in an effective manner.

Environmental performance and condition shall be monitored throughout all stages of the project.

Site monitoring of the CEMP will:

- Verify contractors' implementation of control measures and to provide management feedback for the initiation of further controls if required; and
- Provide data for ongoing environmental management.

### 4.3 Non-compliance actions

Compliance by the Cellhouse Project team with legal instruments and this CEMP will be monitored by the Project Manager (PM) and delegates. The person responsible shall contact the NH Environment Department and the PM regarding the confirmed non-compliance. When any activity is found to not be conforming, construction activities will be suspended as required until appropriate measures are in place.

Any non-conformances must initially be reported using the NH Hazard/Identification form, and investigated to an appropriate level.

#### 4.3.1 Incident Response

If an incident causing or threatening environmental nuisance, environmental harm or material environmental harm from pollution occurs during the project, the person responsible for the activity must immediately take all responsible and practical action to minimise any adverse environmental impacts from the incident.

All Environmental Spills should be managed according to the NH Environmental Incidents – Spillages Procedure (HP-824-00424).

#### 4.3.2 Incident Reporting

In an emergency and/or incident the person responsible must immediately notify the Emergency Response Officers and NH Environment Department after becoming aware of the emergency or

incident resulting in a release of contaminants not in accordance, or reasonably expected to be in accordance with this CEMP (and conditions of approval).

The notification of any emergency or incident must include, but is not limited to the following information:

- The location of the emergency or incident;
- The name and contact details of the Cellhouse Team member, Nyrstar or designated contact person;
- The time of the release;
- The time the operator became aware of the release;
- The suspected cause of the release;
- The environmental harm caused, threatened, or suspected to be caused by the release; and
- Actions taken to prevent any additional release and mitigation measures implemented to manage environmental harm.

### 4.3.3 Reporting

An environmental performance reporting procedure will be implemented to capture environmental performance against the CEMP and relevant approval and legislative requirements. Regular project meetings will also occur, where environmental compliance will be discussed and provisions made to manage and respond to any actual or potential environmental events.

## 4.4 Emergency Response

All employees involved in the NH Cellhouse project must implement the Nyrstar Emergency Management Plan in the event on an emergency. The Project Manager (PM) / Nyrstar Representative (NR) must ensure that all personnel are aware and competent in activating Nyrstar Hobart emergency response procedures.

**Nyrstar Hobart Emergency Assistance – 555 or 6278 4999 or Nyrstar UHF Channel 1**

## 4.5 CEMP Review

This CEMP is a dynamic document. Accordingly, to ensure that environmental management is continually improved during the product, a review of this document by the Cellhouse PM or NR shall occur:

- To incorporate any updated or changed condition requirements or commitments different to current approval;
- Following significant environmental incidents;
- At the completion of any relevant audits; and
- In the instance whereby the objectives of this CEMP are not being achieved.

The effectiveness of this CEMP shall be reviewed following guidelines for continual improvement. The review should consider the following matters:

- Suitability and proficiency of the environmental management;
- Monitoring results;
- Audit/inspection findings; and
- Technical reviews

## Appendices

### Appendix A – Planning and Construction Environmental Controls

# Surface Water

## Planning

- Identify on-site areas requiring stormwater management.
- Wherever possible maximise water reuse to ensure effective conservation and management of the property's water resources.
- Define and agree with NH acceptance criteria for discharge of excess water from the construction site to the NH stormwater system which is treated at the ETP before discharge to the Derwent estuary.
- Schedule works as far as practical such that major earthworks activities do not take place in wet conditions to minimise sediment loading in waters.
- Design and install (as appropriate): stormwater systems; diversion channels / culverts; water containment; water monitoring; oil/grease sumps and separators, and sediment containment at vehicle washing facilities.
- Minimise disturbance near stormwater drainage lines.
- Schedule appropriate inspection and maintenance of any stormwater management infrastructure.

## Construction

- Maintain infrastructure for stormwater management.
- Ensure all stormwater generated is directed to the NH stormwater system.
- Keeping hosing to a minimum to reduce the volume of water entering the stormwater system.
- Surface water which does not meet acceptability for discharge to the NH stormwater system and ETP should be managed on the construction site or disposed via licenced controlled waste contractors.
- Identify opportunities for improvements in stormwater management practices and update the procedure as needed.
- Demarcated wheel wash site to prevent sediment from being tracked off the site.
- Implementation of NH's Materials Movement Procedure, including inspection and approval for equipment to leave site to ensure cleanliness.

# Groundwater

## Planning

- Identification of designated areas specific to activities with high risk of contamination such as refuelling
- Appropriate set up of high-risk areas to include bunding, impermeable hardstand area, appropriate drainage infrastructure from this area to the appropriate treatment location.

## Construction

- Portable self-bunded fuel pods to be used for refuelling machinery.
- Appropriate handling of excavated material and disposal methods
- Management of any extracted groundwater from piling and excavation work via pumps, drainage system and redirection into the onsite stormwater system, or a suitable vessel for treatment.
- The drilling method for piling must be approved by the NH Environment Department prior to works being carried out.
- Notify the ET Officer if any new material (i.e. groundwater generation) is introduced into the drainage system, not just spills and solids.

# Erosion and Sediment

## Planning

- Identify all Site areas requiring sediment control during all stages of construction works.
- Ensure planning strategies include avoidance of unnecessary land disturbance.
- Ensure weather forecasts for heavy rain are identified early to allow effective work planning to minimise sediment erosion and runoff.
- Design and install (as appropriate): stormwater systems; sediment fences; diversion channels / culverts.
- Schedule appropriate inspection and maintenance of any sediment management infrastructure.

## Construction

- Minimise access and disturbance to essential areas only.
- Contaminated spoil will be stored in such a way that it doesn't enter the drainage system.
- Implement sediment controls (as appropriate):
  - Diverting surface flows around disturbed areas.
  - Minimising exposure of soils to erosive forces.
  - Detaining sediment laden runoff to allow sediment to settle out.
  - Using silt fences as sediment traps.
  - Directing all sediment laden runoff to designated sediment traps / structures (as required).
- Ensure all sediment generated is either kept on the construction site, or directed to the to the NH stormwater system.
- Reinstate and clean out accumulated sediment or leaf litter in any control structures after heavy rain events.
- Take reasonable measures to minimise vehicle movements where possible during wet weather.
- Demarcated wheel wash site to prevent sediment from being tracked off the site.

## Noise

### Planning

- Plan main construction works between 7 am and 5 pm, 6 days a week.
- Notify members of the surrounding community of upcoming noisy works before they occur.

### Construction

- Night works to only be completed as required. If night works need to occur, ensure these are minor works.
- Placement of loud equipment (e.g. generators) away from sensitive noise receptors and from the boundary of the NH site (as defined by the NH site permit).
- Continuous noise monitoring at community noise monitoring locations.
- Community complaints register in place.
- Monitor noise during construction, complete a source assessment and determine whether these noise sources could be lessened.

## Dust

### Planning

- Plan demolition and construction activities and sequencing so that areas of exposed soil are minimised, and dusty activities are minimised during windy days.
- Develop dust suppression systems and procedures for all dust generating tasks.
- Ensure dust suppression does not increase sediment runoff.
- Ensure water truck or other dust suppressant equipment is available, installed and in good working order.
- Develop measurable indicators and targets for dust management (e.g. no visible dust plume and no visible dust plume leaving boundary of the NH site (as defined by the NH site permit)).

### Construction

- Reduce dust generation through:
  - Minimising areas of disturbance.
  - Use of hardstand to stabilise exposed areas.
  - Surface water spray.
  - Plan works to avoid double handling and movement of material.
- Make use of onsite weather station (525549E, 5257360N GDA94 MGA55) to monitor conditions. During high wind speed conditions:
  - Increase wetting frequency on unsealed roads and dust-generating surfaces.
  - Minimise or postpone dust-generating activities where possible.
- Orientate waste soil stockpiles comprising fine material to minimise the cross-sectional area presented to the prevailing wind direction wherever space permits. If there is a high risk of dust generation from the stockpile, cover the pile.
- Manage stockpile dust suppression systems to minimise dust generation.
- Ensure dust-generating plant and equipment are operated in a proper manner and fitted with appropriate exhaust, dust extraction and collection systems.
- Abide by and enforce speed limits, particularly on unsealed roads. Site speed limit is 20 km/h typically, or 5-10 km/h in pedestrian zones.
- Use wheel wash or hose down facilities (as necessary) when exiting the site in order to prevent mud and dust being transferred onto public roads.
- Cover trucks carrying fine material (if transporting offsite).
- Complete visual inspections and amend control measure if they are not sufficient.
- Identify opportunities for improvements in dust management practices and update the procedure as needed.

# Hazardous Materials

## Planning

- Goods and materials to be managed in line with the existing approved site standards and procedure. The Australian standards followed on site are as follows:
  - AS 1940-1993 The storage and handling of flammable and combustible liquids
  - AS 4326-1995 The storage and handling of oxidising agents
  - AS/NZS 4452-1997 The storage and handling of toxic substances

## Construction

- Safety Data Sheets (SDS) will be retained within the NH chemical database (ChemAlert).
- An inventory must be kept of all environmentally hazardous materials stored and handled on site. The inventory must specify the location of storage, facilities and maximum quantities of each material kept on site. This inventory will be maintained via ChemAlert.
- Ensure all materials are handled, stored, used and disposed of in accordance with their SDS.
- All hazardous materials must be stored at the designated bunded area on site. Failing this they must be stored on spill trays which are designed to hold 110% of the total volume of material.
- Spill kits must be kept on site in appropriate locations to assist in the containment of a spilt hazardous chemical.
- Inspections of the bunded hazardous materials storage areas, including spill kits, are to be conducted on a monthly basis.



## Solid Waste (excluding excavation material)

### Planning

- Identify and construct on-site temporary waste storage locations for each identified solid waste stream.
- Provide for adequate segregation between potentially incompatible dangerous good (DG) wastes.
- For DG wastes, ensure bunding and segregation distances comply with the requirements of the specific Australian / New Zealand Standard applicable to the class of DG stored.
- Ensure solid waste storage locations are in approved safe areas that are not prone to flooding, traffic, wind, etc.
- Provide safe access for vehicles and ensure access ways are kept clear at all times.
- Install appropriate signage to ensure the correct use of solid waste storage area/s.
- Identify registered / approved off-site reuse, recycling and disposal locations for likely contaminated and non- contaminated solid wastes (as appropriate).
- Ensure waste contracts are in place for all solid wastes that require removal from the site for reuse, recycling, treatment and/or disposal.
- Ensure that all waste transport contractors hold appropriate authorisations to transport, receive, store, reprocess, treat and/or dispose of the specific solid wastes.
- Schedule regular (weekly) inspection and maintenance of any temporary solid waste storage area/s.
- Maintain legal and other requirements associated with waste management, including waste cartage types, quantities, destinations, appropriately licensed carrier for the waste, and any necessary approvals.

### Construction

- Minimise solid waste generation in accordance with the waste management hierarchy.
- Use designated temporary storage areas for solid wastes and ensure segregation is implemented keep contaminated and incompatible materials separate from others.
- Store and handle any solid wastes (excluding excavation spoil) in accordance with the following requirements:
  - a. Packing waste – segregate and return to source wherever possible or recycle.
  - b. Waste concrete – reuse / recycle where possible.
  - c. Scrap metal – segregate and recycle.
  - d. Building demolition wastes – segregate and recycle where possible. Disposal to landfill may be required if the waste is contaminated
  - e. Waste oil / hydrocarbon contaminated wastes – store in sealed containers in bunded areas away from ignition sources and watercourses for removal by appropriately licensed controlled waste contractors.
  - f. DG wastes:

- i. Store DG wastes in designated locations to ensure that there is minimal risk of accidental release to air or land.
  - ii. Ensure labelling of DG wastes complies with the requirements of the GHS.
  - iii. Ensure disposal procedures comply with the requirements of the specific safety data sheets for the DG waste stored.
  - iv. Ensure packages of DG wastes are treated as full prior to disposal.
- g. Office wastes – segregate paper, cartridges and computer wastes, recycle.
- h. Food wastes – dispose of with general rubbish.
- i. Tyres – minimise storage in stockpiles, store away from ignition sources, reuse or recycle.
- j. Batteries – segregate into different types, removal by authorised contractor.
- Dispose of wastes off-site to facilities licenced to accept the wastes.
- Ensure regulated wastes are removed from site by a contractor who holds a current licence to transport such waste.
- Materials Movement Authorisation (MMA) Form must be completed for most on site and off site movements as outlined in Materials Movement Procedure HP-825-00875.

## Excavation Material

Controls are at a minimum, as per the requirements of EA 11426/1, issued by the EPA on 8 March 2023.

### Planning

- Preparation of the two approved re-use zones, including the removal of manganese process material from the Old Manganese Area.
- Installation of drainage in the two re-use zones as per the designs submitted to the EPA.

### Construction

- Excavation works will be supervised. Any material that exhibits characteristics of process wastes, hydrocarbon contaminated material or asbestos will be segregated and the NH Environment Department contacted.
  - This material will be managed in accordance with the existing waste management processes on site, including where required, treatment and disposal in accordance with regulations.
- Excavated material deemed suitable for re-use will be placed in one of the two approved re-use zones.
- The excavated material will be flattened and compacted in such a manner as to make the areas flat, trafficable space.
- Materials Movement Authorisation (MMA) Form must be completed for most on site and off site movements as outlined in Materials Movement Procedure HP-825-00875.

