



DART+ West

PUBLIC CONSULTATION NO.2

PREFERRED OPTION



What is the DART+ Programme?

What is the DART+ Programme

The DART+ Programme will deliver frequent, modern, electrified services to:

- Maynooth and M3 Parkway
- Hazelhatch and Celbridge
- Drogheda
- It will seek to improve southern DART services as far as Greystones
- It provides for the purchase of new electrified fleet

The DART network will increase from 50km to 150km transforming commuter train travel in the Greater Dublin Area (GDA).

What are the Benefits of DART+ Programme



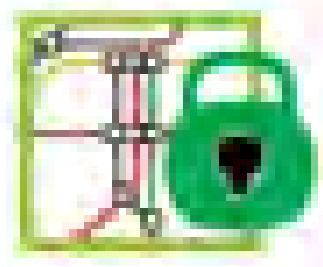
Increased passenger capacity and train frequency:

This will enable people to move away from private car use, contributing to alleviation of road congestion and improving quality of life.



Building a more sustainable city:

Electric trains will positively assist in the de-carbonisation of the transport sector and enable a transition away from fossil fuels.



Future proofing our Public Transport Network:

The DART+ programme will significantly upgrade our existing infrastructure and improve multimodal connectivity through interchange with other public transport networks.



Economic Development:

The DART+ programme, will bring, fast, frequent, reliable and sustainable transport to existing communities along the routes, making it easier to travel for work, education or leisure purposes. It will also facilitate the development of new communities that will greatly benefit from the connectivity that DART+ will deliver.

Specifics of DART+ West

Provides Sustainable Transport Options

- Over-reliance on private car use and increasing congestion in Greater Dublin Area.
- DART trains are more sustainable and cleaner than current diesel trains

Achieve Climate Change Targets

- Will help reduce the transport sector greenhouse gas emissions which continue to rise.
- Supporting the Government's Climate Action Plan.



Supporting Economic and Population Growth

- Congestion in Greater Dublin Area is increasing.
- Cost of time lost in the Dublin Region is ~ €350million/annum and forecast to rise to €2,000million/annum by 2033.
- Sustainable public transport infrastructure (pedestrian, cycling, bus and rail) will sustain economic and population growth while reducing emissions.

Integration of Land-use & Transport Planning

- Co-ordination and integration of spatial planning with rail transport.
- Supporting compact growth and increased densities in the Greater Dublin Area
- Supports the implementation of Project Ireland 2040 and the National Planning Framework

Facilitates Integration with Other Modes of Transport

- Improves integration of rail services with active modes of travel (walking and cycling)
- Enables greater cross-modal journeys through improved integration with other modes - Bus, Luas, proposed MetroLink and Dublin bikes

DART+ West Overview

The first of the infrastructural projects of the DART+ Programme to be delivered will be the DART+ West.

- Modernise and upgrade of infrastructure
- Electrification of approximately 40km of existing track network
- Enhancements in the city centre to provide extra capacity
- Level crossing replacements

	2019	2025 (Opening year)
No. of trains per hour per direction	6	12
Passenger capacity	5,000	13,200

Capacity increases provided by the Maynooth Line

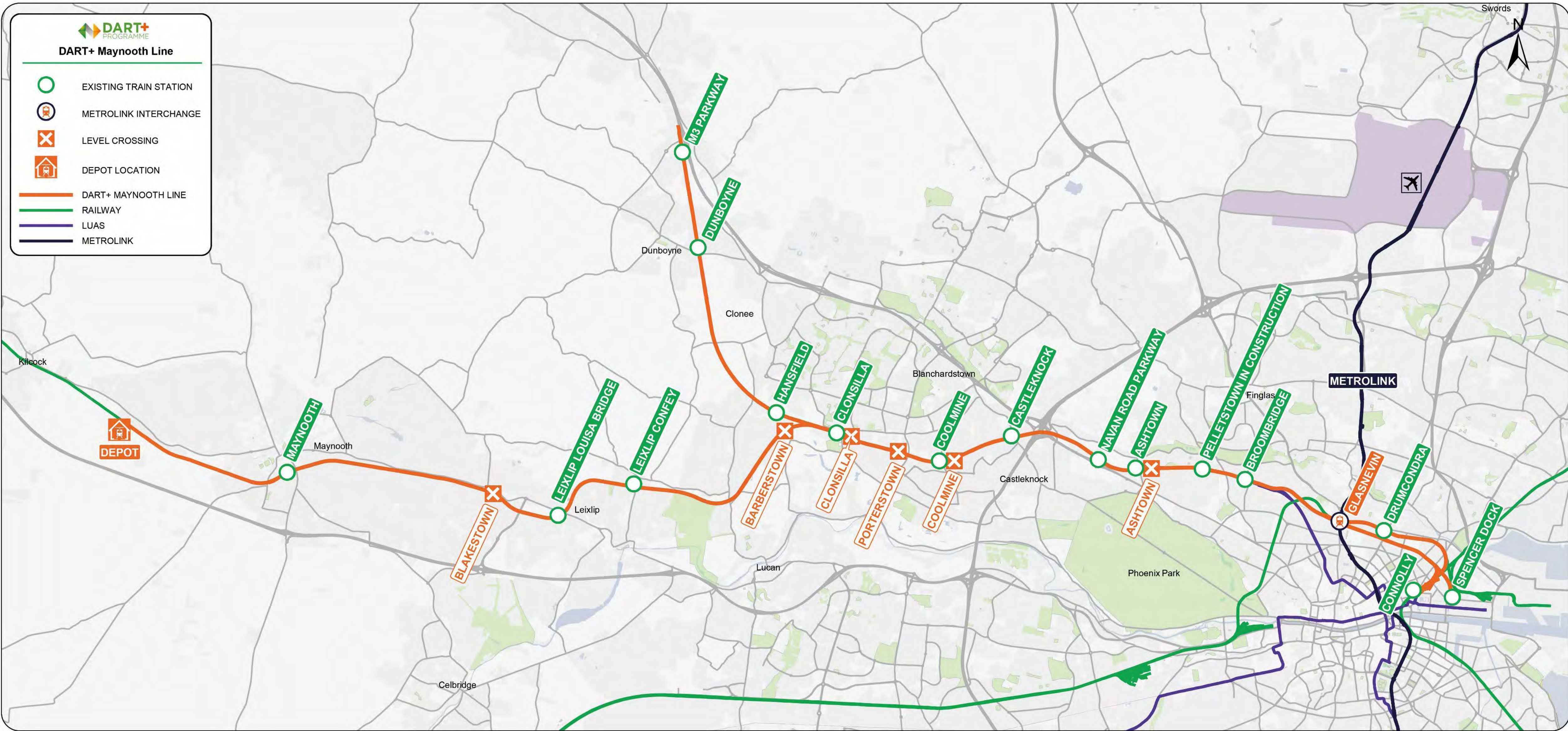
NOTE: The capacity projections have been amended since public consultation no. 1, based on more detailed railway operating modelling.

Specifics of the DART+ West project

Specifics of the Project

- Electrification of the Maynooth & M3 Parkway lines from City Centre to Maynooth (40km approx.).
- Capacity enhancements at Connolly Station (to include modifications to junctions and the station) to facilitate increased train and passenger numbers.
- Provision of a new Spencer Dock Station, which will better serve the north Docklands area and create an improved interchange with the Luas Red Line.
- Closure of level crossings & provision of bridge crossings where required.
- Interventions at existing bridges over the rail line where there is insufficient clearance to accommodate the new overhead electrification system.
- Construction of a new DART depot facility west of Maynooth Station for the maintenance and stabling of trains.
- All civil and bridge works as necessary to accommodate electrification.





Preferred Option for DART+ West

Preferred Option for DART+ West

The options assessment studies have led to the identification of the preferred option as presented below.

For the purpose of describing the project, it has been divided into sections presenting the project in an east west direction, as follows:

- General linear works
- City Centre enhancements (Connolly Station & Spencer Dock Station)
- City Centre to Clonsilla Station
- Clonsilla Station – M3 Parkway
- Clonsilla Station – Maynooth

Options Assessment Process

Following public consultation no.1, a complete re-analysis of the optioneering process was undertaken to take account of feedback received at PC1 and additional information from surveys and further studies.

For the Coolmine level crossing replacement this included the addition of two new options resulting in the selection of a new preferred option. This option will provide a new footbridge at Coolmine Road adjacent to the train station but will not provide a new road bridge across the railway line. Junction improvements will be provided on the local road network to facilitate the redistribution of traffic to the adjacent crossings of the railway line at Castleknock Bridge and Diswellstown Road / Dr. Troy Bridge.

General linear works

Each of the following elements will be required along all sections described below:

- Electrification by overhead line.
- Twelve substations will be required at intervals along the line to provide power to the network.
- Ensure existing bridges have sufficient clearance for overhead lines.
- Signalling upgrades and additional signalling.
- Alterations to railway tracks, including minor realignment and track lowering.
- Utilities, boundary treatments, parapet/wall heightening, vegetation management and other ancillary works provided for along the length of the project.



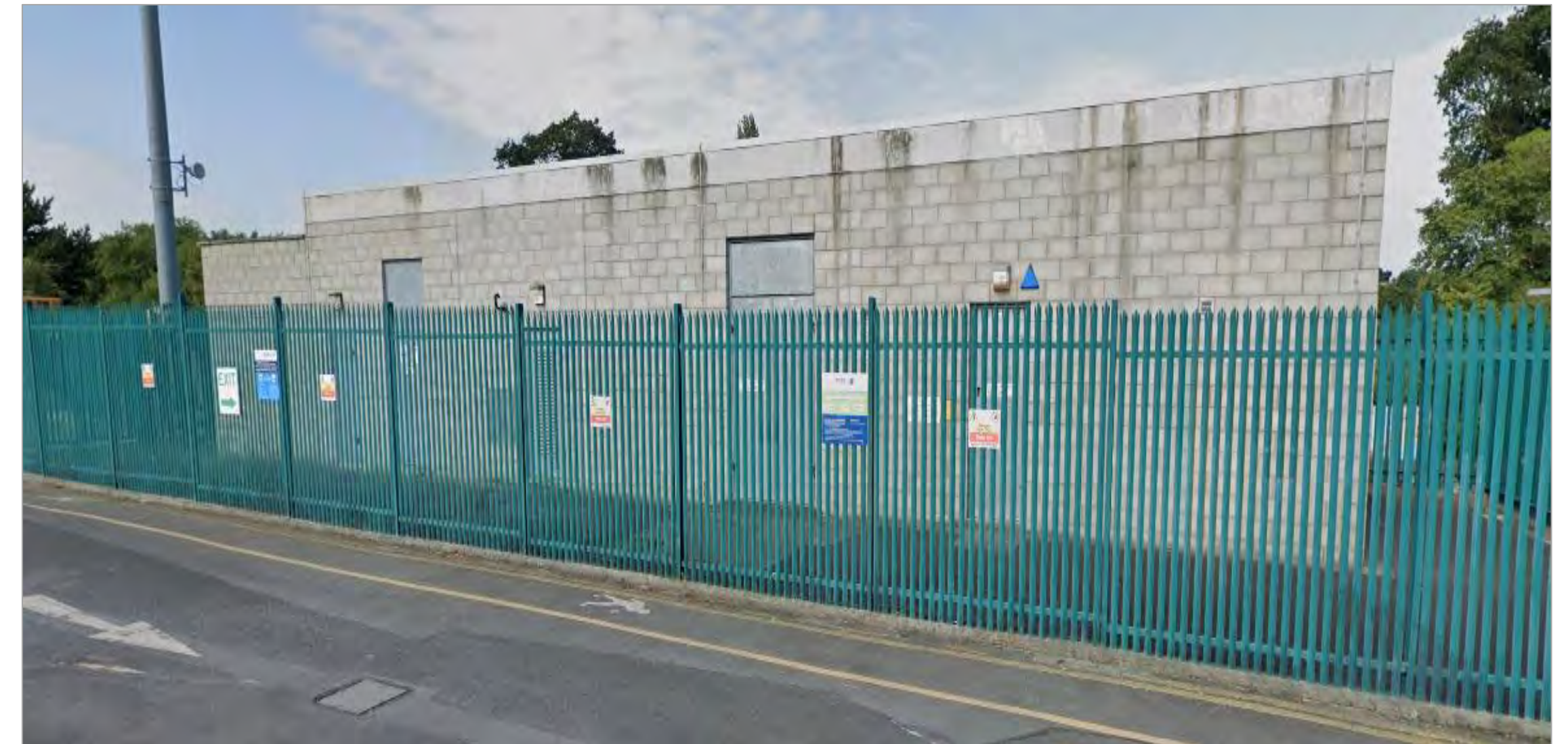
Substations

A total of twelve electrical substations are necessary at specific locations along the DART+ West route corridor to supply electrical power along the line.

Where feasible these have been located on IE lands. Typically these substations are accompanied by a number of equipment cabins which support the signalling, electrical and telecommunication infrastructure.

The preferred option for substation locations are as follows:

- Docklands
- Coolmine
- Leixlip Confey
- Glasnevin
- Hansfield
- Blakestown
- Ashtown
- Dunboyne
- Maynooth
- Castleknock
- M3 Parkway
- depot



View of sample electrical substation

Compounds & Maintenance Facilities

Compound Function	Compound Locations
Multi-disciplinary	Docklands, Castleknock, Blakestown, Millfarm, Depot, Dunboyne, M3 Parkway
Stations	Connolly, Ashtown, Coolmine
SET	Cabra Road, Reilly's bridge and Reilly's bridge complementary, Navan Road Parkway, Barberstown,
Permanent Way	Connolly, Glasnevin, Clonsilla, OBG13 Collins bridge, OBG18 Pike bridge and OBCN286 Barnhill bridge
Structures	OBG5 Broombridge, OBG9 Old Navan Road bridge, OBG14 Bridge adjacent to Leixlip Confey Station, OBG16 Louisa bridge; New UBG22A, UBG22B and UBG22C; and New OBG23A
Level crossing	Ashtown, Coolmine, Porterstown, Clonsilla, Barberstown
Substation	Glasnevin, Ashtown, Coolmine, Leixlip Confey, Maynooth, Hansfield

Table of proposed temporary construction compounds and function

Operational Phase Maintenance Facilities

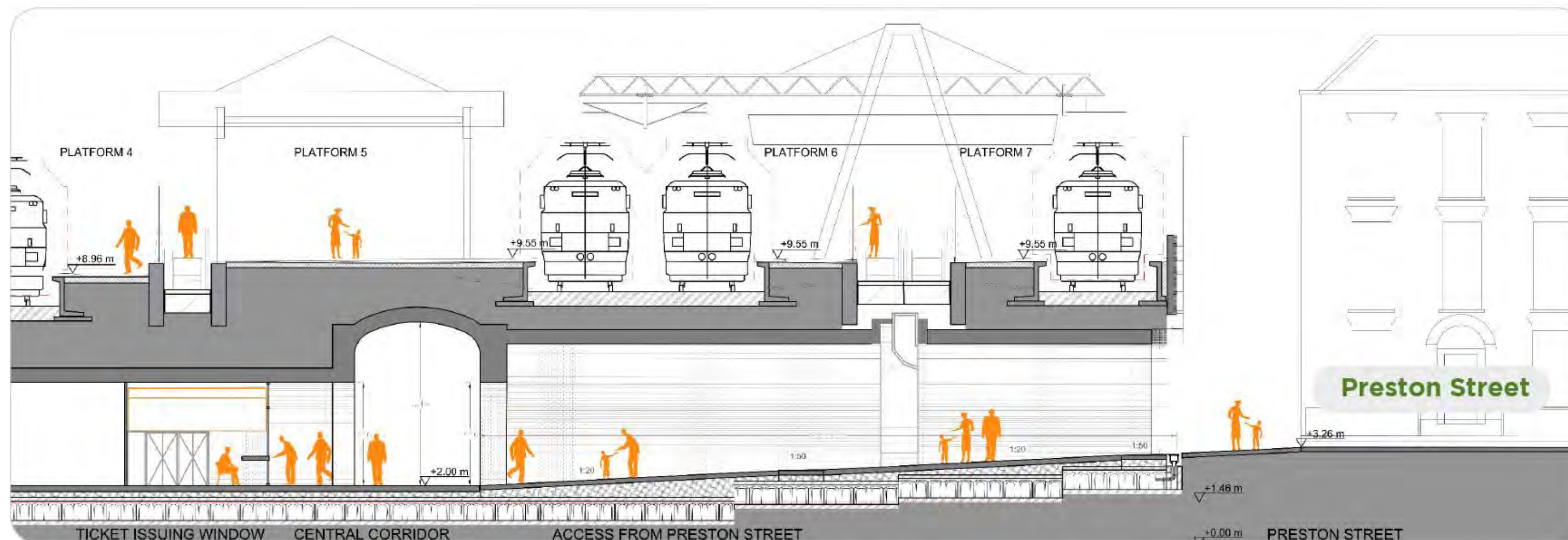
In addition to the existing maintenance compounds along the route, new operational phase maintenance facilities have been identified to support the project. These will be located at:

- Docklands
- Navan Road Parkway Station.
- The depot.

The maintenance facility will at Navan Road Parkway Station will include a two-storey building approximately 7.5 m high x 42.5 m long x 9.8 m wide subject to further design development.

City Centre Enhancements (New Entrance to Connolly Station)

In respect of passenger access and egress enhancements, the preferred option is to provide a new Connolly Station entrance from Amiens Street via Preston Street and through the existing undercroft arches beneath the station. This option requires refurbishment of an area of the existing undercroft vaults and the platforms themselves. Access from the undercroft to the raised platform level will be by means of escalator, stair and lift centred on the existing island platforms.



Section through entrance to Preston Street



Artists impression of proposed Preston Street entrance

City Centre Enhancements (Connolly Station)



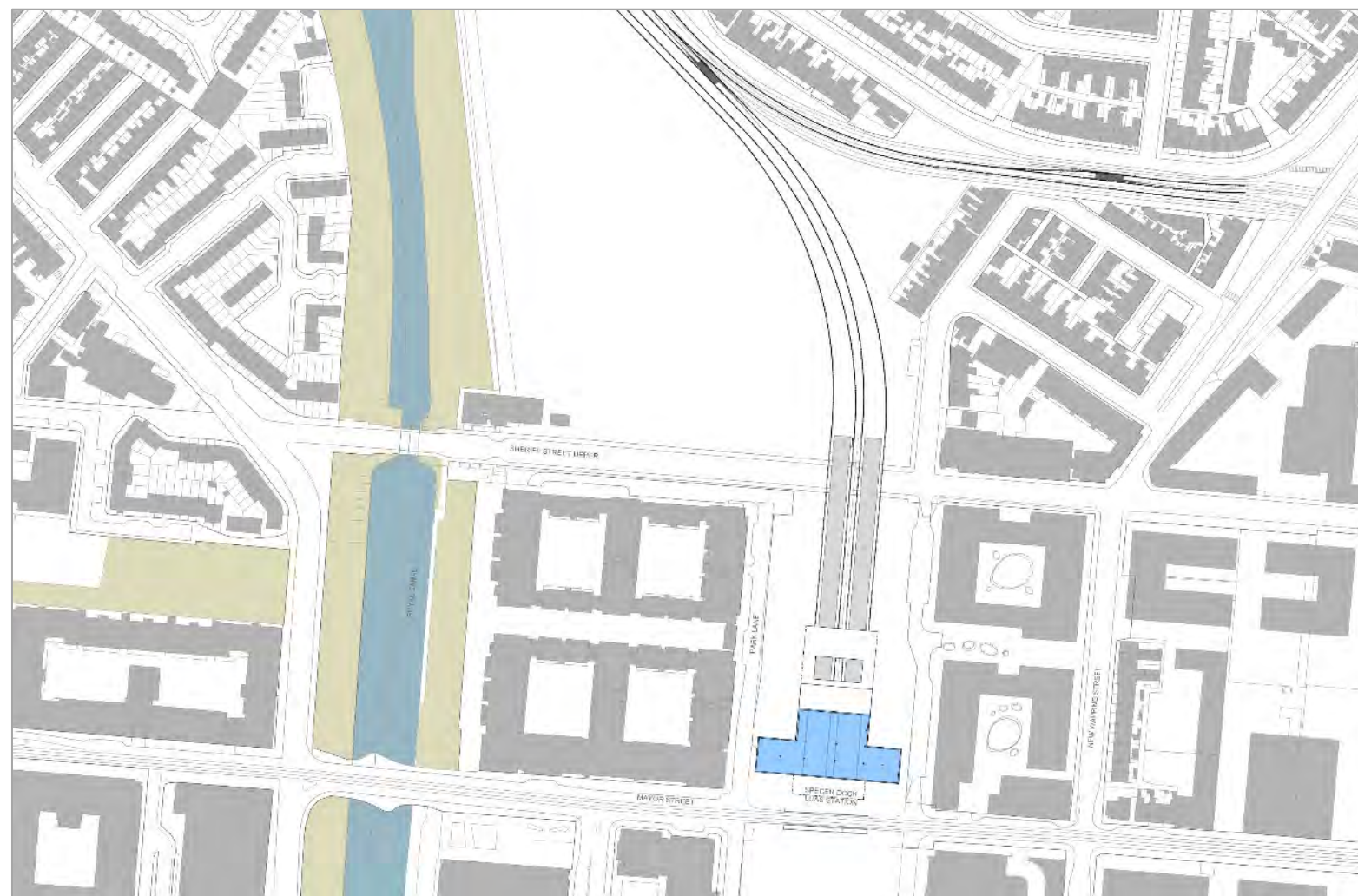
View of tracks on northern approach to Connolly Station showing multiple crossovers which restrict capacity

Connolly Station is one of the main railway stations in Dublin and Ireland and a focal point for the Iarnród Éireann network.

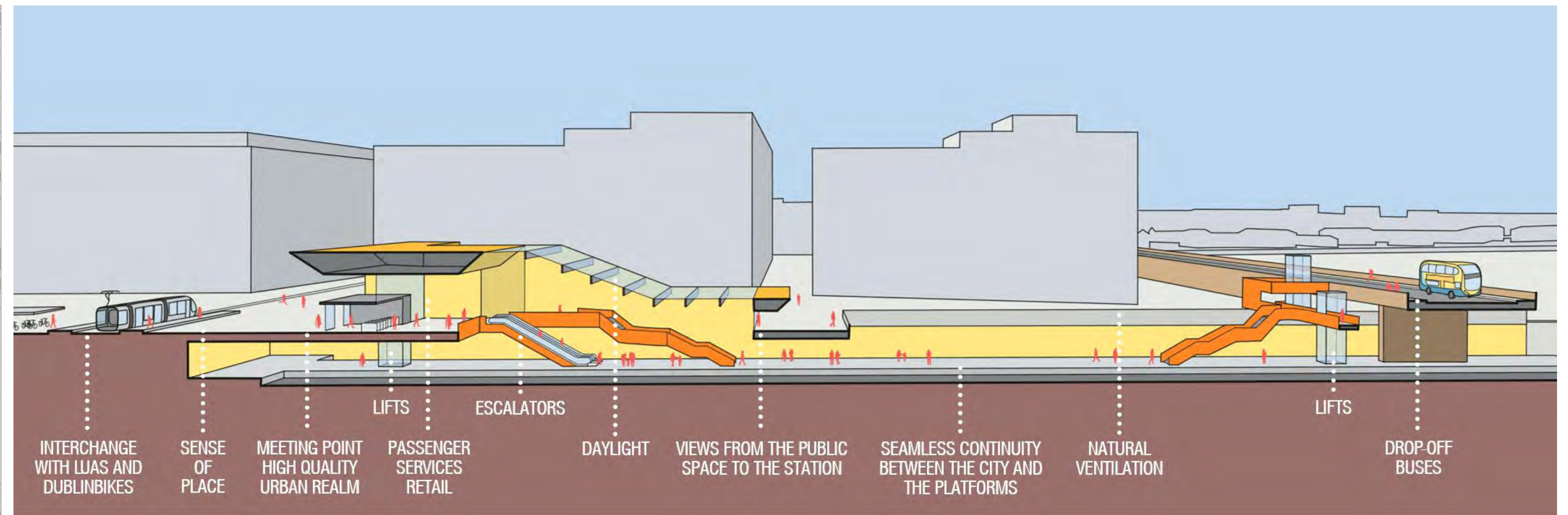
DART+ is seeking to modify the northern access to Connolly Station rail lines with additional crossovers and track modifications to facilitate increase the station capacity.

City Centre Enhancements (Spencer Dock Station)

The DART+ West project is seeking to relocate Docklands Station to Spencer Dock adjacent the Luas Stop to increase the overall rail capacity in the City Centre, to better serve the Docklands area and to maximise the interchange potential with Luas.



Proposed Spencer Dock Station location



Graphic illustrating the Section and the primary elements of Spencer Dock Station

City Centre to Clonsilla Station



Aerial view Broombridge integrated rail and LUAS stations

Travelling in a westerly direction the Maynooth line includes the following stations:

- Drumcondra Station
- Broombridge Station (interface with LUAS),
- Pelletstown Station (under construction),
- Ashtown Station,
- Navan Road Parkway Station,
- Castleknock Station,
- Coolmine Station,
- Clonsilla Station.

Level Crossing Replacements - City Centre to Clonsilla Station

Level Crossing	No. Trains Passing	No. Closures	Total Closure Time	Average Time per Closure
Ashtown	13	6	00:36:42	00:06:07
Coolmine	12	9	00:41:35	00:04:37
Porterstown	12	7	00:32:46	00:04:41
Clonsilla	12	7	00:30:58	00:04:25
Barberstown	9	6	00:26:03	00:04:21
Blakestown	7	5	00:23:48	00:04:46

Railway Statistics for the Level Crossings - Morning (AM) Peak

There are four level crossings along this section:

- Ashtown
- Coolmine
- Porterstown
- Clonsilla

Due to the proposed increased train frequency the retention of these level crossings is untenable.

The closure of these level crossings will improve train efficiencies, safety and remove interfaces and associated delays with the road network.

Ashtown Level Crossing Replacement

Full vehicular road underpass with pedestrian and cycle facilities.

The preferred option provides a new road under the railway and the canal to the west of the existing Ashtown level crossing along the line of Mill lane. CCTV will be provided for the underpass.

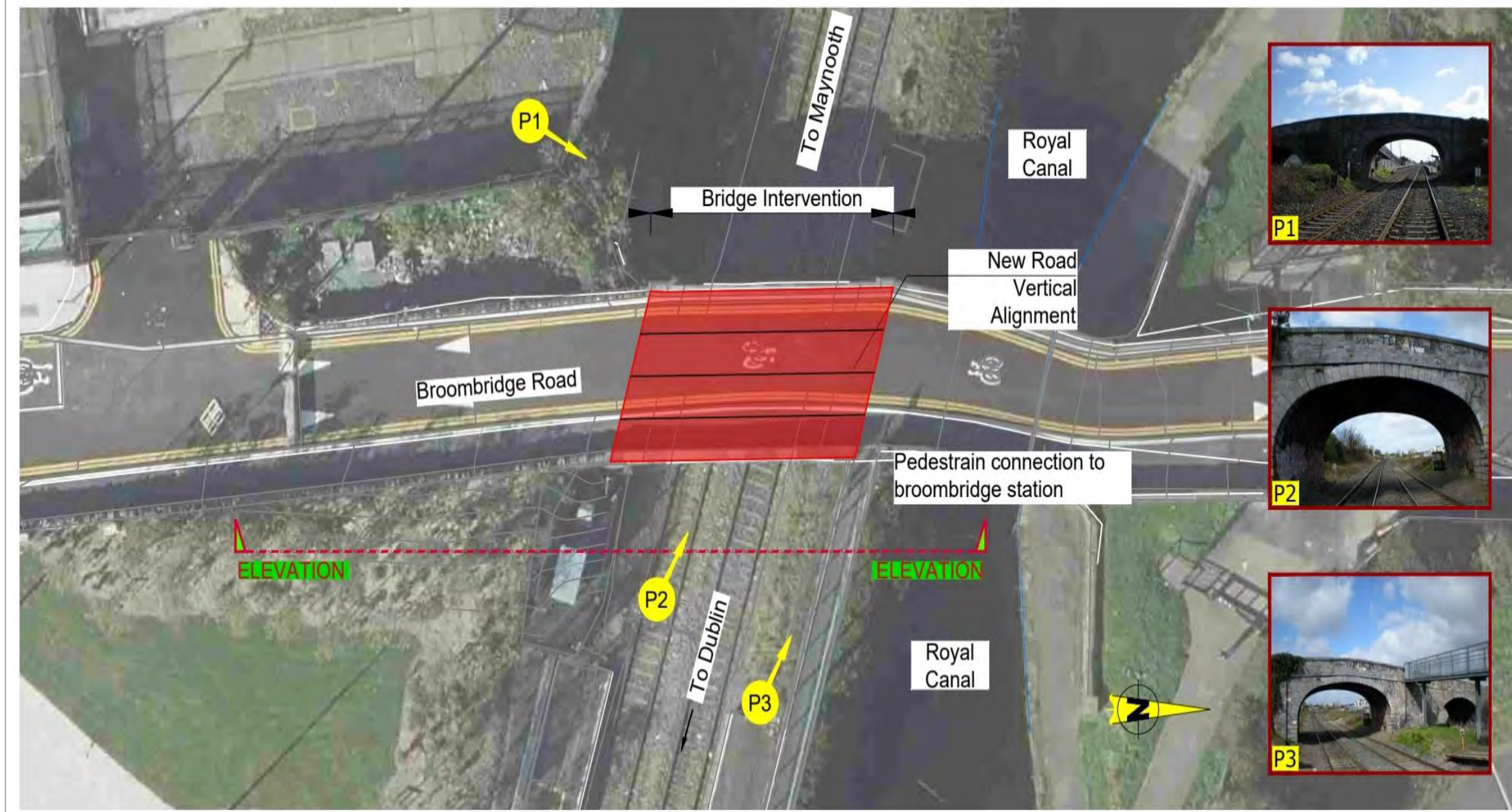
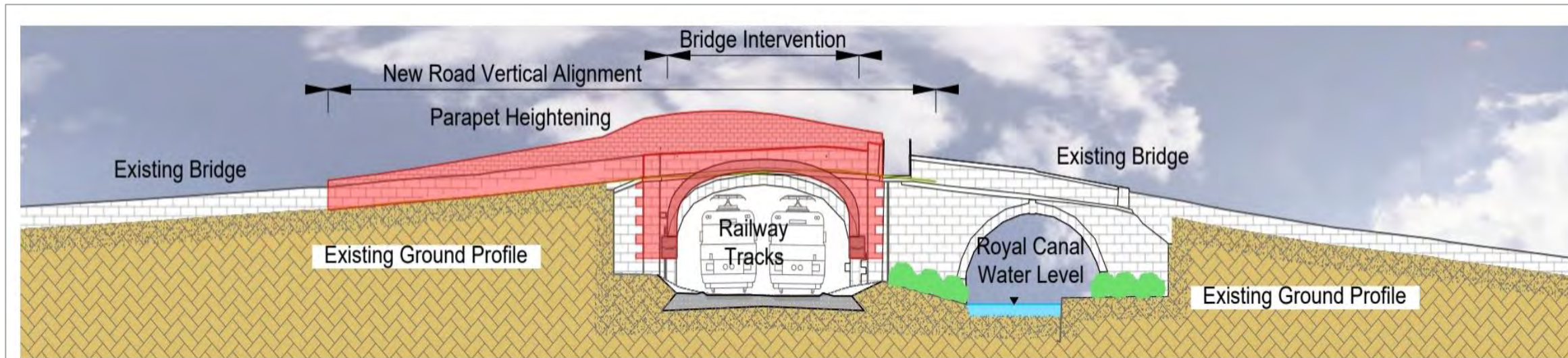
An accessibility bridge with stairs and a lift will also be provided at the level crossing.



Preferred option at Ashtown level crossing replacement



Broombridge rail bridge reconstruction



Graphic of proposed deck reconstruction at Broombridge

The existing bridge (Broome Bridge) carrying Broombridge Road requires an intervention to provide sufficient clearance for the OHLE.

Only the canal bridge is included in the Record of Protected Structures (RPS).

The preferred option is for a careful and sensitive reconstruction of the existing railway bridge to obtain the required clearance.

It is proposed to systematically deconstruct the arch and walls of the existing bridge and reconstruct it with a higher clearance using a pre-cast arch units. The existing Broome Bridge stone will be reused in the spandrel walls and parapets of the reconstructed bridge.

The design will be informed by consultations with Dublin City Council and the Architectural Advisory Unit of the Department of Culture, Heritage and the Gaeltacht.

Coolmine Level Crossing Replacement



Preferred option at Coolmine level crossing replacement

The preferred option provides a pedestrian and cyclist bridge at the existing level crossing and provides junction improvements on the existing road network for vehicular traffic diverting to the nearby Castleknock bridge and Diswellstown Road bridge.

A new accessibility bridge with stairs and a lift will be provided within Coolmine Station.



Coolmine Level Crossing Replacement



Preferred option at Coolmine level crossing replacement

The preferred option at Coolmine proposes that traffic will divert to the existing bridge crossings at Diswellstown Road and Castleknock Bridge.

In order to facilitate the additional capacity on the existing road network, the following upgrades to junctions along the local road network are proposed:

- Diswellstown Road junction
- Diswellstown Road / Coolmine Road junction
- Park Lodge / Castleknock Road junction
- Porterstown Road / Diswellstown Road junction.

Porterstown Level Crossing Replacement



Preferred option at Porterstown level crossing replacement

Given the low traffic flows utilising the crossing combined with the proposed new road bridge at Barberstown to the west and the proximity to the Diswellstown Link Road (R121) to the east, a pedestrian and cyclist bridge is identified as the preferred option.



Clonsilla Level Crossing Replacement



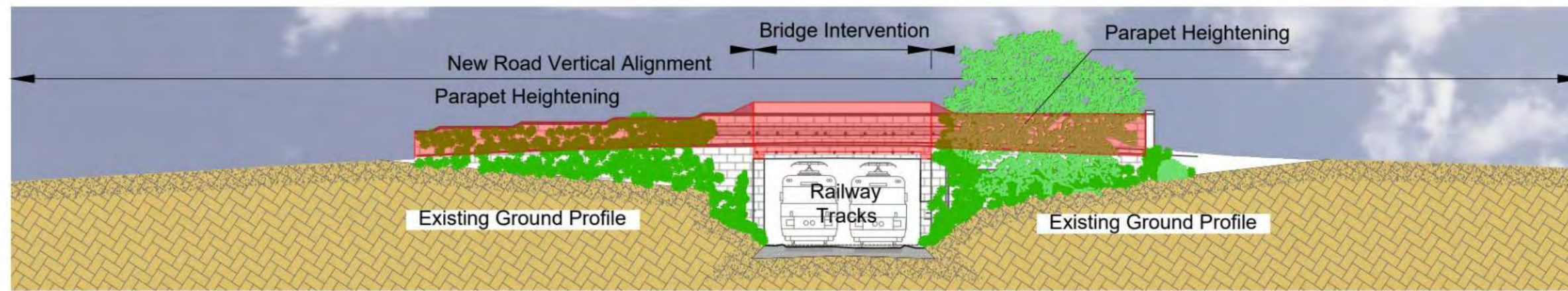
Preferred option Clonsilla level crossing replacement

NOTE: Design of the northern ramp to be agreed with Fingal County Council to be consistent with the Royal Canal Urban Greenway.

Given the low traffic flows utilising the crossing combined with the proposed new road bridge at Barberstown to the west and the proximity to the Diswellstown Link Road (R121) to the east, a pedestrian and cyclist bridge is identified as the preferred option.



Old Navan Road bridge deck lift

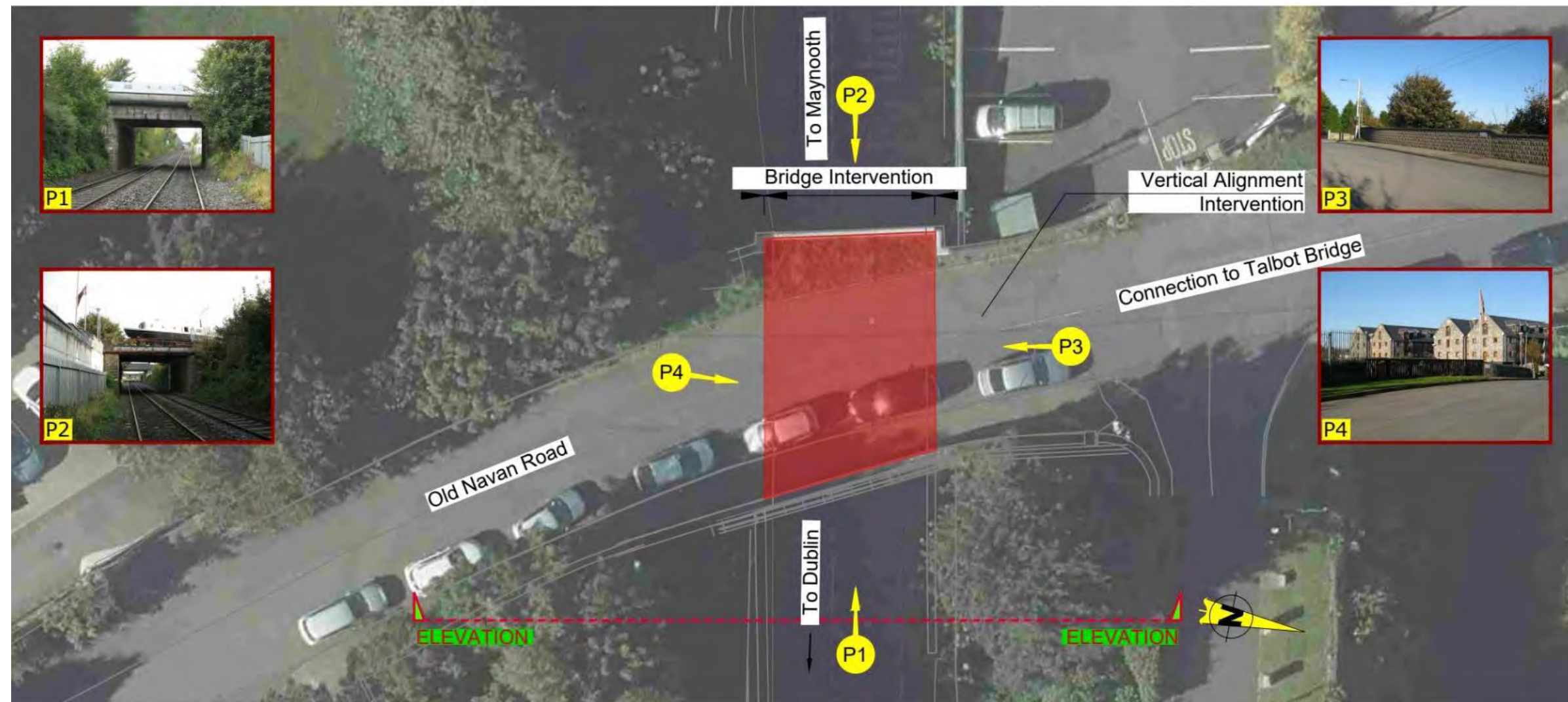


The existing bridge carrying the old Navan Road over the railway requires an intervention to provide sufficient clearance for the OHLE.

Only the canal bridge (Granard Bridge) is included in the Record of Protected Structures (RPS).

The preferred option is for a lifting of the existing bridge deck by approximately 290mm to obtain the required clearance.

This will result in a temporary impact on vehicular access across the Old Navan Road.

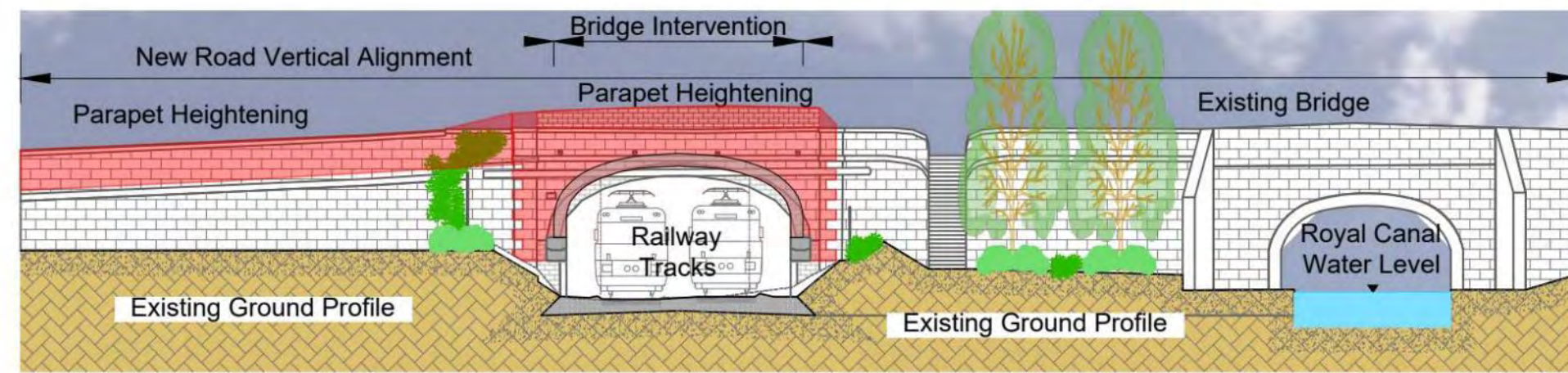


Graphic of proposed old Navan Road Bridge deck lift



View of old Navan Road Bridge

Castleknock Road railway bridge reconstruction



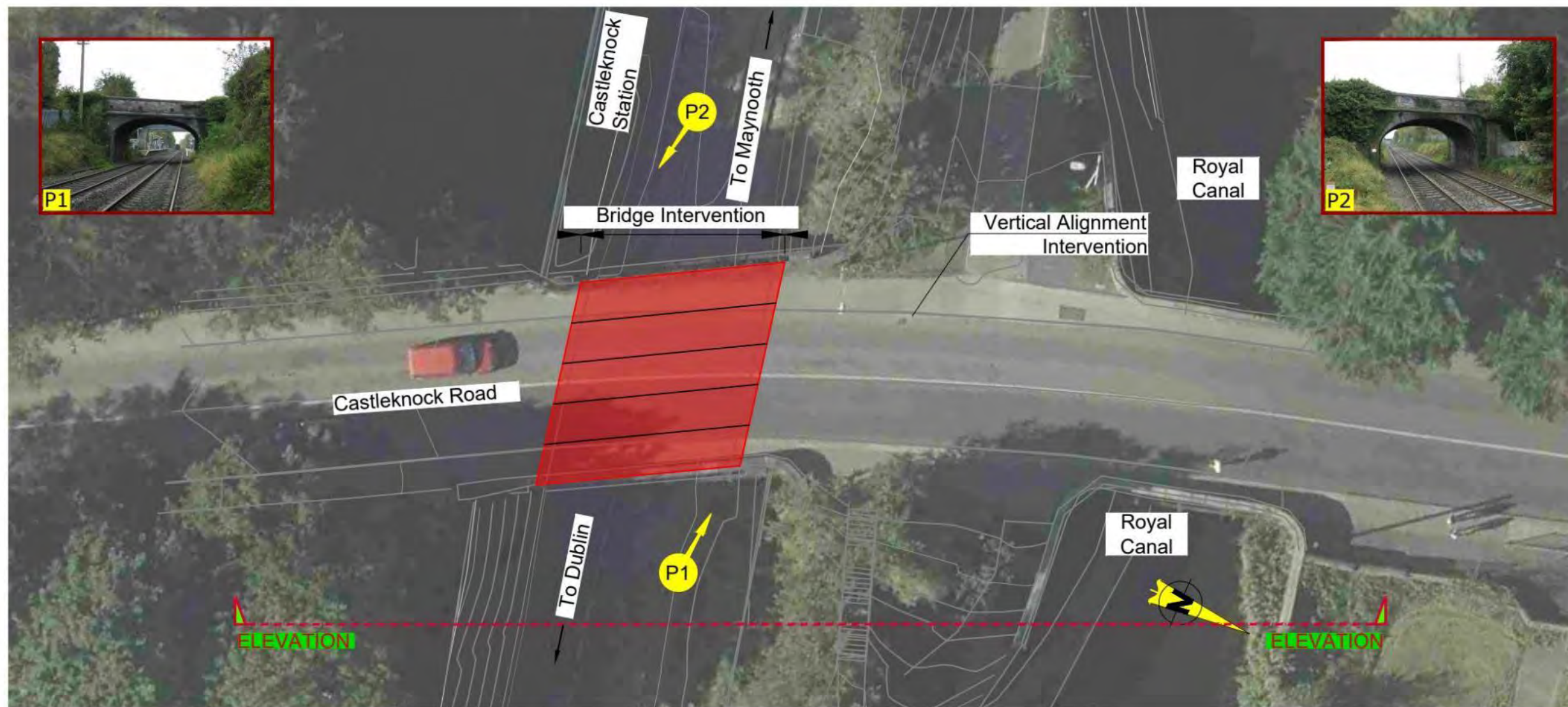
The existing bridge carrying Castleknock Road over the railway requires an intervention to provide sufficient clearance for the OHLE.

Only the canal bridge is included in the Record of Protected Structures (RPS).

The preferred option is for a careful and sensitive reconstruction of the existing railway bridge to obtain the required clearance.

It is proposed to systematically deconstruct the arch and walls of the existing bridge and reconstruct it with a higher clearance using a pre-cast arch units.

The design will be informed by consultations with Fingal County Council and the Architectural Advisory Unit of the Department of Culture, Heritage and the Gaeltacht.



Graphic of proposed deck reconstruction of Castleknock Road Railway Bridge



View of Castleknock Road railway bridge

Clonsilla Station – M3 Parkway



Dunboyne Train Station

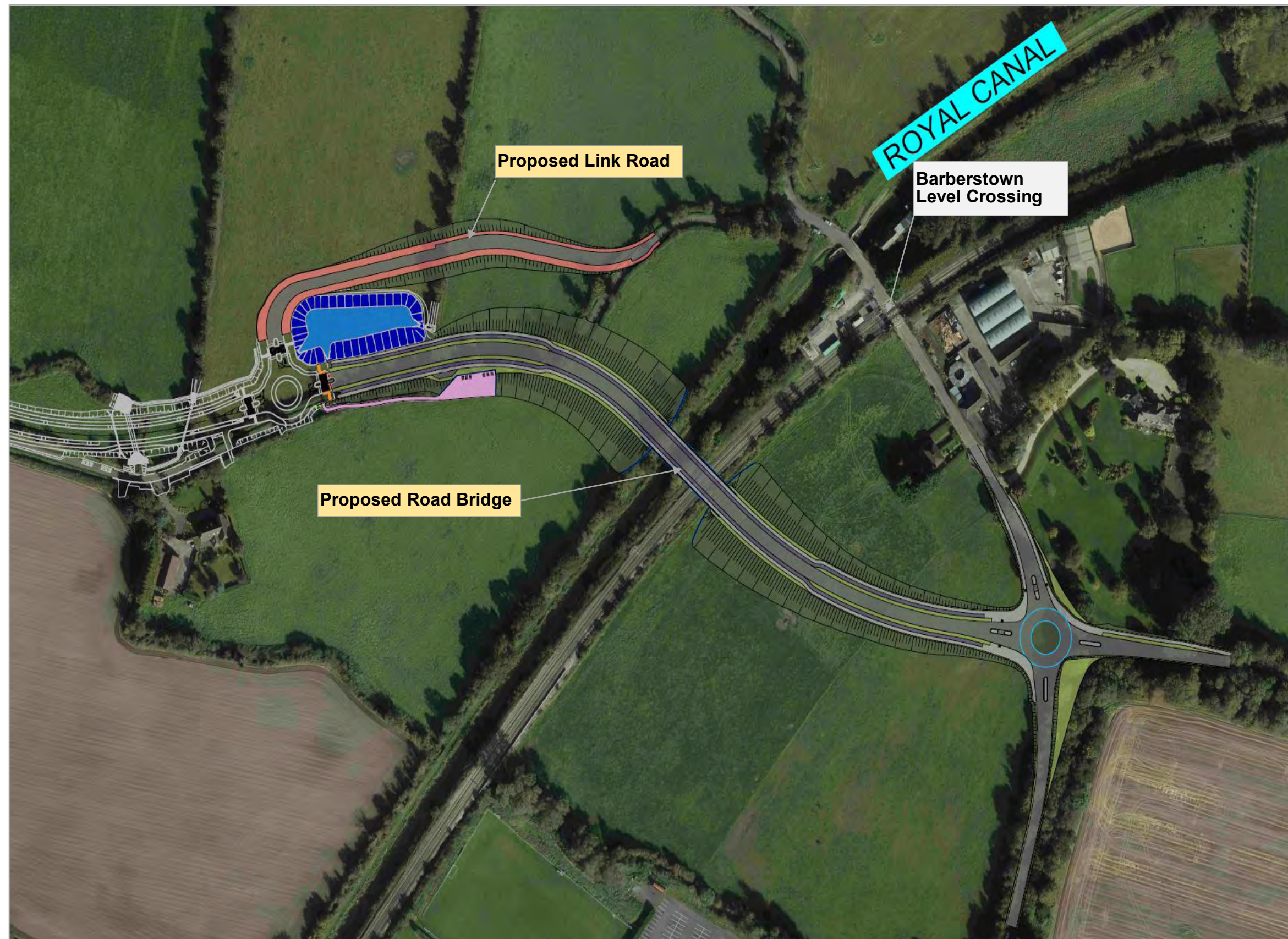
West of Clonsilla Station the M3 Parkway line spurs northwards passing through Hansfield Station and Dunboyne Station before terminating at M3 Parkway Station which lies to the north of Dunboyne and west of Junction 5 off the M3 Motorway.

The line will be provided with electrified, associated upgrades of signals and communications, and the provision of electrical substations as required.

There are three existing structures within this section where clearance beneath the bridge is insufficient to allow the installation of a standard OHLE solution. At these locations, track lowering, installation of a reduced height OHLE solution or a combination of both shall be employed. The bridges in question are listed below:

- Barnhill Bridge.
- Stirling Road Bridge.
- Dunboyne Bridge.

Barberstown Level Crossing Replacement



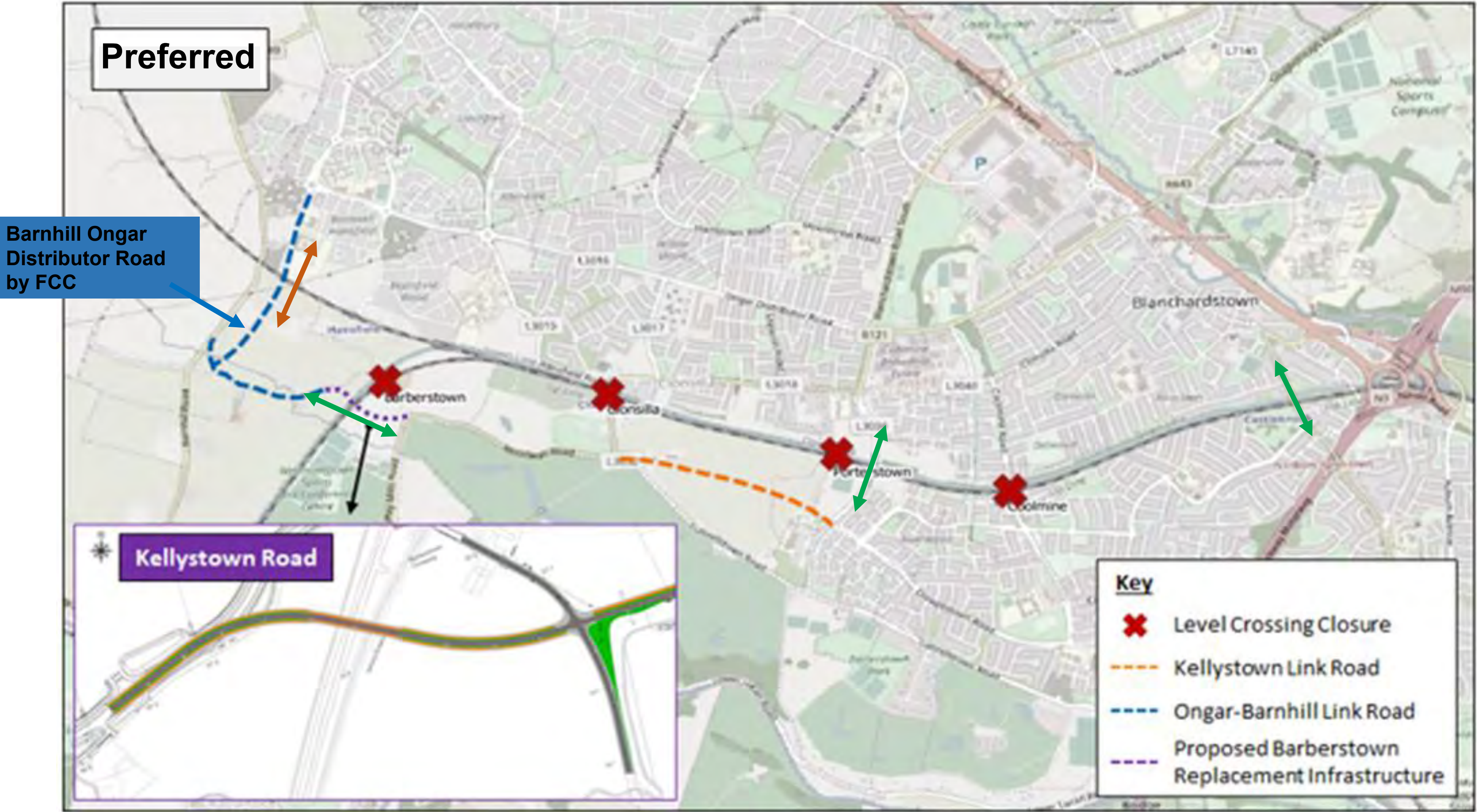
Preferred option Barberstown level crossing replacement

The preferred option provides a new road bridge over the railway line and canal, south of the current level crossing and connecting the existing R121 to the east of the rail to the Barberstown Lane to the west of the rail line.

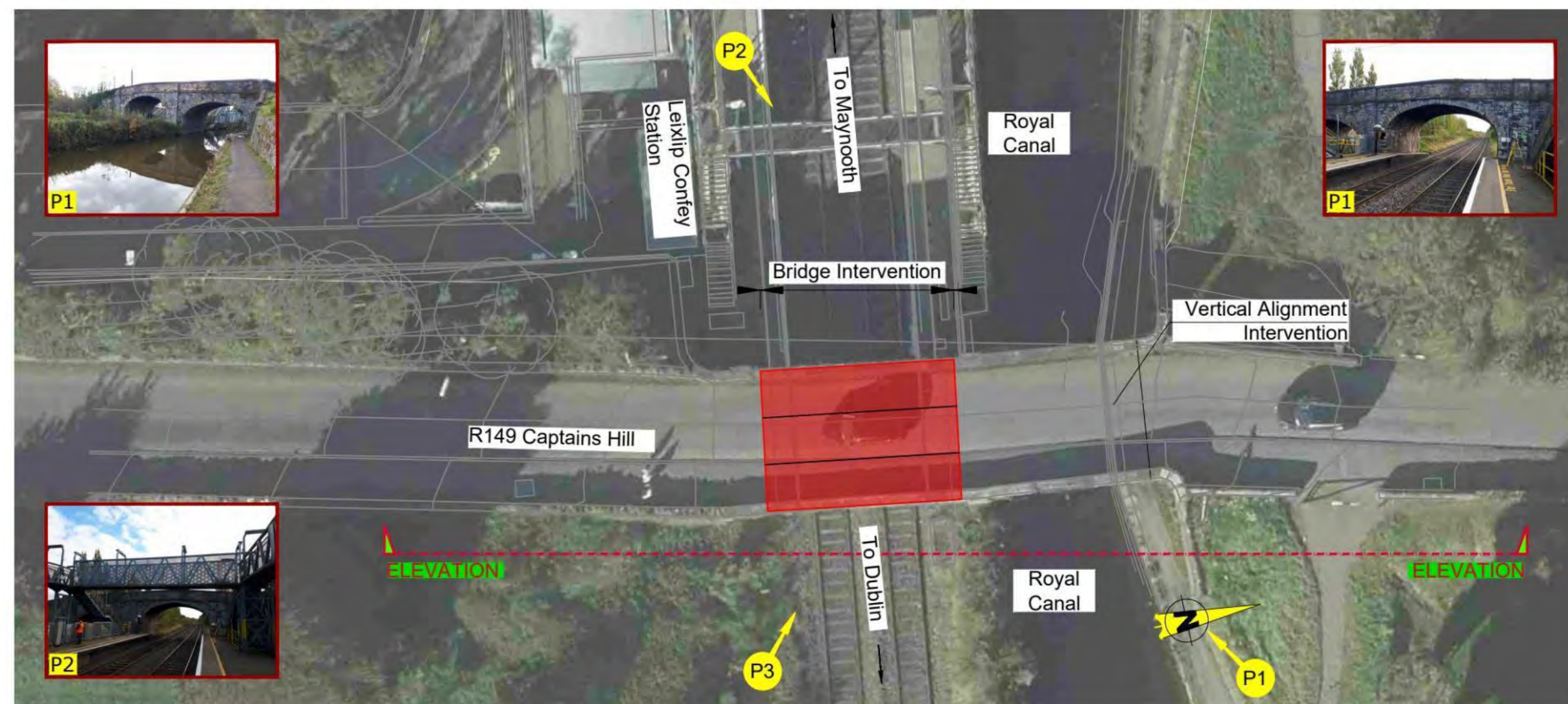
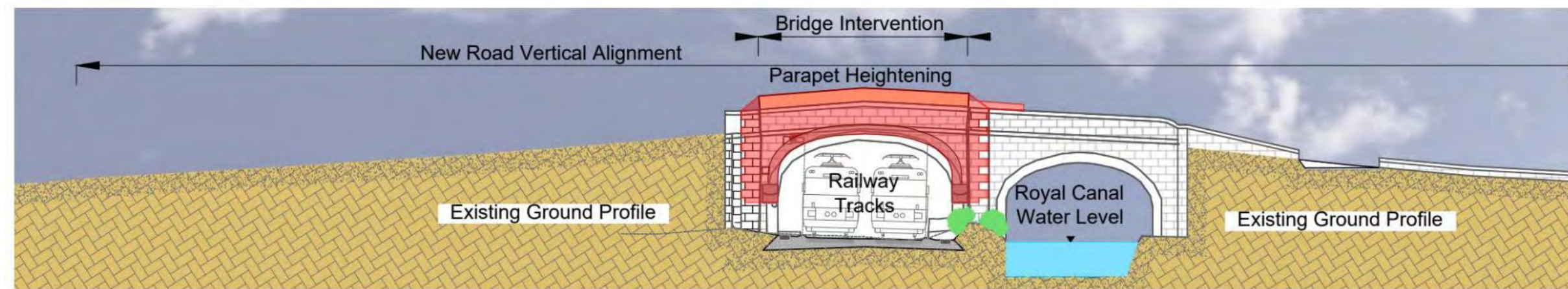
The option selection process has considered:

- Fingal Co. Co. proposals for the Ongar-Barnhill Distributor Road
- Barnhill Local Area Plan
- Kellystown Local Area Plan

Alternative Traffic Routing



Railway bridge adjacent to Leixlip Confey Station



Graphic of railway bridge adjacent to Leixlip Confey Station bridge deck reconstruction

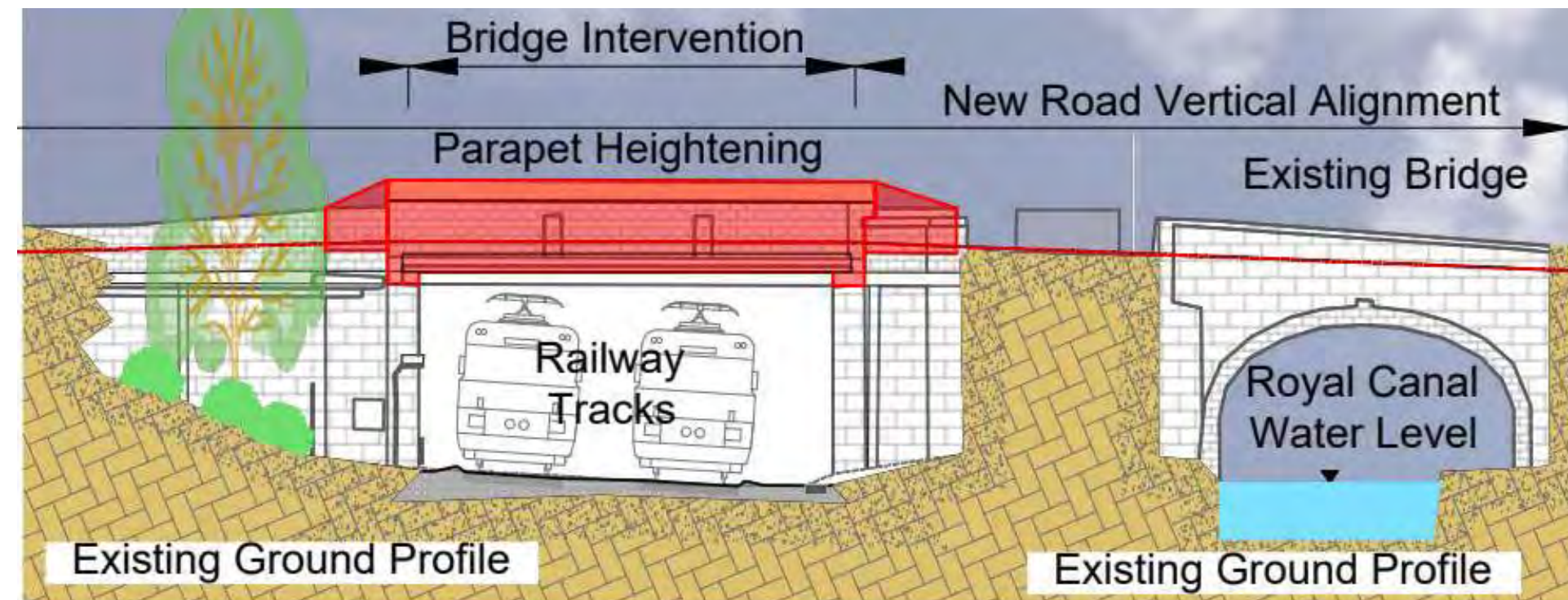
The existing bridge carrying the R149 over the railway requires an intervention to provide sufficient clearance for the OHLE. This bridge has a one way shuttle system in place under traffic signal control.

The preferred option is for a careful and sensitive reconstruction of the existing railway bridge to obtain the required clearance.

It is proposed to systematically deconstruct the existing bridge and reconstruct with a higher clearance using pre-cast arch units.

The design will be informed by consultations with Kildare County Council and the Architectural Advisory Unit of the Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media.

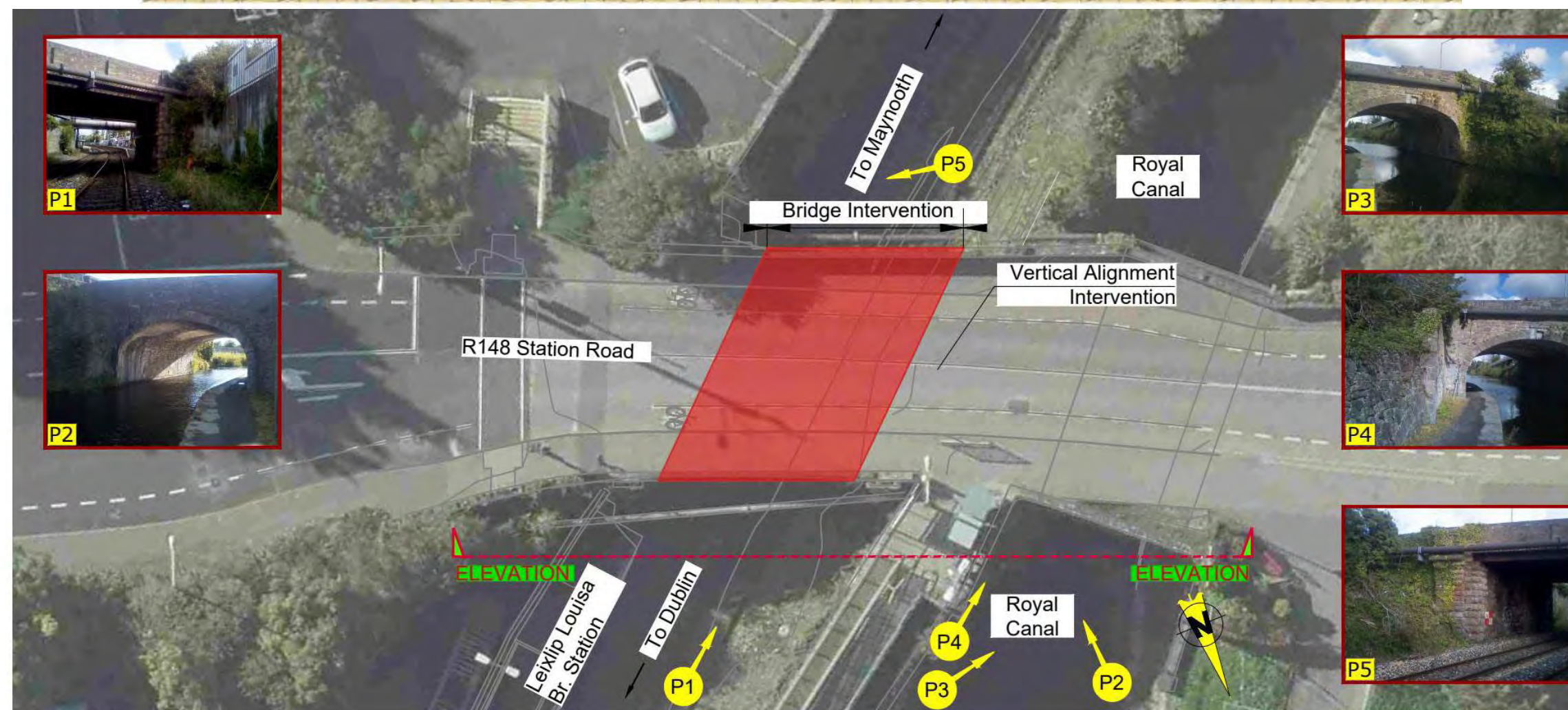
Louisa Bridge deck lift



The existing bridge adjacent to Leixlip (Louisa Bridge) Station carrying the R149 over the railway requires an intervention to provide sufficient clearance for the OHLE.

The preferred option is for a replacement of the existing bridge deck with one which is more slender to obtain the required clearances for electrification. The required deck lift for this bridge is around 140mm.

The design will be informed by consultations with Kildare County Council and the Architectural Advisory Unit of the Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media.



Graphic of proposed Louisa Bridge deck lift

Blakestown Level Crossing



Preferred option Blakestown level crossing replacement

The preferred option is not to provide replacement infrastructure following the closure of the level crossing.

Access and diversions will be via the local road network and R449 Link Road to the east of the crossing.



View of Blakestown level crossing

Double track from Maynooth to the connection to the depot

- The rail line is currently a single line west of Maynooth. This will be upgraded to a twin-track parallel to and south of the existing track between Maynooth and the proposed depot.
- West of Maynooth the twin track will divert onto a new railway embankment, running parallel to the existing railway due to pre-existing flooding issues on the site and the heritage value of Jackson's Bridge.
- The proposed works will include trackwork, electrification, signalling and telecommunications works, platform modifications in Maynooth Station, embankment construction, drainage works with attenuation and compensatory storage within the floodplain of the Lyreen River and tributary.
- Just east of Jackson's Bridge a 220 kV ESB line, will require raising so that sufficient clearance is achieved.



View of Jackson's Bridge



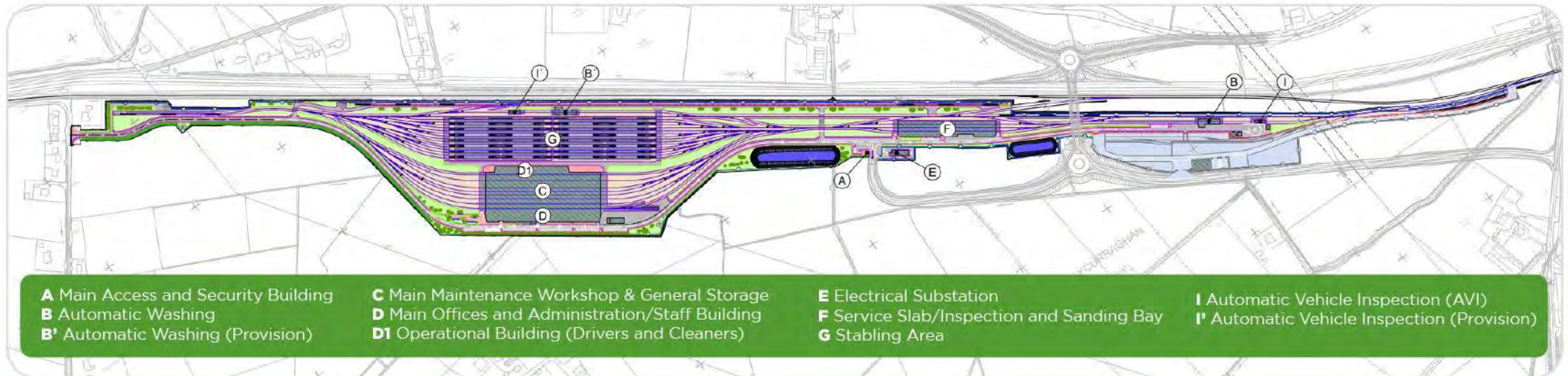
View of flooding at Jackson's Bridge – February 2021

Depot west of Maynooth

The proposed depot will be located to the west of Maynooth and south of the rail line and canal. This depot is essential to the functioning of the DART+ Programme for train maintenance and stabling.

The total length of the proposed depot along the mainline is just over 2.5km.

The proposed depot will comprise a Main Depot Building and maintenance shed, office and administrative building, train washing and cleaning facilities as well as other maintenance facilities, test track, stabling for trains, storage, an electrical substation, staff parking and facilities for staff.



Depot west of Maynooth

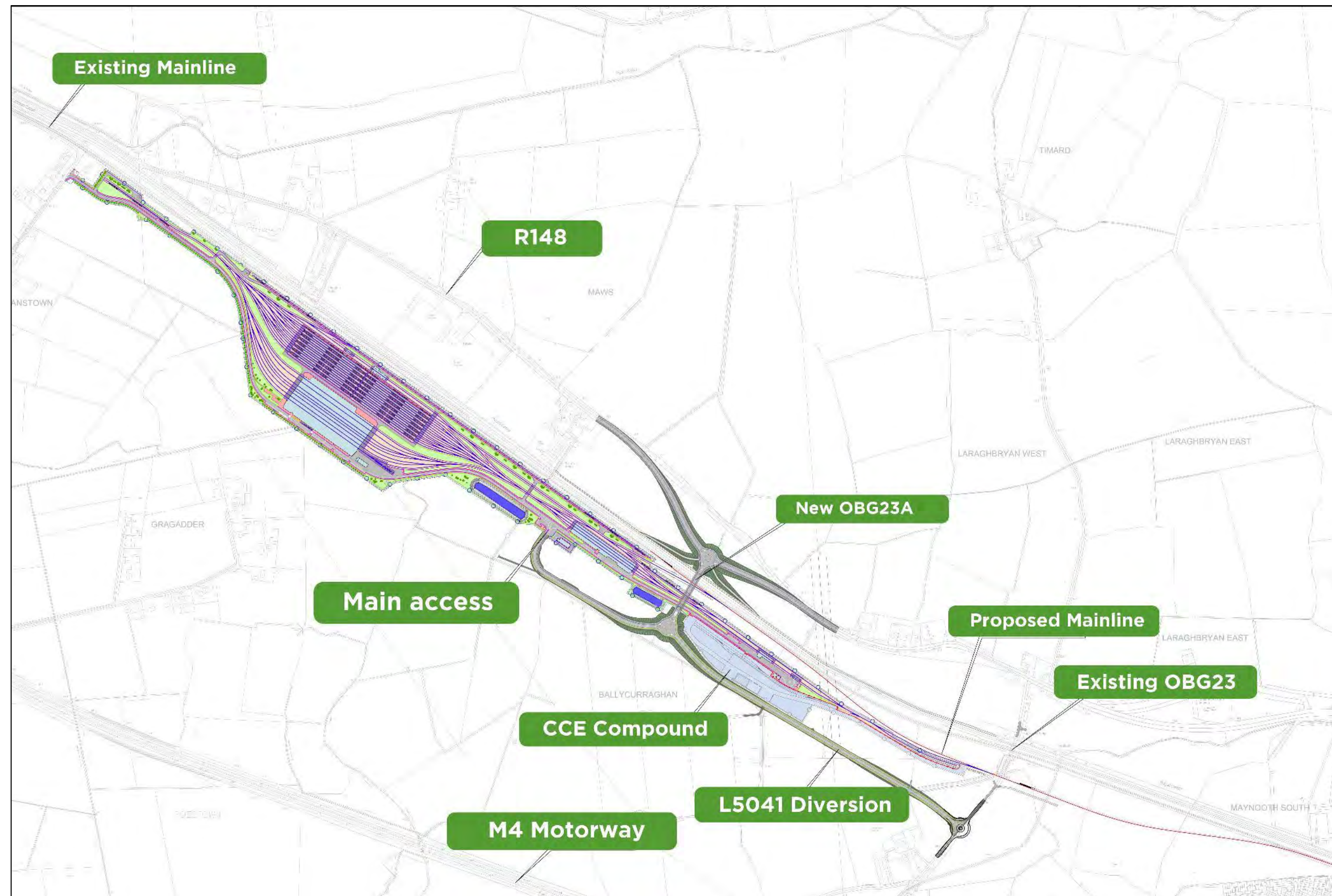


3D image of preferred depot option (stabling area and maintenance workshop)



3D image of preferred depot option (stabling area and maintenance workshop)

Depot access & L5041 realignment



Plan of depot access

The preferred option for providing access to the depot utilises the existing road network for the majority of the route. The access will be from the R148 (the old N4) which will require the construction of a new bridge and the demolition of the existing bridge.

Due to the new railway alignment to the south of Jackson's bridge the L5041 will be diverted west along the southern extent of the depot and will cross the proposed depot, railway and canal on a new overbridge. It will tie into the R148 via a new roundabout junction.

Access for pedestrians and cyclists will be maintained under the realigned railway to Jackson's Bridge.

Public Consultation Process

Public Consultation Process

Public participation is a key element to the delivery of DART+ West. There are three main opportunities to provide feedback to the scheme development & Railway Order approval process as outlined below:

- Public consultation no.1 - emerging preferred option (Closed October 2020)
- Public consultation no. 2 - preferred option (Open until 8th September 2021)



Public participation in the option selection, design and Railway Order process

Public Consultation Process

Public feedback will be accepted during all stages of the design development and can be submitted through the project website, email, phonline or by written correspondence.

Iarnród Éireann invites the public to engage in the design process and all feedback is welcome.



COVID-19



Due to the COVID-19 restrictions this consultation event will be predominantly a digital public consultation on the preferred option.



View of DART+ West public consultation virtual room

Next Steps

Next Steps

Option Selection & Design development



View of typical section of twin track electrified rail line

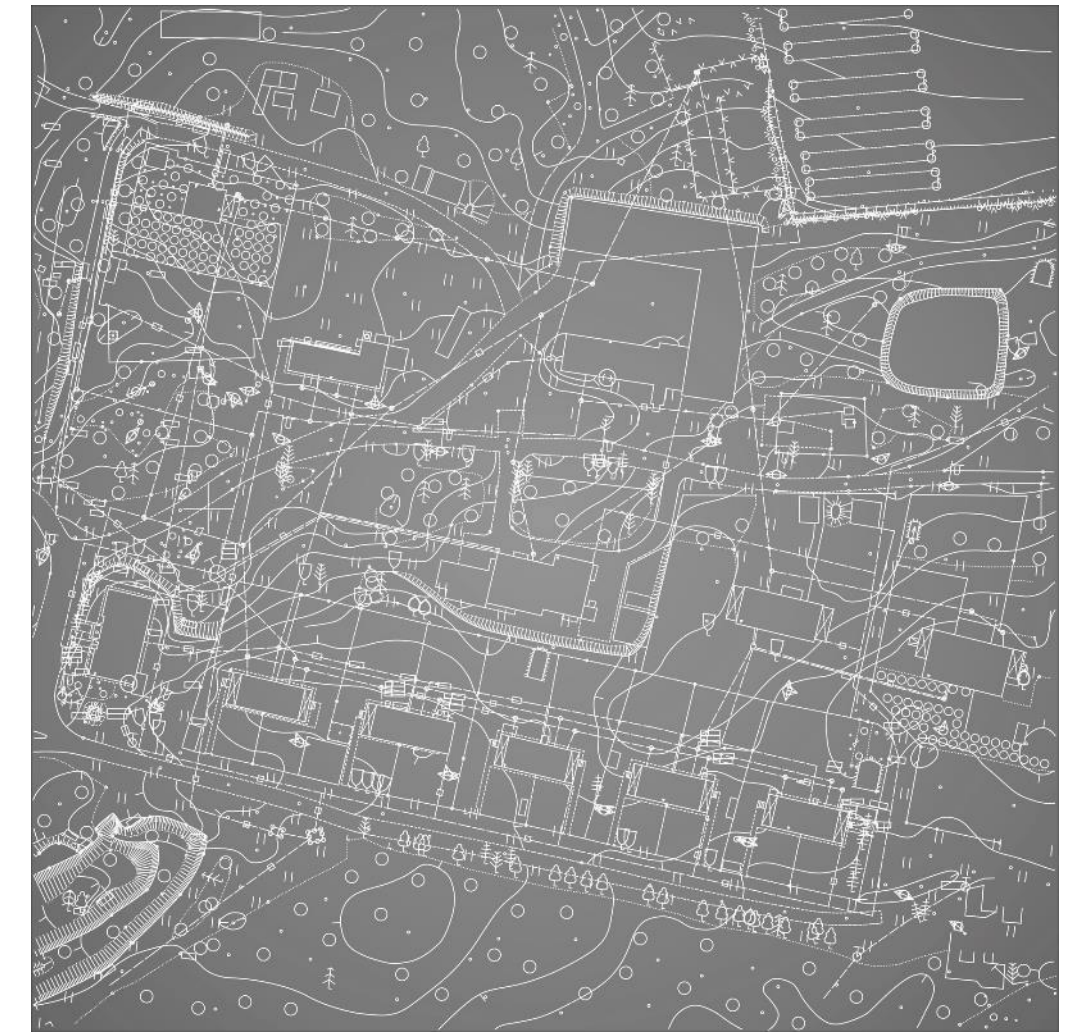
Once the public consultation process is complete all feedback and submissions will be assessed and a public consultation report will be prepared and published to document the process.

All information gathered by the project team will be used to inform the design development of the scheme which will be the subject of the Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) (where required), and ultimately the Railway Order submitted to An Bord Pleanála.

Next Steps – Property Acquisition

The DART+ West project will predominantly consist of works within the existing railway corridor. However, where interventions and modifications are required outside of the existing corridor (such as at the level crossings and depot) some land acquisition will be required.

We have commenced an extensive programme of consultations with the affected property owners. Our Community Liaison Representative will be available throughout the process to ensure landowners are regularly updated on the current proposals.



Next Steps – The Railway Order Process

We expect to make the Railway Order application to An Bord Pleanála in late 2021 / early 2022.

Following submission of the Railway Order to An Bord Pleanála, the public are invited to make submissions. We expect that An Bord Pleanála will conduct a full oral hearing at which the project team will provide responses to submissions and will be available for questioning.

Following the Oral Hearing, An Bord Pleanála will decide to either:

- Refuse;
- Approve; or
- Approve with modifications.



How to engage

This consultation is our way of asking for your views on our plans.

Your local knowledge will inform the emerging design, help us to improve the scheme and ensure it will be beneficial for you and the communities the route will serve.

You can provide feedback on our proposals before 5pm on **Wednesday 8th September 2021.**

Please contact us via the following means:

Website | www.DARTplus.ie

Email | DARTWest@irishrail.ie

Phoneline | **01-8235127**

Postal Address:

If you would prefer to print the response form from the website, please send it or any correspondence to:

Community Liaison Officer
DART+ West
Iarnród Éireann Works
Inchicore Parade
Dublin 8
D08 K6Y3





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