East Anglia TWO
Offshore Windfarm and
East Anglia ONE North
Offshore Windfarm

SCOTTISHPOWER
RENEWABLES

1

Welcome

Welcome to our Phase Three consultation Public Information Day about our proposed **East Anglia TWO** and **East Anglia ONE North** projects. Members of our project team are on hand today to answer your questions.

ScottishPower Renewables is currently progressing the construction of the 714 megawatt East Anglia ONE offshore windfarm and has recently obtained consent for the 1,200 megawatt East Anglia THREE windfarm.

Following on from the success of East Anglia ONE and THREE, East Anglia TWO and East Anglia ONE North are the next projects in the pipeline. They represent ScottishPower Renewables' significant commitment to continual investment in the East Anglia region.

Phase 3 Consultation
These Public Information Days provide a forum for the local community to provide feedback on the East Anglia TWO and East Anglia ONE North projects.

The objectives of this consultation are:

- To consult on the refinement of the Indicative Onshore Development Area
- To consult on mitigation that the projects could adopt, particularly in terms of cable routeing and at the substation location

Feedback can be provided directly to our project team, through the feedback forms available at this event, or via an online feedback form on the ScottishPower Renewables' project website: **www.scottishpowerrenewables.com /pages/east_anglia_projects**

www.scottishpowerrenewables.com

East Anglia TWO
Offshore Windfarm and
East Anglia ONE North
Offshore Windfarm

SCOTTISHPOWER RENEWABLES

2

Why is offshore wind so important?

The need to reduce greenhouse gas emissions

- Global temperature rise as a result of greenhouse gas emissions in the atmosphere is widely accepted as impacting weather, ecosystems and human health and welfare
- The UK has pledged to limit global temperature increases and has committed to a 57% reduction in emissions by 2032 and a reduction in greenhouse gas emissions of at least 80% by 2050 (both compared to 1990 levels)

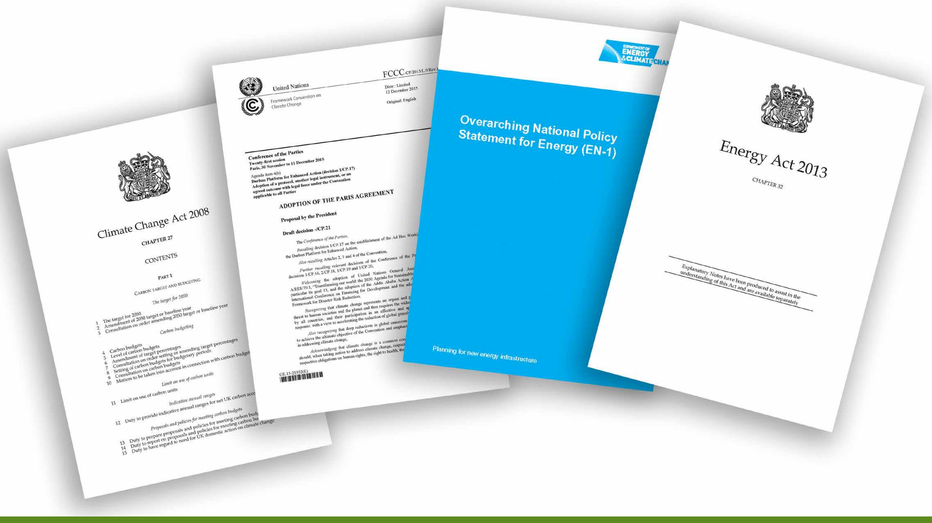
The need for energy security

- With existing fossil fuels and old nuclear powered electricity generation coming to the end of their operational lives, there is a need to use alternative methods to generate electricity and to develop new infrastructure to deliver a secure and sustainable energy supply
- The Overarching National Policy Statement for Energy EN-1 states:"It is critical that the UK continues to have secure and reliable supplies of electricity as we make the transition to a low carbon economy. To manage the risks to achieving security of supply we need sufficient electricity capacity (including a greater proportion of low carbon generation) to meet demand at all times"

Maximising economic opportunities for the UK

- A key Government commitment is to assist in making the UK a green industry centre by supporting the development and use of clean energy technologies
- The Industrial Strategy sets out The Government's vision for the offshore wind industry: to build a competitive and innovative UK supply chain that delivers and sustains jobs, exports and provides economic benefits for the UK
- The Centre for Economics and Business Research estimates that by 2030, offshore wind could increase the UK's Gross Domestic Product value by 0.6% and support 173,000 jobs

Please visit the TV screens to view the video with our Managing Director Jonathan Cole, which explains more about the need for offshore wind.



www.scottishpowerrenewables.com

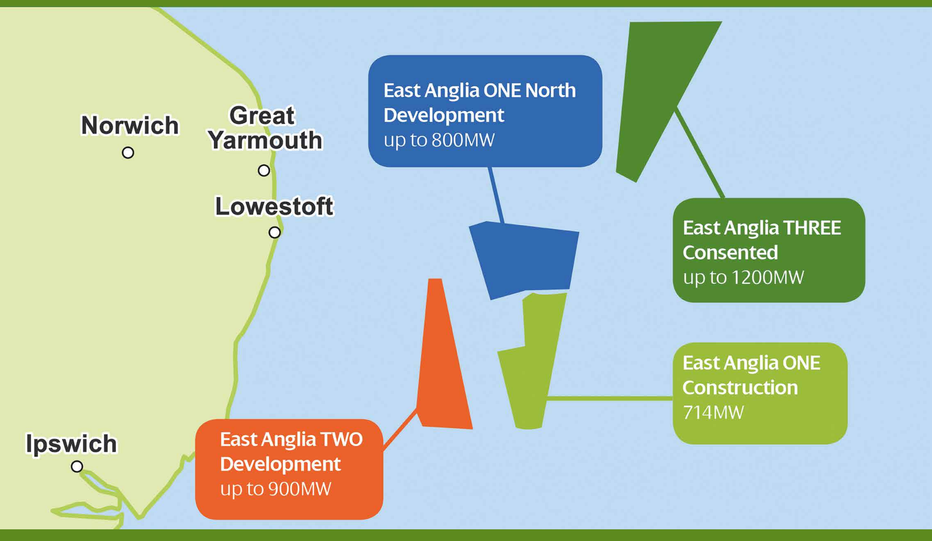
SCOTTISHPOWER RENEWABLES

3 Our Projects

ScottishPower Renewables' East Anglia ONE project is currently under construction and East Anglia THREE received consent in 2017.

The table below presents some key project information on the East Anglia TWO and East Anglia ONE North projects.

	East Anglia TWO	East Anglia ONE North
Anticipated capacity	Up to 900 megawatts	Up to 800 megawatts
Proposed wind turbine parameters	Up to 300m to tip height	Up to 300m to tip height
Potential number of homes equivalent powered	Around 742,000*	Around 660,000*
Number of turbines	Up to 75	Up to 67
Onshore substation operational area	190 x 190m	190 x 190m
National Grid substation operational area	140 x 325m (One substation for both projects)	
Approximate onshore cable route length	9km	9km

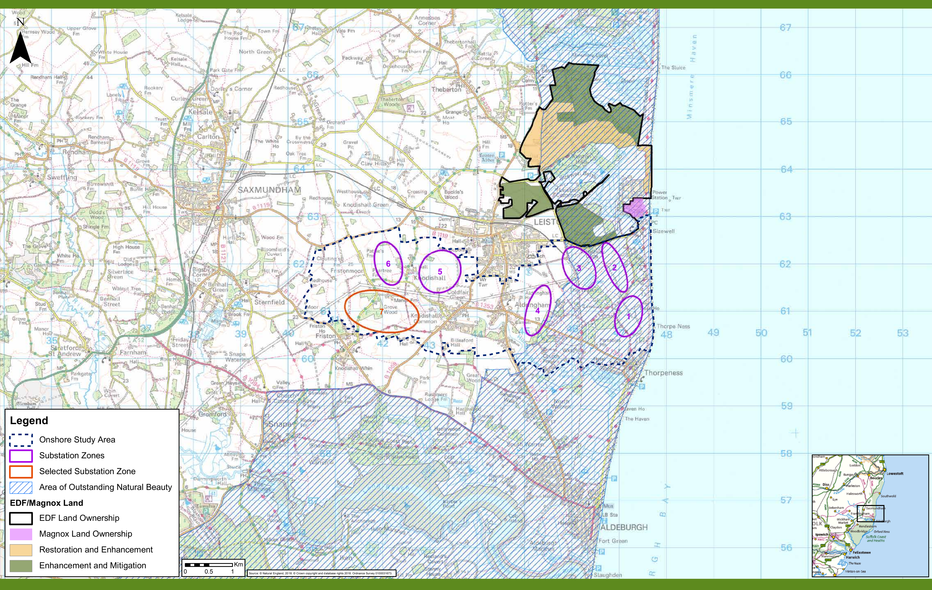


*Calculated by taking the number of megawatts (900/800) multiplied by the number of hours in one year (8,766), multiplied by the average load factor (efficiency of electrical energy usage) for offshore wind (36.7% published by the Digest of United Kingdom Energy Statistics), divided by the average annual household energy consumption (3.9MWh), giving an equivalent of powering 742,413/659,922 homes.

East Anglia TWO
Offshore Windfarm and
East Anglia ONE North
Offshore Windfarm

SCOTTISHPOWER
RENEWABLES

4 Site Selection Process and Considerations



ScottishPower Renewables has taken a balanced view towards the onshore substation site selection, using the advice of industry leading advisors in addition to our own significant project experience.

ScottishPower Renewables has followed the guidance set out in the Overarching National Policy Statement for Energy (EN-1). EN-1 states that consent for development within an Area of Outstanding Natural Beauty (AONB) will only be granted in exceptional circumstances.

Given the significant policy protection afforded to the AONB, ScottishPower Renewables does not consider development of the substations within Zones 1, 2, 3 or 4 to be appropriate.

To inform our site selection, a number of activities were carried out. These included:

- Onshore substation site selection RAG (Red, Amber, Green) assessment
- Suffolk Coast and Heaths AONB impact appraisal
- Public Information Days
- Landscape and visual impact and mitigation appraisal
- Substation access feasibility appraisal
- Crossing Aldeburgh Road avoiding interaction with residential property

ScottishPower Renewables has been working closely with EDF Energy to identify whether their land (as shown on the figure above) is available. EDF Energy has been working closely with stakeholders to establish the agreed ecological mitigation required for the development of Sizewell C. The land area necessary to provide this mitigation means that it is not possible to locate ScottishPower Renewables' substations within this land. Given the complex decommissioning activities at Magnox Sizewell A, the Magnox land is also considered unsuitable.

Following this work, ScottishPower Renewables considers Substation Zone 7 as the most appropriate for development.

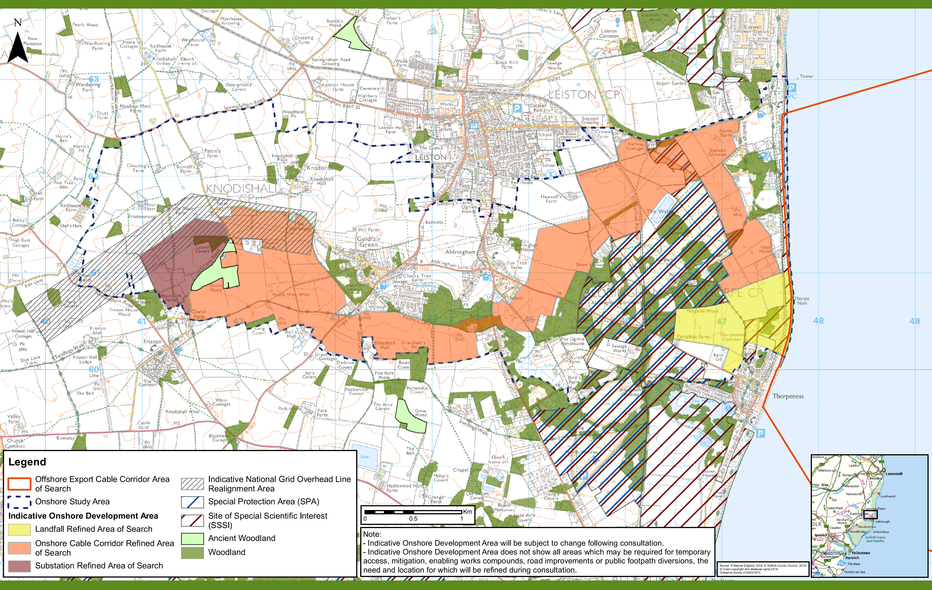
www.scottishpowerrenewables.com

East Anglia TWO
Offshore Windfarm and
East Anglia ONE North
Offshore Windfarm

SCOTTISHPOWER
RENEWABLES

5

Indicative Onshore Development Area



Following the selection of the preferred substation zone, ScottishPower Renewables has created the Indicative Onshore Development Area. This is presented in the figure above. The area will be refined following this consultation phase.

The Indicative Onshore Development Area is comprised of four key parts:

The Landfall Refined Area of Search
This is the area in which we will locate our temporary Horizontal Directional Drilling (HDD) construction compound, which will allow the offshore cables to be brought onshore.

The Onshore Cable Corridor Refined Area of Search
Within this broad area we will locate our onshore cable corridor, which will connect our landfall to the substation zone. A range of factors will be used to inform the refinement of this cable corridor including landowner feedback.

The Substation Refined Area of Search
Within this area we will locate the East Anglia TWO substation, the East Anglia ONE North substation and National Grid substation.

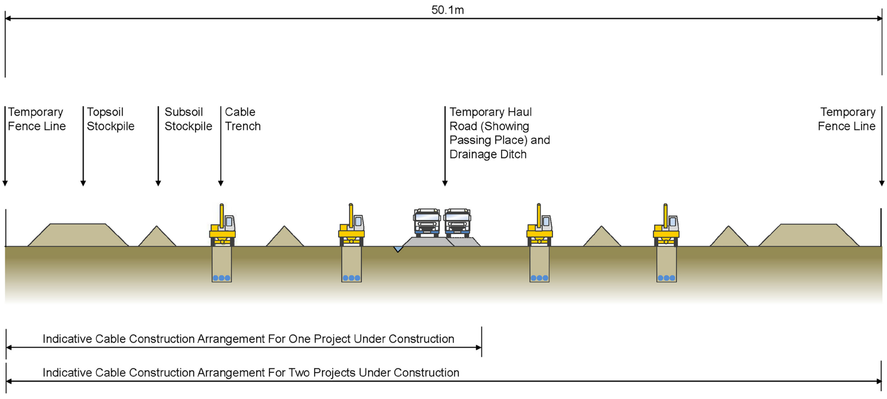
The Indicative National Grid Overhead Realignment Area
This is the area required to facilitate the connection between the proposed National Grid substation and the existing overhead lines.

Please view the other materials presented here today for more information about the Indicative Onshore Development Area.

www.scottishpowerrenewables.com

SCOTTISHPOWER RENEWABLES

6 Cable Route Construction



Installation of the cables
ScottishPower Renewables has committed to installing the cables underground for their entire length between the landfall and the substation. Appropriate techniques will be deployed along the route to cross roads and watercourses. This will involve techniques such as Horizontal Directional Drill (HDD) or open cut trenching.

ScottishPower Renewables is committed to exploring synergies between the proposed East Anglia TWO and East Anglia ONE North projects. Construction of the East Anglia TWO and East Anglia ONE North projects may, subject to regulatory certainty, be undertaken concurrently. However, the projects may also be constructed in isolation, one after the other.

The environmental impact assessment will ensure the potential impacts of both construction scenarios will be fully assessed and mitigation designed appropriately.

Reinstatement after construction
Once the cables are installed and construction is complete, ScottishPower Renewables will reinstate the land to allow its return to its previous use where possible.

Typical land uses along the onshore cable route include arable farming and grazing. Where land is reinstated at landfall and along the cable route, farming activity can resume after construction.

Some restrictions in land use along the onshore cable route will be required to ensure the protection of the cables, once installed. Restrictions will include construction of housing or other such developments. Some planting can be undertaken within the cable swathe which will follow National Grid guidance and be appropriate to the location.

SCOTTISHPOWER RENEWABLES

7 Approach to Assessment

ScottishPower Renewables' expert advisors are well underway with the gathering of baseline data that will help shape the proposals and mitigation measures.

The topic areas subject to assessment are shown on the table below. From our previous consultations with stakeholders, particular interest has been noted on Landscape, Traffic and Flood risk impacts associated with the projects.

Landscape Assessment
In accordance with industry guidance, a thorough Landscape and Visual Impact Assessment will be prepared, which will include a series of photomontages to aid understanding of how the projects will be viewed in the context of the existing landscape.

A selection of preliminary photomontages showing the substation area are available at the interactive map area.

Drawing on ScottishPower Renewables' experience in mitigating the visual impacts of other similar projects, appropriate substation design, landscape planting and land reinstatement can successfully reduce the visual impact of the projects. This is shown on the East Anglia ONE - Substation Design Case Study exhibition board.

Flood Risk Assessment
ScottishPower Renewables is aware that flood risk is a key issue for local communities. The proposed substation infrastructure will introduce additional areas of hard standing. The impact of this will be assessed through a Flood Risk Assessment and suitable mitigation measures (such as Sustainable Urban Drainage Systems) may be incorporated into the project design to reduce any unacceptable flood risk identified.

Feedback
Please visit the interactive map area or complete a feedback form to comment on any environmental aspects and suggest any mitigation measures for consideration.

Offshore Assessment Topic	Onshore Assessment Topic
• Marine Geology, Oceanography and Physical Processes • Water and Sediment Quality • Offshore Airborne Noise • Benthic Ecology • Fish and Shellfish Ecology • Marine Mammals • Ornithology • Commercial Fisheries • Shipping and Navigation • Civil and Military Aviation and Radar • Marine Archaeology and Cultural Heritage • Infrastructure and other users • Seascape, Landscape and Visual Amenity • Tourism, Recreation and Socio-Economics	• Ground Conditions and Contamination • Air Quality • Water Resources and Flood Risk • Land Use • Terrestrial Ecology • Onshore Ornithology • Archaeology and Cultural Heritage • Noise and Vibration • Traffic and Transport • Landscape and Visual Impact • Tourism, Recreation and Socio-Economics

SCOTTISHPOWER RENEWABLES

8 Traffic and Access Considerations

ScottishPower Renewables understands the importance of traffic and transport impacts and will be undertaking the following to refine and assess our proposals:

- Capturing further baseline traffic flows and speed data
- Finalisation of the Abnormal Indivisible Load Study
- Detailed transport modelling to understand future baseline traffic, project traffic demand and distribution and suitable access routes

Site visits are being undertaken to:

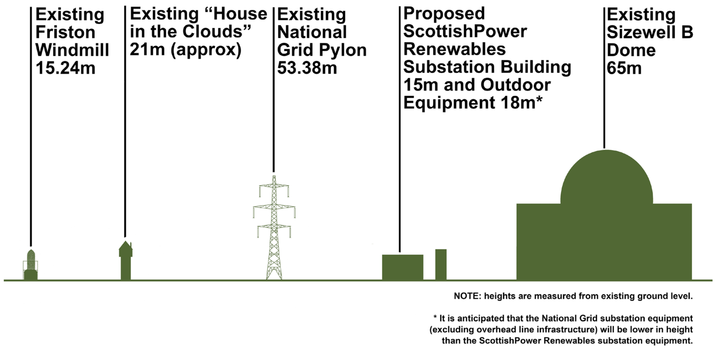
- Undertake critical width measurements
- Assess potential access locations and suitability
- Supplement desk based study to identify sensitive receptors
- Investigate existing highway conditions (visual inspection)
- Observe traffic behaviour at key locations
- Identify any other highway constraints

Details of the permanent access road to the substations will be developed over the coming months.

There is potential for highway improvements outside the Indicative Onshore Development Area. This is currently being considered and further details on potential highway improvements that may be required will be provided during Phase 4 consultation.

SCOTTISHPOWER RENEWABLES

9 Mitigation Measures



NOTE: heights are measured from existing ground level.

* It is anticipated that the National Grid substation equipment (excluding overhead line infrastructure) will be lower in height than the ScottishPower Renewables substation equipment.

ScottishPower Renewables will seek to mitigate and manage construction and operational impacts through the use of various management plans. These will be identified through the Environmental Impact Assessment process and will build upon lessons learnt from the pre and post construction stages of the East Anglia ONE project.

The Development Consent Order (DCO) process will be used to secure mitigation. Examples from East Anglia ONE include:

- Archaeology Written Scheme of Investigation
- Code of Construction Practice
- Artificial Lighting Emissions Plan
- Construction Lighting Emissions Plan
- Construction Noise and Vibration Management Plan
- Construction Surface Water and Drainage Plan
- Substation Landscape Management Plan
- Onshore Cable Route Landscape Plan
- Fencing and Enclosures Plan
- Landscape Management Plan
- Substation Detailed Design
- Substation Surface Water and Drainage Plan
- Written Scheme of Potentially Contaminated Land Mitigation
- Cable Method Statement
- Ecological Management Plan
- Operational Noise and Vibration Management Plan
- Traffic Management Plan
- Travel Plan
- Highways & Access Improvement Plan (Substation)

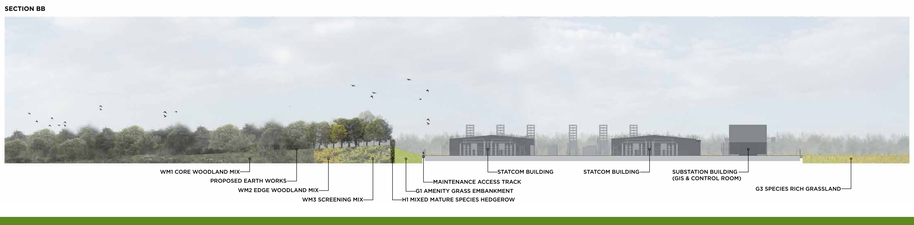
These documents are available to view on the ScottishPower Renewables' project websites: **www.scottishpowerrenewables.com/pages/east_anglia_projects**

East Anglia TWO
Offshore Windfarm and
East Anglia ONE North
Offshore Windfarm

SCOTTISHPOWER RENEWABLES

10

East Anglia ONE – Substation Mitigation Case Study



The Development Consent Order (DCO) for ScottishPower Renewables' East Anglia ONE project was issued by the Secretary of State in June 2014. One of the DCO's requirements was detailed design parameters for the onshore substation, in accordance with a set of initial design principles. A further agreement secured the need to agree a final landscape management plan.

The conceptual design of the substation was then developed with the supply chain and through a design review process involving the Design Council and local communities. This explored the finish of the substation and its design in terms of form and function. The review process also secured a further reduction in substation height.

Landscape Management Plan
Key objectives of this plan were:

- To provide appropriate visual screening of the substation
- To create robust and resilient soft landscape proposals
- To provide enhanced habitat opportunities in appropriate locations

The following landscaping is being included in order to achieve this:

- Hedgerows and woodland blocks to provide visual screening and supplement the woodland framework around the substation
- Use of mixed native species to integrate the new woodland within the landscape
- Planting faster growing native and non-native woodland species in certain areas for quicker visual screening
- Constructing natural looking earth bunding with gentle slopes where possible
- A separate agreement is in place to develop offsite planting where required

In addition to landscape and visual mitigation, this process also considered lighting, access and drainage for the substation area.

An illustrative section of landscaping at the East Anglia ONE substation is shown above.

SCOTTISHPOWER RENEWABLES

11 Consultation

How ScottishPower Renewables has listened and acted upon your feedback:

- Crossing Aldeburgh Road without interacting with residential properties
- Undergrounding cables for the entire length between the landfall and the substation
- Use of an alternating current (AC) grid connection, which removes the need for large convertor stations
- Reducing the height of the tallest building within the ScottishPower Renewables substations from 21m to 15m
- Locating substations outside the Suffolk Coast and Heaths AONB
- Investigating ways to reduce the visual impact of the East Anglia TWO and East Anglia ONE North projects through landscaping and planting
- Wider advertising of the Public Information Days
- Extended consultation periods to allow for further community engagement and comments
- Incorporated weekends and school holidays to increase accessibility of our Public Information Days
- Committed to a reduced cable swathe at the Aldeburgh Road crossing
- Now submitting both East Anglia TWO and East Anglia ONE North for consent at the same time to allow full understanding of the cumulative impact and the interaction between the projects
- Committed to a Horizontal Directional Drilling (HDD) technique at landfall to minimise coastal impact
- Proposed a haul route along the length of the cable route, with deliveries and vehicles marshalled from construction compounds, which reduces the use of local roads

Stakeholder consultation

ScottishPower Renewables has regular engagement with a range of stakeholders and consultees, including:

- Local communities
- Suffolk Coastal and Waveney District Councils
- Suffolk County Council
- Parish Councils
- Environment Agency
- Natural England
- Historic England
- Highways Agency
- Suffolk Coast and Heaths AONB
- Marine Management Organisation
- RSPB
- Suffolk Wildlife Trust

SCOTTISHPOWER RENEWABLES

12 Timeline

The consent programmes for East Anglia TWO and East Anglia ONE North are now aligned. This will provide greater clarity on the cumulative impact and interactions between the projects.

East Anglia TWO

MARCH 2018
- **Publication of Statement of Community Consultation**

SUMMER 2018
- **Phase 3 consultation begins** (16th May until 28th August)
- **Public Information Days**

EARLY 2019
- **Phase 4 Consultation Public Information Days** – To present the developed mitigation measures
- **Section 42 consultation commences on publishing of the Preliminary Environmental Information Report**

LATE 2019
- **Development consent application**

East Anglia ONE North

MARCH 2018
- **Publication of Statement of Community Consultation**

SUMMER 2018
- **Phase 3 consultation begins** (16th May until 28th August)
- **Public Information Days**

EARLY 2019
- **Phase 4 Consultation Public Information Days** – To present the developed mitigation measures
- **Section 42 consultation commences on publishing of the Preliminary Environmental Information Report**

LATE 2019
- **Development consent application**

Once the consent application is submitted and accepted the Planning Inspectorate will hold a preliminary meeting, followed by a six-month examination. The Planning Inspectorate then has three months to make a recommendation to the Secretary of State, who then has three months to grant or refuse consent.

Following consent, ScottishPower Renewables will prepare for construction and investment, which will involve the appointment of contractors and, in consultation with stakeholders and using contractors expertise, prepare detailed mitigation and construction plans to address the conditions and requirements of the DCO.