

Norfolk Boreas Offshore Wind Farm

Consultation Report

Appendix 22.16 Slide pack examples

Applicant: Norfolk Boreas Limited
Document Reference: 5.1.22.16
Pursuant to APFP Regulation: 5(2)(q)

Date: June 2019
Revision: Version 1
Author: Copper Consultancy

Photo: Ormonde Offshore Wind Farm

This page is intentionally blank.

Norfolk Vanguard & Norfolk Boreas Offshore Wind Farms

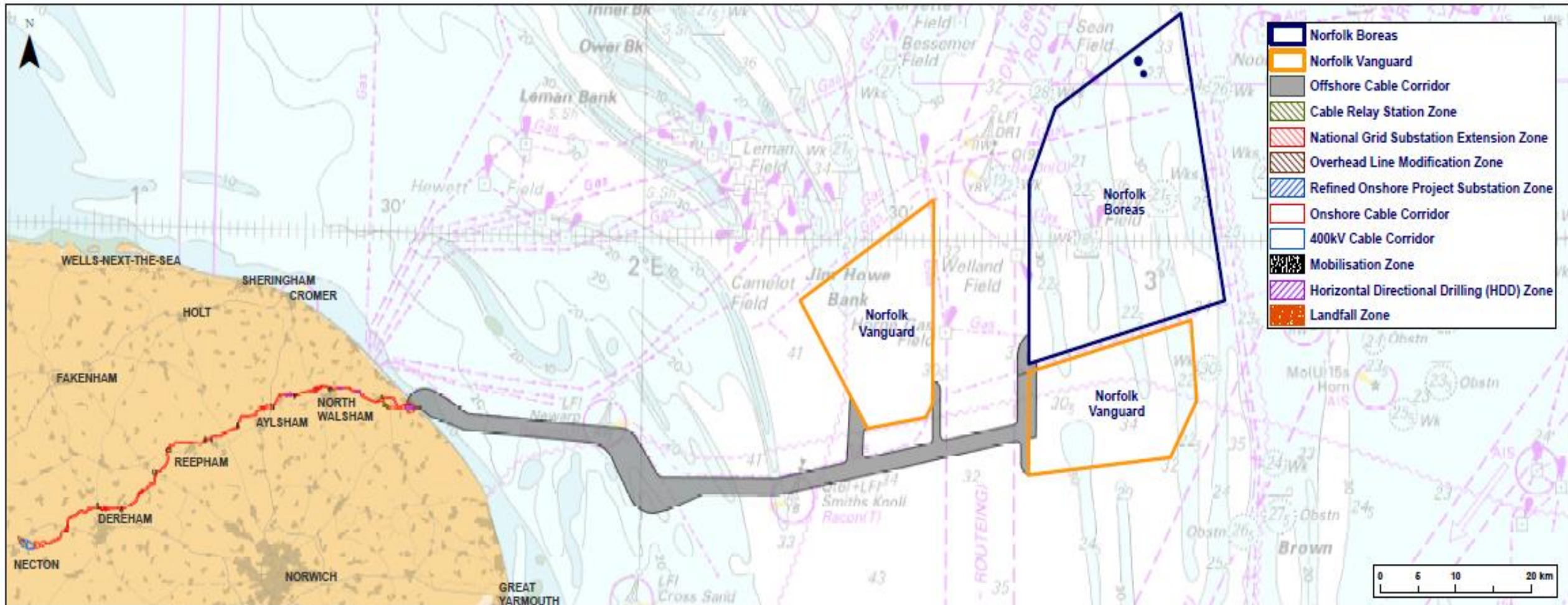
Update for Holme Hale Parish Council 19/11/18

Susan Falch-Lovesey,
Local Liaison Officer & Skills Champion

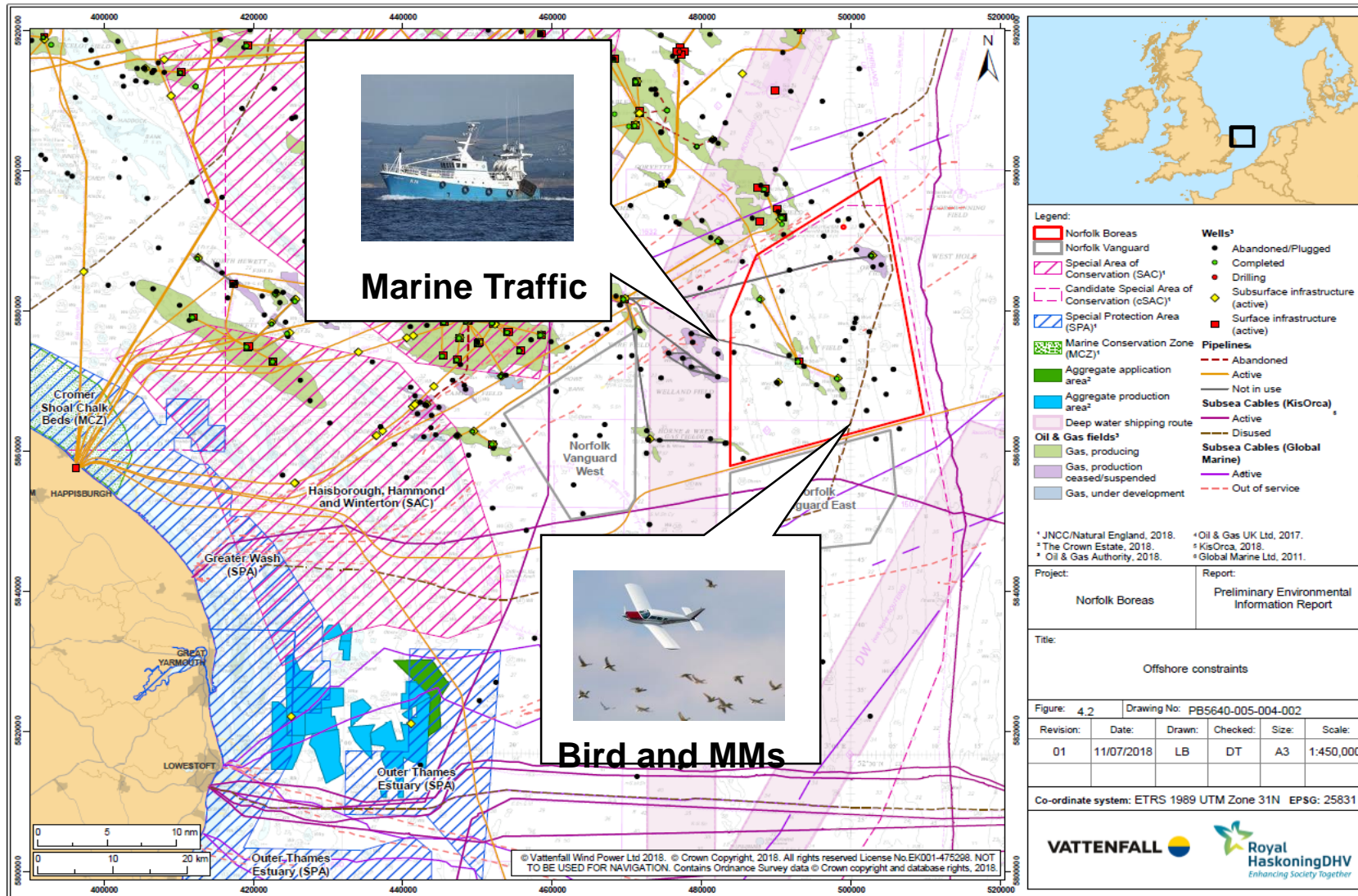
Agenda

- Intro and **do you have any key questions you would like to cover today?**
- Overview
- Project decisions - recap
- Timescales (Vanguard and Boreas consultation process)
- Boreas (SOCC and Statutory Consultation)
- Supply Chain update
- Skills and Community Engagement update
- New Information Leaflets and Autumn Newsletter
- Contact

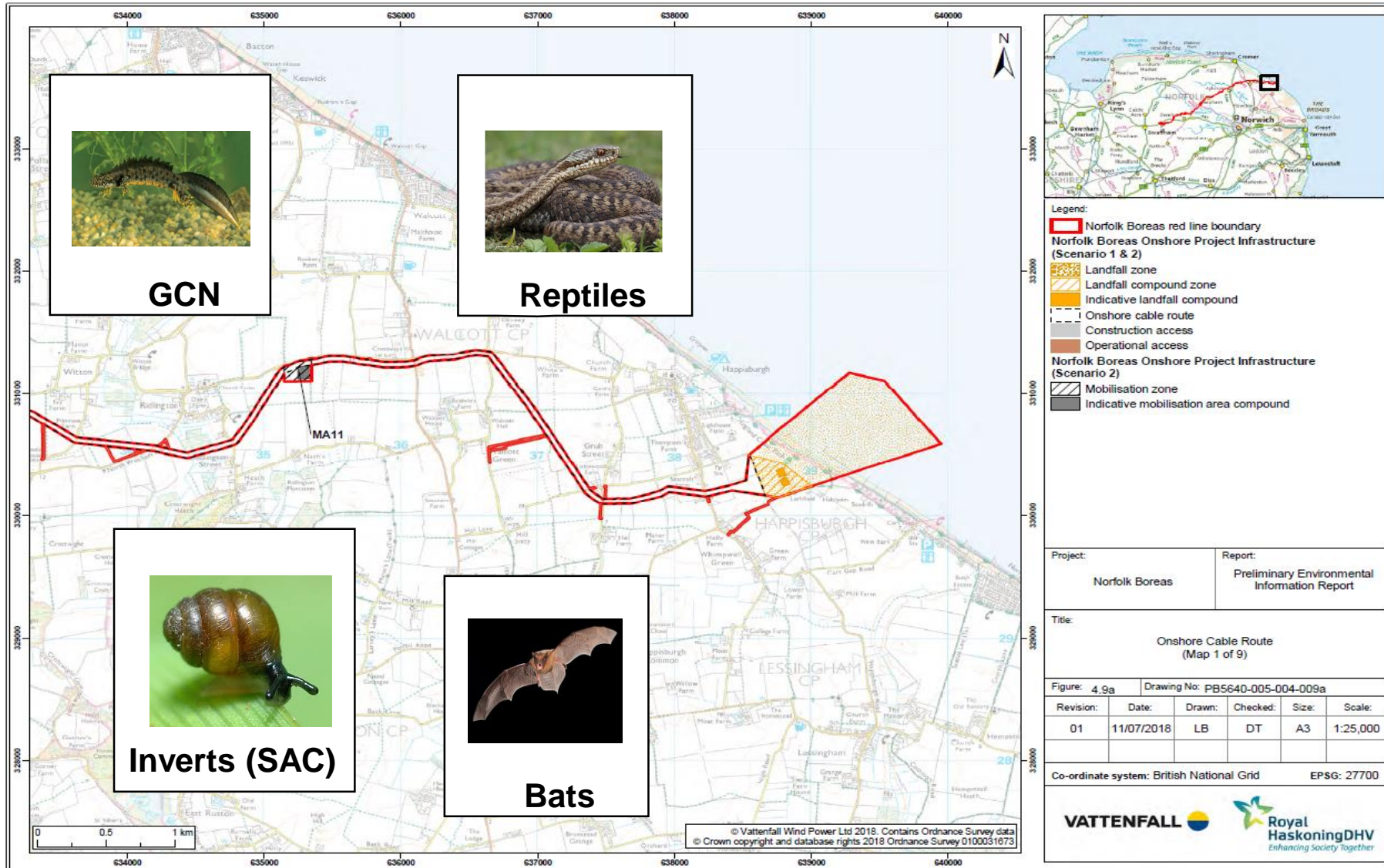
Our 2 Projects – [link here](#) (for Vanguard map) Boreas Scenarios – [Link here](#) (bottom of page)



Surveying continues for Boreas



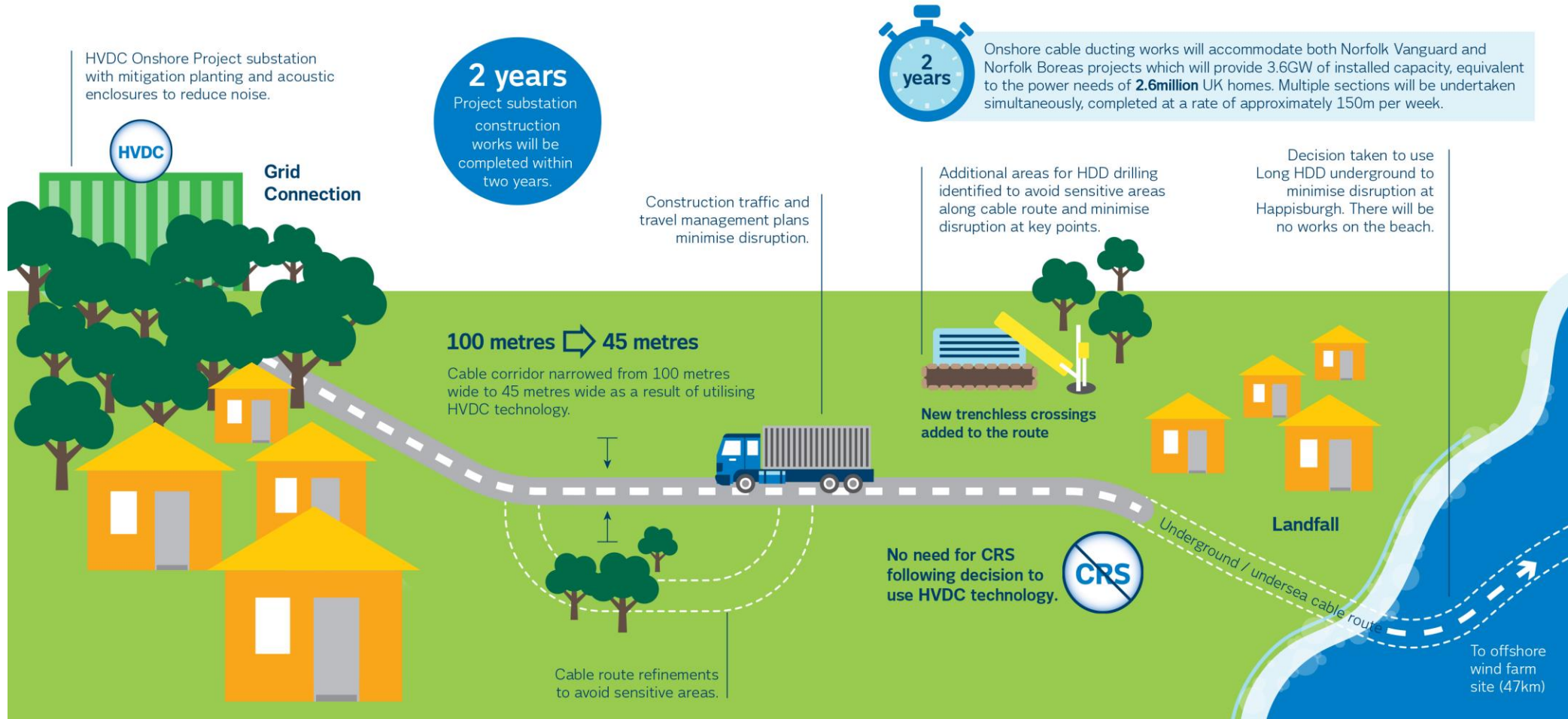
Onshore surveying - Norfolk Wildlife Services



Key Developments [link here](#) to Exec. Summary

Norfolk Vanguard

Key changes made since Statutory Consultation



Indicative timetable

Norfolk Boreas

Summer 2018

Environmental assessments and surveys ongoing, contributing to Preliminary Environmental Information



Autumn /Winter 2018

Publication of the Statement of Community Consultation

Preliminary Environmental Information Report (PEIR) published and Statutory Consultation - have your say at drop in exhibitions

Late 2019/ Early 2020

PINS Examination of the DCO application

Mid/Late 2020

Decision on DCO by Secretary of State

2020-21

Detailed Design & procurement Pre-construction works



2024-25

Onshore works including Norfolk Boreas substation construction and landfall works



Ongoing consultation



Late 2018/Early 2019

Planning Inspectorate (PINS) Examination of the DCO application and supporting documents



Mid/Late 2019

Decision by Secretary of State on DCO application following recommendation from PINS

2021-23

Enabling and onshore works, including duct installation

2020-21

Detailed Design & procurement Pre-construction works

Mid 2020s

Offshore works & 1st power

Norfolk Vanguard and Norfolk Boreas expects to generate:

3.6 GW installed capacity

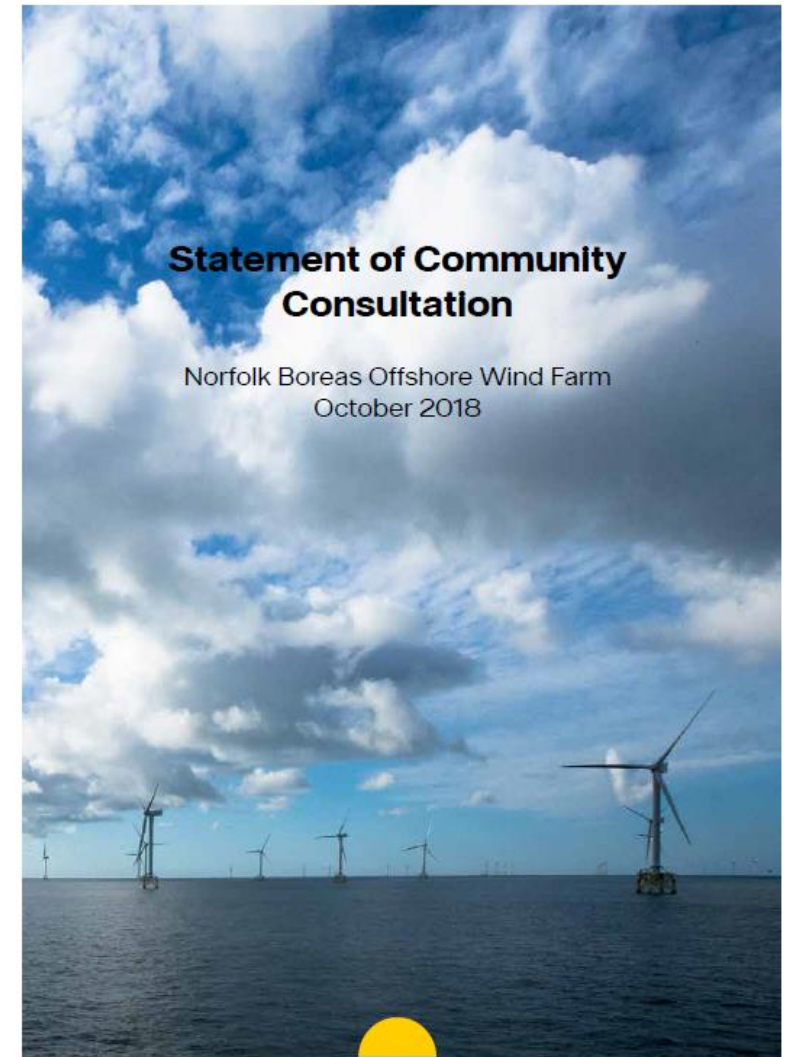
Equivalent power for 2.6 million homes*

Norfolk Vanguard

[Link to](#) Boreas Statement of Community Consultation

Table of contents

Statement of Community Consultation	3
1. Purpose of this document	3
2. Introduction	3
3. What is the Consenting and Consultation Process?.....	4
4. About Vattenfall	6
5. The Project	6
6. Defining the scope of the Norfolk Boreas proposals	12
7. How Environmental Effects are assessed	13
8. Our approach to consultation	15
9. Statutory Consultation	16
10. How to contact us and find out more	23
11. Appendices	24

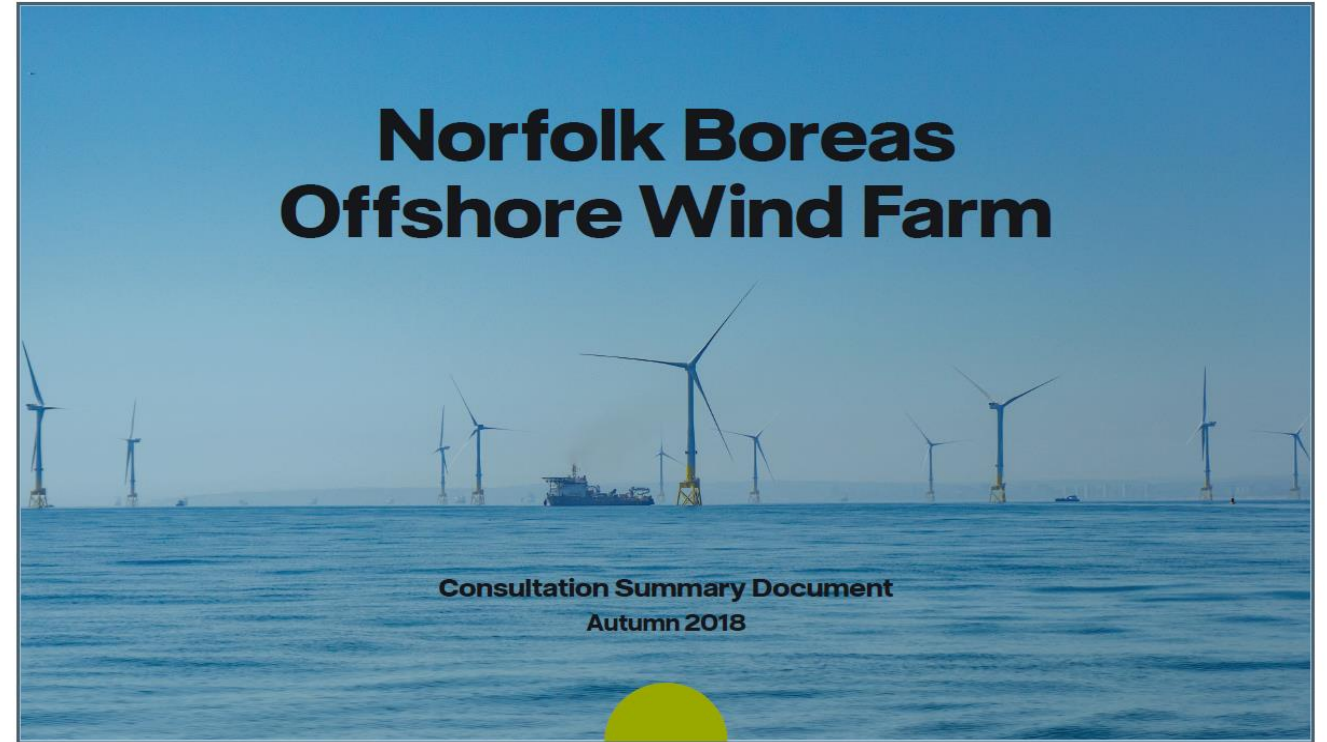


[Link to](#) Boreas Consultation Summary Doc.

Table of contents

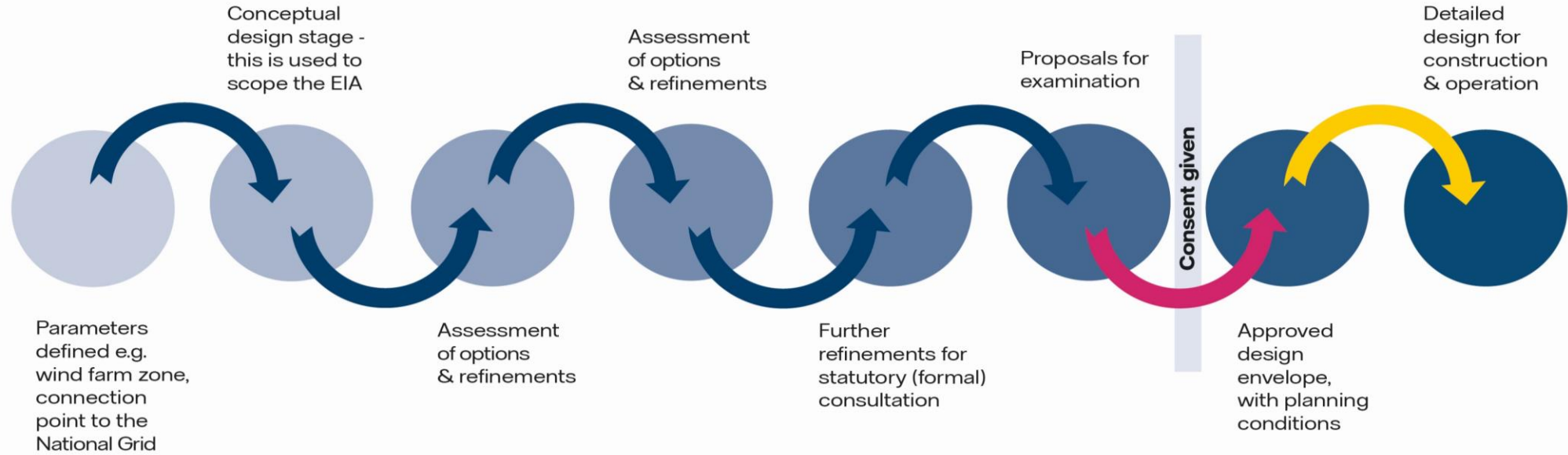
Introduction	3
How to use this document	3
About Vattenfall	4
Why does the UK need offshore wind farms?	6
A Nationally Significant Infrastructure Project (NSIP)	8
Early project definition, site selection & refinement	10
Environmental impact assessment	12
The project design envelope	14
The Norfolk Boreas Offshore Wind Farm proposal	16
Offshore elements of the proposal	18
Onshore elements of the proposal	20
Landfall	22
Bringing power ashore at landfall	24
Underground cable corridor	26
Onshore project substation	30
Potential impacts during decommissioning.....	40
Project timeframe	41
What kind of local opportunities and benefits are important to Norfolk?	42
How to have your say	46

Front cover: European Offshore Wind Deployment Centre. Left: Thanet Offshore Wind Farm



[Link to PEIR](#) – Preliminary Environmental Impact Report

Consultation Process



Stakeholder & community review

Consultation and engagement involving statutory stakeholders, expert topic groups, landowners & land interests, community, and appropriate regard to feedback built into next phase of project development through the EIA process



Examination

Carried out by the Planning Inspectorate - an independent planning authority on behalf of the Secretary of State for Business, Energy and Industrial Strategy (BEIS)



Detailed design

Incorporates planning conditions set out in the Development Consent Order and deploys best-in-class innovation to ensure future-proof design is constructed

Boreas - what are we consulting on ?

If both projects secure consent and progress to construction, synergies will be realised.

However, Norfolk Boreas needs to consider the possibility that the Norfolk Vanguard project may not be built. In order for Norfolk Boreas to be considered as an independent project by the Planning Inspectorate, this scenario must be provided for within the Norfolk Boreas DCO application.

Therefore within the application two scenarios will be considered:

- **Scenario 1**

(Norfolk Vanguard and Norfolk Boreas)

Norfolk Vanguard proceeds to construction, and installs ducts and other shared enabling works for Norfolk Boreas.

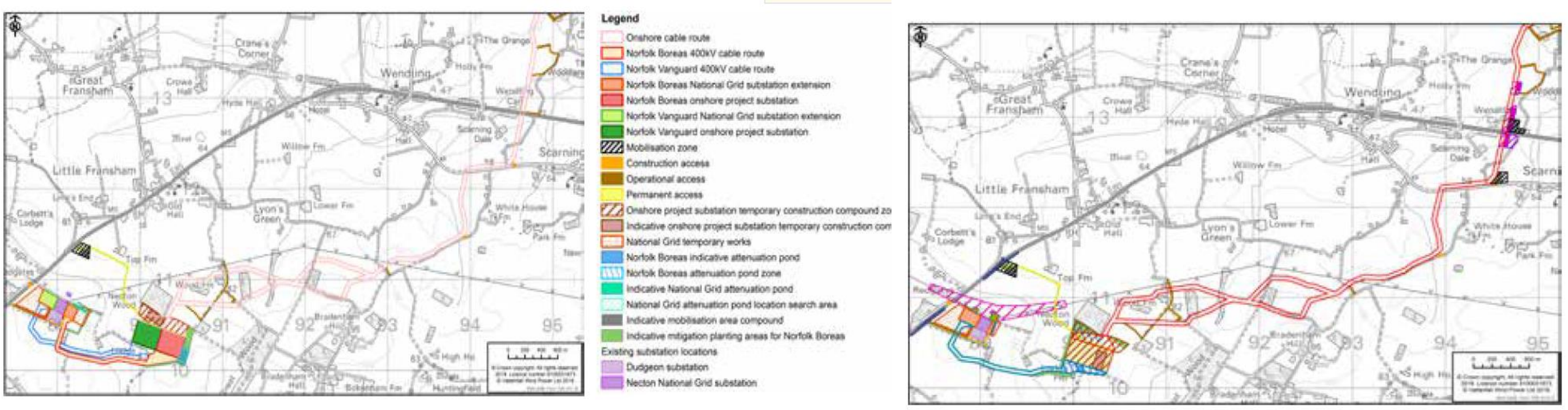
This scenario is optimal and the most probable outcome.

- **Scenario 2**

(Norfolk Boreas only)

Norfolk Vanguard does not proceed to construction and Norfolk Boreas proceeds alone. The Norfolk Boreas EIA will also consider associated constraints and opportunities, under Scenario 2.

Key consultation points



- **Scenario 1**
(Norfolk Vanguard and Norfolk Boreas)

- **Scenario 2**
(Norfolk Boreas only)

Boreas Statutory Consultation Dates

<u>Location</u>	<u>Date and Time</u>	<u>Address</u>
Happisburgh	Wed. 14 th Nov '18 (1pm-7pm)	The Wenn Evans Centre
Aylsham	Thur. 15 th Nov '18 (1pm-7pm)	Aylsham Town Hall
Necton	Friday 16 th Nov '18 (1pm-7pm)	Necton Rural Com. Centre
Norwich	Wed. 21 st Nov '18 (11am-6.30pm)	The Forum
Dereham	Thur. 22 nd Nov '18 (1pm -7pm)	Dereham 6 th Form College
N. Walsham	Friday 23 rd Nov '18 (1pm-7pm)	N. Walsham Com. Centre
Reepham	Sat. 24 th Nov '18 (10am-3pm)	St. Michael's Church, R'ham

VATTENFALL 

Vattenfall is committed to accelerating the development of wind energy and cost reduction through innovation and collaboration.

This includes opening up wider opportunities presented by Norfolk Vanguard & Boreas to maximise project **supply chain content in Norfolk, East of England and the wider UK.**

[LINK HERE FOR SUPPLY CHAIN INFO](#)

VATTENFALL 

Stakeholder discussions

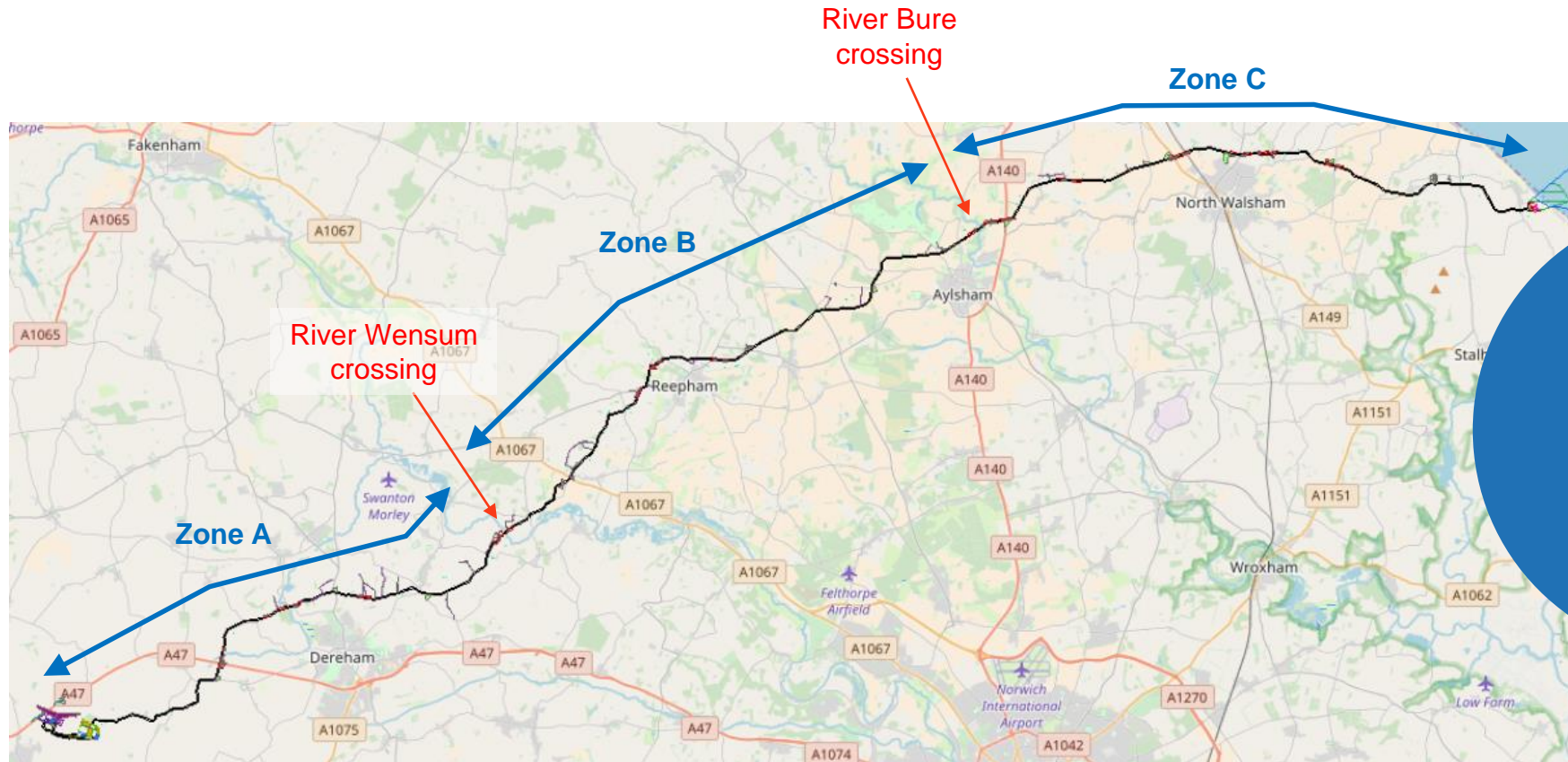
We asked key stakeholders representing business...

What can Vattenfall do to support collaborative efforts ensuring Norfolk and the East of England maximise the socio-economic opportunities that our Norfolk projects bring? And explored:

- *Business
- *Supply chain
- *Skills and training



1st Supply Chain Event – December 5th

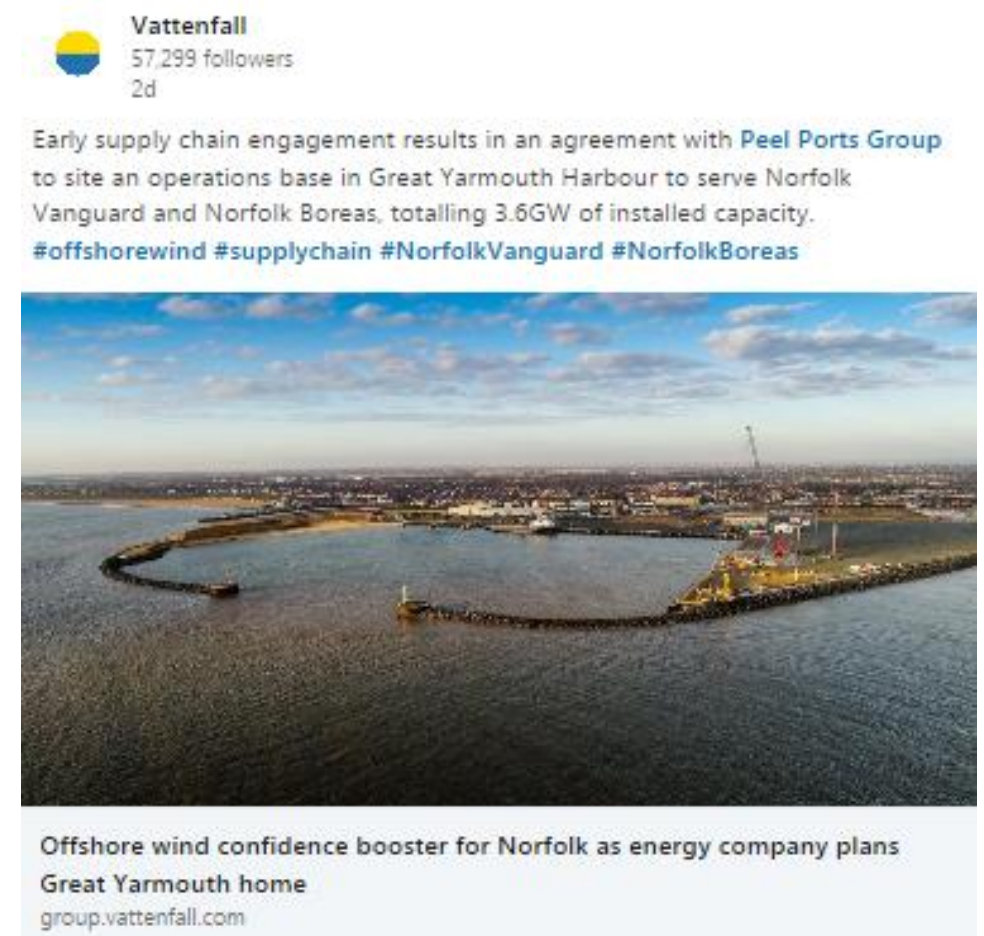


Focus on onshore works

Peel Ports Announcement – October '18



175 technical and project jobs for 30 years



Vattenfall is committed to early work, in partnership, with education and skills partners to benefit Norfolk Young People

This had already included; a Primary outreach programme; A Secondary/College programme (now supported by the UEA); a summer internship programme; Careers Events and the development of a draft skills strategy

[LINK HERE FOR SKILLS AND EDUCATION](#)

Newsletter

- Now out

VATTENFALL 

Vattenfall in Norfolk Norfolk Boreas consultation newsletter



Welcome

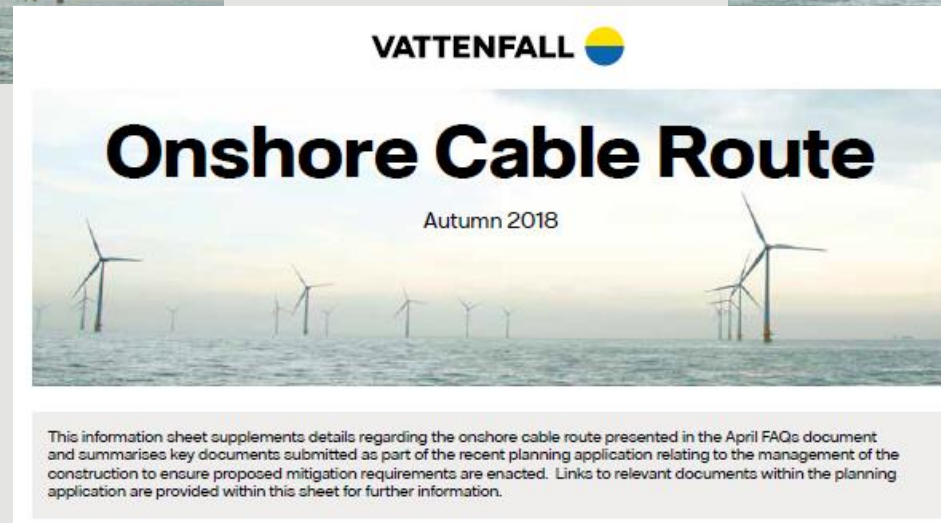
Welcome to the latest edition of your Vattenfall in Norfolk newsletter.

In this edition you will find information about the upcoming formal consultation on our proposals for the Norfolk Boreas Offshore Wind Farm, including where and how you can access information about the project. You'll also be able to see where we're holding our public consultation events during November.

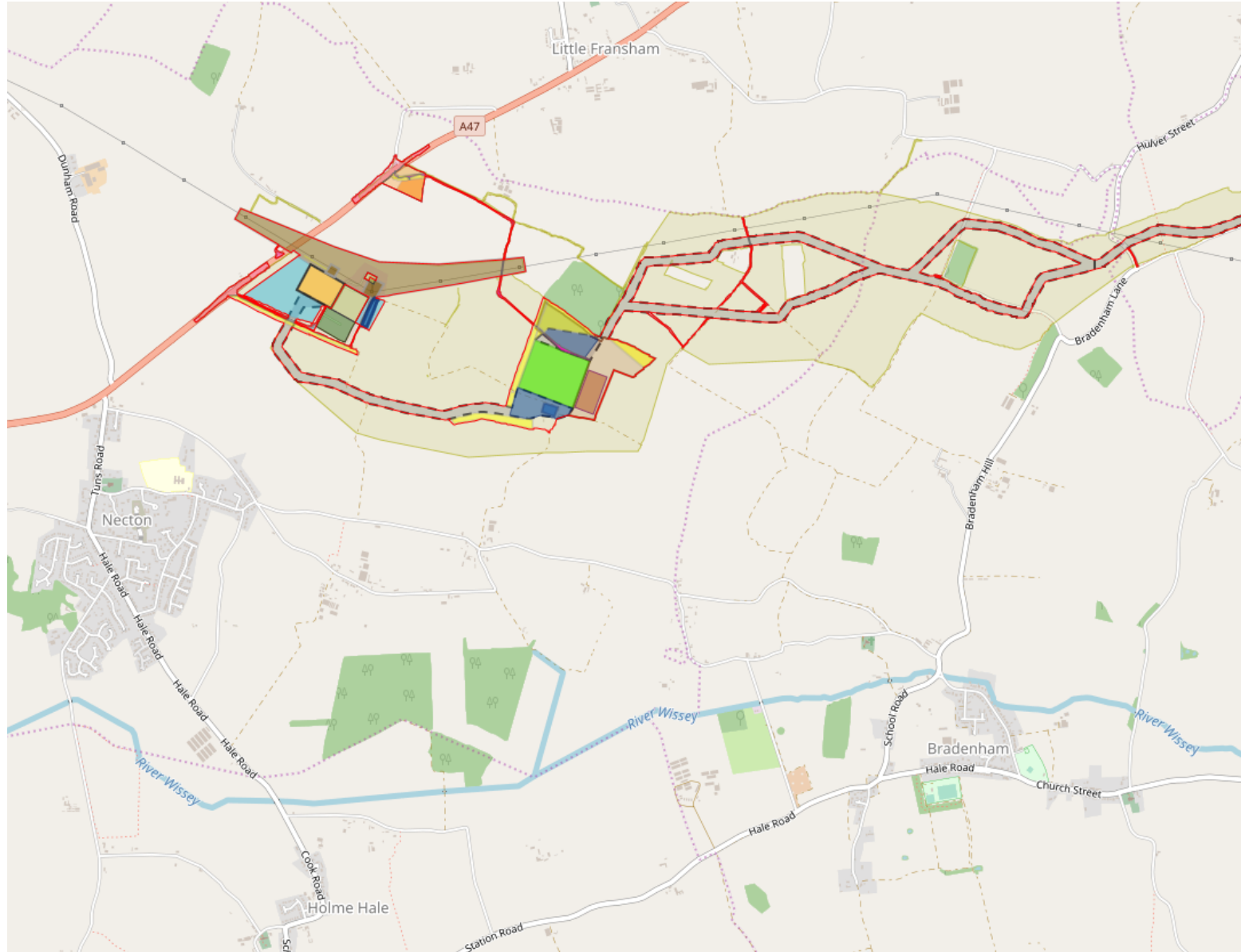
On page 4 you can read about what we've been up to around Norfolk since the last edition of the newsletter, as well as a look ahead to community activities we've got coming up later in the year.

In August, our Development Consent Order application for the Norfolk Vanguard project was accepted for examination by the Planning Inspectorate. Page 4 has more information about the next steps and how you can get involved.

3 New Leaflets – **Live link on each doc.**

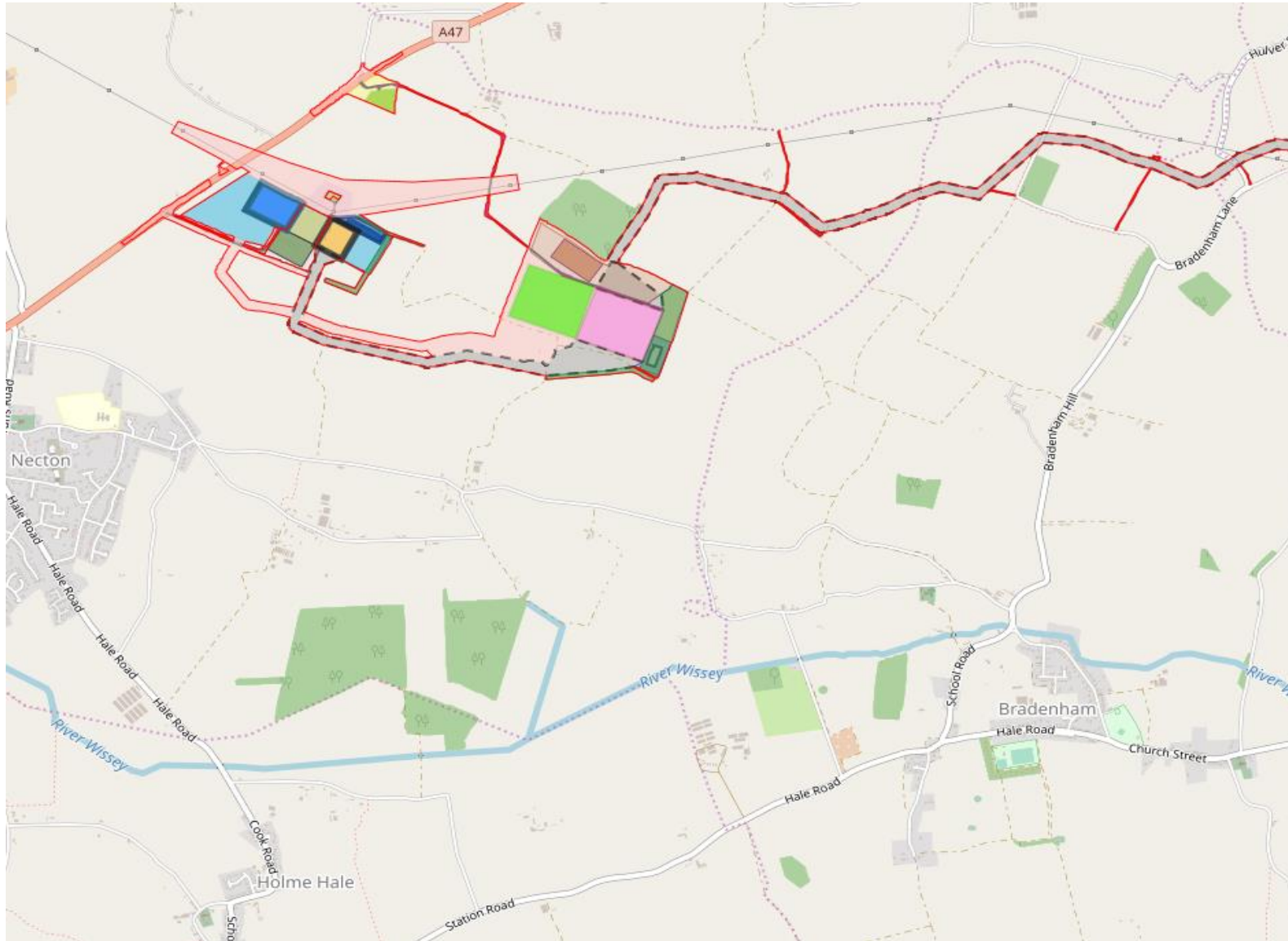


Necton, Holme Hale, Bradenham Area



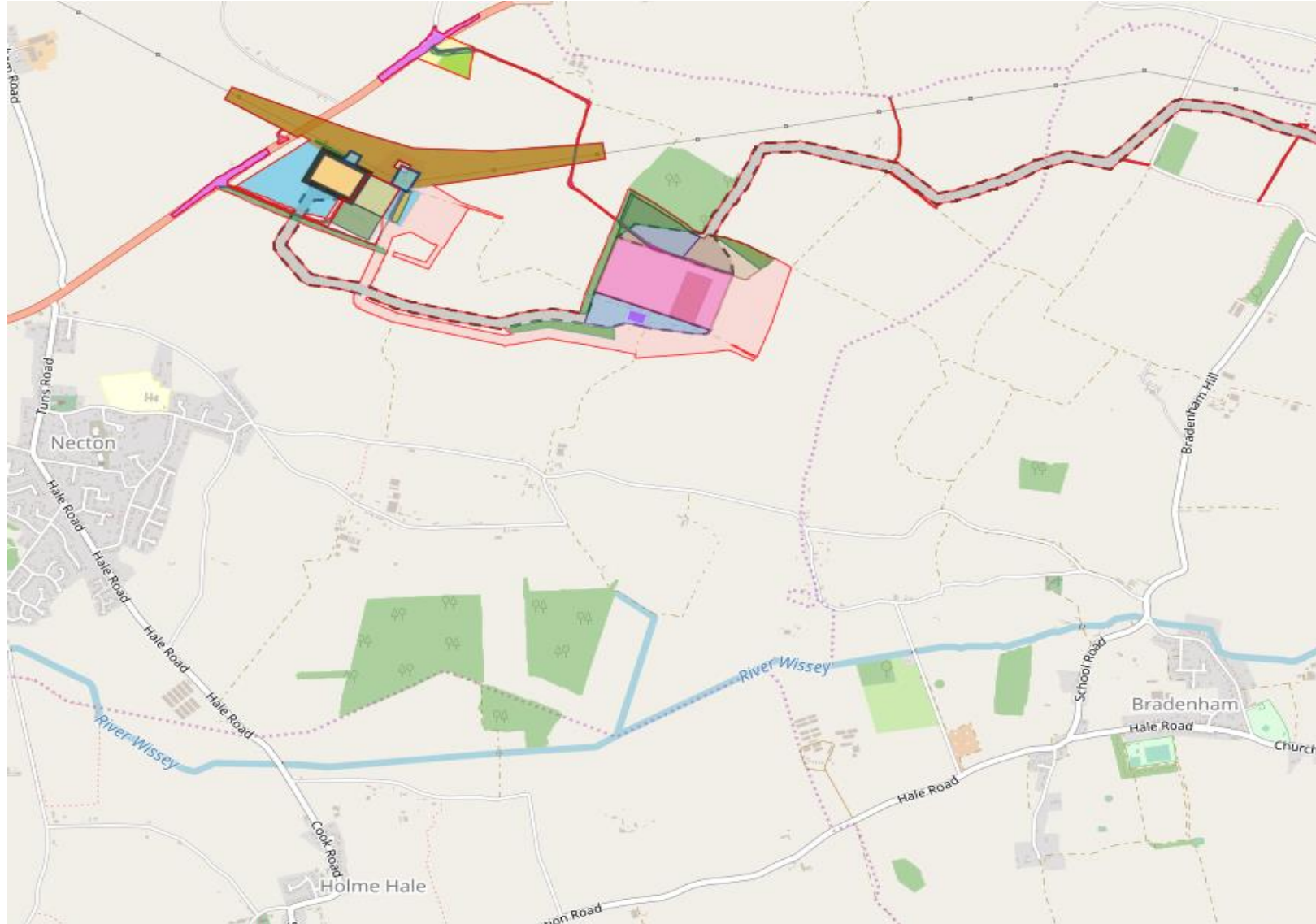
Vanguard

Necton, Holme Hale, Bradenham Area



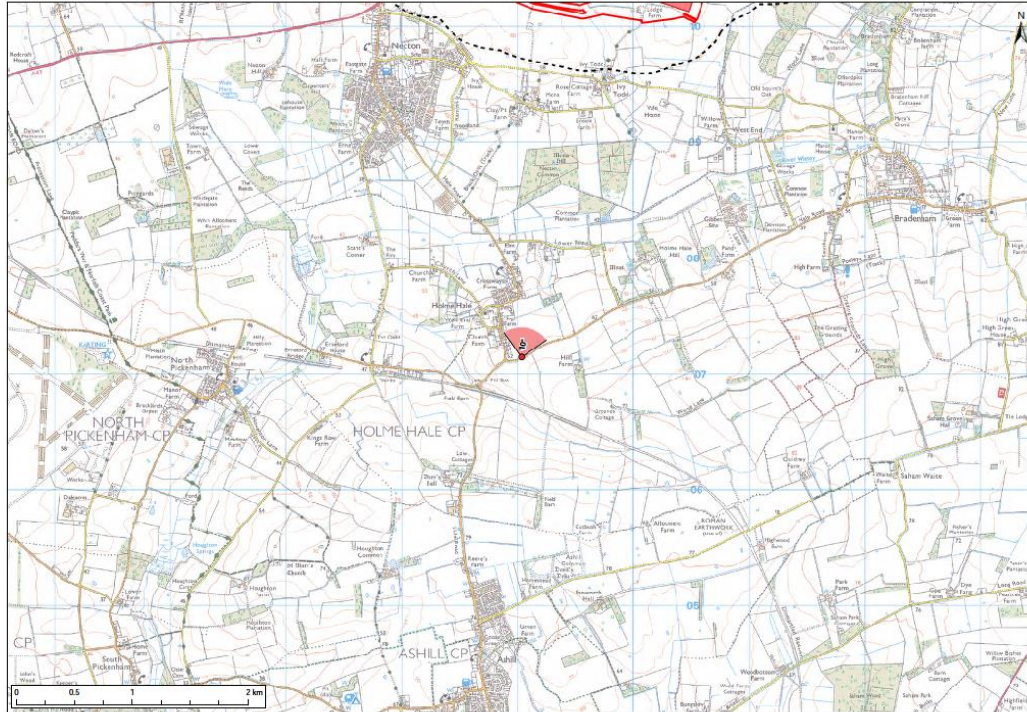
Boreas Scenario 1

Necton, Holme Hale, Bradenham Area

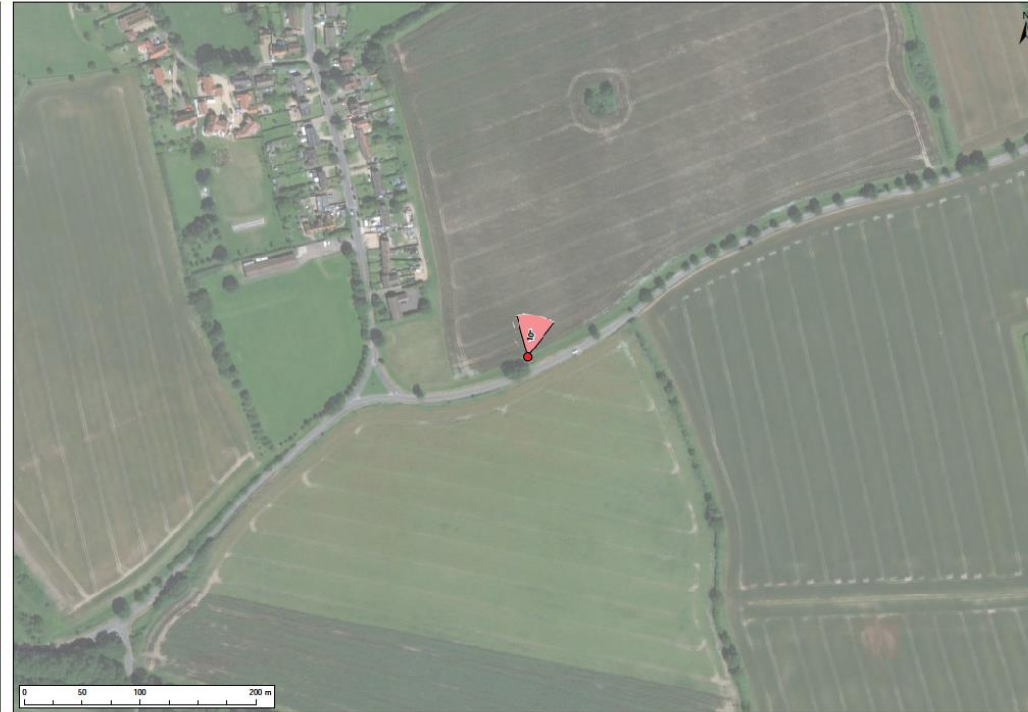


Boreas Scenario 2

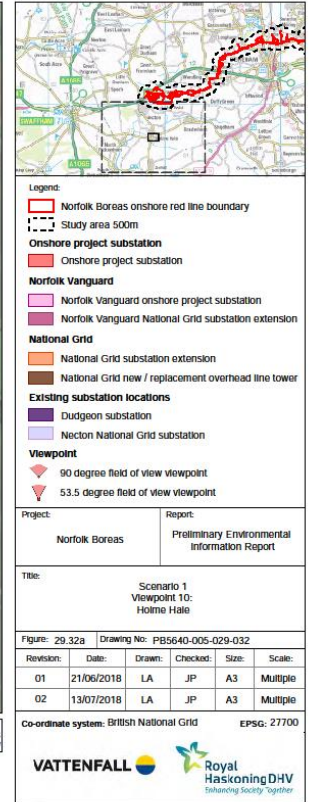
Landscape/visualisations (Holme Hale)



Viewpoint Location Plan Baseline Panorama (90 Degree View)
Scale: 1:25,000



Viewpoint Location Plan (53.5 Degree View)
Scale: 1:2,500



PEIR FIGURE 29.32 SCENARIO 1 Viewpoint 10 Holm Hale – [Link here](#)

Landscape/visualisations (Holme Hale)



Photomontage of the proposed Norfolk Boreas and Norfolk Vanguard HVDC Substations and National Grid Substation Extension and mitigation planting

View set at a comfortable arm's length

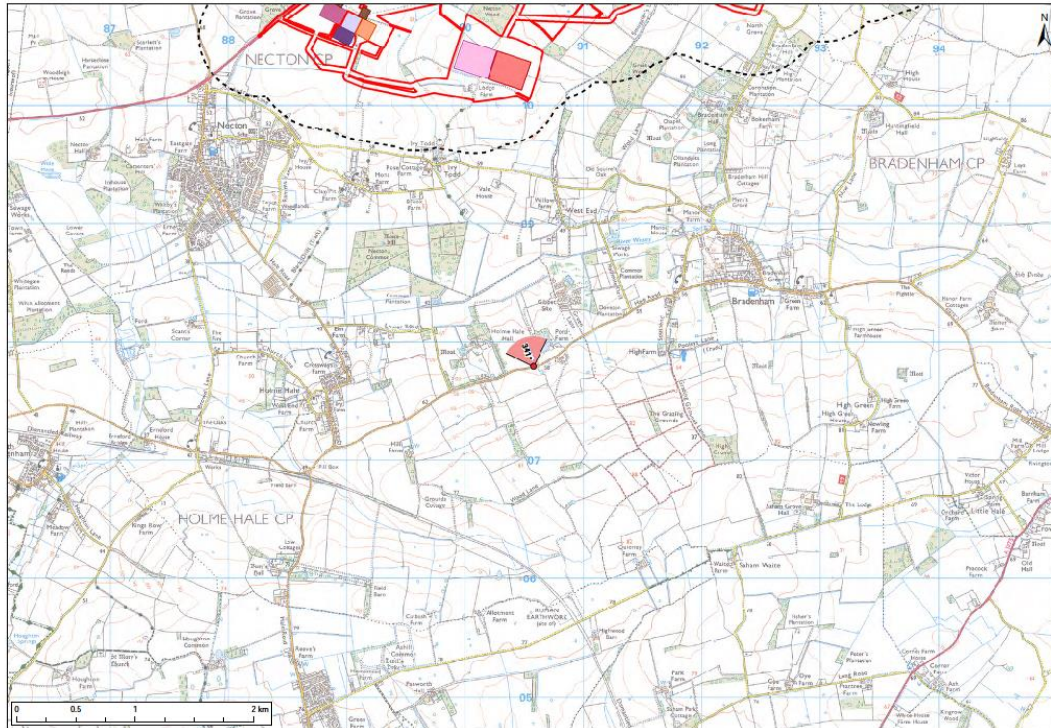
OS reference: 589033 E 307147 N
Eye level: 66.1 m AOD
Direction of view: 10°
Nearest substation: 3.29 km

Horizontal field of view: 53.5° (planar projection)
Principal viewing distance: 812.5 mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 5D Mark II
Lens: 50mm (Canon EF 50mm f/1.4)
Camera height: 1.5 m AGL
Date and time: 25/01/2018, 13:15:48

SCENARIO 1
Figure: 29.32d
Viewpoint 10: Holme Hale

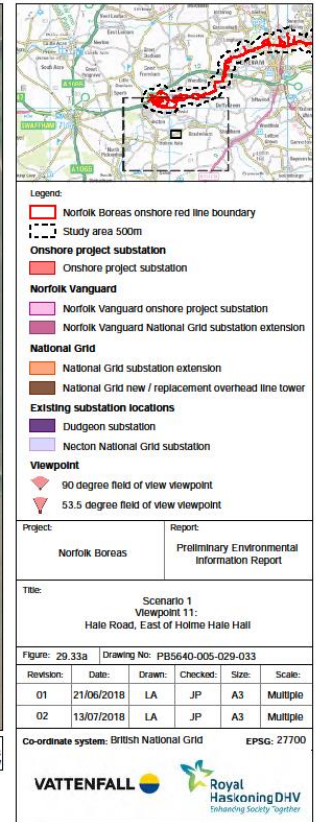
Landscape/visualisations (Hale rd. East)



Viewpoint Location Plan Baseline Panorama (90 Degree View)
Scale: 1:25,000



Viewpoint Location Plan (53.5 Degree View)
Scale: 1:2,500



PEIR FIGURE 29.33 SCENARIO 1 Viewpoint 11 Holm Road, East of Holme Hale Hall – [Link here](#)

Landscape/visualisations (Hale rd. East)



Photomontage of the proposed Norfolk Boreas and Norfolk Vanguard HVDC Substations with the National Grid Substation Extension and mitigation planting

View 11 at a comfortable arm's length.

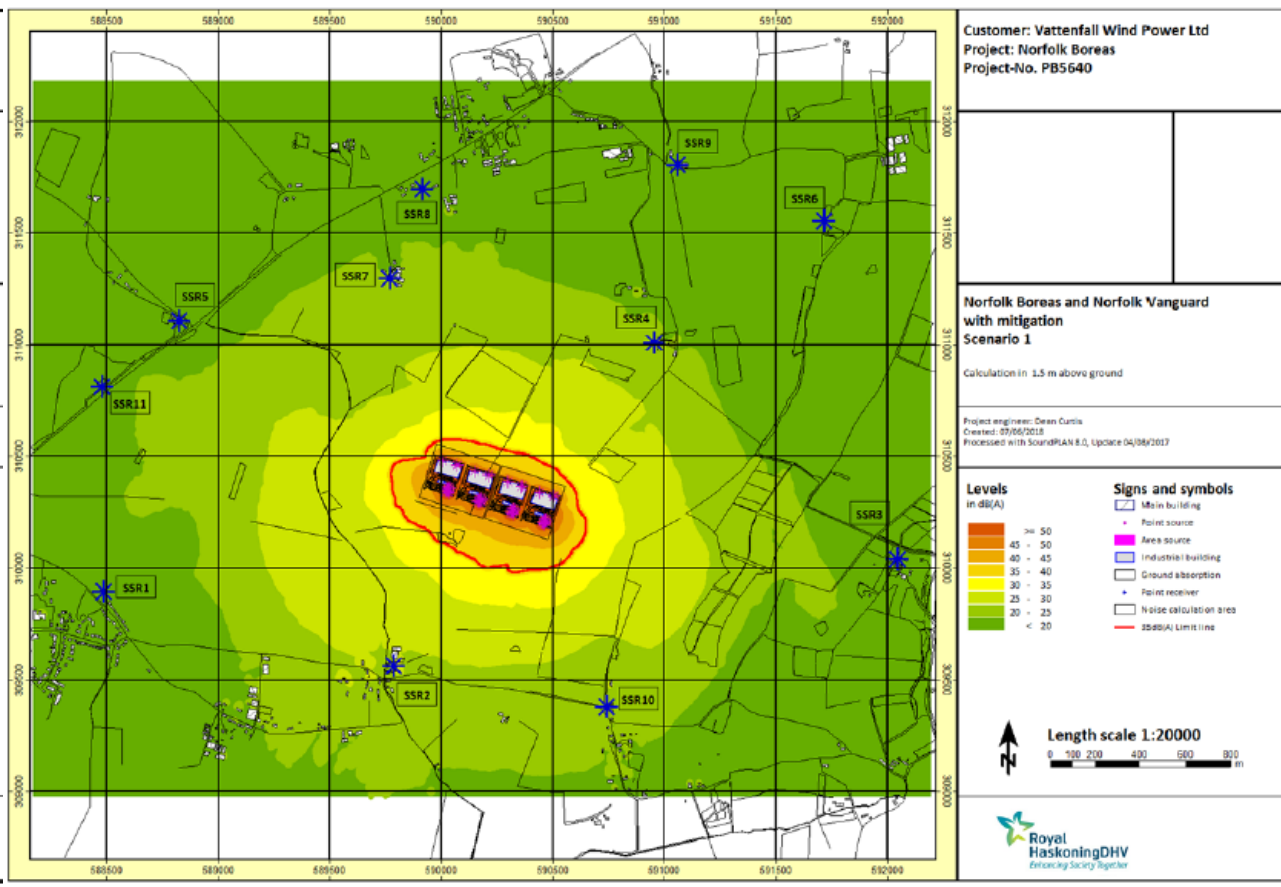
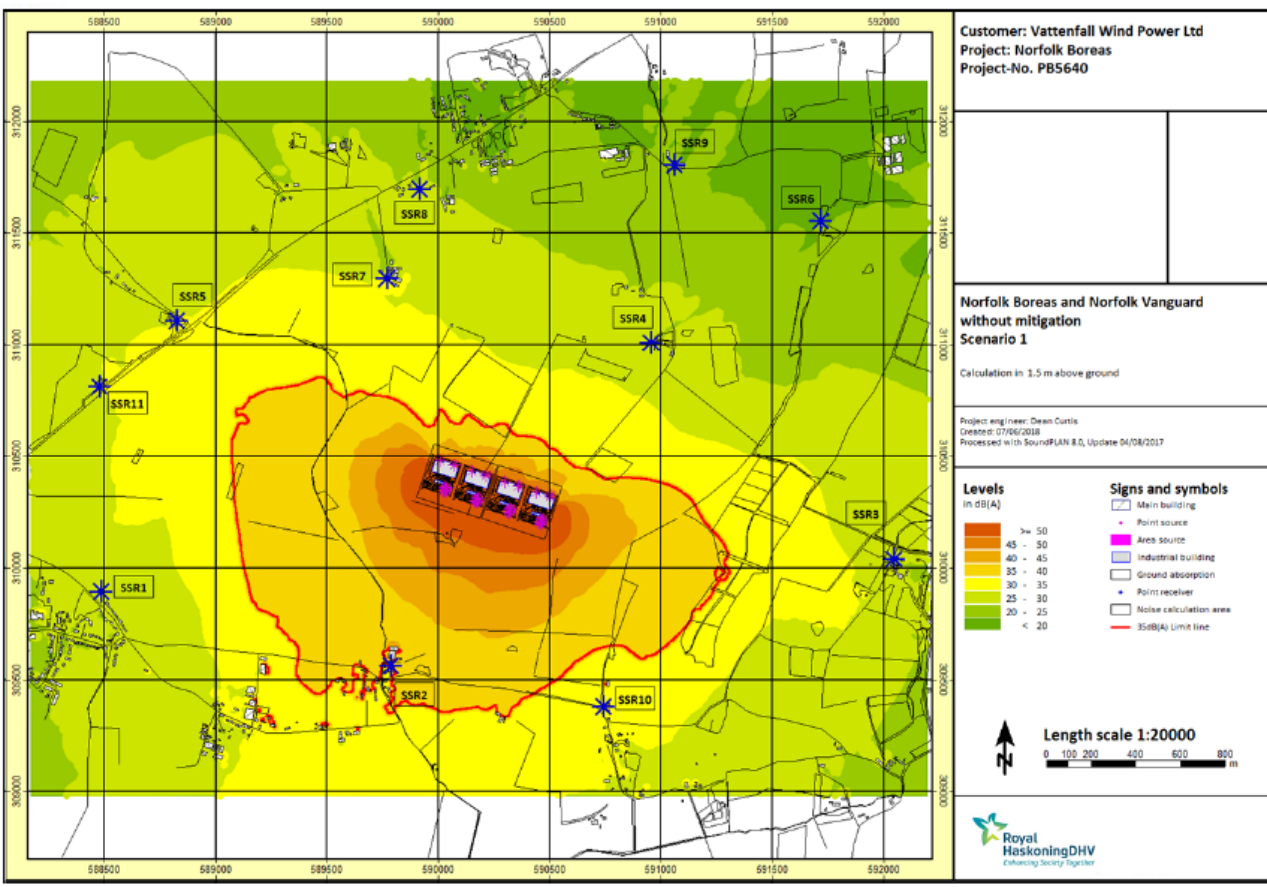
OS reference: 990576 E 307795 N
 Eye level: 59.9 m AOD
 Direction of view: 341°
 Nearest substation: 2.33 km

Horizontal field of view: 53.5° (planar projection)
 Principal viewing distance: 812.5 mm
 Paper size: 841 x 297 mm (half A1)
 Correct printed image size: 820 x 260 mm

Camera: Canon EOS 5D Mark II
 Lens: 50mm (Canon EF 50mm f/1.4)
 Camera height: 1.5 m AGL
 Date and time: 25/01/2016, 14:01:22

SCENARIO 1
 Figure: 29.33d
 Viewpoint 11: Hale Road, East of Holme Hale Hall

Noise (Ch 25, Appendix 25.3) [Link Here](#)



Main Chapter 25 – [link here](#)

For more information please contact:
Sue Falch-Lovesey
Local Liaison Officer and Skills Champion
susan.falch-lovesey@vattenfall.com
www.vattenfall.co.uk/vattenfallinnorfolk



@VattenfallUK



Norfolk Vanguard & Norfolk Boreas Offshore Wind Farms

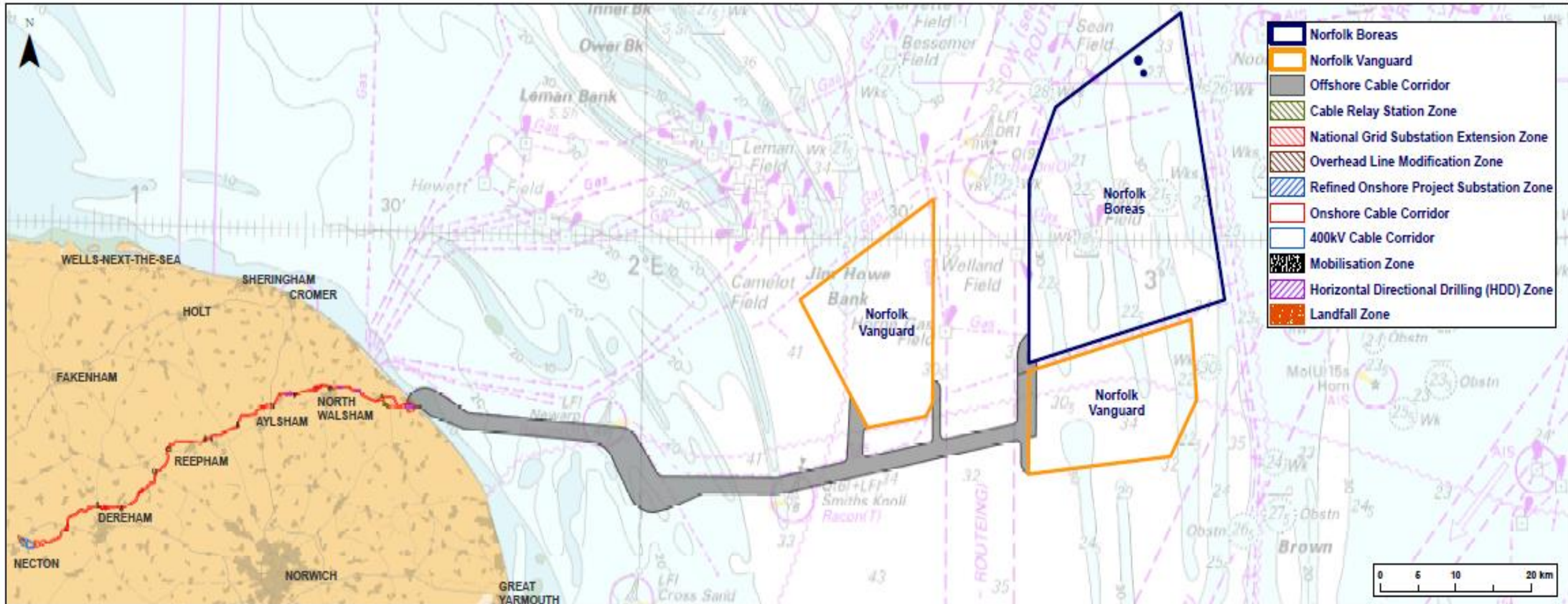
Update for Oulton Parish Council 23/10/18

Susan Falch-Lovesey,
Local Liaison Officer & Skills Champion

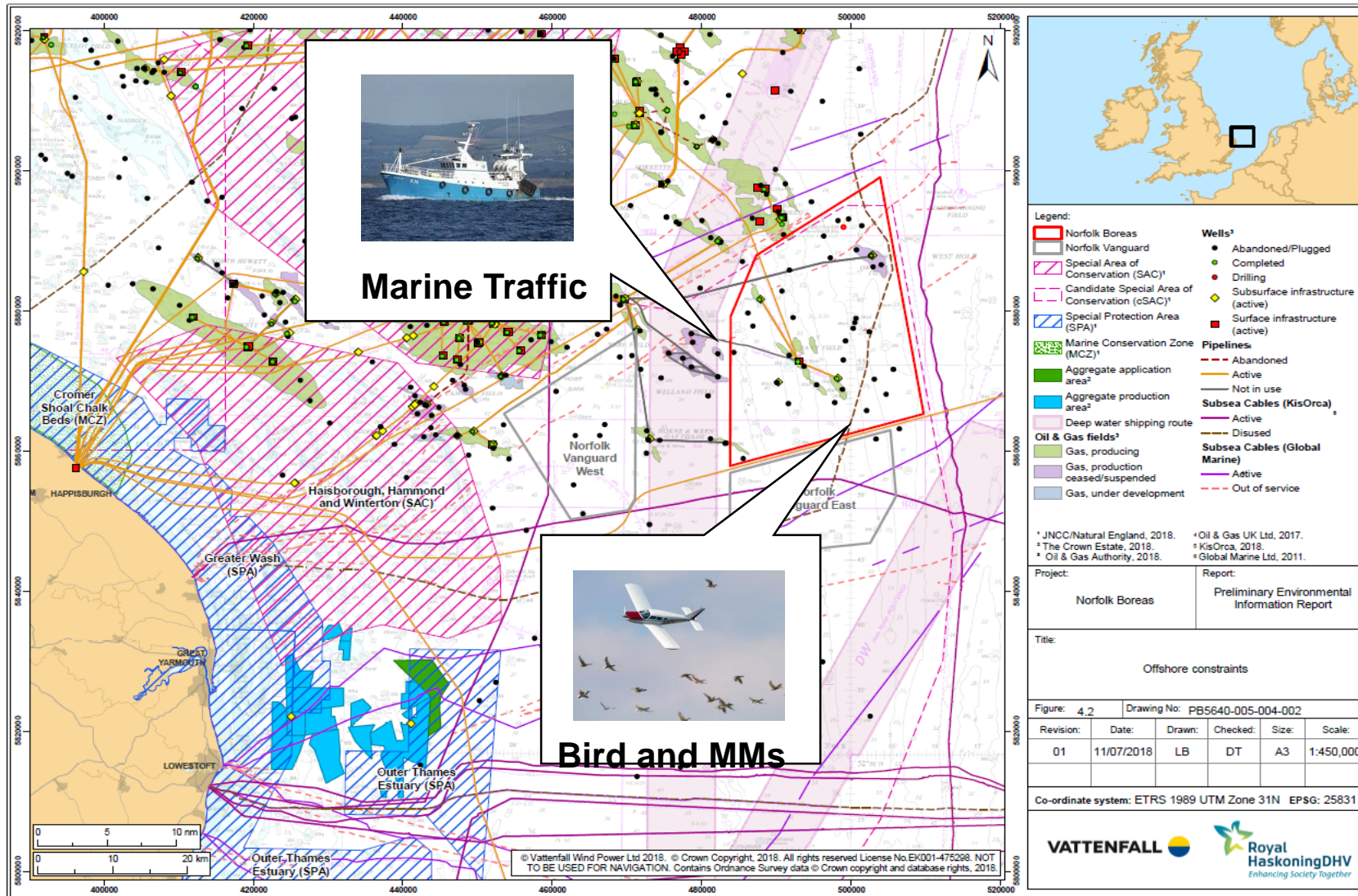
Agenda

- Intro and **do you have any key questions you would like to cover today?**
- Overview
- Project decisions - recap
- Timescales (Vanguard and Boreas consultation process)
- Boreas (SOCC and Statutory Consultation)
- Supply Chain update
- Skills and Community Engagement update
- New Information Leaflets and Autumn Newsletter
- Contact

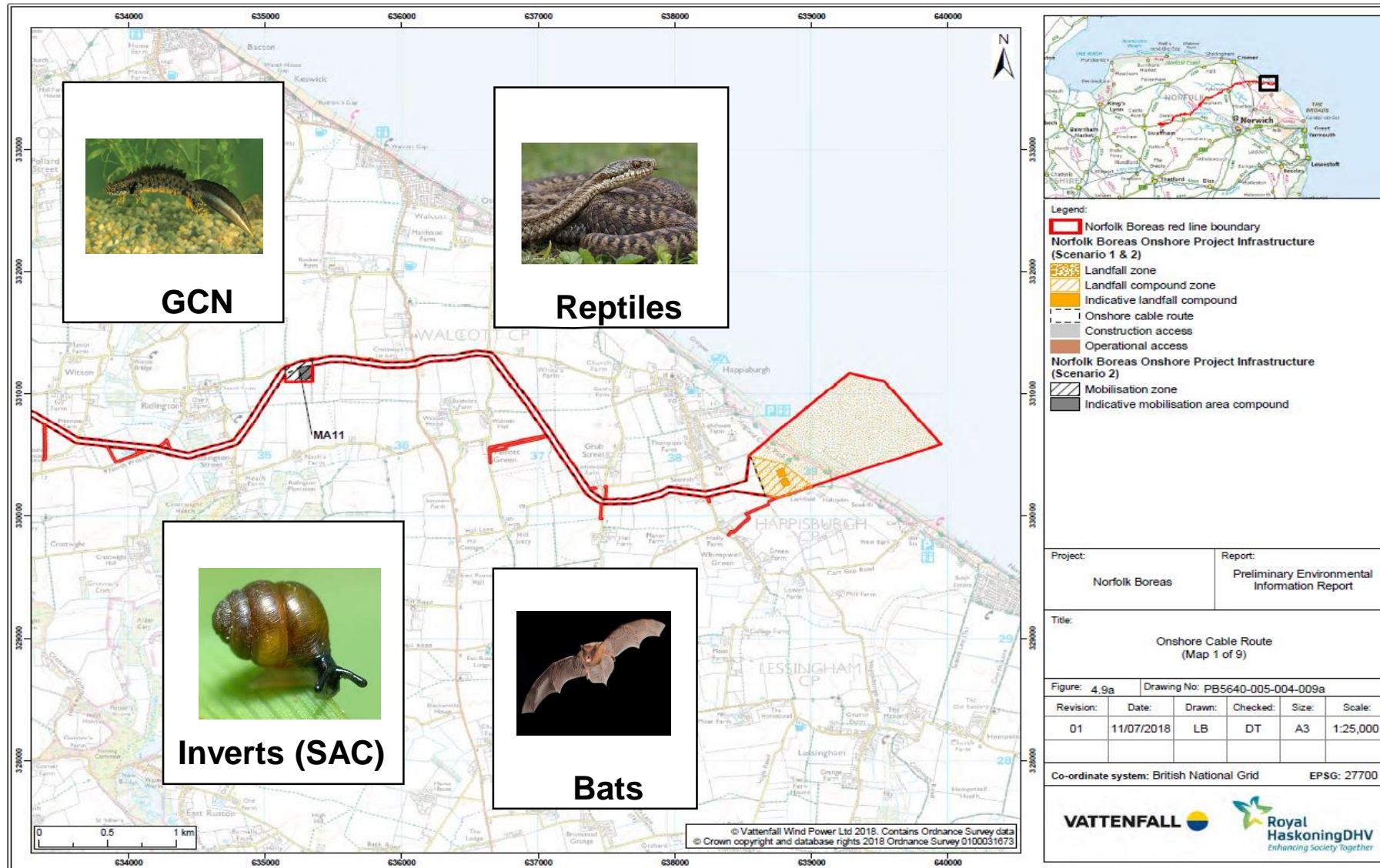
Our 2 Projects – [link here](#) for LIVE map



Surveying continues for Boreas



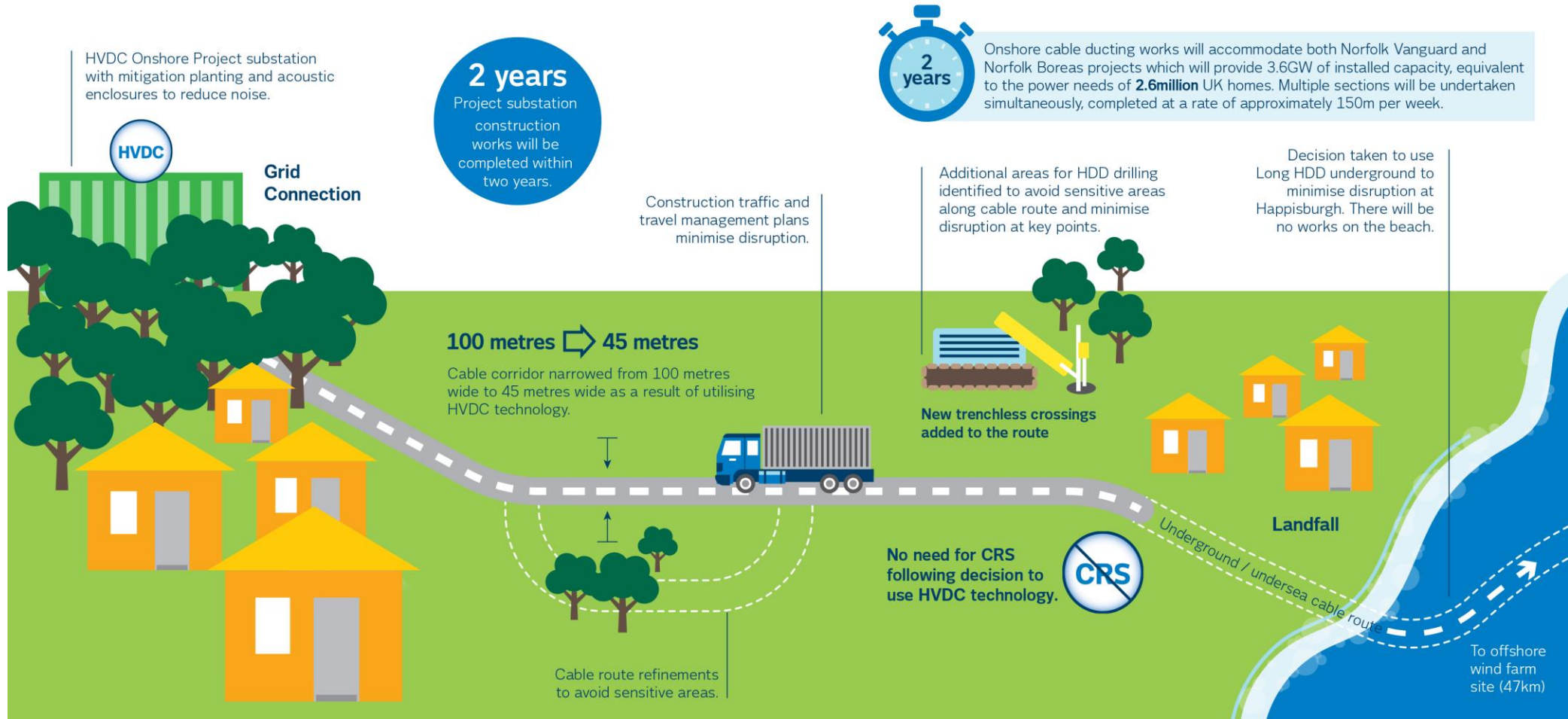
Onshore surveying - Norfolk Wildlife Services



Key Developments [link here](#) to Exec. Summary

Norfolk Vanguard

Key changes made since Statutory Consultation



Indicative timetable

Norfolk Boreas

Summer 2018
Environmental assessments and surveys ongoing, contributing to Preliminary Environmental Information



Autumn /Winter 2018
Publication of the Statement of Community Consultation

Preliminary Environmental Information Report (PEIR) published and Statutory Consultation - have your say at drop in exhibitions

Late 2019/ Early 2020
PINS Examination of the DCO application

Mid/Late 2020
Decision on DCO by Secretary of State

2020-21
Detailed Design & procurement Pre-construction works



2024-25
Onshore works including Norfolk Boreas substation construction and landfall works



Ongoing consultation



Late 2018/Early 2019
Planning Inspectorate (PINS) Examination of the DCO application and supporting documents



Mid/Late 2019
Decision by Secretary of State on DCO application following recommendation from PINS

2021-23
Enabling and onshore works, including duct installation

2020-21
Detailed Design & procurement Pre-construction works

Mid 2020s
Offshore works & 1st power

Norfolk Vanguard and Norfolk Boreas expects to generate:

3.6 GW installed capacity

Equivalent power for 2.6 million homes*

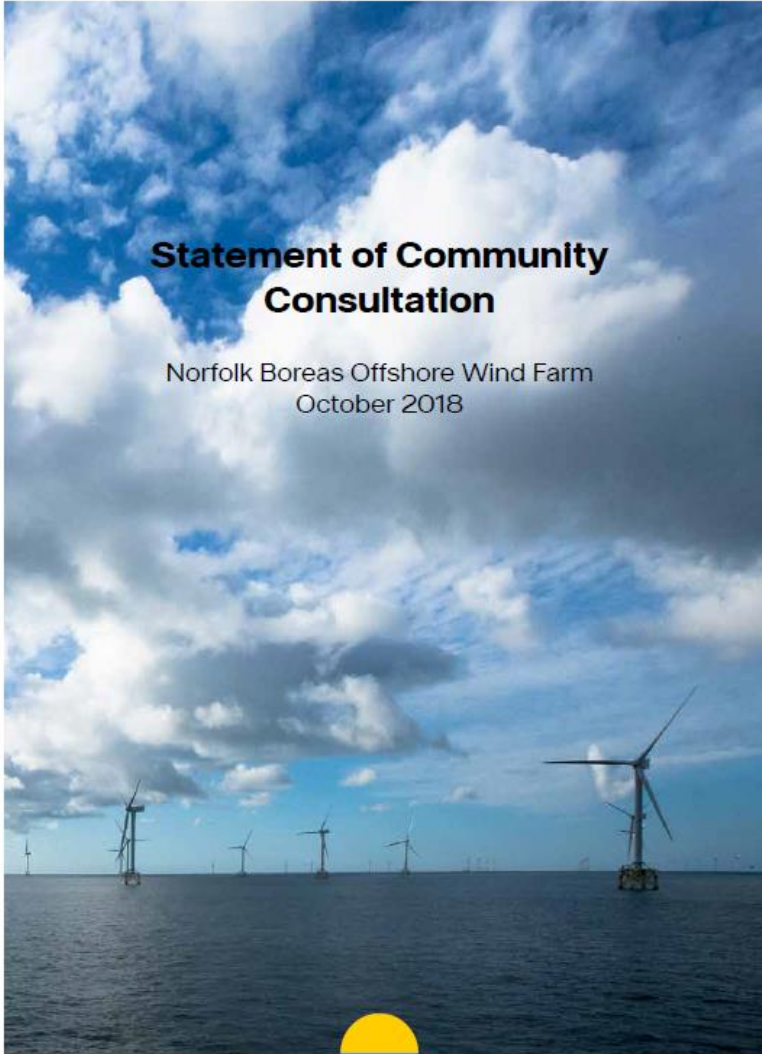
Norfolk Vanguard

Summer 2018
Norfolk Vanguard Development Consent Order (DCO) application submitted

[Link to](#) Boreas Statement of Community Consultation

Table of contents

Statement of Community Consultation	3
1. Purpose of this document	3
2. Introduction	3
3. What is the Consenting and Consultation Process?.....	4
4. About Vattenfall	6
5. The Project	6
6. Defining the scope of the Norfolk Boreas proposals	12
7. How Environmental Effects are assessed	13
8. Our approach to consultation	15
9. Statutory Consultation	16
10. How to contact us and find out more	23
11. Appendices	24



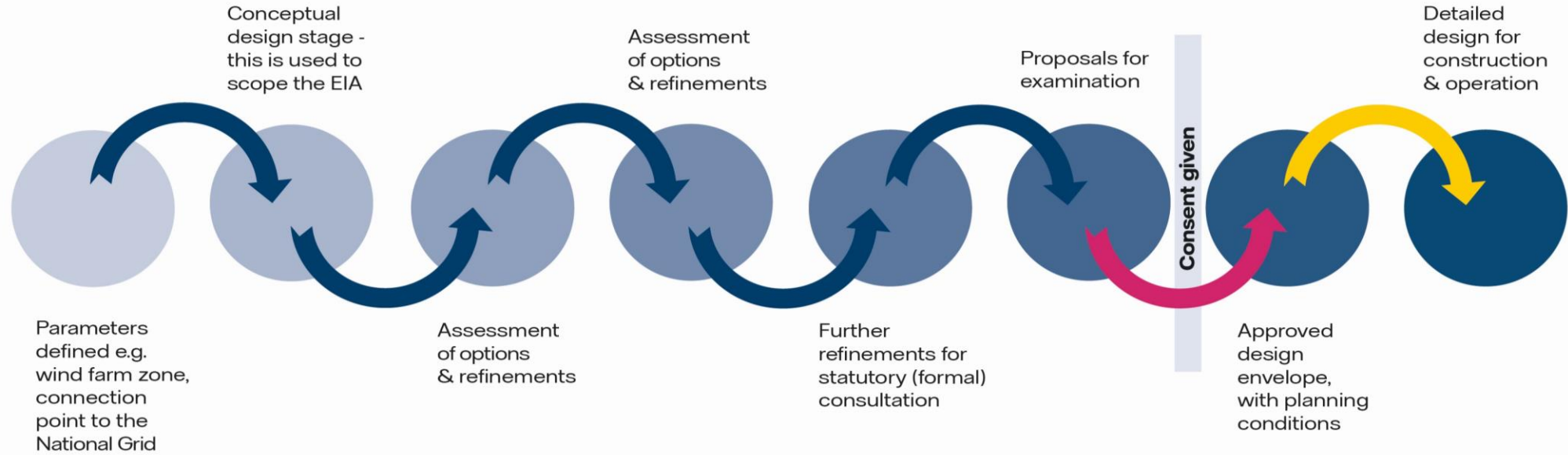
Statement of Community Consultation

Norfolk Boreas Offshore Wind Farm
October 2018



VATTENFALL

Consultation Process



Stakeholder & community review

Consultation and engagement involving statutory stakeholders, expert topic groups, landowners & land interests, community, and appropriate regard to feedback built into next phase of project development through the EIA process



Examination

Carried out by the Planning Inspectorate - an independent planning authority on behalf of the Secretary of State for Business, Energy and Industrial Strategy (BEIS)



Detailed design

Incorporates planning conditions set out in the Development Consent Order and deploys best-in-class innovation to ensure future-proof design is constructed

Boreas Statutory Consultation Dates

<u>Location</u>	<u>Date and Time</u>	<u>Address</u>
Happisburgh	Wed. 14 th Nov '18 (1pm-7pm)	The Wenn Evans Centre
Aylsham	Thur. 15 th Nov '18 (1pm-7pm)	Aylsham Town Hall
Necton	Friday 16 th Nov '18 (1pm-7pm)	Necton Rural Com. Centre
Norwich	Wed. 21 st Nov '18 (11am-6.30pm)	The Forum
Dereham	Thur. 22 nd Nov '18 (1pm -7pm)	Dereham 6 th Form College
N. Walsham	Friday 23 rd Nov '18 (1pm-7pm)	N. Walsham Com. Centre
Reepham	Sat. 24 th Nov '18 (10am-3pm)	St. Michael's Church, R'ham

VATTENFALL 

Vattenfall is committed to accelerating the development of wind energy and cost reduction through innovation and collaboration.

This includes opening up wider opportunities presented by Norfolk Vanguard & Boreas to maximise project **supply chain content in Norfolk, East of England and the wider UK.**

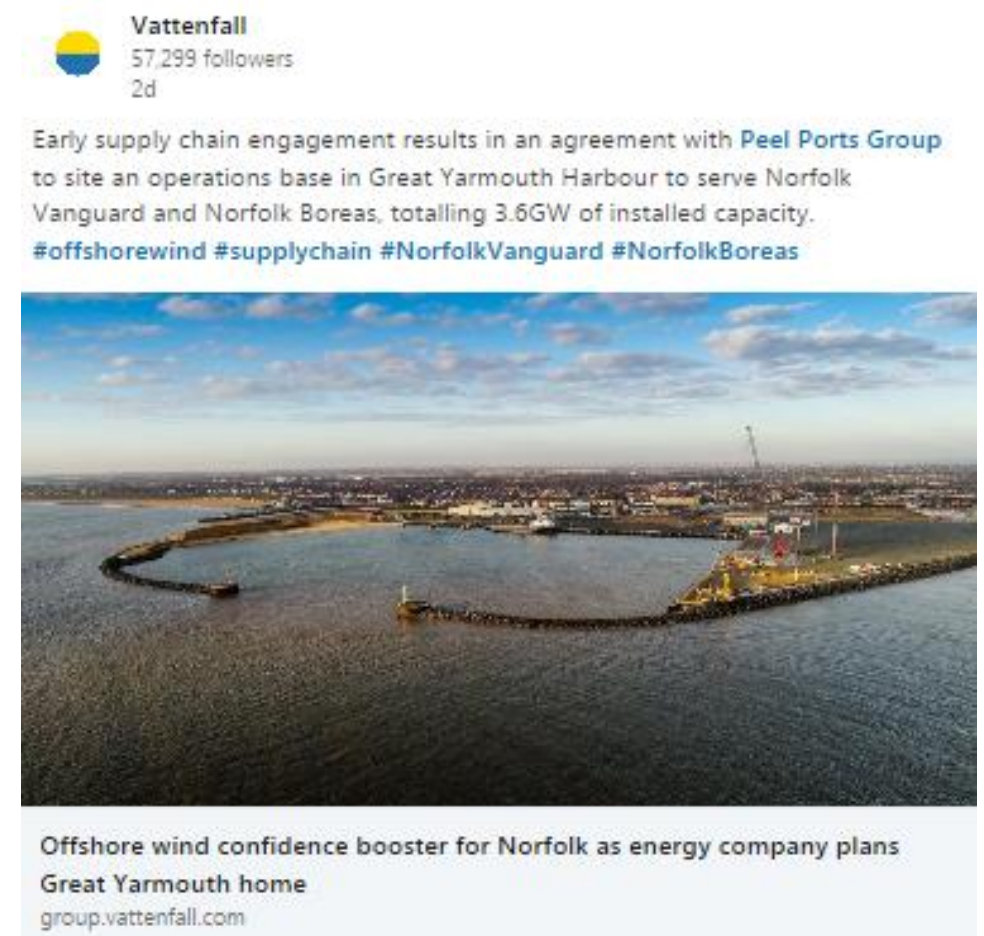
[LINK HERE FOR SUPPLY CHAIN INFO](#)

VATTENFALL 

Peel Ports Announcement – October '18



175 technical and project jobs for 30 years



Stakeholder discussions

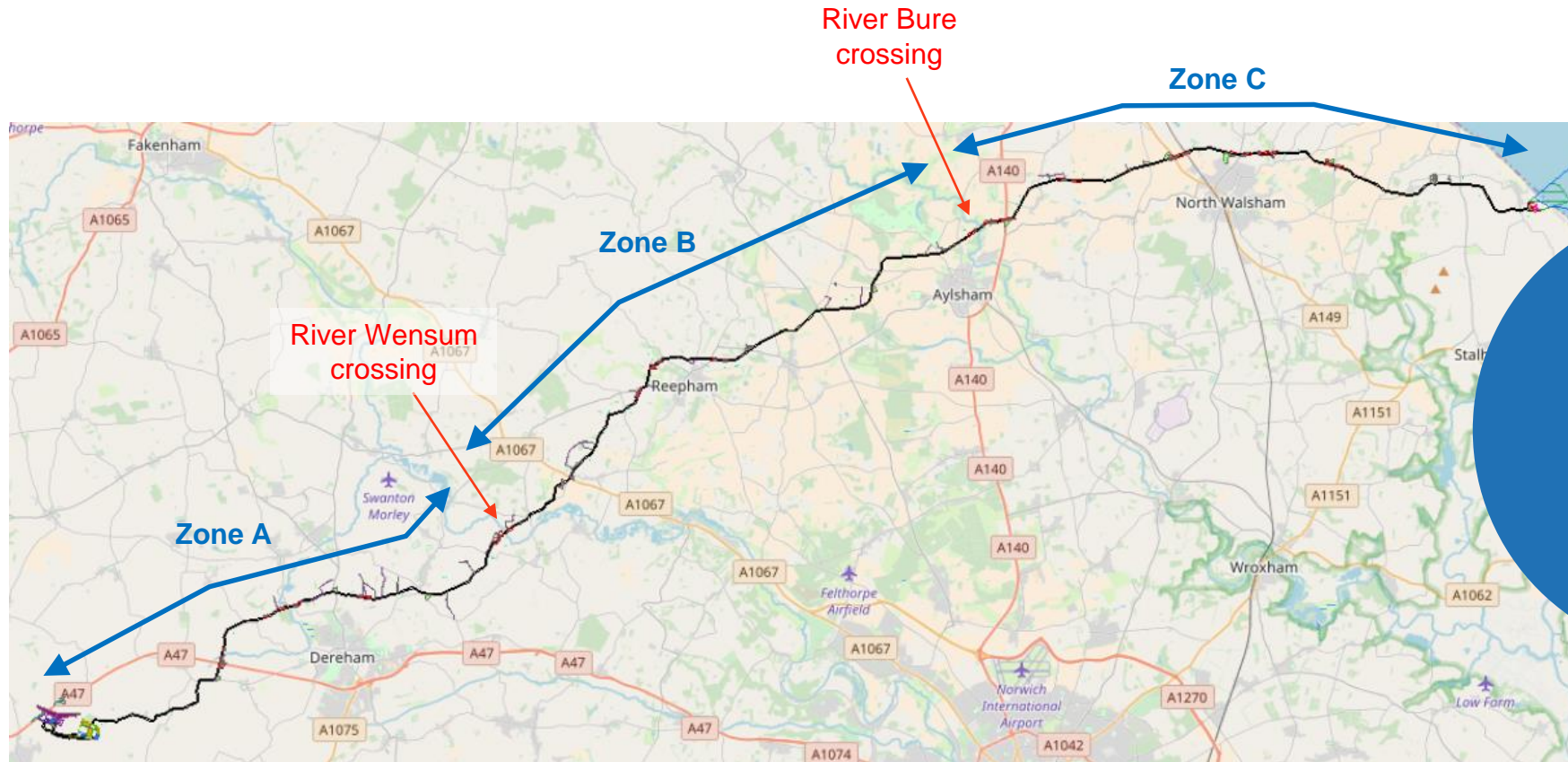
We asked key stakeholders representing business...

What can Vattenfall do to support collaborative efforts ensuring Norfolk and the East of England maximise the socio-economic opportunities that our Norfolk projects bring? And explored:

- *Business
- *Supply chain
- *Skills and training



1st Supply Chain Event – December 5th



Focus on onshore works

Vattenfall is committed to early work, in partnership, with education and skills partners to benefit Norfolk Young People

This had already included; a Primary outreach programme; A Secondary/College programme (now supported by the UEA); a summer internship programme; Careers Events and the development of a draft skills strategy

[LINK HERE FOR SKILLS AND EDUCATION](#)

Why should we reach young people early?

- At primary school, involvement in STEM subjects is 50:50, but the figure for graduate females in STEM roles is only 16%
- By engaging early we can inspire young people with the diversity of jobs and roles – helping to inform choices and keep options open for as long as possible
- Vattenfall already have 25% females in offshore wind and we are pushing towards 30%. **We value diversity and equality and this makes our business better**

Annual and Sustainability Report 2017

**Fossil free
within one
generation**



Looking forward:

**Norwich
Science
Festival**

**Technology Day
24rd Oct**

**Statutory
Consultation for
Norfolk Boreas**

6th Nov - 10th Dec

Drop-in Exhibitions

14th-16th Nov &

21st-24th Nov

**Offshore Wind
Week East Anglia**

22nd-23rd Nov

**Skills for Energy
Norwich**

28th Nov

Newsletter

- Now out

VATTENFALL 

Vattenfall in Norfolk Norfolk Boreas consultation newsletter



Welcome

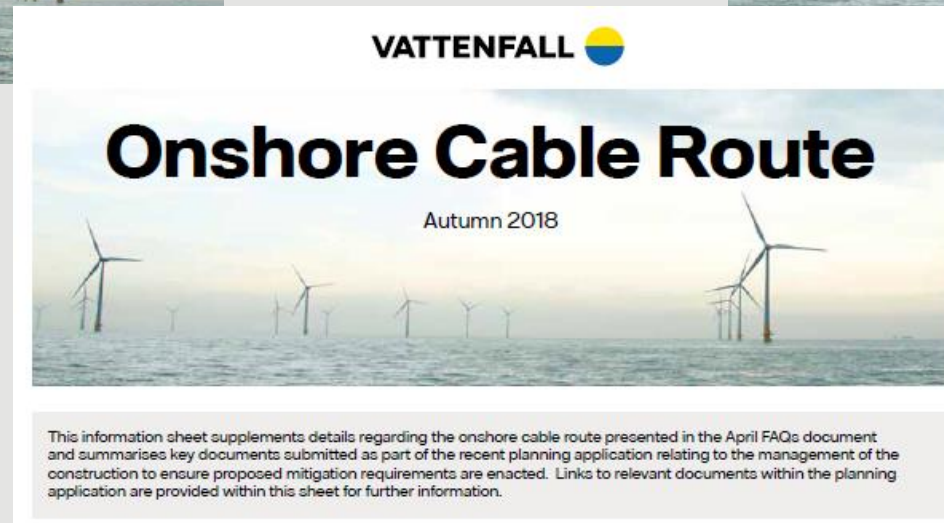
Welcome to the latest edition of your Vattenfall in Norfolk newsletter.

In this edition you will find information about the upcoming formal consultation on our proposals for the Norfolk Boreas Offshore Wind Farm, including where and how you can access information about the project. You'll also be able to see where we're holding our public consultation events during November.

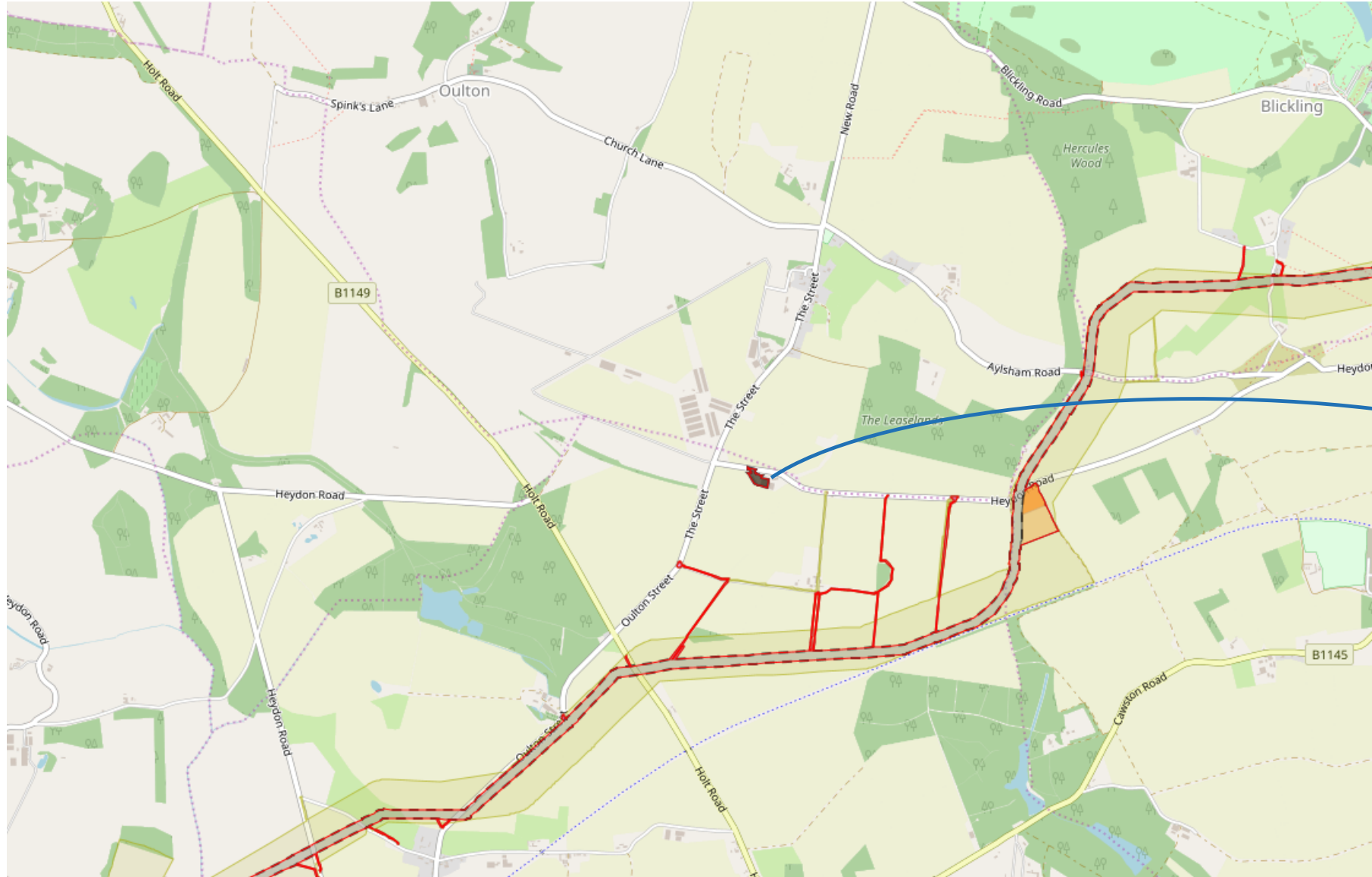
On page 4 you can read about what we've been up to around Norfolk since the last edition of the newsletter, as well as a look ahead to community activities we've got coming up later in the year.

In August, our Development Consent Order application for the Norfolk Vanguard project was accepted for examination by the Planning Inspectorate. Page 4 has more information about the next steps and how you can get involved.

3 New Leaflets – on website now



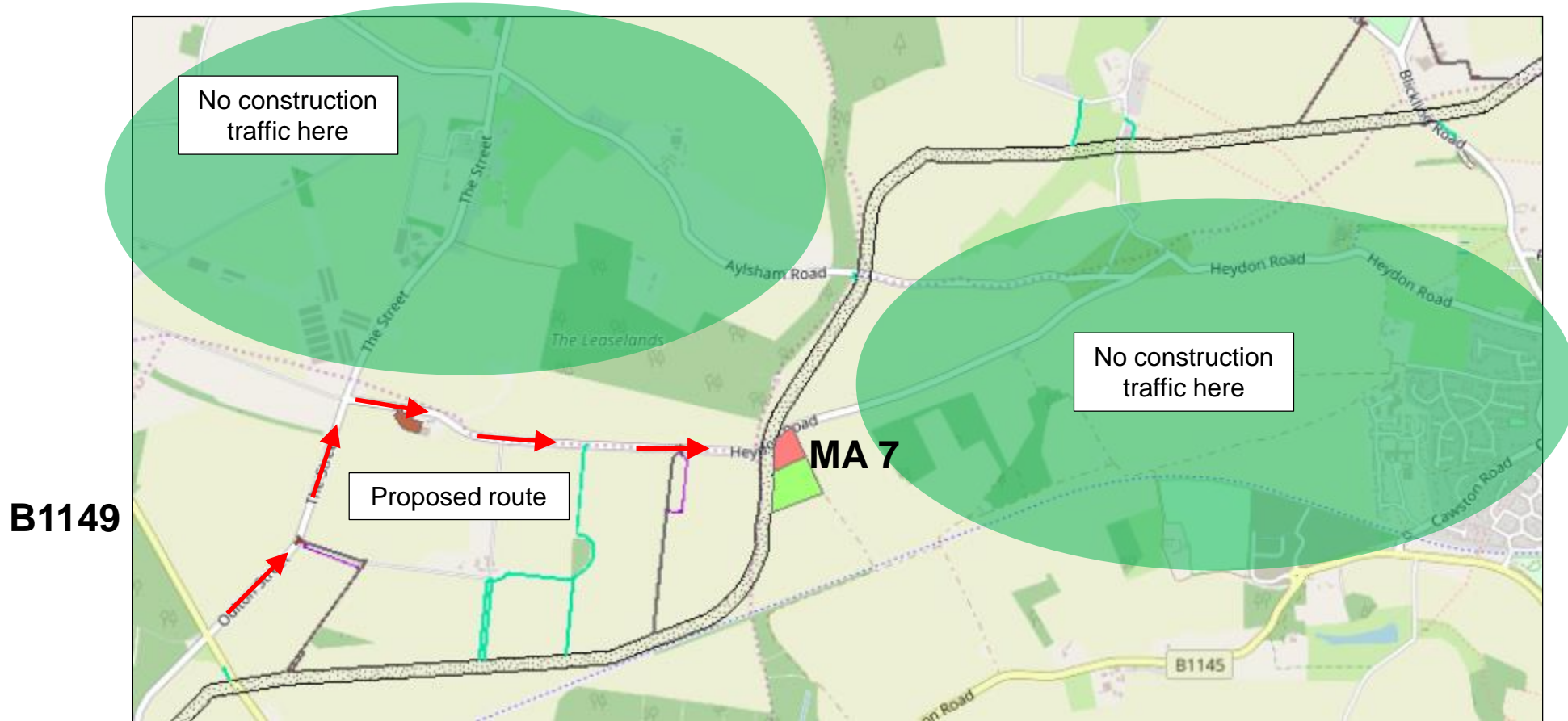
Oulton Area



Temporary works

Public	Cable logistics area
Comment	A temporary facility for storing cable reels, associated equipment and welfare facilities for cable pulling phase of works

Traffic routes to MA 7 from B1149



Cable Storage Facility

What is it? What will it be used for?

1. Buffer storage of cables and jointing kits

- Normally, cable reels will be delivered directly to the pull-in location (just in time)
- Local 'buffer' is for use in the event of delay in manufacture or transportation
- Facility has capacity for up to 20 cable reels, plus joint kits

2. Site offices for cable installation phase

- Temporary buildings (Portakabins) with facilities for up to 10 people
- Co-ordination and management of cable delivery and installation activities
- Induction and briefing sessions for installation teams
- Vehicle parking

Cable Storage Facility

How long will it be used for?

1. Number of export cables to be installed

- At most, there will be 4 x HVDC export links (2 for Vanguard; 2 for Boreas)
- In the 'worst case scenario', there will be 4 consecutive phases of cable installation
- There is scope to reduce this to 3 or 2 phases of cable installation works

2. Duration of each 'phase' of cable installation activity

- Each phase will take place over 1 'season'
- No works will take place during the winter period (Dec to Feb inclusive)
- Maximum duration of activity is 40 weeks (March to Nov inclusive)
- Multiple installation teams working in parallel during this period

Traffic and Transport Survey - [link](#)

Table 24.21 – Link 68 (The Street and Heydon Road)

1097 – All Vehicles

176 – All construction (HGV plus other vehicles) represents a 16% increase

96 – HGV's per day represents a 2x increase

BUT will be peaks and lulls and this is worst case.

Link	Description	Link sensitivity	Background 2022 flows (24hr AADT*)		2022 construction vehicle movements		Percentage increase	
			All vehicles	HGVs	All vehicles	HGVs	All vehicles	HGVs
68	The Street / Heydon Road	Low	1097	44	176	96	16.0%	218.3%

Oulton Consultation Response (Vanguard) – Table 24.3

Consultee	Document / date received	Comment	Response / where addressed in the ES
Oulton Parish Council	November 2017 PEIR Response	Consideration should be made regarding whether access to the site [MA7] is suitable, as it would require HGV's to negotiate narrow country lanes with informal passing places. Possible conflict with year round use by agricultural vehicles, residents and other vehicles plus the possibility of cumulative impact from HGV's from Dong/Ørsted Hornsea 3 project also accessing another potential compound on the old airfield at Oulton Street.	All routes proposed have been subject to a detailed desktop assessment augmented by site visits to validate OS data. An OAMP (document reference 8.10) and OTMP (document reference 8.8) have been provided in support of the DCO application which contains more detail of the measures proposed to manage access via narrow routes. Norfolk Vanguard Limited is in dialogue with Ørsted with regard to coordinating traffic demand.

For more information please contact:
Sue Falch-Lovesey
Local Liaison Officer and Skills Champion
susan.falch-lovesey@vattenfall.com
www.vattenfall.co.uk/vattenfallinnorfolk



@VattenfallUK

