Appendix 4A
Outline Construction Environment Management Plan

March 2025

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Pennant Walters

FOEL TRAWSNANT GRID CONNECTION

Appendix 4A: Outline Construction Environment Management Plan

March 2025

Report for

Pennant Walters

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1	Draft issue	March 2025
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1. Background

1.1 Introduction

1.1.1 Pennant Walters (the Applicant), with design input from National Grid Electricity Distribution (NGED), has applied to construct and operate a proposed 66kV grid connection, connecting the consented Foel Trawsnant Wind Farm to the National Grid. The connection will consist of approximately 5.1km of underground cabling (UGC) and approximately 4.4km of overhead line (OHL). The Project is mainly located within Bridgend County Borough Council (BCBC) but the start and end of the connection fall within the Neath Port Talbot County Borough Council (NPTCBC) (see **Figure 4.1**).

1.1.2 This Construction Environmental Management Plan (CEMP) has been prepared by WSP on behalf of the Applicant to give an outline of the potential environmental impacts of the proposed construction works and the mitigation measures which will be used to minimise these.

1.2 Site Setting

1.2.1 The proposed gird connection is located within the vicinity of Maesteg. Starting at the northern-most point, the route begins west of the A4063 as OHL for approximately 1.5 kilometres (km). To the north of Nant-y-ffyllon, the route then transitions into UGC, mainly following the existing highway network south for approx. 5.1 km. At Sychbant Farm, the highway network ceases; this is where the route transitions back into OHL and continues south for approx. 2.9km.

1.2.2 The route is set within a 25m boundary (12.5m either side of the route), allowing for flexibility for the mirco-siting of pole locations.

1.3 Description of Proposed Works

Underground Work

Existing track and highways

1.3.2 The highway works will be mainly confined to the highways boundary and adhere to standard practice. The exact nature of underground cabling construction works is to be confirmed between the Distribution Network Operator (DNO) and local highways authority, though an outline is provided below.

1.3.3 UGCs can be laid directly into a trench or placed within ducts. The most common way of laying an UGC is to use an open cut method whereby the cable is laid directly into a trench of up to 1.5m depth. The exact width of the trench can depend upon the final specification proposed for the cable, but it can be in the region of 600mm widening to approximately 1.5m closer to the surface to enable access. The cables are placed at the bottom of the trench, and the excavation around the cables is then filled with sand before the remaining excavation is backfilled with the excavated material. If a cable is required to be laid alongside a highway, instead of beneath, a maintenance strip of approximately 1m on the outside of the verge is required for future access. Cables are jointed at approximately 500m intervals. The joint boxes are generally 1-2m deep and 5m x 3m.

1.3.4 An alternative to placing the cables directly into the trench is to use ducts within which the cables would be placed. These would also require joint bays at similar intervals to the open cut method.

1.3.5 It is anticipated the highway works will take between five to six months to complete. The works have been assumed to take place between 07:00 to 19:00 hours on weekdays and 07:00 to 13:00 on Saturdays. A 7-day working week may be required in some exceptions.

1.3.6 Pennant Walters and the DNO will agree either a road closure with the local highways' authority and/or implement appropriate traffic management measures for the works associated with the highways.

1.3.7 The creation of trenches, laying of cable ducts and pulling of cable will be in accordance with NGED (2021) Standard Technique: CA6A/7[1].

Overhead Line Work

1.3.8 The exact nature of OHL construction works is to be confirmed between the DNO and the local authorities, though an outline is provided below.

1.3.9 An OHL would be carried on wooden H-poles, consisting of two single wooden poles (most likely Scots Pine) joined by a crossarm with bracing. At the termination points only, two sets of H-poles will be located side-by-side. Terminal ends may be located at the start and end of the underground section of the connection.

1.3.10 Whilst the intention is for the route to be as straight as possible, there will be some deviation to avoid environmental features, such as trees. At points of deviation, angle poles will be used; these are likely to be H-pole structures. In all locations where the line deviates, there will be the requirement to provide cable stays to the poles. The poles are not typically stayed, and are unlikely to require concrete foundations. However, pre-cast concrete kicking blocks will be installed below ground, to provide the poles with adequate structural support.

1.3.11 The height of the wooden poles will mainly be 12m, with only eight out of 36 poles exceeding this height at a maximum 15m. Foundation depths - the amount of wood pole below ground – are typically between 1.8m to 2.4m. Minimum ground clearance is 6.3m. An assumed minimum clearance to trees from the conductors is 4m from the nearest part of the tree.

1.3.12 The poles are designed to carry the conductor wires. It is currently proposed to install a single circuit made up of one conductor per phase. Telemetry and monitoring capabilities, such as fault detection, will be provided by a microwave link. The poles will carry the cross arms onto which the insulators are attached. Poplar conductor wire will be used for all the OHL sections. For the purposes of the Scoping Report, it has been assumed that a maximum span length between poles of 90m to 130m could be achieved. The actual span between poles will be influenced by topography and the surrounding environment.

1.3.13 The construction compound will be located to the north of the grid connection route. No excavation is required for the construction compound; there will be no installation of utilities or laying down of stone. It'll contain a single storey office/ site cabin, have geo-grid style matting and a permitter fence. It will mainly be used for the storage of wooden OHL poles and the 66kV 630mm Cu Cable.

[1] NGED (2021) Standard Technique: CA6A/7, Relating to the Installation of Underground Cables. Available at: https://www.nationalgrid.co.uk/documents/tech-info/underground-cable-construction/66000-volt

1.3.14 The construction and maintenance of OHL will be in accordance with NGED (2024) Policy Document: OH6/4[2].

1.4 Purpose of the CEMP

1.4.1 A CEMP is a tool for managing the environmental impacts of a development during the post consent phase and is often produced at the request of a planning authority as a condition of planning consent.

1.4.2 This outline CEMP has been produced to accompany the application for a Development National Significance (DNS) and as such is not the product of a formal request. This outline CEMP has been produced to demonstrate that the Applicant understands the potential impacts of the works, which have been assessed as part of the Environmental Impact Assessment (EIA) process and to put in place a mechanism to ensure that the commitments made in the Environmental Statement (ES) are implemented appropriately.

1.4.3 The CEMP is a working document which will be printed and made available to all on-site personnel, providing documented procedures, and a schedule of actions.

1.5 Scope

1.5.1 This CEMP communicates the following:

- Contractual and legal requirements (Section 2);
- Key roles and responsibilities and methods of communication (Section 3);
- Environmental training and awareness (Section 4);
- Site environmental aspects register (Section 5); and
- Monitoring (Section 6).

1.5.2 Revisions to this outline CEMP shall be agreed and approved by the appointed NGED Project Manager and recorded in a final CEMP. The plan shall be continually reviewed to take into account additional environmental information encountered during the design and construction phases. It shall also allow for the inclusion of requirements and amendments that arise from the granting of a DCO or legitimate concerns of Third Parties.

1.5.3 All personnel and sub-contractors working on the project shall perform their duties in accordance with the requirements of the CEMP. The Site Team shall report regularly to the Project Manager on the status and effectiveness of its implementation.

[2] NGED (2024) Policy Document: OH6/4, Construction, Maintenance and Replacement of Low Voltage Overhead Services. Available at: https://www.nationalgrid.co.uk/documents/tech-info/overhead-construction

2. Legal and Regulatory Requirements

2.1.1 Regulatory compliance is the minimum required of the CEMP and NGED Environmental Policy. The measures included in the Site Environmental Aspects Register (as detailed in Section 5) are designed to achieve regulatory compliance as a minimum and additionally, to accord with best practice, where relevant.

2.1.2 A legislation register shall be held in the project environmental file. The register shall be reviewed periodically and updated as necessary. Any legislative changes shall be disseminated to the Project Manager immediately, after which the method statements of any affected operations shall be changed accordingly.

2.1.3 A register of required consents and licences shall be held in the project environment file.

3. Roles and Responsibilities

3.1 Project Manager

3.1.1 The NGED Project Manager (PM) will have ultimate responsibility for ensuring that the CEMP is implemented and adhered to by all those involved in the construction works. The PM will be supported by the roles below.

3.2 Environment Manager

3.2.1 The NGED Environmental Manager (EM) will work with the PM to ensure that the construction works are appropriately managed and accord with the requirements of the CEMP and the environmental policies of WPD. Specifically, the EM will:

- Organise any environmental training required by site personnel;
- Provide advice and deal with queries and correspondence on environmental issues; and
- Oversee all works that have a potential to give rise to environmental issues on site.

3.3 Site Manager

3.3.1 A Site Manager will be appointed at the initiation of the construction phase for the works. This person will familiarise themselves with the CEMP and will ensure that all site personnel are aware of its content. Specifically, the Site Manager will:

- Deal with site enquiries or requests from regulators and local residents;
- Report major incidents to the project team immediately, and to statutory authorities where required;
- Log and monitor incidents and non-conformances;
- Disseminate information, including changes to legislation, and relay to employees;
- Identify employees who require environmental training and maintain training records in line with the contract for the works;
- Monitor the progress in closing out Corrective Action Requests and Observations raised during audits;
- Ensure all records are retained and readily available; and
- Carry out site audits using a Site Audit Checklist.

3.4 All Staff

3.4.1 All staff members have responsibility for the environment. Responsibilities include but are not limited to:

- In the case of an incident, stop work, implement control procedures and report it to the Site Manager;
- Contact the Waste Contractor when waste needs collecting;

- Pass any queries or correspondence on environmental issues to the Site Manager and/or Environmental Manager; and
- Work in accordance with Environmental Procedures, any Environmental Plans and Method Statements.

3.5 Main Works Contractor

3.5.1 The main works contractor will prepare and maintain a health and safety policy, and manage the health and safety of employees and others affected by works within its site. The contractor, in accordance with the requirements of NGED will develop an accident and incident reporting procedure.

3.5.2 The main contractor will develop a project safety document for the application under the Construction (Design and Management) Regulations 2015 (CDM)[3], within the site's operational boundaries. The main contractor will be required to prepare and maintain a site emergency plan.

3.5.3 The performance of the main works contractor will be monitored by the Project Manager on a monthly basis against the health and safety plans in order to highlight any deviations or exceptions, recovery plans and areas of concern.

[3]HSE (2025) The Construction (Design and Management) Regulations 2015. Available at: https://www.hse.gov.uk/construction/cdm/2015/index.htm

4. Environmental Training and Awareness

4.1 Inductions

4.1.1 All project personnel shall receive an environmental induction presentation. No personnel, including sub-contractors, shall be permitted to commence work on site without prior attendance at an induction. The induction shall evolve to reflect changes in the CEMP as the project develops.

4.1.2 Environmental topics covered in the induction shall include but will not be limited to:

- Water resources;
- Pollution prevention;
- Emergency response procedures;
- Waste management and housekeeping;
- Management structure;
- Duties and responsibilities;
- Relevant procedures;
- Ecologically sensitive areas;
- Incident reporting;
- Consents and licenses;
- Legislation; and
- Environmental best practice.

4.2 Toolbox Talks

4.2.1 Regular ‘Toolbox talks’ on specialised topics shall supplement the induction course. Toolbox talks shall be used to highlight issues of concern and to disseminate new information not previously provided. They will also offer site personnel with the opportunity to provide feedback.

4.2.2 Toolbox talks shall include, but will not be limited to, instances where:

- There is a change to existing legislation, which requires an operational change;
- Site inspections or audits have identified corrective actions which require rolling out;
- Work is being undertaken in environmentally sensitive areas; and
- There are significant changes in environmental conditions, e.g. heavy rainfall.

4.2.3 The Toolbox talks will be provided as often as necessary to address site-specific environmental requirements.

4.2.4 Toolbox talk topics for environmental management shall include, but will not be limited to:

- Ecologically sensitive areas;
- Archaeological sensitive areas;
- Environmental incident and reporting;
- Invasive weeds;
- Protected species;
- Silt and water management; and
- Waste management and segregation.

4.2.5 Records of all Toolbox talks and attendance will be kept in the site offices.

4.3 Communications

4.3.1 Environmental performance meetings to discuss the environmental performance of the project shall be arranged as necessary. These meetings shall be attended as appropriate by the Environmental Manager, Project Manager, Site Manager and representatives of the workforce. Notes of the meetings shall be distributed and shall assist in the environmental management of the Project.

4.3.2 The Environmental Manager shall arrange and attend meetings with relevant statutory bodies as necessary.

4.3.3 Site Environmental Notice Boards shall display the Environmental Policy of NGED, Emergency Contacts List, relevant statutory and non-statutory advice and guidance; and any other relevant information. These Environmental Notice Boards shall be situated in prominent positions in the main reception area of the site office.

4.3.4 The main works contractor will erect notices on site to indicate environmentally important and/or sensitive areas that could potentially be affected by the construction works, including proximity to sensitive sites and those containing protected species. These notices may indicate that some areas are “out of bounds” for construction traffic and personnel.

5. Management of Environmental Impacts

5.1 Ecology

5.1.1 An ecological assessment has been undertaken by WSP, the survey results, impact assessment and required mitigation are included within the Environmental Statement. The Project Ecologist and Environmental Manager shall identify any further survey requirements. NGED shall ensure that mitigation measures are designed and implemented in consultation with the Project Ecologist to ensure that no protected species are harmed and disturbance to their habitat is prevented or if not possible, minimised. All relevant licences shall be obtained from the relevant statutory body (Natural Resources Wales (NRW)).

5.1.2 The construction phase includes minimal vegetation clearance to widen existing access points, installation of poles and undergrounding of the cable via open-cut trenching.

5.1.3 Mitigation and enhancement will be identified in a Conservation Plan. This will include future monitoring of habitat and species is to be agreed with the LPA.

5.1.4 Works are planned to commence in January 2028. Anticipated impacts include the following:

- Widening of existing gateways and accesses within hedgerows;
- Excavations within Priority Habitats, Sites of Importance for Nature Conservation (SINCs) and Ancient Woodland caused by the open-trench cutting;
- Ground disturbance caused by moving machinery; and,
- Trimming of trees and shrubs within broadleaved semi natural woodland.

Protection of Retained Habitats

5.1.5 This section of the CEMP provides a mitigation strategy for the protection of existing habitats within or immediately adjacent to the Project and access routes during the construction phase. The proposed access routes and location of OHL poles are detailed on Figure 4-1 of the EIA Report.

Tree Protection

5.1.6 Existing trees are to be protected. The root protection zones of any trees adjacent to proposed works are to be protected by temporary fencing as outlined in BS 5837:2012

Priority Habitats, SINCs and Ancient Woodland

5.1.7 Where habitats are subject to temporary loss, these will be replaced as soon as possible following construction.

5.1.8 Specific measures for minimising disturbance to ground flora will be detailed in a Precautionary Method of Works (PMoW). There will be no loss of floral diversity within the turf layer as it will be reinstated with appropriate aftercare. Specific measures will include:

- Translocation of turf layer (approx. 12 =cm in depth) and soil during construction to temporary stockpile area.

- Careful labelling of turf layer so it is translocated back into correct location following works.
- Translocation methodology to include measures to avoid soil compaction and watering in periods of dry weather.
- Soil and turf to be returned to location where it was excavated immediately after work activities are completed.

5.1.9 *Invasive Non-native Species (INNS)*

5.1.10 A pre-works check up to four weeks prior to the commencement of the Project for INNS should be carried out. In the event that areas where INNS are present cannot be avoided, treatment and removal of INNS to be carried out by suitably certified contractors.

5.1.11 Biosecurity measures, such as boot wash stations, will be implemented throughout construction to avoid the introduction or spread of INNS.

Protection of Protected Species

5.1.12 The following section provides details on mitigation measures to ensure the protection of species on site, prior to construction and during construction works. These measures include pre-construction surveys to update the status of a species on site, or where required, the application of a European Protected Species (EPS) Licence. In addition, it sets out mitigation measures which need to be put in place to ensure the ongoing use of the site by each species.

General Considerations

5.1.13 Staff and contractors on site will be made aware of all protected species issues on site through toolbox talks (TBTs) given during site inductions. In addition, any construction staff welfare buildings will have displays of information on the ecology found on site including species identification guides. Laminated copies will also be made available to contractors to take with them on site to assist in the identification of key species. In the event of chance discoveries of any protected species on site, work will cease in that area and an ecologist will be called immediately. Ecologist contact details will be held by the construction foreman.

5.1.14 Measures such as ensuring all excavations will have sloped sides or have a means of escape for entrapped animals; excavations to be checked each morning by operatives prior to work within the excavation. This will include the protection of retained features, designated haul routes, ecological supervision (ECoW).

5.1.15 A PMoW will be created for specific mitigation to reduce or avoid impacts to Important Ecological Features (IEF), this will be appended to the CEMP. A TBT will be prepared alongside the PMoW and will be delivered to site personnel ahead of any vegetation clearance by the supervising ecologist and will be signed by contractors to confirm they have understood constraints and mitigation measures relating to IEFs.

Badgers

5.1.16 No badger setts are located within the footprint of the proposed route for the development or access roads. However, prior to the commencement of works (at least 3 months before) a badger survey will be undertaken to ascertain whether any new setts have been built, and to determine whether any new foraging routes have been developed.

5.1.17 If construction works are anticipated to impact any badger sett then a mitigation plan will be compiled to remove any potential impact. Should impacts to Badgers be unavoidable then a license application from Natural Resources Wales (NRW) will be submitted.

5.1.18 All excavations will be backfilled at the end of each working day to prevent the entrapment of badger overnight. Where this is not possible, the excavations will be adequately covered to prevent badgers from falling in. The far end of any open-cut trench will be sloped allowing badgers the opportunity to escape of their own accord.

Breeding Birds

5.1.19 The Site contained a range of habitats with suitability to support common and widespread breeding birds. This includes protected and / or notable bird species such as raptors and upland species.

5.1.20 Vegetation clearance should be avoided during the breeding bird season in the first instance. If works cannot avoid the breeding bird season, then all vegetation and suitable nesting habitats must be hand-searched by a suitably qualified ecologist immediately prior to removal.

5.1.21 Specific measures for avoiding / reducing impacts to protected and / or notable bird species will be confirmed following the further recommended surveys. This could include:

- Use of bird flight diverters on the OHL to improve visibility for birds and reduce collision events
- Habitat management under OHL route to discourage sensitive species.
- Minimum stand-off buffers may be required from sensitive habitats which will reduce collision.

Bats

Tree Roosts

5.1.22 At the time of writing the outline CEMP, a total of 3 trees have been identified as having potential to support roosting bats within the footprint of the Project. Evidence of roosting bats to be confirmed during the Phase 2 surveys.

5.1.23 Any trees assessed as having potential to support roosting bats will be subject to Potential Roost Feature (PRF) aerial inspection surveys to determine the presence or likely absence of roosting bats.

5.1.24 Any Category 1 trees which require pruning will be climbed using ladders or ropes and harnesses to inspect all potential roosting features with an endoscope. Should the continued absence of bats be confirmed then the tree can be pruned.

5.1.25 If bats are found at any stage, then works will stop and NRW will be consulted and where required an EPS Licence obtained.

Foraging and Commuting Routes

5.1.26 Phase 2 surveys to confirm the Project impacts, if any, it will have on foraging and commuting habitat. OHL wooden poles will be located outside of hedgerows thereby avoiding any severance of commuting habitat for bats. The underground section of the route will not require any removal of sections of hedgerow.

5.1.27 Works will generally avoid working outside of day-light hours, avoiding any potential impacts to foraging or commuting bats during the construction phase. Should additional lighting be required this will be task specific and will restrict light spill onto retained adjacent habitats.

5.1.28 Minimum stand-off buffers from sensitive habitats which will reduce collision. The stand-off buffers will be determined following the receipt of bat survey data.

Otter

5.1.29 Prior to construction works commencing all previously identified watercourses crossed by the development will be resurveyed to confirm the continued absence of the otter resting places. In the unlikely event that an otter holt/ couch/ lay-up is identified and is anticipated to be adversely affected, then a mitigation strategy will be compiled and if necessary, an EPS licence obtained.

5.1.30 A pre-works survey will take place ahead of works at the Nant Sychbant watercourse. Specific measures to minimise and avoid impacts to otter will be provided in a PMoW. A suitability experienced ecologist will supervise supervising works at this location.

5.1.31 *Water vole*

5.1.32 A pre-construction survey of the footprint of the Site and a suitably sized area (250m radius based on the zone of influence of disturbance impacts) will be conducted to ascertain any new water vole habitats within the Site.

5.1.33 Specific measures to minimise and avoid impacts to water vole will be provided in a PMoW. A suitability experienced ecologist will supervise works at this location to minimise the risk of direct mortality or injury.

5.1.34 Confirmed water vole habitat that will be impacted by the Project will be subject to a licence application with NRW.

5.1.35 *Dormice*

5.1.36 Dormice are likely absent from the survey area. During vegetation clearance an ECoW will be present to deliver a TBT to Site personnel to advise on the possibility of dormice being present. Works should be conducted under a PMoW. If a dormouse or evidence of dormice is identified during the vegetation clearance works, a licence should be sought from NRW. This is considered necessary only in the southern section of the Survey Area, as habitats within the northern section were not considered suitable to support dormice.

Reptiles

5.1.37 Suitable reptile habitat is limited in extent across the Project, mainly confined to areas of potential hedgerow disturbance. Sections of hedgerow which will be disturbed will be searched by an ECoW prior to works commencing. All reptiles found will be translocated to a safe and suitable receptor area within the immediate vicinity of the working corridor. In the unlikely event that a reptile is found, all works will temporarily cease, and the reptiles moved to a suitable receptor site.

5.1.38 A two-stage cut will also be implemented to minimise the risk of killing and injury of reptiles. This will be defined in a PMoW.

5.1.39 Disturbance to features that could support reptiles or amphibians (e.g. scrub, dense tussocky grassland, rocks) will be kept to a minimum, and works in these areas will take place outside the hibernation period for those species (October to March inclusive).

Fish

5.1.40 General environmental protection measures will be required during the construction phase of the Project. Such measures include best environmental practice guidance outlined in the Environment Agency's Pollution Prevention Advice and Guidance (see NetRegs.org.uk) and those outlined by the Construction Industry Research and Information Association (CIRIA) guidance (CIRIA, 2015).

5.1.41 Chemicals and fuels to be stored in secure containers located away from watercourses or water bodies. Spill kits to be made available.

5.2 Waste Management

5.2.1 The majority of waste produced on site will be used to re-fill excavations. Any excess material will be transported to an off-site depot in Swansea. Not waste material is expected to be stored on site. The contractors shall ensure that all wastes are labelled in accordance with the Duty of Care. In particular, care shall be taken to identify and segregate hazardous wastes, though no hazardous wastes are expected on this Project.

5.2.2 The waste carrier registration certificates of all contractors and sub-contractors used to carry waste shall be checked with NRW. The waste management licences of the receiving site shall also be checked with NRW. A periodic check to see that waste is disposed of at the site listed on the Waste Information (previously known as Waste Transfer Notes) shall be made.

5.2.3 Disposal of any surplus rock or subsoil shall be agreed with NRW. Opportunities shall be taken, so far as practicable, to recycle materials for example scrap metal, timber, paper, plastic and oils. Advice on these matters shall be taken from local authority recycling officers and waste contractors.

5.3 Protection of Ground and Surface Waters

5.3.1 Standard control and mitigation measures to be implemented to prevent pollution include:

- Roads and hard surfaces will be kept clean, to prevent a build-up of mud and sediment that could contaminate surface water;
- Surface and foul drainage will be separated, stored on site and removed by a licensed contractor;
- No disposal of any liquids to surface water drains;
- Installation of silt traps and swales to trap silty water;
- Directing any drainage of fuel storage areas, via an oil interceptor, to contain any accidental spillage;
- Regularly inspecting vehicles for fuel, oil, hydraulic fluid leaks;
- Regular visual inspection of working areas and surface water management facilities for evidence of contamination from fuel or sediment, particularly following periods of heavy rainfall; and
- Water quality monitoring will be carried out to ensure no adverse changes as a result of the works.

5.3.2 NGED shall identify all watercourses, drains and potential conduits and where necessary, measures shall be taken to minimise direct sediment and silt-laden run-off from the working site into watercourses. Working areas, where possible will not be within 9m of watercourses. Where this is not possible, approaches will follow relevant best-practice and guidance, for example Guidance for Pollution Prevention 1 and 5[4].

5.3.3 Any crossing of a watercourse for open cut trenching will require consent from the relevant authority. In addition, any required discharge to or abstraction from surface water or groundwater resources may require prior consent from NRW in accordance with the relevant permitting and abstraction regulations.

[4] NetREgs (2021) Guidance for Pollution Prevention. Available at: https://www.netregs.org.uk/media/1898/guidance-for-pollution-prevention-1-2022-update.pdf

5.3.4 The Site Manager will ensure that the required mitigation is installed and maintained to an appropriate standard.

5.3.5 NRW shall be notified prior to any new discharges to ground or water.

5.3.6 No discharges or abstractions shall be made to or from ground or watercourses without the prior consent of NRW and the method of any such discharges shall be in accordance with NRW requirements. A schedule of discharge and abstraction points shall be agreed with NRW.

5.3.7 The Environmental Manager shall carry out daily visual inspections of all watercourses, drainage outfalls and pumping activities, particularly during periods of inclement weather. Water quality monitoring will also be undertaken at agreed specified times during construction.

5.4 Pollution Prevention and Emergency Response

5.4.1 The Contractor will be responsible for establishing and disseminating information on emergency procedures. The main priority will be to avoid spillages and emergency situations, through adopting measures which reduce the risk of spillage at source and which enable swift containment. The Contractor will adopt and implement a set of standardised emergency response procedures. Clearly labelled spill kits, with instructions, will be located at suitable points on the site and all staff will be trained in their use.

5.4.2 Immediately after observing and raising the alarm about any leakage or spillage of oils, fuels or chemicals at the sites, works will cease until deemed safe to continue by the overall site project manager. If the spillage consists of flammable liquids, all sources of ignition will be extinguished. Appropriate Personal Protective Equipment (PPE) should be worn by relevant personnel, to prevent direct contact with any spilled material.

5.4.3 The contractor will be responsible for identifying the source of the leakage or spillage and for rectifying the problem. The priority will be to stop the source of spillage and contain it from entering a sensitive receptor area. Once the source of the spillage has been identified, absorbent pads will be used as a barrier to any further contamination. On open ground, suitable material can be used to construct a bund around the spill to prevent further spreading. It will be critical to identify as quickly as possible where the spilled material is going, to prevent it causing further harm. All contaminated materials used in the containment and cleaning up after a spillage will be disposed of as hazardous waste in line with the current waste regulations and to an appropriately licenced recovery or disposal site. Should a spillage permeate into the ground, such as soil, verge or grassland, then all contaminated soils will be excavated and disposed of along with other clear up waste. Should a spill enter a drain, the route and outfall point should be quickly identified and if possible, the appropriate outlet valve shut off. If required, drains will be pumped out to remove contamination and remove the risk of environmental damage by it entering a watercourse or sewage treatment works.

5.4.4 In the event of a leakage or spill occurring, it will be fully investigated by the Principal Contractor in accordance with incident investigation procedures (see **Section 6**). Should a spillage enter a sensitive receptor area and risk causing a pollution incident, NRW will be notified on its emergency pollution incident number. Records of all incidents will be maintained and made available for audit or inspection.

5.4.5 Lessons learnt from any incident will be communicated back to site staff through appropriate safety and environment briefings and may be used to amend and update the CEMP accordingly.

5.5 Flood Warning

5.5.1 Construction plant or other materials should not be stored within 10m of identified overland flow routes or top of bank of watercourses.

5.5.2 The requirements of NRW, with regard to flood defence, shall be adhered to and any necessary mitigation measures implemented and relayed to the workforce.

5.5.3 If a flood warning has been issued, NRW shall be consulted on the NRW Floodline - 0345 988 1188, and the flood risk assessed. If the flood risk is high, the following measures can be taken to eliminate environmental impact as a result of flooding:

- Plant, fuel and chemicals shall be removed from the flood zone immediately. This may be removal from the haul roads or from the compounds, and could include raising critical items above the design flood level or removing them from the floodplain completely to a suitable alternative compound. At construction stage, the contractor would identify the need (or not) to remove equipment from working areas based on the flood warnings; making the site safe prior to evacuation – this would include appropriate storage of equipment and materials and securing items within site compounds to prevent them being mobilised in flood water;
- Any drill pits shall be bunded using subsoil;
- Topsoil and subsoil heaps shall be further treated / protected if deemed necessary; and
- Evacuation of personnel from the working areas at risk of flooding – this is the primary safety consideration, and is the highest priority.

5.6 Air Emissions

Vehicles and Plant

5.6.2 Most plant and machinery used in the working area would be powered by diesel engines. In order to control excessive exhaust emissions and smoke, NGED and the contractors shall ensure that all plant is correctly adjusted and checked as being in good working order before being allowed on site and is adequately maintained.

Dust

5.6.3 Damping down shall control dust during prolonged periods of dry weather together with the implementation of site speed limits set at a maximum of 10mph, as appropriate (i.e. on private access roads).

5.6.4 All HGVs shall be appropriately sheeted. Note that no stockpiles of fine materials is expected; however any stockpiles shall be covered.

5.6.5 The contractors shall ensure that public highways are kept clear of mud and other debris that may have been tracked from the site. This will be achieved using road sweepers or through manual brushing depending on severity.

5.6.6 The monitoring of dust and/ or visual inspections shall form part of the daily site inspections where receptors (e.g. roads) are nearby, and be conducted regularly elsewhere.

5.7 Light

5.7.1 In any instances where lighting is required (such as poor weather conditions), directed working area lights shall be positioned or shielded so as to avoid nuisance to both properties and highways.

5.7.2 Any lighting shall be positioned so that it does not shine on riparian, woodland, or other sensitive habitats.

5.8 Noise and Vibration

5.8.1 Construction operations have the potential to generate noise and vibration, from:

- Construction traffic movements;
- The operation of plant and machinery;
- Excavation and compaction activities; and
- General site operations.

5.8.2 Noise accounts for most complaints that local councils receive about environmental pollution. It is generally defined as any unwanted sound, either occurring at too loud a volume or repetitively. At high levels over a sustained period of time, noise and vibration can cause a nuisance and/or be hazardous to human health. Very high levels of vibration have the potential to cause damage to nearby structures and infrastructure.

5.8.3 Whilst most of the Proposed Development works are minor in nature, works to construct the car park and new visitor centre and associated access will involve the operation of noise generating plant and machinery.

5.8.4 To mitigate the potential impacts of noise, the contractor must use BPM to minimise the nuisance from noise and vibration, this will include compliance with the approved code of practice, BS 5228, Noise Control on Construction and Open Sites. A range of noise and vibration control measures will be adopted, as set out in the Noise and Vibration Management Plan (see Annex A).

5.9 Traffic Management

5.9.1 Access routes for all site vehicles, plant and deliveries to site shall be detailed in the Construction Traffic Management Plan (see **Appendix 7A** of the EIA Report). Access to site shall be from agreed points only. All accesses to the construction compound shall be gated, signed and locked outside working hours to prevent unauthorised access. Appropriate signing shall be used to indicate roads barred for construction traffic and approaches to the access points. The contractor shall work with the relevant local authority officer to agree suitable procedures where necessary for temporary closure or diversion of any publicly accessible route and any associated measures to ensure the safety of the general public.

5.10 Storage of oils, fuels and chemicals

5.10.1 There is the potential for hazardous substances such as chemicals, fuels and lubricants to be stored and used during the construction works, such as diesel, oils, small quantities of chemical additives for solvents, cleaning agents and adhesives. Poor handling and storage of such substances can result in spillages that can impact on both the natural environment and human health. This could include the pollution of foul and surface water

sewers, land and groundwater contamination and inhalation or direct skin contact by humans (site workers, visitors and the public). Given the modest nature of the Project, it is likely that only small quantities will be required, which can be stored in suitable containers. It is anticipated that chemical additives will be stored in small containers, locked in a secure fixed container within the compound site. All storage containers will be clearly marked as to their contents.

5.10.2 Preventative and control measures will be implemented to comply with the Water Resources Act 1991, Environmental Protection Act 1990 and other associated regulations. These control measures will include:

- Appointing a competent person to check the level of any storage tanks/containers prior to delivery, to prevent overfilling;
- Limiting access to the secure storage container, only to suitably trained and authorised personnel;
- Ensuring that all deliveries are supervised by a competent person capable of dealing with any spills or incidents that may occur and to ensure that products are delivered to the correct tank/storage;
- Designating a fuel and hazardous storage area within the site compound, with adequate bunds and impervious walls and floors to ensure containment, in the event of accidental spillage and to be sited at least 10m from any foul or surface drain where possible, at least 20m from any watercourses and away from areas at risk of flooding;
- Any tanks or drums will be stored in a secure container, where possible, to be kept locked when not in use;
- Ensuring hazardous chemicals, fuels or oils are bunded with the bund capacity being the larger of 110% of the largest tank volume for single tank bunds (or, in the case of multi-tank bunds, 110% of the largest tank capacity or 125% of the combined tank capacity, whichever is largest) to comply with the Control of Pollution (Oil Storage) (England) regulations 2001.;
- Utilising drip trays to collect leaks from fuel pumps or standing plant;
- Refuelling only to be carried out in designated areas by suitable qualified persons;
- Disposing of any cleaning products or arisings (such as oily water from drip trays) in accordance with the Environment Agency waste classification guidance;
- Fitting oil interceptor(s) to all temporary discharge points and for discharge from any temporary oil storage or refuelling area, if applicable;
- Provision of spill containment equipment and spill kits at appropriate points in the Project;
- Taking special care to prevent spillage when moving any fuel and materials in the Project; and
- Carrying out regular inspections of drip trays and bunded areas, spill kits and taking appropriate remedial action as required.

5.11 Historic Environment

5.11.1 The following historic environment management measures will be implemented during the construction of the Project:

- Locations and descriptions of all known historic assets within and adjacent to construction works will be made available, including restrictions to construction methods to protect historic assets (e.g. where micrositing of H-poles will be undertaken to avoid known historic assets);
- A written scheme of investigation (WSI) will be prepared setting out the approach to archaeological works required to mitigate effects on heritage assets with archaeological interest, secured via planning condition. The WSI will need to be agreed by the LPA Archaeological Advisor in advance of any groundworks for the scheme; and
- All archaeological mitigation recording, analysis, dissemination and archiving will be undertaken by a suitably qualified and demonstrably experienced organisation.

5.11.2 It is anticipated that archaeological mitigation will include archaeological monitoring of areas of intrusive groundworks, outside of the existing road network, to ensure that any as yet undiscovered archaeological remains are appropriately identified and adequately recorded. This would be undertaken in accordance with the WSI and implemented during the construction phase.

5.11.3 Should artefacts be located during construction that are deemed by their material content or context to be treasure, as defined by the Treasure Act 1996, then all necessary measures to comply with the requirements of that Act will be implemented.

5.12 Contaminated Land

5.12.1 A baseline study has been undertaken which has considered the potential for contamination to be present in soils and groundwater beneath the Proposed Development. No significant sources of contamination were identified and therefore it is unlikely that contaminants will be encountered.

5.12.2 A Phase 1 Assessment and targeted peat surveys have been conducted. Results are presented in **Annex B**. A separate Coal Mining Risk Assessment has also been produced, identifying appropriate safety and precautionary measures to take into account (see **Appendix 4B** of the EIA Report).

5.12.3 Should any unforeseen contamination be encountered during construction of the Project, work will be stopped; NRW will be contacted and the local planning authority informed as soon as is practicable. A risk assessment will be undertaken to identify additional actions which may be required. Any proposed remedial strategy will be submitted for approval by the local planning authority, if required.

5.12.4 NGED has designed its proposals to avoid all Third Party services wherever possible. Where Third Party services cannot be avoided, NGED will work closely with the organisations responsible for their operation or maintenance to minimise effects on operations and future development aspirations. This engagement would continue during the construction phase.

5.13 COSHH

5.13.1 A Control of Substances Hazardous to Health Regulations (COSHH) store will be set up in the site compound. COSHH assessments and Material Safety Data Sheets shall be held with the COSHH materials. A COSHH register shall be created and maintained by the Environmental Manager.

5.13.2 All site personnel and subcontractors will be made aware of the COSHH requirements through site inductions and specific toolbox talks. Daily site inspections will review and monitor the storage and issue of materials.

6. Environmental Monitoring and Reporting

6.1 General requirements

6.1.1 The Contractor will be required to undertake on-site environmental monitoring to ensure that high standards of environmental performance are maintained throughout the duration of the works. This will involve carrying out regular and frequent checks on site house-keeping, compliance with method statements, as well as monitoring to ensure the efficacy of measures and to check records are being appropriately maintained.

6.2 Site inspections and monitoring processes

6.2.1 The contractor will be responsible for carrying out formal health and safety and environmental inspections throughout the duration of the construction works. These will be carried out at least on a weekly basis and documented in writing. Realistic timescales for any associated actions will be determined and monitored for compliance. The inspections will include:

- Visual inspections, to look for signs of dust deposition, blockage of drains, leaks and spillages, vegetation and species protection measures (such as fencing), stock piles and general cleanliness of the site, its access and adjoining public highway;
- Random/sample checks of compliance with method statements;
- Sample checks on the training of staff;
- Sample checks of contractors documentation; and
- Sample checks of any permission, permit or consent requirements.

6.2.2 Regular and appropriate monitoring will be carried out to determine the effectiveness of the environmental control measures in place.

6.2.3 Topic specific monitoring, such as in relation to noise or dust or to ecology are set out in Section 5 above.

6.3 Compliance and Incident Investigation

6.3.1 In the event of a failure to comply with the CEMP or any other relevant environmental obligation or duty, a written warning will be issued and steps put in place to take appropriate remedial action.

6.3.2 All incidents will be fully investigated by the responsible post holder, and a full report will be prepared with statements and photographs included to assist in the conclusions and recommendations.

6.3.3 All environmental incidents will be reported to the Principal Contractor and SZC as soon as reasonably practicable, including any incident involving:

- The spillage of a hazardous substance onto ground or into drains;
- Damage to the habitat of a protected species;

- Releases of significant dust or emissions that could cause nuisance to the local community; and
- Noise emissions that could cause statutory nuisance or impacts to human health.

6.3.4 The contractor will be required to carry out a formal written investigation, in a timely manner. This should include photographic and/or written evidence and witness statements, a description of the damage caused and remedial action. The investigation should assess the factors contributing to the incident and root causes and identify opportunities for improved preventative practices. A review of the CEMP will also be conducted and any suitable amendments made as required.

6.4 Review and communication

6.4.1 Regular environmental management meetings will be held to communicate information about liaison with regulatory bodies, complaints, environmental incidents and the need for amendments to the CEMP, working practices or further environmental training. The Environmental Manager will be responsible for maintaining a register of any environmental monitoring, which should be available for auditing and inspection.

7. Conclusion

7.1.1 This document sets out the measures that will be taken to manage and control environmental risks and potential impacts that could potentially arise during construction. It is a live document that will need to be kept under review, to take account of any new information encountered and to ensure measures are suitably effective. It is envisaged that this document will need to be updated and reissued as a final CEMP as part of the discharge of planning conditions for the Project.

7.1.2 Measures set out within this CEMP may need to be supplemented by detailed method statements, setting out how specific tasks will be undertaken, without adversely affecting sensitive receptors.

Annex A
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Annex B
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