



# Kildare-Meath Grid Upgrade

**Capital Project 966**  
**Step 4 Consultation**  
**31 August 2021 to 22 November 2021**



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

We want to hear what you have to say about the 4 underground cable route options we are considering for the Kildare-Meath Grid Upgrade. 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 we hope it will help you take part in this consultation. We are on Step 4 of a 6-step process (see page 3). Please read this document to understand our thinking and to understand how you can give us your feedback.

**The consultation is open from 31 August 2021 to 22 November 2021.** We are consulting on four underground cable route options (see page 6) for the Kildare-Meath Grid Upgrade. We will consider feedback on all four route options before deciding on what the best route option is to take forward to detailed design.

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

- what is the Kildare-Meath Grid Upgrade,
- have your say,
- our 6-step approach to consultation and engagement,
- what has happened on the project so far,
- the study area and route options,
- what does underground cable construction look like,
- community forum, and
- Step 4 at a glance.



# What is the Kildare-Meath Grid Upgrade?

## Why is the project needed and what are the benefits?

A significant amount of electricity is generated in the south and south west of Ireland. This electricity needs to be transported to the east of Ireland, where it is needed. This electricity is currently transported on two high-voltage power lines from Moneypoint in Co. Clare to the Dunstown substation in Co. Kildare (near Two Mile House) and Woodland substation in Co. Meath (near Batterstown). Transporting more electricity on these lines could cause electricity supply problems within Ireland, particularly if one of the lines is lost (where power is out) unexpectedly.

The Kildare-Meath Grid Upgrade will add a high-capacity underground electricity connection between Dunstown substation and Woodland substation. 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 development of renewable energy generation in line with Government policy ambitions of having at least 70% of electricity 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.

## 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.

# Have your say

We are inviting you to give feedback on the four route options for the Kildare-Meath Grid Upgrade. We want to know what you think about each option. Is there anything else we should be taking account of? Have you any other feedback we should consider?

The consultation period is from 31 August to 22 November 2021. We encourage you to engage with us and have your say as early as possible during the consultation period.

## Where can I find out more?

You can find out more in different ways.



Arrange to speak to a team member directly



Sign up to a webinar



Visit our consultation portal

All information relating to this project is available on our website: [www.eirgrid.ie/KildareMeath](http://www.eirgrid.ie/KildareMeath).

## How can I have my say?

There are many ways you can give feedback. These include:



Submit your views online at [consult.eirgrid.ie](http://consult.eirgrid.ie)



Email your submission to us at [KildareMeath@eirgrid.com](mailto:KildareMeath@eirgrid.com)



Write your own submission and freepost it back to us

Our freepost address is: **Kildare-Meath Grid Upgrade Consultation, EirGrid plc, Freepost FDN 5312, 160 Shelbourne Road, Ballsbridge, Do4 FW28.**

## Who can I contact?

If you would like to find out more information on this project, you can:

Email

[KildareMeath@eirgrid.com](mailto:KildareMeath@eirgrid.com); or

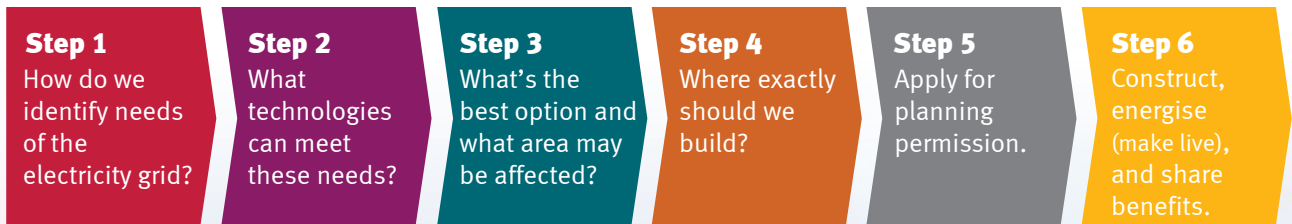
Contact your local Community Liaison Officer:

Gráinne Duffy on +353 (0)85 887 4798.

# Our six-step approach to consultation and engagement

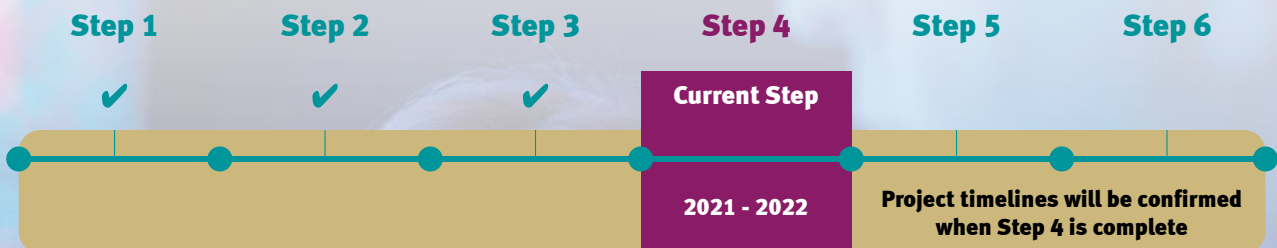
Our 'Have Your Say' publication outlines our commitment to engage with, and listen to, you and all stakeholders. It outlines our detailed six-step approach to developing our projects, and how you can get involved at every step.

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 of these publications at [www.eirgrid.ie](http://www.eirgrid.ie).



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

This project is currently in Step 4. In this step, we will consult and identify exactly where the underground electricity cables will be built.



**Figure 2: Our six-step approach for the Kildare-Meath Grid Update**

# 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. 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 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.

## Step 4 Studies

As part of **Step 4**, we have identified 4 potential underground cable route options and are consulting with you on these now. We are also doing further investigations, which build on those we completed in Steps 1, 2 and 3. We are assessing and comparing 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.

## Outcomes for Step 4

The expected outcomes (results) of Step 4 are to:

- Consult with you on the 4 route options;
- Publish a consultation report on the feedback we received in Spring 2022;
- Announce an emerging best performing route option in Summer 2022 and consult locally with stakeholders on this; and
- Announce a final route option in Autumn 2022, identifying exactly where we will build the project.

This step will not include applying for planning permission. This will be completed in **Step 5**.

# The study area and route options

The study area is the proposed geographical area within which the electricity infrastructure for The Kildare-Meath Grid Upgrade is proposed to be built. This study area has been revised since Step 3 to reflect the further studies we have carried out in Step 4 and the route options we have identified. Figure 3 displays the study area using a red dashed line. Within this, there are 4 route options: Red, Green, Orange and Blue.

## How do we plan route options?

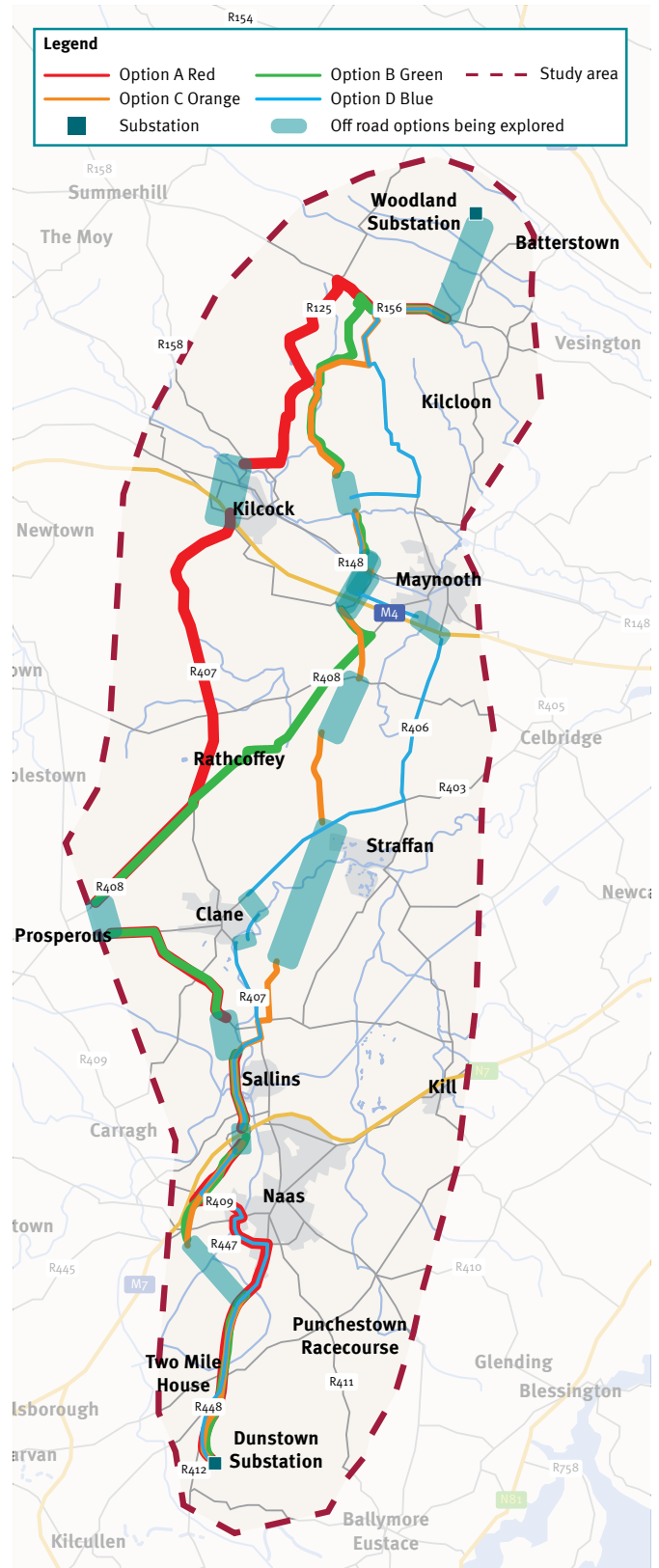
We follow a set of guidelines called routing principles when we are identifying route options. Our routing principles for this project, where possible, are to:

- Avoid motorways;
- Maximise the use of national, regional and local roads;
- Avoid town centres and industrial estates;
- Avoid going off-road, through private land and through agricultural land where possible;
- Avoid sensitive natural and built heritage locations;
- Minimise impact on communities where possible; and
- Minimise the overall length of the route.

We also consider constraints. Examples of constraints are:

- The width and quality of the road;
- Other services in the road such as water, gas and drainage;
- Impact on the environment including European and national protected areas for biodiversity, invasive and protected species and other important biodiversity areas (including undesignated habitats);
- City and County Development Plans and Local Area Plans; and
- Areas of high amenity and ongoing works.

In addition to this, feedback from local communities is at the heart of our process.



**Figure 3:**  
The study area and route options

## Common to all four route options

### **Woodland Station – all routes start here**

All the shortlisted options have a common route section at Woodland station in Co. Meath. Further local consultation, surveys, design and assessment are required before we can determine a more specific route in this area. We will avoid impacts to homes, community facilities and business. We will avoid agricultural land as far as possible by carefully routing the cable and discussing it with the people affected.

### **Dunstown Station – all routes travel here**

South of Naas, all potential routes connect with the R448 (Kilcullen Road) and travel south past Killashee. All routes meet the road junction of R412 and then travel into the Dunstown substation.

### **Royal Canal and Grand Canal crossings – all routes cross here**

All route options will need to cross the Royal Canal and Grand Canal. Both are proposed Natural Heritage Areas (pNHAs); designated for a variety of wetland habitats and species. It is proposed that the cable will be drilled under these by trenchless construction methods to avoid any physical impact. Please know that we will engage extensively with all relevant bodies, carry out all necessary studies and put in place all risk mitigations prior to commencing these works.

### **Common infrastructure and watercourse crossings**

All our route options will need to cross some or all of the following:

Watercourses:

- the Rye Water,
- River Liffey.

Infrastructure:

- Dublin-Sligo railway line,
- Dublin-Cork (and others) railway line,
- the M4 motorway,
- the N7 national road and
- the M7 motorway.

We propose that the cable be drilled under these watercourses and infrastructure. We will use trenchless construction methods to avoid any physical impact.

Please know that we will engage extensively with all relevant bodies, carry out all necessary studies and put in place all risk mitigations before starting these works.



## Off-road corridors

The lengths of the 4 options range from 47km to 51km. Most of the cable route in each option can be laid in the existing road network. However, each option will require some of the cable route to be off-road. These off-road corridors will range from 5km to 12km of the cable route. Where off-road routing is unavoidable, we do not yet know what the exact route may be. For this reason, we highlight a corridor of space on the route maps. The off-road section may pass through this corridor. We will determine this after discussing it with the landowners affected. We will avoid agricultural land as far as possible by carefully routing the cable.

Please note that we could consider further route options by combining sections of the proposed routes. Additional adjustments may emerge from the consultation process if you, the public, identify additional information for consideration.

## At a glance view of the proposed route options

The following table provides an overview of the four underground cable options we are considering for this project.

*Please note that the route lengths referenced below are indicative only and will be finalised when a full and detailed route is agreed.*

Option	Estimated overall length (km)	Estimated off-road sections (km)	Environmental impact	Social impact and potential disruption during construction	Meets technical requirements	Other notable points
Option A (Red)	51	5	Low	Low-moderate	Yes	Travels to the west of Kilcock village, longest route, but it affects the least amount of agricultural land of all options.
Option B (Green)	50	8	Low-moderate	Moderate-high	Yes	Travels through Rathcoffey and Moortown.
Option C (Orange)	47	13	Low-moderate	Moderate-high	Yes	Shortest cable but it affects the most agricultural land of all options.
Option D (Blue)	51	6	Low	Low-moderate	Yes	

**Table 1: At a glance comparison of the proposed route options**

In the following pages, we look at each of the four options in turn.

## Option A: The Red Option

Option A is the most westerly of the shortlisted cable route options and it is potentially the longest.

From Woodland, Option A would travel north west along the R156 towards the Mullagh Crossroads.

It would travel south along the R156, R125, and R158 towards Kilcock. Option A would pass to the west of the village of Kilcock and a potential off-road corridor is shown on the route map.

The route will need to cross:

- the Rye Water,
- the Royal Canal,
- Dublin-Sligo railway line, and
- M4 Motorway.

To the south of Kilcock, Option A is proposed to travel to the south along the R407 towards Clane.

To the north of Clane at the Boherhole Crossroads, it is proposed to take Option A to the west to avoid Clane.

Option A will travel along the R408, the road to Prosperous. Close to the townland of The Cott, it is proposed to route the cable across agricultural land to the south east of the R408 so that the route can continue to travel to the south towards the Dunstown substation.

Option A will travel south along the R403 and the L2002 to the new Sallins Bypass where a potential off-road corridor is shown for a crossing of agricultural land.

Along the Sallins Bypass, Option A will cross:

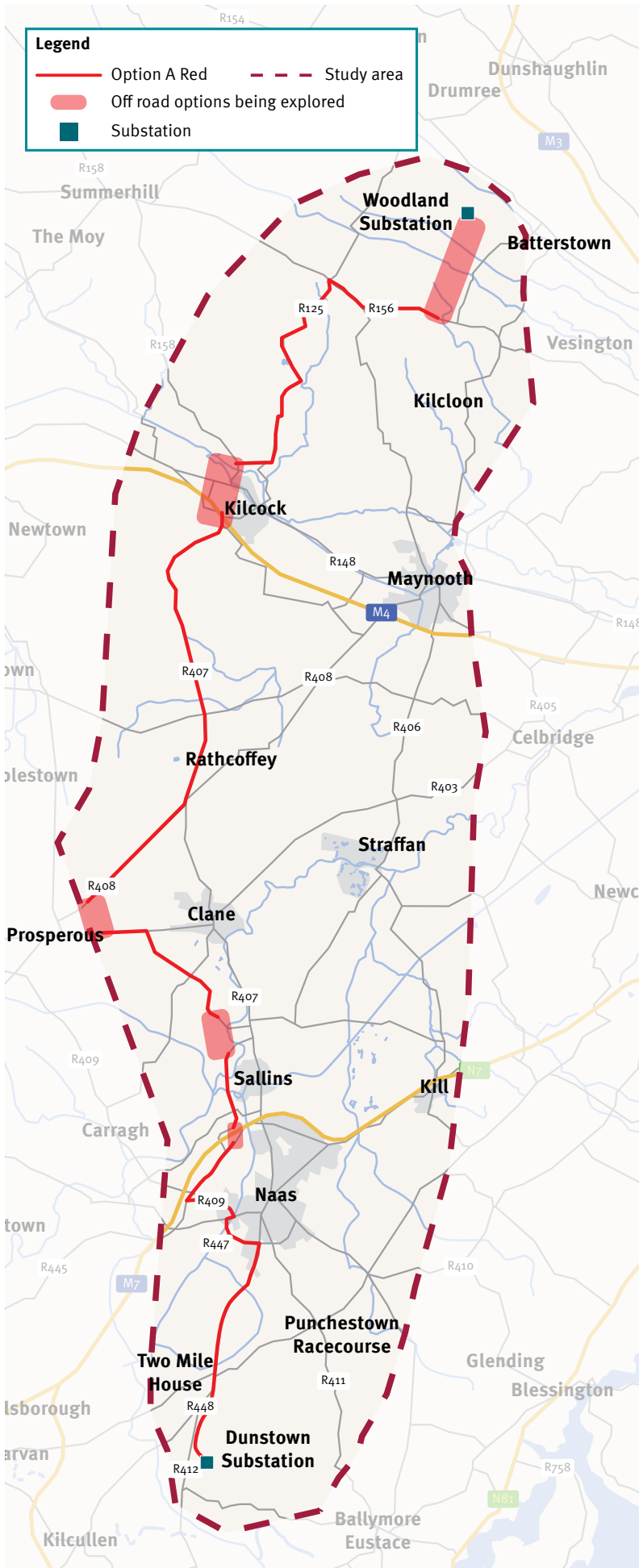
- the River Liffey,
- Dublin-Cork (and others) railway line,
- the Grand Canal, and
- the M7 Motorway (potential off-road corridor).

After crossing under the M7 Motorway, Option A will travel along the Millennium Link Road, travelling to the west around Naas.

Option A will connect with the R409 and travel east towards Naas, passing the Naas Sports Centre and across the Grand Canal.

The cable route then travels along the R445 and the R447 (South Ring Road).

Option A connects with the R448 (Kilcullen Road) and then travels into the Dunstown substation.



**Figure 4:  
Option A: The Red Option**

## Option B: The Green Option

Option B has similar parts to Option A (Red) but differs in the section between the R156 to the north of Clane.

From Woodland, Option B is proposed to travel south along the L1012 (Mulhussey Road).

To the south of the Southern Link Business Park, a potential corridor crossing agricultural land is shown.

Option B connects with the R448 (Kilcullen Road) and then travels into the Dunstown substation.

The route will pass the Mulhussey National School (St Josephs).

The route travels west and passes the roadside Mulhussey Castle and Cemetery toward Kiltens Gap Crossroads.

The route travels south towards Rodenstown and then south east to Bryanstown.

Along this road a potential off-road corridor is shown where Option B will travel south to cross the Rye Water and crossing agricultural land.

A potential off-road corridor is shown where the cable will cross:

- the Royal Canal,
- the River Lyreen,
- the Dublin-Sligo railway line, and
- the M4 Motorway, avoiding Laraghbryam Cemetery.

To the south of motorway, Option B connects with R408 where it will travel south west.

Along this route, Option B will travel through the settlements of Rathcoffey and Moortown, then meeting with the R407 at the Boherhole Crossroads, where it is proposed to go west to avoid Clane.

Option B will travel along the R408, the road to Prosperous. Close to the townland of The Cott, it is proposed to route the cable across agricultural land to the south east of the R408. This is required so that the route can continue to travel to the south towards the Dunstown substation. A potential off-road corridor is shown at this location on the route map.

Option B will meet the R403, travelling along it until the Firmount Crossroads, where it will continue south along the L2002.

It will travel south to the new Sallins Bypass where a potential off-road corridor is shown for a crossing of agricultural land.

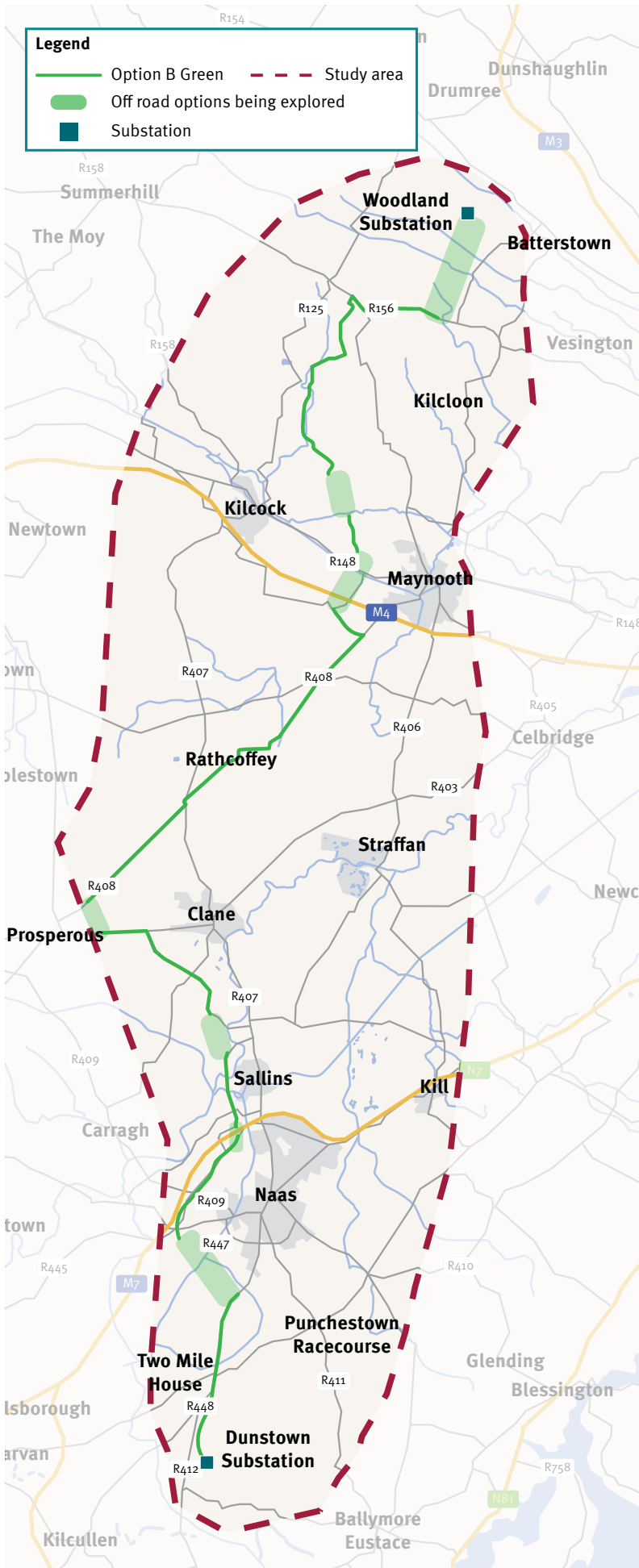
Along the Sallins Bypass, Option B will cross:

- the River Liffey,
- Dublin-Cork (and others) railway line, and
- the Grand Canal.
- the M7 (potential off-road corridor).

Under the M7 Motorway, Option B will then travel along the Millennium Link Road, travelling to the west around Naas.

To the south of the Southern Link Business Park, a potential corridor over agricultural land is shown.

Option B connects with the R448 (Kilcullen Road) and then travels into the Dunstown substation.



**Figure 5:  
Option B: The Green Option**

## Option C: The Orange Option

Option C is potentially the shortest of the four options, however it will potentially cross more agricultural land than the other options.

From Woodland. Option C is proposed to travel south along the L1012 (Mulhussey Road).

To the south of the Southern Link Business Park, a potential off-road corridor crossing agricultural land is shown. This section of Option C will cross:

- the Grand Canal.

Option C connects with the R448 (Kilcullen Road) and then travels into the Dunstown substation.

The route will pass the Mulhussey National School (St Josephs).

The route travels west and passes the roadside Mulhussey Castle and Cemetery toward Kiltens Gap Crossroads.

The route travels south towards Rodenstown and then south east to Bryanstown. A potential off-road corridor is shown where Option C will travel south to cross:

- the Rye Water, and
- agricultural land.

A potential off-road corridor is shown where the cable will cross:

- the Royal Canal,
- the River Lyreen,
- the Dublin-Sligo railway line, and
- the M4 Motorway, avoiding Laraghbryam Cemetery.

To the south of motorway, Option C crosses:

- the R408 at Crinstown Crossroads.

It will travel south east on the L5042 until it meets the L5037 close to Maguire's Wood.

A potential off-road corridor is shown where Option C will cross agricultural land. It will then connect with a local road in the townland of Smithtown, travelling south thorough Johninstown and Ovidstown, crossing:

- the R403 to the north of the K Club.

A potential off-road corridor is shown travelling to the south until the townland of Blackhall. Here it travels under local roads, past the now closed Bodenstown Golf Club, and the roadside Bodenstown Cemetery, before connecting the R407.

Option C will travel along the R407 for a short length before connecting to the new Sallins Bypass.

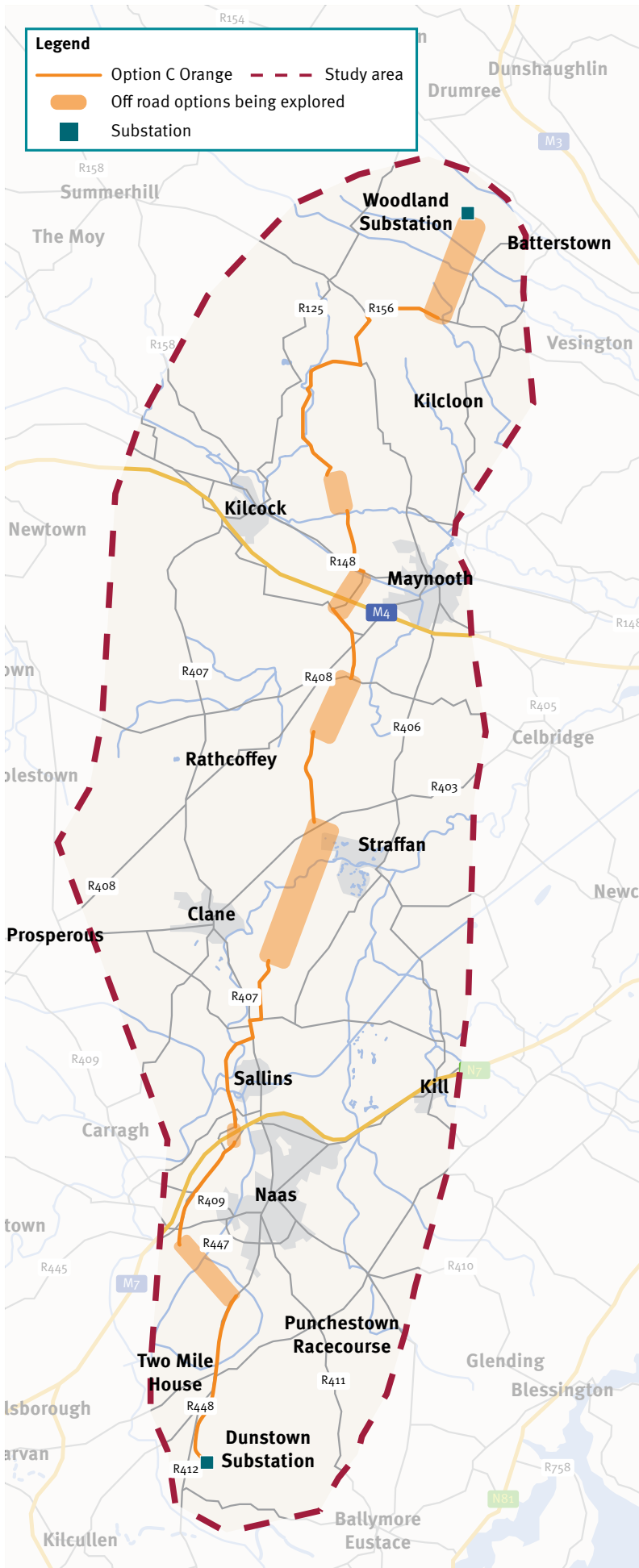
Along the Sallins Bypass, Option C will cross:

- the River Liffey twice,
- Dublin-Cork (and others) railway line, and
- the Grand Canal, and
- the M7 Motorway (potential off-road corridor).

Under the M7 Motorway, Option C will then travel along the Millennium Link Road, travelling to the west around Naas.

To the south of the Southern Link Business Park, a potential off-road corridor over agricultural land is shown.

Option C connects with the R448 (Kilcullen Road) and then travels into the Dunstown substation.



**Figure 6:  
Option C: The Orange Option**

## Option D: The Blue Option

### Option D (Blue) affects the least amount of agricultural land of the shortlist options.

From Woodland, Option D is proposed to travel south along the L1012 (Mulhussey Road).

The route cable will pass the Mulhussey National School (St Josephs).

The proposed route travels east and then south following the L1012 until the Moyglare Road. It will travel west to avoid Maynooth.

Along this road a potential off-road corridor is shown where Option D will travel south to cross:

- the Rye Water, and
- agricultural land.

A potential off-road corridor is shown where the cable will cross:

- the Royal Canal,
- the River Lyreen, and
- the Dublin-Sligo railway line, avoiding Laraghbryam Cemetery.

Option D is proposed to travel parallel to the north of the M4 Motorway. It will then cross:

- the motorway to the west of the Maynooth Junction (number 7) and connect to the R406.

Option D travels along this to the north of Straffan, where it meets the R403. This road will take the cable past Barberstown Castle towards Clane.

Option D will travel to the east of Clane, crossing:

- the River Liffey but avoiding the town. A potential off-road corridor is shown in this area.

The route connects the R407 to the south of Clane and then connects with the Sallins Bypass.

Along the Sallins Bypass, Option D will cross:

- the River Liffey,
- Dublin-Cork (and others) railway line,
- Grand Canal, and
- the M7 Motorway (potential off-road corridor).

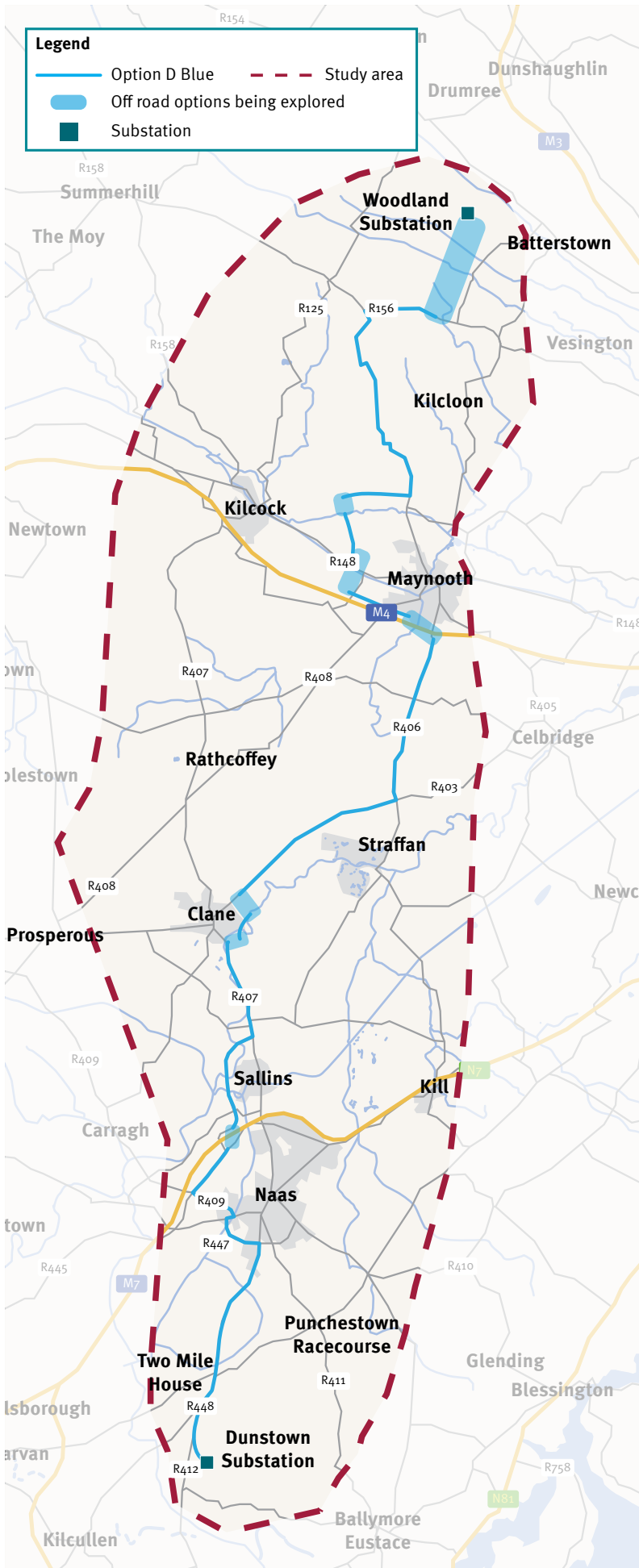
Under the M7 Motorway, Option D will then travel along the Millennium Link Road travelling to the west around Naas.

Option D will connect with the R409 and travel east towards Naas, passing the Naas Sports Centre and across the Grand Canal.

The cable route travels along the R445 and the R447 (South Ring Road).

Option D connects with the R448 (Kilcullen Road) and then travels into the Dunstown substation.

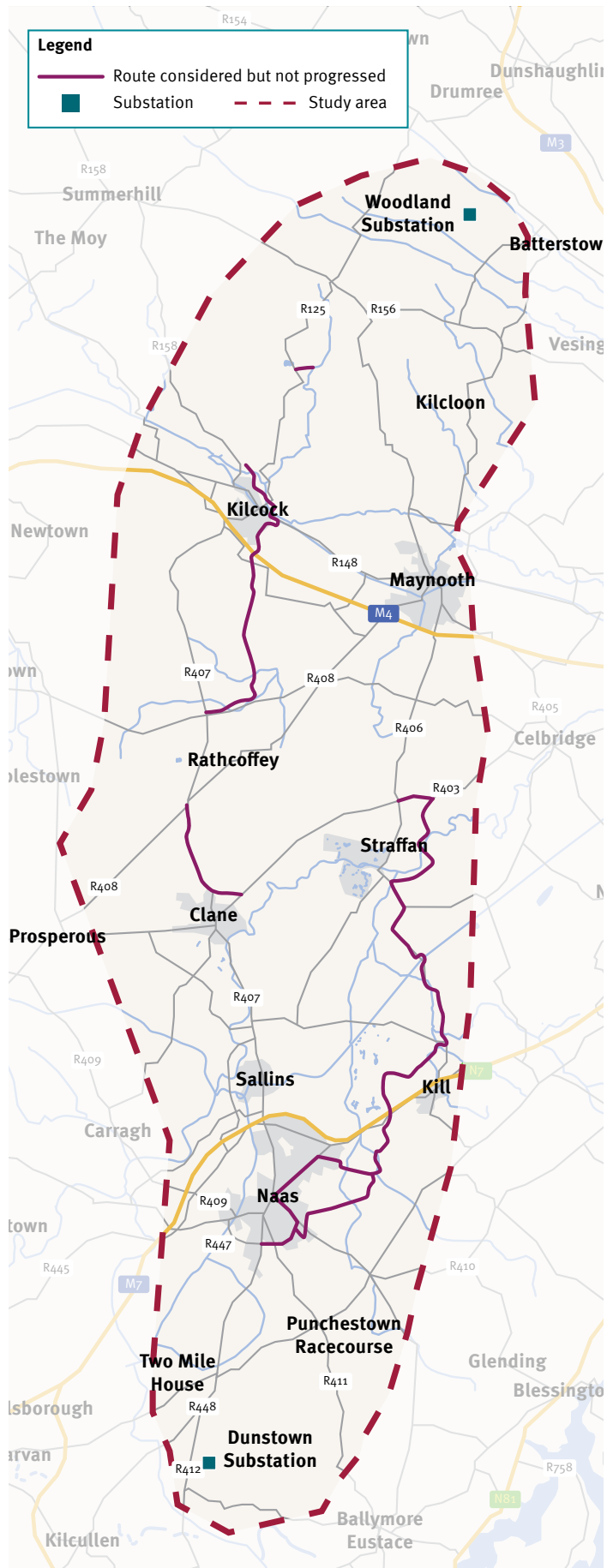




**Figure 7:  
Option D: The Blue Option**

# Other route options we considered

There were other route sections that we considered but did not bring forward for public consultation because we believe they would not be appropriate for this project. These are highlighted for your information in Figure 8 but we are not considering them.

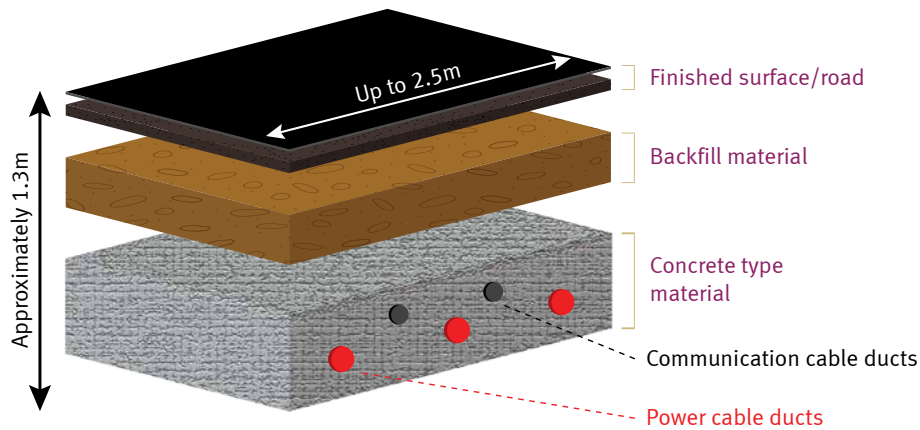


**Figure 8:**  
Route sections we considered  
but did not bring forward



# About the 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. We are currently considering a range of cable options to determine which is most suitable for this project. Figure 9 provides an indicative overview of what a typical underground cable arrangement would look like.



**Figure 9: 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. The following photos provide a **typical example** of what construction may look like. We will be able to provide more detailed information on what construction looks like when we know more about the design.



**Figure 10: A typical cable duct installation in the road**



**Figure 11: A typical jointing bay where cables are connected**



**Figure 12: Cables being pulled into the ducts and jointing bay**



**Figure 13: A typical passing bay in operation during cable jointing**



**Figure 14: A typical road reinstatement**

# Kildare-Meath Grid Upgrade Community Forum

The Kildare-Meath Grid Upgrade Community Forum offers 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; and
- how we can deliver meaningful community benefit to the area where our infrastructure is hosted.

The forum acts as a consultative body and does not replace any other engagement and consultation we carry out.

## How the forum was developed

In May 2021 we appointed an Irish charity called Development Perspectives as the independent Chair of the Kildare-Meath Grid Upgrade Community Forum. In June 2021 we held an information evening about the setup of the forum. We then opened a public nomination period where community groups were invited to express an interest in sitting on the forum. We also invited Kildare County Council and Meath County Council to nominate elected representatives onto the forum, which is ongoing.

The community forum held its first meeting on 14 July and has since met on 11 August and 30 August.

The forum will continue to meet regularly to provide feedback, for project updates and to ensure two-way communication is on-going. To be kept informed of forum activity, visit our website :

[www.eirgrid.ie/KildareMeath](http://www.eirgrid.ie/KildareMeath).



# 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?

We have identified 4 potential route options to upgrade the electricity grid between Kildare and Meath. We are consulting with you on this.

### How long will this take?

Step 4 will take us into Summer 2022. However, we will be engaging on an ongoing basis.

### What can I influence?

You can influence where we build this project.

### How can I get involved?

You can get involved in different ways. We are engaging and consulting at local level with members of the public, landowners, and local representatives from the study area. We are also speaking directly to elected representatives, specialist representative groups, environmental and planning agencies.

You can share your views from 31 August to 22 November 2021. Find out more at:

[www.eirgrid.ie/KildareMeath](http://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](mailto:KildareMeath@eirgrid.com) or contact your local Community Liaison Officer:

Gráinne Duffy on  
**+353 (0)85 887 4798.**



The Oval, 160 Shelbourne Road, Ballsbridge, Dublin D04 FW28 • Telephone: 01 677 1700 • [www.eirgrid.ie](http://www.eirgrid.ie)



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