

APPENDIX 9: CREAG DHUBH TO INVERARAY 275 KV OHL CONSULTATION BOARD MAY 2022

Argyll and Kintyre 275kV Strategy Consultation

Creag Dhubh - Inveraray 275kV Overhead Line -Alignment Consultation

Blarghour Windfarm Connection -Route Options Consultation





We are launching public consultations to seek feedback on two projects in Argyll and Bute:

- Creag Dhubh Inveraray 275kV Overhead Line. The route options for this project were consulted on as part of the Argyll and Kintyre 275kV Strategy in July 2021. We request your feedback on our Preferred Alignment.
- The proposed Blairgour Windfarm Connection project. We request your feedback on the route options.

Information on our proposals is available within this consultation booklet and on the project

webpages. We intend to hold both face to face and virtual consultations. Please note, a face to face event will be subject to covid restrictions and updates on whether these will go ahead will be available on our webpages:

https://www.ssen-transmission.co.uk/projects/ creag-dhubh-inveraray-275kv-overhead-line/



Who We Are

We are Scottish and Southern Electricity Networks, operating under licence as Scottish Hydro Electric Transmission plc (SSEN Transmission) for the transmission of electricity in the North of Scotland.



In total we maintain about 5,000km of overhead lines and underground cables – easily enough to stretch across the Atlantic from John O'Groats all the way to Boston in the USA.

Our network crosses some of the UK's most challenging terrain – including circuits that are buried under the seabed, are located over 750m above sea level and up to 250km long.

The landscape and environment that contribute to the challenges we face also give the area a rich resource for renewable energy generation. There is a high demand to connect from new wind, hydro and marine generators which rely on Scottish and Southern Electricity Networks to provide a physical link between the new sources of power and electricity users. Scottish and Southern Electricity Networks is delivering a major programme of investment to ensure that the network is ready to meet the needs of our customers in the future.

Our responsibilities

We have a licence for the transmission of electricity in the north of Scotland and we are closely regulated by the energy regulator the Office of Gas and Electricity Markets (Ofgem).

Our licence stipulates that we must develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

What is the difference between Transmission and Distribution?

Electricity Transmission is the transportation of electricity from generating plants to where it is required at centres of demand. The Electricity Transmission network, or grid, transports electricity at very high voltages through overhead lines (OHL), underground cables (UCG) and subsea cables. Our transmission network connects large scale generation, primarily renewables, to central and southern Scotland and the rest of Great Britain. It also helps secure supply by providing reliable connection to the wider network of generation plans.

The Electricity Distribution network is connected into the Transmission network but the voltage is lowered by transformers at electricity substations, and the power is then distributed to homes and businesses through overhead lines or underground cables.

Overview of Transmission Projects







The Argyll and Kintyre 275kV Strategy

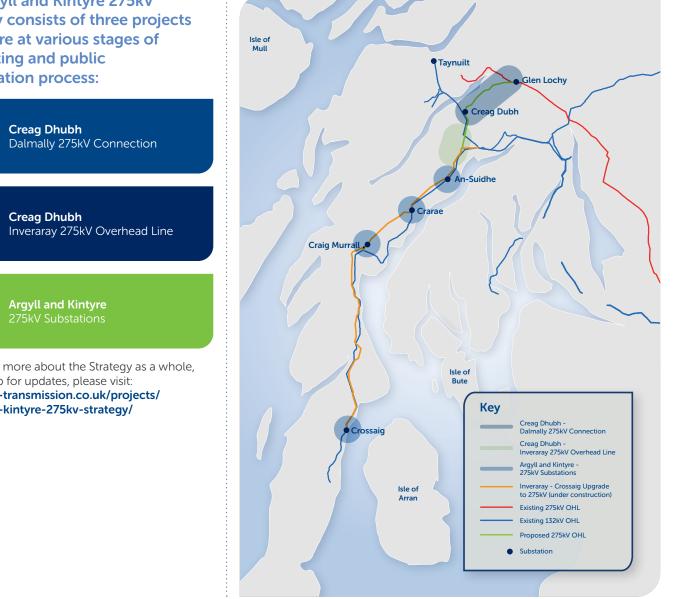
The original transmission network in Argyll and Bute was constructed over 60 years ago and designed to transmit electricity to consumers in rural areas of low-density population.

As the UK strives for Net Zero (achieving a balance between the greenhouse gases put into the atmosphere and those taken out), SSEN Transmission has seen a significant increase in generator connection applications in Argyll and Kintyre in the last 18 months, predominantly in renewable generation.

In terms of this renewable generation (i.e. windfarms), there are infrastructure requirements needed to connect generators to our Transmission network.

This means we need to increase our network capability in Argyll and Kintyre, beyond that already under current construction and public development, to enable the connection of further renewable generation and to export to the wider GB network.

We have called this group of works designed to deliver the required increase in network capacity our 'Argyll and Kintyre 275kV Strategy'.



Our Argyll and Kintyre 275kV Strategy consists of three projects which are at various stages of consenting and public consultation process:







To find out more about the Strategy as a whole, and sign up for updates, please visit: www.ssen-transmission.co.uk/projects/ argyll-and-kintyre-275kv-strategy/





Creag Dhubh – Inveraray 275kV Overhead Line (OHL)

Project Need

An increase in generation seeking connection to the SSEN Transmission network in the Argyll and Kintyre area is driving the requirement for further reinforcement to the network. The volume of contracted generation has significantly increased since 2019, with approximately 612MW signing connection offers since October 2019. On top of this further developers have submitted connection applications, and a large volume of scoping generation has been identified by local stakeholder engagement events that were held in 2021. This significant increase in the generation background requires reinforcement of the network in order for SSEN Transmission to maintain compliance with the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS).

In order to meet licence obligations and ensure security of supply, SSEN Transmission need to provide a new 275 kV OHL transmission connection between the existing Inveraray-Crossaig circuit and the proposed Creag Dhubh substation.

Project Overview

This project involves constructing nearly 9km of new 275kV OHL, supported by steel lattice towers, between the proposed new substation at Creag Dhubh and a connection point at Tower 18 on the recently constructed Inveraray to Crossaig overhead line.

The new line will be operated at 275kV once the associated transmission network in the Argyll and Kintyre region has been upgraded to 275kV capability. This will be done one circuit at a time over the summer of 2026 into Spring 2027.

Once the new OHL is operational, the existing 132kV OHL between Inveraray and the proposed new Creag Dhubh substation will be removed. The remaining 132kV OHL from Creag Dhubh substation to Taynuilt will not be altered during this project.

Due to the constraints on the route corridor, the new 275kV is required to cross the existing 132kV Inveraray - Taynuilt OHL. During the construction of the Creag Dhubh - Inveraray 275kV OHL SSEN will need to maintain the local electricity supply and therefore are required to build temporary OHL diversions on wood poles to allow the new OHL to safely oversail the existing.

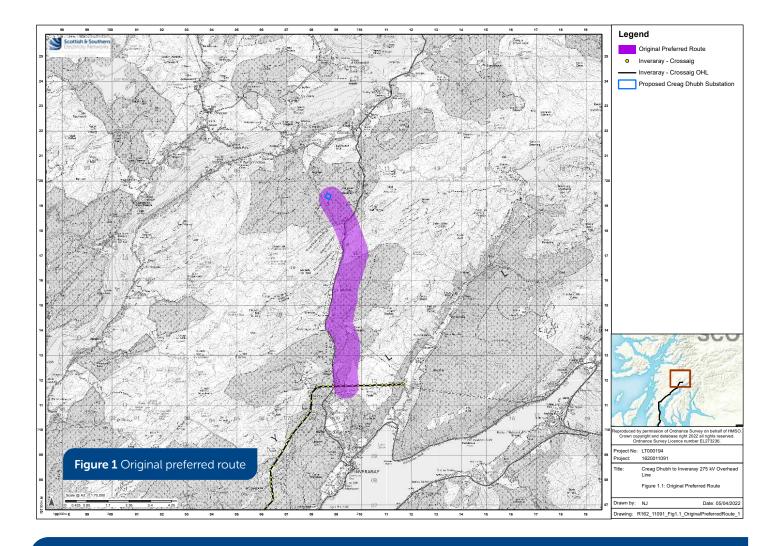
Project History

In July 2021 we consulted on the Route Options for the Proposed Development. Following analysis of the consultation feedback, along with engineering, environmental and cost considerations, we published our Report on Consultation in September 2021 which outlined that Route Option D/E would be taken forward as the Preferred Route Option. The project then moved into the Alignment stage where we determine the proposed alignment of the OHL within the Preferred Route Option.

During the alignment stage, more detailed survey work and discussions with landowners and the Ministry of Defence revealed that Route Option D/E was not suitable as it passes through an area that posed a high risk from unexploded ordinance (UXO). Route Option B was selected as the new Preferred Route Option as of the original route options considered this was the least constrained from an environmental, engineering, and cost perspective and avoids the area of high UXO risk. Route Option D/E and Route Option B are shown in the **Figure on the next banner**.







Our consultation process

OHL routing is a balance between environmental, engineering and cost consideration, with stakeholder and public consultation also making up a key element of this process.

This project is at the alignment optioneering stage of development, and we are consulting with local stakeholders to update them on our proposals and to share considered alignment options and the Preferred Alignment. We have identified a Preferred Alignment on which we are keen to hear your views. After receiving feedback on our Preferred Alignment and carrying out further survey work and analysis to help us refine our proposals we will confirm the Preferred Alignment and take this forward to consenting as a Proposed Alignment, undertaking an Environmental Impact Assessment to support our eventual consent application.

SSEN Transmission are now consulting on the Preferred Alignment for this new OHL within Route Option B.





Alignment – Route Alignment selection process

The OHL design contractor was instructed by SSEN Transmission to develop a Baseline Alignment for a 275kV OHL. The Baseline Alignment aims to provide the optimal alignment taking account of Environmental and Engineering criteria. Following the identification of the Baseline Alignment, amendments were suggested (referred to as 'deviations'). The following deviation options were suggested to address environment and engineering issues and previous consultation.

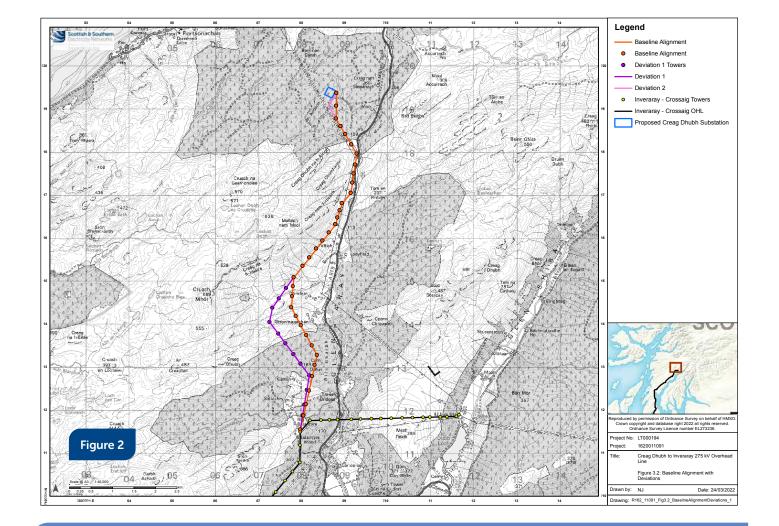
Two deviations were identified for further assessment, and reviewed in terms of cost, engineering and environment. These deviations can be viewed in the figure below.

Deviation 1

This deviation option moves the Alignment to the west in the vicinity of Stronmagachan and offers improvements in response to consultee feedback. Moving the Alignment west moves it further away from residential properties. Additionally, it reduces the impact on the working farm by moving the Alignment out of the lambing or "in-bye" fields. It also allows the Alignment to avoid being sited on top of a ridge, as the Baseline Alignment is, which may help reduce visual impact from the trunk road and/or local properties

Deviation 2

This deviation option extends the section that the new OHL will run in parallel to the existing 132 kV Inveraray to Taynuilt OHL before an angle turns towards Creag Dhubh and offers improvement in response to landowner feedback. The rationale for moving is in theory it reduces the area of land sterilisation by the two OHLs. The area of land between the existing 132 kV Inveraray to Taynuilt OHL and the Baseline Alignment will likely be sterilised due to safety concerns about being enclosed between two live lines. Extending the section that the two OHL runs in parallel, minimises the land area between the two lines and therefore limits the extent of sterilisation.



Comparative Analysis of Baseline Alignment with Deviation 1 and 2

To demonstrate the full extent of comparative analysis undertaken for each alignment option, we created Red/Amber/ Green (RAG) tables which illustrate the level of associated impact for each criterion under environment, engineering and cost. A high impact is shown as red, a medium Impact is shown as amber, and a low Impact is shown as green. For further information on the alignment options analysis, please refer to the Consultation Document available from the project webpage or on request.





Environmental

The RAG analysis has identified particular sensitivities in relation to those constraints shown in amber in the table below. Many of these do not indicate a preference between the alternative options; however, the preferences that can be drawn out are identified below.

The Baseline Alignment is preferred in relation to:

- Ornithology due to its increased distance from a golden eagle territory;
- Geology as it crosses a lesser area of Class 2 and Class 3 peatland;
- Cultural heritage as it is a greater distance from Kilmun Chapel and Burial Ground thus reducing the potential impact on its setting;
- Landscape character as it is located on higher land within the landscape character types (LCT); and
- Planning

Alignment Deviation 1 is preferred in relation to:

- Natural heritage as it avoids impacts on Ancient Woodland and oak woodland;
- Hydrology due to its increased distance from private water supplies (PWSs);
- People as it routes further away from the northern cluster of properties (the four Drimfern and two Stronmagachan residences) and is screened from view by local topography in some places;
- Landscape designations as the towers would be visible from a smaller area;
- Visual receptors as it would have fewer impacts on visual receptors; and
- Land use and recreation as it would have fewer visual impacts on recreational receptors.

Alignment Deviation 2 is preferred in relation to:

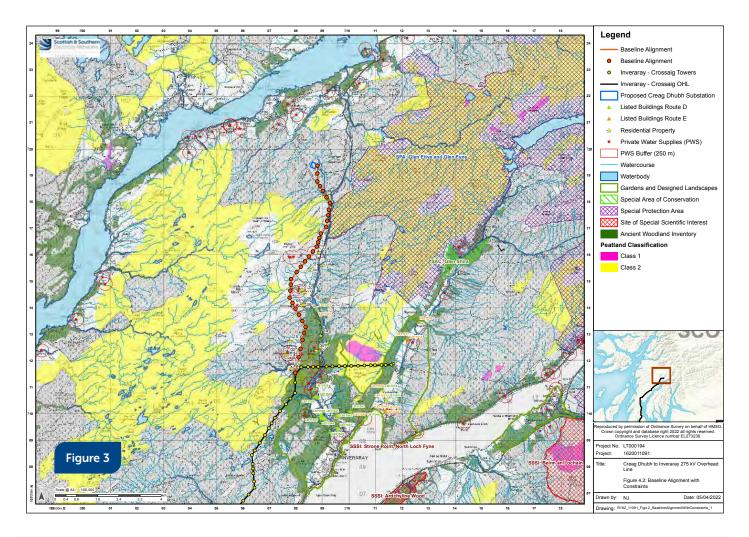
• Hydrology due to its greater distance from the River Aray.

Deviation 1 and Deviation 2 are both preferred to the equivalent Baseline Alignment sections as outlined above.









	RAG I	mpact	Rating													
suoi	Natur						Cultural Heritage		Landscape and Land Use Visual				Planning			
Alignment options	Designations	Protected	Habitats	Ornithology	Hydrology /Geology	Designated Assets	Non-designated Assets	Proximity to Dwellings	Landscape Designations	Landscape Character	Visual Receptors	Agriculture	Forestry	Recreation	Policy	Proposals
Baseline	A	A	G	A	R	A	G	A	A	A	A	G	A	A	G	A
Deviation 1	G	G	G	A	R	A	A	A	A	A	A	G	A	A	A	A
eviation 1	A	A	G	A	A	A	G	A	A	A	A	G	A	A	G	G





Engineering

Deviation 1 is preferred to the Baseline Alignment as the terrain is preferable with it being flatter enabling longer spans between towers. Additionally, it is preferred as it increases clearance between the OHL and nearby properties.

Deviation 2 is not preferred to the Baseline Alignment as it will require two larger angle towers to achieve the near 90 degree turn to connect to Creag Dhubh. This also affects the angle tower that ties into Creag Dhubh which would similarly be required to be larger. The location of the angle towers also requires an additional span over access tracks which is not preferred as it introduces further risk and additional challenges.

۶	RAG Impact Ratin	g - Engineering				
nent options	Infrastructure Cro	ossing	Ground Condition	ı	Construction and Maintenance	Proximity
Alignment	Major Crossings	Road Crossings	Terrain	Peat	Angle Towers	Clearance Distance
Baseline comparable to Deviation 1	A	G	R	G	G	A

s	RAG Impact Ratin	g - Engineering				
Alignment options	Infrastructure Cro	ssing	Ground Condition	n	Construction and Maintenance	Proximity
Alignr	Major Crossings	Road Crossings	Terrain	Peat	Angle Towers	Clearance Distance
Deviation 1	A	G	A	G	A	G
Baseline comparable to Deviation 2	G	G	A	A	A	G
Deviation 1	G	A	A	A	R	A





Cost

Deviation 1 is preferred to the equivalent Baseline Alignment from a cost perspective. It requires one less tower and significantly less felling. This will save the cost of felling the trees and the timber compensation and compensatory planting costs.

Deviation 2 is not preferred to the Baseline Alignment as the substantial angle towers required will be more expensive than those required to construct the Baseline Alignment section.

	RAG Impact	Rating						
Route	Capital	Diversions	Public Road Improvement	Tree Felling	Land Assembly	Consent Mitigations	Inspections	Maintenance
Baseline comparable to Deviation 1	A	G	G	A	A	A	G	G
Deviation 1	G	G	G	G	G	A	G	G
Baseline comparable to Deviation 2	G	G	G	A	G	A	G	G
Deviation 2	A	G	G	A	G	A	G	G



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Preferred Alignment

From south to north, the Preferred Alignment will comprise of Deviation 1 from the Inverary – Crossaig connection on to the Baseline Alignment and maintain this through to the Creag Dhubh connection. The Preferred Alignment will not make use of Deviation 2.

From an engineering perspective Deviation 1 has been selected over the Baseline Alignment as it makes use of flatter more open terrain and in doing so is able to increase distance from local properties and use less towers.

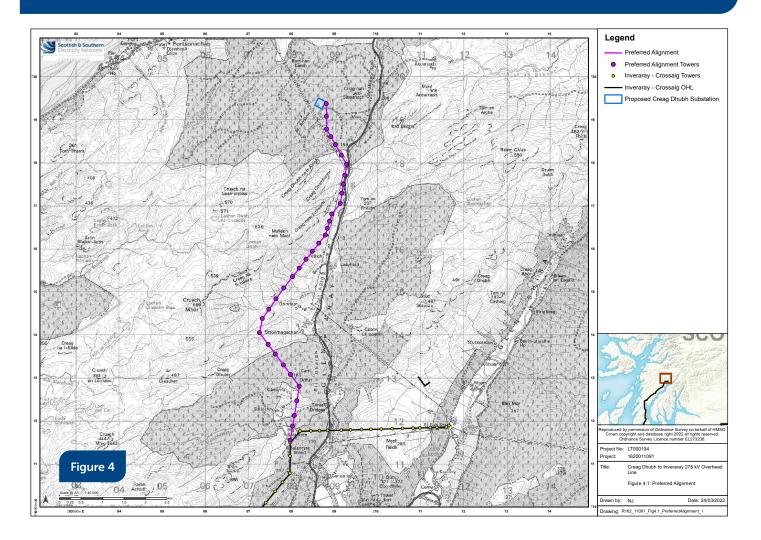
This will also reduce the impact on the local farming operations and residences. Deviation 1 will require less extensive felling, making use of previously felled areas, and should result in an overall less costly and less complex construction.

The most challenging section of the alignment is likely to be from where Deviation 1 re-joins the Baseline Alignment until after the new OHL has crossed the existing 132kV OHL.

From an environmental perspective Deviation 1 is preferred over the Baseline Alignment with respect to:

- Natural heritage as it avoids impacts on Ancient Woodland and oak woodland;
- Hydrology due to its increased distance from private water supplies (PWSs);
- People as it routes further away from the northern cluster of properties (the four Drimfern and two Stronmagachan residences) and is screened from view by local topography in some places;
- Landscape designations as the towers would be visible from a smaller area;
- Visual receptors as it would have fewer impacts on visual receptors; and
- Land use and recreation as it would have fewer visual impacts on recreational receptors.

The Preferred Alignment will not make use of Deviation 2 due to the cost and complexities of requiring the larger angle towers capable of achieving near ninety degree turns. The Preferred Alignment aims to balance these constraints and identify an alignment that is safe and practicable to construct.





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Blarghour Windfarm Connection Consultation

What is the Project

This project aims to connect the consented Blarghour Wind Farm to the proposed Creag Dhubh Substation via approximately 10km of overhead line by Spring 2026.

SSEN Transmission is proposing to construct and operate a single circuit 132kV overhead line to connect Blarghour Wind Farm to the proposed Creag Dhubh Substation (the 'proposed development'). Coriolis Energy and ESB are the developer for the 73.1MW Blarghour Wind Farm, which gained Section 36 consent on 29th October 2021. . SSEN Transmission has a statutory duty under Schedule 9 of the Electricity Act 1989 to connect Blarghour Wind Farm to the transmission network.

The proposed Project would involve:

- Felling commercial forestry to create an operational corridor to enable the safe operation and maintenance of the OHL.
- Establish temporary laydown areas for welfare facilities and material storage.
- Upgrade existing access tracks and install new temporary and permanent access tracks, where required.
- Delivery of structures and materials to site.
- Assemble and erect steel lattice or wood pole structures and stays and string conductors using hauling ropes and winches.
- Excavate trench and install any underground cable (UGC).
- Instal substation equipment within a new building at Blarghour Wind Farm.
- Remedial works to reinstate the immediate vicinity of the works and any ground disturbed to pre-existing use.





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Route Options

We have identified two potential Routes for the new overhead line. The Route selection process identifies a wide corridor in which a preferred Alignment for the overhead line can be determined.

This aims to progress towards a preferred OHL Alignment in a systematic manner, which is technically feasible, economically viable, and could be anticipated to cause the least disturbance to the environment and to those who live, work and visit the area or use it for recreation. The options are:

• Route 1

Heads northeast from the proposed Blarghour Windfarm substation for approximately 8km following the Cruach Mhor ridge line to the proposed Creag Dhubh substation. Upon exiting Blarghour substation, the route passes multiple turbines to the south of the proposed wind farm.

Route 2

Heads east from the proposed Blarghour Windfarm substation for approximately 4.8km towards Drimfern where the route then continues north following a similar route to the existing Inveraray – Taynuilt OHL running alongside the A819, before terminating at the proposed Creag Dhubh substation. Route 2 is approximately 10km long.

What are the potential risks associated with these options?

We have completed a desk based assessment of the routes and have identified that the two options present the following environmental and engineering risks:

1. Environmental

- Both route options pass through areas of blanket bog and peat. Within Route 1 there is approx.
 5.17km² of peatland present which is the largest of the two routes. In Route 2, there is approx.
 3.23km² of peatland present.
- **b.** Both route options are close to the Glen Etive and Loch Fyne SPA and there is potential for impacts to Schedule 1 birds and qualifying interests of the SPA.
- c. The northern section of Route 1 is located within the North Argyll Area of Panoramic Quality. There is potential for distant views of the OHL from the local road network to the north west and north and for the OHL to be visible on the skyline.
- **d.** No designated heritage assets are present within the route options. There are non-designated cultural heritage features that may be impacted by both route options.

2. Engineering

- **a.** Both route options present technical challenges due to the high elevation with over 50% of each route exceeding elevations of 200 m.
- **b.** Both options pass through areas of peat, which presents design challenges such as foundation design and access.
- **c.** For Route 1 the combined effects of peat and altitude may limit the design options to steel lattice towers. These are likely to result in a higher visual impact in the landscape.
- **d.** Route 2 was identified to have approximately 14% of the route within a 1 in 200-year flood zone, as it passes close to the River Aray. It is likely the OHL can be routed to avoid flood risk areas.





	RAG li	mpact R	ating												
	Natura	al Herita	ige			Cultur Herita		People	Landscape and Visual			Land U	Planning		
Route	Designations	Protected Species	Habitats	Hydrology /Geology	Ornithology	Designated	Non designated	Proximity to dwellings	Designations	Character	Visual	Agriculture	Forestry	Recreation	Planning
Route 1	м	L	н	м	м	м	L	L	м	м	м	L	м	L	м
Route 2	м	L	н	м	м	м	м	м	м	м	м	L	м	L	м

Environment RAG rating of the two route options

Engineering RAG rating of the two route options

	RAG Im	npact Rat	ting									
	Infrastructure Crossings		Environmental Design			Ground Condit		Construction and Maintenance	Proximity			Additional Considerations
Route	Major Crossings	Minor Crossings	Elevation	Contaminated Land	Flooding	Terrain	Peatland	Access	Clearance Distance	Windfarms	Communication Masts	Route Length
Route 1	L	L	н	L	м	L	н	м	L	м	L	L
Route 2	м	L	н	L	н	L	н	L	н	L	н	L





	RAG li	mpact R	ating												
	Natura	al Herita	ige			Cultur Herita		People	Landscape and Visual			Land U	Planning		
Route	Designations	Protected Species	Habitats	Hydrology /Geology	Ornithology	Designated	Non designated	Proximity to dwellings	Designations	Character	Visual	Agriculture	Forestry	Recreation	Planning
Route 1	м	L	н	м	м	м	L	L	м	м	м	L	м	L	м
Route 2	м	L	н	м	м	м	м	м	м	м	м	L	м	L	м

Environment RAG rating of the two route options

Engineering RAG rating of the two route options

	RAG Im	pact Rat	ting									
	Infrastructure Crossings		Environmental Design			Ground Conditions		Construction and Maintenance	Proximity			Additional Considerations
Route	Major Crossings	Minor Crossings	Elevation	Contaminated Land	Flooding	Terrain	Peatland	Access	Clearance Distance	Windfarms	Communication Masts	Route Length
Route 1	L	L	н	L	м	L	н	м	L	м	L	L
Route 2	м	L	н	L	н	L	н	L	н	L	н	L





How do I have my say?

We understand and recognise the value of the feedback provided by members of the public during all engagements, consultations and event. Without this valuable feedback, the Project Development team would be unable to progress projects and reach a balanced proposal to submit for planning.

We are planning on holding both face to face and virtual events. The face to face events will be subject to the Covid restrictions at the time and will go ahead if appropriate taking into consideration the safety and wellbeing of the communities we are consulting and the project team.

The feedback forms in this booklet can be detached and sent back, or you can fill them in online using the forms on the project webpages. We do request that any feedback that you wish to be included in the Report on Consultation is received in written format (feedback received via phone calls will be circulated to the project team but would not be included in reporting).

All feedback received will be collated, reviewed and included in the report on consultation which will be published on the project webpage.

Keep in touch

In you have any questions of require further information regarding either of these projects, please do not hesitate to contact the Community Liaison Manager, Caitlin Quinn:

Caitlin.Quinn@sse.com, 07901135758,

Scottish and Southern Electricity Networks, 1 Waterloo St, Glasgow, G2 6AY

If you are unable to join the face to face and virtual consultation live chat sessions, there are still plenty of ways to engage with our team:

- You can contact us by email, phone or post. Please see details for the Community Liaison Manager.
- We are happy to arrange (virtual) meetings for individuals or small groups to discuss any areas of interest and if this is something you would like us to facilitate please contact us as soon as possible.
- We are happy to post out copies of this brochure, please contact the Community Liaison Manager to arrange this.

Join our face to face and virtual consultation

Our consultation events have been organised to ensure our project teams will be available to answer questions on the following dates and times:

Tuesday 18th and Wednesday 19th May 2022 from 2pm - 7pm Loch Fyne Hotel, Inveraray, PA32 8XT

Our live chat sessions will be held at the following times:

Tuesday 24th and Wednesday 25th May 2022 from 5pm-7pm

During these sessions you will be able to send us your questions using a text chat function and they will be answered by the project team.

Feedback

As part of the consultation exercise, we are seeking comments back from members of the public, statutory consultees and other key stakeholders.

We kindly request that all comments and feedback forms are received by Monday 6th June 2022. Further information, should you require it, is available on the project webpage or can be made available in printed format by contacting the Community Liaison Manager.





APPENDIX 10: CREAG DHUBH TO INVERARAY 275 KV OHL EMAIL SENT TO STAKEHOLDERS APRIL 2022

Caroline Collis

From:	Quinn, Caitlin
Sent:	27 April 2022 09:52
Cc:	Linda Divers; gairdeeloch@gmail.com; jasc@hushmail.com; lynda.syed@btopenworld.com; Inveraray Community Council; John H; p.hargreaves71@btinternet.com; Elliott, Lisa Marie
Subject:	Argyll and Kintyre 275kV Strategy and Blarghour Wind Farm Connection Project consultation events
Attachments:	Argyll and Kintyre 275 kV Strategy poster (1).pdf

Good Morning,

Please see the attached poster making you aware of our upcoming consultation that opens on Monday the 9th of May and closes on Monday the 6th of June in relation to the Creag Dhubh to Inveraray 275kV Overhead Line Alignment and the Blarghour Wind Farm Connection Project. In order to provide an opportunity for the community to share their views with us, we would like to welcome you to the events we have organised both in person and virtual. Our in person events will take place at the following dates and times:

Wednesday 18th and Thursday 19th May from 2pm-7pm at the Loch Fyne Hotel, Inveraray.

Our live instant messaging chat sessions with the project team are organised for:

Tuesday 24th May and Wednesday 25th of May from 5pm-7pm.

The live chat sessions can be accessed through our online project portal on our webpage that will be available from Monday the 9th of May. We have produced a brochure for this event that can be viewed online, I am more than happy to post this out to local communities/individuals. If you could give me any suggestions of where I should maybe send some copies of the brochure, I'd really appreciate it.

We encourage you to give us feedback during this time using the feedback forms on the website or by posting them to us; we can accept feedback by email, phone and post.

If you require any further information please don't hesitate to get in touch.

Kind Regards,

Caitlin



TRANSMISSION Caitlin Quinn Community Liaison Manager M: 07901135758 E: <u>caitlin.quinn@sse.com</u> 1 Waterloo St, Glasgow, G2 6AY



www.ssen-transmission.co.uk