



[EirGrid.ie/dublin](https://eirgrid.ie/dublin)

Powering Up Dublin

Replacement
Underground Cable
Programme







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Who are EirGrid and what do we do?

EirGrid develops, manages, and operates Ireland's electricity grid. We are responsible for the safe, secure and reliable supply of Ireland's electricity. EirGrid is also leading the secure transition of the grid to a sustainable low-carbon future.

The grid brings power from where it is generated to where it is needed throughout Ireland. It supplies power directly to industry and businesses that use large amounts of electricity. The grid also brings power from generators to the domestic network that supplies the electricity you use every day in homes, businesses, schools and hospitals.

This critical infrastructure supports the current development of our society and economy. But just as importantly, work carried out now to improve the grid will help to create a more sustainable future for future generations.

What is Powering Up Dublin?

Dublin's electricity infrastructure is ageing and reaching its end of life. Work must be done to transform and modernise the city's electricity infrastructure, so Dublin can continue to develop and thrive, while increasingly using power from renewable sources.

In this first phase, with our partners, we are installing over 50km of cables across the city. Upgrades will also take place in a number of substations to support Dublin's electricity network. These new cables will all be underground and they will connect electricity substations located around Dublin.

We have carried out studies to identify new underground cable routes that will link the following electricity substations to each other. In this brochure, we discuss the options:

- North Wall and Poolbeg
- Finglas and North Wall
- Carrickmines and Poolbeg
- Two cables linking Inchicore and Poolbeg

This brochure presents twelve Emerging Best Performing Route Options in total.



We are seeking feedback on our current plans. We aim to present the Best Performing Route options by the end of 2023.

We are currently developing feasibility and early design works on additional projects that benefit the programme needs. The Powering Up Dublin team will publicise these additional projects once they have completed the early-design phase. The additional projects will be similar to those listed in this brochure.

Why is the project needed?

Powering Up Dublin is a critical programme that will strengthen key electricity infrastructure in Dublin and the surrounding areas, making the city 'renewable ready'.

Dublin's demand for electricity has grown and will continue to grow in the years ahead as we move to using electricity for heat and transport. These works allow us to meet our energy demands now and in the future.

This project will help deliver a consistent and reliable supply of electricity for Dublin. Work must be done now to ensure the city's electricity infrastructure is fit for purpose, resilient and will endure long into the future.

While this work will be disruptive at times, together with our project partners, we seek

to minimise any potential disruption during construction by working with local communities, local authorities and businesses in Dublin.

Ireland's energy future lies in our ability to continue to harness and grow the potential of renewable energy.

Ireland has made good progress to date achieving on average 40% of our electricity coming from renewable sources annually. By 2030, we must strive to reach 80% of electricity demand being supplied by renewable resources.

Powering Up Dublin is key to meeting this target, which is set out in Ireland's Climate Action Plan.

Project Benefits



Security and reliability of supply

Building a more resilient and reliable electricity grid helps ensure that everyone has power when and where they need it. This upgrade will also enable greater energy independence by using greener sources of electricity close to the city.



Sustainability

Powering Up Dublin will enable the city's grid to use and transmit the electricity generated from offshore wind energy to the heart of the city. This is a vital step to help Ireland transition to a low-carbon electricity future.



Meet future needs

These improvements will help to meet the growing and changing electricity needs of Dublin. This includes the electrification of transport systems, vehicles and heating, the requirements of large energy users and the development of housing and offices.



Economic

These critical upgrades will help strengthen Dublin's economy, encouraging and supporting future investment.



Community

Our community benefit policy will directly support local communities in the areas that host the project infrastructure.

Project timelines

We are now consulting on the Emerging Best Performing Route Options with the aim of presenting the Best Performing Route Options by the end of the year.

Surveys and site investigations will start in the coming months, and we will engage with you and other stakeholders throughout this process.

Key elements of Powering Up Dublin



Over 50 km of Cables



Dublin Infrastructure Forum



Works at 5 Substations



Community Forum



Getting Dublin Renewable Ready



Business Forum



Two dedicated Community Liaison Officers



Community Benefit Scheme



Our approach to consultation and engagement

Dublin Infrastructure Forum

To help minimise disruption and work as efficiently as possible, we are coordinating with other state-owned utilities, transport providers and local authorities through our Dublin Infrastructure Forum.

Community Forum and Business Forum

We know that there will be a considerable amount of roadworks needed to complete the works. We also understand that electricity infrastructure projects like these impact on local residents and businesses. With this in mind, we launched Community and Business Forums in November 2022 to communicate, consult and engage with local residents and businesses across Dublin.

Each of these forums have met twice so far where we introduced the project, outlined the study area and sought feedback on our plans. We will continue to incorporate all the feedback received into our design and engagement approach where possible.

You can read the meeting notes from the first meeting on [EirGrid.ie/dublin](https://www.eirgrid.ie/dublin).

If you are interested in becoming a member of the Community Forum or Business Forum, please email Dublin@EirGrid.ie or call one of our Community Liaison Officers.

Community Benefit

While the Powering Up Dublin project is underway, we will work to give back to local communities and businesses as part of our community benefit policy. Our support will focus on issues of community, sustainability and biodiversity. We will be led by local stakeholders on the best ways to use the community benefit funds set aside for these projects, so that your community benefits.

What's happening now?

This brochure presents each route option for the project:

- North Wall to Poolbeg (three options for one cable)
- Finglas to North Wall (three options for one cable)
- Carrickmines to Poolbeg (three options for one cable)
- Inchicore to Poolbeg (three options for two cables)

We are seeking your feedback on our current plans. Your feedback will be reviewed and considered and will influence project design where possible. We will carry out site investigations on each of the proposed routes to help determine the Best Performing Route Options.



Have your say

The public consultation will take place from Tuesday 28 March to Tuesday 23 May 2023. Submissions can be made either online or by post and the deadline for submissions is Tuesday 23 May. Your feedback will be reviewed and considered and will influence design where possible.

Throughout the consultation, we are holding a series of face-to-face and online events. This provides an opportunity for us to present information to you and to provide an opportunity for you to speak to members of the project team about the routes and answer any questions you may have before you submit your views.

Public information events

Visit one of our face-to-face public information events being held across the proposed routes to find out more and speak to experts within the team.

Venue	Date	Time
Marino Institute of Education	Tuesday 04 April	1pm to 8pm
Erins Isle GAA Club, Finglas	Wednesday 05 April	1pm to 8pm
Sandymount Community Centre	Wednesday 12 April	1pm to 8pm
Richmond Barracks, Inchicore	Thursday 13 April	1pm to 8pm
Ballyogan Parish Centre, Ballyogan	Wednesday 19 April	1pm to 8pm
The Evergreen Club, Terenure	Wednesday 03 May	1pm to 8pm
Skylon Hotel, Drumcondra	Tuesday 09 May	1pm to 8pm
Glasnevin Cemetery, Visitors Centre	Wednesday 10 May	1pm to 8pm
Stillorgan Park Hotel	Thursday 11 May	1pm to 8pm
St Kevin's Hall, South Circular Road	Tuesday 16 May	1pm to 8pm
Clanna Gael Fontenoy GAA, Ringsend	Wednesday 17 May	1pm to 8pm

Community liaison clinics

Drop in to meet our Community Liaison Officers, Liz Dillon and Niall Barrett at one of our informal community liaison clinics. You don't need an appointment to attend.

If you have any specific questions, please call our Community Liaison Officers.

Niall Barrett: 087 117 7269

Liz Dillon: 087 188 7982

Venue	Date/Time	Community Liaison Officer
Pembroke Library, Ballsbridge	Thursday 20 April, 12pm to 4pm	Liz Dillon
Carleton Hall, Marino Community Centre	Thursday 20 April, 2pm to 6pm	Niall Barrett
Terenure Enterprise Centre	Tuesday 25 April, 12pm to 4pm	Liz Dillon
Axis Centre, Ballymun	Tuesday 25 April, 12pm to 4pm	Niall Barrett
Mounttown Community Facility, Monkstown	Tuesday 02 May, 12pm to 4pm	Liz Dillon
St. Helena's Family Resource Centre, Finglas	Tuesday 02 May, 12pm to 4pm	Niall Barrett

Ask the project team

Members of the public with specific questions can book a 'one-to-one' session with a member of the project team. These can be held by telephone call-back or by a video call.

You can book an appointment on our website [EirGrid.ie/dublin](https://eirgrid.ie/dublin) or by calling or emailing the team.

Online webinars

You can attend a 1-hour online webinar where we will present details of the project and proposed routes followed by an open Q&A.

- Thursday 27 April at 12.30pm
- Thursday 27 April at 7pm

Please register your interest on our website or by email to Dublin@EirGrid.ie.

Virtual room

Visit our virtual room to find out more information on the project and provide your feedback online. This will be live on our website [EirGrid.ie/dublin](https://eirgrid.ie/dublin).

How to give us feedback



Scan Here
to Submit
your views
online

Our consultation runs from
Tuesday 28 March 2023 to Tuesday
23 May 2023.

We want to hear your views; you can get involved in the consultation and provide feedback in a range of ways:

Consultation Portal

- **Submit** your views online at consult.eirgrid.ie
- **Email** your submissions to Dublin@EirGrid.ie
- **Write** your own submission and freepost it to us.

Our freepost address is:

Powering Up Dublin Consultation,
EirGrid plc, Freepost FDN 5312,
160 Shelbourne Road, Ballsbridge,
Dublin, D04 FW28

Who can I contact?

Email: dublin@EirGrid.ie

Contact our Community Liaison Officers:



Niall Barrett

Community Liaison Officer
087 117 7269



Liz Dillon

Community Liaison Officer
087 188 7982

If you would prefer to receive information relating to the consultation through the post, or you need it in another format, please get in touch.

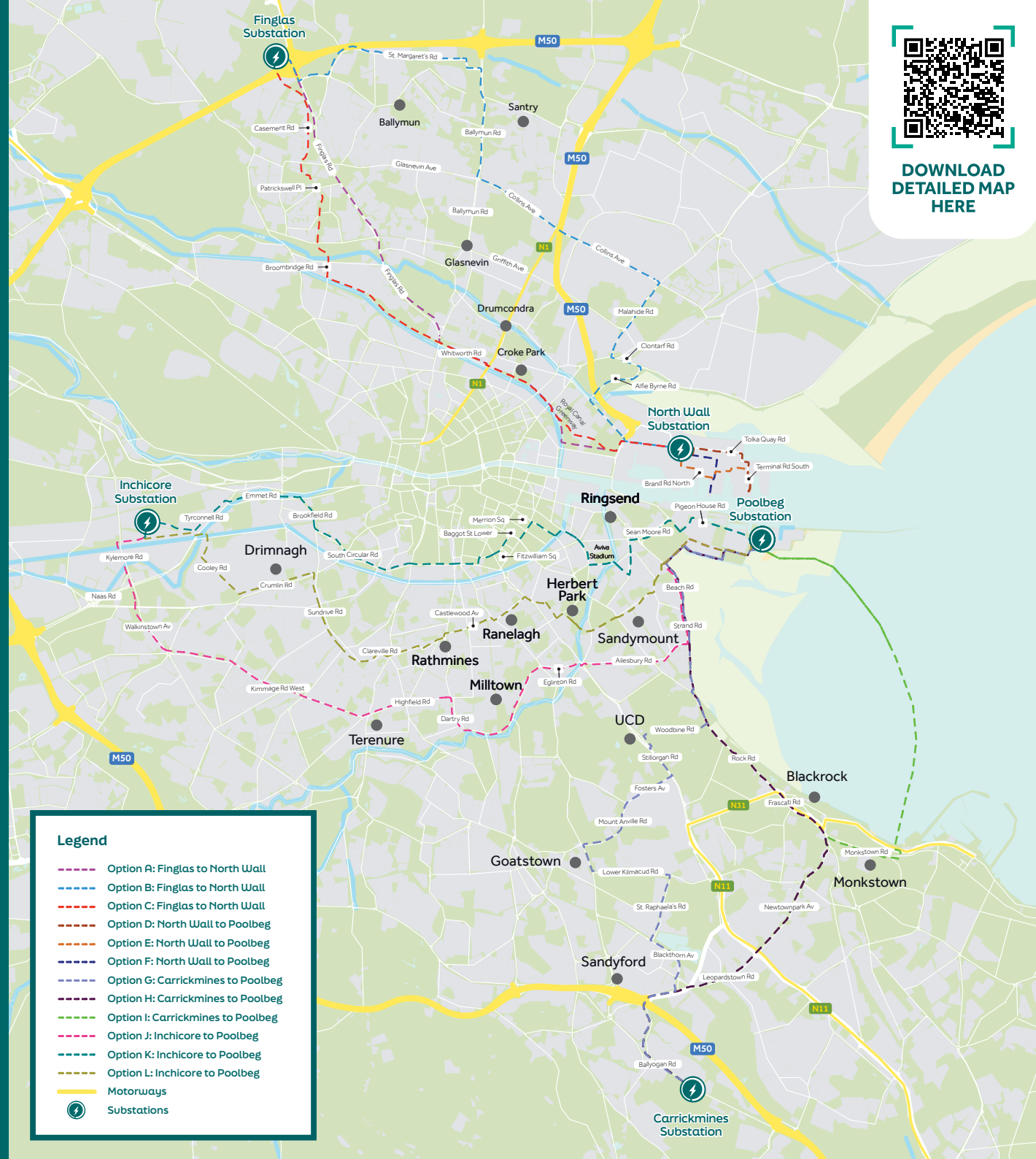
If you have any difficulty writing down your feedback, a member of the Public Engagement Team will be able to take comments over the phone.

The study area and route options

The study area is the geographical area where we propose to install the electricity infrastructure for Powering Up Dublin.

Our studies concluded that we need to replace the underground cables linking the following substations:

- North Wall and Poolbeg
- Finglas and North Wall
- Carrickmines and Poolbeg
- Two cables linking Inchicore and Poolbeg



DOWNLOAD
DETAILED MAP
HERE

How we identify 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 going through private land or agricultural lands;
- avoid sensitive natural and built heritage locations;
- minimise impact on local communities where possible.

We also consider constraints. Examples of constraints are:

- The width and quality of the road;
- other utilities in the area such as water, gas and drainage;
- City and County Development Plans and Local Area Plans;

- areas of high amenity and ongoing works;
- impact on the environment including European and national protected areas for biodiversity, invasive and protected species and other important biodiversity areas (including undesignated habitats).

In addition to this, feedback from local communities is at the heart of our process. We also collaborate with local authorities, transport operators and utility providers to identify opportunities to coordinate construction activities and minimise disruption.

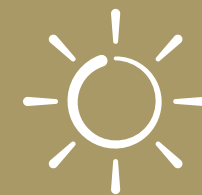
Emerging Best Performing Route Options

We have identified twelve potential underground cable route options:

- North Wall and Poolbeg (three options)
- Finglas and North Wall (three options)
- Carrickmines and Poolbeg (three options)
- Two cables linking Inchicore and Poolbeg (three options)

How we identified the Emerging Best Performing Routes

These routes were assessed against a number of criteria including: technical, economic, environmental, socio-economic and deliverability. These studies are available on our website. We will continue to carry out studies to determine if they are suitable. These twelve routes are called the Emerging Best Performing Routes.



The project team collected all data available and analysed each potential route looking at many different criteria. This allows the project team to select study areas for the routes which are the best opportunity based on the information available.

Due to the volume of underground infrastructure and people within the city, we are now engaging with stakeholders before we start surveying and site investigations to see if the underground cable routes proposed are viable.

We outline the installation process in this brochure.

After we do site investigations on these routes and engage with local communities and residents, the routes may change slightly due to:

- Existing utilities in the ground;
- ground conditions;
- any disruption to communities.

Routes may interconnect

Route options may intersect with each other. This means we may progress part of one route and join it with another route. This is partly due to our road network being heavily congested as it moves towards the inner city.

We will then select the routes and present the Best Performing Route Options.

At times, we may not be able continue a certain portion of the works. However, our site investigations should limit this once we have chosen a viable route.

We will then select the routes and present the Best Performing Route Options.



At a glance view of the proposed route options

The following table provides an overview of the twelve underground 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.

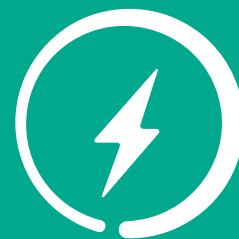
Option	Estimated overall length (km)	Estimated off-road sections (km)
A: Finglas to North Wall	10.8	4
B: Finglas to North Wall	13.8	0
C: Finglas to North Wall	14.1	8
D: North Wall to Poolbeg	3.1	0.9
E: North Wall to Poolbeg	3.2	2.3
F: North Wall to Poolbeg	2.7	0.4
G: Carrickmines to Poolbeg	15.4	1.9
H: Carrickmines to Poolbeg	14.2	1.9
I: Carrickmines to Poolbeg	14.9	6.4
J: Inchicore to Poolbeg	15.7	2.5
K: Inchicore to Poolbeg	12.9	0.4
L: Inchicore to Poolbeg	13.5	3

Environmental impact	Social impact and potential disruption during construction	Other notable points
Low-Medium	Medium	<ul style="list-style-type: none"> • Service tunnels or Horizontal Directional Drilling (HDD) under M50 Tolka River bridge • Railway and canal crossing
Low-Medium	Medium	<ul style="list-style-type: none"> • Service tunnels or HDD under M50 • Alfie Byrne bridge • Railway and canal crossing
Low-Medium	Medium	<ul style="list-style-type: none"> • Horizontal Directional Drilling (HDD) under M50 • Tolka River crossing below via HDD • Tolka Valley Park • Railway and canal crossing
Low-Medium	Low-Medium	<ul style="list-style-type: none"> • HDD likely under Alexandra Road • River Liffey Crossing • Adjacent to the Dublin Docks proposed natural heritage area • High utility congestion in Pigeon House Road
Medium	Low-Medium	<ul style="list-style-type: none"> • Large sections of this route are on private land (Dublin Port Company owned land) • River Liffey Crossing • Adjacent to the Dublin Docks proposed natural heritage areas • High utility congestion in Pigeon House Road
Low-Medium	Low-Medium	<ul style="list-style-type: none"> • HDD likely under Alexandra Road • River Liffey Crossing • Sections of this route are on private land (Dublin Port Company) • High utility congestion in Pigeon House Road Site
Low-Medium	Medium	<ul style="list-style-type: none"> • M50 crossing • Luas crossing • DART crossing onto Strand Road at Merrion gates • Crossing through Sean Moore Park and Irishtown Nature Park • High utility congestion on Poolbeg peninsula
Low-Medium	Medium	<ul style="list-style-type: none"> • M50 crossing • Luas crossing • DART crossing onto Strand Road at Merrion gates • Crossing through Sean Moore Park and Irishtown Nature Park • High utility congestion on Poolbeg peninsula
Low-Medium	Medium	<ul style="list-style-type: none"> • M50 crossing • Space for landfall on Poolbeg Peninsula and Salthill and Monkstown • Submarine cable across Bay
Medium	Medium	<ul style="list-style-type: none"> • Grand Canal crossing at Kylemore Road • Luas Red Line crossing under the Naas Road • DART crossing at Sydney Parade
Low-Medium	Medium	<ul style="list-style-type: none"> • Luas Red line crossing • Luas Green Line crossing • Grand Canal crossing • DART Crossing on Lansdowne Road • Proximity to Aviva Stadium • River Dodder crossing
Low-Medium	Medium	<ul style="list-style-type: none"> • Grand Canal crossing at Tyrconnell Road • Luas Red Line crossing at Tyrconnell Road • River Dodder crossing at Ballsbridge • DART Crossing on Serpentine Avenue

Emerging Best Performing Route Options

This map outlines the twelve Emerging Best Performing Route Options.

Once we review your feedback and carry out site investigations we will determine the five Best Performing Route Options.

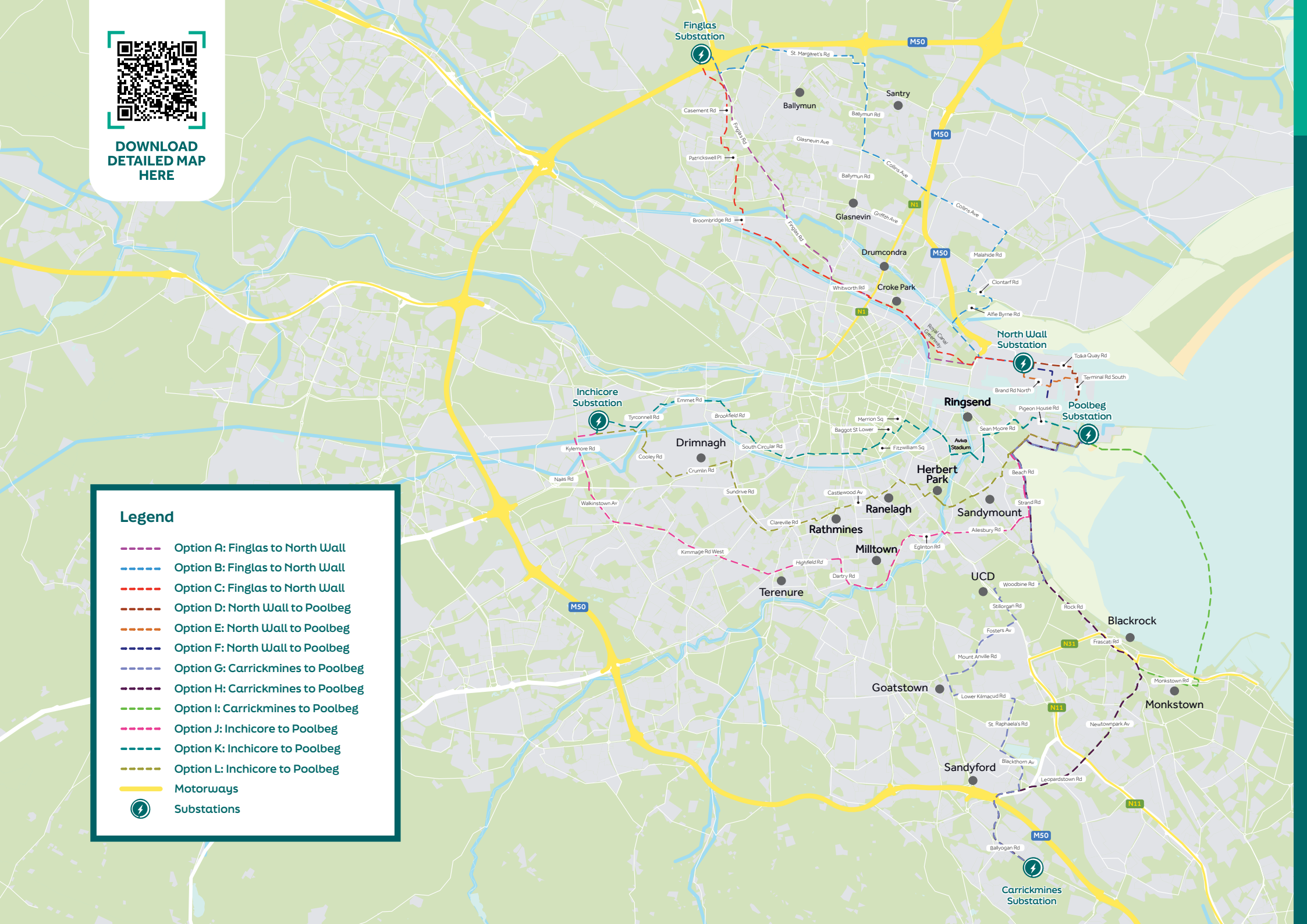




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Legend

- Option A: Finglas to North Wall
- Option B: Finglas to North Wall
- Option C: Finglas to North Wall
- Option D: North Wall to Poolbeg
- Option E: North Wall to Poolbeg
- Option F: North Wall to Poolbeg
- Option G: Carrickmines to Poolbeg
- Option H: Carrickmines to Poolbeg
- Option I: Carrickmines to Poolbeg
- Option J: Inchicore to Poolbeg
- Option K: Inchicore to Poolbeg
- Option L: Inchicore to Poolbeg
- Motorways
-  Substations

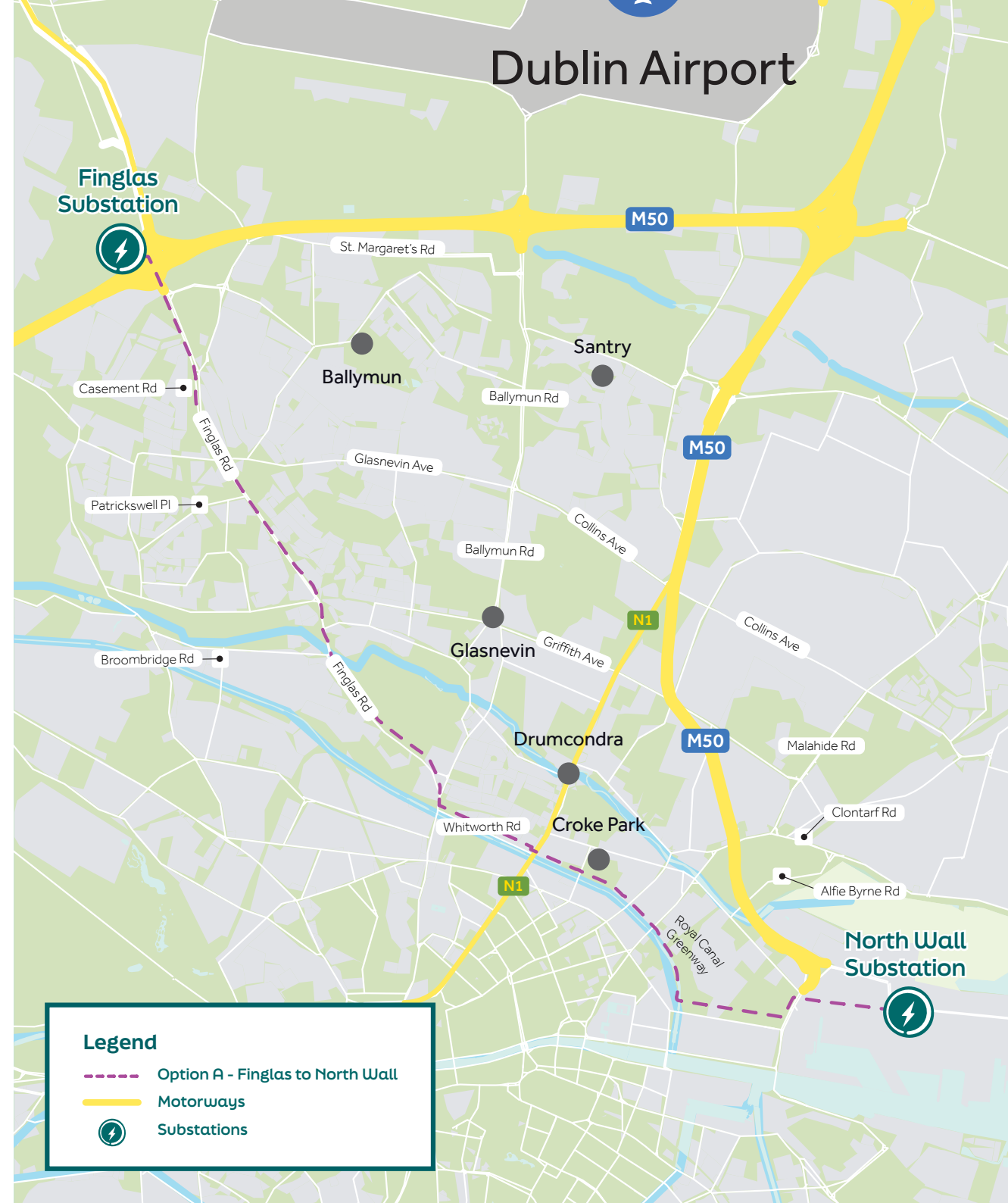


Option A : Finglas to North Wall

Option A commences at the Finglas substation and crosses under the M50 using the service tunnels at the M50/R135 junction. The route travels south along North Road, Finglas Bypass and Finglas Road. On Finglas Road the route crosses the Tolka River.

The route crosses over two railway bridges and turns in an easterly direction onto the Royal Canal greenway. On this section, the route aligns with the current Royal Canal greenway Phase 3 upgrades, which provides 2.1km of high-quality footpath and cycle track along the banks of the canal. As part of these upgrades, advanced ducting is being placed along the Royal Canal greenway. This greatly improves the deliverability of this section.

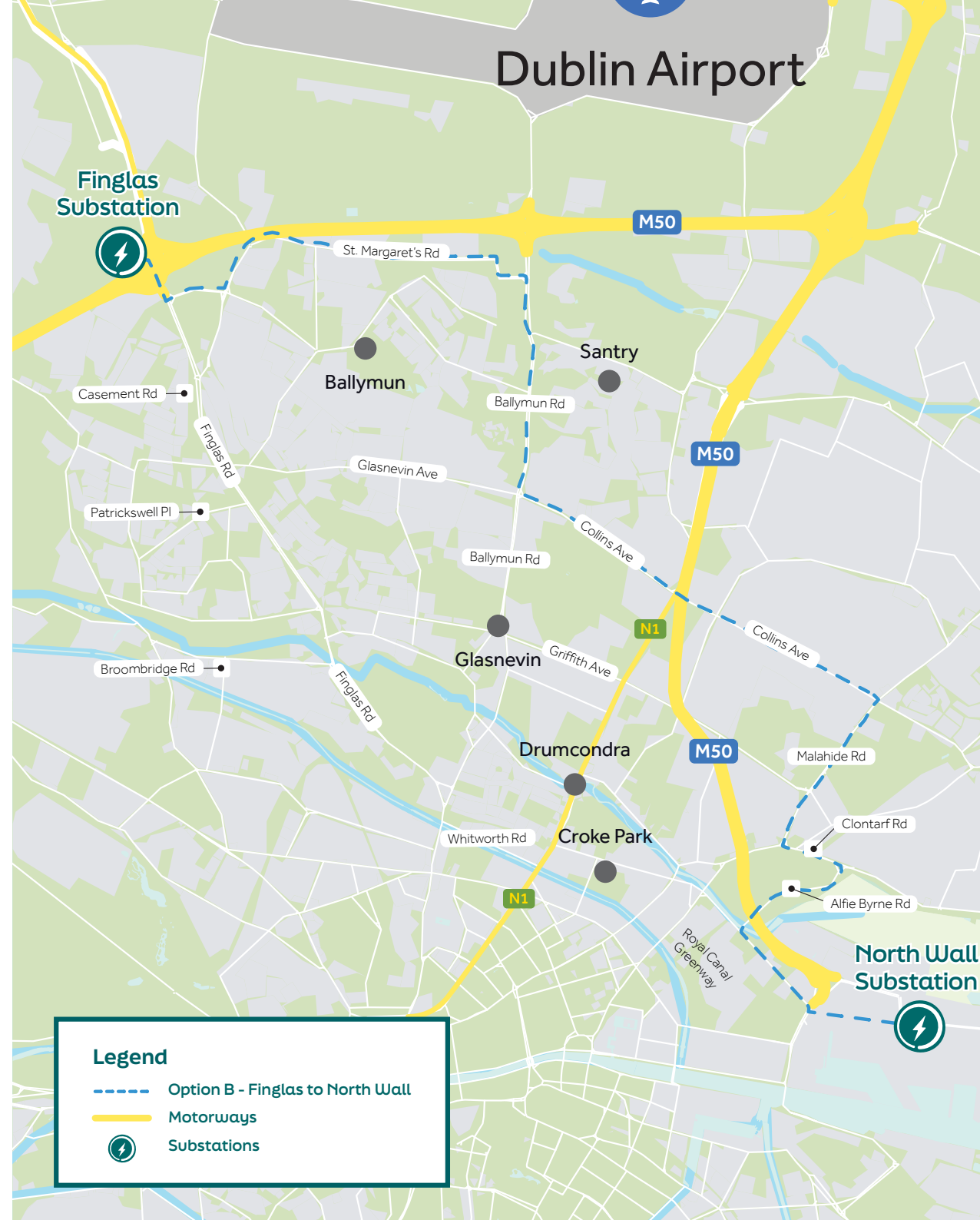
The route follows the Royal Canal greenway to Sheriff Street Upper, where it crosses Spencer Bridge. At the junction with East Wall Road, the route turns north onto East Wall Road and then east onto Alexandra Road as far as the North Wall substation.



Option B : Finglas to North Wall

Option B commences at the Finglas substation and crosses under the M50 using the service tunnels at the M50/R135 junction. The route travels east along Charlestown Place, to the junction with the R104. The route follows the R104 northwards (St Margaret's Road) to the junction with the R108 (Ballymun Road), where it follows this road south.

At the junction with Collins Avenue, the route turns in an easterly direction until R107 (Malahide Road), where the route follows the R107 south. At the junction with the R807 (Clontarf Road), the route turns eastwards to R834 (Alfie Byrne Road). On the R807, the route crosses under the Irish Rail lines. The route crosses the Tolka River using the Alfie Byrne Road bridge. At the junction with East Wall Road, the route turns east onto East Wall Road and then east onto Alexandra Road as far as the North Wall substation.



Option C : Finglas to North Wall

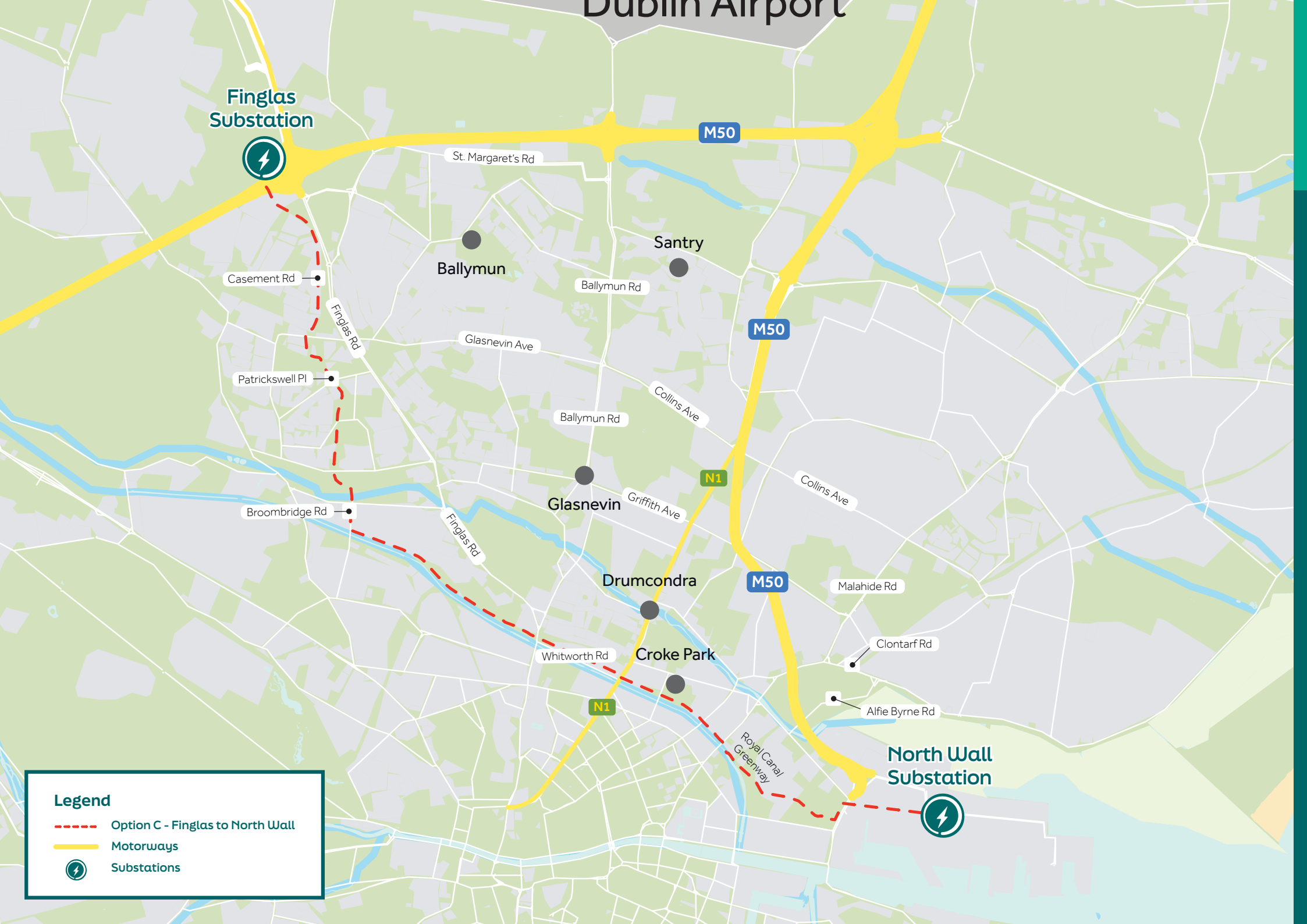
Option C commences at the Finglas substation and crosses under M50 onto North Road. The crossing methodology envisaged is Horizontal Directional Drilling (HDD). From here the route crosses North Park industrial estate and cuts across the open space towards the North Road. The route then follows the Casement road and following an existing circuit via Mellowes park. The route then crosses the R103 via the rear of the Finglas sports and fitness centre. The route continues south on the Finglaswood Road turning east onto the Cappagh Road and down Patrickswell Place. The route follows Casement Road south, and cuts through the park, over St Helena's Road and the R102 (Tolka Valley road) and into Tolka Valley Park. Here the route crosses the Tolka River. The crossing methodology is likely to be HDD.

The route crosses Ballyboggan Road to Broombridge Road. At the Royal Canal, the route follows the Royal Canal Way in an easterly direction. This section could be delivered in conjunction with Royal Canal upgrades phase.

The route travels along Royal Canal Way, passing under the rail lines after Broombridge Station and over the rail lines travelling towards the Phoenix Park tunnel.

The route crosses the Royal Canal on the N1 bridge to the southern side of the Royal Canal. The route runs under two overhead walkways that access Croke Park. After crossing North Stand Road, the route crosses the Royal Canal onto Irish Rail land. The crossing methodology envisaged is HDD. At the junction with East Wall Road, the route turns north onto East Wall Road and then east onto Alexandra Road as far as the North Wall substation.

Dublin Airport



Finglas Substation



M50

St. Margaret's Rd

Ballymun

Santry

Casement Rd

Ballymun Rd

M50

Finglas Rd

Glasnevin Ave

Patrickswell Pl

Ballymun Rd

Collins Ave

Broombridge Rd

Glasnevin

Griffith Ave

N1

Collins Ave

Finglas Rd

Drumcondra

M50

Malahide Rd

Whitworth Rd

Croke Park

Clontarf Rd

Alfie Byrne Rd

North Wall Substation



Legend

----- Option C - Finglas to North Wall

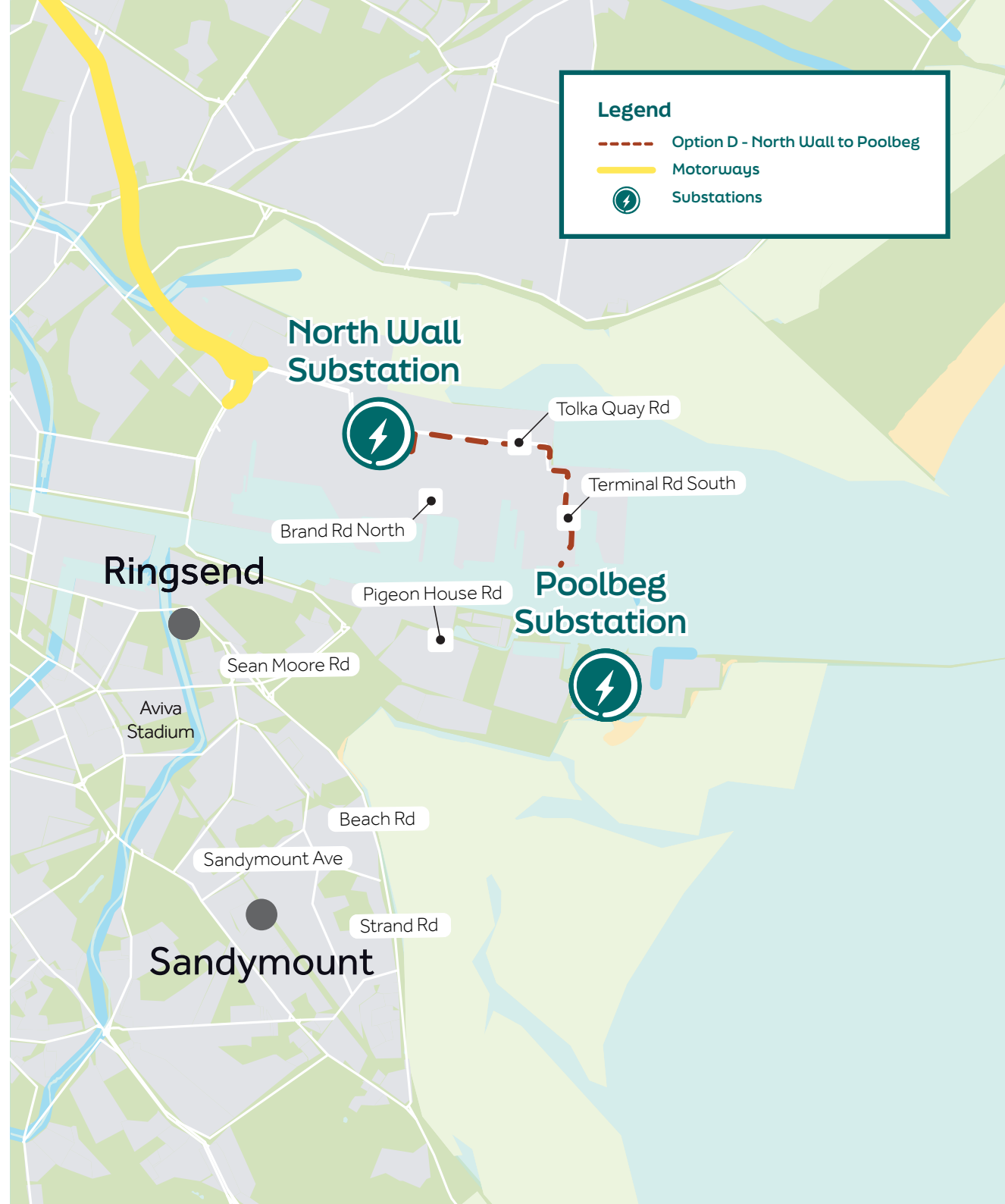
Motorways

Substations

Option D : North Wall to Poolbeg

Option D leaves the North Wall substation heading east on Alexandra Road. The route turns north up Branch Road North to Tolka Quay Road. It follows Tolka Quay Road and turns south onto Terminal Road North and then Terminal Road South. It follows this road to the car park adjacent to the Irish Ferries Terminal.

Here the route continues southwards and crosses under the Lower Liffey Estuary towards Poolbeg. At Poolbeg the route emerges on the east side of the open land adjacent to Celtic Anlian Water on Pigeon House Road. The crossing methodology will most likely be Horizontal Directional Drilling (HDD) and site investigations will determine the preferred crossing route. The route then follows the shoreline past the old Poolbeg Power station and joins Pigeon House Road before continuing to the Poolbeg substation.



Option E: North Wall to Poolbeg

Option E commences at the North Wall substation and travels to the south into the container handling area of Dublin Port Company (DPC) where it tracks east and skirts around the perimeter of the fuel tank farm along 2 Branch Road North. The route then turns north along Breakwater Road and east once again, entering DPC lands via a container handling area and the Stena Line truck marshalling area.

The route then turns south onto Terminal Road South. It follows this road to the car park adjacent to the Irish Ferries Terminal. Here the route continues southwards and crosses under the Lower Liffey Estuary towards Poolbeg. At Poolbeg, the route emerges on the east side of the open land adjacent to Celtic Anglian Water on Pigeon House Road. The crossing methodology will most likely be Horizontal Directional Drilling (HDD) and site investigations will determine the preferred crossing route. The route then follows the shoreline past the old Poolbeg Power station and joins the Pigeon House Road before continuing to the Poolbeg Substation.



Option F : North Wall to Poolbeg

Option F leaves the North Wall substation heading east on Alexandra Road. At Breakwater Road, the route turns south onto Breakwater Road towards the River Liffey. At the end of Breakwater Road, the route crosses the Lower Liffey Estuary onto Dublin Port Company Lands (DPC) on the southern bank, The crossing methodology will most likely be Horizontal Directional Drilling (HDD) and site investigations will determine the preferred crossing route.

On the southern bank, the route crosses the DPC land to Pigeon House Road, which it follows east as far as the Poolbeg substation.

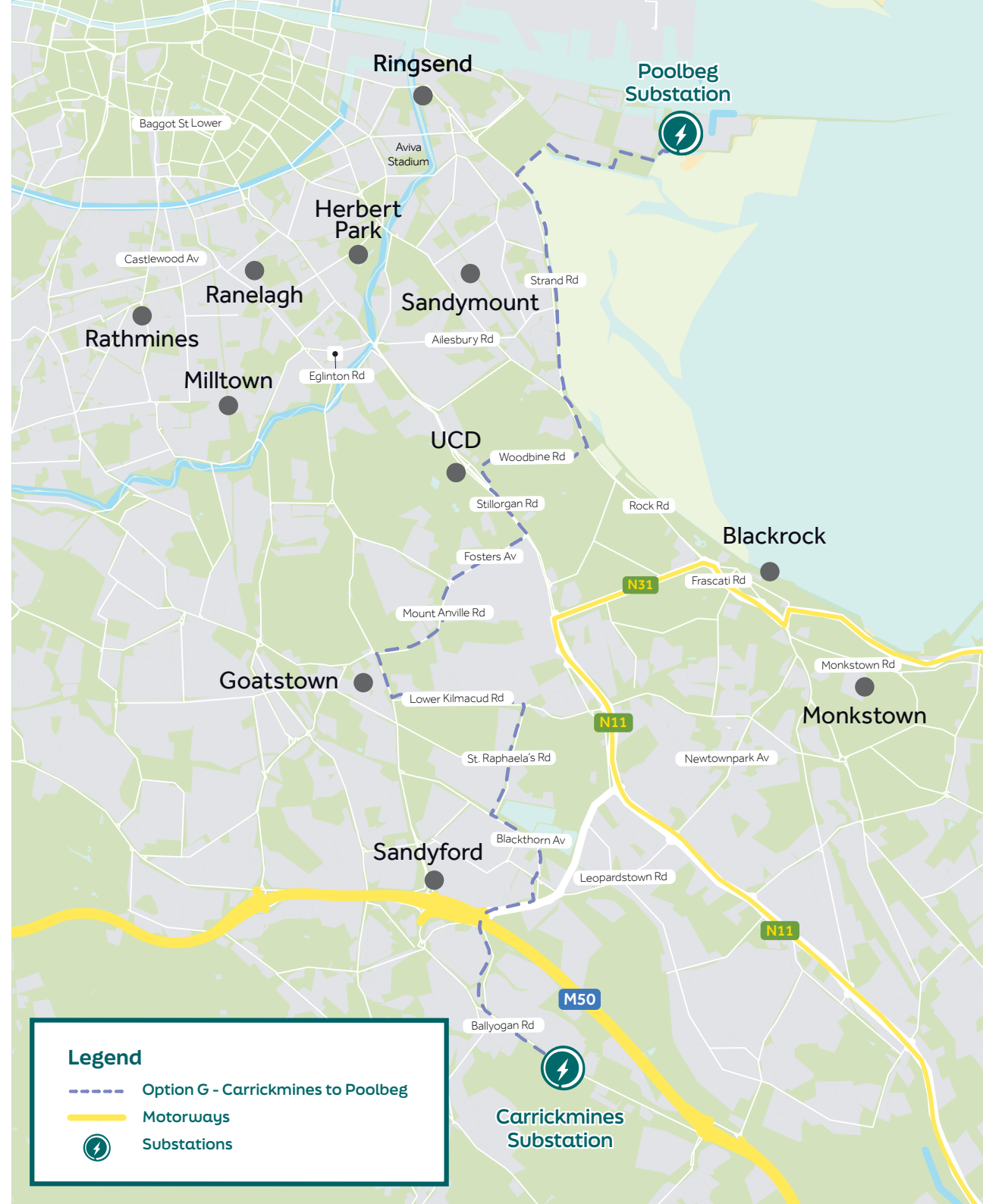


Option G : Carrickmines to Poolbeg

Option G leaves the Carrickmines substation and follows the Ballyogan Road northwest adjacent to the Luas Green Line. It continues into Murphystown Way where it crosses the M50 at Junction 14 on to the N31.

The route then turns in a northerly direction into Sandyford Industrial Estate via Blackthorn Avenue. At the junction with St Raphaela's Road, the route crosses under the Luas Green line at a level crossing. At the end of St Raphaela's Road / Kilmacud Road Upper, the route turns west along Lower Kilmacud Road to Drummartin Road. At Goatstown the route turns off Drummartin Road and follows Mount Anville Road and Foster's Avenue past University College Dublin (UCD) and onto the Stilorgan Road (N11).

The route turns east onto Woodbine Road, Trimleston Park and Trimleston Avenue before joining the Rock Road and travelling north to the DART level crossing at Merrion Gates. The route then follows Strand Road to Sean Moore Park where it turns to the East and skirts the park boundary and follows the route of the shoreline toward the Poolbeg Substation.

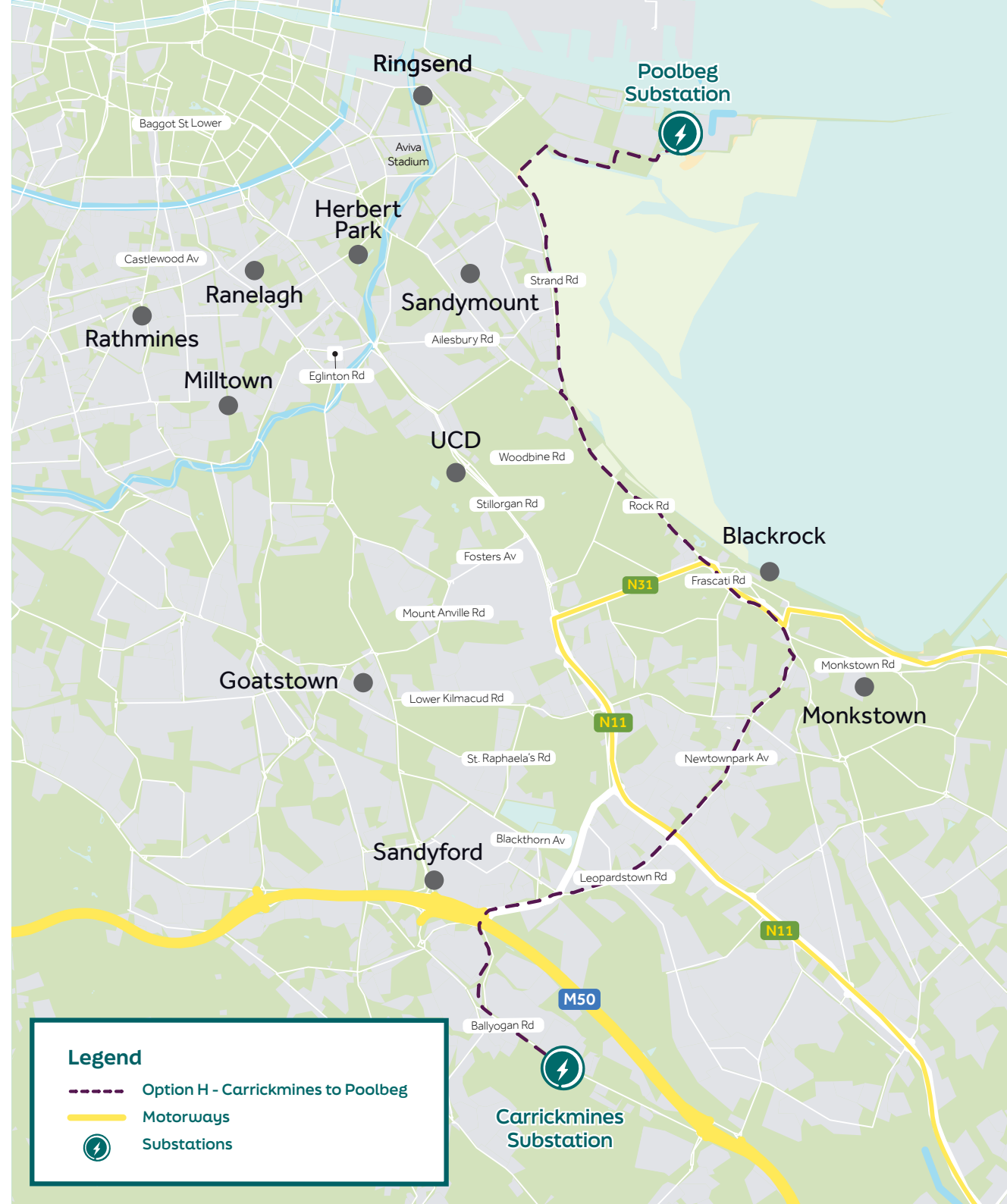


Option H : Carrickmines to Poolbeg

Option H leaves the Carrickmines substation and follows the Ballyogan Road northwest adjacent to the Luas Green Line. It continues into Murphystown Way where it crosses the M50 at Junction 14 on to the N31.

The route crosses under the Luas Green Line at Brewery Road junction (overhead bridge crossing), continues down the Leopardstown Road and crosses Stillorgan Road (N11) before joining Newtownpark Avenue.

The route joins the N31 at Temple Hill and proceeds north along the Frascati Road (N31) and the Rock Road (R118). It continues north along the Rock Road to the DART level crossing at Merrion Gates. The route follows Strand Road to Sean Moore Park where it turns to the East and skirts the park boundary and follows the route of the shoreline toward the Poolbeg substation.

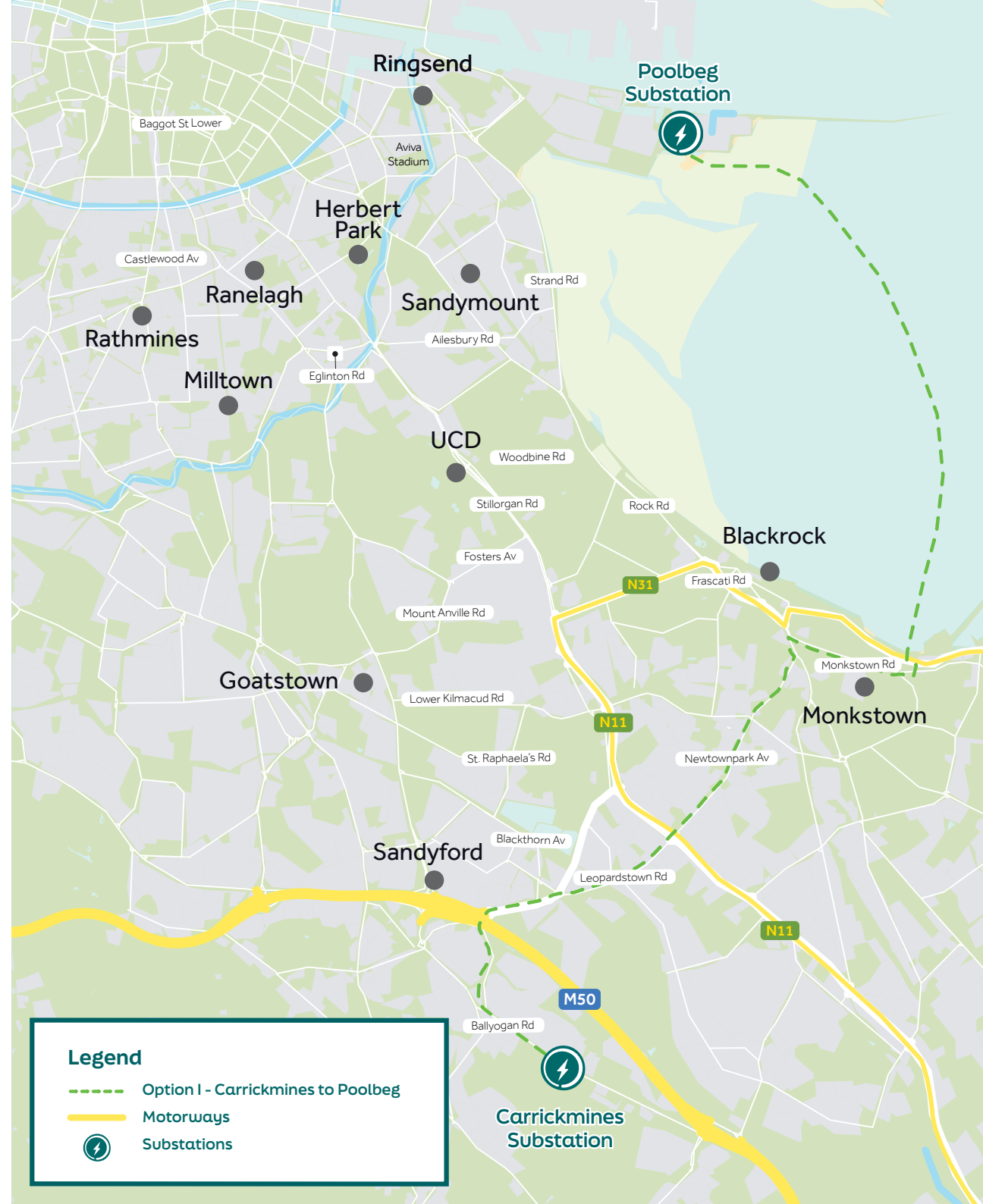


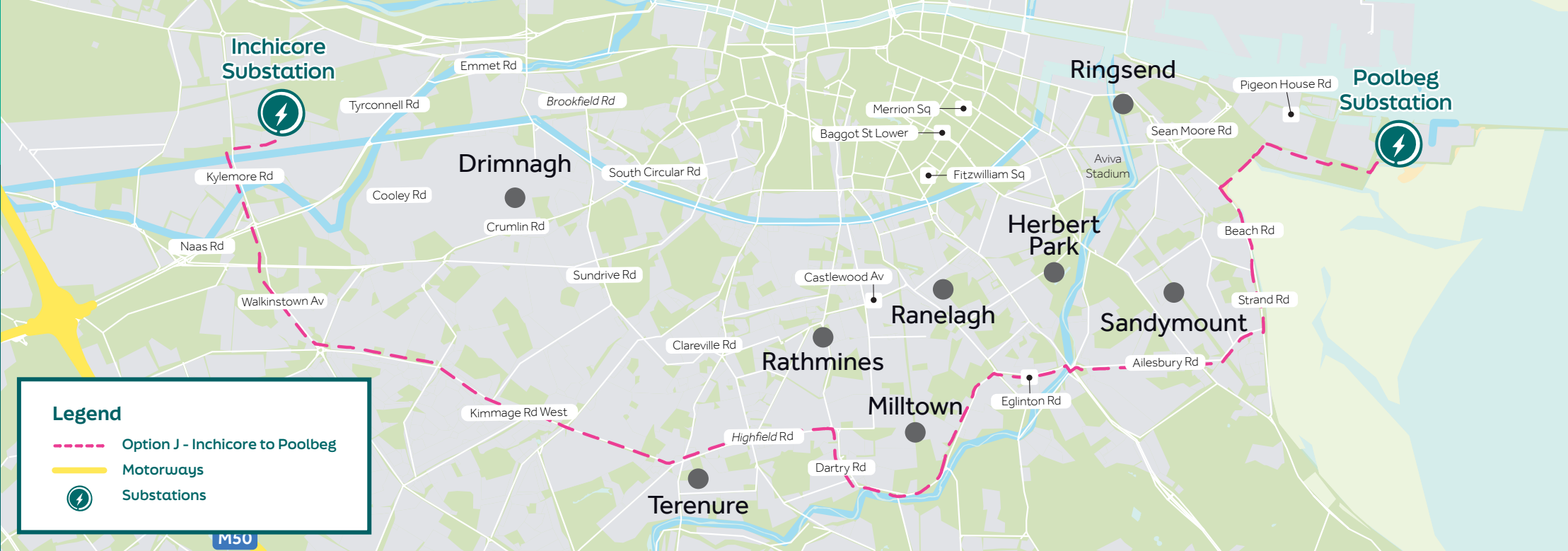
Option I: Carrickmines to Poolbeg

Option I leaves the Carrickmines substation and follows the Ballyogan Road northwest adjacent to the Luas Green Line. It continues into Murphystown Way where it crosses the M50 at Junction 14 on to the N31.

The route crosses under the Luas Green Line at Brewery Road junction (overhead bridge crossing), continues down the Leopardstown Road and crosses Stillorgan Road (N11) before joining Newtownpark Avenue. The route joins the N31 at Temple Hill and proceeds north for a short distance.

At the junction with Monkstown Road, the route turns in an easterly direction and travels through Monkstown Village. At the junction of Monkstown Crescent and Link Road, the route turns north and travels into the Salthill and Monkstown DART station Car Park. From this point, the route becomes a submarine corridor from the Salthill landfall point to the Poolbeg Peninsula landfall point to the north. From the northern landfall, the route travels on to the Poolbeg substation.

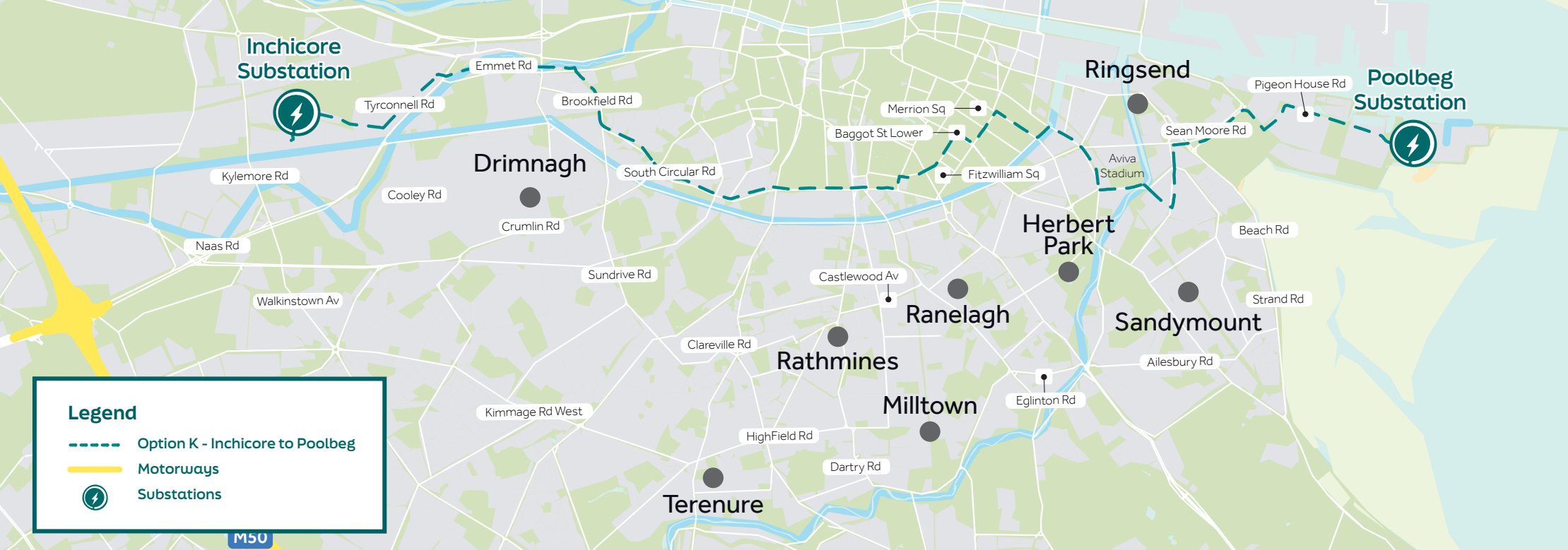




Option J : Inchicore to Poolbeg

Option J leaves the Inchicore substation and travels in a westerly direction along the Grand Canal towards Kylemore Road. It continues along Kylemore Road, and crosses under the Luas Red Line at Naas Road, through the junction at the Long Mile Road, along Walkinstown Avenue and through Walkinstown Roundabout. Here it heads

east towards Terenure Village along Kimmage Road West and Terenure Road West (R818). From Terenure it heads through Rathgar Village along Highfield Road and turns south into Dartry Road. It turns east again and runs under the Luas Green Line at the Nine Arches bridge, through Milltown Village and onto Eglinton Road. At Donnybrook, it crosses the River Dodder at Anglesea Bridge, travels along Ailsbury Road, crosses the Merrion road and crosses under the DART lines at Sydney Parade to join Strand Road via Sydney Parade Avenue. The route then follows Strand Road (R131) to Sean Moore Park where it turns to the east, skirts the park's boundary, and follows the route of the shoreline toward the Poolbeg substation.



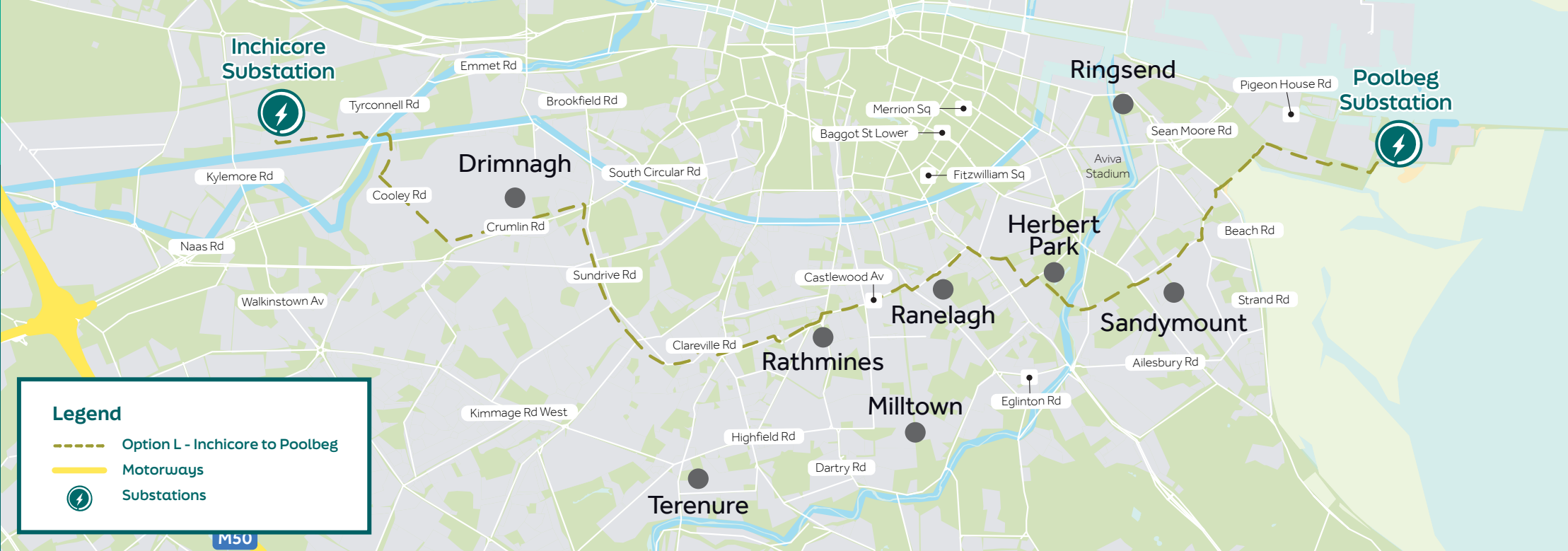
Option K : Inchicore to Poolbeg

Option K leaves the Inchicore substation and heads east along Jamestown Road. At the junction with Tyrconnell Road, it heads north into the centre of Inchicore. Here it heads east again along Emmet Road and onto Old Kilmainham before turning into Brookfield Road and past St. James Hospital. The route then crosses under the Luas Red line at Rialto and travels along South

Circular Road, Harrington Street and Harcourt Road where it crosses under the Luas Green line and continues along Adelaide Road.

The route turns north onto Earlsfort Terrace and then east onto Hatch Steet Lower, which becomes Pembroke Street Upper, where the route passes Fitzwilliam Square before joining Baggot Street Lower and at the junction with Fitzwilliam Street Upper it turns right, joining Merrion Square East, passing Merrion Square Park and onto Mount Street Lower. The route turns east onto Clanwilliam Place, running alongside the Grand Canal. The route crosses the Grand Canal on Grand Canal Street Upper. The route follows this

road south to the junction with Lansdowne Road, which it follows east. On this road it crosses under the Dart line and passes the Aviva Stadium. The route crosses the River Dodder on New Bridge and continues along Herbert Road. From Herbert Road it turns north onto Tritonville Road and Church Avenue. The route crosses Bath Street and then follows Sean More Road before turning onto South Bank Road. The route turns onto Whitebank Road before following Pigeon House Road to the Poolbeg substation.



Legend

- - - Option L - Inchicore to Poolbeg
- Motorways
- Substations

Option L: Inchicore to Poolbeg

Option L exits the Inchicore substation and heads east along the tow path on the north bank of the Grand Canal. Here it crosses the canal and Luas Red Line at Tyrconnell Road and turns right along Kilworth Road and Cooley Road. It turns northeast along the Crumlin Road and then south to follow the Sundrive Road. It continues through

Larkfield Park, Clareville Road and Kenilworth Park before crossing the junction with Harolds Cross Road and entering Kenilworth Square North. It enters Rathmines Village via Grosvenor Road, takes a quick right east along Castlewood Avenue, turns right and travels along Chelmsford Road and Appian Way. After a short section on Leeson Street Upper it travels along Wellington Place, turns into Pembroke Park and continues to Herbert Park.

The route enters Herbert Park at the southern boundary and then crosses under the river Dodder before entering the grounds at Merrion Cricket Club. On exiting the cricket grounds, it

follows Simmons Court Road and Sandymount Avenue where it crosses under the DART line adjacent to Sandymount Station. From here it follows Sandymount Avenue, Gilford Road, Sandymount Green, Seafort Avenue, Dromard Terrace and Marine Drive. The route enters Sean Moore Park, skirts the park's boundary and travels in a northeast direction. It turns right onto Kilsaran South Bank Road before entering Murphy Ringsend P-FIX land. On exiting Murphy's land, it travels along Irishtown Nature Park and through Pigeon House Road toward the Poolbeg substation.

About the underground cable

The cable that will be used is high-voltage XLPE cable with copper or aluminium core, installed within underground plastic ducts. This technology for electricity transmission is proven across Ireland and internationally. Figure 1 provides an overview of what an underground cable looks like.

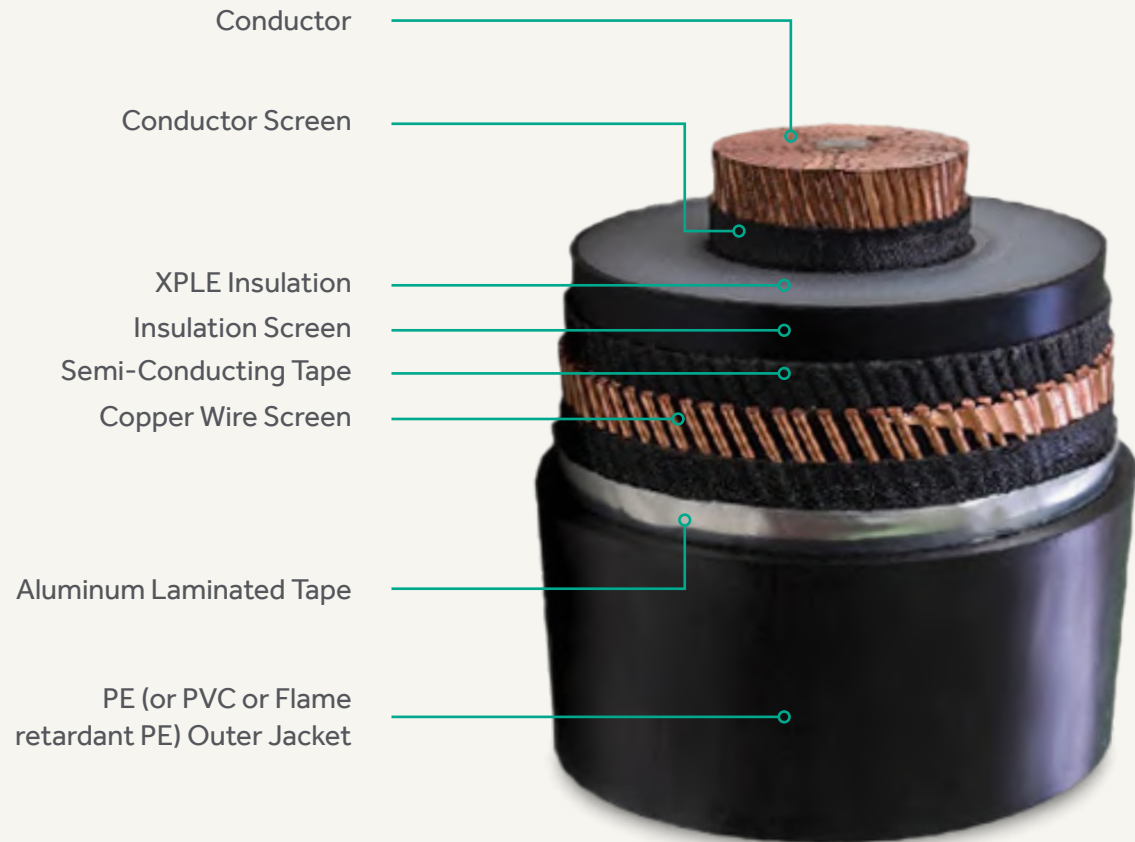


Figure 1: Underground Cable



What does underground cable construction involve?

As this project progresses, we will consult and work closely with local communities and businesses to minimise disruption that may be caused by construction. The photos shown here provide a typical example of what construction may look like. We will be able to provide more information on the construction process as the design progresses.

Construction is broken down into three steps.

Step 1:

Trenches are dug for plastic ducts and larger openings for joint bays. Joint bays are installed below ground to allow for joining different sections of the cables at up to 750 metre intervals. This interval depends on constraints and space. A typical joint bay is 2 metres deep, 2.5 metres wide and 8 metres long, with a slightly larger footprint required for construction.

Beside the joint bay is a link box and a C2 box.

Link box – The link box is used to test and provide a point for condition assessment and maintenance of the cables for performance and reliability. The link box looks like a small manhole.

C2 box – This is a small chamber where communication cores are connected. These cores transmit signals to and from our substations to ensure that the cable is protected and working as designed. We then return the surface to its original appearance.

Step 2:

The cables are delivered to a section of the site on cable drums. Two working areas are set up at each end of the trenched section, at the joint bays. At one end, the cable feed is placed, and at the other, the equipment to pull the cable through.

Step 3:

Cables are pulled through in sections and connected as one circuit in a process called jointing. This process is carried out in an environmentally controlled enclosure which fits directly over the underground joint bay which is exposed for access. Once installed, the road surface is returned to its original appearance and the joint bays are completely hidden from view.



Figure 2: A typical cable duct installation in the road



Figure 3: A typical jointing bay where cables are connected



Figure 4: Cables being pulled into the ducts and jointing bay



Figure 5: A typical passing bay in operation during cable jointing

Off-road corridors

It may be necessary to consider off-road sections to provide flexibility if we meet any challenges. These off-road corridors are still in the discovery phase but may include North Park in preparation for underground crossings of the M50, Tolka Estuary Greenway and the Royal Canal Greenway.

Traffic management

Before works begin, road licenses and traffic management plans will be secured and agreed with the relevant local authorities. This could include road closures and traffic diversions. This ensures the safety of road users and those carrying out the work.

Larger road closures allow for greater speed in the construction and will be assessed with the local authorities in advance. Local access to homes and businesses will be maintained at all times. Our Community Liaison Officers will work closely with local communities and businesses throughout the work.

Advanced ducting

Advanced ducting involves completing ducting works while other organisations are completing similar works within an area. While we make every effort to collaborate on project, it can often be difficult to align projects.

We are currently exploring options on the Royal Canal Greenway as an opportunity to lay ducts in collaboration with the National Transport Authority, and along Alexandra Road with Dublin Port.



Site investigations

We are in the early development stages of the project. Currently we are doing desk research to determine the route options. However, before significant investment is made, and before construction works starts, we will confirm the routes are feasible through non-invasive and invasive investigations.

Non-invasive investigations

We perform these to see an accurate design of the above and below ground environment. This includes:

- Survey of the landscape;
- inspecting manholes;
- using sonic and radar devices with Cat and Gen and Ground Penetrating Radar.

Invasive investigations

In areas of high congestion and/or limited space, we carry out focused slit trenching and H trenching. Slit trenches are long narrow trenches. They are used to verify the position of existing underground utilities and to confirm the desk research and utilities mapping. H trenches are a H shape and are performed where Joint Bays are proposed.

We may also need to take bore hole samples to analyse soil and ground conditions to ensure we can perform Horizontal Directional Drilling (HDD) for crossing existing services or infrastructure.

These investigations are classed as utility survey detection and aims to find any utilities like telephone lines, water, gas and drainage pipes.

Substation upgrades

As part of this project, we need to build a new 220kV substation at Poolbeg to support the electricity network for the Dublin area. A substation is used to reduce the high voltage of electrical power transmission so that it is suitable to supply to customers.

The new substation will be built next to the existing substation. See image below for the location. The works will improve power quality and support future renewable generation, including offshore renewables.



The image below is a typical indoor Gas Insulated substation building.



Planning and environment

The planning and consenting process for this project is complex due to the nature and location of the cable routes and substations.

The replacement of underground electricity transmission cables may be classified as 'exempted development' in accordance with planning legislation, meaning planning permission is not required. This is subject to meeting different criteria including ecological and environmental surveys, which are being performed by specialist consultants.

The substation expansions will require planning permission. A planning application has recently been submitted to Fingal County Council for an expansion of Belcamp substation in Clonshaugh. We are currently engaging with An Bord Pleanála on the planning pathway for Poolbeg substation, which we intend to submit in summer 2023. This planning application will include environmental and traffic surveys.

Our planning applications consider other planned development in the area. For example, we consider proposed offshore windfarm developments connecting into Poolbeg substation and any urban development planned such as the former Irish Glass bottle site in Ringsend, close to the Poolbeg substation.

Licences will also be required for surveys and development within the marine area. This includes areas of tidal rivers as well as Dublin Bay.

Health and safety

When developing all our projects, safety is paramount. We ensure compliance with all safety legislation include the Safety and Health and Welfare at Work Act 2005 and Construction Act 2013. A Health and Safety Coordinator is appointed at the start of the project and monitors safe design practices before the construction phase.

EirGrid specifications on plant and apparatus used to develop the grid are regularly updated and aligned to international best practice on high-voltage infrastructure.

For further information on health and safety and specific information on electric and magnetic fields and cables, see the booklet on our website: The Electricity Grid and Your Health.



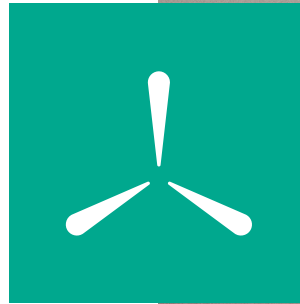
To Download
'The Electricity Grid
and Your Health'
PDF Scan Here

Ongoing engagement and next steps

Once this consultation ends, we will review all the responses as we continue to develop the routes. Your feedback will ensure you have the best infrastructure for your needs.

Over the coming months, we will carry out surveys and site investigations on each of the twelve routes. Our Community Liaison Officers, Liz and Niall will be engaging with local communities and businesses to make sure ongoing communication is always maintained.

We are aiming to present the Best Performing Route Options by the end of 2023.





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