



Rampion Offshore Wind Farm



ES Section 1 – Introduction

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Authors:	Katie Barlow, Dave Watson	Technical reviewer:	Wendy Hogben
Signatures:		Signature:	
Date:	6/12/2012	Date:	6/12/2012
Project manager:	Dave Watson	Quality reviewer:	Sue Sljivic
Signature:		Signature:	
Date:	6/12/2012	Date:	6/12/2012

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GLOSSARY

Air Quality Standard	The concentration of a pollutant, over a specified period, above which adverse effects on health and/or the environment may occur and which should not be exceeded.
Alternatives	Different design, layout and technological possibilities considered during project development that have potential to fulfil the project objectives.
Ambient	Of or relating to the immediate surroundings of something (e.g. ambient noise level).
Ancient Woodland	Woodland that has existed continuously since at least AD 1600.
Annex I Project	See 'Schedule 1 Project'.
Annex II Project	See 'Schedule 2 Project'.
Appropriate Assessment	The process whereby projects, either alone or in combination, are considered to see if it can be ascertained that they will not adversely affect the integrity of a European Site.
Area of Outstanding Natural Beauty	An area with statutory national landscape designation, the primary purpose of which is to conserve and enhance natural beauty
Assessment	A process by which information about effects of a proposed plan, project or intervention is collected, assessed and used to inform decision-making.
Baseline Conditions	The environment as it appears (or would appear) immediately prior to the implementation of the project together with any known or foreseeable future changes that will take place before completion of the project.
Baseline Studies	Work done to determine and describe the environmental conditions against which any future changes can be measured or predicted and assessed.
Bathymetry	Representation of natural and artificial features of the seabed.
Benthic (Benthos)	The community of organisms which live on, in, or near the seabed.
Biodiversity	The variety of life forms, the different plants, animals and microorganisms, the genes they contain and the eco-systems they form.
Catchment	A drainage/basin area within which precipitation drains into a river system and eventually into the sea.
Committed Development	Development projects that are either under construction or which have valid planning permissions/consents.
Competent Authority	The authority responsible for determining the application for consent, permission, licence or other authorisation to proceed with a development.
Construction Phase	The period during which the building or assembling of infrastructure is undertaken.
Consultation	The process by which those organisations or individuals with an interest in the area associated with the proposed scheme are identified and engaged as part of the EIA process.
Controlled Waters	Surface waters, ground waters and coastal waters to which UK pollution legislation applies.
Culvert	A pipe or box-type conduit through which water is carried under a structure.

Cumulative impact	Cumulative impacts are those that may result from the combined or incremental effects of future activities (i.e. those developments currently in planning and not included as part of the baseline).
Decommissioning	The period during which a development and its associated processes are removed from active operation.
Development Order Consent	Permission granted by a Minister for a Nationally Significant Infrastructure Project, this includes planning permission as well as other consents.
Direct Effect	A direct (or primary) effect may be defined as an effect that is directly attributable to a defined element or characteristic of the proposed development, for example the loss or removal of an element or feature such as a hedgerow or a prominent group of
Direct Impacts	A direct impact upon historic assets would involve physical alteration or destruction as a result of the construction, operation or decommissioning of a wind farm. Direct impacts could include the construction of turbine and crane bases, new or upgraded
Discharge Consent	Statutory document issued by the Environment Agency setting limits and conditions on the discharge of an effluent into controlled waters.
Do-Minimum Scenario	Also known as the 'Do-Nothing' Scenario. The conditions that would persist in the absence of the implementation of a development.
Effect	Term used to express the consequence of an impact (expressed as the 'significance of effect'), which is determined by correlating the magnitude of the impact with the importance (or sensitivity) of the receptor or resource in accordance with defined significance criteria. For example, land clearing during construction results in habitat loss (impact), the effect of which is the significance of the habitat loss on the ecological resource.
EIA Directive	Used to refer to Directive 85/337/EEC as amended by Directive 97/11/EC and the Public Participation Directive 2003/35/EC. All amendments to the EIA Directive were subsequently codified in 2011 to form Directive 2011/92/EU.
EIA Regulations	A collective term for the various statutory instruments through which the Directives on Environmental Assessment have been implemented in the UK.
Emission Standard	The maximum amount or concentration of a pollutant allowed to be emitted from a particular source.
Emissions Inventory	A collection of data relating to the characteristics of processes or activities which release pollutants into the atmosphere.
Enhancement	A measure that is over and above what is required to mitigate the adverse effects of a project.
Environmental Assessment	A method and a process, by which information about environmental effects is collected, assessed and used to inform decision-making. Assessment processes include Strategic Environmental Assessment, Assessment of Implications on European Sites, and Environmental Impact Assessment.

Environmental Impact Assessment	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. Involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive, including the publication of an Environmental Statement.
Environmental Information	The information that must be taken into account by the decision maker (the Competent Authority) before granting any kind of authorisation in any case where the EIA process applies. It includes the environmental statement, including any further information, any representations made by any body required by the Regulations to be invited to make representations, and any representations duly made by any other person about the environmental effects of the development.
Environmental Management Plan	A structured plan that outlines the mitigation, monitoring and management requirements arising from an Environmental Impact Assessment.
Environmental Statement	A document produced in accordance with the EIA Directive (as transposed into UK law by the EIA Regulations) which reports the outcomes of the EIA process.
European Site	Sites which make up the European ecological network (also known as Natura 2000 sites). These include: Sites of Community Importance (SCIs); Special Protection Areas (SPAs) and potential SPAs (pSPAs); Special Areas of Conservation (SACs) and candidate or possible SACs (cSACs or pSACs); and Ramsar sites.
Evaluation	The determination of the significance of effects. Evaluation involves making judgements as to the value of the receptor/resource that is being affected and the consequences of the effect on the receptor/resource based on the magnitude of the impact.
Existing Environment	See 'Baseline Conditions'.
Habitats Regulations	EC Council Directive 92/43/EEC, known as the Habitats Directive, was transposed in the UK by the Habitats Regulations 1994 (as amended), now consolidated in England and Wales by The Conservation of Habitats and Species Regulations 2010. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.
Habitats Regulations Assessment	The assessment of the impacts of implementing a plan or policy on a European Site, the purpose being to consider the impacts of a project against conservation objectives of the site and to ascertain whether it would adversely affect the integrity of the site.
Hydraulics	Processes and regimes of water flow (velocities, volumes, duration, frequency etc) in hydrological systems such as surface waters and groundwater.
Hydrodynamics	The mechanical properties of fluids.
Impact	Change that is caused by an action; for example, land clearing (action) during construction, that results in habitat loss (impact).
Indirect Impact	An indirect impact is an impact that is not a direct result of the proposed development but is produced as a result of a complex pathway.

Infrastructure Planning Commission	A former independent body responsible for examination of applications for nationally significant infrastructure projects (responsibilities now passed to the Planning Inspectorate).
Intertidal	The area of land between mean high water and mean low water.
Invertebrates	Animals without backbones.
Local Planning Authority	A local authority or council that is empowered by law to exercise planning functions for a particular area of the United Kingdom (often the local Borough or District Council).
Mean (High / Low) Water	Highest / lowest average level water reaches on an outgoing tide.
Method Statement	A document which sets out intended working or survey practices.
Mitigation	Measures intended to avoid, reduce and compensate adverse environmental effects.
Monitoring	A continuing assessment of the performance of the project, including mitigation measures. This determines if effects occur as predicted or if operations remain within acceptable limits, and if mitigation measures are as effective as predicted.
Nationally Significant Infrastructure Project	Large projects that support the economy and vital public services, including railways, large wind farms, power stations, reservoirs, harbours, airports and sewage treatment works, as defined in the Planning Act 2008 (as amended).
Non-Statutory Consultee	Organisations and bodies who should be consulted on relevant planning applications.
Non-Technical Summary	Information for the non-specialist reader to enable them to understand the main predicted environmental effects of the proposal without reference to the main Environmental Statement.
Operation	The functioning of a project on completion of construction.
Pasture	Grassland maintained primarily for and by grazing, and on which grazing stock is kept for a large part of the year.
Phase 1 Habitat Survey	Recognised methodology used for collating information on the habitat structure of a particular site.
Photomontage	The superimposing of an image onto a photograph for the purpose of creating a realistic representation of proposed or potential changes to a view.
Piling	The installation of bored and driven piles into the ground.
Planning Inspectorate	The body responsible for handling national infrastructure planning under the Planning Act 2008, and processing planning and enforcement appeals.
Pollution	Any increase of matter or energy to a level that is harmful to living organisms of their environment (when it becomes a pollutant).
Preferred Option	The chosen design option that most successfully achieves the project objectives and becomes subject to further design and assessment.
Programme	A series of steps that have been identified by the applicant, or series of projects that are linked by dependency.
Project	One, or more, aspect of a programme or plan that has been identified by the applicant and which usually involves a direct physical intervention.
Project Objectives	The objectives of the project, set by the applicant.

Proposed Scheme	Also known as the 'Proposed Development' - a plan or project which the applicant or promoter seeks to implement.
Ramsar	Areas designated by the UK Government under the International Ramsar Convention (the Convention on Wetlands of International Importance).
Receptor	A defined individual environmental feature usually associated with population, fauna and flora with the potential to be affected by a project.
Regional Spatial Strategy	A strategy for how a region should look in 15 to 20 years time and possibly longer. The Regional Spatial Strategy identifies the scale and distribution of new housing in the region, indicates areas for regeneration, expansion or sub-regional planning
Renewable	Energy derived from non fossil fuel sources using naturally occurring and repeating energy sources such as wind, solar, biomass, hydro, geothermal, tidal, wave and wood.
Resource	A defined but generally collective environmental feature usually associated with soil, water, air, climatic factors, landscape, material assets, including the architectural and archaeological heritage, that has potential to be affected by a project.
Roosting Site (bats)	A place where bats live (e.g. built structures and trees).
Roosting Site (birds)	A place where birds rest or sleep.
Runoff	Precipitation that flows as surface water from a site, catchment or region to the sea.
Schedule 1 Project	Plans or projects listed in Annex I of the EIA Directive, and Schedule 1 of the EIA Regulations.
Schedule 2 Project	Plans or projects listed in Annex II of the EIA Directive, and Schedule 2 of the EIA Regulations.
Scoping	The process of identifying the issues to be addressed by the Environmental Impact Assessment process. It is a method of ensuring that an assessment focuses on the important issues and avoids those that are considered to be not significant.
Scoping Opinion	An opinion provided by a competent authority that indicates the issues an Environmental Impact Assessment of a proposed development should consider.
Screening	The formal process undertaken to determine whether it is necessary to carry out a statutory Environmental Impact Assessment and publish an Environmental Statement in accordance with the EIA Regulations.
Sediment	Organic and inorganic material that has precipitated from water to accumulate on the floor of a waterbody, watercourse or trap.
Semi-Natural	A habitat, ecosystem, community, vegetation type or landscape which has been modified by human activity but which consists largely of native species and appears to have similar structure and functioning to a natural type.
Significance	See Significance of Effect.
Significance of Effect	A measure of the importance or gravity of the environmental effect, defined by either generic significance criteria, or criteria specific to the environmental topic.
Significant Environmental Effect	An environmental effect considered material to the decision-making process.
Sites of Special Scientific Interest	The main national conservation site protection measure in Britain designated under the Wildlife and Countryside Act 1981.

Special Area of Conservation	International designation implemented under the Habitats Regulations for the protection of habitats and (non bird) species.
Special Protection Area	Sites designated under EU Directive (79/409/EEC) for the conservation of wild birds.
Spring Tide	Spring tides happen just after every full and new moon, when the sun, moon and earth are in line.
Stakeholder	An organisation or individual with a particular interest in the project.
Statutory Consultee	Organisations that the competent authority is required to consult by virtue of the EIA Regulations.
Study Area	The spatial area within which environmental effects are assessed (i.e. extending a distance from the project footprint in which significant environmental effects are anticipated to occur). This may vary between the topic areas.
Tesla	Tesla (T) is the unit of measurement for magnetic fields
the 'Habitats Directive'	The EC Directive 92/43/EEC on Conservation of Natural Habitats and of Wild Fauna and Flora, 1992
The Project	the proposed Rampion Offshore Wind Farm
The Zone	Zone 6 of the Crown Estate's Round 3 offshore wind farm licensing
Threshold	A specified level in grading effects (e.g. the order of significance).
Visual Amenity	The value of a particular view or area in terms of what is seen.
Wildlife Corridor	Linear habitats/landscape features such as hedgerows that may increase connectivity by acting as routes between habitat patches.
Worst-Case	A principle applied where environmental effects may vary (e.g. due to seasonal variations) to ensure the most severe effect is assessed.

ABBREVIATIONS

µm	Micrometre
AA	Appropriate Assessment
AADT	Annual Average Daily Traffic
AC	Alternating Current
ADC	Adur District Council
AFRS	Archaeological Field Reconnaissance Survey
AGL	Above Ground Level
AHD	Acoustic Harassment Devices
AIS	Automatic Identification System
ALB	All-weather Lifeboat
ALC	Agricultural Land Classification
ALO	Agricultural Liaison Officer
ANO	Air Navigation Order
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AP	Aerial Photography
API	American Petroleum Institute
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQMP	Air Quality Management Plan
ARP	Aerodrome Reference Point
ARPA	Automatic Radar Plotting Aid
ASDA	Accelerate Stop Distance Available
ASE	Archaeology South East
ALSF	Aggregate Levy Sustainability Fund
ASMS	Active Safety Management System
ASNW	Ancient Semi-Natural Woodland
ATC	Air Traffic Control
AtoN	Aid to Navigation
AWAC	Acoustic Wave And Current Meter
AWI	Ancient Woodland Indicator
BAP	Biodiversity Action Plan
BBC	British Broadcasting Corporation
BCT	Bat Conservation Trust
BERR	Business Enterprise and Regulation Reform
BGL	Below Ground Level
BGS	British Geological Survey
B&HCC	Brighton & Hove City Council
BMAPA	British Marine Aggregates and Producers Association
BMV	'Best and Most Versatile'
BOAT	Byways Open to All Traffic
BOD	Below Ordnance Datum
BODC	British Oceanographic Data Centre
BP	Before Present
BRE	Building Research Establishment
BS	British Standard
BSAC	British Sub-Aqua Club
BTO	British Trust for Ornithology

BWEA	British wind energy association
CA	Cruising Association
CA	Conservation Area
CAA	Civil Aviation Authority
CadnaA	Software Package
CAP	Civil Aviation Publication
CAST	Coastguard Agreement on Salvage and Towage
CC	Construction Contractor
CCO	Channel Coastal Observatory
CCS	Carbon Capture and Storage
CCTV	Closed Circuit Television
CCW	Countryside Council for Wales
CDM	Construction Design Management
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CEMP	Construction Environmental Management Plan
CIRIA	Construction Industry Research and Information Centre
CITES	Convention on the International Trade in Endangered Species
CLR	EA guidance on the assessment of risks from potentially contaminated land
CMP	Catchment Management Plan
CNS	Communications, Navigation and Surveillance
CO	Carbon Monoxide
CO2	Carbon Dioxide
COLREGS	International Regulations for the Prevention of Collisions at Sea
CoNAWR	Control of Noise at Work Regulations
CoS	Chamber of Shipping
COSHH	Control of Substances Hazardous to Health
COWRIE	Collaborative Offshore Wind Research into the Environment
CP	Civil Parish
CPA	Coastal Protection Act
CPRE	Campaign to Protect Rural England
CPT	Cone Penetration Tests
CPRMEM	Fisherman's organisation in France
cSAC	Candidate SAC
CSLVIA	Cumulative Seascape and Landscape Visual Impact Assessment
CSS	Countryside Stewardship Scheme
CTA	Worthing Control Area
DAP	Directorate of Airspace Policy
dB(A)	Decibel (A-weighted) - A unit of noise measurement
dB _{ht}	Decibels above hearing threshold
DBA	Desk Based Assessment
DC	Direct Current
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment Food and Rural Affairs
DfT	Department for Transport
dGPS	Differential Global Positioning System
DPD	Development Plan Document
DTI	Department for Trade and Industry
EA	Environment Agency
EC	European Commission

EclA	Ecological Impact Assessment
EDIP	Environmental Development of Industrial Products
EEDI	Energy Efficiency Design Index
EEA	European Economic Association
EEZ	Exclusive Economic Zone
EH	English Heritage
EIA	Environmental Impact Assessment
ELC	European Landscape Convention
ELF	extremely low frequency
ELS	Entry Level Stewardship
EMF	Electro-magnetic field
EMP	Environmental Management Plan
ENG	Ecological Network Guidance
E.ON	E.ON Climate & Renewables UK Rampion Offshore Wind Ltd (the Developer)
EPR	Ethylene Propylene Rubber
EPS	European Protected Species
ERCoP	Emergency Response Co-operation Plan
ES	Environmental Statement
ESAS	European Seabirds at Sea Database
ESCC	East Sussex County Council
EU	European Union
FEPA	Food and Environment Protection Act
FM	Frequency-Modulation
FOCI	Features of Conservation Interest
FRA	Flood Risk Assessment
FRS	Field Reconnaissance Survey
FSA	Formal Safety Assessment
FTE	Full Time Employment
FTU	Fluorimetric Turbidity Units
GAIOWF	Guidance on the Assessment of the Impact of Offshore Wind Farms
GBS	gravity base structure
GCN	Great Crested Newt
GDP	Gross Domestic Product
GIS	Gas Insulated Switchgear
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GPS	Global Positioning System
GSCs	Geoarchaeological sedimentary context
GVA	Gross Value Added
HAP	Habitat Action Plans
HAT	Highest Astronomical Tides
HCA	Homes and Communities Agency
HDC	Horsham District Council
HDD	Horizontal Directional Drilling
HDLCA	Horsham District Landscape Character Assessment
HDV	Heavy Duty Vehicle
HER	Historic Environmental Record
HGV	Heavy Goods Vehicle
HLC	Historic Landscape Character
HLS	Higher Level Stewardship
HPA	Health Protection Agency
HPA RPD	Health Protection Agency Radiation Protection Division
HRA	Habitats Regulations Assessment

HSC	Hazardous Substance Consent
HSE	Health and Safety Executive
HV	High Voltage
HVDC	High Voltage Direct Current
Hz	Hertz
IALA	International association of Lighthouse Authorities
IAQM	Institute of Air Quality Management
IBGS	Inward Battered Guide Structure
ICAO	International Civil Aviation Organisation
ICES	International Council for the exploration of the Sea
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IDB	Internal Drainage Boards
IEA	Institute for Environmental Assessment
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute for Environmental Management and Assessment
IFCA	Inshore Fisheries and Conservation Association
IHO	International Hydrographic Organisation
IHLS	International Herring Larvae Survey
ILB	Inshore Lifeboat
ILVO	Institute for Agricultural and Fisheries Research (Belgium)
IMO	International Maritime Organisation
INSPIRE	Software Package
IOW	Isle of Wight
IPC	Infrastructure Planning Commission (now abolished)
IROPI	Imperative Reasons of Overriding Public Interest
ITZ	Inshore Traffic Zone
JAAP	Joint Area Action Plan
JNAPC	Joint Nautical Archaeology Policy Committee
JNCC	Joint Nature Conservation Committee
JRC	Joint Radio Company
Km	Kilometre
kV	kilovolt
kWh	Kilowatt Hour
LAeq,1hr	Change in the ambient noise level
LAQM	Local Air Quality Management
LAQM.TG	Local Air Quality Management Technical Guidance
LAT	Lowest Astronomical Tide
LBAP	Local Biodiversity Action Plan
LBs	Listed Buildings
LCA	Landscape Character Area
LDC	Lewes District Council
LDF	Local Development Framework
LFA	Low Flying Areas
LGS	Local Geological Site
LI	Landscape Institute
LiDAR	Light Detection And Ranging
LNR	Local Nature Reserve
LPA	Local Planning Authority
LRIT	Long Range Identification and Tracking
LST	Long shore transport
LVIA	Landscape and Visual Impact Assessment

LWM	Low Water Mark
m	metres
MAFF	Ministry for Agricultural Fisheries and Food
MAGIC	Multi-Agency Geographic Information for the Countryside
MAIB	Maritime Accident Investigation Branch
MALSF	Marine Aggregate Levy Sustainability Fund
MarLIN	Marine Life Information Network
MARPOL	International Maritime Organization's International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978
MaRS	Marine Resource System
MASA	Marine Heritage Asset Study Area
MCA	Maritime and Coastguard Agency
MCAA	Marine and Coastal Access Act
MCZ	Marine Conservation Zone
MEHRA	Marine Environmental High Risk Areas
Metocean	Meteorology and Oceanography
MGN	Marine Guidance Note
MHW	Mean High Water
MHWI	Mean High Water Interval
MHWS	Mean High Water Springs
MHWN	Mean High Water Neaps
MLWI	Mean Low Water Interval
MLWS	Mean Low Water Springs
MLWN	Mean Low Water Neaps
MLS	Minimum Landing Size
MMO	Marine Management Organisation
MMSI	Maritime Mobile Service Identity
MNR	Mean Neap Range
MOC	Marine Operations Centre
MoD	Ministry of Defence
MPS	Marine Policy Statement
MPS2	Minerals Policy Statement 2
MR	Mean Range
MRCC	Maritime Rescue Co-ordination Centre
MRSC	Maritime Rescue Sub-Centre
MS LCS	Mid-Sussex Landscape Character Study
MSC	Mechanically Switched Capacitor
MSDC	Mid Sussex District Council
MSL	Mean Sea Level
MSNCI	Marine Sites of Nature Conservation Importance
MSR	Mean Spring Range
mT	million tonnes
MW	Megawatt
nm	Nautical Mile
NAQS	National Air Quality Strategy
NATS	National Air Traffic Services
NAVTEX	Navigational Telex
NBN	National Biodiversity Network
NCA	National Character Area
NCI	National Coastwatch Institution
NE	Natural England
NERC	Natural Environment and Rural Communities Act 2006

NERL	NATS En Route Ltd
NFCDD	National Flood and Coastal Defence Database
NIA	Nature Improvement Areas
NMP	National Mapping Programme
NMR	National Monument Record
NNG	Night Noise Guidance
NNR	National Nature Reserve
NNSS	Non-native Species Secretariat
NOREL	Nautical and Offshore Renewables Energy Liaison
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NPPF	National Planning Policy Framework
NPS	National Policy Statements
NRA	Navigational Risk Assessment
NRHE	National Record of the Historic Environment
NRPB	National Radiological Protection Board
NSER	No Significant Effects Report
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
NTSLF	National Tide and Sea Level Facility
NV	Notable Verge
NVC	National Vegetation Classification
O ₃	Ozone
O&M	Operations and Maintenance
OART	Ouse and Adur River Trust
OBS	Optical Backscatter
OCIMF	Oil Companies International Marine Forum
OELS	Organic Entry level Stewardship
OES	Offshore Environmental Solutions
OESEA	Offshore Energy Strategic Environmental Assessment
OfGEM	Office of Gas and Electricity Markets
OFTO	Offshore Transmission Operator
ONS	Office for National Statistics
OPERA	European Weather Radar Network
OREI	Offshore Renewable Energy Installations
OS	Ordnance Survey
OSPAR	Oslo and Paris Conventions for the protection of the marine environment of the North-East Atlantic
OWF	Offshore Wind farm
PAH	Polycyclic Aromatic Hydrocarbons
PAM	Passive Acoustic Monitoring
PEL	Probable Effect Level
PEXAs	Practice and Exercise Areas
PINS	Planning Inspectorate
PLGs	Project Liaison Groups
PLN	Port Letter Number
PM ₁₀	Particulates
PM _{2.5}	Fine Particulates
PMRA	Protection of Military Remains Act
PPC	Pollution Prevention and Control
PPG	Planning Policy Guidance (now superseded by the NPPF)

PPG	Pollution Prevention Guidelines
PPS	Planning Policy Statement (now superseded by the NPPF)
PPV	Peak Particle Velocity
PRoW	Public Right of Way
PRP	Project Reinstatement Plan
PSD	Priority Substances Directive
PTS	Permanent Threshold Shift
PWA	Protection of Wrecks Act
RACONs	Radar Beacons
RBMP	River Basin Management Plan
RCS	River Corridor Survey
RDX	Road Crossing
REC	Regional Environmental Characteristics
RES	Renewable Energy Strategy
REZ	Renewable Energy Zone
RIBS	Rigid Inflatable Boats
RIGS	Regionally Important Geological and Geomorphological Site
rMCZ	Recommended MCZ
RMS	Root Mean Square
RNLI	Royal National Lifeboat Institute
ROV	Remotely Operated Vehicle
ROWF	Rampion Offshore Wind Farm
RPGs	Registered Parks and Gardens
RPG	Regional Planning Guidance
rRAs	recommended Reference Areas
RSG	Regional Stakeholder Group
RSPB	Royal Society for the Protection of Birds
RSS	Regional Spatial Strategy
RYA	Royal Yachting Association
SAC	Special Areas of Conservation
SAP	Species Action Plans
SAR	Search and Rescue
SAS	Surfers Against Sewage
SCADA	Supervisory Control and Data Acquisition
SCA	Seascape Character Area
SCANS	Small Cetacean Abundance in the North Sea and adjacent waters
SCI	Sites of Community Importance
SCOPAC	Standing Conference on Problems Associated with the Coastline
SDILCA	South Downs Integrated Landscape Character Assessment
SDNP	South Downs National Park
SDNPA	South Downs National Park Authority
SEA	Strategic Environmental Assessment
SEEDA	South East England Development Agency
SEEMP	Ship Energy Efficiency Plan
SEL	Sound Effect Level
SEPA	Scottish Environmental Protection Agency
SERSS	South East Regional Spatial Strategy
SFRA	Strategic Flood Risk Assessment
SGT	Super Grid Transformer
SIC	Standard Industrial Classification
SIFCA	Sussex Inshore Fisheries and Conservation Authority

SLVIA	Seascape, Landscape and Visual Impact Assessment
SM	Scheduled Monument
SMC	Scheduled Monument Consent
SMP2	Shoreline Management Plan 2
SMNCI	Site of Marine Nature Conservation Interest
SNH	Scottish Natural Heritage
SO ₂	Sulphur Dioxide
SOEC	Solent Ocean Energy Centre
SoS	Secretary of State
SPA	Special Protection Areas
SPM	Suspended Particulate Matter
SPZ	Source Protection Zone
SRN	Strategic Road Network
SSC	Suspended Sediment Concentration
SSFC	Sussex Sea Fisheries Committee
SSS	Side-scan Sonar
SSSI	Site of Special Scientific Interest
SST	Sea Surface Temperature
SuDS	Sustainable Drainage System
SVC	Static Var Compensator
T	Tesla
TCE	The Crown Estate
TETRA	Terrestrial Trunked Radio
THLS	Trinity House Lighthouse Service
THSD	Trailing Hopper Suction Dredger
TPH	Total Petroleum Hydrocarbons
TPO	Tree Preservation Order
TSS	Traffic Separation Scheme
TTS	Temporary threshold shift
TV	Television
TWh	Terawatt Hours
UHF	Ultra High Frequency
UK	United Kingdom
UKBAP	UK Biodiversity Action Plan
UKHO	UK Hydrographic Office
UNCLOS	United Nations Convention on the Law of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America
UW	Underwater
VMCA	Voluntary Marine Conservation Areas
VFR	Visual Flight Rules
VHF	Very High Frequency
VMM	Virtual Met Mast
VOCs	Volatile Organic Compounds
VTs	Vessel Traffic Service
WBC	Worthing Borough Council
W&CA	Wildlife and Countryside Act
WeBs	Wetland Birds Suvey
WFD	Water Framework Directive
WHO	World Health Organisation
WML	Waste Management Licensing

WRL	Western side of the Lower Shore
WSCC	West Sussex County Council
WSI	Written Scheme of Investigation
WSLCA	West Sussex Landscape Character Assessment
WTG	Wind Turbine Generator
XLPE	Cross Linked Polyethylene
ZTV	Zone of Theoretical Visibility

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1 INTRODUCTION

1.1 This Document

- 1.1.1 E.ON Climate & Renewables UK Rampion Offshore Wind Ltd (E.ON) is proposing the development of the Rampion Offshore Wind Farm ('the Project') off the Sussex coast. As a Nationally Significant Infrastructure Project (NSIP) under section 14(3) of the Planning Act 2008 and, owing to the size and nature of the project, an Environmental Impact Assessment (EIA) has been undertaken in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009.
- 1.1.2 This document is an Environmental Statement (ES) produced as a result of the EIA process and is being submitted in support of an application for a Development Consent Order (DCO) for the Rampion Offshore Wind Farm, including associated development, to the Secretary of State under Section 37(3)(d) of the Planning Act 2008.

1.2 Overview of the Proposed Development

- 1.2.1 On 4 June 2008, The Crown Estate (TCE) announced its proposal for the third round of offshore wind farm leasing. Following the earlier demonstration Rounds 1 and 2, which identified strategic search areas in the Greater Wash, the Thames Estuary and the Liverpool Bay areas, Round 3 opened up the potential for 25 GW of offshore wind energy generation capacity in the UK Renewable Energy Zone and English and Welsh territorial waters. Nine zones were identified using TCE's marine resource system (MaRS), and the government's Offshore Energy Strategic Environmental Assessment. Developers were invited to bid for the zones.
- 1.2.2 Following a competitive tendering process, TCE announced the successful bidders for each of the nine Round 3 offshore wind zones in January 2010. E.ON secured the development rights for Zone 6 ('the zone').
- 1.2.3 The zone is located in the English Channel off the Sussex Coast in southern England and extends from approximately 13 to 25km offshore. It occupies an irregular, elongated area approximately 28km long east to west and approximately 10km wide north to south, and has an overall area of approximately 271km².
- 1.2.4 Figure 1.1 shows a location map of the zone and its coordinates are presented in Table 1.1. The nearest coastal ports are Brighton, Newhaven, Shoreham-by-Sea, Littlehampton and Worthing.

Table 1.1: Zone coordinates (WGS84)

Longitude	Latitude
0°21'55.857"W	50°41'11.354"N
0°13'45.701"W	50°42'24.827"N
0°04'26.231"W	50°40'39.195"N
0°03'08.190"E	50°37'46.941"N
0°06'01.051"W	50°35'02.086"N
0°20'10.654"W	50°35'44.110"N

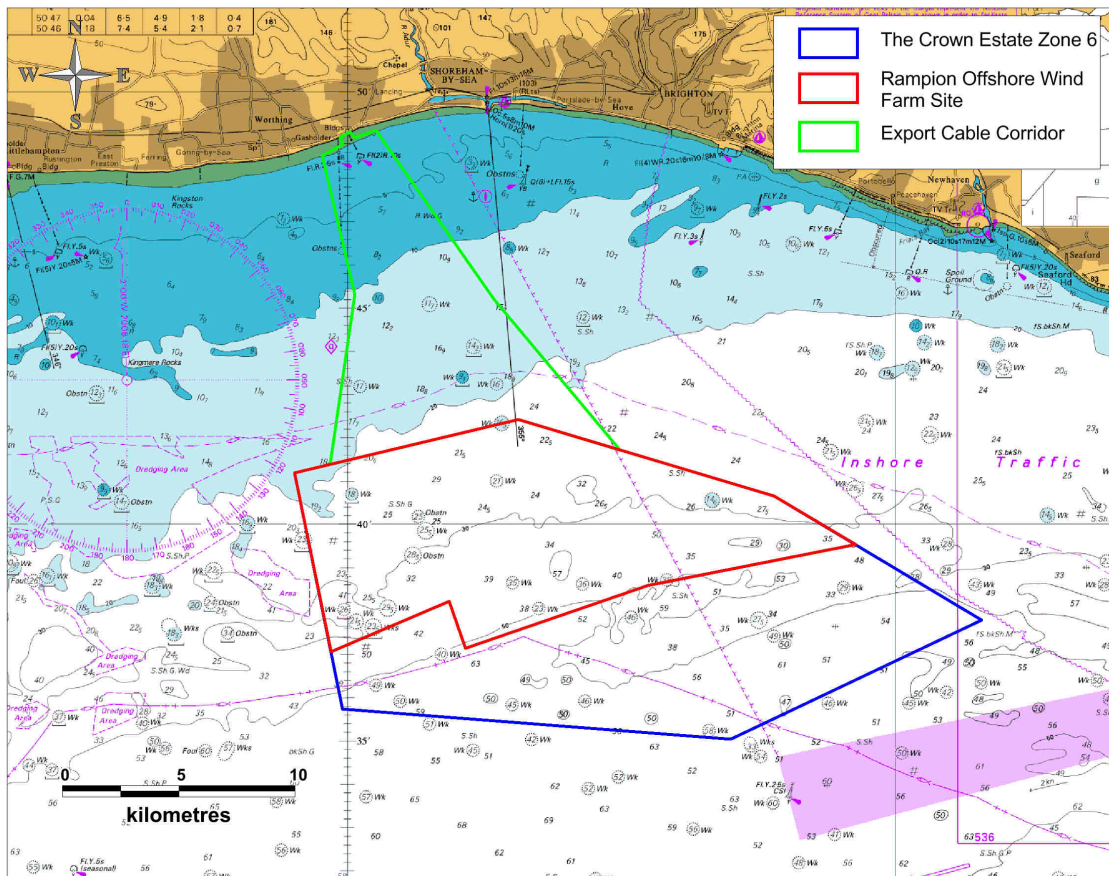


Figure 1.1: The Crown Estate Zone 6

- 1.2.5 E.ON is proposing to develop the Project in an area within the zone defined above and covering approximately 139km². The project area is identified as the Rampion Offshore Wind Farm site and has been chosen for its relatively shallow water and its distance from navigation and shipping lanes. The project was named the Rampion Offshore Wind Farm following a competition for local schools to choose a name.
- 1.2.6 A small area in the South west corner of the wind farm site coincides with an area over which The Crown Estate (TCE) has granted an aggregates extraction option, which is valid until 2013 (the area is shown in Section 19 – Other Marine Users). It has been indicated by the aggregates option holder that they intend to exercise the option and take up a long-term licence for extracting aggregates from this area. Assuming this is the case, this legal interest over this area of

seabed would take precedence and no wind farm development would occur within this area. However, in the event that the aggregates option is not exercised, then the installation of wind turbines within this area would be possible.

- 1.2.7 The provisions of E.ON's agreement with TCE require the developer to consider the future development of the entire zone. Owing to the technological and economic constraints associated with the deeper water areas of the zone, these areas are not currently being considered for development. The baseline environmental data surveys have been undertaken across the entire zone and, should development become possible in the future as a result of technological advances, such additional development would be subjected to a completely new and separate EIA and consenting application.
- 1.2.8 The offshore elements of the project cover the works below the mean high water mark and comprise offshore wind turbines and their foundations, one or two offshore substations, subsea array cables between the turbines and the offshore substations, and export cables between the offshore substations and the shore. The wind farm will have an installed capacity of up to 700MW.
- 1.2.9 For the purposes of the ES the onshore elements of the project relate to the works associated with the onshore electricity grid connection from the mean high water mark to the connection with the national grid transmission system. It is intended that the project will be connected to the terrestrial grid via alternating current (AC) technology to a new substation located in the vicinity of the existing Bolney substation in mid-Sussex.

1.3 Introduction to E.ON Climate & Renewables

- 1.3.1 E.ON Climate & Renewables is part of the E.ON group of companies and is responsible for developing, constructing and operating all of the group's renewable energy projects.
- 1.3.2 In the UK, E.ON Climate & Renewables' focus is on wind energy (both onshore and offshore) and dedicated biomass and marine power generation. Currently, E.ON owns and operates 19 onshore and 3 offshore wind farms. E.ON is a partner in the London Array, which is currently under construction. E.ON also has planning consent to build the Humber Gateway wind farm off the east coast of Yorkshire which has begun onshore construction.

1.4 Consultancy Team

- 1.4.1 E.ON has brought together a team led by RSK Environment Ltd (RSK), which specialises in EIA. Specialist contractors and consultants with local knowledge or specific technical skills relevant to the requirements of the EIA process have also been used. The specialists employed as part of this study and the EIA sections they have prepared or contributed to, are detailed in Table 1.2.

Table 1.2: EIA consultancy team

EIA section	Consultant
Introductory sections 1 – 5	RSK Environment Ltd
Offshore assessment sections	
Section 6 – Physical environment	RSK Environment Ltd, 4C Offshore and ABPmer (modelling)
Section 7 – Benthos and sediment quality	RSK Environment and EMU Ltd (survey)
Section 8 – Fish and shellfish ecology	RSK Environment Ltd
Section 9 – Nature conservation	RSK Environment Ltd
Section 10 – Marine mammals	RSK Environment Ltd, Ocean Science Consulting and Natural Power Consulting Ltd (survey)
Section 11 – Marine ornithology	Ecology Consulting and Natural Power Consulting Ltd (survey)
Section 12 – Seascape, landscape and visual	RSK Environment Ltd
Section 13 – Marine archaeology	RSK Environment Ltd
Section 14 – Navigation and shipping	Anatec UK Ltd
Section 15 – Communications	Pager Power
Section 16 – Civil and military aviation	Wind Power Aviation Consultants Ltd
Section 17 - Socio-economics	RSK Environment Ltd
Section 18 – Commercial fisheries	Brown & May Marine Ltd
Section 19 – Other marine users	RSK Environment Ltd
Onshore assessment sections	
Section 20 – Agriculture and soils	RSK Environment Ltd
Section 21 – Air quality	RSK Environment Ltd
Section 22 – Ground conditions	RSK Environment Ltd
Section 23 – Surface Water, hydrology and flood risk	RSK Environment Ltd
Section 24 – Ecology	RSK Environment Ltd
Section 25 – Archaeology and cultural heritage	RSK Environment Ltd
Section 26 – Landscape and visual impact	RSK Environment Ltd
Section 27 – Noise and vibration	RSK Environment Ltd
Section 28 – Socio-economics	RSK Environment Ltd
Section 29 – Transport	Singleton Clamp
Carbon balance, cumulative impacts and environmental management	
Section 30 – Carbon lifecycle and balance	RSK Environment Ltd

EIA section	Consultant
Section 31 – Cumulative and secondary impacts and impact interactions	RSK Environment Ltd
Section 32 – Environmental management	RSK Environment Ltd

1.4.2 In addition to the above, Subacoustech Environmental Ltd provided technical input and advice on noise impacts associated with construction of the offshore components of the project. This information informed a number of the offshore assessments undertaken as part of the EIA.

1.5 Context

1.5.1 The UK government has concluded that there is, subject to appropriate environmental protection requirements, a need for offshore wind energy generation to meet international climate change obligations and domestic targets for renewable energy.

1.5.2 Current UK offshore wind policy has been based on the requirement for the need to:

- Replace existing generating capacity that is reaching the end of its life;
- Move to a low-carbon power generation mix to help mitigate climate change; and
- Ensure security of supply to minimise reliance on foreign sources of energy.

1.5.3 The principal policy drivers based on these objectives are founded in international and European law, and domestic legislation and policy. Because of the significant contribution of electricity generation to overall human greenhouse gas emissions much of the focus of this law and policy is on climate change.

1.6 International Climate Change Obligations

1.6.1 The United Nations Framework Convention on Climate Change, which was signed and ratified by the UK, seeks, among other things, the ‘stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system’.

1.6.2 Under this Framework Convention, legally binding protocols can provide targets for reducing the emission of greenhouse gases from participating states. Under the Kyoto Protocol agreed in 1997, the UK government is committed to cutting the emission of greenhouse gases by 12.5% of 1990 levels by 2008–2012.

- 1.6.3 A successor Protocol to Kyoto, which is due to expire in 2012, is currently under negotiation following the failure to reach a comprehensive agreement on emissions reductions at meetings in Copenhagen and Cancun in 2010. In the absence of such an agreement, the main obligations relevant to the UK are at the European and domestic levels.

1.7 European Law

- 1.7.1 The Energy Policy for Europe published by the European Commission in January 2007 established a target of 20% of the energy consumed in Europe to come from renewable energy sources by 2020.
- 1.7.2 This policy aim is secured by the EU Renewable Energy Directive (2009/28/EC), under which member states have agreed targets.
- 1.7.3 Under this legislation, there is a requirement for the UK to produce 15% of all its energy from renewable sources by 2020 and more specifically approximately 30–35% of electricity from renewables. In July 2009, the UK government published the UK Renewable Energy Strategy (RES), which sets out the means by which it intends to meet this target. Given the difficulties of increasing the proportion of heating and transportation fuel that is made up from renewable sources, the ‘lead scenario’ identified in this strategy is for over 30% of the UK’s electricity to come from renewable sources by 2020.

1.8 National Policy Context

- 1.8.1 The UK’s International and European commitments allow the implementation of renewable energy and climate change targets to be delivered at a national level. These obligations, together with additional targets, are promoted through various domestic laws and policies.
- 1.8.2 Under the Climate Change Act 2008, the UK government has set legally binding targets to reduce the UK’s carbon dioxide emissions by placing a duty on the Secretary of State for Energy and Climate Change to ensure that the net UK carbon account for the year 2050 is at least 80% lower than 1990 levels.
- 1.8.3 UK policy on energy and climate change is set out in two White Papers published in 2007 and 2009. The plans for the delivery of the aims set out in these overarching policies are given in more detail in documents such as the UK RES and National Policy Statements (NPS) published under the Planning Act 2008.
- 1.8.4 The 2007 White Paper, *Meeting the Energy Challenge* (DTI, 2007), highlighted three main policy drivers in respect of the UK’s electricity supply:
- Tackling climate change by reducing carbon dioxide emissions within the UK and abroad;
 - Ensuring secure, clean and affordable energy; and

- Addressing fuel poverty.
- 1.8.5 The 2009 White Paper, *The UK Low Carbon Transition Plan – National Strategy for Climate and Energy* (DECC, 2009), set out a low-carbon transition plan for the UK to 2020. The plan describes the UK's approach to becoming a low-carbon economy by cutting emissions, maintaining secure energy supplies and maximising economic opportunities. It sets targets for carbon dioxide emission cuts of 18% on 2008 levels by 2020, which is a reduction of more than one-third on 1990 levels.
- 1.8.6 As part of the delivery of the national strategy outlined above, the UK RES confirmed the UK's commitment to source 15% of its energy from renewable sources by 2020. Scenarios published in the RES suggest that more than 30% of UK electricity (117TWh) could be generated from renewables compared with the current 5.5%. Although biomass, hydroelectric and wave and tidal generation are all considered to have important roles to play, the RES anticipates that most of this new capacity will be generated from wind farms (onshore and offshore). The lead scenario for 2020 estimates that offshore wind will be the largest single contributor to renewable electricity generation.
- 1.8.7 The UK's energy requirements have traditionally been met by fossil fuels and nuclear energy; however, the UK government has set ambitious targets for renewable energy, including offshore wind. These targets are intended to help the UK to meet its international climate change obligations and to deliver increased security of energy supply. The Energy Act 2008 makes provision for new offshore renewable installations. The development of offshore wind farms is expected to be the largest contributor to the renewable energy targets.
- 1.8.8 The UK Renewable Energy Roadmap (DECC, 2011a) also confirms the UK government's commitment to increasing the deployment of renewable energy across the UK and in particular sets out a pathway and an action plan to facilitate the increasingly rapid development of offshore wind at reduced per unit cost. This is pertinent, as the UK Committee on Climate Change has identified cost as a potential barrier (DECC, 2011a; paragraph 3.48).
- 1.8.9 The primary policy context for the proposed development is set by the *Overarching National Policy Statement for Energy* (EN-1) (DECC, 2011b) and the *National Policy Statement for Renewable Energy Infrastructure* (EN-3) (DECC, 2011c), both of which were designated under the 2008 Act in July 2011.
- 1.8.10 EN-1 sets out the national policy for the delivery of major energy infrastructure. It outlines how the energy sector can help to deliver the government's climate change plan and clearly sets out the need for new, low-carbon energy infrastructure to contribute to climate change mitigation. EN-1 notes that the large-scale deployment of renewables will help the UK to tackle climate change and reduce the UK's emissions of carbon dioxide by over 750Mt by 2030 (paragraph 3.4.2, EN-1). Such deployment of renewables will also bring business opportunities and provide about £100 billion of new investment (paragraph

2.2.16, EN-1) with the potential to bring up to 500,000 new jobs (paragraph 3.4.2 EN-1) into the UK renewable energy sector.

- 1.8.11 EN-3 reflects the findings of the 2009 White Paper. It is the primary decision-making guidance document for the Secretary of State on NSIPs such as offshore wind farms in waters in or adjacent to England or Wales up to the seaward limits of the territorial sea or in the Renewable Energy Zone¹ (REZ). EN-3 refers directly to renewable energy and contains specific information on offshore wind farms, including the offshore consenting process, the factors that influence site selection and design by the applicant, and the technical considerations for the decision maker when determining consent applications. The need for offshore wind farm development is clearly stated: ‘offshore wind farms are expected to make up a significant proportion of the UK’s renewable energy generating capacity up to 2020 and towards 2050’.
- 1.8.12 The UK Marine Policy Statement (HM Government, 2011) sets out the framework for the formulation of marine plans and taking decisions affecting the marine environment. It reiterates the commitment to the development of offshore renewable energy infrastructure to ‘mitigate against climate change, lessen the UK’s dependence on fossil fuels and improve energy security by increasing the diversity of electricity supply’ (Marine Policy Statement; paragraph 3.3.16). Furthermore, it was observed ‘that there are no overriding environmental reasons to prevent ... plans for offshore wind and subsea grid development ... if mitigation measures are implemented’ (Marine Policy Statement; paragraph 3.3.17).
- 1.8.13 The UK government has stated that a key requirement for successful delivery of its renewable energy targets is ensuring that renewable energy projects are consented and built in a timely manner to facilitate the ambitious timetables set out in European and UK legislation for emission reductions.

1.9 Regional Policy Context

- 1.9.1 Regional Spatial Strategies (RSS) were published in 2008 to provide a regional-level planning framework. Through the Localism Act 2011, the Coalition Government is seeking to abolish all RSS’s, including the South East Plan. However, this process is subject to the outcome of a strategic environmental assessment that has been prepared for each RSS, and any revocation will not be undertaken until the Secretary of State and Parliament have had the opportunity to consider the findings of the assessments. In this interim period, the South East Plan continues to be part of the ‘Development Plan’ and is therefore material to decisions on individual planning applications and appeals.
- 1.9.2 The regional renewable energy targets for south-east England are set out in Policy NRM13 of the adopted Regional Spatial Strategy (RSS) for the South East, published in May 2009. This states that the minimum regional targets for

¹ The REZ is an area outside the territorial sea that may be exploited for the production of energy.

electricity generation from renewable resources of 620MW by 2010, 895MW by 2016, 1130MW by 2020 and 1750MW by 2025 should be achieved by the development and use of all appropriate resources and technologies. Those energy resources with the greatest potential for electricity generation are listed as onshore and offshore wind, biomass and solar.

- 1.9.3 The Project will have an installed generating capacity of up to 700MW and will therefore make a significant contribution towards meeting the above targets.

1.10 The Rampion Offshore Wind Farm in the Context of UK Policy

1.10.1 The proposed installed capacity of the Project of 700MW will generate approximately 2.1TWh per annum². This is equivalent to the electricity consumption of more than 450,000 homes, based on an average consumption of 4700kWh per UK household per annum (Renewable UK, 2012).

1.10.2 The Project will avoid carbon dioxide emissions of approximately 900,000 tonnes per year; relative to equivalent generation by the UK grid generation mix³ (Renewable UK, 2012).

1.10.3 The Project is proposed in the context of a strong European and UK policy background encouraging the development of renewable energy and the reduction of carbon dioxide emissions. This development therefore represents the opportunity for a significant contribution to be made towards ambitious European, national and regional renewable energy targets.

1.10.4 Additionally, the Project represents the opportunity for the generation of significant levels of reliable, domestically sourced and, importantly, low-carbon electricity for the UK, supported by national and regional planning, energy and climate policy.

1.11 Consenting Process and DCO Application

1.11.1 The Planning Act 2008 (the 2008 Act) brought in major changes to the planning procedure for NSIPs. The Infrastructure Planning Commission (IPC) was established under the 2008 Act as an independent body created for the purposes of assessing applications for NSIPs. The 2008 Act stated that applications were to be made to the IPC for a DCO; the IPC would then examine the application in accordance with the policy framework provided in NPSs. The IPC was also the decision maker where the relevant NPS had been brought into force. Under the Localism Act 2011 (the 2011 Act), the IPC was abolished on 1 April 2012 and the responsibility for examining DCO applications was transferred to the Planning

²This figure is calculated using a capacity factor of 35%, based on wind speed data from E.ON's existing offshore wind farms in UK waters. This will be updated as Rampion site-specific data are gathered.

³Renewable UK uses a static figure of 430gCO₂/kWh to represent the UK grid electricity mix. This excludes other greenhouse gases and also indirect emissions from fossil fuelled generation (e.g. those resulting from the extraction, processing and transport of the fuels). Please refer to Section 30 of this draft ES for further discussion.

Inspectorate (PINS) on behalf of the Secretary of State. In all cases, the Secretary of State will have the final decision whether to approve the application.

- 1.11.2 As an offshore generating station with more than 100MW capacity, the project falls within the definition of NSIP. Therefore, E.ON is required to apply to the Secretary of State for development consent under Section 37 of the Planning Act 2008. This ES will accompany the application for a single DCO for both the offshore and onshore elements of the Project.
- 1.11.3 The current requirement of the industry regulator, the Office of Gas and Electricity Markets (OFGEM), is that the transmission assets for offshore wind farms need to be transferred to an independent third-party offshore transmission operator (OFTO). The OFTO regime is designed to provide separation between the generation and transmission of electricity and to introduce competition to deliver significant cost savings to generators and the consumer.
- 1.11.4 The scope of assets to be transferred, usually after completion of the construction, includes the offshore substations, marine export cable to shore, onshore cables and onshore substation. Therefore in terms of consenting and constructing the infrastructure, E.ON has the responsibility of delivering these elements of the project as part of the broader project, as well as ensuring compliance with all regulatory and consent condition requirements.

1.12 Requirement for Environmental Impact Assessment

- 1.12.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (EIA Regulations) implement, in relation to NSIPs, European requirements for EIAs set out in the consolidated EIA Directive (2011/92/EU) on the assessment of the effects of certain public and private projects on the environment. The EIA Directive specifies the types of proposal that should be subjected to a mandatory EIA (Annex I) and those for which the need for an EIA should be determined by the relevant national competent authority (Annex II). Offshore wind farms are listed in Annex II of the EIA Directive as 'installations for the harnessing of wind power for energy production (wind farms)'.
- 1.12.2 The project falls within Paragraph 3(i) of Schedule 2 of the EIA Regulations as an installation for the harnessing of wind power for energy production, where the need for an EIA should be determined by the relevant authority.
- 1.12.3 The EIA Regulations set out the requirements and provisions for screening (deciding if an EIA is required), scoping (setting out the scope for the EIA) and the submission of an ES. A formal scoping exercise was undertaken in September 2010 in respect of the project and a scoping opinion was received from the IPC in October 2010. Further details of the scoping exercise are provided in Section 5 (EIA Methodology) and in Appendices 5.1 and 5.2.

1.13 Content of this Environmental Statement

- 1.13.1 The ES incorporates introductory sections, all relevant offshore and onshore topic areas, environmental management, associated figures and technical appendices. A stand-alone non technical summary accompanies the ES and presents the key findings of the assessment in an easy to understand manner, free from technical jargon.
- 1.13.2 Part 1 of Schedule 4 of the EIA Regulations specifies what information is to be included in an ES. Table 1.3 identifies where this information is provided within this ES.

Table 1.3: Requirements of Schedule 4, Part 2 of the EIA Regulations

EIA Regulations, Schedule 4, Part 2		Location within this ES
1.	A description of the development comprising information on the site and the design and size of the development	Section 2
2.	A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects	Sections 6-30
3.	The data required to identify and assess the main effects that the development is likely to have on the environment	Sections 6–30
4.	An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects	Section 3
5.	A Non-Technical Summary	Non Technical Summary

1.14 Project Contacts

- 1.14.1 A copy of this ES together with the Non-Technical Summary, will be available to download from the National Infrastructure Planning website at the following address: <http://infrastructure.planningportal.gov.uk>
- 1.14.2 Requests for additional copies of this ES, priced at £900 + delivery charge for hard copy, and free on CD: and the Non-Technical Summary (free) should be made to:

FREEPOST RAMPION OFFSHORE WIND FARM
rampion@eon.com

1.15 References

Department of Energy and Climate Change (2011a) UK Renewable Energy Roadmap, July 2011. Available at www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/re_roadmap/re_roadmap.aspx

Department of Energy and Climate Change (2011b) Overarching National Policy, Statement for Energy (EN-1)), July 2011, London: The Stationery Office. Available at: <http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/consents-planning/nps2011/1938-overarching-nps-for-energy-en1.pdf>

Department of Energy and Climate Change (2011c) National Policy Statement for Renewable Energy Infrastructure (EN-3), July 2011, London: The Stationery Office. Available at: <http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/consents-planning/nps2011/1940-nps-renewable-energy-en3.pdf>

HM Government (2011) UK Marine Policy Statement, March 2011, London: The Stationery Office. Available at <http://www.defra.gov.uk/environment/marine/protect/planning/>

Department of Trade and Industry (2007) Meeting the Energy Challenge A White Paper on Energy May 2007 Available at: <http://www.berr.gov.uk/files/file39387.pdf>

Renewable UK (2012), web page. Calculations for wind energy statistics. <http://www.bwea.com/edu/calcs.html>. Accessed June 2012.