

GCRE: Washery: Depot Construction Area Earthworks and Drainage

Construction Environmental Management Plan
Global Centre of Rail Excellence (GCRE)

May 2024

GCRE001-AWJV-XX-XX-DO-YV-00006

Notice

This document and its contents have been prepared and are intended solely as information for Global Centre for Rail Excellence (GCRE) and use in relation to the Construction Environmental Management Plan for the GCRE Washery: Depot Construction Area only.

AtkinsRéalis assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

Document history

Document title: Construction Environmental Management Plan

Document reference: GCRE001-AWJV-XX-XX-DO-YV-00006

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	First draft	PD	SL	JW	HLA	05/04/2023
2.0	Depot Phase update	BL	SW	SR	SR	23/04/2024
2.1	Minor updates	BL	SR	SR	SR	03/05/24

Client signoff

Client	Global Centre of Rail Excellence (GCRE)
Project	GCRE: Washery: Depot Construction Area Earthworks and Drainage
Job number	5209796
Client signature/date	

Contents

Chapter	Page
Abbreviations	6
1. Introduction	8
1.1. Purpose and Scope	8
1.2. Project Overview	8
1.3. Construction Programme and Phasing	9
1.4. Working Hours	9
1.5. Guidance and Other Documents	10
2. Roles and Responsibilities	11
2.1. Environmental Management Responsibilities	11
2.2. Site Roles and Responsibilities	11
3. Awareness, Training and Competence	15
3.1. General Awareness and Site Induction	15
3.2. Environmental Training and Competencies	15
4. Environmental Inspection, Monitoring and Reporting	17
4.1. Environmental Monitoring Requirements	17
4.2. Inspection, Auditing, Recording and Non-Compliance	17
5. Communications	19
5.1. Internal Communications	19
5.2. External Communication	19
5.3. Complaint Management	20
6. Environmental Legislative Requirements	21
6.1. Policies	21
6.2. Legislation, Regulation and Other Requirements	21
7. Consents and Other Permissions	22
8. Environmental Risks Register	23
9. Environmental Management and Construction Principles	24
9.1. General Environmental Management Measures	24
9.2. Public Rights of Way and Common Land	27
9.3. Water Environment	27
9.4. Waste and Materials	31
9.5. Ground Environment and Soils	32
9.6. Ecology	33
9.7. Archaeology and Cultural Heritage	35
9.8. Landscape and Visual	36
9.9. Noise and Vibration	37
9.10. Dust and Emissions	38
9.11. Sensitive Lighting Plan	39
10. Environmental Incidents and Emergency Response	40
Appendices	42
Appendix A. ISO14001:2015 Certification	43
Appendix B. Consents Register	44

Appendix C.	Environmental Risk Register	45
Appendix D.	Site Plans	46
Appendix E.	Site Waste Management Plan	47
Appendix F.	Overall Construction Method Statement and Traffic Management Plan	48
Appendix G.	INNS Management Plan	49

Abbreviations

Abbreviation	Term
ACoW	Archaeological Clerk of Works
BPM	Best Practicable Means
CEMP	Construction Environmental Management Plan
CLO	Community Liaison Officer
CIfA	Chartered Institute for Archaeologists
CPAT	Clwyd Powys Archaeological Trust
COSHH	Control of Substances. Hazardous to Health
DEFRA	Department for Environment, Food and Rural Affairs
DMPWO	Development Management. Procedure) (Wales) Order 2012
DMP	Dust Management Plan
ECoW	Ecological Clerk of Works
EMMP	Ecological Management and Monitoring Plan
EMP	Ecological Management Plan
EMS	Environmental Management System
EPP	Ecological Protection Plan
ES	Environmental Statement
GGAT	Glamorgan Gwent Archaeological Trust
GCRE	Global Centre of Rail Excellence
GPP	Guidance for Pollution Prevention
HSE	Health and Safety Executive
INNS	Invasive Non-Native Species
KPI	Key Performance Index
LPA	Local Planning Authority
MMP	Materials Management Plan
NVC	National Vegetation Classification
NRW	Natural Resources Wales
NMMAP	Noise Management and Monitoring Action Plan
NPTCC	Neath Port Talbot County Council
PAWS	Planted Ancient Woodland
PCC	Powys County Council
PPE	Personal Protective Equipment
PPG	Pollution Prevention Guidance
PPW	Planning Policy Wales
PRoW	Public Rights of Way
RAMS	Risk Assessment Method Statement
REAC	Register of Environmental Actions and Commitments
RPA	Root Protection Area
SINC	Sites of Importance for Nature Conservation
SSSI	Site of Special Scientific Interest

Abbreviation	Term
SAC	Special Area of Conservation
SQE	Suitably Qualified Ecologist
WFD	Water Framework Directive
WSI	Written Scheme of Investigation

1. Introduction

1.1. Purpose and Scope

- 1.1.1. An outline planning application submitted by Arup & Partners Ltd (Arup) (on behalf of the Welsh Ministers (Department for the Economy and Transport)) to Neath Port Talbot Council (planning reference P2021/0327) and Powys County Council (21/0559/OUT) was granted conditional approval in September 2021 for:

“Development of a Global Centre of Rail Excellence, comprising of two test tracks of loop configuration including an electrified high speed rolling stock test track of 6.9 km in length and an electrified low speed infrastructure test track of 4.5 km, with overhead line equipment (OLE) and dual platform station test environment; together with operations and control offices (including staff accommodation and welfare), shunter cabins (2 no.), research and development, education and training, rolling stock storage sidings and maintenance/cleaning/decommissioning facilities; associated drainage, internal vehicular accesses, branch line rail connection, staff and visitor car parking, lighting, electrical infrastructure, (including substations and lineside shore supplies and transformers), fencing (perimeter security, acoustic and stock proof), land reformation and hard and soft landscaping, together with demolition of existing building/structures.”

- 1.1.2. On behalf of the Global Centre of Rail Excellence (GCRE), Walters Group has commissioned AtkinsRéalis to complete a Construction Environmental Management Plan (CEMP) for the Washery: Depot Construction Area earthworks and site-wide drainage of the GCRE development, as specified by Planning Conditions n.11 of both 21/0559/OUT (Powys County Council) and P2021/0327 (Neath Port Talbot Council).
- 1.1.3. The purpose of the CEMP is to set out the requirements, controls and mitigation measures required to ensure the environmental effects associated with the construction of the project (specifically the Washery: Depot Construction Area earthworks and site-wide drainage) are managed and that the works are completed in compliance with applicable environmental requirements.
- 1.1.4. This CEMP is a live document and is to be reviewed and updated as necessary, to take account of updated legislation/guidance and significant changes to the scope of works or required mitigation.
- 1.1.5. The CEMP shall be implemented and adhered to throughout construction, with the document made available to all persons involved in the construction of the development and the key requirements and mitigation measures of the CEMP communicated to all personnel as part of the site induction.

1.2. Project Overview

- 1.2.1. The GCRE is a rail testing centre project that will be delivered by GCRE Ltd on behalf of the Welsh Government.
- 1.2.2. GCRE is located within the counties of Powys and Neath Port Talbot.
- 1.2.3. The Washery: Depot Construction Area is contained within the northern extent of the Onllwyn Coal Washery and will involve construction of earthworks plateaus (achieved by cut and fill within the site boundary) site wide drainage (including swales, ditches, connecting pipework, attenuation pond and connection to the existing culvert at Onllwyn Road), a combined sewer diversion, a site access track, ecological enhancements, landscaping and seeding, and construction of temporary works to support the next phase of work.
- 1.2.4. The Depot Construction Area is illustrated in Phasing Plan - Figure 1-1.

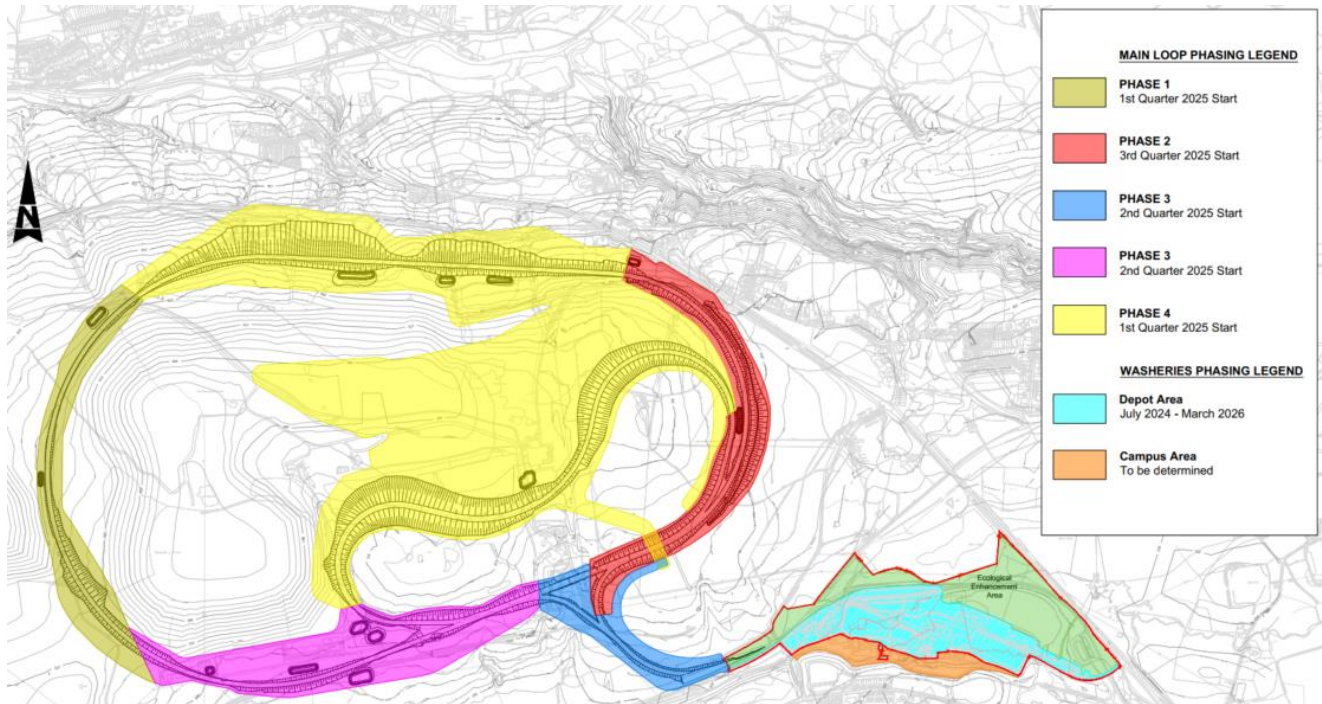


Figure 1-1 - GCRE Phasing Plan

1.3. Construction Programme and Phasing

1.3.1. The Depot Construction Area is planned to commence in July 2024. A summary programme for the delivery is illustrated in Table 1-1.

Table 1-1 - Construction Programme

Activity	Programme
Ecological mitigation	April – July 2024
Site clearance (vegetation and soil stripping)	July 2024
Site establishment	July 2024
Installation of temporary drainage	July – Aug 2024
Earthworks and permanent drainage	July – Nov 2024
Landscaping	Nov – Dec 2024
Future Works (programmed to complete March 2026)	
CEMP will be updated to reflect all further works once designs and methods confirmed.	
Track sidings construction	TBA
Substation building	TBA
Onllwyn Bridge demolition and reconstruction	TBA

1.4. Working Hours

1.4.1. Construction works will take place mainly during the daytime. Construction works outside of normal construction hours of 07:30 to 18:00 weekdays and 08:00 to 13:00 at weekends shall be minimised as far as possible.

1.4.2. Exceptions to these hours will include, but are not limited to:

- Water pumping
- Environmental monitoring
- Maintenance and testing of plant
- The provision of services at compounds, including security and vehicle recovery
- Works associated with the diversion of existing utilities
- Cases of emergency
- Other activities as otherwise agreed by the local authorities

1.5. Guidance and Other Documents

1.5.1. The CEMP is intended to satisfy the principles of the International Environmental Management System (EMS) Standard ISO 14001 and has been developed in accordance with relevant best construction practice guidance including:

- Guidance for Pollution Prevention (GPP) 1 - 29. In particular:
 - GPP 2 Above Ground oil storage tanks
 - GPP 5 Works and maintenance in or near water
 - GPP 6 Working at construction and demolitions sites
 - GPP 21 Pollution incident response planning
 - GPP 22 Dealing with Spills
 - GPP 26 Safe storage – drums and intermediate bulk containers
- CIRIA Environmental handbook for building and civil engineering projects

1.5.2. A number of key documents that contain detailed environmental management information and mitigation measures for the Project are to be read in conjunction with this CEMP.

- Ecological Protection Plan
- Ecological Management and Monitoring Plan
- Remediation Method Statement
- Surface Water Drainage Strategy
- Landscape Strategy
- Geotechnical and Contaminated Land Desk Study Report
- Written Scheme of Investigation
- Materials Management Plan

1.5.3. The Overall Construction Method Statement and Traffic Management Plan is presented in Appendix F.

2. Roles and Responsibilities

2.1. Environmental Management Responsibilities

- 2.1.1. All are responsible for adhering to and complying with the Project's environmental policies, relevant environmental legislation, bylaws, and regulations. It is a requirement that all site personnel will be made aware of their duty of care to the environment and will be provided with adequate training, supervision, or instruction in the form of toolbox talks, site induction modules and specific method statements as necessary.
- 2.1.2. GCRE operates an EMS that meets the requirements of BS EN ISO 14001:2015. A copy of the ISO14001 certificate is included in Appendix A to this plan.
- 2.1.3. The contractor is responsible for operating in compliance with the EMS.
- 2.1.4. Responsibilities for site environmental management will be delegated to key personnel by the contractor. These personnel will be responsible for implementation, reporting and monitoring of environmental mitigation and compliance during construction. Where required, environmental specialists will be consulted to provide advice on specific issues or site activities.

2.2. Site Roles and Responsibilities

- 2.2.1. It is recognised that all participating in the delivery of the Project have a role to play in the minimisation and mitigation of environmental impacts. However, certain members of the construction team will play more active roles in ensuring environmental requirements, controls and mitigation measures are implemented. The key environmental management roles and responsibilities are detailed in Table 2-1. A project organogram is presented in Section 5 of the Overall Construction Method Statement and Traffic Management Plan in Appendix F.
- 2.2.2. Table 2-1 will be updated as the works progress to reflect the growing activities and construction team.

Table 2-1 - Roles and Responsibilities

Role	Responsibility	Contact Details
Client	- Make suitable arrangements for managing the project, including making sure: - other dutyholders are appointed as appropriate - sufficient time and resources are allocated - Make sure: - relevant information is prepared and provided to other dutyholders - the principal designer and principal contractor carry out their duties - welfare facilities are provided	Rob Thompson Director of Implementation GCRE Limited Floor 5 One Central Square Cardiff CF10 1FS
Project Manager – Client	- To act on behalf of the Employer, with responsibility for managing the Earthworks of the Project within the agreed environmental constraints in conjunction with all other necessary management processes - Ensuring delivery of project sustainability and environmental targets - Reviewing results of environmental inspections/audits at monthly progress meetings - Ensuring satisfactory close out of any complaints and any rectification measures are implemented	Mike Edmonds Earthworks Project Manager GCRE Limited Floor 5 One Central Square Cardiff CF10 1FS

Role	Responsibility	Contact Details
Project Manager – Principal Contractor	- Ensuring all relevant persons in a position of responsibility are suitably trained and competent in environmental matters to implement the requirements of the Client and the contractor - Implementation of the CEMP, management systems and relevant procedures, management plans, requirements and method statements - Ensuring adequate environmental instruction is given to those employees and contractors under their control - Requesting advice and support from environment team/specialists - Communicating environmental performance to the Client - Examining results of environmental inspections/audits at weekly progress meetings - Examining the outcomes of any complaints and ensure rectification measures have been put in place - Approving methods of work and supporting any measures to mitigate environmental impacts as far as reasonably practicable	Andrew Pope Snr Project Manager Walters UK Hirwaun House Hirwaun Industrial Estate Aberdare Rhondda Cynon Taf CF44 9UL Tel 01685 815100
Site Agent	- Implementation of site-specific controls and mitigation - Ensuring works under their control do not cause pollution, and that they comply with the environmental requirements specified in the Register of Environmental Actions and Commitments (REAC), as well as the other site controls required for waste and materials, ecology, landscape, archaeology, water, air and noise - Communication of environmental site briefings, toolbox talks and other environmental / community requirements to operatives, subcontractors and delivery drivers - Raising environmental observations or concerns to the environmental team or directly to the Project Manager	Rhys Jones Site Agent Walters UK Hirwaun House Hirwaun Industrial Estate Aberdare Rhondda Cynon Taf CF44 9UL Tel 01685 815100
Works Manager	- Communication of environmental site briefings, toolbox talks and other environmental / community requirements to operatives, subcontractors and delivery drivers - Ensuring all works are carried out in accordance with approved Method Statements and environmental requirements - Raising environmental observations or concerns to the environmental team or directly to the Works Manager	Alan Roberts Works Manager Walters UK Hirwaun House Hirwaun Industrial Estate Aberdare Rhondda Cynon Taf CF44 9UL Tel 01685 815100
Health, Safety & Environmental Manager	- Ensuring the Project Manager is aware of environmental constraints - Providing environmental and sustainability support to the project team and delivering environmental training - Liaising with the client and regulators on environmental management issues - Attending environmental stakeholder meetings as required - Writing, issuing and updating environmental documentation	Neil Wheeler Group Safety Officer Walters UK Hirwaun House Hirwaun Industrial Estate Aberdare Rhondda Cynon Taf

Role	Responsibility	Contact Details
	- Providing support and advice on environmental issues to operations and managing specialist environmental subcontractors and service providers - Liaising with the client, regulators and operations with regards to environmental issues - Implementing a programme of and performing environmental inspections, investigating incidents, issuing corrective actions and monitoring their close out - Ensuring works are in compliance with the CEMP and other environmental requirements - Ensuring the implementation of environmental mitigation as required	CF44 9UL Tel 01685 815100
Community Liaison Officer	- Preparing and implementing a procedure for local community liaison - Chairing regular community forum meetings to keep the community informed - Ensuring all site generated enquiries and/or complaints are effectively logged, communicated and actioned - Assisting in the delivery of the overarching Communication and Engagement plan - Representing the contractor at partnership/stakeholder meetings relating to community initiatives or communications - Being the primary point of contact for the Community Development Manager relating to matters on the ground - Building and maintaining positive relationships with stakeholders facilitating a dynamic and effective communication procedure with established communications team and generating an acceptance of a common vision with all partners/ stakeholders - Ensuring positive awareness of the project brand to all internal and external stakeholders - Working closely with the communications team and particularly the Community Development Manager to plan and deliver community liaison tasks to ensure the delivery of KPIs of the communication and engagement plan - Delivering, monitoring and communicating on the 'Buy Social' clauses and subsequent targets of the project - Registering the contractor and site with the Considerate Construction Scheme (CCS) and leading the monitoring and measuring against the Code of Considerate Practice	Owen Jones Community Liaison Officer Walters UK Hirwaun House Hirwaun Industrial Estate Aberdare Rhondda Cynon Taf CF44 9UL Tel 01685 815100
Ecological Clerk of Works	- Providing watching briefs as required to monitor the implementation of ecological mitigation in line with method statements, the Ecological Protection Plan (EPP) and ecological licences - Providing personnel with relevant ecological toolbox talks - Overseeing the installation of ecological buffer/exclusion zones. - Identifying the requirements for ecological mitigation prior to the commencement of works	David Pryce Ecological Clerk of Works Sylvian Ecology 2 Bronant Church Road Cardiff CF15 9QG Tel; 029 2128 3344
Archaeological Clerk of Works	Ensuring archaeological recording, analysis, dissemination and archiving is undertaken by a suitably qualified and demonstrably experienced organisation	Dr Daniel Young Geoarchaeology Manager

Role	Responsibility	Contact Details
	• Providing supervision as required to monitor the implementation of relevant Standards and Guidance of the Chartered Institute for Archaeologists and guidance from Glamorgan Gwent Archaeological Trust (GGAT) and Clwyd Powys Archaeological Trust (CPAT) • Monitoring compliance with cultural heritage mitigation and supervising works with the potential to impact cultural heritage interests • Consulting Cadw, GGAT and CPAT as appropriate throughout the programme of cultural heritage works	Wessex Archaeology Portway House Old Sarum Park Salisbury Wiltshire SP4 6EB Tel 01722 326867

3. Awareness, Training and Competence

3.1. General Awareness and Site Induction

- 3.1.1. On commencement of construction, the Contractor will be responsible for the organisation of training and site inductions of all personnel on the site whether visitors, full time staff or subcontractors.
- 3.1.2. All individuals working or visiting the site will be required to attend a site induction.
- 3.1.3. Site inductions for the construction team, where required, will be tailored to construction activities and relevant environmental risks and mitigation. Site inductions for visitors will be tailored to those areas of the site they are visiting. Further activity and site-specific details will be provided through risk assessment method statements (RAMS) briefings prior to the commencement of a specific activity. Those participating in or near to specific activities that have an environmental impact may be required to attend additional training or toolbox talks.
- 3.1.4. Topics that are to be included with the site induction for the construction team are detailed within Table 3-1.

Table 3-1 - Environmental Topics for Inclusion within Induction

Environmental Topics

Environmental policy and regulatory requirements	Environmental constraints	Site-specific environmental requirements
Site environmental plans	Pollution prevention procedures	Emergency response
Environmental incidents and reporting	Sustainability	Lighting nuisance
Traffic management requirements	Waste and materials	Ecology/biodiversity and tree protection
Archaeology/cultural heritage	Noise and vibration	Dust and air emissions
Contaminated land	Working near water, drainage systems and water management	Soil management

- 3.1.5. All personnel on site will be made aware of the Environmental Policy, applicable regulatory requirements, the REAC, and an overview of the sites environmental risks/constraints.
- 3.1.6. An environmental training matrix, including a record of all site inductions and training will be maintained. The requirement for any additional training would be identified from the regular site environmental awareness and compliance environmental check reports, or site feedback on any noted non-compliances.

3.2. Environmental Training and Competencies

- 3.2.1. The contractor will ensure all personnel conducting environmental tasks are suitably qualified or experienced for the roles and responsibilities that they are employed to undertake.
- 3.2.2. The contractor will ensure that all personnel have attended the relevant environmental induction and training, including additional, new, or updated training, prior to undertaking any activities on site.

- 3.2.3. The Contractor will conduct toolbox talks as required. Each team will be provided with a minimum of one environmental toolbox talk a month. Toolbox talks will be linked/tailored to construction activities and environmental risks/constraints.
- 3.2.4. Toolbox talks will be delivered to construction teams by sufficiently competent personnel and are to be posted in welfare units and office reception areas. Records of toolbox talks, including attendance are to be kept.
- 3.2.5. Selected members of the Site Management Team including the Work Manager, General Foreman and the Health and Safety Executive (HSE) Manager will be given practical training in the use of the spill kits, appropriate Personal Protective Equipment (PPE), clean-up procedures and the appropriate disposal and recycling requirements.
- 3.2.6. The contractor will ensure that all relevant persons in a position of responsibility are suitably trained and competent in environmental matters to implement requirements.

4. Environmental Inspection, Monitoring and Reporting

4.1. Environmental Monitoring Requirements

- 4.1.1. Through daily checks, site inspections and audits the contractor will ensure compliance with the requirements of the Environmental Statement (ES), REAC, and CEMP, in addition to environmental management procedures, method statements and regulations.
- 4.1.2. The contractor will make key personnel aware of their environmental monitoring responsibilities.

4.2. Inspection, Auditing, Recording and Non-Compliance

Daily Checks and Site Inspection

- 4.2.1. Daily recorded environmental checks are to be undertaken by the construction teams. Daily checks are to cover:
- Weather checks
 - Visual dust monitoring
 - Inspections of vehicle, plant and equipment
 - Inspection of environmental exclusion/protection fencing
 - Visual checks of watercourses and outfalls
 - Inspections of pollution prevention/control equipment/materials
 - Water discharges and abstractions
 - Storage of potentially polluting substance/materials
 - Waste facilities
- 4.2.2. Regular environmental site inspections are also to be undertaken by the HSE Manager, and/or other relevant environmental clerks of work (Ecology, Archaeology) and specialists, in addition to the Site Agent and Works Manager.
- 4.2.3. Records of daily site checks and environmental compliance will be maintained by the contractor. These will be available for inspection by representatives of any audit team and relevant regulatory bodies.

EMS Audit and Management Review

- 4.2.4. Periodic EMS audits and management reviews will be undertaken, recording compliance with legislation and the Project's environmental requirements, in addition to conformance with the requirements of ISO14001 (2015), the effectiveness of the EMS and overall environmental performance.
- 4.2.5. Periodic management review will consider the following:
- Results of internal audits and evaluations of compliance with legal and other requirements
 - Communication(s) from external interested parties, including complaints
 - Effectiveness of the EMS
 - Record/document control management
 - Overall environmental performance and progress towards the achievement of objectives and targets

- Environmental non-conformances/incidents and status of corrective actions
- Follow-up actions from previous management reviews
- Changing circumstances, including developments in legal and other requirements related to the environmental aspects
- Recommendations for improvement

Environmental Non-Compliance

- 4.2.6. All non-compliances raised during site inspections, audits and management reviews will be logged in an environmental action tracker, along with appropriate corrective actions, timeframes for the implementation of corrective actions and confirmation that the identified non-conformance has been effectively addressed.
- 4.2.7. Date of action close out will be recorded in the tracker. A review is to be undertaken, initially on a monthly basis, to ensure all non-compliances are being effectively actioned and to ascertain any root causes and associated remedial actions associated with reoccurring themes of non-compliance.

5. Communications

5.1. Internal Communications

- 5.1.1. The contractor will establish and maintain procedures for internal communications between the various levels and functions of the team during construction. Internal communications include, but not limited to:
- Advising of non-conformances to relevant managers
 - Communicating environmental commitments to the construction team
 - Communicating the environmental policy to the construction team
 - Raising awareness of environmental issues to the construction team
 - Reporting incidents to relevant managers
- 5.1.2. Environment and sustainability are to be standing items on the agenda for the Project's monthly progress meetings.
- 5.1.3. Environmental communications/information including notices, plans, toolbox talks, performance updates, bulletins and posters will be displayed on the Project's Environmental & Sustainability Noticeboard, which will be sited in a prominent position within the site offices. Communication/information displayed on the noticeboard will be updated on a regular basis.
- 5.1.4. Changes and updates to environmental policy, procedure, best practice guidance and legislation is to be communicated to the Project teams by the HSE Manager.

5.2. External Communication

- 5.2.1. External communication will include but not be limited to:
- Consultation with the statutory bodies (local planning authorities (LPAs), Natural Resources Wales (NRW), Cadw)
 - Consultations and presentations to local residents' representatives and any other interested parties
 - Advance notification to those affected by particular phases/elements of construction
- 5.2.2. Possible consultees include, but are not limited to:
- LPA
 - Cadw
 - GGAT
 - CPAT
 - NRW
 - Statutory Utilities – Gas, Electric, Water, Telecoms
 - Third party Landowners
 - Local residents
- 5.2.3. A Community Liaison Officer (CLO) is to be appointed to manage communications with third parties, ensuring that they are aware and kept up to date with the construction works as they progress, in addition to addressing any concerns/complaints third parties may have in relation to the works. The CLO is also to prepare a procedure for Local Community Liaison and is to hold regular Community Forum Meetings.

5.2.4. An Environmental Liaison Group is to be established with statutory environmental bodies. The contractor will facilitate monthly Environmental Liaison Group meetings in order to provide an update on environmental mitigation, progress and performance.

5.2.5. A record of all external communicates relating to environmental matters will be maintained.

5.3. Complaint Management

5.3.1. Complaints are made via the CLO whose details will be included on all communication.

5.3.2. All complaints will be logged, and the CLO will respond initially within 48 hours to let the complainant know that they are being dealt with. The complaint will be investigated, and a response formulated and issued; this will usually be done within 7 working days.

5.3.3. If the response does not satisfy the complainant, then a site visit is arranged so that the complaint can be discussed in more detail with the CLO and Project Manager.

5.3.4. The procedure for managing complaints is as follows:

- Complaint received
- Complaint passed to CLO who will log the complaint within the Complaints Register
- The CLO will inform the Project Manager and contact the complainant, advising the complaint is being handled
- The complaint will be investigated by the Project Manager and response issued by the CLO. Any management action taken to prevent repetition will be noted within the Complaints Register and detailed within the response issued to the complainant
- All complaints will be discussed within monthly Project progress meetings
- Any changes to procedures, mitigation measures or methods of works as a result of a complaint are to be communicated to the Project team

6. Environmental Legislative Requirements

6.1. Policies

- 6.1.1. The project will adhere GCRE and the contractor's environmental and sustainability policies.
- 6.1.2. The contractor will ensure that the policies and their requirements are communicate to all relevant personnel.
- 6.1.3. Policies will be maintained in compliance with the Project's document control system and are to be displayed on the Environmental Notice Board.

6.2. Legislation, Regulation and Other Requirements

- 6.2.1. The Client and contractor are responsible for managing the site in accordance with all applicable environmental legislation, regulations and other requirements, including the conditions of the Project's planning permission.
- 6.2.2. A Register of Health, Safety and Environmental Legislation is maintained. The Register will be updated following any changes to applicable legislation. Any changes will be evaluated and communicated to the relevant project personnel.
- 6.2.3. All Project personnel will be kept informed of the legal requirements relevant to their individual roles and activities. This will be achieved through the training and briefing procedures outlined in Section 3 of this CEMP.

7. Consents and Other Permissions

- 7.1.1. A Consents Register relating to environmental mitigation and construction activities will be maintained and updated by the contractor. This is presented in Appendix B.
- 7.1.2. Prior to the commencement of any works, including environmental mitigation, the contractor is to ensure all necessary consents, permissions and licences are obtained.

8. Environmental Risks Register

- 8.1.1. An Environmental Risk Register is maintained and is documented in Appendix C of this CEMP.
- 8.1.2. The Register is a live document and is to be reviewed and updated in line with the CEMP to manage environmental risks throughout the Project.
- 8.1.3. For each of the aspects the potential impact is scored for the situation where no mitigation measures are employed and again where mitigation measures are employed.
- 8.1.4. This register will be used to inform the environmental procedures and mitigation and is to act as a tool for the construction teams when preparing construction method statements.

9. Environmental Management and Construction Principles

9.1. General Environmental Management Measures

9.1.1. Environmental management controls and mitigation measures identified in the ES and deemed necessary to ensure the Project's environmental impacts are kept to a minimum and the environment is protected from harm during the execution of the Project are to be followed at all times.

Site Management

9.1.2. The layout of Project site, including the location of site offices, compounds, Control of Substances. Hazardous to Health (COSHH) stores, welfare facilities, offices, waste storage facilities, spill kits and firefighting equipment are detailed in Appendix D. Surface water will be managed as set out in Section 6.2 of the Overall Construction Method Statement and Traffic Management Plan in Appendix F. Construction traffic will be controlled as outlined within the Overall Construction Method Statement and Traffic Management Plan in Appendix F.

9.1.3. All working areas will be kept in a clean and tidy condition.

9.1.4. The contractor will establish designated COSHH storage areas. Fuel and COSHH storage outside of these areas will not be permitted.

9.1.5. Welfare facilities will be provided on site and maintained.

9.1.6. The Contractor is to instigate behavioural policies for all the site personnel with regards to traffic/vehicle management in aim of minimising impacts to air quality. Behavioural policies are to cover:

- Minimisation of traffic to site by 'sharing' vehicles or by the use of a site bus
- Avoidance of part load deliveries
- Utilisation of pre-booked delivery policy to minimise holding vehicles prior to loading or unloading
- Ensuring that all construction plant, vehicles and equipment are turned off rather when not in use, avoiding idling
- Where feasible, considering the use of hybrid generators
- Site speed limits of 20mph will be applied.

9.1.7. The contractor and the site will be registered with the Considerate Constructors Scheme (CSS).

Pollution Prevention

9.1.8. The project team will be made aware of potential pollution risks and appropriate mitigation measure to minimise the risks through the induction process, toolbox talks, site briefings and further training.

9.1.9. The following historical Environment Agency Pollution Prevention Guidance will be utilised on-site as best practice to prevent pollution in addition to the measures outlined below:

- Guidance for storing and handling materials and products:
 - PPG2: Above ground oil storage tanks
 - PPG 6: Working at construction and demolition sites
 - PPG 7: Refuelling facilities
 - PPG 26: Drums and intermediate bulk containers

- Guidance for site drainage, dealing with sewage and trade effluents:
 - PPG 3: Use and design of oil separators in surface water drainage systems
 - PPG 4: Disposal of sewage where no mains drainage is available
 - PPG 13: Vehicle washing and cleaning
- Guidance on general good environmental practice:
 - PPG 1: General guide to the prevention of pollution
 - PPG 5: Works in, near or liable to affect watercourses
 - PPG 21: Pollution incident response planning

9.1.10. Generic pollution prevention measures to be implemented during construction are detailed below, with specific measures relating to the water environment, contaminated land, landscape, noise and vibration, and air emissions detailed within the following sections of this CEMP:

- Site compounds to be located a minimum of 10m from surface water features, 30m if possible, and outside the flood plain.
- Potentially polluting substances, products and materials used and available on-site will be kept to a minimum and will be stored in accordance with COSHH and applicable pollution control regulations
- Storage tanks intended for potentially polluting substances will be sited within areas of hardstanding and will be contained within suitably sized bunds with sealed drainage systems. All pipework, valves, filters, sight gauges, vent pipes and other ancillary equipment are to be above ground, also located within the bund and protected from accidental damage
- Storage bowsters or containers for the storage of potentially polluting substances will be doubled-skinned and bunded. Bunds will have sufficient volume to contain 100% of the contents of the largest container or is to be over 25% of the total storage capacity of all containers – whichever is greater
- When in use, containers of potentially pollution substances will be kept on drip trays/bunds away from traffic
- COSHH storage areas, storage tanks and fuel stores will be inspected regularly, with inspection records maintained
- The storage of potentially polluting substances and refuelling will not be permitted within:
 - 50 m of a spring, well or borehole
 - 10 m of a watercourse
 - 10 m of open drains
 - Any areas at risk from flooding
- At the end of each day, plant and equipment will be moved a minimum of 10 m from any watercourse or drain
- Settlement tanks and oil interceptors will be utilised as required
- Vehicle/equipment washing facilities to be positioned a minimum of 10 m from any watercourse and are to have a drainage system that will capture run-off/effluent, allowing it to be treated as required
- Spill response kits of an adequate size will be made available at all points of work and personnel are to be trained in their use. Excavation plant will also be fitted with fuel spill kits
- Wheel cleaning systems (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable) will be installed at site access and exits

Energy Management

9.1.11. Energy will be managed by the project team and undergo regular audits throughout the project. Good practice methods will be put into methodologies for construction works in order to reduce energy construction, and where possible, innovative and sustainable technologies will be used to

reduce the carbon footprint of the project. Carbon footprint calculations will be deployed where expected carbon usage will be calculated prior to works commencing and compared with final carbon usage values.

9.1.12. Energy-saving practices put in place on site will include.

Earthworks Operations

- Detailed planning of earthworks to reduce haulage distances. Haul roads to be constructed from site won materials to reduce imported materials
- Cut-fill balance has been achieved in earthworks design, with the most efficient use of site-won earthworks materials within the permanent works to reduce import requirements and reduce material haulage
- Modern, fuel-efficient plant to be deployed, with all engines to be switched off when not in use

Offices and Welfare

- The use of double-insulated office and welfare accommodation to reduce energy consumption. Offices to have automated lights to switch off when not in use. Toilet facilities to have efficient low water capacity flushing and taps to have automated switch off when not in use
- Automate energy technologies to be used to control and divert power within the offices and reduce generator size
- Offices to have posters displayed to remind personnel of their responsibilities to reduce energy consumption and to turn off lights and heaters when not in use
- Solar panel signage to be used where possible instead of fossil fuel powered signage
- Staff will be encouraged to share cars and vans to reduce vehicle movements

Exclusion Zones and Protective Fencing

Ecology

9.1.13. Where required, exclusion zones will be established, and protective fencing installed to prevent incidental disturbance/damage to retained habitats. Details of habitat and species-specific exclusion zones and the location of protective fencing are detailed within the EPP.

Tree Protection Fencing

9.1.14. Tree Protection Fencing will be erected to create exclusion zones in aim of preventing disturbance/damage to the Root Protection Areas (RPAs) of retained trees.

9.1.15. The tree protection fencing will consist of Heras fencing as per BS5837:2012 Trees in relation to design, demolition and construction.

Public Rights of Way (PRoW)

9.1.16. PRoWs will be segregated from the construction works using Heras type fencing.

Archaeology

9.1.17. Where required, exclusion zones will be established, and protective fencing installed to prevent incidental disturbance/damage to archaeological assets.

9.1.18. Appropriate signage will be provided to communicate the presence of archaeological assets and the purpose of the exclusion zones.

Silt Fencing

- 9.1.19. Where necessary, silt fencing may be used as a precautionary measure to prevent silt migrating into watercourses. The fencing is to be constructed of a permeable filter fabric attached to wooden stakes.

Land Quality

- 9.1.20. Where necessary, fencing and/or signage may be used to demarcate and control access to areas of site soils that present a risk to human health, controlled waters and property. Examples include any areas where risks from asbestos likely or acute risks from other contaminants are present. Heras fencing or similar would be utilised along with appropriate signage that communicates the risks.

9.2. Public Rights of Way and Common Land

Public Rights of Way

- 9.2.1. PRoWs are shown on Figure 9-1. The public footpath crossing at the entrance to the Depot Construction Phase will remain open during the duration of the works.

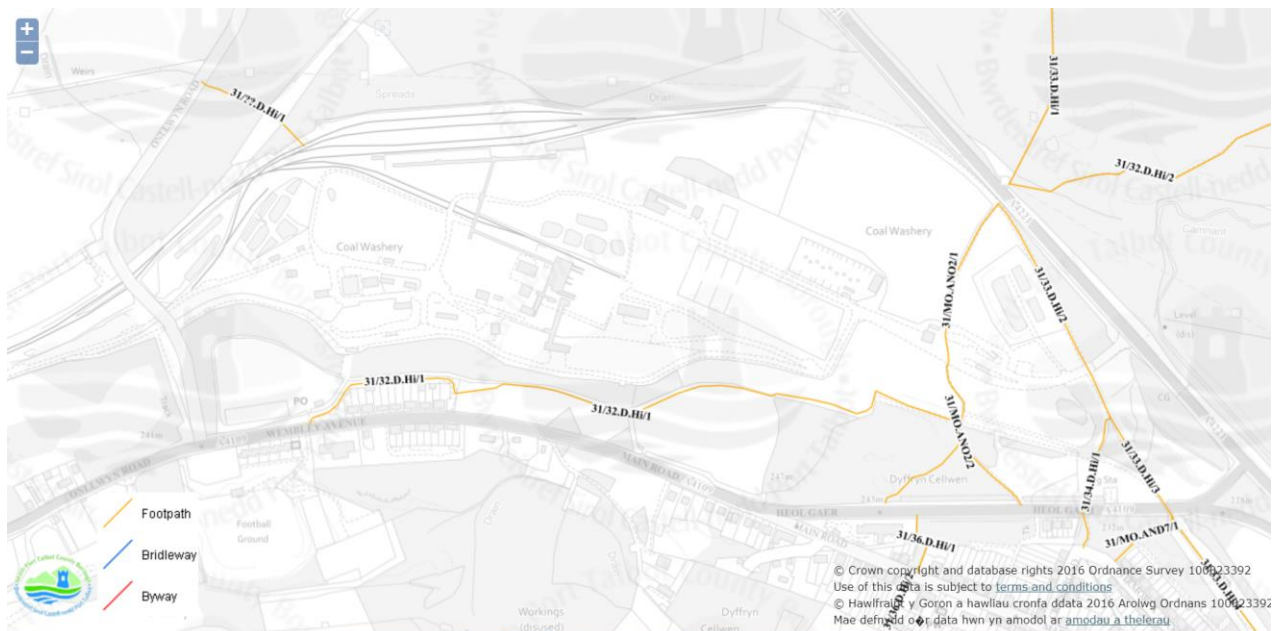


Figure 9-1 - PRoW Map

9.3. Water Environment

- 9.3.1. There are multiple surface water ditches, piped networks, ponds and settlement lagoons that were installed to manage surface water runoff from the site, and the Depot Construction Phase also has the potential to affect the Rover Dulais, which runs through the western part of the Washery, 580m to the west of the site; and the River Camnant (a tributary of the River Pyrddin) 35m east of the site. The surface water features and catchments associated with the Depot Construction Phase are shown in Appendix D.
- 9.3.2. From flood risk perspective, the site is classified as being in Zone A, meaning that the site is considered to be at little or no risk of fluvial or tidal flooding, and with regards to groundwater, the underlying bedrock geology has been classified as a Secondary A Aquifer.
- 9.3.3. The groundwater regime is thought to be fundamentally controlled by remnants of historical mining activities such as shafts or adits, with the historical mine workings potentially acting as pathways for groundwater into the local surface water network. Dewatering previously occurred within the land at Nant Helen (to the north of the Depot Phase) in order to enable open cast mining to occur, this has however ceased. The site is not within any source protection zones.

- 9.3.4. General construction and pollution principles to protect both physical water environment, water habitats and morphology, and to avoid unacceptable adverse effects including changes to flows, water levels and water quality due to construction are detailed in Section 9.1 of the CEMP, with further mitigation measures specific to the water environment set out below.

Surface Water Management

- 9.3.5. When working near, in, or under a watercourse detailed risk assessments will be completed to ensure that appropriate control measures are in place to eliminate or mitigate the environmental impact of the activity. The risk assessment should ensure that the works do not:
- Cause pollution
 - Have a negative impact on water quality
 - Have a negative impact on wildlife
 - Increase flood risk
- 9.3.6. Surface water management systems will be installed early in the construction sequencing and carefully managed to prevent localised flooding or pollution of surface and groundwater (see Section 6.2 of the Overall Construction Method Statement and Traffic Management Plan in Appendix F)
- 9.3.7. Adequate treatment for dealing with silty water will be identified and implemented by the contractor. These techniques will be dependent on local geographic features such as ground conditions, gradients, locality of watercourses, sensitivity of the local environment and prevailing weather conditions.
- 9.3.8. The most suitable measures for the proposed activity will be selected from the following but would not be exclusive to:
- Aggregate Filter Media controls at the point of surface water entering the controlled waters, drainage system
 - Settlement lagoons or tank
 - Cut-off ditches
 - Pumping to grassed/vegetated areas
 - Check dams and sumps
 - Baffled systems
 - Coir matting
 - Silt filters
 - Silt fence
 - Water treatment systems
- 9.3.9. No silty water will be pumped directly into any watercourse and any temporary surface water drainage measures will be planned and designed appropriately prior to installation and recorded on drawings. Recorded details will include:
- Soil/sediment settlement rate
 - Drainage system capacity
 - Details of systems installed to intercept and treat contaminated water run-off
 - Details of steps to prevent bypassing of the drainage system

Dewatering and Groundwater Activities

- 9.3.10. If groundwater management and dewatering is needed the following process will be followed.

- A Discharge Consent / Environmental Permit will be arranged
- Dewatering will be undertaken by the installation of wellpoints within the Made Ground / South Wales Coal Measures (SWCM)
- Wellpoints shall be installed and screened at an appropriate depth
- The groundwater that is pumped out will be tested for a range of contaminants as stipulated by Dwr Cymru (Welsh Water)/Natural Resources Wales (NRW) as part of the discharge consent / Environmental Permit. This Discharge Consent/Environmental Permit will need to be organised and in place before any dewatering activities are undertaken and is the responsibility of the contractor
- If the dewatering produces an effluent that is not within the threshold limits, as stipulated by discharge consent / Environmental Permit, on-site treatment before discharge will be required

Working in Watercourses

- 9.3.11. To facilitate the earthworks, there will be a requirement to temporarily stop up watercourses and drainage ditches for the installation of culverts and to create diversions.
- 9.3.12. All in-stream works to be undertaken in compliance with GPP5.
- 9.3.13. Prior to the commencement of any in-channel works, the Contractor will ensure all relevant permits and permissions are in place for the specific watercourse/ditch. On the commencement of construction, if any deviation from the agreed consents is required, the regulator will be consulted, and the changes agreed prior to commencement of works.
- 9.3.14. Where required, the Ecological Clerk of Works (ECoW) will inspect the area for any protected or invasive species. Any precautions required by the presence of protected species, fish and invertebrates will be implemented as advised by the ECoW.
- 9.3.15. The ECoW will supervise the dewatering and initial scrape of the watercourse, as required
- 9.3.16. The Archaeological Clerk of Works (ACoW) will supervise any ground breaking activities that may impact the formation of the watercourse identified for archaeological mitigation. This is not expected to be required for the Depot Phase.
- 9.3.17. If water is present within the watercourse/ditch, temporary dams at either side of the works will be installed and an over pumping system set up. The pumping system shall include any necessary sediment filtration.

Exposed Soil and Stockpile Management

- 9.3.18. Wherever possible, topsoil will be left in place to minimise the amount of unprotected ground exposed to runoff. Where topsoil removal is required, it would take place as late as possible prior to other works in the area.
- 9.3.19. In advance of vegetation clearance and soil stripping operations commencing within 10m of a watercourse, appropriate control measures would be implemented to prevent pollution.
- 9.3.20. Areas of exposed soil deemed at risk of erosion during heavy rainfall or flood inundation will be protected using either temporary measures (e.g., sheeting) or semi-permanent measures (for example coir matting) until vegetation is able to establish on these surfaces.
- 9.3.21. Topsoil stockpiles will be created and managed in accordance with best practice guidance.
- 9.3.22. Stockpiles will be located and configured in such a way that will avoid the risk of polluting watercourses and drainage ditches. Stockpiles will be located on level ground if possible and where practicable sited at least 10 m away from any watercourses.
- 9.3.23. Stockpiles shall be on hardstanding or plastic sheeting and in specified areas of the site.

- 9.3.24. The sides of stockpiles will be graded to prevent ponding and to help shed rainwater, with silt fencing installed around the margins of topsoil mounds to minimise the risk of sediment-laden runoff reaching watercourses.
- 9.3.25. Stockpiles shall be covered following completion and/or at the end of each day.
- 9.3.26. Exposed stockpiles that are to remain for long periods will be seeded with a standard rye grass seed mix immediately upon completion and in suitable weather conditions. Cleared land will also be reseeded as soon as practicable, to minimise exposed soil and subsequent sediment runoff.

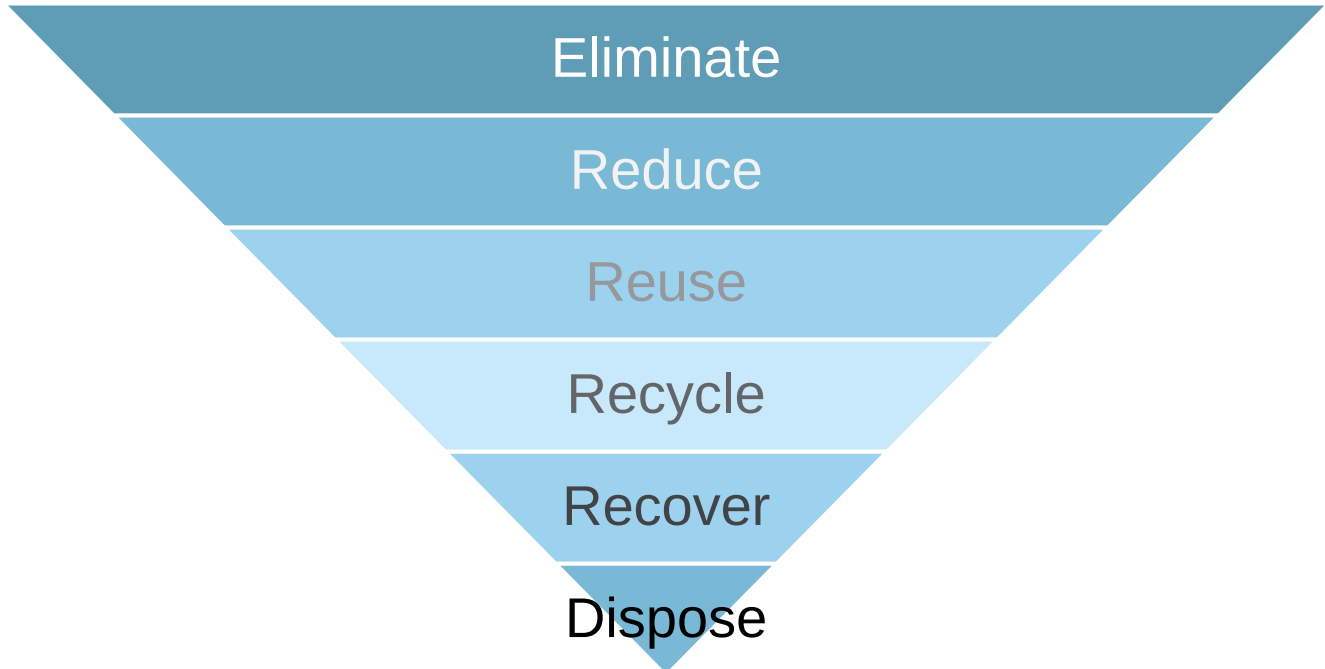
Water Use and Abstraction

- 9.3.27. Potable water to supply the offices and welfare will be drawn off the existing water main used to supply the washery site.
- 9.3.28. Water will be required to dampen down haul roads and earthworks fill areas to prevent the migration of dust. This water will be drawn from the existing settlement lagoons within the washery site.
- 9.3.29. No water abstraction will be required from existing watercourses.

9.4. Waste and Materials

- 9.4.1. The contractor will seek to maximise resource efficiency and reduce the amount of waste generated, through application of the waste hierarchy (Figure 9-2).

Figure 9-2 - Waste Management Hierarchy



- 9.4.2. In the design of the earthworks, consideration has been given to the elimination of waste through the implementation of a Materials Management Plan (MMP), allowing suitable site won material from the creation of cuttings to be utilised in the construction of the embankments and in the wider landscaping to the site. Additionally mining spoil will be reused in compliance with the Mining Waste Directive.
- 9.4.3. The excavation and reuse of suitable site won material will be completed in compliance with the Environmental Permitting (England and Wales) Regulation 2016, and in accordance with the CL:AIRE Definition of Waste: Code of Practice (DoWCoP), or if applicable the Mining Waste Directive.
- 9.4.4. A Site Waste Management Plan (SWMP) has been developed for the Depot Construction Phase works. The SWMP for the Project is documented in Appendix E. This is a live document, updated as required to reflect actual quantities produced and to include any previously unidentified waste type and will be used to monitor compliance with waste regulations.
- 9.4.5. Prior to the commencement of construction, the contractor will identify appropriately licensed waste contractors for the handling of identified waste streams. Recorded checks will be undertaken of the waste contractors' waste carrier licences and waste management facilities permits/licences, with copies of the permits/licences retained.
- 9.4.6. All movements of waste are to be covered by a waste transfer note or consignment note. Waste transfer notes and consignment notes will be retained for the duration of the Project.
- 9.4.7. All waste generated will be stored in secure areas or containers, which prevent escape of the waste/material to the wider environment and are signed posted with the waste/material type and the appropriate European Waste Catalogue Codes.

- 9.4.8. There will be no mixing of inert, non-hazardous and hazardous waste/materials.
- 9.4.9. Any hazardous waste produced will be stored in a manner that prevents its escape to the wider environment whilst awaiting collection.
- 9.4.10. Soils unsuitable for reuse on site under an MMP, will be classified as waste and will be subject to waste characterisation and Waste Acceptance Criteria testing prior to disposal.

9.5. Ground Environment and Soils

Contaminated Land

- 9.5.1. Following ground investigation the majority of material within the Depot Construction Phase that will be excavated is considered to be geotechnically suitable for reuse. All soils, bar a location where lead exceeded the commercial land use GAC, and three locations where asbestos was present at concentrations ranging from <0.001 to 0.001 %, did not pose a risk to human health.
- 9.5.2. All required remediation works will be undertaken in line with the Remediation Method Statement and verified by a suitably qualified and experienced contaminated land practitioner, with materials/soils constituting on-going sources of contamination removed/remediated as during construction in line with current legislation.
- 9.5.3. Following the completion of any works/measures undertaken to remediate contaminated land, a verification report that demonstrates the effectiveness of the remediation will be produced, in addition to a long-term monitoring and maintenance scheme to assess the effectiveness the remediation.
- 9.5.4. Upon discovery of potentially contaminated soil that has not been identified by the site investigations the below is to be followed:
 - A. Stop works in the affected area until assessment and mitigation is in place
 - B. Establish exclusion with appropriate signage around potentially contaminated soils
 - C. Inform HSE Manager and Site Manager
 - D. LPA notified
 - E. Specialist advice shall be sought, and sampling/further investigation undertaken in agreement with the LPA and NRW
- 9.5.5. Only when further investigation by a suitably qualified and experienced contaminated land practitioner has occurred, any required mitigation been put in place, and approval by the regulator been received is the exclusion to be removed and works permitted to continue.
- 9.5.6. If the further investigation confirms contamination risks to be unacceptable, the exclusion zone is to remain in place and additional measures for the remediation of the soils in agreement with the LPAs and NRW will be implemented. Only when the agreed remediation works are complete, and a verification report is submitted and approved by the LPA and NRW will the exclusion zone be removed, and the construction works permitted to continue.
- 9.5.7. Potentially contaminated soils are to be covered whilst awaiting assessment, where possible, and surface water drainage to and from the exclusion area controlled to prevent mobilisation of contaminants.

Mine Workings

- 9.5.8. Geology mapping and mining records, confirmed by ground investigation, have identified the presence of South Wales Middle and Lower Coal Measures at shallow depths (<30 m) below the Washery. Within the Washery area Coal Authority records record coal extraction from the Bluers

and Peacock workings within the Washery's footprint with these workings intruding under limited areas of the west of the site.

- 9.5.9. The geotechnical design of the earthworks takes ground hazards associated with the historical mineworking and subsidence into consideration and has been developed following an assessment of the mining and hydrogeological impact of the Project.
- 9.5.10. The contractor will be aware of any previous disturbances to each phase of the Project and all construction workers will be briefed via toolbox talks on the site history; the potential for the presence of below ground mining features; and to remain vigilant for any sudden or unexpected changes in ground conditions.
- 9.5.11. If any unexpected shallow mine workings are encountered after investigation works have been completed, works will stop and geotechnical specialists consulted to advise on required treatments, if necessary, prior to works continuing.

9.6. Ecology

General

- 9.6.1. The following documents have been produced to ensure the protection and enhancement of ecology within the Depot Construction Phase. They are necessary for the discharge of specific planning conditions permission for the development (P2021/0381 and 21/0559/OUT):
 - **Strategic Biodiversity Plan:** Provides the overarching approach to mitigation and enhancement in each phase of the development and how both are to be delivered
 - **Ecological Protection Plan:** Sets out species-specific mitigation measures, including methods for the treatment of notable plant species/habitats and reptile trapping and translocation, and methods for ensuring habitats outside the footprint of the works are protected
 - **Ecological Management and Monitoring Plan:** Details enhancement measures and an indicative 25 year programme for the management and monitoring of newly created and retained habitats
 - **Reptile Mitigation Strategy:** Provides a detailed mitigation strategy for reptiles within the site, including information on receptor sites, enhancements methods for the translocation of reptiles and post construction monitoring
 - **Barn Owl Conservation Scheme:** Provides barn owl specific survey assessment and mitigation information
 - **Wildlife Corridor Scheme:** Provides information illustrating the way in which the project will be designed to maintain and enhance wildlife corridors supporting wildlife movement within and immediately beyond the site
 - **Wildlife Connectivity Strategy:** Provides information illustrating how the project will be designed to maintain and enhance wildlife corridors supporting wildlife movement within and immediately beyond the development site
 - **Phased Biodiversity Plan:** Implementing and demonstrating compliance with the approach set out in the Strategic Biodiversity Plan
 - **Supplementary technote:** detailing updated information regarding these documents that reflect recent scheme changes and addresses LPA comments is being created in order for these conditions to be discharged ahead of planned site works
- 9.6.2. All construction works will be undertaken in compliance with the mitigation measures and methods of work detailed within the documents listed above.
- 9.6.3. Prior to the commencement of any site/vegetation clearance or construction activities the Project ECoW is to provide an ecological toolbox talk, highlighting the locations and descriptions of all ecological constraints, in addition mitigation measures to ensure minimal disturbance/impact.

- 9.6.4. All retained habitats (such as waterbodies, trees and woodland) will be securely fenced off with appropriate temporary fencing prior to the commencement of construction to prevent access and incidental damage by site vehicles, equipment and personnel.
- 9.6.5. Where possible vegetation clearance takes place outside of the bird breeding season (generally March to August inclusive); if this is not possible, pre-construction checks for nesting birds will be undertaken by an ecologist to ensure active nests are not disturbed.
- 9.6.6. Excavations are to be covered at night-time or a means of escape provided (such as a plank of wood) for otter, badger or other animals.

Statutory and Non-Statutory Sites

- 9.6.7. The statutory, non-statutory designated sites and irreplaceable habitats within 1km of the site are as follows. Further information on the features of interest are presented in the GCRE Washeries Ecological Appraisal Report (AtkinsRéalisis, April 2024).

Site name	Designation	Approximate distance from the Site
Gorsllwyn, Onllwyn	Sites of Special Scientific Interest (SSSI)	36 m northeast of phase boundary
Caeau Ton-y-fildre	SSSI	787 m northeast
Gorsllwyn Meadows	Site of Importance for Nature Conservation (SINC)	Immediately north
Onllwyn Coal Washery	SINC	Extends within phase boundary
Kharoum Tip	SINC	12 m southwest
Dyffryn cellwen	SINC	55 m southeast
Adjacent to Gors Llwyn	SINC	196 m east
Intervalley Road, Banwen	SINC	209 m southeast
Banwen Pond	SINC	539 m southeast
Sarn Helen	SINC	797 m south
Aberhenwaun Uchaf	SINC	923 m southwest
B Lines	B Lines	Extends within phase boundary
Ancient semi-natural woodland	Irreplaceable habitat	950 m northeast

- 9.6.8. A number of the designated sites are hydrologically connected to GCRE. As such there is the potential for SSSI habitats to be adversely affected by pollution events and/or surface run-off. These impacts are to be mitigated through the implementation of pollution prevention measures detailed within this CEMP.

Invasive Non-Native Species (INNS)

- 9.6.9. Invasive Non-Native Species have been recorded within and adjacent to the Project site.
- 9.6.10. INNS present within the Project boundary include Japanese knotweed, rhododendron, Spanish bluebell, snowberry, wall cotoneaster, buddleia, yellow archangel, montbretia and Wilson's honeysuckle, all of which are anticipated to be disturbed during construction. To ensure all INNS are appropriately managed in way that prevents their spread and protects the wider environment an INNS Management Plan has been produced.

- 9.6.11. The INNS Management Plan is documented in Appendix G.

Trees

- 9.6.12. The Contractor will adopt a common-sense ambition to limit tree loss, retaining trees where possible.
- 9.6.13. All tree works will be undertaken by a suitably qualified contractor, and in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*', and retained trees treated in accordance with British Standard BS 5837:2012 '*Guidance for the Treatment of Trees in Relation to Construction*'.
- 9.6.14. RPAs will be established around retained trees, with the areas segregated from construction activities through the installation of tree protection fencing. No construction works or the storage of materials/plant/equipment will be permitted within the RPA of any tree.
- 9.6.15. All trees impacted by the works have been surveyed for bat potential, with those identified to have medium or high potential subject to further surveys. Should any trees containing bat roosts require felling, a licence will be obtained from NRW, and all works shall be completed in compliance with the conditions of the licence under the watching brief of a suitably qualified ecologist.

Precautionary Methods of Working

- 9.6.16. It is recommended that Precautionary Method of Works (PMWs) be written for each of the following species/groups, also considering the detail within the reptile mitigation strategy and that a suitably qualified ECoW is employed for the duration of the Proposed Scheme in order to implement the actions set out in the PMWs:
- Otter
 - Water vole
 - Nesting birds
 - Badger
 - Great crested newt
 - INNS

9.7. Archaeology and Cultural Heritage

General Measures

- 9.7.1. General archaeology and cultural heritage management and mitigation measures implemented by the contractor will include:
- An archaeological watching brief will be maintained during initial groundworks (i.e., topsoil stripping and excavation of subsoil, peat, or modern overburden), of all areas not subject to other archaeological mitigation and following the methodology as contained within the Written Scheme of Investigation (WA 2023 Ref: 271185.1)
 - The archaeological mitigation programme will be incorporated into the overall construction programme
 - Appropriate fencing and hoarding will be provided as necessary to protect sites of archaeological or cultural heritage interest within or adjacent to the construction site should they be revealed by the initial groundworks, whilst they are appropriately dealt with by the onsite archaeological staff and as outlined within the WSI
- 9.7.2. If the initial groundworks reveal significant finds, the works will cease and agreement on how to proceed will be made with the Client, Consultants, Contractor, and LPAs.

- 9.7.3. All archaeological work will be subject to an appropriate programme of post excavation assessment, analysis and review.

Human Remains

- 9.7.4. Requirements of the Burial Act 1857, local environmental health regulations and the Disused Burial grounds (Amendment) Act 1981 will be followed should human remains be located during construction, either during archaeological works or as part of construction activity. Any discovered human remains should be treated with due decency and respect. All excavation of human remains and associated post-excavation processes will be undertaken in accordance with the *Updated Guidelines to the Standards for Recording Human Remains* (CIfA 2017).

9.8. Landscape and Visual

- 9.8.1. The contractor will implement construction mitigation measures to minimise any adverse effects on the landscape and visual amenity.

General

- 9.8.2. During the construction phase of the Project, the measures outlined below are to be applied:
- The contractor will take a common-sense ambition to limit tree loss to that which is strictly required to facilitate the works and where possible retain trees
 - Retained trees will be, in accordance with BS 5837: Trees in relation to design, demolition and construction (2012)
 - To prevent the spread of non-native invasive plant species, the contractor will follow the latest guidance as set out by NRW
 - The following will not be permitted within the RPA of retained trees:
 - Excavation works
 - Storage of plant, equipment or materials, including excavated topsoil, subsoil or spoil
 - Vehicular and plant access
 - Handling of any fuels or chemical substances
 - Action likely to cause localised water logging
 - If construction works are required within an RPA, an Arboricultural Method Statement will be produced setting out the terms and scope of the operations, along with any particular design requirements and additional protection measures
 - Reasonable care will be taken to avoid unnecessary damage to flora and fauna
 - Hoarding and fencing will be maintained in good condition, providing screening and security
 - External facing hoarding will be painted and kept free from graffiti and posters
 - The site will be maintained in a clean and tidy condition and road sweepers and other appropriate methods will be used as necessary

Landscape Design and Planting

- 9.8.3. The landscape design will be implemented in compliance with the Landscape Plan and Strategy.
- 9.8.4. Planting and other landscape measures will be implemented during the earliest planting season and when it is reasonably practicable.
- 9.8.5. Any 'off-site' replacement/compensatory planting is to be undertaken in advance of construction works, if practicable.
- 9.8.6. Sourcing of plants and seeds will be in accordance with current Department for Environment, Food and Rural Affairs (DEFRA)/NRW and industry guidance to prevent the spread of pests, diseases

and INNS. The contractor will also refer to UK Plant Health Information Portal and NRW's latest guidance.

- 9.8.7. The contractor will undertake appropriate inspection, monitoring and maintenance of seeding and landscape works through the construction period. Any failures of planting and seeding will be replaced in accordance with the approved specification, ensuring reseeded works are successful.

9.9. Noise and Vibration

Noise Management

- 9.9.1. A Noise Management and Monitoring Action Plan (NMMAP) that sets out specific controls and mitigation measures in relation to noise to ensure that the construction of the Project is carried out in compliance with the applicable noise requirements has been produced and is to be implemented by the contractor during construction.
- 9.9.2. As a requirement of the NMMAP, Best Practicable Means (BPMs) will be applied during the construction phase of the Project to minimise the impact of noise on nearby noise sensitive receptors. This will require the implementation of measures to control noise at the source and across site.
- 9.9.3. Noise control measures at the source is to focus on reducing the noise of equipment used on site and will be as follows:
- All plant and equipment will comply with the noise limit and noise marking requirements prescribed by the "Noise Emission in the Environment by Equipment for Use Outdoors Regulations 2001"
 - All plant, equipment and noise control measures applied to plant and equipment will be maintained in good and efficient working order and operated such that noise emissions are minimised as far as reasonably practicable. As far as reasonably practicable, any plant, equipment or items fitted with noise control equipment found to be defective will not be operated until repaired
 - Noise from reversing alarms from vehicles will be controlled and limited as far as possible through the following means: designing the site layout to limit the need for reversing vehicles; the use of banksmen for traffic management at site entrance gates and within site footprint; reversing alarms incorporating directional sounders, broadband signals self-adjusting output sounders or flashing warning lights and setting reversing alarms to the minimum output noise level required for health and safety compliance
 - Vehicles and mechanical plant employed for any activity associated with the construction works will, where reasonably practicable, be fitted with effective exhaust silencers and shall be maintained in good working order and operated in a manner such that noise emissions are controlled and limited as far as reasonably practicable
 - Whenever used, all percussion tools shall be fitted with appropriate mufflers or dampers of the type recommended by the manufacturers
 - Unnecessary revving of engines will be avoided, and equipment switched off when not in use
 - Static noise emitting equipment operating continuously (generators, compressors etc) will be screened or housed within suitable acoustic enclosure, where appropriate
 - All generators shall be super-silenced units. Where reasonably practicable, other fixed items of construction plant should be electrically powered in preference to diesel or petrol driven
 - Internal haul routes will be kept well maintained and avoid steep gradients
 - Materials will be lowered whenever practicable and will not be dropped
- 9.9.4. Control measures to minimise the spread of noise from site will be as follows:
- Strict adherence to the site-specific construction working hours set out in Section 1.4

- All personnel on site will undergo site specific inductions and briefings, to include noise control measures
- Noisy plant or equipment shall be sited as far away as possible from noise sensitive receptors. Wherever practicable, the use of barriers in the form of acoustic enclosures or barriers will be employed
- Where practicable, loading and unloading will be carried out away from noise-sensitive receptors
- A programme of site inspections and noise monitoring will be carried out to assess whether BPM are being employed in the control of noise, to investigate any noise complaints or incidents
- A programme of community liaison will be carried out, including notification of works and details of the complaints process as detailed in Section 5.3 and the NMMAP

Vibration

- 9.9.5. Due to the distance of construction works from receptors, impacts from vibration are deemed to be minimal.
- 9.9.6. To ensure construction vibration impacts at receptors are kept to a minimum, vibratory rollers will not be used within 90 m of receptors during operation (125 m for start-up/run down) unless further risk assessments and monitoring is undertaken to demonstrate no likely adverse effects due to vibration.
- 9.9.7. In the event that a complaint of excessive vibration levels is received, a vibration monitoring exercise will be undertaken at impacted receptors. If the levels of vibration recorded are determined to have an adverse effect on the receptor(s), an investigation into the cause will be undertaken and the responsible will be stopped until appropriate mitigation measures have been applied to prevent further adverse effects.

9.10. Dust and Emissions

- 9.10.1. A Dust Management Plan (DMP) has been produced and is to be implemented by the contractor during construction.
- 9.10.2. All dust and air quality complaints will be recorded. An investigation into the cause will be undertaken and appropriate remedial measures implemented to avoid recurrence. A record of any implemented remedial measures will be available on-site.
- 9.10.3. Control/mitigation measures to minimise will be as follows:
- Haul routes are to be regularly inspected and maintained to minimise sediment laden run off
 - Haul roads to be dampened down to minimise dust generation by plant movements
 - Regular clearing, grading and maintenance of haul routes
 - Areas of hard standing to be provided at site access and egress points, where practicable
 - Site wheel washing facilities will be established at access and egress points and located a minimum of 10 m from any watercourse and outside of the flood plain
 - Good practice guidance for vehicle washing and cleaning from GPP13 to be implemented.
 - Machinery, equipment and dust generating activities to be undertaken a minimum of 100 m from sensitive receptors, where practical
 - Where possible, exposed soil to be minimised through scheduling vegetation and topsoil stripping immediately prior to commencement of construction activities
 - A separate paved parking area with no access to construction areas to be provided for non-construction vehicles

- No burning of material on-site
- An adequate water supply will be provided on the site for effective dust suppression/mitigation, using non-potable water where possible and appropriate. Suppression techniques will be used more frequently during periods of dry weather
- Standard good practices are to be followed for site haulage
- Abrupt changes in direction to be avoided
- Vehicles to be evenly loaded to avoid spillages
- If within 100 m of site boundary, soil moving vehicle to be covered. Loaded vehicles carrying dust generating materials will also be covered when leaving site
- Where required, road sweepers to be mobilised
- Where possible, particularly dusty activities will be avoided during extended periods of dry and windy conditions

9.10.4. On and off-site visual inspections to be included within daily operational checks. Any evidence of abnormal dust levels in air or accumulation on surfaces will be logged and remedial action taken as required.

9.10.5. The frequency of off-site inspections will be adjusted based on the dust risk (higher frequency in dry and windy conditions). Further details on dust monitoring are provided within the DMP.

9.11. Sensitive Lighting Plan

9.11.1. There are no permanent lighting elements as part of the construction works, only temporary construction lighting. The general design principles that will be used to minimise the impact of temporary lighting on key environmentally sensitive receptors are in accordance with the Institute for Lighting Professionals, Guidance Notes for the Reduction of Obtrusive Light (GN01:2011) and the Bat Conservation Trust's Guidance Note 08/18 Bats and Artificial Lighting in the UK (2018).

9.11.2. The general design principles for lighting are as follows:

- Lighting will provide optimal light levels that provide enough illumination to safely undertake tasks whilst minimising the impact on sensitive receptors
- Lighting will be located, as far as is practical, away from sensitive receptors, directed away from them, and downwards. If necessary, shields, baffles and cowls will be used
- Lighting columns will be of minimum height, and, when lighting large areas, preference will be given to several lower units rather than tall, wide units
- Controls will be implemented to avoid unnecessary illumination
- Lighting will utilise design features that limit obtrusive light
- Any task lighting or security lighting is to be designed in consultation with an ecologist with the objective of preventing disturbance to habitats which are likely to support crepuscular or nocturnal species such as otter or bats
- Where practicable, daytime working hours will be adopted for construction works, with the works commencing no sooner than one hour after sunrise and finishing no later than one hour before dusk
- Lighting of culverts to be avoided

10. Environmental Incidents and Emergency Response

Reporting

- 10.1.1. All environmental incidents will be reported to the HSE Manager, Works Manager and Project Manager.
- 10.1.2. All incidents will be recorded, and subsequent investigations undertaken to determine the nature, scale and extent of the incident, together with emergency response actions and mitigation measures undertaken and recommended corrective actions to prevent any recurrence.
- 10.1.3. A copy of the investigation report will be provided to the client.
- 10.1.4. The Project Manager will inform the relevant regulators of all reportable environmental incidents.
- 10.1.5. For complaints from third parties, direct the complainant to follow the complaints process.

Spillage Response

- 10.1.6. For minor spills/leaks:
 - A. **STOP** the source of the spill or leak
 - B. **CONTAIN** the spill using spill kits
 - C. **DIVERT** the spill away from drains, watercourses and sensitive receptors
 - D. **CLEAN** up the spill. Put all used spill kit materials and contaminated soil in a waste bag and dispose of as hazardous waste
 - E. **REPORT** the spill to General Foreman
- 10.1.7. For larger spills, the contractor's specialist spill response specialists are to be contacted.
 - A. Immediately **STOP** work
 - B. **ISOLATE** the site and prevent entry
 - C. If safe to do so, **CONTAIN** using available spill kit material
 - D. **NOTIFY** the General Foreman, who will in turn notify the HSE Manager and Project Manager
 - E. If required, **MOBILISE** specialist response teams
 - F. **REMEDIATE**

Unauthorised Discharges to Watercourses

- 10.1.8. For all unauthorised discharges to any watercourse, ditch or drain, including discharges of sediment loaded water:
 - A. Immediately **STOP** work
 - B. **IDENTIFY** the source of the discharge, and **STOP** if possible
 - C. **REMOVE** the pathway to the watercourse

- D. **NOTIFY** the General Foreman, who will in turn notify the HSE Manager and Project Manager
- E. If required, **MOBILISE** specialist response teams
- F. **REPORT** to discharge to NRW
- G. **MONITOR** any residual effects on the watercourse and local receptors

Other Environmental Incidents

- 10.1.9. For all other environmental incidents, works are to STOP and the General Foreman, who will escalate to the HSE Manager and Project Manager, is to be notified.
- 10.1.10. Other environmental incident may include:
 - Complaints from third parties e.g., noise and dust
 - Discovery of potentially contaminated land
 - Disturbance to protected species and habitats
 - Disturbance of archaeological features
 - Non-compliance
 - Impacts to trees and hedgerows

Appendices

Appendix A. ISO14001:2015 Certification

Appendix B. Consents Register

Appendix C. Environmental Risk Register

Appendix D. Site Plans

Appendix E. Site Waste Management Plan

Appendix F. Overall Construction Method Statement and Traffic Management Plan

Appendix G. INNS Management Plan

