



Reap 3 Limited

PLOTS 4 AND 5, CENTRAL SQUARE, CITY CENTRE, CARDIFF

Outline Construction Environmental Management Plan





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Outline Construction Environmental Management Plan

V1.0 PUBLIC

PROJECT NO. 0040270.4485

DATE: AUGUST 2025

WSP
1 Capital Quarter
Tyndall Street
Cardiff
CF10 4BZ



QUALITY CONTROL

Issue/revision	First issue	Second Issue
Remarks	V1.0	V2.0
Date	July 2025	August 2025
Prepared by	T. Sudheish	T. Sudheish
Signature		
Checked by	C. Le Neindre-Hubbard	C. Le Neindre-Hubbard
Signature		
Authorised by	M. McWilliams	M. McWilliams
Signature		
Project number	0040270.4485	0040270.4485
Report number	001	001

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1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1. This Outline Construction Environmental Management Plan (CEMP) has been prepared in support of the detailed planning application being submitted by REAP 3 Limited ('the Applicant') to Cardiff Council in support of a full planning application for the development of Plots 4 and 5, Central Square, City Centre, Cardiff ('the Site').
- 1.1.2. This application seeks full planning permission for the following description of development:
"Mixed-use development to provide residential accommodation, flexible non-residential uses, cycle parking, landscaping and other associated works"
- 1.1.3. In summary, the Proposed Development comprises:
- A landmark 50 storey building with a maximum height of up to 177.85m AOD.
 - 528 new homes (Class C3) comprising a mix of 1-bed and 2-beds.
 - A pavilion building within Central Square comprising up to 601sqm of flexible non-residential floorspace (flexible Class A1 and A3).
 - 2,856.5qm of high quality internal and external amenity space through provision of roof terraces, lounges, coworking, gym and other wellbeing spaces.
 - A basement level providing ancillary residential floorspace.
 - A car free development with 528 cycle parking spaces within proposed building, including 5% accessible spaces, and a publicly accessible bike hub and café. Additionally, 52 public cycle spaces are provided within adjacent square provided as Sheffield stands.
- 1.1.4. The Site sits at the heart of the wider 'Central Square' regeneration area in Cardiff City Centre. Central Square is a strategically important area which Cardiff Council consider to be a gateway to the City, and an opportunity to showcase the best that Cardiff has to offer. Given the strategic importance of the location, Cardiff Council envisage that the regeneration of Central Square, towards which this development will contribute significantly, will play a key role in attracting investment on other strategically important development sites in the City.
- 1.1.5. The Proposed Development provides the opportunity to make a significant positive contribution to the ongoing regeneration to this part of Cardiff. The Proposed Development will build upon the success of the wider Central Square area, proposing a development of exceptional architectural and residential quality. The Applicant is fully committed to the delivery of the Site, and it is their ambition to create a new iconic landmark for Cardiff and Wales.
- 1.1.6. As well as the delivery of much needed high-quality homes to address the Council's housing need, the Proposed Development brings with it a wide range of enhanced planning and public benefits. The benefits include the delivery of a strategically important City Centre site, new flexible non-residential floorspace that will activate Central Square, a publicly accessible bike hub and cafe, a new pavilion building that can accommodate a restaurant, extensive public realm landscaping in and around the buildings, highly sustainable and energy efficient buildings, and other significant economic and social benefits for the City.

1.2 PURPOSE OF THE OUTLINE CEMP

- 1.2.1. This Outline CEMP has been developed to support the works associated with the Proposed Development. The Outline CEMP is a live document and, following a grant of planning permission, this document shall be used by the Principal Contractor to develop a detailed CEMP.
- 1.2.2. This Outline CEMP sets out the overarching principles for the management of the construction phase of the Proposed Development and aims to:
- Provide an overview of the methodology to be adopted during construction of the Proposed Development;
 - Outline the environmental constraints on and around the Site and the potential impacts on these;
 - Ensure that mitigation measures set out in the environmental application reports submitted as part of the Planning Application are implemented during the construction phase;
 - Ensure that industry best practice standards are adopted throughout the construction of the Proposed Development; and
 - Be a point of reference for the Project Team, interested parties and Site workers.

1.3 LEGAL COMPLIANCE

- 1.3.1. Considerable environmental legislation applies to the works to be undertaken. The expectation is that all relevant legislation, including requirements for licences, permits and / or consents shall be identified via the detailed CEMP. The Principal Contractor will be required to provide details of how the compliance is to be achieved, as part of the construction process.

1.4 STRUCTURE OF THE OUTLINE CEMP

- 1.4.1. This Outline CEMP is based on established good management practice through British Standards and Construction Industry Research and Information Association (CIRIA) guidance, and includes the following information:
- **Overview of the Site and Proposed Development** including the location of any potentially sensitive receptors;
 - **General Environmental Requirements:** including management structure, roles and responsibilities, an overview of general requirements and consents, communication protocols and incident response protocol;
 - **Construction Information:** indicative information including construction traffic management and security. Further information on exact construction programme, methods, working hours, plant and equipment is to be provided by the Principal Contractor in the detailed CEMP;
 - **Environmental Control Measures:** methods for managing environmental risks including land and groundwater contamination and hazardous substances, and specific management plans relating to air quality and dust, ground conditions, noise and vibration, heritage and visual, traffic and highways, urban ecology, waste management and water environment. It is expected that the Principal Contractor will review the control measures and update where required; and
 - **Monitoring:** procedures for recording and reporting monitoring results and taking remedial action in the event of any non-compliance, details of receptors and reporting methods.

2 SITE INFORMATION

2.1 SITE AND SURROUNDING AREA

- 2.1.1. The Site sits within the administrative area of Cardiff Council ('the Council'), who are the relevant Local Planning Authority when determining any planning applications on the Site.
- 2.1.2. The Site is 0.21ha and comprises a cleared rectangular plot of land, alongside two smaller parcels of land located to the north of Wood Street within the public realm (these smaller parcels will accommodate public cycle parking spaces). The Site is bound by Wood Street to the south, Scott Road to the west, Rose Lane to the north-west and Park Street further north, and a public square to the east. The Site was formerly occupied by St David's House, until it was demolished in late 2018.
- 2.1.3. The Site benefits from full planning permission for the following development (Ref: 21/02984/MJR), which was granted by Cardiff Council on 2nd May 2024:

'Full planning application for a mixed-use building providing commercial uses at ground floor/mezzanine level (Use Classes A1/A2/A3/B1/D1/D2) and residential accommodation above (Use Class C3 and including non C3 Use Class residential), a pavilion (Use Classes A1/A2/A3), public realm, cycle parking, access, drainage and other infrastructure works required for the delivery of Central Square Plots 4 and 5.'
- 2.1.4. The Site sits within the Cardiff Central Square Masterplan area. Whilst this masterplan was never formally adopted, it has catalysed significant development and has led to the transformation of the area in and around Cardiff Central Station. The prevailing building heights ranges between 7 to 25 storeys, which includes buildings of a variety of land uses and architectural styles.
- 2.1.5. The Media Wales office building is located at 6 Park Street, immediately adjacent to the north west of the Site. The HMRC building is located immediately adjacent to the north east of the Site. The Millennium Plaza leisure complex is located immediately to the west. To the south cross Wood Street lies the Cardiff University School of Journalism, Media and Culture, and the BBC Cymru building. The Principality Stadium is located further to the north and can be accessed via Central Square.
- 2.1.6. The Site is not within a Conservation Area and does not include any Listed Buildings. The Natural Resources Wales ('NRW') Flood Map for Planning ('FMfP') identifies the Site to be at risk of flooding and falls into Flood Zone 3 (Rivers and Sea) (albeit located in a 'TAN15 defended zone').
- 2.1.7. The Site is very well connected by public transport. Cardiff Central Station is within a short walking distance (0.1 miles / 2-minutes' walk). Cardiff Central provides connections to a wide range of locations, including Newport in 13 minutes and Cheltenham Spa in approximately an hour. Adjacent to the Site is Wood Street bus stop, with further bus stops along St Mary Street, approximately 2-minutes' walk from the Site. The River Taff is located approximately 100m west of the Site.
- 2.1.8. Access to the Proposed Development would be through Wood Street, Street Lane and Scott Road.
- 2.1.9. The Planning Application Boundary is shown in **Figure 2-1** below.

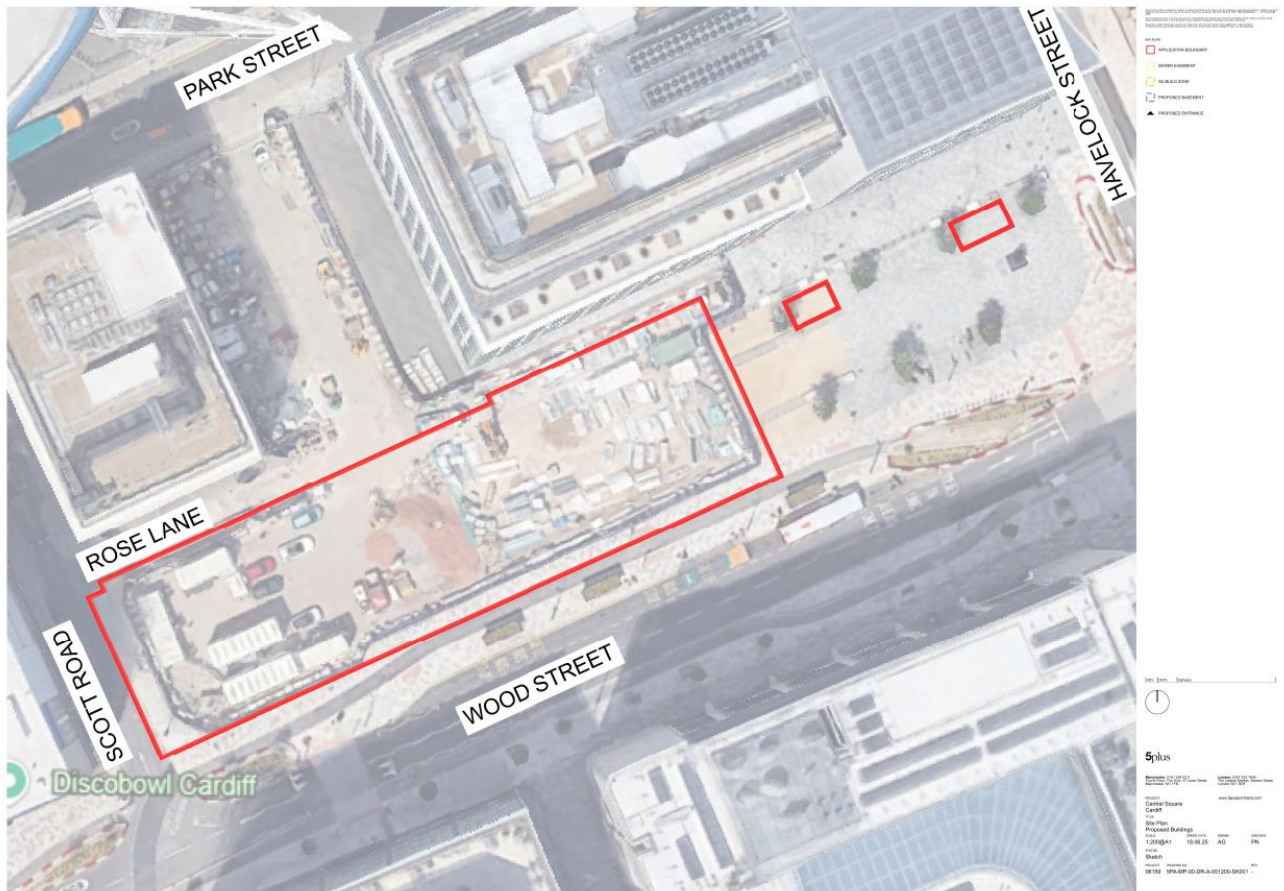


Figure 2-1 - Planning Application Boundary

2.2 MANAGEMENT STRUCTURE / ROLES AND RESPONSIBILITIES

- 2.2.1. This Outline CEMP should be reviewed, updated and adopted by the Principal Contractor (once appointed) in the form of a detailed CEMP to be submitted to Cardiff Council for approval prior to construction commencing. It will be the responsibility of the Principal Contractor to maintain and update the detailed CEMP and maintain it as live document throughout the construction period.
- 2.2.2. The anticipated roles and responsibilities of the parties involved in the construction works are set out below. However, it should be noted that all those involved in the works are responsible for ensuring the requirements of the detailed CEMP are met.

THE CLIENT

- 2.2.3. The Client will be responsible for delivery of the Proposed Development, as well as appointing a Principal Contractor and a Site Manager.

PRINCIPAL CONTRACTOR

- 2.2.4. The Principal Contractor will be responsible for directing the Site Manager on the delivery of the detailed CEMP. This will include checking that the Site Manager has allocated sufficient resources to allow delivery of the detailed CEMP, participating in communication with Cardiff Council and other third parties, and arranging for the periodic review and update of the detailed CEMP. The Principal Contractor will regularly review the findings of the monitoring programme and direct the Site Manager

as necessary. The Principal Contractor will also prepare and maintain a register of consents covering planning, highways and environmental to keep track of any progress. The Principal Contractor will communicate and coordinate between the project team and the local community to maintain community relations and investigate any complaints.

2.2.5. It has been assumed that the Principal Contractor has an Environmental Management System (EMS) that will be implemented throughout construction. The detailed CEMP will be updated and will include reference to all relevant information from the Principal Contractor's EMS.

2.2.6. Personnel with defined environmental responsibilities are detailed in **Table 2-1** below.

Table 2-1 – Personnel with defined environmental responsibilities

Individual	Role
All Site-based staff	▪ Responsible for: – Ensuring good practice is followed and for carrying out their activities without detrimental effects on the environment; – Complying with systems of work including the detailed CEMP, the Principal Contractor's EMS and risk assessments and should carry out tasks in accordance with their training; and – Reporting any environmental concerns and incidents to their supervisors, including suggestions for improvements.
Site Manager	▪ Responsible for: – The day-to-day management of Health and Safety; – Day to day monitoring of Site environment features such as Air Quality, Noise and Vibration. – Ensuring Environmental and Quality performance during construction; – Implementing the detailed CEMP, including, monitoring the performance of sub-contractors and maintaining records to demonstrate compliance with and implementation of the detailed CEMP; – Maintaining community relations; – Ensuring all measures set out within the detailed CEMP are implemented on-site. This includes ensuring that adequate resources are allocated to environmental management on Site; – Ensuring all relevant consents are obtained; – Ensuring environmental issues in the Principal Contractor's EMS/risk assessments are effectively communicated on-site and that appropriate training (including inductions, Tool Box Talks and periodic refresher training) are delivered; – Ensuring planning obligations are met; – Investigating any complaints from the local community and implementing actions to address complaints within 48hrs. Confirming incidents (including near-misses) and non-conformances are investigated, corrected, prevented from reoccurring and recorded;

Individual	Role
	– Liaising with all appropriate stakeholders, including regulators as required; and – Acting as a Waste Champion and enforcing the Site Waste Management Plan (SWMP), setting waste targets, and monitoring all waste movements on-site.
Environmental Manager	▪ Responsible for: – Liaison with environmental third parties; – Undertaking environmental inspections and audits; – Delivering environmental training and toolbox talks; – Ensuring incidents and non-conformances are corrected and preventative action implemented; – Reporting environmental performance to the Client; – Providing help and advice to the Site Manager; – Reviewing and inputting into risk assessments and the Principal Contractor's EMS.
Designer	▪ Responsible for: – Ensuring that environmental aspects are considered and incorporated into the design as appropriate, and that all residual issues or impacts are communicated to the Client / Principal Contractor.
The Client	▪ Responsible for: – Ensuring that all relevant environmental documentation and information, e.g. existing consents, is communicated to the Designer and the Principal Contractor; – Setting the standard for environmental management on Site, as stated in the contracts; and – Reporting any environmental concerns and responding appropriately to incidents.

2.3 AUDITS AND INSPECTIONS

- 2.3.1. Once work commences, internal environmental inspections and audits on the Proposed Development will be conducted on a regular basis. Audits will be carried out in accordance with the Principal Contractor's EMS to assess the environmental performance of the Proposed Development and to check compliance with the legal and contractual requirements.

CONSENTS

- 2.3.2. A register of consents covering planning, highways and environmental matters will be prepared and maintained by the Principal Contractor to keep track of any progress. This will enable the Project Team to plan for consents to be applied for and obtained prior to the relevant works activity commencing.
- 2.3.3. The progress of the preparation, submission and internal approval of the consents identified as being required will be tracked using the consents register.

2.4 CONTACT INFORMATION

- 2.4.1. The contact information for the Client and Principal Contractor (once appointed), as well as other useful contacts will be appended to the detailed CEMP for reference during the construction phase.
- 2.4.2. A contact number that members of the public can use, typically the Site Manager, should be displayed prominently on the Site board and provided at entrances, on perimeter hoardings and where possible and appropriate at community locations.

2.5 COMPETENCE, TRAINING AND AWARENESS

- 2.5.1. The Principal Contractor shall identify the training needs of their employees and subcontractors, so that they can implement the requirements of this Outline CEMP into briefings and construction method statements. It is recommended that the Principal Contractor creates a competence, training and awareness tracker for all Site operatives to ensure employees and subcontractor training requirements and training given is recorded and monitored throughout the construction phase.
- 2.5.2. Specific training needs will be developed for individuals to reflect the work to be carried out on the Proposed Development and the significant risks and opportunities identified.

2.6 INTERNAL COMMUNICATION

- 2.6.1. Communication on environmental issues within the Project Team will take place through face-to-face conversation, email and telephone. The site team will be made aware of all environmental issues at the earliest possible opportunity. Communication on environmental matters will be maintained through regular construction meetings chaired by the Site Manager.
- 2.6.2. Environmental issues identified by any member of the Project Team will be entered into an environmental tracker, communicated to the relevant personnel to ensure any required actions are carried out, and closed out within an appropriate timeframe. Dissemination of information will take place in several forms as appropriate, including meetings to discuss particular project issues, method statements, task/activity briefings, toolbox talks, inductions, environmental notices and environmental alerts. Records that these have been carried out and who received them will be recorded on briefing registers and collated by the project administrator. The Environmental Manager will provide updates to the supervisors to ensure policies and procedures on display are up to date. Supervisors will also be notified of any legislation changes which may affect working practices on-site.

2.7 EXTERNAL COMMUNICATION

COMMUNICATION WITH THE CLIENT

- 2.7.1. The Principal Contractor will liaise regularly with the Client and their representatives regarding the programme of works, nature of the operations and the methods to be employed to minimise adverse environmental impacts. This will include progress meetings as well as the production and submission of progress reports which will cover environmental/sustainability issues. The Principal Contractor will also supply all relevant supporting information and documentation to the Client for matters concerning consents and the environment in accordance with the appropriate timescales.

PUBLIC RELATIONS

- 2.7.2. A minimum of 14 days prior notification by letter drop to those properties likely to be directly impacted before works are due to commence will be adhered to. The letter will outline where exactly the works

are taking place, what activities are involved, timescales for the work and potential impacts. The process for distributing letters to the public is as follows:

- Draft letter written by Principal Contractor;
- Draft letter submitted to the client for approval;
- Final letter returned to the Principal Contractor with appropriate distribution list; and
- Letter delivered to residents a minimum of 14 days prior to works commencing.

COMPLAINTS PROCEDURES

- 2.7.3. As part of the Site set-up process, Site notice boards will be erected, maintained and clearly visible to third parties. A telephone number for environmental complaints will be published local to the Site. The Site Manager will be responsible for dealing with any complaints and will have the appropriate authority to resolve any issues that may occur. Should they be required, both the Environmental Manager and the Site Manager's 'out of hours' telephone numbers will be available.
- 2.7.4. The Environmental Manager will maintain a close liaison with Cardiff Council Environmental Health Officer (EHO) and should any complaints regarding environmental nuisance (e.g. dust or noise) be received, the details will be passed to the EHO for verification purposes.
- 2.7.5. Should any unforeseen event occur within the construction Site that has the potential to cause off-Site pollution then the Environmental Manager will immediately notify the EHO by phone and e-mail. As far as possible, notice will be issued to the EHO for dealing with an unforeseen activity which may give rise to a particular environmental problem.
- 2.7.6. The formal procedure for handling project complaints / concerns will be developed and agreed by the Principal Contractor but may include a procedure similar to the following:
- All Stakeholders will be able to report any concerns, complaints or other comments to Principal Contractor in writing, by email or in person at the Site offices. Site contacts details will be provided at Site entrances, on perimeter hoardings and possibly at appropriate community locations;
 - The Principal Contractor (or nominated representative i.e. Site Manager) will take full details of the concerns expressed and ensure that a formal assessment is commenced of the reported concern. They will also issue an initial response to the person who has submitted the complaint / concern confirming its receipt;
 - The Principal Contractor (or nominated representative) will undertake an investigation to assess what corrective and preventive action, or further investigation is necessary;
 - The Principal Contractor (or nominated representative) will respond within a reasonable timescale (typically not more than 30 days) and place details of the completed corrective and preventive actions within the project complaint register. If a longer-term programme is required to provide an adequate solution, then this programme will be detailed on the register against the specific issue;
 - The Principal Contractor (or nominated representative) will notify the relevant stakeholder of the proposed corrective and preventive actions to be adopted;
 - Any corrective measures / actions will be implemented with associated implementation dates being recorded;
 - For long term corrective action, the complainant will be informed of proposed action; and
 - Following the implementation of the corrective action and agreement with the relevant stakeholder that the complaint has been adequately addressed the case will be closed and date recorded.

- 2.7.7. All complaints will be entered into the Proposed Development's complaints register, each assigned an action, responsible person and close out date.
- 2.7.8. In the event that a complaint is not resolved to the satisfaction of the complainant directly with the Principal Contractor the following levels of mediation will be available:
- If the grievance cannot be adequately addressed by the Principal Contractor, the complaint / concern will be escalated to an appropriate contact within the Client; and
 - If the grievance is still not adequately resolved the issue will be taken to Cardiff Council for a final decision to be made.

2.8 METHOD STATEMENTS

- 2.8.1. Method statements will be completed by the Principal Contractor or sub-contractor by trained engineers or other appropriately experienced personnel, in consultation with on-site staff and, where necessary, environmental specialists. Their production will include a review of the environmental risks and commitments, so that appropriate control measures are developed and included within the construction process.
- 2.8.2. Method statements will be reviewed and signed off by the appointed Environmental Manager as well as the Principal Contractor and, where necessary reviewed, by an appropriate environmental specialist (e.g. an ecologist). Where required, method statements will also be submitted to the enforcement agencies for information (Natural Resources Wales, EHO at Cardiff Council etc.). As a minimum, method statements will contain the following:
- Location of the activity and access/egress arrangements;
 - Work to be undertaken and methods of construction;
 - Plant and materials to be used;
 - Labour and supervision requirements;
 - Health, safety and environmental considerations; and
 - Any permit or consent requirements beyond those already obtained.

3 CONSTRUCTION INFORMATION

3.1 WORKS PROGRAMME

- 3.1.1. The construction programme will be confirmed by the Principal Contractor in the detailed CEMP.

3.2 CONSTRUCTION PLANT AND EQUIPMENT

- 3.2.1. It is likely an array of plant and equipment will be required as part of the construction phase. The Principal Contractor will provide more detail on this once they have been appointed and specific construction activities have been defined.

3.3 WORKING HOURS AND RESTRICTIONS

- 3.3.1. The standard working hours for all construction activities will be confirmed by the Principal Contractor following appointment, in accordance with any relevant planning conditions, and be added to the detailed CEMP.
- 3.3.2. Standard day-time construction activities are envisaged at this stage. It is assumed that the hours and deliveries will be in line with Cardiff Council's best practice guidelines. Any variation on these standard working hours will need to be agreed in advance with Cardiff Council.

3.4 VEHICLE ACCESS AND ROUTING AND TURNING

- 3.4.1. The Site can be accessed from Wood Street, Street Lane and Scott Road. Temporary construction signage and traffic management measures will be agreed by the Principal Contractor with Cardiff Council and presented in the detailed CEMP.

3.5 ROAD AND FOOTPATH CLOSURES

- 3.5.1. During the construction period, access to the footpaths along Wood Street, Street Lane and Scott Road adjacent to the construction site may be temporarily restricted for the safety of pedestrians. The construction site shall be secured with barricades to allow clear demarcation between the Site boundary and the footpaths to safeguard the pedestrian users.

3.6 SITE COMPOUND, WELFARE FACILITIES AND MATERIAL STORAGE

- 3.6.1. It is envisaged that a Site compound including welfare and material storage will be required. Once appointed, the Principal Contractor will identify a suitable location for the compound which will be used for parking of visitor and Site operative.
- 3.6.2. The welfare facilities will contain the first aid kit, spill kits, washing facilities and toilets and will be located near the construction site. The appointed Contractor will determine a suitable location for these facilities and provide details of this within the detailed CEMP.
- 3.6.3. The Principal Contractor will ensure that materials are stored efficiently to reduce the risk of damage, environmental incidents, injury to site-based staff and theft. The following measures shall be considered when determining the storage of materials:
- Materials shall be stored at least 10m away from sensitive receptors, including drainage and transport routes;
 - Store valuable materials, or those that are hazardous or attractive to thieves, in a secure area, out of sight of the public; and

- Materials shall be covered to protect them against the elements. Plant and equipment will be stored in areas that are less susceptible to possible pollution incidents, or in dedicated areas of hard standing. A spill kit will be available for use in the event of an incident.

3.6.4. Lighting will be installed on a temporary basis with exact details presented in the detailed CEMP.

3.7 DELIVERIES TO SITE

3.7.1. All subcontractors and suppliers will be provided with clear instructions regarding deliveries to the Site, unloading, storage and Site distribution of materials. There will be clear signage for pedestrians to understand the delivery system as well.

3.7.2. All staff and supply chain personnel will comply with Cardiff Council traffic management regulations and parking restrictions.

3.7.3. The Principal Contractor will manage deliveries to minimise daily truck movements. When there is a raised number of deliveries, for example a concrete pour, then this will be separately planned to use the Site compound as a holding area.

3.7.4. All deliveries will be supervised by a responsible person. Any fuel deliveries will take precautions to ensure that the fuel storage tanks are checked before and during delivery to prevent overfilling.

3.7.5. In order to reduce the risks associated with construction traffic and deliveries, the following measures will be implemented:

- Deliveries will be planned to happen outside of busy periods. Early morning deliveries to be scheduled as there is no on-site parking;
- Construction traffic will be directed via designated routes and is under the direction of a banksman if the need for reversing is undertaken;
- All deliveries will have a traffic marshal controlling the area outside the Site and temporary barriers will be utilised if required;
- Construction deliveries will be staged, if required. Initially this will be as directed by the Site Manager;
- Deliveries are restricted to Site working hours to reduce disruption to local residents and businesses. Any deliveries outside working hours should be made in agreement with Cardiff Council;
- Plant operations and deliveries which are adjacent to areas such as pedestrian routes, non-Site vehicular routes or work areas will be accompanied by a designated banks man at all times during its operation;
- The gate marshal will be required to direct pedestrians at access points to the Site;
- Designated pedestrian crossing points will be established where such personnel routes are required to cross-over vehicle routes; and
- Pedestrians visiting the Site office will be segregated from the vehicle movements by a dedicated fenced walkway.

3.8 SECURITY

3.8.1. Site security is an important component of good environmental management and every effort shall be made to ensure the safety of the Site and local community. Only authorised persons will be allowed on the Site. The Principal Contractor will inspect the perimeter hoarding weekly and, if damaged, will repair the hoarding immediately. A record of these inspections will be kept on the Site.

- 3.8.2. Security will be controlled by physical locks and a signing in policy. Entry and exit to Site will be controlled by an electronic entry/exit system. It is also expected that CCTV will be installed at the Site. Care will be taken to ensure that cameras are not capable of viewing neighbouring properties.
- 3.8.3. The Principal Contractor will maintain a 24-hour helpline during works to report any security incidents or concerns. Signage will be provided on Site hoardings to inform the public of the helpline number for reporting security incidents or concerns. The Principal Contractor will follow up security incidents and concerns reported and will arrange implementation of further measures required.
- 3.8.4. The following security measures shall also be considered:
- Do not stack materials against the inside or outside of the Proposed Development boundary as this can provide an opportunity for unauthorised individuals to enter the Site;
 - Position fuel tanks, hazardous materials and waste away from the Proposed Development boundary to deter theft and arson;
 - Ensure that potentially hazardous materials are well secured and where possible located away from watercourses. For storage contains with a capacity in excess of 200 litres it is a legal requirement and also good practice, to lock fuel outlets when they are not in use, and provide secondary containment for oil in storage (e.g. bunds);
 - Secure and immobilise plant and equipment overnight to prevent vandalism;
 - To minimise the risk of trespassing, consideration should be given to the installation of lights, warning notices, 24-hour security guards, alarm systems and CCTV;
 - Monitor the movement of people on- and off-site using Site passes or swipe cards;
 - Position the Site office so that it has a good view of the Site;
 - Inform local police about the Site and ask for their advice on security;
 - Consult the Fire Service for advice on storing fuel and flammable materials on-site (where necessary); and
 - If the Site experiences a problem such as vandalism, ensure that appropriate measures are taken to clean up/repair problems promptly, to discourage further problems from occurring.

3.9 HEALTH AND SAFETY

- 3.9.1. This Outline CEMP provides an overview of the health and safety measures and processes that are likely to be adopted during the construction phase of the Proposed Development. However, it is not intended to fulfil any legislative obligations of the Principal Contractor with regards to occupational health and safety. These obligations should be met within a standalone construction Health and Safety Plan.
- 3.9.2. Before works commence on-site, the Principal Contractor is required to issue a Construction Phase Health and Safety Plan (CPHSP). This will detail the initial health and safety procedures as works commence on Site. The CPHSP will be regularly updated as the works progress and take into account all upcoming works.
- 3.9.3. The Principal Contractor will be required to audit safety on-site on a monthly basis and provide a monthly report to the Client detailing numbers on-site, accidents (if any), dangerous occurrences and any visits from the Health and Safety Executive (HSE) inspectors.
- 3.9.4. All works will be subject to approved risk assessments and method statements (RAMS).
- 3.9.5. Everyone employed on-site in relation to the Proposed Development will receive a Site-specific induction to inform them of the health and safety arrangements, welfare on-site and to ensure they

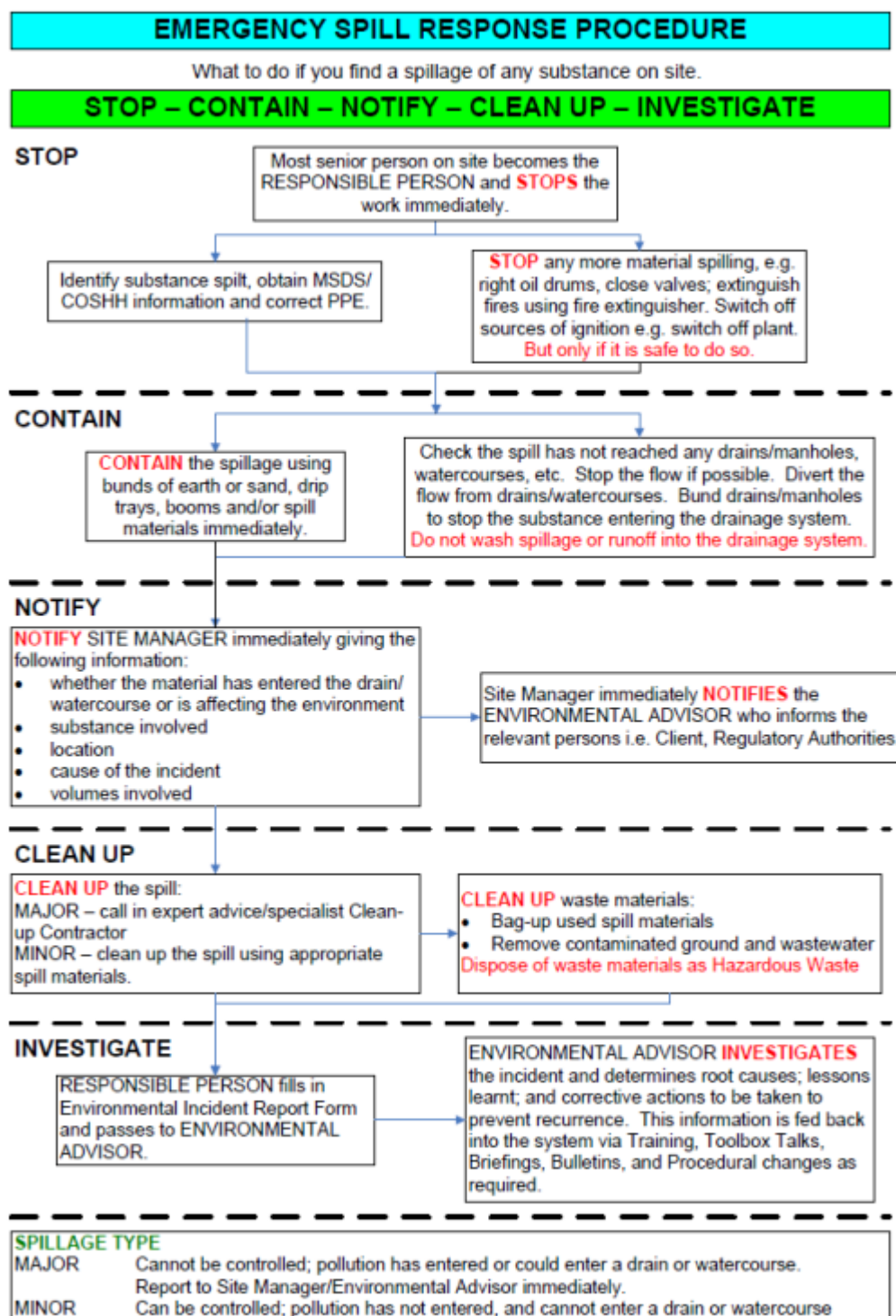
understand the requirements of the risk assessment and method statement relevant to their work. Workers will be informed of their legal obligation to comply with health and safety. The Site Manager will be responsible for the health and safety of all visitors to the Site at all times.

- 3.9.6. Barriers, platforms and hoardings will be erected, adapted and maintained throughout the construction phase to completely segregate the public from construction activity.

3.10 INCIDENT RESPONSE AND EMERGENCY PROCEDURES

- 3.10.1. An Incident Response Plan should be developed by the Principal Contractor to highlight the potential pollution receptors specific to each works area and the activities taking place there. Each document should be in place within the first month of construction activities commencing and should be available for viewing and be briefed to the workforce on-site. They should be reviewed and if necessary, updated, at least every six months. The key components of each Incident Response Plan will be:
- A brief scope of works taking place on-site;
 - Types of environmental incident that have the potential to occur (however low the risk);
 - Types of hazardous material likely to be present on-site;
 - A list of pollution receptors and maps showing their location in relation to the Site;
 - The procedure for responding to environmental incidents, reporting them and investigation (including spill or leak events);
 - Key contact numbers for reporting of environmental incidents; and
 - Recommendations to help reduce the likelihood of environmental incidents.
- 3.10.2. The Principal Contractor will advise Cardiff Council within 24 hours and any incidents of non-compliance within the detailed CEMP and will respond to any reported incidents within 24 hours, or as soon as reasonably practicable. In the event of working practices being deemed dangerous either by Cardiff Council or the HSE, immediate remedial action will be taken.
- 3.10.3. The formal procedure for handling Environmental Incidents will be developed and agreed by the Principal Contractor and Environmental Manager but may include a procedure similar to that detailed below:
- Environmental Incidents are to be reported to the Site Manager or Environmental Manager;
 - The Environmental Manager will record full details of the Environmental Incident and ensure that they are responded to as soon as reasonably practicable (preferably within one hour but always within 24 hours);
 - The Principal Contractor (or nominated representative i.e. Environmental Manager) will monitor and ensure that appropriate action is taken; and
 - The Principal Contractor (or nominated representative i.e. Environmental Manager) will undertake an investigation to assess what corrective and preventive action, or further investigation is necessary to avoid recurrence of the Environmental Incident.
- 3.10.4. In the event of a spill or leak, the following process shown in **Figure 3-1** will be followed. This will be included in each Incident Response Plan, and this will be briefed to the workforce and displayed on Site notice boards.
- 3.10.5. All incidents will be recorded by the Principal Contractor.

Figure 3-1 - Spill response procedure



- 3.10.6. All appropriate staff will be trained and made aware of the spill contingency plan set in place, following *EA Pollution Prevention Guidelines 21¹ and 22²* as best practice. In the event of any incident the Client will be notified. Additionally, Natural Resources Wales and any other interested bodies, will be notified as required.
- 3.10.7. Procedures will also be set in place to respond to any emergency incidents which may occur on Site. As the works progress, the plan will be updated to reflect the construction phase.

3.11 CONTRACTOR TRAINING

- 3.11.1. It is important to raise awareness of environmental issues so that people on Site are aware of what good environmental practice is and where to obtain information. Training should be provided on Site to disseminate good practice guidance relevant to the Proposed Development. For a training programme to be successful and effective it is vital to:
- Appoint a trainer with appropriate knowledge, skills and experience;
 - Make training specific to the audience;
 - Posting key environmental issues relating to the construction programme/phases on notice boards or in communal areas can keep awareness raised to all the workforce;
 - Make training engaging and relevant;
 - Follow up and refresh training to keep abreast of changes in legislation and codes of practice;
 - Use refresher training and inductions as a response to corrective actions raised (e.g. misuse of spill kits, incorrect refuelling methods);
 - Check the understanding of the training with the attendees through tests, discussions, inspections and audits; and
 - Maintain records of all training undertaken and planned.
- 3.11.2. This Outline CEMP will form part of all tender documents circulated to all trades associated with the development of the Site to ensure that the agreed principles are communicated.
- 3.11.3. Site specific inductions completed by the Site Management Team for all staff and contractors new to the development will include reference to the key sensitivities outlined in this Outline CEMP.
- 3.11.4. The Site-specific induction will include training regarding the importance of the surrounding habitats, which will identify the required preventative steps the Site operatives are required to take to minimise the risk of damage to these habitats.

3.12 SUSTAINABLE CONSTRUCTION

- 3.12.1. The Proposed Development will make use of construction techniques whereby all steelwork, equipment, pipework etc. will be fabricated off-site which enables minimal waste.
- 3.12.2. The separation of wastes and distribution to appropriate recycling plants should contribute to the sustainability of the Proposed Development.

¹ EA (2009). Pollution Prevention Guidelines Incident Response Planning: PPG 21. Available online at: <https://webarchive.nationalarchives.gov.uk/20140328155445/http://cdn.environment-agency.gov.uk/pmho0309bpna-e-e.pdf>. Last accessed [28/01/2025].

² EA (2011). Pollution Prevention Guidelines Incident Response Dealing with Spills: PPG 22. Available online at: <https://webarchive.nationalarchives.gov.uk/20140328155449/http://cdn.environment-agency.gov.uk/pmho0411btez-e-e.pdf>. Last accessed [28/01/2025].

- 3.12.3. During the design stage there will be a sustainability review of the design covering construction methods, materials and carbon. The outputs of this will be incorporated into the Proposed Development design where possible.
- 3.12.4. The Principal Contractor will also be encouraged to use electrical plant where possible. Where this is not possible, then practical auto stop start combustible engines could be used.
- 3.12.5. The Principal Contractor will also be encouraged to use solar power and reduced/recycled water facilities where possible e.g. charging of traffic signal and signs batteries.
- 3.12.6. Subject to bituminous materials cold milled during the works not containing tar, any cold milled bituminous material could be reused where they do not present a pollution hazard in the permanent works. For example, a substitute for type 1 subbase in footways and hard standings.

4 ENVIRONMENTAL CONTROL MEASURES

4.1 INTRODUCTION

- 4.1.1. This section sets out the proposed environmental mitigation measures to be implemented during the construction phase.

4.2 AIR QUALITY

- 4.2.1. An Air Quality Assessment³ was conducted for the Proposed Development and submitted as a supporting planning document. It was identified that the Site is located 90m south-west of the Cardiff City Centre Air Quality Management Area (AQMA), which was declared due to exceedances of the annual mean Air Quality Objective for NO₂. Air quality in the vicinity of the Site is primarily influenced by vehicle emissions on the local road network, including the adjacent Wood Street. Emissions from diesel trains along the railway line, 120m south of the Site are also likely to contribute to background pollutant levels.
- 4.2.2. There are sensitive receptors such as residential properties and unnamed footpaths along the road network in the near vicinity of the Site.
- 4.2.3. In order to minimise the nuisance and impact arising from dust produced during the construction phase, the mitigation measures outlined below should be implemented as set out in Appendix 5 of the Air Quality Assessment. These are in line with the Institute of Air Quality Management (IAQM) guidelines.

MITIGATION MEASURES

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences onsite.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the Site boundary. This may be the Environmental Manager or the Site Manager.
- Display the head or regional office contact information, where applicable.
- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by Cardiff Council. The level of detail will depend on the risk and should include as a minimum the dust mitigation measures recommended in this CEMP. Further, 'desirable' measures from IAQM guidance should be included as appropriate for the Site. The DMP may include monitoring of dust deposition, dust flux, real-time PM₁₀ continuous monitoring and/or visual inspections.

Site Management

- All dust and air quality complaints should be recorded, and causes identified. Appropriate remedial action should be taken in a timely manner with a record kept of actions taken including of any additional measures put in-place to avoid reoccurrence;
- The complaints log should be made available to Cardiff Council on request;

³ Cass Allen (2025) Air Quality Assessment

- Any exceptional incidents that cause dust and/or air emissions, either on or off-site should be recorded, and then the action taken to resolve the situation recorded in the log book; and
- Regular liaison meetings with other high risk construction sites within 250m of the Site boundary should be held. These meetings would ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/ deliveries which might be using the same strategic road network routes.

Preparing and Maintaining the Site

- Plan the 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 onsite.
- 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 runoff 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 reused onsite. If they are being reused onsite cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.

Operating Vehicle/Machinery and Sustainable Travel

- Ensure all vehicle operators 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.
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

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 is available on the Site for effective dust/PM suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes/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.
- Ensure equipment is readily available onsite 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.

Measures Specific to Earthworks

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

Measures Specific to 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 make sure that 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.

Measures Specific to 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 Site 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 logbook.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowzers and regularly cleaned.
- 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.
- Access gates to be located at least 10m from receptors, where possible.

4.2.4. Measures relating to monitoring and reporting is presented in Chapter 5 of this report.

4.3 ARCHAEOLOGY AND CULTURAL HERITAGE

CULTURAL HERITAGE

4.3.1. There are no designated historical assets within the Site, however, the following designated heritage assets are located within 1km of the Site boundary:

- There are approximately 200 listed buildings within 1km of the Proposed Development with the nearest being 'Head Post Office' – Grade II listed building (record number: 13825) located 130m to the northeast;
- Two Scheduled Monuments, 'Cardiff Castle and Roman Fort' (record number: 3388) and 'Dominican Friary' (record number: 224) are located at approximately 440m on the north and 700m on the northwest of the Scheme respectively.
- There are seven conservation areas located within 1km of the Proposed Development with the nearest being 'St. Mary Street' conservation area located approximately 60m on the northeast.

- 4.3.2. A Heritage, Townscape & Visual Impact Assessment⁴ was completed for the Proposed Development which states that the Site is located in an area of reclaimed land. The status of below ground archaeology on-site is currently unknown.
- 4.3.3. In the event of unexpected archaeological discoveries by construction workers, the following procedure should be followed:
- Immediately stop works in the area surrounding the archaeological find;
 - Protect the find and the area surrounding by fencing/blocking off and immediately contact the Site Manager and the Environmental Manager;
 - Contact a qualified Archaeologist and obtain advice on how to proceed; and
 - All significant finds must be reported to Cardiff Council.

4.4 BIODIVERSITY

- 4.4.1. There are no national, international or local designated sites within the Site. However, the following national or international designated sites are located within 10km of the Proposed Development:
- 'Severn Estuary' Ramsar site (Ramsar code: UK11081) is located approximately 2.8km to the southeast.
 - 'Severn Estuary' Special Protection Areas(SPA) (SPA code: UK9015022) is located approximately 2.8km to the southeast.
 - 'Severn Estuary' Special Areas of Conservation (SAC) (site code: UK0013030) and 'Cardiff Beech Woods' (site code: UK0030109) SAC are located approximately 2.8km to the southeast and 8.1km to the northwest respectively.
 - There are 25 Sites of Special Scientific Interest (SSSI) within 10km of the Proposed Development with the nearest being 'Severn Estuary' SSSI at approximately 2.8km to the southeast.
- 4.4.2. There are also ten areas of Ancient Woodland Inventory (AWI) sites within 2km of the Proposed Development with the nearest located approximately 480m to the north.
- 4.4.3. An Ecological Appraisal⁵ has been undertaken for the Proposed Development and accordingly it was observed that there are no SACs or SSSIs designated for bats within 10km of the Site. During the desk study for Ecological Appraisal, one locally designated statutory site within 2km of the Site was identified. This was Cardiff Bay Wetland and Hamadryad Park Local Nature Reserve (LNR) which was recorded 1.67km south of the Site. There was no functional connectivity of habitats between the Site and Cardiff Bay Wetland and Hamadryad Park LNR; furthermore, the LNR lies outside of the typical Zone of Influence for impacts resulting from construction dust and noise pollution, which is typically 50m (IAQM, 2014). For these reasons, Cardiff Bay Wetland and Hamadryad Park LNR is not anticipated to be impacted by the Proposed Development.
- 4.4.4. There are no anticipated significant impacts on the designated sites referred to above taking into consideration the limited scale of work and distances to the nearest designated sites.
- 4.4.5. The immediate vicinity of the Proposed Development is dominated by urban development with very little natural vegetation. The Ecological Appraisal notes that the Site was identified to comprise one

⁴ Icen (2025) Heritage, Townscape & Visual Impact Assessment

⁵ WSP (2025) Plot 4 & 5 Central Square - Ecological Appraisal

habitat comprising a mosaic of ephemeral/short perennial species within a hardstanding gravel and concrete substrate. The perimeter was sparsely vegetated with butterfly-bush.

PROTECTED AND NOTABLE SPECIES

- 4.4.6. The protected species assessment conducted as part of the Ecological Appraisal, submitted as a supporting planning document⁵ confirmed that habitats present within the Site are suitable for bats, birds, invertebrates and Invasive Non-Native (plant) Species (INNS) species. No further recommendations in the form of further survey work or ecological supervision are proposed for the Proposed Development.
- 4.4.7. The River Taff was recorded 110m west of the Site, although there was no functional or hydrological connectivity of habitats between the river and the Site. No other water body was recorded within 500m of the Site.

ARBORICULTURE

- 4.4.8. An Arboricultural Impact Assessment⁶ has been prepared in support of the planning application which includes an Outline Arboricultural Method Statement setting out protocols for the Principal Contractor to follow.

GENERAL MITIGATION MEASURES

- 4.4.9. The following general mitigation measures are recommended during the construction phase of the Proposed Development as best practice to reduce potential impacts on Biodiversity:
- Measures must be taken to prevent dust and other emissions from construction impacting land beyond the site.
 - Chemicals and fuels must be stored in secure containers. Spill kits must be available.
 - Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the site construction site is closed (e.g. overnight) to prevent entrapment of animals.
 - Noise and vibration must be controlled and kept to the minimum necessary.
 - Lighting used for construction must be switched-off when not in use and positioned so as not to spill on to adjacent land, particularly avoiding the River Taff.

4.5 LANDSCAPE AND VISUAL

- 4.5.1. The Site is located in Cardiff, Barry and Newport National Character Area (NCA id: 35). The Site itself does not contain any landscape features of value.
- 4.5.2. There are no Public Rights of Way (PRoWs) within the vicinity of the Proposed Development. The users of the footpaths located along the local road network will have views of the construction site.

GENERAL MITIGATION MEASURES

- 4.5.3. The following measures shall be considered during the construction works to ensure protection of the existing landscape setting and views to the Site:
- Plant/machinery to be located within the confines of the Site compound when not in use;
 - Temporary screening to be provided through the implementation of solid construction hoardings;

⁶ WSP (2025) Plot 4 & 5 Central Square – Arboricultural Impact Assessment

- Restricting construction site lighting outside normal working hours as far as practicable to the minimum required for safety and security;
- All temporary task lighting being used for the works should be concentrated on the works area only and switched off when not in use to limit the amount of light spill into surrounding areas with suitable lux levels;
- Reinstatement of disturbed areas associated with any construction works where necessary; and
- Tidy site management to reduce the visual clutter associated with building works.

4.6 GEOLOGY AND SOILS

- 4.6.1. As per the Phase 1 Ground Conditions Desk Study⁷ submitted as a supporting planning document, the site investigation has identified Made Ground overlain with Tidal Flat Deposits, River Terrace Deposits (Gravels) and Mercia Mudstone, conditions which are typical of this area of Cardiff. The Phase 1 report recommends that a development specific site investigation is undertaken, and remediation measures undertaken where necessary.
- 4.6.2. Glamorganshire Canal historic landfill (reference no.: EAHLD15236) and Timber Pond and Abattoir historic landfill (reference no.: EAHLD15245) are located within 500m of the Site. Taking into consideration the distance of these landfill sites to the construction site, no impacts are anticipated during any excavation or construction activities.

GENERAL MITIGATION METHODS

- 4.6.3. It is considered that the above potential contamination sources can be addressed by implementation of a watching brief during Site construction works. The following general mitigation methods should be implemented during construction, where required, to ensure the safety of construction workers, visitors and to avoid any potential pollution of surface and ground water:
- Use of appropriate Personal Protective Equipment (PPE) at all times during the construction works;
 - Fuel storage on-site to be carried out under best practice;
 - In the event of the discovery of unexpected, contaminated ground after construction has commenced, development should be halted and an approach agreed with Cardiff Council in terms of proposed remediation. Handling, storage and removal of contaminated material found on-site should be agreed with Natural Resources Wales; and
 - The Principal Contractor shall comply with all relevant legislation and regulations when dealing with contaminated materials and waste. The Principal Contractor will prepare a full management plan which will be appended to the detailed CEMP where contaminated land is identified to comply with all relevant handling and disposal legislation.

4.7 NOISE AND VIBRATION

- 4.7.1. The Site is located within a largely urban area, with a number of residential and commercial properties in the vicinity.

⁷ WSP (2025) Plots 4 and 5, Central Square, City Centre, Cardiff – Phase 1 Ground Conditions Desk Study

4.7.2. A Noise Impact Assessment⁸ has been undertaken for the Proposed Development which is submitted as a supporting planning document. Existing baseline noise environment is influenced by the following:

- The Principality Stadium is located to the north of the Site. It hosts sporting events and (typically) a summer season of weekend music events.
- Cardiff Central Station is 0.1 miles south-east of the Site, and serves train lines connecting south Wales and south west England.
- Wood Street bus stop is located adjacent to the site, with further bus stops along St Mary Street, approximately 2-minutes' walk from the Site.

4.7.3. WSP have conducted noise surveys, modelling, and calculations to inform the Noise Impact Assessment. Measurements at the Site in line with TAN 11 places the Site in Noise Exposure Category B. TAN 11 states "Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection".

GENERAL MITIGATION MEASURES

4.7.4. Construction phase will comply with *BS 5228-1:2009+A1:2014* and *BS 5228-1:2009+A2:2014 Noise and Vibration Control on Construction and Open Sites*⁹, and should apply the following mitigation measures in order to minimise noise and vibration from construction activities affecting sensitive receptors in the area of the Proposed Development:

- Operators should be trained to employ techniques to keep site noise to a minimum;
- Plant equipment should be certified to meet relevant current EU legislation and should be no noisier than will be expected based on the noise levels contained in Annex C and Annex D of BS 5228-1: 2009 Noise and Vibration Control on Construction and Open Sites;
- Noisy plant or equipment should be situated as far as possible from Site boundaries and will be fitted with effective exhaust silencers, maintained in good and efficient working order and operated in such a manner as to minimise noise emissions. Plant will comply with the relevant statutory requirements;
- Equipment and vehicles to be shut down when not in use;
- All plant and equipment should be checked daily and maintained correctly to limit noise;
- Where practicable, mains electricity to be used instead of generators; and
- Erection of local hoarding if required for particularly noise activities.

METHODS OF WORKING

4.7.5. Details for the methods of working on Site can be found within the *BS 5228-1:2009+A1:2014* and *BS 5228-1:2009+A2:2014 Noise and Vibration Control on Construction and Open Sites*, which includes the following:

- Site inductions will highlight the need for vehicle horns and alerts to only be used when absolutely necessary;

⁸ WSP (2025) Plots 4 and 5, Central Square, City Centre, Cardiff - Noise Impact Assessment

⁹ BS 5228-1:2009(2009). Code of practice for noise and vibration control on construction and open sites. Available online at: https://www.warrington.gov.uk/sites/default/files/2020-08/cf53_bs_5228_pt1-2009a1-2014.pdf [Last Accessed: 29/07/2025].

- No work which is audible at the Proposed Development boundary will be undertaken outside the specified hours, except in cases of emergency where safety is an issue, or where a prior agreement has been reached with Cardiff Council;
- The contractor will comply with the requirements of the Control of Pollution Act 1974 (with particular reference to Part III), the Environmental Protection Act 1990, the Health and Safety at Work Act 1974 and the Control of Noise at Work Regulations 2005;
- Burning equipment will be used in preference to cold cutting where possible;
- All trade contractors will be made familiar with current noise legislation and the guidance contained in BS 5228 (Parts 1 and 2) which will form a prerequisite of their appointment;
- Deliveries will be planned to happen outside of busy periods. Early morning deliveries to be scheduled as there is no on-site parking;
- Unless agreed in advance, all deliveries will be during the construction site hours and on a “just-in-time” basis to avoid/minimise vehicles waiting outside or on the Site with engines running;
- Loading and unloading of vehicles, dismantling of equipment such as scaffolding or moving equipment or materials around the Site will be conducted in such a manner as to minimise noise generation;
- Deviation from approved method statements will be permitted only with prior approval from the Principal Contractor and other relevant parties. This will be facilitated by formal review before any deviation is undertaken;
- A contact number which the public may use shall be displayed prominently on the site board and any noise complaints will be reported to the Principal Contractor and immediately investigated;
- A Construction Logistics Plan will be implemented to mitigate impacts from construction vehicle movements on the highway; and
- Site layout to be set out to create maximum distance between traffic and noise sensitive locations, where possible.

4.7.6. Methods for monitoring and reporting is detailed in the Chapter 5 of this report.

4.8 POPULATION AND HEALTH

4.8.1. The Proposed Development is located in an urban area, with existing residential areas located to the east of the Site, beyond the River Taff.

4.8.2. There are no PRowS within the Proposed Development Boundary.

4.8.3. The following receptors are located within 500m of the Proposed Development:-

- Attaqwa Arabic School is located approximately 320m southwest;
- Riverside Islamic School is located approximately 350m to the southwest;
- Tabernacle Chapel, Cardiff is located approximately 280m northeast; and
- St John The Baptist City Parish Church is located approximately 370m northeast.

4.8.4. Mitigation measures for human receptors are identified in relevant sections of this report, including Air Quality, Noise and Vibration and Landscape & Visual Impact.

4.9 WASTE

4.9.1. The waste stream will be managed so far as is reasonably practicable to maximise the reuse of surplus waste materials and to ensure any adverse environmental effects are minimised. Waste will be segregated onsite into key waste streams such as excavated soil and other materials, metals, wood/timber and general construction waste.

- 4.9.2. The transportation of waste to and from the Site will comply with the Duty of Care requirements. These include ensuring waste is transported by registered carriers, disposal to appropriately licensed sites and maintenance of appropriate waste transfer documentation.
- 4.9.3. The Environmental Manager will audit waste carriers and disposal facilities and maintain documentary evidence that these requirements are being met, including a register of waste carriers, disposal Sites (including transfer stations) and relevant licensing details for each waste stream. Waste contractors who remove waste will be registered with Natural Resources Wales.
- 4.9.4. Prior to the start of construction, the Principal Contractor should develop a Site Waste Management Plan (SWMP) which will detail measures to mitigate impacts from construction waste. This plan would endorse the waste hierarchy (**Figure 4-1**), promote legal compliance and provide guidance on best practice, monitoring and reporting of construction and demolition waste.



Figure 4-1 - Waste Hierarchy¹⁰

4.9.5. The SWMP should be managed by the Site Manager (or an appointed person). They would be responsible for implementing the following strategic recommendations into an SWMP:

- Appointing a waste management company to handle the transportation, recovery and residual disposal of waste;
- Accurate record keeping of all waste recovery / disposal tonnages and destinations;
- Accurate ordering of materials to reduce the volume of unused materials going to landfill;
- Correct storage of materials to prevent contamination / spoiling;
- Timely ordering of materials to reduce the time materials are stored on Site, thereby reducing the potential for spoiling to occur;
- Provision of clearly marked segregated bins / skips for construction materials to avoid cross contamination and to facilitate recycling;
- All the waste will be stored in designated areas that are isolated from surface drainage. Waste containers will be covered to prevent dust and litter being blown out and rainwater accumulating. Containers will be inspected regularly and replaced when full; and
- Training for all Site personnel in the correct disposal routes for materials and appointment of a site waste champion to oversee correct segregation / disposal and record keeping of all resources generated on Site.

¹⁰ Green Neighbourhoods (n.d.) Available online at: <https://greenerneighbourhoods.files.wordpress.com/2013/07/waste-hierarchy.jpg>. [Last accessed 29/07/2025].

4.9.6. Methods for monitoring and reporting is detailed in the Chapter 5 of this report.

4.10 WATER ENVIRONMENT

4.10.1. A Flood Consequences Technical Note (FCTN)¹¹ has been completed by WSP in July 2025, submitted as a supporting planning document. As per the FCTN, the site is considered to be at a low overall risk of flooding. The site has a degree of both fluvial and tidal flood risk due to the presence of the River Taff and Cardiff Bay. It is noted that the site is protected from both of these sources, being situated within a TAN15 Defended Zone.

GENERAL MITIGATION METHODS

4.10.2. A temporary drainage strategy will be designed and implemented by the Principal Contractor during construction to ensure runoff is adequately managed to protect receiving waterbodies from increased runoff, sediments or pollutants and water bodies are protected from increased sediment. Additionally, the following general mitigation measures for the water and sediment environment should be applied:

- All plant to be refuelled over hard standing / concrete;
- Fuel tanks or Control of Substances Hazardous to Health (COSHH) storage areas to be bunded to 110% of contents volume;
- All project plant to be maintained according to manufacturer's standards;
- Spill kits to be stored at selected locations;
- There should be no uncontrolled run-off of water or mud from the Site;
- All machinery will be regularly checked for oil leaks or similar, which, if found, must be prevented from entering the drainage ditches or watercourses either through immediate repair of the machinery or through use of a drip tray/spill kit or similar;
- In the event of a spillage on Site, the material should be contained (using an absorbent material such as sand or soil or commercially available booms). Sorbents will be used to soak up a spill and stop it spreading on hard surfaces. Using sorbents generates waste and this method will only be used on small spills, or where a spill has been contained to stop further spread. All used sorbents will be disposed of at an accredited Site for disposal;
- If it is not possible to stop the spill at source, significant attempts will be made to stop it as close to the source as possible. If possible, the spilling material will be safely moved into another container to limit the size of the spill. Use of a suitable container and pump may be required; and Fuel, oil and chemicals will be stored in secondary containment and located a minimum of 10m from any watercourse. The secondary containment system must provide storage of at least 110% of the tank's maximum capacity and ensure that any valves, filters, sight gauges, vent pipes or other ancillary equipment are also situated within the secondary containment system and arranged so that any discharges are contained;
- On-Site availability of oil spill clean-up equipment including absorbent material and inflatable booms for use in the event of an oil spill or leak;
- Wherever possible, plant and machinery will be kept away from the drainage system and watercourses;
- Use of drip trays under mobile plant where possible;
- Construction materials brought to the Site should be free of any contaminated material, so as to avoid any possible contamination of water features within the surrounding area;

¹¹ WSP (2025) Plots 4 and 5, Central Square, City Centre, Cardiff – Flood Consequences Technical Note

- Wet cement should not come into contact with surface water or near the drainage ditches. Cement should be poured in dry conditions and consideration should be given to use of fast drying cement;
- Contained wheel wash facilities to prevent contaminated runoff; and
- Waste water from machinery wash-down or concrete or cement processing to be discharged to foul drainage system or contained and removed by tanker to a suitable discharge location via a licensed waste operator.

5 MONITORING AND REPORTING

5.1 MONITORING, CONTINUAL IMPROVEMENT AND REVIEW

- 5.1.1. The Site Manager will be responsible for maintaining a register of all required environmental monitoring, which will be made available for auditing and inspection.

AIR QUALITY

- 5.1.2. Regular site inspections to monitor compliance with the DMP should be carried out, inspection results recorded, and an inspection log made available to Cardiff Council when asked. The frequency of Site inspections should be increased when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- 5.1.3. Dust deposition, dust flux, or real-time PM₁₀ continuous monitoring locations should be agreed with Cardiff Council. Where possible baseline monitoring should start at least three months before work commences on-site.

NOISE

- 5.1.4. Noise and vibration levels during construction will be monitored by the Site Manager and through regular communication with those residents in close proximity to the Site. It is expected that any noise issues can be resolved quickly.
- 5.1.5. Examples of appropriate monitoring strategies and methods to be implemented by the Principal Contractor should include:
- Long term unattended/ remote interrogation monitoring of ambient noise at critical locations during construction;
 - Supplementary attended sample measurements on a daily or activity specific basis for noise and vibration at sensitive locations;
 - Programme of information / results sharing with ecologists to study noise and wildlife issues; and
 - Any additional monitoring or reporting requirements will be outlined within the detailed Noise Impact Assessment.

SITE WASTE MANAGEMENT

- 5.1.6. Preparation of a SWMP will record all waste leaving the site, in addition to monitoring recycling rates. The Site Manager will be responsible for collating this data during the construction phase.
- 5.1.7. Waste management arrangements should be reviewed and recorded on a weekly basis using a weekly inspection report. This would include checking that the waste transfer details are correct in the SWMP, that the waste storage and segregation areas are functioning, that the waste streams are being collected by the correct licenced operators and being taken to the correct licensed transfer station.
- 5.1.8. Unexpected volumes of waste should be investigated, and mitigation actions put in place to avoid reoccurrences. The SWMP should be reviewed with the site management team on a monthly basis during the construction phase reviews.

5.2 REPORTING

- 5.2.1. Reporting procedures will be defined by the Site Manager who will hold overall responsibility for providing feedback to the Principal Contractor and the Client on the environmental performance of the construction works.
- 5.2.2. All injury accidents occurring as a result of work activities undertaken for the Proposed Development or conditions are to be reported to the Site Management and recorded in the Site Accident Book. First aid will be provided and where necessary, arrangements will be made to get the injured person to hospital.
- 5.2.3. Site Management will report all injury accidents, 'near misses' and dangerous occurrences to the Principal Contractor's Health and Safety department who will carry out an investigation of all notifiable injury accidents and incidents as scheduled under *The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013*¹². Minor injury accidents will be investigated where it is deemed beneficial.

¹² UK Statutory Instruments (2013). The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013. Available online at: <http://www.legislation.gov.uk/uksi/2013/1471/contents/made>. Last accessed [29/07/2025].



1 Capital Quarter
Tyndall Street
Cardiff
CF10 4BZ

wsp.com

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