

East Anglia THREE  
Offshore Windfarm

East Anglia THREE

# **Presentation by Captain Richard Britton on East Anglia ONE and East Anglia THREE interaction**

Document Reference – Deadline 1/DCO  
ISH/Presentation



SCOTTISHPOWER  
RENEWABLES

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East Anglia THREE

**Presentation to Examining Authority**

29/06/16

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Head of Development

# Agenda

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- Introduction
- EAOW JV
- Overview
- Project Phasing
- EA1/EA3 Construction
- Landfall
- Landscaping
- Interconnector
- Skills

# Introduction

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- Presentation considers the key points highlighted by the ExA in sections 4 'Managing project relationships: East Anglia ONE and East Anglia THREE ' and 5 'Delivery in phases and transfer of benefit' of the agenda for today's hearing
- Objective to provide clarity early on in the process to aid the ExA understanding while examining the function and structure of the draft DCO
- The presentation will last around 30 mins

# Rule 6 Letter

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## Managing project relationships: East Anglia ONE and East Anglia THREE

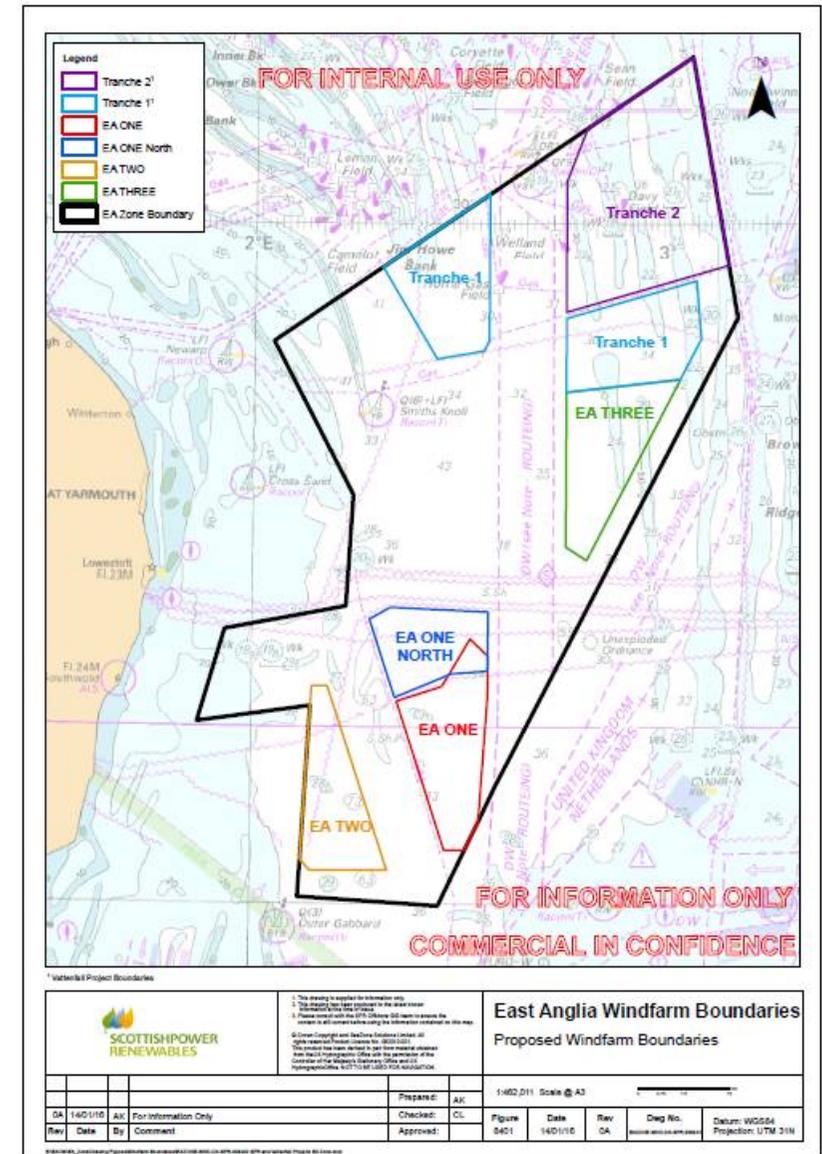
- a) proposals which have the effect of amending the made East Anglia ONE Offshore Wind Farm Order 2014 (SI No 1599) as amended by the made East Anglia ONE Offshore Wind Farm (Corrections and Amendments) Order 2016 (SI No 447);
- b) engagement with East Anglia ONE Ltd;
- c) engagement with interested parties and affected persons relevant to the East Anglia ONE project; and
- d) arrangements for the examination of environmental impact assessment (EIA) and habitats regulations assessment (HRA) issues, taking account of the project definition (including potential phasing) and relationships between East Anglia ONE and East Anglia THREE, particularly seeking a better understanding of the factors taken into account in assessing the effect of the project on the lifetime of landfall works consented for EA1.

## Delivery in phases and transfer of benefit

- a) the current drafting approach to phased delivery;
- b) approaches to phased delivery or multiple delivery vehicles in made Orders for offshore wind farms other than the East Anglia projects (particularly Dogger Bank Creyke Beck, Dogger Bank Teesside A&B, Hornsea Project 1);
- c) whether the current approach to phased delivery and transfer of benefit in the draft DCO provides sufficient certainty about the relationship between and powers to be exercised by more than one delivery vehicle; and
- d) arrangements for the examination of environmental impact assessment (EIA) and habitats regulations assessment (HRA) issues, taking account of phased delivery, particularly seeking to clarify the worst case form of phased delivery for assessment purposes.

# East Anglia Offshore Wind JV

- East Anglia Zone was originally developed by EAOW; a JV of SPR and Vattenfall
- North of zone now developed by Vattenfall; South by SPR
- SPR owned projects
  - East Anglia ONE (EA1)
  - East Anglia THREE (EA3)
  - Two future projects in early stages of development
- EA3 is one large NSIP scale project that may be developed in phases; not multiple NSIPs



## Overview (1)

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- Developer East Anglia THREE Ltd, a subsidiary of ScottishPower Renewables, owner of East Anglia ONE Ltd
- Up to 1,200MW capacity
- Up to 172 turbines between 7-12MW each
- Shares a cable route and landfall with EA1
- Substation(s) to be located adjacent to EA1 substation at common connection point at Bramford, Suffolk
- Project proposal very similar to EA1 as originally consented
- EA3 needs to be flexible to respond to developments in regulatory support framework; includes an option to phase construction in up to 600MW blocks

## Overview (2)

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EA3 cannot be built without EA1 having been built first:

- EA1 must, under its DCO, lay ducts for use by EA3 at the same time as the cables for EA1 (to minimise disruption);
- EA3 will only have power to pull cables through pre-laid ducts and connect them to offshore cables in transition bays at the landfall.

Other inter-relationships between EA1 and EA3 projects:

- possible re-use by EA3 of EA1 temporary works (in whole or in part);
- landscaping at the substation/converter station;
- submitting reports to the relevant planning authority on coastal retreat at the landfall after 24/25 years;
- constructing an interconnecting cable between EA1 array and EA3 array;
- ongoing skills strategy.

## Project Phasing

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- EA3 DCO submission - project could be constructed in two phases both onshore and offshore. Each phase being up to 600MW; maximum 18 month gap
- Purpose to allow flexibility to respond to future development in the regulatory support framework i.e. CfD
- Detailed engineering and economic assessment now concludes that onshore and offshore cabling works will be completed in a single phase of construction
- This further minimises disturbance to local residents and the environment since there is no need to pull through on two separate occasions
- Phased works may still take place at the onshore substation and the offshore array. Temporary laydown area maybe retained between phases

## East Anglia ONE/East Anglia THREE Construction Relationship (1)

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- The offshore array is independent of EA1 (in either one or two phases), save interconnector cables
- The offshore export cables will be laid by EA3
- Both projects will share a cable route from landfall at Bawdsey to their grid connection points at Bramford
- EA1 will install ducting from the landfall to the Bramford substation through which EA3 will pull cables
- Onshore EA3 will pull cables through pre-laid ducts and will construct the jointing bays and kiosks to connect lengths of cable
- At the National Grid connection point EA3 will construct the converter station/substation in either one or two phases

## East Anglia ONE/East Anglia THREE Construction Relationship (2)

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- Baseline remains that EA1 removes temporary works and EA3 reinstalls
- There may be an opportunity for EA3 to re-use temporary infrastructure used for constructing EA1 thereby reducing local impacts
- EA1 may, when submitting reinstatement proposals to the relevant planning authority propose that some or all temporary works are retained for use by EA3
- This includes CCSs, haul roads and temporary accesses
- EA3 then responsible for final reinstatement of those works retained from EA1. If EA3 does not go ahead responsibility for decommissioning works remains with SPR
- Reuse of temporary infrastructure would be subject to technical and commercial requirements, including negotiated landowner agreements

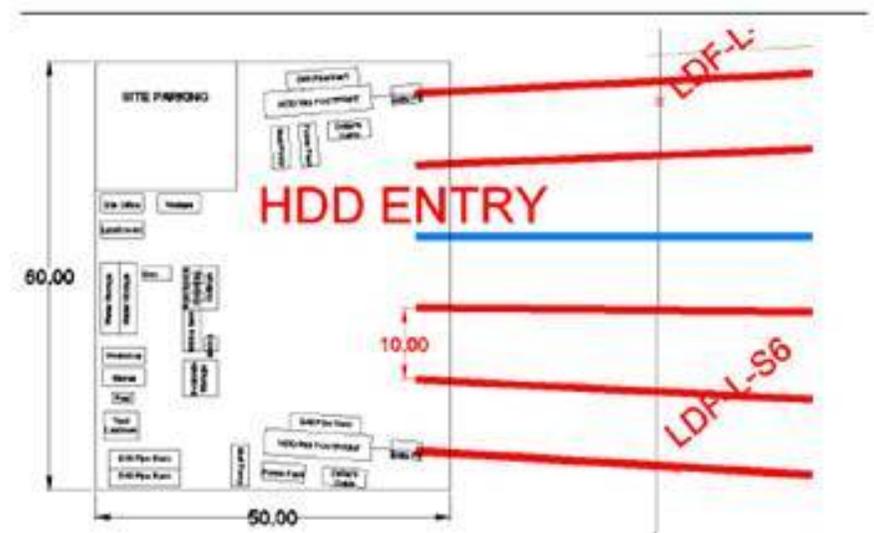
## East Anglia ONE/East Anglia THREE Construction Relationship (3)

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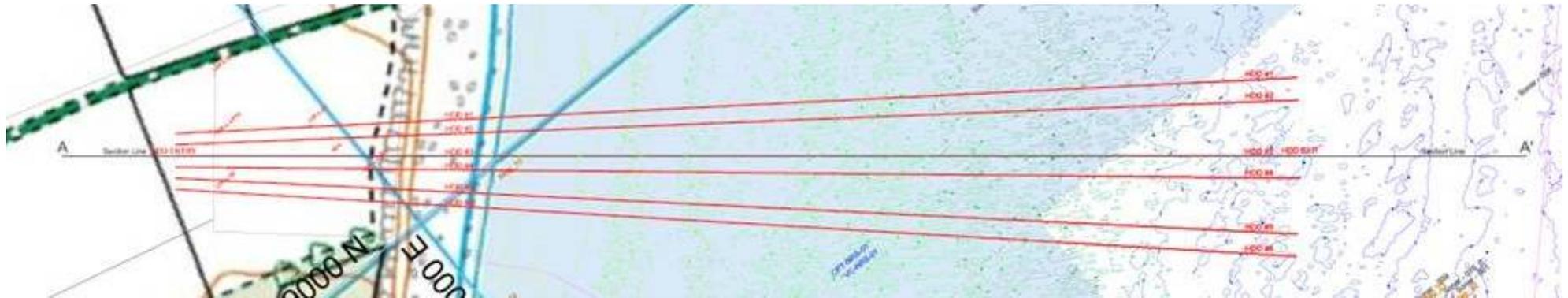
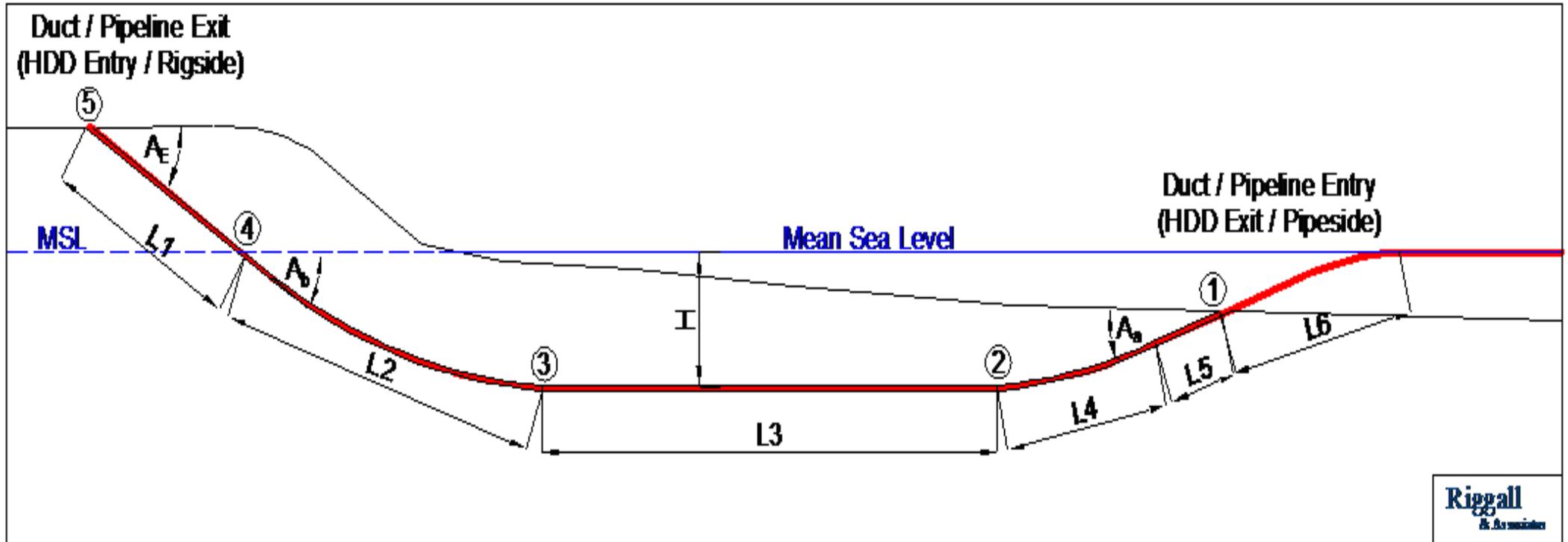
- EA1 transmission assets divestment to OFTO will take place around one year after project completion. Details of what will be part of the divestment are being agreed with OFGEM
- Either EA1 OFTO (with appropriate commercial agreements to SPR) or an SPR company will retain responsibility for the ducts until EA3 notifies the LPA that EA3 assumes responsibility
- EA3 will divest transmission assets to OFTO around one year after completion
- No overlap in construction periods

# Landfall

- EA1 and EA3 share a landfall point at Bawdsey
- EA1 will HDD and lay ducting through which EA3 will pull cables
- Infrastructure located to allow for potential effects of coastal erosion; actual effects will be subject to ongoing surveillance for the lifetime of the project and remedial action taken if necessary
- Requirement 32 of the EA1 DCO for the assessment of the ducts at the landfall will be met by the owners of the ducts



# Landfall – HDD Representation



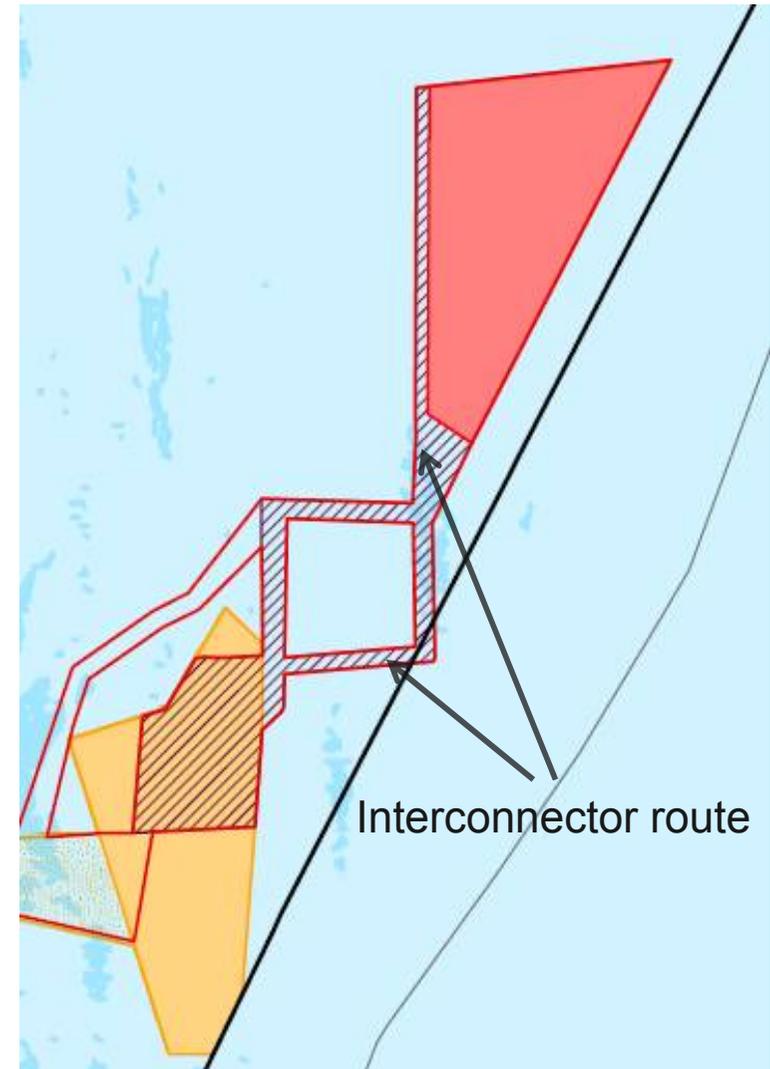
# Landscaping

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- EA3 LVIA assessment submitted as part of the ES in November 2015 assumed the EA1 consented position
- The EA1 (as consented position - July 2014) substation and associated landscaping works provides a high degree of screening for EA3 from the SW
- EA1 non-material change has implications for EA3 landscaping requirements
- A landscaping master planning exercise has commenced to review requirements from a multi development perspective
- EA3 will use the outcome of this exercise to update the LVIA assessment
- Landscaping sufficient to screen the EA3 converter station from the N and NE (which would not affect EA1) will be carried out by EA3
- Responsibility for maintaining the landscaping will be apportioned between OFTOs as necessary

# Interconnector

- An interconnector option has been included within the application
- Up to 4 cables could be installed between EA1 and EA3 projects
- This may perform one or other functions:
  - transmit electricity as a reserve connection
  - act as a backfeed (to provide a supply to the windfarm in event of a loss of power)
- If it exports electricity it will be transferred to an OFTO



## Future Transfers

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- In the case of future transfers, these need to be looked at in two contexts:
  - OFTO: depending on phasing (or not) there may be one or two OFTOs. The transmission works will be transferred and liabilities for ongoing maintenance will be established in the transfer agreement(s)
  - Different Delivery Bodies: if the whole project is transferred the provisions of Article 5 (benefit of the Order) would apply in the normal way. If part of the project is transferred (e.g. a single phase) Article 5 (benefit of the Order) will again apply ("any or all of the benefit of the provisions of this Order") in the normal way
- In either case, on any transfer of ownership (whether to an OFTO or to a different delivery body), the MMO (offshore) and relevant planning authorities (onshore) would be notified

## Skills (1)

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- The Department of Energy and Climate Change published the East Anglia ONE Supply Chain Plan in May 2015
- The plan sets out how EAOL will promote competition, innovation and skills through engagement with the supply chain
- The EA3 socio-economic assessment did not conclude that further mitigation on skills was required over and above that already being done/planned by EA1
- Notwithstanding this the plan approved under the EA1 Order committed SPR to continuing to build on initiatives from the skills strategy to support any future EA projects
- Detail of EA3 skills strategy will be defined in supply chain plan as part of a CfD application

## Skills (2)

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- The EA1 plan seeks to ensure that a suitably trained and skilled workforce is available to deliver the EA1 project.
- A EA3 skills plan will be similar in approach to EA1
- There are four main principles:
  - To utilise existing parent company skills programmes where and when possible and appropriate
  - To make the best of existing local and national education and skills infrastructures and to add value to these where appropriate
  - To promote employment and re-skilling opportunities in the communities most closely associated with the development of the project
  - To ensure the necessary balance of demand and supply of skills to support the delivery of East Anglia ONE