

Welcome

Welcome and thank you for visiting this public exhibition for the **Scoop Hill 132kV Connection Project**.

In normal circumstances, we would engage with communities face-to-face through drop-in public exhibitions, however, given the current COVID-19 pandemic, this is not considered to be feasible at this stage. Therefore, we have prepared this virtual consultation material to replicate an in-person village hall experience in line with Scottish Government good practice guidance.



Photograph: Existing 400kV ZV Route

We hope you enjoy your visit, and we would encourage you to get in contact with SP Energy Networks should you wish to discuss the project further or have any questions.

Through this consultation, you will have the opportunity to:

- Learn about SP Energy Networks;
- Learn about the Scoop Hill 132kV Connection Project;
- Read about the proposals and the methods used to identify route options;
- View the preferred route; and
- Learn about the next steps and how you can provide feedback.

These exhibition boards and a copy of the Routeing and Consultation Report (2021) are also available for download.

This consultation will be live for four weeks and the information will be available from **Monday 25th October 2021** to **Sunday 21st November 2021**. However, the information will remain accessible online at the website below and available to download in a pdf format.

**[www.spenergynetworks.co.uk/pages/
community_consultation](http://www.spenergynetworks.co.uk/pages/community_consultation)**

About Us

SP Energy Networks is part of the ScottishPower Group of companies and owns three regulated businesses in the UK. These businesses are 'asset-owner' companies holding the regulated assets and Electricity Transmission and Distribution licenses of ScottishPower. As part of this, SP Energy Networks operates, maintains and develops the network of cables, overhead lines and substations which transport electricity to connected homes and businesses in Southern and Central Scotland.

SP Energy Networks has a legal duty under Section 9 of the Electricity Act 1989 to keep its network up-to-date to safeguard electricity supplies, as well as to enable new connections for the generation of electricity.



Photograph: Existing 400kV ZV Route near Moffat substation.

Climate Emergency and Project Need

The impacts of climate change are widely recognised as being one of the greatest global, economic, environmental and social challenges facing the world today. A major cause of climate change is a rise in the concentration and volume of greenhouse gases in the atmosphere, a significant contributor to which, is the use of fossil fuels to generate electricity, provide heat and to fuel transport.

One of the primary aims of the Scottish Government is to move towards a low carbon economy, with climate change targets to reduce carbon dioxide emission levels by 100% (net zero) by 2045. This relates to all sectors of business and industry and all policy frameworks that affect the public in general and there is a recognition from the Scottish Government that renewable energy technologies will play a key role in the delivery of the emission reduction targets to achieve 'Net Zero'.

Net zero refers to the balance between the amount of greenhouse gas produced and the amount removed from the atmosphere. We reach net zero when the amount we add is no more than the amount taken away.

The Climate Change Plan (CCP) Update 2020, states that “renewable energy generation in Scotland will account for the equivalent of 50% of our energy demand across electricity, heat and transport” by 2032, and also by 2032, that “our electricity system will have deepened its transformation for the better, with over 100% of Scotland’s electricity demand being met by renewable sources”.

On 27th June 2019 Dumfries and Galloway Council (DGC) declared a climate emergency and have set this as a council priority to urgently respond to climate change and transition to a carbon neutral region by 2025. DGC is currently in the process of producing a Climate Change Strategy Action Plan.

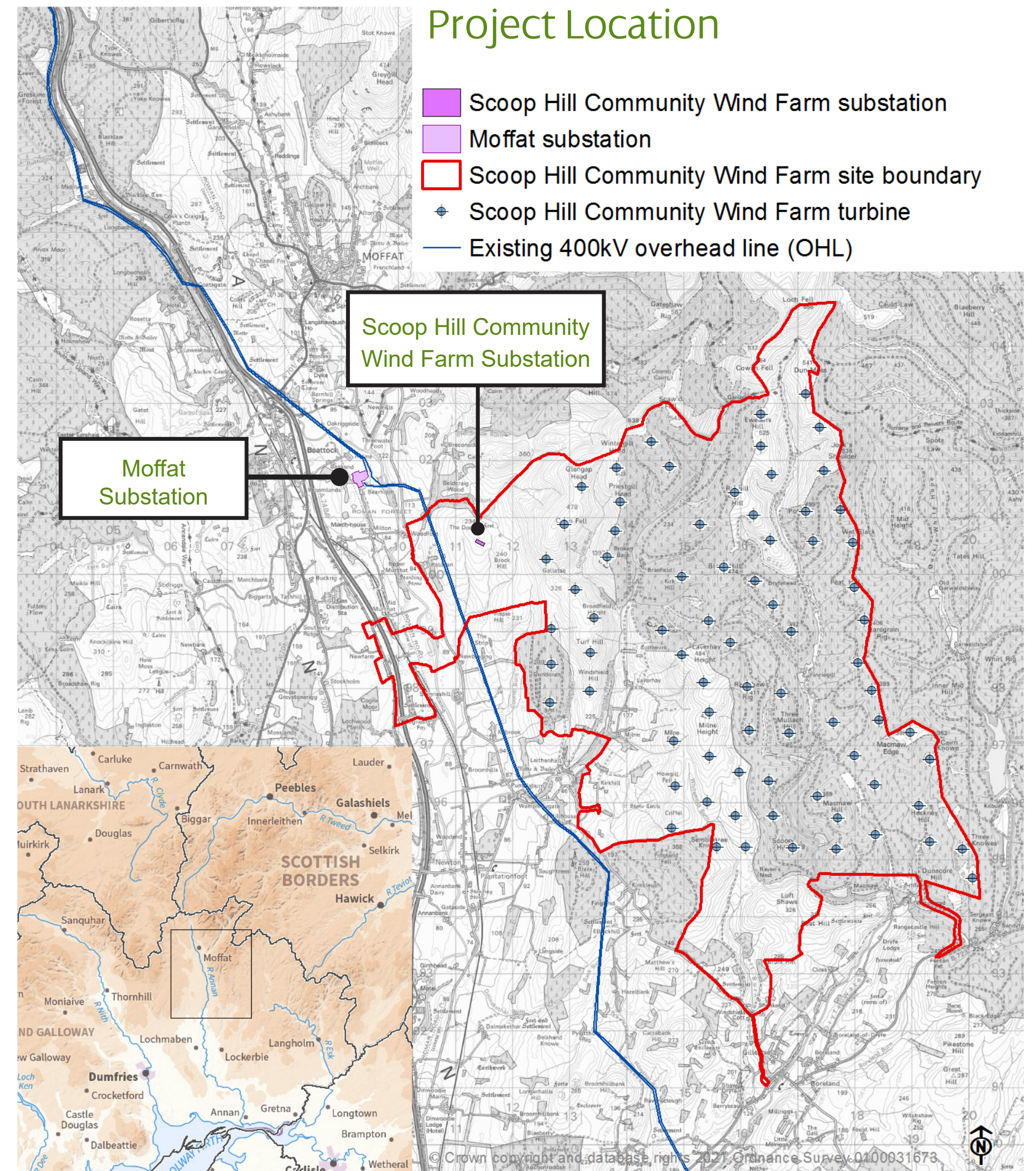
At SP Energy Networks, we recognise that the electricity network is the backbone of the energy system which sits at the heart of this Net Zero transition. We are currently at the forefront of decarbonising our energy system, having already connected approximately one quarter of all onshore wind in Great Britain to the distribution network. We recognise our key role in helping the government meet its climate change targets.

Background to the Scoop Hill 132kV Connection Project

The proposed Scoop Hill Community Wind Farm by Community Windpower Limited is located approximately 5km south-east of Moffat and 11km north-east of Lockerbie. It comprises up to 75 wind turbines with an output capacity of up to 525 megawatts (MW). The developer's application for the proposed Scoop Hill Community Wind Farm was submitted to the Scottish Government Energy Consents Unit (ECU) in November 2020 (ECU reference: ECU00000533) and is currently awaiting determination.

To meet our licence obligations to connect the Scoop Hill Community Wind Farm to the grid, SP Energy Networks is seeking Section 37 Consent under the Electricity Act 1989 for Scottish Ministers for the installation and operation of a new twin 132 kilovolt (kV) overhead line (OHL) from the proposed Scoop Hill Community Wind Farm substation to Moffat substation in Dumfries and Galloway.

The new connection will be approximately 2.5km in length and will be supported on double Trident 'H' wood poles. Wood poles are used to regulate the statutory clearances required for conductor height, which is determined by the voltage of the overhead line and the span length between the wood poles.



What will the Overhead Line Connection Look Like?

Given the output capacity of Scoop Hill Community Wind Farm (circa 525MW), and to avoid the need for larger steel towers, the connection will require twin 132kV overhead lines supported on wood poles. Double Trident 'H' wood poles, rather than single 'Trident' wood poles is proposed given the potential weight of the conductors required for the connection. Double 'H' wood poles have a standard design height that varies between 10 meters (m) to 15m.

The section of overhead line between the wood poles is known as the 'span'. Span lengths between wood poles on each overhead line will average between 80m and 90m.

The location of the wood poles on each overhead line along the final proposed route will be confirmed through a detailed design/technical review process which will be informed by the findings of this public consultation.

A safety clearance of 40-50m will be applied to the existing 400kV ZV route. A minimum clearance corridor of approximately 80-90m will be required taking into account the ZV clearance and stand-off distance between each new overhead line.

Other temporary infrastructure will be required during construction of the overhead lines, including access tracks and storage areas.

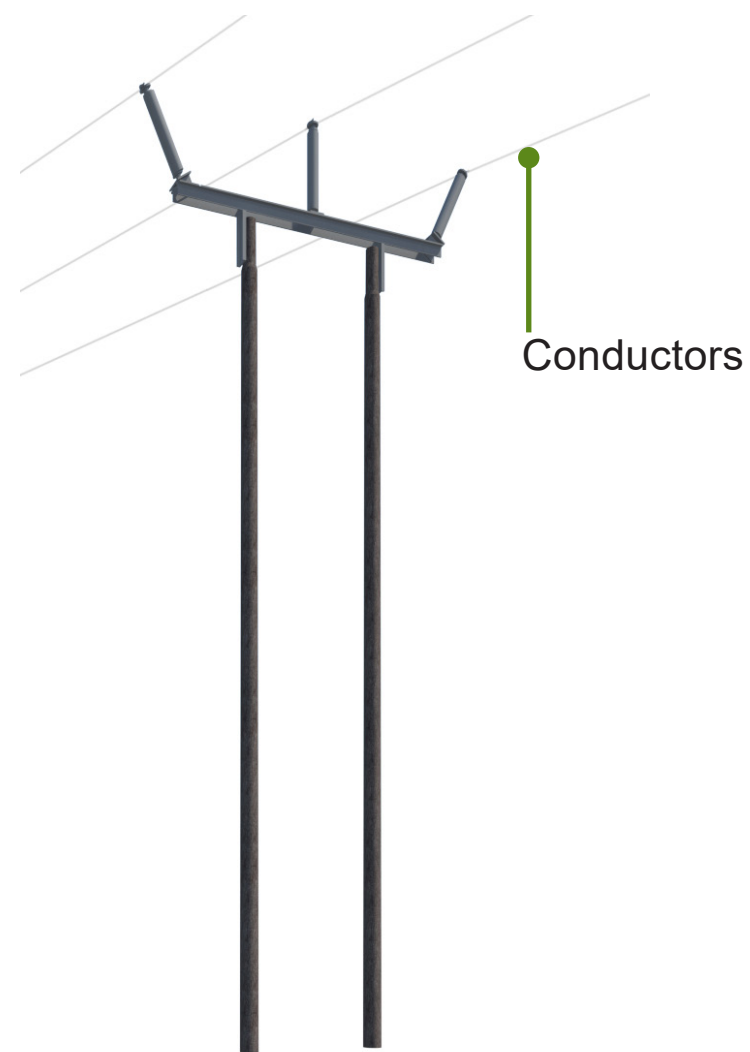
Trident wood poles are dark brown in colour when newly constructed, and weather over the years to a light grey colour.

In terms of operation and maintenance, whilst most overhead components are maintenance free, exposed elements which suffer from corrosion, wear, deterioration and fatigue may require inspection and periodic maintenance.

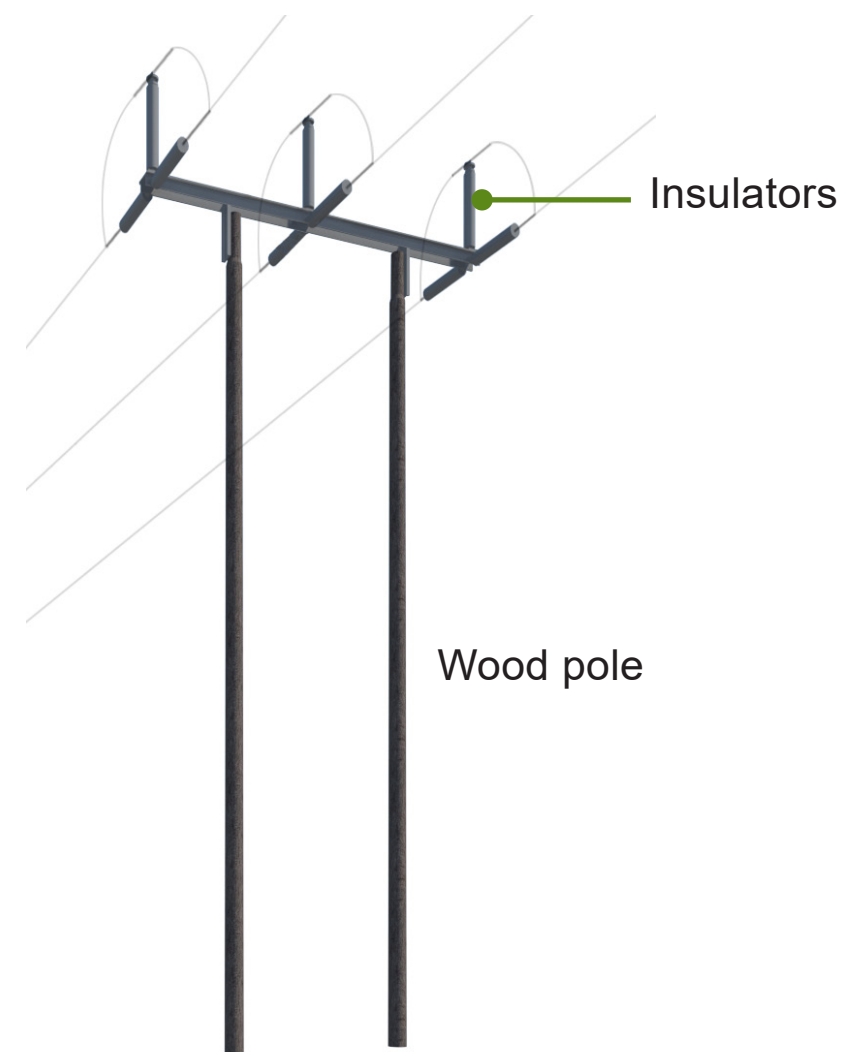
At Moffat substation there will be a requirement for a new transformer to support the connection. The typical dimensions for the new transformer unit that will be installed within the existing substation compound are 20m x 7.5m x 11m.

Upon decommissioning of Scoop Hill Community Wind Farm, the wood poles will be removed in their entirety, with components re-used where possible. All ground disturbance will be fully reinstated.

Typical Wood Pole Structures



Component parts of 132kV 'Trident' design wood pole: Intermediate (H pole)



Component parts of 132kV 'Trident' design wood pole: Angle (H pole)



Component parts of 132kV 'Trident' design wood pole: Terminal (H pole)



Typical Trident 132kV 'H' wood pole

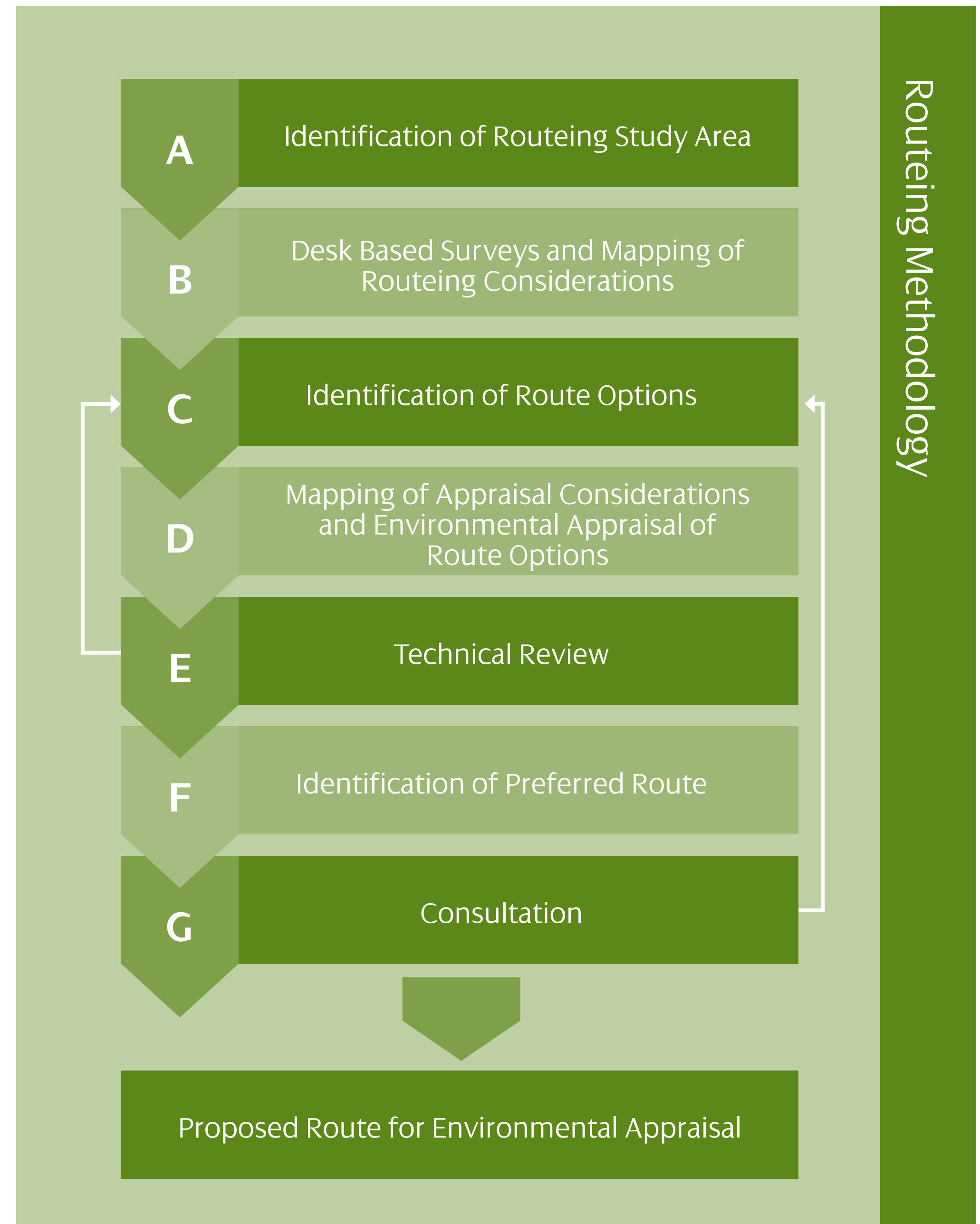
Routeing Methodology

SP Energy Networks has been working with independent consultants to identify potential route options for the twin overhead line connection. Our objective is to identify a route which meets the technical requirements of the electricity system, which is economically viable and causes, on balance, the least disturbance to the environment and the people who live, work and enjoy recreation within it.

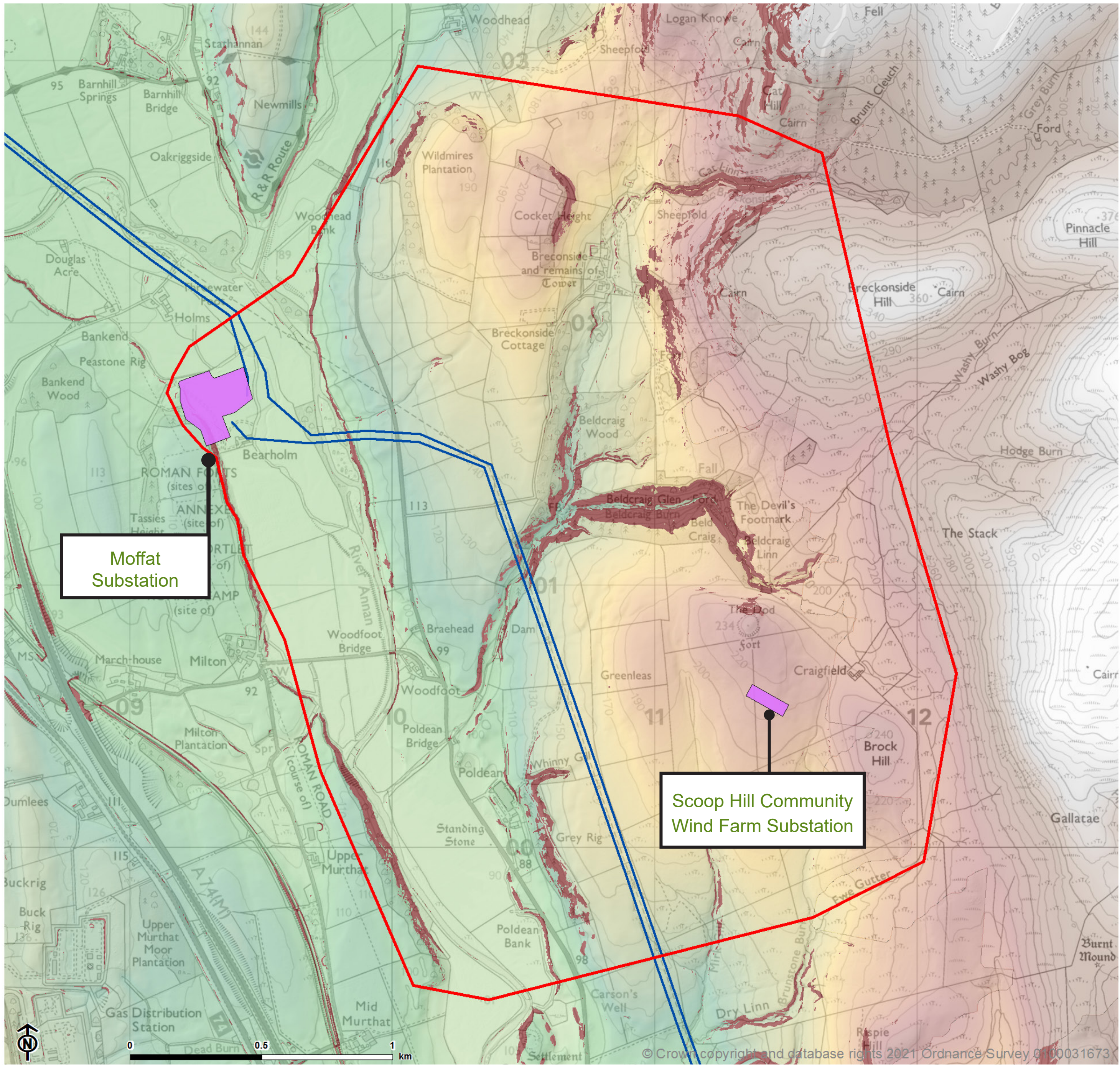
An overview of the routeing methodology adopted is illustrated here.

The routeing methodology follows a linear iterative process of steps. The first step (Step A) involves the identification of a study area, which is large enough to accommodate all potential route options, taking account of key environmental and technical requirements (i.e. connection points) and other factors such as topography and proximity to other existing overhead lines.

The study area adopted for the purposes of routeing is displayed on the next board.



The study area for the Scoop Hill 132kV Connection Project



- Study area
- Substation
- Existing 400kV overhead line (OHL)
- Slope > 22 degrees
- Topography AOD**
 - High : 400
 - Low : 0

Routeing Considerations

Following the identification of the study area, areas/sites of natural and cultural heritage value designated at a national, European or international level ('areas of highest environmental value') were mapped and avoided where possible in the identification of route options.



Photograph: Existing 400kV ZV Route

Given the lack of areas of highest amenity value within the study area, the mapping of routeing considerations also included areas that are of regional or local importance and/or are smaller in scale. These routeing considerations included areas of Ancient woodland and Native woodland of Scotland (NWS), regional scenic areas, non-statutory designated archaeology of regional and/or local importance, residential properties, wind turbines, existing overhead lines, committed developments (planning applications or consented but unbuilt developments) and waterbodies.

Landscape character and landscape designations have also been considered in this process. There are no national level designations in this area, and so regional and local designations have been considered through the routeing process. This includes the Moffat Hills Regional Scenic Area (RSA) situated across the northern extents of the study area and the Southern Uplands Environmentally Sensitive Area (ESA) which covers the majority of the study area. It is therefore not possible to avoid the ESA, however the routeing considerations have ensured that the objectives of the designations are not significantly affected.

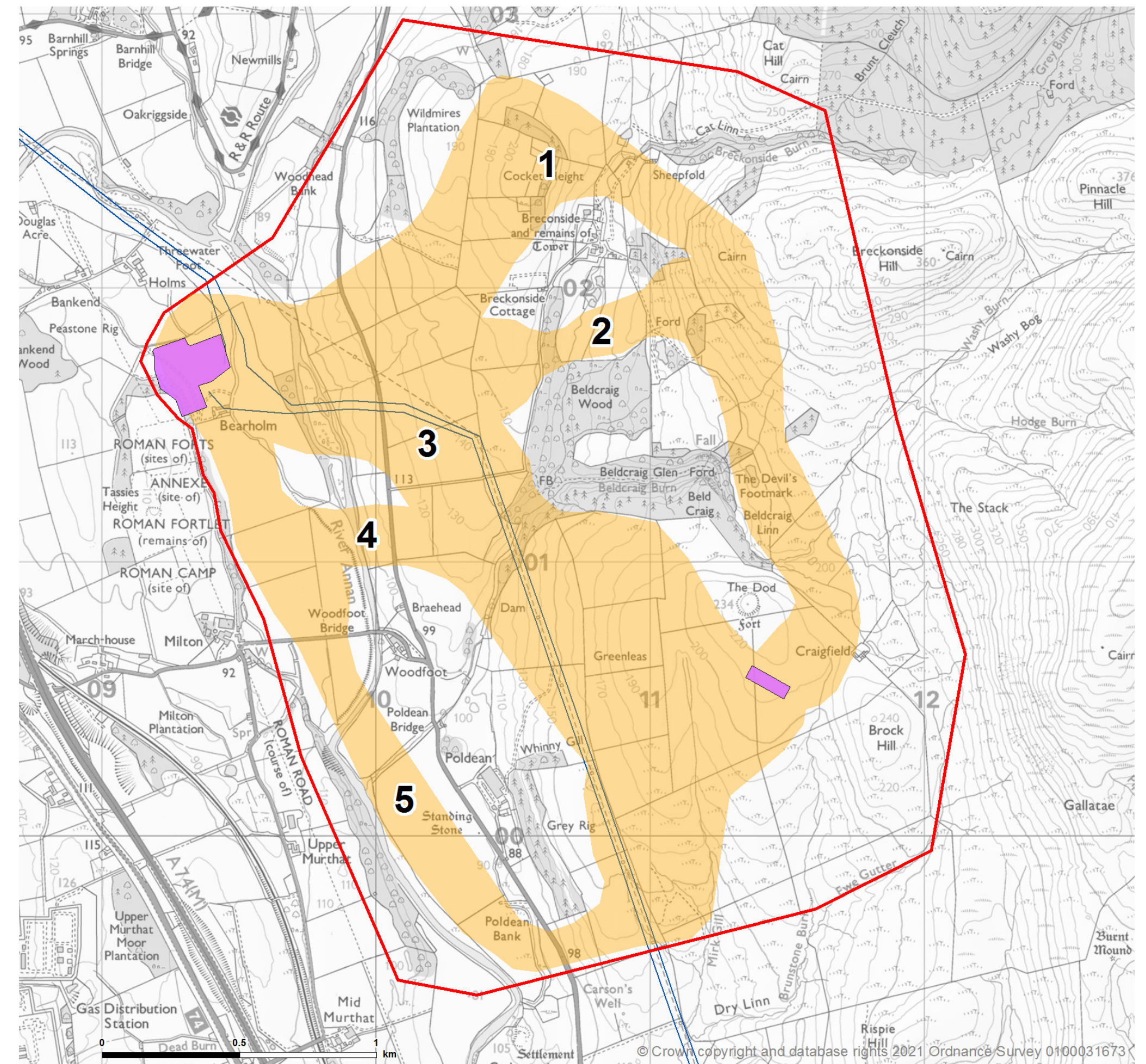
The Route Options

Given the nature of overhead transmission lines, the primary environmental effects are likely to be landscape and visual effects. The best way to limit adverse effects on landscape and visual amenity is to have a landscape led approach to routeing reflecting the Holford Rules (guidelines for routeing OHLs) and taking into account of the other routeing considerations.

Following the desk-based mapping exercise to define potential route options based on the environmental and technical constraints, a site visit was undertaken by the project landscape architects to further refine the potential route options for taking forward to appraisal stage.

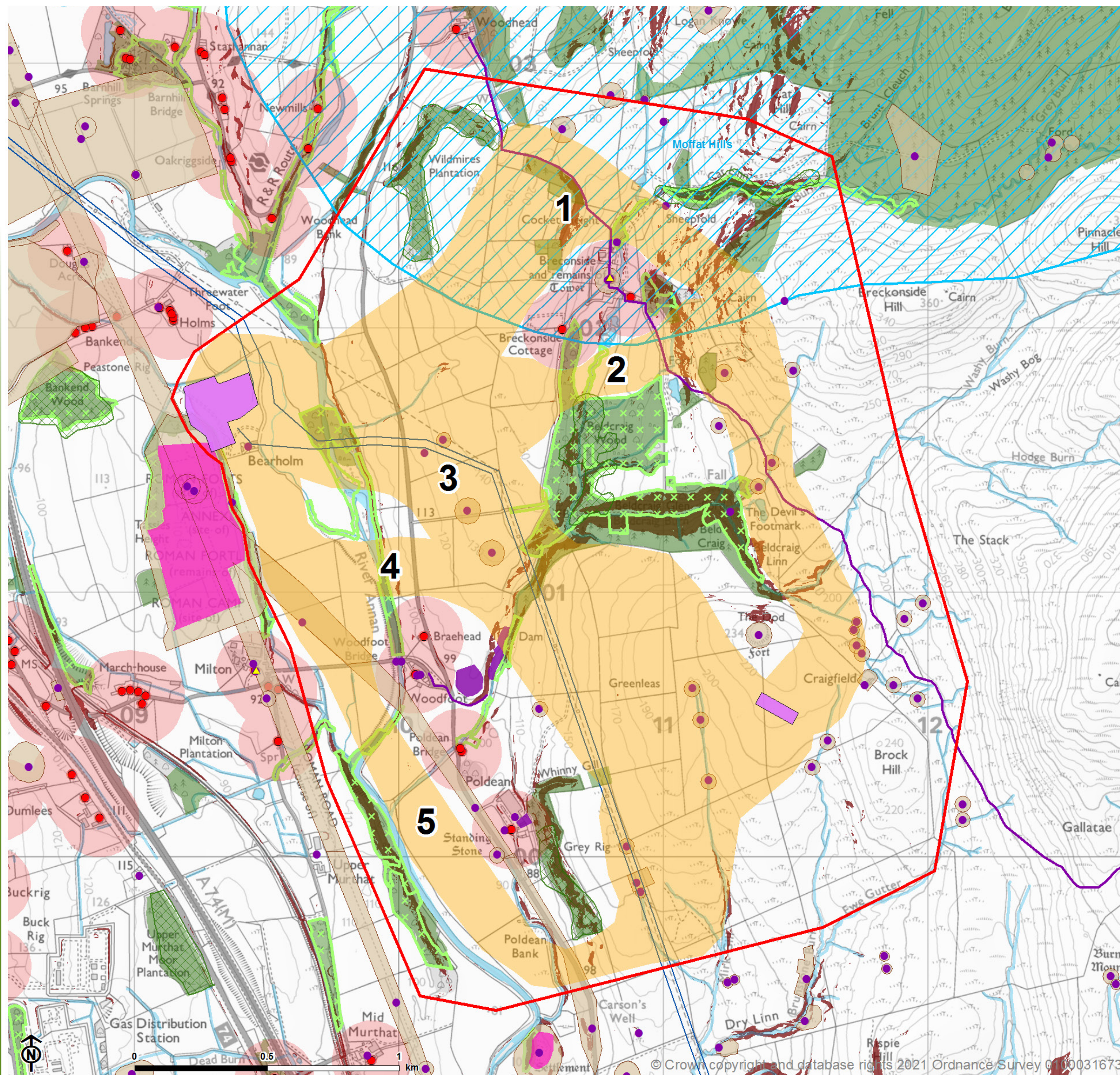
Each of the route options were given a numerical reference: 1-5. All route options have the same connection points, commencing at the Scoop Hill Community Wind Farm substation and terminating at the Moffat 132kV substation. In total, five route options were identified for the Scoop Hill 132kV Connection Project, as shown opposite.

Route Options 1 to 5



- Study area
- Substation
- Existing 400kV overhead line (OHL)
- Route Options

Routeing Considerations and Route Options 1 to 5



- Study area
- Substation
- Existing 400kV overhead line (OHL)
- Route Options

Routeing Considerations

- ▲ Listed Building - Category C
- Scheduled Monument (SM)
- Historic Environment Record
- Areas of Archaeological Interest
- Moffat Hills Regional Scenic Area (RSA)
- Ancient Woodland Inventory (AWI)
- Native Woodland (NWSS)
- National Forestry Inventory (NFI)
- Residential property
- Residential property - 150m buffer
- Watercourse
- Slope > 22 degrees

The Preferred Route

To identify the preferred route, each route option was appraised using the following criteria, which continued to reflect the key considerations of the routeing methodology:



The reasoning for the use of these criteria and an outline of the methodology for appraising each route option against these is detailed in the Routeing and Consultation Document.

The preferred route is the route which achieves the best overall balance between limiting impacts on the environment and people, whilst also meeting SP Energy Networks' technical requirements.

The Preferred Route - **Route Option 3**

Taking account of environmental and technical considerations, the preferred route for the twin overhead line connection is **Route Option 3**.

From the proposed substation to the south of the minor summit of The Dod, **Route Option 3** travels north-west dropping in elevation over the north-western flank of the hill. The route crosses the forested Beldcraig Burn valley at a similar point to the existing 400kV ZV overhead line. The route option then broadly parallels the existing 400kV overhead line as it drops down the valley side to the east of Annadale River, passing over a minor road, crossing the River Annan and passing through low lying farmland, before linking into the northern side of Moffat substation.

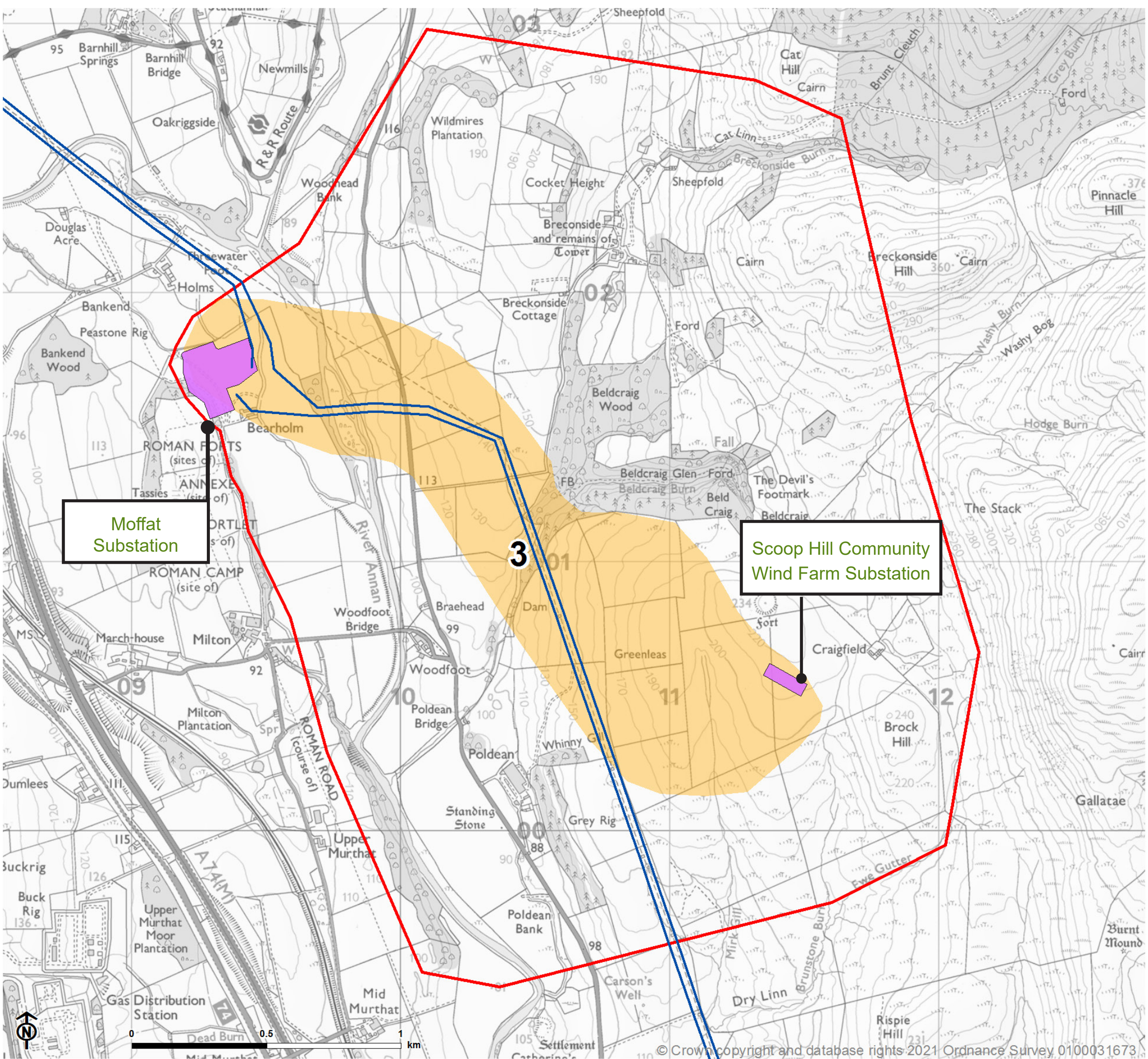


Photograph: Existing 400kV ZV Route

Route Option 3 has the best potential relative to other options to minimise visual effects on residential receptors and the wider landscape. The route avoids the highest ground to the east and north of the study area (limiting visual effects in views from Annandale) and also avoids the Moffat Hills RSA. In addition, **Route Option 3** requires the least number of watercourse crossings, minimises cultural heritage setting change, does not parallel the River Annan 1:200 year floodplain for any considerable distance and avoids areas of native woodland.

You can find more detail of the appraisal in the Routeing and Consultation Document.

The Preferred Route Route Option 3



- Study area
- Substation
- Existing 400kV overhead line (OHL)
- Preferred Route**
- Route Option 3

The final alignment for the overhead line would be located within the orange area on the plan following refinement post consultation.

The Consultation Process

Your feedback is an important part in helping us to finalise the proposed route which considers technical, economic and environmental issues along with landowner and public opinion.

We would be grateful if you could spare five minutes to complete our online questionnaire, which can be found at the central 'Have your Say' platform within the virtual room.

This virtual exhibition will run for four weeks between **Monday 25th October 2021** to **Sunday 21st November 2021**. The closing date for you to provide your response to us is **Sunday 28th November 2021**.

Following this date, the information will remain accessible online and available to download.

Your Views

As part of the consultation we would particularly like your views on:



The preferred route (Route Option 3) for the Scoop Hill 132kV Connection Project



Any of the alternative route options we considered during the routing process



Any other issues, suggestions or feedback you would like us to consider. We would particularly like to hear your views on your local area, for example areas you use for recreation, local environmental features you would like us to consider, and any plans you may have to build in proximity to the preferred route.

Please note comments at this stage are informal comments to SP Energy Networks and are made to allow us to determine whether changes to the preferred route are necessary. An opportunity to comment formally to the Scottish Government Energy Consents Unit (ECU) will follow at a later stage in the process following submission of the Section 37 application.

Below are the best ways to find out more or to talk to us

Visit the website:



On our dedicated website you can view or download all the project consultation material.

[www.spenenergynetworks.co.uk/pages/
community_consultation](http://www.spenenergynetworks.co.uk/pages/community_consultation)

Email us:



[scoophillconnectionproject@
spenenergynetworks.co.uk](mailto:scoophillconnectionproject@spenenergynetworks.co.uk)

Talk to us:



We will be on hand to answer any questions you may have via the live chat service on this virtual exhibition room (accessible at bottom right of screen) on the following dates:

Monday 25th October from 2pm-4pm

Tuesday 26th October from 10am-12pm

Wednesday 27th October from 5pm-7pm.



You can also call the Community Liaison Team on 07516461129

Write to us:



Scoop Hill 132kV Connection Project
Land and Planning Team
SP Energy Networks
55 Fullarton Drive
Glasgow
G32 8FA

What happens next?

SP Energy Networks places great importance on the effect its work may have on the environment and local communities and we are keen to hear the views of local people to help develop the project in the best way.

Informed by the consultation responses and feedback from landowners, we will confirm the proposed route for the new overhead line.

Thank you for taking the time to visit this public exhibition and we look forward to hearing from you.

