

Norfolk Vanguard Offshore Wind Farm

Consultation Report

Appendix 14.5 Cable Relay Station Workshop Feedback Report

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Photo: Kentish Flats Offshore Wind Farm



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REPORT from Happisburgh Cable Relay Stations information and workshop evening on 18 July, and follow up drop-in session on 19 July 2017

This report outlines the Happisburgh Cable Relay Stations information and workshop evening, with all participant comments typed up and ordered in the tables below. The drop in session held the following day resulted in further comments which have also been added to the tables.

Order of the evening

- Presentation: Where the project has got to and a recap of the Environmental Impact Assessment (EIA) process
 - Group reflections and discussion
- Presentation: Three possible footprints
 - Group discussion – pros, cons and ways to reduce impact of each footprint option
- Presentation: What happens next?

The meeting was facilitated by Rachel Leggett Associates, a local, independent facilitation company. Participants were seated at the event at tables of 6-10 people. At each table there was either an independent facilitator from Rachel Leggett Associates and/or a member of the Vattenfall team to help manage discussions, encourage participation and in the case of Vattenfall members, to answer questions relating to the project.

Presentations

An outline of the presentations and visualisations can be viewed here:

<http://bit.ly/VGBCRSW>.

All documents are listed on the Documents page of the Norfolk Vanguard website:

<http://bit.ly/NVDocuments>.

What information was available at the drop-ins

At the drop-ins, participants were able to view the photomontages, and view at their leisure the 3D model illustrating the Cable Relay Stations at the different siting options presented. Vattenfall staff were on hand to answer questions and listen to views of participants. These contributions are clearly marked as drop-in contributions.

Participation

Fifty five local residents and local representatives participated in the evening workshop. Sixty local people attended the drop-in events.

Since the events, we have also had numerous follow-up e-mails providing further thoughts, views and questions. We are very grateful to all who have contributed. All points will be considered as we continue to refine project proposals. Answers to many questions posed by participants and correspondents can be found in our Frequently Asked Questions (FAQ) [<http://bit.ly/NVDocuments>]. Where numerous people have asked new questions on a similar theme, these will be answered briefly in an updated version of the FAQ document and in the Preliminary Environmental Impact Report to be published this Autumn.

The next opportunity to see more detailed information and talk to the team about the wider project will be during the Norfolk Vanguard Statutory Consultation period, and in particular during public drop-in events in October/November '17.

ABOUT THIS REPORT

Below we transcribe contributions made during the evening workshop and drop-in session.

The results have been grouped following the event according to emerging themes, in order to help readers to digest the information.

Notes in italics are intended to help the reader, who may or may not have participated in the event, follow the order of the evening.

In part 2, we also include feedback gathered during the drop-in event.

Where more than one participant has used the same wording, we denote a comment by "x 2" or "x 4", to show how many different participants have used the phrase.

We continue to receive e-mail and postal responses and forms from people providing their feedback. These contributions are being reviewed by our team and will be recorded in our final Consultation Report, however, they will not be shown here.

RESULTS

Presentation 1 – a recap of the Environmental Impact Assessment process to date, including how local opportunities and constraints had led to Vattenfall narrowing down the search for suitable Cable Relay Station Siting to the options presented recently. (See Project Newsletter – June 2017 [<http://bit.ly/NVDocuments>] for background).

Participants wrote their initial thoughts on post-it notes after the first presentation.

Initial thoughts

Evening workshop comments

Preference of Transmission Method

- HVDC
- Main issue relay stations – want answer, AC or DC?
- Adopt the DC option, therefore avoid having relay station. The technology is available i.e. Siemens
- Cost is an issue for AC/DC
- DC supplier need sufficient lead in time
- AC, DC decision after planning permission
- What will influence AC, DC
- We are not complaining about cables, DC or nothing
- Vattenfall should cut straight to DC – landfall at Happisburgh to present for Planning Permission
- Disingenuous to earmark other proposed sites when Happisburgh is only capable of taking all AC cables
- The presumption is DC will go ahead
- The consultation excludes AC as an option, why?
- Economic arguments and cost of AC/DC
- Why relay stations?

Questions regarding narrowing down to options 5a and 6a & 6b

- What's wrong with Bacton gas site for station?
- We know better than the presenter. Reason for rejecting 7 is not correct
- Gas pipeline possible goes through zone 6
- Why was Bacton ever a consideration and why have you wasted time and money proving it?
- Why Happisburgh not Bacton
- Bacton could not have been seriously considered, given the hasty route refinement
- Happisburgh is an area of designated retreat, so coastline is changing
- Yellow box on 5 (north route) is not near telephone exchange
- Are the other proposal sites reasons for refusal available for us to see?
- Why Happisburgh?
- Not clear, why chosen relay preferred sites. Not clear location relay stations
- Will zone 7 come back into consideration?
- How did you get to these 2 locations?
- Why dismiss 1 of 3 sites when all very similar

Access

- How wide access roads

Socio Economic (including health)

- Tourism – 40% second homes. Affecting property mark – Wind farm project
- How would you feel if CRS was built in front of your house?
- Tourism and local business impact
- Properties affected at location 5?
- No consideration of affected properties
- Both sites are close to many properties
- What is electromagnetic field impact?

Environmental Impact

- Maritime conservation zone – more important than people
- MCZ has already been breached (not an excuse)
- Earthquakes – 2000
- Wildlife – skylarks red listed birds? Landfall zone
- Where is environmental impact assessment on deep HDD (especially out to sea)
- Effect of drilling on sea defenses. Technological challenges, integration with EA
- Disruption to wildlife
- Landscape disruption
- Why has there been no initial discussion on the need for renewables, CO2 emissions, global warming etc.?
- The concerns of marine conservation overrode the impact on people and their livelihoods
- Amenity use of Loke
- Northern route is close to Ridlington Churches
- Concrete pipe across field in zone 6. Takes 0.5 at peak flow

Noise

- Equipment degrades and gets noisier
- Amount of noise? Noise impact initiated
- EIA – won't get consent if significant noise impacts
- How loud are these CRS?
- Noise from station traffic, visual impact
- 95 db through whole life/weather conditions
- Noise – how big is sound impact?
- Frequency of noise – need to know

Visual Impact

- Visual aspects

Security Concerns

- Selling off maintenance to lowest bidder – safety compromised
- Safety – electromagnetic field area

Further Information Required

- Waste of time, we know all that. Info on relay station is required
- No information on how it would look
- Lack of information, had to get info from my neighbor. Would like to see a picture of a

• relay station • Length of time trench open for? X 2 • Presentation – not enough information re why other sites not chosen • Need hard copies of visualisations • Who maintains only screening planting? • When will a decision be made about keeping trenches open? • Too focused on CRS. What about residents affected by landfall zone? • Why is zone 5 50% smaller now and 6-50% larger • What alternatives are there? To relay stations to location • Who will be affected? And how? • Size of relay station, height, length, depth Vattenfall Public Consultation • Public Liaison officer? Why have we not has a visit? • Community consultation needs to be extended to all local residents. People who don't know the area are deciding our future. Need site visits. • Not a consultation when routes and sites discounted already • Smoke screen, all decisions made already • The agenda did not involve the community • Not effective way to consult • The consultation is designed to divide communities by restricting the debate to Relay Station only • Poor communication process • The Vattenfall PR has been a disaster. The proposal is bring presented as a fait accompli • It is unclear that a CRS will look like, so it is hard to comment • Insufficient information on CRS in the 3 newsletters meant that attendance was very low. VF were not transparent • The most important part of the project informs any permanent impact has not discussed at an early stage • VF have misled people by saying they would be 1 hectare each Presentation issues • Would have been good to have been able to see info on display • Facilitator highly commended for not allowing any questions from the floor • Has not visited the site. Screen too small, no questions • Provide binoculars to read presentation • How much is the facilitator paid by Vattenfall? • Presenters can't answer questions • Very poor presentation re cable relay station. Graphics a waste of time as too small. Reasons for discounting Bacton? • Future presentations use a microphone! • Has not visited the site. Screen too small, no questions • Unclear presentation – muddled, fail to plan/plan to fail • Badly presented, ill-informed rubbish • Terrible consultation • Visualisations are poor • Terrible presentation with blurred visuals • Confusing • Lack of definitive information	
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- Why is agenda all relay stations
- Shocking visual aids
- Local of communication, worst organised meeting

General Comments

- How big is your pot of cash?
- Lead time for cable order and vessels
- Maintenance of CRS – sold off?
- Consider relay stations in sea, screening, access
- Why is the local council not supporting local villages?
- Why UK government is being steered by foreign investing
- Why not consider NO relay stations as an option?

Presentation 2 – This included a description of the options within sites 5a, 6a and 6b: plans & dimensions of CRS, footprints, orientation of infrastructure and cables, photomontages. The land architect discussed planting schemes and outlined some initial thoughts on planting schemes.

Following this, participants at each table were provided with a book of photomontages of the CRS from several viewpoints, to aid discussions. Participants were asked to consider the pros and cons, and any ideas of how to address any impact, in the case of each of the options for CRS locations presented. There were flip charts on tables, and participants wrote their thoughts on post-it notes, during and following conversations at tables. The results are transcribed below.

Option 5a

Pros

Evening workshop comments

Preference of Transmission Method

- Why is the DC option not discussed? Available via Siemens

Size of the Proposal

- This is such a huge project out to sea (much bigger than Sheringham Shoal) – small island – too small for big wind farm

Impact on Local Infrastructure

- Road network
- Less impact on local amenities

Impact on Local Housing

- Minimal housing impact
- Less close to residential property
- Away from us!
- Not near my house
- Out of the options 5 has the best road access
- Has best road access of all sites

- Not completely surrounded by properties

General Comments

- Yet to be reviewed
- None
- None for any
- Not need a new road
- Could sink it
- None

Drop-in comments written on forms

Community Benefits

- What benefits can be given to the village? E.g. sea defense?

General Comments

- None!
- There are no positive factors to any of these options

Preferable form of Energy Generation

- Rather have a wind farm than a nuclear power station or housing estates

Impact on Local Properties

- 5A less residential. Best road access

Preferable Road Access

- Doesn't need a new road
- No new road

Cons

Evening workshop comments

Request for Further Information

- Need photos sent to landowners/stakeholders

Noise

- Noise level
- No mention of noise levels, this is essential information

Environmental Impact

- Impact of station on natural vegetation and landscaping

Drainage

- Flood risk. Evacuation from Walcott – Happisburgh road to Ridlington

General Comments

- None of the relay station options are acceptable
- Size!
- How high perimeter fence – deer jump high
- Can see too much of it

Transmission Preference

- DC or AC without RS is the only acceptable option

Traffic, transport and access

- Transport impact during construction along Happisburgh – North Walsham
- Degradation of road quality due to heavy loads
- Access roads
- Can B1159 cope with any sites?
- Main road to North Walsham from Happisburgh
- Congestion at cross roads

Visual Impact

- No natural undulation. Land is mostly flat, so it won't hide it
- It is at the same height as village, so will be visible from village
- Why is it so close to the village? Why not further east?
- Close to Ridlington village (should be further East)

Drop-in comments written on forms**Impact on Local Residences**

- 5A far too near houses. Hum affecting wildlife and subsequent tourist industry. Grade 1 agricultural land wasted. Terrorist target – we will be between 2 with Bacon gas terminal at the other. Properties in area blighted and area will be run down. First hand experience in another part of Britain

Environmental Impact

- Impact on the environment. Taking the cables out to sea through the bay, the weakest point
- Environmental impact assessment not fit for purpose
- Fear of coastal erosion, noise levels, environmental impact
- The proposed sites is right across areas where skylarks next (and birds on the red list)

Traffic, transport and access

- Disruption on road whilst being done

Visual Impact

- Ugly view in a beautiful area
- Blight on the landscape

Public Consultation

- Drop-in held during day when people are at work

Ways to reduce impact**Evening workshop comments****Transmission Preference**

- DC only x 4
- DC x 4
- DC supply
- Use DC!

- Always talking AC, go for DC
- DC option
- Please use DC
- Make it DC and you will have less opposition

Reduction of Visual Impact

- Could the CRS be sunk to avoid visual impact?
- Sink CRS
- Partially sink relay station to lessen visibility
- Needs to be sunk
- Build an embankment – sound and vision

Noise

- Noise enclosures, mitigation planting
- What is the noise of the transformers?
- Noise? Electromagnetic field? Why not other sites?

Site Preference

- Bacton discounted because of number of cables

Environmental Impact

- What about coastal erosion?
- Protect our coast to protect your investment
- Who is responsible for maintaining trees?
- More mature trees
- Plant screening as soon as possible (all sites)
- Time of year and landscaping, evergreens?
- Landscaping and bund

General Comments

- How many people responded to the last questionnaire?
- Better comms, graphics and slides etc.
- Go away

Drop-in comments written on forms

Location Preference

- Move footprints a bit further north to just up against North Walsham – Happisburgh Road would reduce visual impact and improve access (near road). Topographic drip. Lighter land to the north. Orientate N-S (Vanguard above Boreas)

Transmission Preference

- Use DC

General Comments

- Will we need electricity supply at the CRS? How much? Will existing line need to be upgraded?
- Move the point of exit to under the sea defenses

Option 6a

Participants wrote their thoughts on post-it notes after the second presentation

Pros

Evening workshop comments

General Comments

- None that I can see for the local population
- None at all
- There are none
- None x2
- None for any

Traffic, transport and access

- 6a has less passing traffic than 5a

Drop-in comments written on forms

General Comments

- 6A and 6B

Cons

Evening workshop comments

Visual Impact

- View from Summers farm?
- Lighting during construction
- Very visible from several properties
- 6a has more houses affected in terms of direct views
- Views from Ridlington Street/Heath Farm
- Highly visible from all view points
- Visible to tourists

Environmental Impact & Flood Risk

- Negative impact on use of lane – peaceful countryside
- High number of mammals and birds – several on Red List
- Bridal way loses nature appeal
- Wildlife protected species
- Birds on red list in area
- Loss of wildlife
- Badgers and other protected species
- Environmental impact
- It is understood that there are badgers in wood strip to south of development?
- Mature trees etc. needed. Sea wind makes planting of others so is low
- Very optimistic projections on tree growth rates
- High water table
- Flood risk
- It is on lower lying land and has a high water table, so liable to flooding
- Very low lying
- No intention of raised ground levels before plant installed

- Industrial unit inappropriate in countryside

Socio Economic (including health)

- Local tourism businesses destroyed
- Not good site for holiday visitors
- Riders, walkers, runners, cyclists
- Used for leisure, tourism, local use is considerable
- Destroy local businesses
- As more rural it has more impact on rural activity, e.g. cycle and horse riding
- Loss of amenity to cyclists, horse riders, runners, children
- Lose a major local amenity

Road/Infrastructure Concerns

- B1159 is a key road – access to Bacton gas site etc. etc., flooding
- No access road?
- Access road off B1159 – busy, hill where junction, potential accident spot
- How wide access roads
- Road infrastructure
- Access!!

Noise

- Noise from relay station
- Sound – contradicts safe limits
- More information about sound impacts
- Noise pollution a definite problem
- Likelihood of further additions/development noise!!

Concerns about the size of the project

- Too bigger project out to sea. 1800 m watts – we are a small island – too big, less is more
- Too much land involved
- Technology needs to suit our small island

General Comments

- I live close to it
- Evacuation at all sites? Bacton
- Unmanned, what if things go wrong? Lighting?
- Affects the most people
- CPRE against this
- The most affective buildings are about 2-3 hundred years old
- Risk of future engagement
- Greater disruption

Drop-in comments written on forms

General Comments

- Other sittings are almost as bad. Use DC only sensible option. We cannot afford to ruin this area when there will be other options. Resonance will be a problem for us

Need for new road

- Needs new road. Ugly view in an un-spoilt area
- Needs new road. Blight on the landscape

Environmental Impact/Impact on Wildlife

- The proposed sites is right across areas where skylarks next (and birds on the red list)
- Environmental impact assessment not fit for purpose
- Lots of housing
- Security/danger at substations. Pollution to inland water ways if pipes rupture

Ways to reduce impact**Evening workshop comments****Transmission Preference**

- DC x5
- DC option
- Please use DC
- Go for DC
- Use DC! x 2
- DC supply
- DC only x 2

Environmental Considerations

- What about coastal erosion
- Plant screening as soon as possible
- A mixture of fast growing and slow growing is needed
- 1. Evacuate to lower height, 2. Build earth bund with earth, 3. Plant
- Is instant hedging a possible?
- Sink CRS

General Comments

- Need a view from B1159
- Note – Vattenfall, learn the local names of the locations, 6a, 6b etc. mean little
- Way forward local solar energy
- We hope for not such a huge project off shore
- Go away
- Review location or go away

Presentation Issues

- The meeting of this was very poorly publicized and badly organized. Presumably it was designed to get acceptance of RS

Further information required

- Need hard copies of visualisations

Drop-in comments written on forms**Transmission Preference**

- Use DC

Coastal Erosion

- Provide extra sea defenses to combat extra erosion

Option 6b

Participants wrote their thoughts on post-it notes after the second presentation

Pros

Evening workshop comments

General Comments

- None x 5
- None!!
- None, use profit to benefit the village, e.g. flood defenses

Drop-in comments written on forms

General Comments

- Happisburgh, impact on cliffs

Cons

Evening workshop comments

Environmental Impact & Flooding

- Wildlife protected species
- Building new roads across beautiful rural land
- Bats in the area
- Wildlife abundance. Deer
- Wood has taken 30 year to reach about 5m high
- Red list bird species
- Environmental impact
- Deer species, foxes, badgers
- Bats in garden – electromagnetic
- High number of birds Red list
- Flood risk from Broads
- Sire level increase in relation to field level 3
- High water table

Visual Impact

- Remove view of lighthouse
- Completely change the view from the whole area
- View of very old houses affected by CRS
- Visibility to tourists
- Distance to East Ruston Hall views

Noise Impact

- Noise
- Sound
- Noise from relay station impact on bird song and rural area
- Noise issue for residents

Proximity to Existing Houses

- Close to properties
- Views blocked of light house from 6B – view 4

Access

- Busy access road to site
- Dangerous and fast road
- Bad access – fast road
- Road infrastructure
- Gas pipeline across where road being built
- Adding a road
- Safety off B1159 as road rises/falls
- More visual impact than 6a
- New access where – impact? B1159
- Access

Socio Economic (including health)

- Loss of amenity
- Destroy local business
- Ancient path
- Issue on local businesses and tourism
- Locals use for walking riding, running
- Amenity use – walk, ride, run, cycle
- Munns Loke links to network of quiet lanes/tracks
- Impact on local amenities
- Munns Loke connected to other lanes and tracks

General Comments

- Not enough photos – only chose ones with least impact
- Need different viewpoint
- Haven't put visualizations with access roads – need to see
- Orientation top to bottom not good, side by side is better
- Length of site
- Boreas CRS (purple), Option 6b on top of concrete pipe
- Low lying
- Industrial unit inappropriate in countryside

Drop-in comments written on forms**Transmission Preference**

- If you haven't got the full technology yet for DC wait until you have battery storage is DC is a requirement for the future. Please listen to us

Benefits to the Local Community

- Happisburgh – what will you do to protect coastline?

Environmental Impact Assessment Process

- Environmental impact assessment not fit for purpose

Requirement for New Infrastructure

- Needs new road. Ugly view in an un-spoilt area
- Needs new road. Blight on the landscape

Ways to reduce impact**Evening workshop comments****Transmission Preference**

- DC x 4
- DC only! x 2
- Use DC x 2
- Please review DC, it's happening elsewhere. If too much m.watt cut down

Mitigation: Planting/Screening and other suggestions

- Embankment to help height of screening and sound barrier
- Plant screening as soon as possible
- Modeling of screening growth including sea winds
- Regarding screening, 50 years ago we were assured in the consultation process that Bacton Gas site would be screened and not visible from the road
- Not possible for trees to grow at rate suggested (all options the same)
- Fast tree screening, do it better than Bacton Gas Site
- Lower ground level???
- Partially construct in the ground
- Bury them underground
- Sink CRS

Noise

- How much noise?
- Construct the station in an excavate and construct an earth bund to reduce noise and visual, it's a no brainer

Light pollution

- Reduce over-bright lighting

Property value

- Compensate house holders near the relay buildings independent assessment of reduction in property values

General Comments

- Technology is advancing all the time – encourage solar energy locally
- Affects the most people
- High water table

Traffic, transport and access

- Straight access roads, diagonal fields harder to farm

Construction

- Seasonal and local consultation for construction traffic
- Reduce construction impact

Drop-in comments written on forms

Transmission Preference

- DC x 2
- DC option

Benefits for the Local Community

- Give us sea defenses as part of the project

All options

Participants wrote their thoughts on post-it notes after the second presentation

Pros

Evening workshop comments

Site Location Preference

- For Ridlington – I think it should be at the North end of the field

General Comments

- None for any
- None (apply to all options)

Cons

Evening workshop comments

General Comments

- None
- None of these options is acceptable in planning terms – completely out of scale in this sensitive coastal location. The size is such that it will disguise a large area of the landscape because of the open nature of the landscape

Socio Economic (including health)

- Impact on community, environment, visual, business, alternative option (apply to all options)

Lack of Suitable Infrastructure

- No access route – 6b

Ways to reduce impact

Evening workshop comments

General Comments

- Go away
- Go elsewhere

Transmission Preference

- DC
- DC only!
- DC supply (applies to all options)

Drop-in comments written on forms

General Comments

- Don't do it

Transmission Preference

- The AC option is completely available by using the DC option. Cost and commercial considerations should not pre-empt case for this sensitive landscape

Any other comments you would like to add?**Drop-in comments written on forms****Drainage**

- Drainage is an issue. E.g. 5a location at church farm there is an issue with flooding. There are trees here because land is so wet

Socio Economic (including health)

- I have extensive international experience with cable installations and share approaches. If you require help locally please contact me on the contact details below

Communciation/Consultation process

- Give longer consultation time to give people who work change to attend. Employ more staff who are competent to answer questions! My neighbour and myself attended fully supportive of the wind farm, we would much rather have wind energy than nuclear or housing estates. Now have objections to it taking a route to the weakest part of our coastline without add some sea defenses there, madness!
- This consultation reflects mostly on the substation and not what will happen in Happisburgh to our delicate coastline. Should have been open longer, people at work not able to attend
- Idea: parish magazine notice for older people who don't have email – help organise a drop-in. 8th August is the Lifeboat Fete
- Poorly organized meeting at wrong venue and limited time. Overall very inappropriate.
- No details of this drop-in on your website

General

- I would rather not have the wind farm on it. Will disrupt an un-spoilt area, effect fishing and shipping. UK will get power but Sweden will get profit!! DC should be the only method considered. Anything else would be a using an old method that we will have to 'put up with' for many years to come. We will be happier if the station has to be the chosen method if there is a commitment to no light pollution and maximize screening. I am still unhappy that Lessingham Village was not contacted at an earlier stage. Can't help feeling that Happisburgh was chosen because there are fewer people living around here to object!!

Transmission preference

- As I understand it the DC option is regarded as the 'future' for the industry. On that basis surely this should be the preferred option especially considering that it would have the least environmental impact. It also concerns me that all 3 relay sites are located in a flood area. No matter which option is selected (AC/DC) I would expect Vattenfall to fund further sea defenses for the Happisburgh area to protect not only our prosperities but also your investments.
- Vattenfall by have done a formal cost/benefit analysis of AC verses DC. Since this is a crucial issue, can we see this please? Discussion with one of Vattenfall's apprentices at this drop in (19/7/17) appears to indicate that the main (or only) consideration against

DC is cost – specifically the additional cost of a DC converter platform at sea, compared with what is required for the AC version. Is this correct? If so, what is the cost difference?

- I do find that choosing a site on the bay – the weakest point along this pint of the coast is crazy – further along where there is a sea wall – a lock defenses, i.e. Sea Palling – to me sounds a better idea. Using DC would be much less disruptive to the land and also no relay stations (I am not against renewable energy).

Compensation

- Happisburgh would like to see compensation for the disruption, noise and traffic in the form of assistance with coastal defenses which would be in Vattenfall's longer term interests as well

Further written comments handed in

'Input from Ridlington reference the Happisburgh Road Site (5a)

View

- Very open field
- No trees or hedges offering any cover
- Essentially flat and visible form a long distance
- Certainly cannot hide this category of equipment on this site

Location

- 400 metres from largest village in the cable corridor east of North Walsham
- 450 metres and visible from Grade I Listed 13th century church, St Peter's
- 500 metres from 2 Grade II Listed Barns and a Grade II Listed farmhouse
- In clear view from the Happisburgh Road, cannot be hidden!!
- Will be visible from many house and the main road to Stalham

Refine Plan Claims

- Relative seclusion – they avoid villages and clusters of housing
 - 400 metres from and in clear view of the largest village on the cable route to Norwich Walsham does not meet the claim, it clearly does not avoid villages!!!
- Good access
 - Road from B1159 to Ridlington will have to be widened and improved to cater for the delivery of the CRS plant and for cranes required to position the plant
- Natural screening and topographic characteristics that we can work with to help minimize visual noise impacts
 - There is no natural screening here and is on a slight down hill slope over a long distance; so what topography???

Jobs

- General comment
 - This is very specialist HVAC plant – all work will go to specialist engineers from out of the area. There are no similar National Grid type equipment any where in this part of the country!!
- Construction phase
 - This is the major industrial plant – 90% of workers will come from outside the area. Major earth moving, lifting and installation/commissioning staff

from outside the area. Fencing and tree planning in area??? Trees must be local sourced to ensure no diseases are introduced.

- Operation phase
 - Maintenance will be summer months (Scoping Report), this means staff will come in from outside the area and be working (noise and light) during the main tourist period. This may cause increase in letting accommodation for summer period but this will create problems in the winter months. Tourists will not wish to be around this with work progressing – damage the tourism industry.

Noise

- Noise is inevitable with this type of equipment and with 12 of these units it is going to be very significant in such a quiet location – major concern about air and ground noise particularly at night – potential for major health impact from disturbed sleep with the CRS this close to the village. What is the noise footprint and the range and magnitudes of frequencies for both air and ground noise? What measures will be taken to suppress this noise?

Lights

- The Ridlington village area is very dark – putting a major light source 400 metres away is going to change the village environment drastically. Security Authorities may well demand full time illumination of the site which controls/provides ‘half the energy needs (commercial, industrial and domestic) of East of England region’

Heat

- Must produce heat, how is this dissipated??? Is there any ‘forced cooling’ requiring fans and if so are they on continuously or switched on and off as required by the varying operational conditions?

This is a very heavy-duty power transmission plant which should be installed in a ‘brown field’ industrial site alongside other similar equipment. Such as, with the Bacton Gas Terminal Site or on an Industrial Park in North Walsham (as suggested by Norfolk County Council in their response to the Vattenfall Scoping Document).

It will change the environment and character of this very rural farming area with its many tourist attractions (counter to the North Norfolk Planning Policy for the countryside). This is industrialization of the Norfolk country area.

The Power comes from a renewable source, which we all welcome, but this particular equipment is HVAC Power Transmission Plant and it is an extension of the National Grid in all but name.

As an HVAC solution it should have been routed more sympathetically and brought ashore closer to the National Grid system to minimize onshore cable lengths and power losses.

This solution is OK for HVDC and the project would offer significant benefits if DC was used

- Turbine Wind speed operating range great
- Minimizing transmission power losses
- And reduced negative impact on the environment, so sea bed or land heating

However, if this HVAC solution is regarded as a fallback/risk contingency solution it is poor.

If there was the slightest expectation of the HVAC system being installed the project should have been planned as an acceptable HVAC system and HVDC used as an opportunity to improve the solution.

Vattenfall have chosen the lowest cost solution which involves using green field sites under the cover of it being Renewable Energy and Strategically Important Infrastructure. Neither of these should be used to minimize cost at the expense of the environment we all want protected. Alternative, more acceptable solutions are possible, they are just more difficult and expensive.