



# Stonehaven & District Community Council

## Introduction

The issues raised represent the concerns of the Stonehaven District Community Council. The issues raised reflect the concern of the community, but any additional comments made by individual members of the community of local groups and commercial enterprises remain valid.

## 400kV OH Transmission

Figure 1 below shows the two current options being considered by SSEN for the section of the 400kV transmission system in the vicinity of Stonehaven.

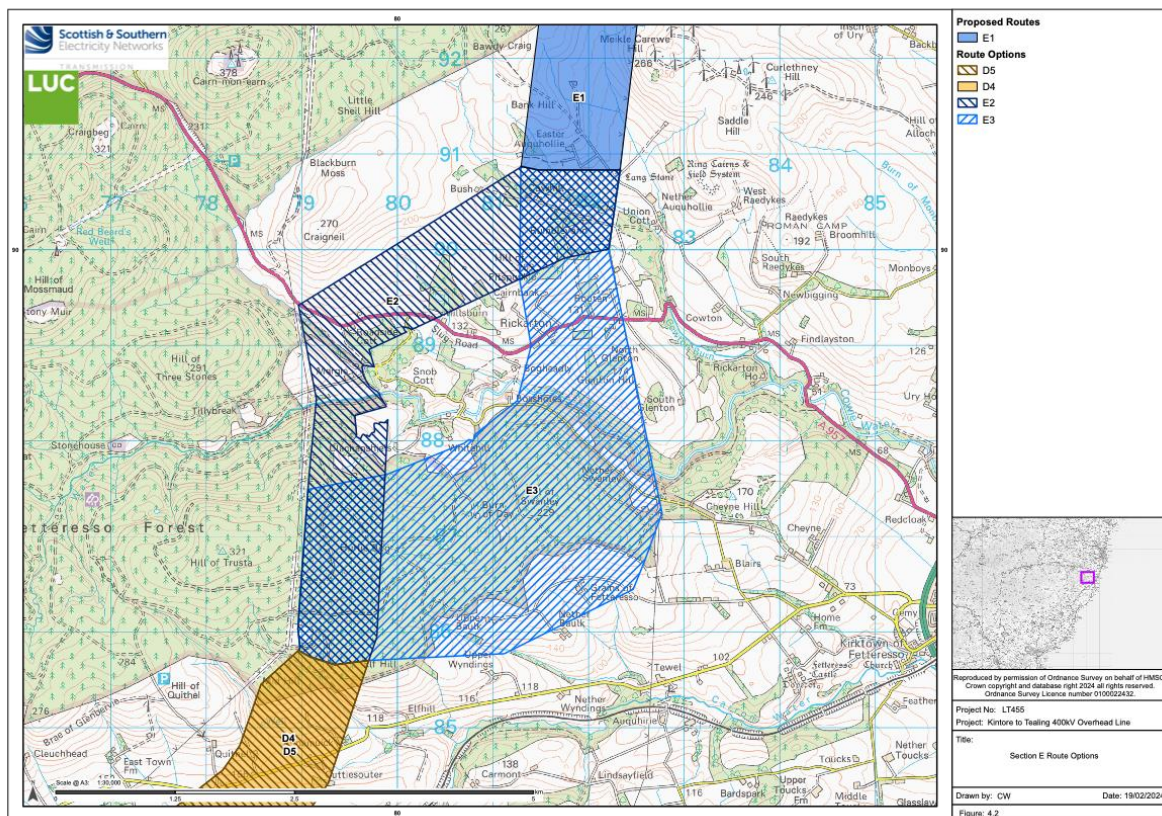


Figure 1 - 400kV OHC route options (Source SSEN Project Documents)

## Stonehaven Future Development

We are concerned that the option E3 will substantially limit the ability of Stonehaven to develop as the community may wish. We refer to the figure below that shows the corridor of the existing gas and oil pipelines:

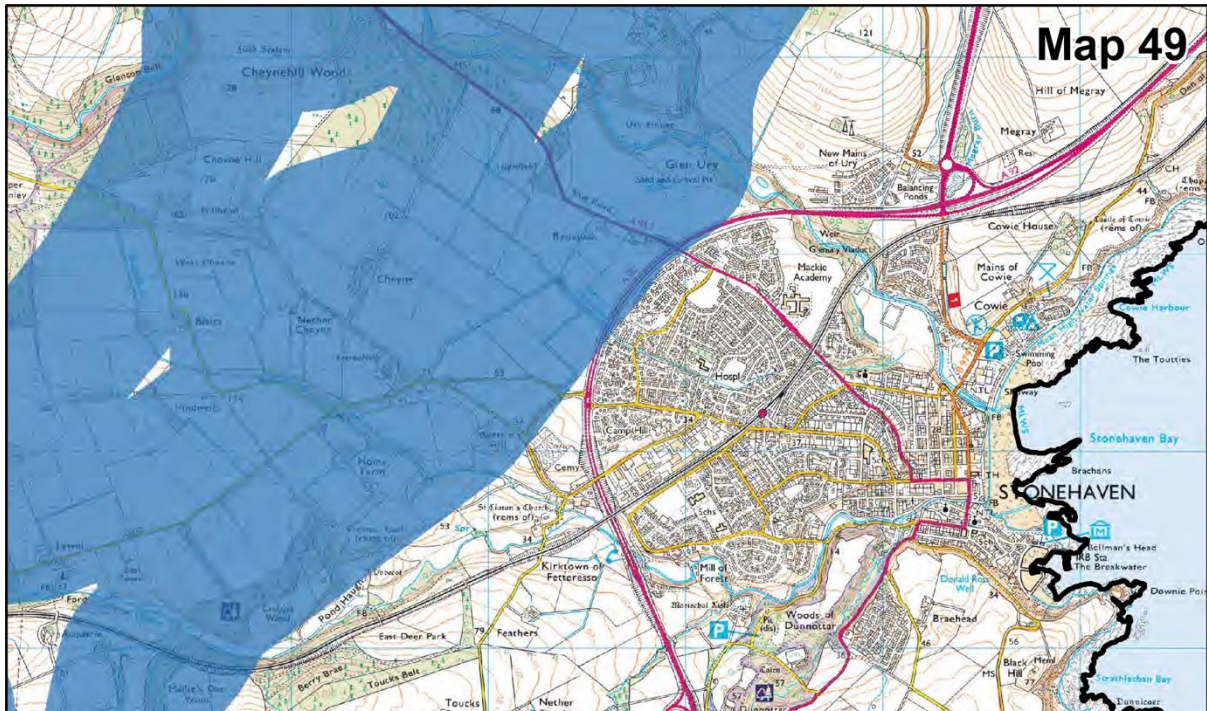


Figure 2 – Existing oil pipeline corridors – 4 off oil and gas pipelines

Figure 2 shows the corridor of the existing oil pipelines and it is very obvious that the E3 corridor being considered by SSEN effectively butts up to the pipeline corridor. These two corridors together will prevent substantially any future development of the town to the west of the A90.

Further, have you considered properly the effect of your construction activities if you were to select corridor E3 and the potential impact that these would have on the oil and gas pipelines?

## Land Usage

The E3 option that you propose passes directly over areas that offer significant recreational use for the community of Stonehaven and the district, including the Hill of Swanley.

## Visual Impact

The selection of the E3 corridor will make the overhead steel towers highly visible from the town. This will impact the aesthetic of the town and stands to impact significantly on the tourist business, which is one of the staples of this community.

## Choice of Corridors

As a community, we would prefer the selection of the E2 corridor significantly over the E3 option. However, given the average height of your towers being 57m, neither route will avoid impacting the community as a whole and an underground option would be a significant improvement.

## Impact of the Selection of Overhead Transmission Systems

There is real concern on the value and saleability of domestic properties that fall within the vicinity of these overhead transmission systems. There is evidence from property consultants that many homes will lose substantial value from proximity to the overhead transmission system. It is essential that SSEN recognise their accountability in this matter and confirm that they will provide compensation for financial harm to people caused by SSEN project decisions which the affected members of the community cannot impact.

There is similar concern that the visual impact of the area around Stonehaven will be damaged significantly by the presence of overhead transmission systems. It needs to be recognised that tourism is a staple industry for Stonehaven and this impact to the attractiveness of the local countryside will affect this business.

These issues need to be incorporated into SSEN's decision making process, as they are for any major capital project. Logically, the need to compensate the community from financial loss which is not of their making but arises from decisions made by SSEN needs to be recognised by SSEN and the cost of such compensation built into the capital spending decisions.

## Undergrounding

There is a significant push back on the use of overhead transmission systems as described above. For these reasons a significant part of the community would prefer you to adopt the underground systems.

Against this, from the perspective of the farmers there are significant advantages in the use of overhead transmission systems:

- the distance between adjacent overhead steel towers means that relatively few will become obstacles to practical farming, and they can be located primarily at field edges.
- constructing the overhead transmission system creates less disturbance than the underground system both in terms of management and the impact on production.

There are a number of concerns for farmers that are detailed in the following paragraphs. However, experience of several underground cable laying operations in Germany, for example, show that with effective construction design and engineering these issues can be minimised.

The biggest concern from constructing an underground system would be the unknown impacts on hydrology. A lot of the design would have to be based on assumptions, and there remains concern on the impact on the water table flows and on what the long-term impact of digging a deep trench might be.

The risk of soil borne diseases probably becomes much more significant during construction due to high numbers of plant operations and the quantity of earth moved. This is an issue for potato farmers in the Mearns for overhead lines but is expected to be

much more significant for an underground system. Again strict control of the soils extracted from the various layers during trenching and its return during infill should mitigate this.

The next major concern for farmers due to constructing an underground system is the potentially considerable damage to fields, due to both the plant operation resulting in soil compaction and the damage to the field drainage systems which can take 20 years to repair. In addition, the land impacted by construction activities probably will be lost to production for 2 years or longer. The use of temporary trackway and strict control of plant movements should assist in mitigating the risks here.

We recognise that to deliver a double three-phase circuit you will need to leave behind 6 off 5m x 5m fenced enclosures at each jointing location, typically between 750m and 1000m intervals. These remain a better option for the impact on the landscape than your proposed line of pylons of an average height of 57m. Where they create an issue is when they land in the middle of a field. Then SSEN requirements for access annually would be an issue to a farmer, as inevitably they would want to drive to the joint bays over a field in crop. We recognise that it is unlikely that the jointing locations would fall at a field edge unless SSEN was prepared to manufacture cable sections to specific lengths to permit this.

One key advantage of the underground system is the reduced need for intervention. We recognise that restoring power in the event of a fault is more complex than it would be for an overhead system, however provided there has been suitable design and specification the probability of a fault occurring with an underground system has to be substantially less than it would be for an overhead system. We have an example of a section 22kva that has been underground for 60 plus years, running through woodland and garden, which has given only one problem with a tree root and SSE had the technology to pin point the problem within 1 metre and rectify within 24 hours of the fault occurring. With respect to that, we are concerned that the focus on overhead power transmission will result in increased risk of power outage with damage from not only due to wind, snow and ice loading and frost but also metal fatigue and insulator life. With the increasingly stormy weather that we are witnessing, this is expected to become ever more prevalent and will not only increase your operational costs but also will impact the households and businesses that are relying on continuity of your supply. Taking this into consideration, we expect that whole life costs will provide a much closer balance between the overhead system and the underground system.

You advise that inspection of underground cabling is more challenging than for overhead transmission. While this is true, given that you have groups of manholes at every cable joint where you can access the cables for testing, the additional effort would not be significant. We do note that this becomes a problem when the cable joint locations are in the centre of a field of crops as described above.

We do not recognise your comment on early deterioration of the cable system, which should be preventable with suitable specification and quality control on the manufacture and installation of the cable being used. Please note that we have oil and gas pipelines

running past out town that have been in operation for over 49 years already without deterioration.

You address the constraints that undergrounding the transmission system places on land use. Clearly there is a significant impact on the land during construction and we would reasonably expect you to make good and return the land to its original condition after construction is completed. As described above, we have shown you that there are 4 oil and gas pipelines running in corridors to the west of the A90. These were installed in co-operation with the landowners, and they have been managed with minimum impact on the prime users of the land. There is no reason why a good design of underground cabling should not be able to achieve the same standards.

## Keeping Close to the Existing Transmission Line

Keeping the new line close to and parallel with the existing line keeps the route above most of the best farmland and just below the heather hill so a lot of the line is screened by trees and on a higher contour than 90% of houses.

Why would a completely new route be required when there is an existing route corridor. Also if the new line is built adjacent and parallel to the existing then many of the existing access routes to the towers can be used.

## Preservation of Ancient Woodland

We note that the E2 route will pass through a narrow strip of ancient woodland south of the A957 in the vicinity of Mergie. While recognising the need to have one corridor or another, we would expect that, if you elected to follow this corridor, you would accept your responsibility to return the woodland to its current condition, as far as possible, preferably by replanting semi-mature trees and providing the necessary care during their establishment to protect them and give them the best potential to develop.

## Impact to the Environment and Wildlife

We note that you have made significant commitments to restoring the environment following construction and have recognised the presence of important wildlife within this area. We trust that this work will continue for a significant period after the completion of construction and commissioning to ensure that the restored environment thrives.

# Hurlie Substation – Fetteresso Forest

## Future Tie-ins Built into this Design.

We note that you wish to consult only on the first phase of this project. We recognise that the subsequent phases involve other project partners and by only presenting the first phase you have a much smaller impact on the community. However, in reality this is a single complex project and, once the first phase has agreement to proceed and the location of the substation and the various developments to be tied in have been decided, the following phases follow on as night follows day. Therefore, it is correct to consult on the total project at this stage and not to do so is obfuscation.

In your document “Hurlie (previously Fiddes) 400kV Substation Pre-Application Consultation dated March 2024, you identify the following future tie-ins:

- A connection by a Scotwind Offshore Wind Developer. The developer would provide an underground cable, from offshore, to its own substation which is likely to be located within the vicinity of Hurlie. It would then provide a further connection to the new Hurlie substation from its own substation.
- A connection to the Offshore Grids Projects. This is being developed by SSEN Transmission’s offshore team. This would require an underground cable, from offshore, to an HVDC converter station likely within the vicinity of Hurlie, and a connection between the converter station and Hurlie substation.
- A potential future connection to the existing Fiddes substation.

Figure 1 is taken from the National Grid ESO Holistic Design Network document dated July 2022 and shows one tie-in corridor from offshore to the proposed Hurlie substation. It shows this a high voltage AC line. However, it is not clear which offshore projects will be tied in along this corridor so please will you confirm that the connections to both the Scotwind developments and to the Offshore Grid projects will be contained within this corridor.

Figure 2 is taken from the Offshore Wind Scotland website and shows all the current and planned offshore wind power projects. Please confirm that all of these are either included in the two planned connections you have listed or will certainly not tie-back to Hurlie.

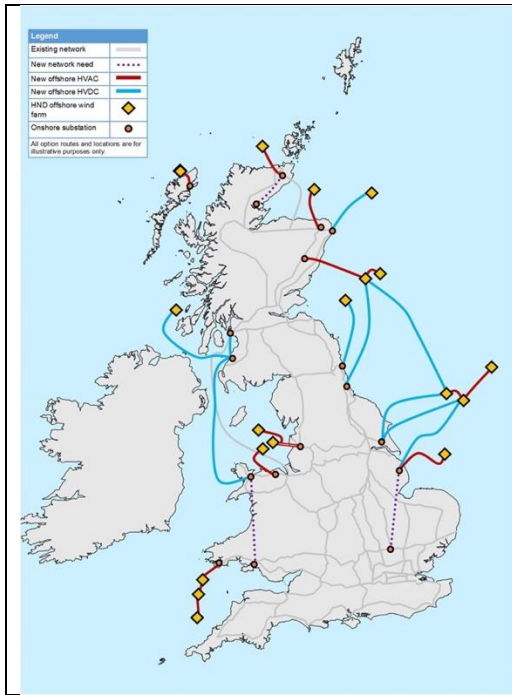


Figure 1 - Shows the new network needs identified by ESO through the HND (Source National Grid ESO Holistic design Network – July 2022)

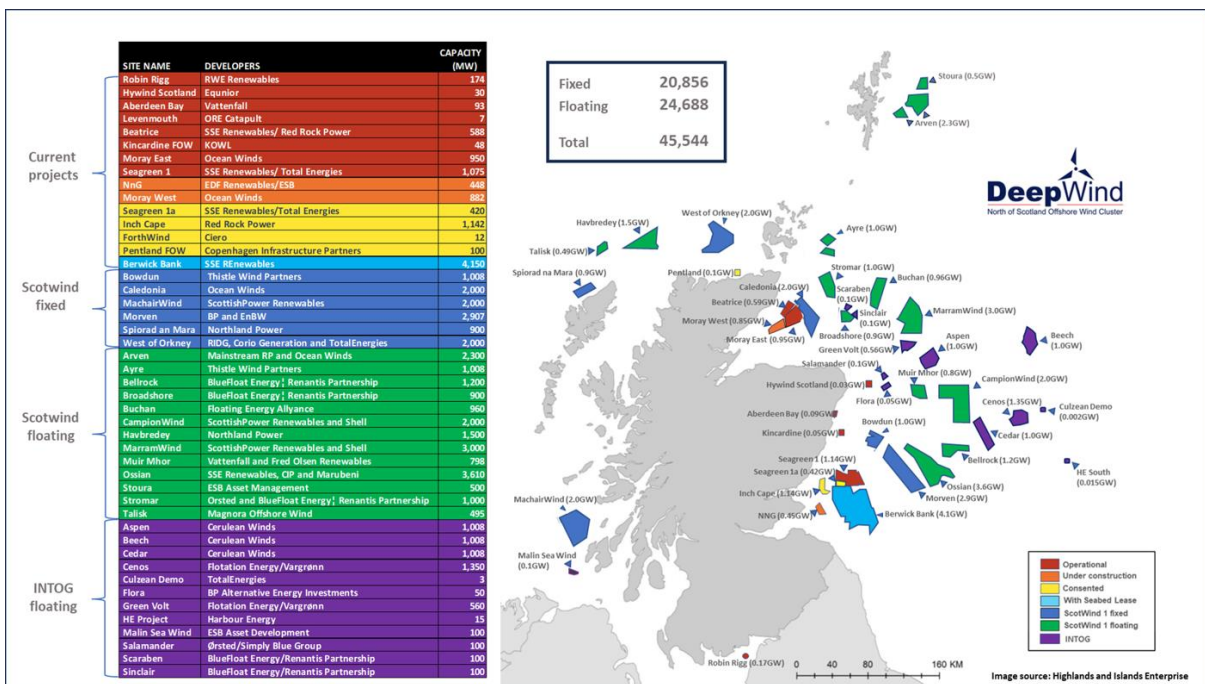


Figure 2 – Scotland Offshore Wind Project Map. (Source Offshore Wind Scotland)

You have stated that the future tie-ins from the Scotwind projects will be underground connections up to separate substation in the vicinity of the Hurlie substation. From the Scotland Offshore Wind Project map these projects appear to provide something over 11.5GW. Therefore, how large will this facility be, where will it be located and what will be the configuration of the tie-ins from this to the Hurlie substation? Will you continue to install this interconnection as underground tie-ins? It is essential that the term “in the vicinity of” is clarified as a maximum offset distance and clarity is provided at this stage on how the connection to the Hurlie station will be configured.

We understand from your brief description of the Offshore Grid Projects that this will consist of:

- Onshore HVDC converter station, which will connect to the AC Hurlie substation via underground cable.
- Underground cables onshore and subsea cables.
- An offshore platform hub to provide a grid connection for two Offshore Windfarms, this shall negate the need for these windfarms to connect to the onshore Grid network on an individual basis, thus reducing onshore infrastructure.
- Subsea cable from the offshore hub to England.

We understand that the offshore hub will export power to England and will not affect the community here. Please confirm that is correct. We are pleased to see that the connections from the Hurlie substation to the HVDC converter station will be installed underground. Please will you confirm that this underground routing will be up to the battery fence at each location. Simply for clarification, please will you advise whether the intention for this tie-in to be incoming to or outgoing from the Hurlie substation.

We note that the planned site covering 760m x 300m is not large enough to accommodate the Offshore Grids Projects as this requires a footprint of 700m x 700m. It is logical to assume that the high voltage DC converter station for this part of the project requires a site of effectively the same size as the Hurlie sub-station. Please confirm how large this facility will be and where it will be located?

Beyond these understood offshore tie-backs you have advised that local renewable developments will be tied back to the Hurlie substation. Please clarify what onshore development will be tied back to the Hurlie substation and what routes and configurations will the transmission take.

Based on the decision to locate the new substation remotely from the existing Fiddes substation, there is now a considerable distance to be covered by this other additional connection between Hurlie and Fiddes. You made the move to respect the wishes of the people of the Mearns that their area was not grossly impacted by your developments but instead you are going to provide an additional transmission system right across this land which in addition will impact further the community around Stonehaven. Since this is clearly within the scope of SSEN, you should provide full details of the configuration and route of this additional transmission system.

You need to recognise that when you return to your project offices, the people who live in this area do not want to be left within a spider's web of assorted overhead transmission systems connecting various developments to the Hurlie substation. We recognise that the consultation works better if only part of the information is provided but we deserve to be told the complete story on what is planned.

## Tied-back Battery Storage Facilities

Concerns have been raised about the possibility of battery storage being sited at the substation. Please will you clarify whether this is the case and what the nature of the batteries will be? The concerns raised focussed on the risk of batteries igniting during



charging operations and resending a fire risk within the forest. We would expect this to be part of your standard design and specification and ask you to provide clarification on the level of risk.

## Acoustic Design and Attenuation

There is substantial concern about the noise that will result from the routing operation of this substation, based on impacts reported from several communities that have similar facilities located close by. We have noted in your consultation papers that you will complete a full acoustic design of the sub-station. We ask you to confirm that all significant noise sources are shielded appropriately and the detail of the expected sound levels that can be expected by existing households adjacent to the substation and the sound pressure levels that can be expected in Stonehaven is made public before the design is finalised.

Further, we note from your drawings of the sub-station shows that the level platform for the equipment will rest on the hill on the easterly and southerly side facing towards Stonehaven. This means that there will be no attenuation in the noise levels in the direction of Stonehaven from the ground. We would expect you to provide effective acoustic enclosures for all significant noise sources and consider further the benefits of reducing the height of the substation platform further and using the cut from that to provide a bund to the eastern and southern faces so that the surrounding earth can attenuate the noise made. Further we would expect you to plant and maintain a significant barrier of trees all around the substation to assist further in the attenuation of noise generated.

## Construction of the Sub-Station

There is a natural concern regarding construction activities and the impact that these will have on the Stonehaven and district community.

Our first concern lies with routing and management of traffic to and from the construction site. Your intention to use the "B" road running from Fetteresso to Auchenblae to access the site can be accessed for the north bound carriageway of the A90. However, it cannot be accessed from the south bound carriageway without passing through residential areas within Stonehaven and along roads used by school children going to or returning from school. However, you state that you planned primary access to the site will be from the A957. This is a greater concern for us as this cannot be accessed from either the northbound or southbound carriageways of the A90 without passing through Stonehaven, passing through residential areas and at least one primary school, possibly another and possibly the secondary school. Once again you will be relying on roads which are routinely used by schoolchildren to go to and leave their schools. We do not believe that you can avoid increasing the risk to the people in our community and wish to understand what you will do to minimise this risk as far as is realistically possible.

## Land Use

As with the proposed E3 corridor the substation and any overhead transmission system to and from the sub-station will impact seriously areas of Fetteresso forest that are used

extensively by local residents and tourist visitors for recreation, including walking, running and cycling. Any of your proposed options will impact significantly on the amenity provided and potentially impact on the tourist business of this area.

## Impact to the Environment and Wildlife

We note that you have made significant commitments to restoring the environment following construction and have recognised the presence of important wildlife within this area. We trust that this work will continue for a significant period after the completion of construction and commissioning to ensure that the restored environment thrives.

## Timing of the Consultation

We note your statement that the “the first stage in the planning application process, and the beginning of a consultation period that must allow for at least 12 weeks between the start of the pre-application consultation and feedback, and submission of a planning application.”

Stonehaven has been directly affected by this project only recently. While you plan for a cut-off on consultation by 30 April it is essential that you recognise the impact that you are having on the community and the consultation only closes when the issues raised have been addressed and there is at least some form of understanding by all stakeholder parties, which absolutely includes the communities living with the impact area of this project.