

# SP MANWEB

## Reinforcement to the North Shropshire Electricity Distribution Network



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Environmental Statement Appendix 9.1

Flood Risk, Water Quality and Water Resources Assessment Methodology

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Electricity Distribution Network**

**APPENDIX 9.1**

**FLOOD RISK, WATER QUALITY AND WATER  
RESOURCES**

**ASSESSMENT METHODOLOGY**

**Environmental Statement**

**DCO Document 6.9.1**

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**The Planning Act 2008**

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

**Regulation 5(2)(a)**

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**Environmental Statement: Appendix 9.1 – Flood Risk, Water Quality and Water Resources Assessment Methodology**

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## APPENDIX 9.1:

# FLOOD RISK, WATER QUALITY AND WATER RESOURCES ASSESSMENT METHODOLOGY

## 1.1 INTRODUCTION

1.1.1 This section outlines the technical methods used to determine what changes to the baseline are likely to occur as a result of the Proposed Development and sets out the significance criteria used in to the Environmental Statement (ES) stage.

## 1.2 ASSESSMENT GUIDANCE AND METHODS

1.2.1 The assessment follows a standard approach:

- Establish baseline conditions against which the effects of the Proposed Development will be assessed;
- Determine the nature of the receptor likely to be affected, i.e. its sensitivity;
- Predict the nature or magnitude of the effect likely to occur (which combines judgments about the likely size and scale of the change, the geographical extent of the area over which it is likely to occur, whether it is direct or indirect) and positive, negative or neutral; and
- Assess whether a significant effect is likely to arise by considering the predicted magnitude of change together with the sensitivity of the receptor, taking into account any identified mitigation measures.

1.2.2 The assessment has been based entirely on published information and no surveys or field measurements have been taken specifically for the assessment.

**1.3 STUDY AREA**

1.3.1 The study area extends up to a distance of 50m either side of the Order Limits in recognition that only local impacts on flood risk, water quality and resources are likely to arise from the proposed works, as identified in the Preliminary Environmental Information Report<sup>1</sup> (PEIR).

**1.4 SENSITIVITY CRITERIA**

1.4.1 The sensitivity of the watercourses, groundwater and flood risk in the area are assessed using the criteria in Table A9.1.1.

Table A9.1.1 – Sensitivity Criteria		
Sensitivity/ Importance and Typical Descriptors	Typical Example	
<b>Very High</b> (attribute has a high quality and rarity on a regional or national scale)	Surface Waters	EC Designated Salmonid/ Cyprinid fishery.  High ecological quality.  Site protected under EU or UK wildlife legislation (SAC, SPA, SSSI, Ramsar site).
	Groundwater	Major aquifer providing a regionally important resource or supporting site protected under wildlife legislation  Source Protection Zone (SPZ) I
	Flood Risk	Flood plain or defence protecting more than 100 residential properties from flooding
<b>High</b> (attribute has a high quality and rarity on	Surface Waters	Good ecological quality  Major Cyprinid Fishery  Species protected under EU or UK wildlife legislation

<sup>1</sup> [https://www.spenergynetworks.co.uk/userfiles/file/SPM\\_NSRP\\_PEIR.pdf](https://www.spenergynetworks.co.uk/userfiles/file/SPM_NSRP_PEIR.pdf)



**Table A9.1.1 – Sensitivity Criteria**

Sensitivity/ Importance and Typical Descriptors	Typical Example	
a local scale)	Groundwater	Major aquifer providing locally important resourced or supporting river ecosystem SPZII
	Flood Risk	Flood plain or defence protecting between 1 and 100 residential properties or industrial premises from flooding.
<b>Medium</b> (attribute has a medium quality and rarity on a local scale)	Surface Waters	Moderate ecological quality
	Groundwater	Aquifer providing water for agricultural or industrial use with limited connection to surface water SPZII
	Flood Risk	Flood plain or defence protecting 10 or fewer industrial properties from flooding
<b>Low</b> (attribute has a low quality and rarity on a local scale)	Surface Waters	Poor or bad ecological quality
	Groundwater	Non-aquifer
	Flood Risk	Flood plain with limited constraints and low probability of flooding of residential and industrial properties.

**1.5 MAGNITUDE OF CHANGE**

1.5.1 The magnitude of change caused during the construction and operational phases of the Proposed Development area qualitatively described, based on the descriptions detailed in Table A9.1.2 below.

<b>Table A9.1.2 – Magnitude of Change Criteria</b>		
<b>Magnitude of Potential Change</b>		<b>Criteria</b>
High	Adverse	Results in loss of attribute and/ or quality and integrity of the attribute.
	Beneficial	Results in major improvement of attribute quality.
Medium	Adverse	Results in effect on integrity of attribute, or loss of part of attribute.
	Beneficial	Results in moderate improvement of attribute quality.
Low	Adverse	Results in some measurable change in attribute’s quality or vulnerability.
	Beneficial	Results in some beneficial effect on attribute or a reduced risk of negative effect occurring.
Negligible		Results in effect on attribute, but of insufficient magnitude to affect the use or integrity.

**1.6 SIGNIFICANCE OF EFFECT**

1.6.1 The significance of effect caused during the construction and operational phases of the Proposed Development are qualitatively described, based on the descriptions detailed in Table A9.1.3.

<b>Table A9.1.3 – Significance of Effect</b>					
		<b>Magnitude of Change</b>			
		<b>High</b>	<b>Medium</b>	<b>Low</b>	<b>Negligible</b>
<b>Sensitivity / Importance of Attribute</b>	<b>Very High</b>	Major	Major	Moderate	Negligible
	<b>High</b>	Major	Moderate	Minor	Negligible
	<b>Medium</b>	Moderate	Moderate	Minor	Negligible
	<b>Low</b>	Moderate	Minor	Minor	Negligible