

Appendix A.5

Outline Construction Environmental Management Plan





Bodelwyddan Solar and Energy Storage Outline Construction Environmental Management Plan

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Prepared for:
Bodelwyddan Solar & Energy Storage
Limited

Prepared by:
Stantec

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Outline Construction Environmental Management Plan

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Glossary

Applicant-	Bodelwyddan Solar & Energy Storage Limited
CCBC -	Conwy County Borough Council
CDM -	Construction, Design and Management (with the relevant regulations contained in the 2015 Regulations document)
CEMP –	Construction Environmental Management Plan – a document reporting a series of interventions to control the impact of construction
CEZ -	Construction Exclusion Zone
CLMP -	Contaminated Land Management Plan
COSHH -	Control of Substances Hazardous to Health
CWTP -	Construction Worker Travel Plan
DCC-	Denbighshire County Council
EA -	Environmental Agency
ECow -	Environmental Clerk of Works
EHO -	Environmental Health Officer
ES -	Environmental Statement
HGV -	Heavy Goods Vehicle
IAQM -	Institute of Air Quality Management
IEMA -	Institute of Environmental Management and Assessment
LEMP -	Landscape Ecological Management Plan
LGV -	Light Goods Vehicle
LPA -	Local Planning Authority (CCBC and DCC – see below)
Mitigate -	to control or reduce the severity – in terms of the CEMP, the measures implemented to reduce the construction impact
NMWTRA-	Mid Wales Trunk Road Agent
Principal Contractor -	the main contractor appointed by the Applicant to deliver the works
PRoW -	Public Right of Way
DCWW -	Dwr Cymru Welsh Water



1 Introduction

1.1 Background

- 1.1.1 Stantec UK Ltd (Stantec) has been commissioned by Bodelwyddan Solar & Energy Storage Limited (the Applicant) to prepare an Outline Construction Environmental Management Plan (oCEMP) for a proposed solar photovoltaic electricity generating system and battery energy storage system ('BESS'), associated solar arrays, inverters, transformers, cabling, substations, access tracks, landscaping, ecological enhancement areas and associated ancillary development ('The Proposed Development') on land near Bodelwyddan, North Wales ('the Site'). The Site is cross-boundary, within the administrative boundaries of Conwy County Borough Council (CCBC) and Denbighshire County Council (DCC).
- 1.1.2 This Outline CEMP (referred to from here as 'The oCEMP') provides a strategy which governs the construction works associated with the Proposed Development of the Site for all contractors. It sets out, in broad terms, methods to avoid, reduce and mitigate construction effects on the environment. A full and detailed CEMP, in accordance with this Outline CEMP, would be subsequently submitted for approval via a planning condition should consent be granted.
- 1.1.3 This oCEMP will be passed onto the Principal Contractor, once appointed, to implement and formulate addendums as required and update as a live document.
- 1.1.4 The oCEMP is an active document and will require updating at key milestones. During the construction works, there may be changes in working practices, plant and equipment that should be used, in addition to new regulatory requirements. Ongoing reviews will allow the oCEMP to be renewed and updated as necessary.

1.2 Purpose of this Document

- 1.2.1 A CEMP is the lead management document that defines the procedures for achieving the objectives set out in relevant environmental legislation and planning policy, best practice (such as the Institute of Environmental Management and Assessment (IEMA) *Impact Assessment Guidelines: Implementing the Mitigation Hierarchy from Concept to Construction* - August 2024) and identified performance targets for the project.
- 1.2.2 This oCEMP has been prepared to set out the issues and management procedures to be adopted during the construction works on site to help control potential adverse impacts to the environment and the local community. To cause minimum disturbance to residents surrounding the area, this document considers:
- Construction traffic routing;
 - Control of dust and other emissions;
 - Control of noise and vibration;
 - Land contamination and drainage;
 - Ecology and natural habitats;
 - Hours of construction work; and
 - Contractors' compounds and storage arrangements.
- 1.2.3 The construction procedures specified in this document will be reinforced on site through the Contractor's detailed method statements. The Principal Contractor will inform site operatives



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and any sub-contractors of the requirements of their detailed method statements as necessary and ensure that they are implemented by the operatives and any sub-contractors.

1.2.4 The Principal Contractor should comply, as a minimum, with applicable environmental legislation at the time of construction. For this reason, the applicable statutory requirements are not repeated within this oCEMP. Further guidance on specific areas, such as soil handling and dust management, will be considered from industry best practice guidance documents as set out in each discipline section. The references to guidance documents within this document are not intended to be exhaustive.

1.2.5 In summary, the objectives of this oCEMP are to:

- Reduce (eliminating where practicable) the adverse effects of the construction of the Proposed Development;
- Document the controls to be adopted during construction;
- Enable agreement with the relevant approval authorities on mitigation measures to be adopted during construction; and
- Provide a plan for contractors to manage construction impacts.

1.3 Structure of this oCEMP

1.3.1 This oCEMP covers a range of topics relating to the identification and management of potential effects of construction. Additionally, other expert documents produced as part of the planning application, have been used to prepare this oCEMP.

1.3.2 The oCEMP is structured as follows:

- **Section 1:** Introduction;
- **Section 2:** Site Location and Proposed Development;
- **Section 3:** Construction Management and Methodology;
- **Section 4:** Construction Traffic;
- **Section 5:** Air Quality and Dust;
- **Section 6:** Noise and Vibration;
- **Section 7:** Land Contamination and Drainage;
- **Section 8:** Ecology and Natural Habitats;
- **Section 9:** Materials Management; and
- **Section 10:** Summary.

1.3.3 **Sections 3 to 9** consider the general issues for construction, potential impacts, mitigation of these impacts and topic-specific legal compliance.

1.4 CEMP Update Requirements

1.4.1 The CEMP is the critical link between the assessment work conducted in support of this full planning application, its delivery on site, and (if applicable) monitoring post construction.



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- 1.4.2 It will be used as a 'live document' during construction and updated by the Applicant and the Principal Contractor throughout the remaining work stages of the project, enabling it to adapt to changes and it should be reviewed periodically through the life of the project. A full and detailed CEMP, in accordance with this oCEMP, would be subsequently submitted for approval via a planning condition should consent be granted. Ongoing reviews will help ensure that the CEMP can be renewed and updated as necessary. The Principal Contractor will deliver the full CEMP and make any necessary updates.



2 Site Location and Proposed Development

2.1 Introduction

2.1.1 This section describes the location of the Site and sets out the development proposals.

2.2 Site and Surrounding Area

2.2.1 The Site comprises two parcels of land, and the cable route connecting the Sites to the National Grid Bodelwyddan substation. It measures approximately 183.77 hectares ('ha') in total. The land is agricultural and lies to the north and south of Bodelwyddan. The Site boundary is shown on **Figure 2.1**.

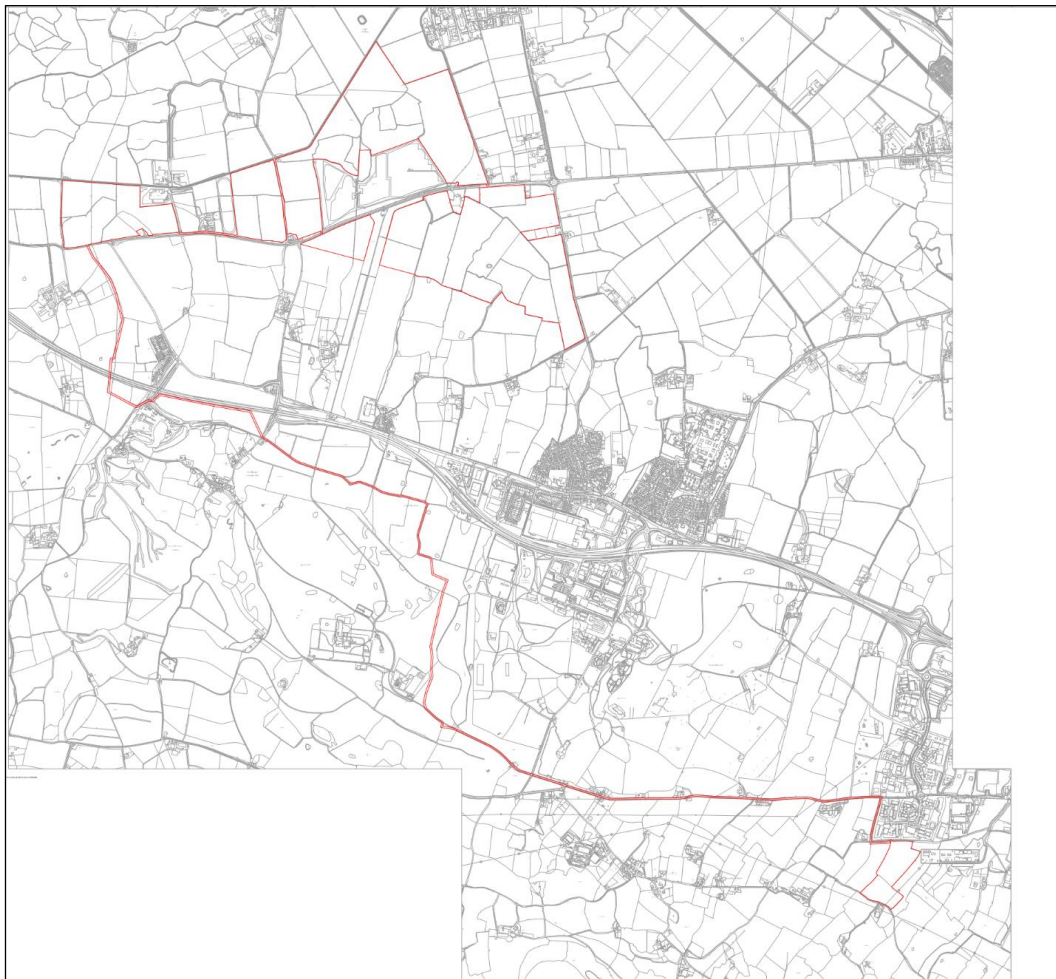


Figure 2.1 – Site Application Boundary

2.2.2 Solar Site

2.2.3 The larger parcel of land to the northwest of Bodelwyddan extends to approximately 168.95 ha, comprising land to the north and south of Rhuddlan Road (A547), and to the west of St Asaph Avenue, and hereinafter is referred to as the 'Solar Site'. Towyn and Kinnel Bay are located to the north of the Solar Site and Abergele to the west.

2.2.4 A 2015 consent for a 24MW solar farm (Conwy LPA ref. 0/40999) sits partially within this scheme's Solar Site. Only part of this approved development was constructed and the portion of the builtout area (currently operational) sits outside the Proposed Development's application

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red line. A northern section that was consented but not built out, however, sits within the Proposed Development's application redline and therefore the precedent for solar development in this area has been established. The associated Screening Opinion (Conwy LPA ref. ENQ/23841) confirmed that it was not EIA development and therefore an ES was not required.

2.2.5 BESS Site

- 2.2.6 The smaller circa 6.52 ha rectangular parcel of land is positioned south of St Asaph Business Park and to the west of Bodelwyddan substation. It is referred to as the 'BESS Site'. High voltage overhead lines transect the eastern part of the BESS Site and pylons are located to the east and south of the site. To the east, south and west of the BESS Site lies agricultural land.

2.2.7 Cable Corridor

- 2.2.8 The Cable Corridor is proposed to be entirely underground and runs from the Solar and BESS Sites will be linked to Bodelwyddan Substation via underground cables and likely to be 33kV double circuit. The cable corridor measures a total of 8.29 ha.

2.3 Proposed Development

- 2.3.1 The description of the Proposed Development is as follows:

'The construction, operation and maintenance of a proposed solar photovoltaic electricity generating system and battery energy storage system ('BESS'), associated solar arrays, inverters, transformers, cabling, substations, access tracks, landscaping, ecological enhancement areas and associated ancillary development.'

- 2.3.2 The Bodelwyddan Solar and Energy Storage project will provide a source of renewable energy, helping to reduce carbon emissions and contribute to Wales' net-zero goals. It is estimated that the proposed solar farm could generate up to 110 megawatts (MW) of electricity, which is equivalent to providing enough power to meet the annual electricity needs of approximately 26,657 homes, with approximately 35,569 tonnes of carbon dioxide saved per year.
- 2.3.3 The BESS would store up to 110MW of electricity during times of high renewable energy generation (such as solar and wind) and discharge it when demand from the grid is high or renewable generation is low.

2.4 Programme of Works

- 2.4.1 It is anticipated that the construction phase will last for approximately 12 – 24 months. Construction activities and deliveries will be carried out Monday to Friday 07:00-18:00 and between 07:00 and 13:30 on Saturdays. No construction activities or deliveries will occur on Sundays or on Public Holidays
- 2.4.2 It is assumed that the programme of works will be reviewed and updated by the future Principal Contractor(s) prior to commencement of the construction phase and as part of the CEMP documents submitted to CBCC and DCC.

2.5 Construction Works

- 2.5.1 During the construction phase, temporary construction compounds will be required to facilitate construction. The compounds will be located within the Solar and the BESS Sites, near to the Site entrances, to minimise HGV traffic within the Site. The internal access tracks will facilitate the movement of construction vehicles around the Sites. Where possible, these will follow existing tracks around the Site and be of a fully permeable construction. The secure temporary



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construction compounds will be used to store materials and provide welfare facilities during the construction period.

2.5.2 The temporary compounds will be formed of a temporary permeable hardcore/gravel base atop a mesh membrane to facilitate ease of removal when construction is complete. Compounds will include:

- Temporary gated security fencing (e.g. Heras Fencing) and temporary CCTV cameras;
- Temporary portable buildings to be used for offices, welfare, and toilet facilities;
- Materials and equipment storage areas;
- Lighting may be required during construction periods but will be temporary in nature and normal working hours will be adhered to except in specified circumstances;
- Parking and turning areas for delivery vehicles and workers' vehicles; and
- Wheel washing facilities.

2.5.3 It is anticipated that the key construction activities are likely to include:

- Site establishment and enabling works for construction, including the erection of perimeter fencing and implementing any required ecological/environmental protection measures;
- Implementation of temporary construction facilities, temporary security measures and internal access track;
- Deliveries and construction of the solar farm, including the installation of mounting framework, solar panels and ancillary units;
- Deliveries and construction of the BESS infrastructure and substation compound;
- Cable trenching, ducting and backfilling to connect solar generating equipment to the substation equipment and from the substation equipment to the BESS Site and point of connection;
- Testing and commissioning of the generating station equipment, BESS infrastructure and grid connection equipment; and
- Landscaping and biodiversity enhancements.



3 Construction Management and Methodology

3.1 Introduction

- 3.1.1 This section provides an overview of the proposed Site management procedures.
- 3.1.2 Key legal and guidance references are provided for information purposes only. The lists are not exhaustive and should be reviewed periodically throughout the construction phase.

3.2 Roles and Responsibilities

The Applicant

- 3.2.1 Overall responsibility for the CEMP and ensuring legislative compliance lies with the Applicant.
- 3.2.2 The Applicant will ensure that all contractors engaged in the construction of the Proposed Development have an obligation to comply with good practice for construction including preparation and implementation of the CEMP.
- 3.2.3 The Applicant may appoint a Project Manager, if they do not undertake this role, to act a central point of contact between CCBC, DCC and the Principal Contractor on the CEMP.
- 3.2.4 The Applicant may appoint a Principal Designer, or elect to undertake this role, to ensure that suitable arrangements are made and implemented for the co-ordination of Health & Safety measures during planning and preparation for the construction phase. They will also carry out any other duties in line with the Construction, Design and Management (CDM) Regulations 2015.

The Principal Contractor

- 3.2.5 The Principal Contractor will carry out the management, co-ordination and implementation of the CEMP.
- 3.2.6 It will be the responsibility of the Principal Contractor to see that all their staff, sub-contractors, and site workers are aware of the CEMP. This is so that everyone understands the aims of the CEMP and recognises their personal responsibility in its implementation, protection of the environment and legislative compliance.
- 3.2.7 The Principal Contractor will have responsibility for ensuring that the CEMP and associated documentation are kept up to date along with details of specific permits etc. Documentation, recording and monitoring of the CEMP will be essential and updated on a regular basis and verified at the end of the project.
- 3.2.8 It is the Principal Contractor's responsibility to check that construction works are undertaken in compliance with all relevant and current legislation applicable at the time of the works.
- 3.2.9 The Principal Contractor will prepare Specific Method Statements detailing how they plan to implement the construction management procedures, detailed in this Construction Management Plan and shall take into account the philosophy promoted by the CEMP.
- 3.2.10 The Principal Contractor should consider registering the project with a national compliance scheme such as the Considerate Constructors Scheme (CCS). The CCS recognises and rewards better than standard industry practice in the following sections:
 - Care about Appearance;
 - Respect the Community;



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- Protect the Environment;
- Secure Everyone's Safety; and
- Value their Workforce.

Site Manager

3.2.11 A Site Manager should be identified by the Principal Contractor to co-ordinate activities during construction. This will include:

- Making sure that the CEMP is followed, and any addendums prepared;
- Ensuring appropriate training and advice is provided to contractors;
- Monitoring construction activities and compliance; and
- Acting as a point of contact between contractors and other stakeholders.

Sub-contractors

3.2.12 Sub-contractors and suppliers will be contractually obliged to adhere to the requirements of the CEMP. They shall check that all their Site personnel are inducted on the requirements of the CEMP and are aware of it prior to commencing any work on Site.

3.2.13 Materials suppliers should provide details to the Principal Contractor of the provenance of all materials they supply to the development.

Workforce Numbers

3.2.14 Until a developer and contractor are appointed, and the programme of works confirmed, it is not possible to know the exact numbers of the likely workforce on Site. However, during the construction phase it is anticipated to have an estimated workforce of between 60-115 roles, which includes site clearance, civil engineering, solar panel and battery installation, grid connection and protection management.

3.2.15 During the operational phase, it is estimated there will be approximately 5 full time roles.

3.3 Statutory Authorities

3.3.1 There are a number of Statutory Authorities and Agencies who - by virtue of their statutory duties and responsibilities - will have interests in the Environmental aspects of the design and construction of the Proposed Development. These Authorities have been consulted during the planning stage as necessary and ongoing liaison will continue as appropriate throughout the design and construction process.

3.3.2 These Statutory Authorities include (inter alia):

- Local Planning Authorities – CCBC and DCC

CCBC and DCC are the Planning Authorities who will oversee the discharge of all planning conditions relating to the Proposed Development.

- Environmental Health Authority – CCBC and DCC

CCBC and DCC are the Environmental Health Authority and will be consulted on various issues including noise, dust and site working hours.



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- Joint Highway Authorities – CCBC, DCC and Mid Wales Trunk Road Agent (NMWTRA)

CCBC and DCC are the Local Highway Authority, NMWTRA the Strategic Highway Authority. They will be consulted with regards to appropriate routes for haulage vehicles and access to the Site.

- Local Water and Drainage Authority – Dwr Cymru (Welsh Water) (DCWW)

DCWW is the Local Drainage Company. They will be consulted on any drainage systems which they will own.

- Lead Local Flood Authority – CCBC and DCC

CCBC and DCC are the Local Drainage Authority. They will be consulted on any works to water courses and discharges.

3.4 Risk Assessments

- 3.4.1 Construction activities undertaken on-site will be subject to more detailed risk assessment by the Principal Contractor, as appropriate, and this will:

- Identify potential impacts that can be anticipated;
- Assess the risks from these impacts;
- Identify the control measures to be taken and re-calculate the risk; and
- Report where an unacceptable level of residual risk is identified so that action can be taken through design changes, re-scheduling of work or alternative methods of working in order to reduce the risk to an acceptable level.

- 3.4.2 The results of risk assessments, and their residual risks, are only considered acceptable if:

- The severity of outcome is reduced to the lowest practical level;
- The number of risk exposures are minimised; and
- All reasonably practical mitigating measures have been taken and the residual risk rating is reduced to a minimum.

- 3.4.3 The findings of the risk assessment and, in particular, the necessary controls will be explained to all contractors before the commencement of the relevant works using an agreed instruction format (e.g., by 'toolbox' talks by the site management).

3.5 Site Standards

- 3.5.1 Site Standards will be agreed with the Principal Contractor and will detail the minimum measures that should be achieved for general operations falling outside the risk assessment procedure.

- 3.5.2 These will cover issues such as storage of materials, management of waste, noise and vibration, and water pollution control. The standards should be used as a briefing tool on Site. These standards will also form the basis of 'toolbox talks' which will inform all contractors working on site of the potential environmental risks arising from construction activities.

- 3.5.3 Best practice construction site management techniques will be implemented to avoid/reduce the generation of excessive waste, dust, noise, lighting, noise and vibration.



3.6 Communications and Training

Overview

- 3.6.1 The Principal Contractor will be required to establish a series of communication protocols to enable relevant stakeholders to be kept informed of construction progress and any issues arising. This will also help to establish lines of communication should any stakeholders wish to raise issues regarding the construction works.
- 3.6.2 The communication protocols will also establish appropriate relations between contractors, the Applicant, any adjacent construction works, occupants of properties near construction sites (including the current occupiers and the local community), and any other key stakeholders such as CCBC and DCC.

Local Community and Third-Party Liaison

- 3.6.3 The Project Manager, working with the Site Manager, will act as a central point of contact between CCBC and DCC, the Applicant, the Principal Contractor, the local community and other third parties. The Project Manager will have the responsibility of keeping the local community informed of construction progress and be the main point of contact with them should any issues arise. The Project Manager will also have the responsibility of responding to complaints or emergencies.
- 3.6.4 To reduce disruption to nearby residents, all relevant parties potentially affected by construction works should be contacted. Correspondence should include details of the nature of the work, hours of works, timetable of works and phasing.
- 3.6.5 The Project Manager should also consider the requirement for meetings to be set up with the local resident and employer representatives.
- 3.6.6 The Principal Contractor, as part of their own communications procedure, will need to make sure that all site generated enquiries and/or complaints are effectively logged, communicated to the Project Manager and put into action as appropriate.

Training

- 3.6.7 Training is essential to implement the CEMP, protect the environment and reduce impacts during construction activities. It is also necessary to enable compliance with the various legislation. A short briefing note on the CEMP will be provided to visitors to the Site.
- 3.6.8 A copy of the CEMP will be available in the main site office.
- 3.6.9 No construction personnel including office staff will be permitted to work on the Site until they have attended a site induction course which includes a briefing on the CEMP and ways of minimising environmental effects, waste management and responding to emergencies.
- 3.6.10 Toolbox talks to site staff are an effective means of focussed communication for specific activities or areas of higher risk.

Project Communications and Reporting

- 3.6.11 The Project Manager will need to set up procedures for communicating and reporting to the Principal Contractor on all matters relating to the environment. This may include the use of key performance indicators.



3.7 Consents and Licenses

- 3.7.1 The Principal Contractor will be responsible for any consents, permissions or licences necessary for the construction works that are not already in place by the Applicant. For example – for gaining land drainage consent and waste licenses.
- 3.7.2 A register of consents, permissions and licences must be kept by the Principal Contractor, to include all applied for and secured, details of expiry dates, conditions and commitments that must be adhered to and all related correspondence. The Principal Contractor should make sure that this is kept up to date.

Legislation and Guidance

- 3.7.3 It is the Principal Contractor's responsibility to check that construction works are undertaken in compliance with all relevant and current legislation applicable at the time of the works.
- 3.7.4 It is expected that through site induction and toolbox meetings, staff will gain an awareness of the information contained within these documents.
- 3.7.5 Provision, communication and update of the list of environmental legislation during construction will be the responsibility of the Principal Contractor.

3.8 Emergency Planning and Incident Control Procedures

General

- 3.8.1 The Principal Contractor will develop and implement an incident control procedure for the project. The aim of this incident control procedure is to prevent the release of pollutants (for example oil and fuels) into the environment and to protect health and safety of those on-Site.
- 3.8.2 Emergency procedures are also to be prepared by the Principal Contractor.

Pollution Incident Recognition

- 3.8.3 The Principal Contractor will undertake health, safety and environmental induction training courses to highlight the key potential environmental pollution issues to all relevant project personnel. Briefing topics will include:
- Uncontrolled discharge / spillage of polluting substances - such as chemicals, oil, concrete etc. - into controlled waters or sewers;
 - Uncontrolled discharge of contaminated surface water run-off - such as oil, chemical, suspended solids contamination - into controlled waters;
 - Release of smoke (e.g., from fire) into the atmosphere;
 - General ecological, archaeological and environmental awareness; and
 - Spillage of solid waste into sensitive areas and risks of windblown litter and debris.

Emergency Planning

- 3.8.4 The Principal Contractor will set up and manage systems, procedures and equipment for emergency planning which will include the following:
- Provision of adequate spillage containment materials to stop and contain pollution, for example the use of available earth where stockpiles are strategically placed in vulnerable areas;



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- Provision of a site drainage plan, identifying and colour-coding surface water drainage separate to foul sewer drainage. This will assist in the siting of storage containment areas and associated protection measures;
- Emergency bunding / control packs to be available at key locations in the event of a pollution incident;
- Liaison with the appropriate representatives from Natural Resources Wales (NRW) and DCWW, and essential local emergency services to discuss, in particular, emergency pollution control plans and emergency communications strategy; and
- Have a site emergency pollution control response in place to respond to pollution incidents.

Incident Control and Reporting

3.8.5 Incident control procedures will be developed by the Principal Contractor in liaison with CCBC and DCC, the NRW and essential emergency services. The control procedure will include:

- Containment of pollution at source;
- Reporting incident immediately to site management team;
- Raising the alarm to the emergency pollution control response team;
- Summoning emergency services where appropriate;
- Safe disposal of pollution waste; and
- Notifying the local NRW regional office.

3.8.6 All incidents shall be recorded by the Principal Contractor and reported to the Applicant as soon as practicable, and if appropriate, reported to the relevant stakeholders.

3.8.7 In case of Incidents or Emergencies occurring on site, the following authorities will need to be contacted appropriately:

3.8.8 The nearest hospital with A&E facilities is as follows:

Glan Clwyd Hospital
Bodelwyddan
Rhy
LL18 5UJ
Tel: 03000 843843

3.8.9 NRW's Incident Hotline should be contacted immediately, and work stopped should any discharge to adjacent watercourses have occurred. The Hotline number is: 0300 065 3000.

3.8.10 The nearest Fire & Rescue station is located at:

North Wales Fire & Rescue Service
Ffordd Salesbury
Saint Asaph
LL17 0JJ
Tel: 01745 535250



3.9 Site Logistics Control and Site Planning

Construction Site Logistics

3.9.1 Schedules and plans to be prepared by the Principal Contractor will show an overview of the logistics plan for construction.

3.9.2 Topics covered should include:

- Site working hours;
- Site layout (e.g. principal access/egress points, routing plans, site security);
- Site offices and welfare facilities;
- Site access routes (construction traffic management);
- Site demarcation and access control;
- Lighting arrangements;
- Delivery areas; and
- Storage and lay-down.

Welfare Facilities

3.9.3 In accordance with relevant guidance, welfare facilities will need to be provided on site. These should include toilets and washrooms with hot water; drying / changing rooms; and a first aid post, as appropriate.

3.9.4 To comply with the CDM 2015 Regulations, and also to safeguard the Site from pollution and from poor sanitation, the Principal Contractor will be responsible in ensuring that the following welfare facilities are provided on site:

- Toilets - an adequate number of toilets must be provided at all times;
- Washing Facilities - these must be located next to both toilets and changing areas;
- Storing and changing clothing facilities - all construction sites should have areas for storing clothing not worn on site and protective clothing needed for site work;
- Rest facilities - these facilities should provide a shelter from wind and rain and be heated as necessary;
- Drinking Water - there should be a supply of potable drinking water readily available which, where possible, should be supplied directly from the mains supply;
- Heating - this should be a properly maintained heating system; and
- Domestic Effluents and Rubbish - there should be an efficient system of collecting and disposing of domestic effluents and rubbish, i.e. effluent from the toilet and washing facilities and rubbish from any mess/canteen facilities.

3.9.5 Any compound lighting is to be tilted and angled to minimise glare and nuisance to any neighbouring light sensitive receptors such as nesting sites, watercourses, highways and residential properties for the duration of the construction period.



Site Security

- 3.9.6 The Principal Contractor will provide boundary fencing / delineation, including suitable signage and any associated security in accordance with appropriate guidance.

Construction Hours

- 3.9.7 No construction work (including use of machinery and / or plant maintenance) shall be carried out on the Site other than between the following hours:
- 0700 hours and 1800 hours on Monday to Friday;
 - 0700 hours and 1330 hours on Saturday; and
 - At no time on Sundays, Bank or Public Holidays.
- 3.9.8 No construction traffic shall enter or leave the Site before 0700 Mondays to Saturday or at any time on Sundays, or public holidays.
- 3.9.9 The timings set out above are the industry standard and to be confirmed as detailed design progresses.
- 3.9.10 Prior notice and agreement will be sought with CCBC and DCC where work outside of the above stated working hours is required.
- 3.9.11 During winter months, work may continue during hours of darkness within normal working hours subject to adequate artificial lighting to illuminate the works in question.

General Types of Plant and Equipment

- 3.9.12 All key static plant and equipment (e.g., hoists, power distribution units, diesel storage tanks etc.) will be clearly identified on site logistics drawings.
- 3.9.13 The Register allows an inventory of on-Site plant and equipment to be kept, to check they are maintained in accordance with statutory test, examination, and inspection requirements, and that specific operator training requirements are addressed. This list also assists by providing a useful cross-reference for noise level predictions and assessments of plant and machinery in respect to ensuring that excessive noise levels are identified, and suitable control measures implemented to reduce those noise levels.

3.10 Monitoring, Review and Complaints

- 3.10.1 The requirements for a programme of monitoring, review and complaints will be reviewed by the Principal Contractor.



4 Construction Traffic

4.1 Introduction

- 4.1.1 Traffic will be generated during the construction of the Proposed Development, as a result of bringing plant and materials to the Site, removing waste, and construction personnel movements. This section identifies the mitigation measures required to limit potential impacts of highway works, transport and traffic movements arising from the construction of the Proposed Development.
- 4.1.2 This section has been informed by the Construction Traffic Management Plan (CTMP).

4.2 Potential Impacts

- 4.2.1 Construction of the Proposed Development will consist of a mix of construction traffic. This would include movement of workers and movement of material, primarily by Heavy Goods Vehicles (HGVs).
- 4.2.2 As concluded in the CTMP, there will be no adverse impacts due to construction associated with the Proposed Development and no transport-related impacts on the local road network. However, construction traffic has the potential to increase air pollution in the local area.

4.3 Management and Mitigation Measures

- 4.3.1 This sets out the management procedures put in place so that negative impacts of construction traffic on local highway users, highways infrastructure, and the wider environment are minimised.

Construction Traffic

- 4.3.2 Typical construction phase traffic has been set out in the CTMP. This covers anticipated number, frequency and size of vehicles. Construction will result in daily HGVs and Light Goods Vehicles (LGVs), as well as site operatives' cars.

Vehicle Access and Routing

- 4.3.3 Construction access to the Solar Site is anticipated to be from Rhuddlan Road and construction access to the BESS Site is anticipated to be from the B5381 (Glascoed Road) to an unnamed road. The anticipated construction access is shown on **Figure 4.1**.



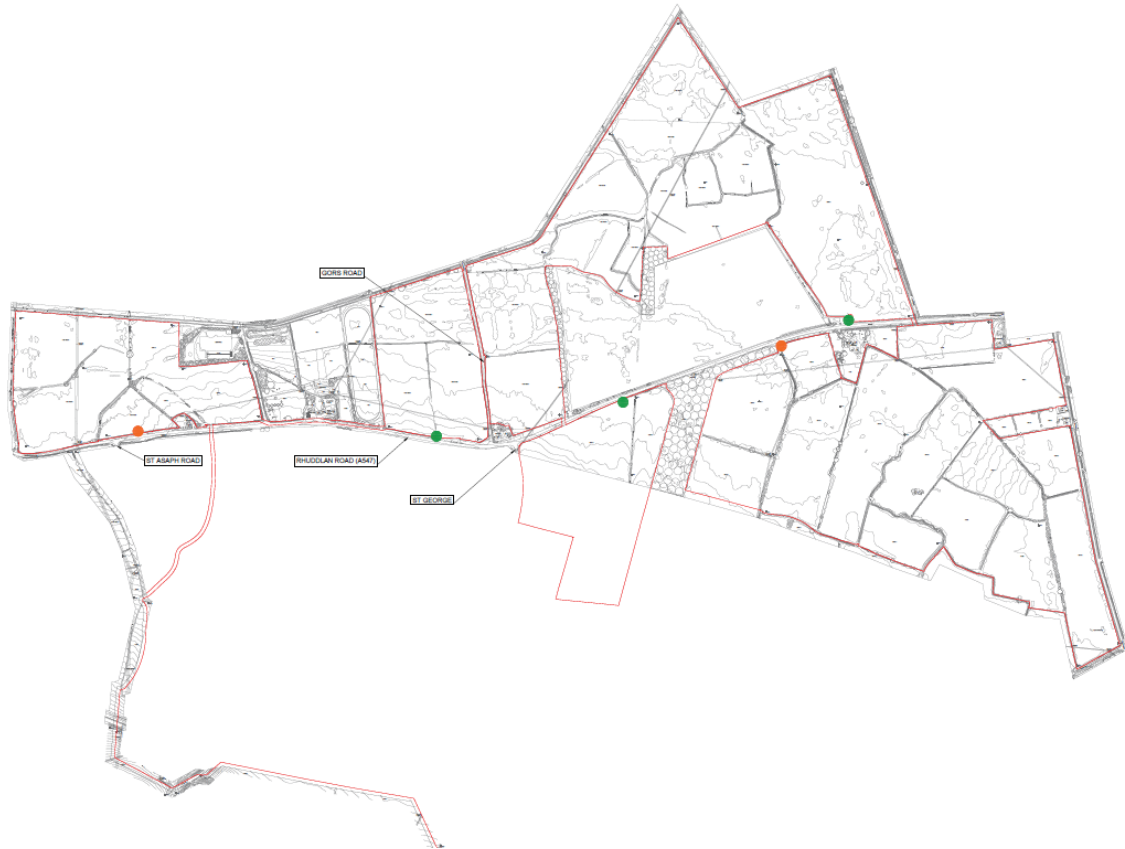


Figure 4.1 – Construction Traffic Access Plan (Proposed Development)

4.3.4 Figure 4.2 and Figure 4.3 demonstrate the proposed construction route for the BESS and solar panels. Construction vehicles will arrive to the BESS access south of Glascoed Road by doing the following:

- Exit the North Wales Expressway (A55), leaving at Junction 26;
- Follow Ffordd William Morgan south to the Ffordd William Morgan / Glascoed Road (B5381) / Ffordd Richard Davies roundabout;
- At this roundabout, vehicles will take the western Glascoed Road (B5381) arm west, until the unnamed carriageway / Glascoed Road priority junction; and
- Vehicles will route south along the unnamed carriageway to access the Site.

4.3.5 Construction vehicles for the Solar Farm will access from Rhuddlan Road and:

- Exit the North Wales Expressway (A55) at Junction 24; and
- Travel east onto Rhuddlan Road where the vehicles will enter one of the five Solar Farm access points.

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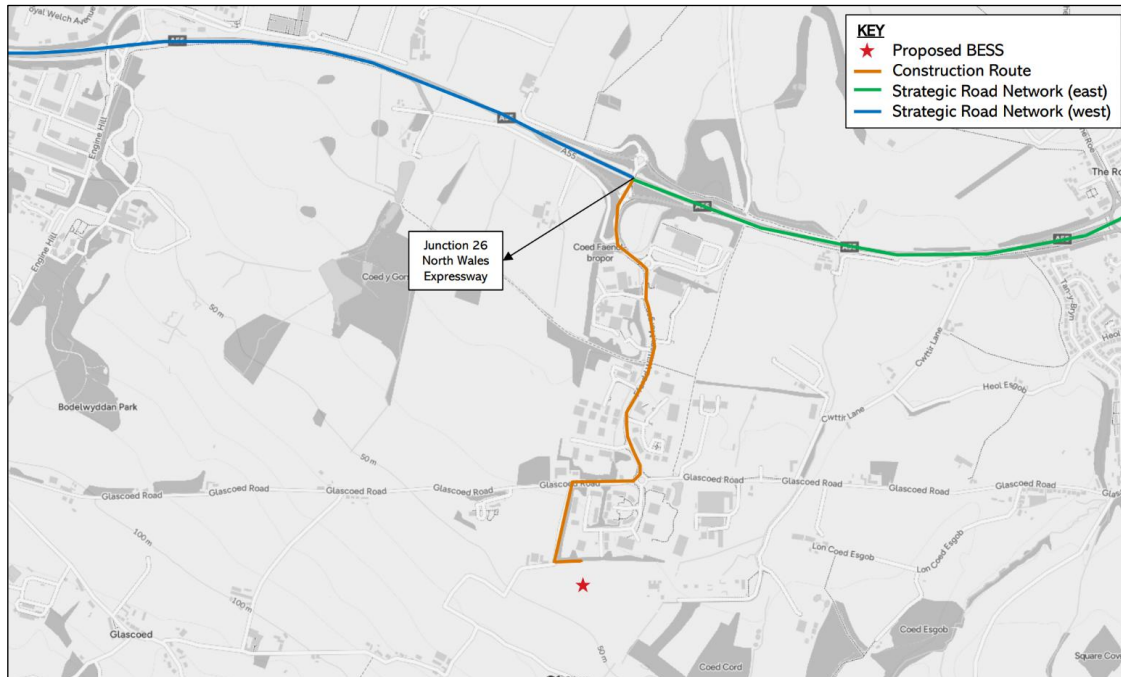


Figure 4.2 - BESS Construction Vehicle Routing

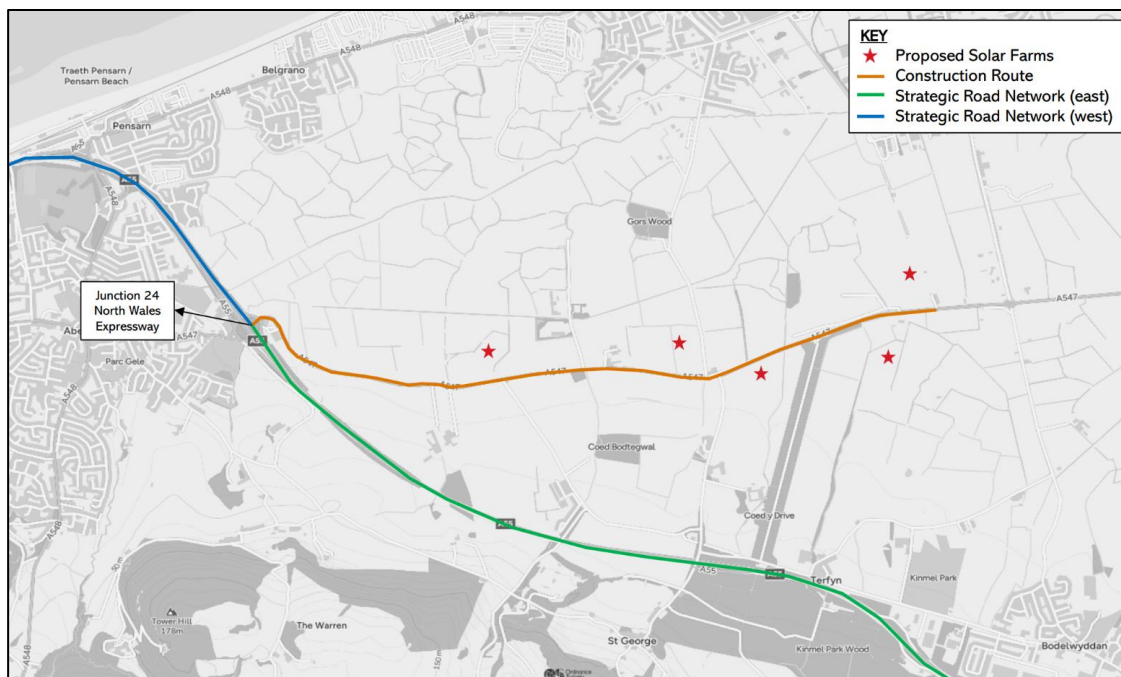


Figure 4.3 - Solar Farm Construction Vehicle Routing

Public Right of Way Management

4.3.6 There are no Public Right of Ways (PRoW) within the Site. Quarry Line Path PRoW is located north of Rhuddlan Road and runs along the eastern boundary of the Site



Parking

- 4.3.7 There will be on-Site parking and unloading facilities to facilitate the construction of the Proposed Development. Construction vehicle parking will be provided in further detail within the detailed CEMP and CTMP. Construction vehicle parking will be monitored and managed in accordance with the detailed CTMP.

Operating Vehicles and Sustainable Travel

- 4.3.8 The CEMP will include the following mitigation measures to reduce air quality impacts from construction traffic:
- Ensure all Non-Road Mobile Machinery (NRMM) meet the required emission standards. Seek to use plant and machinery with the lowest possible emissions;
 - No idling vehicles;
 - Avoid or minimise the use of diesel or petrol powered generators;
 - Follow the requirements of the CTMP and CWMP in relation to construction and worker vehicle traffic management; and
 - The use of internal tracks on-Site would be subject to internal speed limits to prevent dust generation.



5 Air Quality and Dust

5.1 Introduction

- 5.1.1 This section identifies the mitigation measures required to alleviate the potential construction impacts on air quality arising from construction of the Proposed Development.

5.2 Potential Impacts

- 5.2.1 The following activities have the potential to cause emissions of dust during construction of the Proposed Development include earthworks and construction. Earthworks, construction activities and trackout are anticipated to generate the largest amount of emissions, particularly dust and dirt. However, construction HG movements are unlikely to exceed 10 deliveries a day during peak of construction. This number is below the Institute of Air Quality Management (IAQM) criteria and potential impacts of construction are therefore anticipated to be minimal.

5.3 Management and Mitigation Measures

- 5.3.1 Based on the above risk of emissions from earthworks, construction activities and trackout, the following mitigation measures on-Site are likely to include the following:

- Undertake daily inspections to monitor dust/dirt;
- Increase the frequency of Site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions;
- Plan works and construction compounds so that machinery and dust causing activities do not impact sensitive receptors;
- Avoid Site runoff of water or mud;
- Remove materials that have a potential to produce dust from Site as soon as possible;
- Cover any significant stockpiles to prevent wind whipping;
- Only use construction equipment with suitable dust suppression techniques;
- Ensure an adequate water supply on the Site for effective dust management;
- Use water-assisted dust sweepers on the access and local roads, to remove any material tracked out of the Site;
- Ensure vehicles entering and leaving the Site are covered to prevent escape of materials during transport;
- Follow CTMP requirements with respect to wheel wash facilities for vehicles tracking out of the Site and on the public highway; and
- Provide wheel washing facilities for internal vehicles and NRMM to minimise the introduction of dust.

- 5.3.2 These measures reflect best practice as set out in the IAQM guidance.

- 5.3.3 Recommended measures to be taken forward in a CEMP for the benefit of air quality management and other CEMP topics include:

- Include community engagement before and during construction activities;



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- Sharing contact details of the Principal Contractor or other persons accountable for air quality and dust issue for any potential complaints;
- Recording complaints and taking appropriate measures to reduce emissions; and
- Make the complaints log available to the CBCC and DCC when asked.



6 Noise and Vibration

6.1 Introduction

- 6.1.1 This section identifies the mitigation measures required to alleviate the potential impacts of noise and vibration arising from construction of the Proposed Development.

6.2 Potential Impacts

- 6.2.1 Construction noise could potentially increase the ambient noise levels at existing noise-sensitive receptors. The following construction activities have noise impact associations:
- Site establishment, enabling works and temporary construction compounds;
 - Deliveries for and construction of the Proposed Development including generation equipment, BESS, grid connection infrastructure and connective cabling; and
 - Testing and commissioning.
- 6.2.2 Although construction phase will give rise to noise, the nature of the construction works will be dispersed, therefore only impacting sensitive receptors, such as residential properties, for a short period of time.

6.3 Management and Mitigation Measures

- 6.3.1 The Principal Contractor will ensure that all suppliers and subcontractors on Site adhere to the requirements of the CEMP and are aware of the locations of sensitive receptors and that all traffic adheres to the routing plan.
- 6.3.2 There are a number of mitigation measures that constitute best practice techniques to mitigation noise impacts during the construction phase. These may include the following:
- Shutting down noise emitting equipment and vehicles when not in use;
 - Moving 'noisy' equipment far from sensitive receptors and implement screening when practical;
 - Delivery vehicles will be routed to minimise disturbance to nearby residents and deliveries will be programmed to arrive during the least sensitive times of day;
 - Care will be taken to avoid creating unnecessary noise;
 - Quietter plant options will be procured where possible and low vibration practices will be employed where possible;
 - Low vibration working methods will be used when appropriate and vibration levels on Site will be monitored regularly;
 - Instructing personnel on best practice mitigation measures to reduce noise and vibration as part of induction training;
 - Not undertaking construction works outside of the hours agreed with CCBC and DCC; and
 - Undertaking construction for the cable route through 'Best Practicable Mean's provided in BS 5228-1:2009+A1:2014.



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- Reinstatement of the land within the Cable Corridor to its previous state following installation of cable.
- Avoid or minimise impact of construction activities within the Cable Corridor on parkland features within Kinmel Park.



7 Land Contamination and Drainage

7.1 Introduction

- 7.1.1 This section identifies the mitigation measures required to alleviate the potential impacts related to land contamination and drainage during construction of the Proposed Development.

7.2 Potential Impacts

- 7.2.1 The Proposed Development has the potential to produce contaminants - such as silty run-off that could affect water quality and ground conditions. Sources of pollutants and contaminants include excavated and exposed ground, stockpiles and material storage, plant and haul roads, concrete production and washout areas, cleaning and cutting operations. Contaminants produced from the construction stage could enter pollutant receptors such as wells and springs and ultimately the groundwater resource.

7.3 Management and Mitigation Measures

Land Contamination

- 7.3.1 Within the CEMP, in respect of 'Ground Conditions' measures undertaken to reduce land contamination will be an integral part of the environmental arrangements, providing the Outline for ensuring environmental controls are complied with.
- 7.3.2 The overarching CEMP will establish the specific environmental controls on construction works, including:
- An awareness briefing regarding ground conditions and appropriate methods of working to limit disturbance of potentially contaminated soil or water, where possible. The methods will be informed by the findings of the targeted ground investigation;
 - Measures to minimise exposure to contaminated soils e.g., by controlling dust generation and the adoption of good hygiene standards will prevent prolonged skin contact, inhalation, and ingestion of soils during construction;
 - Measures to minimise and control runoff/leaching to Controlled Waters;
 - Measures to protect soils, such as the use of tracked or low ground pressure machines (i.e., with large tyres), to impose low pressures on the soil – analogous to farming machinery. Vehicle tracking routes should be devised which minimise repeat journeys over the Site to reduce rutting and damage to the vegetation and soil structure;
 - Vegetation disturbance should be minimised as much as possible and any bare ground resulting from construction should be re-seeded. On completion of the works the fields will be tilled using light farming machines and prepared appropriately for seeding to encourage early native vegetation growth, restoration of the soil structure and natural creation of an environment to encourage native meadow plants to flourish; and
 - Prevention measures including maintenance of construction vehicles, bunded storage, designated wheel washing areas, settling basins, screening stockpiles of materials, and dampening exposed soils as appropriate.
- 7.3.3 It is anticipated that development of the Site will follow a phased approach. In addition, development on strategic sites such as this are typically undertaken contemporaneously by several parties/developers with enabling earthworks and main infrastructure construction by specialist earthworks contractors and other construction works by specialist contractors.



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7.3.4 **Contaminated Land:** Land contamination considerations will be addressed and controlled through spill response and contamination management. This including but not limited to:

- Liaison with the EA, CBCC and DCC Environmental Health Officers (EHOs) and other relevant statutory bodies;
- Consideration of the most appropriate and sustainable methods for disposing or contaminated soils, including alternatives to disposal such as on-site and off-site remediation;
- Consideration of impacts on human health; and
- If disposal of contamination is required, an assessment of the composition of excavated contaminated soil would be carried out in accordance with the Waste Management Regulations.
- Methods of handling contaminated soils in accordance with the relevant legislation.

7.3.5 Additionally, details of the protocols to be followed in respect of:

- Any material used solely for temporary works during the construction period would be removed from site and recycled or disposed of in accordance with current legislation and best practice; and
- Wash-out of concrete wagons or concrete handling equipment would be restricted to suitable facilities within site compounds. Where no mains foul drainage is available wash water would be collected and taken off site by tanker for appropriate treatment at a licensed facility.

7.3.6 **Soils:** Reasonable precautions would be taken in relation to the handling and storage of agricultural and other soils, including the following, as appropriate:

- The separate handling and storage of topsoils and subsoils;
- Handling soils appropriately to avoid long-term damage to soil structure from compaction; and
- Preventing soil contamination with chemicals or other materials.

7.3.7 The provisions set out in the outline Soil Management Plan will be incorporated into the CEMP and adhered to throughout.

7.3.8 Any excess soil generated from the development works that cannot be reused locally will be dealt with in accordance with the waste management hierarchy as described in **Section 9.3**.

Drainage

7.3.9 The construction works will be appropriately phased to ensure that the proposed surface water drainage system is in place as early as possible within the construction programme. The drainage system will be designed to intercept the majority of contaminants produced as a result of the construction works, such as silty run-off, and prevent such contaminants entering the drainage system.

7.3.10 In protection of nearby waterbodies or watercourses, construction works will follow standard measures against pollution and erosion for all works carried out. Construction of the Proposed Development will be undertaken according to GPP5ⁱ as adequate mitigation measures will be in place to minimise the risk of any pollution or contamination to any waterbodies. Reducing impact to water resources and flood risk will be addressed from site wide management of



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rainfall runoff, site drainage, surface water and groundwater. This management will be monitored as necessary during construction.

- 7.3.11 All chemicals will be stored well away from watercourses and in such a way that they cannot be easily spilt. Pollution prevention activities, such as sediment control measures within proximity to watercourses, will be employed on Site.
- 7.3.12 A Hydrogeological Risk Assessment (HRA) will be conducted prior to construction to identify potential risks to groundwater receptors and identify any additional mitigation or remediation. The nature and scope of the mitigation determined in the HRA will be agreed with the NRW and any other relevant stakeholders.



8 Ecology and Natural Habitats

- 8.1.1 Mitigation measures which will be implemented to limit potential impacts on ecologically sensitive designations, habitats and species arising from construction activities of the Proposed Development are provided within the Outline Ecological Construction Method Statement (oECMS), provided as Appendix A to this Outline CEMP.
- 8.1.2 The Principal Contractor will familiarise themselves with the ecological survey and habitat work conducted to date and the measures provided within the oECMS. They will request any necessary updated surveys and will closely monitor any changing activities on-site. Additionally, they will liaise with an ecologist prior to the commencement of development or the relevant phase, ensuring all environmental considerations are addressed effectively.



9 Materials Management

9.1 Introduction

- 9.1.1 The Proposed Development will generate waste material from construction which will require appropriate handling, storage, treatment, transportation and disposal. Therefore, this section identifies the mitigation measures required to alleviate the potential impacts of waste generated during construction of the Proposed Development.

9.2 Potential Impacts

- 9.2.1 The most significant generation of waste from the Site will be from site clearance and excavation activities.
- 9.2.2 Potential impacts associated with waste arising from the construction period of the Proposed Development have been assessed:
- Transport (i.e., vehicle movements associated with collection / transfer of waste);
 - Dust and Odour (arising from excavation activities, storage of stockpiles and waste); and
 - Noise (arising from construction activities, handling of waste).
- 9.2.3 Specific mitigation measures associated with these are included within this CEMP.

9.3 Management and Mitigation Measures

- 9.3.1 Construction of the Proposed Development will be approached to minimise the creation of waste and, where possible, maximise the use of alternative materials with lower embodied carbon, such as locally sourced products and material with a higher recycled content when feasible. To minimise waste, the following measures will be implemented:
- The waste hierarchy will be adhered to throughout construction and key performance indicators for waste management will be established by the Principal Contractor;
 - Materials for construction with long-term resilience and environmental safety will be prioritised;
 - Any waste material arising from the Site preparation activities will be retained and stockpiled where possible;
 - Stockpiles will be sorted by type of material for recycling and reuse of materials. Construction waste will also be segregated;
 - Suppliers of raw materials will be committed to reducing surplus packaging associated with the supply of any raw materials; and
 - Reusing suitable resources available within the Site where possible to reduce the use of natural resources and unnecessary materials (e.g. reusing excavated soil for fill requirements).



10 Summary

- 10.1.1 This oCEMP has been prepared as the strategic Outline Construction Environmental Management Plan for the Proposed Development.
- 10.1.2 In summary, the objectives of this oCEMP are to:
- Reduce (eliminating where practicable) the adverse environmental effects of the construction of the Proposed Development;
 - Document the controls to be adopted during construction;
 - Enable agreement with the relevant approval authorities on mitigation measures to be adopted during construction; and
 - Provide a plan for contractors to manage construction impacts.
- 10.1.3 A CEMP is a live document and needs to be reviewed periodically through the life of the project. Regular reviews will help see that the CEMP is up-to-date and suitably adapted to changes as the construction phase of the project progresses.
- 10.1.4 Mitigation measures have been outlined to limit potential impacts of construction traffic, air quality and dust, noise and vibration, land contamination and drainage, ecology and natural habitats, and materials management.
- 10.1.5 It has also outlined a series of general best practice principles which should be adhered to, including; the production of risk assessments, the adherence to Site Standards, the monitoring and measurement of construction activities and the roles and responsibilities of key site staff.



Appendix A Outline Ecological Construction Method Statement





Bodelwyddan Solar and Energy Storage

Outline Ecological Construction Method Statement

Prepared by:
**The Environmental Dimension
Partnership Ltd**

On behalf of:
**Bodelwyddan Solar and Energy
Storage Ltd**

September 2025

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Section 1

Introduction

- 1.1 The Environmental Dimension Partnership Ltd (EDP) has been commissioned by Bodelwyddan Solar and Energy Storage Limited to prepare an Outline Ecological Construction Method Statement (oECMS) in relation to the Proposed Development at Bodelwyddan (hereafter referred to as 'the Site').
- 1.2 This oECMS sits alongside an Outline Construction Environmental Management Plan (oCEMP) and should be read in conjunction with this document. The oCEMP covers general environmental protection and management measures, whilst this oECMS covers more specific measures for the protection and management of ecological features including protected and notable species and habitats.
- 1.3 EDP is an independent environmental planning consultancy with offices in Cirencester, Cheltenham and Cardiff. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website (www.edp-uk.co.uk).

SITE CONTEXT

- 1.4 The Site comprises three components, namely:
 - The Solar Site (location of proposed solar panel arrays), measuring c.168.95 hectares (ha) and centred approximately at Ordnance Survey Grid Reference (OSGR) SH 98274 77362. This component is located c.0.6 km north of Bodelwyddan and comprises intensively managed farmland (sheep and cattle pasture and arable) enclosed by hedgerows and field ditches, and is bisected by the A547 (Rhuddlan Road);
 - The Battery Energy Storage System (BESS) Site, measuring c.6.52 ha centred approximately OSGR SJ 01308 73447. This component is located c.1 km south-east of Bodelwyddan, just to the south of St Asaph Business Park and comprises intensively managed farmland (sheep pasture) enclosed by hedgerows; and
 - A Cable Corridor, c.8 km in length and 10 m in width and totalling approximately 8.29 ha, linking up the Solar Site and BESS Site. The corridor initially runs southward from the south-west corner of the Solar Site, passing through farmland and under the A55. It then runs east- and south-eastward through Kinmel Park and Bodelwyddan Park, utilising existing roads and tracks where available to pass through a mix of farmland, plantation woodland and open parkland habitats, before running along the Glascoed Road (B5831).

PURPOSE AND STRUCTURE OF THIS OECMS

- 1.5 The purpose of this oECMS is to provide guidance for the protection of existing ecological features within (and adjacent to) the Site during construction activities. The oECMS also outlines method statements for individual species protection and enhancements within the Site. It does not provide details of habitat creation nor management, which will be set out within a separate document (the Landscape and Ecology Management Plan (LEMP), informed by the Outline LEMP (oLEMP) accompanying the planning application). Measures to protect trees, woodlands and hedgerows are outlined in this document, however, these will be set out in full within an Arboricultural Method Statement submitted separately.
- 1.6 This oECMS will be updated and confirmed by the Developer and their appointed Principal Contractor ahead of construction and will inform the preparation of a full Ecological Construction Method Statement (ECMS) to be submitted to the Local Planning Authority (LPA) for approval under a planning condition to be secured on the planning permission for the Proposed Development.
- 1.7 The remainder of this document is structured as follows:
- **Section 2** outlines the roles and responsibilities of personnel identified within this oECMS;
 - **Section 3** summarises the findings of the ecological surveys and identifies the pertinent ecological features requiring protection during construction;
 - **Section 4** outlines the ecological avoidance and mitigation measures for protected and notable habitats and species required during construction; and
 - **Section 5** outlines a timetable of works.

Section 2

Roles and Responsibilities

ROLES AND RESPONSIBILITIES FOR IMPLEMENTING THE ECMS

- 2.1 The full ECMS will set out the parties responsible for implementing the ECMS and the following roles.

The Developer and Principal Contractor

- 2.2 The Developer and their appointed Principal Contractor will be responsible for:
- Compliance with legal requirements of nature conservation legislation, policy and any protected species licenses;
 - Compliance with planning conditions relating to nature conservation;
 - Appointing a Site Manager to represent them on the Site throughout the construction and to communicate with the Ecological Clerk of Works (ECoW) and the Developer/Principal Contractor as required;
 - Appointing a suitably experienced ecologist to act as an ECoW;
 - Compliance with instructions and guidance provided by the ECoW;
 - Installation of physical protection measures during construction;
 - Implementation of sensitive working practices during construction; and
 - Regular inspection and maintenance of physical protection measures and monitoring of working practices during construction.

Ecological Clerk of Works

- 2.3 The appointed ECoW will be responsible for:
- Assisting the Developer and/or their Principal Contractor to be compliant with nature legislation, policy and any protected species licences;
 - The provision of site briefings and information to the Principal Contractor, and all relevant sub-contractors and site personnel, on all potential ecological receptors and constraints associated with the land area comprising the development footprint, including all species-specific control measures to be adhered to during the construction phase;
 - The ECoW will also supervise relevant pre-construction works as required, including vegetation/site clearance, in addition to undertaking any necessary pre-commencement surveys for protected species, to avoid any harm to legally protected species;

- Working with the Principal Contractor to achieve compliance with the methods in this report; and
- Conduct hand searching, capture and translocation of animals (where appropriate) from working areas.

Section 3

Baseline Ecology

- 3.1 Detailed ecological assessments of the Site were undertaken by EDP between 2024 and 2025, as described within the following reports submitted as part of the planning application:
- Ecological Baseline Report (report reference: edp8841_r003);
 - Ecological Impact Assessment of the Proposed Development (Chapter 10: Biodiversity of the Environmental Statement); and
 - Shadow Habitats Regulations Assessment (sHRA, report reference edp8841_r009).
- 3.2 This oECMS has been written to reflect mitigation recommendations stated within these documents.
- 3.3 **Table EDP 3.1** sets out a summary of the important ecological features associated with the Site that were identified as having possible impacts during construction of the proposals and that would therefore require detailed mitigation to address these impacts.

Table EDP 3.1: Summary of Ecological Features and Any Potential Impacts

Feature	Key Attributes	Possible Construction Stage Impacts in the Absence of Mitigation
Designated Sites		
Coedydd ac Ogofau Elwy a Meirchion Sites of Special Scientific Interest (SSSI)	1.4 km south of the BESS Site. Woodland and caves with roosting bats.	Loss and/or fragmentation of habitat supporting bat species roosting at this SSSI.
The Dee Estuary Special Protection Areas (SPA) and Ramsar Site	10.1 km north-east of the Solar Site. Estuarine habitats with important wintering bird assemblages.	Loss and/or fragmentation of functionally linked land for the designated bird species teal and disturbance of this species (within functionally linked land) from construction noise/vibration/lighting.
Abergele Grazing Marsh Wildlife Site (Candidate) and Morfa Rhuddlan Wildlife Site (Candidate)	Within the northern section of the Solar Site. Grazing marsh habitats.	Habitat loss, fragmentation, severance, degradation or damage. Pollution of surface water.
Coed Parc Kinmel (Candidate) Wildlife Site	Within Cable Corridor. Coniferous woodland habitat.	Habitat loss, fragmentation, severance, degradation or damage.
Habitats		
Priority Habitat: Coastal floodplain and grazing marsh	Covers the northern section of the Solar Site.	Habitat loss, fragmentation, severance, degradation or damage. Pollution of surface water.
Priority Habitat: Wood-pasture and parkland	Present along parts of the proposed Cable Corridor	Habitat loss, fragmentation, severance, degradation or damage.
Ancient Woodland	Parcel adjacent to southern Solar Site and parcel adjacent to Cable Corridor	Habitat degradation or damage. Disturbance to species from noise and light. Pollution of surface water.
Priority Habitat: native hedgerows and mature trees	Across the Site	Habitat loss, fragmentation, severance, degradation or damage.
Wet Ditches	Across the Solar Site	Habitat loss, fragmentation, severance, degradation or damage. Pollution of surface water.
Priority Habitat: pond (standing water)	Single pond within the Solar Site boundary.	Habitat loss, fragmentation, severance, degradation or damage. Pollution of surface water.

Feature	Key Attributes	Possible Construction Stage Impacts in the Absence of Mitigation
Species		
Breeding Birds	Relatively diverse breeding assemblage present across the Site, with ground nesting skylark within the Solar Site of particular note.	Habitat loss, fragmentation, severance, degradation or damage. Destruction of nests. Disturbance to species from noise and light.
Wintering Birds	Diverse assemblage present across the Solar Site with overwintering teal of particular note.	Habitat loss, fragmentation, severance, degradation or damage. Disturbance to species from noise and light.
Bats (roosting)	Numerous trees with Potential Roost Features present across the Site.	Habitat loss, fragmentation, severance, degradation or damage. Disturbance to species from noise and light.
Bats (foraging and commuting)	Potentially present across the Site at night.	Habitat loss, fragmentation, severance, degradation or damage. Disturbance to species from noise and light.
Badger (<i>Meles meles</i>)	Potentially present across the Site, no setts currently recorded.	Habitat loss, fragmentation, severance, degradation or damage. Disturbance to species from noise and light.
Otter (<i>Lutra lutra</i>)	Potentially present across the Solar Site, using wet ditches.	Habitat loss, fragmentation, severance, degradation or damage. Pollution of surface water. Disturbance to species from noise and light.
Water Vole (<i>Arvicola amphibius</i>)	Potentially present across the Solar Site, using wet ditches.	Habitat loss, fragmentation, severance, degradation or damage. Pollution of surface water. Disturbance to species from noise and light.
Great Crested Newt (<i>Triturus cristatus</i>)	Potentially present across the Site, within 250 m of off-site waterbodies.	Habitat loss, fragmentation, severance, degradation or damage. Pollution of surface water.
Reptiles	Potentially present across the Site within scrub and field margin habitats.	Habitat loss, fragmentation, severance, degradation or damage. Disturbance to species from noise and light.

Section 4

Construction Phase Mitigation

- 4.1 This section provides an outline of the habitat and species protection measures to be detailed within the full ECMS and implemented on-site prior to and during the construction phase.

PRE-COMMENCEMENT SURVEYS

- 4.2 Between three and six months prior to any works commencing within the Site, pre-commencement surveys will be undertaken by an experienced ECoW to identify any likely change in notable or protected species or habitats within the Site. This will include an entire site walkover (or specific area walkover - if works are likely to occur over multiple years).
- 4.3 Should a new protected or notable species or habitat be found, or it is apparent that the range of a species or habitat has changed, then the ECoW will advise on how best to proceed, and works may not be permitted to commence until the requirement for further mitigation has been determined.

SITE CLEARANCE STRATEGY

- 4.4 Works to any suitable habitats within 250 m of the off-site waterbodies that were either confirmed as supporting great crested newts, or could not be surveyed and therefore presence is precautionarily assumed, must be undertaken under an appropriate Non-Licensed Method Statement or licence.
- 4.5 Works to any suitable tree that may disturb a roosting bat or damage or destroy its roost must be undertaken under an appropriate licence.

TOOLBOX TALKS/CONTRACTOR'S BRIEFING

- 4.6 All construction personnel will be fully briefed on the features of ecological importance (including their relevant legal protection) to be retained within the Site and protected during construction works. The toolbox talk is to be provided by the ECoW prior to the commencement of works on-site and is to involve all site workers, operatives and contractors. Any new contractors or site-based staff arriving on the Site will need to be fully inducted on ecological matters by way of a toolbox talk.

ECOLOGICAL PROTECTION ZONES

- 4.7 All retained ecologically sensitive habitats within and adjacent to the Solar Site and BESS Site must be protected during construction activities within Ecological Protection Zones (EPZs). This will include the retention and appropriate buffers of each habitat.

- 4.8 The EPZs will also include sensitive arboricultural areas (retained trees, hedgerows and woodland) as set out in the Arboricultural Method Statement.
- 4.9 In relation to the Cable Corridor, standard buffers may not be achievable where it is required to pass in closer proximity to hedgerows, mature trees and woodland blocks, and minor crown lift works are potentially required in places. Works within the Cable Corridor must follow the Arboricultural Method Statement which will set out working methods to avoid damage to the habitats nor any associated root protection areas.

POLLUTION PREVENTION MEASURES

- 4.10 Measures to prevent pollution incidents are outlined in the oCEMP, also submitted with the planning application, and will be detailed within the full Construction Environmental Management Plan (CEMP).

WORKS WITHIN 200 M OF BODORYN CUT

- 4.11 Due to the presence of a notable number of teal using the Bodoryn Cut (the drainage ditch along the northern boundary of the Solar Site) during the winter, and this being a species for which the nearby Dee Estuary SPA/Ramsar Site is designated, measures must be taken to avoid disturbance of this species during construction works.
- 4.12 A buffer of 200 m has been chosen as an appropriate distance to avoid disturbance impacts on teal based on the Waterbird Disturbance and Mitigation Toolkit¹ (developed by the European Union project named 'TIDE Tidal River Development') using mallard as a comparator species given that teal is not specifically described, and also recommended disturbance buffers set out by NatureScot² using mallard, gadwall and shoveler as comparator species given that teal is again not specifically listed.
- 4.13 No works are to be undertaken within 200 m of Bodoryn Cut during the main migratory and winter months of October to February inclusive.
- 4.14 As works within this 200 m buffer must be undertaken between March and September inclusive and, unless undertaken in September, they must be immediately preceded by a pre-commencement check for active ground nesting bird nests undertaken by the ECoW, as outlined in the following sections.
- 4.15 Works within the 200 m buffer that are also within 250m of a waterbody must be undertaken under an appropriate great crested newt Non-Licensed Method Statement or licence.

¹ Available at <https://tide-toolbox.eu/> [accessed July 2025]

² Available at <https://www.nature.scot/doc/disturbance-distances-selected-scottish-bird-species-naturescot-guidance> [accessed July 2025]

WOODY VEGETATION WORKS

- 4.16 Only minor hedgerow loss and pruning works are currently anticipated within woody vegetation habitats (scrub and hedgerow within the Site and woodland or individual trees adjacent to the Site). However, these habitats have the potential to support breeding birds, roosting bats, and refuging reptiles and amphibians.
- 4.17 Any arboricultural (pruning) works to mature trees, or removal of poor condition trees on health and safety grounds, are to be preceded by an update Ground Level Roosting Assessment (GLTA) and any necessary further assessment to determine presence or absence of bat roosts that may be impacted.
- 4.18 Any works to hedgerows, trees and scrub should be undertaken in two stages as follows:
- Any arboreal works (to vegetation over 150 mm tall) should be scheduled to avoid the bird breeding season: March to August inclusive. If works to woody vegetation have to be undertaken between March and August (inclusive) then these can only be undertaken after an inspection for breeding birds by the ECoW. If any nesting birds are discovered, then the nest must be retained with a suitable buffer to protect the nest (which the ECoW will identify) until the nest is no longer active; and
 - Any works to the bases of the woody vegetation should be undertaken during the active reptile and amphibian season (March to October inclusive, works can be undertaken in February and November depending on the prevailing weather conditions (i.e. if nighttime temperatures are consistently above 5°C)) and under an appropriate great crested newt Non-Licensed Method Statement or licence for any works within 250 m of a waterbody.

WORKS WITHIN GRASSLAND (EXCLUDING 200 M BUFFER FROM BODORYN CUT)

- 4.19 This section applies to works within grassland across the majority of the Solar Site, located more than 200 m from Bodoryn Cut, in addition to works in parts of the Cable Corridor and the BESS Site.
- 4.20 Works within grassland that is within 250 m of a waterbody must be undertaken under an appropriate great crested newt Non-Licensed Method Statement or licence.
- 4.21 To prevent reptiles entering the currently unsuitable grassland fields across the Solar Site prior to works, all grassland must be maintained as currently until works commence, through continuation of the existing grazing regime.
- 4.22 Regarding any areas of grassland, low scrub or tall ruderal along the Cable Corridor that may be suitable for reptiles, a phased cut will be implemented during the reptile active season of March to October inclusive prior to works commencing.
- 4.23 The grassland fields are known to support the ground nesting species skylark and lapwing. Therefore, the following measures must be adopted during works within grassland fields:

- Clearance of open grassland or works within it should be undertaken between the months of September and February inclusive, to avoid nest destruction/disturbance during the ground nesting bird breeding season; and
- Where clearance is not possible outside of the breeding season, a pre-commencement check for active bird nests will be undertaken by the ECoW immediately prior to the commencement of works, with no works will be permitted in the area surrounding any identified nests until all young have fledged.

WORKS WITHIN ARABLE FIELDS

4.24 Several arable fields are present primarily across the south of the Solar Site. In addition, the Cable Corridor crosses several arable fields. These areas are of very low suitability for great crested newt, reptiles and other species due to their heavily disturbed nature, which removes any hibernacula or refugia; alongside the use of pesticides which reduce prey availability. However, some ground nesting birds are known to be present in these areas. Therefore, the following measures must be adopted during works within arable fields:

- All arable fields must be kept under production until works commence. If this is not possible, then following the final harvest prior to commencement, the arable fields must be retained as bare ground through frequent ploughing. This will stop the establishment of more suitable habitat;
- All site clearance/commencement works within the arable fields must commence between September and February inclusive to avoid the breeding bird season; and
- In addition, all site clearance works within 250 m of a waterbody must be undertaken under an appropriate great crested newt Non-Licensed Method Statement or licence.

LIGHTING STRATEGY

4.25 To allow nocturnal species, particularly bats, to continue to use the retained habitats across the Site, any temporary lighting required during construction will avoid light spill upon the retained habitats within the EPZs and will be in accordance with best practice measures set out in the ILP's 'Guidance Note 08/23 Bats and Artificial Lighting at Night'³.

4.26 This is particularly important at the BESS Site, where the retained boundary hedgerows support a more diverse bat commuting/foraging assemblage.

BADGER MITIGATION STRATEGY

4.27 The pre-commencement site surveys will confirm if any new setts or sett entrances have been created in proximity to, or within, the construction areas. If new setts have been

³ BCT and ILP (2023). Guidance Note GN08/23 Bats and Artificial Lighting at Night.

created that will likely be damaged or disturbed through the construction works, then sett closure may be required under licence.

- 4.28 Any trenches or holes should be filled or covered overnight during construction to prevent badgers and/or small mammals falling in. If this cannot be achieved, then at least one side of the trench or hole should have a sloping side (45 degrees) to allow easy exit for wildlife.

WATER VOLE MITIGATION STRATEGY

- 4.29 The pre-commencement site surveys will include an update search for evidence of this species along all wet ditches across the Solar Site. Where evidence of a burrow is identified, the ECoW will determine if any additional sensitive methodologies are necessary to avoid damage or disturbance to the burrow, including the establishment of additional buffers.
- 4.30 Where such impacts cannot be avoided, and given the protection afforded to this species, a mitigation licence may be required prior to construction progressing.

CABLE CORRIDOR HABITAT

- 4.31 Whilst utilising bare ground tracks and existing roads as far as possible, there are some sections where the Cable Corridor passes through grassland and wood pasture habitats.
- 4.32 Following installation of the cable ducting and backfilling of the trench (approximately 750 mm) within areas of grassland and wood pasture habitats, the ground will be made good and an appropriate seed mix used to aid the quick re-establishment of habitat over the working area.

Section 5 Timetable of Works

5.1 **Table EDP 5.1** provides a summary timetable for the timings to undertake tasks anticipated in relation to the proposed development.

Table EDP 5.1: Optimal Timings to Undertake Tasks Anticipated in Relation to the Proposed Development

Task	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pre-commencement surveys												
Installation of EPZ Fencing PRIOR TO ANY OTHER WORKS COMMENCING												
Works within 200 m of Bodoryn Cut												
Woody vegetation works to arboreal (over 150 mm) vegetation *												
Woody vegetation works to bases of vegetation (under 150 mm) *												

Task	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Grassland – clearance of longer areas suitable for reptile or amphibians (grassland or tall ruderal vegetation) *												
Grassland – works within open fields suitable for ground nesting birds *												
Arable – works within open fields suitable for ground nesting birds *												

*Once clear, all vegetation should be maintained as short as possible (a maximum of 50 mm should be aimed for), preferably as bare ground until ground works or cable installation complete.

5.2 All timescales for habitat creation and management to be detailed in the LEMP.



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