



**SCOTTISHPOWER  
RENEWABLES**

# **East Anglia ONE North and East Anglia TWO Offshore Windfarms**

## **Applicants' Statement regarding Ground Investigation Works Update**

Applicant: East Anglia TWO Limited and East Anglia ONE North Limited  
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**Applicable to East Anglia ONE North and East Anglia TWO**



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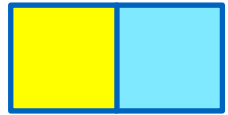
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## Glossary of Acronyms

CPT	Cone Penetration Testing
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
ECoW	Ecological Clerk of Works
ESC	East Suffolk Council
GI	Ground Investigations
PRoW	Public Rights of Way
SCC	Suffolk County Council
SCCAS	Suffolk County Council Archaeological Services
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
UXO	unexploded ordnance



## Glossary of Terminology

Applicants	East Anglia TWO Limited / East Anglia ONE North Limited
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
Landfall	The area (from Mean Low Water Springs) where the offshore export cables would make contact with land, and connect to the onshore cables.
National Grid substation	The substation (including all of the electrical equipment within it) necessary to connect the electricity generated by the proposed East Anglia TWO / East Anglia ONE North project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia TWO / East Anglia ONE North project Development Consent Order.
Onshore development area	The area in which the landfall, onshore cable corridor, onshore substation, landscaping and ecological mitigation areas, temporary construction facilities (such as access roads and construction consolidation sites), and the National Grid Infrastructure will be located.
Onshore substations	The East Anglia TWO substation and East Anglia ONE North substation and all of the electrical equipment within the onshore substation and connecting to the National Grid infrastructure.



# 1 Introduction

1. This document has been prepared by East Anglia TWO Limited and East Anglia ONE North Limited (the Applicants) in relation to the East Anglia TWO Offshore Windfarm project and the East Anglia ONE North Offshore Windfarm project (the Projects).
2. The Applicants submitted Development Consent Order (DCO) applications for their respective Project (the Applications) in October 2019 and the Examination of the Projects commenced on 6<sup>th</sup> October 2020.
3. In support of the detailed design of the Projects, the Applicants commenced onshore site investigation works in April 2021.
4. These onshore site investigation works comprise:
  - Ground investigations (to confirm the soil properties necessary to enable the detailed design of the Projects); and
  - Archaeological investigations (to establish the extent or otherwise of buried archaeological within the onshore development area).
5. Such onshore site investigation works are typically undertaken post consent given the cost of the surveys and the potential disturbance to landowners' activities. However, the Applicants have scheduled these site investigation works to be undertaken at the present time in order to maintain the Projects' development programme and allow for the rapid deployment of offshore wind capacity in line with the Government's strategy should the Projects receive consent.
6. Site investigation works are only being undertaken on land where voluntary agreement with the relevant landowner has been obtained.



## 2 Scope of Works and Programme

### 2.1 Ground Investigations

8. Structural Soils have been appointed by the Applicants to undertake the ground investigations. Two towed welfare units were delivered to the onshore substation location on 29<sup>th</sup> March 2021 with the remaining mobilisation commencing on 6<sup>th</sup> April 2021.
9. The ground investigations aim to further characterise the geotechnical, geo-environmental, thermal and electrical properties of soils within the onshore development area and include geotechnical and geo-environmental laboratory testing of soils and groundwater. It will also be supplemented by groundwater and ground-gas monitoring at a number of locations within the onshore development area. A topographical survey will also be undertaken to establish ground levels and record key features within the onshore development area.
10. The ground investigation will comprise machine excavated trial pits; cable percussion boreholes; cone penetration tests; windowless samplers; infiltration testing; groundwater and ground-gas monitoring installations and a topographical survey.
11. It is expected that the following deliveries will be required to facilitate the ground investigations:
  - Two eco welfare units, a storage container, a bathroom facility delivered to each of two temporary compounds;
  - Plant for the ground investigation comprising a maximum of:
    - Three cable percussion drilling rigs (each towed using a four-wheel drive vehicle);
    - One rotary drilling rig (delivered using a low-loader) and water (delivered by water truck);
    - One cone penetration testing (CPT) truck; and
    - Three machine excavators (each delivered using a low-loader).
  - Once on site, the plant is tracked or driven into position until the work is complete at which point the plant is removed from site. After delivery of plant, small equipment may be transported to its location direct from the contractor's base or from the two temporary compounds, typically using small vans.
12. As per the Applicants' safety procedures, due to the depth of intrusive ground investigations, all such areas will be subject to unexploded ordnance (UXO) clearance surveys or watching brief, and utility surveys which including the use



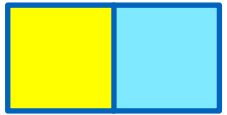
of ground penetrating radar. An archaeological watching brief will also be established.

13. The ground investigations are expected to be completed (with the exception of ground investigations within 200m of the Sandlings Special Protection Area (SPA)/Leiston-Aldeburgh Site of Special Scientific Interest (SSSI)) by the end of May 2021. Ground investigations within 200 meters of the Sandlings SPA/Leiston-Aldeburgh SSSI area will commence on or after 1<sup>st</sup> July 2021 to avoid potential impacts on breeding birds, as agreed with Natural England and are expected to be completed by the end of July 2021. No ground investigations (including topographical surveys) will be undertaken within the boundary of the Sandlings SPA/Leiston-Aldeburgh SSSI.
14. Plates 2.1 to 2.3 below show the ground investigation works being undertaken.



Plate 2.1: Trial Pit Excavation at Onshore Cable Corridor

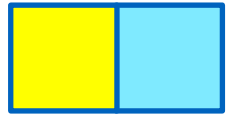




**Plate 2.2: Cable Percussion Drilling Rig in Operation at the Landfall**

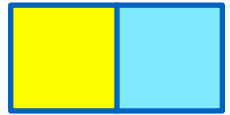


**Plate 2.3: Cable Percussion Drilling Rig Compound at the Landfall (with Acoustic fencing)**



## 2.2 Archaeological Investigations

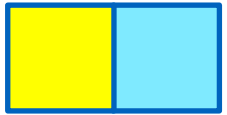
15. Headland Archaeology have been appointed by the Applicants to undertake the archaeological investigations which commenced on 20<sup>th</sup> April 2021. These archaeological investigations comprise of trial trenching and non-intrusive earthworks survey within the onshore development area, the scope of which has been agreed with Suffolk County Council Archaeological Services (SCCAS).
16. The archaeological investigations build on the geophysical surveys (REP1-025 to REP1-033) and trial trenching (REP1-024) previously undertaken by the Applicants.
17. The general aim of trial trenching is to further establish the nature, extent, degree of preservation and likely significance of previously identified archaeological anomalies/features and deposits identified through geophysical surveys undertaken by the Applicants (REP1-025 to REP1-033) in order to inform detailed design and the written scheme of investigation.
18. The general aim of the earthworks survey is to record and interpret the form (i.e. shape, size and orientation) of existing earthworks to allow consideration of how their form points to its historic function or purpose in order to inform detailed design and the written scheme of investigation.
19. Trial trenching started at the onshore substation location and National Grid substation location area and will move east towards the landfall. The earthworks survey is being scheduled at the time of writing this report.
20. It is expected that the following deliveries will be required to facilitate the archaeological investigations:
  - Three excavators and three mobile welfare units initially;
  - Ten excavators and six mobile welfare units as archaeological investigations progress across the onshore development area.
21. As per the Applicants' safety procedures, due to the shallow depth of intrusive archaeological investigations, all such areas will be subject to a metal detection UXO clearance survey prior to excavation.
22. The archaeological investigations are expected to be completed (with the exception of archaeological investigations within the Sandlings SPA/Leiston-Aldeburgh SSSI) by the end of July 2021. Any archaeological investigations within 200 meters of the Sandlings SPA/Leiston-Aldeburgh SSSI area will not commence before 1<sup>st</sup> July 2021 to avoid potential impacts on breeding birds, as agreed with Natural England.



23. The Applicants have also agreed with Natural England that the archaeological investigations will not commence within the Sandlings SPA/Leiston-Aldeburgh SSSI before 1<sup>st</sup> October 2021, to avoid potential impacts on breeding birds. These archaeological works are expected to be completed by the end of October 2021.
24. Plates 2.4 to 2.6 below show the trial trenching works being undertaken at the onshore substation location.



**Plate 2.4: Trial Trench Under Excavated at the Onshore Substation Location**



**Plate 2.5: Trial Trench Excavated at the Onshore Substation Location**



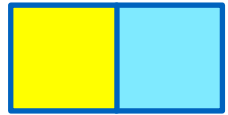
**Plate 2.6: Trial Trench Examination at the Onshore Substation Location**



## 2.3 Control Measures

25. A number of control measures have been put in place during the design and implementation of the abovementioned onshore site investigation works, including:

- No onshore site investigation works within the Sandlings SPA/Leiston-Aldeburgh SSSI will be undertaken before 1<sup>st</sup> October 2021 to avoid potential impacts on breeding birds, as agreed with Natural England;
- No onshore site investigation works within 200m of the Sandlings SPA/Leiston-Aldeburgh SSSI boundary will be undertaken before 1<sup>st</sup> July 2021 to avoid potential impacts on breeding birds, as agreed with Natural England;
- No onshore site investigation works will be undertaken within the wooded areas to the east and west of Aldeburgh Road to avoid the need for vegetation clearance;
- A daily ecological walkover survey will be undertaken by a suitably qualified Ecological Clerk of Works (ECoW) in advance of intrusive onshore site investigation works being undertaken, ensuring any protected species locations are recorded, appropriate exclusion areas established, and intrusive onshore site investigation works amended (if required) to avoid disturbance at any such locations;
- No onshore site investigation works will be undertaken with 10m of watercourses, trees or hedgerows;
- No onshore site investigation works will be undertaken within 30m of a badger sett;
- Hand searches of ground vegetation will be undertaken by a suitably qualified ECoW prior to removing any ground vegetation;
- Acoustic fencing will be used around all borehole investigation areas during drilling operations to reduce the potential for noise disturbance;
- Acoustic fencing will be used where onshore site investigation works take place within 100m of a residential dwelling or the Wardens Trust property unless otherwise agreed with the residential dwelling;
- Restriction on the timing of onshore site investigation works, which will only be undertaken from 7am to 7pm Monday to Friday, 7am to 1pm on Saturdays and no works on Bank Holidays.
- No ground investigation works which generate noise (i.e. excavations, reinstatement or borehole drilling) will be undertaken within 100m of a residential dwelling or the Wardens Trust property, between 7am and 8am or 6pm and 7pm Monday to Friday and 7am to 8am on Saturdays;



- Agreement on the points of access to the work areas with Suffolk County Council (highways department) and relevant landowners;
- Implementation of traffic controls under Temporary Traffic Regulation Orders to ensure safety of road users and site personnel;
- Restrictions on the timing of plant offloading on Sizewell Gap, which will only be undertaken from 9am and 3:30pm Monday to Friday unless otherwise agreed with Sizewell B;
- No intrusive onshore site investigation works will be undertaken on Public Rights of Way (PRoW) to ensure no disruption to PRoW users;
- Where PRoWs are used to access the onshore site investigation works with the permission of landowners, notices will be displayed on the relevant PRoW and all traffic movements will be limited to 5mph speed limit to maintain safety;
- Damping down of work areas for dust suppression where required;
- Washing of plant tracks before entering the Sandlings SPA/Leiston-Aldeburgh SSSI;
- Low ground pressure tracked plant used within the Sandlings SPA/Leiston-Aldeburgh SSSI;
- Erection of traffic calming and warning signage in the area of the onshore site investigation works and access points to maintain safety for members of the public and site personnel;
- Preparation of Ecological Management Plan, Archaeological Written Scheme of Investigation, Pre-commencement Archaeological Execution Plan and Site Preparation Works Management Plan.



## 3 Engagement

### 3.1 Engagement with the Councils and Other Organisations

26. The Applicants advised East Suffolk Council (ESC) of the pending onshore site investigation works in early March 2021. Suffolk County Council (SCC) was engaged on traffic matters ahead of the onshore site investigation works and all traffic management and associated signage was approved by SCC.
27. The Applicants engaged with the Suffolk Joint Emergency Planning Unit in November 2020 to discuss the pending onshore site investigation works. The Suffolk Joint Emergency Planning Unit subsequently confirmed that the onshore site investigation works would not require an update to the Suffolk Resilience Forum Radiation Emergency Plan.
28. The Applicants met with Sizewell B to discuss the onshore site investigation works and refine the control measures to minimise interaction on Sizewell Gap and subsequently Sizewell B's operations.
29. The Applicants also provided details of the onshore site investigation works to the Sizewell A site (Nuclear Decommissioning Authority and Magnox) and Sizewell C given their respective interests on activities along Sizewell Gap.

### 3.2 Engagement with the Local Community

30. Information regarding the onshore site investigation works was published on the Projects' website on 12<sup>th</sup> March 2021, over a month before the start of the onshore site investigation works.
31. Subsequent to this, the Applicants issued an e-mail notification advising of the onshore site investigation works to over 1,250 recipients on 17<sup>th</sup> March 2021, three weeks before the onshore site investigations commenced. Recipients were individuals who have previously registered to receive project update information via the Applicants' websites and was undertaken in line with General Data Protection Regulations. This included notification to every parish council across the onshore cable route and surrounding road network, key interest groups, ESC and SCC.
32. Notices were also displayed at various locations on public rights of way advising of the works from 31<sup>st</sup> March 2021.
33. From 15 April, a letter drop was issued to over 2,000 Royal Mail subscribed residential and business properties in Sizewell, and the parishes of Aldringham-cum-Thorpe, Knodishall and Friston.

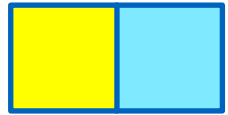


34. Regular updates have been and will continue to be provided to the abovementioned parish councils, key interest groups and other individuals to advise of key activities associated with the onshore site investigation works via e-mail.

### 3.3 Future Consultation

35. Progression of the onshore site investigation works at this early stage of the Projects have provided an opportunity for the Applicants to advance plans for a targeted community engagement programme which would otherwise have been deployed prior to commencement of construction.
36. This will involve the maintenance of a dedicated website (or webpage) to provide regular lookaheads as the onshore site investigation works progress. The website will also include the addition of a subscription option where individuals can register to receive detailed updates on the onshore site investigation works and (in the future) the construction works. The existing database (referred to in **Section 3.2** above) will continue to be utilised to provide more general project updates.
37. To promote this new website and the subscription feature during the onshore site investigation works, a maildrop will be distributed to all Royal Mail subscribed residential and business properties in Sizewell, and the parishes of Aldringham-cum-Thorpe, Knodishall and Friston.
38. Prior to commencement of construction, a further maildrop of the above mentioned residential and business properties will be undertaken, in addition to those within the parishes of Marlesford, Yoxford, Theberton and Eastbridge, Snape and Aldeburgh.





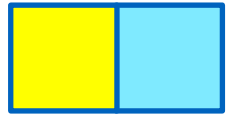
## 4 Community Feedback

### 4.1 Sizewell Hall Road

39. On 8<sup>th</sup> April 2021, a machine excavator with metal tracks was transported by low-loader along Sizewell Hall Road, an access route agreed with SCC highways department. The machine excavator was due to be unloaded on Sizewell Hall Road under the supervision of Structural Soils as close as possible to the exploratory hole locations to minimise the distance travelled by the machine excavator and the low-loader, however, due to overhanging tree branches along Sizewell Hall Road and the desire to avoid damage to these overhanging branches, Structural Soils unloaded the machine excavator further north on Sizewell Hall Road than originally intended. The offloading location occurred where the Sizewell Hall and Beach View Holiday Park accesses meet Sizewell Hall Road.
40. The initial offload resulted in a delay to two vehicles.. On offloading, minor superficial scraping to the rough tarmac road surface was caused by the metal tracks of the excavator. The Applicants' apologise for any delay as a result of this offloading process.
41. Following this offloading activity, the procedures for offload, notification of local residents and choice of plant were reviewed by the Applicants and Structural Soils. As a result, excavators with rubber tracks were subsequently specified and used; a mechanism for further engagement with local residents has been put in place to allow notification of specific offloading and collection times; and an offloading position which reduces the risk of blocking traffic on Sizewell Hall Road has been identified.
42. Following this first offloading activity, two machine excavators were successfully collected and relocated from Sizewell Hall Road to [King George's Avenue] using a tractor and trailer. Delivery of a rotary drilling rig was also successfully completed using a low-loader on 28<sup>th</sup> April 2021.

### 4.2 Safety Signage

43. Representations have been made to the Projects' Examinations regarding the presence of safety and traffic management signage within the village of Friston. Such safety and traffic management signage is essential in maintaining the safety of members of the public and site personnel. The locations of all signage within the public highway has been agreed with Suffolk County Council.
44. Signage is required as traffic calming measures at locations in which speed reduction is necessary. Such signage follows the 'Safety at Street Works and



Roadworks Code of Practice' and is in accordance with Temporary Traffic Regulation Orders for the works.

45. Signage is also required to ensure safety at each site access location. This signage has been approved by SCC and is in accordance with the 'Safety at Street Works and Roadworks Code of Practice'. Following the initial installation of signage, and feedback subsequently received from the local community, the Applicants subsequently removed all signage other than for those works which had already commenced in order to reduce the time the signage was present in the area. The Applicants then reinstalled relevant signage excluding signage relating to a proposed access off Church Road, Friston, which the Applicants consider to be surplus to requirements.
46. The Applicants' stakeholder management team received a direct complaint that signage was placed on private land in the northern section of Grove Road which was investigated and confirmed to be on public highway. With regard to SASES' submission that a sign on the southern section of Grove Road was placed on private land (photograph 5 of REP9-081) this sign was placed in error and has been removed and subsequently repositioned.
47. Safety is of paramount importance to the Applicants and therefore such signage must remain in place until completion of the associated onshore site investigation works.

### 4.3 Private Water Supplies

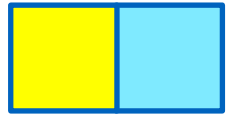
48. Users of a private water supply at Ness House, by the landfall, have expressed concerns regarding the potential for impact on the water supply as a result of ground investigation works (specifically boreholes) at the landfall.
49. The Applicants note the **Landfall Hydrogeological Risk Assessment** (REP6-021) submitted at Deadline 6 remains relevant for the boreholes being undertaken during the ground investigations.
50. The **Landfall Hydrogeological Risk Assessment** (REP6-021) is based on a thorough review of literature (including historical maps and plans, geological maps, cross-sections and schematic diagrams); available ground condition reports; hydrological and hydrogeological information from the British Geological Survey; and data on the location of Source Protection Zones, surface water features, groundwater vulnerability, aquifer type or any Safeguard Zones from the Department for Environment, Food and Rural Affairs (DEFRA) / Natural England websites.
51. No potential impact pathways have been identified and as such the borehole activities are considered to be low risk.



52. The Applicants have been discussing with Dr Gimson the undertaking of water sampling from the well which is ongoing.

#### **4.4 Ecological Complaints**

53. A member, or members, of the public have lodged complaints and concerns with Natural England, and Suffolk Constabulary (Rural and Wildlife Policing) regarding alleged disturbance to breeding birds and badgers as a result of the onshore site investigation works.
54. No complaint or concern has been substantiated by the claimant. The Applicants have addressed all such complaints and concerns with the relevant organisations to their satisfaction, through confirmation of the ECoW's role, undertaking of daily ecological walkover surveys, establishment of suitable exclusion works around protected species and amendment of the onshore site investigation works areas as required.
55. The Applicants consider such complaints to be the result of a concerted effort to discredit the management of the onshore site investigation works.



## 5 Conclusion

56. To support the detailed design of the Projects, the Applicants commenced onshore site investigation works in April 2021. These onshore site investigation works comprise:
- Ground investigations (to confirm the soil properties necessary to enable the detailed design of the Projects); and
  - Archaeological investigations (to establish the extent or otherwise of buried archaeology within the onshore development area).
57. A number of control measures have been put in place in designing and implementing the onshore site investigation works to minimise disruption as a result of the works.
58. The Applicants engaged with ESC and SCC in advance. Engagement with SCC facilitated agreement on access locations and the extent of the archaeological investigations to be undertaken. All necessary Temporary Traffic Regulation Orders were obtained, and site notices were erected in advance of the onshore site investigation works to promote the safety of the general public and site personnel.
59. Progression of the onshore site investigation works at this early stage of the Projects have provided an opportunity for the Applicants to advance plans for a targeted community engagement programme. This will involve the development of a dedicated website to provide regular lookaheads as the onshore site investigation works progress and a subscription option for users to receive detailed updates on localised activity.