# Construction Environmental Management Plan

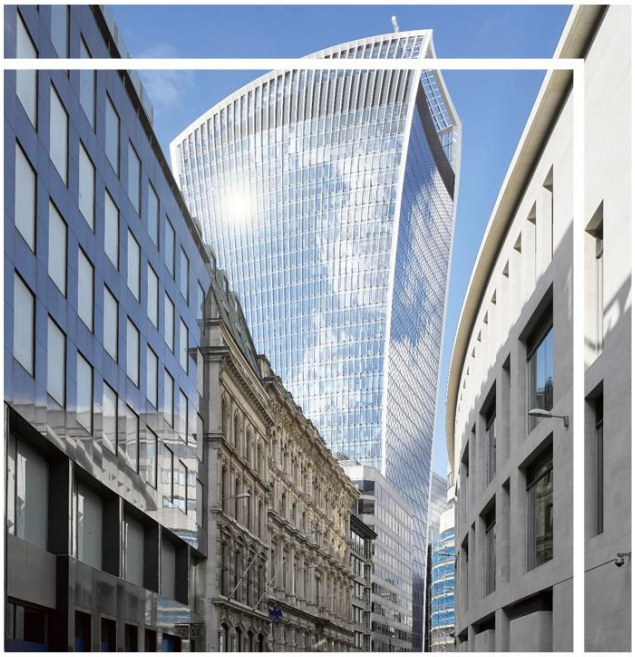
**The Peninsula, Cardiff – Plot 1**

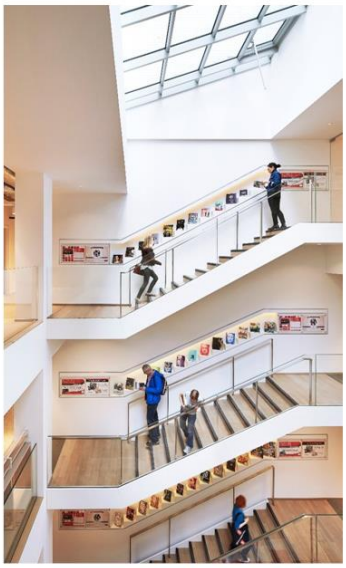
**Orion Land & Leisure Limited**

25 June 2024

CPM-HIL-1A-0000-RP-E-PL-1001

Issue P01





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# Contents

# 1. Introduction

Hilson Moran have been commissioned by Orion Land and Leisure Ltd to provide a Construction Environmental Management Plan (CEMP) in support of the Proposed Development of Plot 1, Cardiff Bay Peninsula.

The location of the Application Site is identified below in **Figure 1.1.** The site will hereafter be referred to as the 'Proposed Development' or 'Application Site.'

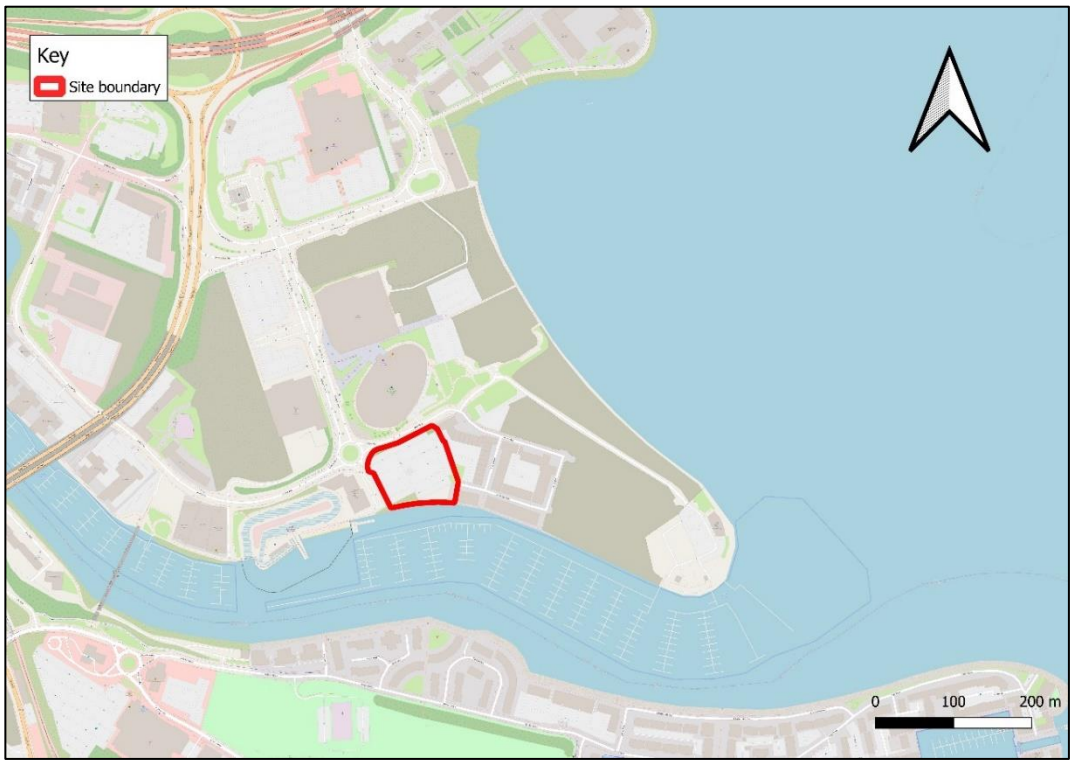


***Figure 1.1 Site Boundary** (OpenStreetMap Sources 2024)*

## 1.1. Purpose

The main purpose of a CEMP is to provide a framework through which a project, and its associated activities and operations, will be managed to control its impacts on the environment and sensitive local receptors, with the view of minimising or, where possible, negating potential impacts arising during the Construction Phase.

The key aspects of a CEMP include:

- Identification of applicable legislative and policy requirements and national standards to which the Project must comply;
- Description of project related activities and operations required for the execution of works within the scope of the CEMP, including a programme of delivery;
- Identification of environmental risks, commitments and constraints associated with sensitive environmental receptors and components, including the description of management procedures and monitoring requirements;
- Development of preventative or remedial measures for incorporation in the event of non-conformance with the CEMP;

- Identifying roles and responsibilities within the Project Team for delivery of the CEMP requirements;
- Development of communication procedures on the Application Site, including those for the dissemination of the CEMP to all site personnel, including the provision of induction, training and briefing requirements;
- Identification of procedures for reporting, monitoring and review of compliance with the CEMP and the process by which the CEMP will be reviewed and updated.

The document is based on the findings of the technical assessments submitted as part of the planning application for the Proposed Development. Additional detail relating to construction elements that will arise as the design progresses and following appointment of a Principal Contractor will be added as an update to the report, with the Plan comprising a live document that is designed to be updated and reviewed as the project develops through the RIBA stages. All information in this report relating to materials, substances etc. is based on the resources available at the time of preparation and will need to be updated and checked as the works progress as additional risks and precautions may be identified.

## 1.2. Applicability

The CEMP will be the responsibility of the Principal Contractor, although the requirements contained within the final CEMP are applicable not only to the Principal Contractor but to sub-contractors and all other associated personnel and activities. The Principal Contractor should ensure the requirements of the final CEMP are appropriately communicated to all relevant persons, and adherence stipulations must be contained within contractual documents between companies that access or influence areas that are included within the Proposed Development.

# 2. Application Site and Receptors

## 2.1. Application Site

The Application Site is located within the Grangetown (The Bay) ward under the jurisdiction of Cardiff City Council (CCC), positioned on the Cardiff Bay Peninsula, as detailed in **Figure 1.1**.

The Application Site encompasses an area of 0.85 hectares and it currently occupied by a carpark, and devoid of any buildings. Adjacent to the water on the eastern side of the site, there is a modest amount of overgrown grass, bushes, and trees.

Directly to the south of the Application Site is the mouth of the River Ely which houses several pontoons occupied by recreational boats. To the Northeast of the Application Site is Cardiff International Sports Village, which houses state of the art sporting facilities, including a white water rafting centre, international pool and gym, ice skating arena, as well as residential and retail developments.

## 2.2. Proposed Development

The proposals comprise:

*'Senior living accommodation with associated car parking, cycle parking, and landscaping.'*

### 2.2.1. Overview

At this stage the proposals for Plot 1 encompass development of a 4 to 5-story tall apartment (Building A) which will contain 77 new residential senior living accommodation units, with 40 parking spaces. The Proposed Development will also introduce soft landscaping, which will help with the visual enhancements of the land by introducing green spaces and tree planting within the Application Site, as well as contributing to the housing demand within the City of Cardiff, which under the Future Wales Policy is to deliver 24,000 houses between 2021-2036 (1,600 p/a)[1].

### 2.2.2. Methodology

Full details on the construction methodology proposed to be employed throughout the construction phase of the development are not currently available. The methodology will, therefore, be updated when a Principal Contractor has been appointed.

## 2.3. Sensitive Receptors

The construction phase of the development should consider sensitive receptors impacted by the construction works both on the Application Site, and key haul roads which lead in and out of the site. These sensitive receptors should be kept under constant review throughout the works.

**Human Health Receptor**

Sensitive receptors in proximity to the Application Site which could be affected by the construction works include the residential properties off Empire Way.

# 3. Legislation, Standards & Guidance

The Proposed Development will be governed by a range of environmental legislation and guidance documents, the below provides a summary of those relevant to the construction phase of the Proposed Development.

## 3.1. Legislation

### 3.1.1. Environmental Protection

**The Environment Act 2021**

Part 3 of the Environment Act 2021[2] follows a holistic approach and allows for action to be taken at all stages of the product lifecycle, as each stage provides opportunities to move towards a more circular economy.

The Act makes provision for product design and related requirements to ensure products are more durable, repairable, and recyclable. It also notes provisions could be made for clearer labelling of products so consumers can easily identify recyclable products.

The Environment Act also makes provision for the introduction of new extended producer responsibility schemes, which will allow for producers to be responsible for the full net costs of managing their products and packaging for disposal.

Charges on single-use plastics will also be introduced as well as the provisions for introduction of a deposit return scheme for waste items such as drinks containers.

The Act will also address the consistency and frequency of recycling collections across England, and councils operate weekly separate food waste collections.

**The Environment (Wales) Act 2016**

The Environment (Wales) Act 2016[3] is focused on safeguarding Wales' natural assets and promoting sustainable practices. It requires the Welsh government to develop and advance policies that support the responsible management of resources, including biodiversity conservation, climate resilience, and ecosystem health.

This Act establishes guidelines for setting clear objectives, targets, and measures to assess progress toward environmental sustainability. The Act emphasizes an integrated approach to decision-making that recognizes relationship between natural systems and human well-being.

It also places responsibilities on public bodies to protect and enhance biodiversity, manage water sustainably, and address air quality issues. In essence, the Environment (Wales) Act 2016 underscores Wales' commitment to preserving its environment for current and future generations through thoughtful and strategic environmental management.

**Well-being of Future Generations (Wales) Act 2015**

Well-being of Future Generations (Wales) Act4 was designed to ensure that decisions made by public bodies in Wales consider the long-term impact on people, communities, and the environment.

This Act outlines seven key well-being goals that public bodies must work towards, including goals related to prosperity, resilience, health, equality, and community cohesion. It requires public bodies to collaborate and take a preventative approach to improve well-being for present and future generations. The Act also emphasizes the involvement of future generations in decision-making processes to address their needs and priorities. Overall, this legislation aims to create a more sustainable and inclusive Wales by prioritizing the well-being of both current and future residents.

## 3.1.2. Flood and Water Management

**The Flood and Water Management Act, 2010**

The Flood and Water Management Act (2010)[5] makes specific provision for the management of risk associated with flooding and coastal erosion.

The Act states that construction work which has drainage implications may not be commenced unless a drainage system for the work has been approved by an approving body (unitary authority/county council).

In determining an application for approval, the approving body must:

1) Grant it, if satisfied that the drainage system, if constructed as proposed, will comply with national standards for sustainable drainage; or
2) Refuse it, if not satisfied.

The Act, therefore, removes the automatic right to connect to the public sewer if the proposed drainage strategy does not fully consider the feasibility of sustainable drainage techniques.

**Cardiff Bay Barrage Act, 1993**

The Cardiff Bay Barrage Act, 1993[6] enabled the construction of a tidal barrage across Cardiff Bay in Wales.

The primary aim of the Act is to transform the bay into a freshwater lake, providing flood protection for surrounding areas and unlocking opportunities for urban regeneration and development. The Act grants powers for the construction, operation, and maintenance of the barrage, including provisions for financing and environmental considerations. By controlling tidal flows, the barrage mitigated flood risks and created a stable water environment conducive to waterfront development.

The Act also emphasized public access to the waterfront and the development of amenities, parks, and recreational spaces around the newly formed lake. The completion of the barrage catalysed the revitalization of Cardiff Bay, leading to significant economic benefits through job creation, tourism, and enhanced property values, while also preserving the area's heritage and culture through appropriate development measures

## 3.1.3. Control of Pollution Act

The Control of Pollution Act (1974)[7] requires that 'Best Practicable Means' (BPM), as defined in Section 72 of the Act, are adopted to control construction noise on any given

site. The Act states that wen defining BPM regard shall be given to relevant approved codes of practice (such as British Standard 5228).

Section 60 of the Act is a reactive mechanism that enables Local Authorities to serve a Section 60 Notice, which can include controls on working hours and methods of works to be used and can specify onsite mitigation. The site must then be operated under the constraints of the notice (subject to appeal).

Section 61 of the Act is a proactive mechanism which enables the contractor to submit a Section 61 consent application for approval 28 days prior to the commencement of construction. The application should detail, among other things, the construction activities, working hours and measures to be employed to demonstrate that best practicable means is being adopted at all times to minimise noise and vibration on site. If the works are undertaken in a manner compliant with a consented Section 61 application, then the local authority cannot serve a Section 60 Notice and therefore the contractor can have more certainty in the programme.

### 3.1.4. Conservation of Habitats and Species Regulations

The Conservation of Habitats and Species Regulations 2017 (as amended)[8], which consolidate the Conservation of Habitats and Species Regulations 2010 and subsequent amending instruments, is the main legislation governing the protection of biodiversity and is derived from European Council Directive 92/43/EEC (otherwise known as the Habitats Directive). These Regulations provide protection for sites, habitats and species that are of conservation importance at the European or international level. The Regulations provide the framework for the designation and protection of 'European sites', including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). The Regulations also provide legislative protection to species, identified as 'European Protected Species' (EPS) within Schedule 2 of the Regulations.

The Conservation of Habitats and Species Regulations 2017 are amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which ensures the continuity of the legislation following the departure of the UK from the European Union.

**European Protected Species (EPS)**

All European Protected Species (EPS) in England and Wales are fully protected through inclusion within the Regulations. Under this legislation it is an offence to deliberately capture, injure or kill individuals of any native EPS. It is also a strict liability offence to damage or destroy sites or places which EPS use as a breeding site or resting place. EPS are also protected under the Regulations from deliberate disturbance which is likely to:

a. impair its ability:
    i. to survive, breed or reproduce, or to rear or nurture their young; or,
    ii. in the case of animals of a hibernating or migratory species to hibernate or migrate; or,

b. to affect significantly the local distribution or abundance of the species to which they belong.

It may be possible to apply for a licence from Natural Resources Wales to allow activities that would otherwise be an offence under these Regulations. However, it is an offence to breach a condition imposed by any such licence.

### 3.1.5. Wildlife and Countryside Act

The Wildlife and Countryside Act 1981 (as amended)[9] comprises the principal means of protecting wildlife in the UK, including the identification and protection of Sites of Special Scientific Interest (SSSIs), and provides the mechanism by which a number of international directives are implemented in the UK.

**Birds**

All wild birds in England and Wales are protected under Part 1 of the Act, which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs. Additional protection is afforded to species listed in Schedule 1 of the Act from disturbance whilst it is building a nest, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

**Flora**

All wild plants are protected under Schedule 13 of the Act, which makes it an offence to uproot a plant, defined as to *'dig up or otherwise remove the plant from the land on which it is growing'*, without permission from the land owner or occupier. A number of higher and lower plants receive additional protection under Schedule 8 of the Act, which makes it an offence to intentionally pick, uproot, destroy or trade in these plants.

Schedule 9 of the Act identifies invasive plant species and makes it an offence to plant these species or otherwise cause them to grow in the wild. The protection has been strengthened through the inclusion of a new schedule, as a result of Section 23 of the Infrastructure Act 2015, which enables environmental authorities to required works to be undertaken to remove or prevent their establishment. Any material containing Japanese knotweed (*Reynoutria japonica.)* or giant hogweed (*Heracleum mantegazzianum)* is identified as 'controlled waste' under The Invasive Alien Species (Enforcement and Permitting) Order 2019 and must be disposed of appropriately.

**European Protected Species**

All EPS are also partially protected in England and Wales through their inclusion in Schedule 5 of the Act. Under this legislation, it is an offence to intentionally or recklessly disturb a bat whilst it is using a place of rest or shelter.

**The Waste (England & Wales) Regulations**

The Waste (England & Wales) Regulations 2011 (as amended)[10] repealed the Environmental Protection (Duty of Care) (England & Wales) Regulations 1991 and replaced them with provision in the Environmental Protection Act 1990 (as amended).

The Regulations set requirements for the collection, transport, recovery and disposal of wastes. Notably, the Regulations require businesses/organisations to confirm, upon

transfer of waste, all reasonable measures have been taken to apply the waste hierarchy, in the following order of priority:

- Prevention;
- Preparing for re-use;
- Recycling;
- Other recovery (e.g., energy recovery); and
- Disposal.

The Regulations, including 2014 amendment, establish new requirements for the completion of a Waste Transfer Note, including use of alternative documentation provided it complies with the legal requirements for what must be included.

The Waste (Circular Economy) (Amendment) Regulations 2020[11] amend a number of primary and secondary legislation on waste and introduce a revised framework for the identification of steps to reduce waste and establish robust long-term plans for the reuse and recycling of wastes.

**Hazardous Waste (England and Wales) Regulations 2005**

The Hazardous Waste (England and Wales) Regulations 2005 (as amended)[12] defines the way in which hazardous wastes are classified and subsequently treated and disposed of in England and Wales. The Regulations draw together definitions of hazardous waste from previous European and UK legislation and set a range of chemical and physical parameters for determining the nature of waste. Hazardous wastes are listed in the European Waste Catalogue (EWC).

Wastes listed as hazardous include a range of everyday items, such as waste oils from vehicle maintenance, fluorescent tubes, and some electronic and electrical equipment. A full list of hazardous wastes is provided in the EWC and the List of Wastes (England) Regulations 2005[13].

The Regulations place strict controls on the methods of treatment and disposal of hazardous waste. The Landfill (England and Wales) Regulations 2002[14]restrict the landfill disposal of hazardous waste to specific hazardous waste landfill sites. As with the wider Landfill Regulations, the aim is to enforce tighter control of the nature of the landfill and cause less end-of-life problems with toxic landfill leachate and landfill gas production. The requirement imposed by the Hazardous Waste Regulations to treat hazardous waste prior to disposal is intended to reduce the toxicity of the materials deposited and recover value from them prior to landfill to encourage sustainable resource use.

The Hazardous Waste Regulations require waste producers, whether domestic or commercial, to separate hazardous materials from their general waste to allow separate disposal. Failure to do is in breach of the Hazardous Waste Regulations and Duty of Care requirements in the Environmental Protection Act 1990 (as amended).

### 3.1.6. Air Quality Strategy for England, Scotland, Wales and Northern Ireland

The Government's policy on air quality within the UK is set out in the Air Quality Strategy (AQS) for England, Scotland, Wales and Northern Ireland[15], most recently updated in August 2023.

The AQS sets out a framework for reducing hazards to health from air pollution and ensuring that the European Union and International agreements are met in the UK. The AQS covers the following air pollutants: ammonia ($NH_3$), benzene ($C_6H_6$), 1,3 butadiene ($C_4H_6$), carbon monoxide (CO), lead (Pb), oxides of nitrogen ($NO_X$) (including nitrogen dioxide ($NO_2$)), particulate matter ($PM_{10}$ and $PM_{2.5}$), sulphur dioxide ($SO_2$), ozone ($O_3$) and polycyclic aromatic hydrocarbons (PAHs).

The AQS sets standards and objectives for the listed pollutants for the protection of human health, vegetation, and ecosystems. The standards are based on recommendations by the Expert Panel on Air Quality Standards (EPAQS) and the World Health Organisation (WHO) based on current understanding and scientific knowledge about the effects of air pollution on health and the environment. The air quality objectives are policy based targets set by the UK Government that are often expressed as maximum concentrations not to be exceeded either without exception or with a limited number of exceedances within a specified timescale.

For the pollutants considered in the Air Quality Impact Assessment, there are both a long-term (e.g., annual mean) and short-term (e.g., one hour mean) standard. In the case of $NO_2$, the short-term standard is for a 1-hour averaging period (no more than 18 exceedances of 200 µg/m$^3$ per year), whereas for $PM_{10}$ it is a 24-hour averaging period (no more than 35 exceedances of 50 µg/m$^3$ per year). The variation in time period reflects the varying impacts on health of differing exposures to pollutants.

Updates to the Air Quality Strategy in 2023 sets a framework which includes updated targeted for fine particulate matter ($PM_{2.5}$).

The legislation has set 2 new legally binding $PM_{2.5}$ targets, each with an interim target:

- 10 µg/m$^3$ annual mean concentration $PM_{2.5}$ nationwide by 2040, with an interim target of 12 µg/m$^3$ by January 2028; and,
- 35% reduction in average population exposure by 2040, with an interim target of a 22% reduction by January 2028, both compared to a 2018 baseline.

### 3.1.7. Environment (Air Quality and Soundscapes) (Wales) Act 2024

The Environment (Air Quality and Soundscapes) (Wales) Act[16]was passed in March 2024 and proposes to provide a framework for setting national air quality targets, amending existing legislation relating to the national air quality strategy and places a devolved responsibility to Welsh ministers to promote awareness of air pollution and publish a national soundscape strategy.

### 3.1.8. Air Quality Standards Regulations

The air quality objectives in the AQS are statutory in England with the Air Quality (Amendment)(Wales) Regulations 2000[17] and the Air Quality (Wales) (Amendment) Regulations 2002[18] for the purpose of Local Air Quality Management (LAQM).

The Regulations require likely exceedances of the AQS objectives to be assessed in relation to:

*'…the quality of air at locations which are situated outside of buildings or other natural or man-made structures, above or below ground, and where members of the public are regularly present…'*

The Air Quality Standards (Amendment) Regulations 2016[19] transpose the European Union Ambient Air Quality Directive (2008/50/EC) into law in England, with the Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019 ensuring continuation of the transposition of the Directive. This Directive sets legally binding limit values for concentrations in outdoor air of major air pollutants that impact public health such as $NO_2$, $PM_{10}$ and $PM_{2.5}$. The limit values for $NO_2$ and $PM_{10}$ are the same concentration levels as the relevant AQS objectives and the limit value for $PM_{2.5}$ is a concentration of 20 µg/m$^3$. The relevant air quality objectives are presented in Table 2.1.

*Table 3.1 Air Quality Objectives for Relevant Pollutants*

| Pollutant | Concentration | Measured as |
|---|---|---|
| $NO_2$ | 200 µg/m$^3$ | 1-hour mean, not to be exceeded more than 18 times a year (99.79 %ile) |
| | 40 µg/m$^3$ | Annual mean |
| $PM_{10}$ | 50 µg/m$^3$ | 24-hour mean, not to be exceeded more than 35 times a year (90.41 %ile) |
| | 40 µg/m$^3$ | Annual mean |
| $PM_{2.5}$ | 20 µg/m$^3$ | Annual mean |
| | 10 µg/m$^3$ - Annual Mean to be met by 2040<br>Population exposure is reduced by 35% compared to 2018 levels | |

# 4. Management of Construction Activities

## 4.1. Responsibilities

The CEMP will comprise part of the construction contract for the development of the Application Site, with appointed Principal Contractor holding the overall responsibility for its implementation. It is a working document and is expected to be updated as the development progresses.

The roles and responsibilities identified in Table 4.1 are suggested for inclusion within the Principal Contractor's delivery team. Whilst the precise detail of these roles and responsibilities may be subject to change once the Principal Contractor for the Proposed Development is engaged, the identification of responsibilities will be included in any updates to the CEMP to ensure allocation of these is clear.

*Table 4.1 Roles & Responsibilities*

| Designated Role | Responsibilities | Company | Contact |
|---|---|---|---|
| Developer | Responsible for ensuring planning conditions are adhered to through regular liaison with Site Manager and Environmental Manager. | TBC | TBC |
| Site Manager | Overall responsibility on site for the specific construction activities. Responsible for the CEMP and producing any updates. Responsible for sub-contractors' compliance with the CEMP. First point of call in the event of an environmental incident or emergency, responsible for environmental response including liaison with Environmental Manager and Developer and relevant authorities. Also responsible for reviewing details and enforcing any modifications to method statements. First point of call and responsible for complaints procedure and response. | Principal Contractor *(TBC)* | TBC |
| Environmental Manager | Responsible for ensuring appropriate environmental monitoring is undertaken. Monitoring of sub-contractors' compliance with the CEMP. Liaison with Site Manager | Principal Contractor or Appointed Consultant (*TBC*) | TBC |

| Designated Role | Responsibilities | Company | Contact |
|---|---|---|---|
| | following any environmental incident or emergency, advise on actions required and monitor remedial measures. Support to Site Manager in investigating and responding to complaints. | | |

## 4.2. Construction Best Practice Methods

This section describes some established and uncontroversial standard best practice construction techniques and methods which will be employed to avoid or minimise the risk of potential impacts, in particular habitat damage and disturbance, and species mortality.

These are described in detail throughout the Construction Environmental Management Plan (CEMP), and the adoption and implementation of these measures and best practice construction techniques will be secured through adherence with the CEMP.

If any protected species or signs of protected species such as an otter holt, or other ecological features including new occurrences or increase in extent of INNS are encountered during the works, all work in the vicinity is to stop immediately and a suitably qualified ecologist contacted as soon as possible.

Measures detailed within the CEMP will include:

- Ensuring that all site activities in proximity to watercourses are controlled and are in accordance with relevant legislation and undertaken in compliance with the relevant Guidance for Pollution Prevention (e.g. GPP5[20],) and industry best practice (CIRIA[21], CIRIA C741[22]). Additional measures such as silt fencing, silt busters or bales may be necessary to prevent silt or contaminants from being released into connecting watercourses.
- Use of noise control equipment such as jackets, hoods and shrouds on equipment such as generators.
- Constant monitoring of dust levels and adopting effective methods of work to prevent dust becoming airborne at the source for example; using wet sweeping methods to prevent accumulation of dust and mud and using effective exhaust ventilation and filtering to minimise potential dust pollution.
- Spill kits deployed in the event of a spillage. In the event of a pollution incident, work should cease in the vicinity of the incident and contaminants must be cleaned up immediately.
- Measures to protect trees to be retained within and immediately adjacent to the site and access route in line with the British Standard BS5837:2012.
- Plant will be regularly serviced and maintained.
- Plant will be located as far as reasonably practicable away from ecology features, and will be shut down when not in use.

- Trenches and holes will be covered when not being worked on to prevent entry by mammals and where this is not possible exits and escape routes such as ramps or mammal ladders will be provided.
- All construction works, especially those emitting high levels of noise and vibration, will be limited to daylight hours taken to be from 30 minutes after dawn and 30 minutes before dusk.
- Best Practicable Means (BPM) as defined in Section 72 of the Control of Pollution Act 1974 would be employed to keep the level of noise and vibration generated on Site as low as reasonably practicable. Measures to be considered in implementing best practicable means would be consistent with recommendations of British Standard (BS) 5228-1:2009+A1:2014 and would include but not be limited to:
    - Careful programming to ensure activities which may generate significant noise are planned well in advance and SRs are notified of the works;
    - Identification and use of low noise techniques. For example, equipment that breaks concrete by munching or similar, rather than by percussion. Where construction plant which is known to generate significant levels of noise then it is to be used sparingly and the construction activity is closely monitored to minimise noise levels;
    - Identification and use of low vibration techniques. This would include the use of continuous auger flight piling methods or rotary bored piling, and driven cast in-situ piling as opposed to percussive methods such as impact bored piling;
    - All plant brought on to Site should comply with the relevant EC/UK noise limits applicable to that equipment or should be no noisier than would be expected based on the noise levels quoted in BS 5228. Plant should be properly maintained and operated in accordance with manufacturers' recommendations;
    - Where feasible, all stationary plant should be located so that the noise at all occupied SRs is minimised and, if practicable, every item of static plant when in operation should be sound attenuated using methods based on the guidance and advice given in BS 5228 (e.g. local screening);
    - Items of plant on the Site operating intermittently should be shut down in the intervening periods between use;
    - Adoption of a noise monitoring regime and the establishment of noise Action Levels in consultation with CC, above which consideration would be given to the use of alternative techniques and/or other means of controlling noise levels;
    - Use of hoarding to the required height and density appropriate to the noise sensitivity of the Site; and
    - Implementation of a Construction and Logistics Plan (CLP) to pre-plan and manage traffic associated with the works to minimise disturbance to NSRs. The CLP would include aspects such as operation of a 'Just in Time' policy for the delivery and supply of materials for the work to minimise the disruption to the local community.

## 4.3. Incident and Emergency Procedures

### 4.3.1.1. Initial Response

In the event of an incident or emergency, the Site Manager is the principal contact in the first instance, who will be responsible for advising the relevant procedures and, where relevant, may be referred to the Environmental Manager for implementation.

Information recorded on the incident should include:

- Location of the incident;
- Activity involved, including any substances involved in any spillages;
- Details regarding personnel or plant involved/affected by the incident; and,
- Whether the incident holds potential to impact upon a watercourse, sewer or ground conditions.

Some incidents, such as spillages, can be managed by site personnel to contain or remove the threat of further impact. As a result, the Principal Contractor should ensure spill kits, appropriate to activities ongoing, are readily available and personnel are trained in their deployment. Measures to reduce the risk of spillage should also be taken, where appropriate, for example by ensuring refuelling points are appropriately bunded and plant have drip trays. In certain circumstances, reporting of incidents may require informing relevant statutory bodies including, but not limited to:

- Health and Safety Executive: Incident Contact Centre, Tel: 0345 300 9923 (For major or fatal injuries); and,
- Environment Agency: Environment Agency Incident Hotline, Tel: 0800 80 70 60.

### 4.3.1.2. Reporting Procedures

The Principal Contractor will ensure all environmental incidents that occur will be investigated at the earliest opportunity to understand the causes, review control/mitigation measures in place and their effectiveness and review the emergency response procedures and implementation and its effectiveness.

### 4.3.1.3. Fire Prevention and Control

The Principal Contractor will be responsible for developing a Fire Prevention Strategy for the Construction Phase, in line with relevant best practice guidance. This will include a Fire Safety Plan specific to the Application Site and based on the fire risk assessment. This Plan will be a working document, reviewed and updated as the works progress to reflect the changing nature of hazards and requirements of the scheme.

## 4.4. Compliance Monitoring & Response

Monitoring of the CEMP should be routinely undertaken by the Principal Contractor to ensure the relevant mitigation measures are implemented and effective and specific monitoring requirements for environmental aspects, for example Dust Management, are appropriately undertaken and reported.

In the event that monitoring indicates non-compliance with the CEMP, or inspection of the Application Site or complaints procedure indicates the requirement for action, the Environmental Manager should be informed immediately. The Environmental Manager will be responsible for reviewing the monitoring data, inspection findings or complaints procedure and determination of the action required to address the non-conformance.

The Environmental Manager will also be responsible for completing monthly reporting on the monitoring undertaken through the construction phase and can be submitted to the Environmental Health Officer at LBC if requested.

Table 4.2 identifies the split of responsibilities between the Site Manager and Environmental Manager.

*Table 4.2 Responsibility in Environmental Compliance Monitoring, Actions and Reporting*

| Role | Responsibility |
|---|---|
| Site Manager | Routine site inspection to ensure compliance with operating procedures and mitigation implementation and effectiveness. Liaison with Environmental Manager regarding any changes to site practices, mitigation measures or temporary suspension of works. |
| Environmental Manager | Routine walkover surveys to ensure compliance with operating procedures and mitigation requirements. Completion/compilation of monthly reporting outlining the findings of routine monitoring, non-compliances and actions taken.<br><br>Review site conditions and liaison with Site Manager on requirement to alter working practices, mitigation measures implemented or temporary suspension of works in response to an incident, observation of non-compliance, exceedance of trigger level or following public complaint.<br><br>Notify environmental regulators, where relevant, of any non-compliances and liaison with Cardiff City Council's Environmental Health Officer (EHO). |

## 4.5. Application Site Induction

The Application Site Induction should be provided by the Principal Contractor for all site personnel, including subcontractors, to ensure they are aware of the CEMP, its implementation and their associated responsibilities. The induction should ensure relevant elements of the site procedures are covered for, covering three main topic areas: general information regarding site operation; health and safety; and environment.

Topic specific training, delivered through toolbox talks for example, may be required to supplement information for some construction activities, particularly those of potentially

high risk, to ensure all personnel involved in that activity are fully aware of the potential risks involved and the mitigation measures required to manage that risk.

**General**

Information contained within the general section should provide information including, but not limited to: security, site access requirements; site documentation requirements (*e.g.* Permits to Work, Risk Assessments, Site IDs); housekeeping rules (*e.g.* waste procedures, smoking policy); signage on site and importance of its obeyance; welfare facilities and requirements.

**Health and Safety**

The responsibility to ensure compliance with health and safety policy will remain the responsibility of the Principal Contractor, however information should that be disseminated should include, but not be limited to: identification of key health and safety personnel and contact details; site rules and expectations, including Personal Protective Equipment (PPE) requirements; general risks applicable to a wide range of construction activities on site and mitigation measures that should be adhered to.

**Environmental**

A specific section should be dedicated to environmental risks and considerations on the Application Site, ensuring personnel are aware of the specific environmental constraints associated with the Proposed Development, mitigation measures that should be adopted and reasons for these. Information on risks and associated mitigation should include, but not be limited to dust and noise generation; ecology; water resources and waste.

## 4.6. Considerate Constructors Scheme

The Principal Contractor will be required to register the Project with the Considerate Constructors Scheme and ensure all construction activities undertaken are compliant with the principles and guidance set out in the scheme.

Compliance with the scheme will ensure a high standard of practice through the Construction Phase based on the following principles:

- Respect the Community – Constructors must manage their impact on their neighbours and the public to support a positive experience by:
    - Ensuring courteous and respectful language and appropriate behaviour in and around the construction activity;
    - Providing a safer environment, preventing unnecessary disturbance, and reducing nuisance for the community from activities;
    - Proactively maintaining effective engagement with the community to deliver meaningful positive impacts.
- Care for the Environment – Constructors must minimise their impact and enhance the natural environment by:
    - Prioritising environmental issues to protect the natural environment and minimising negative impacts;
    - Optimising the use of resources, including minimising carbon throughout the value chain;

    - Engaging with the community to improve the local environment in a meaningful way.
- Value their Workforce – Constructors must create a supportive, inclusive and healthy workplace, by:
    - Actively encouraging and supporting an inclusive and diverse workplace;
    - Proactively supporting safe working, mental and physical wellbeing at work;
    - Providing workplaces that are, well maintained, clean and secure from physical and biological hazards.

# 4.7. General Site Management

The following sections identify high level information regarding the approach to general site management, which will be confirmed and amended through an update to the CEMP once a Principal Contractor has been engaged.

## 4.7.1. Working Hours

Working hours for the site will be set by the Cardiff Council by way of planning condition, however it is anticipated that working hours will be as per the following during which construction activities or delivery of materials should be undertaken:

- Monday – Friday: 08:00 – 18:00;
- Saturday: 08:00 – 13:00

No working will be undertaken on Bank Holidays or Sundays. Some Out of Hours working may be required, for example for the erection or dismantling of tower cranes, etc. Any specific instances where this is required will be communicated with CCC with detailed method statements for the work, as a formal application for approval prior to any commencement of the specific works on the site.

## 4.7.2. Site Establishment

Site establishment comprises the preparation of the Application Site for the construction activities, which will commence from Week 1 of the development programme and comprises the establishment of welfare facilities, offices, and stores. The exact facilities to be provided will be confirmed by the Principal Contractor through an update to the CEMP.

The Principal Contractor will ensure the Application Site is fully secure with hoarding extending around the perimeter with appropriate gate locations and access points.

The site establishment period is also an important period for the establishment of environmental mitigation measures, including any necessary tree protection measures, dust monitoring equipment and noise mitigation for sensitive receptors.

## 4.7.3. Security

Details regarding the provision of security during the construction period will be confirmed following the appointment of a Principal Contractor and will be provided in an update to the CEMP. However, it is anticipated that this could comprise the provision of 24/7 security to ensure the site is secure at all times and control of access is maintained and manned.

## 4.7.4. Lighting

An appropriate level of lighting will be provided on the Application Site to allow for the completion of the construction activities associated with the Proposed Development. All lighting will be inward facing to the proposed development and minimise spill outside of the redline boundary into adjacent areas to avoid impacts upon sensitive receptors.

As a rule lighting levels will be kept to a minimum, taking into account the health and safety and security. The lighting provision should consider the best practice recommendations of the Institute of Lighting Professionals (ILP)25 on the reduction of obtrusive light.

Lighting should also consider Reference to ILP GN08/23. Given ecologically sensitive species which could be present on the site the following recommendations should be considered:

- Selecting luminates that lack UV elements,
- Use of LED luminares with dimming capability,
- Using warm white light sources of 2700k or lower to reduce the blue light components.
- All luminaires should be fall cut-off and therefore do not contribute directly to light pollution; they are also dark sky compliant.
- Light sources were chosen with peak wavelengths greater than 550nm to avoid the component of light most disturbing to bats. (I need to double check this one is correct for our scheme)
- Light sources have been directed onto where they are required only, being asymmetric, or having 1800baffles on them.
- To reduce light spill behind fittings, wherever lighting is not required behind the luminare, blanking plates have been added
- Lighting column reduced in height wherever possible

Control will be afforded to the lighting provision, allowing for a lower level of lighting to be provided outside of work hours that allows security of the site to be effective whilst avoiding over lighting. The details of the lighting provision will be confirmed once a Principal Contractor is engaged and will be included in an update to the CEMP.

## 4.7.5. Pedestrian Management

The Principal Contractor will be responsible for ensuring the surrounding public pavements around the Application Site are always kept clear, with monitoring of the public realm surrounding the site forming part of the weekly reviews. Any remedial actions required, such as street sweeping to remove a build-up of dust, should be implemented as soon as possible.

The Principal Contractor is also responsible for establishing and maintaining the access gates, including vehicle and pedestrian access points, and associated pedestrian routes to the site offices and. Any visitors are likely to be required to report to the site offices, via the main pedestrian entrance, and complete a site induction or be accompanied by a member of the site team.

# 4.8. Ecological Management Procedures

## 4.8.1. Ecological Clerk of Works (ECoW)

An Ecological Clerk of Works (ECoW) will be employed during construction phase of the development, this requirement will be within the CEMP. The ECoW will be employed to oversee management of ecological issues as they arise and educate around ecological issues at the site, and oversee specific avoidance and mitigation required for ecological features s well as enhancement measures.

The ECoW will deliver Toolbox Talks prior to the commencement of construction works to all site personnel to inform them of important ecological features at the site including INNS, protected and notable species. An associated register of attendance will be signed and kept as a record; and a copy of the toolbox talk left at the site office for reference. The ECoW will supervise all vegetation clearance on site to safeguard ecological features from injury.

## 4.8.2. Pre-construction surveys

Prior to construction works, pre-construction surveys are required. Construction works will also include increased noise and vibration which could disturb species including otters should they be resting in proximity to the works. The requirements for pre-construction surveys include:

- Otter survey, undertaken by a suitably qualified ecologist (SQE), 8-12 weeks prior to commencement of construction works. The survey will focus on the River Ely adjacent to the site (100m from the site) and also scrub habitat on site to identify if any resting places that have become established and occupied by otters since survey undertaken in 2024 where none where identified in proximity to the site. The survey will inform the requirement for an otter development licence from NRW;
- Immediately prior to vegetation clearance or during the phased vegetation clearance a check should be undertaken by the ECoW, to identify any potential hedgehog nests. If found the nest will be moved by the ECoW by hand to suitable habitat off site to safeguard the species;
- The ECoW will also check for any natural refugia/hibernacula prior to vegetation clearance, and these will be dismantled by hand prior to vegetation clearance. Depending on time of year (avoiding March and September), and if any hibernating reptiles or amphibians are found these should be moved by hand by a SQE to suitable habitat within the wider site;
- Prior to construction a check for plant INNS should be undertaken by a SQE. No INNS have been identified on site, although cotoneaster sp. is known to be in the wider site. A pre-construction check 8-12 weeks prior to construction is therefore recommended to ensure no INNS have become established on site, that could be spread during construction which would be an offence under the WCA and/or the Invasive Alien Species (Enforcement and Permitting) Order 2019
- There will be no requirement for a nesting bird survey prior to vegetation clearance due to sensitive work timings which will avoid the breeding bird season (March to August). However if work timings cannot be followed, and vegetation clearance within the breeding bird season is required, a nesting bird check must be undertaken by a suitably experienced ecologist no more than 24 hours prior to clearance, which

will be supervised by the ECoW. Should any active nests be found, a suitable buffer will be established as advised by the ECoW and any clearance within the buffer around the nest will have to be completed once the chicks have fledged and the nest is no longer active.

### 4.8.3. Work Timings

Specific avoidance of disturbance to sensitive receptors includes, undertaking all vegetation clearance outside of the breeding bird season (March to August), and the need to ideally also avoid the breeding bird season for installation of the boardwalk as well due potential disturbance to birds nesting in riparian habitat present.

All construction works will be undertaken during daytime working hours to avoid/minimise the requirement for artificial lighting a potential impact upon foraging commuting bats and otters, and avoid noisy activities between dusk and dawn when otters are most active. All construction works, especially those emitting high levels of noise and vibration, will be limited to daylight hours taken to be from 30 minutes after dawn and 30 minutes before dusk. If any task lighting or security lighting is required it will be directional and temporary and be away from the riparian corridor or any semi-natural vegetation

# 5. Management Procedures

The following sections outlines the mitigation requirements associated with each environmental aspect and monitoring requirements that are recommended for the Principal Contractor to implement. Regular site inspections form a significant part of the monitoring requirements through the construction phase, with an example Site Inspection proforma provided in Appendix 1 providing an indication as to the aspects that should be considered/addressed in these inspections.

## 5.1. Transport & Site Logistics

Situated within the jurisdiction of Cardiff Council, the Proposed Development holds the potential to affect the local road network by potentially inducing congestion on nearby roads or heightening the risk of collisions, as well as impacting pedestrian safety.

### 5.1.1. Mitigation

The establishment of appropriate mitigation for transport is, first and foremost, aimed at ensuring the safety of the general public and site personnel, including pedestrians and drivers both on-site and off-site. The following measures are proposed for adoption by the Principal Contractor, who will provide additional detail by way of an update to the CEMP once engaged and prior to the commencement of construction activities.

#### 5.1.1.1. Vehicle Access/Egress

The Principal Contractor will establish appropriate pedestrian and vehicular site access to the site as part of their site establishment. Appropriate signage should be provided within the local highway, if required, to ensure local traffic and pedestrians are aware of the likelihood of vehicle movements.

Appropriate routes for vehicle movements associated with plant and materials delivery/removal will be identified by the Principal Contractor by way of an update to the CEMP and agreed in advance with Cardiff Council.

The local highway and pavements will be kept clear of site debris and dust for the duration of the construction phase, using suitable wet methods for cleaning to avoid resuspension of particles into the air that may potentially cause a nuisance or health concerns (see Section 5.6 on Air Quality).

#### 5.1.1.2. Construction Logistics Plan

The Proposed Development has potential for disruption and impacts on the local road network as a result of the delivery and movement of materials, plant and personnel through the construction programme.

To mitigate the potential implications of this, an Outline Construction Logistics Plan (CLP) will be prepared separately. The CLP will be prepared in consideration of best practice guidance and appropriate mitigation measures.

The main mitigation considerations which should be put forward in the CLP are summarised as follows:

- *Vehicle Routing and Access*: strategic routes will be used for construction vehicle routing wherever possible, and use of local roads minimised. Heavy Goods Vehicle (HGV) routes will be directed to avoid local residential streets and roads where schools are located;
- *Industry Best Practice*: contractors and sub-contractors will be expected to be members of, or signed up to, best practice schemes and initiatives including: Considerate Constructors Scheme, Fleet Operator Recognition Scheme (FORS) and/or Construction Logistics and Community Safety (CLOCS);
- *Delivery Scheduling*: details will be confirmed in a detailed CLP; however it is expected that a web-based delivery management system will be implemented to book and manage deliveries to site. This will consider likely dwell times, capacity as well as loading operations once confirmed. The use of consolidation centres and call-off areas will also be considered;
- *Out of Peak Deliveries*: retiming out of peak deliveries will aid operational efficiency, with commitment to timing deliveries outside of the local network peak periods where possible and appropriate without generating significant disruption;
- *Sustainable Freight:* consideration to be given to the feasibility of utilising the rail network for deliveries to be given in the detailed CLP;
- *Materials Procurement:* the potential for pre-fabrication techniques that would reduce deliveries to the site will be given further consideration, and consideration will be given to the use of local concrete and aggregate supplies to minimise movements;
- *Collaboration:* where possible, consideration will be given to working collaboratively with other construction projects in the Site's vicinity for the re-use of materials across sites or sharing delivery vehicle scheduling information to minimise disruption;
- *Staff Travel Plan*: the detailed CLP will include a Staff Travel Plan that will seek to encourage site operatives to access the site sustainably and reduce the pressure on the local road network.

#### 5.1.1.3. Road Closures/Abnormal Loads

Prior to any movement of large or abnormal loads the Principal Contractor will liaise with Cardiff Council, relevant highway's authorities, and the police to ensure compliance with regulations and advance notification for local residents and businesses. Appropriate designated access routes for abnormal loads will be agreed and complied with.

#### 5.1.1.4. Sustainable Travel

Located near Cogan station and with various bus stops within walking distance, this site boasts good access to local public transport services. Train services offer convenient routes to both central Cardiff and across South Wales. Additionally, bus services further enhance accessibility, ensuring connections to various parts of Cardiff.

Given these factors, it is advisable for the Principal Contractor to promote the use of public transport among site personnel whenever feasible. This initiative aims to minimize the number of individual vehicle trips to and from the site.

#### 5.1.1.5. Monitoring

Monitoring of the above measures will form part of the routine site inspections carried out by the Environmental Manager as well as elements being considered by the Construction Logistics Manager as part of the CLP.

The Construction Logistics Manager will oversee the implementation of the CLP, and will be responsible for collecting information on:

- Number of vehicle movements to site collected through a delivery booking-in system, including data on total vehicles, by vehicle type/size/age, time spent on site, consolidation centre utilisation and delivery/collection accuracy compared to schedule;
- Breaches and complaints, including information on vehicle routing, unacceptable queueing, unacceptable parking, supplier FORS accreditation and Low Emissions Zone (LEZ) compliance;
- Safety, including information on logistics-related accidents, record of associated fatalities and serious injuries, ways staff are travelling to the site and vehicles and operations not meeting safety requirements;
- Description of the Contractor's handbook; and,
- Description of the Driver's Handbook.

The routine site inspections will consider the adequacy of aspects relating to access/egress and conditions associated with the local network, with any adverse findings reported to the Construction Logistics Manager for further investigation.

## 5.2. Materials

The management of materials is a key consideration in the Construction Phase, ensuring materials are appropriately procured, ensuring responsible resourcing to minimise adverse effects associated with their production, and stored and handled onsite, to avoid unnecessary wastage of materials.

### 5.2.1. Mitigation

#### 5.2.1.1. Material Procurement

Consideration is required to be given to the sustainable procurement of materials for the Proposed Development, with the Principal Contractor and sub-contractors seeking opportunities for the following:

- Ensure all timber procured is Forestry Stewardship Council (FSC) certified, which ensures the timber is sourced from forests that are sustainably managed with a focus on long-term stewardship and resilience;
- Review supplier's environmental credentials and management systems to ensure a high level of sustainability in the supply chain;
- Use of materials with a high recycled content to support the move towards a circular economy;
- Consider adoption of the Building Research Establishment's (BRE's) Green Guide in selection of materials, which ranks materials and components based on Life Cycle Assessments (LCAs).

#### 5.2.1.2. Material Storage and Handling

All materials will be stored in line with relevant guidelines and best practice. This includes, but is not limited to the following measures:

- All materials on-site will be stored in line with relevant guidelines and in a manner that minimises damage by plant, personnel, weather or theft;
- All hazardous materials will be stored separately in line with relevant guidance and regulations, including recommendations of the Control of Substances Hazardous to Health (COSHH) assessment, with access appropriately restricted;
- Where relevant, materials storage will incorporate a secondary containment that has an impermeable base and walls that contains or catches leaks or spills with at least 25 % of the capacity of the storage containers up to 205 litres capacity or at least 110 % for containers over 205 litres capacity;
- If material storage exceeds the thresholds identified in the Control of Major Accident Hazards Regulations (COMAH) 201526, the Principal Contractor will ensure the project is registered with the relevant COMAH competent authority;
- Materials delivery will be appropriately planned to minimise the period of time they are stored on the site to reduce the volume of stockpiling on site and risks associated with storage (e.g., damage);
- Materials should be loaded and unloaded in suitable locations on the site, avoiding areas with open drains, and should follow pre-determined routes; and,
- Deliveries of potentially hazardous materials should be supervised by experienced site personnel that are appropriately trained in spill response.

#### 5.2.1.3. Monitoring

Monitoring of the implementation of the above measures will form part of the routine site inspections carried out by the Environmental Manager, ensuring compliance with sustainable procurement practices as well as best practice measures for materials storage and handling. Any issues arising during the routine site inspections will be reported in the subsequent record of findings and appropriate action taken to remedy the issues arising. This may be a review of mitigation measures or further training of site personnel on implementation of these.

It is suggested that the effectiveness of the mitigation measures is also be reviewed periodically by the Principal Contractor to ensure they remain relevant and

## 5.3. Waste Management

Construction projects can generate large quantities of waste that have a significant impact on waste generation nationally, however much of this can be recovered and reused. As a result, through careful planning of the construction phase the Principal Contractor can improve resource efficiency, increase reuse and recycling of materials and reduce waste generation and the burden on treatment capacity.

The management of construction waste should follow the Waste Hierarchy, as shown in **Figure 5.1**, which provides a prioritised list of options for waste with landfill being the least desirable option.

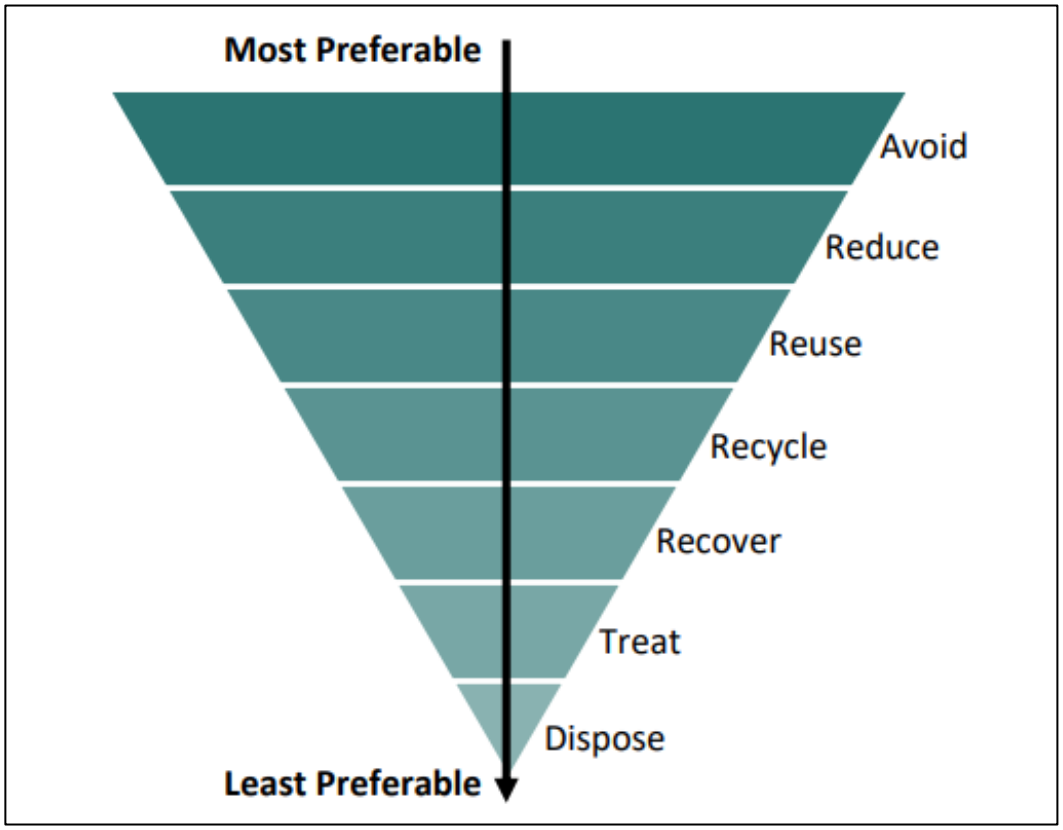


*Figure 5.1 The Waste Hierarchy*

## 5.3.1. Mitigation

### 5.3.1.1. Waste Manager

The Principal Contractor should appoint a Waste Manager for the Application Site, who's main responsibilities will include:

- Compliance with environmental legislation and, where required, environmental permits;
- Monitoring compliance with the Waste Management Strategy;
- Managing waste on site by:
    - Ensuring there are sufficient and adequate waste containers and facilities on-site;
    - Keeping accurate records of all waste generations, recycling, reuse, sent to landfill;
    - Ensure hazardous waste (such as batteries, asbestos, oil, solvents, paints and chemicals) is dealt with in accordance with local applicable regulations.
    - Ensuring all documentation, including Waste Transfer Notes, are completed and held on site within a designated file.

### 5.3.1.2. Good Practice Implementation

The Waste Manager should consider the implementation of the following strategies, designed to overcome the barriers to implementing good practices onsite:

- Incentives - good onsite performance should be rewarded through the organisation's scheme;
- Organisational support structure;
- Allocation of a sustainability/waste champion throughout the project to ensure all targets are monitored and met;
- Involve and train the workforce to contribute to adoption of good or best practice;
- Ensure high waste performance and Key Performance Indicators (KPIs) are communicated during subcontractor tenders and set selection criteria for subcontractors; and,
- Ensure a strong corporate commitment where goals and targets are clearly set, communicated and shared on all communication channels.

#### 5.3.1.3. Waste Targets

The Waste Manager should identify the specific waste streams that will offer highest potentials for recovery rates and propose recovery targets based on their working practices. Commercial developments for example have metals as their typical waste stream. Table 5.1 identifies the main waste management actions that can be implemented for the expected waste streams.

*Table 5.1 Waste Management Actions for Construction Work (adapted from WRAP)*

| Waste Materials | Activity Likely to Produce Waste | Waste Minimisation Opportunities | On-Site Recycling/Reuse | Off-Site Recycling/Reuse |
|---|---|---|---|---|
| Concrete | Demolition, concrete frame, ground works | Prefabrication offsite, on site batcher | Excess can be dried and reused on site as backfill | Segregation, land reclamation, reprocessed and reused in construction industry |
| Rubble | Demolition, site clearance | Using part of the existing structure within the completed construction | Use as hardcore on site | Segregation, land reclamation, reprocessed and reused in construction industry |
| Soils | Groundwork, earthworks | Store on site | Reuse in landscaping, use as backfill | Land reclamation |
| Metal | Steel frame, temporary works, concrete frame | Pre-fabrication, correct ordering, just in time | Reused in temporary works | Segregate waste and send to metal recycler |

| Waste Materials | Activity Likely to Produce Waste | Waste Minimisation Opportunities | On-Site Recycling/Reuse | Off-Site Recycling/Reuse |
|---|---|---|---|---|
| | | delivery, store correctly | | |
| Timber | Concrete frame, ground works, joinery | Use steel shuttering, reuse all shuttering | Reuse for temporary hoardings, and general carpentry | Segregate for chipping to use in other timber products or use as mulch |
| Plasterboard | Drylining | Cut offsite, offsite design, reuse plasterboard size. | Keep in dedicated areas for reuse for offcuts | Send for recycling manufacturer take back schemes. |
| Pallets | Material supply and delivery | Return pallet to supplier or use plastic pallets | Reuse pallets for internal storage and movement of materials | Send pallets for reuse |
| Green Waste | Earthwork, demolition, landscaping | Excavate and replant larger specimens such as trees | Chip onsite for landscaping | Segregate, send for composting, use as mulch on land |
| Hazardous Waste | Demolition, earthworks, groundworks | N/A | Remediate onsite | Remediate offsite |

### 5.3.1.4. Management of Waste Generation

Sensitive management of resources and waste can minimise the waste produced through the construction phase, for example through procurement of materials and reducing off cuts. A number of steps are recommended for implementation by the Principal Contractor for implementation within the project to reduce the amount of waste produced during development and increase resource and cost efficiency. These may include:

- The Principal Contractor should appoint a licensed waste management service provider to the project and ensure that they can demonstrate materials disposed of are being recycled or reused, or the disposal route for non-recyclable elements;
- Identify where waste can be reused or recycled on site, e.g., secondary aggregate, excavated soils;
- Separate waste streams at source to minimise contamination, and consequently cost of disposal. This should include specific waste streams produced by different trades, such as sealants and paints. Clearly label waste disposal and recycling facilities;

- Identify areas where materials can be reused and stored on-site for later use or sent to external organisations or sites. These materials could include crushed material, timber, brick and block;
- Train staff and subcontractors in appropriate waste management and reduction;
- Set targets for waste production and incentivise/penalise meeting (or not) those targets;
- Implement 'just-in-time' deliveries to ensure materials are not left onsite unused, making them susceptible to damage, and hence wastage;
- Provide adequate, safe storage for materials to reduce damage and wastage;
- Engage the supply chain to reduce packaging materials (use corner protection for products, rather than full packaging for example), introduce take-back schemes for unused materials and ordering non-standard materials to size to reduce alterations;
- Utilise off-site manufacture or fabrication to reduce materials delivered to site;
- Minimise skip void space by planning skip management as waste disposal methods;
- Making use of recycled elements such as steel beams for example; and,
- Utilising recycled aggregate where possible, as fill material, as a component in concrete/road surfacing, etc. or as a cement replacement (such as pulverised fly ash, PFA), providing it also meets the relevant British Standards requirements for the works. This could include cut and fill waste produced at the beginning of the project, or material brought in from other local schemes or recycling facilities.

#### 5.3.1.5. Waste Segregation

The Waste Manager should ensure waste generated onsite is segregated according to the following expected waste streams as a minimum:

- Inert waste (concrete, broken asphalt, bricks, blocks, soils);
- Metals;
- Timber;
- Finishing materials (e.g., tiles (roof, wall, floor), paints);
- Packaging materials;
- Mixed waste; and,
- Hazardous waste.

The Waste Manager should ensure segregated construction waste is stored in appropriate designated receptacles or storage areas. Each container or storage areas must be appropriately sized and clearly labelled for each waste stream. These should also be cleaned regularly. Training of site personnel should be conducted covering instructions on separation, handling, recycling, re-use and return methods.

#### 5.3.1.6. Monitoring

Monitoring through the Construction Phase will be important in ensuring the mitigation measures for the appropriate segregation, handling and storage of wastes is successful in delivering a reduction in generation.

Waste management and reduction strategies should be considered through the routine site inspections to ensure mitigation measures are in place and review their effectiveness, including consideration as to the waste storage levels to ensure waste collection frequency is sufficient to avoid a significant build-up of wastes.

The Waste Manager should review the information generated from the routine site inspections and consider if mitigation measures are effective and implement alterations where required. The Waste Manager should also carry out waste audits and checks to ensure management strategies are effectively being employed.

The Principal Contractor should track and record waste arisings on site to monitor the amount of waste that is reused onsite, removed for recycling and/or reuse and/or sent to landfill.

## 5.4. Water Resources and Ground Conditions

The Proposed Development has the potential for adverse effects on water resources, including potential implications to soils, groundwater and surface water flooding through drainage infrastructure.

From the data provided it was indicated that the highest modelled flood level expected within the boundaries of Plot 1 to be **8.62m** above ordnance datum. It is intended that site-wide, the ground levels will be above this height, therefore, this development will be compliant with the TAN15 in terms of flood risk. There is however detailed mitigation which should be adhered to throughout the construction process.

The Principal Contractor will comply with the relevant legislative and policy requirements in regard to pollution events to ground and water resources.

### 5.4.1. Mitigation for Flooding

#### 5.4.1.1. Flood Warnings

- In the event of flooding within Cardiff, the National Resources Wales has live warnings and alerts on the website (refer to https://naturalresources.wales/flooding/check-flood-warnings/?lang=en), which will also provide information on the flood risk outlook for Wales for the next five days.

#### 5.4.1.2. Safe Access and Egress

- TAN15 states that safe access and escape routes for emergency services to and from the development during a flood event should be identified.
- All evacuation routes will be clearly signed with legible and pictorial signs, permitting them to be understood by those with visual impairment, difficulty in reading, or diverse ethnical backgrounds.
- Multi-agency plans activated at the time of the event may include the provision of public transport to aid rapid evacuation. Attention must be given to advice provided by the emergency services at the time of the incident.

### 5.4.2. Mitigation for Ground Conditions

#### 5.4.2.1. Materials Storage and Handling

All materials will be stored in line with relevant guidelines, including Pollution Prevention guidance provided by the Department for Environment, Food and Rural Affairs (Defra) and Environment Agency. This includes, but is not limited to:

- All materials on-site will be stored in line with relevant guidelines and in a manner that minimises damage by plant, personnel, weather, or theft;
- All hazardous materials will be stored separately in line with relevant guidance and regulations, including recommendations of the Control of Substances Hazardous to Health (COSHH) assessment, with access appropriately restricted;
- Where relevant, materials storage will incorporate a secondary containment that has an impermeable base and walls that contains or catches leaks or spills with at least 25 % of the capacity of the storage containers up to 205 litres capacity or at least 110 % for containers over 205 litres capacity;
- Drip trays will be used to collect leaks from relevant equipment, including construction plant when stationary;
- If material storage exceeds the thresholds identified in the Control of Major Accident Hazards Regulations (COMAH) 201527, the Principal Contractor will ensure the project is registered with the relevant COMAH competent authority;
- Materials delivery will be appropriately planned to minimise the period of time they are stored on the site to reduce the volume of stockpiling on site and risks associated with storage (e.g., damage);
- Materials should be loaded and unloaded in suitable locations on the site, avoiding areas with open drains, and should follow pre-determined routes; and,
- Deliveries of potentially hazardous materials should be supervised by experienced site personnel that are appropriately trained in spill response.

#### 5.4.2.2. Spillage Response

- Spill kits and containment equipment, such as absorbent material, will be provided and relevant staff trained in their deployment;
- The Site Manager should be informed immediately of the spillage, who will advise on relevant procedures, and should include detail regarding the location, activity and substances involved, details of personnel or plant involved/affected and risk to watercourses, sewers, or ground conditions; and,
- No turbid site runoff will be allowed from construction activities, with settlement facilities to be utilised to remove suspended solids.

### 5.4.3. Monitoring

Through the routine inspections, storage facilities for hazardous, or potentially hazardous, materials should be checked for signs of damage or evidence of spillage and relevant mitigation measures should be reviewed to ensure they are effective and free from damage. Any issues arising through the inspections should be raised immediately and appropriately addressed.

## 5.5. Noise and Vibration

The Proposed Development has potential for noise and vibration effects on surrounding sensitive receptors, notably Watermark Apartments and residential properties at Empire Way.

The Principal Contractor will comply with the relevant legislative and policy requirements regarding noise and vibration effects.

A specific assessment of noise and vibration generated by the Proposed Development during the Construction Phase has not been carried out, however it is assumed that the Principal Contractor will comply with the Shared Regulatory Services (SRS) Pollution Control Construction Site Handbook[23]. The Good Practice Guide identifies relevant mitigation measures based on a risk assessment approach which is based on the background noise levels and presence of sensitive receptors.

## 5.5.1. Mitigation

The following mitigation measures are supported by the SRS Construction Site Handbook practice guidance as applicable for all sites and should be considered by the Principal Contractor for adoption in working practices. In addition to these, the Principal Contractor should give consideration to the recommendations contained within British Standard 5228 on Noise and Vibration Control on Construction and Open Sites.

### 5.5.1.1. General Considerations

- Designated site-based staff should have the authority to take the steps necessary on behalf of the contractor(s) to ensure noise and vibration is adequately controlled and managed, according to the circumstances associated with each worksite;
- At the commencement of appointment, all site staff should be briefed on their responsibilities to the application of best practicable means to minimise construction noise and vibration and the content of any planning consents, codes of construction or other legal agreements. The performance of the training should be regularly reviewed and repeated throughout the construction programme as appropriate;
- Hoarding should be maintained to maximise the reduction in noise levels to sensitive buildings and land uses;
- Display contact details of the contractor and responsible Site Manager as well as working hours and other site information on the hoarding;
- Locate the site access away from noise sensitive receptors, where possible;
- Keep internal haul routes well maintained and avoid steep gradients;
- Limit material and plant loading and unloading to normal working hours;
- Reduce loading/unloading heights for muck away and material movement to mitigate impact noise;
- Handle all material in a manner that minimises noise; and,
- Consult the SRS Construction Site Handbook

### 5.5.1.2. Construction Plant

- Ensure that each item of plant and equipment complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC, UK Statutory Instrument (SI) 2001/1701;
- Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer;
- Follow manufacturer's guidance and measures to operate plant and equipment and use it in a manner which minimises noise;
- Use all plant and equipment only for tasks for which it has been designed for;
- Shut down all plant and equipment in intermittent use in the intervening periods between works or throttle it down to a minimum;

- Equipment that breaks concrete, brickwork or masonry by bending or bursting shall be used in preference to percussive tools where practicable. Avoid the use of impact tools where the site is close to occupied premises;
- Where practicable rotary drills and bursters activated by hydraulic, chemical or electrical power shall be used for excavating hard or extrusive material.
- Neither any part of the works or any maintenance of plant shall be carried out in such a manner as to cause unnecessary noise or vibration except in the case of an emergency, where the work is absolutely necessary for the saving of life or property or the safety of the works; and,
- Plant shall be maintained in a good condition so that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.

### 5.5.1.3. Vehicle Movements

- Ensure all vehicle movements occur within normal hours or at agreed times, taking into account the primary function of sensitive receptors in the vicinity;
- Maximise the reuse of any waste arising on site to minimise vehicle movements;
- Plan deliveries and vehicle movements so that vehicles are not waiting or queuing on the public highway. If waiting or queuing is unavoidable, then engines should be turned off; and,
- Minimise opening and closing of site access through good coordination of deliveries and vehicle movements.

### 5.5.1.4. Ground Works and Piling

- Avoid percussive piling wherever possible;
- Ensure major excavation works are limited to normal working hours;
- Adopt the following hierarchy of groundwork/piling methods, in order of preference to minimise the impact of piling, if ground conditions, design and safety allows: pressed-in methods, e.g. hydraulic jacking; auger/bored piling; diaphragm walling; vibratory piling or vibro-replacement; and, drive piling or dynamic consolidation;
- Consider the location and layout of the piling plant for efficient operation and potential noise control of generators and any electric or hydraulic motors used by plant;
- Where impact piling is the only option, utilise a non-metallic dolly between the hammer and driving helmet, or enclose the hammer and helmet within an acoustic shroud;
- Consider concrete pour sizes and pump locations. Plan the start of concrete pours as early as possible within normal working hours to avoid overruns;
- Where obstructions are encountered stop works and review approach, adopt work methods that minimise noise and vibration;
- When using an auger, rather than dislodging material from the auger by rotating the drill back and forth quickly, use alternate methods where safe to do so. For example, some piling rigs are equipped with a metal brush to remove spoil as the auger is taken out of the ground;
- Prepare pile caps using methods/procedures which minimise the use of breakers*, e.g.,* using hydraulic splitters to crack the top of the pile; and,
- Both the Building Control and Neighbourhood Services Teams of Shared Regulatory Services should be consulted on the reasons for the chosen method of piling.

#### 5.5.1.5. Construction

- When working within a building ensure all openings (e.g., doors and windows) are closed or sealed up; and,
- Plan the site layout to maximise screening from existing features/structure.

In addition to the above, consideration should be given to additional measures that should be considered based on the level of risk associated with the site.

#### 5.5.1.6. Communication and Liaison

The Principal Contractor should consider the development of a Community Liaison Plan and Complaint Procedure, detailing timescales for responses and a nominated liaison person to engage with local residents and to handle complaints.

The Site Induction should include briefing of the complaint's procedure and mitigation requirements to all staff and ensure their responsibilities to register and escalate complaints received.

### 5.5.2. Monitoring

The SRS Construction Site Handbook identifies that noise and vibration monitoring of the site may be necessary. Monitoring should include the establishment of pre-existing levels of ambient noise prior to the commencement of construction. During the construction phase, the following monitoring should be carried out by the Principal Contractor or dedicated third party consultant:

- Attended noise monitoring should be undertaken at the start of any new phase of works and following any complaints, to check source sound emission data from plant on-site;
- Regular on-site observation monitoring and checks/audits should be carried out to ensure best practicable measures are being employed at all times, and should include consideration of:
    - Hours of working;
    - Presence of mitigation measures, equipment (engine doors closed, airlines not leaking, etc.) and screening (location and condition of local screening, etc.)
    - Number and type of plant;
    - Construction method; and,
    - Where applicable, any specific Section 61 consent conditions.

Additional monitoring measures may be advisable, depending on the level of risk associated by the site and its application by the Principal Contractor should be considered following completion of the risk assessment.

The Principal Contractor will also consider the requirement for monitoring of ground borne vibration to neighbouring properties based on the construction methods applied, the detail for which will be identified following appointment of a Principal Contractor. Any vibration monitoring would consider levels in line with the transient vibration guideline values for cosmetic damage established in British Standard 7385.

## 5.6. Air Quality and Dust

The Proposed Development has potential for dust impacts on surrounding sensitive receptors, notably the residential properties off Empire Way a result of activities involving earthworks, construction activities and track out.

The full risk of dust impacts upon sensitive receptors will be assessed in a Construction Dust Assessment and Air Quality Monitoring Plan and in line with best practice guidance[24].

### 5.6.1. Mitigation

The Construction Dust Assessment and Air Quality Monitoring Plan will set out the relevant mitigation measures that the Principal Contractor should implement through the construction phase, which are outlined below.

**Communication**

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site;
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager; and,
- Display the head or regional office contact information.

**Site Management**

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- Make the complaints log available to the local authority when asked; and,
- Record any exceptional incidents that cause dust and/or emissions, either on- or off-site, and the action taken to resolve the situation in the log book.

**Monitoring**

- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of the site boundary, with cleaning provided if necessary;
- Carry out regular site inspections to monitor compliance with the Dust Management Plan (DMP), record inspection results, and make an inspection log available to the local authority when asked; and,
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

**Preparing and Maintaining the Site**

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site;

- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- Avoid site run-off of water or mud;
- Keep site fencing, barriers and scaffolding clean using wet methods;
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below; and,
- Cover, seed or fence stockpiles to prevent wind whipping.

**Operating Vehicle/Vehicle Movements**

- Ensure all vehicles switch off engines when stationary – no idling vehicles;
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable;
- Impose and signpost a maximum speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate); and,
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.

**Operations**

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems;
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate;
- Use enclosed chutes and conveyors and covered skips;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and,
- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

**Waste Management**

- Avoid bonfires and burning of waste materials.

**Earthworks**

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- Use hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and,
- Only remove the cover in small areas during work and not all at once.

**Construction**

- Avoid scabbling (roughening of concrete surfaces) if possible;

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and,
- For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.

**Trackout**

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use;
- Avoid dry sweeping of large areas;
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport;
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;
- Record all inspections of haul routes and any subsequent action in a site log book;
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable);
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and,
- Access gates to be located at least 10 m from receptors where possible.

## 5.7. Ecological Management

The following measures should be included within the CEMP:

**General mitigation measures**

- Site compounds and laydown areas should be situated on areas of existing hard standing and existing access routes should be used, with the minimum area necessary used for construction.
- Adhere to Guidance on Pollution Prevention, in particular, GPP5 (works and maintenance in or near water) and GPP6 (working at construction and demolition sites). Additional measures such as silt fencing, bales or siltbusters may be necessary to prevent silt or contaminants from being released into connecting watercourses.
- Spill kits deployed in the event of a spillage. In the event of a pollution incident, work should cease in the vicinity of the incident and contaminants must be cleaned up immediately.
- Plant will be regularly serviced and maintained.
- Plant will be located as far as reasonably practicable away from ecology features, and will be shut down when not in use.

- Use of noise control equipment such as jackets, hoods and shrouds on equipment such as generators.
- Constant monitoring of dust levels and adopting of effective methods of work to prevent dust becoming airborne at the source, for example using wet sweeping to prevent accumulation of dust and mid and using effective exhaust ventilation and filtering to minimise potential dust pollution.
- A toolbox talk will be provided by an appropriately experienced ecologist to all site personnel to inform them of the ecological features present including any protected or notable species onsite, detailing any associated legislative requirements. A registry of attendance will be signed and kept as a record and a copy of the Toolbox Talk left at the site office.
- Any out of hours work/night works should be avoided, particularly adjacent to the river; in particular, minimise noise and use of artificial lighting after sunset or before sunrise and if lighting is required this must be directed away from the watercourse and switched off when not in use.
- No lighting of the riparian corridor at night to prevent disturbance to otter and bats.
- If task lighting is required at night this must not spill onto the river corridor, and must be directed to ground with minimal upward light spill.
- All excavations must be covered at night, or a ramp provided, as a means of escape for any mammals that enter the site.
- An arboriculturist must be consulted, with root damage risk to retained scrub and trees will to be avoided or reduced through the implementation of an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP). This must be undertaken in line with the British Standard BS5837:2012, as outlined. Any trees that require removal for safety reasons must also undergo appropriate ecological assessment.
- No invasive in-channel works to take place within the spawning season (15 October to 15 May). Works from floating platforms or those that do not disturb the river bed are not limited.

**Pre-construction checks**

- Otter survey, undertaken by a suitably qualified ecologist (SQE), 8-12 weeks prior to commencement of construction works. The survey will focus on the River Ely adjacent to the site (100m from the site) and also scrub habitat on site to identify if any resting places that have become established and occupied by otters since survey undertaken in 2024, where none where identified in proximity to the site. The survey will inform the requirement for an otter development licence from NRW;
- Vegetation clearance should be avoided during the breeding bird season wherever possible (generally February to August inclusive). If this is required, an Ecological Clerks of Works (ECoW) must undertake a pre-construction check.

- Any works to the boardwalk, sheet piling or works required within the water should be programmed to avoid bird breeding season (generally February to August inclusive) due to presence of breeding waterbirds. However, if work timings cannot be followed, and works to the boardwalk within the breeding bird season is required, a nesting bird check must be undertaken by a suitably experienced ecologist no more than 24 hours prior to clearance. Should any active nests be found, a suitable buffer will be established as advised by the ecologist and any works within the buffer around the nest will have to be completed once the chicks have fledged and the nest is no longer active.
- Immediately prior to any vegetation clearance a check should be undertaken by the ECoW, to identify any hedgehog, including nests, or other small mammals. If present these will be moved by the ECoW by hand to suitable habitat off site to safeguard the species;
- The ECoW will also check for any natural refugia/hibernacula prior to vegetation clearance, and these will be dismantled by hand prior to vegetation clearance. Depending on time of year, and if any hibernating reptiles or amphibians are found these should be moved by hand by an appropriately experienced ecologist to suitable habitat within the wider site;
- Prior to construction a check for plant Invasive non-native species (INNS) should be undertaken by an appropriately experienced ecologist. No INNS have been identified on site, although cotoneaster sp. is known to be in the wider site. A pre-construction check in the relevant growing season (April – September) prior to construction is therefore recommended to ensure no INNS have become established on site, that could be spread during construction which would be an offence under the WCA and/or the Invasive Alien Species (Enforcement and Permitting) Order 2019.

# 6. Communication Strategy

## 6.1. Contact Details

The Principal Contractor will ensure contact details for the Site Manager and/or Environmental Manager are available on the site boundary, ideally at the point of access to the Contractor's compound. The contact details should include a telephone number and email address to which the public can communicate any queries or complaints to the Site Manager.

In addition to this, contact information for the Principal Contractor's regional or head office should also be displayed.

## 6.2. Stakeholder Communication Plan

The Principal Contractor will be responsible for all formal external communications and will, prior to the commencement of construction activities on the site, develop and implement a stakeholder communications plan that includes community engagement before work commences on site.

Communication with the public will be established with local stakeholders through a variety of means aimed at reaching local residents, businesses and commuters utilising the adjacent railway. This should include, but necessarily limited to:

- Prominent placement of information boards to communicate key information and potential upcoming activities with potential for disturbance/impact;
- Contact with local residents by way of regular newsletters or letters; and,
- Attendance at local residents or stakeholder meetings, where required.

## 6.3. Complaints Procedure

The Principal Contractor will establish an appropriate procedure by which any complaints received will be appropriately recorded, investigated and responded to in an appropriate manner to maintain good relations with relevant stakeholders.

Details of the complaints procedure should be distributed to local residential and commercial properties potentially affected by construction activities ahead of commencement, allowing them to understand the procedure by which issues raised would be investigated and addressed prior to any issues occurring.

Any complaints received would be communicated directly to the Site Manager, who holds overall responsibility for the complaints procedure and will determine the appropriate course of action. The compliant will be investigated by either the Site Manager or Environmental Manager, according to who is the most appropriate to understand the issues arising, and consider whether the implementation of mitigation or remedial action is appropriate/required. Where mitigation/remedial action is not required, appropriate justification should be identified. The Site Manager should then report back to the complaint contact to provide feedback on the investigation and findings/actions.

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