Electricity Distribution

Pre-application consultation brochure

November 2025

Connecting the Upper Ogmore Wind Farm

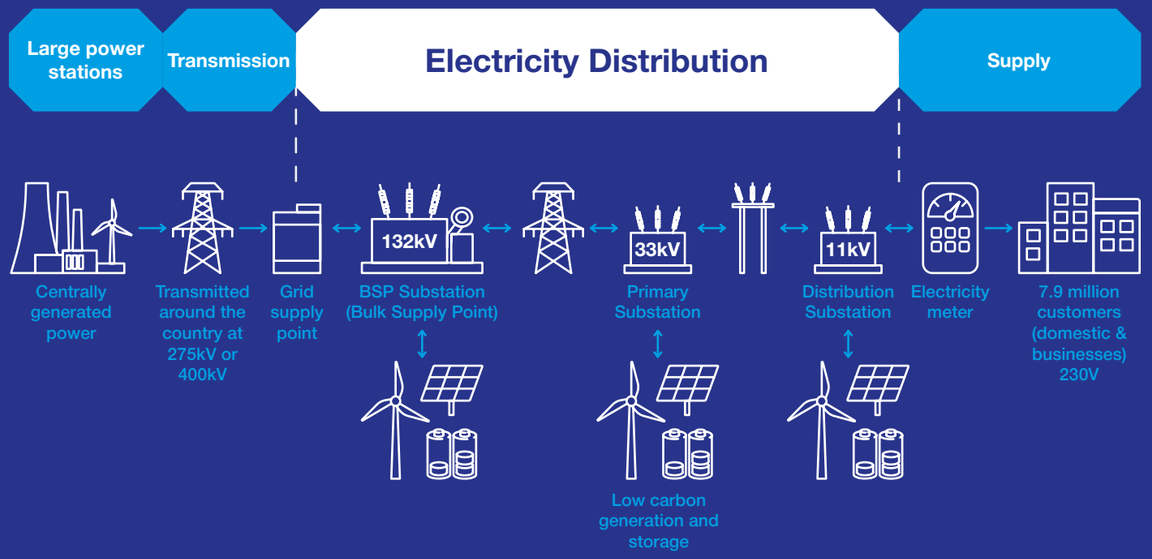
This document provides information regarding National Grid Electricity Distribution's pre-application consultation on the Upper Ogmore grid connection.

nationalgrid

About National Grid Electricity Distribution (NGED)

National Grid sits at the heart of Britain's electricity system, connecting millions of people to the energy they use every day.

National Grid operates both the Transmission and Distribution (local) networks in South Wales. The diagram below shows where both operate.



National Grid Electricity Distribution's role:

At NGED, we don't generate electricity ourselves. We take electricity from the high voltage transmission network and direct from small scale generation, and distribute it to homes and businesses.

National Grid Electricity Distribution is the distribution network operator for South Wales, the Midlands, and the South West – we provide safe and reliable electricity supply to over 20 million people.

Every time you plug in your phone, or turn on a switch, we're connecting you to the electricity you need. We work with our customers, regulators, national and local policymakers and stakeholders to understand the future demands on the local electricity system, so we make sure that the network is reliable and fit for the future.

NGED in Wales

Serving **2 million** customers

36,000km of network

40,000 transformers

Investing **£1.2billion** between 2023 and 2028

National Grid Electricity Distribution is the UK's largest distribution operator with over 20 million customers across South Wales, the Midlands and the South West England.

In South Wales we operate around 36,000km of network, serving 2 million customers and with over 1,000 employees.

We're investing £1.2 billion between 2023 and 2028 and are looking to connect 1.8 Gigawatts of wind capacity in South Wales.

The way we use the network is changing rapidly, with electricity demand set to double by 2050. In the last five years alone, we have seen a 900% increase in connection requests.

We're investing more to maintain, reinforce and upgrade the distribution network so we can connect the exponential increase in low carbon technologies we are seeing.

Contents

Consultation 5

Upper Ogmore Wind Farm 6

Our proposals 8

Proposal updates 9

Associated Infrastructure 12

Overhead lines 14

Underground cables 16

Environmental considerations 18

Your questions answered 22

Consultation

The Upper Ogmore Grid Connection meets the criteria to be classified as a Development of National Significance (DNS). This grid connection will connect the Upper Ogmore Wind Farm to the grid.

This type of project requires a special type of planning permission where a planning application is submitted to and approved by Planning Environment Decisions Wales (PEDW), a part of the Welsh Government.

The Local Planning Authorities (Bridgend County Borough Council and Neath Port Talbot County Borough Council) will provide a local impact report with their opinion on the application, but they will not be responsible for making the final decision. As the proposed route will be laid under a track that runs through the Clawdd Mawr Dyke, we will also be applying for Scheduled Monument Consent.

Consultation is a statutory part of the DNS process, and it enables everyone to comment on our proposals. We are currently running a statutory consultation on the draft planning application for the Upper Ogmore Grid Connection.

This consultation brochure is intended to provide an over view of the draft application with detailed documents available on the projects website: nationalgrid.co.uk/upper-ogmore

The consultation is running from 12 November 2025 until 5 January 2026.
Contact details can be found on the final page of this document.

Project Timeline

June & July 2025
Informal consultation

Summer 2025
Finalisation of draft planning application

Winter 2025
Statutory Pre-Application Consultation

Early 2026
Reviewing feedback and finalising the Planning Application

Early 2026
Submission of the Planning Application

Summer 2026
Anticipated examination by PEDW (subject to PEDW timetables)

Winter 2026
Anticipated determination (subject to PEDW timetables)

Summer 2028
Anticipated start of construction

Spring 2029
End of construction

Upper Ogmore Wind Farm

Upper Ogmore Wind Farm was approved by PEDW as a DNS in September 2022.

The wind farm will be constructed across the top of the Garw and Ogmore valleys within the boundaries of Bridgend CBC. Once constructed, the wind farm could generate up to 25MW. It will be located directly next to the existing Llynfi Afan Renewable Energy Park.

National Grid is responsible for connecting the wind farm to the grid and enabling the export of electricity to customers. Now we're consulting on our plans to link it to the wider grid network.

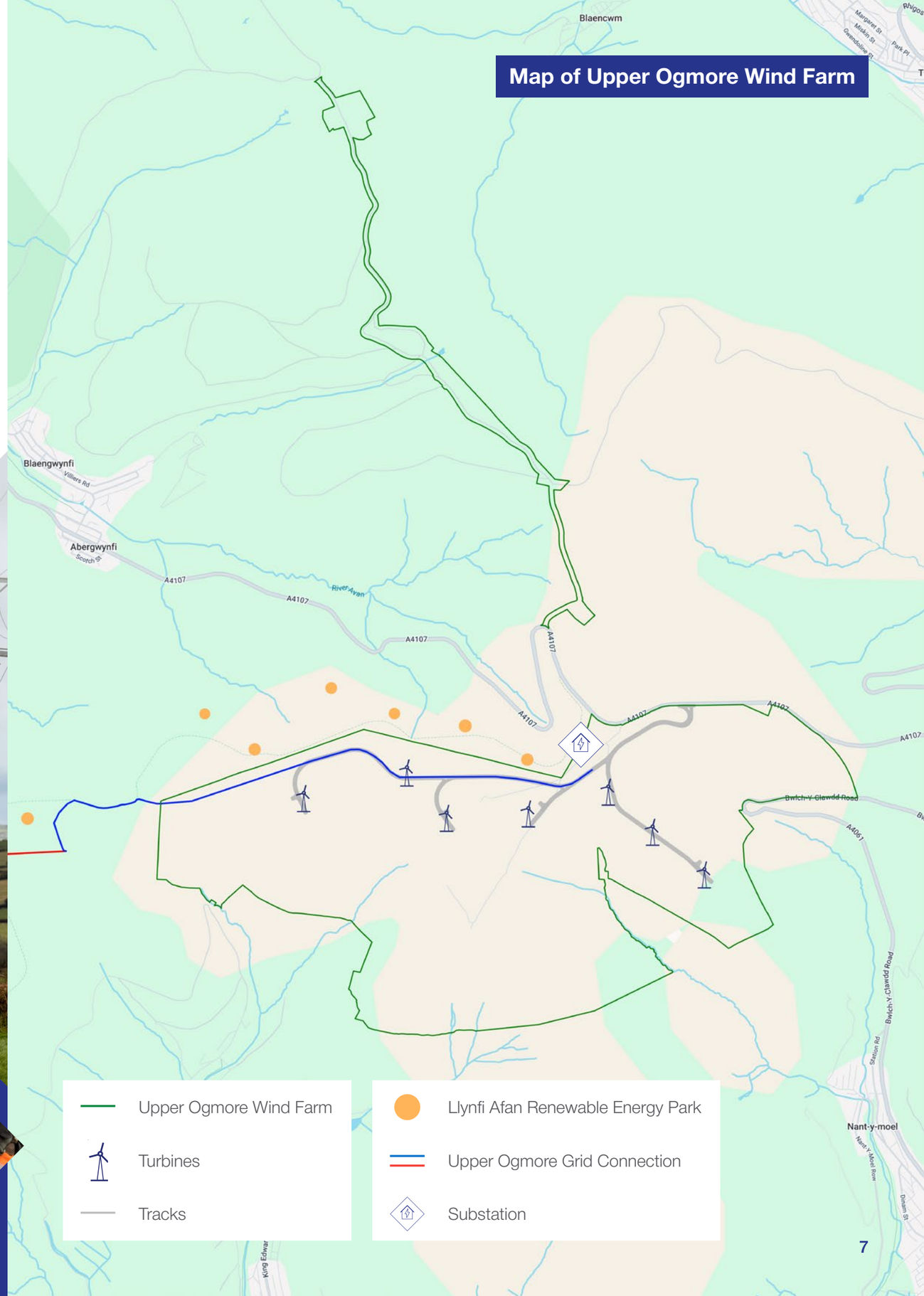
For more information on the wind farm, visit the Upper Ogmore Wind Farm website: upperogmore-windfarm.co.uk

Electricity generation is changing

The UK's energy system is changing – becoming more multi-directional, and more decentralised. This means, as a network operator, National Grid must connect smaller scale sources of power generation spread around the country.

This means we have to build and upgrade our network, sometimes in new locations to connect these sources.

Map of Upper Ogmore Wind Farm



Our proposals

Connecting the wind farm to the grid is in two parts:

New connection (the subject of this consultation)

To connect the new wind farm to the grid, 9 kilometres (5.5 miles) of new 66kV electricity cable will be installed. This will be made up of 4.1km (2.5 miles) of overhead powerlines and 4.9km (3 miles) of underground cables. Whilst the eastern section of the line does not run through any communities, the western section would run to the south of Croeserw and through the main road in Caerau.

The route will start and finish in the area covered by Bridgend County Borough Council, with sections also passing through or being visible from Neath Port Talbot County Borough Council.

- The route begins to the west of the A4063 near Caerau, as an Overhead Line (OHL) for approximately 1.1km (half a mile).
- As the route reaches Caerau, the route then transitions into Underground Cable (UGC) following the existing highway network for approximately 1.7km (1 mile) to the north.
- Just after the Caerau Substation, the line transitions back to OHL for approximately 3km (2 miles) to the east.
- To the west of Clawdd Mawr Dyke, the route transitions back to UGC and continues east towards the substation at the Upper Ogmore wind farm for 3.2km (2 miles).
- During this last part of the route it would travel partially through the common of Mynydd Llangeinor.

Existing infrastructure

The connection to the grid is proposed at an existing substation in Pyle, approximately 15km (9 miles) from the site.

To get to this substation the proposed Upper Ogmore grid connection would use an existing stretch of network near the Craig Yr Aber woods and the proposed Foel Trawsnant Grid Connection by Pennant Walters. The Foel Trawsnant grid connection was submitted to PEDW in the Summer. (DNS CAS-02505-N3T6M4)

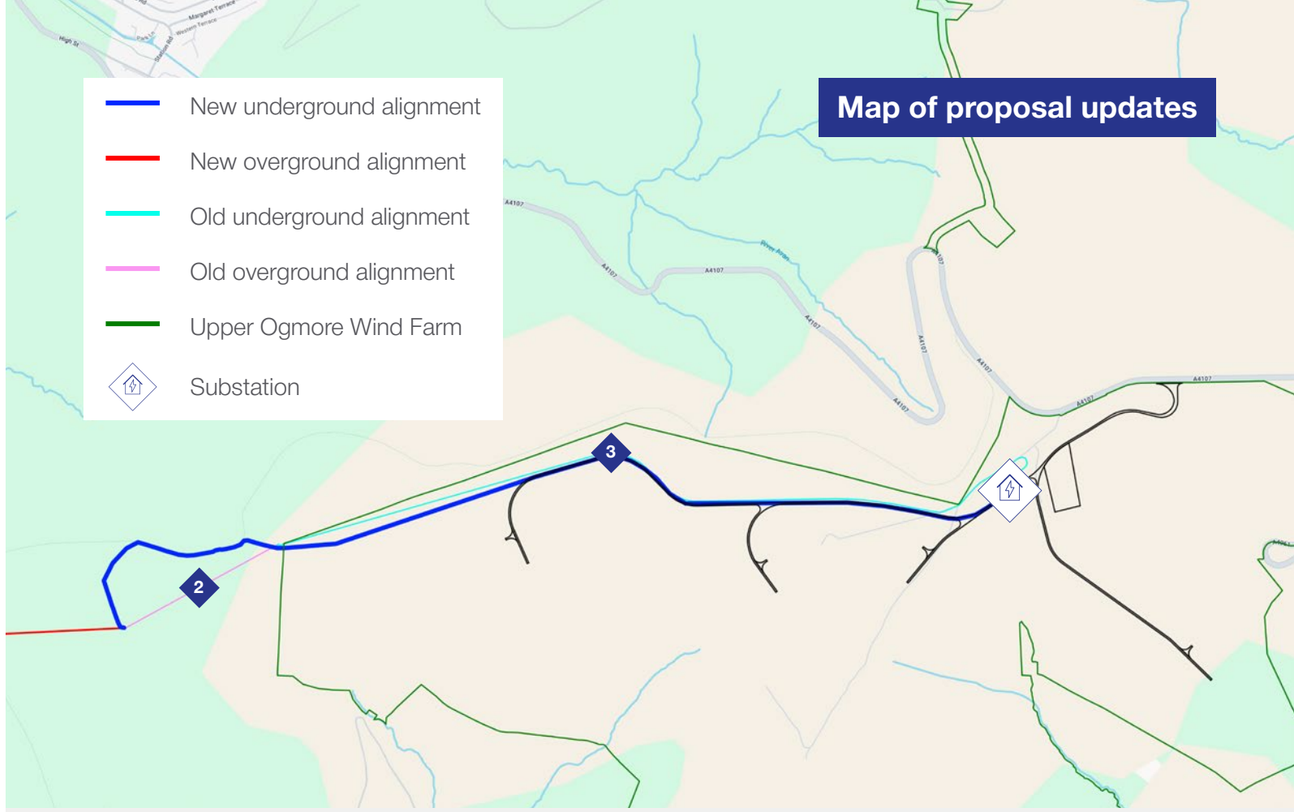
To link into the Foel Trawsnant Grid Connection, the Upper Ogmore line needs to travel westward from the site towards a connection point to the west of Duffryn and Nantyffyllon.

The map on pages 10 and 11 show the proposed grid route in more detail.

To find out more about the Foel Trawsnant Grid Connection please visit the website at: ftgrid.co.uk

or view the application on the PEDW planning portal.

(DNS CAS-02505-N3T6M4)



Proposal updates

As you may already be aware, an initial informal consultation was undertaken in the summer. Since then we have reviewed the feedback received and survey data collected, allowing us to make some notable changes to the grid connection route proposal.

Since then, we have made changes to the grid connection route. These have been informed by ongoing surveys, and responses to the consultation.

The following changes have been made:

1. The transition from underground cables to overhead lines has been moved to just east of the Caerau substation, rather than north of it (To the west of number 2, not shown on the above map).
2. The transition from overhead lines to underground cables has been moved to the western side of the Clawdd Mawr Dyke near Mynydd Caerau, with the line undergrounded through existing tracks for the Llynfi Afan Renewable Energy Park.
3. At the end of the line the route would use a new alignment that follows paths to be built as part of the Upper Ogmore Wind Farm. This would include a short section through the Mynydd Llangeinor common.

Proposed Upper Ogmore Connection Route

Foel Trawsnant Grid Connection
Underground alignment
Overground alignment
Upper Ogmore Wind Farm

To Pyle

Associated Infrastructure

Substation

Substations play a vital role in converting electricity into different voltages. Their infrastructure includes transformers, circuit breakers, disconnecting switches, and other equipment needed for the safe transfer of power across both the region and the country.

There are two classes of substation:

1. 275kV and above that form part of the transmission network.
2. 132kV and below that form part of the distribution network.

There would be a substation constructed as a part of the Upper Ogmore Wind Farm, and power from the wind farm would be transferred to another substation at Pyle.

There is no substation included in this proposal.

Transformer

Transformers allow us to transport power across the grid, and make up a large part of the substations used at either end of the Upper Ogmore Grid Connection.

Transformers make sure that voltage in a grid line is suitable for where it is being transmitted to.

They can be used to either increase the voltage of electricity to transmit across the country or decrease the voltage to distribute to homes and businesses.

Volt

When referring to grid connections, the higher the voltage for the line, the higher the capacity, and the more power it can transport.

Low voltage is the type of power we use in our homes. Medium voltage is for distributing around our towns to our homes and high voltage is used for sending power over long distances.

The Upper Ogmore grid connection would transmit power at 66kV (66 thousand volts), which is classed as high voltage.

Watt

A watt is a measure of power, and there are 1 billion watts in 1 gigawatt (GW).

1 gigawatt hour (GWh) is a unit of energy, equivalent to powering one million UK homes for one hour.

The Upper Ogmore Wind Farm would produce 25 megawatts of energy, equal to 25 million watts.

Towers

The Tower is there to support high voltage electricity conductors (the conductors and lines transport the electricity)

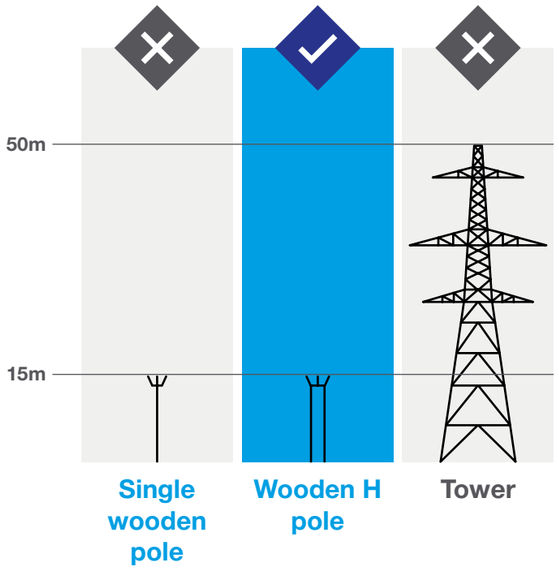
Towers are not included as part of these proposals.

Towers are usually made of steel and have a lattice pattern – they look like pylons, used on the Transmission Network, but are not as tall.

Overhead lines

Overhead lines (referred to as OHL) are a common way of transmitting power across the UK. Electricity transmission cables are suspended in the air either on top of wooden poles or from steel towers.

There are many different styles of overhead poles from large T pylons, to steel lattice towers, H poles, and single wooden poles.



H Poles

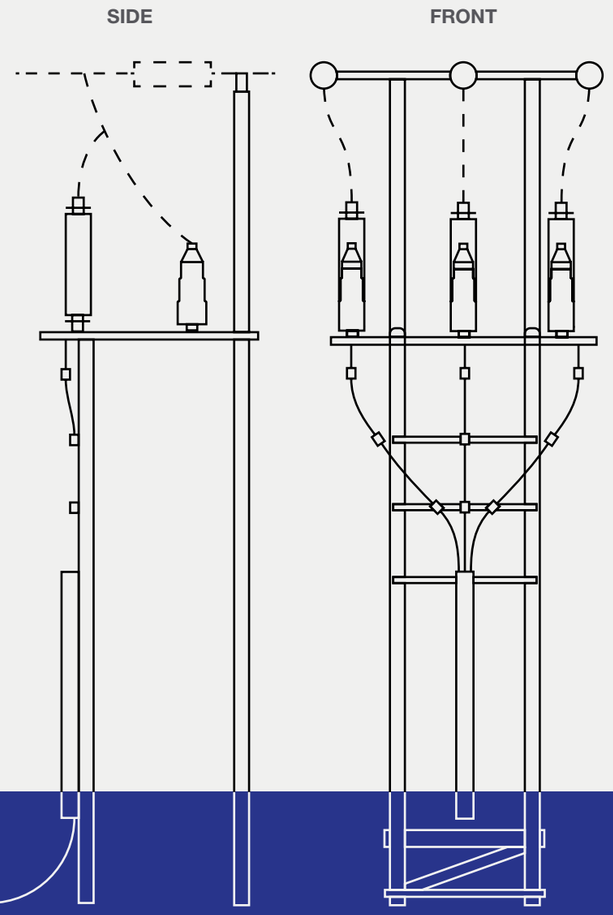
H-Poles consist of two wooden poles of up to 15 metres in height joined by a crossarm with bracings.

This scheme would only use wooden H poles for the overhead connection, with no need for steel towers to be constructed.

Installing the OHL

The installation of poles would be a simple process, and it is anticipated that wooden blocks would be placed in the ground to provide structural support.

While the line is intended to be as straight as possible, there are points where the line may need to change direction, to avoid environmental features, such as trees. At points of deviation, angle poles will be used. These are likely to be H-pole structures, with cable stays to provide extra stability.



Terminal Ends

At the beginning or end of each section of OHL there will be a terminal end consisting of two sets of H-poles located side by side. This style of pole will also be used at the connection point with the Foel Trawsnant Grid Connection.

Underground cables

Underground Cables (commonly termed UGC) will also form part of the Upper Ogmore Wind Farm Grid Connection. The cables will be installed in two terrains, under existing tracks and highways, and through open land by the windfarm.

Highway works to install the lines will take approximately five to six months to complete.

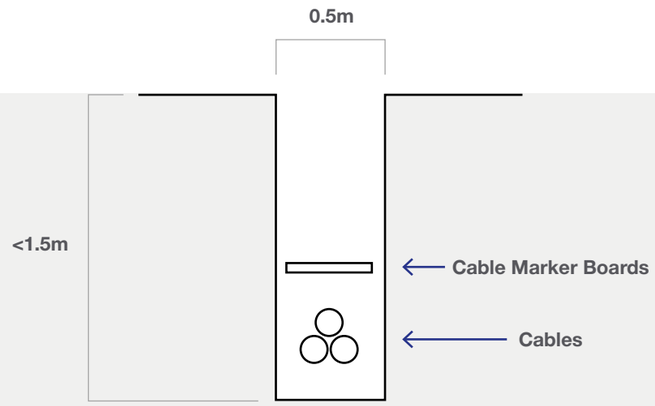
There are two main ways of installing the underground cables.

1 Laying in a trench

When installing cables underground an open cut method can be used. Cables are placed directly into the excavated trench at a depth of up to 1.5 meters. At the surface of the excavation the width of the opening will be between 0.5 meters and 1.5 meters wide.

Cables are placed at the bottom of the trench and the area around them filled with sand. The remaining trench is filled with stone dust and resurfaced in keeping with existing materials.

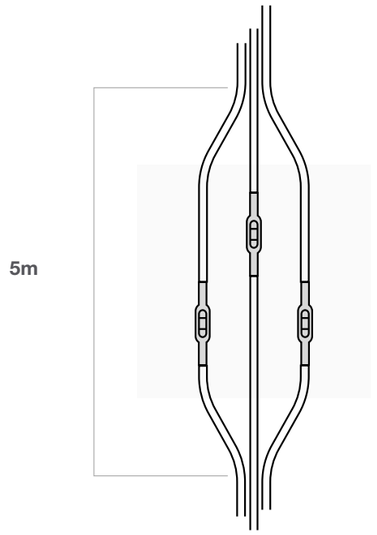
SINGLE CIRCUIT

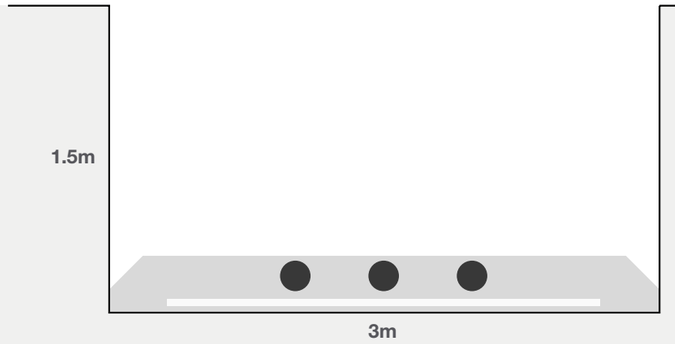


2 Laying in a duct

Alternatively, we could place ducting in the open cut trenches in line with the previous method. The ducting can be placed ahead of the cable placement which can expatiate the on site works. The ducting would be laid in 250m sections with the cable being jointed together as shown in the diagram below.

VIEW FROM ABOVE





Please see page 19 for details on traffic management.

It is important that, on the surface, there will be no long term changes to the land.

Due to the immediate closure of the land after the placement, the land is able to return to its original state in only a short time period.

Environmental considerations

As a part of our application, we have prepared a detailed Environmental Statement exploring various impacts from the scheme and how these could be mitigated.

On the consultation website you can view the full Environmental statement (alongside the full planning application), as well as the non-technical summary. The following pages provide information on the key areas of the Environmental Statement.

Landscape

Landscape and visual impacts on the local landscape are a key consideration in developing these proposals. We have designed the proposals to limit impacts on the local environment and landscape, such as trees.

The proposed route would run across land that is currently classified as Grade 4 and 5, with some sections classed as urban land, and non-agricultural land.

The use of wooden H poles is in keeping with similar overhead lines already in the area and will lessen the visual impacts on the surrounding landscape.

Historic Environment

In preparing this draft planning application we've been talking to relevant heritage stakeholders and have conducted extensive archaeological and historic background assessments of the proposed grid route and the surrounding area.

Our discussions with Cadw have identified the Clawdd Mawr dyke as a historical asset, which the proposed old route crossed over using overhead lines.

As a result, we have altered the grid route to put underground cables through an existing track. This will reduce visual impacts and changes to the setting of this historical asset.

Traffic

Sections of the underground cables will be installed under the existing highway on the A4063 through Caerau. It is not anticipated that any full road closures will be required, however, the nature of the works mean that there will be impacts on the road network.

We will agree appropriate traffic management measures with the local highway authority (Bridgend County Borough Council). These works will be detailed within the final Construction Traffic Management Plan and are anticipated to take up to 6 months to complete.

H Poles for the route would be delivered via the M4 and Heads of the Valleys Road, before traveling to a construction compound located at the Upper Ogmore Wind Farm on the A4107. The poles would then be transported from the construction compound to the rest of the line as required. This will result in minimal impacts on the rest of the road network.

Ecology

We will ensure that there is no net loss of habitats during the construction of the line.

We've carried out surveys for a variety of species looking at the possible impacts that the project may have. These have included Great Crested Newts, Bats, Water Voles, Hares and nationally and locally important species of moth and butterfly.

There are many measures that we can take to mitigate any possible impacts on wildlife in the area, and reducing habitat impacts from the grid line.

Potential impacts from the overhead sections of the line will be limited to the footprint of the OHL poles.

Environmental considerations

Ornithology

We've carried out detailed Bird Surveys along the grid route and a buffer zone around it. The surveys have included breeding raptors, vantage points and nightjars. We will be carrying out winter raptor roost surveys between now and February 2026.

The proposed construction of the line would be scheduled to take place outside of the main breeding season as much as we can. However in some instances this may not be possible and *"no disturbance"* signs and sound buffers would be considered to avoid impacts on breeding birds.

Construction methods have also been planned to take place using all necessary and practical measures to minimise the noise, vibration, and visual disturbance to birds.

Hydrology

We've carried out a range of surveys to understand the route's current water environment and ground conditions. We have also assessed what impacts the proposed grid line could have on these.

To limit the impact on the hydrology of the site, we will make sure the gradient of land we're working on is as shallow as possible to minimise silt runoff. Any runoff during construction will be captured and disposed of safely to prevent it entering natural watercourses.

In addition, we will be undertaking regular water quality monitoring and visual inspection of watercourses near the works to ensure there are no changes in the water.

Coal Mining

Whilst we have undertaken as much research as possible, as with any project of this nature, there is a slight risk of unrecorded mine entries being present at the site. We have included this within our risk registers.

There are deep mine workings recorded below the site at depths of between 31 and 783 meters (half a mile) below ground level. These are considered deep enough that there will be no impacts on the proposed development.

If any features that we have not already mapped are encountered during site works, these will be subject to further assessment and investigation by specialists.

If needed, additional action will be taken to ensure this does not impact the proposed development.

Electromagnetic Frequencies

Electric and Magnetic Frequencies (EMFs) arise from the generation, transmission, distribution, and use of electricity. All overhead and underground powerlines produce EMFs, as do any appliances that use electricity.

EMFs are at their highest directly under overhead lines and directly over underground lines, with levels decreasing rapidly with distance to the side of a line.

With the low voltage of the proposed Upper Ogmore Grid Connection, there will be no significant effects relating to EMFs. The maximum EMFs that could be found directly under an overhead line would be equivalent to a household TV, washing machine, or microwave.

There are no proven links between electromagnetic frequencies and any health impacts.

You can view the full planning application on the website at: nationalgrid.co.uk/upper-ogmore

Your questions answered

What impacts will there be on the local community?

As a part of the construction there will be impacts on the roads between Croeserw and Duffryn as we construct the underground portion of the line. We will only need to work on a single side of the road and therefore with traffic lights we will be able to make sure everyone can get to where they need to be.

Will the power be used locally?

Power from the wind farm will be exported to Pyle Substation, from there it will be used wherever it is needed.

What's prevented you from connecting into the existing Caerau substation?

The existing Caerau substation does not have the capacity to accommodate the Upper Ogmore grid connection. If we were to connect this project into the Caerau substation, the works would be far more extensive and disruptive. Additionally, by building this new grid connection, we are future-proofing the network's capacity.

Where can I find more information about the Upper Ogmore wind farm?

More information about this project, which is being delivered by Marubeni, can be found at:
upperogmore-windfarm.co.uk

Where can I find more information about the Foel Trawsnant Grid Connection?

More information about this project, which is being delivered by Pennant Walters, can be found at:
ftgrid.co.uk

How will the grid connection be delivered?

Our grid connection proposal is for a 66kv line running for around 9 km (5.5 miles), with 4.1km (2.5 miles) overhead, and 4.9km (3 miles) underground.

What infrastructure is required for the overhead lines?

This scheme would only use wooden H poles for the overhead connection, with no need for steel towers to be constructed.

Why isn't all the line being placed underground?

As part of the development of this scheme we have evaluated all the options for the line, including regulatory duties, local geography and environment, cost, and stakeholder view. Some of these are expanded upon below:

Land impacts

Undergrounding can disturb sensitive habitats or archaeological sites and may require extensive land use and construction, which can also be more impactful, challenging and costly.

Maintenance

The maintenance and repair of underground cables can be more complex and time consuming compared to overhead cables.

Cost

Underground cables are generally more expensive to install and maintain compared to overhead cables, especially for high voltage cables.

We also consider the views and requirements of our customers as well as stakeholders and the community.

Will you have to close any roads to lay underground cables?

Sections of the underground cables will be installed under the existing highway on the A4063 through Caerau. It is not anticipated that any full road closures will be required, however, the nature of the works mean that there will be impacts on the road network.

We will agree appropriate traffic management measures with the local highway authority (Bridgend County Borough Council). These works will be detailed within the final Construction Traffic Management Plan and are anticipated to take up to 6 months to complete.

Electricity Distribution

nationalgrid

Get in touch

We'd welcome your feedback to our consultation. There are lots of ways to get in touch with us and send us your feedback before the end of the consultation.

Complete the feedback form via the website or on paper, available at our events. You can also find our full draft planning application on the website:

nationalgrid.co.uk/upper-ogmore

The consultation is open until 5 January 2026 and we'd love to hear your thoughts.

You can also submit feedback via any of the contact methods outlined below.

Email us:

nged.upperogmore@nationalgrid.co.uk

Phone us:

01656 334319

Write to us:

Freepost GRASSHOPPER CONSULT

(no stamp or further address needed)

The contact details will put you in touch with Grasshopper Communications who are managing the consultation with the team at National Grid.

After the close of the consultation, we will be finalising our proposals and submitting our application to PEDW.

National Grid Electricity Distribution plc.
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