Project / Contract Name:	North Wessex Downs VIP
Client:	National Grid Electricity Transmission plc
BB Project No.:	5417
NG Scheme No:	100540
Document Title:	Outline Construction Environmental Management Plan
BIM Code:	5417-PTDC-CABXX-XX-RP-PDM-000072

VERSION	P04	STATUS CODE	S4
Reason For Issue	Updated as per National Grid Comments		
	Name	**Signature**	**Date**
Prepared	Mott McDonald	*A.Lee*	16/11/2023
Reviewed	Kayleigh Evans	*K.Evans*	16/11/2023
Authorised	Madhava Kumar	*M Kumar*	16/11/2023

Previous Versions

Version	Revision details	Date	Pre'd	R'wd	Auth'd
P01	First Draft for Client Approval	02/09/2021	NM	GG	AS
P02	Revised in line with NG comments	14/03/2022	NM	GG	AS
P03	Update to points of contact information	05/01/2023	NH	TN	MK
P04	Mott MacDonald update to meet the requirements of the planning condition	20/10/2023	RP	JC	MC

This Document is controlled when viewed on BIM 360. Printed copies are uncontrolled.

Contents

1 Project Description 5
1.1 Purpose of the Plan 5
1.2 Project Location 7
1.3 Proposed Location of Main Construction Offices 8
1.4 Scope of Work 8
1.4.1 Proposed construction works – Permanent 9
1.4.2 Proposed construction works – Temporary 9
1.5 Points of Contact 12

2 Environmental Management System 14
2.1 Structure 14
2.1.1 ISO14001 clause 4.1: Understanding the organisation and its context 14
2.1.2 ISO14001 clause 4.2: Understanding the needs and expectations of interested parties 15
2.1.3 ISO14001 clause 4.3: Determining the scope of the EMS 16
2.2 Leadership 16
2.2.1 ISO14001 clause 5.1: Leadership and commitment 16
2.2.2 ISO14001 clause 5.2: Environmental policy 16
2.2.3 ISO14001 clause 5.3: Organizational roles, responsibilities and authorities 16
2.3 Planning 17
2.3.1 ISO14001 clause 6.1.2: Environmental Aspects 17
2.3.2 ISO14001 clause 6.1.3: Compliance Obligations 17
2.3.3 ISO14001 clause 6.2: Environmental objectives and planning to achieve them 17
2.4 Support 18
2.4.1 ISO14001 clause 7.1: Resources 18
2.4.2 ISO14001 clause 7.3: Awareness 18
2.4.3 ISO14001 clause 7.4: Communication 18
2.4.4 ISO14001 clause 7.5: Documented information 19
2.5 Operation 19
2.5.1 ISO14001 clause 8.1: Operational planning and control 19
2.5.2 ISO14001 clause 8.2: Emergency preparedness and response 19
2.6 Performance evaluation 19
2.6.1 ISO14001 clause 9. 1: Monitoring, measurement, analysis and evaluation 19
2.6.2 ISO14001 clause 9.2: Internal audit 20
2.6.3 ISO14001 clause 9.3: Management review 21
2.7 Improvement 21
2.7.1 ISO14001 clause 10.1: Nonconformity and corrective action 21
2.7.2 ISO14001 clause 10.2: Continual improvement 21

3 General requirements 22
3.1 Contract Environmental Objectives 22
3.2 Responsibility, Authority and Communication 22
3.3 Competency, Training and Communication 24
3.4 Hours of work 25

3.5 Unexploded Ordnance Survey 26
3.6 Utilities Survey 26
3.7 Public rights of way 26
3.8 Security 26
3.9 welfare 27

4 Environmental management measures 28
4.1 Environmental Constraints 28
4.2 Pollution Prevention and Plant Storage 36
4.2.1 Depot Fuel Storage 36
4.2.2 Refuelling 36
4.3 Pollution from construction traffic 37
4.4 Protection of the Water Environment 37
4.4.1 Flood Risk 37
4.4.2 Working near Water & Land Drainage 38
4.5 Noise and vibration control 41
4.6 Ecology 42
4.6.1 Water vole 42
4.6.2 Great Crested Newt 43
4.6.3 Badgers 43
4.6.4 Nesting Birds 43
4.6.5 Barn Owl Presence Noted 43
4.6.6 Bats 44
4.6.7 Dormice 44
4.6.8 Reptiles 44
4.6.9 Invertebrates 45
4.6.10 Invasive Non-Native Species 45
4.6.11 Statutory and Non-Statutory Sites 45
4.6.12 Trees 46
4.6.13 Hedgerows 46
4.7 Light Pollution 46
4.8 Archaeological management 47
4.9 Agri-environment schemes and soil management 47
4.10 Contaminated Land 48
4.11 Waste Management 48
4.12 Air Quality 49
4.13 Environmental Consents / Licences / Permits 50

5 Emergency Response 51
5.1 Spillage Control 51
5.2 Other Environmental Incidents 51
5.3 Flood Emergency Response 51
5.4 Environmental Incidents 51

LIST OF TABLES

Table 1 Pre-construction surveys, records and plans. 7
Table 2 Points of Contact 13
Table 3 Selected Environmental and Ecological Constraints 35

LIST OF TABLES

Figure 1 Project site location plan 8
Figure 2 Project Boundary 11
Figure 3 Environment Agency Flood Planning Tool Map 38
Figure 4 Map Indicating Source Protection Zone 40
Figure 5 The waste hierarchy 49
Figure 6 Decision and report flow chart 52

1 PROJECT DESCRIPTION

1.1 PURPOSE OF THE PLAN

This Outline Construction Environmental Management Plan (CEMP) supports the NWD project whereby National Grid intend to replace 13 overhead line pylon towers with a 4.6km stretch of underground cables as part of National Grid's Visual Impact Provision (VIP) project, which aims to reduce the visual impact of electricity transmission lines in English and Welsh Areas of Outstanding Natural Beauty (AONB) and National Parks.

The scheme has been granted planning permission under reference PL/2023/01643. As part of the planning permission, the following pre-commencement planning condition has been imposed:

"No development shall commence on site (including demolition, ground works, vegetation clearance) until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the local planning authority. The CEMP shall include, but not necessarily be limited to, the following:

a) *Risk assessment of potentially damaging construction activities (Please refer to Table 3, Page 29 onwards)*

b) *Identification of 'biodiversity protection zones' (Please refer to Section 4 onwards)*

c) *Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements) (Please refer to Table 3, Page 29 onwards)*

d) *The location and timing of sensitive works to avoid harm to biodiversity features (Please refer to section 4.6 for specific details)*

e) *The times during construction when specialist ecologists need to be present on site to oversee works (Please Refer to Section 3.2 and 3.3, and Table 3 in Section 4)*

f) *Responsible persons and lines of communication (Please refer to Sections 3.2 and 3.3)*

g) *The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person(s) (Please refer to Section 3.2 and 3.3)*

h) *Use of protective fences, exclusion barriers and warning signs (Please refer to Section 4 for specific details)*

i) *Ongoing monitoring, including compliance checks by a competent person(s) during construction and immediately post-completion of construction works." (Please refer to Sections 3.2 and 3.3)*

The documents that have been used in the preparation of this Outline CEMP are outlined below in Table 1.

Pre-Construction Surveys, Records and Plans	
1	National Vegetation Classification (NVC) Survey Report
2	Great Crested Newt eDNA Survey Report
3	Bat Activity Survey Report
4	Dormouse Survey Report
5	Reptile Survey Report
6	Otter Survey Report
7	Arable Plant Survey Report
8	Hedgerow Survey Report
9	Preliminary Ecological Appraisal
10	Archaeological DBA
11	Balfour Beatty Site Walkover to Assess Vegetation Removal Requirements
12	Water Vole Report
13	Soil Resource Survey and Management Plan
15	Arboriculture Impact Assessment
16	Flood Risk Assessment
17	TMP
18	Drainage Strategy
19	Public Right of Way Plan
20	Construction Access Strategy
21	Noise and Vibration Assessment
22	Preliminary Hydrogeology Risk Assessment
23	Hydrogeology Technical Note

Pre-Construction Surveys, Records and Plans	
24	Badger Survey Report

Table 1 Pre-construction surveys, records and plans.

Other documents expected to form part of the Environmental File for the project will be agreed with the Client ideally before construction and may include:

- Environmental aspects and impacts register also known as the Environmental Risk and Opportunity Assessment Tool (EROA) (contained within the Environment & Sustainability Plan)
- Emergency response procedures (contained within the Environment & Sustainability Plan)
- Environmental studies and surveys e.g. ecology, archaeology
- Information on biosecurity constraints and mitigations
- Consents, licences and permits e.g. protected species licences, consents to discharge, waste management exemptions, flood defence consents, hedgerow removal notices etc. Actions made against these should be mindful of the drainage strategy, FRA, and Wiltshire Council bye-laws
- The consents register will be maintained during project lifetime and kept up-to-date
- Organisations consulted
- Records of consultations
- Details of environmental design features
- Details of environmental control equipment fitted
- Water management plan
- Environmental control procedures
- Details of environmental complaints and actions taken
- Environmental incident reports
- Results of environmental monitoring e.g., noise monitoring
- Environmental method statements
- Waste transfer notes and hazardous waste consignment notes

This Outline CEMP is a live document and will be updated as and when required prior to and during construction when construction details are further refined.

1.2 PROJECT LOCATION

The site lies on the western boundary of the North Wessex Downs AONB, near to the Devizes White Horse and Roundway Down Iron Age hill fort, where vistas over the town of Devizes and the valley of Pewsey are interrupted by 13 overhead line pylon towers. The proposal involves the removal of the pylon towers (pylon references YYM034 – YYM046) and the installation of approximately 4.6km of 400kV below ground cables and associated Cable Sealing End Compounds (CSEC).

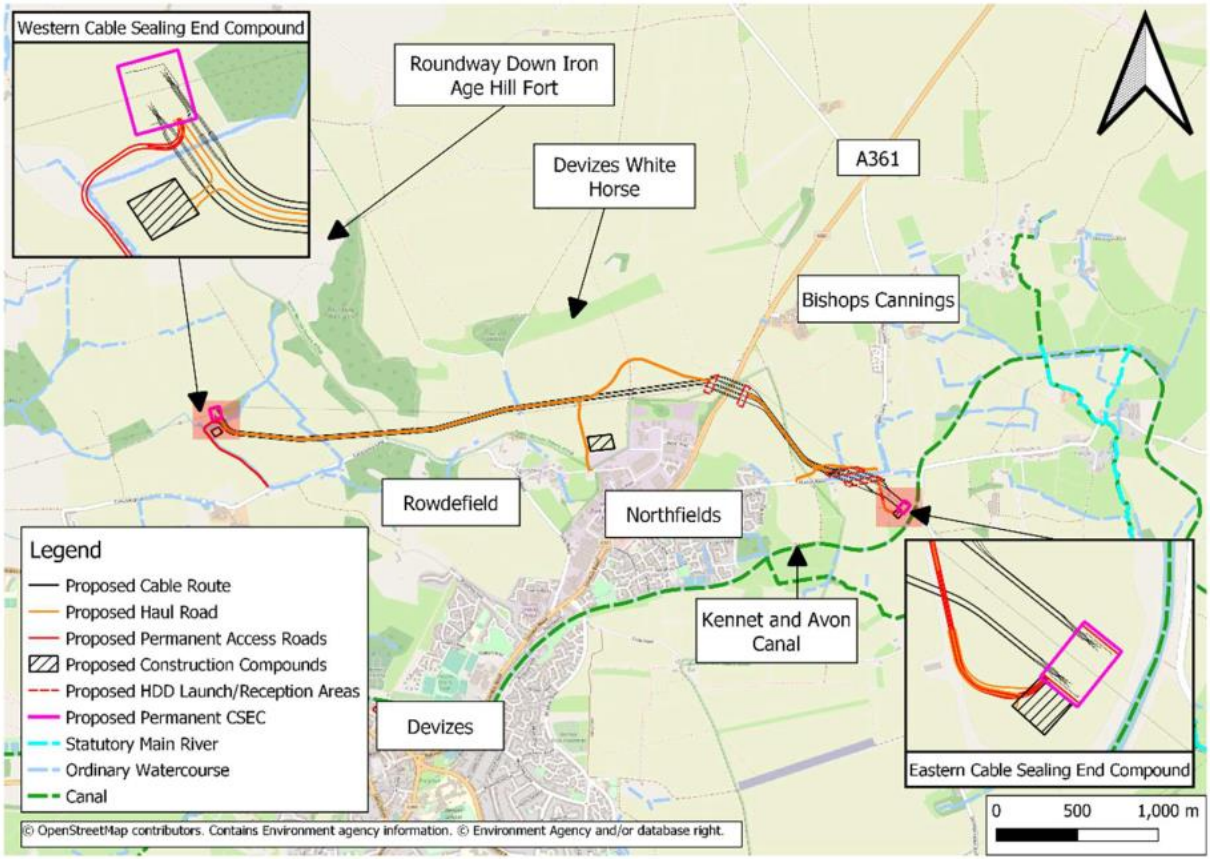


Figure 1 Project site location plan

1.3 PROPOSED LOCATION OF MAIN CONSTRUCTION OFFICES

Hopton Park Industrial Estate, Hopton Road, Devizes, Wiltshire SN10 2EY

1.4 SCOPE OF WORK

Balfour Beatty has been appointed by National Grid as Principal Contractor under an Early Contractor Involvement (ECI) contract to deliver Stage 1 (FEED and surveys) where the technical requirements as well as a good approximation of the cost of the project will be developed. Mott MacDonald is supporting Balfour Beatty in project design during this phase of the project.

The scheme would permanently remove thirteen pylons from the AONB, which would significantly enhance views across this part of the North Wessex Downs (NWD), including those from the popular vantage point, the Millennium White Horse. The scheme would similarly improve the visual amenity users of the White Horse Trail, the Mid Wilts Way, the Kennet, and Avon Canal, and for local residents.

To complete the project, soil and geological deposits will need to be excavated across the scheme for cable trenches, designated haul roads, laydown areas (which will be situated at each end of the scheme) as well as for temporary soil and spoil stockpiling. Most of the excavated material will be reinstated after construction is complete. Two sealing-end compounds and associated access will be constructed at each end of the scheme to facilitate reconnection of the new cable to the existing overhead lines.

The permanent and temporary scope of activities are outlined in more detail below.

1.4.1 PROPOSED CONSTRUCTION WORKS – PERMANENT

The permanent works associated with this scheme are:

- 400kV below ground cables – Twelve no.400kV cables will be installed in a total of four trenches (two trenches either side of a temporary haul road) at a depth of 1.2m for approximately 4.6km, shown as grey cable lines in Figure 2 below. The cables will be encased in a uPVC duct, surrounded by a cement bound sand backfill, wrapped in geotextile.
- Joint bays – Joint bays will be located at locations along the route, in each of the four trenches along the associated above ground pillars. A reinforced concrete slab will support the joint bays with drainage sumps at either end. They will be backfilled with cement bound sand up to the top of the cables, sand, or gravel from the top of the cables to the tiles and then thermally suitable backfill above the tiles. The joint bays are resilient to flooding, and access to the joint link boxes is typically required every 4-5 years for inspection.
- Cable Sealing End Compounds (CSEC) – There are two CSECs that facilitate the transition from the existing above ground network to the proposed below ground network. Both CSECs are located at the eastern and western end of the cable route, as shown in Figure 2. The CSEC to the west of the site will have a plan area of 59m x 62m and the CSEC to the east having a plan area of 47m x 62m. As part of the project design, a semi-permeable granular construction material will provide surface water attenuation within the surface platforms.
- Permanent access roads – Two 4m wide permanent access roads to the CSECs for maintenance are to be constructed of semi-permeable material, such as Grasscrete which allows for partial infiltration. The roads will be provided with a positive drainage system including attenuation. Upgrades will be made to existing bellmouths onto the highway including provision of surface water drainage. The bellmouths are to be surfaced with macadam.
- Permanent landscaping – Soft landscaping to be planted at each of the CSECs.
- Pylon removal – Once the below ground installation is complete, the existing 13 overhead line towers will be removed (pylon references YYM034 and YYM046).

1.4.2 PROPOSED CONSTRUCTION WORKS – TEMPORARY

In order to facilitate the cable and CSEC installation, and the pylon removal, the following temporary works will be constructed:

- Haul road – Approximately 4.6km long, 7m wide haul road to be constructed from impermeable material, such as Type-1 crushed stone, along the spine of the route.line. The depth of the haul road will vary depending on ground conditions, but between approximately 250mm to 700mm. The cables will be laid either side of the haul road and spoil from the excavation will be stockpiled at ground level beyond the cable installation.
- Access roads – Access roads are required to allow plant to access the haul road and will utilise existing access road where possible. They will be constructed from the same material as the haul road.
- Bellmouths – Where the haul road and access roads interface with the public highway, bellmouths are required to ensure adequate accessibility for construction vehicles. These are to be constructed from bitumen that will tie into the existing highway. Bellmouth sizes will vary across the site depending on access requirements.

- Construction compounds – To be located at both CSECs and at the centre of the route shown as grey boxes in Figure 2. Approximate sizes and locations have been provided by Balfour Beatty. They will be constructed from permeable Type 3 subbase (reduced fines aggregate).

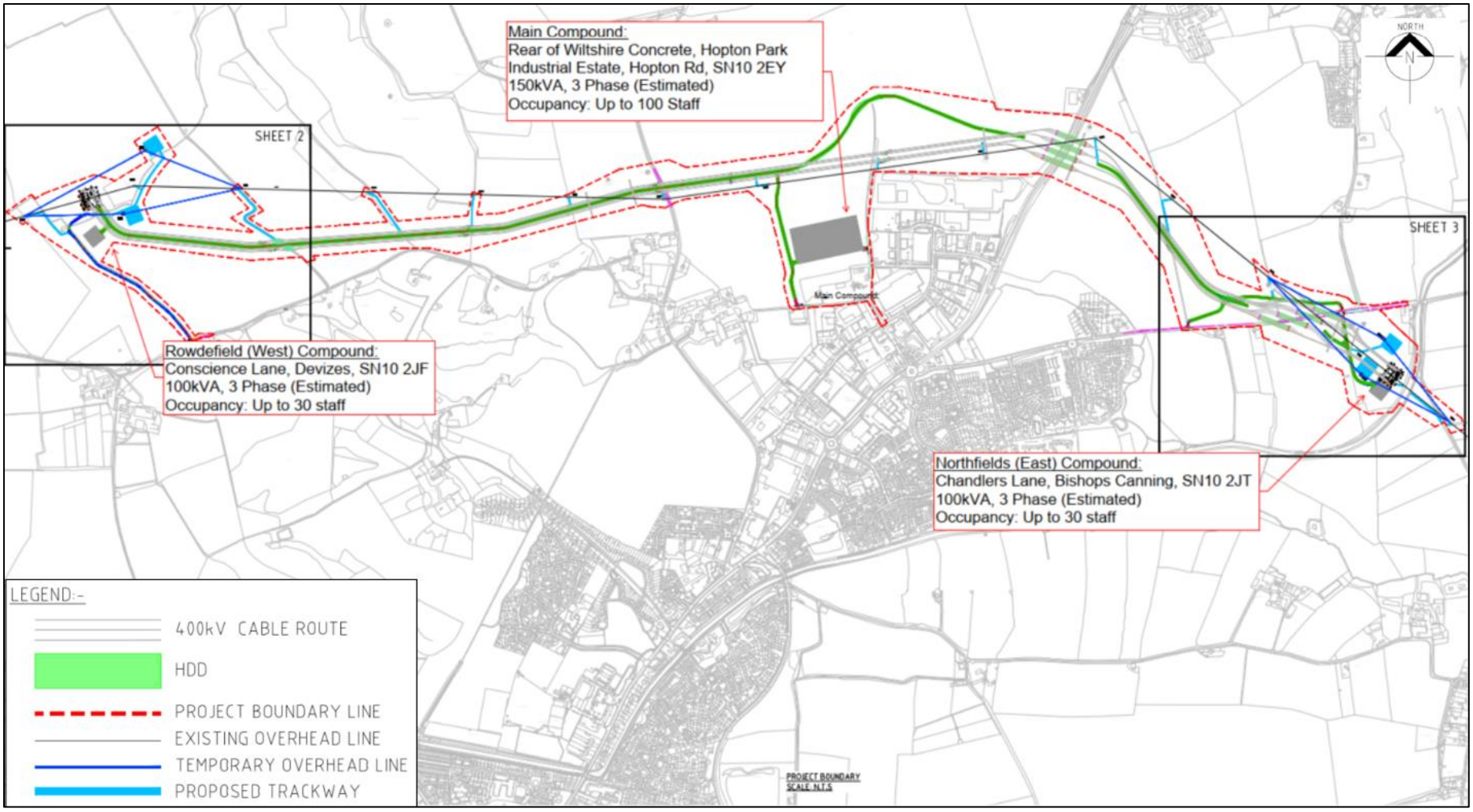


Figure 2 Project Boundary

Doc Title:	Outline Construction Environmental Management Plan			Activity ID	D229988
BIM Code:	5417-PTDC-CABXX-XX-RP-PDM-000072	Version	P04	Status	S4

1.5 POINTS OF CONTACT

Table 2 details the persons responsible for environmental issues on the project. This is a live document and the roles and responsibilities will be updated prior to construction once people are appointed to roles.

Name	Job Title	Phone	E-mail
Corporate Contacts (Balfour Beatty)			
Ashley Oates	Head of Environment & Sustainability	07514 316654	ashley.oates@balfourbeatty.com
Tom Newstead	Environment & Sustainability Manager	07811 423721	Thomas.newstead@balfourbeatty.com
Site Contacts (Balfour Beatty)			
Bruce Tumenta	Head of Operations	07971614 205	bruce.tumenta3@balfourbeatty.com
Madhava Kumar	Project Manager	07752794 524	madhava.kumar@balfourbeatty.com
Tony McCaughey	Project Engineer		Tony.mccaughey@balfourbeatty.com
Kayleigh Evans	Environmental Advisor		Kayleigh.evans@balfourbeatty.com
Clare Smith	Health and Safety Advisor		Clare.smith@balfourbeatty.com ke
TBC	Project Ecologist		
TBC	Landscape Architect		
TBC	Ecological Clerk of Works		
Balfour Beatty Helpline (for comments and complaints)		0800 121 4444	N/A
Emergency Contacts			
Environment Agency	Incident Hotline General Enquiries Flood Warning Line	080080 7060 0370850 65060345988 1188	enquiries@environment-agency.gov.uk
Wiltshire Council	Local Council	0300 456 0100	customerservices@wiltshire.gov.uk
Wessex Water	Water Provider	0345 600 3600	

Name	Job Title	Phone	E-mail
Kennet and Avon Canal	Canals and Rivers Trust	0303 040 4040	
National Grid Contacts			
Amardeep Malhi	Project Manager	07980 898427	Amardeep.malhi@nationalgrid.com
Juan Murray	Consent Officer	07767 161345	JuanMurray@tep.uk.com
TBC	Ecologist	TBC	
TBC	Archaeologist	TBC	
Robert Pinney	Land officer	07342 083 329	Robert.Pinney@nationalgrid.com

Table 2 Points of Contact

2 ENVIRONMENTAL MANAGEMENT SYSTEM

A ISO14001 accredited Environmental Management System (EMS) is used to ensure a high standard of environmental management. Each environmental aspect has a specific environmental management sub-plan designed to incorporate a hierarchy of control and best practice environmental management. The ISO14001 environmental management system is described in this section.

2.1 STRUCTURE

All persons working directly for National Grid and anyone working on our behalf shall comply with the requirements of this EMS to retain certification and to meet legislative and other requirements. This is described further under Clause 4.3: Determining the scope of the EMS.

2.1.1 ISO14001 CLAUSE 4.1: UNDERSTANDING THE ORGANISATION AND ITS CONTEXT

The nature of National Grid's role, central to the infrastructure of the UK, means that internal and external contextual considerations form a key part of day-to-day business activities. Our interactions with our stakeholders from regulators to customers are closely monitored and form part of the incentive schemes as set out by Ofgem, ensuring that we deliver a safe, reliable, efficient, and sustainable service, helping to transform the energy infrastructure in the UK and facilitate UK ambition to net zero. As part of the EMS, National Grid has established an understanding of the important issues that can affect, either positively or negatively, the way National Grid manages its environmental responsibilities. The issues of interest are those that affect National Grid's ability to achieve the strategic environmental objectives and that affect National Grid's ability to meet the commitments of its Environmental Sustainability Business Management Standard (BMS).

The current external factors that may impact or influence the ability of National Grid to achieve the intended outcomes of our environmental management system include:

- The changing portfolio of energy generation, predominantly the move away from baseload and two-shifting generation and towards a more decentralised, intermittent system, and the significant impact that will have on network operations and design, as well as the inherent impact this change in operations will have, for example line losses and visual amenity;
- The changing demand profile of energy use in the UK, the reduction in the morning and evening peaks as consumers spread their usage out by implementing smart technology and demand side response becomes more prevalent, and the significant impact that will have on network operations i.e. electrification of the UK;
- Environmental and climatic change may impact the operation and management of our assets, for example flooding and increasing temperature differentials can impact the operation of our assets and how the surrounding environment interacts with them;
- Changes and developments in technology may have an impact on the operation of the network e.g. 'smart' technology;
- Changes in the regulatory landscape of environmental policy and regulation may have an impact on the operations and management of the business entity assets, including any impact Brexit may have particularly on our cross-EU enterprises, for example interconnectors; and,
- Negative publicity regarding the energy industry and its impact on the environment and therefore any potential publicity or campaigning may lead to a drop in share price and

concern amongst markets and investors (affecting interested parties, shareholders, and stakeholders).

Internal issues that may impact National Grid's ability to achieve the intended outcomes of the EMS include:

- The standard operation of our networks and other businesses has the potential to have a significant environmental impact, both locally and globally, from greenhouse gas emissions (CH4 and SF6 losses) and oil losses to large development projects. If not well managed, all of these activities have the potential to prevent National Grid from achieving the ambition of being a recognised leader in sustainable energy infrastructure
- The focus on being a responsible business requiring the need to integrate sustainable practices into day-to-day business; and
- Focus on delivering for the customer and ensuring smooth business practices to increase efficiency

2.1.2 ISO14001 CLAUSE 4.2: UNDERSTANDING THE NEEDS AND EXPECTATIONS OF INTERESTED PARTIES

A cornerstone of National Grid's ambition is delivering and engaging with our customers and stakeholders understanding their needs and delivering on our promises. The dedicated Customer & Stakeholder team make sure we have the right relationships across all our businesses with the people we are there to serve, that we understand their feedback and act on it. The focus of the Customer and Stakeholder team is to ensure the voice of the customer is at the heart of future energy strategies. The Customer Management Business Management System (BMS) defines this further.

National Grid's place in UK infrastructure, as a key part of the transition to a low carbon economy, scale of operation and land ownership mean that a large number of stakeholders hold an interest in the environmental management and performance of the organisation. Key stakeholders who have been identified as having an interest in National Grid's environmental management performance include:

- Political bodies and think tanks within the UK and Europe e.g. BEIS
- Regulators
- Industry bodies
- Other major infrastructure businesses and groups
- Customers and consumer groups
- Shareholders and investors
- The public and landowners, particularly in areas we interact with
- Employees and trade unions
- Our supply chain and charities/businesses working with National Grid

National Grid regularly reviews the needs and expectations of our interested parties through stakeholder engagement workshops, feedback sessions in industry groups, assessing information requests received and compiling the Net Promoter Score (NPS) twice a year.

To ensure our stakeholder engagement activities are systematically aligned to National Grid's long-term strategy, Policy Review Groups have been established to link businesses' stakeholder engagement priorities to key policy issues that will be used to help shape the debate. The Stakeholder Engagement Business Management System (BMS) establishes the minimum requirements for stakeholder management.

2.1.3 ISO14001 CLAUSE 4.3: DETERMINING THE SCOPE OF THE EMS

The scope of the National Grid ISO 14001 Environmental Management System, which is documented on the ISO 14001 certificate and available, if requested, to the public is:

- All infrastructure, operations and employees under National Grid One Holdings Ltd UK Regulated and Non-Regulated activities, with the exception of National Grid SMART and National Grid Interconnector businesses; including all compliance obligations and reasonable areas of influence for its activities which result from the design, development, construction, maintenance and operation of gas and electricity transmission, and the wholly owned businesses of National Grid Grain LNG, National Grid Metering, UK Commercial Property and Workplace Services.

2.2 LEADERSHIP

2.2.1 ISO14001 CLAUSE 5.1: LEADERSHIP AND COMMITMENT

Commitment, responsiveness, and active support is provided by National Grid's top management to ensure the success of the Environmental Management System.

The UK Board has overall responsibility for establishing, implementing, and maintaining the EMS. It is also responsible for setting objectives for our operations and ensuring that environmental and sustainability matters are integral to how we operate our company.

The Head of Safety, Health and Sustainability (SHS) supports the Board, Executive and UK SHE committees in delivering strategy, setting standards and targets across the company, and making sure the EMS meets the appropriate international standard ISO14001 (2015).

Across the company, SHE committees at executive and business unit level oversee, assure, and monitor environmental performance. In the UK, the Executive SEH Committee operates at the highest level. It is a subset of the Board and is the key governance body for environmental management.

2.2.2 ISO14001 CLAUSE 5.2: ENVIRONMENTAL POLICY

The National Grid Environmental Policy provides a framework for the managing of the environmental aspects of the past, ongoing, and planned activities, products or services of National Grid. The Environmental Sustainability Business Management Standard (BMS) acts as the Environmental Policy for National Grid. This is available to all internal interested parties through the National Grid Book.

The BMS is communicated via the Environmental Sustainability policy poster. This is available upon request to external interested parties and shall be displayed on all National Grid sites.

2.2.3 ISO14001 CLAUSE 5.3: ORGANIZATIONAL ROLES, RESPONSIBILITIES AND AUTHORITIES

Roles, responsibilities, and authorities associated with environmental management shall be defined within each relevant tier 1 standard. It is the responsibility of the management teams within each business entity to determine if further roles, responsibilities, and authorities specific to a particular business entity or activity are required. These shall be defined within tier 2 documentation and communicated accordingly.

Responsibility and authority for ensuring the environmental management system conforms to the requirements of ISO14001 and for reporting on performance of the system shall be assigned to the Environmental Operations Manager in the central SHE functions (SHS).

2.3 PLANNING

2.3.1 ISO14001 CLAUSE 6.1.2: ENVIRONMENTAL ASPECTS

National Grid shall identify the environmental aspects of its activities to control and/or influence their associated environmental impacts, whether they be adverse or beneficial. The process used is defined in the Environmental Risks and Opportunities Standard.

2.3.2 ISO14001 CLAUSE 6.1.3: COMPLIANCE OBLIGATIONS

National Grid ensures that through the effective application of its Environmental Management System, our compliance obligations are understood and actioned throughout the business.

The Establishing and Evaluating Compliance Standard defines the process used to determine compliance obligations and how these are documented.

2.3.3 ISO14001 CLAUSE 6.2: ENVIRONMENTAL OBJECTIVES AND PLANNING TO ACHIEVE THEM

Environmental sustainability objectives and targets are set by National Grid with the intention to drive continual improvement to its environmental performance.

The central SHE functions (SHS) shall set corporate environmental sustainability objectives in collaboration with the business entities and group functions. Each business entity shall set targets to achieve the corporate environmental sustainability objectives on at least an annual basis.

Both levels of objectives and targets shall consider:

- Significant environmental aspects and risks and opportunities
- Applicable compliance obligations
- Findings from environmental reviews and assurance activities
- Financial, operational, technical, and organisational considerations
- Views of interested parties and possible effects on stakeholder image and reputation of National Grid
- How to evaluate the effectiveness of the actions taken
- How to integrate the actions into standard processes for the business; and/or
- Other organisational goals.

All objectives and targets shall be SMART (Specific, Measurable, Achievable, Relevant and Time-bound) and each business entity shall determine what will be done, the resources required, responsibilities, monitoring, completion targets and communication. Business entity data shall be fed back into corporate environmental data to allow for reporting, assessment of compliance and continual improvement.

2.4 SUPPORT

2.4.1 ISO14001 CLAUSE 7.1: RESOURCES

Each business entity management team shall ensure the essential resources are determined and made available to ensure the maintenance and continual improvement of the National Grid Environmental Management System.

The central SHE functions (SHS) shall support business entities in the implementation, maintenance, and continual improvement of the Environmental Management System.

2.4.1.1. ISO14001 CLAUSE 7.2: COMPETENCE

All National Grid staff, contractors, and sub-contractors shall have the appropriate competencies to enable them to fulfil their role effectively. The process and requirements for managing competency are defined within the Competence Management Standard.

Business entities shall identify the 'roles' within their area that have environmental responsibilities, what those responsibilities are and how the people fulfilling those roles demonstrate competence, with appropriate actions identified for people requiring the competence.

2.4.2 ISO14001 CLAUSE 7.3: AWARENESS

In order to raise awareness of environmental management, National Grid shall ensure that person(s) participating in work under its control are aware of:

- The Environmental Policy commitments
- The significant environmental aspects and related actual or potential impacts associated with their work
- Their contribution to the effectiveness of the Environmental Management System, including the benefit of improved environmental performance; and
- The implications of not conforming to the set requirements of the Environmental Management System.

For employees, this shall be achieved via a mandatory general environmental awareness training package. Further targeted training for those employees with specific environmental responsibilities shall be made available. For those working on behalf of National Grid, this shall be achieved via the appropriate communication channel e.g., toolbox talk at the start of a scheme.

2.4.3 ISO14001 CLAUSE 7.4: COMMUNICATION

The mandatory requirements for communicating environmental information are defined within the SHE Communication and Information Standard.

Each business entity shall communicate environmental information internally using the appropriate communications channel. The central SHE functions (SHS) shall communicate environmental information internally across business entities and externally for UK information and performance.

In addition to our own communications, National Grid shall encourage the communication of initiatives/best practices by persons working for or on its behalf that can contribute to the improvement of the EMS. These shall be communicated to the relevant people and recorded centrally.

National Grid shall ensure that relevant communication(s) from external interested parties are responded to as appropriate. External contact made by enforcing authorities shall be captured via the Enforcement Agency Contact database.

National Grid has been designated as a public authority by the Information Commissioners Office and is therefore required to respond to Environmental Information Requests under the Environmental Information Requests (EIR) Regulations.

Environmental performance, including information relating to the Environmental Management System shall be communicated to internal and external interested parties on an annual basis via the National Grid external website.

2.4.4 ISO14001 CLAUSE 7.5: DOCUMENTED INFORMATION

National Grid operates a tiered document management system as defined by the Control of SHE Documents Standard. All environmental management procedures shall be produced and controlled under this standard.

2.5 OPERATION

2.5.1 ISO14001 CLAUSE 8.1: OPERATIONAL PLANNING AND CONTROL

Through the identification of compliance obligations along with its significant aspects, National Grid shall establish, implement, and maintain documented environmental procedures to control situations where an absence of such could lead to deviation from the National Grid Environmental Policy, objectives or legal and other requirements.

The SHS Environmental Operations team shall ensure the tier 1 environmental standards are kept up to date, with business entities holding responsibility for the establishment, implementation, and maintenance of specific tier 2 environmental procedures relevant to themselves. These standards and procedures shall define the responsibility for implementation of operational controls.

National Grid sets the standard for outsourced processes to ensure that the requirements of its Environmental Management System are met. However, the implementation of environmental management is required by contractors etc. who undertake the outsourced processes.

2.5.2 ISO14001 CLAUSE 8.2: EMERGENCY PREPAREDNESS AND RESPONSE

The Emergency Planning and Response Standard defines the requirements to ensure the processes necessary to prepare for, and respond to, potential emergency situations are established.

Potential emergency situations and incidents that could have an impact on the environment shall be recognised through the identification of environmental aspects.

2.6 PERFORMANCE EVALUATION

2.6.1 ISO14001 CLAUSE 9. 1: MONITORING, MEASUREMENT, ANALYSIS AND EVALUATION

The process for monitoring, measurement, analysis and evaluation of environmental performance is defined in the Monitoring and Measuring Safety, Health and Environmental

Performance Standard. This includes requirements for the minimum environmental performance parameters to be monitored and measured.

Evaluation of environmental performance shall be undertaken through internal governance reporting and through each business entity managing performance indicators using Performance Excellence processes. The Performance Excellence Business Management Standard (BMS) ensures that all areas within the business use frequent KPI's to track performance, identify blockers and implement remedies to remove these blockers. Each business entity within National Grid shall identify the relevant environmental performance indicators to manage through their PEx process and/or internal governance reporting structure.

As part of operating responsibly, National Grid shall report our environmental performance open and honestly externally. Our external reporting includes, but is not limited to:

- General environmental performance on our external website and in the Annual Accounting Reports
- Responding to Environmental Information Regulations requests
- Carbon Disclosure Project (CDP) reporting

Outstanding environmental compliance issues shall be assessed by the SHS Environmental Operations Manager through the quarterly compliance assurance report (CAR) process and actions taken for investigation and resolution. The process for evaluating fulfilment of the identified compliance obligations is defined within the Establishing and Evaluating Compliance Standard.

2.6.2 ISO14001 CLAUSE 9.2: INTERNAL AUDIT

National Grid adopts a three lines of defence assurance model with clear roles and responsibilities, as defined within the Assurance Business Management System (BMS). The 2nd and 3rd lines of defence act as internal audit capabilities.

On a cyclical basis, Corporate Audit shall conduct a 3rd line of defence assurance programme which takes into consideration:

- The conformance of the National Grid environmental management system to the clauses of the ISO 14001 Standard
- Key environmental processes; and
- Results of previous environmental audits.

Each Business Assurance function shall conduct an environmental management system 2nd line of defence assurance programme, at suitably planned intervals which takes into consideration:

- The implementation of the environmental management system procedures into their line of business
- Key environmental processes; and
- Results of previous environmental audits.

Results following the Corporate Audit and business assurance function audits, both positive and negative, shall be reported and the findings addressed.

The SHS Environmental Operations team shall undertake focussed assurance visits across the business through site engagement visits. These assess site specific performance and provide a wider understanding of compliance issues. While local compliance feedback is

provided to site in the form of assurance reporting, metadata from each Business entity is assessed to provide an indication of wider compliance. These issues are addressed through the relevant business unit environmental liaison groups with support from the Environmental Operations Team.

First line of defence assurance shall be undertaken at the point of work through National Grid's sensible monitoring process. This requires all aspects of SHE to be managed and assessed based on risk profile during the setting to work process, undertaking operations and the closure of jobs. Each Business Unit will determine the frequency and subject matter for which they will undertake sensible monitoring.

2.6.3 ISO14001 CLAUSE 9.3: MANAGEMENT REVIEW

Management reviews of the National Grid Environmental Management System shall be carried out per business entity on an annual basis and collated into a UK level management review. The process used is defined in the Management Review Standard.

2.7 IMPROVEMENT

2.7.1 ISO14001 CLAUSE 10.1: NONCONFORMITY AND CORRECTIVE ACTION

National Grid has identified several different areas of its Environmental Management System, where nonconformities or potential nonconformities associated with activities, products and services could be raised. The Nonconformity, Corrective Action and Preventative Action Procedure sets out how these are managed.

2.7.2 ISO14001 CLAUSE 10.2: CONTINUAL IMPROVEMENT

National Grid will use the environmental management system as a structured framework for continuous improvement. National Grid will evaluate its environmental performance and that of its management system processes annually to identify opportunities for improvement. The evaluation will involve the review of the root causes of the deficiencies of the management system.

3 GENERAL REQUIREMENTS

3.1 CONTRACT ENVIRONMENTAL OBJECTIVES

The Environmental Objective is to deliver works safely and with due care of the environment to meet national and industry standards. Further, Schedule 9 of the *Electricity Act 1989* places upon undertakers the requirement to preserve amenity.

3.2 RESPONSIBILITY, AUTHORITY AND COMMUNICATION

National Grid has placed a requirement for governance and reporting during project delivery. The overall performance of the contract, the provision of resources and the delivery of the objectives of the project is the responsibility of the company to which the contract is awarded.

The project specific environmental responsibilities for the project manager are to:

- Manage and communicate the overall environmental performance on the contract.
- Ensure all relevant persons in a position of responsibility are suitably trained and competent in environmental matters to implement the requirements of the Client and Balfour Beatty.
- Manage the effectiveness of environmental management support to Operations.

The Construction Managers and Site Engineers for are responsible for:

- Implementing the company Management Systems and relevant procedures.
- Ensuring the sites under their control meet the environmental standards set by the company
- Implementing site specific management plans, requirements, and method statements.
- Ensuring adequate environmental instruction is given to those employees and contractors under their control.
- Requesting advice and support from the BB environment team and environment advisor.
- Communicating environmental performance to the BB environment team and environmental advisor.

Construction team leaders, foremen, supervisors or similar are responsible for;

- Communicating the site-specific environmental requirements to their teams.
- Ensuring site specific controls are implemented.
- Ensuring that sites under their control do not cause pollution, comply with the ecological restrictions, as well as the other site controls required for waste, water, air, and noise.
- Communicating the environmental site briefings, toolbox talks and other environmental / community requirements to operatives, subcontractors, and delivery drivers.
- Raising environmental observations or concerns to the environmental team or their manager.

The Project Environmental Advisor is responsible for:

- Ensuring the Project Manager is aware of the project specific environmental constraints
- Providing environmental support to the project team and deliver environmental training and ensure induction material includes project specific environmental issues including communication and requirements to implement CEMP. This might also include toolbox talks on items within the CEMP.
- Managing the contract specific environmental systems
- Liaising with the Client and regulators on project level environmental management issues
- Attending any environmental stakeholder meetings where required to do so
- Managing the progress of environmental projects, tasks, and actions in conjunction with the project

- Writing, issuing, and updating environmental documentation, including Environmental Plans
- Preparing environmental documentation for Operations during the planning of the work
- Providing support and advice on environmental issues to Operations on site and manage specialist environmental Subcontractors and service providers
- Liaising with the Client, regulators, ECoW, and Operations to actively find solutions to environmental issues on site
- Implementing a programme of and performing environmental inspections on site, investigating incidents, issuing corrective actions, and monitoring their close out
- Ensuring the operations on site follow this environmental management plan, procedures and all legal, company or Client requirements
- Monitor Key Performance Indicators and seek ways to
    - reduce waste generation, improving opportunities to recycle material whilst identifying opportunities to use recycled materials where possible
    - minimise energy consumption

The Environmental Manager/HSES Delivery Manager is responsible for;

- Providing support to the Project Environmental Advisor including (but not limited to) liaising with the Client and regulators on project level environmental management issues.
- Ensuring the Environmental Advisors are organised to deliver effective environmental support to Operations.
- Setting the priorities and objectives of the Environmental Advisors, including performance improvements and initiatives.
- Managing the reporting of environmental performance.
- Providing support in attending any environmental stakeholder meetings where required to do so.
- Organising training and supporting auditing programs.

Technical environmental support can be provided by specialist consultants, either employed by the Client or through Balfour Beatty channels.

The Ecological Clerk of Works (ECoW) will:

Lead the management of ecological issues in delivery, will advise and provide support to Balfour Beatty, and liaise with the Principal Contractor(s), which will have the responsibility to deliver all construction and maintenance activities. The ECoW role is to oversee any works that are sensitive to protected species and habitats. This may not be a full-time site-based role and would only be required when works to protected species and habitats are anticipated.
It is the ECoW responsibility to ensure the Contractor is undertaking works legally and in a sensitive way to protected species and habitats within and around the site location. The ECoW should be suitably qualified and licenced when required to oversee the works detailed in this Plan. In summary, the ECoW will be responsible for the following activities:

- Overseeing, in conjunction with the Belfour Beatty Project Management Team, the delivery of all measures detailed in this Plan, including inspection, monitoring and quality control, of the embedded environmental (ecological) measures implemented by the Principal Contractor(s)/Contractor(s) during the construction phase;
- Reviewing relevant documents, including risk assessments, method statements and evidence relating to all proposed work activities that may impact upon ecology to ensure they comply appropriately;

- Advising the Applicant and its Principal Contractor(s) in relation to how legal and contractual ecological management measures should be met;
- Reviewing the content of toolbox talks (TBTs) or other ecological briefings provided by the Principal Contractor;
- Reviewing the Ecological Constraints Register (ECR) of works conducted, from site establishment through to demobilisation which will be maintained by the Principal Contractor. The ECR will include weekly updates and a photographic record of activities carried out and recommendations of future works; and
- On request of the Applicant and/or Principal Contractor Project Management Teams, meet landowners and occupiers to describe the Building Management Systems (BMS), its intentions, and its implications for their land interests.

3.3 COMPETENCY, TRAINING AND COMMUNICATION

The focus on education of the workforce is critical to complying with legislation and minimising our environmental impact. Training of operatives is organised by a centralised training function. Records of all skills are held in the company training system and where applicable skills card issued to individuals.

Our training approach uses internal and external training to communicate environmental information to our staff. In-house environmental training is designed and delivered based on job responsibility and required level of environmental understanding.

Every employee receives SHEA Electric, and an in-house role specific education program, focusing on teaching staff the key environmental requirements of their job, and how to identify and comply with company and client requirements.

Site Engineers and other supervisory staff receive a 1-day modular style course which uses several real-life case studies to tackle issues which are relevant to the technicalities of the work which we carry out and includes modules on water, waste, ecology, archaeology, trees, nuisance, legal requirements and associated environmental documentation. A 2-hour environmental course is delivered to all site operatives enhancing general environmental awareness. Additionally, subject specific training courses can be provided, for example, on site waste management plans. Course materials are updated as legislation changes, new working methods are developed, best practice is identified, and contains Scotland specific case studies, ensuring that our operations teams have the most up-to-date knowledge.

All our staff undergo a comprehensive project-specific induction before they are allowed to join the project team containing information and instructions regarding legislation, local project-specific environmental issues and controls, risk assessment, mitigation measures, and what to do in the event of an environmental incident or emergency. A suite of toolbox talks on relevant environmental issues will be available for delivery during relevant parts of the project. Where a specific risk exists a mitigation strategy will be developed and communicated through on-site training. The weekly Power T&D Safety Pack will contain Balfour Beatty briefings and toolbox talks, client briefings and third party briefings that will be communicated to project staff.

Relevant Toolbox Talks:

- Amphibians
- Badgers
- Bats
- Birds
- Contaminated Land
- Concrete Washout

- Dewatering
- Dormice
- Drip Trays and Plant Nappies
- Ecological and Biodiversity Assessment
- Fly Tipping
- Great Crested Newts
- Hedgerows
- Trees
- National Grid SCIP Reporting Requirements
- Nesting Birds and Vegetation Clearance
- Otters
- Reptiles
- Silt Mitigation Measures
- Spill Control and Spill Kits
- Spill Management and Response
- Storage of Fuels Oils and Liquids
- Source Protection Zone
- Waste Segregation and Storage
- Waste Management - Compliance
- Water Voles
- Working near Watercourses

Our approach will ensure that environmental competence of all personnel (including subcontractors) is maintained through the life of the project. Most importantly it will provide our operations teams with the knowledge base to understand the environmental impact of their works, where risk lies and how to mitigate risk.

3.4 HOURS OF WORK

The proposed core working times for the proposed project are:

- Monday to Friday 07:00 - 19:00hrs
- Saturday (alternate weekends) 07:00 - 13:00hrs
- Sunday (alternate weekends) 07:00 - 13:00hrs

- Project Working Hours (for Cable Sealing End Compound Construction works)
- Monday – Friday 08:00 -18:00
- Saturday –(alternate weekends) 08:00 -13:00
- Sunday – (alternate weekends) No Working Permitted
- Bank Holidays No Working Permitted

These hours include 30 minutes start up and close down and likely full duration of traffic movements as site working hours are 07:30-17:00. This does not take into account special working hours for abnormal deliveries.

Where works outside normal hours is planned, the local Environmental Health Officer and nearby residents will be informed by giving a minimum of 5 days' notice.

To avoid any congestion on the public road network, deliveries or movements of abnormal loads through these congested highways may be required outside of peak time and site hours. This involves deliveries late at night, early mornings or Sunday's. However, approval for out of hours working will be obtained prior to work commencement.

During construction the proposed project could have potential impacts on bats, badgers, birds, otters and water vole, etc. Considering these effects is important for mitigation and so, timing works during daylight hours and limiting night time working are suitable measures.

3.5 UNEXPLODED ORDNANCE SURVEY

UXO surveys has been completed, and none found. However, there is always a small residual risk of finding UXO. If any UXO or anything resembling UXO is encountered then all work is to stop, all personnel evacuated, and a superior notified.

3.6 UTILITIES SURVEY

A utilities survey has been undertaken and is complete, please refer to the utilities survey report.

3.7 PUBLIC RIGHTS OF WAY

Public rights of way have been mapped. Please refer to the public rights of way access plan (5417-MMD-CIVXX-DR-CGN-10089). For some of the project, a traffic light system is to be used in order to preserve PRoW, and this must be respected at all times. If, however, a member of the public does gain unexpected access to the working area all work is to stop, and the senior project manager notified. We have a duty of care to members of the public should they enter the working area. Please always remember that all staff are representatives of the project, Balfour Beatty and by extension National Grid.

3.8 SECURITY

It is necessary to maintain good security on site to protect the environment. For example, fuel theft frequently leads to fuel spillage and pollution. Secure cabins will be used to reduce the risk of break in and fuel theft.

A fixed (24/7) guard will be based at the proposed site, roaming guards where there is exposed cable as well as security camera located at each compound. Both CSECs will be enclosed by security permanent fencing which will be installed prior to construction and typically comprises of galvanised steel palisade approximately 2.4m high. The fence colour will be recessive to minimise visual impact. This fencing ensures that the general public are protected from any electrical equipment as well as denying access to the site.

Easement fencing will be installed (post and wire) to demarcate the working easement. All other fencing shall be either hoarding around site compounds or herras fencing which will be used after each shift to secure working areas as well as using turning areas or holding bays to check and reject vehicles before they enter or exit a site access point. Temporary fencing will be installed as the works progress.

Lighting overnight will be minimised to what is required for a safe working environment for security personnel as well as having low level lighting and motion sensors around welfare areas.

Signage and physical barriers to include but not limited to:

- Access/Egress
- Pedestrian walkways/crossings
- Speed limit signs
- Reception

- Parking bays & reverse parking
- Entering CDM/Safety notices/PPE board
- Loading and unloading area

3.9 WELFARE

Welfare facilities will be managed in good order with care given to the management of waste, water, and refuelling. Thought will be given to energy management, such as reducing the use of idling engines to those times when it is necessary for warmth or cooling.

4 ENVIRONMENTAL MANAGEMENT MEASURES

4.1 ENVIRONMENTAL CONSTRAINTS

Copies of surveys undertaken will be held electronically and at the onsite depot in paper form, and there locally on the project. The results of surveys should also be held within this file and the CEMP regularly updated by the Environmental Advisor as new relevant information becomes available. Relevant findings are to be briefed out as required via site briefings, inductions, toolbox talks, and via the implementation of a detailed CEMP once produced.

Specific controls, recommendations or issues identified via surveys are detailed in Table 3 and controls will be included within site specific method statements where necessary.

An Environmental Risk and Opportunities Assessment (EROA_ of site activities will be completed prior to construction commencing and the detailed CEMP updated. This will be fully documented in the Environmental and Sustainability Risk and Opportunity Register which is in the contracts document filing system. The EROA will be updated during the project lifetime. Table 3 outlines the environmental aspects applicable to the project and will be communicated in the site induction. Please refer to the EROA for a more complete evaluation. Note that responsibilities for the control measures fall to the Principal Contractor Site Manager (PCSM).

Environmental Aspect	Environmental Category	Environmental Impact and Risk	Control Measure to Mitigate Risk and Realise Opportunity for Improvement	Who is Responsible for the Control Measure
Works or depot located close to drinking water borehole	Water	Impact: Potential pollution of drinking water / ground pollution / human health impact Risks: Unavailability of drinking water, reputational damage, negative publicity, possible fine Significance: Low	No fuel or chemicals to be stored within 50m of borehole / no refuelling at all to occur within the source protection zone / follow client guidelines if client owned site / bunds / drainage plan / spill kits Emergency: Stop work	Senior Project Manager
Works near canal	Water	Impact: Potential flooding, degraded water quality. Risks; Flood risk, reputational damage, negative publicity, clean-up costs. Significance: Low	Eastern CSEC raised above maximum water level / 4.91 ha planting to absorb run off / buffer to arable field / construction of an attenuation pond to absorb run off and surface flood water / discharge velocity 0.3m/s to avoid flood risk and worsened water quality / abide by CRT Code of Practice. Emergency: Stop work	Senior Project Manager
Works near water bodies	Water	Impact: Flood risk, potential water pollution, degraded water quality. Risks: Flood risk, reputational damage, negative publicity, clean-up costs, prosecution. Significance: Low	Machinery kept away from waterbodies or at least 8m away / seek advice from ECoW / suitable buffers / record land use activity / consult Wessex Water and EA / keep roads and hard surfaces clean / manage stockpiles / protect waterbodies from run off using low level technologies / assess mitigation prior to works / grips, silt fencing / inspections and site checks / report breaches to bunds and mitigation controls.	Senior Project Manager

Environmental Aspect	Environmental Category	Environmental Impact and Risk	Control Measure to Mitigate Risk and Realise Opportunity for Improvement	Who is Responsible for the Control Measure
			Emergency: Stop work	
Concrete washout	Operations	Impact: Pollution to water / pollution to ground / damage to flora and fauna / loss of biodiversity Risks: Reputational damage, negative publicity, fines, prosecution, clean-up costs Significance: Low	▪ Designated area for wash out away from drains and watercourses ▪ use concrete washout skip ▪ vehicle to return to concrete depot for washout ▪ waste to be removed by licensed waste contractor / use of concrete sock ▪ Emergency: Stop work	Senior Project Manager
Working close to archaeological & heritage remains	Archaeology & Heritage	Impact: Damage caused to monuments, artefacts, and archaeological sites Risks: failure to fulfil compliance obligations, reputational damage, complaints, negative publicity, fines, delay to works Significance: Low	▪ Surveys and assessments have been undertaken to evaluate the historical environment: geophysical surveys, metal detecting, evaluation trenching etc. ▪ Investigate likelihood for archaeological finds prior to work commencing / cordon off ▪ Implement recommendations e.g. watching briefs ▪ written scheme of investigation in place and followed ▪ seek advice from Local Authority ▪ consult professionally qualified archaeological contractor ▪ Provide Detailed Archaeological Mitigation Design in Tender showing collaboration between environmental specialists ▪ determine method of investigation involving all people it may affect in terms of programme ▪ pre-excavation plan with input from ecologists and conservationists	Senior Project Manager

Environmental Aspect	Environmental Category	Environmental Impact and Risk	Control Measure to Mitigate Risk and Realise Opportunity for Improvement	Who is Responsible for the Control Measure
			▪ Emergency: Stop work if damage occurs or if unknown archaeology identified and consult professionally qualified archaeological contractor	
Noise/Light disturbance	Noise and Vibration control & Light pollution	Impact; Disturbance or damage to species and their habitats, disturbance to nearby residents/social environments Risks: reputational damage, bad publicity. Significance: Low	▪ Mains electricity ▪ exhaust silencing and plant muffling / low noise generators ▪ bunding and fencing ▪ traffic movements ▪ loading and unloading activities located away from residential areas ▪ reverse alarms ▪ designated haul roads ▪ censored lights ▪ low energy lighting ▪ prevent shining on residences, species and habitats ▪ turned on as required ▪ adjusted downwards ▪ Emergency: Stop work	Senior Project Manager
Waste	Waste management	Impact: Environmental degradation, contamination, pollution Risk: reputational damage, bad publicity, fines	▪ Use waste hierarchy guidelines ▪ inspections ▪ waste transfer note ▪ waste records via Site Waste Management Plan ▪ upskilling and mentoring ▪ segregated waste skips ▪ waste carrier licences and licenced disposal ▪ Emergency: Stop work	Senior Project Manager

Environmental Aspect	Environmental Category	Environmental Impact and Risk	Control Measure to Mitigate Risk and Realise Opportunity for Improvement	Who is Responsible for the Control Measure
Air quality	Air quality	Impact: Potential pollution, social and environmental disturbances Risk: reputational damage, bad publicity, fines	▪ Sheeting ▪ wheel cleaning facilities ▪ water sprays ▪ waste disposal ▪ materials to be kept on site ▪ no burning materials on site ▪ diesel generator use will be limited ▪ 10mph speed limit ▪ prevent engine 'idling' ▪ provide EV charging points ▪ Emergency: Stop work	Senior Project Manager
Working near protected species	Ecology & Biodiversity	Impact: Disturbance or damage to protected species and their habitats / loss of biodiversity Risks: possible fine, prosecution, reputational damage, delay to works Significance; Low	▪ A series of ecological studies have been undertaken, refer to EcIA and Outline Landscape and Ecology Management Plan (Balfour Beatty, 2023) ▪ preconstruction ecology survey is carried out ▪ species specific surveys carried out ▪ fingertip searches ▪ apply for protected species licence and follow conditions ▪ controls such as translocation, watching brief or other suitable mitigation measures to be included in method statements ▪ teams to be briefed on controls ▪ mitigation measures to be implemented ▪ support to be provided by environmental advisor, ECoW, or specialist ecological resource where required	Senior Project Manager ECoW

Environmental Aspect	Environmental Category	Environmental Impact and Risk	Control Measure to Mitigate Risk and Realise Opportunity for Improvement	Who is Responsible for the Control Measure
			▪ Emergency: Stop work and inform team leader / site manager. Consult environmental advisor / specialist	
Works near nesting birds	Ecology & Biodiversity	Impact: Harm or disturbance to nesting birds and their habitat, loss of biodiversity Risks: reputational damage, negative publicity, prosecution, fines, delay to works Significance: Low	▪ Avoid works in nesting season ▪ pre-construction nesting bird survey ▪ check structures prior to nesting season and remove nests ▪ use bird deterrents ▪ consult ECoW if works unavoidable to agree working methods and mitigation measures ▪ obtain appropriate licences from Natural England for disturbance or relocation. ▪ Emergency: Utilise warning signs to warn project team of nesting birds / stop work if nests are identified and contact environmental advisor or appointed ecological specialist / Tool box talks.	Senior Project Manager ECoW
Works near water vole	Ecology & Biodiversity	Impact: Harm or disturbance to water vole and their habitat, loss of biodiversity Risks: reputational damage, negative publicity, prosecution, fines, delay to works Significance: Low	▪ License required from Natural England ▪ advice of ECoW ▪ if dewatering is necessary, should be done away from species ▪ fencing and trackaway ▪ Emergency: Stop works if water voles are identified and contact environmental advisor or appointed ecologist specialist.	Senior Project Manager ECoW
Works near badgers	Ecology & Biodiversity	Impact: Harm or disturbance to badgers and their habitat, loss of biodiversity	▪ Re-survey setts ▪ update mitigation and avoidance measures ▪ sett closure under low impact class license of setts where unavoidable ▪ avoidance of works within 20m buffer zone.	Senior Project Manager ECoW

Environmental Aspect	Environmental Category	Environmental Impact and Risk	Control Measure to Mitigate Risk and Realise Opportunity for Improvement	Who is Responsible for the Control Measure
		Risks: Risks: reputational damage, negative publicity, prosecution, fines, delay to works Significance: Low	▪ Emergency: Stop works if badgers are identified and contact environmental advisor or appointed ecologist specialist.	
Works near barn owl	Ecology & Biodiversity	Impact: Harm or disturbance to barn owl and their habitat, loss of biodiversity Risks: Risks: reputational damage, negative publicity, prosecution, fines, delay to works Significance: Low	▪ No construction vehicles to be parked adjacent to barn ▪ no construction at ducks or overnight ▪ provision of alternative nest site ▪ haul road to reduce noise and vibration disturbance. ▪ Emergency: Stop works if barn owls are identified and contact environmental advisor or appointed ecologist specialist.	Senior Project Manager ECoW
Works near bats	Ecology & Biodiversity	Impact: Harm or disturbance to bats and their habitat, loss of biodiversity Risks: Risks: reputational damage, negative publicity, prosecution, fines, delay to works Significance: Low	▪ ECoW to be consulted ▪ HRA ▪ mobile dead hedges placed overnight to fill removed headgerow gaps ▪ replacement planting. ▪ Emergency: Stop works if bats are identified and contact environmental advisor or appointed ecologist specialist	Senior Project Manager ECoW
Works near reptiles	Ecology & Biodiversity	Impact: Harm or disturbance to reptiles and their habitat, loss of biodiversity Risks: Risks: reputational damage, negative publicity, prosecution, fines, delay to works Significance: Low	▪ Further surveys prior to works ▪ fingertip search by ecologist ▪ vegetation management during active season using hand tools ▪ slow speed vehicle access.	Senior Project Manager ECoW

Environmental Aspect	Environmental Category	Environmental Impact and Risk	Control Measure to Mitigate Risk and Realise Opportunity for Improvement	Who is Responsible for the Control Measure
			▪ Emergency: Stop works if reptiles are identified and contact environmental advisor or appointed ecologist specialist	
Works near hedgerows and trees	Ecology & Biodiversity	Impacts: Disturbance to species/ habitats Risks: failure to fulfil compliance obligations, reputational damage, complaints, negative publicity, fines, delay to works	▪ Any works supervised by specialist / licenses / protective fencing / avoid nesting season / 2m buffer zone / replacement. ▪ Emergency: Stop work	Senior Project Manager ECoW

Table 3 Selected Environmental and Ecological Constraints

Details of the Environmental Aspects Assessment for this scheme can be found in the Environmental Risk and Opportunities Assessment (EROA) The environmental requirements and controls identified as part of the design and construction activities of this project are detailed further in the following sections. It is intended that the measures set out herein will be discussed in more detail with relevant stakeholders as required in order to support the identification of any additional measures to be taken account of during construction.

This Outline CEMP is a live plan intended to evolve from pre-construction, through all phases of construction and to operation, in relation to the scope of works described in section 1.4.

4.2 POLLUTION PREVENTION AND PLANT STORAGE

4.2.1 DEPOT FUEL STORAGE

There is a Drinking Water Source Protection Zone (SPZ) on the project, see figure 4, no fuel storage is to occur within this zone, no refuelling is to occur within this zone. It would be strongly preferred if no vehicles were to be parked in this zone if possible. All bulk fuel stored in Balfour Beatty depots will be stored to comply with the Oil Storage regulations. Bowsers and tanks are to be stored on hard standing ground whenever possible and kept locked when not in use.

All fuel storage:

- Will not be stored within known flood risk areas
- Will not be within 10m of a watercourse / canal
- Will not be within 10m of a surface water drain
- Will not be within 50m of a borehole
- Will not be within 10m of known drainage ditches

All drips trays and plant nappies will be emptied regularly to prevent overflow. In the case of drip trays, an insert from a plant nappy may be used to soak up any spillage.

Where storage on hardstanding is not possible, fuel containers will be stored within raised bunds of a volume dependent upon the number and volume of containers that they can store:

- If a bund can only hold one container, then the volume of the bund is 110% of that container.
- If a bund can hold more than one container then the required volume is 110% of the largest container or 125% of the total volume, whichever is greater.

For example, a bund capable of holding four 60L drums, but holding only one 60L drum, must have a capacity of 60L. This is because theoretical capacity is considered when calculating bund capacity.

All bunds must be visually inspected to be clear of rainwater and other liquids on a regular basis.

4.2.2 REFUELLING

No refuelling of plant or equipment will take place along the working width and will only take place at a designated facility with the use of plant nappies/spill trays with spill kits available to reduce potential impacts from spillages.

For any spillages the response will be; **stop** the spill, **contain** it from spreading, **and notify** the site manager and the Helpline. Finally, dispose of the used spill materials in the oily waste container. All refuelling will be undertaken at a minimum of 10m away from watercourses.

4.3 POLLUTION FROM CONSTRUCTION TRAFFIC

As detailed in Traffic Management Plan, these are the measure the project team will implement to reduce the effects of air pollution and mud/silt on roads from construction traffic:

- Road sweeping with water sprays – to hard standing at access/egress points, to suppress dust while cleaning
- Vehicle wash down/ wheel wash points at each exit point on to the highway – where temporary haul routes become particularly muddy and material is transferred onto highway by HGVs that block drainage interceptors, gullies, etc.
- Localised silt fencing/ measures to prevent silt run off – if run off and ponding is significant adjacent to hoardings on the carriageways
- All vehicles transporting soil, loose and or dusty materials on public roads will be fully sheeted to reduce the risk of air pollution.

These measures will consider the regular maintenance and condition of public roads, cycleways and PRoW so that they do not deteriorate due to use by construction traffic i.e. road sweeping, resurfacing works, track panels with extra grip for wet boggy areas, if required.

4.4 PROTECTION OF THE WATER ENVIRONMENT

4.4.1 FLOOD RISK

A more detailed assessment of flood risk may be found in the document, 'Flood Risk Assessment' (Balfour Beatty, 2023). A review of the EA "Flood Map for Planning" indicates that the site is located within Flood Zone 1, and therefore at a low flood risk from rivers and sea.

The mitigation required at each stage of works will be fully assessed following access to the site and updated in the Outline CEMP where needed. Examples of mitigation include: each stockpile not exceeding 25m in length, stockpiles not exceeding 1.4m above the existing ground level, not be more than 8m wide at the toe and gaps of a minimum 5m between adjacent stockpiles to preserve existing flow paths. Inspections of the mitigation will be captured in the daily/weekly site checks. Prior to works commencing, Balfour Beatty PT&D will ensure operatives have full awareness of flood mitigation measures along the route during each stage of works. No fuel or other polluting materials will be stored within known flood risk areas.



Figure 3 Environment Agency Flood Planning Tool Map

4.4.2 WORKING NEAR WATER & LAND DRAINAGE

4.4.2.1. WORKS ADJACENT TO CANAL

The Kennet and Avon Canal is located 75m southeast from the Eastern Cable Sealing End Compounds (Eastern CSEC) with a plan area of 47m x 62m. The Kennet and Avon Canal is a locally important site of restored canal much used for recreation; contained lowland mixed deciduous woodland along banks. The Eastern boundary of the project runs adjacent to a short section of the canal within approximately 25m of Eastern CSEC. The Eastern CSEC plan area is at high risk from ground flooding and as a result of the construction of the Eastern CSEC, water storage capacity within the underlying aquifer will be reduced.

To mitigate against flood risk, the Eastern CSEC will be raised above the maximum water level in a 1:1000 year flood event. 4.91 ha planting of neutral grassland, standard trees, hedgerow and woodland will be installed around both CSEC bases to absorb potential run off from the compound and act as a buffer to the arable field, and a permanent attenuation pond will be constructed, as discussed in the Ecological Impact Assessment (SLR, 2023). The attenuation pond aims to store existing surface water flood volume and runoff and will be discharged via an outfall into the Kennet and Avon Canal. The discharge will have a velocity of 0.3m/s which is in accordance with the requirements of the Canal and River Trust (CRT). This discharge will not impact water quality and will not increase flood risk of the Canal.

Works adjacent to the canal should comply with the CRT Code of Practice (CoP). All activities within proximity to the Kennet and Avon Canal will need to comply with the CRT CoP and must

consider all potential environmental risks, impacts and mitigation measures. The CRT CoP recommends the following actions are undertaken for activities located within close proximity to rivers and canals:

- undertake ecological surveys
- abide by the Biodiversity Strategy Statement which aims to mitigate and promote the conservation and enhancement of habitats/species
- obtain appropriate licences
- seek consent from national and local authorities as well as consult with ECoW's and other experts
- ensure appropriate control and management of waste, noise, vibration, dust, odours and lighting.

Most importantly, the CRT CoP requires third parties to ensure protection of the water environment which concerns management of water bodies, including abstraction, discharge and water quality, and the biodiversity that relies on those water bodies.

4.4.2.2. DRAINAGE

All drainage from access tracks, site compounds and the temporary depot will be in accordance with best practice techniques and drainage will allow the natural flow of water to continue through / around construction features to maintain the hydrology of the land and local plant life. Work shall carry out to best practice to prevent damage to culverts, farmer's drains, and railway embankments.

Please refer to the drainage plan for the supporting strategy, e.g. green rhino silt sock for pumping out, straw bales to slow water flow and capture silt, settlement tanks etc. Consultation to be undertaken with the Wiltshire Council for works near Ordinary Watercourses.

All machinery and equipment will be kept as far from the watercourses/bodies as possible, following additional advice from the Ecological Clerk of Works, or at least 8m from the bank or edge of the waterbody/course. Where there are operational difficulties in achieving this, the watercourse/body embankment with a suitable buffer will be demarcated.

The project is sited upon outcrops of the lower chalk and upper green sand subgroups. Hydrologically the area is not prone to flooding, with localised flood risk being noted around watercourses and land drains. Refer to the land drainage plan for further information. The project must be mindful of landowner's and users and the yearly cycle and pattern of land use of the greater project area. Maintaining a record of land-use activity is therefore indicated.

4.4.2.3. WATER POLLUTION

Risks to water resources have been assessed in the *Water Resources Act 1991* (WRA), Flood Risk Assessment (FRA), and Drainage Strategy and mitigation measures developed to control residual risks.

There are 6 main water receptors within 250m of the cable route and associated temporary works area, as shown in Figure 4 below. Those water receptors include:

- Rowde Ford - tributary of the Summerham Brook (river)
- Etchilhampton Water - tributary of the Summerham Brook (river)
- Upper Hampshire Avon groundwater body
- Roundway Farm Spring groundwater body
- SSSI Roundway Down and Covert - sensitive land use area
- Kennet and Avon Canal.

It is recommended that no materials likely to cause ground water pollution should they escape to the environment are stored in the source protection zone. These materials include fuels, oils, paints, solvents, and other chemicals. Wessex Water and the Environment Agency will continue to be consulted during the design stage and build stage of the project. A preliminary HRA has been undertaken, a more detailed HRA will be produced once sufficient groundwater monitoring data has been obtained. Findings from the more detailed HRA will be included in an updated CEMP.

There is a drinking water source protection zone is in the area indicated:

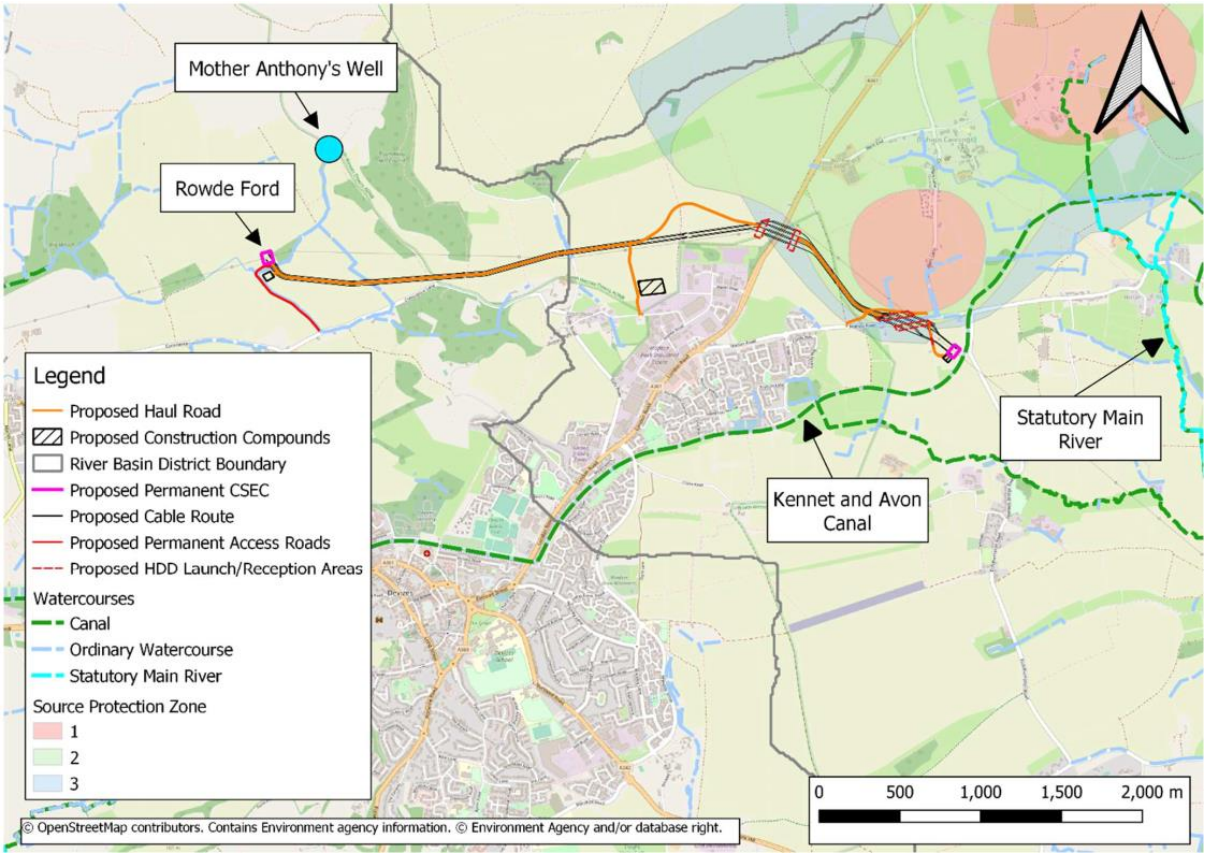


Figure 4 Map Indicating Source Protection Zone

To minimise the potential for silt pollution from construction activities mitigation will be adopted including keeping roads and hard surfaces clean to prevent mud build up, managing stockpiles that are to be stored for more than three months and protecting watercourses from run off using low level technologies. The level of mitigation required will be assessed prior to works commencing and could include one or more techniques including grips, silt fencing etc. Inspections of the silt mitigation will form part of the daily and weekly site checks. Employees and site staff will be vigilant on site reporting any breaches to the bunds and/or mitigation controls.

The impact assessment concluded that there will not be a significant impact to the individual receptors because of the proposed development. Any temporary potential impacts to the hydrological regime within 250m of the site area will be mitigated by the embedded guidance of the Flood Risk Assessment (Balfour Beatty, 2023) and the detailed CEMP. For more details

on the impact assessment on all surface water and groundwater receptors, refer to the Water Resources Environmental Appraisal report (Balfour Beatty, 2022).

The relevant regulator will be consulted regarding whether consent is required to carry out work near watercourses / drainage ditches as per the drainage strategy and flood risk assessment (Balfour Beatty, 2023).

4.5 NOISE AND VIBRATION CONTROL

A noise and vibration assessment has been completed, the findings of which will be used to prepare a strategy in the detailed CEMP. The standard working hours are to be confirmed with Wiltshire Council but are anticipated to be at such a time as to reduce the potential for nuisance. These are subject to agreement with involved parties.

The minimum methods to demonstrate best practicable means to reduce construction noise level include:

- Where advised, consent will be sought under Section 61 of the Control of Pollution Act 1974, under Wilshire Council.
- Where advised by the CRT's CoP, noise and vibration should be minimised throughout construction to reduce the impact of the project on adjacent site residents and users of the surrounding amenity. Mains electricity will be used rather than diesel generators where connections to mains electricity is possible. Hybrid systems are becoming available, and consideration will be given to using these were possible.
- Exhaust silencing and plant muffling will be fitted and maintained in good working order
- Low noise generators and quieter plant and equipment will be used and will conform to European standards
- The bunding and fencing proposed at the compounds to be installed to help to attenuate noise where applicable
- Construction traffic movements will be undertaken in accordance with the 'Construction Traffic Management Plan'
- Loading/unloading activities will be located away from residential properties and shielded from those properties where practicable.
- Reverse alarms will incorporate at least one of the following features: directional sounders, broadband signals, self-adjusting sounders, and/or flashing warning lights
- Only designated haul roads (on site) will be used, and these will be well maintained
- Vehicles will not wait or queue on the public highway with engines idling
- Engines will be turned off when vehicles are not in use to avoid 'idling'
- Plant and equipment will be shut down when not in use
- Equipment will be well-maintained and where possible will be used in the mode of operation that minimises noise
- Where possible plant and equipment will be started-up sequentially rather than simultaneously
- The jointing of cables will be undertaken in a covered working area
- Shouting and the use of radios when entering to and from site and when working on site will be minimised
- Where practicable, materials will be handled in a manner that reduces noise & vibration to an acceptable level
- Static plant will be shielded or provided with screens or enclosures where practicable
- Where possible, working hours will be planned to minimise impact on residents and buildings

- Static plant known to generate significant levels of vibration will be fitted with vibration dampening features
- Cable cutting (undertaken as part of the cable transition jointing process) will be undertaken within core daytime working hours
- Effective management of the site will be used to control the impact of noise levels on the surrounding area

All site personnel will be instructed on measures to reduce noise and vibration as part of their induction training and followed up by 'toolbox' talks.

4.6 ECOLOGY

A preliminary ecological appraisal has been undertaken and updated during the design phase of the project. The need for specific species surveys has been identified. Relevant surveys have been undertaken where works are in sensitive areas, with consideration given to the scope of works to ascertain potential risk. Consultation has been undertaken with Natural England. An ecological impact assessment has been produced for the project and mitigations incorporated within the OLEMP. Further surveys are to be conducted as detailed in the Ecological Impact Assessment, and an Ecological Clerk of Works is to be engaged (SLR, 2023).

4.6.1 WATER VOLE

Water vole presence has been confirmed at the western extent of the project, with further detail is in the EcIA, and water vole report (SLR, 2023). This species is protected under Schedule 5 of the *Countryside and Wildlife Act 1985*. It is an offence to:

- intentionally capture, kill, or injure water voles
- damage, destroy, or block access to their places of shelter or protection (on purpose or by not taking enough care)
- disturb them in a place of shelter or protection (on purpose or by not taking enough care)
- possess, sell, control or transport live or dead water voles or parts of them (not water voles bred in captivity).

Licence to be sought from Natural England if required for the proposed works, and the advice of the ECoW followed, general steps for the protection of water vole include not:

- polluting the watercourses adjacent to the proposed compound
- trapping water voles under trackway
- disturbing water volves with noise or vibration
- allowing materials to enter watercourses

The primary purpose of the water vole licence is to protect water vole during the construction of the proposed works and ensure that the population is retained and enhanced in the longer term to ensure continuation of a robust population of water vole in the area. All activities will be carried out in accordance with current best practice guidelines to avoid impacts to individual water vole.

It is recommended that if dewatering is necessary then this should be done to an area away from water voles, please see the Water Resources Environmental Appraisal for further information on dewatering (Balfour Beatty, 2023). If trackway is to be laid across an area with known water vole presence, then a combination of fencing and trackway sealing is indicated. Advice will be sought from the ECoW accordingly.

4.6.2 GREAT CRESTED NEWT

Great Crested Newt DNA was isolated from one pond 250m from the project. Given this distance there is no need for a licence, however, if this position changes, then ecological advice from the ECoW is to be sought.

4.6.3 BADGERS

Updated surveys completed as part of the Ecological Impact Assessment (SLR, 2023) identified 24 active setts within the project area. No badger setts are located within the planning application boundary of the Western CSEC, but two setts are located adjacent to the Western CSEC. Potential effects arising from the presence of badger setts could occur within the Planning Application area, primarily through the possible destruction of active setts and the possible disturbance, which would constitute an offence under the *Wildlife and Countryside Act 1981*.

The construction team should ensure that works are avoided with the 30m buffer zone around all setts and entrances and so, impacts onto existing and retained vegetation boundaries are avoided. Where this is not possible, entrances and possible setts will need to be temporarily closed which needs to be done though registration of the site through a Low Impact Class Licence followed by exclusion measures for 21 days. These will remain closed until all works are complete. Whilst use of a low impact license is anticipated, it may be necessary to apply for standard licence depending on the degree of impact to setts. Advice from the ECoW is to be sought on the appropriate licence route.

Some existing entrance holes and subsequent tunnels and chambers may fall within the construction footprint of the Western CSEC. Where this is the case, each sett will be assessed and where considered a risk, geophysical surveys will need to be conducted to determine the extent of the underground sett architecture. Should any issues arise, the site team needs to contact the ECoW for further information.

4.6.4 NESTING BIRDS

Removal of existing pylons, specifically the removal of the supporting legs, and construction of the underground cable route will potentially cause a negative impact to birds, young, eggs and nests if completed during nesting season (March – August inclusive). If vegetation removal cannot occur outside of nesting season, an ECoWwill need to complete a nesting bird check to confirm the absence of nesting activity within no more than 48 hours of clearance commencing.

Construction operations will be separated from the any retained vegetation within the project area (trees, woodland and hedgerows) by root protection fencing. Outages have also been secured to allow disused bird nests to be removed from pylons prior to the nesting season. Pylons are to be checked for bird nests prior to removal, noting that some species will nest even outside primary nesting season.

4.6.5 BARN OWL PRESENCE NOTED

A barn owl is noted as nesting in a barn 40m south-west of the Western CSEC construction area, and a potential nesting site is known at grid reference SU 03671 62983. These areas are therefore particularly sensitive and the ECoW must be consulted during the nesting season. The following measures must be undertaken during construction of the proposed development:

- No construction vehicles will be parked adjacent to the barn.
- As per the proposed hours of work, no construction activities are to be undertaken at dusk or overnight which could put off adults returning to feed chicks during the nesting period.
- Provision of an alternative nest site through the erection of a barn owl box on a suitable tree at the Eastern edge of the Rickpiece Plantation approximately 200m from the construction area.

The known barn owl may be subject to a higher level of noise and vibration disturbance than ordinarily habituated to, which could lead to adult birds repeatedly flushing from the nest. Construction traffic should use the haul road alongside the route of the cable.

4.6.6 BATS

The development proposals have the potential to affect the local bat population with the construction of the Eastern CSEC and Western CSEC and removal of arable habitat. These areas provide opportunistic habitat for foraging and commuting bats.

The trees with Moderate suitability potential roost features (PRFs) or confirmed roost will be fully protected during the course of the works and are not proposed for removal or management. Construction operations will be separated from any retained vegetation (trees, woodland and hedgerows) by root protection fencing. The most recent survey should be consulted, and 48h ecological survey must be done before any work is undertaken on a tree and the ECoW must be consulted before significant work is done on a tree. The western end of the project now comes within a bat consultation zone and a shadow Habitats Regulations Assessment (HRA) has been produced. Other proposed mitigation measures include mobile dead hedges to be placed across the gaps overnight, replacement planting to be carried out upon completion of the works, and dead hedges are to remain in place until there is sufficient growth of the hedgerow.

4.6.7 DORMICE

One dormouse was recorded in the Hopton Industrial Estate which suggests that dormice may be present in other areas of suitable habitat outside of the project area. Access to the pylon bases for the removal of existing pylons and supporting legs may require some vegetation management which may impact dormouse. Therefore, a check of the vegetation prior to removal for possible dormouse nest/ presence will be carried out as a precautionary measure.

The underground cable and haul road construction area requires removal of sections of five hedgerows.. Removal of vegetation will avoid potential effects on dormouse (if present) through a pre-removal check carried out by an ECoWas a precautionary measure. Vegetation removal north of Hopton Park is likely due to the use of open cut method and is considered to be slightly higher risk of encountering dormouse and will therefore, be subject to a nest tube/footprint tunnel survey prior to the start of works. In the unlikely event that dormouse are found to be present within the area requiring vegetation management, no vegetation will be removed, and a licence is likely to be required in order to carried out the work.

4.6.8 REPTILES

Common reptiles (slow worm and common lizard) have found to be present in small populations in wayleave areas under existing pylon within the SSSI. The Proposed Development has the potential to impact these reptiles during the removal of existing pylons. A precautionary approach is indicated as per the EcIA and reptile report (SLR, 2023).

Vegetation management in habitats suitable for reptiles will need to be carried out during the active period for reptiles (March – October inclusive depending on weather conditions) using hand tools (brush cutter, strimmer etc) and reduce the vegetation to 150mm to encourage animal to move out of the area. Advice from the ECoW is to be sought if there is a conflict between vegetation management being in the reptile active period, but also in the nesting bird season requiring a nesting bird check.

Once vegetation has been cut to 150mm height, and prior to further vegetation management, a fingertip search of the area will be carried out by ECoW to ensure there are no reptiles are within the area. Prior to access by any machinery within the reptile suitable areas a check will be carried out by an ECoW who will encourage any reptiles found to move out of the area. All vehicle access will be carried out at slow speed to allow animals to move out of the way of potential harm.

4.6.9 INVERTEBRATES

No notable invertebrate species were noted during the survey. However, many of the hedges and wood edges around field boundaries contained English elm, which is a key food plant for white-letter hairstreak butterfly. This species is on record locally and may therefore use hedgerows and wood edges within the survey area. Dingy skipper and grizzled skipper may also be present on site, although if so, only at low population densities. Birdsfoot trefoil is a foodplant of dingy skipper which present in set-aside margins. Creeping cinquefoil, dog-rose and bramble are also food plants of grizzled skipper however, dog-rose and bramble are only used occasionally and creeping cinquefoil was not abundant within the project area.

Due to removal of existing pylons and underground cable routes, there is potential removal of small areas of food plants such as vegetation within existing wayleaves and hedgerow removal. The invertebrate population is likely to have a local level of important with predicted magnitude of change considered to be low and therefore, unlikely to cause a significant effect on invertebrate as result of the proposed development.

4.6.10 INVASIVE NON-NATIVE SPECIES

No invasive or non-native species have been found during surveys. Surveys should be conducted prior to construction and during construction by the ECoW to identify and monitor protected and/or invasive species. If invasive non-native plant species are identified, the ECoW will advise on an appropriate exclusion zone which should be maintained around areas of these species, and no ground disturbance or vegetation clearance should occur within these areas. If works are required within an exclusion zone, an invasive non-native species management plan will be prepared and adhered to. This would detail appropriate mitigation measures relevant to the particular species and location, would include bio-security measures and may including the use of an appropriate Contractor to clear the area of invasive non-native plant material prior to works.

4.6.11 STATUTORY AND NON-STATUTORY SITES

The path of the overhead line intersects Roundway Down and Covert SSSI. All work here must be undertaken under permission of Natural England. SSSI assent must be sought from Natural England which has a 28-day turnaround, and if work is to deviate from that agreed then work is to stop, and consultation is to take place.

In addition, the Kennet and Avon Canal Local Wildlife Site (LWS) is situated at the eastern end of the works. The works here include modifying the OHL crossing over the canal and will require a scaffold and netting structure to be erected over the canal.

4.6.12 TREES

An arboricultural impact assessment has been prepared and a tree protection protocol has been prepared and will be adhered to. Please refer to the arboricultural impact assessment, tree protection plan, and tree constraints plan for further information. In all cases work around trees will adhere to the designated root protection area.

Trees will be pruned / cut back by a qualified Arboriculturist / Tree Surgeon. There are no tree preservation orders present on the project at this time, however this will be revalidated prior to commencement. Trees that are to remain will be fenced off using BS 5837 Trees in Relation to Construction to calculate the minimum distances for protective fencing. Natural breaks in tree lines will be utilised to minimise tree removal wherever possible. Tree removal will be carried out outside the bird nesting season or if this is not possible, under ecological supervision. Details on any site-specific mitigation within the work area will be communicated to employees through site specific briefings and toolbox talks.

TPO information has been obtained via consultation with Devizes Town Council.

4.6.13 HEDGEROWS

A 2m buffer zone will be left between hedgerows where possible between works to minimise impact. Where possible existing gaps in hedgerows will be utilised, where hedgerow is to be removed this will be minimal and the gaps replanted post construction, with translocation being considered where appropriate. Due to the nature of works some hedgerow removal cannot be avoided. However, it will be kept to the minimum possible, and all hedgerow removed will be reinstated.

Where hedgerow trimming is required to establish a working area/access the extent of hedge trimming will be kept to the minimum required and, where required clearance works will be undertaken with ecological supervision.

Of the nine hedgerows surveyed as part of the primary environmental assessment all would be protected under the 1991 regulations, but none would be considered ecologically ‘important’ under the Act. There was a notable and significant lack of diversity in woody species in the sections surveyed. Hedgerows removed will therefore be replaced with improved species where feasible.

Hedgerow removal Notices will be required in most cases for vegetation clearance for the cabling / access works. It will be the responsibility of the environmental advisor and site manager to obtain them.

4.7 LIGHT POLLUTION

The use of lighting during the construction phase will be limited and restricted to site operational hours only, the lighting is more likely to be used during the winter when working hours coincide with the hours of darkness. There will be minimal lighting left overnight outside core working hours for the security team. Safety lighting around welfare areas will consist of PIR motion sensor / low energy lighting. The effects of lighting on sensitive receptors will be addressed during construction.

Sensored lights on all sites and depots will be positioned and set in a direction to ensure safe working, whilst also preventing direct shining on any private residence or into environmentally sensitive areas. Further good practice examples that must be followed include:

- Lighting that is of the minimum suitable brightness to allow for safe working conditions
- Adjustable light fittings and diffusers that can prevent light from shining above the horizontal plane
- Light fittings being adjusted correctly to ensure that light is being shone in a downward position only
- Lighting being turned on only as required

Light pollution is very visible and can be seen from many miles. It is also often very easily controlled.

4.8 ARCHAEOLOGICAL MANAGEMENT

Trial trenching is now complete, alongside other archaeological investigation. Two written schemes of investigation (WSI) have been prepared, one to address the design subject to planning consent and the other non-development aspects found on the planning application portal (Wessex Archaeology, 2023). The first WSR covers archaeological mitigation works requiring a planning application and includes a programme of Archaeological Monitoring and Recording (AMR) and Strip, Map and Record Excavation (SMR) (Wessex Archaeology, 2023). The second WSI covers the works requiring AMR and SMR to be undertaken as permitted development (Wessex Archaeology, 2023).

A mitigation scheme has been agreed with the county Archaeologist. Employees will be briefed on the WSI and be made aware of controls and conditions put in place. Should any archaeological remains be discovered during the construction process work will be stopped and advice sought from the appointed Archaeologist.

4.9 AGRI-ENVIRONMENT SCHEMES AND SOIL MANAGEMENT

Much of the scheme proceeds through good quality farmland, this is under agricultural schemes. A record is being maintained of which parcels of land are what under which scheme. Care will be taken to ensure that these parcels of land are maintained on these schemes. Furthermore, the quality of soil demands that proper soil management is always maintained according to the project ‘Soil Resources Survey and Management Plan (Balfour Beatty, 2023)’.

There are known agri-environmental / stewardship agreements in place along the route, some are listed below:

- There is a stewardship strip south of the west CSEC
- Beetle bank adjacent to the main construction compound (2m buffer from construction works required)
- Environmental strip – enhanced grass for biodiversity and wildflowers north of the Horton Road HDD. These ‘strips’ are important landscape elements used by a wide range of birds, mammals and insects and are important for plants.

Please see Appendix B for maps of stewardship schemes

4.10 CONTAMINATED LAND

Contaminated Land is not anticipated on this project given the history and present use of land, see the Ground Investigation interpretive report. However, should contaminated land be encountered work is to stop, and the presence of contaminated land reported to a superior.

4.11 WASTE MANAGEMENT

A site waste management plan will be generated prior to commencement, this will also be aligned with the LPA's waste strategy 'Wiltshire & Swindon Waste Core Strategy Development Plan Document, adopted July 2009'. This shall detail the types of waste expected to be generated. The opportunities for the avoidance of generating waste, in accordance with the waste hierarchy, shall be identified. For example, reducing the quantities of primary aggregate by either selecting recycled aggregate or alternative technologies for the construction of haul-roads where appropriate.

For Soil, please refer to the Soil Resources Survey and Management Plan (Balfour Beatty, 2023). All excavated soil is to be managed in accordance with this plan and in such a way that loss is minimised, and that as much structure as possible is maintained.

Further behaviours that reduce the use of materials include:

- Correct storage of materials, particularly perishable materials
- Off-site build and fit, reducing the need for on-site snagging
- The reuse of materials onsite, for example using aggregate from a disused section of haul-road to build the next
- Correct measurement and design, for example appropriate sizing for concrete shuttering then notifying suppliers of correct concrete type and volume required
- Where possible returning packaging to the supplier for reuse

The waste hierarchy favours above all the avoidance of waste, and therefore the aim should be always to reduce the amount of waste generated to the minimum necessary.

All waste will be segregated into appropriate skips and removed by an approved carrier. Waste management will follow the waste hierarchy shown below in Figure 5 and includes:

- Prevention of waste production
- Reuse of waste materials produced
- Recycling of waste
- Landfill of waste



Figure 5 The waste hierarchy

All waste storage areas will be inspected on a regular basis for correct segregation, security, tidiness. All waste must have a waste transfer note, or a consignment note whenever passed to another party. The project will have a Site Waste Management Plan on the Sustainability Portal, where all waste records will be stored.

Hazardous waste, such as aerosol cans, may be generated during the lifetime of the project. Each type of hazardous waste shall be appropriately segregated, and absolutely must not enter another waste stream. Opportunities to eliminate the generation of hazardous waste should be identified.

There is a legal duty of care to ensure that any waste transfer is to a person or company believed to be legally competent to handle the waste. And that waste will ultimately go to a facility that is suitable for its handling. If there is any doubt do not make the transfer. Retain all documentation regarding the transfer of waste materials. It is necessary to audit waste management regularly to ensure that legal compliance is maintained, and therefore this should be included as part of the regular audit regime.

Upskilling on the waste management shall be given from time to time via TBT. Those more involved with waste management may be provided with more intensive mentoring.

Segregated waste skips will be kept at all compounds with bins to separate waste streams at the source. Environmental team will audit the use of the correct bins and keep waste consignment notes in the office to confirm waste carrier's licences and licenced disposal or processing sites.

Waste should be stored, disposed of safely to prevent contamination and managed in a way that prevents harm to human health, amenity and the environment. This should not be within 10m of a watercourse, borehole, well or water drainage systems.

4.12 AIR QUALITY

Measures shall be implemented to reduce the emission of dust and other emissions from the works. These may Impact on air quality in several ways, broadly classified into:

- Exhaust Emissions – from site plant, equipment, and vehicles
- Fugitive Emissions – from construction activities

The following mitigation measures may be implemented to reduce the effect of dust and smoke:

- dusty materials, will be sheeted or prevented in some other way from becoming wind-borne
- wheel cleaning facilities will be provided, and road sweeping will be undertaken
- Where activities could create dust clouds, dust suppression techniques will be adopted, for example water sprays and dampening of access roads. Suppression techniques will be used more frequently during periods of dry weather
- Waste will be disposed of in accordance with the SWMP
- Materials kept at site, including the stockpiling of soils, will be protected by appropriate measures, for example membranes, spraying or seeding
- Loaded vehicles that are carrying dust generating materials will be covered, for example with sheets, when leaving site
- No burning of materials on site
- All plant and vehicles will be maintained in good order so that they do not emit dark smoke, grit, or dust
- The use of diesel generators will be minimised, and battery powered generators will be used where available
- Engines will be turned off when vehicles are not in use to avoid ‘idling’
- The site speed limit will be signposted and will not exceed 10mph
- Alternative methods for business travel will be considered by all employees to reduce vehicle use
- All working areas will be kept in a clean and tidy condition
- Electric vehicle charging points will be provided on site

Dust suppression will be used on all activities producing a residue extending beyond the boundary of the work area where this may cause a nuisance or a significant impact on the environment. During the project lifecycle all access routes (including both public highways and private land) will be monitored for risk of dust pollution in dry weather, where required appropriate dust suppression techniques will be implemented.

4.13 ENVIRONMENTAL CONSENTS / LICENCES / PERMITS

A register will be kept of all environmental consents, licenses, and permits. This shall be kept up to date during the project lifetime.

5 EMERGENCY RESPONSE

Emergency procedures will be developed in line with ISO14001 criteria and Health Safety and Environment (HSE) standards by the appointed Principal Contractor(s).

An emergency response plan shall be in place before commencement, please refer to this in case of an emergency. A specific response plan will be generated for the source protection zone.

5.1 SPILLAGE CONTROL

For plant/equipment leaks:

- **STOP** the source of the spill or leak if possible
- **CONTAIN** the spill using spill kits, sand or soil
- **DIVERT** the spill away from drains and watercourses
- Clean up the spill. Put all used spill kit materials and contaminated soil in a waste bag and dispose of as hazardous waste
- **REPORT** the spill to your supervisor and ensure it is reported to the Balfour Beatty Helpline (0800 121 4444) and the National Grid.

5.2 OTHER ENVIRONMENTAL INCIDENTS

As noted in Appendix B, a bio hazard risk has been identified on entry to fields 11-14. Entrance to these fields may include wash facilities for boots and vehicle wheels. These measures would be put in place to mitigate the risk of any loss of fuels, lubricants, load or other substances.

Site personnel will receive toolbox talk training to reduce the incidence of environmental incidents, such as causing nuisance. In the event of a near miss or nuisance being caused then work will stop, and a supervisor notified.

5.3 FLOOD EMERGENCY RESPONSE

If there are flood alerts in the vicinity of the site:

- **CONTACT** the Environment Agency flood warning line on 0845 988 1188
- **OBTAIN** as much information as possible from the Environment Agency i.e., what timescales are involved and what level of flooding is expected
- If flooding is **IMMINENT** ensure that fuel, oil and other potential contaminants are moved out of danger or stored as securely as possible
- If the extent of the flooding becomes serious and an **EVACUATION** of the site is deemed necessary, a decision to evacuate will be made by a senior person on site.

REPORT instances of flooding to the Helpline on 0800 121 444

5.4 ENVIRONMENTAL INCIDENTS

All incidents (including complaints, prosecutions, notices and cautions relating to the works) on the contract will also be reported to the client's Project Supervisor and actioned as per South West Capital Delivery Verbal Incident Reporting Chain. This will refer to the persons named in the positions for the project who will need to contact their respective line managers. Figure 6 demonstrates the reporting flow for an on-site incident.

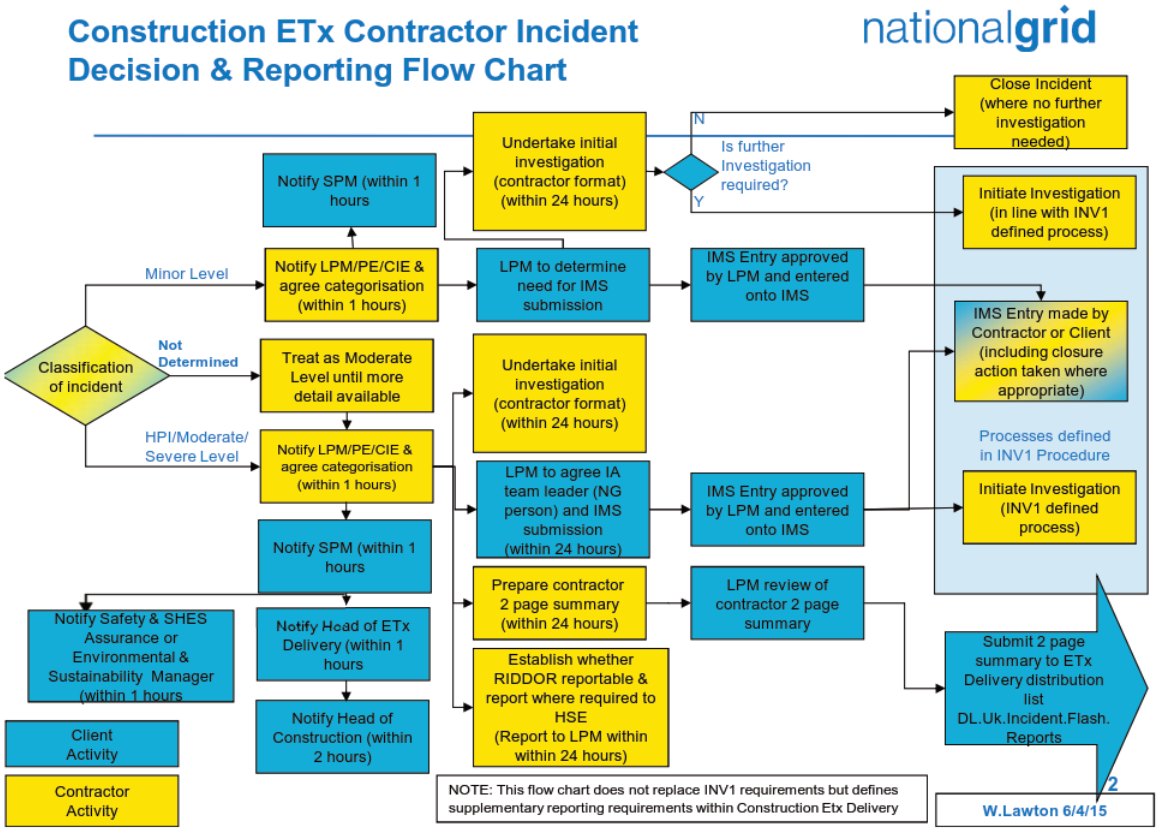


Figure 6 Decision and report flow chart

Appendix A – ISO14001 Certificate

ISO 14001

Certificate of Registration

ERM Certification and Verification Services

Exchequer Court
33 St. Mary Axe
London EC3A 8AA
Tel: +44 (0)20 3206 5281
Fax: +44 (0)20 3206 5442
post@ermcvs.com

This is to certify that

National Grid Holdings One Plc

ERMCVS

Certificate Number: 611
Initial Issue Date (prev. CB): 20 July 2018
Reissue Date: 31 March 2021
Expiry Date: 11 January 2023
Version #: 1

at

National Grid House
Warwick Technology Park, Gallows Hill
Warwick
CV34 6DA
United Kingdom

UKAS MANAGEMENT SYSTEMS 067

has been registered to ISO 14001:2015 for

All National Grid Holdings One Plc UK Regulated and Non-regulated activities, with the exception of National Grid SMART and National Grid Interconnector businesses; including reasonable areas of influence from activities in design, development, construction, maintenance, operation and decommissioning of gas and electricity transmission infrastructure, and the wholly owned businesses of National Grid Grain LNG, National Grid Metering, UK Commercial Property and Workplace Services.

This certificate is the property of ERM Certification and Verification Services Ltd and is issued subject to ERM CVS' Standard Terms and Condition of Business. Its validity may be confirmed by contacting ERM CVS as set out above.

Signed on behalf of ERM CVS by:

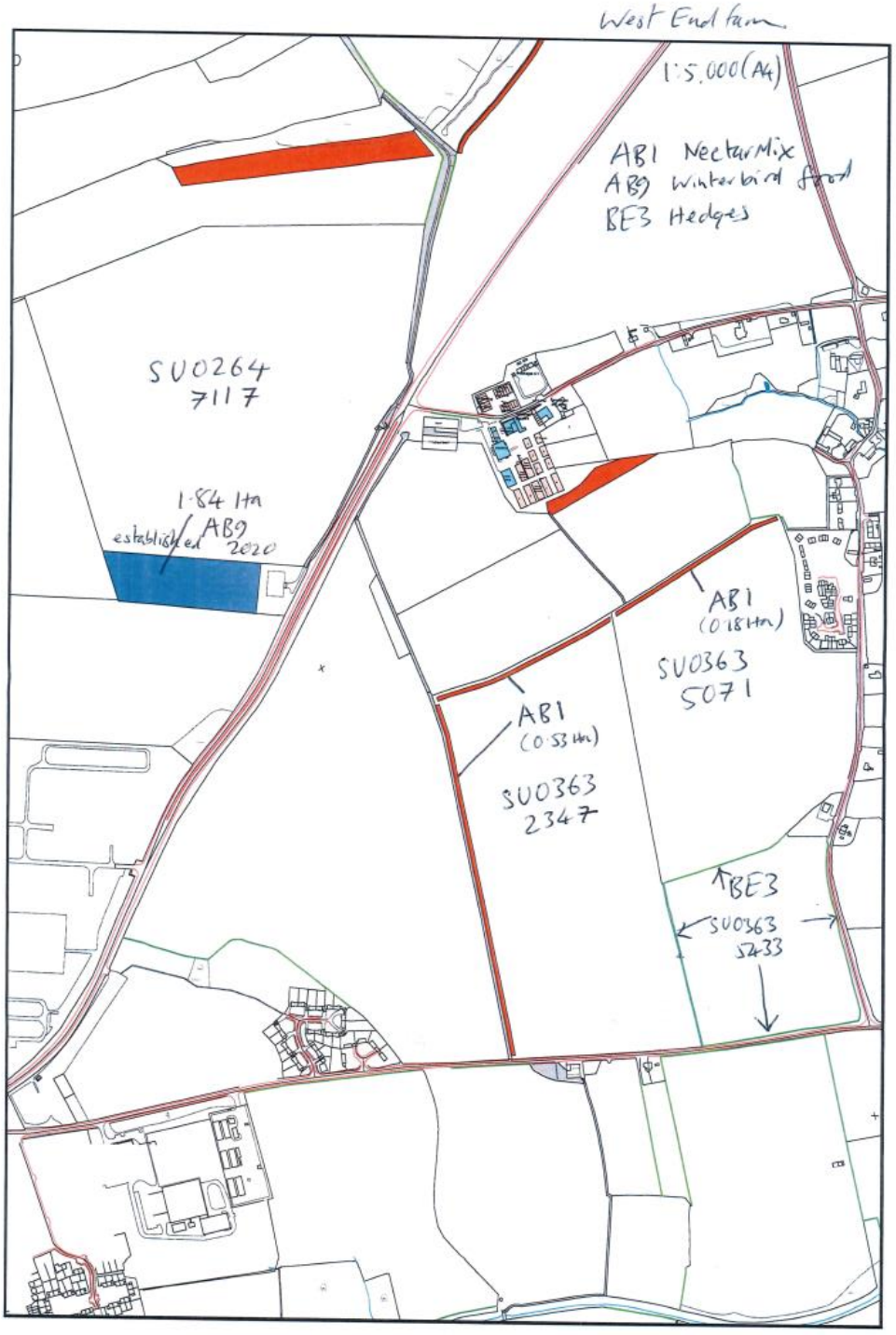
Jeff Rose
Head of Certification

ERM CVS is an independent member of the world-wide Environmental Resources Management Group of Companies

Appendix B – Stewardship Schemes

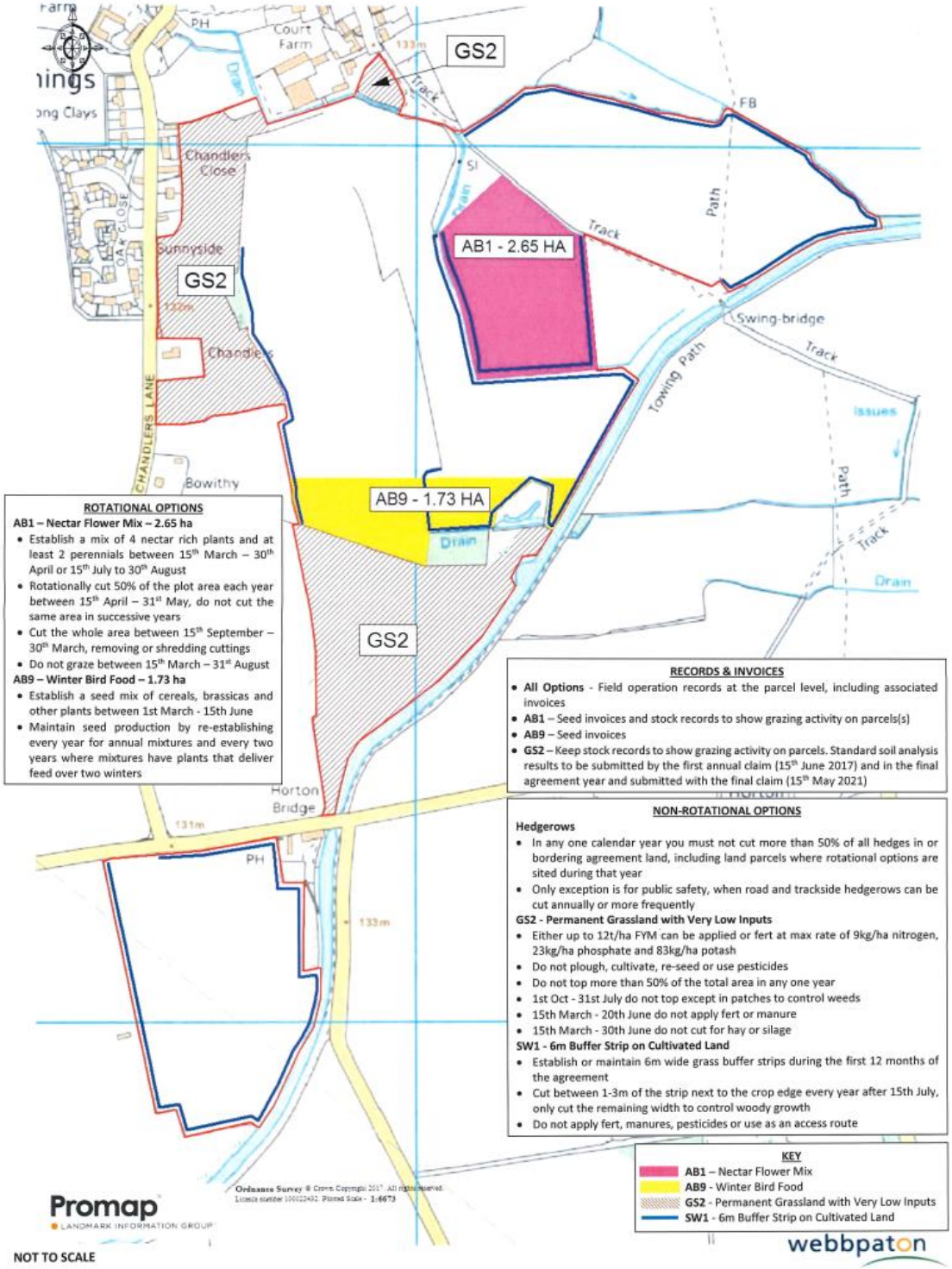


FIELD	LANDOWNER ACCESS REQUIREMENTS
F1	Do not drive on field margins; do not cross the culvert or bridges into Field 3.
F2	Do not drive on field margins, avoid tramlines where reasonably practicable.
F3	Do not drive on field margins, avoid tramlines where reasonably practicable.
F4	Do not drive on field margins, avoid tramlines where reasonably practicable.
F5	Do not drive on field margins, avoid tramlines where reasonably practicable.
F6	Do not drive on field margins, avoid tramlines where reasonably practicable.
F7	Do not drive on field margins, avoid tramlines where reasonably practicable.
F8	Avoid field margin (low grass) on left hand side that runs parallel to Folly Lane. Do not encroach within 1m of beetle bank (low hedgerow). Do not dig on field margins, tramlines, or beetle bank areas where reasonably practicable.
F9	Enter from the south through Wiltshire Concrete new bellmouth. Avoid 6m wide field margin (low grass) apart from entry point and use existing tramlines, where possible. Do not encroach within 1m of beetle bank (low hedgerow). Do not dig on field margins, tramlines or beetle bank areas where reasonably practicable.
F10	Enter field off private road follow existing tramlines all the around into the field initially. Do not drive on outer grass track/ avoid digging on tramlines where reasonably practicable.
F11	Access from Horton Road – padlock. Gate to be locked on agreement with farmer. Follow track up to point to enter field. Follow existing routes/ tramlines where possible while heading NW. Use fields boundaries if required.
F12	Follow track to enter field on right. Avoid 6m field margin (for flowers) on left. Use existing tramlines where possible.
F13	Enter gate (go straight ahead or turn right) and stay close to field boundaries in first instance otherwise use existing tramlines Avoid driving through crop where reasonably practicable.
F14	Stay on existing tramlines where reasonably practicable. No sharp turns or 90 degree movements to churn up ground. Requested: use visqueen/ terram to store topsoil and subsoil to protect crop underneath. BIO HAZARD RISK – on entry to all fields 11-14 disinfect boots and wheels of plant.
F15	Follow existing tramlines near edge of field (on first entry) parallel to field boundary. Do not drive on outer grass margin, follow tramlines and avoid digging on them where reasonably
F16	Close gates and reinstate cattle fence if removed.
F17	Close gates and reinstate cattle fence if removed.

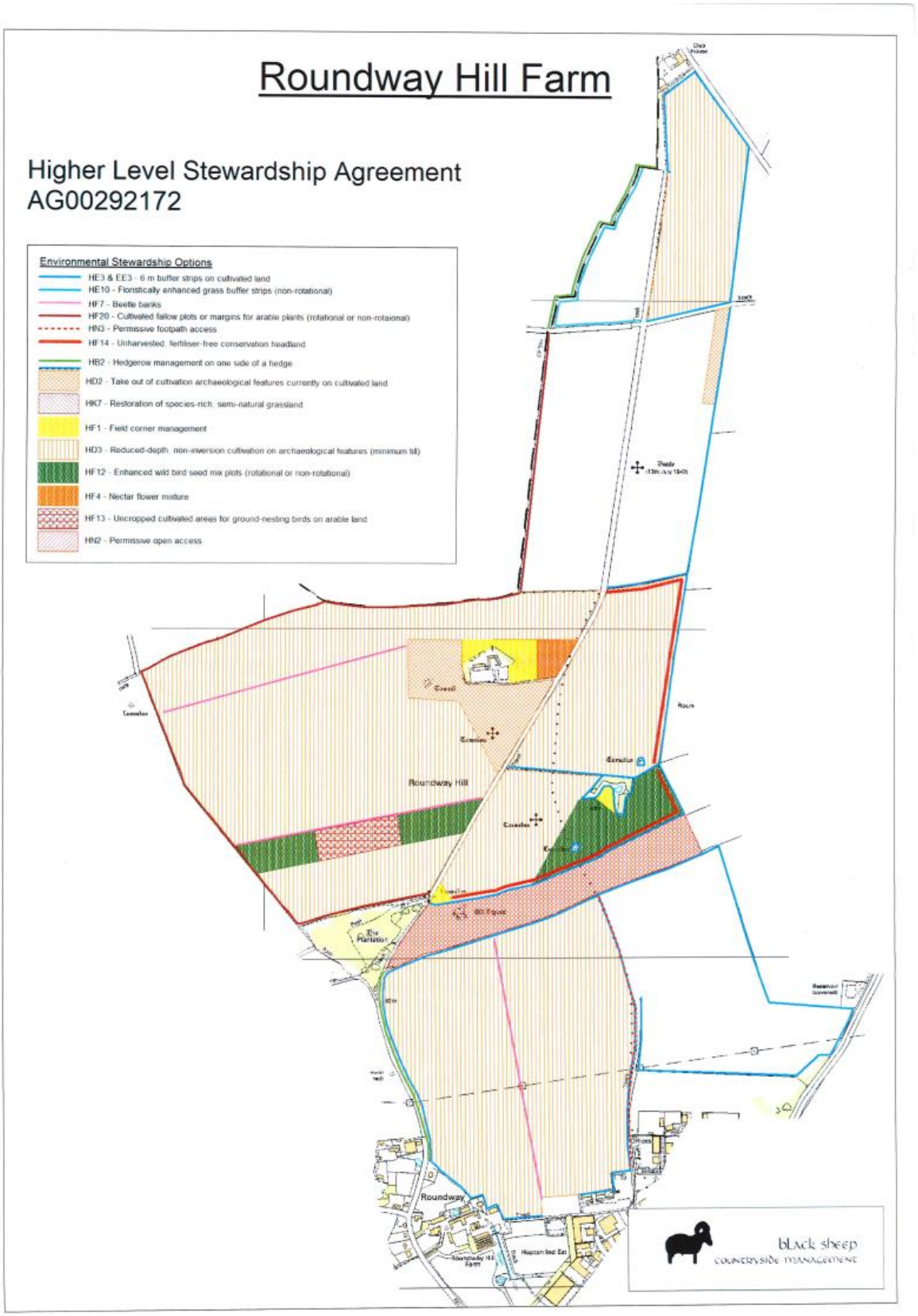


Doc Title:	Outline Construction Environmental Management Plan			Activity ID	D229988
BIM Code:	5417-PTDC-CABXX-XX-RP-PDM-000072	Version	P04	Status	S4

MID-TIER COUNTRYSIDE STEWARDSHIP (1st January 2017 – 31st December 2021)



Doc Title:	Outline Construction Environmental Management Plan			Activity ID	D229988
BIM Code:	5417-PTDC-CABXX-XX-RP-PDM-000072	Version	P04	Status	S4



Doc Title:	Outline Construction Environmental Management Plan			Activity ID	D229988
BIM Code:	5417-PTDC-CABXX-XX-RP-PDM-000072	Version	P04	Status	S4