

SP MANWEB

Reinforcement to the North Shropshire Electricity Distribution Network



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Environmental Statement Chapter 4
Approach and General Methodology

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November 2018

SP MANWEB

**Reinforcement to the North Shropshire
Electricity Distribution Network**

CHAPTER 4

APPROACH AND GENERAL METHODOLOGY

Environmental Statement

DCO Document 6.4

November 2018

PINS Reference EN020021

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The Planning Act 2008

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

Regulation 5(2)(a)

Reinforcement to the North Shropshire Electricity Distribution Network

Environmental Statement: Chapter 4 – Approach and General Methodology

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CONTENTS

4.1 INTRODUCTION	1
4.2 CONSULTATION	3
SP Manweb's Approach to Consultation	3
Stage One Consultation	5
Stage Two Consultation	6
Further Stage Two Consultation	7
4.3 EIA CONSULTATION	8
4.4 SCOPE OF THE ASSESSMENT	8
Scoping Report	8
Study Area	13
Rochdale Envelope	13
Temporal Scope	15
Technical Scope	16
4.5 BASELINE CONDITIONS	17
4.6 APPROACH TO MITIGATION	17
4.7 DEFINING SIGNIFICANT EFFECTS	18
4.8 CUMULATIVE EFFECTS	21
Projects Included in the Inter-Project Cumulative Assessment	23
4.9 ASSUMPTIONS AND LIMITATIONS	28
4.10 SUMMARY	28

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Environmental Statement Documents

ENVIRONMENTAL STATEMENT		
DCO Document	Chapter	Document
6.1	1	Introduction
6.2	2	Alternatives and Design Evolution
6.3	3	The Proposed Development
6.4	4	Approach and General Methodology
6.5	5	Planning Considerations
6.6	6	Landscape and Visual
6.7	7	Ecology and Biodiversity
6.8	8	Historic Environment
6.9	9	Flood Risk, Water Quality and Water Resources
6.10	10	Socio-Economics
6.11	11	Land Use and Agriculture
6.12	12	Cumulative Effects
6.13	13	Summary of Environmental Effects
6.14		Environmental Statement Figures
6.15		Non-Technical Summary
6.16		Glossary

Reference is also made to the following documents:

DCO Document	Document
2.3.0 – 2.3.16	Works Plans
5.1	Consultation Report
5.2	Flood Risk Assessment
6.3.1	Proposed Pole Schedule
6.3.2	Draft Construction Environmental Management Plan (CEMP)
7.1	Planning Statement
7.2	Construction Report
7.5	The Strategic Options Report (May 2016)
7.6	Updated Strategic Options Report (November 2017)
7.7	Further Updated Strategic Options Report (November 2018)
7.8	Route Corridor Options Report (June 2016)
7.9	Line Route Report (June 2016)
7.10	Updated Line Route Report (November 2016)
7.11	Updated Line Route Report 2 (November 2017)

CHAPTER 4: APPROACH & GENERAL METHODOLOGY

4.1 INTRODUCTION

- 4.1.1 This chapter sets out the approach and methodology used in gathering the environmental information as presented in the Environmental Statement (ES).
- 4.1.2 The ES is being submitted in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2009/2263) as amended (the 'EIA Regulations').
- 4.1.3 Although these Regulations have since been superseded by The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the 2017 Regulations'), the transitional arrangements for the 2017 Regulations state that the 2009 Regulations continue to apply to projects for which a request for a scoping opinion was submitted prior to the date upon which the 2017 Regulations came into force, which was 16 May 2017. As the request for a scoping opinion for the project was submitted on 6 March 2017, the 2009 Regulations are therefore applicable. Any reference in this ES to the 'EIA Regulations' should therefore be taken to mean the 2009 Regulations.
- 4.1.4 On 12 January 2018 a meeting was held between SP Manweb and PINS. In expectation of the statutory consultation process resulting in amendments to the Proposed Development, PINS advised SP Manweb to consider whether any of the proposed changes were such that they would represent a different development to that scoped under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009. In such circumstances, the transitional EIA Regulations may not apply and the Proposed Development would fall under the 2017 EIA Regulations. In light of these comments SP Manweb considered that the project had not materially changed i.e. it remained substantially a 132kV overhead wood pole line, (with one section of 132KV underground cable) connecting Oswestry Substation and Wem Substation and therefore the 2009 Regulations apply.

4.1.5 To enable the decision maker to understand the likely significant environmental effects of the Proposed Development the ES provides environmental information in accordance with Schedule 4 of the 2009 Regulations, which sets out the information that must be included within an ES.

4.1.6 The design and assessment process is set out in Diagram 4.1 below:

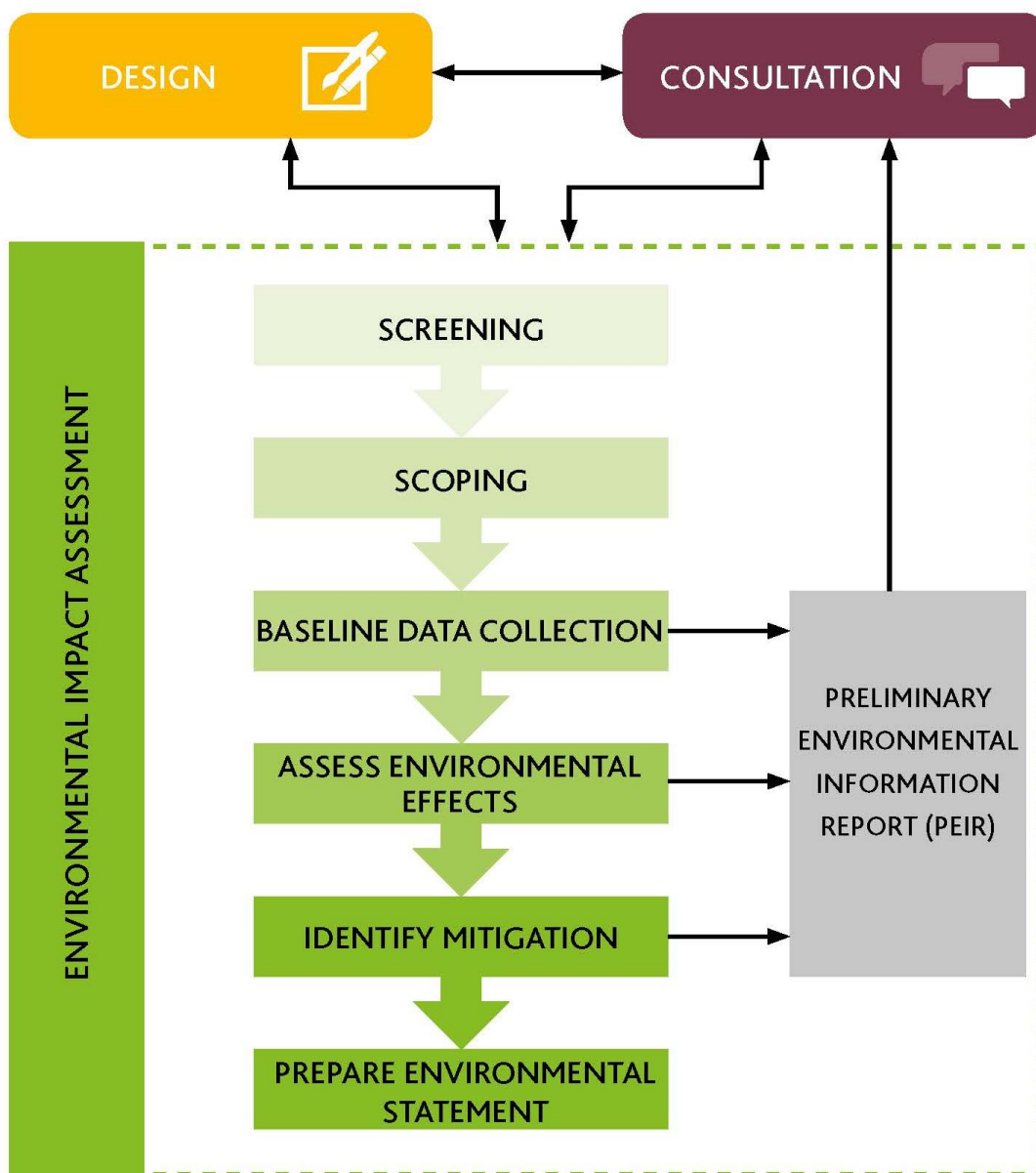


Diagram 4.1: The design and assessment process

4.1.7 This chapter should be read in conjunction with

- Figure 2.1: Amendments to the Proposed Line Route (**DCO Document 6.14**);
- Figure 4.1: Consultation Zone (**DCO Document 6.14**); and
- Figure 4.2: Cumulative Assessment (**DCO Document 6.14**).

4.2 CONSULTATION

SP Manweb's Approach to Consultation

4.2.1 Public participation and consultation lie at the heart of the statutory planning process. Before an application for an Order granting development consent is submitted, the developer of a Nationally Significant Infrastructure Project (NSIP) is legally required under the requirements of the Planning Act 2008 to carry out pre-application consultation. Effective pre-application consultation leads to applications that are better understood by the local community and provides developers with an opportunity to resolve or reduce the impacts caused by the construction and operation of the NSIP in advance of submitting the application.

4.2.2 In conducting pre-application engagement the Planning Act 2008 includes requirements for a developer to:

- Conduct pre-application consultation with statutory consultees and other relevant groups, local authorities, persons with an interest in land, landowners and prescribed persons (under section 42 of the Planning Act 2008);
- Conduct pre-application consultation with the local community in accordance with a Statement of Community Consultation (SOCC) (the content of which must be the subject of consultation with the local authority and then publicised) (section 47 of the Planning Act 2008);
- Undertake further pre-application publicity under section 48 (of the Planning Act 2008);

- To take account of responses to consultation under section 49 (of the Planning Act 2008); and
- Prepare a consultation report under section 37 (of the Planning Act 2008), explaining how the applicant has responded to representations made in response to the consultation.

4.2.3 Guidance on the pre-application process¹ includes consultation guidance for both the developer and the Secretary of State (SoS).

4.2.4 From the early development of this project SP Manweb has engaged in environmental and technical pre-application consultation with a variety of stakeholders, some of which are listed in Table 4.1. The feedback from this pre-application consultation informed the project design to reduce potential effects and resulted in the Proposed Development as assessed within this EIA.

Table 4.1 – List of Consultees	
Canal and River Trust	NATS
Environment Agency	Natural England
Forestry Commission	North Shropshire Tourism
Highways England	RSPB
Historic England	Shropshire Council
Marches Growth Hub	Shropshire Ornithological Society/County Bird Recorder
Marches LEP	Shropshire Tourism UK Ltd
Meres and Mosses Business Environment Network	Shropshire Wildlife Trust

¹ Guidance on the Pre-application Process: Department for Communities and Local Government (DCLG) (March 2015)

Table 4.1 – List of Consultees

Meres and Mosses Landscape Partnership Scheme	Sleap Airfield
MOD	Woodland Trust

4.2.5 The general feedback from the pre-application consultation with respect to the potential for environmental effects is summarised in the following paragraphs, with more detail provided in the Consultation Report (**DCO Document 5.1**). Responses to specific comments are included within the individual topic chapters of this ES and their appendices (**DCO Documents 6.6 – 6.11**).

Stage One Consultation

4.2.6 SP Manweb's Stage One Consultation (non-statutory) ran from June 2016 to July 2017.

4.2.7 The non-statutory initial consultation period commenced on 29 June 2016 and finished on 9 September 2016. The consultation sought views on the preferred line route and line route options, likely environmental impacts, previous work (including reinforcement options and broad route corridor options).

4.2.8 SP Manweb published the following three consultation documents for this initial consultation:

- Strategic Options Report (May 2016) (**DCO Document 7.5**);
- Route Corridor Options Report (June 2016) (**DCO Document 7.8**);
and
- Line Route Report (June 2016) (**DCO Document 7.9**).

4.2.9 SP Manweb continued to receive feedback after the initial consultation period ended and considered it beneficial to accept this feedback in order to develop the design of the Proposed Development. This non-statutory extended consultation (September 2016 – July 2017) resulted in further amendments

to the scheme which were outlined in the publication of Project Update 2 (November 2016) and Project Update 3 (May 2017). SP Manweb continued to review feedback up to July 2017.

4.2.10 Feedback from consultees on environmental issues was generally supportive. Full details of the feedback from the stakeholders is provided in the Consultation Report (**DCO Document 5.1**).

4.2.11 Changes to the scheme in response to the non-statutory Stage One Consultation are described in the following SP Manweb documents:

- Stage One Consultation Feedback Report (November 2016) (Appendix 4.1 to the Consultation Report (**DCO Document 5.1**));
- Updated Line Route Report (November 2016) (**DCO Document 7.10**);
- North Shropshire Reinforcement Newsletter – Project Update 2 (November 2016) (Appendix 4.2 to the Consultation Report (**DCO Document 5.1**));
- Scoping Report (March 2017)²;
- North Shropshire Reinforcement Newsletter – Project Update 3 (May 2017) (Appendix 4.2 to the Consultation Report (**DCO Document 5.1**));

Stage Two Consultation

4.2.12 Statutory consultation (in accordance with sections 42, 47 and 48 of the Planning Act 2008 and the EIA Regs 2009), which formed the second stage of SP Manweb's consultation process, ran from 23 November 2017 to 2 February 2018.

² <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020021/EN020021-000027-Scoping%20Report.pdf>

4.2.13 The documents that formed part of this consultation included:

- Preliminary Environmental Information Report (PEIR) (November 2017)³;
- Updated Line Route Report 2 (November 2017) (**DCO Document 7.11**);
- Updated Strategic Options Report (November 2017) (**DCO Document 7.6**); and
- North Shropshire Reinforcement Newsletter – Project Update 4 (Winter 2017/2018) (Appendix 5.2 to the Consultation Report (**DCO Document 5.1**)).

4.2.14 Where appropriate, feedback on environmental issues from the Stage 2 Consultation is included within the technical chapters of this ES.

4.2.15 A number of responses to the Stage Two Consultation feedback resulted in further amendments to the proposals, as detailed in Chapter 2 ‘Alternatives and Design Evolution’ (**DCO Document 6.2**).

4.2.16 The outcome of the Stage Two Consultation is reported in the Consultation Report (**DCO Document 5.1**).

Further Stage Two Consultation

4.2.17 The feedback from the Stage Two Consultation (up to February 2018) resulted in a number of minor amendments to the proposals, see paragraphs 2.4.51-2.4.52 in Chapter 2 ‘Alternatives and Design Evolution’ (**DCO Document Ref 6.2**), which were then subject to further consultation with:

- Persons who were either engaged in the project consultation previously
- Persons who (as far as SP Manweb were aware) had an interest in

³ https://www.spenergynetworks.co.uk/userfiles/file/SPM_NSRRP_PEIR.pdf

land affected by the Proposed Development that was previously consulted;

- Persons affected by the propose amendments to the route assessed in the PEIR; and
- Prescribed bodies that SP Manweb are required to consult.

4.2.18 Feedback from this detailed consultation has informed the design of the Proposed Development (see the Consultation Report (**DCO Document 5.1**)) as assessed within this ES.

4.3 EIA CONSULTATION

4.3.1 In addition to the Stage One and Stage Two Consultations, there was additional stakeholder engagement between the topic-specific professionals undertaking the assessment and relevant consultees listed in Table 4.1 and in the Consultation Report (**DCO Document 5.1**).

4.3.2 The additional stakeholder engagement included the methodologies to be adopted in undertaking the topic specific assessments, the extent of study areas and details such as the location of potential viewpoints.

4.3.3 Relevant additional stakeholder engagement is detailed within section 4 of the topic chapters, together with a description as to how the feedback has been addressed.

4.4 SCOPE OF THE ASSESSMENT

Scoping Report

4.4.1 The Scoping Report was submitted to PINS in March 2017, together with a request for an EIA Scoping Opinion in accordance with Regulation 8(3) of the EIA Regulations. The Scoping Report provided an outline approach for the identification of likely adverse and beneficial effects for each of the identified topics.

4.4.2 A Scoping Opinion⁴ was received from the SoS in April 2017. The comments received, together with how they have been taken into account, are set out in the topic specific chapters (DCO Documents 6.6 – 6.12) and their relevant appendices to this ES.

4.4.3 Within the Scoping Opinion, the SoS agreed that effects on the following matters were not relevant to the assessment and could be scoped out of the EIA process:

- Likely effects on heritage assets as a result of routine operation and maintenance of overhead lines and pruning/vegetation clearance during the operational phase;
- Hydrological changes during construction and operation;
- Socio-economic effects during construction and operation (excluding effects on leisure and tourism);
- Water resources during operation;
- Mineral resources during construction and operation;
- Traffic and transport during operation;
- Noise during operation;
- Vibration during construction⁵ and operation;
- Air quality during operation;
- Electro-magnetic fields (EMF) during construction and operation;
- Geology and ground conditions during construction and operation;
- Other emissions during operation;

⁴ <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/EN020021/EN020021-000012-Scoping%20Opinion.pdf>

⁵ On the assumption that a continuous flight auger would not be used.

- Waste during operation; and
- Contribution to climate change during construction and operation.

4.4.4 However, the SoS did not agree that the following areas could be scoped out of the ES without further justification and agreement from the relevant consultants:

- Effects on water resources during construction only: (now included within Chapter 9 'Flood Risk, Water Quality and Water Resources' (**DCO Document 6.9**) of the ES);
- Effects on traffic and transport during construction only: (subsequent agreement received from consultees to omit from the ES, see Traffic and Transport Technical Note, Appendix 1.1 (**DCO Document 6.1.1**) of the ES);
- Effects on noise during construction only: (subsequent agreement received from consultee to omit from the ES, see Noise and Air Quality Technical Note, Appendix 4.1 (**DCO Document 6.4.1**) of the ES);
- Effects on air quality during construction only: (subsequent agreement received from consultee to omit from the ES, see Noise and Air Quality Technical Note, Appendix 4.1 (**DCO Document 6.4.1**) of the ES);
- Other emissions during construction only: (the EIA has not identified any other sources of emissions during the construction phase. Consideration of statutory nuisance is set out in the Statement of Statutory Nuisance (**DCO Document 5.3**) which concludes that with the measures set out in the draft Construction Environmental Management Plan (**DCO Document 6.3.2**) in place, it is not expected that there would be a breach of Section 79(1) of the Environmental Protection Act 1990 during construction activities. This issue has not therefore been considered further in the EIA);

- Waste during construction only: (the project will generate relatively small quantities of waste and these will be controlled through standard good practice construction techniques as set out in the draft Construction Environmental Management Plan (**DCO Document 6.3.2**) and secured through a Requirement to the draft DCO. Waste has therefore not been considered further in the ES); and
- Effects of non-fluvial flooding: (a full flood risk assessment has been provided as **DCO Document 5.2**).

4.4.5 As referenced within the bullet points for paragraph 4.4.4, since receiving the Scoping Opinion further survey and assessment work has been undertaken and SP Manweb has agreed with the relevant stakeholders that the Proposed Development would not give rise to significant effects with respect to the following topics:

- Traffic and transport during construction (although certain traffic measures are included within the draft CEMP (**DCO Document 6.3.2**)), as per the reasons and agreements detailed in Appendix 1.1 (**DCO Document 6.1.1**); and
- Air quality during construction as per the reasons and agreements detailed in Appendix 4.1 (**DCO Document 6.4.1**) and the Construction Report (**DCO Document 7.2**).

4.4.6 These topics are not therefore considered further within this ES.

4.4.7 It was also agreed that the potential effects of noise during the construction of the overhead line could also be scoped out of the ES, as per the reasons and agreements detailed in Appendix 4.1 (**DCO Document 6.4.1**). However, since this agreement was made the scope of the Proposed Development has been expanded to include the works at Oswestry and Wem Substations, which includes a new 132kV transformer at Wem Substation. Therefore a noise assessment has been produced for proposed extension to Wem

Substation and the details of this are provided in Appendix 4.1 (**DCO Document 6.4.1**).

4.4.8 Within the feedback provided by Public Health England (PHE) it was requested that a specific section be included within the ES *‘to provide a focus and adequate consideration for relevant PHE issues’*. As explained in section 4.1 of this Chapter this ES is being submitted under the transitional arrangements for the 2017 Regulations i.e. under the 2009 Regulations and therefore a specific section on health issues is not a requirement under the regulations. However, although not included within the ES information consideration of ‘health’ is provided within the Planning Statement (**DCO Document 7.1**).

4.4.9 Based on the Scoping Opinion, the following environmental topics are considered within the ES:

- Landscape and Visual (Chapter 6) (**DCO Document 6.6**);
- Ecology and Biodiversity (Chapter 7) (**DCO Document 6.7**);
- Historic Environment (Chapter 8) (**DCO Document 6.8**);
- Flood Risk, Water Quality and Water Resources (Chapter 9) (**DCO Document 6.9**);
- Socio-Economic (Chapter 10) (**DCO Document 6.10**);
- Land Use and Agriculture (Chapter 11) (**DCO Document 6.11**); and
- Cumulative Effects (Chapter 12) (**DCO Document 6.12**).

4.4.10 Since receiving the Scoping Opinion and the response to the Statutory Consultation (PEIR) SP Manweb has continued to engage with statutory stakeholders and local interest groups and local communities, in order to inform the detailed design and EIA process.

Study Area

- 4.4.11 The geographical study area for the assessment depends on the environmental topic being considered but includes the surrounding environment over which significant effects can reasonably be thought to be likely to arise. The study area for the individual topics is defined in Chapters 6 to 11 (**DCO Documents 6.6 – 6.11**) of the ES and also shown on the associated Figures for each chapter (**DCO Document 6.14**). In each case, best practice guidance and consultation with stakeholders, including the public and statutory environmental bodies, and identification of potential receptors/resources and likely significant effects informed the definition of the study area.
- 4.4.12 Works to the existing substations, undergrounding of lower voltage lines, temporary laydown areas, works to existing access tracks, vegetation planting and reinstatement planting are included in the study areas.

Rochdale Envelope

- 4.4.13 Within the Order Limits the poles would, wherever possible, be located where indicated along the Final Route Alignment (see Chapter 3 ‘The Proposed Development (**DCO Document 6.3**)’). It is anticipated however that post consent it may be necessary and desirable to refine the final vertical and horizontal profile of the conductors and pole positions (known as micro-siting) to reflect the following:
- Following consent and pre-construction, environmental constraints would be reviewed (for example for protected species which may be present);
 - Following consent and pre-construction, micro-siting would take place involving more detailed technical survey information, particularly for unconfirmed ground conditions; and
 - Minor alterations that may be requested by landowners.

4.4.14 The Order Limits allow:

- For each pole to move laterally along the overhead line route.; and
- To deviate vertically in height not exceeding 2m upwards or any extent downwards from the heights shown in the Pole Schedule (see Appendix 3.1 (**DCO Document 6.3.1**) of the ES).

4.4.15 This flexibility in the micro-siting of the wood pole structures is covered by the ‘Rochdale Envelope’ approach.

4.4.16 Planning Inspectorate Advice Note 9 ‘Using the Rochdale Envelope’ (Version 3 July 2018⁶) provides guidance on the use of the Rochdale Envelope approach under the Planning Act, and in particular its application to the EIA process. Para 1.2 states that:

‘The ‘Rochdale Envelope’ approach is employed where the nature of the Proposed Development means that some details of the whole project have not been confirmed (for instance the precise dimensions of structures) when the application is submitted, and flexibility is sought to address uncertainty’.

4.4.17 The ‘Rochdale Envelope’ is an acknowledged way of dealing with an application comprising EIA development where details of a project have not been resolved at the time when the application is submitted. As per guidance this EIA has properly considered:

‘the realistic and likely worst case variations of the project... set out in the ES and as such that the likely significant impacts have been adequately assessed’.

⁶ <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2013/05/Advice-note-9.-Rochdale-envelope-web.pdf>

4.4.18 The basis of the assessment is:

- The 132kV underground cable could be located anywhere within the Order Limits for that elements of the works;
- The 132kV overhead line would be located wherever possible, where indicated along the Final Route Alignment, however consideration has been given to the flexibility as set out in para 4.4.14 above; and
- The undergrounded sections of the lower voltage diversions could be located anywhere within the Order Limits for that element of the works

4.4.19 The approach to the flexibility allowed for within the DCO is set out in the individual topic chapters of this ES.

Temporal Scope

4.4.20 The assessment considers the effects of the Proposed Development during construction and operation.

4.4.21 Construction of the Proposed Development is anticipated to take place between 2020 and 2021, and the intensity and scale of construction would vary during this period. For example, the overhead line works in any one location are anticipated to take no more than one week. Work at the Oswestry and Wem Substations is anticipated to take one and six months respectively. Works for the underground cable would take 2 months. Should construction works start later than the anticipated programme, but within the 5-year timescale of the draft DCO, this would not change the outcome of the assessment.

4.4.22 The connection is anticipated to be operational from 2021.

4.4.23 Construction impacts are considered short term and temporary (other than permanent vegetation removal), whilst operational impacts are considered long term (each wood pole is expected to have a minimum life span of 40 years and underground cables have a life expectancy of approximately 40-50 years) and permanent.

4.4.24 The Scoping Opinion requested that the effects of decommissioning the Proposed Development is considered in the assessment. Decommissioning is not anticipated for this project, as explained in Chapter 3 ‘The Proposed Development’ (**DCO Document 6.3**) of this ES.

Technical Scope

4.4.25 The environmental topics to be considered and the spatial extent of the assessment proposed for each topic is referred to as the technical scope.

4.4.26 The main effect of the Proposed Development is widely acknowledged to be visual effects, as a result of the introduction of the Trident wood poles and overhead line (including the terminal pole at Wem Substation), which can have consequences for the landscape, for peoples’ views and visual amenity and for the setting of cultural heritage assets. Dependent on the location of the line there may also be effects on wildlife, habitats, agriculture and water resources. For this reason, information relating to topography, landscape character, designated or valued landscapes, cultural heritage sites, residential properties, public viewpoints and rights of way, recreational assets, ecological sites, wildlife habitats, agriculture, water courses and resources have all been given high consideration in the review and assessment process. Factors such as tree and woodland removal required for constructing a new overhead line can have visual as well as ecological considerations and also need to be carefully considered.

4.4.27 Direct environmental effects are those associated with the ground occupied by the wood pole supports, sections of underground cable and any direct construction effects.

4.4.28 The main potential effects as a result of the undergrounding work and connection of the underground cable at Oswestry Substation are potential effects, dependent on the route of the undergrounding, on archaeology, wildlife, habitats, agriculture and water resources.

4.4.29 Construction access routes and temporary laydown areas are considered unlikely to cause significant effects due to their short-term and temporary nature. However, if located incorrectly they could have short-term and temporary consequences on the landscape, visual amenity, cultural assets, wildlife, habitats, agriculture and water resources.

4.5 BASELINE CONDITIONS

4.5.1 Establishing the baseline environmental conditions (i.e. the environment without the Proposed Development) is a necessary starting point for any assessment of likely change. For each topic, the existing conditions for the study area have been identified by a combination of desk-based study and site survey.

4.5.2 For the assessment of environmental effects, the baseline needs to reflect the conditions that may exist in the future (the 'future baseline') in the absence of the Proposed Development.

4.5.3 The description of the baseline and future baseline conditions has identified receptors that may be affected by the Proposed Development and also their 'value' and 'sensitivity' to likely change arising from the Proposed Development. Receptors may be a physical resource (e.g. a water body or a habitat type), flora/fauna, or a user group (e.g. the local community or recreational users of an area). Some receptors will be more valuable and/or sensitive to particular environmental impacts than others.

4.6 APPROACH TO MITIGATION

4.6.1 Paragraph 5.9.8 of National Policy Statement (NPS) EN-1⁷ recognises that major energy infrastructure projects are likely to result in effects on the landscape, stating that:

⁷ Department for Energy and Climate Change (July 2011), Overarching Energy National Policy Statement (EN-1)

'Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.'

- 4.6.2 As explained in Chapter 3 'Description of the Proposed Development' (**DCO Document 6.3**), the main strategy for minimising adverse environmental effects of the Proposed Development has been avoidance through careful planning, design and routeing. This is the strategy that led to the identification of the Proposed Development which is the subject of this ES. The design has evolved iteratively from the original route options through a number of revisions in response to consultees' comments and the outcome of studies being undertaken. In addition to environmental considerations, technical and economic considerations have also been taken into account in developing the Proposed Development.
- 4.6.3 On-site negotiation with landowners also led to careful micro-routeing/micro-siting of the underground cable route and the overhead line and its associated infrastructure (both temporary and permanent).
- 4.6.4 The draft CEMP (**DCO Document 6.3.2**) provides details of standard construction practices and control measures designed to counter avoidable impacts. The final CEMP is the subject of a Requirement 9 to the draft DCO.
- 4.6.5 Given the level of identified effects, SP Manweb do not consider any mitigation measures to be necessary.

4.7 DEFINING SIGNIFICANT EFFECTS

- 4.7.1 The EIA Regulations require that the ES reports only on likely significant effects. As part of the EIA process, however, all predicted levels of impact that give rise to predicted effects are identified and have been reported.

- 4.7.2 The significance of an environmental effect is typically a function of the ‘value’ or ‘sensitivity’ of the receptor and the ‘magnitude’ or ‘scale’ of the predicted impact. Combining the environmental value of the resource or receptor with the magnitude of change produces a significance of effect category.
- 4.7.3 The approach to assigning significance of effect relies on reasoned argument, professional judgement, experience on similar projects and taking on board the advice and views of appropriate organisations. For some disciplines, predicted effects may also be compared with quantitative thresholds and scales as outlined within the Appendices to Chapters 6 – 12 (**DCO Documents 6.6 – 6.12**) of this ES. Where any uncertainty exists this, together with any assumptions relied on, is noted in the relevant assessment and any limitations to the EIA work is reported in the appropriate chapter.
- 4.7.4 Assigning each effect to standard significance categories (major, moderate, minor or negligible) enables different topic issues to be placed upon the same scale. This assists the decision-making process at whatever stage the project is at within that process.
- 4.7.5 In arriving at the significance of effect, the assessor also considers whether the effect is direct, indirect, secondary, cumulative, short, medium or long-term, permanent or temporary, positive or negative.
- 4.7.6 The different terms are defined in Table 4.2 below.

Table 4.2 – EIA Predicted Effects Definitions	
Adverse	Detrimental or negative effects on an environmental resource or receptor.
Beneficial	Advantageous or positive effects on an environmental resource or receptor.
Negligible	Imperceptible effects on an environmental resource or receptor.
Minor	Slight, very short term or highly localised effect of no significant consequence.

Table 4.2 – EIA Predicted Effects Definitions

Moderate	More than a slight, very short or localised effect (by extent, duration or magnitude) which may be considered significant.
Major	Considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards.

4.7.7 For the purpose of the assessment, moderate and major effects are deemed to be ‘significant’. This is a precautionary approach to ensure all likely significant effects are categorised as such. Identifying only major effects as significant could result in a significant effect being categorised as non-significant.

4.7.8 In determining whether or not an effect is likely to be significant, consideration is given to:

- Nature of the construction and operational activities;
- Feedback from scoping and consultation, including views from the local community;
- Spatial extent (e.g. local, district, regional, national or international);
- Magnitude of effect;
- Duration of effect (short, medium or long term);
- Nature of the effect (direct, indirect, reversible or irreversible);
- Frequency of occurrence;
- Whether the effect occurs in isolation or is cumulative;
- The sensitivity and numbers of receptors affected;
- Value of the affected resource;
- Performance against environmental quality standards; and
- Compatibility with environmental policies and standards which offer protection to the environment and community.

- 4.7.9 Some effects would arise directly from construction or operation of the Proposed Development and others would arise more indirectly as a consequence of activities associated with it. Whether an effect arises directly or indirectly does not affect whether the resulting effects are considered to be significant or not.
- 4.7.10 Not all environmental effects are significant. Moreover a significant effect does not necessarily mean that such an effect is unacceptable to the SoS when considering the application for consent. This is a matter that the SoS weighs, alongside other factors, when determining an Order granting development consent. What is important is that the likely significant effects of the Proposed Development are identified and transparently assessed and described so that the SoS can arrive at a balanced and well-informed judgement as part of the decision-making process.
- 4.7.11 The assessments have been undertaken by qualified and experienced teams of assessors who are able to apply expert professional judgement on a consistent basis.

4.8 CUMULATIVE EFFECTS

- 4.8.1 The approach to assessing cumulative effects for NSIPs is set out in Advice Note 17⁸.
- 4.8.2 Cumulative effects occur when individual sources of effects add together to have an overall greater effect on receptors. For the purpose of this EIA they have been defined under the two categories identified in the IEMA 2011 Special Report on 'The State of Environmental Impact Assessment in the UK'. These are inter-project effects and intra-project effects. These two types of

⁸ The Planning Inspectorate (2015) Advice note seventeen: Cumulative effects assessment relevant to Nationally Significant Infrastructure Projects

cumulative effects are explained below.

- **Inter-Project Effects:** The combined effects of the Proposed Development with other developments (including projects for which consent has been sought or granted, as well as those already in existence⁹). These projects may be acceptable when considered on an individual basis but together may give rise to a significant effect. Inter-project effects are assessed within the individual topic chapters (**DCO Documents 6.6 – 6.11**) and their relevant appendices; and
- **Intra-Project Effects:** The interrelationship between topics considered within the ES. An example would be where a local resident is affected by dust, noise and a loss of visual amenity during the installation of the overhead line, with the result being a greater nuisance than each individual effect alone. It therefore follows that receptors only considered by one topic cannot experience an intra-project effect. Intra-project effects are assessed in Chapter 12 'Cumulative Effects' (**DCO Document 6.12**).

4.8.3 Inter-project effects have been assessed within individual topic chapters, whilst intra-project effects are covered in Chapter 12 'Cumulative Effects' (**DCO Document 6.12**) of the ES.

4.8.4 Page 4 of PINS Advice Note 17 ((December 2015) sets out the following a four-stage approach to the assessment of cumulative effects.

- Stage 1 – Establish the NSIP's zone of influence and identify a 'long list' of 'other development' with the potential to give rise to significant

⁹ Where other projects are expected to be completed before construction of the proposed NSIP and the effects of those projects are assessed, effects arising from them should be considered as part of the baseline and may be considered as part of both the construction and operational assessment. The ES should clearly distinguish between projects forming part of the baseline and those in the cumulative effects assessment.

effects;

- Stage 2 - Identify shortlist of 'other development' by reference to planning applications, relevant development plans and any other available sources including stakeholder consultations, in particular with the relevant local planning authority;
- Stage 3 - Gather available information regarding the shortlisted 'other development'; and
- Stage 4 - Applicant reviews each of the 'other developments' in turn to assess whether cumulative effects may arise and identifies potential mitigation measures if required. Consider the apportionment of effect between the proposed NSIP and the 'other development' e.g. is the contribution to the effect demonstrably related to one development or is there an equal contribution from either development. This requires professional judgement.

4.8.5 The recommended process focuses on cumulative effects with 'other developments' and is presented within each of the specialist topic chapters.

Projects Included in the Inter-Project Cumulative Assessment

4.8.6 The locations of all projects in Tables 4.3 and 4.4 (below) are shown in Figure 4.2 (**DCO Document 6.14**). A survey area of 5km was used when establishing which projects would be assessed as it was considered that beyond this distance no significant cumulative effects would occur

4.8.7 The projects agreed with Shropshire Council to be included in the inter-project cumulative assessment are shown in Table 4.3 below. These projects were identified by a search of the Shropshire Council planning portal, minor developments were not considered relevant for the Cumulative Assessment i.e. residential developments of less than ten homes were not considered. The list of projects to be considered was emailed to the planning officers at Shropshire Council for input and comment on 26 February 2018 and 23 April 2018. The Council agreed to the suggested list of projects during a meeting

with SP Manweb in August 2018.

Table 4.3 – Projects considered within Cumulative Assessment			
Reference	Location	Proposal	Status
17/03751/FUL	Land Adjacent Cairndale Hordley Road Tetchill Shropshire	Residential development of 13 dwellings	Awaiting decision
17/01924/FUL	Land Off Mill Street Wem Shropshire	Erection of two blocks of residential care home comprising 50 units	Awaiting decision
17/01961/EIA	Land Adjoining Lower Fenemere Farm Myddlewood Myddle	Erection of 16,000 Bird Free Range Poultry Shed	Awaiting decision
17/03638/FUL	Land To The South Of Henry Robertson Drive Gobowen	Residential development comprising of 20 dwellings; formation of vehicular access and parking	Awaiting decision
17/00486/FUL	Water Treatment Works Broomhall Lane Oswestry SY10 7HQ	Application for the extension to Water Treatment Works	Permission granted
17/03553/FUL	Little Sutton Rednal West Felton Oswestry Shropshire SY11 4HX	Erection of agricultural building for storage and livestock housing	Permission granted
16/01018/REM	Old Piggery Park Hall Shropshire SY11 4AX	Approval of reserved matters for the mixed residential development of 44 dwellings	Permission granted
16/02598/FUL	The Westlands Station Road Wem	Mixed residential development of 32	Permission granted

Table 4.3 – Projects considered within Cumulative Assessment

Reference	Location	Proposal	Status
	Shrewsbury SY4 5BL	dwelling for independent living for the elderly	
16/05336/REM	Land At The Cross West Felton Shropshire	Residential development of 25 houses	Awaiting decision
15/01029/FUL	Wycherley Hall Bagley Ellesmere SY12 9BY	Installation of ground mounted solar system comprising circa 432 panels (108kw output) with all associated works including inverter cabin, transformer building	Permission granted
14/02851/OUT	Land Off Roden Grove Wem Shropshire	Outline application for the erection of 25 dwellings (to include access)	Permission granted
14/03184/FUL	Brogyntyn Hall Brogyntyn Oswestry SY10 7DA	Change of hall from offices to residential; erection of 50 dwellings within grounds	Permission granted
13/01393/OUT	Land East Of Kingfisher Way Morda Shropshire	Outline application (to include access) for Use of land for residential development (46 dwellings)	Permission granted
13/04845/FUL	Land West Of Morda Bank Morda Shropshire	Mixed residential development of 65 dwellings	Permission granted
13/01221/OUT	Land North Of Tedsmore Road Holyhead Road West Felton	Outline application for mixed residential development comprising 35	Permission granted

Table 4.3 – Projects considered within Cumulative Assessment			
Reference	Location	Proposal	Status
		dwelling and 4 commercial units	
5/03727/FUL	Former Archwood Ltd Whittington Road Oswestry SY11 1HZ	Erection of mixed residential development comprising 53 dwellings	Permission granted
16/02594/OUT	Land To The North Of Shrewsbury Road Oswestry Shropshire	Outline application for residential development of up to 600 units with associated infrastructure including areas of public open space with all matters reserved except access	Awaiting decision
13/01643/OUT	Land West Of Artillery Road Park Hall Oswestry Shropshire	Outline application for residential development (all matters reserved)	Permission granted
15/05475/SCR	The Rise Petton Lane Weston Lullingfields Shrewsbury SY4 2AA	Proposed wind turbine	EIA not required
15/03443/SCR	Webscott Farm Webscott Myddle Shrewsbury SY4 3QU	Proposed 100kw wind turbine	EIA not required

4.8.8

4.8.9 Prior to completion of the ES a review of the Shropshire Council planning portal was undertaken and a further four proposals were added to the list as detailed in Table 4.4 below.

Table 4.4 – Further projects considered within Cumulative Assessment			
Reference	Location	Proposal	Status
18/01990/FUL	Development Land SE Of Whittington Primary School Station Road Whittington	Erection of 34 dwellings; formation of access onto the B5009; open space area and community parking area (Phase I of area approved under 14/03027/OUT)	Awaiting decision
13/04954/OUT (18/02681/REM)	Proposed Residential Development Land To The East Of Llwyn Road Oswestry Shropshire	Residential development of 15 dwellings	Granted
17/06025/OUT	Proposed Residential Development Land To The South Of Middleton Road Oswestry	Residential development of up to 150 dwellings to include means of access	Awaiting decision
15/03975/FUL	Proposed Solar Farm At Rhosygadfa Gobowen Shropshire	Construction of a solar farm comprising the installation of (circa) 20,000 ground mounted solar panels; 4 inverter sub-stations; electricity substation; perimeter fencing	Granted

4.9 ASSUMPTIONS AND LIMITATIONS

- 4.9.1 Each environmental topic chapter in the ES includes a section to explain the key assumptions made in undertaking the assessments.
- 4.9.2 Where, during preparation of the ES, there have been circumstances that have limited the information available to inform the assessment process these limitations and consequences on the potential completeness or accuracy of the conclusions is described within the relevant topic chapter.

4.10 SUMMARY

- 4.10.1 This chapter explains that the approach and methodology used in gathering and assessing the environmental information relating to, and resulting from, the Proposed Development follows a transparent and consistent approach which meets regulatory requirements and industry standards.