

West Sussex County Council and Mid Sussex District Council

Application for Development Consent Order to construct and operate the Rampion Offshore Wind Farm.

Draft Local Impact Report – Version 1

National Infrastructure Directorate Project Ref: EN010032

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1. INTRODUCTION

- 1.1. This Local Impact Report (LIR) has been prepared on behalf of West Sussex County Council, Mid Sussex District Council and Adur and Worthing Councils ('the Councils') in response to an application by E.ON Climate and Renewables UK Rampion Offshore Wind Limited ('E.ON') for a Development Consent Order (DCO) to construct and operate the Rampion Offshore Wind Farm and associated infrastructure (the Rampion project).
- 1.2. The Rampion project involves the installation of up to 175 wind turbines covering an offshore area of some 139km², connecting to the National Grid via underground cables linking to a new substation at Bolney, Mid Sussex. The maximum output of the turbines would be 700 megawatts or 2,100 gigawatt hours of electricity per year – enough to power the equivalent of 450,000 homes.
- 1.3. The Rampion is considered a nationally significant infrastructure project (NSIP) because the project involves the construction of an offshore generating station with a capacity of more than 100 megawatts, thereby falling within the definitions set out in section 14(1)(a) and 15(3) of the Planning Act 2008 (as amended by the Localism Act 2011). Because it is considered an NSIP, the application for development has been submitted to the Planning Inspectorate (acting for the Secretary of State for Communities and Local Government).
- 1.4. The application for development consent was made by E.ON on 1 March 2013, and accepted for examination by the Secretary of State on 25 March 2013. The Councils, as local authorities affected by the development, were invited by the Planning Inspectorate to submit a LIR to form part of their considerations in making a recommendation to the Secretary of State.
- 1.5. The LIR does not consider impacts on areas within the South Downs National Park. These have been considered separately by the South Downs National Park Authority (SDNPA).
- 1.6. Further, while Horsham District Council is within the geographical boundary of West Sussex County Council, its views do not form part of this Report because it chose not to contribute to it.

2. THE LOCAL IMPACT REPORT: TERMS OF REFERENCE

- 2.1. Section 104 of the Planning Act 2008 ('the Act') requires the Secretary of State to have regard to LIRs in deciding applications. The Act defines an LIR as "*a report in writing giving details of the likely impact of the proposed development on the authority's area (or any part of that area)*" (section 60(3)).
- 2.2. As long as the LIR fits within this definition, its structure and content is a matter for the local authority. However, guidance is provided in the Planning Inspectorate's Advice Note One: LIRs (version 2, April 2012). This notes that the LIR should set out the local authority's view of likely positive, neutral and negative local impacts, and give its view on the relative importance of different social, environment or economic issues and the impact of the scheme upon them.
- 2.3. This LIR has been prepared taking into account the legislative limits, and the Planning Inspectorate's guidance. Accordingly, it seeks to assist the Planning Inspectorate by presenting West Sussex County Council, Mid Sussex District Council, and Adur and Worthing Councils' views of the likely impacts of the project, based on local information, experience, and evidence.
- 2.4. The LIR focuses on high level, strategic issues, allowing districts, boroughs and local consultees (including parish councils) to make more detailed comments on local matters.
- 2.5. In order to identify the key impacts it has been necessary to analyse all aspects of the proposal. In order to articulate the Councils' perspective on the proposal in a logical and coherent manner the LIR is split into four areas of development:
 - Offshore;
 - Landing;
 - Onshore (excluding substation) and
 - Substation.
- 2.6. For each development area, the document appraises the impacts (both direct and indirect) likely to result from this development and identifies whether the impacts are considered to be negative, positive or neutral, taking into account proposed mitigation measures. It also considers whether further work could be undertaken, including mitigation measures, to address issues identified as being significantly negative.
- 2.7. The topic areas covered in the LIR are set out in Table 1. The topics covered do not reflect the full remit of those addressed in the Environmental Impact Assessment (EIA) but highlight what are considered by the Councils to be the key issues within their remit. Because the Councils' remit ends at low water mark, impacts beyond that point have not been addressed, other than where they have onshore impacts.

Table 1: Topic areas covered by the LIR
Characteristics of Site
Agriculture and Soils
Air Quality
Surface Water Hydrology and Flood Risk
Ecology
Archaeology and Cultural Heritage
Landscape and Visual Impact
Noise and Vibration
Socio-Economics
Transport
Carbon Lifecycle and Balance
Cumulative and Secondary Impacts and Impact Interactions
Environmental Management
Other

- 2.8. Each of these topics has been considered, in relation to the four elements of the development (offshore, landing, onshore, and substation).
- 2.9. A Statement of Common Ground (SoCG) has also been prepared separately, identifying issues where the Councils agree with E.ON.

3. PROPOSED DEVELOPMENT

Introduction

- 3.1. E.ON is seeking development consent to construct and operate a new offshore wind farm located between 13km and 25km off the Sussex Coast.
- 3.2. Up to 175 wind turbines would be installed, covering an off-shore area of 139km², extending between Peacehaven to the east and Worthing to the west (approximately). The location of the wind farm has been selected taking into account water depths, and the need to avoid environmental designations and shipping lanes.
- 3.3. The project would have an 'installed capacity' of 700 megawatts, generating some 2,100 gigawatt hours each year. This is enough to serve the annual electricity needs of 450,000 homes each year – 80% of households in West Sussex.
- 3.4. The construction of the project, including all off- and on-shore components, is anticipated to take four years.
- 3.5. The turbines, substations and foundations are expected to operate for 20 – 25 years, after which a decision would be made whether to refurbish the off-shore plant or remove it. The onshore cables, and any buried off-shore cables would be left buried in situ.

Offshore:

- 3.6. The 175 wind turbines would be between 165m and 210m in height, measured from sea level to the tip of the blade. Below sea level, the towers would be 18m – 60m in height, depending on water depths.
- 3.7. They would be 5m -7m in diameter at sea level, tapering to 4m in diameter at the top of the tower. A 'nacelle' containing the gearbox, generator and possibly a transformer (though this could be within the tower) would be fixed to the top of each tower. The turbine tower, nacelle and blades are likely to be light grey or white in colour, except for the lower section which would be painted in bright yellow high visibility paint to 15m above highest astronomical tide.
- 3.8. They would be set out in a grid formation, the layout of which has yet to be confirmed as it will depend on detailed ground investigation and design optimisation work being undertaken. However, they would cover an estimated area of 139km². The type of foundations has yet to be decided upon.
- 3.9. The turbines would be linked to each other, and to substations, using inter-array cables which would be buried under the seabed.
- 3.10. Two substations would be located towards the northern extent of the wind farm and connected to the turbines by cables under the sea. The substations, which would also house operational equipment, welfare facilities, and accommodation, would be 20m above sea level ('lowest astronomical tide'), up to 25m in height (i.e. 45m above sea level), and 45m X 45m in area. They would have exposed painted steelwork, and would be marked for navigational purposes.

- 3.11. The substations would be linked to the shore with four cables buried in the seabed.

Construction

- 3.12. It is anticipated that the construction of the offshore elements of the scheme (including foundations, scour protection, wind turbines, offshore substations and laying of cables) would take three years. It is likely to involve 1,260 heavy vessel movements to/from a port, the location of which would be decided at the procurement stage but is likely to be in mainland Europe.

Operation

- 3.13. During the operational period there would be a requirement for ongoing operation and maintenance activities. These include yearly/twice-yearly services of each turbine and substation, unscheduled maintenance (monthly visits to each turbine anticipated), and repair of breakdowns. It is anticipated that five service vessels would be used throughout the year, with an additional vessel used during scheduled maintenance. A helicopter may be used, but only in exceptional/emergency situations. A headquarters for the operation and maintenance works would be located at Newhaven Port.

Landing

- 3.14. The cables would make landfall in front (south) of the Brooklands Golf Centre between East Worthing and Lancing where they would travel under the beach, sea defences, A259, and national cycle route. Four transition pits would be created underneath Brooklands Pleasure Park to allow the interface between the offshore and onshore cables. The transition pits would be located 1 – 2m below the surface, and would measure approximately 12m X 4m.

Construction

- 3.15. The four offshore cables would be taken ashore using Horizontal Directional Drilling (HDD) until they reach the transition pits (mentioned above) within Brooklands Pleasure Park.

Onshore

- 3.16. The onshore cable route would then continue underground for some 26.4 km underground through West Sussex County (including Adur, Worthing, Horsham and Mid Sussex districts) and South Downs National Park Authority to reach a new substation at Bolney in Mid Sussex.
- 3.17. The route of the cable has been established taking into account sensitive historic, ecological and landscape features, as well as physical constraints. From the East Worthing landfall it extends north-west through the Brooklands Golf Centre, under the west-east railway corridor (using HDD), where it crosses from Worthing District into Adur District. North of the railway the route passes through Sompting Gap, an area of pastoral farmland. It would cross under Upper Brighton Road (the B2222) and a Public Right of Way south of the A27, immediately west of Sompting Conservation Area. The cable would

then head northwards under the A27 Sompting Bypass, beyond which it would enter the South Downs National Park.

- 3.18. The route then curves east under Lamleys Lane, crossing back into Worthing District before heading north, then north-east, through rising pastoral farmland, crossing under a number of Public Rights of Way. The route turns north-east at Beggars Barn, before turning east in a location north of Steep Down Site of Nature Conservation Importance (SNCI). A small part of Appelsham Farm SNCI falls within the cable route.
- 3.19. The route continues east, then north east after Coombes Road to cross under Adur River just south of the former Shoreham Cement Works. Beyond the river, the route curves north-east and north, crossing from Adur into Horsham District east of the former Shoreham Cement Works. The cable would head east of Upper Beeding through Tottingham Mount, looping west then east to avoid the Beeding Hill to Newtimber Site of Special Scientific Interest (SSSI). At this point the cable would be some 850metres inside the South Downs National Park.
- 3.20. The cable then continues north, then north-east through farmland east of Small Dole. The route remains within Horsham District, but close to its eastern boundary with Mid Sussex District.
- 3.21. At a point south of Horn Lane, north east of Small Dole, the cable emerges from land within the SDNPA, and returns to Horsham District.
- 3.22. The route continues in a roughly northerly direction through farmland west of Woodmancote and Blackstone, and east of Henfield. The cable would cross under the A281 (Brighton Road), then continue between several ancient woodlands, and underneath several Public Rights of Way. It would continue north across low lying farmland, turning east to avoid businesses and dwellings on the B2116 before crossing under the road, in the process leaving Horsham District and entering Mid Sussex District. The route would cross and abut several Public Rights of Way, particularly around Morley Farm south of the B2116.
- 3.23. The cable route then continues north towards Twineham, crossing Bob Lane just east of Twineham Grange Cottages. The proposed substation would be located immediately north of Twineham Court Farm, abutting the existing Bolney National Grid substation.
- 3.24. Permanent marker posts would be installed at field boundaries (to minimise interference with agriculture) to indicate the cable route.

Construction

- 3.25. Most of the cable route would be laid in phases using open trenching where a trench is dug, the cable ducts laid, and the trenches backfilled and reinstated.
- 3.26. Cable installation would be undertaken from joint bays which would be installed at 600m – 1 km intervals. An area of hard standing (approximately 10m X 30m) will need to be created adjacent to each joint bay to enable cable drums to be offloaded using a mobile crane, and stored. The cable drums hold up to 1,000m of cable, and can weigh up to 27 tonnes each.

- 3.27. The cable corridor would have a 'working width' of at most 40m which would include a 15m permanent easement for four cable trenches, a 3m trench access to one side and a 5m haul road to the other, and a 10m area for topsoil and subsoil storage.
- 3.28. It is anticipated that the onshore construction works (including landfall, substation and cable construction) would take 28 months. Trench excavation, duct installation and reinstatement are expected to take six weeks per kilometre. There would be joining bays every 600m – 1km which would be left exposed to allow cable pulling and jointing, with 10 further weeks required for each bay, for cable pulling, jointing, and reinstatement.
- 3.29. There could be a six month – one year delay between the trenching process and cable installation. Because of this there would be a delay in the reinstatement of the joint bays to enable cable pulling and jointing operations.
- 3.30. Temporary compounds (a main compound and satellite compounds) would be established along the cable route, though their locations have yet to be identified. These would house materials and machinery required for delivery to construction sites, along with staff welfare facilities, and may incorporate measures such as wheel washes. It is anticipated that the compounds would be in use from 07:00 to 19:00 Monday – Friday, and 07:00 to 13:00 on Saturdays. The satellite compounds are likely to measure 50m X 50m, and be enclosed with security fencing, with external lighting in place for security.
- 3.31. The main compound, likely to be located in the northern part of the cable route, would also include office accommodation. It would measure an estimated 150m X 100m in area.
- 3.32. In addition to these compounds, a 'working area' is required at either end of locations where HDD is to take place. This method is to be used to lay cable where open trenching is not possible. Large scale HDD will be used at:
- Between landfall (at East Worthing) and an area north of the A259;
 - Under the south coast railway line between East Worthing and Lancing;
 - Under the A27 at the Sompting bypass (the drilled exit north of the A27 is within South Downs National Park so not considered in this LIR); and
 - Under the River Adur and A283, south of former Shoreham Cement Works (within South Downs National Park).
- 3.33. HDD is anticipated to take 4 to 13.5 weeks depending on the location.

Substation

- 3.34. The new substation would be located on agricultural land immediately east of an existing National Grid substation. It would cover an area of some 23.3 hectares.
- 3.35. Permanent access to the substation would be from an existing access on Bob Lane which would be upgraded, though traffic during the substation operation is expected to be minimal.
- 3.36. The substation would contain a range of equipment including transformers, switchgear, High Voltage cables, car parking, and control buildings which are likely to be two storeys in height. The site would be largely covered with buildings and equipment, the tallest of which would be 12.5m in height.

Construction

- 3.37. The substation would take up to two years and four months to construct.
- 3.38. Due to the number and size of construction vehicles anticipated, a temporary construction access would be created from Wineham Lane to the west of the site. Wineham Lane links with the A272 some 700m north, east of which is the A23.
- 3.39. It has been agreed that construction traffic would avoid using Bob Lane to access the site, following feedback from the local community, including the Parish Councils. However, initial works, taking four – six weeks, enabling work on the construction access, would make use of the existing access on Bob Lane.

4. SITE AREA AND CONSTRAINTS

Offshore

- 4.1. The offshore part of the wind farm would cover an area of 139m², extending over an offshore area approximately between Worthing to the west and Peacehaven to the east.
- 4.2. The area was selected for its lack of constraints on development, at least relative to other alternatives. A wider area between Chichester and Rye was identified as a potential location by E.ON, taking into account a range of constraints (water depth, geology, ecology, shipping lanes, aggregates extraction, Ministry of Defence constraints, statutory nature designations and distance from shore). Preferred areas were then weighted taking into account environmental constraints, acceptability and constructability.
- 4.3. Nonetheless, the final offshore Rampion application site is still subject to a number of constraints. It contains no national or international environmental designations, though there is a local Marine Site of Nature Conservation Importance, namely the City of Waterford Wreck, located along the north-eastern boundary of the site.
- 4.4. The seabed gradient is relatively gentle, with the seabed formed of sands and gravels.
- 4.5. The key constraints, from the point of view of the Councils, are the proximity of Shoreham Port (along with routes to it and vessel anchorages), and the physical impact of the wind turbines on views and perceptions.
- 4.6. The offshore part of the project – i.e. the wind turbines – has the potential to have the greatest long term social and economic impact onshore. In very basic, obvious terms, the sea plays a central role to communities living along the coast. For many, it is a key reason they have chosen to live where they do. The sea plays a key role in the economic and social lives of many living in this area, so any impact socially, economically and/or environmentally has the potential to be of great significance, even with a relatively small magnitude.
- 4.7. Adur and Worthing Councils are to provide background relating to the socio-economic situation in the coastal areas, and the potential impact upon it in terms of fishing, tourism, diving, and Shoreham Port, as well as the general impact on outlook/perceptions of people living along the coast.

Landing

- 4.8. The cable would come ashore between Lancing and East Worthing, in front of Brooklands Golf Centre.
- 4.9. The site was selected as the largest gap in a 'heavily built coastline', aiming to avoid significant impacts on commercial and residential properties, major disruption to roads, and impact on communities. A number of alternatives were looked at, taking routes from various points along the coast, to several different substations.

- 4.10. The landing point avoids any national or international designations and any dwellings. It would cut under the beach, under the A259 (with cycle lane to the south, and footpaths either side), before heading across a local authority golf course (pitch and putt and par 3), and associated recreational areas.
- 4.11. Worthing Borough Council is to provide more details relating to this area, particularly as much of it is publicly-accessible land.

Onshore (excluding substation)

- 4.12. While much of the onshore route has been selected to avoid sites subject to ecological, landscape or historic designations, it would pass close to several.
- 4.13. The southern part of the cable route, along the coast and across some of the inland route to the A27 is within an area identified as being at risk of flooding (flood zones 2 and 3). There are a number of Tree Protection Orders within the Brooklands Park Golf Course, none of which are anticipated to be affected by the development.
- 4.14. The area from the seafront to the A27 is largely flat, and forms a relatively narrow un-built area between Worthing and Lancing.
- 4.15. Following the route north, the cable would extend immediately west of Sompting Conservation Area, with HDD under the A27 separated from the historic designation by the narrow Lambleys Lane.
- 4.16. The route then crosses under the A27 into the South Downs National Park (dealt with separately by the SDNPA).
- 4.17. The cable route emerges from the South Downs National Park at a point north of Small Dole, in Horsham. It extends between several areas of Ancient Woodland, and near Listed Buildings at Twineham Place and Great Waspses Farm. There is an SNCI at Henfield Common, some 750m west of the cable route.
- 4.18. In this area the land is characterised by farmland which rises very gradually to the north.

Sub station

- 4.19. The substation would not be in an area subject to any designations or otherwise constrained. It would, however, be a significant, industrial built feature within an area largely characterised by open countryside.
- 4.20. Twineham Lane which links to the site from the A272 is relatively narrow, with thick trees on either side. There are few residential properties to the north, and any built features are generally set well back from the road.
- 4.21. Bob Lane is a narrow rural road enclosed on either side by thick trees and hedgerows.
- 4.22. To the south of the site on Wineham Lane is the Royal Oak pub, a busy rural pub adjacent to a caravan park. There is frequent on-road parking the vicinity of these businesses. South of this is a strip of large residential properties fronting Wineham Lane. [

5. RELEVANT PLANNING POLICY

- 5.1. In accordance with Section 104 of the Planning Act 2008, in determining applications for development consent decision-makers must have regard to relevant national policy statements. However, paragraph 4.1.5 of the Overarching National Policy Statement (NPS) for Energy ('NPS EN-1') states that along with NPSs:

"Other matters that the IPC may consider both important and relevant to its decision-making may include Development Plan Documents or other documents in the Local Development Framework. In the event of a conflict between these or any other documents and an NPS, the NPS prevails for purposes of IPC decision making given the national significance of the infrastructure."

- 5.2. The developments plans for the Rampion Project area are therefore a relevant consideration, as long as they do not conflict with NPSs.
- 5.3. The National Planning Policy Framework (March 2012) ('the NPPF') is also a material consideration, though paragraph 3 of that document states that it does not contain specific policies for nationally significant infrastructure projects, and goes on to reiterate the requirements of the Planning Act 2008 (see paragraph 6.1). However, paragraph 162 states that *"Local planning authorities should work with other authorities and providers to: take account of the need for strategic infrastructure including nationally significant infrastructure within their area."*
- 5.4. The Councils consider that the following development plan policies are of particular relevance to the consideration of the present application:
- Worthing Local Plan (2003);
 - Worthing Core Strategy (2011);
 - Adur District Local Plan (
 - Emerging Adur Local Plan
 - Horsham Core Strategy
 - Horsham General Development Control Policies
 - Mid Sussex Local Plan
 - Revised Mid Sussex District Plan
- 5.5. The NPPF is also a material consideration.

6. STRATEGIC VIEW

- 6.1. At a county level, it is considered that the impact of the proposed development would be generally positive through providing a new source of renewable energy. However, this is balanced against the impact of the construction works combined with the new substation and the creation of a cable route across the county.
- 6.2. The works required to install the wind farm infrastructure, including off shore (turbines, substations, undersea cable), and onshore (horizontally drilled landing and other crossings, buried cable, and substation) would be significant in both physical scale and length of construction. The potential for adverse strategic and cumulative impacts is therefore significant.
- 6.3. However, the construction of the development would be undertaken in a linear fashion, so impacts resulting from the construction works themselves would be confined to the immediate area, or several areas around the county.
- 6.4. The ecological and visual impact of a 40m wide construction corridor extending across the county could be significant, and potentially long-lasting without appropriate mitigation. It is therefore crucial that a ten year ecological enhancement plan is in place, to ensure that the land is restored in a way which is feasible, and maintained in the long term.
- 6.5. The wind farm itself can be seen by some to have a positive visual impact, or at least to be a feature of interest. However, it is considered that the potential for public interest in the wind farm, and potential tourist opportunities, has not been adequately explored by E.ON. This could have a positive benefit on West Sussex which has not been investigated.
- 6.6. In strategic terms, additional renewable energy capacity is welcomed. Further, the impact of this project on public awareness of renewable energy and wider green issues is likely to be positive. It must be acknowledged however that these benefits are slightly esoteric compared with the direct, albeit temporary, construction impacts which are likely to be at the forefront of the county's residents' minds over the construction period.

7. MATTERS TO BE COMPLETED BY DISTRICTS

8. AIR QUALITY

- 8.1. The cable corridor would stretch from the densely populated area along the south coast, through the protected landscape of the South Downs, to the farmland around Twineham, and as a result, across significant differences in air quality.

9. NOISE AND VIBRATION

- 9.1. The key impact from the operations in noise terms would be during the construction period, both on- and off-shore.
- 9.2. The Councils are concerned at clause Article 14(1)(a)(ii) and (b)(ii) allow the construction, maintenance and use of the authorised project to be undertaken without regard to statutory nuisance "...where it cannot be reasonably avoided." The clauses allow the operator to ignore any mitigation requirements and noise levels set out in approved noise schemes. This is of significant concern to the Councils.
- 9.3. The Councils also wish to express significant concern at the statement in paragraph 27.5.12 of the Environmental Statement that "The results show a moderate impact from HDD noise at the landfall and a major impact from HDD at the railway, Sompting Bypass, A281 and B2116, which would be considered significant."
- 9.4. The previous paragraph to this notes that HDD may, as a worst case scenario, take place 24 hours a day, for up to 13.5 weeks. This is a significant period of time for a sensitive receptor to experience major noise impacts. It is noted that there is no reference to distances from HDD points to sensitive receptors, but that there are residential properties within very close proximity to all of these points.

10. SURFACE WATER HYDROLOGY AND FLOOD RISK

- 10.1. Adur/Worthing to complete re. impact of project on coastal flood risk.
- 10.2. Compaction of soil replaced on trenches may be an issue, particularly on steeper slopes.

11. SOCIO-ECONOMICS

- 11.1. Adur and Worthing Councils are to provide the bulk of information for this section.
- 11.2. The Councils are concerned at the possibility that the development may adversely affect Shoreham Port. The Port plays an important role in the economic performance of the area, particularly in the areas along the south coast, many of which underperform economically.
- 11.3. The Port may suffer economically due to the loss of fishing area to 'exclusion zones' around the towers, and during construction, and if ships need to divert around the windfarm, adding miles to operations, making the Port unattractive.
- 11.4. The Councils are also concerned at the impact of exclusion zones to be imposed during construction and afterwards. These have the potential to significantly impact upon the local fishing community in particular, but also those relying economically on diving and charter fishing. There

is also the potential for secondary impacts as a result of the loss of local spending from these businesses.

- 11.5. The cable construction has the potential to result in socio-economic impacts, as has the new substation.
- 11.6. To offset the socio-economic impacts, and to ensure that the benefits of the project are focused on the local area which will be subject to the greatest adverse impacts, the Councils wish to see the imposition of a requirement that at least xx % of employees are sourced within xxxkm of the site.
- 11.7. Lack of detail re. substation plans and lack of public consultation [Henderson rep]
- 11.8. The Councils are seeking greater investment by E.ON in public education and tourism relating to the windfarm. The wind turbines would be a significant new feature, visible to a huge number of local people and visitors to a seaside destination area. Its very visible presence should be capitalised on by E.ON through the creation of a visitor and education centre. This could be used to help raise awareness of wind farms and 'green' issues generally, and through education, may help to change people's perceptions of the environmental benefits of the development.
- 11.9. It is noted that 35,000 people visit Scroby Sands Visitor Centre in Great Yarmouth according to E.ON's own website (<http://www.eon-uk.com/generation/scrobysands.aspx>). The Councils would therefore question why a similar facility has not been proposed as part of this development. This is a missed opportunity which should be taken forward by E.ON, as soon as possible, to make the most of people's interest in and curiosity about the wind farm.

12. ECOLOGY

- 12.1. The application has the potential to result in significant impacts on habitats and species, particularly if the construction-period impacts are not appropriately managed, or mitigated.
- 12.2. In terms of off-shore impacts, it is noted that sub-tidal chalk reef, a rare habitat, may occur along the offshore cable route. This is recognised in the ES which states that a pre-construction survey will update locations of any such habitats and that cabling will avoid sub-tidal chalk, where possible. This pre-construction survey must be submitted to Natural England to seek advice prior to any works.
- 12.3. It is noted that while E.ON committed to the early provision of an Ecological and Landscape Management Plan to ensure that the measures within it were appraised as early in the process as possible. This has yet to be provided (June 2013), so ecological mitigation details are still lacking.
- 12.4. The cable route crosses 18 'important' hedgerows. A further two 'important' hedgerows (of approximately 600m in length across both hedges) will be lost at the proposed substation. It is proposed to replace hedges and breaches in hedgerows on a like for like basis. If there are opportunities for additional hedge planting, such as gapping up breaks in hedgerows and re-connecting hedges, this would reduce the negative impact.
- 12.5. Requirement 20(2) – Implementation and Maintenance of Landscaping: a ten year aftercare period should be required, rather than five years (for landscaping, tree and hedgerow planting and habitat restoration works). This is particularly important as E.ON proposes to only replace the same length of hedgerow or area of other habitat as would be affected, not enhancing provision. It is therefore crucial to ensure that the replacement hedgerow/habitat thrives or at least survives over an ecologically-significant period.
- 12.6. E.ON has indicated reluctance at committing to taking on any liabilities of more than five years. If this is the case, and as a less-desirable alternative, more hedgerow/habitat should be provided than is lost. In this scenario if hedgerow/habitat did not last more than five years, it may have survived elsewhere.
- 12.7. If this cannot be provided within the site, funding should be provided for off-site provision through the Section 174 agreement.
- 12.8. More attention should be given to seeking opportunities for biodiversity enhancement, rather than just mitigation. Opportunities exist for example by way of artificial reefs and the creation of new ponds. The ES states that great crested newts were found in 23 ponds along the proposed cable route. Section 24.6.86 of the ES mentions that great crested newt mitigation, including translocation, will be discussed with Natural England directly. Some minor habitat enhancements are proposed.

- 12.9. It is considered that the creation of several new ponds may also be appropriate and should be discussed with Natural England as part of a great crested newt mitigation strategy.
- 12.10. If E.ON cannot commit to the provision of ponds and other enhancements within the site, and/or if these would be disruptive to archaeological and other features, funds should be provided through the Section 174 agreement to fund the enhancements off site.
- 12.11. There are concerns that the ES has a lack of detail regarding mitigation. For instance in relation to reptiles (Section 24.6.101) the ES says that the locations of reptile receptor sites and their enhancement will be discussed with Natural England directly. No further details are given. In light of this gap in information, the Ecological Management Plan needs to provide detailed mitigation plans to clarify exactly how this will be taken forward.
- 12.12. The ES highlights an important population of Red Star-thistle, a nationally rare plant, within the working width of the cable route in Old Erringham Farm Valley (an SSSI). In addition to protecting some of the existing habitat, further mitigation should be undertaken through seed collection in one or more seasons prior to the works, plus some localised habitat creation and seeding.
- 12.13. All connection works with the potential to affect ecologically-sensitive habitat or species should be conducted under the supervision of a suitably-qualified ecologist.
- 12.14. Post-construction ecological monitoring, including the chalk grassland at Tottington Mount (to be conducted for a period of five years post-construction). The results for Tottington Mount should be provided to Natural England annually.
- 12.15. It is also noted that the Botanical Survey submitted with the application is not complete (Figure 3 – Map 12 of 17).

13. ARCHAEOLOGY AND CULTURAL HERITAGE

- 13.1. The Councils have concerns over the methodology proposed by E.ON to appraise the archaeological assets within the cable corridor. Much of this would create a trench across undisturbed Greenfield land. The route therefore has the potential to contain previously-undisturbed archaeological features.
- 13.2. As an overall comment, E.ON's approach proposes a targeted archaeological investigation. However, it is considered that this needs to be broadened, and archaeological investigation needs to be far more thorough than is proposed.
- 13.3. In addition, the Councils are concerned that the programme E.ON is proposing for the cable works do not allow for delays which may occur as a result of archaeological finds. The Rampion newsletter from April 2013 states that "*We'll use a duct-based construction method, which means each section of cable route (around 1km) will be trenched, ducted and backfilled in days and weeks rather months. The cable itself can then be pulled through the ducting from the jointing bays between each section at a later date, reducing the impact on Public Rights of Way and allowing us to reinstate at an earlier date.*"
- 13.4. E.ON has noted that this was to reassure the public that the works would not be as disruptive as they perhaps imagine. However, in reality it may be necessary to allow for sufficient time to provide an appropriate level of archaeological mitigation for a cable route of 26.4km length running through some of the most archaeologically sensitive landscape in Sussex.
- 13.5. While the opportunity to respond to the details set out in response to Requirement 28 (Archaeology), the Councils remain concerned at what has so far been presented.
- 13.6. The proposed approach to Desk-Based Assessment raises concerns. The Heritage Base Line assessment was based on wholly out of date sources. Despite this, the same sources, many of them dating from 1978 when field archaeology in Sussex was in its infancy, are used in Section 25 of the Environmental Statement.
- 13.7. Much reliance is placed on geophysical survey, but this covers only 86% of the survey corridor, excluding locations where overhead lines, cables, fencelines etc. are present. Geophysics should be seen as a complementary technique at best, backing up direct intervention techniques such as trial trenching and area excavation. It cannot reveal the date (or full complexity) of the features/ anomalies revealed nor confirm whether these are real features or geological anomalies with the appearance of archaeological features.
- 13.8. The statements in Table 25.2 of the ES states "*The geophysical survey could also suffice to replace historical aerial photograph assessment, but high-resolution modern aerial photography should be assessed for the whole route*". While a concession might be made in terms of reviewing historic air photo evidence for the entire width of the corridor it was not agreed that the actual construction easement

should be excluded and it would be contrary to professional archaeological practice.

- 13.9. The Historic Environment Record (HER) data originally supplied to inform desk based assessment (and heritage baseline assessment etc) is now dated, and should be reviewed against HER data for the corridor which may have been added since.
- 13.10. Concerns remain about fieldwork and timetabling to minimise the risk of delay. There remains a need to target 'blank' areas as well as 'hotspots' to avoid surprises, to allow sufficient time for field investigation/assessment/mitigation. In addition, the sample size (evaluation trenching) should be at least 5% - sufficient to make an informed judgement on impact.
- 13.11. ES Paragraph 25.8.3: it would be helpful to know the sample size to be used in the proposed trial trenching.
- 13.12. Paragraph 25.8.4: Trial Trenching - it is important that 'blank' areas are tested in trial trenching as well as 'targeted' areas, as a control and to provide an adequate idea of the true resource. Evaluation prior to construction is undertaken to minimise the risk of the unexpected, and to ensure that the provision for recording is adequate. The sample size (archaeological trial trenches) of the corridor land take should be sufficient to make a judgement upon the impact with reasonable confidence and ensure that heritage assets are properly recorded.
- 13.13. Paragraph 25.8.13 states "Full archaeological advance-excavation will be undertaken following stripping scheduled in the groundworks methodology of the construction programme, and in advance of further groundworks such as cable trenching." This hints at the susceptibility of the programme to delay. Little margin for error (or archaeological finds) has been factored in.
- 13.14. Fundamentally, the archaeological information is a 'broad brush' outline of the scope of archaeological fieldwork. Insufficient detail has been provided. Until the Written Scheme of Investigation (WSI) is produced there is little to work with. An Archaeological Consultant should draft the WSI as soon as possible as this could influence timetabling and forward planning. For example, once topsoil has been stripped from the working easement, no vehicles should enter until an archaeological investigation has been undertaken.
- 13.15. The ES states that there is a limited amount of capacity to 'tweak' the alignment to preserve certain features in situ but this relies on identifying and assessing importance in the first place before determining whether to preserve in situ or preserve by record.
- 13.16. In relation to the draft DCO, Section 28 refers to a WSI for archaeological investigation and acknowledges that "*no stage of the connection works, including any trial trenching, shall commence until (one) ...has been submitted*". However, it also refers to submission of the WSI "*after consultation with English Heritage*" which seems unnecessary other than for the specific requirements of the scheduled monument on Tottington Mount - see 28.5 infra (and might introduce an element of delay).

14. SEASCAPE, LANDSCAPE AND VISUAL IMPACT

- 14.1. E.ON has committed to the early provision of an Ecological and Landscape Management Plan to ensure that the measures within it were appraised as early in the process as possible. This has yet to be provided (June 2013), so ecological mitigation details are still lacking.
- 14.2. Article 37 allows the felling or lopping of any trees or shrubs where it is reasonably believed to be necessary to prevent the obstruction or interference with the construction, maintenance or operation of the project.
- 14.3. Despite this provision, the submission does not include a Tree Survey or Arboricultural Impact Assessment (in accordance with BS5837:2012). This issue was raised in August 2012 but has not been addressed in the submission.
- 14.4. The creation of a 40m swath for construction purposes will clearly have implications for trees, particularly in the well-wooded areas of the Low Weald. The loss of trees on this scale will have impacts on local landscape character and it is not felt that this is accurately reflected in the Landscape Impacts Assessment. (ES Section 26). The tree survey should cover all trees affected by the proposed 40m swath for construction, those affected by the proposed compound areas and those affected adjacent to the highway where visibility splay and/or access improvements are required. The Arboricultural Impact Assessment should identify where protection of root zones and canopies from over run and damage is required and the appropriate measures to take.
- 14.5. It is unclear whether new/upgraded overhead powerlines will be required from Bolney into the National Grid.
- 14.6. It is practical to use the Rochdale envelope principle to examine the worst case scenario. However it is also generally implied that the effect of development will be less than stated. The problem with stating the worst case is that it becomes the default position. Where impacts could be reduced by deviating from the agreed line or changing the construction method it becomes a financial or programming issue, whereby justification is required to change. This runs counter to the idea that the development should plan to minimise impacts within all practical constraints.
- 14.7. The way to avoid this becoming an issue is to reduce the uncertainty surrounding those areas that are currently vague. To this extent the Ecology and Landscape Management Plan and more detailed method statements should be progressed with urgency to help assess the full impact of the scheme.
- 14.8. The DCO provides a good overview of the impacts but falls down in assessing the actual changes that could affect landscape character through the introduction of a new linear feature through the landscape. Method statements and management plans are required to demonstrate deviation of the route and mitigation to trees, hedgerows and woodland to avoid scarring the landscape.

Green Infrastructure

- 14.9. The proposals demonstrate an understanding of the potential impacts to and around the proposed cable route but do not identify how they could enhance the area. The proposals represent an interesting opportunity to implement improvement to the Green Infrastructure network. For example providing/improving pedestrian and cycle access to the South Downs National Park through the Sompting Gap as identified in Adur District's Green Infrastructure Wildlife Corridors Study (2009) or providing hedgerow/tree planting to connect woodlands to improve migration of species and protect biodiversity.

Seascape Impacts

- 14.10. It is noted that Seascape Impacts are shown in the Environmental Statement to be significant.
- 14.11. Previous comments from the Councils identified the importance of the Worthing Conservation areas. These have been classified within the report as being of large magnitude, with a major effect.
- 14.12. Submitted layout options for the turbines illustrate that impacts on a viewpoint can be reduced but with a cursory study the wireframes the impact is simply shifted elsewhere. The siting of the turbines should therefore be carefully considered to minimise on the whole area rather than focusing on a single viewpoint.
- 14.13. Issues raised previously (but not addressed):
- Trees subject to Tree Protection Orders (TPOs) have been included in the baseline research. TPOs are generally only made by Local Planning Authorities where trees are under threat of development. Therefore whilst this search may be indicative of tree quality within urban and peri-urban areas, it is not a reliable source of information on tree quality in open countryside where development is limited by policy.
 - There does not appear to be consideration of the highway impacts in the Landscape and Visual Impact Assessment (LVIA). The construction process outlined in the Environmental Impact Assessment (EIA) (Section 29) describes the use of access areas and compounds for site personnel. These features should be included in the LVIA and also the impacts on the existing boundary hedgerows and trees implicit within the highway alterations should be identified.
- 14.14. Finally, the Councils would ask that specific reference is made to the need for a hedgerow/tree protection scheme as part of Environmental Management Plan.

15. PUBLIC RIGHTS OF WAY

- 15.1. Diversion of footpath 8T (DCO Article 17 and Requirement 22): usually when a Public Right of Way (PROW) is diverted to enable development works the path is temporarily stopped-up while the works are undertaken, then the diversion is formalised. However, footpath 8T is not included in the list of footpaths for temporary closure in Schedule 4. The procedure and timings for this need to be clarified with E.ON.
- 15.2. Requirement 22 of the Explanatory Memorandum should refer to 'public rights of way' rather than 'public footpaths' (as per DCO Schedule 1, Part 3) – as paths of other status are involved.
- 15.3. Some corrections are also required to Schedule 4 of the DCO (PROWs to be temporarily stopped up):
 - Path 2761 is described as 'restricted byway' whereas it is a Public Byway;
 - Path 2760 is described as 'restricted byway, bridleway' whereas it should just be described as 'restricted byway';
 - Omission of bridleway 2754 being temporarily stopped up between points W and X (it runs parallel to and immediately north of restricted byway 2760 which is shown and described as being stopped up between these points);
 - Path 2745 is described in columns 2 and 3 as path 2741 - the path crossed between points Ae and Af is footpath 2745; and,
 - Path 2741 is described in columns 2 and 3 as path 2745 - the path crossed between points Ag and Ah is footpath 2741.

16. TRANSPORT

- 16.1. The location of construction compounds (main compounds and satellite compounds): these would be used to store and distribute material along the cable route. They would be used by lorries and tractors, would store plant, equipment, and aggregates, and would include infrastructure such as staff welfare facilities, wheelwash facilities and security lighting. The number and location of the compounds has not been identified in the application.
- 16.2. This is considered to be a significant omission as the compounds will be the focus of the main vehicle movements and other activity associated with the development.
- 16.3. The submitted information lacks details regarding how the offshore equipment would be transported to the site, and whether this would adversely affect the local road network, and if so, how significant this would be. The applicant has indicated that the turbines would most likely be brought to site by boat directly from mainland Europe, but it is unclear whether this is the case for the whole off-shore project.

17. OTHER ISSUES

- 17.1. Consideration of alternatives – Lindfield route discounted too readily.
- 17.2. Feasibility and impact of cable route going along steep scarp slopes – and impact on drainage/run-off of having new areas of compacted soil on top of buried cable.
- 17.3. Notification of where offshore construction to be taking place so can plan around navigation hazards.
- 17.4. Minimise restriction to navigation, recreational diving, angling at any one time.
- 17.5. Reasonable, clear, accurate guidance on navigation and diving zones needed once construction completed. Windfarm is over a large area, used by a significant number of divers, anglers and charter/tourist industry so current guidance that no diving zone within 50m of tower, and that small craft not within wind farm – would have a significant impact (though assumed towers not close to wrecks which would lessen diving impact).
- 17.6. Impact on uninterrupted sea views from houses along coast.

Comments on Requirements

- 17.7. Requirement 17 – Stages of Authorised Development Onshore: it is unclear what detail is required in the *“written scheme setting out the stages of the connection works”*. This appears to be the Councils' only chance to require details of the temporary works proposed.
- 17.8. The Requirement should therefore seek details of temporary works compounds, haul roads and other infrastructure, as well as timings, length of works, final locations, site boundaries, site layouts, elevations/sections of any buildings, and/or mounds, and the timing and proposals for final restoration. More detail should be required for compounds as these are likely to be larger, have greater impact, and be in situ for a longer period of time.

18. SUMMARY OF KEY CONSIDERATIONS

- 18.1. The following sets out what the Councils have identified as the key considerations, for them, in relation to this application.
- It is considered that any decision should be informed by the development plan, so the policies set out in Section 7 are of significance in reaching a decision;
 - The need for the development: while the principle of renewable energy is supported, the need for this particular scheme in this location should be a key consideration; and
 - Whether the need for the development outweighs any adverse impacts.
- 18.2. Development Plan Policy
- 18.3. The following have been identified by the Councils as the key local impacts likely to result from the proposal:
- Potential adverse impact on Shoreham Port: lack of detail in Navigational Risk Assessment (appendix 14.1) has raised concerns that the wind farm may result in ships
 - Highways impacts: resulting from construction period. Lack of details regarding location of construction compounds so impact on safety and congestion unclear.
 - Ecology: disturbance of ecological features and habitats along the route of the cable corridor, particularly through loss of sections of hedgerows (and lack of long term maintenance programme relating to replacement).
 - Impacts on PROW during the construction process.
- 18.4. As a general comment, the Councils are supportive of the principle of an off-shore wind farm located off the Sussex Coast. The principle of renewable energy is supported and welcomed by the Councils.
- 18.5. Further, the Councils are satisfied that with the exception of the socio-economic impact on Shoreham Port, it is likely that these issues can be overcome.
- 18.6. The Councils would like to express particular support for the decision to locate the cable underground.
- 18.7. However, the Councils wish to express disappointment that the applicant has sought to simply mitigate the impact of the development, providing few enhancements. Overall it is considered that this is a missed opportunity to give greater weight to the acceptability of the scheme to local communities along the cable route and near the substation. While the scheme as a whole has the benefit of providing renewable energy, it is considered that as a whole, the immediate benefit to local communities and the local environment has been overlooked.
- 18.8. Further, the Councils are concerned that the application relies on the submission of significant amounts of details to discharge the 'requirements'. It is not considered that the information submitted has

always been sufficient to enable a full appraisal of the potential impacts of the development. The key information gaps relate to:

- The location of construction compounds (main compounds and satellite compounds): these would be used to store and distribute material along the cable route. They would be used by lorries and tractors, would store plant, equipment, and aggregates, and would include infrastructure such as staff welfare facilities, wheelwash facilities and security lighting. The number and location of the compounds has not been identified in the application. This is considered to be a significant omission as the compounds will be the focus of the main vehicle movements and other activity associated with the development.

Further, in the Environmental Statement the applicant has assumed that the compounds would be located on brownfield land within the red line application boundary. The applicant has indicated that while desirable, this may not always be possible and compounds may be on Greenfield land, outside the application boundary. The evaluation is therefore contrary to the 'Rochdale Envelope' which assumes a 'worst case scenario'. Cumulatively the compounds could result in a significant adverse effect which has not, the Councils consider, been taken into account in the evaluation of the project.

- Archaeological Information: much of the cable route crosses 'greenfield' land. As such, there is the potential for archaeological features to be present. E.ON's approach to this has been to focus on known areas of archaeological potential, but with a trench to be created across a significant area of Greenfield land affected, a more thorough, wide-ranging approach needs to be taken.
- Highway Information: details of highway accesses and temporary compounds have not yet been provided.

- 18.9. Finally, given the lack of detail contained in the application, the Councils are gravely concerned at the short timescales proposed by the applicant to consider the submission of information to discharge the Requirements, as set out in proposed DCO clause 39. This states that (in summary) if the Relevant Authority fails to indicate disapproval within 56 days it is considered approved.
- 18.10. The applicant's indicative timescale notes that it anticipates it will have a contractor for the works by October/November 2014, and wish to be on site by 'early 2015'. It also notes that final details for many of the works will not be known until the contractor is on board. This indicates a very tight timescale in which a great deal of information could be submitted to the Relevant Authority for approval. While the Council is keen to act proactively and supportively, it is concerned that this timescale is unrealistic.