Plas Power Solar and Energy Storage Project

3.0.5 Outline Construction Environmental Management Plan

June 2024

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Contents

1 Introduction 2
2 The Site and Project Description 3
3 Construction Methods 3
4 Construction Working Hours 6
5 Traffic Management 6
6 Amenity 8
7 Noise Management 8
8 Dust 9
9 Materials and Waste Management 10
10 Biodiversity Management 12
11 Hydrology Management 14
12 Storage 16
13 Safety and Security 16

1 Introduction

1.1 Introduction

1.1.1 This Outline Construction Environmental Management Plan (OCEMP) has been prepared in support of a planning application for the Plas Power Solar and Energy Storage Project at Plas Power Estate, Wrexham.

1.1.2 This OCEMP outlines the activities involved in constructing the solar and BESS project, together with mitigation and management measures to prevent or reduce potential effects upon the environment and nearby sensitive receptors during the construction phase of the development. This report should be read in conjunction with the Outline Construction Traffic Management Plan (OCTMP) (document reference: 3.04). The OCEMP will be further developed with the Engineering, Procurement and Construction (EPC) Contractor for the project and a detailed construction programme has been developed.

1.1.3 A Decommissioning Environmental Management Plan (DEMP) will be produced prior to the decommissioning phase and will detail mitigation and management measures to reduce potential effects upon the environment and nearby sensitive receptors during the decommissioning phase of the development. This OCEMP therefore does not consider the decommissioning phase.

1.1.4 The approved OCEMP shall be adhered to throughout the period of construction activities unless otherwise agreed in writing by LPA.

1.1.5 The document is structured as follows:

- Section 1 – Introduction
- Section 2 – The Site and Project Description
- Section 3 – Construction Methods
- Section 4 – Construction Working Hours
- Section 5 – Traffic Management
- Section 6 – Amenity
- Section 7 – Noise Management
- Section 8 – Dust
- Section 9 – Materials and Waste Management
- Section 10 – Biodiversity Management
- Section 11 – Hydrology Management
- Section 12 – Storage
- Section 13 – Safety and Security

2 The Site and Project Description

2.1 Site

2.1.1 The application site (the "site") covers approximately 136 hectares (ha) and is located wholly within the administrative boundary of Wrexham County Borough Council (WCBC). The site is approximately 2.5 km to the west of Wrexham town city centre.

2.1.2 The site comprises two interconnected areas north and south of the A525 Ruthin Road. The southern and larger part of the site is bound by the A525 Ruthin Road to the north, to the east by the A483, to the south by Plas Power Woods and its westernmost point by agricultural fields beyond which lies Rhos Berse Road and Nant Road. The northern part is bound by the A525 Ruthin Road to the south and extends northwards towards Higher Berse Road. Coedpoeth lies approximately 120m to the west and New Broughton lies approximately 600m north-west of the site. The site comprises several agricultural fields, primarily used for pasture grazing, bound by a mixture of mature woodland, trees, hedgerows, fencing, agricultural tracks and roads.

2.2 The Proposed Development

2.2.1 The Proposed Development is for a solar project with a battery energy storage system (BESS). The Proposed Development will consist of the construction of solar panels mounted on metal frames, new access tracks, underground cabling, perimeter fencing with CCTV cameras, switchgear substations, inverters, transformer stations, auxiliary transformers, permanent storage containers, monitoring houses, a BESS and all ancillary grid infrastructure and associated works. It will also include landscaping and ecological enhancement areas. The project will include a 33kV cable that will connect the solar, BESS and associated infrastructure to the Legacy Substation located approximately 1.2km to the south-west of the site, north of the B5246 Bronwylfa Road.

3 Construction Methods

3.1 Implementation and Management

3.1.1 The EPC Contractor will be appointed and will be responsible for the construction of the Proposed Development. The contractor will ensure that all measures and mitigation identified within the approved OCEMP are taken into account and implemented during the construction. In addition, the OCEMP will be monitored regularly throughout the duration of the construction phase so that good practice is implemented. The implementation of commitments within the OCEMP will be documented in an environmental compliance log which will be available for WCBC to review on request. The Contractor would be responsible for maintaining the log and keeping a photographic record of key activities.

3.1.2 A ‘responsible person’ will be designated to oversee the application of the OCEMP during all phases of construction and require that all personnel follow and adhere to the procedures outlined within the OCEMP. The detailed CEMP (to be produced prior to construction) will confirm key roles and responsibilities on site.

3.1.3 The detailed CEMP will include further information in respect of:

- Silt pollution prevention measures
- Procedures to deal with emergencies and/or spills
- Measures for the storage of oils and chemicals
- Details of any water discharge permits (if applicable)
- Further details of site waste management

3.2 Construction Programme

3.2.1 The timing of the construction of the Proposed Development would be dependent on securing planning permission and the discharge of any pre-commencement planning conditions. The construction of the Proposed Development will be in two phases – solar and BESS. The construction programme for the solar and associated infrastructure will be approximately 12-18 months and is expected to complete in 2026.

3.2.2 Construction of the BESS will take approximately 6-9 months (independent of the overall construction programme). The BESS element of the Proposed Development will be constructed at a later date and is expected to be constructed during 2032 and will be completed by 2033 at the latest.

3.2.3 It is assumed that the construction is likely to be phased as shown in **Tables 3.1** and **3.2**.

Table 3.1 Indicative Construction Programme – Solar

Construction Stage	Start	End
Site Preparation (incl. accesses, construction compound, fencing)	Q1 2025	Q1 2025
Delivery of construction materials	Q1 2025	Q3 2025
Construction and installation of the solar arrays, and associated infrastructure	Q2 2025	Q1 2026
Demobilisation and equipment removal	Q1 2026	Q2 2026
Landscaping including biodiversity enhancements	Q1 2026	Q4 2026
Commence operation	Q1 2026	N/A

Table 3.2 Indicative Construction Programme – BESS

Construction Stage	Start	End
Site Preparation (incl. accesses, construction compound, welfare)	Q3 2032	Q3 2032
Delivery of construction materials	Q3 2032	Q4 2032
Construction of the BESS	Q4 2032	Q1 2033
Demobilisation and equipment removal	Q1 2033	Q2 2033

Landscaping including biodiversity enhancements	Q4 2032	Q1 2033
Commence operation	Q1 2033	N/A

3.3 Construction Activities

3.3.1 The broad sequence of construction activities is likely to be:

- Site entrance creation and enabling works,
- Erection of security fencing and gates,
- Laying down of temporary construction compounds,
- Installation of the temporary compounds,
- Construction of access tracks through the site,
- Delivery of solar, PV and associated equipment,
- Installation of foundations for structures such as inverters, transformers, and substations,
- Piling and installation of mounting frames, solar panels and solar farm infrastructure,
- Cable trenching, ducting and backfilling,
- Installation of inverters, transformers, and substations,
- Laying of underground cable from the solar farm to the existing Legacy Substation,
- Commissioning of the solar farm and grid connection,
- Landscaping and ecological enhancements works, and
- Demobilisation from the site, including removal of the temporary construction compound.

3.3.2 Construction of the BESS will consist of the following principal activities:

- Delivery of the BESS and associated equipment,
- Installation of foundations for structures,
- Cable trenching, ducting and backfilling,
- Installation of BESS containers and associated infrastructure,
- Commissioning of the solar farm, BESS and grid connection.

4 Construction Working Hours

4.1.1 Construction working hours will be 07:00 to 19:00 hours Monday to Friday, 07:00 to 13:00 hours on Saturday and at no time on Sundays or on public or bank holidays. However, noisy activities such as piling will be undertaken 08:00 to 18:00 hours Monday to Friday and 08:00 to 13:00 hours on Saturday. In the event that works are required outside of these hours in exceptional circumstances, this would be agreed with the LPA prior to commencement of the activity, as necessary.

5 Traffic Management

5.1 Construction Traffic

5.1.1 An Outline Construction Traffic Management Plan (OCTMP) (document reference: 3.04) has been produced and provides a framework for management of construction vehicles associated with the development. The OCTMP aims to estimate the traffic generation due to construction, the vehicle routes which will be used, the construction programme and the strategies which will be implemented to reduce adverse impacts and overall help manage construction vehicle and staff movements. A detailed CTMP will be produced once an EPC Contractor has been appointed. A summary of the OCTMP is provided below and the full document is included in the DNS application.

5.2 Deliveries and Traffic

5.2.1 During the construction phase, traffic movement to and from the site will be reduced as much as practicable.

5.2.2 Deliveries will be restricted to the following hours:

- 0800 to 1800 Monday to Friday; and
- 0800 to 1300 on Saturday.

5.2.3 Deliveries will also be scheduled, where practicable, to avoid peak traffic times, i.e. avoiding rush hours and before and after school pick up/drop off times.

5.2.4 All delivery vehicles will be able to enter the sites and unload within the compound areas. There will be no queuing, parking or unloading within the public highway. The EPC contractor will be required to select a suitable layby or motorway service station on route to the site for delivery vehicles to wait at if required. This can be used to coordinate deliveries.

5.2.5 Based on previous experience, the construction works are estimated to require around 1,200 HGV movements across the course of the solar construction programme (and less for the BESS). Based on a 12-month construction programme and 5.5 day working week this would equate to around 4-5 HGVs (8-10 movements) per day. However, it is recognised that a flat profile across the programme is unlikely and there will be peaks in activity associated with overlaps in the construction programme and more transport intensive activities taking place.

5.3 Traffic Signage

5.3.1 Construction vehicle site accesses will need to be carefully designed to facilitate safe vehicle turning movements and where appropriate signage and traffic management measures may need to be utilised.

5.3.2 Cable route works are likely to be accesses via Bersham road B5098 or B5097 and then unnamed local roads. Cable works in the carriageway would likely require temporary road closures to achieve safe working areas. Controls would include diversionary routes, maintaining access (where practicable) and consideration of working out of hours. The final details will be set out in a detailed CTMP post planning consent.

5.4 Construction Workforce

5.4.1 A framework Construction Worker Travel Plan (CWTP) (document reference: 3.04, Section 7) has been developed to promote sustainable transport for workers during the construction and commissioning phases. This will be developed further once an EPC Contractor has been appointed and the final construction programme and worker numbers are confirmed. A final CTWP will be provided as part of a detailed CTMP to be submitted post planning consent. A similar management plan will be produced at the decommissioning stage.

5.4.2 Through the use of the CWTP the Principal Contractor will encourage the workforce and visitors to the site to:

- reduce their reliance on car travel;
- increase the use of walking cycling and public transport; and
- encourage work practices that reduce the need to travel, where practicable.

5.4.3 The Principal Contractor and subcontractors will seek to use a locally based workforce where practicable to help reduce the distance travelled to site and increase the potential to use non-car modes.

5.4.4 Members of the workforce living within 2km of the site will be encouraged to walk to work; those living within 5km of the site will be encouraged to cycle. All staff members will be encouraged to car share where practicable and to arrive on-site prior to the AM network peak hour.

5.5 Temporary Construction Compounds

5.5.1 During construction delivery vehicles will be constrained to the site access tracks and construction compound areas. Certain vehicles will be working within the sites, including the piling rig and small vehicles for on-site transport of equipment.

5.5.2 No vehicle parking, loading or unloading will take place within the public highway. The construction compound areas will be used for all parking, turning, unloading / loading.

6 Amenity

6.1.1 There is an existing Public Right of Way (PRoW) which currently runs through the Site – the 'Bersham Public Footpath 1'. The PRoW runs north / north-west through the southern portion of the Site before meeting A525. It continues approximately 650m to the west along A525 where it runs north through the northern portion of the Site.

6.1.2 There will be no extinguishment of this PRoW as a result of the Proposed Development, however some minor re-alignment will be required. The current WCBC Definitive PRoW Map shows the alignment of this route in a different position to the path walk on the ground. As such, the re-alignment of the route will additionally realign the Definitive Map, resulting in an alignment which is more accessible where the existing alignment is affected by steep topography.

6.1.3 Where appropriate, landscaping will be incorporated along the PRoW to screen views of the Development. A width of 5m will be incorporated for all PRoWs to be retained through the Site.

7 Noise Management

7.1.1 Best Practicable Means (BPM) of noise control will be applied during construction works to reduce noise (including vibration) at neighbouring residential properties and other sensitive receptors as far as practicable.

7.1.2 BPM are defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990 as those measures which are:

"reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications".

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7.1.3 The recommendations of BS5228: 2009+A1:2014 'Code of practice for Noise and Vibration Control on Construction and Open Sites', will also be implemented.

7.1.4 In order to limit potential noise impacts, noise generating construction works shall only be undertaken between:

- 0800 and 1800 Monday to Friday; and
- 0800 to 1300 on Saturdays.

7.1.5 Noise during construction will be controlled by limiting the hours of noise generating activities, where practicable. The noisiest activity is the piling of the mounting frames into the ground. The piling will be undertaken at the start of the construction process.

7.1.6 Any noise complaints shall be directed to the Site Manager as soon as reasonably practicable. Depending on the nature of the complaint, remedial action may need to be undertaken.

8 Dust

8.1.1 In order to control, prevent and reduce, so far as practicable, dirt on the access route and emissions of dust and other airborne contaminants during the construction works, the following measures will be implemented:

8.1.2 All vehicles exiting the sites during construction will require wheel washing. Depending on the time of year, and conditions on the sites, wheel washing facility requirements will vary.

- During summer or dry conditions, wheel washing facilities should include a pressure washer with suitable drainage as a minimum.
- During winter or wet conditions, wheel washing facilities should include ride on/off wheel washers if required.

8.1.3 The EPC Contractor will monitor the public highway conditions and will assess if further measures are required to maintain road cleanliness, such as road sweeping.

8.1.4 Given the ground condition of the sites, no significant dust issues are anticipated to arise during construction. If conditions on site are very dry then water misting/spraying will be employed to dampen ground to avoid any dust nuisance.

8.1.5 During windy conditions, dust generating activities will be avoided or reduced, where practical and any soil stockpiles will be covered when left for extended periods of time.

9 Materials and Waste Management

9.1 Management of Topsoil and Subsoil

9.1.1 No soils are expected to be generated that cannot be re-used on the site.

9.1.2 Good practice guidance for soil reinstatement would be followed, i.e. Defra Code of Practice for the Sustainable Management of Soil on Construction Sites.

9.1.3 Measures set out in the outline Soils Resource Management Plan (oSRMP) (document reference 3.08) will also be followed during the construction period to ensure that there is no adverse impact on soil function as a result of construction. Such measures include:

- Restricting the timing of works so that certain construction activities are undertaken when soils are sufficiently dry.
- Retention of soil profiles by separation and correct replacement of subsoil and topsoil.
- Avoiding compaction through restriction of works during heavy rainfall events and amelioration as appropriate.
- Appropriate storage of soils for reuse.

9.1.4 In accordance with the Building Research Establishment (BRE) 'Agricultural Good Practice Guidance for Solar Farms', during the construction process the time of year will be taken into account and low ground pressure tyres will be used to avoid soil compaction.

9.1.5 Earthworks will be required to create stable, level platforms for the associated infrastructure for the solar PV (e.g. the intake and customer substations) and also for the battery, and to create the trenches for the cables.

9.1.6 Topsoil will be removed from the relevant areas and set aside separately from any subsoil. When backfilling the cable trenches, the subsoil will be replaced first, followed by the topsoil.

9.1.7 Any topsoil not required for backfilling will be used to build up areas where new planting is to be undertaken in accordance with the detailed Landscape Proposals, and the remainder will either be thinly spread on the site or removed from site and disposed of at an appropriate facility.

9.1.8 Topsoil removed during construction of the access track will be retained onsite in a suitable bund at least 10 metres from any watercourse, for use in site landscaping.

9.1.9 Once construction is complete, both sites will be seeded in accordance with the detailed Landscape Plan and the detailed CEMP (to be produced prior to construction).

9.2 Management of Waste

9.2.1 The EPC Contractor will ensure that all waste is disposed of responsibly from the sites during and immediately following construction.

9.2.2 A Site Waste Management Plan will be developed to deal with waste generated during the construction phase. The collection of waste material will be via skips which will be situated to the side of the main compound area and selected areas within plots. Separation of the waste will take place for this reason thus waste skips for wood, card/paper, plastic, metal and general waste will be provided. All waste will be disposed of by licensed waste carriers to licensed tips.

9.2.3 The potential waste generated during the construction process will primarily be related to packaging, and will include:

- The pallets that the solar panels are packaged in - These will be either wood crates, or cardboard boxes. These will be removed from the sites on a regular basis. If they arrive on wooden pallets, then these have a value and will either be returned to the manufacturer/distributer, or collection by a local contractor will be arranged. If they arrive packaged in cardboard boxes, then these will be removed on a regular basis, either through a hired skip, or through trips to the closet appropriate recycling station.
- Packing materials for various components (such as screws, cabling, and mounting frames) - Any non-recyclable waste will be stored in a skip for regular removal to an appropriate landfill.
- Food waste from workers - Personal rubbish will be collected along with non-recyclable packaging materials, for disposal at an appropriate landfill.
- Portable toilets - Will be hired for the duration of the construction period; therefore, there will be no human waste issues.

9.3 Storage of Hazardous Materials

9.3.1 Hazardous materials, such as fuels and oils, will be stored within suitable containers within the compound. Above ground storage tanks will be located on a designated area of hardstanding within an appropriate bund. No underground storage tanks will be used during the construction period. Storage of liquids such as degreasers, solvents, lubricants and paints would be in segregated, bunded enclosures.

10 Biodiversity Management

10.1.1 The site is currently in agricultural use, and predominantly used for grazing. Wildlife is likely to be concentrated around boundary hedges and trees. An ecological assessment and the Environmental Statement outlines mitigation measures to reduce impacts on wildlife during construction.

10.2 Hedgerows

10.2.1 All hedgerow habitats will be protected from accidental damage during the construction phase by a suitable buffer zone of 6 metres. This protection zone will be delineated by a suitable fence and maintained for the duration of the works, and there will be no access, storage of materials, ground disturbance, burning or contamination within the fenced areas.

10.3 Badger

10.3.1 A walkover survey should be undertaken of areas of woodland within 30m of working areas prior to the start of construction to confirm that no new badger setts have been established. In the event that a new sett is found, a suitable buffer should be implemented or a sett closure licence sought from NRW if sett disturbance cannot be avoided.

10.3.2 During construction, open excavations should be infilled at the end of each working day or a ramp (such as a timber plank) should be created to prevent badgers (or other faunal species) becoming trapped. Regular gaps of sufficient size to allow access by badger should be included in perimeter fencing so that badgers can continue to use the site for foraging

10.4 Bats

10.4.1 Stand-offs should be implemented around all boundary habitats. If lighting is required during construction this should be directed away from hedgerows and boundary habitats.

10.5 Nesting birds

10.5.1 To prevent potential adverse effects on ground-nesting birds, a check should be undertaken by an Ecological Clerk of Works no more than 48 hours in advance of works within the pasture fields during the breeding bird season (generally March-August inclusive).

10.5.2 Suitable buffer zones should be implemented around active nests. No works should be undertaken within the buffer and the buffer areas should remain unlit until the young have fledged and dispersed from the nest site.

10.6 Great Crested Newt

10.6.1 Where it has been identified that construction works have the potential to affect great crested newts or their resting places, construction works should be carried out in accordance with a Great Crested Newt (GCN) Mitigation Strategy and under a European Protected Species (EPS) License. A Method Statement will be prepared and submitted under the EPS License and must be adhered to.

10.6.2 Precautionary working will be implemented for all areas of habitat of higher potential value for GCN including any disturbance of longer field margin grassland.

10.6.3 Wherever practical, existing established field margin grassland will be left undisturbed. The precautionary working would involve fingertip searches by an Ecological Clerk of Works where foraging habitat will be disturbed during the active season.

10.7 Dormouse

10.7.1 Where short sections of hedgerow removal (up to 10m) are required to widen the access for vehicles transporting the infrastructure onto the site, precautionary working measures should be undertaken. This will follow a non-licence method statement which will presume the presence of dormice in the local network of hedgerows. Checks for dormice nests will be undertaken in the section affected followed by the gradual removal of hedgerow overseen by an Ecological Clerk of Works.

10.7.2 A Welsh Government Dormouse Mitigation Licence would be sought from Natural Resources Wales should dormouse be encountered during the works and any works with the potential to affect the species postponed until the licence is granted.

10.8 Trees

10.8.1 A pre-commencement site meeting with the arboriculturist and developer will identify trees requiring protection during the construction phase. Tree protection barriers conforming to guidance given within BS 5837-2005 will be erected for any trees identified as needing protection.

10.8.2 The majority of hedgerows and mature trees surrounding the site will be retained and protected in line with BS 7837. There will be a requirement for a small amount of hedgerow removal to provide access tracks, where an existing opening cannot be utilised, which should be in strict accordance with the Arboricultural Impact Assessment (AIA) (ES Volume 3, Appendix 5.8 - document reference: 4.03.24).

10.8.3 The security fence will be installed inside the boundary vegetation, and all subsequent construction and deconstruction work will take place inside the security fence, thus the construction area will be isolated from any animals traversing the site.

10.8.4 The removal of vegetation (including the improved and poor semi-improved fields) must be completed outside of the bird nesting season (March to August inclusive), therefore between September and February, or be preceded by a check for active nests by a suitably qualified ecologist. If clear of nests, vegetation should be removed within 48 hours. If a nest is found, an appropriate buffer will be established by the ecologist, which is to be left undisturbed until the ecologist confirms that the checks have fledged, or the nest is no longer active.

10.8.5 A Construction Exclusion Zone (CEZ) by erection of tree protection fencing and the site security fence is to be established to reduce the potential for harm to occur to retained trees as far as practicable. No earthworks should be undertaken within the CEZ as indicated on the Tree Protection Plan. Within the CEZ there must be no mechanical digging or scraping, no alteration to existing ground levels including soil stripping, no earthworks, no handling or discharge of any chemical substance, concrete washings or of any fuels. Furthermore, vehicular or pedestrian access and the storage of any materials is prohibited within the CEZ. The CEZ is indicated on the Tree Protection Plan as Root Protection Zones (please refer to AIA, ES Volume 3, Appendix 5.8 - document reference: 4.03.24).

10.8.6 Additionally, no materials that may contaminate the soil such as concrete mixings, diesel oil and vehicle washings shall be discharged within 10m of the stem of any tree and no fires shall be lit within 10m of the maximum extent of a trees crown as concrete wash out, vehicle cleaning maintenance and refuelling would be in contained areas, which will be located in suitable areas on the site.

10.9 Invasive Species

10.9.1 Japanese knotweed (*Reynoutria japonica*) is listed in Schedule 9 of the Wildlife and Countryside Act 1981 and is subject to controls set out in Section 14 of this Act.

10.9.2 Small patches of Japanese knotweed are present in the northern parcel of the site. Where Japanese knotweed is present, appropriate stand-offs have been incorporated as part of the development proposals.

10.9.3 An Invasive Species Management Plan will be produced as part of the detailed CEMP which will be produced prior to construction of the Proposed Development. The Management Plan will include measures for control and where appropriate, eradication of the species.

11 Hydrology Management

11.1 Construction Drainage Systems

11.1.1 During the construction phase of the Proposed Development, temporary drainage mitigation techniques would be used, including, but not limited to, runoff interceptor channels installed prior to the construction of the operational drainage design so that discharge from the site is controlled in quality and volume during construction. The construction drainage system would be designed so that any runoff produced would be treated before being discharged to the surrounding environment. This may include the use of settling tanks and/or ponds to remove sediment, temporary interceptors, and hydraulic brakes. Any drainage service runs would be surrounded by appropriate granular bedding material to reduce any potential leaks from infiltrating into the below groundwater body. Monitoring would be undertaken and any damage to the temporary drainage network would be repaired/replaced.

11.2 Construction Techniques and Processes

11.2.1 Dust suppression equipment would be used to reduce the spread of sediment within the site, so that any dust created during construction is diverted into specific drainage systems equipped with sediment interceptors.

11.2.2 Construction material and / or spoil within construction compounds would be positioned away from surface watercourses / significant ecological areas (where available) and no hazardous substances would be stored within close proximity of the drainage network.

11.2.3 The main construction compounds and storage areas would be positioned within the western part of the site away from the surface watercourses.

11.2.4 Any area at risk of spillage, such as vehicle maintenance areas and hazardous substance stores (including fuel, oils and chemicals) would be bunded and carefully sited to reduce the risk of hazardous substances entering the drainage systems and local watercourses as far as practicable. Additionally, the bunded areas would have impermeable bases to limit the potential for migration of contaminants into surrounding watercourses and significant ecological habitats following any potential leakage/spillage event.

11.2.5 In line with standard building practices and as a precautionary measure, it is recommended that ground floor threshold levels of ancillary buildings would be raised a minimum of 150 mm above external ground levels, where feasible.

11.3 Excavation and Piling Mitigation Measures

11.3.1 Mitigation measures would be incorporated into the construction techniques so that the groundwater flow and quality is protected. During any piling and / or foundation excavation, the area would be isolated from surface water until completed. Should any groundwater be encountered during excavation, appropriate dewatering methods would be considered. Any water arising from excavations would be disposed through the temporary drainage system (if uncontaminated) and following removal of silt. Should contamination be encountered during excavation, work would be stopped until appropriate measures are in place to prevent mobilisation. Good practice construction techniques and design would be used for any excavations during the installation of foundations.

11.4 Pollution Prevention Measures

11.4.1 Refuelling of machinery would be undertaken within designated areas where spillages can be easily contained. Machinery would be routinely checked to ensure it is in good working condition.

11.4.2 Any tanks and associated pipe work containing hazardous substances included in List 1 of the Groundwater Directive (2006/118/EC) would be double skinned and be provided with intermediate leak detection equipment.

11.4.3 The following specific mitigation measures for the protection of surface water during construction activities would be implemented.

- Management of construction works to comply with the necessary standards and consent conditions as identified by NRW and WCBC.
- A briefing for all staff highlighting the importance of water quality, the location of watercourses and pollution prevention included within the site induction.
- Areas with prevalent runoff to be identified and drainage actively managed, e.g. through bunding and / or temporary drainage.
- Disturbance in areas close to watercourses reduced so far as practicable.
- Excavated material to be placed in such a way as to avoid any disturbance of areas near to the banks of watercourses and any spillage into the watercourses.
- Construction materials to be managed in such a way as to effectively reduce the risk posed to the aquatic environment.
- Plant machinery and vehicles to be maintained in a good condition to reduce the risk of fuel leaks.
- Drainage works to be constructed to relevant statutory guidance.
- Consultation with NRW during the construction period to promote good practice and to implement proposed mitigation measures.

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11.5 Water Quality Monitoring

11.5.1 Water quality monitoring would be carried out throughout the construction phase so that discharge of pollutants or increase in suspended sediment is avoided. A water quality monitoring methodology and schedule would be developed in consultation with stakeholders.

12 Storage

12.1.1 No long-term on-site storage of materials is required during construction.

12.1.2 During construction the HGVs will provide the materials at regular intervals throughout the construction period as construction progresses, rather than being delivered all in one go. Thus, infrastructure can be unloaded in the construction compounds from the HGVs, and transported directly to where it is needed using smaller internal vehicles, or by hand where appropriate. Short term storage of materials can be accommodated within the construction compounds until it is required.

13 Safety and Security

13.1.1 The EPC Contractor will be in charge of Health and Safety on-site. A Health and Safety board identifying potential hazards will be updated daily with all visitors required to sign in and adhere to on-site Health and Safety practices. All personnel working on both sites will be required to wear a high visibility vest or jacket, steel cap boots, and a hard hat as well as any other activity-specific safety wear.

13.1.2 It is intended that the security fence that will surround the Proposed Development for the duration of its life will be erected at the start of to the construction phase, so that the site is secure from the start. However, if this is not practicable, the site will have 24 hour security on patrol in order to adhere to health and safety regulations as well as prevent crime.