Kildare-Meath Grid Upgrade

Capital Project 966
Step 4 – Project Update Brochure
June 2022

EIRGRID
Delivering a cleaner energy future

Who are EirGrid – and what do we do?

EirGrid is responsible for the 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 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 keeping up to date about the Kildare-Meath Grid Upgrade.

This document provides information about what this project is, and an update on further assessments and developments that have taken place since the announcement of the Emerging Best Performing Option - Option A: The Red Option, in March 2022.

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

- What is the Kildare-Meath Grid Upgrade;
- Our six-step approach to developing the electricity grid;
- What has happened in this project so far;
- What is a 400kV underground cable;
- What is the Best Performing Route Option;
- Kildare-Meath Grid Upgrade Community Forum and Community Benefit
- What happens next?

Key Findings

Following ongoing engagement with landowners, community and statutory stakeholders, we are now in a position to confirm a Best Performing Option (BPO) for this project.

The Best Performing Option is the refinement of the Emerging Best Performing Option chosen along the project corridor within the study area.

What is the Kildare-Meath Grid Upgrade?

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

The upgrade will help to:

- transfer power more efficiently from the south and south west of Ireland, including from offshore renewable sources, to the east of the country; and
- distribute that power within the electricity network in Meath, Kildare and surrounding counties.

The project is essential to enable further development of renewable energy generation in line with Government policy of having up to 80% of electricity coming from renewable sources by 2030. This includes transporting electricity from offshore renewable sources.

Due to increased population and economic activity in the east, the project will also help meet the growing demand for electricity in Kildare, Meath and Dublin.

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.

What is our six-step approach to developing the electricity grid?

We have a six-step approach to gathering and understanding your and other stakeholders' views during this process. Our 'Have Your Say' publication outlines our renewed commitment to engage with, and listen to, stakeholders.

Our '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 publications at **www.eirgrid.ie**

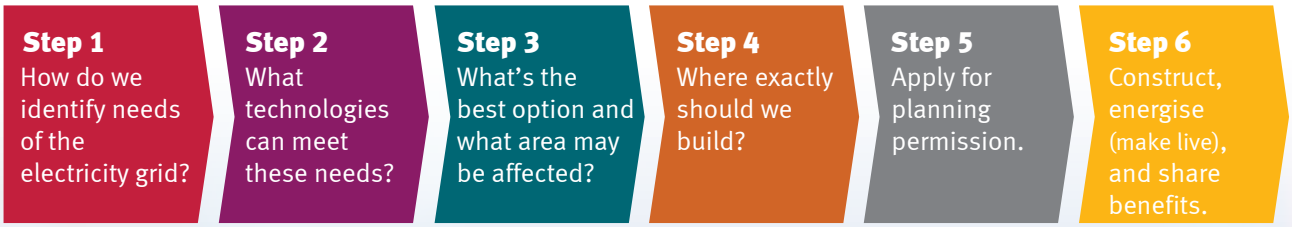


Figure 1: Our six-step approach to developing the electricity grid

This project is coming to the end of Step 4 and we have now identified where we propose to build the underground electricity cable within the EBPO - Option A: The Red Option. This Best Performing Route Option will now be brought forward to Step 5 where we will apply for planning approval.

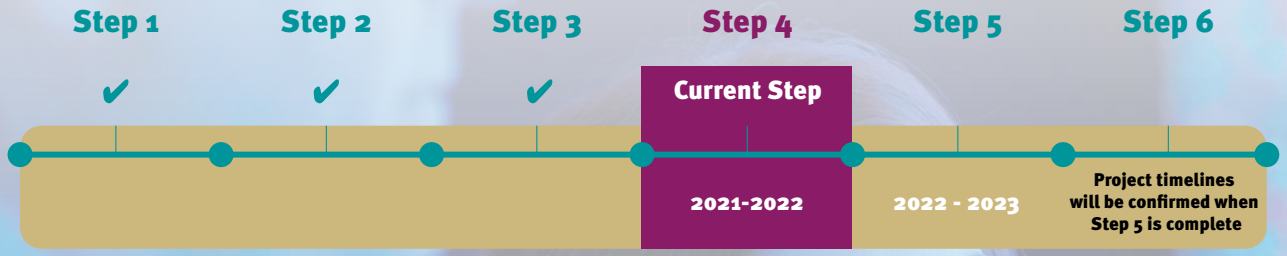


Figure 2: Our six-step timeline for the Kildare-Meath Grid Upgrade

What has happened so far?

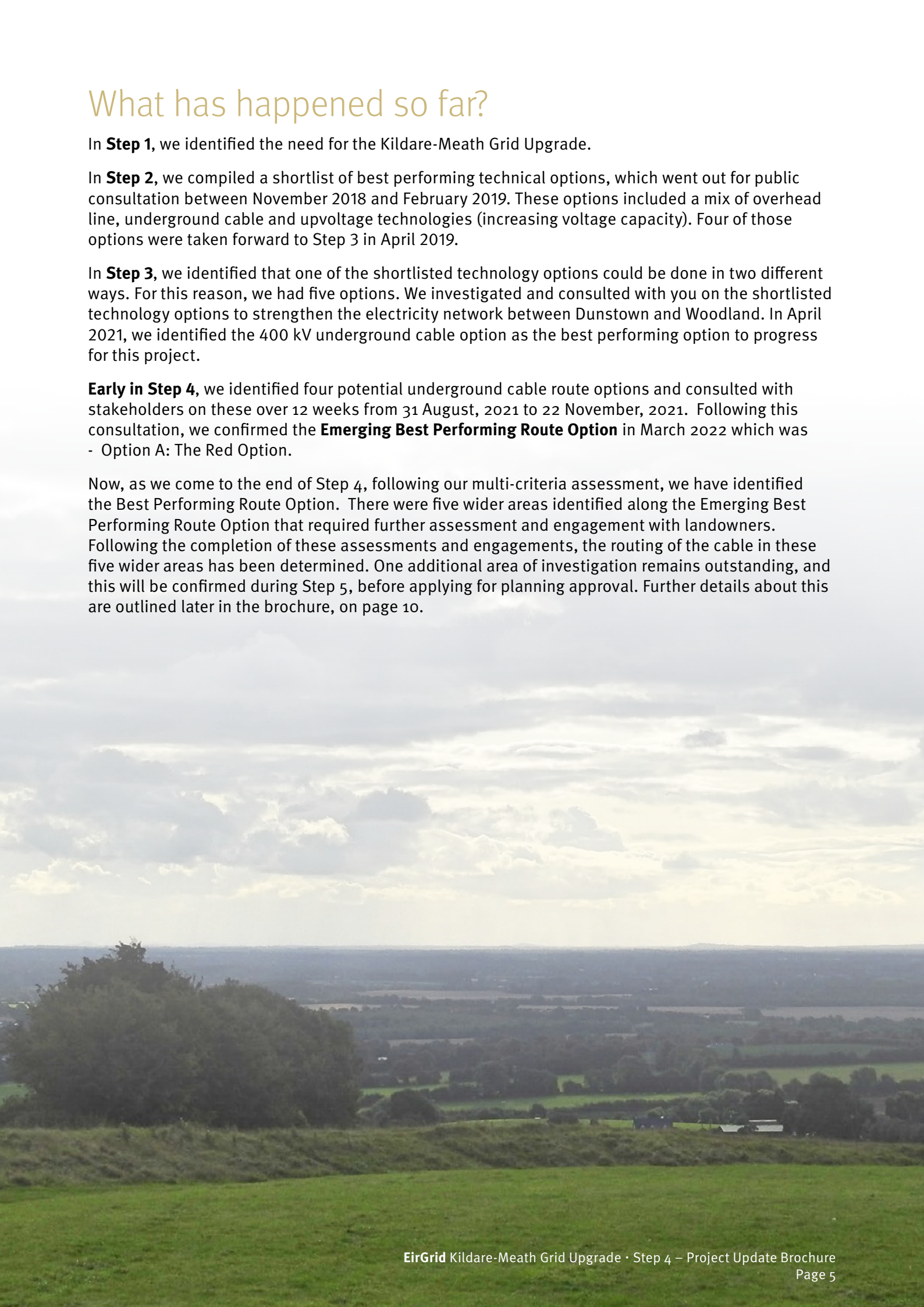
In **Step 1**, we identified the need for the Kildare-Meath Grid Upgrade.

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

In **Step 3**, we identified that one of the shortlisted technology options could be done in two different ways. For this reason, we had five options. We investigated and consulted with you on the shortlisted technology options to strengthen the electricity network between Dunstown and Woodland. In April 2021, we identified the 400 kV underground cable option as the best performing option to progress for this project.

Early in Step 4, we identified four potential underground cable route options and consulted with stakeholders on these over 12 weeks from 31 August, 2021 to 22 November, 2021. Following this consultation, we confirmed the **Emerging Best Performing Route Option** in March 2022 which was
- Option A: The Red Option.

Now, as we come to the end of Step 4, following our multi-criteria assessment, we have identified the Best Performing Route Option. There were five wider areas identified along the Emerging Best Performing Route Option that required further assessment and engagement with landowners. Following the completion of these assessments and engagements, the routing of the cable in these five wider areas has been determined. One additional area of investigation remains outstanding, and this will be confirmed during Step 5, before applying for planning approval. Further details about this are outlined later in the brochure, on page 10.



What is a 400kV underground cable?

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.

Earlier studies have determined that a 400 kV underground cable between Woodland and Dunstown substations is most suitable for this project.

Figure 3 provides an indicative overview of what a typical underground cable arrangement would look like.

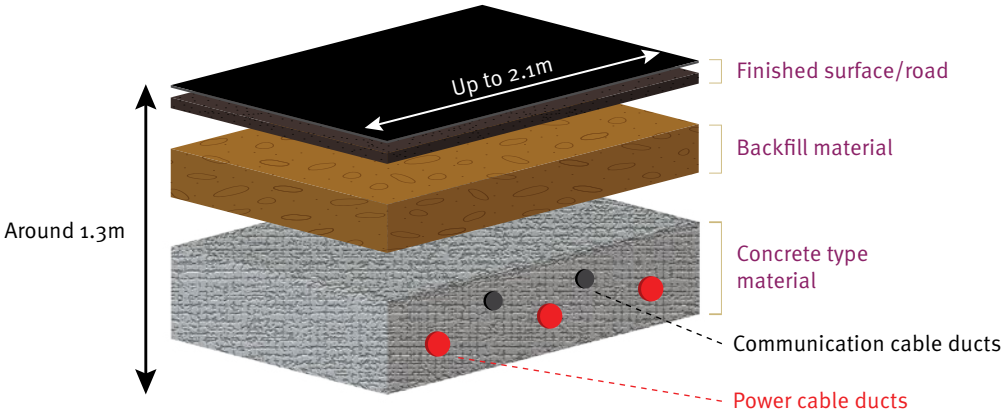


Figure 3: Typical HVAC underground cable duct arrangement

Further information about underground cable construction and what it looks like can be found in the Kildare-Meath Grid Upgrade Step 4 Consultation Brochure, located in the related documents section here **www.eirgrid.ie/kildaremeath**.

Step 4 Studies and Assessment Criteria

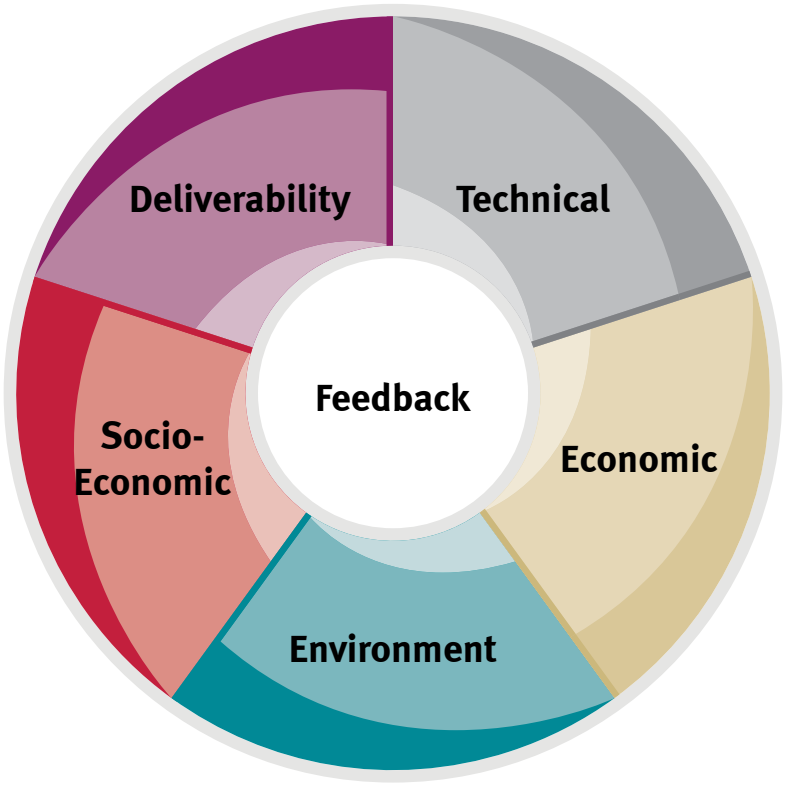


Figure 4: The five categories we use to assess options with your feedback

As part of Step 4, we completed further investigations, building on those we completed in Steps 1, 2 and 3. We assessed and compared these investigations under five categories:

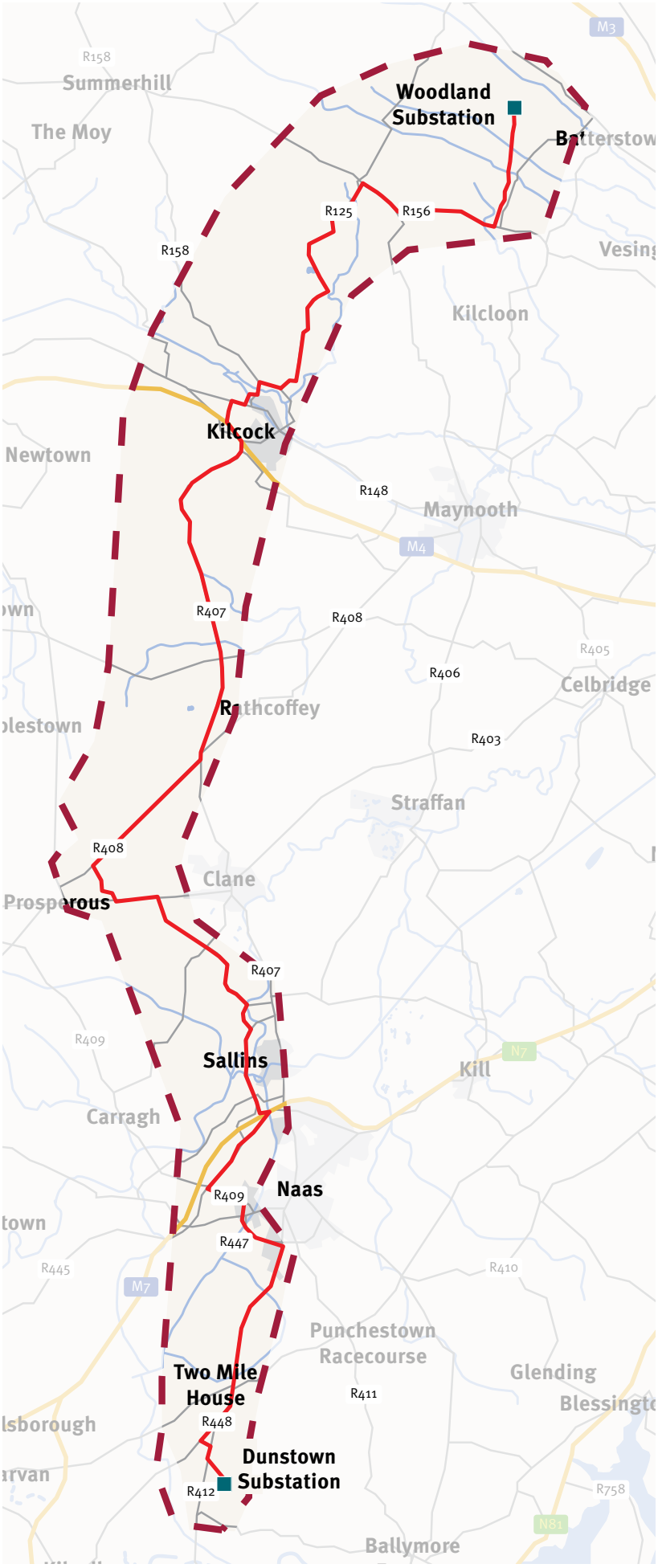
1. Technical aspects – such as compliance with electricity standards/ operational aspects,
2. Economic factors – such as project implementation costs,
3. Environmental factors – such as biodiversity / habitats/ ground conditions/ archaeology,
4. Socio-economic factors – such as the local economy and local amenities; and
5. Deliverability factors – such as timeline and potential risks

What is the Best Performing Route Option?

Following further engagement and technical studies, we can now confirm the changes to the route and announce the Best Performing Option for this 400kV underground cable.

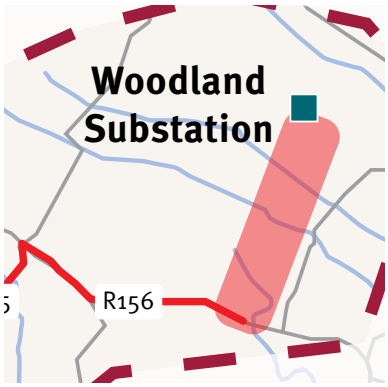
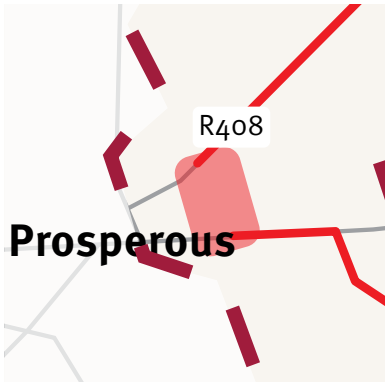
Previously in Step 4, we announced the Emerging Best Performing Option. This route included five off-road sections, which were shown as wider areas on the map.

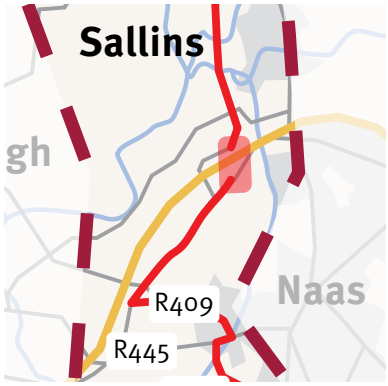
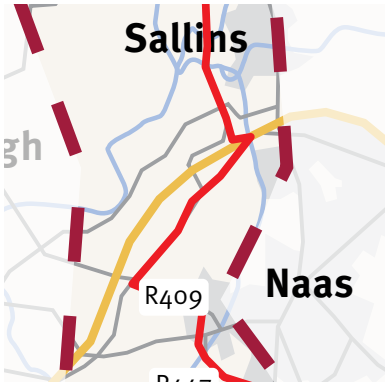
Further engagement was required with affected landowners and technical assessments were carried out to confirm the route within these wider areas.

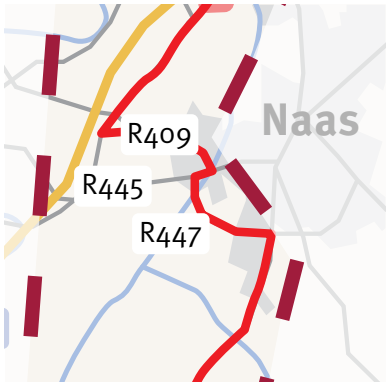
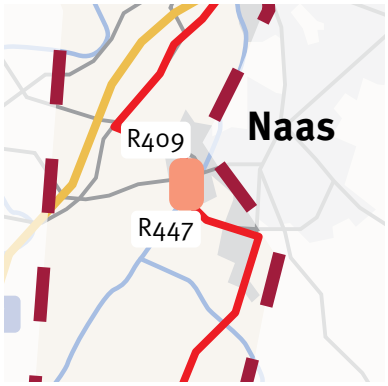
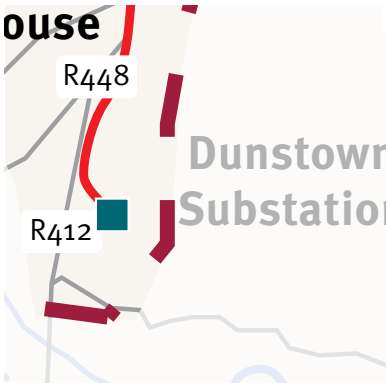
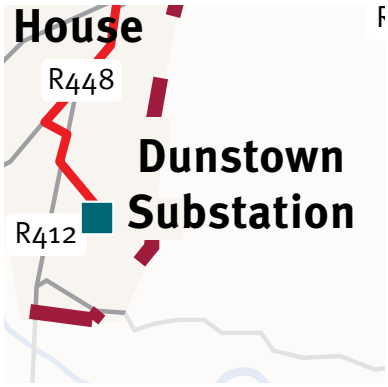


The Key Changes

The following table outlines the defined routes that will now be taken through the five wider areas presented as part of the Emerging Best Performing Option.

Emerging Best Performing Option	Reason for the change	Best Performing Option
	**Woodland Substation to R156** This is now an off-road section approximately 3km in length through agricultural land. The use of local roads in this area was ruled out because of two road bridges. These bridges are too shallow for a trench to be constructed in them and constraints associated with drilling under the bridges would have made that option impractical.	
	**West of Kilcock** The route has been designed to avoid Kilcock town, businesses and dense residential area. This section includes a crossing of the Rye Water, Royal Canal, railway, and the M4 Motorway. The cable will be drilled under these to avoid any impacts to them.	
	**East of Prosperous** This is an off-road section approximately 1.1 km in length through agricultural land. The section passes slightly to the west of the study area outlined in the Emerging Best Performing Option. This decision was made in order to avoid Prosperous village, to minimise potential impacts to landowners, hedgerows, and agricultural land.	

Emerging Best Performing Option Corridors	Reason for the change	Best Performing Corridors
	**North of Sallins** This section is a mixture of on-road sections and off-road crossing through agricultural land. It will also pass close to the River Liffey, and the design will help avoid impacts to the landscape and ecology.	
	**Crossing of the M7** This section is a mixture of on-road and off-road sections. The route comes off the Sallins Bypass and crosses over agricultural land. The route crosses under the M7 in the existing underpass (Osberstown Road). The route then connects to the R407 (Millennium Parkway).	

Additional areas of change	Reason for the change	Best Performing Corridors
	**Grand Canal Crossing in Naas** This is a new corridor, and is included in this section because further ground condition surveys are needed before the route can be finalised. The Naas Sports Centre and adjacent residential properties will be avoided. The Canal could be crossed along the R409 (New Caragh Road) or with a crossing under the canal.	
	**Approach to Dunstown Substation** The route was changed in this section to avoid a road bridge which is too shallow for the cable trench. The cable will now travel south west along the R448 for a greater length, before turning east to connect with the R412. This change reduces potential environmental and social impacts.	

Key Statistics

Route length	53 km
Off-road sections	8km
Number of river crossings	5: Rye Water, Royal Canal, River Liffey, Grand Canal and other smaller watercourses.
Other major crossings	4: Two railway and two motorway crossings.
Construction duration	24 to 32 months*

* This may change depending on further technical assessment.

Further design features will be added to the project at Step 5. These include jointing bays, passing bays, construction areas, access tracks, substation works and other associated works. These works will be within the route area outlined. These elements will not affect the routing of the cable but they will require additional engagement with landowners and key stakeholders.

The following photos show what construction may look like.

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

Kildare-Meath Grid Upgrade Community Forum

The Kildare-Meath Grid Upgrade Community Forum provides advice to us on key project developments such as:

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

This is an advisory forum and does not replace any other engagement and consultation we carry out.

The Community Forum is facilitated by Development Perspectives, an independent Development Education non-governmental organisation (NGO) and registered charity. It has met a total of eight times since its first meeting in July 2021. The forum continues to meet regularly to provide feedback, for project updates and to ensure two-way communication is ongoing.

To be kept informed of forum activity, visit our website **www.eirgrid.ie/KildareMeath**.

Community Benefit

We recognise the importance of local communities and businesses who facilitate the upgrading of the electricity transmission network and the Community Benefit Fund reflects this.

While the Kildare-Meath Grid Upgrade is being built, we will work to support communities as part of our community benefit policy.

A dedicated fund for the Kildare-Meath Grid Upgrade will be made available to provide direct benefits to communities who are closest to the new transmission infrastructure. These funds, which are proportional to the scale of the project, support local good causes and help communities transform their area. The overall aim is to leave a positive legacy in the communities hosting electrical infrastructure. The community benefit scheme becomes live once a project receives planning permission.

The Kildare-Meath Grid Upgrade Community Forum will lead the development of the community benefit project strategy. This will be agreed before the community benefit funding is released.

EirGrid will appoint an independent body to administer the fund on its behalf and work with the Community Forum.

This fund will be released in three phases, which align with the development of the infrastructure:

Phase	Percentage
1 - Construction	40%
2 - Cable installation	30%
3 - Energisation	30%

These funds will provide support to local community groups, not-for-profit organisations and social enterprises that operate or service communities near the new infrastructure.

Examples of projects include:

- Heritage projects, like supporting a historical or archaeological association;
- Community projects, like helping to fund a new park or support for retrofitting of local community halls;
- Education initiatives, like IT equipment to enhance digital learning;
- Environmental initiatives, like planting woodland or improving existing ecological areas;
- Youth facilities, like a playground;
- Sports facilities, like equipment or a playing pitch, or supporting sporting groups to reduce energy consumption and become more sustainable

What happens next?

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?

We have identified the Best Performing Option. This route is approximately 53km in length with an estimated off-road section of 8km.

We will now progress to Step 5 – The Planning Process.

How long will this take?

We expect Step 5 will take us to the end of 2023, depending on the planning application process.

What will happen next?

In Step 5, the planning application will include preparation of environmental appraisals and reports. Various surveys and geotechnical site investigations will also take place along the cable route. Engagement will continue throughout the remaining steps of the project.

Once the application has been submitted, the project enters a phase of statutory consultation. This allows members of the public time to make submissions regarding the project to the relevant planning authority.

How can I get in touch and stay informed?

Further details about this project can be found on our website at www.eirgrid.ie/KildareMeath.

Here you will find the *Step 4B Report – Route Options and Evaluation Report*, an interactive map outlining the Best Performing Route Option, along with all project reports and brochures previously published during the earlier steps.

You can contact us in a number of ways, including:

www.eirgrid.ie/KildareMeath

KildareMeath@eirgrid.com

Contact your local Community Liaison Officer, Eoghan O'Sullivan, on 087 247 7732

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