LONDON ARRAY OFFSHORE WIND FARM PROJECT

ENVIRONMENTAL IMPACT ASSESSMENT (ON-SHORE WORKS) SCOPING REPORT

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1. INTRODUCTION

1.1. The Proposed Development

The London Array Consortium (London Array), is proposing the development of a large offshore wind farm located in the Outer Thames Estuary. The proposed site is located on and between two long sandbanks located approximately 20km from both the Essex and Kent coasts. Site selection and feasibility studies commenced in late 1999 and key environmental studies were scoped with the statutory agencies and have been progressing from 2002 until the present time.

London Array's proposal has been awarded an Option for an 'Agreement for Lease', by the Crown Estate, for an offshore wind farm of up to 1,000 MW to be constructed in a number of phases. In totality, the assessment site would cover an area of approximately 245 km^2, however, the actual development area would be somewhat less. The final development site would cover an area of approximately 70-100 km^2 and include 250–300 wind turbines, offshore transformers, undersea cable to the shore, on-shore cabling and a new substation.

This Scoping Report has been produced in order to obtain a Scoping Opinion for the on-shore parts of the project, i.e. parts of the cabling to the shore, the on-shore cabling, and the new substations. The relationship of these facilities to the overall project and the consents process is described in subsequent sections.

1.2. The Development Consortium

The London Array Consortium comprises three partners: Shell WindEnergy Ltd, E.0N UK Renewables Developments Ltd. and CORE Ltd.

Shell WindEnergy Ltd is one of the 10 largest wind farm asset owners in the world and has secured, or operates, about 660MW of wind projects across Europe and the USA. Shell WindEnergy has access to considerable experience and expertise with regard to offshore developments as part of the Royal Dutch/Shell Group of companies. Shell U.K. Limited, its parent company, has more than 30 years of offshore experience in the UK sector and The Shell Petroleum Company Limited was one of the joint venture parties, together with Powergen, Nuon and Amec, in the UK's first offshore wind project at Blyth in Northumberland.

E.ON UK Renewables Developments Ltd is one of the UK's leading wind farm owner-operator-developers. The company, which was previously known as Powergen Renewables Ltd is currently building a 60MW offshore wind farm called Scroby Sands off the coast of Great Yarmouth. It is also progressing 180MW of offshore wind farm development in the Solway Firth. E.ON UK Renewables has stakes in 16 wind farms that supply enough renewable energy to power a town the size of Blackpool. A further three wind farms in County Durham are in the final stages of construction. The company also operates two hydro power stations in Wales and burns biomass material in coal-fired power stations. The company is part of the E.ON group, one of the world's largest investor-owned utilities.

CORE Ltd is a joint venture between Farm Energy and Energi E2. Farm Energy was originally established as a specialist wind power manufacturing and servicing company in 1988. In 1997, the company reorganised to concentrate on development work for onshore and offshore wind farms in the UK. Energi E2 is a leading Danish energy generator, whose production portfolio includes around 700MW of renewable energy, of which 400MW is wind power. E2 has acquired considerable offshore experience and recently completed the 165MW Nysted offshore wind park in Denmark.

The Key Contact with regard to this scoping report and any comments or queries that may arise is:

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2. POLICY BACKGROUND

The UK government has committed itself to cutting the emission of a basket of greenhouse gases to 12.5% below 1990 levels by 2008-2012, as its contribution to the European Union commitment to the Framework Convention on Climate Change agreed at Kyoto in 1997. More recently the Government has set itself a domestic target for reduction in carbon dioxide emissions beyond this commitment. The domestic target is to reduce CO_2 emissions to 20% below 1990 levels by 2010. In November 2000, the Government published the UK Climate Change Programme, which outlines the target areas and policies through which it aims to achieve these targets.

The target areas identified in the Climate Change Programme include energy generation, transportation and domestic and business energy efficiency. Expansion of the proportion of electricity produced by renewables is seen within the programme as a major contributor to greenhouse gas emission reductions within the energy sector, alongside promotion of combined heat and power plant, subject to the cost to consumers being acceptable.

Also within the Climate Change Programme, the Government states that its main objective in the energy sector is to work towards the target of obtaining 10% of the UK's electricity supply from renewable sources by 2010. More recently the Government announced an extension in its domestic renewables target to 15% by 2015. The Government's aspiration is by 2020 to double renewables share of electricity to 20%. The development of renewable energy will be vital to meeting the Government's CO2 reduction targets, and will provide economic benefits for the UK economy.

The Climate Change Programme recognises that the domestic goal for a 20% reduction in carbon dioxide emissions by 2010 over 1990 levels is only '*a first stage towards what will be needed in the longer term.'* The Energy White Paper, published in February 2003, sets out the longer term strategic framework for the UK's energy policy and accepted that the UK should put itself on a path to reducing carbon dioxide emissions by some 60% by 2050.

The wind farm would have a generation capacity of up to 1,000MW. The result would be enough electricity to supply almost 25% of London's homes with their electricity[1]. In addition, the clean energy generated would displace around 1.3 million tonnes of carbon dioxide per annum**.** If fully operational by 2010 it is predicted that the full development would deliver almost 10% of the Government's targets for renewables in 2010.

3. PROJECT OUTLINE

In its entirety, the project consists of the following main elements.

- The offshore wind farm, located in the Outer Thames Estuary on and between two compacted sandbanks, Long Sand and Kentish Knock, comprising of between 250-300 wind turbines.

- Up to 6 cables connecting the wind farm to the proposed on-shore landing point on the River Swale.

- An on-shore electrical substation with associated access road at Cleve Hill, near Graveney in Kent, into which the 6 cables would be connected.

- Diversion of the existing 400kv overhead transmission lines at Cleve Hill, to connect into the new sub-station.

This scoping report addresses the whole of the third and fourth elements above, and the second element from the boundary of jurisdiction of Swale and Canterbury Councils within the Swale. A further scoping report will address the offshore wind farm itself and the cables to shore as far as the seaward boundary of local authority jurisdiction.

4. PLANNING AND CONSENTS PROCESS

[1] Based on 2001 census information

The principal consents, planning permissions and licences needed for the proposed offshore wind farm and associated on-shore infrastructure are:-

- For the offshore works (i.e. all works beyond the jurisdiction of Swale Borough Council and Canterbury City Council), a Section 36 Consent under the Electricity Act 1989 and associated consents under the Coast Protection Act 1949 and the Food and Environment Protection Act 1985. A licence from the Port of London Authority (PLA) may also be required for certain offshore works.

- For the on-shore works (all works within the jurisdiction of Swale Borough Council, i.e. the on-shore sub-station, associated access road and cable routing), Planning Permission under the Town & Country Planning Act 1990.

- Should it be necessary, Planning Permission will be sought under the Town and Country Planning Act 1990 from Canterbury City Council for the some sections of the off-shore cable routing in the Swale.

In addition consent under Section 37 of the Electricity Act 1989 may be required for the diversion of the existing overhead 400kv transmission line and re-positioning of transmission towers, unless the final design were to fall within the scope of 'permitted development' under the Section 37 exemption regulations.

Although formally the Consents and Planning Permissions referred to above are administered under separate procedures and to different determining authorities, it is the intention that the applications and supporting documentation will be submitted at the same time. In this way, the environmental impacts of the project as a whole will be available for public review.

In addition to the principal licences, any other required consents and licences will be identified during the project development stage and consultations with statutory bodies.

The Environmental Impact Assessment (EIA) Directive (97/11/EC) requires member states to ensure that an EIA is completed in support of an application for development consent for certain types of projects. Offshore wind farms are listed in Annex ll of the Directive, as 'installations for the harnessing of wind power for energy production (wind farms)'. For the purposes of the principal on-shore facilities, these requirements have been transposed into UK legislation in the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (Statutory Instrument 1999 No. 293) (the EIA Regulations).

The need for EIA for electricity generation projects requiring Consent under Section 36 of the Electricity Act 1989 is provided for in England and Wales by The Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000. These set out the statutory process and minimum requirements for environmental impact assessment.

5. ENVIRONMENTAL ASSESSMENT APPROACH

For this project the following approach is being adopted: -

- An EIA will be undertaken, and Environmental Statement prepared, to support the Section 36 Consent Application for the offshore works. An EIA Scoping Report for the offshore works is currently being prepared.

- An EIA will be undertaken, and Environmental Statement prepared, to support the Planning Application under the Town and Country Planning Act 1990 for the on-shore works.

Should the modifications to the 400kv overhead transmission lines not be 'permitted development' under the exemption regulations of the Section 37 procedure, they would become a 'Schedule 2' development under the EIA regulations. However the minor nature of the overhead line works would suggest that these should not require a formal EIA under the regulations. This view would need to be confirmed by a formal screening opinion from the DTI in consultation with Swale Borough Council.

Should the modifications for the 400kv transmission lines be confirmed as non-EIA development then an Environmental Report will be prepared to support the Section 37 Consent Application. Details from that report will be included in the Environmental Statement prepared in support of the on-shore works planning application.

For completeness, and to ensure that the project as a whole is fully assessed, the Environmental Statement prepared for the Section 36 Consent application for the off-shore works will include (probably as an Appendix) the Environmental Statement for the on-shore works.

This Scoping Report has been prepared in accordance with Regulation 10(2) of the EIA Regulations to provide the information required to determine the scope of the EIA to accompany and support the Town & Country Planning application for the on-shore works. This Scoping Report has been submitted formally to Swale Borough Council and circulated to those organisations listed in Appendix 1.

6. CHOICE OF SITE FOR ON-SHORE WORKS

For the output capacity of the proposed wind farm (up to 1,000MW) it is necessary to connect into the 400kv transmission system operated by National Grid Transco.

Potential sites were identified and assessed, taking account of technical, environmental and economic factors. The Environmental Statement will include an outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects. This may include both alternatives leading to the choice of Cleve Hill for the on-shore connections and alternative arrangements for the facilities to be provided at Cleve Hill.

7. PROJECT DESCRIPTION

This section briefly describes the on-shore works; a description of the offshore works can be found in the London Array Offshore Wind Farm Project, Environmental Impact Assessment Scoping Report (currently in preparation).

7.1. Cable Arrangement

Up to six cables will be required to connect the offshore wind farm to the on-land transmission system. The cables will be buried in the sea bed at a depth of about 1-2m. As the cables approach land they will be routed along the bed of the River Swale about 20-30m apart and will come ashore in the general area to the north of Cleve Hill, shown on fig1. At that point, the cables will be in the region of 20m apart.

The cables will need to cross the sea defences at that point. This is likely to be by means of a ‘cut and cover’ operation, to a depth of about 2m, through the sea defence wall. However, the final design and construction methodology will depend on the results of further investigations into the structure of the existing sea defence wall and on-going discussions with the Environment Agency, who have responsibility for sea defences at this location. The Environment Agency have already indicated that they have no objection in principle to the process described for cabling through the sea defence wall, provided the integrity of the sea defences is maintained at all times and the wall is fully reinstated on completion of works.

The cables will be laid individually. The most likely method of operation is for a shallow draught barge, with the full length of cable on-board, to moor in the River Swale as close to the on-shore landing point as possible. The cable will be hauled ashore, laid in the pre-constructed trenches, up to the on-shore sub-station. Once the on-shore section of the cable has been laid the barge will move into the River Thames and commence laying the cable offshore. Alternatively, the offshore cables will be laid and terminated to the landward side of the sea defence wall, and jointed to cabling to connect to the sub-station.

On the landward side of the sea wall and to the proposed sub-station, the cables will be laid in trenches about 2m deep and initially about 20m apart. The trenches will be about 1m in width. On one side of the trench it is likely that temporary steel sheets will be laid to create a working width of about 5-10m. This will be for the machinery to construct the trench and haul the cables from the offshore barge. On the other side will be a smaller working width of about 2-3m for the temporary storage of excavated material. The trenches will be fully reinstated on completion of cable laying.

The timing of on-shore and offshore cable laying will depend on the construction programme of the offshore wind farm. It is likely that the operation to lay all six cables will be spread over a number of years in 2 or 3 phases; one phase per year. Consultations will be undertaken to determine the seasonal timing of cable laying in order to minimise environmental disturbance, and the Environmental Statement will consider the impact of the various options.

7.2. Sub-station Design

The proposed location for the sub-station is to be about 1km south of the Thames Estuary at Cleve Hill. The sub-station would be located directly adjacent to the 400kv overhead line that runs between Canterbury and North Kemsley, shown on Fig 1.

Two new transmission towers will be required, replacing two existing towers, which will allow the overhead line cables to be brought down to ground level. The replacement towers will be of a slightly different design but about the same height and dimensions as the towers they replace. They will be broadly in the same location as the existing towers, or located slightly further northwards, depending on the final design and orientation of the proposed new sub-stations. The two towers to be replaced are labelled ZV165 and ZV166A on Fig 2.

Access to the site will be from the Seasalter Road. A new metalled access road will need to be constructed to serve both construction and on-going maintenance of the sub-station. The indicative location of the proposed new road is shown on Fig 1**.** This will also provide a new improved access to Cleve Farm.

The main components of the proposed new sub-station are shown on Fig 2. The sub-station will consist of two compounds; a 400kv sub-station owned and operated by National Grid Transco (NGT), and a 132kv sub-station owned and operated by London Array Ltd (LAL).

The NGT compound will consist of: -

- An overhead line landing compound, where one circuit of the existing overhead line will be brought down to ground level, to steel lattice structures of about 16m in height. From here, the 400kv lines will be connected to the 400kv sub-station.

- An indoor 400kv sub-station, with switchgear and ancillary equipment housed in a building of about 40m x 20m and a height of about 14m. From here, the cables will be connected to step-down transformers in the 132kv sub-station.

Overall, including for fencing and internal roads, the NGT compound will be about 60m x120m.

The LAL compound will consist of: -

- 6 transformer bays (one for each cable connection from the offshore wind farm), each housing a transformer and ancillary equipment. Each will be located inside an oil containment bund of about 20m x10m with a height of about 9m.

- Gas insulated switchgear and associated control equipment, the largest component having a height of about 8m.

- A control building, housing telecommunications equipment, battery room and ancillary equipment. This building will be about 20m x10m and about 8m in height.

Overall, including for fencing and internal roads, the LAL compound will be about 175m x100m.

Landscaping proposals will be prepared, utilising the surplus spoil from the site levelling to create landscaping and screening bunds around the periphery of the sub-station site.

An indicative plan of the proposed sub-station site is shown on Fig 2. It is expected that the design of the sub-station, the location of replacement transmission towers and landscaping will evolve as the project progresses, taking account of technical factors and the environmental assessment.

Permanent internal access roads will be required for on-going maintenance purposes. For security reasons the perimeter of the site will need to be fenced and the access gated.

7.3. Sub-station Construction

For construction, land in addition to that shown on Fig 2 will be required on a temporary basis. This will be fully re-instated on completion of construction.

As the proposed site location is on sloping ground, cut and fill will be needed to create a level site. Final site level has yet to be determined and will depend on a number of factors including visual intrusion and the extent of land liable to flood. The higher land on Cleve Hill is understood to be above recorded flood levels and initial assessments indicate a site level of 6.4m to protect the sub-station from a 1 in 200 year flood. The objective is to balance the cut and fill to minimise traffic movements from the site. Top-soil separated out during the earth works can be used to form landscaping mounds.

An indicative construction programme is shown in Fig 3. A temporary diversion overhead line will need to be constructed first, to allow the replacement towers and 400kv sub-station to be constructed. The site preparation and civil works for the

400kv and 132kv sub-stations will be undertaken concurrently. Some piling is likely to be required for the construction of the replacement towers and sub-station construction.

The cable laying, and installation of transformers and switchgear equipment will be the final operations, with timing dependant on progress with the construction of the offshore components of the wind farm.

The peak of construction will occur during the earthworks and civil construction for the sub-stations. During that period the work force will peak at about 60-80. HGV movements will be minimised by balancing the cut and fill. HGV movements, mainly delivery of concrete, will average at about 6-8 per day but may peak at about 20-25 for short periods. Construction work is likely to be undertaken only during normal working hours, although there may be some operations that require continuous 24 hour working.

During the installation of the electrical equipment the number of HGV's will average at about 2-3 per day, with about 6 large indivisible 'abnormal' loads that may require special arrangements. During this period a workforce of around 60 is likely to be required.

8. ENVIRONMENTAL IMPACT ASSESSMENT

The EIA Regulations require that certain information is provided by the Environmental Statement ("the specified information"), which is as shown below:

1. A description of the development comprising information on the site, design and size of the development.

2. A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.

3. The data required to identify and assess the main effects which the development is likely to have on the environment.

4. An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects.

5. A non-technical summary of the information provided.

In accordance with the Regulations, other information which should also be provided where it is reasonably required to assess the environmental effects of the project and the applicant is able to compile it includes:

6. Additional information on the physical characteristics of the project e.g.: land-use requirements during the construction and operational phases; nature and quantity of the materials used; estimates by type and quantity, of expected residues and emissions from the operation of the proposed development.

7. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.

8. Any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development.

9. Description of the forecasting methods used to assess the effects on the environment.

10. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

9. PROPOSED SCOPE OF ENVIRONMENTAL IMPACT ASSESSMENT

The following is a description of the proposed activities and assessments to be undertaken as part of the Environmental Impact Assessment.

9.1. The site and its Planning Context

The context provided by relevant Structure Plan and local plan policies will be identified and the proposal assessed against plan policies. The context provided by for the proposal will also be identified and assessed from National Plans and Government targets for increasing the development of renewable energy sources.

9.2. Air Quality

It is standard practice to include a small diesel generator on sub station sites to provide power in emergency situations. It will be used very infrequently. It will require regular testing, probably every two weeks., Apart from this emergency diesel generator there will be no emissions to air resulting from this proposal. The overall scheme will make a contribution towards reducing CO_2 emissions and global warming. However, the on-shore elements of the scheme considered here are unlikely to give rise to significant effects on local or regional air quality.

9.3. Landscape

The general area of Cleve Hill and Cleve Marshes is identified in the Local Plan as a ‘Special Landscape Area’. The coastline is identified as ‘Undeveloped Coast’, with the coastal footpath running along the top of the sea defence wall.

The EIA will assess the potential and predicted impacts upon the landscape of the proposed development and the degree of visual intrusion that might be expected. A visual assessment will be undertaken through both field and desk study work. The assessment will refer to the Swale Landscape Character Study, currently issued as a consultation draft, November 2003, which has been undertaken on behalf of Swale Borough Council.

Key viewing points will be agreed with Swale Borough Council. An assessment will be made of the visual impacts from these locations and photomontages prepared to illustrate the potential and anticipated impact of the development.

Landscaping proposals will be submitted for consideration and development. At the sub station site it is anticipated that top-soil from the cut and fill operation will be separated out and used to form a landscape mounds.

Measures will be agreed for the re-instatement of the trenches, once the cables have been installed.

9.4. Ecology

Part of the area close to the proposed sub-station site is known as the Swale, which is an important habitat for birds and noted for having one of the largest remaining areas for freshwater grazing marsh in Kent. The Swale is covered by the following designations for its nature conservation importance:-

- The Swale SSSI includes habitats comprising chiefly mudflats, saltmarsh and freshwater grazing marsh, the latter intersected by extensive dykes and fleets. The citation includes the internationally important numbers of wintering and passage wildfowl and waders, and important breeding populations of a number of bird species.

- The Swale Special Protection Area (SPA) is important for certain species of bird. These are: Avocet and Marsh Harrier throughout the year, Mediterranean Gull in the summer, and Bar-tailed Godwit, Golden Plover and Hen Harrier during the winter. Mussel beds Mytilus edulis, eelgrass Zostera spp, and mudflats are listed as important food and foraging areas for the birds.

- The Swale Ramsar site qualifies by virtue of the saltmarsh and grazing marsh supporting internationally important numbers of wintering waterbirds including the following species: Redshank (0.9% of the Eastern Atlantic wintering population. Brent Geese (0.7% of the Western Siberia/Western Europe population, and Grey Plover (1.2% of the Eastern Atlantic wintering population).

As part of the studies for the wind farm as a whole, ornithological data is being collected for an area covering about 8km^2 around the cable landing point at Cleve Hill. The aim of the survey work is to provide a reliable and repeatable method to estimate the wintering bird populations of conservation importance using the site and to enable construction work to be scheduled to minimise ecological impact. The survey work comprises of regular counts of birds within the study area, the counts being undertaken at approximately fortnightly intervals throughout the year. These surveys commenced in November 2002.

Kent Wildlife Trust lease and manage a Nature Reserve on the south bank of the River Swale, to the west of proposed location for cable laying. The Trust also leases and manages an area about 50m in width running immediately behind the sea wall and up to a drainage ditch running parallel with the sea wall. The cables would also cross this area.

The trenching for the cables and penetration of the sea defences will have a direct effect on the section of the Swale SPA/RAMSAR/SSSI that lies within the planning application boundary. Figure 1 shows the general area where the cables would be brought ashore. However, initial studies and visual inspections would suggest that the more westerly section of that general area would be preferable. Although increasing overall the length of cabling, the cables would cross a shorter section of the inter-tidal area, and the area behind the sea wall at that point is grazed and could be crossed without disturbance to the nearby borrow-pits managed by Kent Wildlife Trust. Further studies will be necessary, and consultations will continue with both English Nature and Kent Wildlife Trust.

The construction and operation of the sub-station will not directly impinge on or affect the Swale. Potential indirect effects might result during construction, for example effects on local water drainage ditches, or construction noise. These possible effects will be identified and assessed.

The area landward of the sea defences and the land drainage ditch, which runs about 50m behind and parallel to sea wall, is largely managed as arable farmland.

A number of drainage ditches within the agricultural land will be disturbed temporarily during excavations for the cable laying trenches or diversions for construction of the transformer compounds. These ditches may provide a habitat for plant and animal species of importance for nature conservation including water voles, which are a protected species, and invertebrates. Significant effects on water voles might arise if occupied habitat is directly affected by the works and potential impacts on this species will be assessed from documentary sources, consultations and surveys as required. Following appropriate reinstatement measures, any impacts on plant and invertebrate communities in the ditches are likely to be localised and short-lived; significant effects on these species are considered unlikely.

Discussions are on-going with English Nature and Kent Wildlife Trust. The EIA will establish and report on the ecological and wildlife value of the area including a Phase 1 habitat survey of affected areas. It will take account of Kent Habitat Survey, prepared on behalf of Kent County Council. An assessment of possible impacts from the cable laying operation and construction of the sub-station will be undertaken, and mitigation measures proposed.

9.5. Soils and Agricultural Land

Pollution records for the area will be examined but significant environmental effects as a result of past or future contamination are considered unlikely.

Effects on soil resources and agricultural land quality will be identified by desk study. Mitigation measures will be identified such as the reinstatement of existing agricultural land drainage systems.

9.6. Water Environment

A drainage ditch crosses the footprint of the site and will need to be diverted or culverted. Early discussions will take place with the Environment Agency and the Lower Medway Internal Drainage Board on this aspect and also on its eventual use for site drainage from the sub-station. Where appropriate, Sustainable Drainage Systems (SuDS) will be incorporated into the surface water drainage.

There are also other drainage ditches in the locality of the site and where cabling laying will take place. An assessment will be undertaken and measures proposed to preserve the integrity of these ditches.

Arrangements will be made for the safe drainage of the sub-station site. All potentially toxic or hazardous materials stored on site (transformer oil for example) will be contained in bunded compounds. As a result of these measures it is most unlikely that there will be an impact on water quality.

The relationship of the permanent development to land liable to flood and flood levels under various conditions of sea defence will be investigated.

9.7. Solid Waste

The earthworks for construction of the sub-station will require a cut and fill operation to level the site. It is anticipated that most spoil will be re-used on site to create a level platform or for landscaping. An assessment of cut and fill requirements will be undertaken and an assessment made to identify the quantity (if any) of surplus material.

It is anticipated that the material excavated for the cable trenches will be re-used to re-instate disturbed land.

The operation of the sub-station will not generate solid wastes.

9.8. Fisheries

Off-shore of the potential cable landing points (but within the planning jurisdiction of Swale Borough Council), rights are granted for the breeding, laying, dredging and harvesting of oysters. The area is sub-divided, with rights granted to Faversham Oyster Fishery, the Whitstable Oyster Fishery Company and the Seasalter and Ham Oyster Fishery. Not all these areas will be affected by the cable laying operation, which will depend on the preferred cable route and on-shore landing point. Further consultations will take place with fisheries interests to help determine the optimum route for cables and seasonal restrictions. The effects on fisheries will be assessed.

9.9. Transport

An assessment of the local road network will be carried out. Any constraints on the local road network to HGV movements or abnormal loads will be identified in consultation with the local highway authority. Mitigation measures will be identified including hours of construction operations.

Once construction of the sub-station and cable laying operation is complete, the effect on the local road system will be minimal. There will be no permanent staffing needed at the sub-station, but access will be required from time to time for routine maintenance.

9.10. Noise

There will be some noise arising from the construction of the sub-station, tower relocation and cable laying. It is likely that construction activities will be limited to normal day-time working hours, although some operations (cable laying for example) may require continuous working for limited periods.

Once constructed, operational noise will be limited, but some noise from transformers and switchgear may be possible. Such potential impacts will be mitigated by the design of plant and noise attenuation measures such as bunding of plant.

The methods recommended in BS 4142 (1990), or a similar standard, will be adopted to assess noise arising from the new installations and their construction. Background noise surveys will be undertaken at key locations, to be agreed with the Local Authority Environmental Health Officer. Assessments of construction noise, piling noise (if piling is required), and vibration will be undertaken with regard to established significance criteria for annoyance and health effects from temporary and long term activities. Where appropriate, recommendations will made for the mitigation of any significant adverse effects.

9.11. Socio-economic Effects

During construction of the sub station there are likely to be some opportunities for local building and construction companies. Once operational, the site will be largely un-manned except during routine maintenance periods. The on-shore elements of the project are unlikely to give rise to significant socio-economic effects.

The development of the offshore components of the wind farm may create wider economic benefits for Kent as a whole. These will be reported on the Environmental Statement to support the Section 36 Consent for the offshore works.

9.12. Cultural Heritage

Desk assessment will be undertaken to understand the archaeological and historical features that may be present the locality.

Consultations will be undertaken with English Heritage and the County Archaeologist to agree the scope of the desk assessment and any mitigation measures that might be required.

9.13. Health and Safety

The statutory responsibilities of all partners in the London Array Consortium and of National Grid Transco include the health and safety of all their employees and other people who may be affected by their activities. This responsibility arises from various Acts of Parliament. The design of the on-shore components of the London Array wind farm will incorporate features that will ensure these responsibilities are met. The requirements of the Construction (Design and Management) Regulations will be met.

ATTACHMENTS

Appendix 1 Circulation list
Fig 1 General Location Plan
Fig 2 Sub-station layout Plan
Fig 3 Construction Programme

APPENDIX 1- Circulation List

This document has been issued to Swale Borough Council in order to obtain a Scoping Opinion for the on-shore parts of the project.

This document has also been circulated to the following.

English Nature
The Countryside Management Centre
Coldharbout Farm
Wye, Ashford
Kent
TN25 5DB

Environment Agency
Orchard House
Addington
West Malling
Kent
MW19 5SH

Kent County Council
Country Hall
Maidstone
Kent
ME14 5BJ

Kent Wildlife Trust
Tyland Barn
Sandling
Maidstone
Kent
ME14 3BD