# Outer Dowsing Offshore Wind Appendix 5.1.5 Community Liaison Group Consultation Documents

Date: June 2023

Outer Dowsing Document No: 5.1.5

Internal Reference: PP1-ODOW-DEV-CS-REP-0006

Rev: V1.0





#### **Appendix 5.1.5 Community Liaison Group Consultation Documents**

This Appendix includes the following documents:

- Annex 5.1.5A CLG Presentations (to date)
- Annex 5.1.5B CLG Minutes (to date)
- Annex 5.1.5C Outline ONSS Design Principles Document (April 2023)



#### **Annex 5.1.5A CLG Presentations (to date)**

This Annex includes the following documents:

- CLG Round 1 Presentation (Nov 2022)
- CLG Round 2 Presentation (Feb 2023)
- CLG Round 3 Presentation (Apr 2023)

Once Approved, all Presentations are made available on the Project's website:

https://www.outerdowsing.com/community-liaison-groups/



# Outer Dowsing Offshore Wind Community Liaison Group

Q4 2022



## Agenda

#### Outer Dowsing Offshore Wind - CLG

<u>ltem</u> :		<u>Timing (approx.)</u>
1	Coffee and tea	10 mins
2	Chair's welcome and introductions	10 mins
3	Aims and Terms of Reference	10 mins
4	Project Overview	10 mins
5	Issues raised at Project Information Days / webinars	20 mins
4	Question and answer session / discussion on future topics	20 mins
5	AOB	5 mins
6	Chair's closing remarks and next steps / next meeting	5 mins





## Terms of Reference (ToR's) Aims

#### Our Aims ...

- To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.
- To act as a two-way communication channel between local communities and the project team.
- To help **foster local involvement and ownership** of the project.

Any comments or Queries on the group Aims or ToR's as circulated prior to this meeting?

To facilitate focused discussions and ensure attendees can make the most out of the CLG's – it is intended for these groups to be focused on concerns/ issues / thoughts relative to their specific **local area**.

In the case of Anderby, this comprises:

- Landfall
- Northern substation search area
- Northern section of the cable route

### Welcome

**Outer Dowsing Offshore Wind** 

Welcome to the our very first Community Liaison Group. Thank you very much for joining us and we look forward to working with you all as we develop this project!

A little reminder of who we are...

The Project is a proposed offshore windfarm located approximately 54 kilometres off the coast of Lincolnshire, England.

The project comprises of a **1.5 GW** offshore generating station, and offshore and onshore transmission infrastructure. Outer Dowsing Offshore Wind is being developed by **Corio Generation** (a wholly-owned Green Investment Group portfolio company) and **TotalEnergies.** 











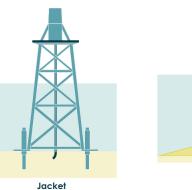
## Our Offshore Proposal

The offshore elements of The Project consist of an offshore wind turbine array, located approximately 54 km east of the Lincolnshire coast, along with offshore platforms, and export cables and array cables to connect the electricity generated to the National Grid.

#### **Wind Turbine Array Area**

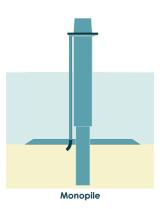
The Project design envelope allows for a maximum of 100 wind turbines, with a maximum tip height of **403m LAT** (m).

#### **Typical Foundation Types**





**Gravity base** 







## Our Onshore Proposals

- Landfall south of Anderby Creek;
- Undergound cables would continue underground to one of two different connection points still under consideration by National Grid;
- a connection to the existing overhead line circuits at Weston Marsh (north of Spalding) or;
- to a proposed new National Grid substation, Lincolnshire Node, (east of Alford).





**Scheduled Monument** 



**Onshore Search Zone** 



**Designated Site** 



**Substation Search Zone** 

## Landfall



#### What is landfall?

Landfall is the location along the project cable route where the offshore transmission cables carrying power from the wind turbines are brought ashore and link to the onshore cables. Following an extensive site selection process and landfall assessment, the optimum location for the landfall for Outer Dowsing Offshore Wind sits just south of Anderby Creek.

Landfall will be facilitated through the use of **horizontal directional drilling (HDD)** to install ducts within which the offshore power cables can be installed and joined to the onshore cables at a transition joint bay onshore. This method is a proven technique and has been applied as common practice throughout the industry for landfall of offshore wind projects amongst other applications.

#### What does this mean?

This means that the project will be drilling <u>underneath both</u> the beach, the dunes, Anderby Mash LNR and the road .. The drill compound will be located on the western side of the coastal road (Roman Bank), ensuring minimal interaction with the beach and the Coastal Country Park.

We appreciate we are not the first project to undertake works like this in your local area, we are therefore keen to hear any feedback you have on any issues from yourselves or your constituents who might have experienced this work in the past. We want to learn and work together to ensure we develop our proposals for the landfall in the best way we can, minimising disturbance and impacts to the communities as much as possible and possibly even working together to achieve the biodiversity ambitions of the Coastal Country Park.



#### What did we learn?

- Energy security a key issue
- Lots of shared experiences (good & bad) from Viking & Triton Knoll, the following issues noted:
  - Chopping down of trees for access turning points
  - Dust
  - Traffic & Air Quality
    - (in particular the 40mph temporary zones in place 24/7)
    - Limit to HGVs through Boston air quality
- Grid connection options views vary depending on location of attendees
- Constraint to expansion of economic development from lack of grid availability
- Useful information & feedback for substation search zones
- Concerns for cumulative impacts for future projects planning coordination
- Interface with National Grid wider works trigger points

- Temporary impact on agriculture & restoration.
- Archaeology
  - The Salterns
- Ecology and ornithology
  - The coastal communities of Lincolnshire have an inspiring fondness for nature
  - We want to encourage, support and foster this.. how can we get involved?
- Community benefit engagement and Biodiversity Net Gain







# Outer Dowsing Offshore Wind Community Liaison Group

February 2023



## Agenda

**AOB** 

#### Outer Dowsing Offshore Wind - CLG

Chair's closing remarks and next steps / next meeting

<u>Item:</u>		Timing (approx.)	
1	Coffee and tea	10 mins	
2	Chair's welcome and introductions	10 mins	
3	Feedback from Consultation Events	10 mins	
4	Project Update - Alternative cable route option and further consultation	10 mins	
5	Key Feedback and Our Response	20 mins	
4	Question and answer session / discussion on future topics	20 mins	



5 mins

5 mins



# A quick reminder of what we hope to achieve with these Community Liaison Groups...

#### Our Aims ...

- To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.
- To act as a two-way communication channel between local communities and the project team.
- To help **foster local involvement and ownership** of the project.

To facilitate focused discussions and ensure attendees can make the most out of the CLG's – it is intended for these groups to be focused on concerns/issues / thoughts relative to their specific local area.

### Welcome

**Outer Dowsing Offshore Wind** 

Welcome to our second phase of Community Liaison Groups. Thank you very much for joining us this evening.

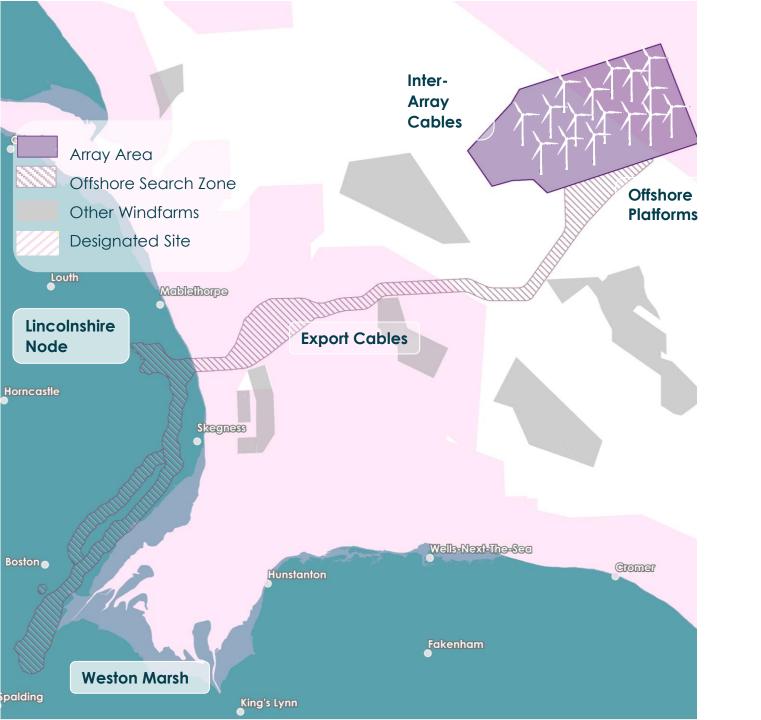
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The project comprises of a **1.5 GW** offshore generating station, and offshore and onshore transmission infrastructure. Outer Dowsing Offshore Wind is being developed by **Corio Generation** (a wholly-owned Green Investment Group portfolio company) and **TotalEnergies**.









## Our Offshore Proposal

The offshore elements of The Project consist of an offshore wind turbine array, located approximately 54 km east of the Lincolnshire coast, along with offshore platforms, and export cables and array cables to connect the electricity generated to the National Grid.

#### **Wind Turbine Array Area**

The Project design envelope allows for a maximum of 100 wind turbines, with a maximum tip height of **403m LAT** (m).

#### **Typical Foundation Types**



#### **Lincs Node** Connection **Option** A158 Burgh le Marsh Skegness New **Alternative Route Option** to Weston Marsh (north of the A52) Original Route to Weston Marsh (south of the A52) The Wash **Weston Marsh** Connection Option Long Sutton

# Our Onshore Proposals (& Project update)

- Landfall **south of Anderby Creek** (there is only one landfall search zone as this has been assessed as the optimum search zone for both connection options);
- Underground cables would continue underground to one of two different connection points still under consideration by National Grid;
- a connection to the existing overhead line circuits at Weston Marsh (north of Spalding) or;
- to a proposed new National Grid connection point, Lincolnshire Node, (east of Alford).

Alternative Route Option Search Zone



**Scheduled Monument** 

Alternative Route Option Indicative Cable Corridor



Designated Site



**Original Onshore Cable Corridor** 



Substation Search Zone



**Original Onshore Search Zone** 

## Gathering environmental data



#### **Onshore Surveys**

- Ornithology wintering bird surveys
- Ecology Phase 1 Habitat surveys & protected species surveys
- Archaeology geophysical and trial trenching investigations
- Engineering geotechnical, topographical, soil thermal resistivity
- Traffic & Transport traffic counts
- Visual photomontages of substation
- Geology & hydrology flow rates, filtration, drainage
- Aerial Photography Hi-res aerial imagery, vegetation survey and Lidar
- Meteorology weather & climate

#### **Offshore Surveys**

- Geophysical & Geotechnical
- Metocean & wind resource
- Ornithology & Marine Mammals
- Benthic ecology
- Marine Traffic Surveys













## **Onshore Geotechnical Survey**



#### Scope

- Up to 25 Geotechnical boreholes (15-30m deep)
- Trial Pits (3m x 2m)
- Cone Penetration Tests (CPTs)

#### **Programme**

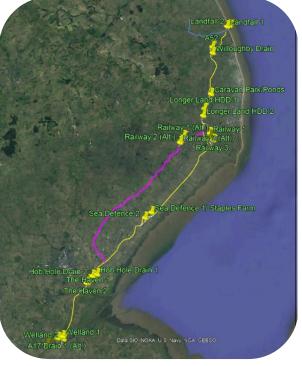
End March - ~6 weeks

#### **Stakeholder Engagement**

- Natural England
- Lincolnshire Wildlife Trust
- The Crown Estate
- ELDC, LCC & Parish Councils
- Site Notices for beach at Wolla Bank
- Access arrangements
- Intrusive Survey Licenses from landowners

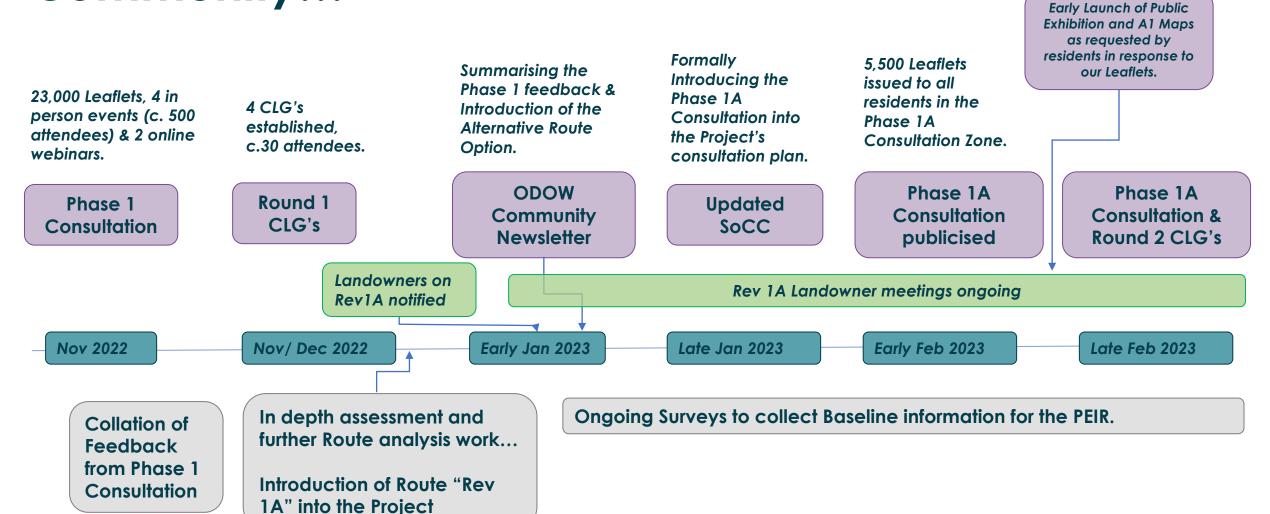


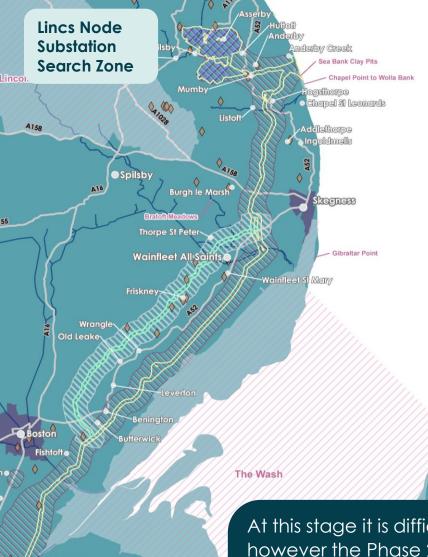




## How are we informing the local community...







Weston Marsh Substation(s)

Search Zone

Long Sutton



## Our Onshore Substation(s) Search Zones

Until we have secured a final grid connection, we currently have **two search zones** for the onshore substation & associated infrastructure required to connect to the National Grid transmission system.

#### **Weston Marsh connection option**

 Here there would be the Outer Dowsing substation & a National Grid Customer Substation. Some overhead line modifications will be required at, or near to, the ODOW/National Grid substation(s) to facilitate the connection of our project at this location.

#### **Lincolnshire Node connection option**

Here there would be the Outer Dowsing substation & we would be connected to the planned National Grid wider reinforcement works, this is likely to require a larger footprint, however the details of these plans are not yet known.

At this stage it is difficult to know exactly what the substation(s) will look like due to the number of unknowns, however the Phase 2 Consultation phases will include **Visualisations** of theoretical Worst-Case Scenario's and we will use feedback from this to help inform the aspects of the design that will go into the Application.

As well as this we are proposing to establish an "Onshore Substation Working Group", we aim to establish this as soon as a grid connection for the Project is confirmed and we can progress the designs for the onshore substation in consultation with the community who are local to it! What do you think?

## Landfall



The cables at the Landfall at Anderby Creek will be facilitated through the use of **horizontal directional drilling (HDD)** to install ducts within which the offshore power cables can be installed and joined to the onshore cables at a transition joint bay onshore.

What does this mean? This means that the project will be drilling underneath the beach, the dunes, Anderby Marsh LNR and the coastal (Roman Bank) road .. The drill compound will be located on the western side of the coastal road (Roman Bank), ensuring minimal interaction with the beach and the Coastal Country Park.

We are consulting with the below Nature Conservation Bodies and organisations to see how we can achieve Biodiversity Net Gain as part of our project, ensuring our efforts are put to work locally and that our project has minimal adverse impacts, and the overall outcome is positive with maximum gain for the local area.













We want to learn and work together to ensure we develop our proposals for the landfall in the best way we can, minimising disturbance and impacts to the communities as much as possible and possibly even working together to achieve the biodiversity ambitions of the Coastal Country Park.

## What have we been doing?

#### Key Feedback and Our Response

Experiences from Viking Link & Triton Knoll:

**Update:** We are reviewing the experiences on both Triton Knoll and Viking Link. We are also ensuring that all feedback from the community is fed back to our technical teams and discussed as part of our Expert Technical Groups (ETG's) with all relevant stakeholders.

Grid connection Location (Lincs Node or Weston Marsh)

**Update:** We have been having regular meeting with National Grid and we have been advised we should be getting a confirmed grid connection offer by Spring.

 Concerns on Original Route to Weston Marsh (Agricultural Practices, "Running Sands" and High water table)

**Update:** Introduction to the Project Design Envelope of an Alternative Route Option, that avoids the majority of this area without significantly impacting the cost of delivery (i.e. increasing the length of the cable route by a significant margin).

Temporary impact on agriculture & restoration

**Update:** We have met with over 300 landowners and established Landowner Interest Groups.

Archaeology (The Salterns)

**Update:** We have been meeting with the County Council Archaeologist to discuss the results of our desk-based assessment and proposed approach to non-intrusive surveys through 2023.

Community benefit engagement and Biodiversity Net Gain

**Update:** We have been meeting with a number of key stakeholders to discuss potential collaborations from both a Community and Biodiversity Perspective.

Useful information & feedback for substation search zones

**Update:** We are progressing with some visualisations for our Phase 2 Consultation for some specific candidate substation sites and configurations. We want to be as transparent as possible with the community and get their feedback on these options.

 Concerns for cumulative impacts for future projects – planning coordination

**Update:** We are regularly updating our planning system to ensure any known projects are included in our Cumulative impact Assessment.







# Outer Dowsing Offshore Wind Community Liaison Group

April 2023



## Agenda

#### Outer Dowsing Offshore Wind - CLG

<u>ltem</u> :		<u>Timing (approx.)</u>
1	Coffee and tea	10 mins
2	Chair's welcome and introductions	5 mins
3	Project Update	5 mins
4	Presentation of onshore substation design option	25 mins
5	Consultation next steps	10 mins
4	Question and answer session / discussion on future topics	5 mins
5	AOB	5 mins
6	Chair's closing remarks and next steps / next meeting	5 mins





# A quick reminder of what we hope to achieve with these Community Liaison Groups...

#### Our Aims ...

- To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.
- To act as a **two-way communication channel** between local communities and the project team.
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To facilitate focused discussions and ensure attendees can make the most out of the CLG's – it is intended for these groups to be focused on concerns/issues / thoughts relative to their specific local area.

## The Project Partners

## Outer Dowsing Offshore Wind is being developed jointly by TotalEnergies, Corio Generation (part of the Green Investment Group) and Gulf Energy

**TotalEnergies** is a global multi-energy company that produces and markets energies: oil and biofuels, natural gas and green gases, renewables and electricity.

It's over 100,000 employees are committed to energy that is ever more affordable, cleaner, more reliable and accessible to as many people as possible. Active in more than 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people.

**Corio Generation** is a Green Investment Group (GIG) portfolio company, operating on a standalone basis. GIG is a specialist green investor within Macquarie Asset Management, part of Macquarie Group.

With a unique blend of sector-leading expertise and deep access to long-term capital, Corio Generation applies a long-term partnership approach to the creation and management of projects, taking them from origination, through development and construction, and into operations.

Gulf Energy Development (GULF) is a holding company based in Thailand that invests in a portfolio of energy, infrastructure, and digital and telecommunications businesses.

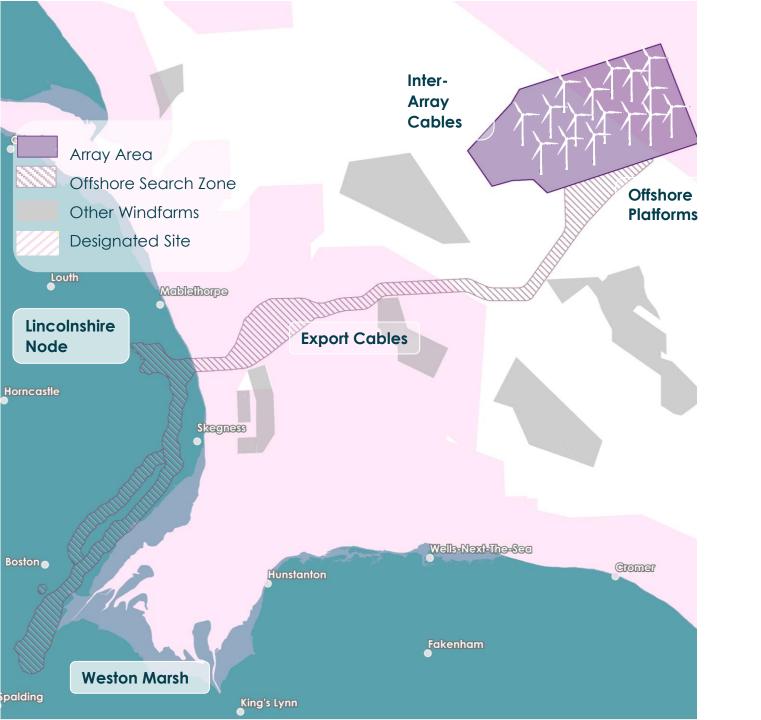
As one of Thailand's largest private power producers with over 20 GW of gas-fired and renewable capacity, GULF is committed to supporting the energy transition to create sustainable shared value in all spheres where it operates.













## Our Offshore Proposal

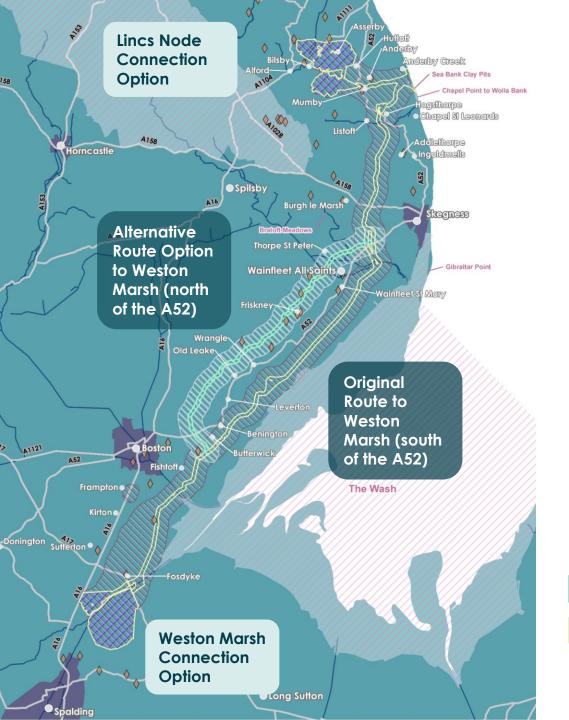
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#### **Typical Foundation Types**





## Our Onshore Proposals



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Alternative Route Option Search Zone



**Scheduled Monument** 

Alternative Route Option Indicative Cable Corridor



**Designated Site** 



**Original Onshore Cable Corridor** 



Substation Search Zone

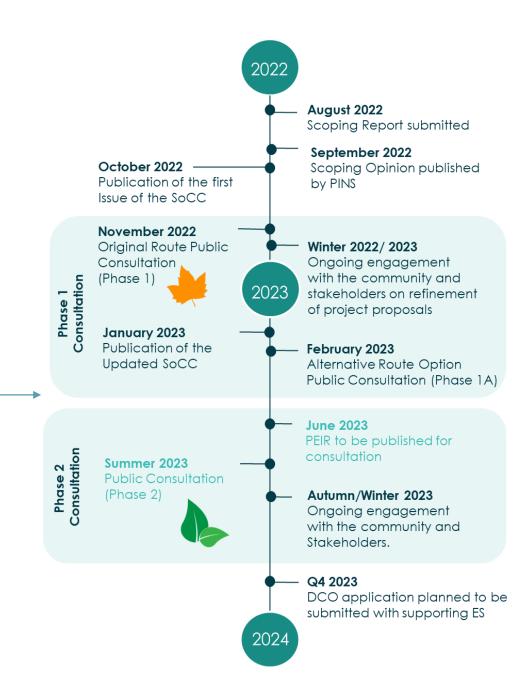


Original Onshore Search Zone

## Programme

We are here





#### **Public Consultation Events to date**

#### November 2022

Original Route Public Consultation (Phase 1)



## 4x Public Information Days c. 500 attendees

- 2 Webinars, Online virtual exhibition, Questionnaires / feedback forms, Freephone, Email, social media
- 4x Community Liaison Groups established with all affected Parish Councils & Landowner Interest Group established
- Winter Newsletter summarising feedback and introducing Phase 1A Consultation

#### February 2023

Alternative Route Option Public Consultation (Phase 1A)

## 2x Public Information Days c. 300 attendees

- 2 Webinars, Online virtual exhibition, Questionnaires / feedback forms, Freephone, Email, social media
- 4x Community Liaison Groups met with additional affected Parish Councils & Landowner Interest Group met
- **Spring Newsletter** summarising feedback and next steps









## **Newsletter – Spring 2023**





Theme	Comments	Response
Alternative route proposals	The general feedback was that this was a good route as it affected fewer residential properties and avoided the engineering issues raised at Phase 1.	These comments will be fed back to the development team to help with the production of the Preliminary Environmental Information Report, the next step in the consultation process.
Energy costs	A number of respondents asked whether the project would make a difference to the energy bills of people in the local area.	The cost of energy crisis is a broad issue and one that this project cannot solve on its own. However, the Outer Dowsing scheme will increase supply of renewable energy into the Grid, providing enough electricity to power 1.6 million homes with clean, green electricity.
Biodiversity and environmental enhancements	Several people commented that they would like to see an environmental corridor/green grid, with an increase in relevant biodiversity.	We are actively looking into opportunities where we can provide Biodiversity Net Gain as part of the Project and are talking to local organisations who may be able to help us deliver these aims.
Consultation quality	A number of attendees at the events commented on how well the information was presented and that it was easy to understand. They also wanted the Project to keep in regular contact at a local level.	We are delighted that attendees found the exhibition useful. We will take on board these comments when designing the exhibition for the Phase 2 consultation in the summer. We will continue to hold regular community liaison groups and communicate via newsletters and the website.
Supporting local projects	We received a lot of feedback on how other projects in the area delivered community benefit in the form of a Community Benefit Fund, with suggestions on how we could support with funding local projects	We are keen to offer a community benefit fund with an aim to deliver a substantive and enduring benefit to local communities. We are talking to local organisations who may be able to help us deliver these aims.
The effects of previous schemes on local communities	People highlighted concerns regarding previous schemes in the area. It was acknowledged that whilst some aspects could have perhaps been handled better, there was also a lot of good practices the scheme could learn from.	We aim to learn from what worked well for other schemes and also what didn't work so well. Our aim is to deliver a traffic, construction and operations programme that has been shaped by local input and views.

## Gathering environmental data



#### **Onshore Surveys**

- Ornithology wintering bird surveys
- Ecology Phase 1 Habitat surveys & protected species surveys
- Archaeology geophysical and trial trenching investigations
- Engineering geotechnical, topographical, soil thermal resistivity
- Traffic & Transport traffic counts
- Visual photomontages of substation
- Geology & hydrology flow rates, filtration, drainage
- Aerial Photography Hi-res aerial imagery, vegetation survey and Lidar
- Meteorology weather & climate

#### **Offshore Surveys**

- Geophysical & Geotechnical
- Metocean & wind resource
- Ornithology & Marine Mammals
- Benthic ecology
- Marine Traffic Surveys













# **Onshore Geotechnical Survey**



#### Scope

- Up to 25 Geotechnical boreholes (15-30m deep)
- Trial Pits (3m x 2m)
- Cone Penetration Tests (CPTs)

#### **Programme**

Mid-May-~6 weeks

#### **Stakeholder Engagement**

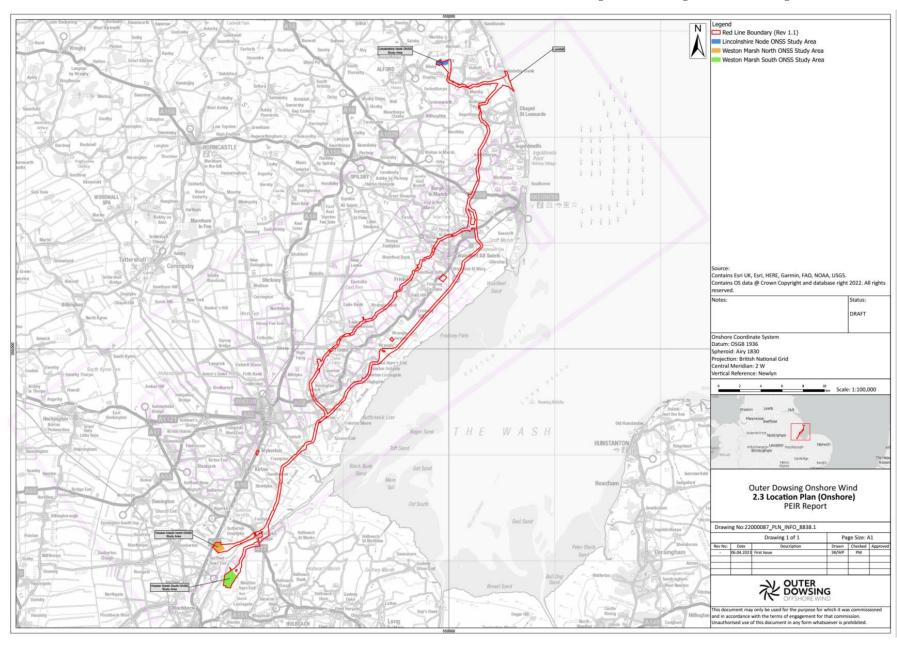
- Natural England
- Lincolnshire Wildlife Trust
- The Crown Estate
- ELDC, LCC & Parish Councils
- Site Notices for beach at Wolla Bank
- Access arrangements
- Intrusive Survey Licenses from landowners









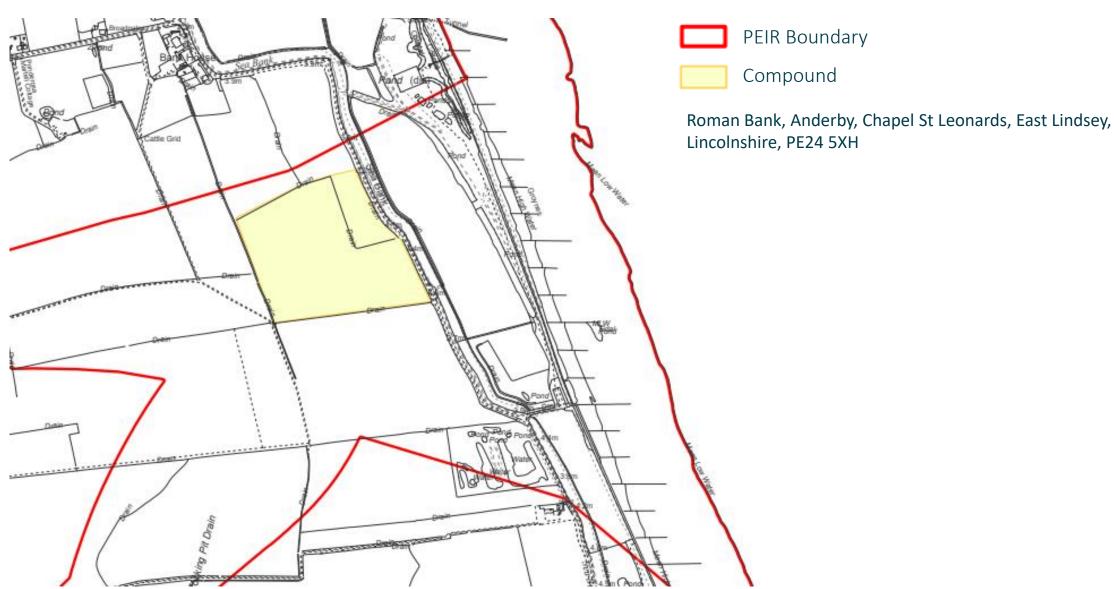




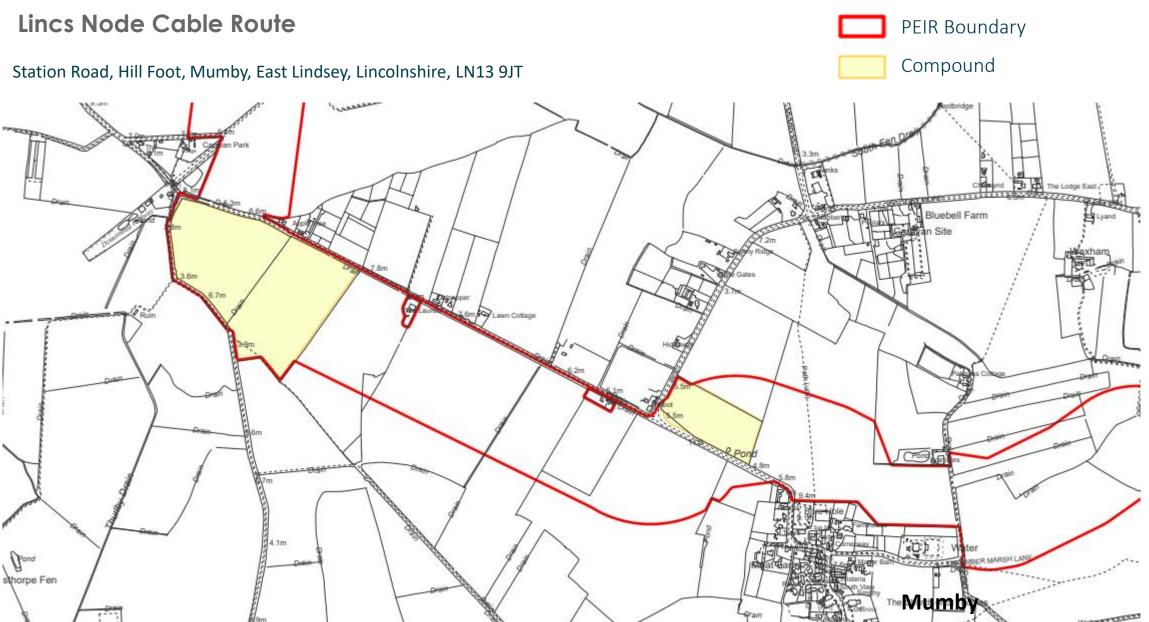
# CLG – Substation North



#### Landfall





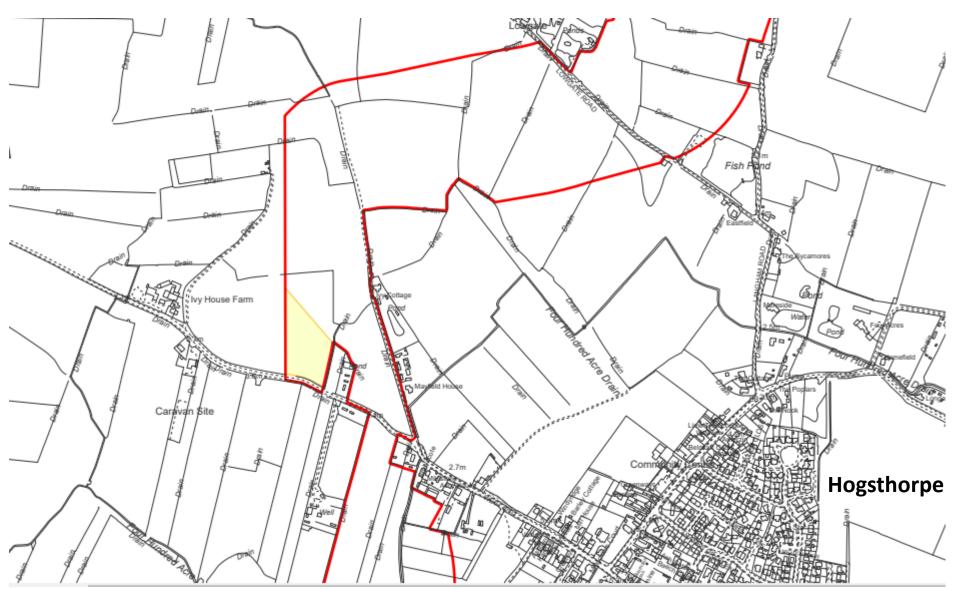




# CLG - Cable Route North



#### Weston Marsh North Cable Route

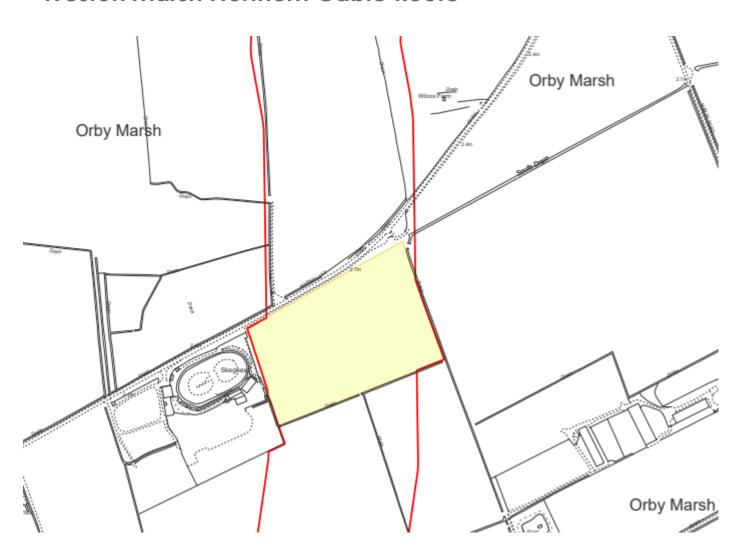




Bracken Lane, South End, Ingle Nook, Hogsthorpe, Mumby, East Lindsey, Lincolnshire, LN13 9SG



#### **Weston Marsh Northern Cable Route**

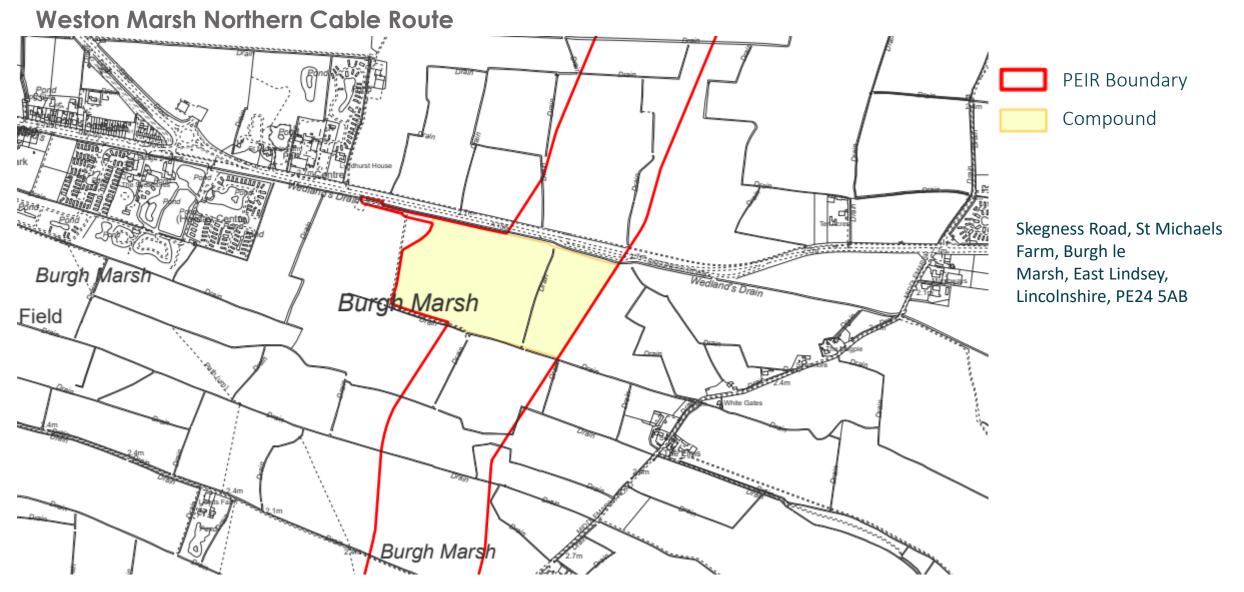


PEIR Boundary

Compound

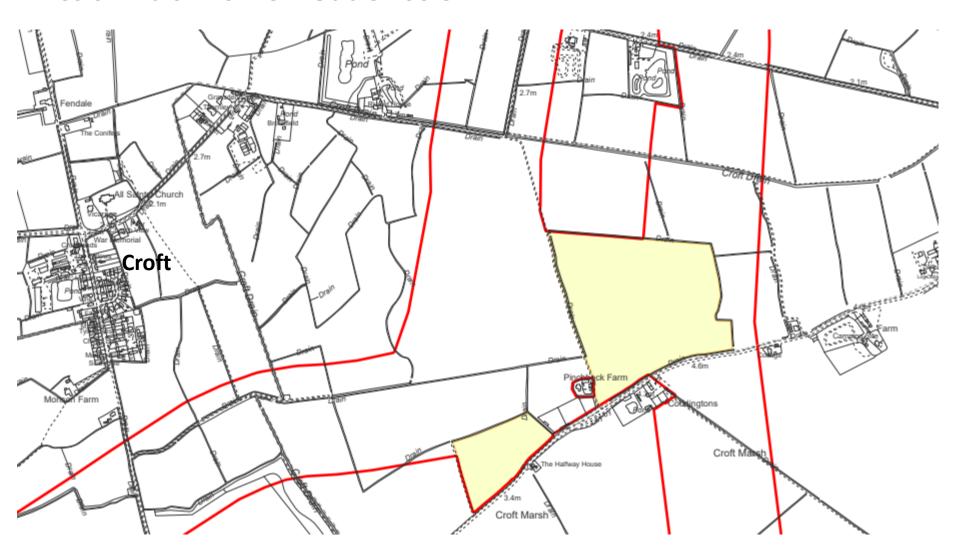
Skegness Stadium, Marsh Lane, The Holding, Orby, East Lindsey, Lincolnshire, PE24 5JA





# OUTER DOWSING OFFSHORE WIND

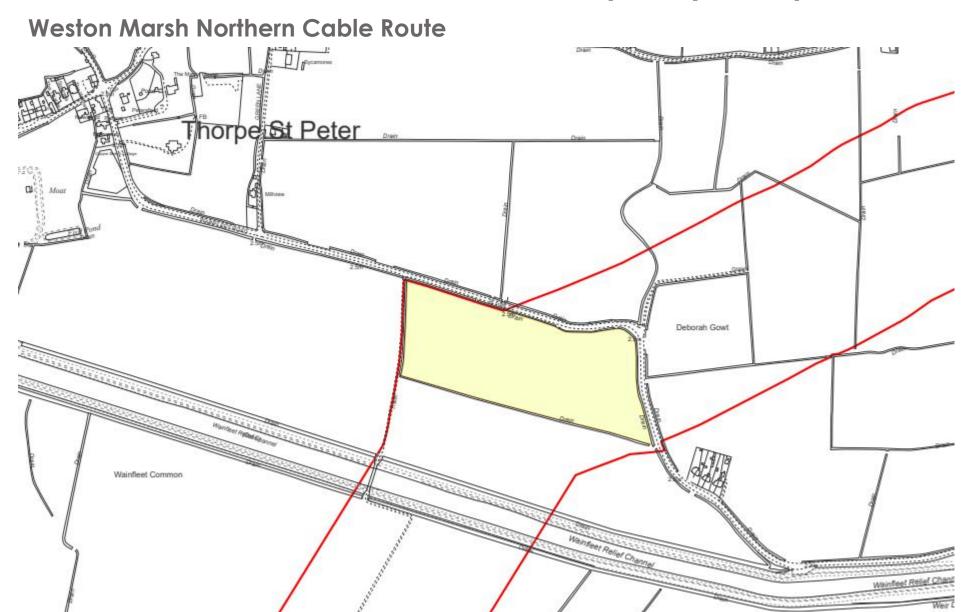
#### **Weston Marsh Northern Cable Route**





Pinchbeck Lane, Rivulet House, Croft, East Lindsey, Lincolnshire, PE24 4RY



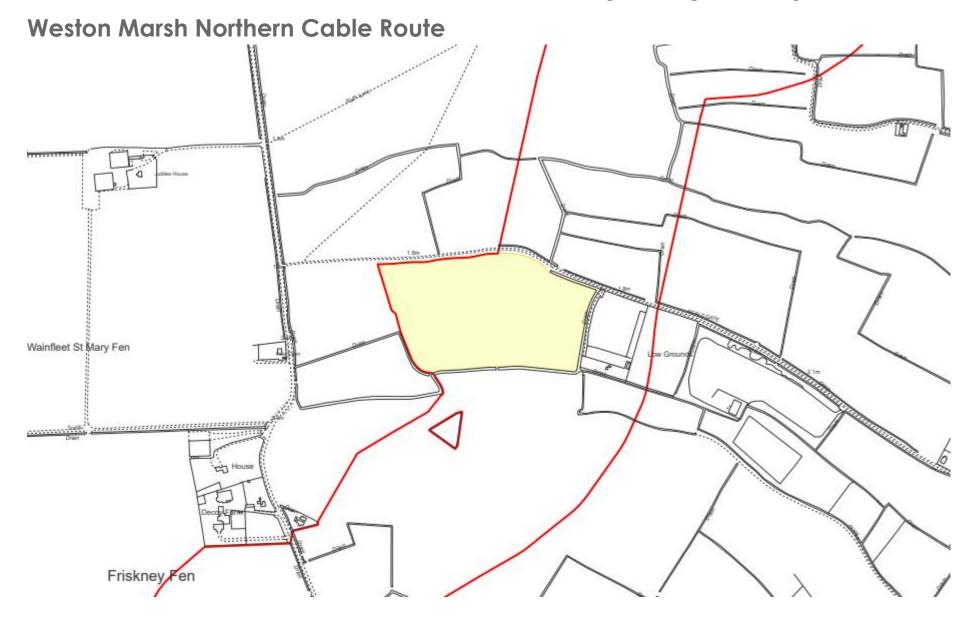


PEIR Boundary

Compound

Wainfleet Road, Ivy Cottage, Thorpe St. Peter, East Lindsey, Lincolnshire, PE24 4NS





PEIR Boundary

Compound

Hallgate Road, Church Cottages, Wainfleet St Mary, East Lindsey, Lincolnshire, PE24 4JT



#### Weston Marsh Northern Cable Route



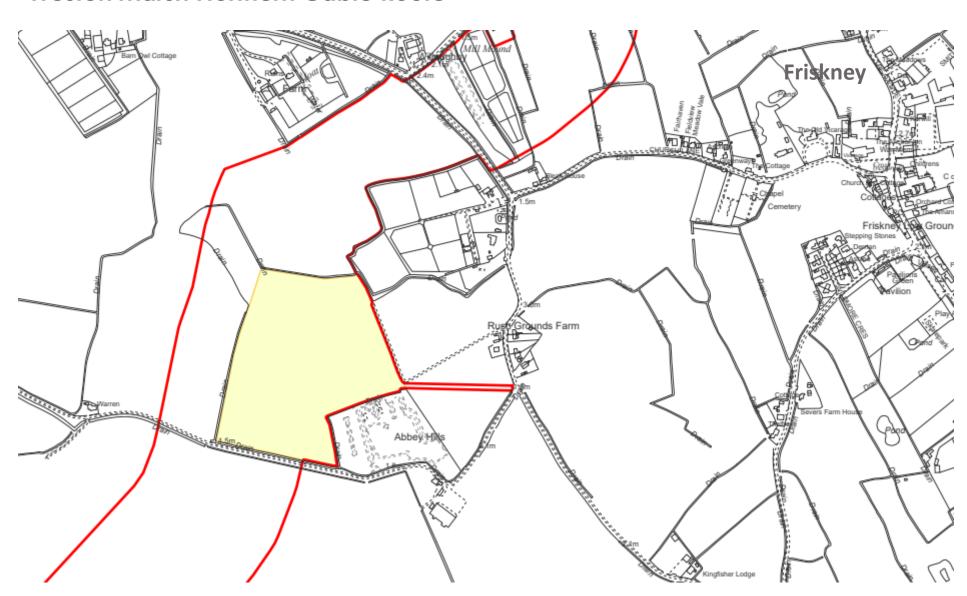
PEIR Boundary

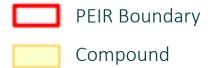
Compound

Brays Farm, Boston Road, Toft House Farm, Wainfleet St Mary, East Lindsey, Lincolnshire, PE24 4HJ

# OUTER DOWSING

#### Weston Marsh Northern Cable Route

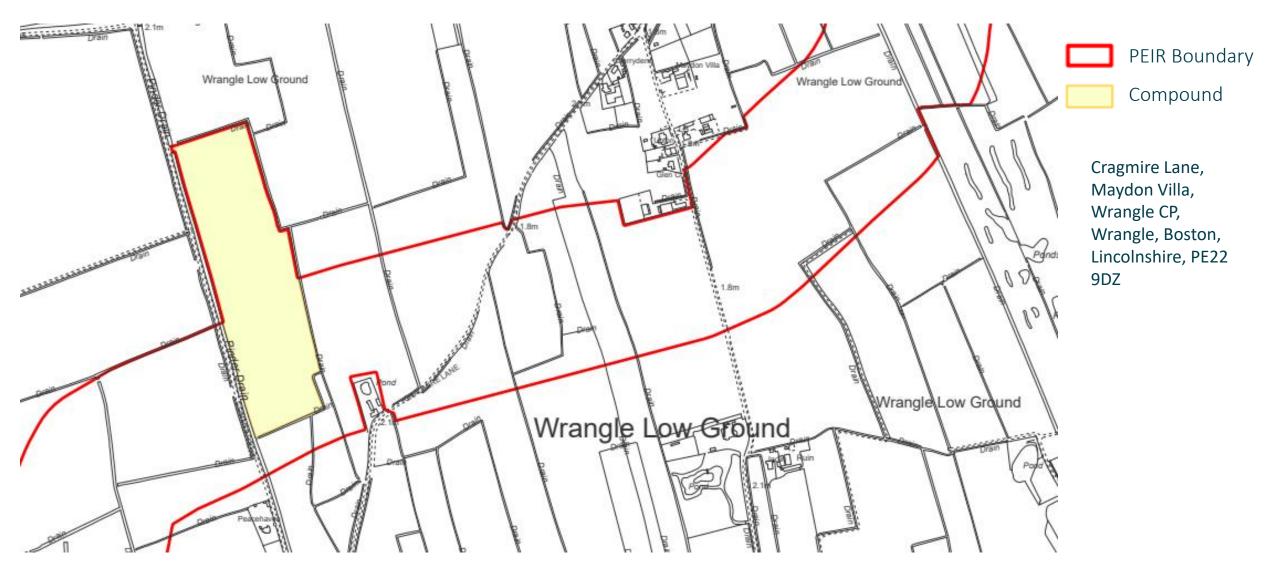




Small End, The Rookery, Friskney, East Lindsey, Lincolnshire, PE22 8PQ



Weston Marsh Northern Cable Route





#### Weston Marsh Northern Cable Route





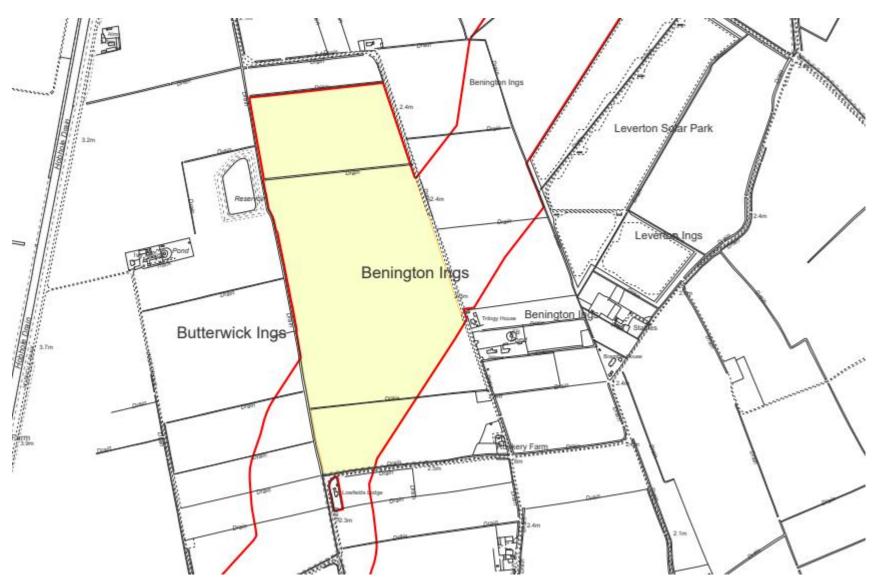
Sea Lane, Marsh Farm, Wrangle CP, Wrangle, Boston, Lincolnshire, PE22 9HE



# CLG - Cable Route South

# OUTER DOWSING OFFSHORE WIND

#### Weston Marsh Southern Cable Route

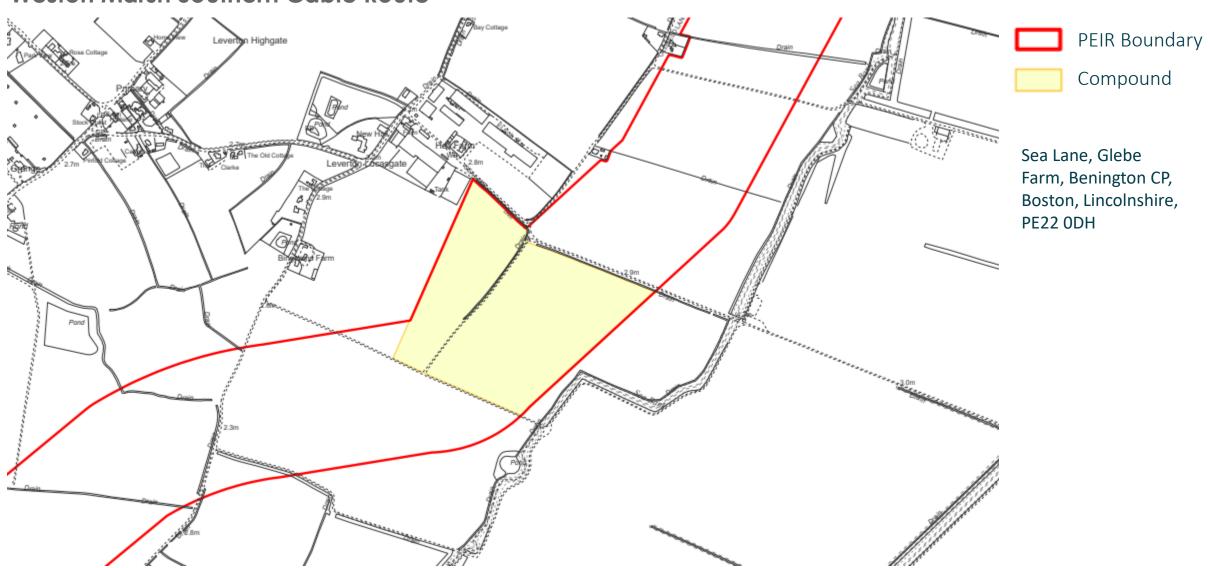




Ings Road, Southway, Benington CP, Boston, Lincolnshire, PE22 OPZ

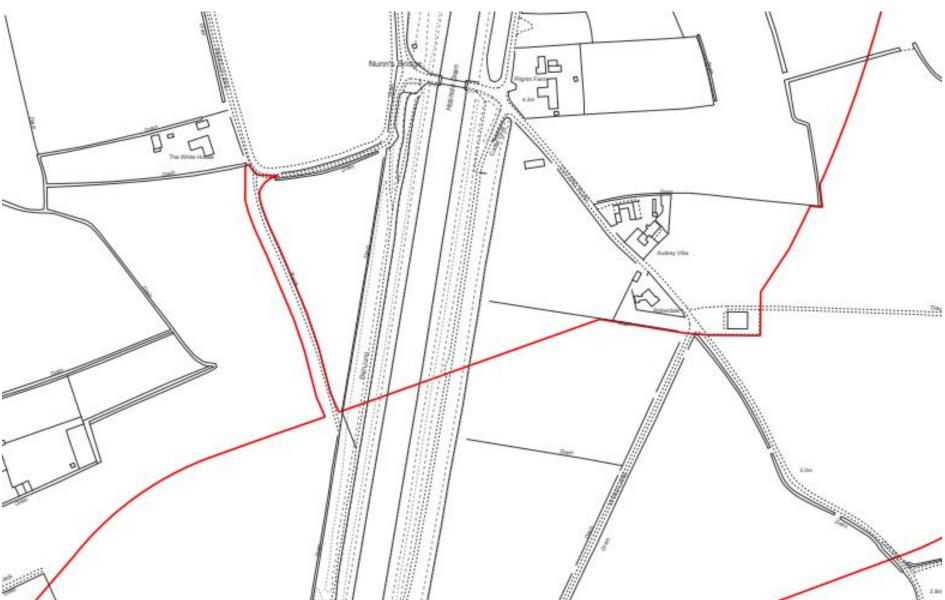


#### Weston Marsh Southern Cable Route





#### Weston Marsh Southern Cable Route

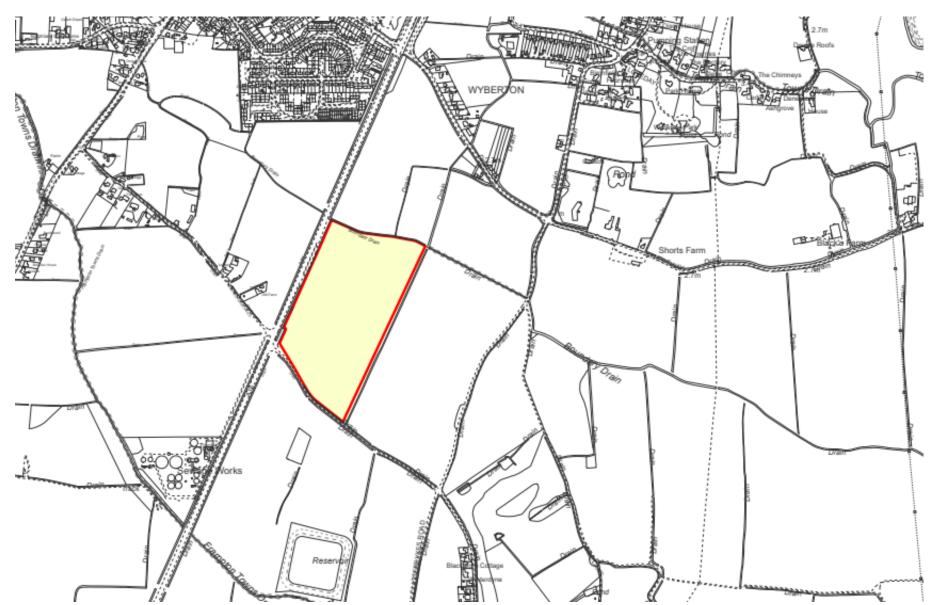




Hobhole Bank, Pinfold Lane, Laurel Farm, Fishtoft CP, Fishtoft, Boston, Lincolnshire, PE21 OSL

# OUTER DOWSING OFFSHORE WIND

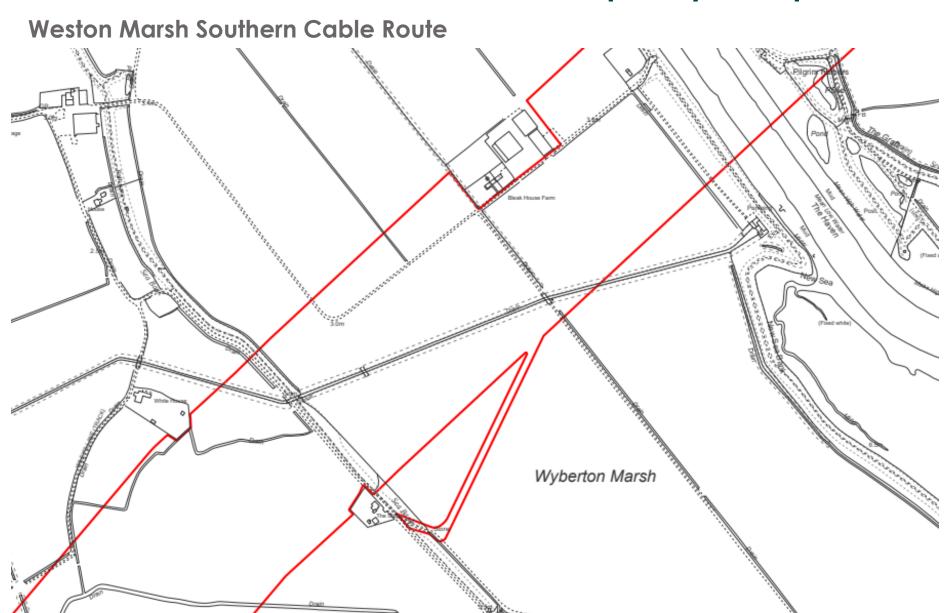
#### Weston Marsh Southern Cable Route





A16, Old Farm, Frampton CP, Wyberton, Boston, Lincolnshire, PE20 1EB







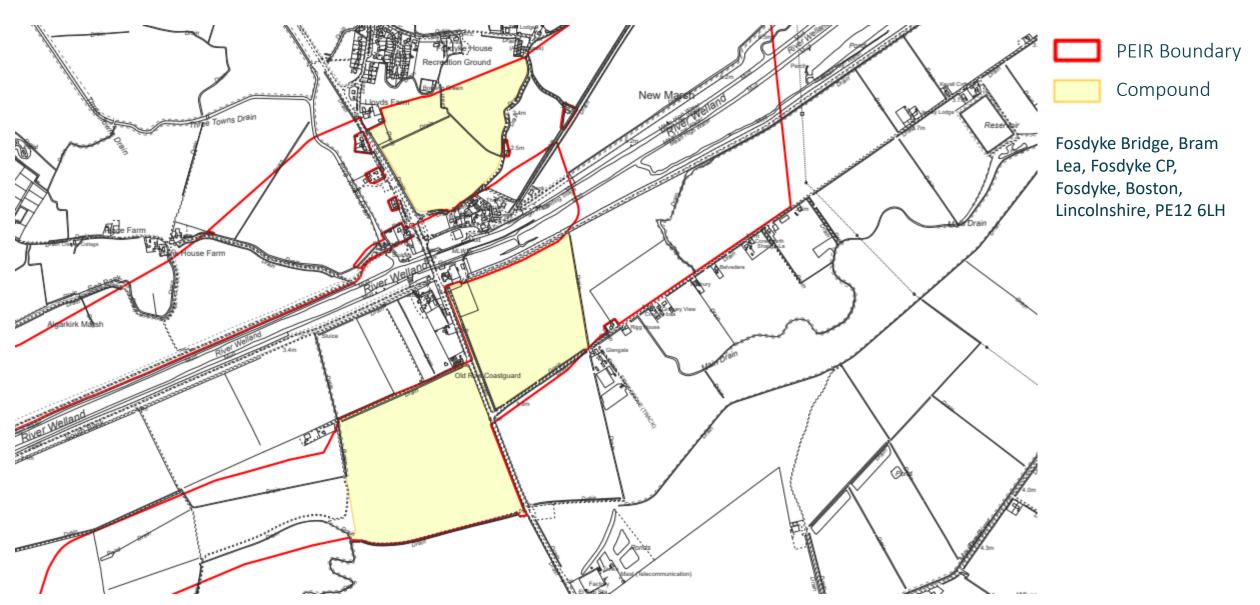
Bleak House Farm, 3, Wyberton Roads, Bank House, Wyberton CP, Boston, Lincolnshire, PE20 1BD



# CLG – Substation South



#### **Weston Marsh Substation South**







# Our Onshore Substation Study Areas

Until a final grid connection is confirmed, we have **two study areas** for the onshore substation & associated infrastructure required to connect to the National Grid transmission system.

#### **Weston Marsh connection option**

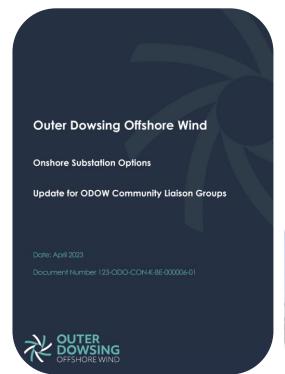
 Here there would be the Outer Dowsing substation & a National Grid Customer Substation. Some overhead line modifications will be required at, or near to, the ODOW/National Grid substation(s) to facilitate the connection of our project at this location.

#### **Lincolnshire Node connection option**

 Here there would be the Outer Dowsing substation & we would be connected to the planned National Grid wider reinforcement works, this is likely to require a larger footprint, however the details of these plans are not yet known.

# Substation Options – Design Parameters





ODOW Consent Stage	ODOW OnSS Site Options			ODOW OnSS Technology	
	LN	WM North	WM South	AIS	GIS
		NOLLII	300111		
Land engagement and options	X	X	X	X	Χ
Environmental surveys	Χ	Χ	Χ	Χ	Χ
Preliminary Environmental Information	Х	X	X	X	X
Report (PEIR)					
Phase 2 Consultation	Х	Х	Х	Х	Х
Final Environmental Statement	Single ODOW OnSS adopted site option			Χ	X
DCO application				Χ	Χ
DCO project authorisation				Χ	X
Detailed design acceptance (Local Planning	Final ODOW OnSS				
Authority)	detailed design				

Design aspect	Technology /	Max. Parameter	Max. Height
	Site	Footprint	
Temporary construction area	AIS / GIS	27ha (270,000m²)	-
Permanent overall site area	AIS / GIS	18ha (180,000m²)	-
Operational area	AIS	9.27ha (92,700m²)	12m
Operational area	GIS	7.26ha (72,600m²)	12m
GIS building (footprint included in above)	GIS	0.45ha (4,500m²)	19m
Lightning protection masts	AIS / GIS		30m
Floor level raising above existing ground level	WM only		1m







#### Memo issued to CLG members on 13th April

- Both Air Insulated Substation (AIS) and Gas Insulate Substation (GIS) being considered
- A set of maximum parameters have been defined, to create an 'envelope' for assessment that will accommodate any of the options under consideration.
- The detailed design of the ODOW OnSS will be undertaken post-consent with the envelope defined in the DCO and assessed in the ES.

### **Onshore Substation Visualisations**



For the purpose of presenting a Realistic Worst Case (RWC) Scenario, all the visualisations at this stage assume a GIS footprint. It should be noted, while the adopted layouts may represent a worst case in respect of specific topics or receptors, in others it may not. The individual topic chapters in the PEIR will each outline how the ONSS has been assessed to reflect a RWC for each technical assessment.



### National Grid Onshore Substation



- In addition to the ODOW OnSS, a National Grid Onshore Substation (NG OnSS) and associated enabling works will be required at, or near to, the ODOW OnSS.
- For a connection at the proposed Lincolnshire Node location, NGET proposes to build a new overhead line
  and new NGET substation to accommodate multiple connections. Our current understanding is that the NG
  OnSS would be located within the onshore substation search zone presented at our Phase 1 and 1A
  Consultation events and would be connected to the ODOW OnSS by underground cables.
- The Lincolnshire Node scheme was proposed by National Grid several years before ODOW approached National Grid for a connection and it is a strategic proposal relating to reinforcement of the wider transmission network rather than being instigated to serve any individual development.
- For a connection at the proposed WM North and WM South locations into the existing NGET overhead line, new NGET infrastructure will be required to facilitate a connection for ODOW. Based on other similar connections this will likely consist of a new NGET substation and localised alterations to the overhead lines to form the connection.
- The NG OnSS could utilise AIS or GIS technology and it is likely that the necessary infrastructure will be
  designed and constructed by NGET.

# Substation Options – Site Selection Criteria



#### Developable plot criteria:

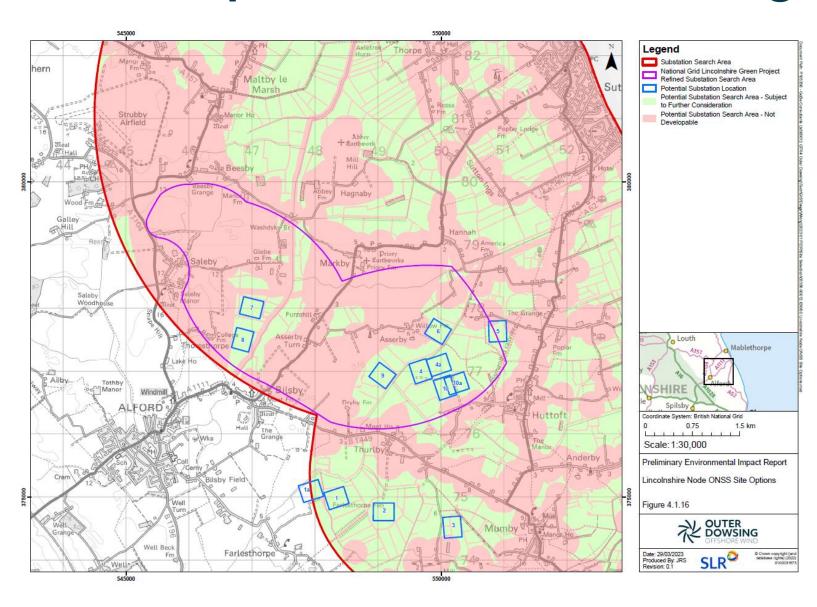
- Close proximity to the National Grid area of search
- Providing an area of land large enough to meet the requirements of the Project OnSS
- As far as possible, free from environmentally sensitive receptors
- Not within 200m of any occupied building.

#### Environmental constraints appraisal considering the following issues:

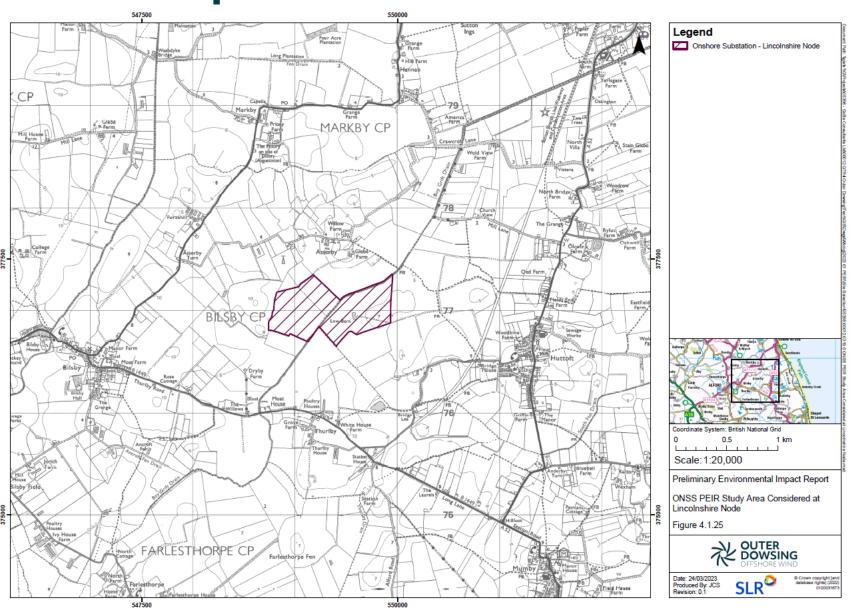
- Air quality
- Archaeology and cultural heritage
- Ecology and ornithology
- Geology and ground conditions
- Hydrology and flood risk
- Land use
- Noise and vibration
- Traffic and transport
- Landscape and visual assessment
- Planning

# Substation Options – Lincs Node Long List

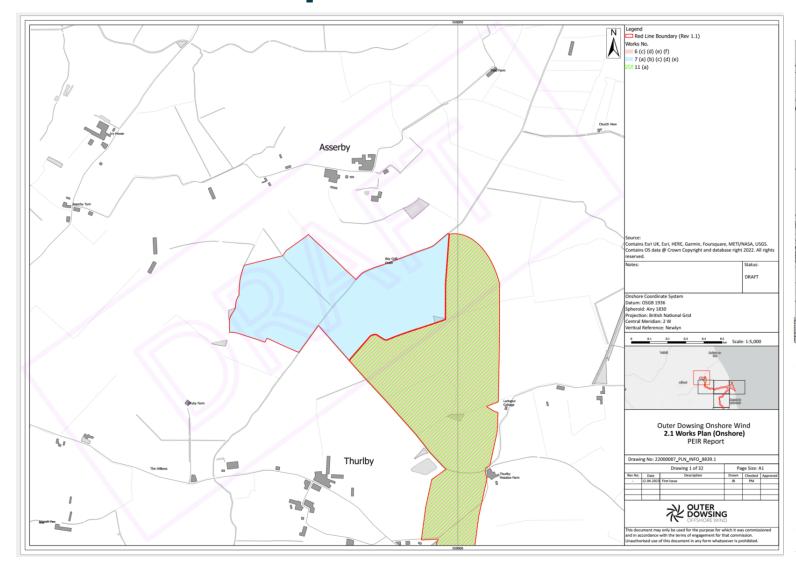


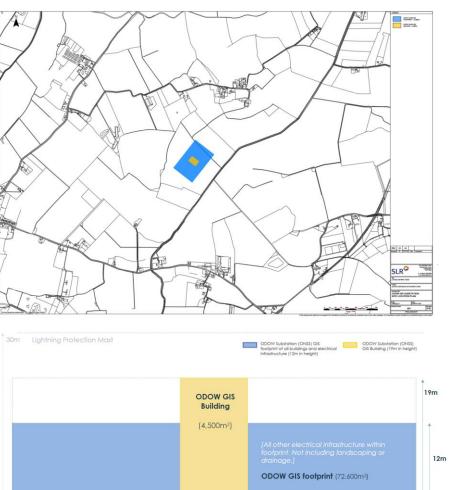












1x ONSS

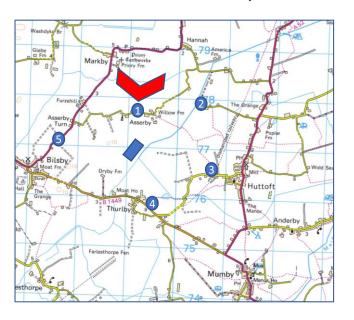








#### Lincolnshire Node Viewpoint 1: Asserby Road



ODOW Substation (ONSS) GIS footprint of all buildings and electrical Infrastructure (12m in height)











#### Lincolnshire Node Viewpoint 2: Mill Lane



ODOW Substation (ONSS) GIS footprint of all buildings and electrical Infrastructure (12m in height)

ODOW Substation (ONSS)
GIS Building (19m in height)









#### Lincolnshire Node Viewpoint 5: Bilsby

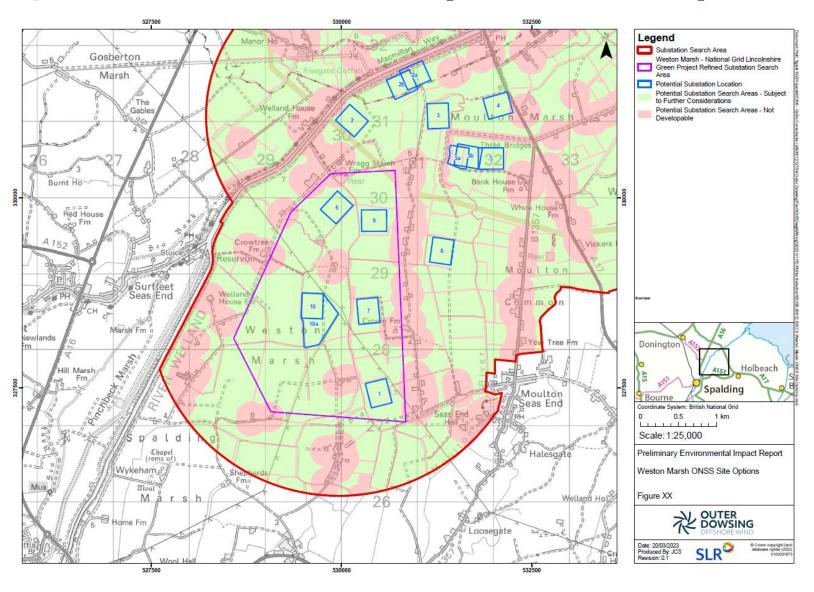


ODOW Substation (ONSS) GIS footprint of all buildings and electrical Infrastructure (12m in height)



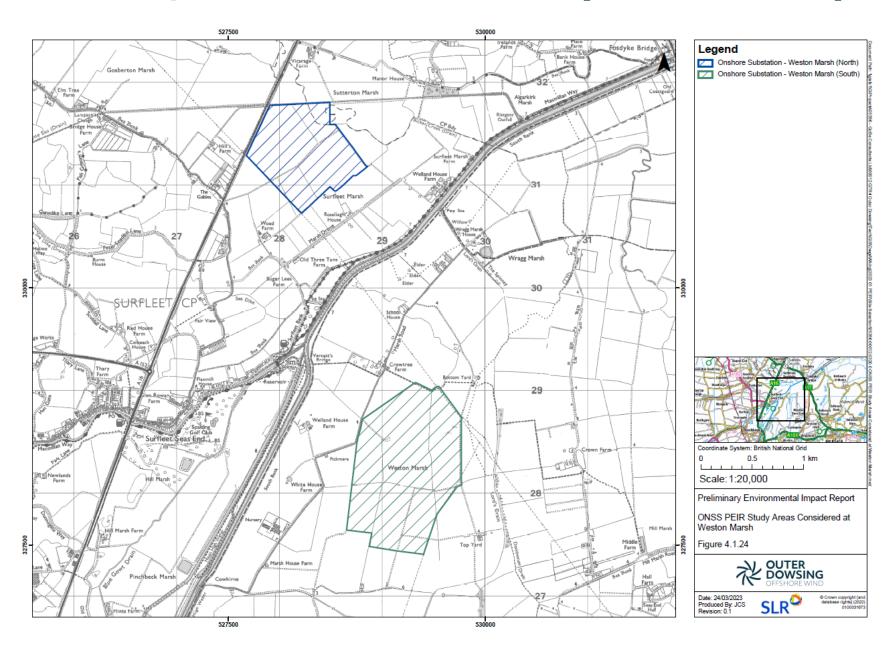
### Substation Options – Weston Marsh (North & South)



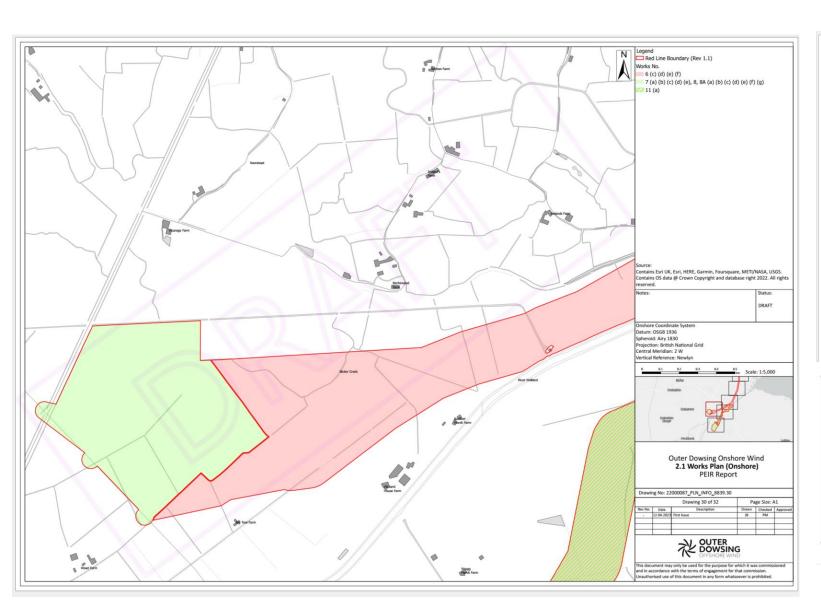


### Substation Options – Weston Marsh (North & South)











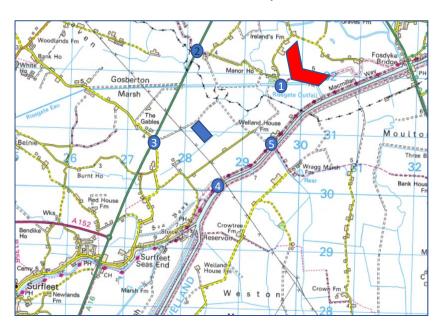


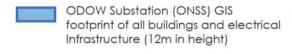






### Weston Marsh North Viewpoint 1: Marsh Lane near Manor House







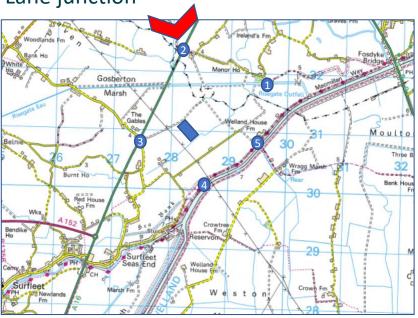


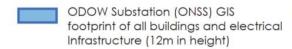






Weston Marsh North Viewpoint 2: A16 near Marsh Lane junction

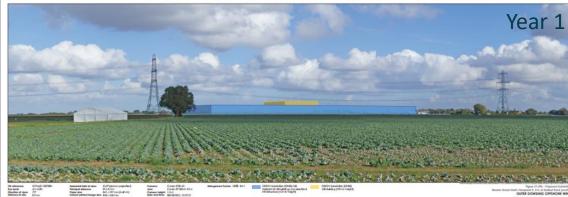






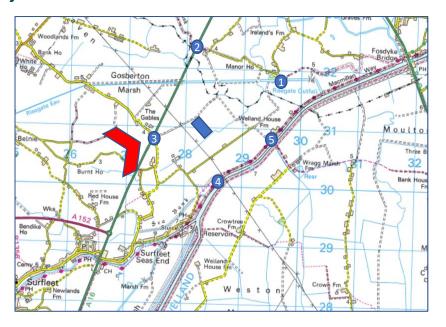








Weston Marsh North Viewpoint 3: A16 at Surfleet Bank junction



ODOW Substation (ONSS) GIS footprint of all buildings and electrical Infrastructure (12m in height)











Weston Marsh North Viewpoint 4: Macmillan Way at Surfleet Bank



ODOW Substation (ONSS) GIS footprint of all buildings and electrical Infrastructure (12m in height)

ODOW Substation (ONSS)
GIS Building (19m in height)









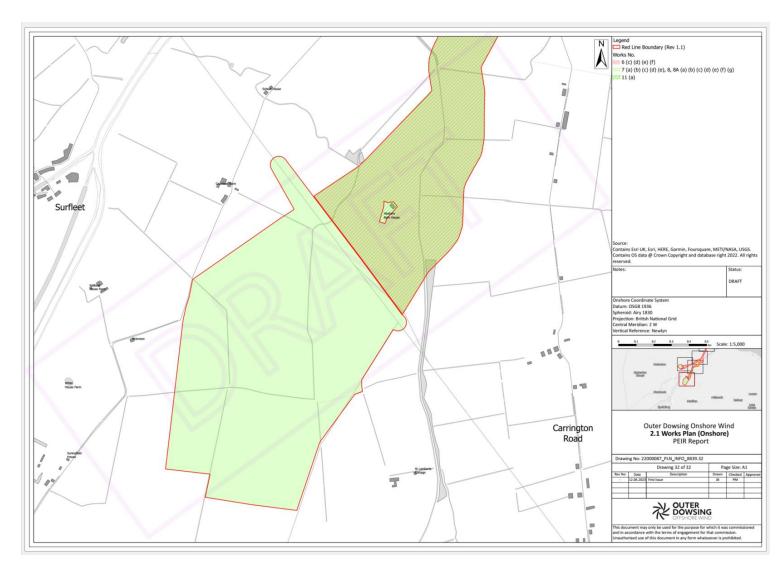
Weston Marsh North Viewpoint 5: Macmillan Way near Welland House Farm

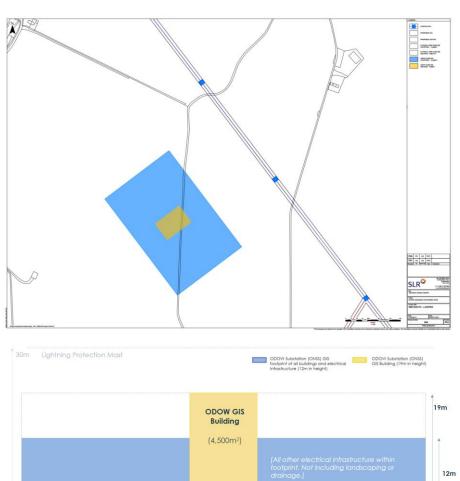




ODOW Substation (ONSS)
GIS Building (19m in height)







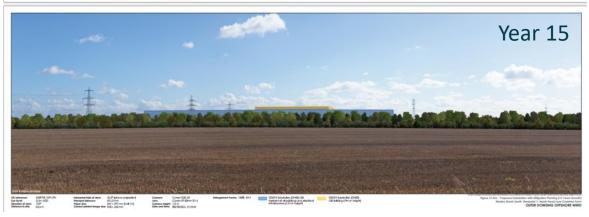
1x ONSS

ODOW GIS footprint (72,600m²)

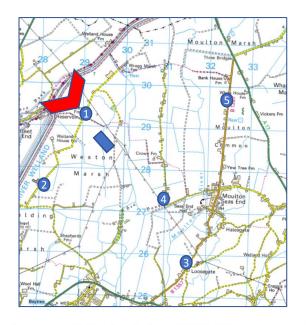








Weston Marsh South Viewpoint 1: Marsh Road near Crowtree Farm





ODOW Substation (ONSS)
GIS Building (19m in height)









Weston Marsh South Viewpoint 2: Marsh Road near Kindergarten Nursery



ODOW Substation (ONSS) GIS footprint of all buildings and electrical Infrastructure (12m in height)

ODOW Substation (ONSS)
GIS Building (19m in height)









### Weston Marsh South Viewpoint 3: B1357 near Loosegate



ODOW Substation (ONSS) GIS footprint of all buildings and electrical Infrastructure (12m in height)



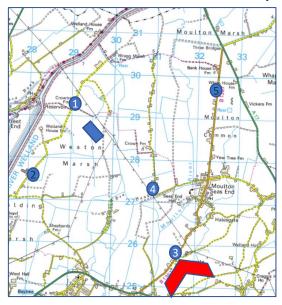








### Weston Marsh South Viewpoint 4: Carrington Road south



ODOW Substation (ONSS) GIS footprint of all buildings and electrical Infrastructure (12m in height)



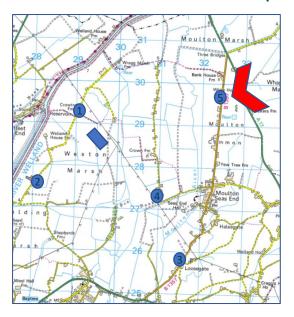


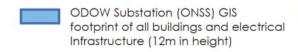






### Weston Marsh South Viewpoint 5: B1357 Common Road north











### **Annex 5.1.5B CLG Minutes (to date)**

This Annex includes the following documents:

- Substation North Meeting Minutes
- Cable Route North Meeting Minutes
- Cable Route South Meeting Minutes
- Substation South Meeting Minutes

Once Approved, all Minutes and Agendas are made available on the Project's website:

https://www.outerdowsing.com/community-liaison-groups/



### Minutes of Meeting.

Meeting title	Community Liaison Group – Cable Route South		
Location	Butterwick Village Hall		
Date/ time	Tuesday 29 November 2022		
Originator	ODOW		
Attendees	Andrew Acum – Group Facilitator – ODOW - AA Roisin Aldis – Onshore Consents Manager – ODOW - RA Chris Jenner - Development Manager – ODOW - CJ David Wright – Land Manager – ODOW - DW  John Grant – Benington Parish Council Judith Skinner - Boston Borough Council Paul Skinner - Boston Borough Council Peter Bedford - Boston Borough Council / Freiston Parish Council		
Apologies	Roly Ashley – Fishtoft PC		
Purpose of meeting	To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.		
	<ol><li>To act as a two-way communication channel between local communities and the project team.</li></ol>		
	<ol><li>To help foster local involvement and ownership of the project.</li></ol>		
	1. Chair's welcome and introductions		
	CJ opened the meeting and welcomed all members to the group. Each member of the group introduced themselves.		



#### 2. Terms of Reference

CJ checked that everyone had received a copy of the terms of reference and explained the purpose of the CLGs.

JS asked why the CLGs were being held so early instead of waiting until the Grid connection point is known. CJ explained that the exact date of the decision is unknown as this is down to National Grid. It is hoped that there will be a decision early in the New Year but the project has a target of delivery by 2030. The programme is based around hitting this date and working back from this, the project will need consent by 2025 in order to start construction in 2026. The Nationally Significant Infrastructure Project (NSIP) consenting process takes around 16 months which means the Development Consent Order (DCO) application will need to be submitted by the end of 2023. This means that during the early stages, the project will twin track the two routes until one of them falls away.

CJ then ran through the terms of reference on screen and these were agreed by the group.

#### 3. Project Overview

CJ ran through a presentation to bring everyone up to speed with the project including:

- Background to partners and project
- Offshore proposal
- Onshore proposal
- Grid connections two possible options –
  Lincolnshire Node and Weston Marsh (based
  on recommendations from the Offshore
  Transmission Network Review) but will be
  National Grid's decision which one is
  progressed. Decision expected in the New
  Year. Currently looking at the two options in
  parallel until one of them drops away.
- Landfall



PB asked whether Crown Estate will sell the seabed or just lease it. CJ confirmed that the arrangement is a lease.

PS said he believed the lifespan of the turbines was around 25 years and wanted to know what happened to them at the end of their life. He said he had seen nothing on offshore wind projects about decommissioning. CJ explained that the seabed lease is for 60 years and the turbines have a design life of 30-35 years. The turbines could be repowered after this time with newer, more efficient technology. On decommissioning, there is a requirement to submit a decommissioning plan for approval by the Secretary of State prior to the start of construction. All offshore wind projects have a requirement for end of life decommissioning and the Crown Estate requires the seabed to be returned to its original state

JS asked if the cost of connecting to Weston Marsh would be more expensive than Lincolnshire Node due to the longer cable route. CJ explained that the cable route construction costs would be more expensive, but there are other factors also involved. How quickly the project can connect to the Grid has a value in terms of development costs and carbon savings.

JS asked if the requirement for additional National Grid works at Lincolnshire Node might delay the project. CJ confirmed that this may be a possibility that needs to be considered. At Weston Marsh there are existing overhead lines whereas Lincolnshire Node would require National Grid infrastructure to be installed.

JS asked if it also depended on the capacity at Weston Marsh. CJ confirmed that this is what National Grid is looking at to work out what is the most effective and efficient point to connect in terms of the wider network.

PS asked what storage provision is being made for when the wind isn't blowing. CJ said that offshore wind is more reliable than onshore wind with higher load factors. As there are offshore wind projects



around the UK coast, National Grid can use these as a balancing system to remove some of the intermittency. Some offshore wind projects are also starting to include battery storage to help balance the Grid.

PS asked what the local benefit would be to having additional infrastructure in the area. CJ explained that offshore wind is one of the cheapest forms of energy generation which will help bring prices down for everyone. PS asked whether the electricity generated by the project would just be sent down south to London. CJ said the project will supply enough electricity to power 1.6 million homes which increases supply on the Grid as a whole which means there is more power that everyone can use.

PS said that previous projects claimed they would bring jobs to the area, but on following up they never achieved the figures they promised. CJ said that he had worked on east coast offshore projects for over 20 years including the early projects at Skegness and was involved in the opening of the first Centrica office in Grimsby. Now Grimsby is a big offshore hub with a number of major developers based there and Siemens has opened a large blade factory in Hull. PS asked if the project would use Siemens. CJ said that it is still very early in the project and the turbine specification would be developed as part of the procurement process over the next few years.

JS asked if there would be a community benefit fund. CJ confirmed that the team was already looking at early ideas for how this could be delivered. The event questionnaire asked people what they would like to see in terms of a community benefit. The attendees at the Anderby CLG mentioned speaking to Lincolnshire Community Foundation who had managed the Triton Knoll community fund. The project is also keen to support biodiversity net gain projects such as nature conservation and public amenity.

4. Issues Raised at Public Information Days



1	CJ outlined	the main	themes	raised	at the	public
1	information	days:				

- Energy security is a key issue now probably bigger than climate change
- Shared experiences (good & bad) from Viking & Triton Knoll, the following issues noted:
  - Chopping down of trees for access turning points
  - Dust
  - Traffic & air quality (in particular the 40mph temporary zones in place 24/7)
  - Limit to HGVs through Boston air quality
- Grid connection options views vary depending on location of attendees
- Constraint to expansion of economic development from lack of grid availability
- Useful information & feedback for substation search zones – feedback on ecology, access, transport, visual impact, noise
- Concerns for cumulative impacts for future projects – planning coordination and what's coming next?
- Interface with National Grid wider works –
   Where? When? How will they consult?
- Temporary impact on agriculture, food security & restoration. Construction will require temporary access to a small strip of land 80m wide to put the cables in.
- Archaeology
  - The Salterns
- Ecology and ornithology
  - The coastal communities of Lincolnshire have an inspiring fondness for nature
  - We want to encourage, support and foster this.
  - Ideas for bio-diversity net gain. How can ODOW get involved?
- Community benefit engagement and Biodiversity Net Gain – feedback from community



#### 5. Question and Answer Session

PS mentioned that there are local elections in May and need to be careful that the project doesn't become an election issue.

DW said that the team is currently meeting with landowners and has met with around 84 per cent of them so far in order to gain feedback which will help inform the project design.

JG asked how long the project would require land for. DW said the construction phase would take around 2-3 years in total but this included offshore infrastructure and the construction of the substation. The cable route would normally be built in sections which will probably take around 3-4 months at a time.

PS asked what depths the cables will be buried to. DW said they would have 1.2m of cover so they would be below land drains but they can go deeper if they need to avoid a particular obstacle.

JG asked if it was ever necessary to compulsory purchase land or properties. DW said the compulsory purchase order powers are included as part of the DCO. Landowners are paid for the loss of value as a result of the works as set out in the statute.

JG asked whether it was ever necessary to demolish properties. DW said this wouldn't be necessary as the route avoids buildings as can be seen on the indicative plans.

JG said the scheme seemed to mainly affect farmers rather than general residents. The only issues he could see would be traffic, mud and dust. DW said that the route followed farmed areas so local residents would be used to plant and machinery in the fields and on the roads. CJ said that the red lines on the maps are the 300m search area. The actual cable route temporary construction area will be up to a maximum of 80m wide within this 300m area and once built, the land will be returned to agricultural use with a maximum 60m wide permanent easement, but this is based on six circuits. If fewer



	• OTTSTOKE WIND
	circuits can be used then the strips could be reduced. By the next round of consultation there should be a more accurate figure. RA said the Preliminary Environmental Information Report (PEIR) should be ready by Q2 next year and this will have more detailed proposals.
6.	AOB None.
7.	Chair's closing remarks and next steps / next meeting  CJ thanked everyone for attending on a cold night with football on TV. Minutes and the presentations will be circulated to the group members. Any further questions can be raised at any time via the website, freephone number or Freepost address. The team would like continuous dialogue with communities as decisions made now can have the biggest impacts.  The next meeting is pencilled in for February but AA
	will be in touch with details later.

Meeting Protocol			
Distribute agenda before meeting	Fix responsibilities for each item		
Start on time	Finish on time		
Set out your ground rules	Publish minutes / actions		
Stick to the agenda	Continuous improvement		



### Minutes of Meeting.

Meeting title	Community Liaison Group – Cable Route South		
Location	Old Leake Village Hall		
Date/ time	Friday 24 February 2023		
Originator	ODOW		
Attendees	Andrew Acum – Group Facilitator – ODOW - AA Roisin Alldis – Onshore Consents Manager – ODOW - RA Chris Jenner - Development Manager – ODOW - CJ Frank Pickett – Old Leake Parish Council - FP		
Apologies	Roly Ashley – Fishtoft PC Paul Skinner – Boston Borough Council Judith Skinner - Boston Borough Council		
Purpose of meeting	<ol> <li>To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.</li> <li>To act as a two-way communication channel between</li> </ol>		
	local communities and the project team.  3. To help foster local involvement and ownership of the project.		
	-	Chair's welcome and introductions	
	TI G U	CJ opened the meeting and welcomed Cllr Pickett.  the minutes of the last meeting were approved. CJ  added that minutes of all meetings would be apploaded to the website for transparency.  ACTION: AA to arrange upload of meeting minutes for all CLGs	



### 2. Feedback from Consultation Events and Project Update

#### Offshore:

CJ explained that the offshore element has not changed since the last meeting. The offshore array will consist of up to 100 turbines, 54km offshore, each up to 403m above sea level. These will be approximately 7.5km miles behind the Triton Knoll development and the very top of the blades would only visible on average five or six days a year when weather conditions permit.

The landfall will be just south of Anderby Creek and the onshore cable will either connect at a northern site near Alford known as Lincolnshire Node or at a southern site known as Weston Marsh.

#### Onshore:

The previous round of consultation events introduced the southern underground cable route along the east coast down to Weston Marsh. The project has received a lot of feedback regarding subsurface conditions in The Tofts area, such as flowing sands, high water table and intensive agriculture which would make this route more challenging than originally anticipated.

As a result, it was decided to consult on a second option for the underground cable route known as, known as Phase 1A. This would run from just north of Wainfleet All Saints, west of the A52 and down towards Butterwick where it would connect to the original route option. This alternative route option had been selected to avoid any major towns and villages, intensive agriculture, existing infrastructure, archaeological sites, etc. and the alternative option was now the subject of an additional consultation.

FP said that he lived near the proposed route but as it was an underground cable it didn't concern him.

CJ explained that one of the two connection point options would fall away, probably around May, when National Grid decide which connection point the Project will connect to. However, the consultation in



June will still include two options as all the chapters for the Preliminary Environmental Information Report are having to be written now and it is not possible to pre-empt the decision.

FP asked whether Triton Knoll connecting at Bicker Fen would have any effect on the connection decision.

CJ said that is unlikely as ODOW is just one customer that National Grid has to consider as part of where and how electricity needs to flow around the country. Ultimately, electricity users are paying for the investment in infrastructure so National Grid will want to make their decision based on what is most economical, practical and delivers the best value for money to the GB consumer.

#### Environmental data:

The Project has been undertaking a wide variety of onshore surveys including:

- Ornithology
- Ecology
- Archaeology
- Engineering
- Traffic & transport
- Visual
- Geology and hydrology
- Aerial photography
- Meteorology

The project is also undertaking a number of offshore surveys including:

- Geophysical and geotechnical
- Metocean and wind resource
- Ornithology and marine mammals
- Benthic ecology
- Marine traffic surveys

#### Onshore Geotechnical Survey

In the coming months there will also be some onshore geotechnical survey work undertaken along the cable route options which will involve drilling boreholes, digging small pits and some core penetration tests to get a better understanding of the subsurface structure. This will start at the end of March



and will last for around six weeks, although equipment will only be on site at each location for a couple of days.

#### Informing the Local Community:

The Phase 1 consultation included writing to 23,000 households, hosting four public information days with around 500 visitors, along with four community liaison groups.

The Project is currently undertaking the Phase 1A consultation on the alternative route option including writing to 5,500 households and hosting two public information days and four community liaison groups.

All feedback will be considered to help inform the production of the Preliminary Environmental Information Report, which will itself undergo a formal consultation in the summer.

#### Onshore Substation Search Zones:

There are existing overhead lines at Weston Marsh, so the Project would need to build a substation and National Grid would need to build a smaller substation to connect into these. At Lincolnshire Node there is currently no National Grid infrastructure and the Project would have to connect into the proposed National Grid wider reinforcement works, however the details of these works are not yet known.

After the elections in May, the Project will meet with the CLGs to present visualisations of what the substations may look like. Feedback from these worstcase scenarios will be used to help inform the aspects of the design that will go into the DCO application.

There will also be an Onshore Substation Working Group established once the grid connection point is confirmed. This will allow the onshore substation to be designed in consultation with the people and stakeholders who are local to it.

#### Landfall:

The cables at the landfall at Anderby Creek will be facilitated using horizontal directional drilling (HDD) - the project will be drilling underneath the beach, the



dunes, Anderby Marsh LNR and the coastal (Roman Bank) road so as not to disturb them.

As a project, there is a commitment to 10 per cent biodiversity net gain, so not only will the land be reinstated to its original condition, but there is also a commitment to a 10 per cent enhancement. The Project has been talking to a number of local organisations about how this can be delivered. Once a grid connection has been confirmed, the Project will be able to come back with more detailed plans.

#### 3. Key Feedback and response

CJ outlined the headline consultation responses:

- Learning from Viking Link and Triton Knoll all feedback is passed to our technical teams to look at how we can improve the Project
- Grid connection regular meetings with National Grid with hopefully a grid connection offer by late Spring
- Feedback on the original route to Weston Marsh (agricultural practices, "running sands" and high water table) resulted in the introduction of an Alternative Route Option, that avoids the majority of this area.
- Temporary impact on agriculture and restoration – the Project has met with over 300 landowners and established Landowner Interest Groups.
- Archaeology (The Salterns) the Project has been meeting with the County Council Archaeologist to discuss the results of our deskbased assessment and proposed approach to non-intrusive surveys through 2023.
- Community benefit engagement and biodiversity net gain - the Project has been meeting with a number of key local stakeholders to discuss potential collaborations from both a community and biodiversity perspective.



	OH SHOKE WIND
	<ul> <li>Useful information and feedback for substation search zones – the Project is progressing with some visualisations for our Phase 2 Consultation for some specific candidate substation sites and configurations. We want to be as transparent as possible with the community and get their feedback on these options.</li> <li>Concerns for cumulative impacts for future projects (planning coordination) - the Project is regularly updating the planning system to ensure any known projects are included in our Cumulative impact Assessment.</li> </ul>
4.	<b>Q&amp;A</b> CJ re-emphasised that the project wants to listen to all of the parish councils and local stakeholders and give everyone a voice.
5.	AOB
	No AOB
6.	Chair's closing remarks and next steps / next meeting
	CJ said that he hoped that by the time of the next CLG the Project would be able to present more detail on the location and visualisations for the substation.
	The next CLG is expected to be in May but AA will be in touch with details nearer the date.

Meeting Protocol			
Distribute agenda before meeting	Fix responsibilities for each item		
Start on time	Finish on time		
Set out your ground rules	Publish minutes / actions		
Stick to the agenda	Continuous improvement		



### Minutes of Meeting.

	1		
Meeting title	Community Liaison Group – Cable Route North		
Location	Wainfleet Village Hall		
Date/ time	Thursday 2 December 2022		
Originator	ODOW		
Attendees	Andrew Acum – Group Facilitator – ODOW - AA Roisin Aldis – Onshore Consents Manager – ODOW - RA Chris Jenner - Development Manager – ODOW - CJ David Wright – Land Manager – ODOW - DW  Mick Rust – Wainfleet St Mary PC - MR Kym Wickham – Friskney PC - KW Wendy Bowkett – East Lindsey District Council - WB Carleen Dickinson – East Lindsey District Council - CD Sid Dennis – East Lindsey District Council / Skegness Town Council / Croft Parish Council-SD John Walton – Orby PC - JW		
Apologies	Iain Hyde - Wainfleet St Mary PC		
Purpose of meeting	To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.		
	<ul><li>2. To act as a two-way communication channel between local communities and the project team.</li><li>3. To help foster local involvement and ownership of the</li></ul>		
	project.  Chair's welcome and introductions		
	1.	Chair's welcome and introductions	
		CJ opened the meeting and welcomed all members to the group. Each member of the group introduced themselves.	
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#### 2. Terms of Reference

CJ checked that everyone had received a copy of the terms of reference and explained the purpose of the CLGs.

CJ then ran through the terms of reference on screen and these were agreed by the group.

#### 3. Project Overview

CJ ran through a presentation to bring everyone up to speed with the project including:

- Background to partners and project
- Offshore proposal
- Onshore proposal
- Grid connections two possible options –
  Lincolnshire Node and Weston Marsh (based
  on recommendations from the Offshore
  Transmission Network Review) but will be
  National Grid's decision which one is
  progressed. Decision expected in the New
  Year. Currently looking at the two options in
  parallel until one of them drops away.
- Landfall

WB asked about RAF training exercises over the project array area. CJ said that the array area does not overlap with any of the near shore bombing ranges and the team is working closely with the MOD on a range of issues including radar and early warning systems. The offshore wind industry in general has very close contacts with the MOD, CAA and NATS to ensure that national air defence and monitoring systems are not affected. Airspace in the southern North Sea is heavily regulated.

KW asked how tall the nearest offshore wind turbines are. DW said that Lynn and Inner Dowsing are 133m tall – about a third as tall as the proposed maximum height of the turbines for Outer Dowsing. However, due to the distance, weather conditions and curvature of the Earth, the tip of the Outer Dowsing blades will only be visible for around two per cent of the year – approximately six or seven days a year.



MR ask why the proposed connection is at Alford when the landfall is at Anderby Creek and why a substation couldn't be built near the coast. CJ said that it is down to what the substation does. Once the electricity goes into the substation, it is stepped up to 400,000KV and the substation needs to be as close as possible to the 400,00KV network to prevent power losses. The further from the network, the greater the losses.

SD asked how big the substation would be. DW said that it would require 9.2 hectares for the footprint of the electrical infrastructure, but a total of 24 hectares including landscaping and screening, etc. These figures are worst case scenario and subsequent engineering studies may be able to reduce this size.

KW asked whether there is any housing at Weston Marsh that would be affected. DW said that Weston Marsh is actually a marsh, but there are existing National Grid overhead lines there which the project would connect to.

KW asked if the connection was approved at Alford, would there be a chance that the project would come back to Weston Marsh at some point in the future. CJ said this would not happen. Whichever connection point is given, this will be the sole connection for the project. If the connection point is Alford, the Weston Marsh option would drop off and there would be no need for further CLG meetings in this area.

KW asked if the project had a preference for the connection point. DW said it was not the project's decision. There is no preference as there would be pros and cons to either site, for example a shorter cable route versus an earlier connection date.

JW pointed out that there are no overhead lines at Alford. CJ said that National Grid has an ambition to build overhead lines from the Humber Estuary down to Spalding onwards to reduce constraints on the network. That will need National Grid to come forward with proposals under the same consenting process, requiring an application for a Development



Consent Order (DCO) which would be determined by the Secretary of State. The application would need to follow the same consultation process as Outer Dowsing and the local councils would again be statutory consultees in this process.

CJ informed the group that Outer Dowsing has now established a Planning Performance Agreement with the local planning authorities to cover the costs of officer time involved in advising on the project.

SD asked what the timescales are on the project. CJ said the project would submit the DCO application at the end of 2023, with consent by 2025, construction during 2026/27 and be commissioned and operational by 2029/30 to hit the government's 2030 targets.

MR said at the last meeting he thought it was stated that depending on which route was taken, the works may be undertaken by either National Grid or Outer Dowsing. CJ clarified that there is no National Grid infrastructure currently at Alford so National Grid would need to build new lines as part of their wider plans. There are existing overhead lines at Weston Marsh so there is a smaller amount of equipment needed to connect there. Therefore it will take longer to establish a connection at Alford and this is what National Grid are considering at the moment, taking into account their wider plans for the national network.

MR said he had understood that if National Grid made the decision, the landfall would be in a different place to Anderby Creek. CJ clarified that the National Grid Holistic Network Review outlined their strategic view of how offshore wind should connect to the Grid and in the infrastructure that would be required. The projects themselves have to work out the detail of where the landfall and cable route needs to be to reach their connection points and then get consent for these proposals.

KW asked if the cables would all be underground. CJ confirmed that they would and that any IDB ditches, roads, rivers, etc, would be directionally drilled under



to avoid any disturbance. SD asked if this was similar to Viking Link and CJ confirmed it was and would have a similar timescale of 2-3 years for the total project from spade in the ground to reinstatement.

KW asked whether it would be reinstated to the original condition as she felt that Viking Link was a bit of an eyesore. CJ said it would be reinstated to the same condition as a minimum but also that Viking Link was still in the process of reinstatement and hadn't finished yet.

KW asked what advantages there would be for local people as a result of the project. CJ explained that if he could run through the feedback themes from the public information days then this might answer the question.

#### 4. Issues Raised at Public Information Days

CJ outlined the main themes raised at the public information days:

- Energy security is a key issue now probably bigger than climate change. Offshore wind is one of the cheapest forms of electricity generation
- Shared experiences (good & bad) from Viking & Triton Knoll, the following issues noted:
  - Chopping down of trees for access turning points
  - Dust
  - Traffic & air quality (in particular the 40mph temporary zones in place 24/7)
  - Limit to HGVs through Boston air quality
- Grid connection options views vary depending on location of attendees
- Constraint to expansion of economic development from lack of grid availability
- Useful information & feedback for substation search zones – feedback on ecology, access, transport, visual impact, noise



- Concerns for cumulative impacts for future projects – planning coordination and what's coming next?
- Interface with National Grid wider works –
   Where? When? How will they consult?
- Temporary impact on agriculture, food security & restoration. Construction will require temporary access to a small strip of land 80m wide to put the cables in.
- Archaeology
  - The Salterns
- Ecology and ornithology
  - The coastal communities of Lincolnshire have an inspiring fondness for nature
  - We want to encourage, support and foster this.
  - Ideas for bio-diversity net gain. How can ODOW get involved?
- Community benefit engagement and Biodiversity Net Gain – feedback from community

KW asked how the cables will cross the Boston River. CJ explained that the project will horizontally direct drill (HDD) under all main rivers, drains and roads. The cables will pass 2-3m underneath the bed of the river and this would be the same at the landfall site where the drilling would start offshore and go under the beach, sand dunes and nature reserve to ensure these are not disturbed and public access is maintained at all times.

SD said he thought people needed to be pragmatic about these types of schemes so they can get the job done and get the projects generating clean, cheap electricity faster. People shouldn't lose sight of what this is all about. CJ said these types of projects typically take 10-15 years from start to finish. He said that Triton Knoll started in around 2005 with the award of the lease and reinstatement only finished a couple of years ago, so that was around 15 years in total. Outer Dowsing hopes to complete the project in approximately eight years.



MR asked to whom the compounds that are still dotted around belong to. CJ said they belong to Viking Link who are in the process of reinstatement now.

KW asked whether electricity market reform would happen in her lifetime so that people could benefit from cheap offshore electricity. DW said that the more offshore projects that come online, the closer this becomes. In the last CfD round, offshore wind was quoted a fixed price of £37 per megawatt hour, whereas gas is currently around £300 per megawatt hour, so offshore wind is substantially cheaper.

MR said he understood that the project had a 30-year lifespan and asked what happens after this. CJ explained that the project will have a 60-year lease on the seabed, with the turbines having a 30–35-year design life. The project plans to retain the option to repower (replace) the machines halfway through the lease period and replace them with newer, more efficient technology as this becomes available.

SD said he felt everyone needed to sit back and show a bit of vision so these types of schemes can be brought online and provide the country with energy independence.

MR said it was down to a choice of solar, wind or nuclear, and no-one wants a nuclear power station near them. DW said that ultimately there will probably be an energy mix in order to provide energy security.

MR said the problem with solar was that it took up a lot of farmland which reduced capacity for growing food. CJ said there was a balance between energy security and food security, particularly in Lincolnshire which has some of the best agricultural land in the country. The project will have a temporary impact of an 80m wide construction corridor, but this would be fully reinstated and returned to agricultural use afterwards with just a 60m permanent easement over it. This may be reduced as the design is refined.

KW asked how deep the cable trenches would be. CJ said that the cables would be at a depth of 1.2m.



		DW added that it would be 1.2m of cover on top of the cables so the trench may be 1.5m at the bottom. This is more than sufficient for farming which normally only uses the top 300-400mm.
	5.	Question and Answer Session
		WB said residents are anxious about cables possibly going through their gardens. DW said that this wouldn't be the case. The cable route plans on display at the information days and on the website show that the 300m cable route search area diverts round buildings, farms, settlements, etc. SD said it is often social media that starts these unfounded rumours.
		JW said that the theme that had come out of the night was that Outer Dowsing is taking a responsible attitude and he could alleviate the worries of his residents' concerns, and it had been a worthwhile evening.
		SD said that the main challenge of consultations is getting people involved and turning up to events. He said this scheme would cause minimal disruption and this had to be set against the benefits it will bring to the UK and the work it will bring to the area.
	6.	AOB None.
	7.	Chair's closing remarks and next steps / next meeting
		CJ thanked everyone for attending on a cold Friday night. Minutes and the presentations will be circulated to the group members. Any further questions can be raised at any time via the website, freephone number or Freepost address. The team would like continuous dialogue with communities as decisions made now can have the biggest impacts.
		The next meeting is pencilled in for February but AA will be in touch with details in due course.



Meeting Protocol		
Distribute agenda before meeting	Fix responsibilities for each item	
Start on time	Finish on time	
Set out your ground rules	Publish minutes / actions	
Stick to the agenda	Continuous improvement	



# Minutes of Meeting.

Meeting title	Community Liaison Group – Cable Route North
Location	Wainfleet Coronation Hall
Date/ time	Tuesday 21 February 2023
Originator	ODOW
Attendees	Andrew Acum – Group Facilitator – ODOW - AA Roisin Alldis – Onshore Consents Manager – ODOW - RA Chris Jenner - Development Manager – ODOW - CJ David Wright – Land Manager - DW  Cllr Carleen Dickinson – East Lindsey District Council – CD Cllr Mick Rust – Wainfleet St Mary Parish Council – MR Dr Clive Shrubsole – Wainfleet St Mary Parish Council & Pear Tree Manor Residents Association - CS
Apologies	
Purpose of meeting	<ol> <li>To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.</li> </ol>
	<ol><li>To act as a two-way communication channel between local communities and the project team.</li></ol>
	<ol> <li>To help foster local involvement and ownership of the project.</li> </ol>



#### 1. Chair's welcome and introductions

CJ opened the meeting and attendees introduced themselves.

The minutes of the last meeting were approved. CJ added that minutes of all meetings would be uploaded to the website for transparency.

MR commented that the exhibition in the main hall was very clear and well laid. CJ thanked him for his comments and emphasised that this is a two-way process and the Project wanted stakeholders to be involved in the development and design of the project. CD said the newsletter had also been helpful in explaining the proposals to people. MR said he was pleasantly surprised at how little the revised plans affected built up and residential areas.

ACTION: AA to arrange upload of meeting minutes for all CLGs

# 2. Feedback from Consultation Events and Project Update

#### Offshore:

CJ explained that the offshore element has not changed since the last meeting. The only significant development is that the Project has signed the Agreement for Lease with the Crown Estate which is an exclusivity agreement for the seabed, but the landfall and connection options remain the same.

The offshore array will consist of up to 100 turbines, each up to 403m above sea level. These will be approximately 7.5km behind the Triton Knoll development and the very top of the blades would only visible on average five or six days a year when weather conditions permit.

The landfall will be just south of Anderby Creek and the onshore cable will either connect at a northern site near Alford known as Lincolnshire Node or at a southern site known as Weston Marsh.



MR asked what the height of the turbines referred to. CJ clarified that the 403m is from sea level to the blade tip and that this is a worst-case scenario.

#### Onshore:

The previous round of consultation events introduced the southern underground cable route along the east coast down to Weston Marsh. The project has received a lot of feedback regarding subsurface conditions in The Tofts area, such as running silts, high water table and intensive agriculture which would make this route more challenging than originally anticipated.

As a result, it was decided to consult on a second option for the underground cable route known as, known as Phase 1A. This would run from just north of Wainfleet All Saints, west of the A52 and down towards Butterwick where it would connect to the original route option. This alternative route option had been selected to avoid any major towns and villages, intensive agriculture, existing infrastructure, archaeological sites, etc. and the alternative option was now the subject of an additional consultation.

CJ explained that one of the two connection point options would fall away, probably around May, when National Grid decide which connection point the Project will connect to. However, the consultation in June will still include two options as all the chapters for the Preliminary Environmental Information Report are having to be written now and it is not possible to pre-empt the decision.

MR asked who makes the decision on the connection point. CJ confirmed that it was National Grid.

CD pointed out that group members may change as a result of parish and district elections in May.

## Environmental data:

The Project has been undertaking a wide variety of onshore surveys including:

- Ornithology
- Ecology
- Archaeology



- Engineering
- Traffic & transport
- Visual
- Geology and hydrology
- Aerial photography
- Meteorology

The project is also undertaking a number of offshore surveys including:

- Geophysical and geotechnical
- Metocean and wind resource
- Ornithology and marine mammals
- Benthic ecology
- Marine traffic surveys

## Onshore Geotechnical Survey

In the coming months there will also be some onshore geotechnical survey work undertaken along the cable route options which will involve drilling boreholes, digging small pits and some core penetration tests to get a better understanding of the subsurface structure and conditions. This will start at the end of March and will last for around six weeks, although equipment will only be on site at each location for a couple of days.

MR said that any public notices could be shared on the community Facebook pages.

#### Informing the Local Community:

The Phase 1 consultation included writing to 23,000 households, hosting four public information days with around 500 visitors, along with four community liaison groups.

The Project is currently undertaking the Phase 1A consultation on the alternative route option including writing to 5,500 households and hosting two public information days and four community liaison groups.

All feedback will be considered to help inform the production of the Preliminary Environmental Information Report, which will itself undergo a formal consultation in the summer.



All the work is building towards consent by 2025, build 2026 to 2029 operational by 2030.

## Onshore Substation Search Zones:

There are existing overhead lines at Weston Marsh, so the Project would need to build a substation and National Grid would need to build a smaller substation to connect into these. At Lincolnshire Node there is currently no National Grid infrastructure and the Project would have to connect into the proposed National Grid wider reinforcement works, however the details of these works are not yet known.

CS asked whether it was becoming increasingly unlikely that National Grid would build the infrastructure for Lincolnshire Node. CJ said that the National Grid reinforcement project had been around for many years and was part of a wider scope of work to upgrade the grid nationally, predating the ODOW project and that it would be required regardless of whether ODOW connected there or not.

After the elections in May, the Project will meet with the CLGs to present visualisations of what the substations may look like. Feedback from these worstcase scenarios will be used to help inform the aspects of the design that will go into the DCO application.

There will also be an Onshore Substation Working Group established once the grid connection point is confirmed. This will allow the onshore substation to be designed in consultation with the people and stakeholders who are local to it.

#### Landfall:

The cables at the landfall at Anderby Creek will be facilitated through the use of horizontal directional drilling (HDD) - the project will be drilling underneath the beach, the dunes, Anderby Marsh LNR and the coastal (Roman Bank) road so as not to disturb them.

As a project, there is a commitment to 10 per cent biodiversity net gain, so not only will the land be reinstated to its original condition, but there is also a commitment to a 10 per cent enhancement. The



Project has been talking to a number of local organisations about how this can be delivered. Once a grid connection has been confirmed, the Project will be able to come back with more detailed plans.

CS asked if wildlife corridors were being considered. RA confirmed that the Project had had discussions with various groups about this. CJ added that rewilding schemes were also being looked at.

# 3. Key Feedback and response

CJ outlined the headline consultation responses:

- Learning from Viking Link and Triton Knoll all feedback is passed to our technical teams to look at how we can improve the Project
- Grid connection regular meetings with National Grid with hopefully a grid connection offer by late Spring
- Feedback on the original route to Weston Marsh (agricultural practices, "running sands" and high water table) resulted in the introduction of an Alternative Route Option, that avoids the majority of this area.
- Temporary impact on agriculture and restoration – the Project has met with over 300 landowners and established Landowner Interest Groups.
- Archaeology (The Salterns) the Project has been meeting with the County Council Archaeologist to discuss the results of our deskbased assessment and proposed approach to non-intrusive surveys through 2023.
- Community benefit engagement and biodiversity net gain - the Project has been meeting with a number of key local stakeholders to discuss potential collaborations from both a community and biodiversity perspective.



- Useful information and feedback for substation search zones the Project is progressing with some visualisations for our Phase 2 Consultation for some specific candidate substation sites and configurations. We want to be as transparent as possible with the community and get their feedback on these options.
- Concerns for cumulative impacts for future projects (planning coordination) - the Project is regularly updating the planning system to ensure any known projects are included in our Cumulative impact Assessment.



	OFFSHORE WIND
4.	Q&A
	MR said that he thought the exhibitions had been well-attended.
	CS asked for confirmation that the National Grid decision in May would determine which connection option would be used. CJ said this was correct, but that National Grid would also give a connection date as well as a connection location.
	MR said he wanted to add that the panels and maps at the exhibition had been excellent and allowed him to fully understand the proposals. CS agreed with him.
	CD asked where the turbines would be made. CJ said there are three or four main manufacturers, but any decision on turbine supplier would be undertaken through a formal procurement process. CD said it was important to encourage local young people into engineering and maintenance jobs.
	CS asked what the lifespan of the turbines was. CJ said that the Crown Estate lease was for 60 years, although the turbines have a design life of around 35 years. No project has got that far yet, but they would probably be repowered with new technology after around 30 years.
	CJ re-emphasised that the project wants to listen to all of the parish/district councils and local stakeholders and give everyone a voice.
5.	AOB
	No AOB.
6.	Chair's closing remarks and next steps / next meeting
	CJ said that he hoped that by the time of the next CLG the Project would be able to present more detail on the location and visualisations for the substation.
	The next CLG is expected to be in May but AA will be in touch with details nearer the date.



Meeting Protocol		
Distribute agenda before meeting	Fix responsibilities for each item	
Start on time	Finish on time	
Set out your ground rules	Publish minutes / actions	
Stick to the agenda	Continuous improvement	



# Minutes of Meeting.

Meeting title	Community Liaison Group – Substation South	
Location	Fosdyke Village Hall	
Date/ time	Thursday 1 December 2022	
Originator	ODOW	
Attendees	Andrew Acum – Group Facilitator – ODOW - AA Roisin Aldis – Onshore Consents Manager – ODOW - RA Chris Jenner - Development Manager – ODOW - CJ David Wright – Land Manager – ODOW - DW  Mike Cooper – Boston Borough Council - MC Kerry Gratton – Fosdyke PC - KG Thomas Sneath – Moulton PC - TS Simon Walsh – South Holland District Council - SW Anthony Casson – South Holland District Council - AC Ian Pennington – Weston Parish Council - IP	
Apologies	Alison Austin – Lincolnshire County Council Richard Austin – Lincolnshire County Council Jane King – South Holland District Council	
Purpose of meeting	To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.	
	<ol><li>To act as a two-way communication channel between local communities and the project team.</li></ol>	
	<ol><li>To help foster local involvement and ownership of the project.</li></ol>	
	1. Chair's welcome and introductions	
	CJ opened the meeting and welcomed all members to the group. Each member of the group introduced themselves.	



#### 2. Terms of Reference

CJ checked that everyone had received a copy of the terms of reference and explained the purpose of the CLGs.

CJ then ran through the terms of reference on screen and these were agreed by the group.

# 3. Project Overview

CJ ran through a presentation to bring everyone up to speed with the project including:

- Background to partners and project
- Offshore proposal
- Onshore proposal
- Grid connections two possible options –
  Lincolnshire Node and Weston Marsh (based
  on recommendations from the Offshore
  Transmission Network Review) but will be
  National Grid's decision which one is
  progressed. Decision expected in the New
  Year. Currently looking at the two options in
  parallel until one of them drops away.
- Landfall

AC asked how deep the cables would be buried. CJ explained that they would be in ducts at a depth of 1.2m although they could be deeper if necessary. AC asked if this would be deep enough to prevent any EMF. DW said that at this depth, any EMF at surface would be negligible.

IP asked how deep the cables would need to be to get under the River Welland. DW said that the team would be speaking to the Environment Agency to get a better understanding of the river, but normally they would drill around 2m below the river bed. This would be horizontally direct drilled (HDD) from one field on one side to another field on the other side so it would not disturb the river or its ecology. CJ said that the same technique will be used at the landfall to go under the beach and sand dunes.



IP said nothing much had been mentioned about a substation north of the Welland at Surfleet Marsh. DW explained that the search area stretches from Weston Marsh to Surfleet Marsh and the team is undertaking detailed technical analysis to decide the optimal location with minimal visual impact.

AC asked who would make the final decision on the project. DW explained that this would be the Secretary of State but local councils will be statutory consultees.

TS asked if Lincolnshire Node was the preferred option as it would involve less cabling. DW explained that the cable route is one consideration, but it would also depend on when a connection would be available as an earlier connection date would mean that the project could start generating earlier.

TS asked when the turbines would be installed. DW said the decision on the DCO would hopefully be in 2026. There would then be a period of mobilising contractors and construction would start in 2026/27. CJ added that the turbines are likely to be installed in parallel with the onshore works.

CJ told the group that a Planning Performance Agreement has been set up with the district and county councils so the costs of all officer time spent on advising on the project is now covered by this.

CJ explained that the project is also looking at supporting bio-diversity net gain projects. This is about not only returning the landscape to its original condition, but actually enhancing it. The project is currently looking at a number of possible schemes supporting environmental, nature, woodlands and public amenity/visitor sites. The project is also looking at establishing a community benefit fund.

AC asked if this was the same thing as a Section 106 agreement. CJ said it is very similar but it is the mechanism used for an NSIP. AC asked if this is negotiable. CJ said it is to an extent and the project is currently looking at processes and a framework through which projects can be identified, funded



and delivered. The project is aware of some third party organisations that have been used previously in the area to successfully administer community benefit funds on similar projects.

AC said additional funding was welcome but it seemed like blackmail. CJ explained that it was right that the project provided some compensation for the areas that will be temporarily affected. MC said he had worked with the Bicker Fen community fund and the process and framework worked well.

IP said that with the power station all the funds went to Spalding and not the local parishes. He felt that the funds should go to the communities most affected by the project. DW said it was normally based on impact, and as the substation would have the biggest impact, the substation area would probably receive the biggest allocation of the community fund.

IP asked how much land the substation would require. CJ said that both HVAC and HVDC technology are still being assessed, but there is a size difference depending on which technology is used. DW explained that Bicker Fen uses HVDC which requires larger and higher substation infrastructure. No decision has been made yet for Outer Dowsing.

IP asked whether the turbines generated HVAC or HVDC. CJ said that they generate HVAC. IP asked if Viking Link was generating HVDC. CJ explained that Viking Link is just a transmission cable between the UK and Denmark and not actually generating so uses HVDC to reduce power loss. Triton Knoll generates and transmits HVAC as it is close enough to the Grid to transmit without significant losses. DW explained that HVAC has higher losses during transmission than HVDC. At a certain distance there is a tipping point where it is more economical to build convertor stations and transmit using HVDC rather than have the power losses from HVAC.



# 4. Issues Raised at Public Information Days

CJ outlined the main themes raised at the public information days:

- Energy security is a key issue now probably bigger than climate change. Offshore wind is now one of the cheapest forms of electricity generation
- Shared experiences (good & bad) from Viking & Triton Knoll, the following issues noted:
  - Chopping down of trees for access turning points
  - Dust
  - Traffic & air quality (in particular the 40mph temporary zones in place 24/7)
  - Limit to HGVs through Boston air quality
- Grid connection options views vary depending on location of attendees
- Constraint to expansion of economic development from lack of grid capacity at distribution voltages
- Useful information & feedback for substation search zones – feedback on ecology, access, transport, visual impact, noise
- Concerns for cumulative impacts for future projects – planning coordination and what's coming next?
- Interface with National Grid wider works Where? When? How will they consult?
- Temporary impact on agriculture, food security & restoration. Construction will require temporary access to a small strip of land 80m wide to put the cables in.
- Archaeology
  - The Salterns
- Ecology and ornithology
  - The coastal communities of Lincolnshire have an inspiring fondness for nature
  - We want to encourage, support and foster this.
  - Ideas for bio-diversity net gain. How can ODOW get involved?
- Community benefit engagement and Biodiversity Net Gain – feedback from community



IP said that the increase in fuel prices will also be seen in food prices if land is taken out of agricultural use to build a 'power station'. TS pointed out that many farmers are paid not to farm land, and that there is enough land in Lincolnshire for food production whilst also contributing towards energy security. TS asked if offshore wind is cheaper than nuclear. CJ confirmed that it is significantly cheaper. TS said that it is a substation that is being proposed not a power station, and that there would be minimal disruption which would be little different to existing agricultural work. He said that National Grid is already paying him not to use electricity at certain peak times and this situation is only going to get worse. DW confirmed that 9.2 hectares (excluding landscaping & drainage) is required for the substation electrical footprint which was insignificant in terms of the amount of arable land farmed in the UK.

SW asked what increase in capacity of UK production the project would represent. CJ said that ODOW has a 1.5 gigawatt capacity compared to a typical national peak demand requirement of 40-45 gigawatts. The project will provide enough electricity to power 1.6 million homes.

SW asked how many other schemes are in the pipeline. He said that the development process is far too long as the energy crisis is happening now. CJ said that this is just one of a number of projects which are either generating, in construction, consented or in development and that there are 8 gigawatts of Round 4 projects currently in the development pipeline with around 15 gigawatts currently installed. The government is aiming for 40 gigawatts to be installed by 2030, with an ambition for 50 gigawatts by this date.

SW asked if the site and infrastructure could be expanded. CJ said that Crown Estate have licenced a fixed capacity. Any increase would require a new licensing round.

SW asked if additional infrastructure could be included that would provide future capacity. CJ said



that this is called anticipatory investmentand is very difficult to finance. DW added that investment is also linked to the length of the lease and there is no guarantee that the lease could be extended to cover any additional costs. In addition, National Grid can only plan for what they know. The OTNR is a strategic vision for how the Grid can transmit electricity from the known offshore projects.

#### 5. Question and Answer Session

TS asked whether there was sufficient finance in place to complete the project. CJ said the two partners behind the scheme are amongst the biggest energy and infrastructure organisations in the world and are completely committed to low carbon projects. Outer Dowsing is one of their flagship schemes.

TS asked whether the project was waiting for any other investors to come on board. He asked if there was sufficient finance in place to build the project and start generating. CJ explained that the final Financial Investment Decision (FID) is made when consent has been obtained, there is an agreed Grid connection, suppliers are lined up who are ready and able to build it and the shareholders are happy. If the FID is agreed at this point, then the money is ringfenced to build the project. FID is expected in 2026 but the partners have already committed to get the project to this stage. The Green Investment Group is one of the biggest private investors in UK Offshore wind.

IP asked whether the project would have any involvement in the National Grid connection decision. CJ clarified that the project feeds into the process so that National Grid understands the project requirements but has no input into the choice of location. It is a fairly arm's length relationship as National Grid has statutory duties.



	CIT STICKE WIND
	SW said that if Lincolnshire Node is chosen it looked like that could mean a later connection date. DW said that it was in everyone's interests to get a connection as soon as possible.
6.	AOB None.
7.	Chair's closing remarks and next steps / next meeting  CJ thanked everyone for attending on a cold night. Minutes and the presentations will be circulated to the group members. Any further questions can be raised at any time via the website, freephone number or Freepost address. The team would like continuous dialogue with communities as decisions made now can have the biggest impacts.  The next meeting is pencilled in for February but AA will be in touch with details in due course.

Meeting Protocol		
Distribute agenda before meeting	Fix responsibilities for each item	
Start on time	Finish on time	
Set out your ground rules	Publish minutes / actions	
Stick to the agenda	Continuous improvement	



# Minutes of Meeting.

Meeting title	Community Liaison Group – Substation South
Location	Fosdyke Village Hall
Date/ time	Thursday 23 February 2023
Originator	ODOW
Attendees	Andrew Acum – Group Facilitator – ODOW - AA Roisin Alldis – Onshore Consents Manager – ODOW - RA Chris Jenner - Development Manager – ODOW - CJ David Wright – Land Manager – ODOW – DW  Alison Austin – Lincolnshire County Council – AAu Richard Austin – Boston Borough Council - RAu Kerry Gratton – Fosdyke Parish Council – KG Ian Pennington – Weston Parish Council - IP Thomas Sneath – The Moultons Parish Council – TS Simon Walsh – South Holland District Council - SW
Apologies	
Purpose of meeting	<ol> <li>To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.</li> </ol>
	<ol><li>To act as a two-way communication channel between local communities and the project team.</li></ol>
	<ol><li>To help foster local involvement and ownership of the project.</li></ol>



#### 1. Chair's welcome and introductions

CJ opened the meeting and introductions were made.

DW pointed out that IP was a landowner affected by the scheme and that TS was an agent acting on behalf of a landowner. DW asked if anyone had any conflicts of interest to declare. None were declared.

The minutes of the last meeting were approved. CJ added that minutes of all meetings would be uploaded to the website for transparency.

ACTION: AA to arrange upload of meeting minutes for all CLGs

# 2. Feedback from Consultation Events and Project Update

#### Offshore:

CJ explained that the offshore element has not changed since the last meeting. The only significant development is that the Project has signed the Agreement for Lease with the Crown Estate which is an exclusivity agreement for the seabed, but the landfall and connection options remain the same.

The offshore array will consist of up to 100 turbines, 54km offshore, each up to 403m above sea level. These will be approximately 7.5km behind the Triton Knoll development and the very top of the blades would only visible on average five or six days a year when weather conditions permit.

The landfall will be just south of Anderby Creek and the onshore cable will either connect at a northern site near Alford known as Lincolnshire Node or at a southern site known as Weston Marsh.



#### Onshore:

The previous round of consultation events introduced the southern underground cable route along the east coast down to Weston Marsh. The project has received a lot of feedback regarding subsurface conditions in The Tofts area, such as flowing sands, high water table and intensive agriculture which would make this route more challenging than originally anticipated.

As a result, it was decided to consult on a second option for the underground cable route known as, known as Phase 1A. This would run from just north of Wainfleet All Saints, west of the A52 and down towards Butterwick where it would connect to the original route option. This alternative route option had been selected to avoid any major towns and villages, intensive agriculture, existing infrastructure, archaeological sites, etc. and the alternative option was now the subject of an additional consultation.

IP asked whether the alternative route option would face the same problems with ground conditions around Fosdyke and Weston Marsh. DW said that the challenge with the first route was proximity to the sea and the high water table.

IP said that the route wasn't far from the sea at the river crossing. DW explained that this is the only practical point for a crossing. Whilst ground conditions at Weston Marsh may be similar, it would be less subject to tidal effects. The alternative route option was about minimising the distance with challenging engineering conditions wherever possible. DW said that the Project would be undertaking some ground investigation works from the end of March to get a better understanding of subsurface conditions.

IP asked how deep the tests would be. DW said that boreholes would be about 20m deep and trenches about 3.5m.

IP said that his father had a well that was affected by the tides.



CJ indicated where the tests would take place. Alongside the boreholes and trenches, there would also be some ground penetration tests to understand soil composition and strength. These tests would take about six weeks to complete, with equipment in locations for around two-three days at a time.

RAu said that in 1976, a number of boreholes towards Bourne became saline as the drought persisted, indicating that the pressure of the sea was still having an effect many miles inland.

CJ explained that one of the two connection point options would fall away, probably around May, when National Grid decide which connection point the Project will connect to. However, the consultation in June will still include two options as all the chapters for the Preliminary Environmental Information Report are having to be written now and it is not possible to pre-empt the decision.

#### Environmental data:

The Project has been undertaking a wide variety of onshore surveys including:

- Ornithology
- Ecology
- Archaeology
- Engineering
- Traffic & transport
- Visual
- Geology and hydrology
- Aerial photography
- Meteorology

The project is also undertaking a number of offshore surveys including:

- Geophysical and geotechnical
- Metocean and wind resource
- Ornithology and marine mammals
- Benthic ecology
- Marine traffic surveys

TS asked what the lifespan of the turbines was. CJ said that the Project had a 60-year lease and the turbines had a 35-year design life. After around 30



years, it is likely that the turbines would be repowered with the latest technology.

#### Onshore Geotechnical Survey

In the coming months there will also be some onshore geotechnical survey work undertaken along the cable route options which will involve drilling boreholes, digging small pits and some core penetration tests to get a better understanding of the subsurface structure. This will start at the end of March and will last for around six weeks, although equipment will only be on site at each location for a couple of days.

IP asked the cable would have to go deeper if there was running silt. CJ said that this is one of the things the geotechnical studies will determine. Once this information is available, the engineers would look at the Front End Engineering Design (FEED) studies where they would look to optimise the design, for example, trying to reduce the number of trenches, HVAC v HVDC, substation design, etc.

IP asked what height the substation at Weston Marsh would be. CJ said that both HVAC and HVDC were still on the table at this point and this would influence substation design.

#### Informing the Local Community:

The Phase 1 consultation included writing to 23,000 households, hosting four public information days with around 500 visitors, along with four community liaison groups.

The Project is currently undertaking the Phase 1A consultation on the alternative route option including writing to 5,500 households and hosting two public information days and four community liaison groups.

All feedback will be considered to help inform the production of the Preliminary Environmental Information Report, which will itself undergo a formal consultation in the summer.

All the work is building towards consent by 2025, build 2026 to 2029 operational by 2030.



# Onshore Substation Search Zones:

There are existing overhead lines at Weston Marsh, so the Project would need to build a substation and National Grid would need to build a smaller substation to connect into these. At Lincolnshire Node there is currently no National Grid infrastructure and the Project would have to connect into the proposed National Grid wider reinforcement works, however the details of these works are not yet known.

RAu asked if there was any indication of which site might be favoured. CJ said that the Project had no say in this, but a decision is expected in late Spring. As soon as a decision is known, this will be communicated to the CLGs.

AAu asked if it would be the Secretary of State who would make this decision. CJ said the location of the substation would be decided by National Grid, but the decision on consent for the Project would be made by the Secretary of State after an Examination process.

AAu asked how long the process would take. CJ said that the DCO application would be submitted at the end of the year with an examination period of 12-15 months, so a decision is expected by 2025. There are very strong drivers to achieve the 2030 target of 50 GW of offshore wind and ODOW is one of the next generation projects that will help meet that target.

After the elections in May, the Project will meet with the CLGs to present visualisations of what the substations may look like. Feedback from these worstcase scenarios will be used to help inform the aspects of the design that will go into the DCO application.

There will also be an Onshore Substation Working Group established once the grid connection point is confirmed. This will allow the onshore substation to be designed in consultation with the people and stakeholders who are local to it.

#### Landfall:

The cables at the landfall at Anderby Creek will be facilitated using horizontal directional drilling (HDD) -



the project will be drilling underneath the beach, the dunes, Anderby Marsh LNR and the coastal (Roman Bank) road so as not to disturb them.

As a project, there is a commitment to 10 per cent biodiversity net gain, so not only will the land be reinstated to its original condition, but there is also a commitment to a 10 per cent enhancement. The Project has been talking to a number of local organisations about how this can be delivered. Once a grid connection has been confirmed, the Project will be able to come back with more detailed plans.

### 3. Key Feedback and response

CJ outlined the headline consultation responses:

- Learning from Viking Link and Triton Knoll all feedback is passed to our technical teams to look at how we can improve the Project
- Grid connection regular meetings with National Grid with hopefully a grid connection offer by late Spring
- Feedback on the original route to Weston Marsh (agricultural practices, "running sands" and high water table) resulted in the introduction of an Alternative Route Option, that avoids the majority of this area.
- Temporary impact on agriculture and restoration – the Project has met with over 300 landowners and established Landowner Interest Groups.
- Archaeology (The Salterns) the Project has been meeting with the County Council Archaeologist to discuss the results of our deskbased assessment and proposed approach to non-intrusive surveys through 2023.



- Community benefit engagement and biodiversity net gain - the Project has been meeting with a number of key local stakeholders to discuss potential collaborations from both a community and biodiversity perspective.
- Useful information and feedback for substation search zones – the Project is progressing with some visualisations for our Phase 2 Consultation for some specific candidate substation sites and configurations. We want to be as transparent as possible with the community and get their feedback on these options.
- Concerns for cumulative impacts for future projects (planning coordination) - the Project is regularly updating the planning system to ensure any known projects are included in our Cumulative impact Assessment.

#### 4. Q&A

IP asked what would happen when the cable route needed to cross gas pipelines. DW said that the Project has a crossings schedule for every single utility along the route and once the connection point has been confirmed, the Project will enter discussions with the relevant utility that owns that asset, for example, gas, electricity, water, rail, etc. This is quite standard and happens up and down the country.

AAu asked if there had ever been collisions between turbines and aircraft. CJ said that developers work very closely with the CAA, NATS and MOD to avoid this.

CJ re-emphasised that the project wants to listen to all of the parish councils and local stakeholders and give everyone a voice.

#### 5. AOB

No AOB.



6.	Chair's closing remarks and next steps / next meeting
	CJ said that he hoped that by the time of the next CLG the Project would be able to present more detail on the location and visualisations for the substation.
	The next CLG is expected to be in May but AA will be in touch with details nearer the date.

Meeting Protocol	
Distribute agenda before meeting	Fix responsibilities for each item
Start on time	Finish on time
Set out your ground rules	Publish minutes / actions
Stick to the agenda	Continuous improvement



# Minutes of Meeting.

Meeting title	Community Liaison Group – Landfall/Substation North	
Location	Anderby Village Hall	
Date/ time	Monday 28 November 2022	
Originator	ODOW	
Attendees	Andrew Acum – Group Facilitator – ODOW - AA Roisin Aldis – Onshore Consents Manager – ODOW - RA Chris Jenner - Development Manager – ODOW - CJ Graham Meeks - Stakeholder Manager – ODOW - GM David Wright – Land Manager – ODOW - DW  Kevin Pryke – Alford Town Council - KP Lynette Pryke – Alford Town Council - LP Jenny Hayes – Anderby Parish Council - JH Graham Fisher – Anderby Parish Council - GF Hayley Brown – Anderby resident representative - HB Graham Marsh – East Lindsey District Council - GMa Tim Smith – Hogsthorpe Parish Council - TS Nigel Sylvester – Huttoft Parish Council - NS Chris Meaker – Huttoft Parish Council - CM Paul Russell – Mablethorpe and Sutton Town Council - PR Steve Holland – Mablethorpe and Sutton Town Council - SH Linda McCaig – Mumby Parish Council - LM Hanna Fairfield – Willoughby & Sloothby Parish Council - HF	
Apologies	Ron Christie-Smith – Chapel St Leonards PC Annie Maynard – Chapel St Leonards PC Colin Matthews – Lincolnshire County Council	
Purpose of meeting	<ol> <li>To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.</li> <li>To act as a two-way communication channel between local communities and the project team.</li> <li>To help foster local involvement and ownership of the</li> </ol>	
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#### 1. Chair's welcome and introductions

CJ opened the meeting and welcomed all members to the group. Each member of the group introduced themselves.

#### 2. Terms of Reference

CJ checked that everyone had received a copy of the terms of reference. CJ then ran through the terms of reference on screen.

Several members of the group said that they had been involved with similar groups on Triton Knoll and CJ said ODOW was happy to take on board any learnings on what had worked well and what had not worked so well from previous projects.

GF asked whether the chair would have final say on invitations to join the group. CJ clarified that ODOW is hoping to have a diverse representation of local communities and is open to suggestions on new members. ODOW will also be happy to bring in specialists as and when necessary to answer any detailed technical questions.

GF asked about speaking to the media. He felt that if he was asked a question about the scheme by the media, as an elected representative he would have to answer that question. AA clarified that the terms of reference only stated that individuals could not act as official spokepersons for the group, but as elected representatives of the community, it is expected that they will speak to the media during the course of their day to day work and ODOW would encourage them to communicate information obtained from group meetings.



# 3. Project Overview

Five people said they had attended a public information day. CJ ran through a presentation to bring everyone up to speed with the project including:

- Background to partners and project
- Offshore proposal
- Onshore proposal
- Grid connections two possible options –
  Lincolnshire Node and Weston Marsh (based
  on recommendations from the Offshore
  Transmission Network Review) but will be
  National Grid's decision which one is
  progressed. Decision expected in the New
  Year. Currently looking at the two options in
  parallel until one of them drops away.
- Landfall

## 4. Issues Raised at Public Information Days

CJ outlined the main themes raised at the public information days:

- Energy security is a key issue now probably bigger than climate change
- Shared experiences (good & bad) from Viking & Triton Knoll, the following issues noted:
  - Chopping down of trees for access turning points
  - Dust
  - Traffic & air quality (in particular the 40mph temporary zones in place 24/7)
  - Limit to HGVs through Boston air quality
- Grid connection options views vary depending on location of attendees
- Constraint to expansion of economic development from lack of grid capacity at distribution voltages
- Useful information & feedback for substation search zones – feedback on ecology, access, transport, visual impact, noise
- Concerns for cumulative impacts for future projects – planning coordination and what's coming next?
- Interface with National Grid wider works –
   Where? When? How will they consult?



- Temporary impact on agriculture, food security & restoration. Construction will require temporary access to a small strip of land 80m wide to put the cables in.
- Archaeology
  - The Salterns
- Ecology and ornithology
  - The coastal communities of Lincolnshire have an inspiring fondness for nature
  - We want to encourage, support and foster this.
  - Ideas for bio-diversity net gain. How can ODOW get involved?
- Community benefit engagement and Biodiversity Net Gain – feedback from community

CJ said that ODOW doesn't have answers to all of these at the moment, but will speak to local communities, councils, businesses and wildlife organisations to understand their views, ideas and thoughts.

#### 5. Question and Answer Session

GF said as he understood it there were two possible sites for connection, but it will be National Grid's decision. He asked what opportunity there would be to discuss this with National Grid. He felt that the scheme would get consent regardless so it was about getting the best possible outcomes for their communities. He also asked for it to be recorded in the minutes that he asked why all the windfarm projects couldn't be co-ordinated and share landfall and infrastructure. CJ explained that ODOW is the only Round 4 offshore wind project coming through area. Other North Sea wind farms connect in East Yorkshire, North East Lincolnshire and Norfolk, National Grid's remit is to look at how best to co-ordinate and connect wind farms and their conclusion was that the best options were Lincolnshire Node or Weston Marsh. The whole point of developing these connection points is to reduce long-term impact.



TS said there had already been three years of disruption and they didn't want the same for the next three or four projects. DW replied that National Grid has undertaken an in-depth analysis of all future projects they know about which has informed the OTNR – details can be found on their website. National Grid can however only assess known projects and cannot spend money on speculative projects. Further assessments will be likely as future projects become known. GM said that the link to the website will be circulated.

[National Grid OTNR - <a href="https://www.gov.uk/government/groups/offshore-transmission-network-review">https://www.gov.uk/government/groups/offshore-transmission-network-review</a>]

LP asked if the cables would be underground or overhead. GM said that the ODOW cables from landfall to the National Grid would be underground. The National Grid lines for Lincolnshire Node would be overhead. Weston Marsh would be connecting to existing National Grid overhead lines but Lincolnshire Node would be connecting to infrastructure proposed by National Grid and they will be required to undertake separate statutory consultation on their own projects.

TS asked where the overhead cables would go. DW said that ODOW couldn't say as this would be a National Grid project.

TS said he was a landowner and felt that the project would affect tourism and his business if people couldn't get on the beaches or on the roads. CJ said that effect on tourism is a key factor which the project is taking into consideration to ensure that the design of the construction programme mitigates any impact on tourism. At the landfall, the joint bay for the export cable will be inland of the Roman Bank road so there would be no interruption of the road, car parks, beach, nature reserve or the sand dunes as the cable would be horizontally direct drilled (HDD) underneath them. Materials would be brought in along a temporary haul road, not the local road network. Ensuring that access to the beach is maintained throughout the project is critical and that



is why ODOW has set up the CLGs, hosted public information days and met with the County, District and Parish Councils to take on board community views and knowledge to minimise any possible impacts. DW asked if there was a local tourism board that could send a representative to the CLGs. It was suggested that the team contacts Lincolnshire County Council

LM added that agricultural impact was also very important.

SH said there had been a debate in parliament raising concerns about suppliers to wind farms going bankrupt. He asked where the equipment was coming from and how could ODOW ensure that the project would be completed and not leave stranded assets. CJ said he would need to see the transcript of the debate but the project was already building a procurement team and relationships with Tier 1 and Tier 2 suppliers in order to develop a strong and secure supply chain. GM added that the industry as a whole struck a sector deal with the government which involved developers taking greater ownership of the need to develop the supply chain to deliver the aim of 30GW (at that time) by 2030 and ensure that there was capability, capacity and viability to deliver this. The ambition has now grown from 30GW to 50GW by 2030.

KP asked what input ODOW would have in National Grid's selection of landfall and the connection site. GM clarified that the landfall site was already decided – it was just the connection point that was still not decided. RA indicated where the two substation search zones are and that ultimately the grid connection location is National Grid's decision.

KP asked whether a cable route through the Wash had been considered. GM explained that National Grid looked at offshore and onshore constraints via the OTNR. Due to the SPA, SAC and RAMSAR designations, Natural England has said that they would not support any proposals for cables to be routed through The Wash.



KP asked what interface there would be with the Triton Knoll cables. DW said that the ODOW landfall is south of the Triton Knoll landfall and that the proposed southern cable route for ODOW would remain south east of that of Triton Knoll's for the whole of its length.

NS asked why the project couldn't connect at Bicker Fen and use existing infrastructure. CJ explained that Bicker Fen wouldn't be able to accommodate a 1.5GW connection.

NS asked why the project couldn't run alongside the Triton Knoll route. CJ said that Weston Marsh is approximately 15km from Bicker Fen so requires a different route.

NS asked whether flooding and over-topping would mean a route further inland would be more practical. CJ said that flooding would only be an issue for the substation not the cable route.

CM said that Lincolnshire Node would appear to be more expensive than Weston Marsh. CJ said that purely in terms of capital expenditure, this may be true but there were also other factors to consider. A connection at Weston Marsh may be possible earlier since the overhead lines are already in place. Earlier connection would offer savings in terms of carbon savings and other development costs.

JH asked whether the cables couldn't go down the Wash due to the proposal for a barrage. CJ said that the two projects were not linked.

GF said that overhead cables were not mentioned at the public information day. CJ said the ODOW project only involves underground cables. The development and construction of overhead lines was the responsibility of National Grid.

GF asked if it was true that Lincolnshire County Council (LCC) had sent a letter saying that they would object to the project. CJ said no such letter had been received.



TS said that he was at a council meeting where a councillor said he was putting in a strong objection to the cable coming through Lincolnshire. The councillor said that this was being pushed through and that the project was not wanted. He said he had heard this directly from the councillor himself. GM said he had also heard this from a member of the Executive. TS said he thought there would be disruption of businesses for 20 years. CJ explained that construction would only take 2-3 years and the cable route would be reinstated and returned to agricultural use. The project team has liaised closely with LCC. The project will be considered by the Secretary of State as it is classed as a Nationally Significant Infrastructure Project. LCC is a statutory consultee in the process and will be able to put forward their views. It is the project team's job to work with local stakeholders to identify issues and to mitigate and minimise any potential impacts.

GMa asked if the councillor who had made the comments was Cllr Colin Davie. TS and GF confirmed that it was. GMa said that ELDC would respond to the project through the appropriate channels. CJ informed the group that ODOW has already set up a Planning Performance Agreement with the Local Planning Authorities so that they have a formal channel to consult on any issues.

CJ said the Phase 1 consultation still had one day to run and questionnaires and comments were still welcomed and being received. This feedback will be evaluated to decide if any changes or amendments need to be made to the proposals/route. Next year there will be another round of consultation on the Preliminary Environmental Information Report (PEIR). Subject to a decision from National Grid, it should be possible to come back with more detailed proposals on the location for the substation. If no decision has been made, the project may have to twin track both proposals until one falls away.

KP asked if it would be possible to have a National Grid representative at the next CLG meeting. He felt that most people had no concerns about the ODOW element of the project but there were concerns



about the lack of information from National Grid. He felt that it would be useful to have someone attend who could give more detailed answers on the National Grid proposals. DW said that National Grid themselves probably aren't at a stage where they have detailed answers yet but will also need to go out to public consultation as part of the statutory process.

GF said that the next CLG meeting is scheduled for February by which time there may be a decision on the connection location. If this was the case, he asked whether someone from National Grid could attend. CJ said he could ask the question.

CM asked whether any of the landowners in the substation search zone had been contacted. He said a local farmer had told him there was a proposal to put a cable across a field he had dyked and drained. DW said there was a 300m corridor under consideration and the team has written to every landowner in the corridor. The project land agents Dalcour McLaren were meeting with all affected landowners. So far around 84 per cent of landowners had been met.

KP asked if there were any plans for how the heavy machinery and plant would get to site. He said all traffic has to go through Alford which has very narrow roads. DW said a full traffic and transport assessment will be produced as part of the application. All contractors will be briefed to use main roads and an agreed Traffic Management Plan would be put in place.

LP said Viking Link had sent three abnormal loads through the village (Alford) in the last week. She said it is also causing damage to the roads so Alford Town Council would like input on any proposed traffic routes. DW said at this stage the project doesn't have a Grid connection point so it is not possible to specify routes, but any future traffic plans would try to avoid populated areas. Once a connection point is known, the project team will consult on traffic management plans with parish councils, LCC Highways and the CLG.



CM said the removal of the temporary haul road was causing additional damage to the roads. CJ said that there had been feedback from the Triton Knoll experience about the removal of the haul roads. He said that in some instances it may be possible to use existing tracks instead to make it easier to reinstate afterwards.

LM asked if the chalk from the temporary haul road could be offered to local farmers. DW said he was aware of this on other schemes, but it would depend on the terms of the waste transfer licence as to whether this would be allowable legally. He also said that the Development Consent Order is for a temporary road with reinstatement afterwards. If the landowner could get planning permission for a permanent road, it might be possible for the chalk to be left in place.

LM said that landowners are not always the people that are farming the land and asked how tenants would be consulted. DW confirmed that tenants are being picked up as part of the consultation process.

NS asked if there would be a community benefit scheme for parishes affected by the project. CJ said that the consultation process was seeking thoughts and ideas from the local community on the best way to establish a benefit fund. There are a range of thoughts from small individual schemes through to more strategic schemes that involve different parishes working together.

LM asked who would make the decision on allocation of funds. GM said that everything is still at an early stage. The team has spoken to the district councils and they have pointed to funding and governance arrangements similar to those used in Somerset on the Hinckley Point C nuclear power station project. Alternatively, what works at a district level may not be appropriate for the individual parishes that are most affected. Once there is more clarity on the route then the team will start looking at what will be the most appropriate way of managing the fund. At the moment, it is still very much a case of



listening to what local communities are saying would work best.

LP suggested making contact with Sue Fortune at Lincolnshire Community Foundation who have managed other community funds. DP asked what the experience had been like with Triton Knoll and Viking Link. LP said these projects had used LCF to do the due diligence, issue the grants and produce the impact reports afterwards.

CM said Anderby and Huttoff benefitted from the funds.

### 6. AOB

HF asked what the deadline for the National Grid decision would be. CJ said that it was all down to National Grid and the OTNR process. The team is speaking to National Grid on a regular basis. As soon as there is any information, it will be shared with the CLGs.

DW asked if there was anyone else in the wider community who should be invited to join the CLG. GF suggested a representative from the NFU. LP said that the three district councils had set up community hubs with key players in the villages and towns and the organisations acting as the council's access points should have strong links with the local communities. The initial contact would be Roxanne Warwick at East Lindsey District Council.

TS said that the project would take up large amounts of agricultural land and asked what compensation would be given to people who would lose crop yields. He said that in winter it would not be possible to get vehicles and plant onto the land. DW said Dalcour McLaren (land agents appointed by Outer Dowsing) are speaking to landowners about crops and compensation for any loss. The team understands the importance of early engagement with landowners and farmers. The project will also consider any additional land that becomes inaccessible due to works.



7.	Chair's closing remarks and next steps / next meeting
	CJ thanked everyone for attending on a cold and foggy night. Minutes and the presentations will be circulated to the group members. Any further questions can be raised at any time via the website, freephone number or Freepost address. The team encouraged regular dialogue with communities as decisions made now can have the biggest impacts.  The next meeting is pencilled in for February but AA will be in touch with details later.

Meeting Protocol			
Distribute agenda before meeting	Fix responsibilities for each item		
Start on time	Finish on time		
Set out your ground rules	Publish minutes / actions		
Stick to the agenda	Continuous improvement		



# Minutes of Meeting.

Meeting title	Community Liaison Group – Substation North
Location	St Wilfrid's Church Hall, Alford
Date/ time	Monday 20 February 2023
Originator	ODOW
Attendees	Andrew Acum – Group Facilitator – ODOW - AA Roisin Alldis – Onshore Consents Manager – ODOW - RA Chris Jenner - Development Manager – ODOW - CJ David Wright – Land Manager – ODOW - DW  Hayley Brown – Anderby resident – HB Cllr Hannah Fairfield – Willoughby & Sloothby Parish Council - HF Cllr Kevin Pryke – Alford Town Council - KP Lynette Pryke – Alford Town Council – LP Cllr Graham Marsh – East Lindsey District Council – GM
Apologies	Graham Fisher – Anderby Parish Council
Purpose of meeting	<ol> <li>To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.</li> </ol>
	<ol><li>To act as a two-way communication channel between local communities and the project team.</li></ol>
	<ol><li>To help foster local involvement and ownership of the project.</li></ol>



# 1. Chair's welcome and introductions

CJ opened the meeting and attendees introduced themselves.

CJ pointed out that there was an anomaly in the minutes of the last meeting. Cllr Chris Meaker stated that the Lincolnshire Node connection would be more expensive than the Weston Marsh connection. It is the other way around and Weston Marsh would be more expensive since the onshore cable route is longer. From his subsequent comments it appears that Cllr Meaker meant Weston Marsh would be the more expensive option. AA will contact CM to confirm that he is happy for the minutes to be amended.

Other than the above, the minutes of the last meeting were approved. CJ added that minutes of all meetings would be uploaded to the website for transparency.

ACTION: AA to contact CM to confirm that he is happy for the minutes to be amended.

AA to arrange upload of meeting minutes for all CLGs.

# 2. Feedback from Consultation Events and Project Update

### Offshore:

CJ explained that the offshore element has not changed since the last meeting. The only significant development is that the Project has signed the Agreement for Lease with the Crown Estate which is an exclusivity agreement for the seabed, but the landfall and connection options remain the same.



The offshore array will consist of up to 100 turbines, 54km offshore, each 403m above sea level. These will be approximately 10 miles behind the Triton Knoll development and only visible on average five or six days a year when weather conditions permit.

The landfall will be just south of Anderby Creek and the onshore cable will either connect at a northern site near Alford known as Lincolnshire Node, or at a southern site known as Weston Marsh.

## Onshore:

The previous round of consultation events introduced the southern underground cable route along the east coast down to Weston Marsh. The project has received a lot of feedback regarding subsurface conditions in The Tofts area, such as running silts, high water table, drainage and intensive agriculture which would make this route more challenging than originally anticipated.

As a result, it was decided to consult on a second option for this section of the underground cable route known as Phase 1A. This would run from just north of Wainfleet All Saints, west of the A52 and down towards Butterwick where it would connect to the original route option. This alternative route option had been selected to avoid any major towns and villages, intensive agriculture, existing infrastructure, archaeological sites, etc. and the alternative option was now the subject of an additional consultation.

CJ explained that one of the two connection point options would fall away, when National Grid decide which connection point the Project will connect to. However, the consultation in June will still include two options as all the chapters for the Preliminary Environmental Information Report are having to be written now and it is not possible to pre-empt the decision.

GM said that "Countryfile" had put it into perspective by explaining that it is the whole network that is being reviewed and there are so many unknowns for National Grid. CJ agreed that it is a difficult decision for National Grid having to balance between



# investing for known demand and investing for anticipatory demand.

# Environmental data:

The Project has been undertaking a wide variety of onshore surveys including:

- Ornithology
- Ecology
- Archaeology
- Engineering
- Traffic & transport
- Visual
- Geology and hydrology
- Aerial photography
- Meteorology

The project is also undertaking a number of offshore surveys including:

- Geophysical and geotechnical
- Metocean and wind resource
- Ornithology and marine mammals
- Benthic ecology
- Marine traffic surveys

## Onshore Geotechnical Survey

In the coming months there will also be some onshore geotechnical survey work undertaken along the cable route options which will involve drilling boreholes, digging small pits and some core penetration tests to get a better understanding of the subsurface structure and conditions. This will start at the end of March and will last for around six weeks, although equipment will only be on site at each location for a couple of days.

LP asked whether the findings of the geotechnical surveys could be shared with the CLG. CJ said that this would be possible.

HF asked what would happen if the results showed that there was not a suitable site. CJ said there was a degree of confidence as Triton Knoll and Viking Link had already been through the area. The surveys were more about getting detailed data which would assist in getting a specification for contractors and



determining the construction techniques that would be required.

CJ said site notices would be placed in advance so that members of the public were aware of what was happening. Notices would also be sent to CLG members and parish councils.

# <u>Informing the Local Community:</u>

The Phase 1 consultation included writing to 23,000 households, hosting four public information days with around 500 visitors, along with four community liaison groups.

The Project is currently undertaking the Phase 1A consultation on the alternative route option including writing to 5,500 households and hosting two public information days and four community liaison groups.

All feedback will be considered to help inform the production of the Preliminary Environmental Information Report, which will undergo a formal consultation in the summer.

All the work is building towards consent by 2025, build 2026 to 2029 operational by 2030.

## Onshore Substation Search Zones:

There are existing overhead lines at Weston Marsh, so the Project would need to build a substation and National Grid would need to build a smaller substation to connect into these. At Lincolnshire Node there is currently no National Grid infrastructure and the Project would have to connect into the proposed National Grid wider reinforcement works, however the details of these works are not yet known.

After the elections in May, the Project will meet with the CLGs to present visualisations of what the substations may look like. Feedback from these worstcase scenarios will be used to help inform the aspects of the design that will go into the DCO application.

There will also be an Onshore Substation Working Group established once the grid connection point is confirmed. This will allow the onshore substation to be



designed in consultation with the people and stakeholders who are local to it.

# Landfall:

The cables at the landfall at Anderby Creek will be facilitated using horizontal directional drilling (HDD) - the project will be drilling underneath the beach, the dunes, Anderby Marsh LNR and the coastal (Roman Bank) road so as not to disturb them.

As a project, there is a commitment to 10 per cent biodiversity net gain, so not only will the land be reinstated to its original condition, but there is also a commitment to a 10 per cent enhancement. The Project has been talking to a number of local organisations about how this can be delivered. Once a grid connection has been confirmed, the Project will be able to come back with more detailed plans.

KP asked if on completion there would be any surface indication that the underground cables were present at the landfall site. DW said that there would be no presence on the beach or dunes, but on the western side of Roman Bank there would be a temporary compound were the cables would come up, but once the project is completed, it would be fully reinstated just like the other projects along the coast.

KP asked how far out to see the HDD would start. CJ said this would be determined by the geotechnical surveys.

# 3. Key Feedback and response

CJ outlined the headline consultation responses:

- Learning from Viking Link and Triton Knoll all feedback is passed to our technical teams to look at how we can improve the Project.
- Grid connection regular meetings with National Grid with hopefully a grid connection offer by late Spring



- Feedback on the original route to Weston Marsh (agricultural practices, "running sands" and high water table) resulted in the introduction of an Alternative Route Option, that avoids the majority of this area.
- Temporary impact on agriculture and restoration – the Project has met with over 300 landowners and established Landowner Interest Groups.
- Archaeology (The Salterns) the Project has been meeting with the County Council Archaeologist to discuss the results of our deskbased assessment and proposed approach to non-intrusive surveys through 2023.
- Community benefit engagement and biodiversity net gain - the Project has been meeting with a number of key local stakeholders to discuss potential collaborations from both a community and biodiversity perspective.
- Useful information and feedback for substation search zones the Project is progressing with some visualisations for our Phase 2 Consultation for some specific candidate substation sites and configurations. We want to be as transparent as possible with the community and get their feedback on these options.
- Concerns for cumulative impacts for future projects (planning coordination) - the Project is regularly updating the planning system to ensure any known projects are included in our Cumulative impact Assessment.

### 4. Q&A

KP asked what the target completion date for the project was. CJ said that the target is to be generating by 2030 as this project is a fundamental part of the government's target of 50GW by 2030. Energy security and affordability had become a key issue for people. Nearly 500 people attended the events in November and there was broad debate about energy generation, how the market works, price of wind, dependency on imports, benefits for the region, etc.



#### Q&A

KP asked whether the Project was actively reaching out to other projects in the area, or just being aware of them CJ said that the Project was collaborating with other offshore projects, such as Dogger Bank and the Dudgeon and Sheringham extension project (connecting in Norfolk), working with other offshore projects on ecology, sharing data, etc. Onshore, National Grid have a role in co-ordinating projects. RA said that the Project was already looking at a number of collaborations on bio-diversity net gain and community benefits to help build bigger projects that will have a greater positive impact on local communities.

KP said he was particularly thinking about Viking Link with the construction of the temporary haul road and then its subsequent removal. Now Outer Dowsing is proposing to do the same thing, and future projects may come along and want to do this as well. He wanted to know how these different schemes could work together to minimise disruption. DW said that the Project did look at other projects and was aware that there could be another project connecting into Lincolnshire Node, but this would be a different developer with different timescales to Outer Dowsing, so collaboration between projects on construction is difficult. Also, projects like interconnectors do not go through the same planning process as offshore wind farms, so it is very difficult to know in advance which schemes might be coming on stream.

CJ re-emphasised that the project wants to listen to all of the parish/district councils and local stakeholders and give everyone a voice.

5. AOB

No AOB.



6.	Chair's closing remarks and next steps / next meeting
	CJ said that he hoped that by the time of the next CLG the Project would be able to present more detail on the location and visualisations for the substation.
	The next CLG is expected to be in May but AA will be in touch with details nearer the date.

Meeting Protocol	
Distribute agenda before meeting	Fix responsibilities for each item
Start on time	Finish on time
Set out your ground rules	Publish minutes / actions
Stick to the agenda	Continuous improvement



# Annex 5.1.5C Outline ONSS Design Principles Document (April 2023)

# **Outer Dowsing Offshore Wind**

**Onshore Substation Options** 

**Update for ODOW Community Liaison Groups** 

Date: April 2023

Document Number 123-ODO-CON-K-BE-000006-01



# 1 Onshore Substation Update

### 1.1 Introduction

- 1.1.1 The purpose of this memo is to update the Outer Dowsing Offshore Wind Community Liaison Group (CLG) members regarding the process that we (the Outer Dowsing Offshore Wind Farm (ODOW) project) are following for the grid connection and our current assumptions regarding the substation infrastructure options that will be required to facilitate the connection into the National Grid.
- 1.1.2 We also wish to advise the CLG members that the preliminary location plans for the substation options will be shared with the groups at the April meetings. Visualisations from selected viewpoints of all options are being prepared to be included in the PEIR and the Phase 2 consultation in early summer. We hope to be able to share drafts of the visualisations with the groups in April.
- 1.1.3 This document describes the outline design parameters for the ODOW onshore substation (ODOW OnSS) that will be built close to one of the grid connection options under consideration.
- 1.1.4 Additional works will be required by National Grid Electricity Transmission (NGET) to enable our connection, and these works will be designed and constructed by NGET.

# 1.2 National Grid's process to confirm the grid connection point

- 1.2.1 Since the last CLG meeting, we have been developing options for site locations and layouts for the two alternatives that National Grid have given as possible connection points. The connection point options are:
  - The proposed new Lincolnshire Node (LN) substation, north-east of Alford, or
  - A connection into existing overhead lines at Weston Marsh (WM), south of Boston.
- 1.2.2 NGET are continuing with their evaluation of the alternatives, through the Offshore Transmission Network Review (OTNR), and we don't expect a formal response regarding the connection point before June at the earliest. The final decision may be some months after this.
- 1.2.3 We cannot make any assumptions regarding NGET's selection while the OTNR is still ongoing. Therefore, we are currently preparing our Preliminary Environmental Information Report (PEIR) to include the environmental assessments of both connection points. We plan to issue the PEIR in early summer as the evidence base to support our Phase 2 Consultation For a connection at Weston Marsh, two potential substation sites (WM North and WM South) are being considered. Until the final decision has been made by NGET, we will continue to assess both the Lincolnshire Node and the two potential sites at Weston Marsh.
- 1.2.4 The surveys and the assessments that are being undertaken for PEIR will cover all options and include the full range of environmental topics for each of the sites and associated cable routes.
- 1.2.5 We are engaging with landowners to undertake environmental surveys on cable routes for all options. The visualisations of all the ODOW OnSS options will be in the Landscape and Visual chapter of the PEIR and we hope to have draft visualisations to share with the CLGs in April.

1.2.6 The final Development Consent Order (DCO) application and Environmental Statement (ES) will be for a connection at the single point determined by NGET. The table below shows the anticipated stages of the application process in which the site and different technology options for the ODOW OnSS options will be included and the stages for which this will change to the single option.

ODOW Consent Stage	ODOW OnSS Site Options		ODOW OnSS Technology		
	LN	WM	WM	AIS	GIS
		North	South		
Land engagement and options	Χ	Χ	Χ	Χ	Χ
Environmental surveys	X	Χ	X	Χ	Χ
Preliminary Environmental Information	Χ	Χ	Χ	Χ	Χ
Report (PEIR)					
Phase 2 Consultation	X	Χ	X	Χ	Χ
Final Environmental Statement	Single ODOW OnSS		Χ	Χ	
DCO application	adopted site option		Χ	Χ	
CO project authorisation		X	X		
Detailed design acceptance (Local Planning			Final ODOW OnSS		
Authority)	detailed design			d design	

**Table 1: Consent Stages and ODOW OnSS Options** 

# 1.3 Outer Dowsing Offshore Wind Onshore Substation (ODOW OnSS)

- 1.3.1 The detailed design of the ODOW OnSS will be undertaken post consent and in order that all options are assessed in the ES, the maximum design parameters of the different options must be defined, and these parameters will be set as limits of the authorised project in the DCO. The DCO will contain a requirement that the local authority will be responsible for the final approval of the detailed design and associated management plans.
- 1.3.2 There are two primary technology options for the substation. The 'Air Insulated Substation' (AIS) relies on the air gap between conductors to provide insulation. This requires an external yard of switching gear with a relatively large footprint. The image below shows typical outdoor AIS infrastructure.



Figure 1: Typical outdoor AIS equipment

1.3.3 The alternative is a 'Gas Insulated Substation' (GIS), where the electrical contacts are enclosed inside sealed vessels containing an insulating gas, replacing the outdoor switch yard of the AIS option. The GIS substation requires a large building to house the switch gear but has a smaller overall footprint compared to the AIS option. The image below shows an example of a typical GIS building and switchgear.





Figure 2: Typical GIS building and indoor switchgear.

- 1.3.4 The PEIR and ES will therefore have to assess both AIS and GIS options, including the building required for the GIS option, and the external equipment and footprint required for AIS. A set of maximum parameters have been defined, to create an 'envelope' for assessment that will accommodate any of the options under consideration.
- 1.3.5 The current assumptions regarding the relative heights and profiles of the different elements of infrastructure required for the different options that are being used in the PEIR are shown in the design parameters table below. All these dimensions may be subject to change until the final application is made.
- 1.3.6 The detailed design of the ODOW OnSS will be undertaken post-consent with the envelope defined in the DCO and assessed in the ES. The assessments in the PEIR have been based on the maximum design parameters in Table 2 below. Following consultation on the PEIR, these will be refined for the final ES and DCO application. The figures give a robust basis for the assessment and an 'envelope' within which the design can be developed.

Design aspect	Technology /	Max. Parameter	Max. Height
	Site	Footprint	
Temporary construction area	AIS / GIS	27ha (270,000m²)	-
Permanent overall site area	AIS / GIS	18ha (180,000m²)	-
Operational area	AIS	9.27ha (92,700m²)	12m
Operational area	GIS	7.26ha (72,600m²)	12m
GIS building (footprint included in above)	GIS	0.45ha (4,500m²)	19m
Lightning protection masts	AIS / GIS		30m
Floor level raising above existing ground level	WM only		1m

**Table 2 ODOW OnSS Maximum Design Parameters for PEIR** 

- 1.3.7 The maximum parameter being used for an AIS substation, is for a permanent operational area of 92,700m<sup>2</sup>, within an overall site of 180,000 m<sup>2</sup>, to include land for access, landscaping, and storm water attenuation. The external equipment will be up to 12m in height, including transformers, conductors, switchgear, and other smaller items of equipment.
- 1.3.8 For any of the options, additional land will be temporarily required during construction and an additional area of 270,000m<sup>2</sup> is being assumed for the purposes of the assessments, for the duration of the three-year construction program.
- 1.3.9 Both AIS and GIS options will require a control room, transformers, external fencing, roadways, hard standings, lighting, lightning protection masts (of up to 30m in height), drainage systems and a landscaping scheme. The images below are examples of typical transformers and external fences.



Figure 3: Typical transformers (righthand image with a noise enclosure)



Figure 4: Typical examples of external fencing

- 1.3.10 The same overall site area will be assessed for a GIS option, although this technology would require a smaller footprint for the operational area. A GIS building footprint of  $4,800m^2$  (based on assumed floor plan of 150m x 30m) with a maximum height above the floor level of 19m, will be assessed.
- 1.3.11 For all options at Weston Marsh, it is assumed that the site level will be raised above the existing ground level. It is anticipated that this would result in a finished floor level of up to 1m above the existing ground level, to provide protection from flooding. This would be formed partly by raising the level of the site and partly by raising equipment plinths and building floor levels. It's not currently anticipated that any significant raising will be required at the Lincs Node site.

1.3.12 ODOW's consultants are preparing visualisations of these layouts and developing outline landscaping plans, which will be included in the visualisations, at PEIR and the Phase 2 consultation and will be shared with the CLGs in April, if these are available.

# 1.4 National Grid Onshore Substation (NG OnSS)

- 1.4.1 In addition to the ODOW OnSS, a National Grid Onshore Substation (NG OnSS) and associated enabling works will be required at, or near to, the ODOW OnSS.
- 1.4.2 For a connection at the proposed Lincolnshire Node location, NGET proposes to build a new overhead line and new NGET substation to accommodate multiple connections. Our current understanding is that the NG OnSS would be located within the onshore substation search zone presented at our Phase 1 and 1A Consultation events and would be connected to the ODOW OnSS by underground cables.
- 1.4.3 The Lincolnshire Node scheme was proposed by National Grid several years before ODOW approached National Grid for a connection and it is a strategic proposal relating to reinforcement of the wider transmission network rather than being instigated to serve any individual development.
- 1.4.4 For a connection at the proposed WM North and WM South locations into the existing NGET overhead line, new NGET infrastructure will be required to facilitate a connection for ODOW. Based on other similar connections this will likely consist of a new NGET substation and localised alterations to the overhead lines to form the connection.
- 1.4.5 The NG OnSS could utilise AIS or GIS technology and it is likely that the necessary infrastructure will be designed and constructed by NGET.