

East Anglia THREE
Offshore Windfarm

East Anglia THREE

Explanatory Memorandum

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East Anglia THREE Limited

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THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (APPLICATIONS: PRESCRIBED FORMS AND PROCEDURE) REGULATIONS 2009 REGULATION 5(2)(c)

THE PROPOSED EAST ANGLIA THREE OFFSHORE WIND FARM ORDER

EXPLANATORY MEMORANDUM

1 Introduction

- 1.1 This memorandum accompanies an application for development consent (the **Application**) by East Anglia THREE Limited (**EATL**) to construct and operate the East Anglia THREE Offshore Wind Farm (**East Anglia THREE**). The memorandum explains the purpose and effect of each article of, and Schedule to, the draft East Anglia THREE Offshore Wind Farm Order (the **Order**), as required by Regulation 5(2)(c) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.
- 1.2 It also highlights and explains the purpose and effect of any departures from the Infrastructure Planning (Model Provisions) (England and Wales) Order 2009 (**model provisions**). The draft Order is based on the model provisions but occasionally departs from those clauses and where appropriate draws from the drafting used in Orders for similar development made under the Planning Act 2008 (the **2008 Act**), the Transport and Works Act 1992 and other Acts authorising development.
- 1.3 A detailed explanation of the authorised development is set out in the Environmental Statement (Document 6.1) which accompanies the Application.
- 1.4 As the Order seeks to apply and modify statutory provisions concerning the compulsory acquisition of land and the treatment of certain requirements as planning conditions, in accordance with sections 117(4) and 120(5) of the Planning Act 2008 (**2008 Act**) it has been drafted as a statutory instrument.

2 The purpose of the Order

- 2.1 In overview, the purpose of the Order is to grant EATL development consent for a Nationally Significant Infrastructure Project (**NSIP**), namely:
- 2.1.1 An offshore generating station of up to 1,200 MW located on the bed of the North Sea approximately 69km from the coast at Lowestoft;
 - 2.1.2 Up to one accommodation platform;
 - 2.1.3 Up to two meteorological masts;
 - 2.1.4 Up to 12 buoys; and
 - 2.1.5 A network of subsea cables.

- 2.2 The Order also includes associated development linked to the NSIP, namely:
- 2.2.1 A subsea electrical connection between the East Anglia THREE and East Anglia ONE Offshore Wind Farms, the latter having been constructed pursuant to the East Anglia ONE Offshore Wind Farm Order 2014 (the **East Anglia ONE Order**);
 - 2.2.2 Up to six offshore electrical stations;
 - 2.2.3 A subsea electrical connection between the offshore substations, and from those substations to a landfall at Bawdsey Cliffs;
 - 2.2.4 Up to four transition bays;
 - 2.2.5 An underground electrical connection comprising of up to four circuits (each with up to three cables) pulled through ducting which has been pre-laid pursuant to the East Anglia ONE Order; and
 - 2.2.6 Up to two new onshore substations housing the principal electrical equipment located adjacent to the existing National Grid Bramford substation.
 - 2.2.7 An underground electrical connection comprising up to four circuits pulled through pre-laid ducting or laid directly underground in the location of the onshore substations and the National Grid substation.
- 2.3 The Order also contains six deemed marine licences under section 66(1) of the Marine and Coastal Access Act 2009 (the **2009 Act**). In addition, the Order contains powers to acquire land, or rights, compulsorily for the construction and operation of the project.

3 Nationally Significant Infrastructure Project – offshore generating station

- 3.1 Pursuant to sections 14(1)(a) and 15(3) of the 2008 Act, an offshore generating station in England or Wales having a capacity of more than 100 MW is an NSIP.
- 3.2 Section 31 of the 2008 Act provides that development consent is required under that Act to the extent that a development is or forms part of an NSIP. As the proposed generating station is proposed to have a capacity of up to 1,200 MW it qualifies as an NSIP in its own right.
- 3.3 The detailed elements which comprise the generating station, and its associated development, are considered separately below.

4 The need for flexibility in the Order

- 4.1 There are a number of particular elements in which flexibility is sought for East Anglia THREE, as follows:

Phasing

- 4.1.1 EATL is considering constructing East Anglia THREE in either a single phase or in a two phased approach. Under a single phased approach East Anglia THREE would be constructed in one single build period and under a two phased approach East Anglia

THREE would be constructed in two consecutive phases, each consisting of up to 600MW.

- 4.1.2 In the case of a two phased approach, each phase would comprise up to 86 wind turbine generators with a capacity of up to 600MW and associated development comprising up to 3 electrical stations and a defined maximum length of subsea electrical connections. The accommodation platform, one or both meteorological masts and some or all buoys may be constructed as part of either phase.
- 4.1.3 The cabling for the connection works will be undertaken in a single phase, but the onshore substation works may be carried out using either a single or two phased approach.

Electrical solution

- 4.1.4 EATL is considering both a High Voltage Direct Current (**HVDC**) and a Low Frequency Alternating Current (**LFAC**) electrical solution for East Anglia THREE. The key differences between the HVDC and LFAC solution are as follows:
 - 4.1.4.1 The LFAC solution does not require offshore converter stations, whereas the HVDC solution requires up to two offshore converter stations to convert the AC current produced by the turbines to HVDC for export to shore.
 - 4.1.4.2 The HVDC solution requires a greater amount of electrical cable to be installed offshore than the LFAC solution.
 - 4.1.4.3 The LFAC solution will require a slightly larger compound area for the onshore substation.
- 4.1.5 A decision on the final electrical solution for East Anglia THREE will be made post-consent during the final design stage of the project.

- 4.2 The Environmental Statement has assessed the worst case parameters, whether they be from the HVDC or LFAC solution or from the single phase or two phases of construction. The Order has therefore been drafted to reflect this approach, particularly with regard to maximum parameters and the structure of the requirements and deemed marine licences. Implications of phasing on the drafting of the Order are considered further below.

Structure of deemed marine licences

- 4.3 As drafted, the Marine and Coastal Access Act 2009 suggests that while a marine licence may be transferred in whole, it may not be transferred in part (or at least the drafting did not anticipate this). In light of this, EATL's proposed approach to allow for a transfer of a marine licence for the transmission assets to an Offshore Transmission Owner (**OFTO**) under The Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2010 (SI 2010/1903) is to create separate deemed marine licences in the draft Order for the generation assets, transmission assets and the interconnection.

- 4.4 This approach has been adopted on a number of offshore wind farms consented under the 2008 Act, including East Anglia ONE. However, it has been developed further in the case of East Anglia THREE to take into account the potential for phasing of the project, as set out below.
- 4.5 Whilst Schedule 1 of the Order specifies the maximum capacity of the wind farm as being 1,200 MW (with up to 172 turbines and six offshore substations), the Environmental Statement has assessed the project as being constructed in a single phase and two phases, each comprising up to 600 MW and with up to 86 turbines and three substations in each.
- 4.6 To provide for the situation where generation, transmission or interconnection assets in each phase (should the project be constructed in phases) will be held by different companies post-construction, the approach has been taken of splitting the deemed marine licences into six separate licences. These are as follows:
- 4.6.1 Licence 1 – generation assets (up to 600 MW and 86 turbines for phase 1)
 - 4.6.2 Licence 2 – generation assets (up to 600 MW and 86 turbines for phase 2)
 - 4.6.3 Licence 1 – transmission assets (up to three offshore electrical stations for phase 1)
 - 4.6.4 Licence 2 – transmission assets (up to three offshore electrical stations for phase 2)
 - 4.6.5 Licence 1 – interconnection with East Anglia ONE (phase 1)
 - 4.6.6 Licence 2 – interconnection with East Anglia ONE (phase 2).
- 4.7 Using this approach, it is possible to implement the development in two phases and to allow the transfer of the deemed marine licences for each phase to separate companies if necessary. This also avoids difficulties with contractual indemnities and enforcement if several different companies are subject to ongoing obligations under one licence. However, should EATL decide to construct the wind farm in one single phase of 1,200 MW, licences 1 and 2 for both generation and transmission assets and the interconnection with East Anglia ONE can be discharged simultaneously.

Structure of requirements

- 4.8 In terms of phasing of the offshore works, the DML conditions provide that pre-construction plans and documentation should be submitted to the Marine Management Organisation (**MMO**), including whether the works are to be carried out as a single phase or as two phases.
- 4.9 In terms of phasing of the onshore substation works, the requirements provide that pre-commencement details should be submitted to confirm whether it will be carried out in a single phase or in two phases, and the stages for each phase including prior notification of the second phase (if relevant).

Offshore flexibility

- 4.10 The Order defines the generating station in paragraph 1 of Schedule 1, Part 1 (*Authorised development*). It is limited by the 1,200 MW generating capacity, which is expressed to be a maximum i.e. “up to 1,200 MW”.

- 4.11 The constituent elements of the generating station are specified in Work No. 1, together with offshore associated development in Work Nos. 2, 3, 4 and 5A which are expressly limited to the Order Limits seaward of Mean High Water Springs (**MHWS**). Works No. 5B to 69 specify the onshore associated development linked to the NSIP within the Order Limits landward of Mean Low Water (**MLW**) and Part 2 of Schedule 1 specifies the ancillary works.
- 4.12 Within the Order, flexibility has been provided in relation to the generating station and linked associated development, and in the view of EATL this flexibility, which has hitherto been critical to the development of offshore windfarms in the UK, is fundamental to whether the Order is fit for purpose.
- 4.13 The reasons for this principally relate to the need to manage and drive down the cost of offshore wind developments to justify equity investment and access debt funding in a competitive international market. This includes the need to maintain competitive tension in the procurement process driving down costs; the need to take advantage of new developments and emerging products in the market for offshore wind turbine generators and other equipment; and the need to drive down the cost of energy for the purposes of tendering for Contracts for Difference.
- 4.14 The final design of a windfarm depends on a number of factors which include the size, height and capacity of the chosen turbine type; electrical design; length of cables; areas where development is constrained; the outcomes of site investigations, and ongoing wind monitoring results. All these are considered post-consent at the stage of detailed design and optimisation when the final number and type of turbines and their location will be decided as a function of site constraints and viable layout. This final design will be approved under the provisions of the deemed marine licences.

Onshore flexibility

- 4.15 Similar flexibility is required for the onshore elements of the development. With regard to the onshore substations, the optimal design will be determined through the contracting process. Each tenderer will offer different technologies, designs and layouts for the onshore substations within the parameters of any consent obtained, which enables the optimal design solution to be chosen. Final detailed design of the onshore substation will not be settled until after the appointment of a contractor.
- 4.16 As a result, flexibility within the Order, both onshore and offshore, is needed to optimise East Anglia THREE in the light of variable costs and supply chain availability; to accommodate technology development in turbines and other equipment; and to allow for optimal detailed design and procurement within the parameters of consents.

Policy support for flexibility

- 4.17 The use of flexibility in project details within an Order is expressly endorsed by National Policy Statements EN-1 (at paragraphs 4.2.7 to 4.2.10) and EN-3 (at paragraphs 2.6.42 to 2.6.45), provided the resulting variables are fully assessed in terms of worst case effects. Paragraph 4.2.9 of EN-1 explains that where flexibility is sought, it will be necessary to include appropriate requirements within the Order to ensure that the project "envelope" is limited to that which has been assessed in the Environmental Statement.

4.18 This approach, known as the “Rochdale Envelope”, has been followed numerous times in relation to large scale offshore wind farms consented under section 36 of the Electricity Act 1989 and the 2008 Act, and it is an approach which is well known and adopted by statutory consultees. Relevant statutory consultees have all been made aware of the parameters used in the Environmental Impact Assessment (**EIA**) and the draft Order.

Parameters in the Order

4.19 The overall result of the wording in Part 1 of Schedule 1 (i.e. paragraph 1 and Work Nos.1 – 5A) and Requirements 3 to 9 (*Detailed offshore design parameters*) in Part 3 is to allow similar flexibility in the Order as in those earlier consents. In particular, the undertaker will have freedom, within the specified parameters, as to the number of wind turbines installed, the size of turbines, the resulting capacity of the generating station up to 1,200 MW, the extent to which the area within the Order limits is used, the precise layout of turbines, accommodation platform, meteorological masts, offshore electrical stations, and the arrangement of cabling between the turbines, accommodation platform, meteorological masts and offshore electrical stations. It will also allow for different electrical solutions to be adopted.

4.20 Similarly, Work No. 67 and Requirement 12 (*Detailed design parameters onshore*) dictate the site of the onshore substations and their maximum height and footprint. Requirement 12 also requires detailed approval of the layout, scale and external appearance of the onshore substations and requires the final details to be approved in accordance with the principles of the design and access statement.

4.21 PINS has issued an Advice Note (Advice Note 9) which suggests (page 10) that a practical way forward in the use of the Rochdale Envelope would be for the Order application to “set out specified maximum and minimum” parameters, and gives possible examples, for offshore windfarms, of maximum/minimum turbine numbers; hub height and blade tip heights; minimum clearance above mean sea level; and separation distances between turbines. While these examples are not intended to be exhaustive for use by promoters, many of the fundamental parameters which define the majority of likely significant effects are included in the Advice Note, and each is considered further below, with reasoning provided for including, or not including, each parameter within the Order, or including parameters which are not included in the Advice Note.

4.22 The parameters included in the Order are set out in the Appendix to this Explanatory Memorandum for ease of reference.

Maximum MW capacity and maximum number of turbines

4.23 The total MW capacity of an offshore wind project, together with its project boundary, is its single most important defining characteristic. The maximum capacity of East Anglia THREE of 1,200MW therefore comprises the over-arching project description, and all other parameters are in effect subordinate to that description. The total MW controls the maximum number of turbines that can be installed at any given turbine capacity, with an absolute maximum number of turbines for East Anglia

THREE set at 172. In the case of a two phased approach, neither phase shall comprise more than 86 turbines.

Minimum number of turbines

- 4.24 Advice Note 9 suggests a minimum number of turbines should be specified. It is not considered that this would be a workable or appropriate parameter for EATL.
- 4.25 It is not necessary to impose a minimum to ensure that the project exceeds the NSIP threshold of 100 MW as that threshold turns on what the capacity of the scheme is expected to be at the point of application and consent. This is not in doubt – the expected capacity is 1,200 MW. While a lower figure may in fact be constructed once the turbine size/capacity has been decided and the scheme design optimised after the grant of consent, there is no reasonable basis to expect that the capacity constructed would be less than 100 MW.
- 4.26 Whether setting a minimum number of turbines as a parameter would either be reasonable or enforceable must be open to doubt. An offshore windfarm consent is a valuable asset, and if a developer chooses only to utilise part of it, there will invariably be very good commercial and technical reasons for this. This has been the exception to date in the UK, as almost all the constructed schemes have been built out in full. The flexibility sought in a modern large scale development consent for a large offshore windfarm is fundamental to whether or not the project will be constructed at all, and goes to the heart of whether the consent is fit for purpose to permit a buildable, economically viable project. This may not be the case for other types of, particularly onshore, development, but it is the case for offshore windfarms.
- 4.27 There can be no EIA justification for seeking to impose a minimum turbine requirement, since, the fewer the number of turbines, the lesser the impact.
- 4.28 To seek to impose a minimum number of turbines would also cut across a long standing principle of consents for development, namely that it is lawful for less than the full extent of the consent to be constructed, as long as what is constructed is in accordance with the requirements of the consent.
- 4.29 The other issue which arises is whether a minimum number of turbines is needed to address the point in the Advice Note that the project parameters should not be "*so wide ranging as to represent effectively different schemes*". The project is fundamentally defined by the Order Limits, the nature of the development (an offshore windfarm) and the maximum 1,200 MW capacity. It is inherent in this type of project that there will be variations in turbine numbers and scheme layout, as already explained, and it cannot properly be regarded as giving rise to "*effectively different schemes*" to the extent that an Order in these terms cannot lawfully be granted. Numerous large scale consents on an equivalent basis have already been granted under the Electricity Act 1989 for offshore windfarms without a minimum number of turbines being specified.

Maximum and minimum hub height

- 4.30 It is accepted by EATL that maximum hub height is a parameter which is appropriate for inclusion in the Order. The maximum height serves to fix the Environmental Statement assessments and confirms the maximum height at which static (rather than rotating) elements of each turbine would be

seen. However a minimum hub height is not necessary as this is inherently defined by the minimum blade clearance distance to mean MHWS (see paragraph 4.28 below).

Maximum and minimum blade tip height and clearance to mean sea level

4.31 The maximum blade tip height is a fundamental parameter and has been fixed at 247 metres above Lowest Astronomical Tide (**LAT**). The minimum blade clearance to MHWS is set at 22 metres to reflect the long standing position of the Royal Yachting Association and the inclusion of this parameter in previous offshore windfarm consents. An additional parameter has been included which requires that the number of turbines with a draught height of less than 24 metres from MHWS comprised in the authorised development must not exceed 52 turbines.

4.32 A minimum blade tip height (i.e. the lowest level at which the highest blade could pass) is not referred to in any of the assessments and is inherently fixed by the minimum blade clearance. It is not therefore included as a proposed parameter.

Minimum separation distances between turbines

4.33 A minimum separation distance perpendicular to the prevailing wind of 675 metres and in line with the prevailing wind of 900 metres has been adopted. The separation in both axes is to allow time for the energy in the wind to recover, although the greater distance is afforded to the axis of the prevailing wind direction. This approach of applying minimum separation distances has been commonly used for Electricity Act 1989 and 2008 Act consents.

4.34 The number of variables affecting the final optimised layout, including the extent to which the area within the Order Limits is used or not used, mean that a condition governing scheme layout which goes beyond the specified minimum separation distances is not appropriate. Whilst in practice most offshore windfarms have been built on a broad grid arrangement, there needs to be flexibility on this issue in the Order, to allow for detailed design and optimisation.

Maximum rotor diameters

4.35 Whilst not mentioned as a parameter in the Advice Note, EATL considers that a parameter on maximum rotor diameter is necessary to ensure a robust EIA. The total blade swept area of the turbines is a key factor in different assessments. This approach also provides an indirect control over the capacity of turbines although the 1,200 MW maximum limit means that an individual limit on turbine capacity is not necessary, as it has no bearing on the assessments in the Environmental Statement.

Foundation parameters

4.36 It is fundamental to the project that there should be flexibility to use different foundation types. Four different foundation types are provided for; monopile, jacket, suction caisson or gravity base. The choice of foundations will be influenced by a variety of factors, as explained in Volume 1, Chapter 5 of the Environmental Statement. In terms of the Order, EATL has considered which design parameters for each type of foundation are important to ensure a complete and robust EIA, and these have been included in the Order.

Offshore electrical stations, accommodation platform, meteorological masts and buoys

4.37 The number of meteorological masts, accommodation platforms, offshore electrical stations and buoys will not exceed 2, 1, 6 and 12 respectively. In the case of a two phased approach neither phase shall comprise more than 3 electrical stations. The type of meteorological mast, accommodation platform, offshore electrical station or buoy will be determined as part of the post consent detailed design and optimisation process, and will depend on the final layout and electrical design considerations. For the reasons given above, the precise design of the meteorological masts, accommodation platform, offshore electrical stations or buoys cannot be fixed at this time. Accordingly, parameters limiting their dimensions and foundation arrangements (where relevant) are included in the draft Order. Their final location within the Order limits will depend on post consent detailed design and optimisation.

4.38 It should be noted that in order to maintain flexibility, the accommodation platform could be constructed in either Licence 1 (generation assets) or Licence 2 (generation assets) of the deemed marine licences. The drafting in the Order makes it clear that only one accommodation platform is authorised, as per the following:

4.38.1 Schedule 1, Part 1 (*Authorised development*) states that Work No. 1 includes “*up to one accommodation platform*”

4.38.2 Section 3 of the deemed marine licences states that Work No. 1 includes up to one accommodation platform, “*which may alternatively be constructed under [licence 2]*”.

4.38.3 Condition 1 (*Design parameters*) of the deemed marine licences states that “*the total number of accommodation platforms forming part of the authorised scheme must not exceed one (whether constructed under this licence or [licence 2])*”.

4.39 The wording is therefore clear that there will only be one accommodation platform, but that it could be constructed under either phase 1 or phase 2 of the development. This principle is also extended to the meteorological masts and buoys, which could also be constructed in either Licence 1 (generation assets) or Licence 2 (generation assets).

Inter-array, export and interconnector cables

4.40 The precise number, layout and total length of the inter-array, export and interconnector cables cannot be fixed until post consent design optimisation. The key factor for assessment purposes is the total cable length, based on the maximum number of turbines and a worst case layout for cabling, and the maximum length has been included as a parameter in the draft Order, whether under a single phase or two phased approach.

Offshore Order Limits and offshore plans

4.41 The final parameter is the Order Limits. The nature of the flexibility sought necessarily means that the offshore Works Plan is very simplistic. It is not possible to provide a more detailed plan, for the reasons given above.

4.42 It is important to bear in mind that under the deemed marine licences contained in Schedules 10-15 of the draft Order, the undertaker must submit final construction details for approval by the MMO before construction. The MMO must ensure that final construction details conform with the description of Works Nos. 1 to 5A and compliance with the design parameters in Part 2, in conditions 1 to 6 in the deemed marine licences for the generation and transmission assets and condition 1 in the deemed marine licences for the interconnection assets. Those submitted details will specify the number, dimensions and layout of the WTGs, accommodation platform, offshore electrical stations, meteorological masts, buoys and the network of cables. Hence, there will be a further stage of regulatory control of the final form of the development prior to construction.

5 Associated development

DCLG Guidance on associated development

- 5.1 Pursuant to section 115 of the 2008 Act, development consent can be granted for the NSIP and associated development. The Secretary of State for Communities and Local Government has issued guidance on associated development¹ (the **Guidance**) which sets out its defining characteristics and illustrates the types of development that may qualify. Associated development must not be an aim in itself. In most cases, it is of a type normally brought forward with the primary development² and must be subordinate to and necessary for the effective operation of the NSIP, and may include measures necessary to mitigate the effects of the primary development. It should be of a proportionate scale to the primary development. Examples given in the Guidance include grid connections (underground or overhead lines)³.
- 5.2 Work Nos. 2 to 69 in Part 1 of Schedule 1 of the Order include associated development for which consent is sought as part of the generating station NSIP. These works comprise the offshore electrical stations (Work No. 2), interconnector with East Anglia ONE (Work No. 4), subsea cables (Work No. 5A) and onshore underground cables from those offshore electrical stations to up to two onshore substations, via jointing bays (where the offshore cables connect to the onshore cables) and associated accesses (Work Nos. 5B to 65) and the onshore substations and associated landscaping and grid connection (Work Nos. 64, and 66 to 69) together with various miscellaneous matters.
- 5.3 All these elements clearly fit within the definition of associated development in that they are not an aim in themselves but are required to receive and export the electricity generated by the generating station, with suitable electrical transformation at both the offshore electrical stations and the onshore substations. This is reinforced by the fact that these elements will, after construction, be transferred to potentially two or more (depending on whether the phased approach is adopted) new OFTOs. After such transfer the works will be owned and operated completely separately from the generating station under a transmission licence issued under section 6 of the Electricity Act 1989.

¹ Planning Act 2008: associated development applications for major infrastructure projects (Published by Department for Communities and Local Government, April 2013)

² Guidance para. 5

³ Guidance Annex B

- 5.4 The works are required to be within the Order limits but the detailed design of the associated development will be a matter for EATL. As with the WTGs, the precise number of offshore electrical stations is not fixed at this stage, but is limited to a maximum of six by the wording of Work No. 2 and by Requirement 3 (*Detailed offshore design parameters*).
- 5.5 In terms of the onshore associated development, whilst parameters are proposed for Work No. 67 (the onshore substations) the detailed elements are not fixed and will be the subject of submission of details for approval pursuant to Requirement 12 (*Detailed design parameters onshore*). The precise nature and layout of the equipment in the compound will depend on the turbine(s) selected, the electrical design and other matters. Work No. 67 is however subject to the maximum heights for the buildings and equipment specified in Requirement 12. Detailed approval for landscaping of the connection works, including the substation, is sought under Requirement 14 (*Provision of landscaping*).

Onshore connection works

- 5.6 The offshore array is located in the East Anglia Zone in the North Sea, which is being developed as a number of individual windfarms, each of which will require the appropriate statutory consents and approvals. East Anglia ONE Offshore Windfarm was the first to be proposed within the East Anglia Zone and the Secretary of State granted consent for that project on 17 June 2014. East Anglia THREE comprises the next stage of development in the East Anglia Zone.
- 5.7 The requirement to include the onshore cable ducts for future projects was included in the application for East Anglia ONE as associated development. This permits the onshore cable ducts for East Anglia THREE to be laid at the same time (if practicable) as the laying of the onshore cables for East Anglia ONE. East Anglia THREE has adopted the same landfall point as East Anglia ONE and, as for East Anglia ONE, will also connect to the National Grid onshore transmission network at Bramford in Suffolk.
- 5.8 Accordingly, East Anglia THREE will follow the same connection route and cable corridor as East Anglia ONE. Therefore, the application for East Anglia THREE includes any further works to pull the onshore cables through any (previously laid) onshore ducts together with the direct lay of cables into the ground at the substation location.

Interaction with the East Anglia ONE Order

- 5.9 The East Anglia ONE Order and the Order interact in some respects with regard to the onshore connection works, namely the use by EATL of the ducts for onshore cables pre-laid by East Anglia ONE; the possible re-use by EATL of the East Anglia ONE temporary works for cable laying; and the use by EATL of landscaping installed by East Anglia ONE to screen the East Anglia THREE onshore substation.

Cable ducts

- 5.10 At the landfall location at Bawdsey Cliffs, horizontal directional drilling (HDD) construction works will be undertaken by East Anglia ONE to lay ducts. The main feature of the landfall construction process

for East Anglia THREE will therefore be the construction of the transition bays and pulling through the onshore cables.

- 5.11 Along the onshore cable corridor the main feature of the cable laying works will be cable pulling operations and construction of jointing bays and kiosks. At each location there will be a requirement to construct up to two jointing bays and four kiosks and the pull through of up to four circuits (up to three cables in each circuit) through up to four existing cable ducts.
- 5.12 The East Anglia ONE Order aims to ensure that the laying of cables for East Anglia ONE and for future generation projects which may use the onshore cable corridor between Bawdsey Cliffs and Bramford causes minimal disruption and that as far as possible open trenching operations for different projects along the cable corridor are avoided. The onshore connection works set out in the East Anglia ONE Order comprise up to four cables and up to eight additional ducts laid underground between Bawdsey Cliffs and Bramford.
- 5.13 Requirement 29(1) of the East Anglia ONE Order requires all cable ducts forming part of the onshore connection works to be installed simultaneously with the East Anglia ONE onshore cables. A written method statement showing the programme for laying the onshore cables and all cable ducts as part of a single cable laying operation must be submitted to and approved in writing by the relevant planning authority before any stage of the connection works can commence.
- 5.14 On completion of the onshore cable laying works for East Anglia ONE, cable ducts for East Anglia THREE will therefore be in place. East Anglia THREE will make use of those ducts and will require powers to install transmission bays (at the landfall), jointing pits (along the cable corridor) and to pull cables through the pre-laid ducts.
- 5.15 The Order gives EATL the power to pull up to four circuits through existing cable ducts laid underground, to lay cables directly into the ground at the substation location, and to construct transmission bays, jointing bays, kiosks, temporary vehicular access tracks, temporary widening and upgrade of existing access tracks and new temporary primary and secondary construction consolidation sites.

Temporary works

- 5.16 On completion of the East Anglia ONE onshore cable laying works (including laying the ducts) East Anglia ONE Limited is required to restore any land used temporarily for construction. Requirement 28 of the East Anglia ONE Order requires any land landward of mean low water within the Order limits which is used temporarily for the connection works and not ultimately incorporated in permanent works or approved landscaping to be reinstated in accordance with such details as the relevant planning authority may approve. Restoration must take place as soon as reasonably practicable and in any event within 12 months of completion of the relevant stage of the connection works.
- 5.17 The areas of land to be used temporarily will comprise, broadly, the land required for the haul road and soil storage areas along the onshore cable corridor, the primary and secondary construction consolidation sites, and temporary vehicular access tracks.

- 5.18 The relevant planning authority, when approving details of any reinstatement proposals, may permit the partial retention of temporary works installed by East Anglia ONE in a form which can then be reused by East Anglia THREE. This would reduce the disruption which would otherwise be involved in East Anglia ONE fully reinstating the temporary works and then EATL reinstalling them.
- 5.19 Under requirement 36 of the Order EATL is required to submit a scheme for approval by the relevant planning authority of any reuse of temporary works installed by East Anglia ONE. Under requirement 30 of the Order EATL is required to reinstate land used temporarily for construction of the connection works.

Landscaping

- 5.20 Some of the proposed landscaping to be installed by East Anglia ONE to screen the East Anglia ONE substation will also serve to screen the East Anglia THREE substation. East Anglia ONE landscaping includes planting to the south-west, immediate north and east of the site for the East Anglia THREE substation, with the planting to the south-west and east taking place on earth bunds.
- 5.21 While existing woodland currently screens those aspects to the west, north-west and north-east, the proposed mitigation planting for East Anglia ONE would provide visual screening for the East Anglia THREE substation from all aspects.
- 5.22 Mitigation planting proposed for the East Anglia THREE substation includes substantial woodland planting to the north. This would add to the screening effect already provided by existing woodland and the narrow band of new woodland planting that would be implemented to the north as part of the East Anglia ONE planting. It also includes further planting to the south-west, should the East Anglia ONE planting need to be further reinforced. Additional planting is also proposed adjacent to Gobert's Grove to mitigate any potential impact from ash die-back.

6 Preliminary Provisions

Articles 1 and 2 of the Order contain preliminary provisions.

Article 1 (*Citation and commencement*) provides for the commencement and citation of the Order. It includes the date on which the Order comes into force, which may or may not be the date on which the Order is made.

Article 2 (*Interpretation*) provides for the interpretation of the Order. Amongst other things, the definition of Order limits includes cross reference to the works plan and to the grid coordinates for the offshore Order limits contained in Schedule 1 of the Order. The Article also defines the offshore substations and foundations and other structures such as wind turbine generators and the meteorological masts.

7 Operative Provisions

Articles 3 to 38 of the Order contain provisions for and relating to the authorised project, and miscellaneous and general provisions.

- Article 3* (Development consent etc. granted by the Order) would grant development consent for the authorised development within the Order limits, thereby authorising the construction of the main development, associated development and ancillary works. The authorised development means the development described in Part 1 of Schedule 1 (*Authorised development*). Part 2 describes the ancillary works. These are defined together as the authorised project. In identifying the development authorised by this Order, Article 3 also makes provision for the offshore and onshore works authorised by the Order to be constructed within the Order limits. All the authorised development must be carried out in accordance with the requirements set out in Part 3 of Schedule 1 (*Requirements*).
- Article 4* (*Power to construct and maintain authorised project*) makes provision for the construction and maintenance of the authorised project. This Article follows the wording within the model provisions.
- Article 5* (*Benefit of the Order*) provides for the transfer of the whole or part of the benefit of the Order with the consent of the Secretary of State, subject to certain exceptions. It also provides for the transfer of any of the deemed marine licences with the consent of the Secretary of State. The wording of this Article is based on the East Anglia ONE Order.
- Article 6* (*Application and modification of legislative provisions*) provides for the modification of Regulation 6(1)(j) of the Hedgerows Regulations 1997 to provide that removal of any hedgerow to which the Regulations apply is permitted for carrying out development which has been authorised by a development consent order made pursuant to the 2008 Act.
- Article 7* (*Defence to proceedings in respect of statutory nuisance*) reflects model provision 7 and provides that no-one shall be able to bring statutory nuisance proceedings under the Environmental Protection Act 1990 in respect of noise, if the noise is created in the course of carrying out or maintenance of the authorised project and for which notice has been given under section 60 or consent obtained under section 61 or 65 of the Control of Pollution Act 1974 or if the noise is unavoidable. As stated in the Statement of Engagement submitted with the Application (Document 5.3), it is not considered that any properties will be affected beyond statutory nuisance thresholds, as mitigation measures will be used to control noise emissions. However, EATL considers that this Article should be included in the event that proceedings are brought

under Section 82 of the Environmental Protection Act 1990. This was accepted in the East Anglia ONE Order. East Anglia THREE comprises nationally significant infrastructure and as a result it is appropriate that the project is protected.

- Article 8* (*Street works*) is adapted from model provision 8 and confers authority on the undertaker to place and maintain works under the streets specified in Schedule 2 (*Streets subject to street works*) within the Order limits and for the purposes of the authorised project. The authority given by this right is a statutory right for the purposes of sections 48(3) (streets, streets works and undertakers) and 51(1) (prohibition of unauthorised street works) of the New Roads and Street Works Act 1991.
- Article 9* (*Temporary stopping up of public rights of way*) is adapted from the model provisions to allow the temporary stopping up of public rights of way during the construction of the onshore part of the authorised development. It refers to Schedule 3 (*Public rights of way to be temporarily stopped up*) which lists those rights of way which may be stopped up temporarily.
- Article 10* (*Temporary stopping up of streets*) reflects model provision 11 and provides for the temporary stopping up of streets, subject to the consent of the local highway authority concerned which may attach reasonable conditions to any such consent.
- Article 11* (*Access to works*) reflects model provision 12 and authorises accesses to and from public highways to be created at locations specified in Schedule 4 (*Access to works*) and for any other access, with the approval of the planning authority after consulting the highway authority.
- Article 12* (*Agreements with street authorities*) reflects model provision 13 and authorises street authorities and the undertaker to enter into agreements relating to any temporary stopping up, alteration or diversion of a street authorised by the Order, or the carrying out of works in the streets referred to in Article 8 (*Street works*).
- Article 13* (*Discharge of water*) reflects model provision 14 and enables the undertaker to discharge water into any watercourse, public sewer or drain in connection with the construction and maintenance of the authorised project with the approval and superintendence (if provided) of the authority to which the watercourse, public sewer or drain belongs (such approval not to be

unreasonably withheld) and subject to other conditions.

Article 14 (*Authority to survey and investigate the land onshore*) reflects model provision 16 and confers upon the undertaker a power to survey and investigate land, including the ability to make trial holes, to use and leave apparatus on the land in question and to enter onto land. The article also makes provision in relation to the payment of compensation.

Article 15 (*Compulsory acquisition of land*) confers on the undertaker powers of compulsory acquisition of so much of the Order land as is required for the authorised project or to facilitate it, or is incidental to it. The model provisions have not been followed in that paragraph (2) of model provision 18 has been revised. The model provisions at paragraph (2) provide for automatic extinguishment of rights applying to the Order Land as soon as it is vested in the undertaker. This is inconsistent with both the undertaker's intentions and the provisions of Article 18 (*Private rights*) which is based on the model provisions applicable to railways orders. It is varied to provide for the extinguishment of rights upon entry onto the land concerned. Entry may take place ahead of vesting of the Order Land (if indeed vesting ever occurs) pursuant to the powers of temporary possession in the Order, or by agreement. Article 18 (*Private rights*) also provides for rights to be excluded from extinguishment where extinguishment via statutory process is not appropriate or required. As a result, Article 18 (*Private rights*) has been expanded to deal with rights in general and the corresponding provision omitted from this draft Article.

Article 15 provides broad powers. It is considered necessary to make it clear, in the main, operative provision that the whole of the Order land is potentially subject to powers of compulsory acquisition. In practice, however, pursuant to the other Articles, the powers of compulsory acquisition are limited, and for the great majority of the East Anglia THREE Order land, will be restricted to some combination of the acquisition of specified new rights (Article 17), and specified powers of temporary possession.

Articles 17 and 23 also limit the application of Article 15. More detail is given below.

Article 16 (*Time limit for exercise of authority to acquire land compulsorily*) reflects model provision 20 and imposes a time limit of five years from the coming into force of the Order for the exercise of powers of compulsory acquisition of land.

Article 17

(Compulsory acquisition of rights) enables the undertaker to acquire rights over land, including new rights and existing rights if applicable. It also provides for the extinguishment or overriding of existing rights in land subject to the provisions of the Article. The Article is drafted so as to allow the undertaker flexibility to acquire new rights in the Order Land if appropriate rather than outright acquisition under Article 15 (*Compulsory acquisition of land*). This flexibility allows the undertaker, if it is possible so to do, to reduce the areas required for freehold acquisition and rely on new, permanent rights instead if this is appropriate. This flexibility is appropriate to allow for continued negotiations with owners of Order Lands and is a provision that is usual in Transport and Works Act Orders and hybrid bills. An example can be found in Article 19 of the Network Rail (Nuneaton North Chord Order) 2010 and Part 3 of Schedule 6 to the Crossrail Act 2008. This was accepted in the East Anglia ONE Order.

The model provisions have been amended to reflect that a right to compensation is now provided in Article 18 (*Private rights*) rather than in this Article. Reference is also made to Schedule 6 (*Modification of compensation and compulsory purchase enactments for creation of new rights*) in the modifications of compulsory purchase legislation to apply appropriate provisions regarding material detriment etc to the acquisition of new rights.

Further it is to be noted that the undertaker is seeking to impose new restrictive covenants as scheduled in Schedule 5 (*Land in which only new rights etc. may be acquired*) to the Order for the protection of the cables, jointing bays and any ducts that will be installed as part of the authorised development. Such protection has been given in Transport and Works Orders (notably relating to Docklands Light Railway) to protect the structure of subterranean development such as tunnels. It was also included in the East Anglia ONE Order. It is considered that the nature of the authorised development is appropriate for such restrictive covenants and the predominantly agricultural nature of the Order lands would not be unduly burdened by the imposition of restrictive covenants, particularly on the basis that where restrictive covenants are being sought, a right of access for maintenance purposes over the same area is also being sought.

Paragraph 2 provides for the acquisition of new rights as are specified in Schedule 5 (*Land in which only new rights etc. may be acquired*) rather than permitting the compulsory acquisition of land.

Paragraph 3 states that the undertaker will not be required to acquire a greater interest in the land than an existing right where existing rights are proposed to be acquired in the land to which paragraph 1 of Article 17 applies.

Paragraph 4 refers to modifications to enactments in relation to the creation of new rights and their compensation as a result of the creation of a new right. It is considered that such a modification to the statutory provisions relating to the acquisition of new rights is necessary because they do not operate clearly in relation to the creation of new rights over land. Accordingly a new Schedule (*Modification of compensation and compulsory purchase enactments for creation of new rights*) has been incorporated, modelled on numerous Transport and Works Act Order equivalents as well as the provisions of the Local Government (Miscellaneous Provisions) Act 1976 which apply in relation to compulsory purchase orders made by local authorities.

Paragraphs 5 and 6 provide a mechanism for the transfer of rights to statutory undertakers with the consent of the Secretary of State.

Articles 17(1) and (2) provide that, for Order Land specified in Schedule 5 (Land in which only new rights, etc, may be acquired), the undertaker's rights are limited to the acquisition of such new rights or restrictive covenants that are set out in column 2 of Schedule 5. These rights are precisely drafted. For illustration as to the extent of land that is subject to this restriction, all of the plots in the Order, with the exception of Plots 449A, 450, 453, 454, 454A, 454B and 454C, and 457-463 are scheduled for the permanent acquisition of new rights only and/or temporary possession only.

The Statement of Reasons anticipates that the acquisition of land will include the acquisition of new rights, and sets out the compulsory acquisition case for both types of acquisition.

Article 18

(*Private rights*) has been amended as has partly been explained in relation to Article 15 (*Compulsory acquisition of land*). It is required to apply to private rights generally and not just to rights of way over land. Reference to section 152 of the 2008 Act is included in paragraph (4) to confirm that compensation payable under this Article is in accordance with the principles for the payment of compensation for injurious affection to land that would ordinarily apply to schemes where statutory authority is relied upon and a claim under section 10 of the Compulsory Purchase Act 1965 arises. Such claims instead arise

under section 152 of the 2008 Act rather than section 10 of the Compulsory Purchase Act 1965 as a result of the contents of section 152 of the 2008 Act. The model provisions are accordingly not followed in full and are adjusted so as to apply to both land and rights over land acquired pursuant to the Order. Paragraphs 6 and 7 allow the undertaker to provide notice to the contrary to the provisions of the Article, allowing the undertaker to confirm to the relevant owner of a dominant tenement that the rights that would by operation of this Article be extinguished or overridden are not so extinguished or overridden.

Article 19 (*Application of the Compulsory Purchase (Vesting Declarations) Act 1981*) reflects model provision 23. It provides for the Order to apply as if it were a compulsory purchase order for the purposes of the Compulsory Purchase (Vesting Declarations) Act 1981 and provides for that Act to have effect subject to certain modifications. It gives the undertaker the option to acquire land by this method rather than through the notice to treat procedure.

Article 20 (*Acquisition of subsoil only*) reflects model provision 24. It authorises the undertaker to acquire the subsoil in any Order land without acquiring the whole of that land. In certain cases it may be necessary only to acquire a stratum of land below the surface and in the absence of this article the undertaker would be obliged to acquire the whole interest in the land. There are precedents for this in, for example, the Glasgow Airport Rail Link Act 2007.

Article 21 (*Acquisition of part of certain properties*) reflects model provision 26 and provides an alternative procedure where the undertaker compulsorily acquires part only of certain types of properties, subject to the right of the owner to require the whole of the property to be acquired, if part cannot be taken without material detriment to the remainder. This replaces section 8(1) of the Compulsory Purchase Act 1965 and unlike that provision sets out a process and timescales for dealing with claims of material detriment. Such provisions are usual in Transport and Works Orders containing compulsory powers such as, for example, article 32 of the Network Rail (West Coast Main Line) Order 2003.

Article 22 (*Rights under or over streets*) reflects model provision 27 and provides that the undertaker may use a street within the Order limits for the authorised project without being required to acquire any part of the street or any easement or right in the street. Provision is made for the payment of compensation to an owner or occupier of land where their interest in land is

not acquired and who suffers loss as a result.

Article 23

(Temporary use of land for carrying out the authorised project) will allow the undertaker to take temporary possession of the land included in Schedule 7 (*Land of which temporary possession may be taken*).

Additionally to the model provisions, the Article also provides for other Order land in respect of which notice of entry has not yet been served under Section 11 of the Compulsory Purchase Act 1965 and no vesting declaration has been made under the Compulsory Purchase (Vesting Declarations) Act 1981 to be taken possession of and used, temporarily, for certain specified purposes, save for plots identified for freehold compulsory acquisition. It also allows for new rights in land to be acquired compulsorily after temporary possession has been taken; and for permanent works to be constructed whilst temporary possession notices are in place but before permanent rights have been acquired. This follows a number of recent Development Consent Orders, including the East Anglia ONE Order, and allows greater flexibility in the event that, following further design work, it is either decided by the undertaker or agreed with the relevant landowner that temporary occupation rather than permanent acquisition is appropriate. A benefit of structuring the Order powers in this way is also to limit the amount of land that need be ultimately acquired, or over which new rights are acquired, from landowners. As works may be constructed prior to permanent acquisition of land, elements of the scheme can be acquired "as built", with no need to account for uncertainties in the final design in terms of land acquired.

Article 23 provides that powers to take possession of land temporarily, if land is specified in Schedule 7 (*Land of which temporary possession may be taken*), may be used only for the specific purposes set out in column 3 of Schedule 7. These temporary powers are "overlaid" onto many of the plots that are also scheduled for the acquisition of permanent new rights.

For plots that are scheduled for temporary possession, Article 23(8)(a) excludes freehold compulsory acquisition, but still permits the acquisition of permanent rights under Article 17 (as set out in Schedule 5). In this way, the power in Article 15 is further limited.

Article 23(8)(b) permits the acquisition of subsoil rights in any of the land subject to Article 15 or Article 17. This provision could potentially allow the undertaker to acquire additional rights to those set out in Schedule 5, in case

a need for a subsoil right becomes apparent that is currently unforeseen. As the great majority of the land to be acquired under the Order comprises new rights for an underground cable and related works, this provision is unlikely to be used, but could be relied on in rare circumstances to assist the delivery of the nationally significant infrastructure project. This provision was accepted in the East Anglia ONE Order, and is commonly used on Transport and Works Orders. A similar provision was included in the Network Rail (Ordsall Chord) Order 2015.

The power to temporarily possess "any other Order land" (in respect of which notice of entry has not yet been served under Section 11 of the Compulsory Purchase Act 1965 and no vesting declaration has been made under the Compulsory Purchase (Vesting Declarations) Act 1981), in addition to the land specified in Schedule 7, is unlikely to be exercised for the East Anglia THREE project, as all of the Order land, save for the freehold plots (Plots 449A, 450, 453, 454, 454A, 454B and 454C, and 457-463) is included in Schedule 7 for some purpose (either for access, use for temporary construction compounds, or for purposes of construction of the authorised project).

In a departure from the model provisions, there is no requirement on the undertaker to remove from the relevant land works that have been constructed for the purposes of the authorised project. Compensation is available to owners whose land is taken possession of pursuant to this Article.

In all cases where powers of temporary possession are exercised, compensation must be paid to the landowner and any occupiers for loss or damage arising from their exercise where claimed.

Article 24

(Temporary use of land for maintaining authorised project) reflects model provision 29 providing that the undertaker may take temporary possession of land within the Order limits required for the purpose of maintaining the authorised project, and to construct such temporary works as may be reasonably necessary for that purpose for a period of five years from the date on which that part of the authorised development is first used. Provision is made for notice and compensation. This power does not apply with respect to houses, gardens or any other buildings for the time being occupied.

Article 25

(Statutory undertakers) authorises the undertaker to acquire land and new rights in land belonging to statutory undertakers as shown on the land plans within the limits of the land to be acquired or used and described in the book

of reference. Paragraphs (a) and (c) of model provision 31 have been combined.

- Article 26* (*Recovery of costs of new connections*) reflects model provision 33 providing for compensation to owners or occupiers of property where apparatus is removed in accordance with Article 25 (*Statutory undertakers*). It departs from the model provision only by amending paragraph (3), which is not relevant as the Order does not contain an article dealing with the apparatus and rights of statutory undertakers in stopped-up streets.
- Article 27* (*Operation of generating station*) is not a model provision but authorises specifically the undertaker to operate the authorised project in accordance with the provisions of this Order or an agreement made under this Order. This aspect is included pursuant to section 140 of the 2008 Act.
- Article 28* (*Deemed licences under the Marine and Coastal Access Act 2009*) adopts the form of model provision 37 but adapted to the provisions of the 2009 Act. It provides for six deemed licences, the terms of which are set out in Part 1 of Schedules 10 to 15, required for the deposit at sea within the Order limits of the specified substances and articles and the construction of works in or over the sea and/or on or under the seabed. As explained at paragraph 4.6 above the approach of splitting the Deemed Marine Licences into six separate licences is to provide for a situation where generation or transmission assets in each phase (should the project be constructed in phases) will be held by different companies (including OFTOs) post-construction.
- Article 29* (*Application of landlord and tenant law*) reflects model provision 35 and overrides the application of landlord and tenant law in so far as it may prejudice the operation of any agreement for leasing the whole or part of the authorised development or the right to operate the same and any agreement for the construction, maintenance, use or operation of the authorised development or any part of it entered into by the undertaker.
- Article 30* (*Operational land for the purposes of the 1990 Act*) reflects model provision 36 and provides that for the purposes of section 264(3) of the Town and Country Planning Act 1990 the development consent granted by the Order shall be treated as a specific planning permission.
- Article 31* (*Felling or lopping of trees and removal of hedgerows*) enables the undertaker to fell or lop trees and shrubs for the purposes of preventing obstruction or

interference with the authorised project and danger to the authorised project. Provision is included for the payment of compensation for loss and damage. It varies from model provision 39 as it also enables the undertaker to remove the hedgerows and important hedgerows that are within the Order limits and specified in Schedule 9 (*Hedgerows*).

Article 32 (*Certification of plans etc*) reflects model provision 41 and requires the undertaker to submit copies of the documents, plans and sections referred to in the Order to the decision maker, for certification as true copies following the making of the Order.

Article 33 (*Arbitration*) adapts model provision 42 and makes provision for any dispute arising under the provisions of the Order and, unless otherwise provided for, to be settled by arbitration. These will include circumstances where the agreement of the relevant local authority is needed but cannot be reached. It will not apply to any appeals against approval or non-determination of requirements.

Article 34 (*Requirements, appeals etc*) deems the requirements which relate to works landward of mean low water, and hence within the area of the relevant planning authority, as planning conditions under section 72 of the Town and Country Planning Act 1990, and includes a modification to the application of that Act to provide for the normal right of appeal in relation to the discharge of a planning condition. This Article avoids the need for the Secretary of State to have the role of determining detailed approvals under the relevant onshore requirements, which would otherwise be necessary under the 2008 Act.

Article 35 (*Abatement of works abandoned or decayed*) authorises the Secretary of State to issue a written notice to the undertaker requiring the repair, restoration or removal of Works No. 1(a) to (d) or 2 where they have been abandoned or allowed to fall into decay. This power is stated to be without prejudice to any notice served under section 105(2) of the Energy Act 2004 requiring the submission of a decommissioning scheme.

Article 36 (*Saving provisions for Trinity House*) is a standard provision taken from the harbour model clauses and was also included in Transport and Works Orders for offshore windfarms, including that for Scarweather Sands.

Article 37 (*Crown rights*) is not a model provision, but protects the Crown's position in relation to its own estates, rights, powers, privileges, authorities and

exemptions. The Crown's written consent is required where any land, hereditaments or rights of the Crown are to be taken, used, entered or interfered with as a result of granting of the Order, although there is no conditionality in respect of third party interests in Crown land. This article reflects recent Orders and has been agreed with The Crown Estate.

Article 38 (*Protective provisions*) gives effect to the protective provisions in Schedule 8 (*Protective provisions*).

8 Schedules

Schedule 1 (*Authorised Project*) Part 1 of Schedule 1 specifies the authorised development comprising the scheduled works. The ancillary works are set out in Part 2.

Part 3 sets out certain requirements that the undertaker must meet in relation to the construction and operation of the authorised project. These requirements take a similar form to planning conditions.

The requirements are based upon those contained in Schedule 4 of the model provisions (the **model requirements**). The model requirements are, however, necessarily general, designed for development on land and cover a wide range of schemes. Model requirements which are not relevant to the authorised development have been omitted.

With regard to the structure of the onshore requirements, it should be noted that the principles informing the onshore mitigation are largely set out in a number of outline documents submitted with the Application. This follows the approach agreed with the local planning authorities for East Anglia ONE.

Requirement 1 (*Time limits*) specifies the time limit for commencing the authorised development as 5 years from the date of the Order, as provided for in Regulation 3 of the Infrastructure Planning (Miscellaneous Prescribed Provisions) Regulations 2010.

Requirements 2 to 9 (*Detailed offshore design parameters*) set out the detailed design parameters within which the authorised development must be constructed. Requirement 2 deals with the dimensions and other characteristics of WTGs. Requirement 3 clarifies the division of works between phases and limits the dimensions of the offshore electrical stations,

accommodation platform, meteorological masts and buoys. It also restricts offshore platforms (both electrical stations and accommodation platforms) from being constructed in a location identified on the offshore works plan as a 'Platform Exclusion Zone', and for which grid co-ordinates are also provided within Requirement 3. Requirement 4 limits the total length of export, inter-array/inter-substation and interconnector cables and specifies the maximum amounts of cable protection. Requirements 5-8 restrict the dimensions of the different foundation types and Requirement 9 limits the amount of scour protection for the various structures. The purpose of these various restrictions is to ensure that the authorised development is restricted to that which has been assessed in the Environmental Statement.

Requirement 10 (*Offshore decommissioning*) requires a decommissioning programme to be agreed with the Secretary of State prior to the commencement of the offshore works and replicates the wording used on consents for offshore windfarms granted under the Electricity Act 1989 (and now the 2008 Act) following the relevant provisions of the Energy Act 2004 coming into force.

Requirement 11 (*Phasing and stages of authorised development onshore*) reflects model requirement 3 and requires a written scheme setting out all the stages of the onshore connection works and any phasing of the onshore substation to be approved by the relevant planning authority before commencement of any onshore works.

Requirement 12 (*Detailed design parameters onshore*) follows model requirement 4 in requiring approval of details of the proposed works at the onshore substations by the relevant planning authority. It specifies parameters in terms of the maximum size of the equipment and buildings for the onshore substations. The maximum footprint of the construction consolidation sites and the details of the kiosks are also included. Taken together these restrictions ensure that the impact of the onshore works is minimised in line with the assessment and commitments contained in the Application.

Requirement 13 (*Landfall method statement*) provides that the landfall works (Work No. 5B, Work No. 6 and Work No. 7) cannot commence until a method statement which includes measures to minimise the impact of the works on cliff stability and coastal erosion, has been submitted to and approved by the relevant planning authority in consultation with Natural England.

Requirement 14 (*Provision of landscaping*) follows model requirement 7 and requires a landscaping management scheme to be approved by the relevant planning authority before the relevant stage of the connection works may commence. The landscaping scheme must be in accordance with the outline landscape and ecological management strategy submitted with the Application. Landscaping is proposed along the cable corridor and at the onshore substation location. As well as landscaping to the north of the substation (Work No. 69) which relates solely to the project, landscaping works to the east (Work No. 64) and the west (Work No. 68) of the substation have been included in the works description. It is anticipated that East Anglia ONE will carry out the landscaping works to the east (Work No. 64) and the west (Work No. 68), but if not the Applicant will require the ability to do so as part of their own landscaping scheme for the project.

Requirement 15 (*Implementation and maintenance of landscaping*) follows model requirement 8 and requires the undertaker to implement the approved landscaping management scheme, and to replace trees or shrubs which die along the cable route within 5 years of planting and trees or shrubs which die at the substation location within 10 years of planting.

Requirement 16 (*Highway accesses and improvements*) follows part of model requirement 10 in requiring approval of details of any permanent or temporary means of access to a highway, or any alteration to an existing means of access, by the relevant planning authority in consultation with the relevant highway authority. It also provides that no stage of the connection works may commence until for that stage a scheme of traffic management measures (in accordance with table 2 of the outline traffic management plan) has been approved and brought into use.

Requirement 17 (*Fencing and other means of enclosure*) follows model requirement 13 and provides that temporary and permanent fencing and other means of enclosure shall be approved before that stage of the onshore connection works is commenced, that construction consolidation sites shall be securely fenced, temporary fencing removed after completion of the works and that the permanent fencing around Work No. 67 (the onshore substations) is in place before it is used.

Requirement 18 (*Surface and foul water drainage*) provides that the relevant stage of the connection works shall not be commenced until details of the

surface and foul water drainage system for that stage have been approved by the relevant planning authority in consultation with the sewerage and drainage authorities.

Requirement 19 (*Contaminated land and ground water*) requires that Work No. 41 must not commence until a scheme to mitigate the potential release of contaminants has been submitted to and approved by the relevant planning authority (following consultation with the Environment Agency). It also requires the scheme to be implemented as approved. This Requirement has been included to reflect the specific site conditions at the location of Work No. 41.

Requirement 20 (*Archaeology*) follows model requirement 16. It provides that the relevant stage of the connection works shall not commence until a scheme of investigation has been agreed with the relevant planning authority (in consultation with Historic England and Suffolk County Council). At the request of the relevant planning authorities, the scheme is to cover the matters set out in the Requirement.

Requirement 21 (*Ecological management plan*) reflects model requirement 17 and provides that the onshore connection works shall not commence until an ecological management plan for that stage of the connection works reflecting the surveys, mitigation and enhancement measures in the Environmental Statement has been approved by the relevant planning authority. The scheme shall be implemented as approved. Requirement 21(2) notes specific mitigation which must be observed in relation to construction work between Ferry Road and the River Deben.

Requirement 22 (*Code of construction practice*) provides that the relevant stage of the connection works shall not commence until a code of construction practice for that stage of the connection works has been submitted and approved by the relevant planning authority. The code must cover all the matters in the outline code submitted with the Application and be implemented as approved.

Requirement 23 (*External lighting and control of artificial light emissions*) adapts model requirement 21 and provides for written details of any external lighting proposed to be used for the relevant stage of the connection works to be submitted and approved by the relevant planning authority before works commence on that stage of the connection works. It also requires that Work

No. 67 (the onshore substations) shall not be commenced until a scheme for management and mitigation of artificial light emissions has been approved for the operation of that work. The approved scheme shall be implemented and observed.

Requirement 24 (*Control of noise during construction*) requires a scheme for noise management during construction of the relevant stage of the connection works, which accords with the outline code of construction practice, to be submitted to and approved by the relevant planning authority before works to that stage of the connection works commence. Construction works must be undertaken in accordance with the approved scheme.

Requirement 25 (*Construction hours*) adapts model requirement 24 and provides for construction hours for the connection works on specified days, with none on Sundays or bank holidays, for the relevant works, with exceptions for certain continuous operations, delivery of abnormal loads, works on the foreshore and other cases agreed with the relevant planning authority.

Requirement 26 (*Control of noise during operational phase*) specifies noise limits for noise arising from Work No. 67 (the onshore substation(s)) and with specified locations for measuring the noise.

Requirement 27 (*Traffic*) requires that the connection works must not commence until a traffic management plan (in accordance with the outline traffic management plan), a travel plan (in accordance with the outline travel plan) and an access management plan (in accordance with the outline access management plan) have been submitted to and approved by the relevant planning authority. The Requirement requires that the plans are implemented on commencement of the connection works.

Requirement 28 (*Port travel plan*) requires that a travel plan for the onshore port-related traffic to and from the selected base port during construction and operation is approved by the relevant planning authority in consultation with the relevant highway authority (for this Requirement only, being the planning or highway authority in whose area the relevant port is located).

Requirement 29 (*European protected species onshore*) reflects model requirement 34 and provides that no stage of the connection works shall be commenced until a final pre-construction survey has been carried out to

establish whether there are any European protected species present, or likely to be affected by the works. If so the requirement provides that the relevant stage of the works shall not commence until a scheme for protection and mitigation has been approved, which shall be implemented as approved.

Requirement 30 (*Restoration of land used temporarily for construction*) provides that any land (landward of mean low water) used temporarily as part of the onshore works shall be restored to its prior condition or such other condition as the relevant planning authority shall approve (save, for the avoidance of doubt, where the land forms part of the approved permanent works or the approved landscape scheme) within a specified period after completion of the relevant stage of the onshore works. The requirement also permits retention of the temporary lay down area (Work No. 56) between phases of construction for the onshore substation if approved by the relevant local planning authority.

Requirement 31 (*Onshore decommissioning*) provides that upon the cessation of commercial operation of the connection works, an onshore decommissioning plan must be submitted to and approved by the relevant planning authority.

Requirement 32 (*Aviation Safety*) provides that lighting must be used as determined necessary for aviation safety. It also requires notification of certain information to the Defence Infrastructure Organisation at least 14 days prior to commencement of the authorised development, on completion of the authorised development and of any changes to the information supplied.

Requirement 33 (*Ministry of Defence surveillance operations*) has been included to ensure appropriate mitigation to prevent or remove any adverse effects which the operation of the authorised development will have on the air defence radar at Remote Radar Head (RRH) Trimmingham and the Ministry of Defence's air surveillance and control operations.

Requirement 34 (*Requirement for written approval*) provides that where any requirement requires the approval of the Secretary of State or the relevant planning authority such approval shall be in writing.

Requirement 35 (*Amendments to approved details*) amends model requirement 37 and provides that any details approved pursuant to any requirement shall be taken to include any amended details which are

subsequently approved, provided that any amendments to or deviations from the approved details are in accordance with the principles set out in the Environmental Statement.

Requirement 36 (*Re-use of temporary works*) provides that if it is proposed to use any temporary works constructed pursuant to the East Anglia ONE Order a scheme which accords with the details in requirement 36(2) must first be approved by the relevant planning authority. The details required include confirmation that the works to be re-used accord with the parameters assessed for the East Anglia THREE project; a timetable for removal of any works which do not accord with the parameters; and provision of details in respect of any transfer of benefit of the temporary works under the East Anglia ONE Order.

Requirement 37 (*Notification of site clearance and archaeological works*) sets out the definition of 'commence' for works landward of MHWS and also the notification requirements in the event that pre-commencement works are proposed in respect of site clearance works or archaeological works within the substation location (Work No. 67).

- Schedule 2* (*Streets subject to street works*) sets out those streets which are to be the subject of street works.
- Schedule 3* (*Public rights of way to be temporarily stopped up*) sets out those public rights of way which are to be temporarily stopped up.
- Schedule 4* (*Access to works*) sets out details of access points to the Works.
- Schedule 5* (*Land in which only new rights etc may be acquired*) sets out details of such land. It sets out the purposes for acquisition of new rights over specified plots. In accordance with the Guidance issued by the Secretary of State, it specifies rights that apply to the relevant plots set out in the Book of Reference, and also details, where relevant, the restrictive covenants that apply to the relevant plots to protect the installed cables.
- Schedule 6* (*Modification of compensation and compulsory purchase enactments for creation of new rights*) sets out changes to the operation of the legislation relating to compulsory purchase, principally the material detriment provisions contained in Section A of the Compulsory Purchase Act 1965.

<i>Schedule 7</i>	<i>(Land of which temporary possession may be taken)</i> sets out details of such land that may be occupied under temporary powers.
<i>Schedule 8</i>	<i>(Protective provisions)</i> sets out protective provisions for statutory undertakers affected by the authorised development.
<i>Schedule 9</i>	<i>(Hedgerows)</i> sets out those hedgerows (Part 1) and important hedgerows (Part 2) to be removed.
<i>Schedule 10</i>	<i>(Deemed licence under Marine and Coastal Access Act 2009 – generation assets (licence 1 – phase 1))</i> sets out the deemed licence for phase 1 of the generation assets within the authorised project.

The model provisions do not provide a draft deemed marine licence; however standard provisions and structure have been developed and included within Orders granted under the 2008 Act. The draft deemed licences comprise provisions relating to phase 1 of the generation assets (Schedule 10), phase 2 of the generation assets (Schedule 11), phase 1 of the transmission assets (Schedule 12), phase 2 of the transmission assets (Schedule 13), phase 1 of the interconnection with East Anglia ONE (Schedule 14) and phase 2 of the interconnection with East Anglia ONE (Schedule 15) within this draft Order and have been developed by EATL in discussion with the MMO, Maritime and Coastguard Agency and Trinity House.

The licences are deliberately drafted to be standalone documents. This reflects the fact that they will have a wide distribution to contractors and agents, being an audience that may be confused by cross references to the main Order. Also, they are documents which, based on past experience, are likely to be varied from time to time. Such variations will be much easier to follow if the licences have been prepared on a standalone basis. As a result, there is intentional repetition from the main Order of various definitions and the description of the authorised works.

Unless otherwise stated, the provisions below relate to all of the deemed marine licences, although condition numbering varies between the deemed marine licences for the generation assets/transmission assets and the interconnection assets. That difference in numbering is set out in the comparison table of DML references at the end of this Explanatory Memorandum.

Part 1 – Licensed marine activities

Paragraph 1 (*Interpretation*) provides interpretation of certain words and phrases used in the licence and contact details for key organisations relevant to the content of the licence. Many of the definitions (including the different types of foundations and other structures such as wind turbine generators and the meteorological masts) are identical to those used in the main Order.

Paragraphs 2-4 (*Details of licensed marine activities*) specify the licensable marine activities which are authorised by the licence in connection with the construction and operation of the generating station (generation assets licences) and offshore associated development (transmission assets and interconnection licences). The section deliberately repeats in full the description of the relevant works from Part 1 of Schedule 1. Reference is also included to disposal of material as a result of preparation works for construction of the generating station and associated development (as appropriate).

Paragraph 5 sets out the grid coordinates for those works within the deemed marine licence.

Paragraph 6 confirms that the deemed marine licence shall remain in force until the scheme has been decommissioned.

Paragraph 7 confirms that section 72(7) (*Variation, suspension, revocation and transfer*) of the 2009 Act is disapplied in relation to transfer of the deemed marine licences. Section 72(7) permits the licensing authority to transfer a marine licence to another person. Section 72(8) provides that "a licence may not be transferred except in accordance with subsection 7". Article 5 (*Benefit of the Order*) however provides for the transfer to take place in a different way to section 72(7). Since Article 5 is different from the precise wording of section 72(7) of the 2009 Act it is necessary to disapply section 72(7) in those limited circumstances to enable Article 5 to operate. Without such a disapplication, Article 5 might be claimed to be inoperative because of adopting a different wording from section 72(7).

Paragraph 8 confirms that where any condition requires the licensed activities be carried out in accordance with the plans, protocols or statements approved under the licence, the approved details, plan or scheme are taken to include any amendments that may subsequently be approved by the MMO.

Paragraph 9 notes that any amendments to approved details must fall within what has been assessed in the Environmental Statement.

Part 2 – Conditions

Conditions 1 to 6 (*Design parameters*) repeat the design parameters from requirements 2 to 9 of Part 3 of Schedule 1. This has the effect of putting beyond doubt the fact that when considering approvals under the licence, the details of proposed works must comply with these constraints under the deemed marine licence as well as under the Order.

Condition 7 (*Notifications and inspections*) provides for a system of supplying copies of the licence to agents and contractors, restricting the use of contractors and vessels to those notified to the MMO, and publicising commencement and progress of the licensed activities.

Conditions 8-9 (*Aids to navigation*) provide for various matters to aid navigation in the vicinity of the authorised scheme, including the provision of various navigation aids and notices to mariners; the ongoing availability of the aids to navigation; notification of the progress of works to Trinity House and the MMO and the colouring of structures. These are all standard provisions from previous Transport and Works Act Orders and Electricity Act consents for offshore wind farms and have been incorporated into recently granted Orders under the 2008 Act.

Condition 10 (*Aviation safety*) requires the undertaker to notify the Defence Infrastructure Organisation Safeguarding regarding the construction of the scheme and its parameters.

Condition 11 (*Chemicals, drilling and debris*) restricts the use of chemicals and other substances and provides for the disposal of certain drilling arisings and the monitoring of construction materials so as to identify those which may accidentally fall into the sea, which shall then be investigated and, where identified, recovered.

Condition 12 (*Force majeure*) provides for the notification of deposits made in an emergency.

Condition 13 (*Pre-construction plans and documentation*) provides for the

submission for approval, before the commencement of licensed activities, of a plan showing the proposed location, dimensions and choice of foundation of all elements of the authorised scheme to ensure that the licensed activities conform with the description of Work No. 1 and the design parameters in conditions 1-6. It also provides for submission for approval of a construction programme and monitoring plan, a construction method statement, a project environmental management plan, a scour protection management and cable protection plan, a marine mammal mitigation protocol (where driven or part driven foundations are proposed), a cable specification, installation and monitoring plan, a written scheme of archaeological investigation, a scheme for habitats of principal importance, an offshore operations and maintenance plan and an aids to navigation management plan. In the event that driven or part-driven pile foundations are proposed to be used, the condition provides that before commencement of licensed activities a project specific site integrity plan (which accords with the submitted in principle plan) must be submitted to the MMO and the MMO must confirm that it is satisfied that the plan provides mitigation as is necessary to avoid adverse effects on the integrity of the Southern North Sea pSAC, to the extent that harbour porpoise are a protected feature of that site.

Condition 14 requires any archaeological reports produced in accordance with Condition 13 to be agreed with Historic England. It also requires each of the documents for approval under Condition 13 to be submitted for approval at least 4 months prior to the intended start of construction, and that each approved document be complied with. Finally, it states that no part of the authorised scheme may commence until the MMO has confirmed that the undertaker has taken into account and adequately addressed all MCA recommendations as appropriate contained within MGN371 and its annexes.

Condition 15 (*Reporting of engaged agents, contractors and vessels*) requires the undertaker to provide to the MMO details of agents and contractors engaged to carry out the licensed activities, and a weekly update as to which vessels are being used during construction.

Condition 16 (*Foundation restrictions*) restricts the installation of gravity base foundations on mobile sand waves of 5 metres or more unless otherwise agreed in writing with the MMO.

Condition 17 (*Pre-construction monitoring*) specifies the manner in which the undertaker shall discharge its obligation under Condition 13 to put forward

proposals for pre-construction surveys/monitoring, and provides an indicative list of the expected pre-construction surveys.

Condition 18 (*Construction monitoring*) specifies the manner in which the undertaker shall discharge its obligation under Condition 13 to put forward proposals for construction surveys/monitoring, and specifically requires certain noise monitoring. It provides for the MMO to require further noise monitoring depending on the results.

Condition 19 (*Post construction*) specifies the manner in which the undertaker shall discharge its obligation under Condition 13 to put forward proposals for post-construction surveys/monitoring, and provides an indicative list of the expected post-construction surveys.

Condition 20 (*Reporting of impact pile driving/detonation of explosives*) provides that the undertaker must provide information of the expected location, start and end dates of impact pile driving/detonation of explosives to the MMO.

Schedule 11 (*Deemed licence under Marine and Coastal Access Act 2009 – generation assets (licence 2 – phase 2)*)

This deemed marine licence relates to phase 2 of the generation assets only and its provisions largely duplicate the generation assets deemed marine licence at Schedule 10 of the draft Order.

Schedule 12 (*Deemed licence under Marine and Coastal Access Act 2009 – transmission assets (licence 1 – phase 1)*)

This deemed marine licence relates to phase 1 of the transmission assets only and its provisions largely duplicate the generation assets deemed marine licence at Schedule 10 of the draft Order. However, it does contain an additional design parameter to prevent impacts from contaminated sediment (condition 1).

Schedule 13 (*Deemed licence under Marine and Coastal Access Act 2009 – transmission assets (licence 2 – phase 2)*)

This deemed marine licence relates to phase 2 of the transmission assets only and its provisions largely duplicate the transmission assets deemed marine

licence at Schedule 12 of the Order.

Schedule 14 (Deemed licence under Marine and Coastal Access Act 2009 – interconnection with East Anglia ONE (licence 1 – phase 1))

This deemed marine licence relates to phase 1 of the interconnection only and its provisions largely duplicate the deemed marine licences at Schedules 10 to 13 of the Order. However, conditions which are not relevant to the interconnection assets have not been included. In summary, relevant design parameters are included at condition 1; notification and inspections are secured at condition 2; aids to navigation are dealt with at condition 3; chemicals, debris and drilling is dealt with at condition 4; force majeure at condition 5; pre-construction plans and documentation at condition 6; archaeological reporting at condition 7; reporting of engaged agents, contractors and vessels at condition 8; pre-construction monitoring and surveys at condition 9; construction monitoring at condition 10; and post construction matters at condition 11. An additional condition 12 has been included to provide for co-ordination between the undertakers for East Anglia ONE and East Anglia THREE given that the interconnection will form a link between the two projects.

Schedule 15 (Deemed licence under Marine and Coastal Access Act 2009 – interconnection with East Anglia ONE (licence 2 – phase 2))

This deemed marine licence relates to phase 2 of the interconnection only and its provisions duplicate the interconnection assets deemed marine licence at Schedule 14 of the Order.

**East Anglia THREE
Comparison Table of DML References**

	Schedules 10 and 11	Schedules 12 and 13	Schedules 14 and 15
Design parameters	1(1)(a)-(e)	1	1
	(2) ⁴		-
	(3)		-
	2(1)-(9) ⁵	26	-
	3	37	-
	4	4	-
	5	5	-
	6	6	-
Notifications and inspections	7(1)-(11)	7(1)-(11)	2(1)-(11)
Aids to navigation	8(1)-(5)	8(1)-(5)	3(1)-(5)
	9(1)-(2) ⁸	9	-
Aviation safety	10	10	-
Chemicals, drilling and debris	11(1)-(10)	11(1)-(11) ⁹	4(1)-(10)
Force majeure	12(1)-(2)	12(1)-(2)	5(1)-(2)
Pre-construction plans and documents	13(1)(a)-(k)	13(1)(a)-(k)	6(a)-(j) ¹⁰
	(2)-(3) Nb. pSAC condition	(2)-(3) Nb. pSAC condition	(2)
	(4)	(4)	-
	14(1)-(5)	14(1)-(5)	7(1)-(5)

⁴ Draught height restriction

⁵ Condition (8) relates to the offshore platform restriction and condition (9) restricts hammer energy

⁶ Relates to offshore platform restriction

⁷ Relates to hammer energy restriction

⁸ Additional condition 9(2) relates to colour of turbines

⁹ Additional condition 11(8) relates to Work 5A obstructions

¹⁰ Does not contain MMMP condition

Reporting of engaged agents, contractors and vessels	15(1)-(2)	15(1)-(2)	8(1)-(2)
Foundation restrictions	16	16	-
Pre-construction monitoring and surveys	17(1)-(3)	17(1)-(3)	9(1)-(3)
Construction monitoring	18(1)-(4) ¹¹	18(1)-(2)	10(1)-(2)
Post construction	19(1)-(4)	19(1)-(4)	11(1)-(4)
Reporting of impact pile driving/ detonation of explosives	20(1)-(3)	20(1)-(3)	-
Co-ordination with EA1	-	-	12(1)-(2)

¹¹ Additional condition 18(3) relates to noise monitoring and 18(4) relates to traffic monitoring

**East Anglia THREE
List of Order parameters**

- Note: If the Two Phased construction approach is taken there will be differences between the infrastructure required in each Phase. As the two phases are designed to act together as a single windfarm, Phase Two requires extra cables to be installed that are not required for the installation of Phase 1, which connect Phase 2 to Phase 1. Therefore in the table below the infrastructure shown for each Phase is different in some cases.

- If the Single Phase construction approach is taken less infrastructure is required than for the Two Phased approach, there will be fewer cables and one less platform. Therefore the total footprint (or volume) of materials required for a Single Phase approach is less than that of the Two Phased approach and therefore the Single Phase column in the table below does not equal the sum of the two Phases if the Two Phased approach is taken.

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
Wind turbine generators (WTG)	Total installed capacity	600 MW	600 MW	1,200MW	Work No. 1(a) DML (Generation Assets) Part 1, Paragraph 3(1)(a)
	Maximum number of WTGs	86	86	172	Work No. 1(a) DML (Generation Assets) Part 1, Paragraph 3(1)(a)
	Maximum tip height from LAT	247m	247m	247m	Requirement 2(a) DML (Generation Assets)

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
					Condition1(1)(a)
	Maximum hub height from LAT ¹²	150.6m	150.6m	150.6m	Requirement 2(b) DML (Generation Assets) Condition1(1)(b)
	Maximum rotor diameter	220m	220m	220m	Requirement 2(c) DML (Generation Assets) Condition1(1)(c)
	Minimum spacing crosswind	675m	675m	675m	Requirement 2(d) DML (Generation Assets) Condition1(1)(d)
	Minimum spacing downwind	900m	900m	900m	Requirement 2(d) DML (Generation Assets) Condition1(1)(d)
	Minimum draught height from MHWS ¹³	22m	22m	22m	Requirement 2(e) DML (Generation Assets) Condition1(1)(e)

¹² Note that 150.6m from LAT is equivalent to 150m from MLWS as assessed in the ES

¹³ Note that a separate parameter requires that the number of turbines with a draught height of less than 24 metres from MHWS must not exceed 52 turbines (see requirement 2(2) and relevant DML conditions 1(2)).

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
	Foundation types	Jacket (piles or caissons) Gravity base structure Suction caisson Monopile	Jacket (piles or caissons) Gravity base structure Suction caisson Monopile	Jacket (piles or caissons) Gravity base structure Suction caisson Monopile	Requirement 5 DML (Generation Assets) Part 1, Paragraph 3(1)(a) DML (Generation Assets) Condition 4
Offshore Substations	Maximum number	3	3	5 ¹⁴	Work No.2 DML (Transmission Assets) Part 1, Paragraph 3(1) Requirement 3(1)
	Maximum height from LAT	70m	70m	70m	Requirement 3(2) DML (Transmission Assets) Condition 4(2)
	Maximum length (Topside)	80m	80m	80m	Requirement 3(2) DML (Transmission Assets) Condition 4(2)
	Maximum width	120m	120m	120m	Requirement 3(2)

¹⁴ If a single phase approach is taken fewer offshore substations are required

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
	(Topside)				DML (Transmission Assets) Condition 4(2)
	Foundation types	Jacket (piles or caissons) Gravity base structure	Jacket (piles or caissons) Gravity base structure	Jacket (piles or caissons) Gravity base structure	Requirement 7 DML (Transmission Assets) Part 1, Paragraph 3(1)
Accommodation Platform	Maximum number	1 ¹⁵	1 ¹⁶	1	Work No. 1(b) Requirement 3(1) DML (Generation Assets) Part 1, Paragraph 3(1)(b) DML (Generation Assets) Condition 2(1)
	Maximum height from LAT	60m	60m	60m	Requirement 3(3) DML (Generation Assets) Condition 2(2)
	Maximum length	70m	70m	70m	Requirement 3(3) DML (Generation Assets) Condition 2(2)
	Maximum width	70m	70m	70m	Requirement 3(3) DML (Generation Assets) Condition 2(2)

¹⁵ This would either be constructed in Phase 1 or Phase 2 but not both

¹⁶ This would either be constructed in Phase 1 or Phase 2 but not both

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
	Foundation types	Jacket (piles or caissons) Gravity base structure	Jacket (piles or caissons) Gravity base structure	Jacket (piles or caissons) Gravity base structure	Requirement 8 DML (Generation Assets) Part 1, Paragraph 3(1)(b) DML (Generation Assets) Condition 5(5) and 5(6)
Meteorological Mast	Maximum number	2 ¹⁷	2 ¹⁸	2	Work No. 1(c) DML (Generation Assets) Part 1, Paragraph 3(1)(c) DML (Generation Assets) Condition 2(3)
	Maximum height from LAT	160m	160m	160m	Requirement 3(4) DML (Generation Assets) Condition 2(4)
	Foundation types	Jacket (piles or caissons) Gravity base structure Suction caisson Monopile	Jacket (piles or caissons) Gravity base structure Suction caisson Monopile	Jacket (piles or caissons) Gravity base structure Suction caisson Monopile	Requirement 6 DML (Generation Assets) Part 1, Paragraph 3(1)(c) DML (Generation Assets) Condition 5(1) to (4)

¹⁷ There would be two meteorological masts in total, which would be built either one in each phase or both in one phase

¹⁸ There would be two meteorological masts in total, which would be built either one in each phase or both in one phase

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
Buoys	Maximum number	12 ¹⁹	12	12	Work No. 1(d) DML (Generation Assets) Part 1, Paragraph 3(1)(d)
	Maximum height from LAT	6m	6m	6m	Requirement 3(6) DML (Generation Assets) Condition 2(6)
	Maximum length	4m	4m	4m	Requirement 3(6) DML (Generation Assets) Condition 2(6)
	Maximum width	4m	4m	4m	Requirement 3(6) DML (Generation Assets) Condition 2(6)
	Anchor footprint	4m ²	4m ²	4m ²	DML (Generation Assets) Condition 2(6)
Offshore Cables					
<i>Inter-Array Cables</i>	Maximum length	275km	275km	550km	Requirement 4 DML (Generation Assets) Condition 3
	Maximum cable protection	24,750m ³	24,750m ³	49,500m ³	Requirement 4 DML (Generation Assets) Condition 3

¹⁹ There would be 12 buoys in total and these could be placed in any combination across the two phases

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
<i>Platform link Cables</i>	Maximum length	75km ²⁰	165km ²¹	195km ²²	Requirement 4 DML (Transmission Assets) Condition 3 Note, different parameters are included for different phases (see Schedules 12 and Schedule 13 for the different parameters)
	Maximum cable protection	8,900m ³	19,580m ³	23,140m ^{3 23}	Requirement 4 DML (Transmission Assets) Condition 3 Note, different parameters are included for different phases (see Schedules 12 and Schedule 13 for the different parameters)
<i>Interconnection Cables</i>	Maximum length	190km	190km	380km	Requirement 4

²⁰ If the Two Phased approach is used, the platform link cables will not be installed uniformly in both phases, which results in a different number of cables for each phase and therefore a different cable length

²¹ If the Two Phased approach is used, the platform link cables will not be installed uniformly in both phases, which results in a different number of cables for each phase and therefore a different cable length

²² If constructed using the single phase, fewer cables are required as there are fewer platforms, which results in a reduced cable length

²³ If constructed using the single phase fewer cables are required as there are fewer platforms, which results in a reduced cable length and therefore less cable protection.

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
					DML (Interconnection) Condition 5
	Maximum cable protection	23,980 m ³	23,980 m ³	30,860 m ³	Requirement 4 DML (Interconnection) Condition 5
	Maximum number	2	2	4	Work No. 4 DML (Interconnection) Part 1, Paragraph 3(1)
<i>Export Cables</i>	Maximum length	332km	332km	664km	Requirement 4 DML (Transmission Assets) Condition 5
	Maximum cable protection	40,630 m ³	40,630 m ³	81,260 m ³	Requirement 4 DML (Transmission Assets) Condition 5
	Maximum number	2	2	4	Work No. 5A DML (Transmission Assets) Part 1, Paragraph 3(3)
Foundations (WTGs)					

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
<i>Jacket</i>	Maximum leg spacing at seabed	43.5m	43.5m	43.5m	Requirement 5(3)(a) DML (Generation Assets) Condition 4(3)(a)
	Maximum pile diameter	4m	4m	4m	Requirement 5(3)(b) DML (Generation Assets) Condition 4(3)(b)
	Maximum suction bucket diameter	10m	10m	10m	Requirement 5(3)(b) DML (Generation Assets) Condition 4(3)(b)
	Maximum number of piles or suction buckets per leg	1	1	1	Requirement 5(3)(c) DML (Generation Assets) Condition 4(3)(c)
	Maximum number of legs	4	4	4	Requirement 5(3)(d) DML (Generation Assets) Condition 4(3)(d)
<i>Gravity Base Structure</i>	Maximum diameter at seabed	60m	60m	60m	Requirement 5(1)(a) DML (Generation Assets) Condition 4(1)(a)
	Maximum base height (flat base)	12m	12m	12m	Requirement 5(1)(b)

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
	and cylindrical shaft)				DML (Generation Assets) Condition 4(1)(b)
	Maximum base height (conical base)	2m	2m	2m	Requirement 5(1)(c) DML (Generation Assets) Condition 4(1)(c)
	Maximum column diameter (flat or conical base)	9m	9m	9m	Requirement 5(1)(d) DML (Generation Assets) Condition 4(1)(d)
<i>Suction Caisson</i>	Maximum diameter at seabed	30m	30m	30m	Requirement 5(2)(a) DML (Generation Assets) Condition 4(2)(a)
	Maximum base height	5m	5m	5m	Requirement 5(2)(b) DML (Generation Assets) Condition 4(2)(b)
	Maximum column diameter	9m	9m	9m	Requirement 5(2)(c) DML (Generation Assets) Condition 4(2)(c)
<i>Monopile</i>	Maximum diameter	12m	12m	12m	Requirement 5(4) DML (Generation Assets) Condition 4(4)

Component	Specifications	Two Phased		Single Phase	DCO Reference
		Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		
Foundations (offshore electrical station)					
<i>Jacket</i>	Maximum footprint under structure, per foundation	15,855m ²	15,855m ²	15,855m ²	Requirement 7(2)(a) DML (Transmission Assets) Condition 4(4)(a)
<i>Gravity Base Structure</i>	Maximum footprint at seabed, per foundation	8,011m ²	8,011m ²	8,011m ²	Requirement 7(1) DML (Transmission Assets) Condition 4(3)
Foundations (meteorological mast)²⁴					
<i>Jacket</i>	Maximum footprint at seabed, per foundation	625m ²	625m ²	625m ²	Requirement 6(3) DML (Generation Assets) Condition 5(3)
<i>Gravity Base Structure</i>	Maximum diameter at seabed, per foundation	20m	20m	20m	Requirement 6(1) DML (Generation Assets) Condition 5(1)
<i>Suction Caisson</i>	Maximum diameter at seabed, per foundation	15m	15m	15m	Requirement 6(2) DML (Generation Assets) Condition 5(2)
<i>Monopile</i>	Maximum diameter, per foundation	8m	8m	8m	Requirement 6(4) DML (Generation Assets) Condition 5(4)

²⁴ There would be two meteorological masts in total, which would be built either one in each phase or both in one phase

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
Foundations (accommodation platform)²⁵					
<i>Jacket</i>	Maximum footprint at seabed , per foundation	15,855m ²	15,855m ²	15,855m ²	Requirement 8(2)(a) DML (Generation Assets) Condition 5(6)(a)
<i>Gravity Base Structure</i>	Maximum footprint at seabed , per foundation	15,855m ²	15,855m ²	15,855m ²	Requirement 8(1) DML (Generation Assets) Condition 5(5)
Licensed Marine Activities					
	Maximum inert material disposed (generation assets: WTG)	1,505,000m ³	1,505,000m ³	3,010,000m ³	DML (Generation Assets) Part 1, paragraph 2(d)(ii)
	Maximum inert material disposed (generation assets: inter-array cable)	47,342m ³	47,342m ³	94,684m ³	DML (Generation Assets) Part 1, paragraph 2(d)(i)
	Maximum inert material disposed (transmission assets: electrical substations)	219,675m ³	219,675m ³	366,125m ³	DML (Transmission Assets) Part 1, paragraph 2(d)(ii)
	Maximum inert material disposed (transmission assets:	12,911m ³	28,405m ³	41,316m ³	DML (Transmission Assets) Part 1, paragraph 2(d)(i)

²⁵ This would either be constructed in Phase 1 or Phase 2 but not both

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
	platform link cables)				Note, different parameters are included for different phases (see Schedules 12 and Schedule 13 for the different parameters)
	Maximum inert material disposed (transmission assets: export cables)	162,242 m ³	162,242 m ³	324,484m ³	DML (Transmission Assets) Part 1, paragraph 2(d)(iii)
	Maximum inert material disposed (Met Masts) ²⁶	20,750m ³	20,750m ³	20,750m ³	DML (Generation Assets) Part 1, paragraph 2(d)(iv)
	Maximum inert material disposed (interconnection assets)	73,746.5m ³	73,746.5m ³	147,493m ³	DML (Interconnection) Part 1, paragraph 2(d)
	Maximum inert material disposed (accommodation platforms) ²⁷	73,225m ³	73,225m ³	73,225m ³	DML (Generation Assets) Part 1, paragraph 2(d)(iii)
Maximum scour protection (around	WTG	1,275,000m ²	1,275,000m ²	2,550,000m ²	Requirement 9(1)

²⁶ There would be two meteorological masts in total, which would be built either one in each phase or both in one phase

²⁷ This would either be constructed in Phase 1 or Phase 2 but not both

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
WTGs, electrical substations, accommodation and met masts)	Accommodation and met masts	22,460m ²	22,460m ²	22,460m ²	DML (Generation Assets) Condition 6 DML (Transmission Assets) Condition 6
	Subtotal for Generation Assets if accommodation and met masts in Phase	1,297,460m ²	1,297,460m ²	2,572,460m ²	
	Electrical substations	50,400m ²	50,400m ²	84,000m ²	
	Total for Approach ²⁸	2,673,260m ²		2,656,460m ²	
Onshore parameters					
Onshore Substations	Maximum number	1	1	2	Requirement 12(1) Requirement 12(10)
	Maximum building height	25m	25m	25m	Requirement 12(4)
	Maximum external equipment height	15m	15m	15m	Requirement 12(4)
	Maximum footprint of building	85m (width) x 116m (length)	85m (width) x 116m (length)	85m (width) x 116m (length)	Requirement 12(6)
	Maximum fenced compound	3.04ha	3.04ha	3.04ha	Requirement 12(7)

²⁸ Two Phased total would only include accommodation platform and met masts once, not in both phases

		Two Phased		Single Phase	
Component	Specifications	Parameters (Phase 1 – Two Phase)	Parameters (Phase 2 – Two Phase)		DCO Reference
Onshore Cable Corridor	Maximum footprint of a primary construction consolidation site	N/A	N/A	3,600m ²	Requirement 12(9)(a)
	Maximum number of primary construction consolidation sites	N/A	N/A	2	Work No. 31 and 51
	Maximum footprint of a secondary construction consolidation site	N/A	N/A	1,200m ²	Requirement 12(9)(b)
	Maximum footprint of jointing bay compound	N/A	N/A	3,740 m ²	Requirement 12(11)
	Maximum length of haul road	N/A	N/A	18.05km	Requirement 12(12)
	Maximum number of secondary construction consolidation sites	N/A	N/A	5	Work Nos. 18, 22, 40, 46, and 61
	Maximum footprint of kiosk	N/A	N/A	1m x0.75m x1m high	Requirement 12(8)(b)