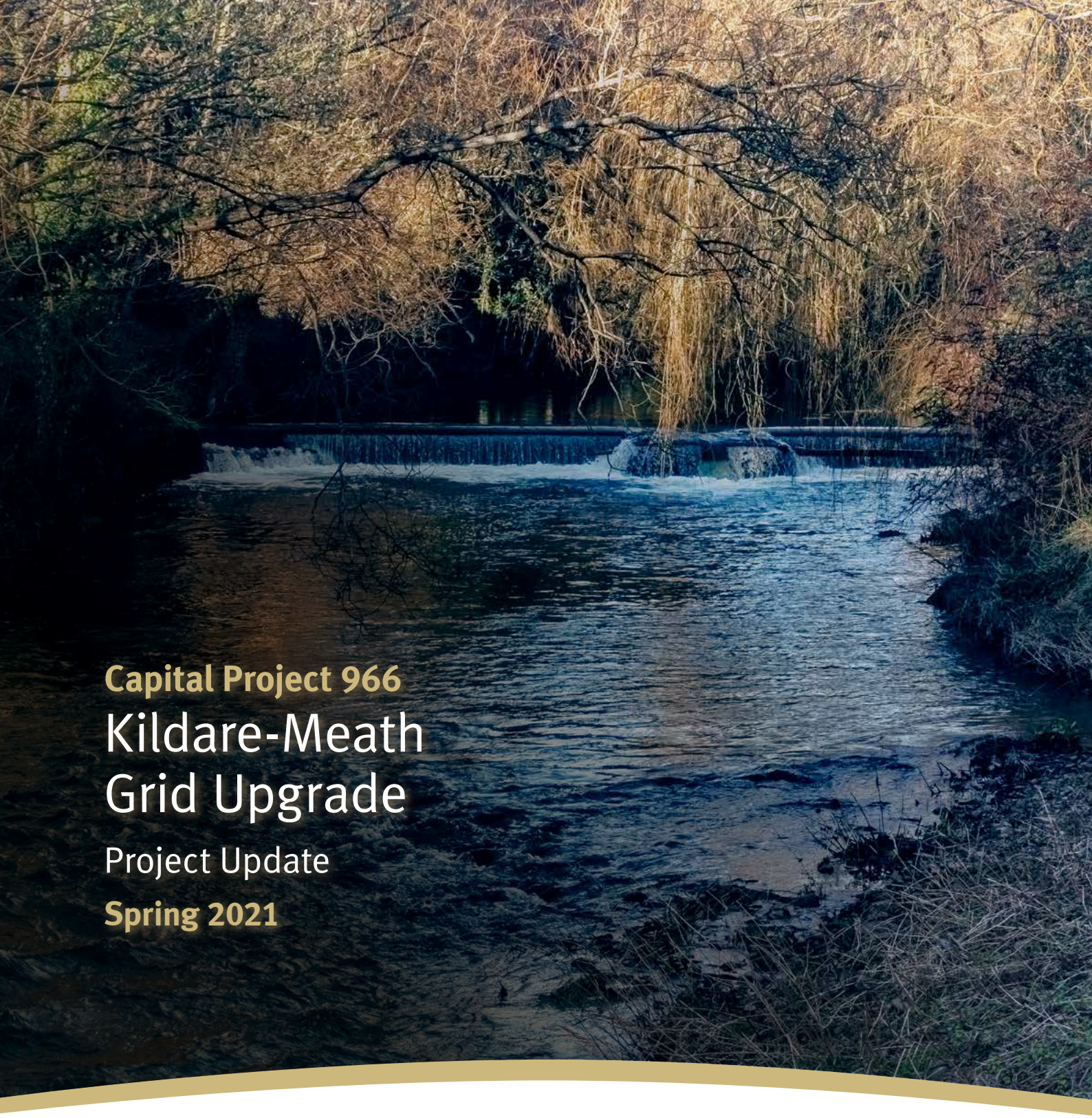


Capital Project 966

Kildare-Meath Grid Upgrade

Project Update

Spring 2021

EIRGRID

Delivering a cleaner energy future

Who are EirGrid – and what do we do?

EirGrid is responsible for a safe, secure and reliable supply of electricity – now and in the future.

We develop, manage and operate the electricity transmission grid. This grid brings power from where it is generated to where it is needed throughout Ireland. We use the grid to supply power to industry and businesses that use large amounts of electricity. The grid also powers the distribution network and supplies the electricity you use every day in your homes, businesses, schools, hospitals and farms.

About this update

This update is for you as stakeholders, communities, landowners and members of the public interested in finding out more about the Kildare-Meath Grid Upgrade. This document provides information about the project, and the outcome of our recent consultation which took place from 6 October 2020 to 14 December 2020.

During this consultation, we invited stakeholders to provide feedback on a shortlist of five options for the Kildare-Meath Grid Upgrade. Based on our assessments and your feedback, we identified an underground cable option (Option 4) as the best performing option to bring into the next step of this project. This concludes Step 3 in our six-step process to grid development, see Figure 2.

We will now start investigating exactly where we should build the project. In our six-step process of grid development we refer to this as Step 4 (Where exactly should we build?).

This document provides up-to-date information on the project, including:

- what is the Kildare-Meath Grid Upgrade,
- our six-step approach to consultation and engagement,
- what has happened on the project so far,
- details about the best performing option,
- next steps and how you can get involved, and
- frequently asked questions from our consultation.

What is the Kildare-Meath Grid Upgrade?

The Kildare-Meath Grid Upgrade will add a high-capacity underground electricity connection between Dunstown substation in Co. Kildare (near Two Mile House) and Woodland substation in Co. Meath (near Batterstown).

Why is the project needed and what are the benefits?

The upgrade will help to more effectively transfer power to the east of the country and distribute it within the electricity network in Meath, Kildare and surrounding counties.

The project is essential to enable further renewable energy generation in line with Government policy ambitions of achieving at least 70% of electricity consumption coming from renewable sources by 2030. This includes transporting electricity from offshore renewable sources.

The project will also help meet the growing demand for electricity in the East. This growth is due to increased economic activity and the planned connection of new large-scale IT industry and other industry infrastructure in Kildare, Meath and Dublin.

Electricity generated in the South and South West needs to be transported to where it is needed in the East. Power is currently transported across the country on two high-voltage power lines from Moneypoint in Co. Clare to the Dunstown substation and Woodland substation.

Transporting more electricity on these lines could cause electricity supply problems throughout Ireland, particularly if one of the lines is lost (where power is out) unexpectedly.

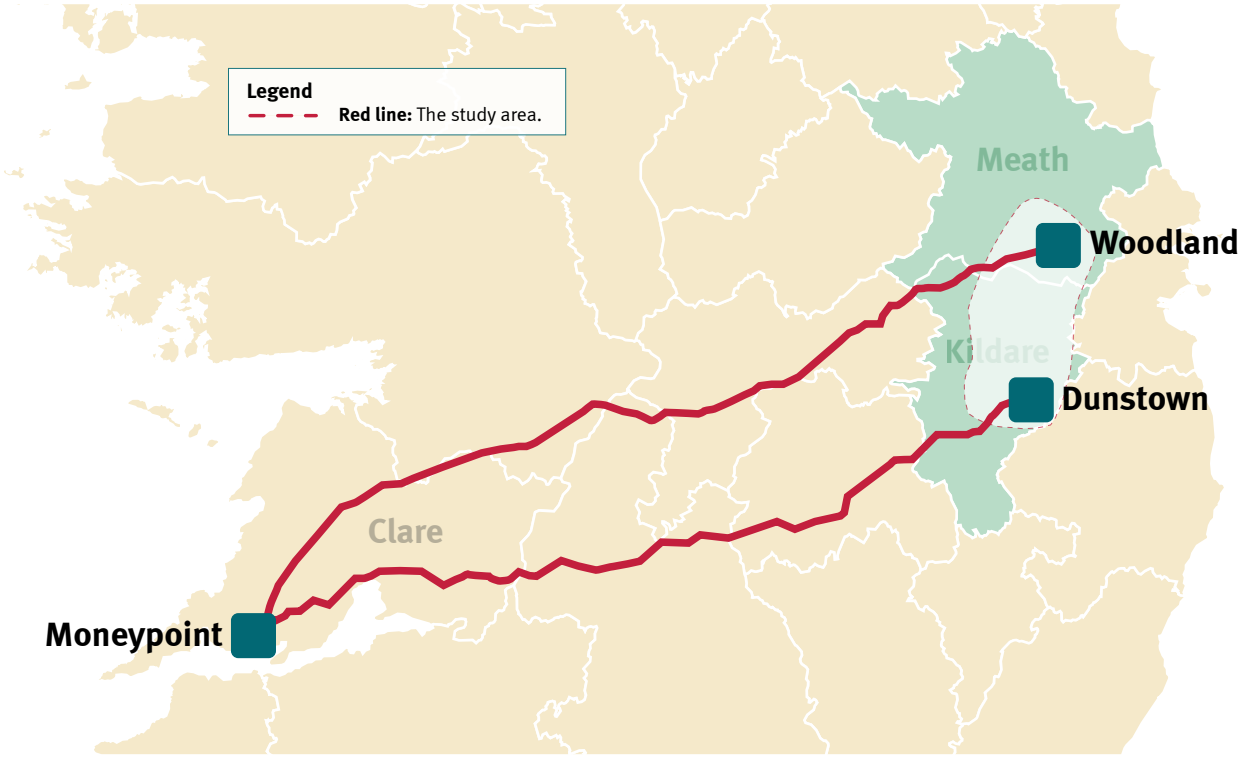


Figure 1: The connections from Moneypoint to Dunstown and Woodland with the study area between the two substations highlighted. We need to add a connection between Dunstown and Woodland

Benefits

Competition

Apply downward pressure on the cost of electricity.

Sustainability

Help facilitate Ireland's transition to a low carbon energy future.

Security of Supply

Improve electricity supply for Ireland's electricity consumers.

Economic

Contribute to the regional economy and support foreign direct investment.

Community

Deliver community benefit in the areas that facilitate the project infrastructure.

Our six-step approach to consultation and engagement

Our 'Have Your Say' publication outlines our commitment to engage with, and listen to, stakeholders. It outlines our detailed six-step approach to developing projects, and how you can get involved at every step.

Our new 'Public Engagement Strategy' publication reinforces our commitment to engaging with our stakeholders in the development of projects like this. You can get a copy of both of these publications at **www.eirgrid.ie**.

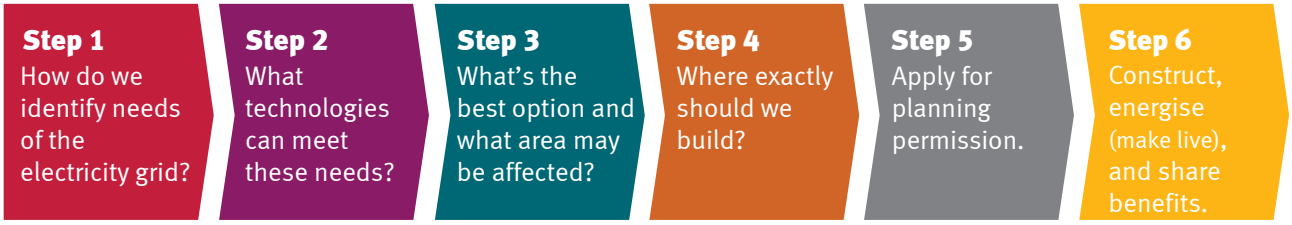


Figure 2: Our six-step approach to developing the electricity grid

This project has just finished Step 3, where we have identified the best performing option and the broad study area. We are now moving into Step 4, where we will identify exactly where the underground electricity connection will be built.

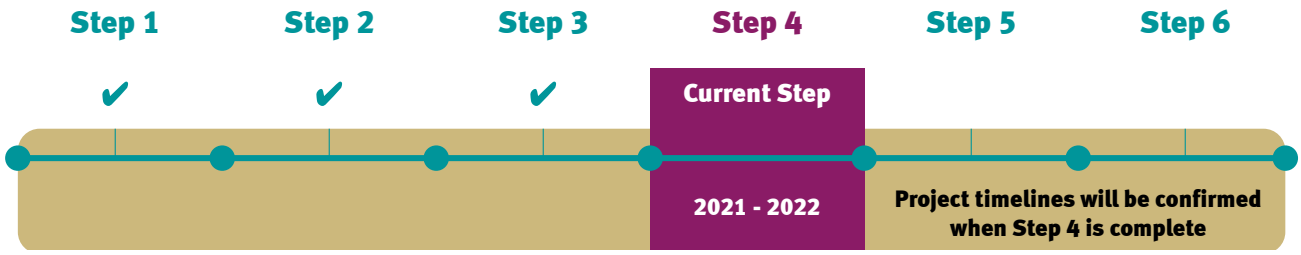


Figure 3: Our six-step timeline for the Kildare-Meath Grid Upgrade

What has happened so far?

In **Step 1**, we identified the need for the Kildare-Meath Grid Upgrade.

In **Step 2**, we compiled a shortlist of best performing technical options, which went out for public consultation between November 2018 and February 2019. This included a mix of overhead line, underground cable and upvoltage technologies. Four of those options were taken forward to Step 3 in April 2019.

In **Step 3**, we re-confirmed the need for the project. We also investigated the shortlisted options to strengthen the electricity network between Dunstown and Woodland.

The shortlist we investigated is as follows:

1. Connect two existing 220 kV overhead lines and up-voltage to 400 kV;
2. Build a 400 kV overhead line;
3. Build a 220 kV underground cable;
4. Build a 400 kV underground cable in one route;
5. Build a 400 kV underground cable using two new conductors in two separate routes.

As we investigated Option 4, we identified that the cable would perform differently depending on its construction (if this option was chosen). So we added Option 5 to cater for this variation in cable construction.

In October 2020, we identified Option 1 as the *emerging* best performing option and Option 4 as the best performing *alternative*. We then consulted on all 5 options to help us determine the Best Performing Option.

Step 3 Studies

In Step 3, we completed a range of investigations. These built on those we did in Steps 1 and 2. We have assessed and compared these investigations under five categories:

1. Technical aspects;
2. Economic factors;
3. Environmental factors;
4. Socio-economic factors – such as the local economy and local amenities; and
5. Deliverability factors – such as timeline and potential risks.

Step 3 Engagement and Consultation

We engaged extensively with stakeholders throughout this step of the project. We held a 10-week project information phase from July to September 2020 and held a 10-week public consultation phase from October to December. Due to the challenges of the COVID-19 pandemic, we made additional efforts in reaching out to the public. Some of these activities included:

- publishing a plain English consultation brochure as well as all the technical reports;
- hosting public webinars;
- circulating 57,000 freepost questionnaires to households within the study area;
- advertising in local newspapers, on radio, bus stops, in some supermarkets and on social media;
- developing a project micro-site (available at **www.eirgrid.ie/KildareMeath**);
- hosting a virtual project exhibition;
- in-person meeting with our project liaison staff (as restrictions allowed);
- on-going engagement by phone and email.

We also met with the County Councils, Chambers of Commerce and Public Participation Networks.

Best performing option

Further Studies

In October 2020, we identified Option 1 as the *emerging* best performing option and Option 4 as the best performing *alternative*. When we studied Option 1 further, we found that to carry out the necessary works on the line, it would require longer outages where the line would be out of service. This extends the timeline for delivering Option 1 and negatively impacted the assessment of Option 1. When we examined Option 4 further by undertaking more in-depth studies, we found that the underground cable can be constructed in a narrower trench width than we had assumed before. This results in a more efficient construction timetable for Option 4. This positively impacted the assessment of Option 4.

Consultation Feedback

In total, this consultation received 178 responses. The consultation responses provided valuable insight into the views and opinions respondents had about the project options. The responses will also help us plan and manage our consultation and engagement in the next step of this project. The responses highlighted support and concern for all five options we were considering. We have provided more information on the general concerns later in this document (see page 10).

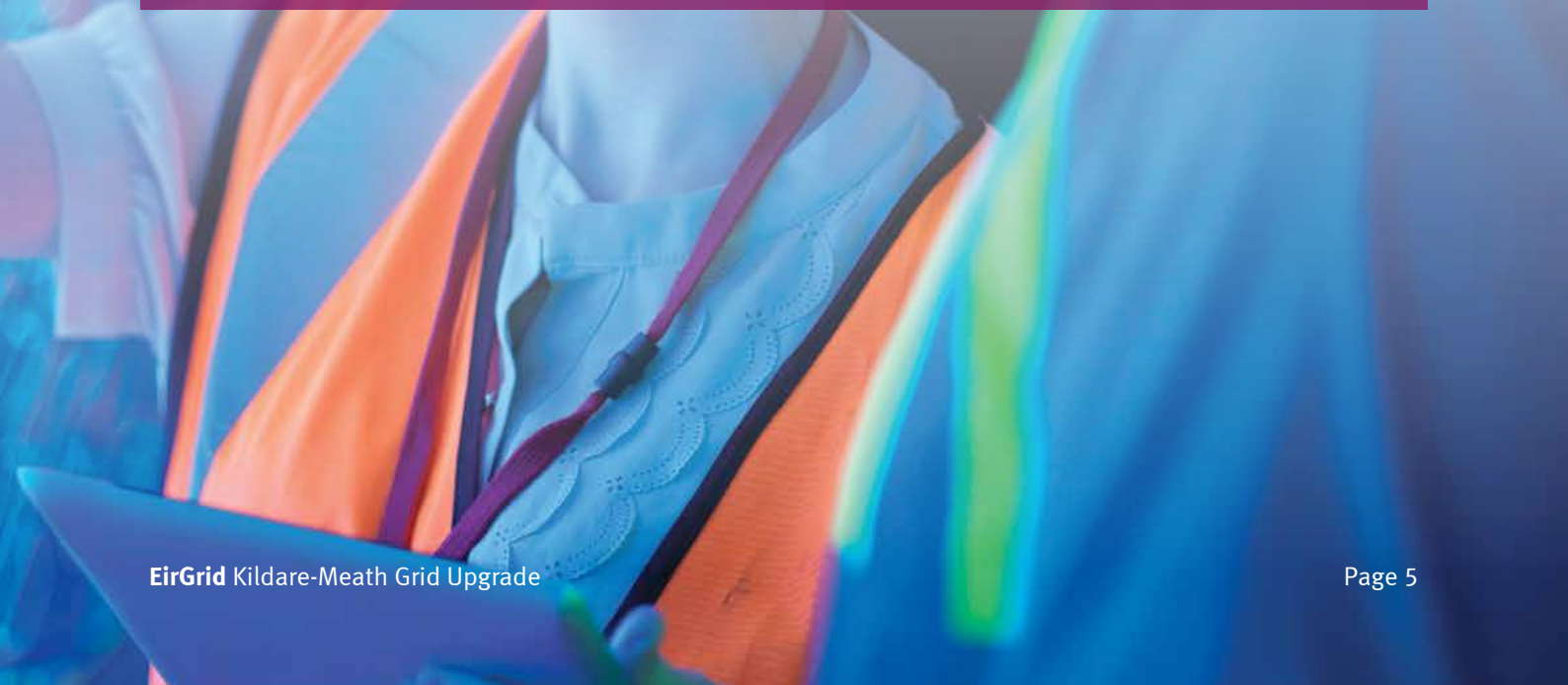
Every response was analysed and reported on. The consultation report is available on our website at **www.eirgrid.ie/KildareMeath**. We incorporated this feedback into our review of the various options.

Best Performing Option Outcome

Based on the further studies and public consultation feedback, we have identified the underground cable (Option 4) as the best performing option, which will now progress to Step 4.

In Step 4 we will explore where exactly we will build the new underground cable. We will consult with stakeholders, partners and the public before any decisions on a route are made.

The Best Performing Option Report is available on our website: **www.eirgrid.ie/KildareMeath**.



About the best performing option: A 400 kV underground cable in one route

Description

The best performing option involves building a new 400 kV underground cable to link the Dunstown substation and Woodland substation.

Installation

We aim to install the underground cables in the public road network (as opposed to through private lands or similar) where feasible. This approach allows for easier access if the cable needs repair or maintenance. The cable route, while not yet designed is likely to require use of regional, local roads and involve crossings of the national road network. Discussions with key stakeholders such as local authorities and Transport Infrastructure Ireland will be required in the coming months before we are able to confirm a specific route for the project. However, we will consider cross country routing where significant constraints and potential adverse impacts arise. To achieve electricity transmission using alternating current (AC), three cables would be required.

These three cables would be laid in the same trench in a road. The trench width is expected to be up to 2.5 metres wide (see Figure 4). We would also need a temporary working area to carry out the installation. The cable would be laid in sections. While we are laying the cables, there will be local traffic restrictions. We will explore options such as passing bays at certain locations (local road widening) to reduce the impact to traffic and communities during the cable duct and cable installation works.

We will also need to work on the Dunstown and Woodland substations. Additional infrastructure which will help support voltage and maintain electricity quality will be required. Further investigations will confirm the details of any new infrastructure needed to existing substations in the Greater Dublin area. This will facilitate the eventual operation of the new cable on the existing transmission network.

Electricity current

We will use High Voltage Alternating Current (HVAC) for this project. This form of electricity transmission is used internationally in electricity networks and in Ireland.

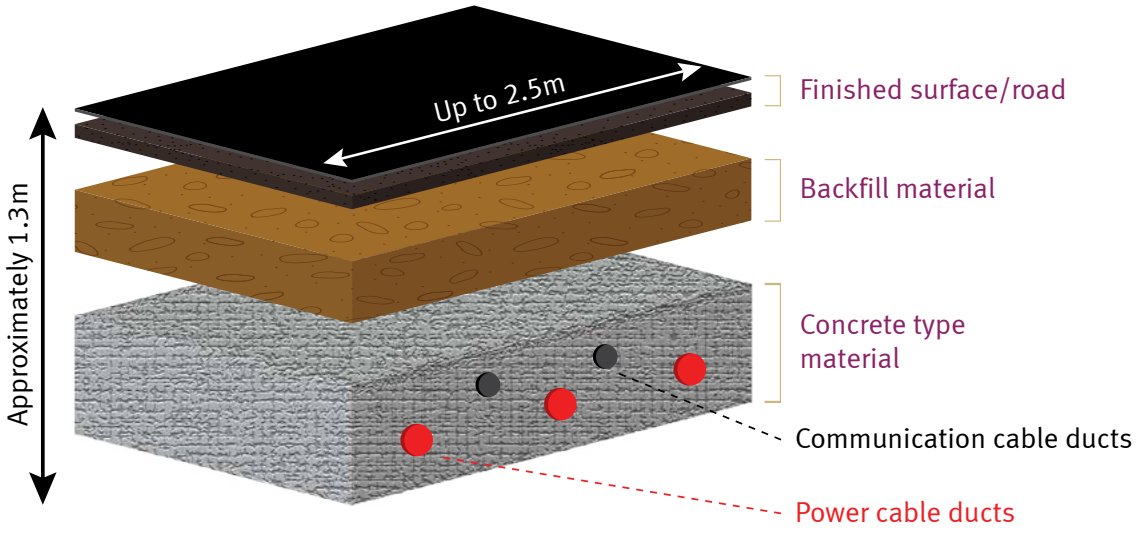


Figure 4: Typical HVAC underground cable duct arrangement

What does underground cable construction look like?

As this project progresses, we will consult and work closely with local stakeholders to minimise any disruption that may be caused by the construction phase of the project. Construction will not commence before 2024. The following photos provide a **typical idea** of what construction may look like. We will be able to provide more detailed information on what construction looks like as the project design develops.

Figure 5: A typical cable duct installation in the road

Figure 6: A typical jointing bay where cables are connected

Figure 7: Cables being pulled into the ducts and jointing bay

Figure 8: A typical passing bay in operation during cable jointing

The study area

This is the proposed area within which the underground cable for the Kildare-Meath Grid Upgrade is expected to be built. The current study area is outlined by the red dashed line in Figure 9. This study area will be reviewed as part of this step in the project.

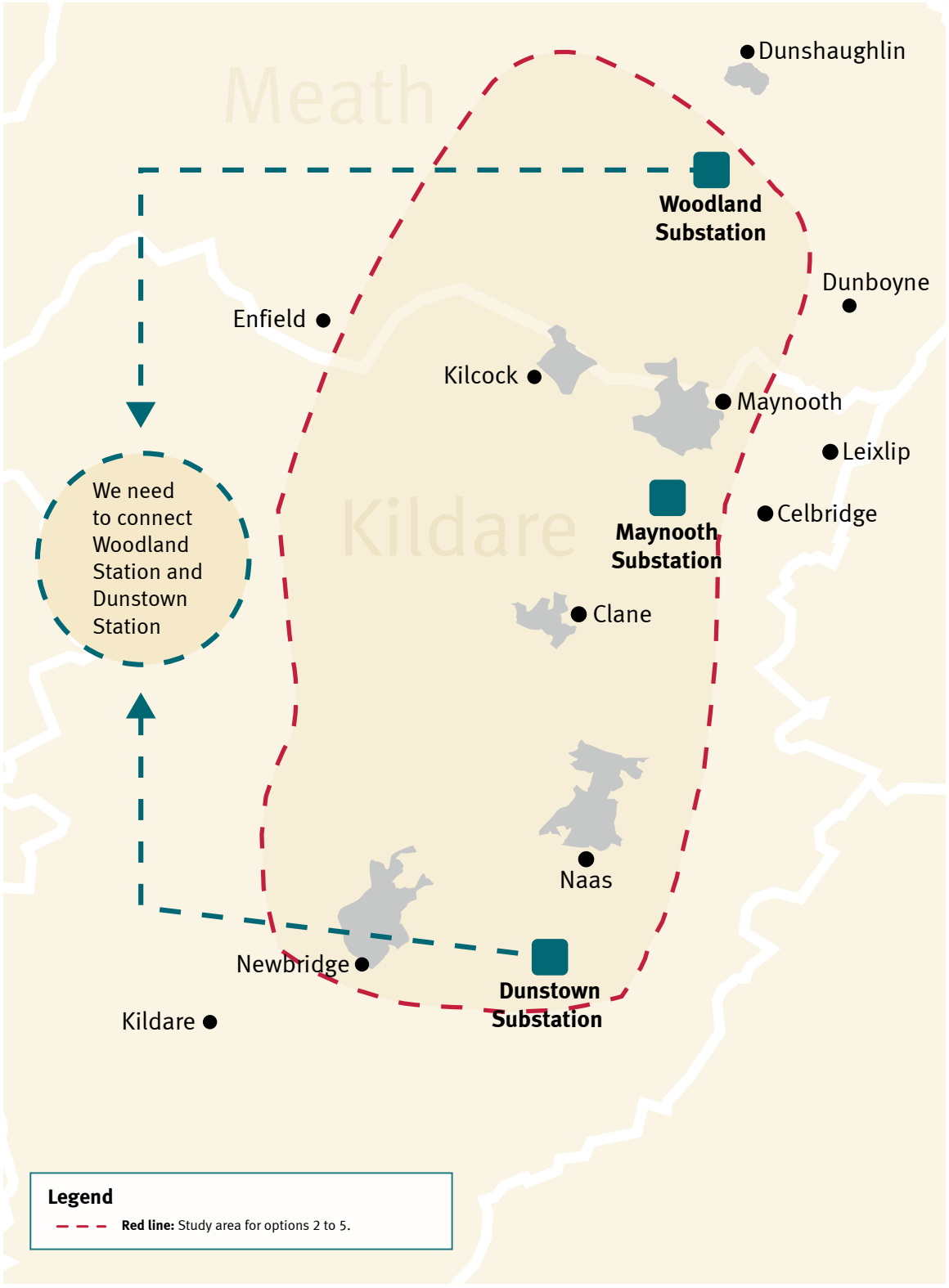


Figure 9: The Kildare Meath Grid Upgrade project study area

Next Steps

The Kildare-Meath Grid Upgrade project now moves into Step 4 of our six-step process for developing grid projects. Step 4 involves identifying where exactly we will build the project. Before making a decision on where we will build the project, we will develop route options and we will consult with you and other stakeholders on these options when they are available. We anticipate this consultation will commence in the autumn for a 12-week period.

Kildare Meath Grid Upgrade Community Forum

We are currently preparing to set up a Kildare Meath Grid Upgrade Community Forum. We expect this to happen by Summer 2021.

Membership will include representatives of community organisations and other stakeholders such as local authority staff and public representatives. The forum will act as a consultative body throughout the development of the project. It will offer advice to us on key project developments such as:

- how we communicate and engage with the public,
- what we need to consider in developing route options, and
- how we can deliver meaningful community benefit to the area where our infrastructure is hosted.

The forum will also meet regularly for project updates and to ensure two-way communication is on-going.

We will issue an invite for expressions of interest for membership of the forum through the public participation networks (PPN) in Kildare and Meath. Forum members will need to be members of their local PPN. Where a group is not a member of their local PPN already, we can offer support with registration. We will publish detailed information about this and how to get involved on our website. To be kept informed of this process, please email **kildaremeath@eirgrid.com**.

Kildare Meath Grid Upgrade Community Benefit Scheme

We recognise electricity infrastructure projects have an impact on local residents and businesses especially during the construction phase. While the Kildare-Meath Grid Upgrade is being built, we will work to contribute to communities as part of our community benefit policy.

The Kildare Meath Grid Upgrade Community Benefit Scheme will consist of a:

1. General community grants fund;
2. Sustainability fund to support transition to sustainable communities; and
3. Biodiversity fund to ensure a net biodiversity contribution resulting from the infrastructure.

The value of the scheme is calculated at a later stage of the project based on the capital value of the cabling costs. The community benefit scheme will be led and shaped by the Community Forum. This ensures the benefit is owned by Kildare Meath communities and will leave a positive lasting legacy in the project area.

You can learn more about our community benefit policy on our website.

Keep up to date

If you would like to find out more information, register to receive update emails or give feedback on this project, you can email **KildareMeath@eirgrid.com** or contact your local Community Liaison Officer, Gráinne Duffy, on +353 (0)85 887 4798.

Consultation Frequently Asked Questions

The Step 3 Consultation Report contains information on all responses submitted and can be reviewed on the project website. Individual respondents to the consultation emphasised areas of particular interest to them. The project team has grouped the feedback into frequently asked questions. It is hoped that these will address some of the queries and concerns received from stakeholders and communities. These questions will be reviewed as the project develops.

Will this project actually be delivered and will it be delivered on time?

This project is essential to enable further renewable energy generation in line with Government policy ambitions of achieving at least 70% of electricity consumption coming from renewable sources by 2030. This project will also support increased economic activity in Kildare, Meath and surrounding counties. With this in mind, every effort will be made to scope, design, construct and deliver the project in the most efficient way. We will do this while working closely with communities, stakeholders and partners and within statutory planning timelines.

How will we manage the cost of the project?

We will closely monitor the project costs throughout the project by using internal governance and reporting frameworks as agreed with the Commission for Regulation of Utilities.

Does this project provide a long-term solution to the need identified?

Yes, this reinforcement will provide a solution for current predicted demand and generation growth in this section of the network.

In the longer term, future demand and generation may require further upgrades in this area.

How will the project cross constraints such as motorways, rivers and bridges?

We will explore solutions to overcome routing challenges posed by infrastructure and or environmental constraints using a variety of proven engineering design solutions such as horizontal directional drilling (HDD).

Could broadband (fibre) be delivered at the same time as construction of this project?

During the installation phase we may identify opportunities to work with other utility providers to minimise the impact to communities and road infrastructure. While fibre cables are included within the proposed cable infrastructure, its primary purpose is communication between the existing ESB substations.

Will this project cause traffic disruption?

For a project of this size, some disruption to traffic will occur during construction. The cable installation along the route of this project is likely to take approximately 2 to 3 years. However, we will work closely with local authorities, community groups and individual stakeholders to put traffic management plans in place to minimise impacts. The project will have a construction management plan that will help to minimise disruption to existing roads users when the ducting is being installed.

Will this project cause access disruption?

During road works, local access to dwellings and businesses will be maintained, along with keeping traffic moving through suitable management. The works are expected to progress at approximately 100 metres a day, meaning people can reasonably expect to have work directly outside their home, business or place of work for limited periods of time only. There may be times when the work period may be longer due to the installation of a joint bay. A joint bay is the housing within which the joint is located and is permanently installed underground.

Will this project require the use of private lands?

We aim to install underground cables like this in the public road network (as opposed to through private lands or similar). This allows for easier access if the cable needs repair or maintenance. However, we will consider cross country routing where constraints and potential impacts arise. In this instance, our project team will consult and liaise directly with relevant landowners and stakeholders to establish a preferable and acceptable option.

Will this project disrupt local electricity supply during construction?

While not expected, some disruption to local electricity supply may occur during construction. The cable installation along the route of this project is likely to take approximately 2 to 3 years. We will work with the ESB, local authorities, community groups and individual stakeholders to put management plans in place to minimise impacts.

How will this project impact on the environment?

We will examine the possible impact that options may have on an area. We assess the current situation in the area with regard to health, noise, ecology, visual amenity, air quality, flora and fauna and other relevant topics. We then examine the possible impact an underground cable might have on each of these. Where impacts do arise, we will always incorporate measures to avoid or reduce these effects to acceptable levels.

How will this project impact on heritage and cultural sites?

We will examine the possible impact that options may have on an area. We will firstly assess the current situation in the area with regard to heritage and cultural sites. We will then examine the possible impact an underground cable might have on each of these. Where impacts do arise, we will always incorporate measures to avoid or reduce these effects to acceptable levels.

How will this project impact on the landscape?

As the majority of infrastructure will be placed underground, there is very limited impact on the landscape. There will be a construction impact – however, this is temporary.

Will this project impact on the value of my property?

When we start to define a new route, there are understandable concerns about the potential effect on land and property. In particular, people who own land or a home near the route worry that the project will devalue their property or limit how they can develop it in future. However, there is no evidence that existing infrastructure causes any long-term devaluation of land or property.

Will Electro Magnetic Fields associated with the project have a negative impact on my health?

The electromagnetic fields emitted by transmission infrastructure are at an extremely low frequency, and are at the non-ionising end of the electromagnetic spectrum. We design and operate the transmission grid in accordance with stringent safety recommendations which are made by national and international agencies. Further information on electro-magnetic fields and the guidelines which we adhere to are contained in our brochure "The Electricity Grid and Your Health" which can be found on our website.

Will Electro Magnetic Fields associated with the project have a negative impact on the Equine Industry?

In 2014, we gave a commitment to investigate international practice and research relating to power lines and the equine sector. The engineering and scientific group, Exponent, undertook this and the full review is available **here**.

In relation to horses, Exponent states: "No scientific studies of potential adverse EMF (Electro Magnetic Fields) effects on horses were identified in the literature review." We are committed to a process of on-going monitoring of research on EMF, and we will provide the latest information to the general public on the issue. We design and operate the transmission grid in accordance with stringent safety recommendations which are made by national and international agencies.

How is our feedback used in progressing this project?

We will continue to consult and engage with stakeholders, partners and the general public on this project. Your feedback is important to us and is considered alongside all our studies and reports. We take your feedback into account:

- when making decisions on the project,
- to help minimise the impact of the construction of the project on the local community, and
- to improve how we communicate and engage with the local community.

Step 4 at a glance

Step 1 Completed identifying needs of the grid.

Step 2 Completed identifying the technologies that can meet these needs.

Step 3 What's the best option and what area may be affected?

Step 4 Where exactly should we build?

Step 5 Apply for planning permission.

Step 6 Construct, energise (make live), and share benefits.

Step 4 At a glance

What's happening?

In Step 4, we will plan exactly where we will build. We will do this by identifying and evaluating route options, with feedback from you and other stakeholders.

How long will this take?

Step 4 will take us into Summer 2022.

What can I influence?

You can influence where we build this project.

How can I get involved?

You will be able to get involved in different ways. When we have more information to share, we will engage and consult at local level with members of the public, landowners, and local representatives from the study area. We will also continue to engage directly with elected representatives, specialist representative groups, environmental and planning agencies. If you are a member of a community group in the study area, you may be able to get involved in our community forum for this project. You can stay up to date at: **www.eirgrid.ie/KildareMeath**.

Who can I contact?

If you would like to find out more information, register to receive update emails or give feedback on this project, you can email **KildareMeath@eirgrid.com** or contact your local Community Liaison Officer:

Gráinne Duffy on +353 (0)85 887 4798.

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