SP MANWEB

Reinforcement to the North Shropshire Electricity Distribution Network

Deadline 5 Submission

Application Reference: EN020021

Updated Draft Construction Environmental Management Plan V4A (Clean)

DCO Document 6.3.2

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Reinforcement to the North Shropshire Electricity Distribution Network

APPENDIX 3.2
DRAFT CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Environmental Statement

DCO Document 6.3.2
November 2018
PINS Reference EN020021

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Regulation 5(2)(a)

Reinforcement to the North Shropshire Electricity Distribution Network

Environmental Statement Appendix 3.2

Draft Construction Environmental Management Plan

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Document Control			
Date	**Version**	**Status**	**Description/Changes**
12/11/18	1	-	Final version for DCO submission
20/02/19	2	-	Updated version following Environment Agency comments (28/11/18) on application version (Version 1) of this document. Updated: • New Section 1.14 added (Water Voles and Otters Species Protection Plan) • Paragraph 1.16.2 updated to include reference to private water supplies • Paragraph 1.16.3 added regarding private water supplies • Paragraph 1.16.5 updated to include reference to EA guidance • Paragraph 1.16.6 updated to include reference to private groundwater supply points • Paragraph 1.16.8 updated to include reference to private groundwater supply points • Paragraph 1.16.9 updated to include reference to private groundwater supply points • Paragraph 1.16.4 updated to include reference to superficial aquifers • Paragraph 1.16.14 updated to include reference to superficial aquifers • Table A2.16.1 updated to include reference to superficial aquifers
26/03/19	3	-	Update version following EA comments (25/03/19) on Version 2 of this document. Updated: • Paragraph 1.14.12 updated to include reference to vegetation removal disturbing voles and removal of brash disturbing otter refuges • Addition of Otter and Water Vole Plan to table A2.7.1 and section 1.8.2 • Paragraphs 1.6.33 - 1.6.35 added with reference to non-native invasive species and biosecurity measures • Paragraph 1.6.53 amended to include reference to auditing of staff to ensure compliance with biosecurity guidance Additional changes made in response to Shropshire Council's Local Impact Report. Updated: • Paragraph 1.19.9 updated to remove reference to widening as construction team have confirmed no farm accesses will be widened. • New paragraph 1.6.91.6.8 added to include reference to monitoring and noise attenuation in response to the Council's noise and air quality considerations

			• Paragraph 1.19.14 amended to clarify construction activities in response to the Council's comments on highways considerations First Written Questions. Updated: • New paragraph 1.6.40 added regarding unknown archaeological assets in response to FWQ 7.03.
07/06/19	4	-	Updated following 16 May meeting with Canal and River Trust (CRT). Updated: • Paragraph 1.20.5 reworded • Paragraphs 1.20.6 and 1.20.7 updated to reflect updated 2019 Code of Practice and inclusion of the Managing the Risk to Anglers document • Appendix B updated to include 2019 Code of Practice and Managing the Risk to Anglers Document Updated following 4 June discussion regarding Statement of Common Ground with CRT. Updated: • Creation of new Canal Crossing Plan (1.20). All references to works associated with the canal have been removed from the Watercourse Crossing Register and inserted within the separate Canal Crossing Plan. • Additional bullet point added to paragraph 1.20.5 which refers to tree works either side of the canal • Additional paragraphs 0 - 1.20.8 regarding signage • Additional paragraphs 1.20.9 - 1.20.11 regarding bird diverters • Additional paragraphs 1.20.12 - 1.20.13 regarding tree works • Additional paragraph 1.20.15 confirming that SP Energy Networks will carry out the works in accordance with the CEMP Updated following comments received from Highways England Deadline 4 submission [REP4-006]. Updated: • Additional paragraph 1.19.13 regarding temporary signage for the A5 access and associated works compound • Additional paragraph 1.19.18 regarding the system of traffic management for the A5 access and associated works compound • Appendix T1 added (A5 Trunk Road Access; Traffic Management Signage Strategy Updated following comment received from Examining Inspector Request for Further Information letter dated 18/06/19:

			• New paragraphs 1.1.4 to 1.1.5 clarifying the status of the draft, certified and detailed CEMPs
01/07/19	4A	Live	Updated following revision to delete paragraph 1.20.16

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APPENDIX 3.2: DRAFT CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

1.1 INTRODUCTION

Objective of this Document

1.1.1 As set out in Chapter 3 of the Environmental Statement, this draft Construction Environmental Management Plan (CEMP) has been produced to outline the means by which the effects on the environment of the Reinforcement to the North Shropshire Electricity Distribution Network (hereafter referred to as 'the Proposed Development') would be minimised. It has been prepared with the objective of securing environmental management measures in one cohesive document for the construction works associated with the Proposed Development.

1.1.2 It will help to control and guide the working practices used during the construction of the development. It aims to establish a framework through which SP Manweb and their contractors ensure a robust and effective approach to environmental management and implementation of measures in constructing electricity distribution infrastructure.

1.1.3 The draft CEMP incorporates Natural England and Environment Agency guidelines, as appropriate, reflecting current best practice in protecting the environment during the works.

1.1.4 The draft CEMP will be updated throughout the course of the Examination to reflect additional comments received from consultees and the Examining Authority. The draft CEMP will then become "the CEMP" and will be a certified document.

1.1.5 Once certified SP Manweb will work with the Contractor to collate the detailed information required by the CEMP. Once this information is recorded in the CEMP this detailed CEMP shall be consulted on with the parties listed in Requirement 9 and then submitted to Shropshire Council for approval.

Structure of this Document

1.1.6 **Table**A2.1.1 provides a brief overview of the content of this document.

Table A2.1.1 Structure of this Document

No.	Title	Description of Content
1.1	Introduction	Provides background information about this document its objectives and content.
0	The Proposed Development	Provides details of the Proposed Development including a description of construction methods and facilities.
0	Roles and Responsibilities	Sets out the roles and responsibilities of the parties involved in the construction of the Proposed Development.
1.4	Communications, Reporting and Training	Sets out the measures for regular communications and reporting as well as staff training.
1.5	Design Change Review Process	
1.7	General Environmental Management Measures	Sets out the general measures with respect to environmental management during construction.
1.8	Subject Specific Management Plans	Provides an overview of the subject specific management plans to be implemented.
1.9	Species Protection Plans	Sets out the general measures with regard to protected species.

Table A2.1.1 Structure of this Document		
No.	**Title**	**Description of Content**
1.10	Badger - Species Protection Plan	Sets out the measures with regard to protection of badger.
1.11	Bats - Species Protection Plan	Sets out the measures with regard to protection of bats.
1.12	Great Crested Newts - Species Protection Plan	Sets out the measures with regard to protection of great crested newts.
1.13	Reptiles - Species Protection Plan	Sets out the measures with regard to protection of reptiles.
1.14	Birds - Species Protection Plan	Sets out the measures with regard to protection of birds.
1.16	Water Voles and Otter – Species Protection Plan	Sets out the measures with regard to protection of water voles and otters
1.15	Hedgerow Management Plan	Sets out the measures with regard to protection and reinstatement of hedgerows.
1.16	Pollution Prevention Plan	Sets out the measures with regard to pollution prevention and protection of the water environment.
1.17	Watercourse Crossing Register	Sets out a watercourse crossing strategy and structure of a detailed crossing register.
1.18	Drainage Management Plan	Sets out the measures with regards to drainage management
1.19	Traffic Management Plan	Sets out the measures with regard to the routeing and management of construction-related traffic.
1.20	Canal Crossing Plan	Sets out measures with regard to the crossing of the Montgomery Canal

1.2 THE PROPOSED DEVELOPMENT

1.2.1 The Proposed Development is described in detail in Chapter 3 of the ES (**DCO Document 6.3**). Article 3, Schedule 1 to the draft DCO and the Works Plans set out the detail of the Proposed Development authorised.

Construction Programme

1.2.2 It is currently anticipated that (subject to consent being granted) work on site would commence in mid-2020. The construction phase is anticipated to be completed within twelve months following starting on site. The target is for the Proposed Development to be operational in 2021.

2020							2021				
June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May
Enabling Works											
	Main Construction Activities										
									Reinstatement and Commissioning		

1.3 ROLES AND RESPONSIBILITIES

SP Manweb

1.3.1 This section identifies the key roles and responsibilities under the draft CEMP.

1.3.2 SP Manweb will oversee and manage the planning and environmental aspects of the Proposed Development through the appointment of an Environmental/Ecological Clerk of Works (ECoW).

1.3.3 SP Manweb will be responsible for ensuring that all relevant DCO requirements are satisfactorily discharged,

1.3.4 SP Manweb will be responsible for reviewing risk assessments and method statements and will submit the required documents and information to the relevant authority to discharge DCO requirements.

The Contractor

1.3.5 SP Manweb will appoint Contractor(s) to undertake the construction of the Proposed Development. The Contractor (as well as all Sub-Contractors) is required to comply with the measures and provisions of the ES, the draft CEMP, and any requirement imposed by the DCO and/or licences associated with the Proposed Development. The Contractor will have or will engage a suitably qualified environmental advisor to assist with meeting their (and the Sub-Contractors) obligations.

1.3.6 The draft CEMP will form part of the legal contract between SP Manweb and the Contractor. The Contractor will be responsible for ensuring all works are undertaken strictly in accordance with their legal and contractual obligations, terms and conditions. The Contractor will be responsible for ensuring the general management measures and species management plans identified in this draft CEMP are incorporated into the risk assessments and construction method statements to be produced for the Proposed Development.

1.3.7 The Contractor will also be responsible for ensuring the construction works are supervised on a day to day basis and for carrying out regular site

inspections to ensure all works personnel are aware of the general environmental management measures and subject specific management plans, including species protection plans, detailed in this document.

1.3.8 The Contractor will take all reasonable precautions and undertake all reasonable measures under their control to ensure that all legal requirements are complied with and that no unnecessary damage, disturbance or pollution results from undertaking the works.

Environmental/Ecological Clerk of Works

1.3.9 SP Manweb will appoint an Environmental / Ecological Clerk of Works (ECoW) for the duration of the construction of the Proposed Development. The purpose of this appointment is to ensure that the environmental interests of areas that may be affected by the works are safeguarded. The ECoW will have the appropriate authority to review method statements, oversee works and recommend action as appropriate, including temporarily stopping works if required, for example to safeguard protected species and their habitats, or where any other breaches of environmental legislation are likely to occur.

1.3.10 The ECoW will work with the Contractor to ensure the implementation of, and compliance with, the provisions of the draft CEMP, licensing or other requirements imposed on the Proposed Development. The ECoW will report to SP Manweb.

1.3.11 The ECoW may be a company who provide a general Clerk of Works who can liaise with a team of internal specialists on specific environmental subjects, for example, ecology, archaeology, noise, air quality, or pollution where required throughout the Proposed Development, or a suitably qualified individual.

1.3.12 The ECoW shall be responsible for:

- Inspections of the Contractor's work site, on a daily basis;
- Weekly routine audits of the Contractor's compliance with the draft CEMP – site activities and record keeping;

- Monitoring or inspection of site activities in response to incidents, breaches of the draft CEMP or complaints received from a third party;
- Inspections of works to ensure that environmental measures incorporated into the design have been implemented

Contacts Register

1.3.13 A detailed Contacts Register will be prepared with contact details of all key internal and external parties involved with the Proposed Development. This will be prepared prior to commencement of construction and updated as appropriate where staff changes occur. The Contact Register structure is contained in Appendix A.

1.4 COMMUNICATIONS, REPORTING AND TRAINING

Communications and Liaison

1.4.1 The Contractor will adopt an appropriate system for the logging and recording of any complaints with copies made available to the ECoW and the relevant consultees. Any complaints received will be acknowledged within 24 hours during all hours when works, including deliveries, are taking place.

1.4.2 The Contractor will provide a telephone number for any complaints and further details (postal and email address) to which all written complaints should be addressed. The Contractor shall ensure that all complaints receive a written response, to include details of any action undertaken if such action is deemed appropriate. The Contractor shall provide SP Manweb with a monthly report that details all complaints, who they were filed by and the actions taken.

1.4.3 Where required, in addition to ensuring that the public is fully informed of the proposed programme of works (including working hours), the Contractor will ensure that procedures are established for notifying the public in advance of planned works. It should also be noted that advanced notification will similarly apply to any alterations in the construction programme or working hours that have been agreed with the Contractor and the relevant departments of Shropshire Council.

1.4.4 The ECoW will be responsible for liaison with Shropshire Council via SP Manweb and all consultees such as Natural England, Environment Agency and Historic England.

Inductions and Training in Environmental Issues

1.4.5 The Contractor will ensure all employees, sub-contractors, suppliers, and other visitors to the site undertake site specific induction training. The induction will include a summary of environmental risks associated with the Proposed Development, specifically those relevant to the inductee. Topics that will be addressed will include any areas of environmental sensitivity, such as ecological or archaeological, sensitive areas, in addition to pollution

prevention and protection of the water environment, ground stability, and waste management.

1.4.6 The Contractor will ensure all personnel are suitably trained on general site good practice emergency procedures including the use of spill kits and silt mitigation for example. To ensure all staff are suitably trained on such procedures, training will be provided by a suitably qualified person on a regular basis. Details of the proposed training will be provided to SP Manweb prior to commencement of construction works.

1.4.7 Toolbox talks, information updates to onsite construction personnel on specific issues such as environmental awareness or a specific issue that has arisen on site, will be provided by the ECoW (or other relevant specialist such as archaeological clerk of works). These shall continue throughout construction of the Proposed Development to provide on-going reinforcement and address any new issues that arise. Prior to works starting on site the programme of talks to be undertaken will be agreed by the appointed Contractor. Additional toolbox talks may be required outwith this based on circumstances such as unforeseen risks, observation of bad practices, perceived lack of awareness, pollution event, etc. A record of all toolbox talks and attendees will be maintained and recorded by the Contractor.

Environmental Management Reporting

General Reporting

1.4.8 Regular reporting of environmental management will be undertaken for the duration of construction of the Proposed Development. Table A2.4.1 outlines the reporting which is expected to be undertaken. Prior to the commencement of Development the Contractor in consultation with the ECoW shall agree exact reporting requirements.

Table A2.4.1 Environmental Management Reporting		
Task	**Summary of Requirements**	**Responsibility**
Daily Reporting	e.g daily report following set proforma for highlighting sensitive environmental receptors and impacts	e.g Contractor
Weekly Reporting	e.g weekly report summarising key incidents (positive and negative) over the previous week. Including actions taken and lessons learnt.	e.g Site manager
Monthly Reporting	e.g monthly report summarising key incidents (positive and negative) over the previous week. Including actions taken and lessons learnt. e.g. Complaints received	e.g ECoW / Site manager

Environmental Incident Reporting

1.4.9 The Contractor will produce an Environmental Incident Response Plan. This document will set out and categorise potential environmental incidents as Category 1 (Major Pollution Incident) or Category 2 (Limited Pollution Incident) and set out the procedure to follow in each case. For example Category 2 incident reporting would involve cleaning up on site, logging the incident internally and recording lessons learnt. For Category 1 incidents, the Category 2 incident response would be undertaken in addition to reporting the incident to the relevant statutory body e.g. Environment Agency or Natural England.

1.5 DESIGN CHANGE REVIEW PROCESS

1.5.1 In order to ensure that the Proposed Development is constructed in compliance with the consent awarded, including approved Order Limits, a design review process must be followed.

1.5.2 The Construction Report (**DCO document 7.2**) describes in detail the Order Limits for the Proposed Development. These Order Limits are in effect a construction and operation corridor, where all the proposed work shall be undertaken. The width of the Order Limits is 25m wide for the overhead line section and approximately 20m wide for the underground cable. The Order Limits also include construction access from public roads and are between 3m and 5m wide. Laydown areas are included within the Order Limits and are located adjacent to construction accesses.

1.5.3 Within the Order Limits the poles would, wherever possible, be located where indicated along the Final Route Alignment. The Final Route Alignment provides an indication of the likely pole positions and forms the centreline of the Order Limits. The indicative pole locations are shown on the Works Plans (**DCO Document 2.3.0 to 2.3.16**). It is anticipated however that post consent it may be necessary and desirable to refine the final vertical and horizontal profile of the conductors and pole positions (known as micro-siting) to reflect the following:

- The outcome of pre-construction surveys which identify new localised environmental constraints and ground investigations surveys; and
- Agreements on minor alterations suggested by landowners.

1.5.4 In carrying out the proposed development, the Order Limits allow for the following:

- To move any pole structure by no more than 5m from its indicative position (as shown on the Works Plans (**DCO Documents 2.3.0 – 2.3.16**)), and not within 1m of the outside edge of any hedgerows; and

- To increase vertically in height any pole structure (not exceeding 2 metres) from the heights shown in the Proposed Pole Schedule (Appendix 3.1 to the ES (**DCO Document 6.3.1**)).

1.5.5 The indicative location of the 132kV underground cable is shown on the Works Plans (**DCO Document 2.3.1**).

1.5.6 The Contractor shall be responsible for the final pole positions and will produce a final design of the Proposed Development. This shall include details of all final pole positions and will consider landowner wishes wherever possible along with any relevant issues arising from pre-construction environmental surveys.

1.5.7 The ECoW will be responsible for reviewing and, where appropriate, approving micro-siting which is within the Order Limits in writing prior to the commencement of revised works. A record of design changes approved by the ECoW will be kept for the duration of construction.

1.5.8 Where the ECoW identifies an issue with a suggested change to a pole location, SP Manweb shall be responsible for approving the final design and relevant pole locations.

1.6 GENERAL ENVIRONMENTAL MANAGEMENT MEASURES

Introduction

1.6.1 This section provides a description of the general environmental management measures to be implemented during the construction of the Proposed Development. As the draft CEMP forms part of the contract between SP Manweb and the Contractor, these measures shall form part of the Contractors contractual obligations and shall also be part of any arrangements with Sub-Contractors.

General Measures

1.6.2 Overhead lines must conform to the specifications contained in the Electrical Safety, Quality and Continuity Regulations 2002 (as amended). Overhead lines are also constructed to conform to the Electricity Supply Industry's own engineering standards (Energy Networks Association Technical Specification 43-8) which govern the minimum clearances to be provided between the conductors, roads, trees and other features.

Fencing

1.6.3 During construction, fencing may be required in proximity to the Proposed Development at the request of landowners or in the vicinity of public rights of way. Fencing may be provided along temporary access tracks, surrounding excavations for pole positions or around winching and pulling positions. Fencing will be temporary for the duration of the construction works.

1.6.4 If fencing is to be provided during construction and there is a risk of local flood water, identified through flood risk mapping by the ECoW, the construction will be post and wire to ensure the free passage of local flood water.

Water Supplies

1.6.5 Discussion will be undertaken with affected landowners to identify water supplies used for livestock. During construction, if livestock are unable to be relocated away from the actual work areas and grazed elsewhere, the Contractor will provide replacement water sources through the provision of

additional water piping or water troughs.

1.6.6 If landowners have a right to use a water supply on neighbouring land, the Contractor will source an alternative water supply or relocate the existing water supply if there is deemed to be an interference with this specific right as a result of the construction or operation of the Proposed Development.

Noise

1.6.7 SP Manweb recognises that construction has the potential to cause noise in a quiet rural area. A number of embedded measures are proposed below to minimise the potential for disturbance. Where necessary, suitable plant and working methods that have the potential to cause noise will be discussed and agreed in consultation with Shropshire Council.

1.6.8 To ensure noise does not become an issue during construction activities the following principles will be applied when relevant:

- limiting site work to daylight hours;
- appropriate choice of plant and equipment such as low noise generators and quieter plant and equipment as far as reasonably practicable;
- Regular plant maintenance to keep plant in good working condition;
- Reduce noise from all vehicles, plant and equipment using effective exhaust silencers;
- Careful phasing of the proposed operations; and
- In locations where there is the potential for noise disturbance, the provision of temporary barriers around static plant (pumps, generators) and equipment liable to create noise whilst in operation as suggested in Section 8 of British Standard 5228-1:2009 *Code of Practice for noise and vibration*.

1.6.9 To ensure operational noise is within acceptable limits, in the event of noise complaints being received, monitoring of plant and equipment with Wem

Substation shall be carried out and appropriate noise attenuation, if required, shall be provided in consultation with Shropshire Council.

Air Quality

1.6.10 The emissions of pollutants and creation of dust from on-site vehicles, plant and construction activities will be minimised as far as is practicable. These measures will include:

- Ensuring all vehicle movements are kept to the absolute minimum;
- Rigorously enforcing appropriate speed limits for all construction vehicles on site to minimise dust generation through the use of signage and tool box talks;
- The ECoW will carry out check of the Contractors vehicles to ensure low emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices are utilised where practicable;
- The ECoW will carry out checks to ensure plant is well maintained, with routine servicing of plant and vehicles to be carried out in accordance with manufacturer's recommendations by the Contractor;
- Requiring that all construction vehicles hold current MOT certificates;
- Requiring all vehicles to switch off engines when not in use;
- Minimising the use of diesel or petrol powered generators and using mains electricity or battery powered equipment where practicable;
- No burning of waste materials to be permitted on site;
- Vehicle loads to be sheeted during the transportation of loose or potentially dusty material or spoil; and
- Regular cleaning of site work areas and wheel washing facilities if necessary.

Vegetation Management

1.6.11 Where the overhead line passes over, or is in close proximity, to vegetation that could infringe the safety clearance from live conductors then these will

be either felled or trimmed prior to construction of the line. SP Manweb carries out vegetation clearance to the Engineering Networks Association (ENA) Technical Specification 43-8 which represents best current practice in the UK for clearances for overhead lines and includes the statutory ground clearance requirements of the Electricity Safety, Quality and Continuity Regulations (ESQCR). SP Manweb has a duty under the ESQCR regulations to keep sufficient distance between vegetation and overhead lines both to safeguard public safety and to ensure continuity of supply.

1.6.12 Guidance on how SP Manweb should ensure that sufficient clearance distances between vegetation and the overhead lines can be achieved is contained in ENA Engineering Technical Report 132, Issue 2 Improving resilience of overhead networks under abnormal weather conditions using a risk based methodology 2016. This is a risk based assessment which makes an allowance for the tree species and expected growth rates, and the frequency of return visits by the tree cutting contractors.

1.6.13 Generally it will be necessary to ensure that the clearance from trees and vegetation under the overhead line and trees adjacent remain in accordance with ENA Technical Specification 43-8. For the wooded areas through which the overhead line passes it is expected that it will be necessary to cut and trim trees immediately under the line. In the SP Manweb licenced area tree trimming for overhead lines would not normally be expected within 5 years of the last visit.

1.6.14 Tree protection in and around construction working areas will be in accordance with British Standard 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*. Construction activities in proximity to trees and woodlands will adhere to the National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (2007). This guidance sets out the principles for protecting trees (including shrubs and hedges) during utility works and ensuring that tree protection zones are maintained.

1.6.15 The following precautions will be adhered to *outside of* tree protection zones:

- Planning of construction activities in proximity to trees should take sufficient account of wide loads, tall loads and plant with booms, jibs and counterweight;
- no burning of waste on site; and
- Material whose spillage could cause damage to a tree should be stored and handled away from the outer edge of the Root Protection Area (RPA), downhill and at least 10m away.

1.6.16 The following precautions will be adhered to *within* tree protection zones:

- No mechanical excavation;
- No excavation without arboricultural site supervision;
- No hand digging without a written method statement approved by the arboriculturists;
- No lowering or raising of levels;
- No storage of plant or materials;
- No storage of handling of any chemicals including waste from cement mixing; and
- No vehicular access.

1.6.17 Whenever trees have been identified within close proximity to the works and require protective measures, there shall be an auditable system of arboricultural site monitoring.

1.6.18 Pre-construction surveys shall be undertaken to confirm the location of invasive species in proximity to the Proposed Development. Any such species shall be identified on a plan and on site.

Soil Handling and Storage

1.6.19 Indiscriminate vehicle movements across soil will be avoided, with the location of stored soils in an area away from construction traffic and clearly

demarcated to ensure construction traffic does not track over them.

Waste Management

1.6.20 SP Manweb promotes and practices waste minimisation, encouraging beneficial re use or recycling of materials where feasible. The Contractor will be required to ensure construction is legally compliant with waste management standards and legislation. SP Manweb prefers recycling and recovery and only uses landfill as a final option. It will encourage this approach with the Contractor.

1.6.21 As far as reasonably practicable the following embedded measures will be applied by the Contractor:

- Waste will be removed at frequent intervals;
- All waste will be identified, quantified and where practicable appropriately segregated and recycled;
- Site waste susceptible to spreading by wind or liable to cause litter will be stored in secure containers;
- Only registered carriers will be used to take waste off-site;
- No burning of material will be permitted on site;
- In the event of a spillage, all contaminated material will be removed from the sites to a licensed waste facility;
- Only soil that is to be re-used will be stored on site; and
- Any soil moved, handled or stored on site will be treated in accordance with Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.

1.6.22 The Contractor will be required to develop a Site Waste Management Plan (SWMP). The SWMP will set the framework for the management of wastes generated during the construction process. It will document the decisions taken during the planning and design stages to minimise waste and set objectives and targets for the main waste types. It will also identify the

following:

- responsibilities within the construction team for waste management;
- the types of waste and the quantities likely to be generated;
- measures to be adopted during construction to minimise waste generated.
- opportunities for recycling and/or reuse;
- proposed treatment and disposal sites together with details of their Environmental Permit; and
- provisions for staff training and use of the SWMP.

Management of Accesses and Public Rights of Way During Construction

1.6.23 The Access and Rights of Way Plans (ARoW plans, **DCO document 2.4**) show affected accesses and public rights of way. The Construction Report (**DCO document 7.2**), details the Public Rights of Way (PRoW) affected by the Proposed Development, identifies the length of PRoW affected and sets out the management of PRoW during construction. The Construction Report also sets out the utilisation of existing farm accesses to construction the Proposed Development.

General Management of Accesses and PRoWs

1.6.24 There are a number of PRoW running through the Order Limits, however, none of these PRoW are directly affected by the Proposed Development and do not need to be permanently stopped up or diverted. Farm accesses will also be utilised for construction traffic but also will not require diversions and will not prevent the landowner from using the access.

1.6.25 All points where Public Rights of Way (PRoW) follow access tracks or alternatively enter the Proposed Development Order Limits, as shown on the Access and Rights of Way Plans (**DCO Documents 2.4.0 – 2.4.16**), would have appropriate signage advising of dates and hours of work. Management would involve the use of construction staff at those points where and when

construction works affect a PRoW. In these instances PRoW users may have to wait for a short period of time whilst the PRoW is in use by the construction team. Use would include the movement of vehicles and plant along the access or the oversailing of the conductors during stringing.

1.6.26 Any restrictions are likely to be for tens of minutes rather than hours. Users would be advised when works are completed and when it is safe to cross or use the PRoW by staff at an appropriate location. There is no requirement to erect scaffolding or netting to complete the conductor stringing across any PRoW.

Bio Security

1.6.27 Good biosecurity practice helps to minimise the risk of disease occurring or spreading, safeguarding the health and welfare of animals and protecting the viability of businesses. Good biosecurity reduces the spread of disease, improves farm efficiency and keeps new diseases out.

Biosecurity - Animal Disease

1.6.28 SP Manweb is committed to observing precautions recommended by Government agencies. Defra hold primary regulatory responsibility for management of biosecurity and implementation of controls to prevent, restrict, control and eradicate outbreaks of animal disease. During outbreaks it may refer to other government agencies to bring these controls to bear by issue of restriction, prohibitions and compulsory actions on those directly affected including any indirect third parties. Breach of the requirements and license restrictions may be an offence.

1.6.29 Defra has produced guidance relevant to livestock owners, landowners and third parties entitled ‘Biosecurity Guidance to Prevent the Spread of Animal Diseases’. A number of the biosecurity measures are relevant for SP Manweb and the Proposed Development, which will be adopted where the potential for spread of animal disease has been identified through discussions with landowners and the relevant authorities:

- Where appropriate any visit to site should be made with the

agreement of the owner or premises manager and any reasonable requests for additional biosecurity measures should be observed, especially if contractors have visited other premises with farm animals in the previous 3 days.

- Livestock vehicles or trailers must be cleansed and disinfected in accordance with current legislation.
- If other vehicles are taken on to the premises they should, wherever possible, be parked on hard standing away from farm animals and must be visibly free of for example animal excreta and slurry. Vehicles or trailers should not normally be taken into areas where farm animals have access – these arrangements should be confirmed, where appropriate, with the owner or premises manager in advance of the visit. Before leaving the premises all visible contamination with manure, slurry or similar material must be removed (including where appropriate, cleaning of the inside of vehicles, especially foot wells and pedals). If this is not possible, vehicles and trailers must be cleaned before they are taken onto other premises with farm animals, either at the end of the day or before the next visit.
- Owners or farm managers are recommended to have facilities available for disinfecting vehicles, footwear and clothing. If facilities are NOT available on farm, cleansing and disinfection should be arranged as soon as possible and before the next visit to premises with farm animals.
- Suitable protective clothing and footwear must be worn on all premises where visits include entering areas where farm animals are present or to which they normally have access. The type of protective clothing and footwear required depends on the nature of the visit (e.g. the protection required for a visit to a dairy herd would differ from that required for a visit to extensive premises on moorland). Contractors should ensure clothing is changed and washed between visits to

different premises.

- The purpose of the protective clothing and footwear is to prevent any contamination being carried from premises to premises. Protective clothing and footwear may be disposable or re-usable. The following are examples of types of protective clothing:
    - Disposable boiler type suits. These can be used once and should be discarded at the end of the visit to the premises. They can be left on the premises with the owner's agreement or bagged and suitably disposed of later, as can disposable overshoes for footwear.
    - Non-disposable protective clothing (for example cotton boiler suits or cotton coats). These may be used once and should be laundered before being re-used on any other livestock premises.
    - Waterproof protective clothing and waterproof boots. These should be cleansed and disinfected before entering the premises and again at the end of the visit just before leaving the premises.
- All equipment used must be clean on arrival and on departure. Great care must be taken when cleaning electrical apparatus or tools. Where possible equipment should be protected from contamination, for example by using plastic bags. Health and Safety rules must be observed. Where equipment can be cleansed and disinfected this must be done before entry to the premises and again on departure.

1.6.30 Landowners may adopt preventative controls and expect staff and visitors to comply with best practice guidance for the prevention of the spread of disease. During the construction phase of works consideration will be made for discussion with grantors regarding particular measures during the works.

1.6.31 If a disease outbreak occurred during the construction of the Proposed

Development SP Manweb and the Contractor would discuss the measures for work with the affected landowners and the relevant regulatory authority. Primary risk controls are based upon avoidance of the need to undertake work, minimising staff numbers on site and restricting staff and equipment for the duration of the works. A licence may be required if the works are to continue during such an outbreak.

Biosecurity - Other Pests and Diseases

1.6.32 Chytrid fungus is a disease that affects amphibians including great crested newts and specific biosecurity measures shall be put in place if works are undertaken that require working close to or entering of ponds. These biosecurity measures shall include the use of dedicated survey equipment (bottle traps, canes and pond nets) for each separate site/pond and the disinfection of boots and equipment following each survey.

Biosecurity – Invasive Species

1.6.33 There is the potential for construction activities to spread invasive plant species including Japanese Knotweed and Himalayan Balsam, as well as invasive aquatic invertebrates, such as Killer Shrimp and Signal crayfish. Ecological surveys found small stands of invasive plants along the route of the Proposed Development. The following actions should be undertaken to ensure no spread of these species:

- Pre-construction surveys should be carried out within and near to working areas to confirm the findings of the ecological surveys and to ensure no further species have appeared;
- All vehicles and machinery shall be checked and cleaned before leaving the construction working areas, and;
- Buffer and exclusion zones around watercourses, as set out in paragraph 1.6.38, should be adhered to.

1.6.34 The GB non-native species secretariat has provided standard guidance for works in or adjacent to water (Check, clean, dry):

- **Check** your equipment and clothing after leaving the water for mud, aquatic animals or plant material. Remove anything you find and leave it at the site;
- **Clean** everything thoroughly as soon as you can, paying attention to areas that are damp or hard to access. Use hot water if possible, and;
- **Dry** everything for as long as you can before using elsewhere as some invasive plants and animals can survive for over two weeks in damp conditions.

1.6.35 All construction staff shall be given a tool-box talk regarding the risks associated with invasive species, the potential for spread of these species and the biosecurity guidance set out above that must be followed.

Watercourses

1.6.36 There are a number of watercourses within the Order Limits. The Development oversails the Rivers Perry and Roden and the Montgomery Canal.

1.6.37 In addition, the Proposed Development oversails a number of smaller watercourses, ditches, streams and ponds. A number of the watercourses also have associated floodplains which extend wider than the watercourse as marked.

1.6.38 SP Manweb has developed a number of good practice measures for construction work in proximity to watercourses and floodplains:

- Wherever possible, machinery and equipment will be kept a minimum of 10m from the edge of the watercourse. If the watercourse has an associated floodplain, machinery and equipment shall be located 10m from the edge of the floodplain. Soil shall only be stockpiled in locations sited at least 10m away from any watercourse. If the watercourse has an associated floodplain, stockpiled soil shall be located 10m from the edge of the floodplain. Silt fences shall be used around stockpiled soil where considered appropriate.

- Water containing silt will not be pumped or allowed to flow into watercourses.
- Where possible, water will be prevented from entering excavations.
- The amount of exposed ground will be minimised in the working area to reduce the risk of silty surface water runoff.
- Fuel, oil and chemical storage will only be permitted at the construction compound and not on site.
- Suitable spill kits or absorbent materials will be held in the vicinity of the watercourses during works. In the event of a spill, the spilt material shall be contained and the incident management procedures followed.
- Herbicides will not be used on or near any watercourses or ponds within the working area without written approval from the Environment Agency.

1.6.39 Further specific management and details on protective provisions in relation to the Rivers Perry and Roden and the Montgomery Canal are provided in the Water Crossings Register, section 1.17 of this draft CEMP.

Archaeology

1.6.40 Construction activities such as access routes or pole foundation locations have the potential to affect unknown archaeological deposits. In the event that unexpected archaeological remains are identified during construction the ECoW and technical specialist must be contacted immediately to assess the requirement for mitigation. It may also be necessary to liaise with Shropshire Council.

Other Utilities

1.6.41 SP Manweb has confirmed that other utilities such as water supplies, gas pipelines and high voltage overhead lines are crossed by the Proposed Development. The Contractor will be required to carry out further detailed utilities searches and onsite surveys to confirm the exact location of water and sewage pipes, telecommunications and electricity cables and overhead lines prior to construction. Severn Trent (water and sewage), Wales and

West Utilities (gas pipeline) have provided specifications for working. These specifications can be found in Appendix B – Companies Specifications. A set of Protective Provisions has been drafted by SP Manweb relating to water supply and sewage and are included in the draft DCO (**DCO Document 3.1**).

1.6.42 Openreach, which replaced BT Telecommunications, have undertaken an initial assessment of the Proposed Development and have indicated that diversions of Openreach infrastructure will be required at Rednal, Hordley and Wackley Lodge. SP Manweb will agree terms with Openreach regarding the required diversion of Openreach infrastructure to enable Openreach to undertake the necessary diversion works. A set of Protective Provisions has been drafted by SP Manweb relating to Openreach and are included in the draft DCO (**DCO Document 3.1**).

1.6.43 SP Manweb is in discussion with National Grid regarding agreements to cross the high voltage 400kV overhead line in Rednal. Appropriate Protective Provisions are included in the draft DCO **(DCO Document 3.1)**.

1.6.44 It will be the Contractors responsibility to adhere to the working specifications set out in Appendix B.

Road and Rail Crossings

1.6.45 Scaffolding and nets will be erected over major roads (A and B Classified) and noticeably busy minor roads to enable the conductors to be pulled out unhindered.

1.6.46 On minor roads (C Classified and Non-classified) temporary traffic management (manned signalling), is sufficient to control traffic during stringing activities.

1.6.47 All requirements of the appropriate authority would be adhered to such as relevant codes of practice, specification and procedures and where necessary temporary traffic management will be agreed with Shropshire Council.

1.6.48 There is one railway crossing located at Babbinswood. At this location, the

conductors would be installed in a manner agreed with Network Rail. SP Manweb is in discussions with Network Rail regarding Protective Provisions and these are included in the draft DCO (**DCO Document 3.1**).

Working Hours

1.6.49 Construction activities would in general be undertaken during daylight hours only. For weekdays, this includes between the hours of 0700 to 1900 March to October and 0730 to 1730 or during daylight hours, whichever is the shorter, November to February. At weekends, the working hours would be 0700 to 1300 on Saturdays with no works on Sundays or bank/public holidays. Some works may be required outside of the working hours such as scaffolding/netting, highways crossings and completion of operations that cannot be safely stopped.

Site Management and Housekeeping

1.6.50 The construction compound is located within an existing SP Manweb depot and will be the main store for all materials, including paints, sealants or other chemicals. Any temporary laydown areas to be used for temporary storage of materials will be located at least 25 metres away from surface water bodies in a secure container within impermeable areas within the temporary laydown area. All construction materials will be stored in accordance with the appropriate regulatory requirements, including the Control of Substances Hazardous to Health Regulations 2002.

Staff Facilities

1.6.51 Appropriate welfare facilities will be provided. These will be located at Maesbury Road and at the Wem laydown area (laydown area 7). Prior to construction, the Contractor will prepare the arrangements for welfare provision and will be responsible for the maintenance of the facilities throughout the life of the project. The nature and scale of facilities required will be in proportion to the size and location of the Proposed Development.

Secondary Consents, Permits and Licences

1.6.52 The Contractor and ECoW will be responsible for obtaining other necessary

consents, licences and permissions for activities as required by current legislation governing the protection of the environment. It is anticipated that other consents and licences such as European protected species licences will be required for the Proposed Development. The DCO application is supported by a document entitled Other Consents and Licences (**DCO document 5.5**) which sets out the requirements in full.

Monitoring, Audits and Inspections

1.6.53 The ECoW will be responsible for weekly routine audits of the Contractor's compliance with the draft CEMP including site activities, following guidance set out in the CEMP (such as the biosecurity guidance and record keeping. SP Manweb will be responsible for monitoring the contract and ensuring the Contractor is working within the contract.

1.7 SUBJECT SPECIFIC MANAGEMENT PLANS

Introduction

1.7.1 Additional management plans, referred to as subject specific management plans (listed in Table A2.1.1), are required to control the potential effects and address the measures identified in the ES.

Table A2.7.1Subject Specific Management Plans	
Species Protection Plans: • Badger Protection Plan • Bat Protection Plan • Great Crested Newt Protection Plan • Reptiles Protection Plan • Bird Protection Plan • Water Vole and Otter Protection Plan	Hedgerow Management Plan Pollution Prevention Plan Watercourse Crossing Register Drainage Management Plan Traffic Management Plan Canal Crossing Plan

Structure of the Subject Specific Management Plans

1.7.2 The subject specific management plans establish the principles that will be adopted and adhered to in order to mitigate potential environmental impacts. The principles of the subject specific management plans draw on relevant good practice, however, project specific measures has also been included where relevant. The subject specific management plans largely follow a common structure:

- Introduction: sets out the purpose of the plan and a summary of its contents;
- Project Specific Considerations: identifies project specific constraints or impacts;
- General Measures: sets out the principles of environmental management to be followed;
- Project Specific Measures: sets out project-specific environmental measures; and
- Summary of Responsibilities: provides a summary of all responsibilities.

1.8 SPECIES PROTECTION PLANS

Overview

1.8.1 A number of protected species have been identified through EIA surveys. Some have the potential to be affected by the Proposed Development and as such required specific measures to avoid any adverse significant effects. These species protection plans will assist with the application for protected species licences.

1.8.2 The Species Protection Plans that have been developed for this project are:

- Badger;
- Bat;
- GCN;
- Reptiles, and;
- Water Voles and Otters

1.8.3 A Species Protection Plan has also been developed for birds as a precautionary measure.

1.9 BADGER – SPECIES PROTECTION PLAN

Introduction

1.9.1 This Species Protection Plan has been produced for the Proposed Development in relation to protected species, badger (*Meles meles*).

1.9.2 Full details on the badger survey findings recorded during the pre-application stage are contained within ES Chapter 7 (**DCO document 6.7**) and the confidential Appendix 7.9 (**DCO document 6.7.9**) which should be referred to in conjunction with this document.

Legislation

1.9.3 Badgers are legally protected from intentional or reckless cruelty and they and their setts are protected from the results of otherwise lawful human activities such as building developments and forestry operations. The main legislation protecting badgers is the Protection of Badgers Act 1992.

Site and Project Description

1.9.4 The habitats along the survey corridor for the Proposed Development are dominated by agricultural land supporting a mixture of arable and (largely improved) grassland fields with scattered ponds. Field boundaries contain mature hedgerows (both species rich and species poor) and trees and there are scattered individual mature trees within the fields which are often associated with ponds. Tree lines, scattered mature trees and a number of broadleaved woodland copses are found along the route of the Proposed Development. Although predominantly within a rural landscape, the proposed route passes a range of built features including roads, a railway line, farm complexes, and residential and commercial buildings.

Background

1.9.5 Badgers are known to be present within 100m of the Proposed Development with surveys undertaken for the ES confirming 29 active and inactive setts. Several setts lie in close proximity to the Proposed Development As such, badgers are required to be considered at an early stage within the Proposed Development to ensure no significant impact on this species with all

appropriate measures in place, including any licences where required.

1.9.6 This Species Protection Plan sets out the approach to ensure the protection of badgers during the construction of the Proposed Development.

Review of Existing Data

1.9.7 The ES concluded that specific measures will be required to safeguard individuals and ensure compliance with the legislation. However, badgers are common and widespread in Shropshire and the Proposed Development will have no discernible effects on local population levels arising from the limited badger measures likely to be required during construction.

Sources of Potential Impacts

1.9.8 As addressed within the ES the Proposed Development has the potential to impact upon badgers. Impacts are related to the following:

- Direct land take leading to permanent or temporary habitats loss;
- Indirect habitats damage or alteration to habitats (and the species they may support) through:
    - Changes to surface or ground waters (hydrological alteration): alterations to the physical regime, typically water levels/availability to wetland species or habitats;
    - Pollution: release of pollutants (for example silt-laden runoff from working areas and fuel spills) into habitats inside or outside the Order Limits including watercourses or ditches which provide pathways to affect downstream habitats and species; and
    - Introduction or spread of invasive non-native species.
- Direct or indirect harm or disturbance to or displacement of protected or notable species from machinery, equipment and human activities during construction works along the Proposed Development, including noise and visual disruption.

Environmental / Ecological Clerk of Works

1.9.9 As set out in section 0 an Environmental/Ecological Clerk of Works (ECoW) will be appointed prior to the commencement of construction. The ECoW will be responsible for ensuring the implementation of the measures described within this Species Protection Plan and the application for licences if required.

Site Surveys and Monitoring

1.9.10 Due to the potential for impacts on badgers, additional pre-construction surveys will be undertaken to identify any new sett construction and/or badger presence within 50m of potential working areas.

Update of Data and Impact Assessment

1.9.11 The results of the additional surveys will be reviewed by the ECoW in conjunction with the previous information and assessments. Licences to authorise works affecting badgers or interfering with badger setts will be obtained if required.

1.9.12 Measures proposed will be reviewed and updated where appropriate. The Contractor will be advised of existing/new constraints, together with measures developed by the ECoW. This will include undertaking toolbox talks with relevant construction teams. In addition, the following general good practice measures will be adhered to throughout the construction period by the Contractor.

General Measures

1.9.13 General good practice measures will be adhered to at all times during the construction of the Proposed Development. This includes:

- Construction will be confined as far as possible to those habitats less favoured by badgers;
- No work will be undertaken within 30m at an active badger sett without a relevant licence;
- Disturbance in the vicinity of any sett where breeding is confirmed or expected will be avoided during the period 1st December to 30th June

inclusive;

- Topsoil rich in earthworms (good badger foraging habitat) should be retained on site and reused in amenity/grassland habitats;
- Any badger fencing used to prevent badgers gaining access to roads, or to guide badgers to tunnel entrances or passes, must conform to a specification of 2.5mm gauge wire and a 25mm x 50mm welded mesh size;
- Within development areas, depending on expected traffic volumes, provision should be made for the incorporation of traffic calming measures in order to reduce the likelihood of badger road mortality;
- The use of noisy plant and machinery in the vicinity of the protection zone should cease at least two hours before sunset;
- Chemicals should be stored as far away from the setts and badger paths as possible;
- Trenches must be covered at the end of each working day, or include a means of escape for any animal falling in;
- Any temporarily exposed open pipe system should be capped in such a way as to prevent badgers gaining access overnight;.
- Water sources (for badgers) should always be safeguarded; and
- Trees should be felled away from setts and must not block badger paths.

Project Specific Measures

1.9.14 No additional project specific measures has been identified in the ES. Badger licences will be applied for once the DCO is made. This section shall be updated following issue of those licences to include any additional details included within those licences. Any associated conditions imposed on a licence and details on how all of the work in relation to badgers will be included. A species specific mitigation plan/management plan will likely be required in accordance with any licence.

Summary of Responsibilities

1.9.15 Table A2.9.1 provides a summary of the responsibilities of the parties involved in the Proposed Development.

Table A2.9.1 Badger Protection Plan – Summary of Responsibilities

Party	Responsibilities
SP Manweb	Appointment of independent ECoW Provision of relevant survey reports and other material prepared during pre-application stages of the Proposed Development.
ECoW	Undertaking appropriate pre-construction surveys and reporting results. Undertaking appropriate monitoring during construction. Undertaking consultation with Natural England as required. Obtaining protected species licence if required. Establishing exclusion zones as required. Briefing contractor on specific requirements.
Contractor	Assisting the ECoW with implementation of measures. Adhering to measures in of Species Protection Plan. Adhering to conditions of protected species licence (if one is required).

1.10 BATS – SPECIES PROTECTION PLAN

Introduction

1.10.1 This Species Protection Plan has been produced for the Proposed Development in relation to European protected species of bat.

1.10.2 Full details on the bat survey findings recorded during the pre-application stage are contained within ES Chapter 7 Ecology (**DCO document 6.7**) which should be referred to in conjunction with this document.

Legislation

1.10.3 Bats are a Schedule 2 European Protected Species (EPS) under the Conservation (Natural Habitats and Species .) Regulations 2017. Under this legislation a person is guilty of an offence if he acts intentionally or recklessly, or knowingly causes or permits an act, to kill, injure, capture or keep bats, or disturb bats.

Site and Project Description

1.10.4 The habitats along the survey corridor for the Proposed Development are dominated by agricultural land supporting a mixture of arable and (largely improved) grassland fields with scattered ponds. Field boundaries contain mature hedgerows (both species rich and species poor) and trees and there are scattered individual mature trees within the fields which are often associated with ponds. Tree lines, scattered mature trees and a number of broadleaved woodland copses are found along the route of the Proposed Development. Although predominantly within a rural landscape, the proposed route passes a range of built features including roads, a railway line, farm complexes, and residential and commercial buildings.

Background

1.10.5 Bats are known to be present within the survey corridor with surveys previously undertaken confirming no trees identified as having high bat roost potential but some with moderate bat roost potential within 25m of the Proposed Development. As such, bats are required to be considered at an early stage within the Proposed Development to ensure no significant impact

on this species with all appropriate measures in place, including any European Protected Species (EPS) licences where required.

1.10.6 This Species Protection Plan sets out the approach to ensure the protection of bats during the construction of the Proposed Development.

Review of Existing Data

1.10.7 Of the trees considered to have moderate roost potential, none are currently considered likely to be directly affected by the Proposed Development construction works.

1.10.8 Bat activity transects were undertaken at representative locations along the Proposed Development but did not suggest the presence of any roosts in close proximity to the line. Activity levels overall were not high and reflected the open, largely arable/improved grassland habitats crossed by the Proposed Development. As would be expected, bat activity was higher in the vicinity of woodlands, along watercourses and where the hedgerow network provided commuting routes and connected suitable foraging and roosting habitats.

1.10.9 Overall much of the surveyed areas were considered to be of low value for foraging or roosting, comprising exposed open fields often lacking trees suitable for roosting, with more valuable habitat confined to the hedgerow margins. Areas of higher value to bats were considered to be along the watercourse corridors of the River Perry, where tree and hedgerows linked to woodlands in the wider landscape and where clusters of ponds, trees and woodland were well connected and associated with potential roost locations such as farm complexes containing barns and other potentially suitable roost structures.

Sources of Potential Impacts

1.10.10 As addressed within the ES the Proposed Development has the potential to impact upon bats. Impacts are related to the following:

- Direct land take leading to permanent or temporary habitats loss;

- Indirect habitats damage or alteration to habitats (and the species they may support) through:
    - Changes to surface or ground waters (hydrological alteration): alterations to the physical regime, typically water levels/availability to wetland species or habitats;
    - pollution: release of pollutants (for example silt-laden runoff from working areas and fuel spills) into habitats inside or outside the Order Limits including watercourses or ditches which provide pathways to affect downstream habitats and species; and
    - introduction or spread of invasive non-native species.
- Direct or indirect harm or disturbance to or displacement of protected or notable species from machinery, equipment and human activities during construction works along the Proposed Development, including noise and visual disruption.

Environmental / Ecological Clerk of Works

1.10.11 As set out in section 0 an Environmental/Ecological Clerk of Works (ECoW) will be appointed prior to the commencement of construction. The ECoW will be responsible for ensuring the implementation of the measures described within this Species Protection Plan.

Site Surveys and Monitoring

1.10.12 Bat species soprano and common pipistrelle, noctule, myotis species, and nyctalus species were identified during ES surveys. The most commonly recorded species was soprano pipistrelle. Additional pre-construction surveys of the trees with bat potential will be undertaken.

1.10.13 Should moderate roost potential trees require pruning back or removal, this will be subject to further survey (climbing inspection) to confirm whether or not they support bat roosts. Trees with low roost potential requiring removal will be subject to 'soft felling' techniques under supervision.

Update of Data and Impact Assessment

1.10.14 The results of the additional surveys will be reviewed by the ECoW in conjunction with the previous information and assessments. Where appropriate Protected Species Licences will be obtained.

1.10.15 Measures proposed will be reviewed and updated where appropriate. The Contractor will be advised of existing/new constraints, together with measures developed by the ECoW. This will include undertaking toolbox talks with relevant construction teams. In addition, the following general good practice will be adhered to throughout the construction period by the Contractor.

General Measures

1.10.16 General good practice measures will be adhered to at all times during the construction of the Proposed Development. This includes:

- Prior to removal of any trees they will be surveyed to assess their potential for roosting bats as per the latest BCT Guidelines;

Project Specific Measures

1.10.17 The Proposed Development has avoided affecting trees as far as possible through a process of iterative design and alignment. The route passes through a relatively open landscape with scattered trees, treelines and small woodland copses identified along the surveyed corridor within areas dominated by arable and improved grassland fields under agricultural management.

1.10.18 No large section of hedgerow removal is proposed for construction. The short sections of hedgerow that will be temporarily removed to construct the Proposed Development are only 4m in length. The small lengths involved are easily crossed by bats and would not represent a barrier to flight lines or connectivity.

1.10.19 Pre-construction checks on trees with identified moderate bat roost potential affected by the proposed works and the application for licences if required to ensure no disturbance occurs during the construction phase.

Summary of Responsibilities

1.10.20 Table A2.10.1 provides a summary of the responsibilities of the parties involved in the Proposed Development.

Table A2.10.1 Bats Protection Plan – Summary of Responsibilities

Party	Responsibilities
Employer (SP Manweb/IEC)	Appointment of independent ECoW Provision of relevant survey reports and other material prepared during pre-application stages of the Proposed Development.
ECoW	Undertaking appropriate pre-construction surveys and reporting results. Undertaking appropriate monitoring during construction. Undertaking consultation with Natural England as required. Obtaining protected species licence if required. Briefing contractor on specific measures and measures.
Contractor	Assisting the ECoW with implementation of measures. Adhering to requirements of Species Protection Plan. Adhering to conditions of protected species licence (if one is required).

1.11 GREAT CRESTED NEWTS – SPECIES PROTECTION PLAN

Introduction

1.11.1 This Species Protection Plan has been produced for the Proposed Development in relation to European protected species of great crested newts *Triturus cristatus* (GCN).

1.11.2 Full details on GCN findings recorded during the ES are contained within Chapter 7 Ecology (**DCO document 6.7**) and Appendix 6.7.6 Amphibians (**DCO document 6.7.6**) which should be referred to in conjunction with this document.

Legislation

1.11.3 GCN are a Schedule 2 European Protected Species (EPS) under the Conservation (Natural Habitats and Species) Regulations 2017. Under this legislation a person is guilty of an offence if he acts intentionally or recklessly, or knowingly causes or permits an act, to kill, injure, capture or keep GCNs, or disturb GCN.

1.11.4 It is anticipated that an EPS Low impact class licence will be required for construction works. Some works may be carried out under Reasonable Avoidance Measures Method Statement (RAMs) and this Protection Plan will be used as the basis for those RAMs.

Site and Project Description

1.11.5 The majority of ponds within the survey area are field ponds in managed agricultural land, generally arable or improved grassland. A number of these ponds are isolated within open fields, lacking good habitat connectivity or extensive areas of high quality foraging or refuge habitat nearby apart from a narrow border of trees and scrub around their banks. Field ponds lying at the boundaries of fields adjacent to hedgerows or woodland copses have better habitat connectivity and higher quality terrestrial habitat nearby for great crested newts and other amphibians.

1.11.6 It is considered that the dominant habitats (arable and grazed improved grassland farmland) provide low value amphibian terrestrial habitat, with

higher value habitats provided by woodland copses, hedgerows and associated ditches, unmanaged scrub and ruderal vegetation present in limited areas, mainly along watercourse banksides.

Background

1.11.7 Ponds identified within 50m of the Proposed Development were subject to a Habitat Suitability Index (HSI) assessment with 21 ponds potentially suitable for GCN identified for follow-up presence-absence survey. Water sampling for amphibian environmental DNA (eDNA) was undertaken to confirm presence-absence.

1.11.8 Of the 21 ponds that were surveyed, nine tested positive for the presence of GCN. There was generally good correlation between HSI and eDNA results with positive eDNA results from ponds whose HSI score ranged from Good-Excellent.

1.11.9 As such, GCN are required to be considered at an early stage within the Proposed Development to ensure no significant impact on this species with all appropriate measures in place, including any European Protected Species (EPS) licences.

1.11.10 This Species Protection Plan sets out the approach to ensure the protection of GCN during the construction of the Proposed Development.

Review of Existing Data

1.11.11 The ES concludes that there will be no loss of any ponds as a result of the Proposed Development. Poles are mainly located well away from pond banks, thereby reducing the potential for indirect effects on aquatic habitats. The underground sections of the Proposed Development do not lie within 50m of any pond.

Sources of Potential Impacts

1.11.12 As addressed within the ES the Proposed Development has the potential to impact upon GCN. Impacts are related to the following:

- Direct land take leading to permanent or temporary habitats loss;

- Indirect habitats damage or alteration to habitats (and the species they may support) through:
    - Changes to surface or ground waters (hydrological alteration): alterations to the physical regime, typically water levels/availability to wetland species or habitats;
    - pollution: release of pollutants (for example silt-laden runoff from working areas and fuel spills) into habitats inside or outside the Order Limits including watercourses or ditches which provide pathways to affect downstream habitats and species; and
    - introduction or spread of invasive non-native species.
- Direct or indirect harm or disturbance to or displacement of protected or notable species from machinery, equipment and human activities during construction works along the Proposed Development, including noise and visual disruption.

Environmental / Ecological Clerk of Works

1.11.13 As set out in section 1.3 an Environmental/Ecological Clerk of Works (ECoW) will be appointed prior to the commencement of construction. The ECoW will be responsible for ensuring the implementation of the measures described within this Species Protection Plan. The EC0W will develop the RAMs or apply for the EPS licence.

Site Surveys and Monitoring

1.11.14 Due to the potential for impacts on GCN, additional pre-construction surveys will be undertaken.

Update of Data and Impact Assessment

1.11.15 The results of the additional surveys will be reviewed by the ECoW in conjunction with the previous information and assessments. Where appropriate EPS licences will be obtained.

1.11.16 Measures proposed will be reviewed and updated where appropriate. The Contractor will be advised of existing/new constraints, together with

measures developed by the ECoW. This will include undertaking toolbox talks with relevant construction teams. In addition, the following general good practice will be adhered to throughout the construction period by the Contractor.

General Measures

1.11.17 General good practice measures will be adhered to at all times during the construction of the Proposed Development. These measures will be the basis for the RAMs. This includes:

- All works, including access tracks and laydown areas will take place within a clearly demarcated works area, as defined on a plan.
- Terrestrial habitat around a pond provides feeding and sheltering for GCN when they are out of water and as such the area up to around 500m surrounding a pond should be considered as potential /GCN habitat;
- Vegetation removal will not occur if the habitat has potential for overwintering GCN. Any potential overwintering refuges, fallen timber (for example) will be left in situ wherever possible. In the event that they must be moved they will be relocated closer to an identified newt pond in suitable habitat.
- Material shall not be stored in areas which may be used by GCN.
- Excavations in proximity to GCN habitat should be filled in or covered over at night. Alternatively, escape routes can be incorporated into the excavation. Any excavations left open overnight shall be checked each morning prior to the commencement of works.

Project Specific Measures

1.11.18 No project specific measures has been identified in the ES. GCN EPS licences will be applied for once the DCO is made. This section shall be updated following issue of those licences to include any additional details included within those licences. Any associated conditions imposed on a

licence application and details on how all of the work in relation to GCN will be included. A species specific mitigation plan/management plan will likely be required in accordance with any licence.

Summary of Responsibilities

1.11.19 Table A2.11.1 provides a summary of the responsibilities of the parties involved in the Proposed Development.

Table A2.11.1 Great Crested Newts Protection Plan – Summary of Responsibilities

Party	Responsibilities
Employer (SP Manweb/IEC)	Appointment of independent ECoW Provision of relevant survey reports and other material prepared during pre-application stages of the Proposed Development.
ECoW	Undertaking appropriate pre-construction surveys and reporting results. Undertaking appropriate monitoring during construction. Undertaking consultation with Natural England as required. Obtaining protected species licence if required. Establishing protection zone as required. Briefing contractor on specific requirements.
Contractor	Assisting the ECoW with implementation of measures. Adhering to measures in Species Protection Plan. Adhering to conditions of EPS licence

1.12 REPTILES – SPECIES PROTECTION PLAN

Introduction

1.12.1 This Species Protection Plan has been produced for reptiles.

1.12.2 Details on reptile survey findings recorded during the pre-application stage are contained within ES Chapter 7 Ecology (**DCO document 6.7**) and Appendix 7.3 Phase 1 Habitat Survey (**DCO document 6.7.3**) which should be referred to in conjunction with this document.

Legislation

1.12.3 Reptiles, including snakes (adders, grass and smooth), lizards (sand and common) and slow worm are protected under the Wildlife and Countryside Act 1981 (as amended) against intentional or reckless killing and injuring and against trade.

Site and Project Description

1.12.4 Arable habitats and improved grassland along the Proposed Development are intensively farmed and would not hold substantial viable reptile populations. Small extents of potentially more suitable habitat comprising narrow field margins along the bases of hedgerows, scrub and dense marginal vegetation along watercourses and ditches and woodland edges was recorded at a limited number of locations, along with refuge habitat such as log piles. However, there were no extensive areas of high habitat suitability or with good connectivity to high suitability habitat in the wider area suitable to support more than small populations of or individual reptiles within the surveyed area or nearby.

1.12.5 On a precautionary basis it is considered that individuals of common species of reptile may potentially be occasionally present along the survey corridor, for example grass snake around damp habitats especially along watercourse riparian corridors.

Background

1.12.6 Reptiles are considered to be present in low numbers in proximity to the Proposed Development. As such, common reptiles are required to be

considered at an early stage within the Proposed Development to ensure no significant impact on this species with all appropriate measures in place.

1.12.7 This Species Protection Plan sets out the approach to ensure the protection of reptiles during the construction of the Proposed Development.

Review of Existing Data

1.12.8 The ES concludes that the nature of the Proposed Development entails a restricted construction footprint and construction proceeds in a largely linear way, meaning that habitat disturbance will be temporary and short term at any given location along the route. There will be inconsequential loss of suitable reptile habitat and hence negligible fragmentation effects on reptiles (if present near the construction area).

Sources of Potential Impacts

1.12.9 As addressed within the ES the Proposed Development has the potential to impact upon reptiles. Impacts are related to the following:

- Direct land take leading to permanent or temporary habitats loss
- Indirect habitats damage or alteration to habitats (and the species they may support) through:
    - Changes to surface or ground waters (hydrological alteration): alterations to the physical regime, typically water levels/availability to wetland species or habitats;
    - pollution: release of pollutants (for example silt-laden runoff from working areas and fuel spills) into habitats inside or outside the Order Limits including watercourses or ditches which provide pathways to affect downstream habitats and species; and,
    - introduction or spread of invasive non-native species; and

1.12.10 Direct or indirect harm or disturbance to or displacement of protected or notable species from machinery, equipment and human activities during construction works along the Proposed Development, including noise and visual disruption.

Environmental / Ecological Clerk of Works

1.12.11 As set out in section 0 an Environmental/Ecological Clerk of Works (ECoW) will be appointed prior to the commencement of construction. The ECoW will be responsible for ensuring the implementation of the measures described within this Species Protection Plan.

Site Surveys and Monitoring

1.12.12 Due to the low potential for impacts on common reptiles, further pre-construction surveys are unlikely to identify populations of reptiles.

Update of Data and Impact Assessment

1.12.13 Previous information and assessments will be reviewed by the ECoW.

1.12.14 Measures proposed will be reviewed and updated where appropriate. The Contractor will be advised of existing constraints, together with measures developed by the ECoW. This will include undertaking toolbox talks with relevant construction teams. In addition, the following general good practice will be adhered to throughout the construction period by the Contractor.

General Measures

1.12.15 General good practice measures will be adhered to at all times during the construction of the Proposed Development. This includes:

- Where possible, micro-siting will be undertaken so that areas used by reptiles are not developed/used as temporary laydown areas.
- All works, including access tracks, laydown areas will take place within a clearly demarcated works area illustrated on a plan.
- Measures will be designed by appropriately experienced ecologists and be installed under expert ecological supervision if necessary using specialist contractors.

Project Specific Measures

1.12.16 No additional project specific measures are proposed.

Summary of Responsibilities

1.12.17 Table A2.12.1 provides a summary of the responsibilities of the parties involved in the Proposed Development.

Table A2.12.1 Common Reptiles Protection Plan – Summary of Responsibilities

Party	Responsibilities
SP Manweb	Appointment of independent ECoW Provision of relevant survey reports and other material prepared during pre-application stages of the Proposed Development.
ECoW	Undertaking appropriate monitoring during construction. Undertaking consultation with Natural England as required.
Contractor	Assisting the ECoW with implementation of measures. Adhering to measures in Species Protection Plan.

1.13 BIRDS – SPECIES PROTECTION PLAN

Introduction

1.13.1 This Species Protection Plan has been produced for the Proposed Development in relation to wild birds.

1.13.2 Full details on the bird survey findings recorded during the pre-application stage are contained within ES Chapter 7 (**DCO document 6.7**) which should be referred to in conjunction with this document.

Legislation

1.13.3 All wild birds are protected by law under the Wildlife & Countryside Act 1981 and by the Conservation (Natural Habitats and Species) Regulations 2017 and Countryside and Rights of Way Act 2000, making it an offence to:

- kill or injure any wild bird;
- capture or keep (alive or dead) any wild bird;
- destroy or take the egg of any wild bird;
- sell or advertise for sale any wild bird or its eggs; and
- destroy, damage, interfere with, take or obstruct the use of the nest of any wild bird while it is in use or being built.

1.13.4 Additional protection is given to rare breeding birds listed under Schedule 1 of the Wildlife and Countryside Act 1981. It is an offence to intentionally or recklessly disturb any Schedule 1 species while they are nest building, or at a nest containing eggs or young, or disturb the dependent young of such birds.

Site and Project Description

1.13.5 The survey area is largely dominated by open arable/pastoral farmland with woodland copses, networks of hedgerows and watercourses including the Rivers Roden and Perry, and the Montgomery Canal.

Background

1.13.6 Target bird species (such as Schedule 1 species, species considered vulnerable to collision, bird species present during the breeding season) are known to be present in proximity to the Proposed Development. As such

they require to be considered at an early stage within the Proposed Development to ensure no significant impact on this species with all appropriate measures in place.

1.13.7 This Species Protection Plan sets out the approach to ensure the protection of birds during the construction of the Proposed Development.

Review of Existing Data

1.13.8 Surveys undertaken for the ES confirmed the Proposed Development does not constitute a particularly sensitive area for target species of birds and does not support large numbers of vulnerable species such as geese or other waterfowl. Small numbers (1-2 pairs) of lapwing were observed attempting to breed in a small number of the numerous large open fields present across the survey area, however agricultural management and ploughing of fields meant that little or no successful breeding was noted. Numerous heron flights were recorded in winter passing north-south and intersecting the Proposed Development. Flights were however all above the height of the proposed overhead line. Few intersecting flights were recorded in the spring/early summer, suggesting that heron movements changes seasonally in the area.

Sources of Potential Impacts

1.13.9 As addressed within the ES the Proposed Development has the potential to impact upon birds. Impacts are related to the following:

- Disturbance/displacement of target bird species
- Breeding birds may be affected if works are carried out during the breeding season
- Collision risk with the overhead line
- Increased predation through the use of the new poles as hunting perches by raptors

ECoW

1.13.10 As set out in section 1.3 an ECoW will be appointed prior to the

commencement of construction. The ECoW will be responsible for ensuring the implementation of the measures described within this Species Protection Plan.

Site Surveys and Monitoring

1.13.11 Due to the potential for impacts on target birds species, additional pre-construction surveys will be undertaken. Nest checks by a suitably qualified ecologist will be undertaken.

Update of Data and Impact Assessment

1.13.12 The results of the additional surveys will be reviewed by the ECoW in conjunction with the previous information and assessments. Where appropriate Protected Species Licences will be obtained.

1.13.13 Measures proposed will be reviewed and updated where appropriate. The Contractor will be advised of existing/new constraints, together with measures developed by the ECoW. This will include undertaking toolbox talks with relevant construction teams. In addition, the following general good practice will be adhered to throughout the construction period by the Contractor.

General Measures

1.13.14 General good practice measures will be adhered to at all times during the construction of the Proposed Development. This includes:

- In advance of construction, appropriate bird surveys will be undertaken to ensure no impacts on Schedule 1 or 1A birds, which breed all year round;
- In open areas suitable for ground nesting birds, measures including placement of Hawkeye bird scarers, ticker tape or scarecrows (e.g from old PPE) and strimming may be used to discourage birds nesting (providing no Schedule 1 or 1A species are present);
- All works, including access tracks and laydown areas will take place within a clearly demarcated works area as defined on a plan; and

- Should birds be found breeding during construction, a protection zone will be erected around the nesting site and left until the young have fledged. It is an offence to remove any birds nest while it is being built or in use. If a bird nest is to be removed then it must be shown to be disused.

Project Specific Measures

1.13.15 No project specific measures are identified for birds.

Summary of Responsibilities

1.13.16 Table A2.13.1 provides a summary of the responsibilities of the parties involved in the Proposed Development.

Table A2.13.1 Bird Protection Plan – Summary of Responsibilities

Party	Responsibilities
SP Manweb	Appointment of independent ECoW Provision of relevant survey reports and other material prepared during pre-application stages of the Proposed Development.
ECoW	Undertaking appropriate surveys during construction. Undertaking consultation with Natural England as required.
Contractor	Assisting the ECoW with implementation of good practice measures. Adhering to measures in this Species Protection Plan.

1.14 WATER VOLES AND OTTERS – SPECIES PROTECTION PLAN

Introduction

1.14.1 This Species Protection Plan has been produced for the Proposed Development in relation to European protected species otter (Lutra lutra) and water vole (Arvicola amphibious).

1.14.2 Full details on otter and water vole findings recorded during the ES are contained within Chapter 7 Ecology (**DCO document 6.7**) and Appendix 6.7.8 Otter and Water Vole Survey (**DCO document 6.7.8**) which should be referred to in conjunction with this document. This Species Protection Plan should be read in conjunction with Section 1.17 Watercourse Crossing Register.

Legislation

1.14.3 Otter are a Schedule 2 European Protected Species (EPS) under the Conservation (Natural Habitats and Species) Regulations 2017. Under this legislation a person is guilty of an offence if he acts intentionally or recklessly, or knowingly causes or permits an act, to kill, injure, capture or keep otters, or disturb otters. Otters and water voles are protected under the Wildlife and Countryside Act 1981 (as amended) against intentional or reckless killing and injuring and against trade.

Site and Project Description

1.14.4 The habitats long the survey corridor for the Proposed Development are overwhelmingly dominated by agricultural land supporting a mixture of arable and (largely improved) grassland fields. There is a network of scattered ponds across the area. The proposed route crosses the Montgomery Canal, Rivers Perry and Roden, and land to either side of these waterways includes ditch-lined fields within the floodplain.

Background

1.14.5 Otter and water vole surveys covered suitable watercourses and riparian habitat extending approximately 100m upstream and 100m downstream of crossing points. Both banks of each watercourse or ditch were surveyed

where safe access was possible.

1.14.6 No otter field signs were observed during survey, although otters are considered likely to be present and to move along the main watercourses in the area, including the Rivers Perry and Roden and Montgomery Canal, as well as minor tributaries. No holts or other signs of otter resting places were located along sections of surveyed bankside habitat up and downstream of crossing points for the Proposed Development.

1.14.7 Signs of water voles were recorded at several locations. Including burrows, latrines and feeding remains. The presence of water vole droppings is the only field sign that can be used reliably on its own to confirm the species presence however as a precautionary approach, other signs of small mammal activity suh as paths along banks of suitable watercourses/ditches were recorded as possible evidence on a precautionary basis.

1.14.8 Evidence of water vole presence was very limited overall along the Proposed Development, clustered along the River Perry and within a connected network of ditches in the fields east of the River Roden.

1.14.9 As such, otters and water voles are required to be considered at an early stage within the Proposed Development to ensure no significant impact on this species with all appropriate measures in place, including any European Protected Species (EPS) licences.

1.14.10 This Species Protection Plan sets out the approach to ensure the protection of otters and water voles during the construction of the Proposed Development.

Review of Existing Data

1.14.11 The ES concludes that there will be no loss of any watercourses or ditches as a result of the Proposed Development. Poles are mainly located well away from watercourse banks and ditches, thereby reducing the potential for indirect effects on aquatic and riparian habitats.

Sources of Potential Impacts

1.14.12 As addressed within the ES the Proposed Development has the potential to impact upon otters and water voles. Impacts are related to the following:

- Direct land take leading to permanent or temporary habitats loss;
- Indirect habitats damage or alteration to habitats (and the species they may support) through:
    - Changes to surface or ground waters (hydrological alteration): alterations to the physical regime, typically water levels/availability to wetland species or habitats;
    - pollution: release of pollutants (for example silt-laden runoff from working areas and fuel spills) into habitats inside or outside the Order Limits including watercourses or ditches which provide pathways to affect downstream habitats and species; and
    - introduction or spread of invasive non-native species.
- Direct or indirect harm or disturbance to or displacement of protected or notable species from machinery, equipment and human activities during construction works along the Proposed Development, including noise and visual disruption;
- Vegetation removal along any watercourses and banks may disturb and remove food sources for water voles, and;
- Removal of brash piles on the banks of watercourse may potentially remove otter refuges

Environmental / Ecological Clerk of Works

1.14.13 As set out in section 1.3 an Environmental/Ecological Clerk of Works (ECoW) will be appointed prior to the commencement of construction. The ECoW will be responsible for ensuring the implementation of the measures described within this Species Protection Plan. The EC0W will apply for the EPS licence.

Site Surveys and Monitoring

1.14.14 Due to the potential for impacts on otters and water voles, additional pre-construction surveys will be undertaken.

Update of Data and Impact Assessment

1.14.15 The results of the additional surveys will be reviewed by the ECoW in conjunction with the previous information and assessments. Where appropriate EPS licences will be obtained.

1.14.16 Measures proposed will be reviewed and updated where appropriate. The Contractor will be advised of existing/new constraints, together with measures developed by the ECoW. This will include undertaking toolbox talks with relevant construction teams. In addition, the following general good practice will be adhered to throughout the construction period by the Contractor.

General Measures

1.14.17 General good practice measures will be adhered to at all times during the construction of the Proposed Development. These have been highlighted by the Environment Agency and includes:

- Site staff will be briefed by means of Toolbox Talk;
- Obtain necessary licences from Natural England;
- Ensure the riparian vegetation is maintained; and,
- Any excavations left open overnight in proximity to water vole/otter habitat shall be fenced or fitted with escape planks.

Project Specific Measures

1.14.18 No project specific measures has been identified in the ES. The Environment Agency require that vegetation within the construction footprint shall be reinstated to allow for the dispersal of water voles across the area.

1.14.19 Otter and water vole licences will be applied for once the DCO is made, if required. This section shall be updated following issue of those licences to include any additional details included within those licences. Any associated conditions imposed on a licence application and details on how all of the

work in relation to otter and water vole will be included. A species specific mitigation plan/management plan will likely be required in accordance with any licence.

Summary of Responsibilities

1.14.20 Table A2.14.1 provides a summary of the responsibilities of the parties involved in the Proposed Development.

Table A2.14.1 Water Vole and Otter Species Protection Plan – Summary of Responsibilities

Party	Responsibilities
Employer (SP Manweb/IEC)	Appointment of independent ECoW Provision of relevant survey reports and other material prepared during pre-application stages of the Proposed Development.
ECoW	Undertaking appropriate pre-construction surveys and reporting results. Undertaking appropriate monitoring during construction. Undertaking consultation with Natural England as required. Obtaining protected species licence if required. Establishing protection zone around otter holts as required. Briefing contractor on specific requirements through tool box talks and other suitable measures.
Contractor	Assisting the ECoW with implementation of measures. Adhering to measures in Species Protection Plan. Adhering to conditions of EPS licence

1.15 HEDGEROW MANAGEMENT PLAN

Introduction

1.15.1 This Hedgerow Management Plan (HMP) has been produced for the Proposed Development and sets out the measures required to ensure protected features on site and existing hedgerows are adequately protected.

1.15.2 Full details on the hedgerow survey findings recorded during the environmental impact assessment are contained within Chapter 7 Ecology of the ES (**DCO document 6.7**) which should be referred to in conjunction with this document.

1.15.3 The purpose of the HMP is to identify potentially affected hedgerows and set out proposed measures. The HMP shall provide a link between the design phase of the project, the consenting process and construction. The HMP is provided in support of the DCO application and is secured through a requirement in the DCO.

1.15.4 Hedgerows are distinctive features of the countryside in England and Wales. As the most traditional type of field boundary in many areas, hedgerows and the field banks on which they often run are often of considerable historic interest.

1.15.5 Many hedgerows contain a great diversity of species both plant and wildlife. Their role in conserving and enhancing biodiversity is recognised in the section 41 list of Habitats of Principal Importance for Conservation of Biological Diversity in England. The section 41 list is used to guide decision-makers such as public bodies in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006 to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

1.15.6 Plan of Important Hedgerows (**DCO document 2.5**) identifies those hedgerows listed as “Important” affected by the Proposed Development.

Project Specific Considerations

1.15.7 All hedgerows within 50m of the Proposed Development were identified and

assessed in the ES. The survey corridor identified field boundaries containing mature hedgerows (both species rich and species poor). Important hedgerows were also identified.

1.15.8 Protection of these hedgerows through avoidance and minimisation of damage and loss is necessary for the following reasons:

- Priority habitat; and
- Considered to meet the relevant ecological criteria to be considered important under the Hedgerow Regulation 1997.

1.15.9 Works shall require the removal of hedgerows for construction of the Proposed Development to facilitate the location of wood poles and in a few instances to increase the size of some existing field accesses.

General Measures

1.15.10 There are no additional general measures in relation to this Hedgerow Management Plan.

Project Specific Measures

Proposed Construction Works

Accesses

1.15.11 The construction accesses routes have been identified to make use of the most suitable local roads from the main construction compound at Maesbury road. Existing farm accesses and field gates used by farmers will also be utilised to access the working areas along the route of the Proposed Development.

1.15.12 The construction accesses into and between fields have been chosen to intentionally avoid breaching the many field boundary hedgerows that the Proposed Development crosses. These construction accesses allow access to every pole position along the route of the Proposed Development.

1.15.13 Construction activities near hedgerows will be undertaken in line with British Standard 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations.*

Pole Locations

1.15.14 Where the proposed overhead line crosses field boundary hedgerows, these hedgerows have been assessed in terms of their historic and/or ecological value and therefore their importance in terms of the relevant statutory hedgerow regulations. Where poles are proposed, a limit of deviation will be applied to ensure that the hedgerow is not affected and is oversailed.

1.15.15 Where section poles are shown indicatively close to a hedge on the Works Plans (**DCO Document 2.3.0 – 2.3.16**) then these hedgerows shall be uplifted and temporarily stored to one side whilst the area is excavated and the pole installed. The length of hedgerow removed will be a maximum of 2.5m in length. (the width of the excavation required for a double H-pole, the largest structure proposed).

1.15.16 On completion of the development, all hedgerows between pole structures shall be reinstated following the proposed method detailed in section 1.15.28 - 1.15.34.

Identification of Hedgerows

1.15.17 Prior to construction works commencing the contractor shall prepare a schedule detailing all hedgerows affected by the Proposed Development and the works proposed. This shall be agreed with the ECoW.

Pre-Construction Surveys

1.15.18 Following identification of required hedgerow removal, pre-construction surveys for protected and invasive species shall be carried out. Some flexibility in micrositing of poles will allow some more sensitive hedgerow species to be avoided. If hedgerow removal is required during the bird breeding season (March – September) additional checks shall be required to ensure no nests are affected. During this period these checks shall be no longer than 48hrs in advance of removal works.

Removal

1.15.19 The Contractor and ECoW shall agree the method for hedgerow removal for accesses and pole locations. This method may vary for each location and shall ensure potential adverse environmental effects are minimised.

1.15.20 Work shall be planned to limit disturbance to those sections of the hedgerow that are not proposed for removal, including roots of hedge plants. The optimal time for hedgerow removal is in the winter months whilst the plants are in a dormant growth phase.

1.15.21 Hedgerows shall be hard-pruned in the autumn prior to construction after the bird breeding season to render the hedgerow unsuitable for various overwintering species and nesting birds the following season.

1.15.22 The section of hedgerow for removal will be clearly marked on site to ensure minimum take.

1.15.23 In respect of hedgerow removal for the erection of poles, the shortest length of hedgerow necessary will be removed with the maximum length being no greater than 2.5m. This will be achieved through clear and accurate marking prior to works commencing.

Temporary Removals

1.15.24 Where excavations and reinstatements for pole installations occur over a short period of time, the intention is to temporarily remove the hedgerow. The section of hedgerow will be lifted, including root growth and associated soil, using an excavator. Roots shall be cut during the lifting operations to prevent excessive damage to the adjoining sections of the hedgerow.

1.15.25 This section of intact hedgerow will be set aside as the pole is constructed and installed, and the excavations refilled. The section of hedgerow will then be replaced back in its original position. The hedgerow will be replaced within 48hrs.

Other Removals

1.15.26 One short sections of hedgerow will be required to be cut back to increase

the size of an existing field access. Once the hedgerow is removed a gated access and required fencing shall be installed to maintain continuity along the boundary.

1.15.27 All operations shall be undertaken by suitably qualified persons. Machinery including chainsaws and excavators shall be used to remove the required section of hedgerow. Hedgerows removed will either be mulched on site and used in reinstatement or shall be disposed of at a licensed waste facility. Burning of cut hedgerow material on site shall not be permitted under any circumstances.

Reinstatement

1.15.28 All reinstatements of hedgerows shall ensure compatible species are used during the reinstatement. If the hedgerow is in a poor condition, a species rich but still reflective mix will be planted.

1.15.29 Reinstatement and planting shall be undertaken in suitable weather conditions so as not to stress the plants. No planting shall be undertaken if the ground is frozen or waterlogged. Hedgerows shall be watered when out and when replaced as necessary.

1.15.30 Hedgerow species shall be two year old root trained grown stock of native origin, obtained from reputable suppliers and delivered to site ready for planting. The replanting shall be in an appropriate pattern to ensure integration with the structure of the undisturbed section.

1.15.31 Planting shall be at a density of six plants per linear metre in a double staggered row in accordance with the proposed species mix. All newly planted hedgerows shall be protected to prevent damage to the young plants from livestock. Rabbitproof fencing shall be installed where necessary. Species replanted shall include hawthorn, blackthorn, Hazel, elder, Rose sp., Oak sp., Field Maple and Holly. A standard detail for hedgerow planting can be found at the end of the Plan.

Maintenance

1.15.32 A programme of maintenance shall be devised to ensure weed control and

replacement of non-surviving stock. Monitoring of reinstated hedgerows shall be undertaken 12 months after construction is completed to ensure recovery has been successful. Where plants have failed, new appropriate native species will be planted into the hedgerow.

1.15.33 The first cut to newly planted hedgerows shall take place within years 2 to 3 (dependant on growth), and shall consist of 'facing up' either side of the hedge. Additional hedge cutting may be required from a health and safety perspective should there be a good growing season although this is unlikely within the first few years of establishment, but shall be monitored.

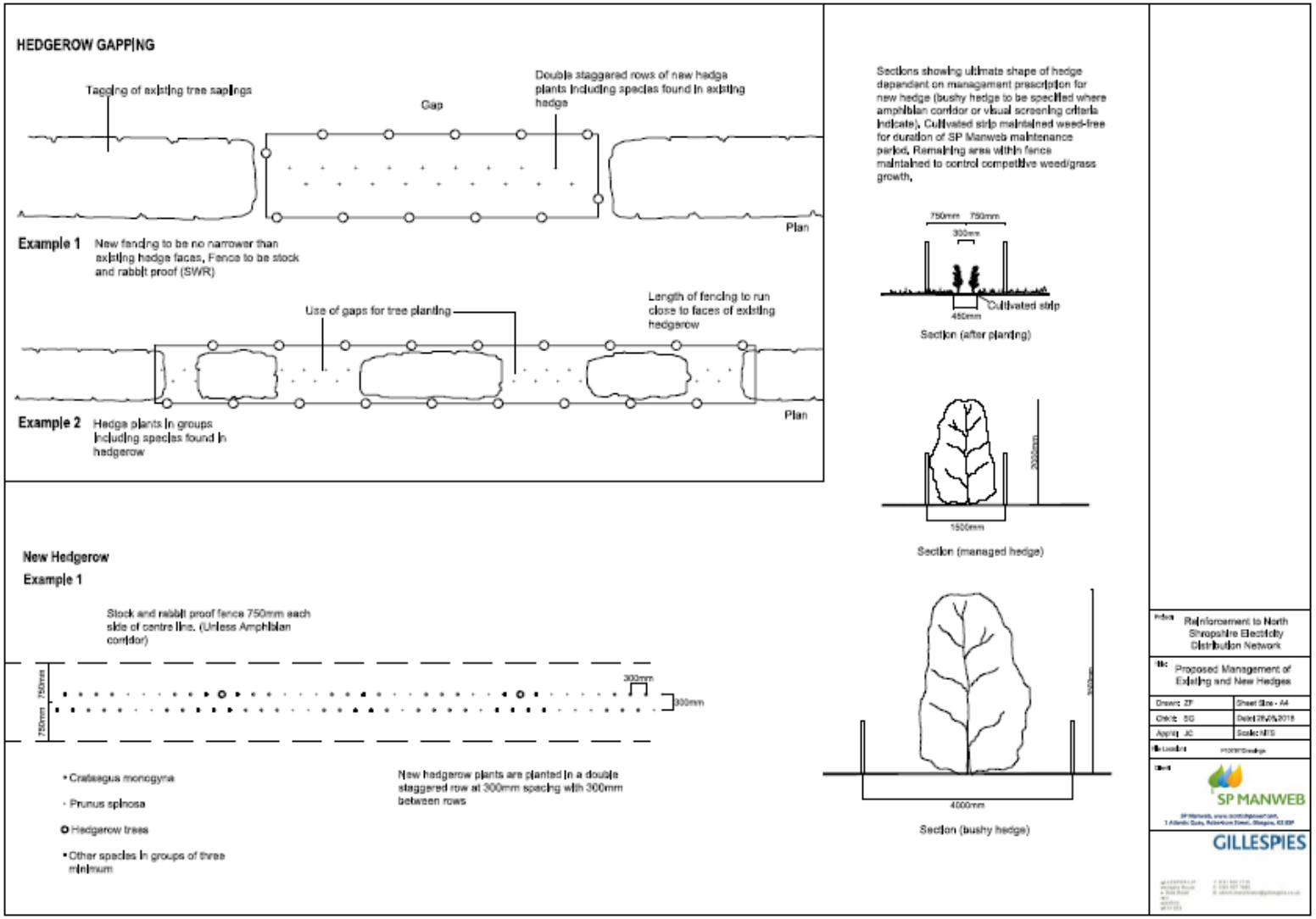
1.15.34 Newly planted hedgerows shall be cut in an 'A' shape to maintain a wide base for bird nesting and roosting and only one side shall be cut annually unless health and safety issues necessitates that both sides are cut. All such hedge cuts must be undertaken using appropriate hand or power tools or mechanical methods of management.

Summary of Responsibilities

1.15.35 Table A2.15.1 provides a summary of the responsibilities of the parties involved in the Proposed Development.

Table A2.15.1 Hedgerow Management Plan – Summary of Responsibilities

Party	Responsibilities
SP Manweb	Review risk assessments and method statements prepared by contractor
ECoW	Undertaking appropriate surveys during construction. Undertaking consultation with Natural England as required.
Contractor	Assisting the ECoW with implementation of good practice measures. Adhering to measures in this Management Plan.


HEDGEROW GAPPING
Tagging of existing tree saplings
Gap
Double staggered rows of new hedge plants including species found in existing hedge
Plan
Example 1
New fencing to be no narrower than existing hedge faces. Fence to be stock and rabbit proof (SWR)
Use of gaps for tree planting
Length of fencing to run close to faces of existing hedgerow
Plan
Example 2
Hedge plants in groups including species found in hedgerow
New Hedgerow
Example 1
Stock and rabbit proof fence 750mm each side of centre line. (Unless Amphibian corridor)
750mm
750mm
300mm
300mm
• Crataegus monogyna
· Prunus spinosa
O Hedgerow trees
• Other species in groups of three minimum
New hedgerow plants are planted in a double staggered row at 300mm spacing with 300mm between rows
Sections showing ultimate shape of hedge dependant on management prescription for new hedge (bushy hedge to be specified where amphibian corridor or visual screening criteria indicate). Cultivated strip maintained weed-free for duration of SP Manweb maintenance period. Remaining area within fence maintained to control competitive weed/grass growth.
750mm 750mm
300mm
450mm
Cultivated strip
Section (after planting)
3000mm
1500mm
Section (managed hedge)
3000mm
4000mm
Section (bushy hedge)
Reinforcement to North Shropshire Electricity Distribution Network
Proposed Management of Existing and New Hedges
SP MANWEB
GILLESPIES

1.16 POLLUTION PREVENTION PLAN

Introduction

1.16.1 This Pollution Prevention Plan sets out the measures to be implemented to protect the water environment and ensure that the Proposed Development does not result in significant impacts on surface and ground water resources.

Project Specific Considerations

1.16.2 Relevant constraints or impacts which are addressed within this plan are identified in the ES and include watercourses, canals, private groundwater supply points and other sensitive habitats.

1.16.3 Before construction commences discussions will be undertaken with landowners to determine the location of private groundwater supply points and to agree what protection is required against construction activities.

1.16.4 Sections of the Proposed Development are located in areas of medium and high superficial aquifer vulnerability. Poles 31-39, 59-76, 102-143 are in areas of high vulnerability, secondary superficial aquifer. Poles 39-59, 76-102 and 143-176 are in areas of medium vulnerability, secondary superficial aquifer.

General Measures

Relevant Guidance

1.16.5 Construction of the Proposed Development will be carried out in accordance with all current good practice guidance including:

- Environment Agency Guidance: Protect groundwater and prevent groundwater pollution (March 2017);
- Environment Agency Guidance: Temporary dewatering from excavations to surface water (July 2018)
- WAT-SG-25 Engineering in the Water Environment: Good Practice Guide, River Crossings;
- WAT-SG-26 Engineering in the Water Environment: Good Practice Guide, Sediment Management;

- WAT-SG-29 Engineering in the Water Environment: Good Practice Guide, Temporary Construction Methods;
- CIRIA Report C532 Control of Water Pollution from Construction Sites: Guidance for Consultants and Contractors;
- CIRIA Handbook C650 Environmental Good Practice on Site;
- The Forests and Water Guidelines (Forestry Commission); and
- British Standard 6031: 2009 *Code of practice for Earthworks*.

Scheduling of works

1.16.6 Works shall be scheduled to:

- Reduce the periods for which soils are exposed and stockpiled thereby reducing the risk of generating silt laden runoff;
- Avoid where possible undertaking specific activities such as earthworks during prolonged and heavy rainfall thereby reducing the risk of sediment or pollutants becoming entrained in excess runoff;
- Avoid where possible undertaking particular works in closer proximity to watercourses when water levels are higher and adjacent land is at risk of flooding; and
- Allow time to identify the location of private groundwater supply points prior to construction.

Storage of Chemicals, Fuels and Oil

1.16.7 Fuel shall be stored:

- In areas where potential for contamination of water bodies is low i.e. outwith 50 metres of a spring, well or borehole and 10 meters of an open watercourse;
- In areas that are low risk of flooding;
- In tanks that meet the manufacturing standards appropriate for the type of oil stored and comply with BS EN ISO 9001;
- With contents clearly marked on their storage containers;
- With secondary containment (a bund or drip tray) where required;
- With secure and appropriately sized bunds being suitable to contain

110% of the contents (single tank). If more than one storage container is involved, the bund must be capable of containing 110% of the largest tank, or 25% of the total aggregate capacity, whichever is the greatest; and

- Tanks/ storage containers shall be protected against vehicle collision.

Additional Measures:

- Storage will be minimalised;
- Any tanks or drums of non-oil based chemicals must be recorded and additional records kept as required by the Control of Substances Hazardous to Health Regulations 2002 (COSHH Regulations);
- All storage containers will be checked daily for oil and fuel leaks and record of such checks kept by the contractor; and
- Leaking or empty drums must be removed from the site immediately and appropriately disposed of.

Movement, Parking and Re-fuelling of Vehicles and Plant

1.16.8 Vehicles and plant will comply with the following:

- Movement of construction plant and vehicles will be limited to clearly defined access tracks and construction areas only in order to prevent compaction and erosion of undeveloped ground;
- All construction plant and vehicles will be parked/stored at least 10m away from surface waterbodies and springs and 50m away from private groundwater supply points;
- All construction plant and vehicles will be checked daily for oil and fuel leaks and record of such checks kept by the construction contractor;
- Mobile plant will be in good working order, kept clean and fitted with drip trays where appropriate;
- Refuelling of construction plant and vehicles will be undertaken on an impermeable surface at a temporary construction compound only; and
- All refuelling activities will be supervised by site personal with emergency response training.

Silt Control

1.16.9 The following measures will be implemented in order to reduce the potential generation of silt laden runoff:

- Bare ground exposure shall be minimised by only removing vegetation from areas that require to be exposed in the near future and completing reinstatement as soon as practicably possible;
- Stockpiles of excavated soils will be located away from surface watercourses, private groundwater supply points and away from known surface drainage pathways as much as possible;
- Pumped water from excavations and de-watering activities will be drained to a suitably sized settlement pond to remove silt before discharge;
- Site roads will be regularly maintained and kept free from sediment deposits in order to reduce the volume of silt becoming entrained in surface runoff and entering any watercourse or drain;
- Watercourses will be monitored regularly with additional monitoring during periods of high rainfall and construction activities with potential for significant run-off; and
- Additional measures will be implemented as required (silt fencing, placement of straw bales into ditches, sediment traps) to intercept and collect silt, reduce runoff velocity and encourage deposition of suspended sediment.

Emergency Spill Response

1.16.10 Any spillage shall be dealt with in accordance with the Environmental Incident Response Plan (see section 1.4.9). which shall be developed prior to the commencement of Development. This will comply with the following:

- Site personal shall be provided with emergency spill response training;
- Spill kits shall be made available at fuel storage and refuelling locations; and in individual plant and vehicles; and
- Specific emergency response actions shall be detailed in the Environmental Incident Response Plan.

Monitoring and Record Keeping

1.16.11 The COSHH record for any chemicals stored on site will be kept and updated by the Contractor.

1.16.12 Records will be kept of all visual fuel and oil checks of construction plant, vehicles and fuel and oil storage containers by the Contractor.

1.16.13 Monitoring of sensitive watercourses will be required during construction of the Proposed Development. The frequency and nature of monitoring will be proportionate to the sensitivity of the water environment and the risks posed by construction. This could include regular visual inspections of watercourses.

Project Specific Measures

1.16.14 In areas of medium and high vulnerability for secondary superficial aquifers special consideration will be given to construction activities to ensure the general measures listed above are strictly enforced. Additional auditing of activities in these areas will be required and tool box talks shall be given to highlight the sensitivity. .

Summary of Responsibilities

1.16.15 The content of this table has been prepared to clearly illustrate who is responsible for the different activities during construction.

Table A2.16.1 Pollution Prevention Plan – Summary of Responsibilities

Party	Responsibilities
SP Manweb	Review risk assessments and method statements prepared by Contractor
ECoW	Inspect and monitor construction activities. Assist with any training required. Provide additional auditing within those areas identified as medium and high vulnerability secondary superficial aquifers.
Contractor	Ensure construction activities follow the general measures set out above. Responsible for the implementation of the Environmental Incident Response Plan and recording of information relating to chemicals and spills. Provide additional tool box talks highlighting the sensitivity of those areas within the medium and high vulnerability, secondary superficial aquifers.

1.17 WATERCOURSE CROSSING REGISTER

Introduction

1.17.1 The main aim of the Watercourse Crossing Register is to manage the construction activities in proximity to the watercourses crossed by the Proposed Development. No works are proposed within the rivers but construction activities will take place adjacent to, and over, the watercourses. To ensure construction activities are controlled in this sensitive environment the following measures are set out for each river. There are also a large number of drainage ditches in the Proposed Development area. Most of these were found to be dry for the majority of the year but The Environment Agency (EA) state that these could support populations of water voles and otters.

Project Specific Considerations

1.17.2 Where the proposed overhead line crosses the Rivers Perry and Roden, the conductors will be strung across without the need to access the water or banks. To enable conductor stringing, a pilot wire will be fired across from one bank to the other, with conductors subsequently pulled over under tension. The conductors will not touch the water during this operation.

1.17.3 SP Manweb have discussed the crossing of the Rivers Perry and Roden with the Environment Agency (EA) and have agreed a set of working methods for construction activities in proximity to the watercourse. These methods are set out below. The EA have confirmed that the River Perry crossings are exempt from requiring an Environmental Permit (formerly known as a Flood Defence Consent) but, as the overhead line crosses close to their Common Wood flood defence on the River Roden, a bespoke Flood Risk Environmental Permit is required.

General Measures

1.17.4 Design and construction of all temporary and permanent watercourse crossings will comply with the following:

- Watercourse crossings will be designed and constructed taking into

account the guidance contained within WAT-SG-25 *Engineering in the Water Environment: Good Practice Guide, River Crossings*;

- Watercourse crossings will be designed such that they do not restrict water flow or hinder the passage of mammals along the banks; and
- Where works require temporary working within close proximity to surface waters all activities shall be undertaken in accordance with the guidance contained within PPG 5: *Works and Maintenance Near Water*. Measures shall be put in place in order to minimise disturbance of substrate material and silt pollution.

Project Specific Measures

1.17.5 Table A2.17.2 below sets out each watercourse crossed by the Proposed Development, give a brief description of the watercourse, explains the type of crossing proposed and whether any additional licences or permits are required.

Table A2.17.2 Watercourse Crossing Register						
Crossing ID	**Location**	**Watercourse Name**	**Approx. Channel Width**	**Type of Crossing**	**Description & Rationale**	**Environmental Permit required?**
WC02 WC03 WC04	SJ372294 SJ375293 SJ385292	River Perry	4.7m 6.6m 7.4m	Overhead Line Overhead Line Overhead Line	Classified in 2016 as ecologically Moderate but Good chemically. Licensed abstractions of surface and groundwater in catchment for agricultural purposes, principally for spray irrigation	Construction works > 8m from bank of River. Therefore works exempt from requiring an Environmental Permit.
WC05	SJ492283	River Roden	9.2m	Overhead Line	Classified in 2016 as ecologically Poor but Good chemically. Licensed abstractions of surface and groundwater in catchment for agricultural purposes,	Construction works > 8m from bank of River but close to the EA Common Wood Flood Defence therefore a bespoke Flood Risk Environmental Permit is required.

Table A2.17.2 Watercourse Crossing Register						
Crossing ID	**Location**	**Watercourse Name**	**Approx. Channel Width**	**Type of Crossing**	**Description & Rationale**	**Environmental Permit required?**
					principally for spray irrigation	

Agreed Working Methods for River Perry crossings

1.17.6 The EA sets out conditions that must be met to register a crossing as an exempt activity:

- the service crossing is within 10° of perpendicular to the direction of flow of the main river;
- you erect permanent hazard markers on both banks of the main river;
- your works do not disturb the bed and banks of the main river;
- you remove from the floodplain all excavated material not re-used on the site of the works; and
- the vertical and horizontal clearances of the service crossing comply with the distances below:

Voltage (kV)	Vertical clearance above bank or flood bank crest level (metres)	Horizontal clearance of any tower or support landward from the top of the bank of the main river (metres)
132	12	15

1.17.7 Pre-construction surveys shall also be carried out along drainage ditches to confirm presence/absence of water voles and otters. If water voles or otters are identified the following good practice measures will be followed:

- Site staff will be briefed by means of a Toolbox Talk;
- ECoW will determine if necessary licences are required;
- Ensure the riparian vegetation is maintained; and
- Any excavations left open overnight in proximity to water vole/otter habitat are fenced or fitted with escape planks.

Summary of Responsibilities

1.17.8 The content of this table has been prepared to clearly illustrate who is responsible for the different activities during construction.

Table A2.17.3 Watercourse Crossing Register – Summary of Responsibilities	
Party	**Responsibilities**
SP Manweb	Review risk assessments and method statements prepared by Contractor
ECoW	Inspect and monitor construction activities
Contractor	Prepare risk assessments and detailed method statements for watercourse crossings. Confirm exact location of Poles in proximity to river crossing

1.18 DRAINAGE MANAGEMENT PLAN

Introduction

1.18.1 This Drainage Management Plan (DMP) sets out the measures to be implemented to protect the water environment and ensure that the Proposed Development does not result in significant impacts on surface and ground water resources.

Project Specific Considerations

1.18.2 Relevant constraints or impacts which are addressed within this plan include:

- Increased flood risk due to location of laydown areas, access tracks and temporary construction activities within the floodplain;
- Release of sediment into surface water during construction activities;
- Accidental release of oils, fuels and construction materials, including accidental release of contaminants into the groundwater, particularly from temporary laydown areas;
- Trenching activities for the underground sections; and
- Drainage of site offices and welfare unit.

General Measures

Drainage System Design Principles

1.18.3 Site Drainage System will comply with the following principles:

- The drainage system will not discharge directly to any waterbody, but will discharge to appropriately sited buffer strips or trenches, preferably on flat ground. The buffer strips will act as filters, minimising sediment transport, attenuating higher velocity flows and maximising infiltration;
- During construction a range of temporary measures will be put in place to manage surface and groundwater flows and prevent pollution. These will be developed in detail prior to construction but shall include silt traps, settlement ponds and buffer strips as required;
- Temporary interception bunds including silt fences and/or matts and straw bales will be installed upslope and downslope of excavations and stockpiles in order to intercept surface water runoff, trap

entrained/suspended sediment and reduce ingress of water to excavations; and

- Artificial drainage will only be installed where necessary. The individual lengths, depths and gradients of these drains will be minimised to avoid intercepting large volumes of diffuse overland flow and generating high velocity flows during storm events.

Project Specific Measures

1.18.4 The main construction compound will be located at an Existing SP Manweb depot at Maesbury Road in Oswestry. New office cabins, welfare unit and storage containers will be all be located in the site. The drainage from these units will be connected into the existing drainage systems at Maesbury road. The welfare unit at the Wem laydown area will be self-contained.

Summary of Responsibilities

1.18.5 The content of this table has been prepared to clearly illustrate who is responsible for the different activities during construction.

Table A2.18.1Drainage Management Plan – Summary of Responsibilities

Party	Responsibilities
SP Manweb	Review risk assessments and method statements prepared by Contractor
ECoW	Inspect and monitor construction activities
Contractor	Prepare risk assessments and detailed method statements for construction activities Ensure construction activities follow the general measures set out above

1.19 TRAFFIC MANGEMENT PLAN

Introduction

1.19.1 This Traffic Management Plan (TMP) sets out measures to be implemented to ensure the appropriate routeing of all traffic generated by the construction of the Proposed Development including abnormal loads.

1.19.2 Access and Rights of Way Plans (ARoW Plans, **DCO document 2.4**) identifies the proposed areas for access required for the Proposed Development. The Construction Report (**DCO document 7.2**) describes how existing farm accesses will be used to access the Proposed Development rather than the need to create new accesses.

1.19.3 Operational traffic will largely comprise of ad-hoc maintenance and scheduled inspections, with the potential for larger scale works in the event of a major failure or natural disaster. The level of traffic generated during the operational phase is expected to be extremely low and thus formal management is not covered within this TMP.

1.19.4 The objectives of the TMP are as follows:

- Ensure that movements of people and materials are achieved in a safe, efficient, timely and sustainable manner;
- Keep construction traffic to a minimum during network peaks to reduce the impact on the highway network during busy periods;
- Ensure that the impact and disruption to the local communities is minimised;
- Minimise construction trips where possible;
- Ensure the continued monitoring, review and subsequent improvement of the CTMP and measures;
- Minimise impacts on the Strategic Road Network (SRN) and Local Road Network (LRN); and
- Minimise impacts on the natural and built environment.

1.19.5 This TMP shall be agreed with Highways England (HE) and Shropshire Council before construction works commence. It is a live document that will be updated and modified as agree with HE and Shropshire Council, as highways authorities, as the Proposed Development progresses and as detailed construction activities are clarified by the Contractor.

Project Specific Considerations

1.19.6 Relevant constraints or impacts which are addressed within this plan are contained with ES Appendix 1.1 Transport and Highway Technical Note (**DCO document 6.1.1**) This includes:

- Construction traffic numbers and movement on local roads to the existing SP Manweb depot at Maesbury Road, Oswestry;
- Construction traffic travelling to the overhead line route.

General Measures

1.19.7 Traffic management measures shall be put in place to protect the condition and safety of the local highways used. These will include:

- making safe vehicular accesses;
- use of wheel washing facilities, dust control, road sweeping;
- noise/ vibration control;
- use of banksmen to ensure safe access/ egress of vehicles;
- convoy support vehicles for wide loads;
- wide load notifications; and
- compliance with width and weight restrictions.

Project Specific Measures

Primary Routes to Site

1.19.8 In order to construct the Proposed Development, access will be required onto and from the public highway network both for construction purposes and on a permanent basis to allow routine maintenance and inspection of the completed infrastructure.

1.19.9 For the majority of the Proposed Development existing gates and field access will be used.

1.19.10 Construction traffic will utilise the Strategic Road Network (SRN, A roads and Motorways managed by HE) and the Local Road Network (LRN).

Crossing the Road Network

1.19.11 Scaffolding and nets would normally be erected over major roads to enable the conductors to be pulled out unhindered. On minor roads temporary traffic lights are sufficient to control traffic during stringing activities. Prior to construction the contractor will agree the relevant codes of practice, specifications and procedures with HE and Shropshire Council.

Traffic Management Measures

Traffic Signage

1.19.12 Temporary signage will be erected along construction traffic routes on the LRN to provide directional routeing information for construction vehicles, to ease navigation between the SRN and the construction sites. In addition, temporary signage will be erected along the proposed construction access roads where necessary. The signage will provide construction vehicle drivers with information on the distances to construction sites (destinations) and warning (hazard) information related to potential vehicle conflict or pedestrian conflict areas.

A5 Trunk Road Access Traffic Signage

1.19.13 Temporary signage for the A5 Trunk road access and associated works compound has been discussed with HE and a Traffic Management Signage Strategy has been drafted and agreed in principle with Highways England (Appendix T1). The final Traffic Management Signage Strategy, completed once the contractor is appointed, shall be agreed with and approved by HE (see also Requirement 11).

Temporary Traffic Management

1.19.14 Temporary traffic management will be deployed throughout the construction programme. Construction activities that may require temporary traffic

management include but are not limited to:

- Improvements to construction access points, e.g. new gates;
- The construction/dismantling of overhead lines within the vicinity of the highway;
- Erection/netting of scaffolding;
- Haul road crossing points; and
- Delivery of materials to the work areas.

1.19.15 The type of temporary traffic management deployed will vary and could include temporary traffic signals, manned stop/go boards, road narrowing and speed restrictions.

1.19.16 All temporary traffic management implementation plans will need to be approved by HE and Shropshire Council.

1.19.17 Temporary traffic management arrangements will be included as part of the detailed design submission by the Contractor, which will also be subject to approval by the relevant highway authority.

A5 Temporary Traffic Management

1.19.18 In addition to the measures detailed above SP Manweb has prepared temporary traffic measures for the A5 in consultation with HE. Appendix T1 includes the details of these measures. The final temporary traffic management measures for the A5, completed once the contractor is appointed, shall be agreed with and approved by HE (see also Requirement 11).

Working Hours

1.19.19 Working hours will be restricted to those defined in the draft DCO (**DCO document 3.1**) and are as follows:

- Construction activities would in general be undertaken during daylight hours only;

- For weekdays, this includes between the hours of 0700 to 1900 March to October and 0730 to 1730 or during daylight hours, whichever is the shorter, November to February;
- At weekends, the working hours would be 0700 to 1300 on Saturdays with no works on Sundays or bank/public holidays, and;
- Some works may be required outside of the working hours such as scaffolding/netting, highways crossings and completion of operations that cannot be safely stopped.

1.19.20 Heavy good vehicle (HGV) movements associated with the Proposed Development shall take place during working hours.

Construction Contractor

1.19.21 Prior to construction the Contractor will be required to provide details on the following:

- HGV restrictions;
- Construction routes;
- Non-compliance guidance;
- Complaints procedure;
- Standard communication procedures between contractors and site; and
- Emergency and non-emergency contacts.

1.19.22 These shall be included in the TMP for approval by HE and Shropshire Council.

Identification of Hazards

1.19.23 Table A2.19.1 below identifies key constraints and proposed management measures.

Table A2.19.1 Traffic Management

Constraint	Management Measures
Deliveries to site	Deliveries to site will follow defined haulage routes. One abnormal load delivery is required to the existing SP Manweb substation at Wem. The route and timing of this delivery shall be agreed with HE and Shropshire Council. General traffic management measures relating to the timing, escort provisions and advertisement shall be included in a detailed plan submitted by the appointed haulier along with confirmation of the vehicle configuration (axle loads/spacings and dimensions).
Debris on roads	All vehicles exiting from a bellmouth will be checked and cleaned manually if required (or if it is deemed necessary, will pass through a wheel cleaning facility) prior to using the public highway to prevent the debris from being transferred off the site onto the road. A road sweeper will be utilised to further ensure that the LRN remains safe and clear of debris.
Construction traffic exiting farm access or near PRoW	Qualified personnel (banksmen) shall be placed at key locations when necessary during the construction of the Proposed Development. Key locations are likely to include access at key parts of the Proposed Development works or at the PRoW crossing points during construction at that location.
Damage to highways and accesses	Each access point to any public highway by any access road or track used by the Proposed Development will be inspected. These inspections shall take place before first use, at intervals during the construction programme and following final use, to ensure that the surface of the highway remains in good repair and highway safety is maintained. The inspections will also enable any repairs to be made in a timely manner throughout the construction period. At the end of the construction period, the accesses and crossing points shall be inspected and a programme of works to restore them to the condition they were in before the construction period began will be agreed with SC and HE.

Summary of Responsibilities

1.19.24 The content of this table has been prepared to clearly illustrate who is responsible for the different activities during construction.

Table A2.19.2 Traffic Management Plan – Summary of Responsibilities	
Party	**Responsibilities**
SP Manweb	Provision of relevant survey reports and other material prepared during pre-application stages of the Proposed Development. Review risk assessments and method statements prepared by Contractor
ECoW	Inspect and monitor construction activities. Assist with any training required
Contractor	Ensure construction activities follow the general measures set out above. Provide detailed information to update TMP Consultation with HE and Shropshire Council Develop the TMP to include any additional measures identified through consultation with HE or Shropshire Council

1.20 CANAL CROSSING PLAN

Introduction

1.20.1 The main aim of the Canal Crossing Plan is to manage the construction activities in proximity to the canal crossed by the Proposed Development. No works are proposed within the canal but construction activities will take place adjacent to, and over, the canal. To ensure construction activities are controlled in this sensitive environment the following measures are set out for the canal.

Project Specific Considerations

1.20.2 Where the proposed overhead line crosses the Montgomery Canal the conductors will be strung across without the need to access the water or banks. To enable conductor stringing, a pilot wire will be fired across from one bank to the other, with conductors subsequently pulled over under tension. The conductors will not touch the water during this operation. There is no requirement to erect scaffolding or netting to complete the conductor stringing across the Montgomery Canal.

1.20.3 SP Manweb has discussed the crossing of the Montgomery Canal with the Canal & River Trust. A Code of Practice for Works in proximity to the Canal and a set of protective provisions has been provided by the Trust and SP Manweb's proposed provisions are included in the draft DCO **(DCO Document 3.1)**.

General Measures

1.20.4 Design and construction of the canal crossing will comply with the following:

- guidance contained within WAT-SG-25 *Engineering in the Water Environment: Good Practice Guide, River Crossings*;
- the canal crossing will be designed such that it does not restrict water flow or hinder the passage of mammals along the banks; and
- all activities shall be undertaken in accordance with the guidance contained within PPG 5: *Works and Maintenance Near Water*.

- Measures shall be put in place in order to minimise disturbance of substrate material and silt pollution.

Project Specific Measures

Agreed Working Methods for the Canal Crossing

1.20.5 The Canal & River Trust have requested the following:

- signage to restrict fishing activities and avoidance of risks to anglers;
- bird diverters are installed on the overhead line where it crosses the Canal; and
- Tree works either side of the canal

1.20.6 The Canal & River Trust have provided a Code of Practice for Works in proximity to the Canal 2019 (see Appendix B) and the draft DCO (**DCO Document 3.1**) contains protective provisions.

Signage

1.20.7 The Canal & River Trust have also supplied a document entitles Managing the Risk to Anglers which is included in Appendix B. This document includes detailed guidance regarding signage types, placement, mounting, exclusion zones, inspection and maintenance. SP Manweb and it Contractor shall follow the guidance with regards to signage for anglers.

1.20.8 SP Manweb shall ensure the signage is in place prior to the overhead line being energised.

Bird Diverters

1.20.9 Bird diverters can be fitted to the conductors of overhead lines. There are different designs of diverters including large spherical devices, devices which move and 'flap' hung from conductors and the 'spiral' bird diverter which is now more commonly used. It is effective in making the line visible to birds but has much less effect on the landscape and in views. It also tends to stay in the position where it is installed, whereas other diverters such as those that move and flap tend to move slowly towards the lowest point on the

conductor between supports. A manufacturer's drawing of a bird diverter is shown at Drawing BFD 5249069RB which can be found at the end of this plan.

1.20.10 SP Manweb shall ensure the bird diverters are installed prior to the line being energised.

1.20.11 Once installed, the bird diverters are monitored in the inspections of the overhead line which occur at least annually. The 'spiral' type diverter has a lifespan which is longer than the anticipated lifetime of the conductors to which it is fixed and it does not move along the line as a result of wind or other influences. It is highly unlikely that maintenance or replacement would be required during the operation of the line. Where new conductors are installed, SP Manweb anticipates that replacement bird diverters would be installed in the equivalent locations to diverters on the conductors to be replaced.

Tree Works

1.20.12 Vegetation clearance works will be required either side of the canal in the vicinity of the Proposed Development. The details of these works shall be developed in consultation with the Canal & River Trust but noting that SP Manweb has a duty under the ESQCR regulations (see paragraph 1.6.11) to keep sufficient distance between vegetation and overhead lines both to safeguard public safety and to ensure continuity of supply.

1.20.13 SP Manweb is also proposing to provide additional tree planting and/or habitat enhancement works in the vicinity of the canal. The details of these works shall also be developed in consultation with the Canal and River Trust.

Towpath/Footpath Management

1.20.14 The towpath/footpath alongside the Canal shall be kept open at all times during the construction works. As per the PRoW management described in sections 1.6.24 - 1.6.26, management will use construction staff at those crossing points where and when construction works affect the

towpath/footpath. Towpath/footpath users may have to wait for a short period of time whilst the towpath/footpath is in use by the construction team. Users will be advised when works are completed and it is safe to cross the towpath/footpath by staff at the crossing point.

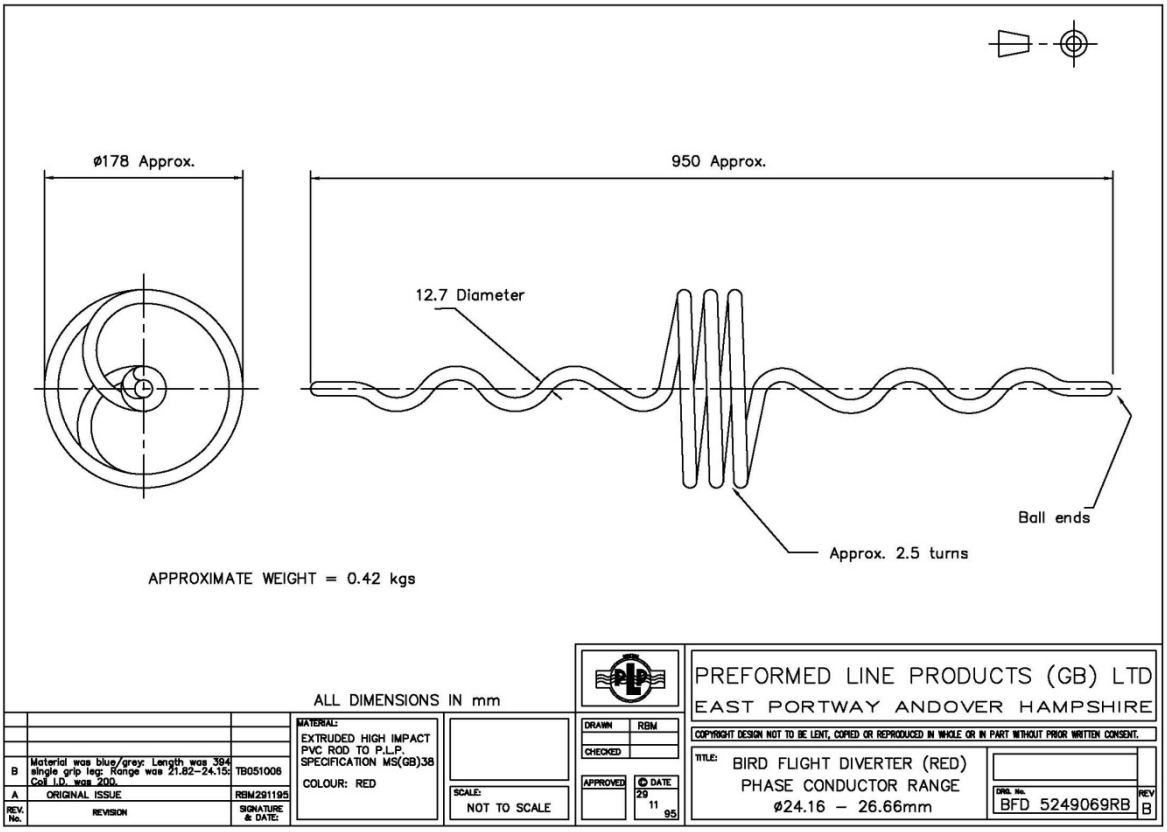
SP Energy Networks Commitment

1.20.15 SP Energy Networks and its Contractor are committed to carrying out the works as described above and in consultation with the Canal & River Trust. As stated in section 1.3.6 the draft CEMP will form part of the legal contract between SP Manweb and the Contractor. The Contractor will be responsible for ensuring all works are undertaken strictly in accordance with their legal and contractual obligations, terms and conditions. The Contractor will be responsible for ensuring the general management measures and species management plans identified in this draft CEMP are incorporated into the risk assessments and construction method statements to be produced for the Proposed Development.

Summary of Responsibilities

1.20.16 The content of this table has been prepared to clearly illustrate who is responsible for the different activities during construction.

Table A2.20.1 Canal Crossing Plan – Summary of Responsibilities	
Party	**Responsibilities**
SP Manweb	Review risk assessments and method statements prepared by Contractor
ECoW	Inspect and monitor construction activities
Contractor	Prepare risk assessments and detailed method statements for canal crossing. Confirm exact location of Poles in proximity to canal crossing


ø178 Approx.
950 Approx.
12.7 Diameter
Ball ends
Approx. 2.5 turns
APPROXIMATE WEIGHT = 0.42 kgs
ALL DIMENSIONS IN mm
PREFORMED LINE PRODUCTS (GB) LTD
EAST PORTWAY ANDOVER HAMPSHIRE
COPYRIGHT DESIGN NOT TO BE LENT, COPIED OR REPRODUCED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN CONSENT.
B Material was blue/grey: Length was 394 single grip leg: Range was 21.82–24.15: Coil I.D. was 200. TB051006
A ORIGINAL ISSUE RBM291195
REV. No. REVISION SIGNATURE & DATE:
MATERIAL: EXTRUDED HIGH IMPACT PVC ROD TO P.L.P. SPECIFICATION MS(GB).38
COLOUR: RED
SCALE: NOT TO SCALE
DRAWN RBM
CHECKED
APPROVED
DATE 29 11 95
TITLE: BIRD FLIGHT DIVERTER (RED) PHASE CONDUCTOR RANGE ø24.16 – 26.66mm
DRG. No. BFD 5249069RB
REV B

Appendix A – Contacts Register

<Project-specific Register to be finalised prior to the start of construction>

Contacts Register				
Name	**Company**	**Position**	**Tel. No.**	**Email address**
	SP Manweb	**Planning/Consents Lead**		
	SP Manweb	**Wayleaves Lead**		
	SP Manweb	**Project Manager**		
	SP Manweb	**Project Coordinator**		
	SP Manweb	**Environmental Manager**		
		Environmental Clerk of Works		
	Contractor	**Site Manager**		
	Contractor	**Foreman**		
	Contractor	**Environmental Manager**		

Appendix B – Companies Specifications

Appendix T1 – A5 Trunk Road Access: Traffic Management Signage Strategy