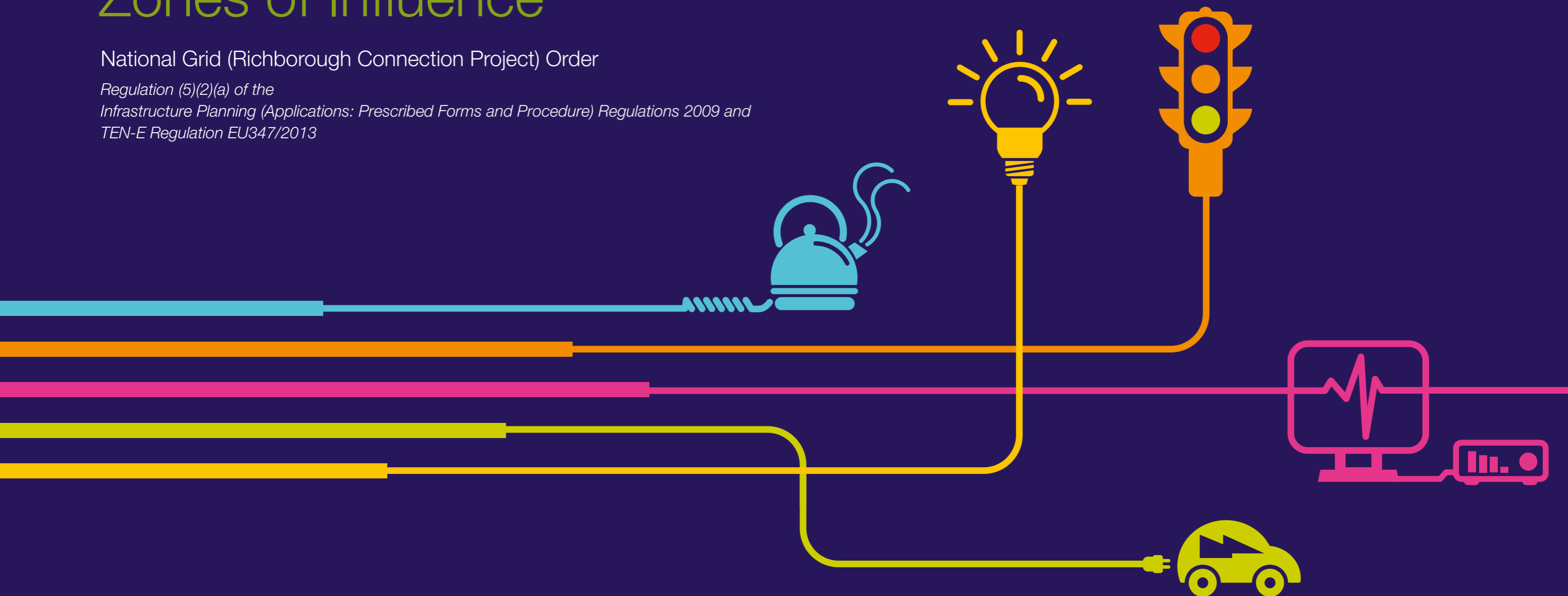


9C Justification for Defining Zones of Influence

National Grid (Richborough Connection Project) Order

*Regulation (5)(2)(a) of the
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 and
TEN-E Regulation EU347/2013*



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Richborough Connection Project

Volume 5

5.4 Environmental Statement Appendices

5.4.9C Justification for Defining Zones of Influence

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Final

January 2016

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Document Control			
Document Properties			
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Title	Justification for Defining Zones of Influence		
Document Reference	5.4.9C		
Version History			
Date	Version	Status	Description/Changes
04/01/16	1	Final	1 st Issue

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1. JUSTIFICATION FOR DEFINING ZONES OF INFLUENCE

1.1 Introduction

- 1.1.1 Receptors have only been assessed against potential environmental changes to which they are likely to be sensitive, considering the spatial scope of the proposed development. Whether a receptor is sensitive or not to an environmental change has been determined based on professional judgement, project design, statutory guidance and appropriate relevant literature. Proposed construction areas (areas where direct land take or direct disturbance occurs for the proposed development and associated development, including, but not limited to compounds, bellmouths, pulling sites, access development or pylon working areas), as defined in **Chapter 3 within Volume 5, Document 5.2**, are referenced as appropriate, and illustrated **within Volume 5, Document 5.3.3**. Maintenance (operation) and decommissioning phase works have been scoped in or out of the assessment on the basis of those same areas, whilst considering the description and thus likely effects of those works as described in **Chapter 3 within Volume 5, Document 5.2**. The Order limits are defined **Chapter 2 within Volume 5, Document 5.2** are referenced as appropriate, and illustrated on **Figure 3.1a-3.1h within Volume 5, Document 5.3.3**.
- 1.1.2 **Table 9C.1 of this Appendix** sets out in detail the justification for defining the Zones of Influence adopted for the assessment of potential effects provided in **Chapter 9 within Volume 5, Document 5.2**.
- 1.1.3 Within the No Significant Effects Report (NSER) **Volume 5, Document 5.5** all European designated sites within 10km from and within the Order limits were independently assessed as part of the Habitat Regulation Assessment (HRA) in relation to the Zones of Influence (Zoi) described and defined as appropriate in **Table 9C.1 of this appendix**. All sites screened into the NSER are included within **Table 9A.1 and 9B.1 within Volume 5, Document 5.4.9A and 5.4.9B respectively** although they may, as appropriate, be scoped out of further assessment within the EIA.

Table 9C.1 Justification for defining zones of influence

Environmental change	Receptor (sensitive to environmental change or scale of environmental change)	Zone of Influence	Justification
Land-take / Land cover change / construction / decommissioning	All receptors	Within a construction/maintenance/decommissioning area	Land-take/land cover change will only take place in areas where construction/decommissioning are planned. Other areas within and outside the Order limits will not be affected by land-take/land cover change.
	Japanese Knotweed/ Himalayan Balsam/ Water Fern	Within ~7m of a construction/decommissioning area	Rhizomes from Japanese knotweed are considered to extend up to ~7m laterally from the base of the parent plant (Knotweed Code of Practice, Environment Agency 2013). Any ground disturbance within this area may promote the spread of the species.
Overhead line operation - Displacement	Wintering waders (including golden plover) and wildfowl)	Within 135m of Order limits	This Zone of Influence is based on a combination of best practice and professional judgment. 135m is a mean minimal displacement distance for wintering golden plover at studies of wind farm sites in Germany (Hotker <i>et al.</i> 2006) and is considered applicable to operational overhead lines with respect to wintering waders and wildfowl.
Overhead line operation – Collision risk	All SPA/SSSI qualifying interest species	Within the immediate vicinity of the overhead power line	During the operational period, there is also a potential risk of collision and displacement resulting from barrier effects for these species.
Overhead line operation - Noise	All SPA/SSSI qualifying interest species recorded within the Ash Level	Within 300m from the route centre-line within the Ash Level	This Zone of Influence is based on a combination of best practice and professional judgment.

Environmental change	Receptor (sensitive to environmental change or scale of environmental change)	Zone of Influence	Justification
Increased light, noise and vibration	Designated Sites	Dependent on site qualifying features*	<p>The ZoI of noise from the proposed overhead line is likely to extend approximately 300m from the route centreline within the Ash Level.</p> <p>Studies have shown that birds will habituate to low levels of noise (below 50 dB) (Cutts <i>et al.</i> 2009). All areas outwith 300m of the route centre-line within the Ash Level are below 50Db.</p>
	Bats	~100m from a construction/decommissioning area	<p>Flora not considered to be affected by light, noise or vibration. *If any of the species below are listed as a designated feature, the ZoI listed below are implemented. Other qualifying features not considered sensitive to the scale of environmental change.</p> <p>Light spill from temporary lighting during the construction and decommissioning periods would be restricted to the working area as far as possible, and there would be no lighting of the overhead line during the operational phase; however, headlights from vehicles within the Order limits would typically cast light to a distance of approximately 100m. There is little information on the effects of noise and vibration on fauna; however, recent studies indicate that bats' foraging ability can be adversely affected by road noise up to a distance of at least 50-60m.</p>
	Badger	Sett ~30m from construction/maintenance/decommissioning area	This zone of influence is based upon guidance from English Nature "Badgers and Development" 2001.
	Otter	~30m from watercourse to a construction/maintenance/decommissioning	This zone of influence is based on professional judgement

Environmental change	Receptor (sensitive to environmental change or scale of environmental change)	Zone of Influence	Justification
		area	
	Water vole	Minimum ~5m from watercourse/body to construction/maintenance/decommissioning area	This zone of influence is based on professional judgement and best practice guidance. Water vole conservation handbook 3 rd edition 2011.
	Dormouse	~30m from suitable habitat	This zone of influence is based on professional judgement
	GCN	Up to 500m from a construction/maintenance/decommissioning area	This zone of influence is based on best practice guidance. Great crested newt mitigation guidelines, English Nature 2001.
	Terrestrial priority species, Norfolk hawk, heath fritillary	~30m from suitable habitat	This zone of influence is based on the maximum limit priority species listed may be affected by light, noise and vibration based on professional judgement
	Cetti's warbler, kingfisher	Nest site within 50m of Order limits	This zone of influence is based on professional judgement
	Barn owl	Nest site within 200m of Order limits	This zone of influence is based on best practice guidance. Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting Shawyer (2011)
	Marsh harrier, hobby, peregrine	Nest site within 500m of Order limits	This zone of influence is based on best practice guidance. Disturbance-free zones for forestry workers of 400 - 600 m (Petty 1998) around peregrine breeding sites in Great Britain. Survey opinion by Whitfield & Ruddock (2007) suggests a disturbance buffer of 300-500m from marsh harrier nests. Based on these guidelines, a 500m survey buffer is also considered robust in terms of hobby and peregrine nest sites.

Environmental change	Receptor (sensitive to environmental change or scale of environmental change)	Zone of Influence	Justification
	All SPA/SSSI qualifying interest species	Within 250m of Order limits	This zone of influence is based on a combination of best practice guidance and professional judgement. Disturbance buffer zone distance represents a precautionary approach for all wintering waders (including golden plover) and wildfowl, based on a recommended 250m distance (Cutts <i>et al</i> 2009), set to sensitive species such as redshank.
Dust deposition/Air quality	Designated sites, watercourses, waterbodies, Priority habitat and Priority plant species	Within ~50m of Order limits	The zone of influence is based on usual deposition distances for dust from construction sites. The air quality assessment (Chapter 12) has concluded no significant effects in respect of air quality changes following the implementation of embedded environmental measures, and is scoped out of further assessment.
Increased vehicle movement	Badgers, bats otter, brown hare, hedgehog, reptiles, GCN, common toad	Within the Order limits and associated external access routes	This zone of influence is based on an increase in vehicle movement within the Order limits during construction/decommissioning and risk of direct collision
Pollution	Statutory sites, watercourses, waterbodies, great crested newts, otter, water vole, aquatic BAP / Priority species	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse)	This zone of influence is based on the Environment Agency stand-off distance that negates the requirements for a Flood Defence Consent (from a main river). Distance represents a precautionary approach for ditches i.e. non main river. Based on potential inputs of pollution to watercourses and waterbodies from construction related surface run off (in the absence of environmental measures).

Environmental change	Receptor (sensitive to environmental change or scale of environmental change)	Zone of Influence	Justification
	Downstream statutory sites designated for aquatic habitats or with other direct water dependence/hydrological connectivity.	Potential hydrological connectivity	All statutory sites (with water dependence) are located at distance from the proposed development (nearest site hydrologically connected at 1.5km downstream or 275m in flood). Even though these sites may be deemed to have a greater level of sensitivity to water pollution when compared to the immediate watercourse receptor, the Water Environment assessment (see Chapter 13, within Volume 5, Document 5.2) has determined that protection of the upstream/immediate receptor would avoid the propagation of any significant direct or indirect effects further downstream. This has been assessed from a biodiversity perspective in respect of the features present in those sites, and is not limited to consideration of water quality standards only.