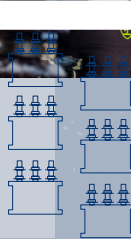
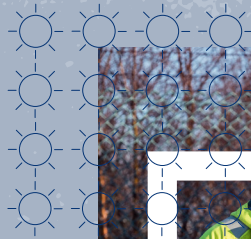


Fanellan 400kV substation and converter station

Pre-application consultation feedback event

June 2024



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The consultation events will be taking place on:

Wednesday 19 June, 2–7pm,
Phipps Hall, Beauly, IV4 7EH

Thursday 20 June, 2–7pm,
Kiltarlity Village Hall, Kiltarlity, IV4 7HH



Powering change together

The time has come to further enhance Scotland's energy infrastructure, providing power for future generations as we move towards net zero.

The shift to a cleaner, more sustainable future is about more than climate change. It's about ensuring future generations have the same opportunities to thrive as we have all had.

Countries around the world are investing in their energy infrastructure to support the demands of modern economies and meet net zero targets. The UK is leading the way in building a modern, sustainable energy system for the future.



We all have a part to play

When it comes to net zero, we have to be in it together. The UK and Scottish governments have ambitious net zero targets, and we're playing our part in meeting them.

We work closely with the National Grid Electricity System Operator to connect vast renewable energy resources—harnessed by solar, wind, hydro and marine generation—to areas of demand across the country. Scotland is playing a big role in meeting this demand, exporting two thirds of power generated in our network.

But there's more to be done. By 2050, the north of Scotland is predicted to contribute over 50GW of low carbon energy to help deliver net zero. Today, our region has around 9GW of renewable generation connected to the network.

At SSEN Transmission, it is our role to build the energy system of the future.

We're investing £20 billion into our region's energy infrastructure this decade, powering more than ten million UK homes and creating 20,000 jobs, 9,000 of which will be here in Scotland.



More information about the policies and documents driving the need for the energy system for the future can be found here:

Who we are

We're responsible for maintaining and investing in the electricity transmission network in the north of Scotland. We're part of SSE plc, one of the world's leading energy companies with a rich heritage in Scotland that dates back more than 80 years. We are also closely regulated by the GB energy regulator Ofgem, who determines how much revenue we are allowed to earn for constructing, maintaining and renovating our transmission network.

What we do

We manage the electricity network across our region which covers a quarter of the UK's land mass, crossing some of the country's most challenging terrain. We connect renewable energy sources to our network in the north of Scotland and then transport it to where it needs to be. From underground and subsea cables and overhead lines to electricity substations, our network keeps your lights on all year round.

Working with you

We understand that the work we do can have an impact on our host communities. So, we're committed to minimising our impacts and maximising all the benefits that our developments can bring to your area. We're regularly assessed by global sustainability consultancy AccountAbility for how we engage with communities. That means we provide all the information you need to know about our plans and how they will impact communities like yours. We want to hear people's views, concerns, or ideas and harness local knowledge so that our work benefits their communities: today and long into the future. You can share your views with us at: ssen-transmission.co.uk/talk-to-us/contact-us/

The Pathway to 2030

Building the energy system of the future will require delivery of significant infrastructure over the next few years. In partnership with the UK and Scottish governments, we're committed to meeting our obligation of connecting new, renewable energy to where it's needed by 2030.

Achieving Net Zero

By 2030, both the UK and Scottish governments are targeting a big expansion in offshore wind generation of 50GW and 11GW respectively. The Scottish Government has also set ambitious targets for an additional 12GW of onshore wind by 2030.

Across Great Britain, including the north of Scotland, there needs to be a significant increase in the capacity of the onshore electricity transmission infrastructure to deliver these 2030 targets and a pathway to net zero.

Securing our energy future

And it's not just about net zero. It's also about building a homegrown energy system, so that geopolitical turmoil around the world doesn't severely impact the UK and push up energy prices.

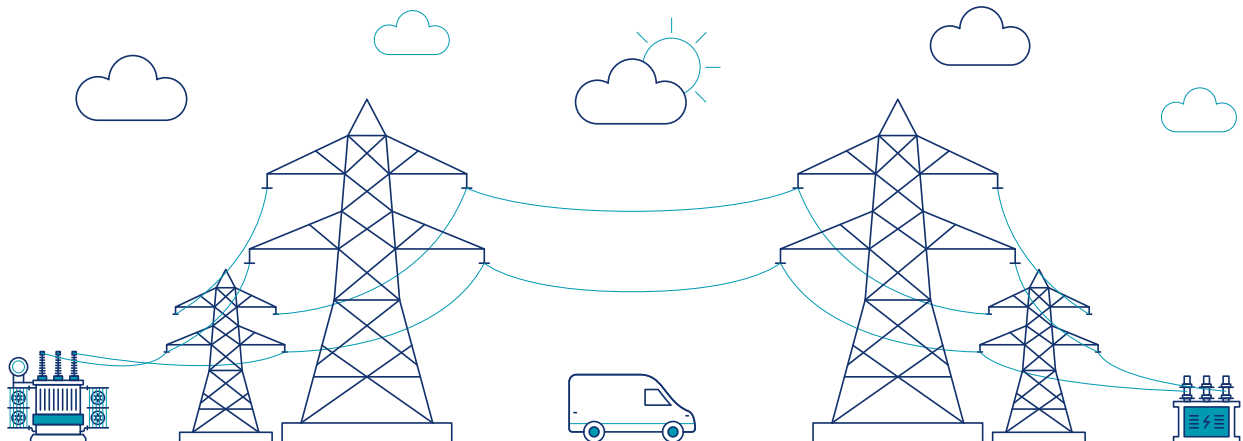
The UK Government's British Energy Security Strategy further underlines the need for this infrastructure, setting out plans to accelerate homegrown power for greater energy independence. The strategy aims to reduce the UK's dependence on and price exposure to global gas wholesale markets through the deployment of homegrown low carbon electricity generation supported by robust electricity network infrastructure.

Meeting our 2030 targets

In July 2022, National Grid, the Electricity System Operator (ESO), published the Pathway to 2030 Holistic Network Design (HND). This set out the blueprint for the onshore and offshore transmission infrastructure that's required to support the forecasted growth in the UK's renewable electricity. It's an ambitious plan that will help the UK achieve net zero.

What does this mean for the North of Scotland?

The North Highlands will play a key role in meeting these goals. The extensive studies that informed the ESO's Pathway to 2030 HND confirmed the requirement for a new 400kV substation and converter station in the Beauly area. This will connect the proposed new 400kV overhead line reinforcements from Spittal and Peterhead together with the new Western Isles link.



Future network investment requirements

Our 2030 targets are the first step on the transition to net zero. The UK Government has a target to decarbonise our electricity system by 2035 and fully decarbonise our economy by becoming net zero by 2050, with the Scottish Government committing to net zero five years earlier, by 2045.

To achieve these targets, further investment in new low carbon electricity generation and the enabling electricity transmission network infrastructure will be required.

The next stage of strategic network planning across Great Britain has now been outlined in the independent Electricity System Operator, National Grid ESO's, 'Beyond 2030' report, published in March this year. For the north of Scotland, the ESO's plan recommends several new and upgraded onshore and offshore reinforcements that the ESO has assessed are required to help deliver net zero targets. These projects, which will be subject to extensive public consultation, are at the very early stages of development and further details will be set out in due course.

- New infrastructure**
- Upgrade/replacement of existing infrastructure**
- Existing network**



The story so far

Early 23



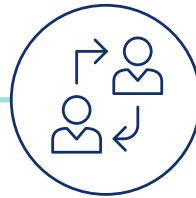
We held a public event on 2 March to introduce the project, consult on site options and gather feedback.

April 23



The site options consultation feedback period closed on 14 April with over **160** written responses received.

Mid 23



We continued engaging with stakeholders. The Highland Council and community members requested that the Balblair quarry area was assessed as a potential site option.

Dec 23



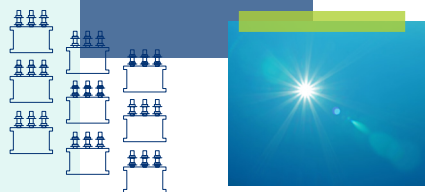
We published our Report on Consultation, confirming Fanellan as the proposed site option selected for further development.

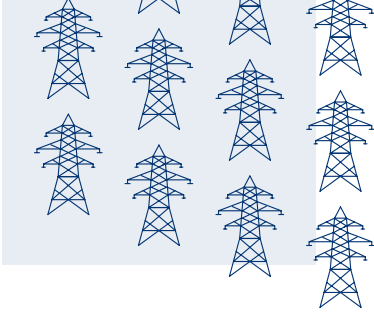
Help shape our plans

The work we have planned is significant and has the potential to deliver massive benefits in your community, Scotland, and beyond. Yet we know that achieving our goals will require a lot of work that will impact your lives. That's why we want to work with you every step of the way throughout the planning and delivery stages of these essential and ambitious works.

We're committed to delivering a meaningful consultation process that actively seeks the views of everyone affected by our plans. That means making our plans clear and easily accessible, so that you can give us input throughout each stage of the development process.

Throughout the consultation, we'll present our approach to developing the project, including changes made since we last consulted with you. We will also provide some visualisations and maps to show you where everything will be located and to allow you to see what the proposed substation will look like. These will all also be available to view and download from our project website.





Feb 24¹



We submitted our Proposal of Application Notice (PAN) on 21 February 2024 to The Highland Council.

March 24



The first of two sequential public consultation events triggered by the submission of the PAN were held in Kiltarlity and Beaully.

June 24



The second statutory public events are being held in Kiltarlity and Beaully.

What we are seeking views on

We want you to share your thoughts and opinions on our plans, where you think we can make improvements, concerns about the impact of our work and what you think of the refinements or changes we've made.

This event is the second of two planned, sequential, public consultation events following the submission of the Proposal of Application Notice (PAN). The PAN submission triggered the initial formal Town and Country Planning (major application) consultation process for this site, including the 12-week (minimum) pre-application consultation period.

Following the initial consultation event, the project team has sought to ensure that comments or concerns raised have informed, where possible, the primary considerations for the designs as they have progressed. This includes substation layout design, landscaping enhancement and screening. Outside of the formal consultation periods and events, we have continued to provide a dedicated webpage for the projects and liaise with a wide range of stakeholders to help inform the development and design.

We are therefore holding this feedback event to present our proposed substation design, which has been informed by stakeholder feedback, and have set out our responses to feedback received to date.

By telling us what you think, you will help shape our proposals. We want to harness your local knowledge so that we spot any unforeseen challenges early and maximise the potential benefits and opportunities for your communities.

Because, ultimately, we want to work with you to ensure that the energy infrastructure we build will be the best it can possibly be.

Who we are consulting with

As well as communities, we are keen to hear feedback from a broad range of other stakeholders including but not limited to landowners, businesses, non-statutory consultees, and statutory consultees such as local authorities, NatureScot, Scottish Environment Protection Agency (SEPA), Historic Environment Scotland (HES) and Scottish Woodlands.

¹Please note there was an error in our PAC1 event materials that stipulated this was submitted in January 2024 which was incorrect. The PAN was submitted 21 February 2024.

Project overview

We're leading some exciting projects to power change in the UK and Scotland. To support the delivery of 2030 offshore wind targets set by the UK and Scottish Governments, and to power local communities, we need to upgrade our existing network. In some key areas, we need to develop entirely new infrastructure, and quickly.

Fanellan 400kV substation and converter station

The proposed new Fanellan substation and converter station is a strategic development which is required in the Beauly area.

It will provide connections for the Western Isles Connection project, the Beauly to Peterhead 400kV and the Spittal to Beauly 400kV overhead line projects. In addition, a section of the existing Beauly–Denny overhead line near Fanellan will initially be diverted around the new 400kV substation and converter station and will tie-in to the substation.

It will provide connections for:

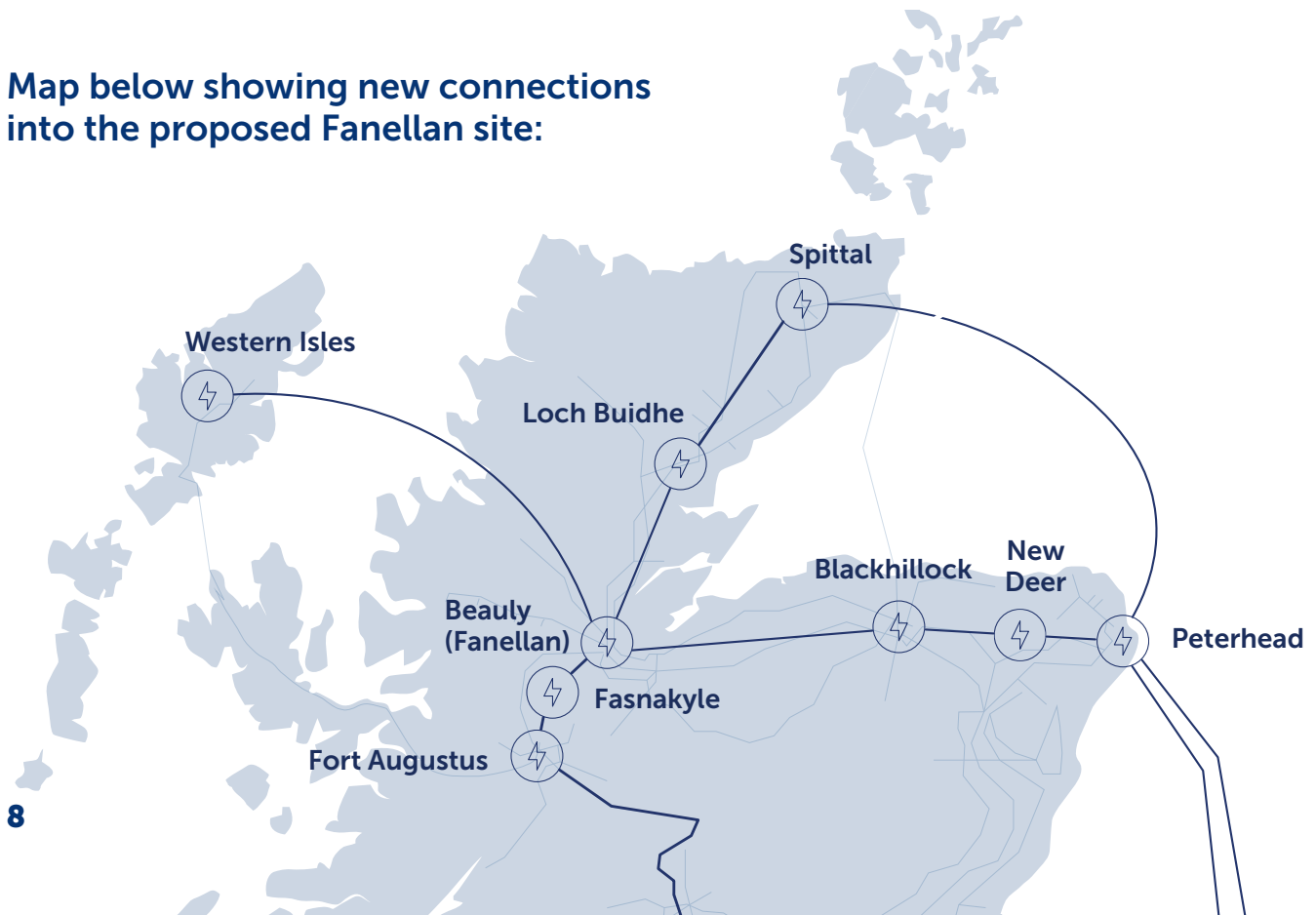
- New Spittal–Loch Buidhe–Beauly 400kV overhead line
- New Beauly–Blackhillock–New Deer–Peterhead 400kV project
- New Western Isles link connection into the HVDC converter station

A joint solution

Following extensive studies and assessments of alternative sites it was concluded that the optimum solution was to locate both new installations on a single larger site rather than two separate sites.

The advantages are the avoidance of lengthy AC (Alternating Current) connecting cables and reduced visual impact from co-locating this new infrastructure in one location.

Map below showing new connections into the proposed Fanellan site:



Project elements for the substation



What is a substation?

An essential component in the energy network, substations connect sources of generation, such as wind farms and power stations. They connect overhead and underground circuits and can connect nearby utility systems. Substations manage electricity flows within the network, which can include connection and disconnection of circuits to direct the flow, transform voltages to higher or lower ratings (step-up or step-down—for example 275kV stepping-up to 400kV), manage the frequency of the electricity and increase efficiency and reliability of the power supply.

Other key substation functions

Substations are critical in maintaining an efficient and healthy energy network, as they monitor and report back to operators on statistics and events to provide live information on our network. This allows for the following functions:

- Fault monitoring and identification which allows for isolation to protect the network and allow repairs.
- Allow for redirection and disconnection of energy to allow for demand/maintenance.
- Provide data such as voltage, current and power flow to allow for efficient running and future predictions.

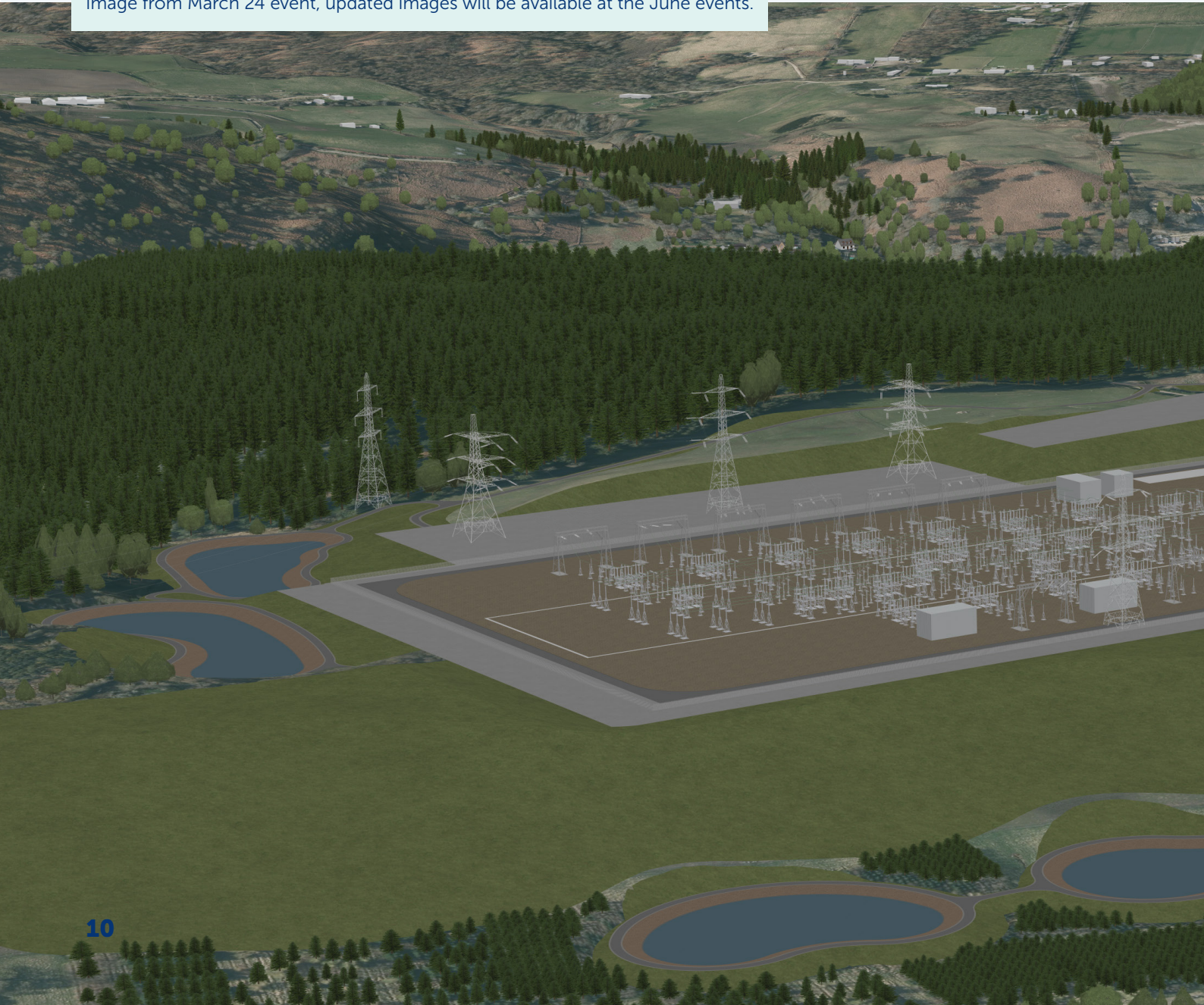
Substation project elements

Both the substation and converter station projects will share common access, security arrangements, site drainage and landscaping. A new access point from Fanellan Road, adjacent to the site, will be used to create the required compounds, laydown and storage areas in the initial stages. An additional access road is also being proposed further east of the site, at the main junction, which will eventually be used as the main construction haul road and permanent access. This would then follow the route of the existing Beauly–Denny overhead line into the new Fanellan substation and converter station site to facilitate heavier construction traffic. This will reduce construction traffic on Fanellan Road. Access tracks around the site perimeter are also required to facilitate general maintenance.

The proposed Fanellan 400kV substation shall comprise:

- The AC substation platform, indicatively 305m x 525m.
- AIS switchgear and busbar, to connect incoming circuits including the HVDC converter station and to facilitate the cable connection from the HVDC converter station.
- Step-down transformers, to provide the site with a Low Voltage Alternating Current (LVAC) supply.
- A control building, indicatively 50m x 25m, maximum height 8m.
- Existing access point from Fanellan Road to be used for construction access, subject to road upgrades.
- Construction of a haul road and longer term permanent access, for heavier load vehicles and to reduce extent of public road use.
- Sustainable Drainage Systems (SuDS) and access for maintenance.
- Temporary access tracks for overhead line construction activities, temporary construction compounds and temporary storage compounds for topsoil and materials (size and location to be agreed).
- Land required on a temporary basis during construction for temporary construction laydown, equipment storage, site offices and welfare facilities.
- Site clearance activities, including some tree felling.

Image from March 24 event, updated images will be available at the June events.



Our consideration of Gas Insulated Switchgear (GIS) at 400kV

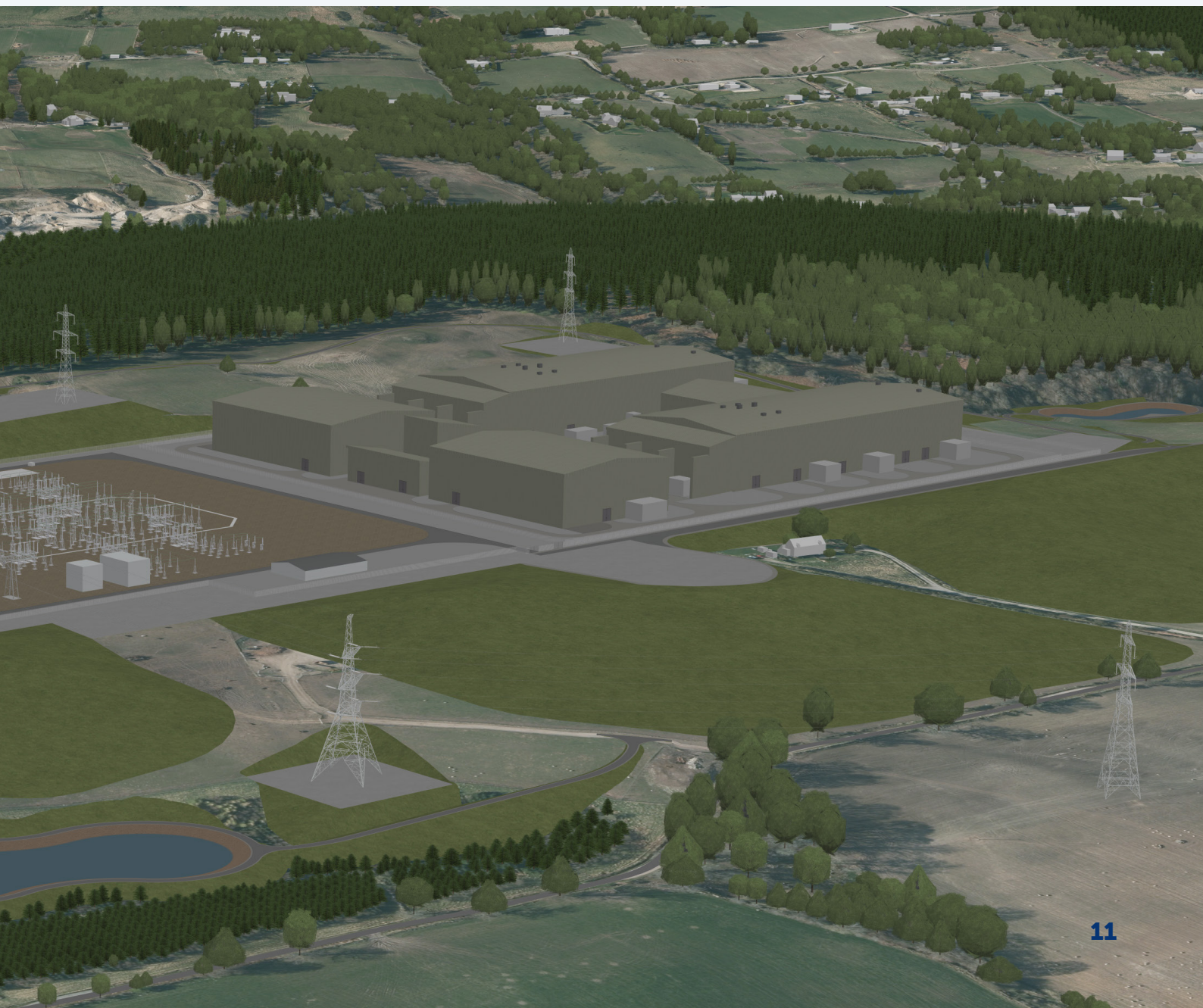
An Air Insulated Switchgear (AIS) substation is constructed with switchgear which relies on open air components. This means infrastructure must be positioned with sufficient clearance from other components in order to allow for safe operation and maintenance. This typically takes up a larger area of land than Gas Insulated Switchgear (GIS) which relies on housed components.

Feedback received for the substation was in favour of GIS technology and initially, this was a consideration. Through project design and further study there is a fundamental difference in the GIS technology used at 132kV (such as that being built for the Beauly 132kV project at Wester Balblair) and higher voltages, such as 400kV. It is more straightforward to connect high voltage cables directly

to 132kV GIS, this becomes more complex with 400kV GIS, which then necessitates the use of lengths of Gas Insulated Busbar (GIB). Therefore, increasing the size of the substation footprint.

Across Pathway to 2030 projects, GIS will only be progressed at sites where environmental requirements (such as coastal locations) dictate an indoor solution was required. In those cases, the downsides associated with a 400kV AIS substation indoors made GIS more favourable.

Our approach to AIS vs GIS across the whole Pathway to 2030 portfolio in general and at each site including Fanellan, has been presented to Ofgem over recent months; Ofgem agreed with our approach.



Project elements for the converter station

What is a converter station?

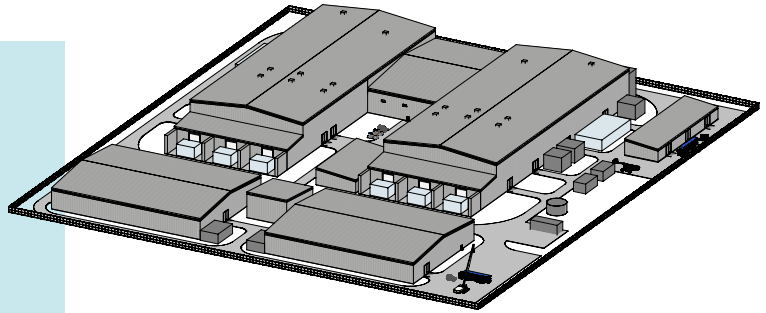
Converter stations change electricity from alternating current (AC) to direct current (DC), or vice versa. Alternating current is used in households, whereas direct current is used to efficiently transport electricity over long distances, such as via subsea cables, with fewer electrical losses.

HVDC project elements

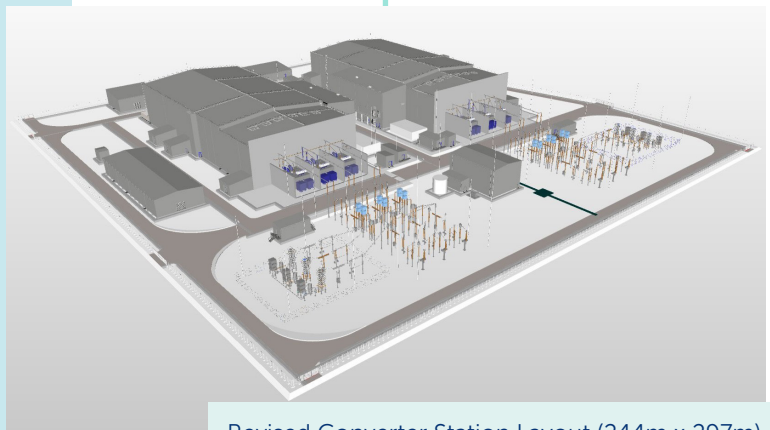
- Two Main Converter Pole Buildings (63m by 123m by 26.4m). Each converter building has an attached service building of dimensions 51m by 17m by 23.2m.
- An Outdoor AC Filter Yard.
- Smaller ancillary and support buildings around the perimeter of the main converter station buildings.
- Underground cable connection from Fanellan to Dundonnell (circa 80km), and subsea cable (circa 80km to Isle of Lewis).

Following the PAC1 events in March our technology provider and building designer have further refined the proposed converter station design. As a result of this work, the following improvements have been made;

- HVDC platform has reduced in area by 16.5%.
- Buildings around the AC filter equipment removed completely.
- The main HVDC converter buildings have reduced by 44%.
- AC filter buildings removed completely.
- The height of the main converter building reduced by 2.5m.



Indicative HVDC Converter Station layout presented at PAC1 (290m x 350m).



Revised Converter Station Layout (244m x 297m).

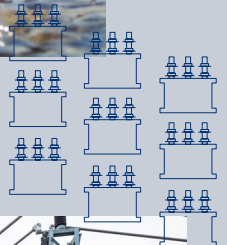


The 320kV DC 1200MW Blackhillock HVDC converter station

What size is the platform?

The total platform size (base of the site) containing both the substation and converter station has been reduced since our public events in March and will be approximately 305m x 837m, which includes a 4m high security fence.

Landscape forms at the front and side of the platform will help to screen the development and there are requirements for SuDs ponds for drainage and Biodiversity Net Gain (BNG) enhancements.



Beauly–Denny 400kV overhead line diversion

The existing Beauly–Denny 400kV overhead line crosses the proposed Fanellan 400kV substation and converter station site.

This overhead line will therefore require a section of diversion to:

- Enable the Fanellan 400kV substation and converter station to be built.
- Facilitate the connection of the Fanellan 400kV substation to the existing Beauly–Denny overhead line. This will enable the connection between the Fanellan substation and the existing Beauly substation at Wester Balblair and the wider electricity network.

The permanent diversion will consist of six towers being installed to divert the existing overhead line around the proposed substation development on the northern side. In total the number of towers will change from 4 (existing overhead line) to 6 (newly diverted overhead line) in order to allow for redirecting the conductors and for the final tie-in to the new site. This results in approximately 1.7km of modified 400kV overhead line.

A temporary diversion will also be needed to allow for replacement of two existing towers. At this stage it is anticipated that the temporary diversion will be to the south of the existing Beauly Denny overhead line between the new Fanellan substation and converter station and Fanellan Road.

There will also be a temporary diversion of the telecoms fibre. Access tracks, temporary compounds and laydown areas will be needed to facilitate construction of the overhead line and these may be shared with the proposed Fanellan substation and converter station to maximise efficiencies and minimise disturbance. The access tracks created will remain permanently for operational use. Drainage will also be shared with the substation and converter station site.

Some tree felling will be needed to accommodate safety clearances for the overhead line diversion. The overhead line diversion and temporary telecoms diversion will not form part of the formal planning application for the Fanellan substation and converter station and will be progressed under a separate consenting regime by the Energy Consents Unit of Scottish Government (telecoms fibre which may be covered by Permitted Development).

As all overhead lines of 132kV and above fall into the relevant regulations, an Environmental Impact Assessment (EIA) screening opinion will be sought from the Energy Consents Unit to confirm whether or not an EIA is required. If our project is deemed non-EIA (due to its scale or potential environmental impacts), a voluntary Environmental Appraisal (EA) may be produced by us to support the consent application.

This assessment would be made publicly available once submitted.

The Fanellan site

About the site

Following site selection consultation, we advised that our Option 7 site at Fanellan, had been selected as our proposed site for the substation and HVDC converter station ahead of our first Pre-Application Consultation event earlier this year.

The site is located east of Kiltarlity and southwest of the existing Balblair substation. It was considered best on balance because it reduced engineering complexities, whilst offering the best opportunity to limit overall environmental impacts on the wider area for the following reasons:

- It limits the work to the Beaulay–Denny OHL, the distance for the Spittal–Beaulay 400kV OHL connection and removes the need for an underground cable to connect the AC and HVDC sites.
- It presents substantial opportunity to mitigate visual impacts with landform and planting opportunities.
- It is preferred from environmental conditions as well as from a biodiversity, geology and hydrology perspective.
- The combined site minimises total collective adjacent land impact through sharing a platform, maximises the space available and is considered the most technical and cost-effective solution.

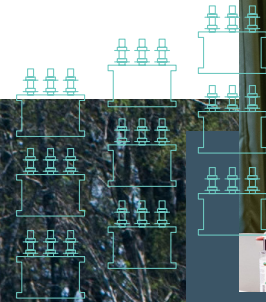


Fanellan 400kV substation and converter station

However, feedback from the earlier consultation process in 2023 recommended that we consider alternative sites in the site selection process, which included a site near West of Broallan and four sites in close proximity to the existing quarry at Balblair. This culminated in a review of potential options.

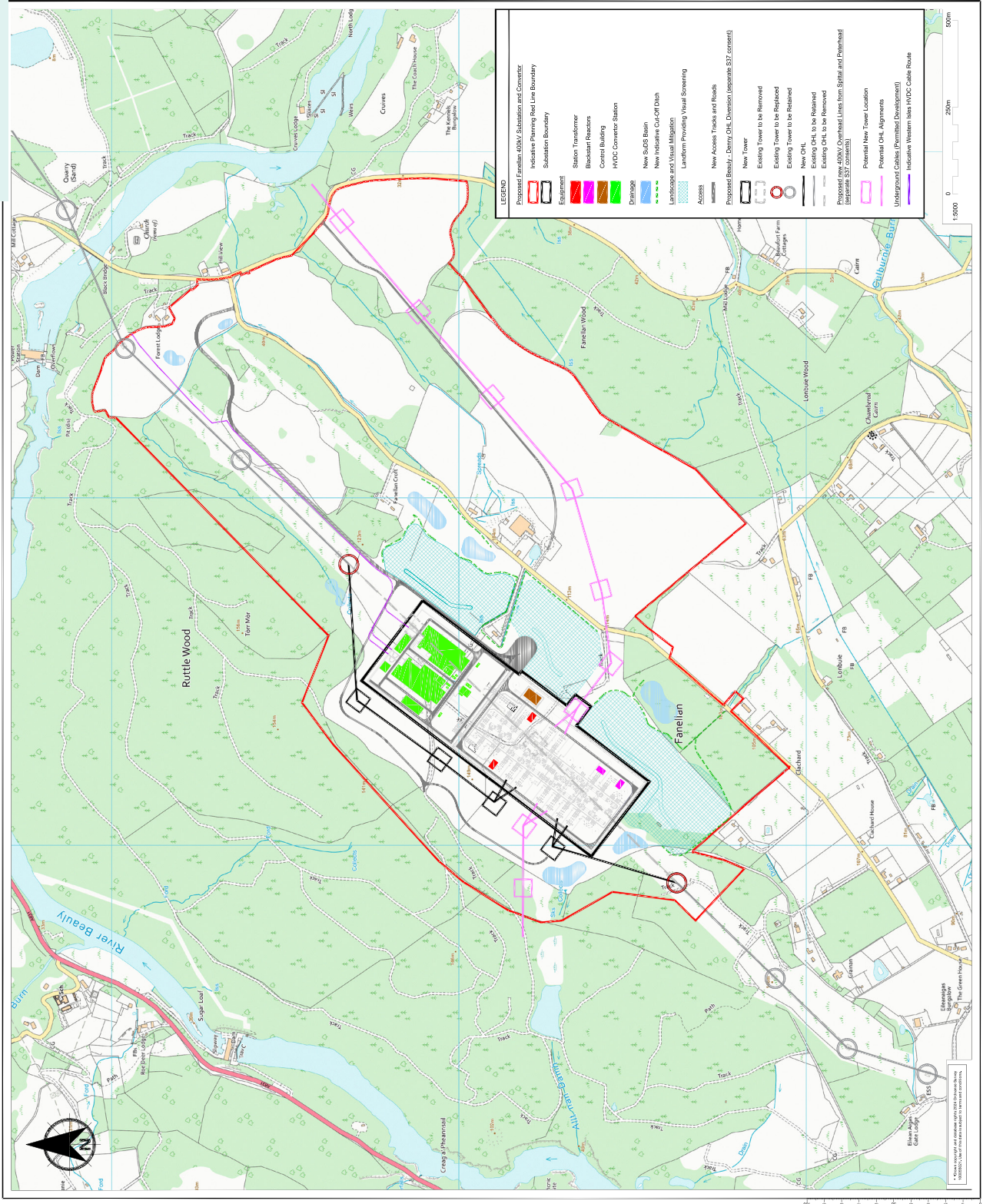
These sites were assessed using the same site selection process as that used previously, however, it was found that none of these options performed better than Option 7 (combined). The main challenges with each of these additional options were engineering and constructability, connection to the existing Beauty-Denny 400kV OHL, limited space for ancillary works such as temporary compounds and landscaping, proximity to residential properties and thus noise, flood risk and proximity to cultural heritage.

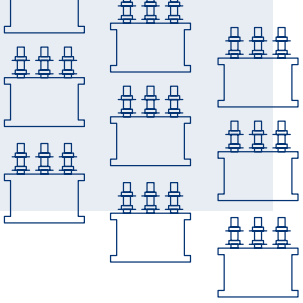
The Highland Council has specifically requested for us to consider the option, whereby the HVDC converter station is located at Quarry A and the substation at Option 7. We completed a full assessment of this option, however there are clear technical and environmental justifications for why this option is not suitable and this will be explained in the Environmental Impact Assessment supporting the planning application. All additional site options scored less favourably than Option 7.



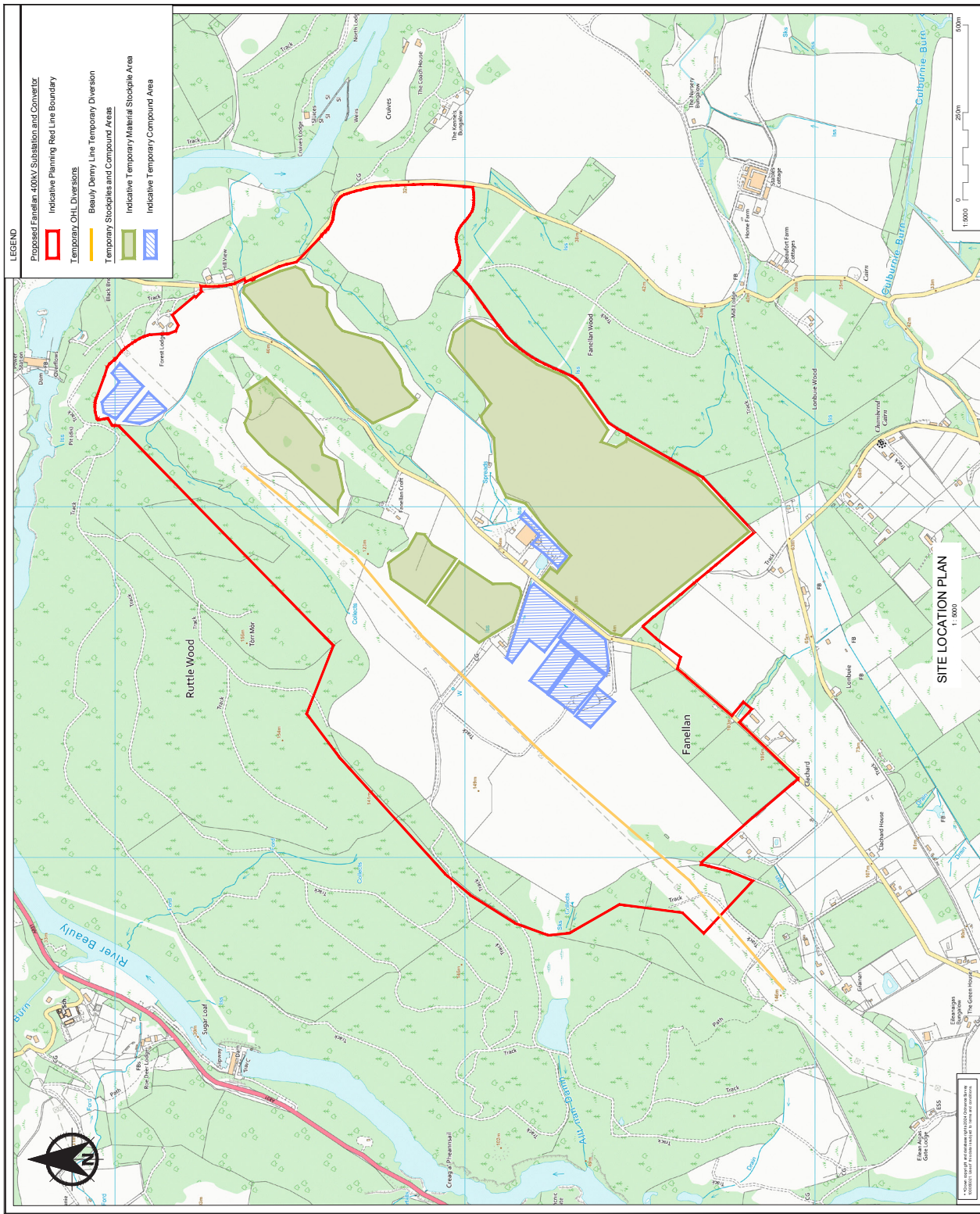
Project layout maps

Permanent layout map





Fanellan 400kV substation and converter station



Temporary layout map

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What you told us

Following submission of the PAN in February 2024, the first of two pre-application consultation events were held at Kiltarlity Village Hall on 26 March and Phipps Hall in Beauly on 28 March 2024. A total of 115 attendees were happy to have their details recorded, however, total attendance figures were far greater.

During the 8 week feedback period which closed on 9 May 2024, 98 written responses were received specific to this project through feedback forms and emails.

Most responses were general objections to the project itself and questioned the need for the project. Whilst this feedback is acknowledged, only tangible, direct feedback specific to the development of the proposals is summarised and responded to within the following table.

Some respondees requested that the brownfield site at the quarry near Wester Balblair be used to split the location of the substation and converter station. This has been fully assessed as part of the Site Option Assessment and is covered in the Report on Consultation which is on the project webpage.

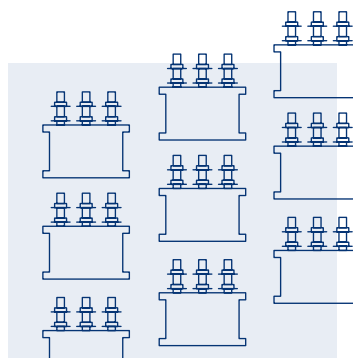
Many of the responses also posed general questions covered in our Frequently Asked Questions (FAQ) Page and additional handouts such as project need, compensation, health impacts, challenges of undergrounding at 400kV and more information regarding these topics and more can be accessed at: ssen-transmission.co.uk/2030faqs

Find out more:



Scan the QR code with your smartphone to find out more information.

We have included summaries of both written and verbal feedback from during the consultation events and meetings with residents alongside statutory stakeholder feedback through the PAN and pre-application process, as well as design feedback, within the following pages.



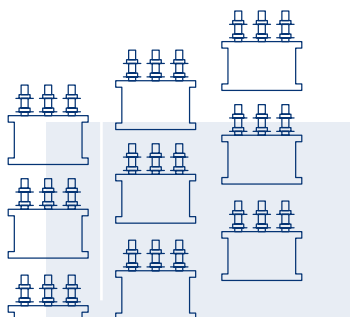
Event feedback:

Theme	Response
<p>Pre-Application Notice (PAN) Boundary Map</p> <p>Concerns from residents over the extent of the Red Line Boundary map were received, with some concerned the substation platform had increased in size.</p>	<p>The PAN Boundary Map issued in February 2024 was an indicative extent of total temporary and permanent land requirements at that stage of project development. These initial plans tend to be larger than the final requirements to allow for the unknowns at the early project stage and to prevent the requirement to re-start the planning timeline in the event that an increase be required at a later date.</p> <p>Since our March events the project team has been refining the permanent and temporary land requirements in discussion with landowners. This will be further reviewed as the project progresses to planning submission in late Summer 2024.</p>
<p>Noise</p> <p>Concerns were received from local residents regarding locations of noise monitoring equipment, with requests for an independent company to carry out noise monitoring at their properties.</p> <p>Construction and Operational Noise</p> <p>General concerns regarding noise during construction and operation were received.</p>	<p>Our noise consultants are independent, third party, specialist noise and vibration consultants. Receptors chosen are representative of the closest properties surrounding the Proposed Development and have been agreed with The Highland Council.</p> <p>The properties selected for monitoring will have the highest anticipated noise impact from the Proposed Development, and therefore if the chosen properties meet noise criteria then any property at greater distances will also pass the criteria.</p> <p>The information collected from the noise monitoring survey at receptor locations will provide the baseline noise data for the project i.e. a record of what the noise level is pre the proposed development.</p> <p>Our contractors will be required to comply with current guidance on noise from construction sites, as set out in British Standard BS528. They will produce a noise management plan as part of their Construction Environmental Management Plan, which has to be agreed to by The Highland Council through planning condition.</p> <p>We have clear operational noise limits to achieve which are being imposed by The Highland Council’s Environmental Health Team, which requires the operational noise from the site to not exceed 30dB at any noise sensitive properties and the rating level of the operational noise from the site must not exceed the current background noise levels at noise sensitive properties.</p> <p>Now the project design has been sufficiently progressed, the noise consultants will model the predicted noise levels (based on design information) within the context of the site setting. They will produce construction and operational noise impact assessment reports which will set out the baseline noise and predicted noise results from the model and assess the impacts from the project on the surrounding noise sensitive receptors. The report will also make recommendations for noise mitigation where necessary to ensure no significant impacts arise from the development.</p> <p>All this information will be available as part of the EIA which will be published with the planning application.</p>

Theme	Response
<p>Dust and Light Pollution</p> <p>Dust and lighting during and post construction were also raised as potential impact concerns.</p>	<p>Construction working will be restricted as far as practicable to be during daytime periods only. During winter months when there is reduced daylight, lighting will be required to aid construction activity and will be switched off when not in use.</p> <p>A Light Management Plan will be adopted by our contractor to minimise any impacts associated with this. During operation, lighting would be installed at the substation but would only be used in the event of a fault during the hours of darkness, during the over-run of planned works, or when the sensor is activated as security lighting for nighttime access. Any out of hours working will need to be agreed in advance with The Highland Council.</p> <p>Dust will be managed in line with the Construction Environmental Management Plan produced by our contractor which will need to be agreed through planning condition with The Highland Council. These will require weather and ground conditions to be monitored and dust suppression/wheel washes etc to be employed on work areas and transport routes. The proposed new substation will not be permanently illuminated and will operate as a dark site.</p>
<p>Site Location and Substation Preference for GIS over AIS technology</p> <p>Feedback indicated a preference for the substation to be GIS technology and to be located adjacent to the convertor station at Balblair quarry site.</p> <p>A question raised was why can GIS be used at other 400kV substations.</p>	<p>The project found no significant footprint benefits with a GIS option due to additional equipment/busbars required to link into the circuits. A GIS arrangement would not be limited to only a building and the requirements are equal to if not worse than AIS arrangement.</p> <p>Our assessment as to why we chose not to site the converter station adjacent to the existing Beaully Substation at Balblair, will be included in our EIA.</p> <p>It has been noted as a comparison that Kintore is a GIS site, however the intervening four years has been a fast-moving period for the transmission industry and SSEN Transmission is no different. Specifically, we have revisited how GIS solutions are implemented, particularly those that need GIB. (GIB being the outdoor Gas Insulated Busbar sections, whilst the main Gas Insulated Switchgear is housed inside buildings.) At this time, our evaluation of the criteria for Fanellan has led us to conclude that AIS is the preferred technology for the substation.</p>
<p>Workforce accommodation</p> <p>Concerns that the workforce will live on the site were raised.</p>	<p>We are currently developing working groups to determine the most suitable accommodation strategy for our Pathway to 2030 projects. This includes working with internal and external partners including Local Authorities to develop an accommodation strategy and plan to provide suitable and appropriate solutions and lasting benefit where possible. There will not be workers accommodation on the Fanellan site.</p>
<p>Wildlife impacts</p> <p>Feedback included concerns the project could be endangering wildlife and local habitats, including local birdlife which includes red, amber and green species and endangered species.</p>	<p>Habitat and protected species surveys are being completed by third party, independent consultants using their ecological and ornithological specialists to collect data, determine the impact to ecology and ornithology from the proposed project and propose suitable mitigation measures required to protect wildlife and habitats.</p> <p>The EIA will include a chapter on this and will be submitted with the project planning application and will be publicly available through the planning application portal. Our separate s37 consent application for the Beaully-Denny OHL diversion will be submitted with a voluntary Environmental Appraisal which will also have a chapter on ecology and ornithology.</p>

Theme	Response
<p>Construction traffic and Access Tracks</p> <p>Potential impact on roads in the surrounding area for traffic accessing site.</p> <p>Construction traffic should be coordinated with residents to avoid times of getting to and from work/school and provide safe paths for walkers over the Blackbridge.</p> <p>Flooding and drainage concerns in the field proposed for the access track.</p>	<p>We understand that with large construction projects, increased construction traffic and road condition will often cause concern. In developing the proposals for Fanellan, traffic and road use is a primary consideration for us and our contractors.</p> <p>An initial construction traffic routing assessment has been undertaken to establish the most appropriate routes for construction traffic travelling to and from the site. To support this, an Abnormal Loads Assessment report will also be undertaken for larger equipment being delivered to the site, this includes assessments around the use of Blackbridge. A package of Public Road Improvements will also be delivered prior to construction to ensure the local roads are suitable for the construction traffic.</p> <p>Our Contractor will prepare and adopt a Construction Traffic Management Plan (CTMP) to ensure that appropriate mitigation and management strategies are identified and implemented. This will include the identification of road widening, junction improvements or repairs that will be required. It will also ensure a defined route is agreed with the council.</p> <p>Condition surveys of the public highway will be carried out before works start on site, and again upon completion, with any defects repaired to ensure the public highway is left in no worse state once the works are complete.</p> <p>In addition, we recognise the importance of separating construction traffic from the single-track road which is located at the south of the site. Therefore, a substation specific access road has been proposed for construction traffic and will be constructed prior to the main substation construction works commencing.</p>
<p>Screening visual impact</p> <p>Stakeholders requested more information and visuals showing how the site will be screened.</p> <p>Viewpoints towards the site should be taken from the Ruttle lochan.</p> <p>The platform should be sunk as low as possible.</p> <p>Feedback included colour preferences for the buildings and fencing as requested.</p>	<p>The landscape strategy for the development is currently being drafted and will be informed by the Landscape and Visual Impact Assessment (LVIA) undertaken as part of the EIA.</p> <p>The current proposals deliver boundary screening in the form of landscape forms (in conjunction with sinking the platform) and will include planting that seeks to mitigate the visual impact of the development and soften its appearance within the local environment. We are grateful for your feedback on colour suggestions and confirm that the colour of buildings located within the development will be selected to best mitigate visual impact, taking into account The Highland Councils wishes.</p> <p>Viewpoints have been discussed and agreed with The Highland Council Landscape Officer. A 3D model of our current design will be available at the next Fanellan Substation and Converter Station events in June 2024.</p> <p>We received a mix of responses which included requests for greens, browns and blacks or a mix to camouflage in a matt finish. Subdued greens and browns were noted as prominent requests, alongside requests for as much native planting as possible. At the stage of submitting our planning submission, we will make a suggested colour selection taking account of public feedback and feedback from The Highland Council during pre-application discussions. This will be our preferred option and submitted to The Highland Council (THC) but will be subject to final approval by THC as the local authority.</p>

Theme	Response
<p>Community Concerns around the impacts on Ruttle Woods such as:</p> <ul style="list-style-type: none"> • The amount of required tree felling. • Impacts as a local amenity for walkers and swimmers for example. • The importance of protecting wildlife, birdlife and habitats. • Ensuring biodiversity net gain. 	<p>We are committed to preventing, and where not possible, minimising, tree loss as far as practicable.</p> <p>To allow for the permanent relocation and diversion of the Beauty-Denny line, where the angled towers are likely to be located, there is currently proposed tree felling but this would be minimal on the periphery of the wood. We are required to ensure specific clearances (both width and height) from vegetation and overhead lines for safety so felling will likely be needed there unless the design changes for the overhead line. However, as we have still to undertake our forestry and woodland surveys and as the design is still in progress, we cannot confirm at this stage what the final felling requirements will be.</p> <p>There will also be a requirement to fell in Ruttle Wood in relation to the proposed Spittal-Beauty 400kV overhead line. We have included an indicative corridor for this in our 3D model which will be available at the next Fanellan substation and converter station events.</p> <p>We also acknowledge that minimising impacts is not enough on its own, and we have committed to delivering a Biodiversity Net Gain (BNG) on all our projects; as well as compensatory planting for any trees felled during the construction phase, where possible with native species. Where our projects are unable to completely avoid irreplaceable habitats (for example peatland or ancient woodland), we have also introduced a commitment to restore more habitat than we affect.</p>
<p>Health</p> <p>Some respondents stated that the proposal may cause or is causing feelings of stress and anxiety.</p> <p>Concerns over perceived risks from electro magnetic fields emitted from energy infrastructure were also noted.</p>	<p>We are mindful of the uncertainty that our proposals can pose to communities who may be affected. Our process for project development seeks to identify options that provide an appropriate balance across a variety of considerations and interests.</p> <p>We aim to do this as swiftly as possible to minimise the duration of uncertainty for affected communities. However, we are also committed to providing sufficient time and opportunity for all stakeholders to feed into each stage of our project development process, so that views can be understood and wherever possible incorporated into design decisions. This is a balance which has to be carefully managed.</p> <p>We understand that everyone may be impacted in different ways and would be interested in residents' views regarding any additional activities that would help to address their specific concerns.</p> <p>Our responses to these topics can be found at: ssen-transmission.co.uk/2030faqs</p> <p>Our statement on EMFs can also be found at: ssen-transmission.co.uk/2030faqs</p> <p>This and other information will be available as handouts at the public events.</p>



Theme	Response
<p>Concerns around property values and requests for compensation.</p>	<p>We understand that there are concerns about the potential impact of our proposed developments on properties within the vicinity of our proposed overhead line alignments and substations sites.</p> <p>These proposals are still under development and are subject to further consultation and design refinement. During this period, we want to work closely with communities and are looking to optimise timescales for decisions on final route alignments and substation location and designs. As the proposed alignments for the overhead lines are determined, and designs of substations are refined, we will engage with property owners, as well as listen to any other concerns there may be.</p> <p>We will look to mitigate impacts on residential properties as far as possible and these impacts will be assessed as part of the Environmental Impact Assessments that will accompany our applications for consent. Extensive surveys will be carried out at identified receptors, including selected residential properties so that we are able to model potential impacts on the wider area.</p> <p>Concerns in relation to impacts on property are being noted by our team however, as a regulated business, we are obliged to follow a statutory legal framework under the Electricity Act 1989 and Land Compensation Act 1961. If you are entitled to compensation under the legal framework we will assess any claim on a case-by-case basis under the direction of this legal framework. If this is the case, we will recommend that you engage a professional adviser and SSEN Transmission will generally meet reasonably incurred professional fees in these circumstances. However, for the avoidance of doubt, we should advise that we will not meet fees incurred in objecting to our proposed developments.</p>
<p>Tower Design</p> <p>A request to use low profile towers L12 to reduce visual impact was received.</p>	<p>The L12 design was developed in the 1970's based on environmental loading (wind and ice) typical for England and Wales. The SSE400 design was developed from the L12 design to match the higher environmental loads present in Scotland, the more mountainous terrain and improvements in health and safety since the 1970's. The SSE400 is thus essentially an L12 design that is suitable for Scotland and the modern era.</p> <p>An SSE400 version of the low height L12 was not developed for several reasons:</p> <ul style="list-style-type: none"> • The extended bottom crossarm results in substantially greater loads acting on the tower, which, when combined with the higher overall loading in Scotland, would have substantially increased the width of the tower body or required greatly reduced span lengths. The former would result in visually larger, if shorter, more solid structures which are more prominent on the landscape. The latter would increase the overall number of towers that were built on the landscape. • The extended bottom crossarm increases the width of the powerline corridor resulting in a need for increased tree felling. • On sloping ground, the extended bottom crossarm means the outer most conductors can come closer to the ground than bottom conductors on a conventional tower. To ensure the outermost conductors are a safe distance from the ground it can then be necessary to increase the overall tower height, diminishing the main benefit of the low height tower. As such, these towers whilst ideal for flat lowlands offer far less benefit in mountainous and other hilly regions.

Fanellan 400kV substation and converter station

Theme	Response
<p>Archeology</p> <p>Lack of surveys and assessments on the ancient archaeology which may lie in the area.</p>	<p>Effects on the historic environment will be considered through the EIA process by our independent heritage professionals and any potential impacts reduced through the iterative design process and appropriate mitigation. A methodology for monitoring (as part of a Written Scheme of Investigation) was agreed with the Highland Council for the Ground Investigation works carried out in 2023 and results of that investigation and monitoring by the independent Archaeological Clerk of Works on site have been recorded. Further surveys will be conducted to inform the EIA (and voluntary Environmental Appraisal for the overhead line diversion) and where necessary methodology for further monitoring of works via Written Scheme of Investigation will be planned and agreed with The Highland Council ahead of construction.</p>
<p>Project Need</p> <p>Questions were raised over the need for the proposed development.</p>	<p>The proposed project at Fanellan is a National Development that is supported by national policy, the Electricity System Operator, and the energy regulator. It would contribute significantly towards the delivery of the UK and Scottish Government's Net Zero targets and help reduce the UK's dependence on imported oil and gas. Further details on the need for SSEN Transmission's Pathway to 2030 projects is available at: ssen-transmission.co.uk/2030-need</p>
<p>Biodiversity Net Gain</p> <p>We were asked to clarify the intention of the 10% biodiversity net gain element of our proposals and if this 10% will be partly or all done at another site.</p>	<p>We are committed to delivering a 10% gain for biodiversity enhancement for all new infrastructure projects. This is our approach towards demonstrating positive effects for biodiversity and addressing requirements under policy of the Scottish Government's National Planning Framework 4.</p> <p>A Biodiversity Net Gain Assessment Report will be produced, detailing the approach to assessment and results (including baseline units, post development units, temporary impacts, and irreplaceable habitat impacts). The BNG Assessment report will set out any proposed compensation to achieve the target biodiversity units. A long-term habitat management plan will be produced to support the creation and/or enhancement of proposed post-development habitats in order to meet the proposed target conditions and secure positive effects for biodiversity.</p> <p>An EIA Scoping report will be submitted to The Highland Council that will set out our proposed plans for BNG assessment and they will consult with statutory consultees including NatureScot before responding.</p> <p>We try to design soft landscaping which addresses compensation and enhancement (the 10% Biodiversity Net Gain) on-site where possible. This is not always possible depending on the particular types and areas of habitats required and requirements of the network operation. In situations where it is not possible to implement 10% Biodiversity Net Gain on site we are working with other partners to offset by supporting schemes which will enhance or create habitats. We start by looking for opportunities local to the development site but may need to look further afield if appropriate opportunities are not available locally.</p>
<p>Fire safety</p> <p>A concern regarding safety in respect of fire was raised.</p>	<p>Safety is our number one priority and forms the core of how we operate our electricity network across the north of Scotland.</p> <p>There will be a comprehensive fire risk assessment conducted by our contractor Siemens Bam. The substation will be made up of established technologies with no lithium batteries on site. In the unlikely event equipment catches fire, Fire Damage Zones (FDZ) are calculated and incorporated into the overall footprint to minimize the risk of fire spread outside of the equipment zone and substation.</p>

Theme	Response
<p>Community Benefit</p> <p>Suggestions were received with respect to possible community benefits.</p> <p>These include:</p> <ul style="list-style-type: none"> • High speed broadband • Electricity discounts • Circular paths in the woods of varying lengths • Path improvements in the local and wider area • Improved sports facilities • New School 	<p>We would like to thank residents for suggesting potential community benefits. While some of the suggestions are outside of the scope of the project to deliver, it is our intention to work with the community to further explore opportunities in this area. When is appropriate to do so, our Community Benefit Fund team will work with Communities and Groups to examine the suggestions made and better understand local needs, with a view to identifying initiatives that could be developed during the design refinement and construction phases. SSEN Transmission is in the process of establishing a Community Benefit Fund which will enable us to work directly with local communities to support initiatives across northern Scotland. We want to give back to the communities hosting our transmission network and to help fund projects that can leave a lasting, positive legacy in those areas. In terms of broader community benefits, our Pathway to 2030 projects will boost the economy and support local jobs and businesses. Recent studies show our Pathway to 2030 programme could contribute over £6 billion to the UK’s economy, support 20,000 jobs across the UK and benefit Scotland by around £2.5 billion, supporting 9000 Scottish jobs. We typically hold ‘Meet the Buyer’ events prior to the construction phase to connect our principal contractors with local businesses and this has proven to be an effective means of sharing the economic benefits of our projects with local communities. We are also actively seeking opportunities to accommodate our workers in a way that provides a range of local benefits.</p>
<p>Pre-application discussion with the Highland Council and SEPA providing technical comments relating to landscape and visual assessments and design, requesting reasoning for not siting the HVDC converter at the quarry to be provided in the EIA and comments from SEPA on culverting of watercourses.</p>	<p>These comments are being considered by the relevant technical disciplines in engineering and our third party, independent landscape architect consultants and will be addressed in their assessments and designs included in the planning permission submission.</p> <p>Our assessment as to why we chose not to site the converter station adjacent to the existing Beauly Substation at Balblair, will be included in our EIA.</p>
<p>Consultation Process</p> <p>Some feedback indicated that they felt our consultations were meaningless with the inability to influence the project.</p>	<p>We are committed to meaningful and constructive engagement with local communities and residents throughout the development process to seek input and feedback into our proposals. As we consult and develop our projects, we aim to be open and transparent with communities, engaging as early as possible to seek input into our early plans through to refinement. We share our plans and images in a number of formats, and we are also open to feedback as to how we could improve the way we do things.</p> <p>We commit to early engagement with the communities where we may have an impact, which means that the plans we shared in March/April 2023 were at a very early stage of development and therefore subject to change as they evolved. We have continually engaged with a wide range of stakeholders throughout the development process listening to concerns, comments and suggestions, incorporating these where possible. It is our preference to engage early with the community rather than wait until the formal planning stage before sharing plans.</p> <p>We favour the use of a 3D animation rather than scale models. This tool provides residents with personalised vantage point views and are very popular with the residents who engage with them. We believe the animations provide a more realistic and useful representation of our proposals than a 3D model would, as it puts the development in its proper context.</p>

Fanellan 400kV substation and converter station

Theme	Response
<p>Flooding and drainage concerns in Butlers field where the proposed access track is planned.</p>	<p>An appropriate site drainage plan for both the construction and operational phases, including Butlers field will be developed to mitigate the impact on the surrounding water environment.</p> <p>The following hydrological aspects are being investigated as part of the ongoing EIA:</p> <ul style="list-style-type: none"> • Groundwater and surface water bodies. • Potential for flood risk—a flood risk assessment is being produced and will form part of the EIA Report. • Site drainage—a Drainage Impact Assessment (DIA) is being produced and will form part of the EIA report. • Public and private water supplies. • Drinking water protection areas. • Groundwater dependent terrestrial ecosystems. • If any, designated sites that are hydrologically linked to the site.
<p>Impacts on Beauly</p> <p>Concerns raised around possible impacts of Beauly becoming a 'workers hub', impacting traffic, local services and affecting tourism.</p>	<p>The project team are fully aware of these concerns and are/will be liaising with the Community Council to discuss with our focus on mitigating impacts around the workforce, traffic noise and dust, the possible impacts on services, facilities and tourism.</p>



What has changed?

Following our March consultation events and consideration of feedback received, we've concentrated on refining our Red Line Boundary and added more detail to our proposals.

Creation of the Indicative Red Line Boundary

Through the design development of the project and since the PAC1 event, as temporary land take requirements have been more clearly understood, the project team has reviewed the PAN boundary presented at the PAC1 event and refined it into the indicative red line boundary currently being shared.

This indicative RLB for planning is reduced compared to the PAN Boundary, in the north east and south east sides of the development. As temporary laydown areas are developed we will inform the local residents and the relevant community councils of the details of these requirements.

The HVDC Converter Station

Following the PAC1 event in March our technology provider and building designer have further refined the proposed converter station design. As a result of this work, the following improvements have been made;

- **HVDC platform has reduced in area by 16.5%.**
- **Buildings around the AC filter equipment removed completely.**
- **The main HVDC converter buildings have reduced by 44%.**
- **AC filter buildings removed completely.**
- **The height of the main converter building reduced by 2.5m.**

3D modelling and visualisations

We understand the need for attendees to be able to visualise what the proposals may look like in their local area and have commissioned 3D visualisations which model these into the local landscape.

A fly through video and photomontages will be available to view on the project webpage and copies of the interactive model will be available at our public events, so attendees can see the views of the proposed development from where they request. Through further design refinement, stakeholder feedback and requests from The Highland Council, these may change and will be updated on the project webpage and at future events.

Landscaping and screening

Our independent Landscape Architect has been in dialogue with The Highland Council and working with our design team to inform the design for the landscaping. This has now been further developed to create land forms wrapping around the development to the west, east and south. The landscape forms are included in our 3D model which is available to view at the PAC2 events so you can see how these landscape forms help to screen the development from different places. Moving forward the Landscape Architect will also develop a planting design to further screen the proposed development.

Further design refinement of the site drainage requirements has also allowed for the rationalisation of the SUDs ponds and we are currently progressing review of options to reduce the number of ponds as well as their locations behind proposed landscape forms.

We have also incorporated indicative felling requirements through Ruttle Wood for the proposed Spittal to Beauly 400kV overhead line into our 3D model at the event.

Reduction in platform size

Following on from feedback and through ongoing design refinement we have reduced the platform size for the substation and converter station from 305m x 875m to 305m x 837m.



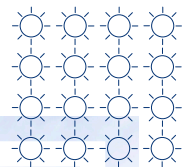
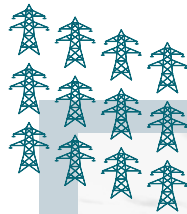
To find the 3D flythrough video, scan the QR code or visit the following URL: ssen-transmission.co.uk/fanellan

Connections into Fanellan

Connections into Fanellan are in various stages of development and are not part of the consultation process for this proposed substation and converter station development. These overhead line projects will not form part of the formal planning application for the Fanellan converter station and will be progressed under Section 37 Electricity Act consent to be determined by the Scottish Government. The map adjacent provides an indication of the proposed connections into the new site.

Pathway to 2030 projects connecting into Fanellan:

- Spittal–Loch Buidhe–Beauly 400kV overhead line.
- Beauly–Blackhillock–New Deer–Peterhead 400kV overhead line.
- Western Isles HVDC underground cabling.

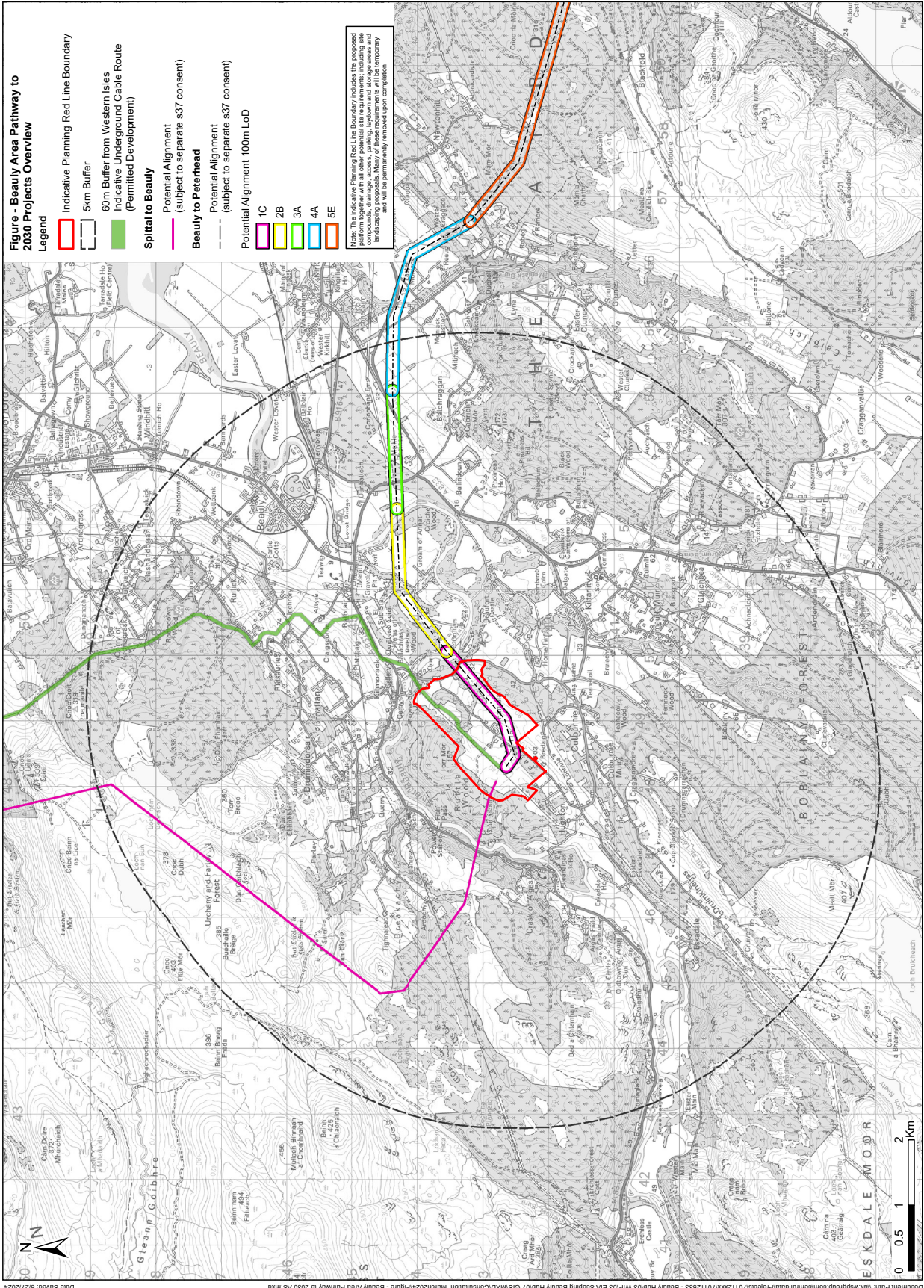


Local renewable developments

We know that local stakeholders are keen to understand the full extent of renewable developments being proposed in their local area.

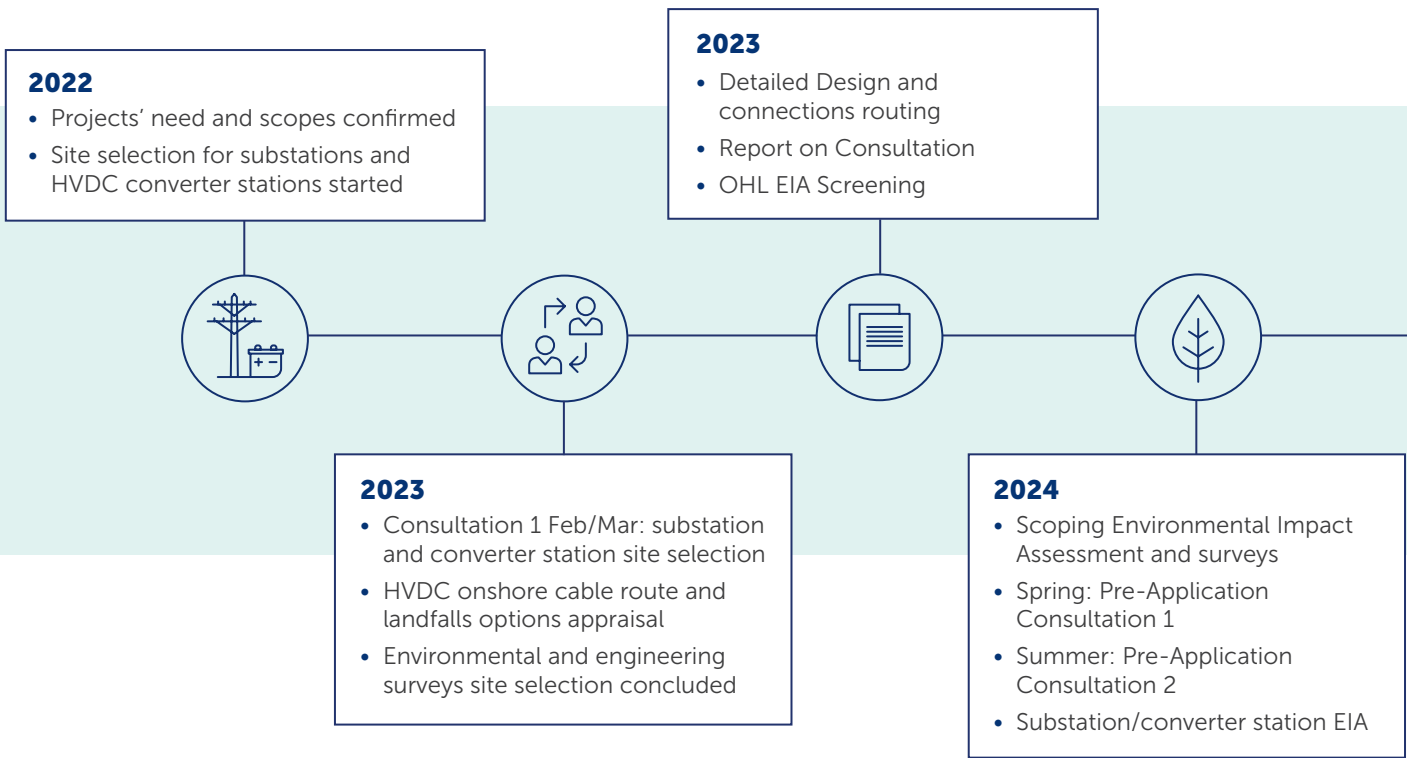
Applications to connect to the transmission network in our licence area are made to National Grid ESO and undergo a lengthy process of assessment before we begin to develop a network connection for those developments. We aim to be transparent about the renewable developments looking to connect to our network but are not permitted to disclose any details of these developments until they are in the public domain.

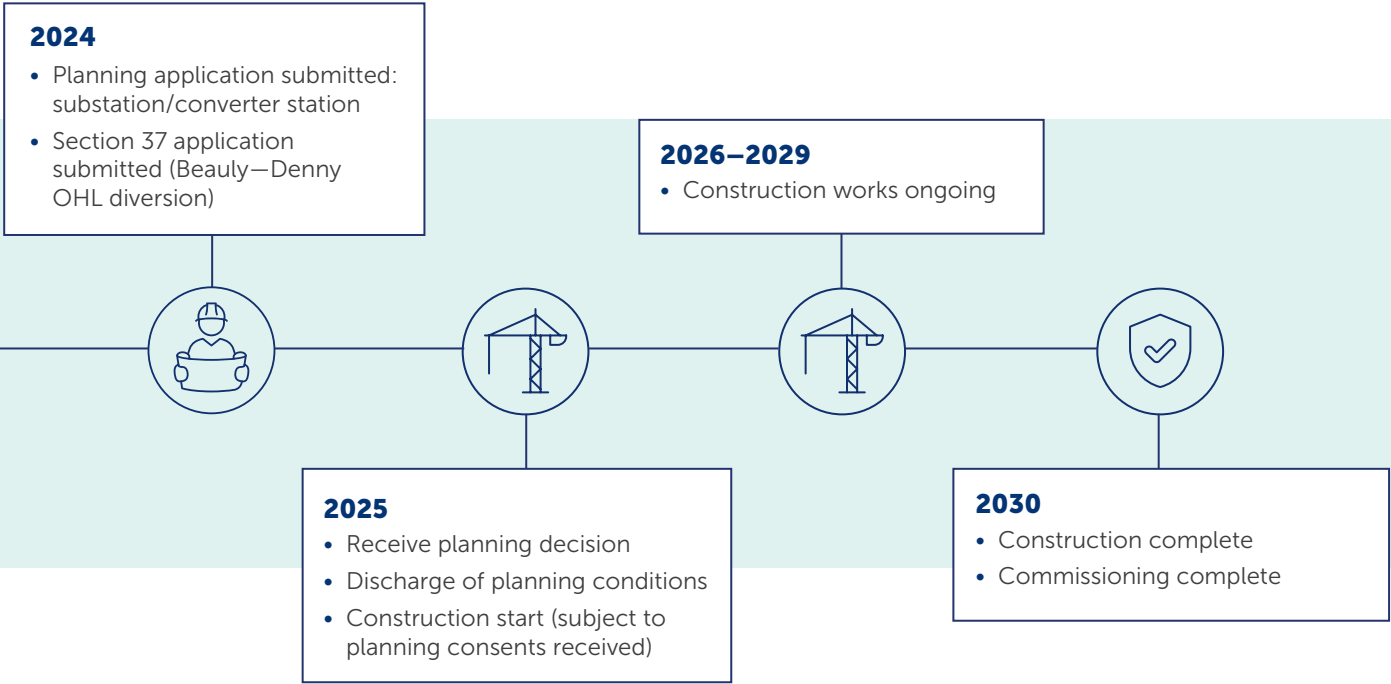
A list of projects that hold contracts for Transmission Entry Capacity (TEC) with National Grid, the Electricity System Operator is available from their website: [nationalgrideso.com](https://www.nationalgrideso.com)



Project timeline

The project programme for the proposed Fanellan substation and converter station together with the Beauly–Denny OHL diversion.





Have your say

We value community and stakeholder feedback. Without this, we would be unable to progress projects and reach a balanced proposal.

The feedback period

We intend to submit our planning application in Autumn 2024. Our formal feedback period will close on **1 August 2024**. However, we will welcome final comments from members of the public, statutory consultees and other key stakeholders regarding our proposals until we submit our planning application. Any comments received will be reflected in our Pre-application Consultation Report (PAC Report) that will accompany our planning application.

How to provide feedback

Submit your comments and feedback by emailing or writing to your Community Liaison Manager.

Our Community Liaison team

Each project has a dedicated Community Liaison Manager who works closely with community members to make sure they are well informed of our proposals and that their views, concerns, questions, or suggestions are put to our project teams.

Throughout the life of our projects, you will hear from us regularly. We aim to establish strong working relationships by being accessible to key local stakeholders such as community councils, residents' associations, and development trusts, and regularly engage with interested individuals.

What we're seeking views on

During our last public consultation event in March we wanted to know your thoughts on our project plans, where you thought we could make improvements, and any changes and refinements we'd made.

We are now asking for any final comments or feedback ahead of submitting planning applications for the Fanellan project.

We'll be actively looking to mitigate the impacts of the site as much as possible over the coming months, but it would be helpful to understand what you believe we should be doing to help minimise these impacts and if there are any opportunities to deliver a local community benefit you would like us to consider.

Community Liaison Manager

Sally Cooper



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To support everyone online, we provide accessibility and language options on our website through 'Recite Me'.

The accessibility and language support options provided by 'Recite Me' include text-to-speech functionality, fully customisable styling features, reading aids, and a translation tool with over 100 languages, including 35 text-to-speech.

Please select "Accessibility" on our website to try out our inclusive toolbar."

Additional information:



The best way to keep up to date is to sign up to project updates via the project webpage:

ssen-transmission.co.uk/fanellan

You can also register for updates at our consultation events, just ask our staff at the welcome desk.

You can also follow us on social media:



@sentransmission



@SSETransmission

