East Anglia THREE
Offshore Windfarm

East Anglia THREE

Revised Design and Access Statement (Schedule of Changes)

Document Reference – Deadline 5/ Second Written Questions/ DAS (Schedule of Changes)/ LH16

SCOTTISHPOWER RENEWABLES

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Schedule of changes to the Design and Access Statement (as at October 2016)

Changes made in Version 2 of Design and Access Statement	

Section	Consultee	When comment made	Comments from consultee	Change made
				Changes to the following sections / paragraphs made (strike-throughs show text that has been deleted)
1.1	N/A	N/A	N/A	2. East Anglia THREE Ltd (EATL) submitted an application for Development Consent Order (DCO) to the Planning Inspectorate in November 2015, which seeks authorisation for the project under the Planning Act 2008.
1.2	N/A	N/A	N/A	5. A ~~The~~ Design and Access Statement (DAS) was ~~has been~~ prepared as part of the East Anglia THREE DCO application ~~and has been prepared~~ pursuant to Regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 to assist in the determination of the application. The purpose of the ~~this~~ DAS was ~~Design and Access Statement is~~ to demonstrate the design ~~process that has been~~ process followed during the development of the onshore electrical transmission works at the pre-consent stage and how this is likely to progress should the project be consented. 6. This document updates the DAS to reflect refinement of the East Anglia ONE Offshore Windfarm project design, and refer to the East Anglia Projects Masterplan (Deadline 2/ First Written Questions/ Landscape Masterplan/ PN1, PN3, LH14), the principles of which will be followed by the proposed East Anglia THREE project to progress final design post consent.
1.2	N/A	N/A	N/A	9. The proposed East Anglia THREE project has been developed in accordance with ~~subjected to~~ formal EIA procedures, the outcomes of which have been reported in an Environmental Statement (ES) that accompanied ~~accompanies~~ the East Anglia THREE DCO at submission.
2	N/A	N/A	N/A	14. The East Anglia ONE Offshore Windfarm (East Anglia ONE) was awarded Development Consent Order (DCO) by the Secretary of State Department of Energy and Climate Change (DECC) on June 17th 2014. The DCO granted consent for the development of a 1200MW offshore windfarm and associated infrastructure. This was on the basis of a 1200MW HVDC project. 15. In February 2015 East Anglia ONE Ltd (EAOL) secured a Contract for Difference (CfD) that supports the construction of a 714MW project.. In April 2015 East Anglia ONE submitted a non-material change application to DECC to amend the East Anglia ONE Order toalso include a High Voltage Alternating Current (AC) solution. In March 2016 DECC authorised the

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				proposed change application and issued a Corrections and Amendments Order. 16. On 16th September 2016, EAOL wrote to the Secretary of State to advise that the East Anglia ONE project would be taken forward on the basis on HVAC technology and would comprise of 102 x 7MW turbines. 17. Requirements relating to the design of the East Anglia ONE HVAC substation at Bramford were discharged by Babergh and Mid-Suffolk District Council in August 2016. This has been confirmed by Mid Suffolk District Council's submission to the East Anglia THREE examination at Deadline 4 (REP4-027). 18. This document takes account of the updated East Anglia ONE consented position in regard to the revised substation and landscaping requirements and the process by which that design was finalised
3	N/A	N/A	N/A	21. EATL are considering constructing the offshore array and onshore substation(s) ~~project~~ in either a Single Phase or in a Two Phased approach. Under the Single Phased approach the project would be constructed in one single build period and under a Two Phased approach the project would be constructed in two phases each consisting of up to 600MW. In either case cable laying onshore and offshore will be completed in a single event. 22. The DCO for the ~~consented~~ East Anglia ONE Offshore Windfarm includes consent to construct onshore cable ducts for East Anglia THREE ~~two further projects~~ to connect at Bramford. To minimise disruption to local communities, this ducting will be installed by ~~East Anglia ONE Ltd~~ EAOL at the same time as the cables are laid for East Anglia ONE, this will include all required ~~These would be installed, and then utilised by East Anglia THREE, along the majority of the onshore cable route and all~~ horizontal directional drilling (HDD) operations ~~would be undertaken at the same time~~. EATL will then pull cables through the ducts. For East Anglia THREE, s~~S~~ome intrusive groundworks will be required at 62 jointing bay locations and close to the EATL substation at Bramford where ducting terminates. ~~for new trenches to connect form ducted to the substation and from the substation to the National Grid ducts.~~
5.1	N/A	N/A	N/A	30. The East Anglia Projects Masterplan (Deadline 2 / First Written Questions/ Landscape Masterplan/ PN1, PN3, LH14) included both East Anglia THREE and a future project to illustrate how the landscape mitigation would evolve with each proposed development in an integrated way. 31. This document will be referred to in developing the East Anglia THREE design principles at the detailed design stage of the project.
5.1.1	N/A	N/A	N/A	32. The site selection work completed for the consented East Anglia ONE considered how the proposed East Anglia THREE project would be accommodated as a future project, occupying the same or proximate locations to the components of East Anglia ONE. This has meant that the footprint ~~site locations~~ of the onshore components have already been established through East Anglia ONE.

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5.1.2	N/A	N/A	N/A	34. As the majority of the components would be procured following consent, their exact dimensions and appearance are unknown at this stage in the project. For the purposes of the EIA, assumptions were ~~are~~ made about the components based on a worst case scenario to ensure that all potentially significant effects are reported.
5.1.2	N/A	N/A	N/A	37. The principles utilised in developing the East Anglia ONE substation design would be considered for the East Anglia THREE project in the design and selection of components.
5.1.4	N/A	N/A	N/A	45. As the proposed East Anglia THREE project will only require the pull-through of cables the impact of the construction works will be greatly reduced in terms of geographical extent. This means than much of the East Anglia ONE replacement planting will remain undisturbed and therefore be able to grow and become well established. The mitigation planting in specific areas required for the proposed East Anglia THREE project construction will be removed and replanted following completion of the construction stage. ~~The effects of a scenario in which East Anglia ONE infrastructure is retained to be used as part of the proposed East Anglia THREE project is addressed in Appendices 23.7 and 29.5.~~
5.2	N/A	N/A	N/A	48. The presence of existing large scale energy infrastructure is part of the baseline character of this landscape. The National Grid Substation near Bramford marks a convergence of electricity transmission lines, which approach from many different directions. Whilst this effect dissipates with distance, electricity transmission lines are a typical feature of many of the surrounding landscapes. Furthermore, the East Anglia ONE converter station forms part of the predicted baseline for the proposed East Anglia THREE project. Without the construction of East Anglia ONE, the proposed East Anglia THREE project would not ~~be unlikely to~~ be implemented as it needs to utilise much of the infrastructure that will be implemented through East Anglia ONE.
5.3.2	The Examining Authority	The Examining Authority's second written questions and requests for information Published on Thursday 22 September 2016	In response to FWQ question LH11 [REP2-028] it is stated that the Design and Access Statement will be updated to refer to the design principles developed for EA ONE. Please provide this update.	54. The overarching provisions of the landscape masterplan for East Anglia ONE have been agreed with ~~The key principles in relation to the East Anglia ONE converter station were agreed with~~ Suffolk County Council and Mid Suffolk District Council. These provisions will be used to refine the design response and potential mitigation proposals for the East Anglia THREE project. ~~These principles are equally applicable to the East Anglia THREE substation and have been considered throughout. The principles are set out in Table 2 below.~~ ~~The following design principles emphasise the need for substation design to be sensitive to place and minimise visual impacts as far as possible. They reference the need to consider appropriate building design and material, to ensure blending with the local environment and minimisation of visual clutter. The principles also reference a desire to have regard to ecological mitigation and enhancement which dovetails with a sustainable drainage strategy. Lastly, the design principles from the Local Planning Authorities highlight the need for full engagement with local communities and for the substation to be exemplar in terms of design.~~ 55. The principles for the appearance of the buildings and other structures have been established for East Anglia ONE with some cognisance of the potential for further buildings being needed for future phases. Both the design of the East Anglia ONE substation and the potential mitigation for it has been subsequently refined. Landscaping proposals will be developed along similar lines for East Anglia THREE.

<table>
<tr><th>Section</th><th>Consultee</th><th>When comment made</th><th>Comments from consultee</th><th>Change made</th></tr>
<tr><td></td><td></td><td></td><td></td><td>~~Design Principles for the East Anglia THREE substation.~~
<table>
<tr><th>~~Principle~~</th><th>~~Description~~</th></tr>
<tr><td>~~1~~</td><td>~~EATL is committed to engagement with Parish Councils, local residents and relevant authorities (Suffolk County Council, Mid Suffolk District Council and Babergh District Council) on design and landscaping in order to discharge DCO Schedule A, Part 3, Requirements 10 and 12.~~</td></tr>
<tr><td>~~2~~</td><td>~~Appropriate building design and materials will be actively sought as part of the procurement process. The East Anglia THREE substation must be sensitive to place, with visual impacts minimised as far as possible by the use of appropriate design, building materials, shape, layout, coloration and finishes.~~</td></tr>
<tr><td>~~3~~</td><td>~~The height of the substation hall and ancillary equipment will be kept to a minimum and the slab level will be lowered to the most practical level.~~</td></tr>
<tr><td>~~4~~</td><td>~~Landscaping to minimise the visual intrusion, and respond to local landscape character and biodiversity will be undertaken and considered with building design and layout of ancillary structures.~~
~~Delivery of this principle will be guided by implementation of the Outline Landscape and Ecological Management Strategy..~~</td></tr>
<tr><td>~~5~~</td><td>~~Design should have regard to the potential for embedded ecological mitigation and enhancement (excluding green and brown roofs and green walls), with particular attention to lighting, large areas of glass and baffling of noise sources.~~
~~Examples of items of ecological enhancement which could be considered include:~~
~~1. Reptiles and amphibians - refugia and hibernacula in habitats around station~~
~~2. Bird boxes (e.g. Barn Owl boxes) in surrounding habitat and on site~~
~~3. Swift bricks installed into buildings~~
~~4. Bat boxes in planting around site~~
~~5. Insect boxes on site~~
~~6. Hedgehog hibernation boxes on site~~
~~In addition, the sustainable drainage system (SuDS) solution for the site as a minimum would be likely to include a ponded area, which could represent habitat creation on the site.~~</td></tr>
<tr><td>~~6~~</td><td>~~A SuDS drainage strategy will be developed in accordance with DCO Requirement 16 relating to a Surface Water and Drainage Management~~</td></tr>
<tr><td>~~7~~</td><td>~~Opportunity will be provided through development of the final design and landscaping proposals to engage with, and seek feedback from, local communities who will be directly affected by the substation.~~</td></tr>
</table></td></tr>
</table>

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				8 ~~The design should be subject to design review, in consultation with the relevant local authorities. This could involve the Design Council or Shape East. The output of which, if it is appropriate to do so, will form part of the procurement process, as set out in Figure 2.~~ 56. The site for the East Anglia THREE substation benefits from the screening effect of existing woodland. Mitigation planting is proposed as part of East Anglia ONE. Details of this mitigation are provided in the East Anglia Projects Masterplan. ~~which will occur to the south-west, immediate north and east, with further mitigation planting proposed as part of the proposed East Anglia THREE project to the north. The potential impact of ash die back to the screening effect of existing woodland for the proposed East Anglia THREE project, and the management strategies that aim to mitigate these effects, are set out in the OLEMS~~
5.3.2	N/A	N/A	N/A	58. Integration of the building into the local landscape will be further assisted by detailed landscape planting using a selection of appropriate indigenous species to increase site biodiversity. Proposed mitigation planting for East Anglia THREE is provided in the East Anglia Projects Masterplan.
6.2.1	N/A	N/A	N/A	63. Cable pulling operations would be undertaken at up to 62 locations along the onshore cable route. At each of these locations, there would be a requirement to construct up to two jointing bays and four kiosks, and in addition access would be required to these locations. This would be either via haul road for isolated jointing bay locations, upgraded track access or directly from the public highway wherever possible. A ~~diagram showing the~~ cross section of an installed haul road is shown in Diagram 1. In some locations, removal of hedgerows and other types of vegetation would be required for the construction of the jointing bays. ~~Under the Single Phase approach both jointing bays would be constructed in one construction period, while under the Two Phased approach, one would be constructed in the first phase and the other in the second phase.~~
6.2.2	N/A	N/A	N/A	~~67. Sections of cabling would be connected together in jointing bays along the route. Under a Single Phase approach, two jointing bays each containing two HVDC cables or six LFAC cables would be created side by side during the same construction period. This will occur at up to 62 locations, therefore creating 124 jointing bays along the cable route. Under a Two Phased approach a single jointing bay containing two or six cables would be constructed at each location during each phase, also resulting in 124 jointing bays.~~
6.2.4	N/A	N/A	N/A	74. During the construction of the proposed East Anglia THREE project it would only be necessary to access the jointing bay locations to construct the bays themselves and pull through the cables. Therefore East Anglia THREE accesses are not the same as those required for East Anglia ONE, where a haul road will be built along the entire length of the onshore cable route. ~~This has provided EATL with the opportunity to reduce the amount of haul road required for the construction process. EATL will look at any opportunities to leave the haul road in place between projects or phases to further minimise impacts.~~

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6.2.4	N/A	N/A	N/A	78. The eventual length of temporary haul road required will be dependent on the detailed design and final location of the jointing bays. However it is estimated that using the indicative jointing bay locations, the total length of temporary haul road would be up to 18.05 ~~17.8~~km in length and 5.5m in width. 79. It is anticipated that where the PRoW interaction is limited to the installation of haul road across the PRoW, then no closure and diversion would be required whilst the short section of haul road is laid (and removed at the end of the construction period). During the installation and removal of the haul road, EATL propose to maintain the ongoing use of the PRoW by the public by the use of banksmen to ensure temporary cessation of haul road laying works and safe passage of users. Once the haul road is installed across the PRoW, further management measures (i.e. signage) would ensure that haul road users are aware of the potential for PRoW users to cross their path, and PRoW users are aware of the hazards to allow both to operate together safely. Precise details for management of PRoW to remain available during works will be agreed with the relevant Highway Authority prior to commencement of the relevant stage of works. 80. In the case of the Bridleway (Reference W-155/001/0) which runs close to the site of the onshore substation at Bramford, an alternative route (for walkers only) is proposed during the period of temporary stopping up, which is for a one week period. The alternative route will follow the existing footpath network from and to the points to be temporarily stopped up and would be for pedestrians only. The alternative route has been shown on the temporary stopping up of PRoW plan submitted at Deadline 2 (Document Reference – Deadline 2/ Plans/ PROW Plans (Version B)) and agreed with Suffolk County Council ~~80. At locations interfacing with the existing public rights of way (PRoW) network, there will be two approaches taken.~~ ~~81. It is considered that where the PRoW interaction is limited to the installation of haul road across the PRoW, then no closure and diversion would be required whilst the short section of haul road is laid (and removed at the end of the construction period). During the installation and removal of the haul road, the ongoing use of the PRoW by the public would be maintained by the use of banksmen to ensure temporary cessation of haul road laying works and safe passage of users. Once the haul road is installed across the PRoW, further management measures (i.e. signage) would ensure that haul road users are aware of the potential for PRoW users to cross their path, and PRoW users are aware of the hazards to allow both to operate together safely.~~ ~~82. It has been agreed between SCC and EATL that only where a haul road or upgraded access track is formed from an existing PRoW would there need to be a diversion. PRoW requiring closure will be closed for the minimum time practical and commensurate with the work requirements and restoration proposed. Diversionary routes will be agreed with the relevant Highways Authority.~~ 81. Post construction, future access to the jointing bays will either be provided by a manhole or other suitable access cover, or alternatively via a small kiosk. T~~t~~his will be undertaken on an annual basis or as required, using off-road vehicles to reach each location where required.
6.2.5	N/A	N/A	N/A	85. Post installation of the onshore cable, the working width and any associated compound areas would be reinstated to their previous condition. Works would typically include topsoil reinstatement, reseeding of grassland, margins and banks, and

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				planting in line with the Landscape Strategy, to be agreed ~~currently under development through discussion~~ with local authority stakeholders.
6.3.2	N/A	N/A	N/A	90. On this basis, it is proposed that the East Anglia THREE substation will be located within a single compound of maximum dimensions ~~15~~ 160m wide x 190m long. Within this compound, from a worst case visual impact perspective two substation buildings would be constructed to a height not exceeding 25m (to ridge line). These ~~se~~ substation hall buildings themselves will be of maximum width of ~~5885~~m wide and ~~85~~116m in length. The maximum height of equipment and ancillary buildings generally would be 15m ~~or lower~~.
6.3.5	N/A	N/A	N/A	99. Landscaping and architectural design would be developed in accordance with the East Anglia Projects Masterplan, and with reference to the appendix East Anglia ONE Architectural Plan (Deadline 4/ EA ONE Architectural Plan). The East Anglia ONE Architectural Plan is bespoke for East Anglia ONE, however the principles set out in the document will be considered in the development of the East Anglia THREE design works. ~~98. Enabling works will be undertaken to level the site in advance of the main construction works, with any materials being retained on site for reuse as part of the Landscaping Strategy, where possible.~~ ~~99. A temporary fence will be erected along the boundaries of the proposed substation site following site clearance; and will remain in place throughout the duration of the construction works.~~ ~~100. The external appearance of the substation has been driven by a need to achieve the desired functionality whilst giving due regard to the overall character of the receiving environment. The substructures of the substation halls will be formed of steel and composite cladding set around prefabricated steel framework. The control building would also include brickwork / blockwork, internal partitioning and utility connections. It is anticipated that the substation will have olive green facades and a grey roof.~~ ~~101. Based on the indicative dimensions of the substation buildings stated as 58m wide, 85m long and with height to eves and roof line of 21.35m and 25m respectively, a roof profile of 6.6 degrees would result. The roof would be constructed from profile metal sheeting. Again this scenario is assessed to represent the worst case in terms of visual impact.~~ ~~102. The design of the HVDC or LFAC substation will be the subject of discussion with the relevant local authorities who will be required to approve the final proposal before construction can commence.~~ ~~103. Areas not covered by hardstanding within the compound will be finished in stone chippings over an appropriate sub-base surface.~~ ~~104. Landscaping forms an integral part of the design of the substation. A combination of earthworks and planting measures will be implemented in order to provide visual screening and containment of the compound and the visually intrusive outside air insulated switchgear from properties to the south-west. A landscape strategy is under development with local authority stakeholders.~~

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7	N/A	N/A	N/A	104. The design of the proposed East Anglia THREE project is part of an ongoing process in which EATL is committed to optimising the quality of the design by following the principles set out in this DAS. The design-development process has built upon works undertaken ~~advice received~~ by the East Anglia ONE project and has been informed by targeted consultation with key stakeholders, the responses of whom have influenced site selection, design evolution and accessibility considerations. 105. The site for the East Anglia THREE substation building benefits from excellent existing screening and also from additional screening developed ~~proposed~~ by the East Anglia ONE project and detailed in the East Anglia Projects Masterplan. Further screening can easily be accommodated within the site which is in keeping with the existing landscape character. 107. The East Anglia ONE Architectural Plan will inform the design of the East Anglia THREE substation buildings ~~It is considered that a simple agricultural form of building is appropriate for this location and that design considerations should focus on choice and articulation of facing materials~~. Planting incorporated into the overall design will ensure the various project components successfully integrate with the local landscape pattern over time.
Figure 2	N/A	N/A	N/A	*Note that this is indicative and that the diagram does not consider award of Contracts for Difference.*