DART+ South West

PRELIMINARY OPTIONS SELECTION REPORT

EXECUTIVE SUMMARY

NTA
Údarás Náisiúnta Iompair
National Transport Authority

Rialtas na hÉireann
Government of Ireland

Tionscadal Éireann
Project Ireland
2040

Co-financed by the Connecting Europe Facility of the European Union

Iarnród Éireann
Irish Rail

Executive Summary

ES1.1 DART+ Programme Overview

The DART+ Programme is a transformative railway investment programme that will modernise and improve the existing rail services in the Greater Dublin Area. It will provide a sustainable, electrified, reliable and more frequent rail service, improving capacity on rail corridors serving Dublin.

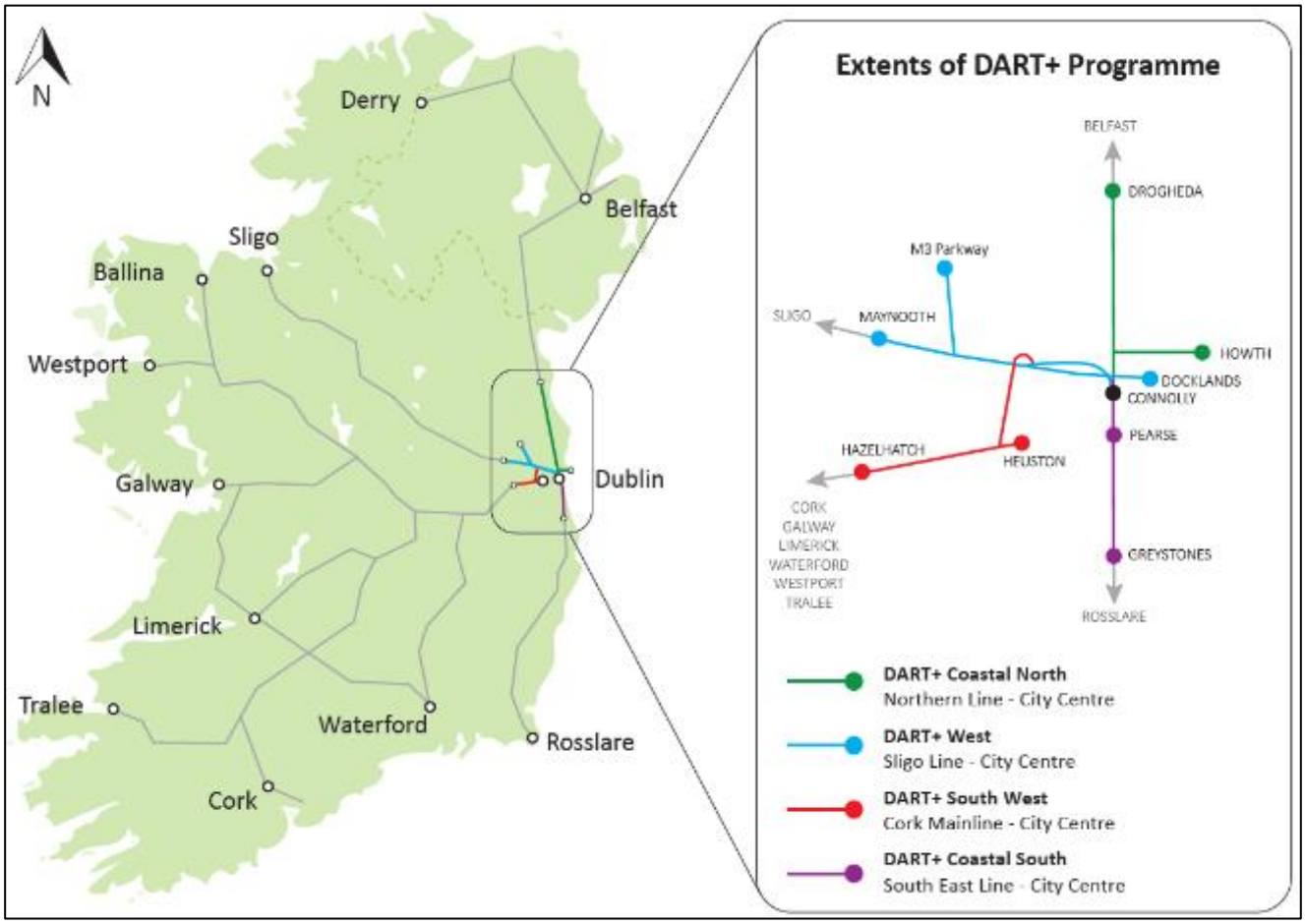


Figure ES-0-1 DART+ Programme

The current electrified DART network is 50km long, extending from Malahide / Howth to Bray / Greystones. The DART+ Programme will increase the length of the DART network to 150km of railway corridor through the electrification and upgrade of existing lines transforming commuter train travel in the Greater Dublin Area. This modernisation includes the electrification, re-signalling, and certain interventions to remove constraints across the four main rail corridors, as per below:

- DART+ South West (this Project) – circa 16km between Hazelhatch & Celbridge Station to Heuston Station and also circa 4km between Heuston Station to Glasnevin, via the Phoenix Park Tunnel Branch Line.

- DART+ West – circa 40km from Maynooth & M3 Parkway Stations to the City Centre.
- DART+ Coastal North – circa 50km from Drogheda to the City Centre.
- DART+ Coastal South – circa 30km from Greystones to the City Centre.
- DART+ Fleet – purchase of new electrified fleet to serve new and existing routes.

DART+ Programme is a key transportation improvement to form a high quality and integrated public transport system. It will have benefits for the residents of the Greater Dublin Area and also those living in the other regions. It will assist in providing a sustainable transport system and a societal benefit for current and future generations.

The Programme has also been prioritised as part of *Project Ireland 2040* and the *National Development Plan 2018-2027* as it is integral to the provision of an integrated, high-quality public transport system.

Delivery of the Programme will also promote transport migration away from the private car and to public transport. This transition will be achieved through a more frequent and accessible electrified service, which will result in reduced road congestion, especially during peak commuter periods.

Ultimately, the DART+ Programme will provide enhanced, greener public transport to communities along the DART+ Programme routes, delivering economic and societal benefits for current and future generations.

ES1.2 DART+ SOUTH WEST OVERVIEW

The DART+ South West Project will deliver an electrified network, with increased passenger capacity and enhanced train service between Hazelhatch & Celbridge Station to Heuston Station (circa 16km) on the Cork Mainline, and Heuston Station to Glasnevin via Phoenix Park Tunnel Branch Line (circa 4km).

DART+ South West will complete four tracking between Park West & Cherry Orchard Station and Heuston Station, in addition to re-signalling and electrification of the entire route. The completion of the four tracking will remove a significant existing constraint on the line (i.e., where the rail corridor reduces to two tracks), which is currently limiting the number of train services that can operate on this route. DART+ South West will also deliver track improvements along the Phoenix Park Tunnel Branch Line, which will allow a greater number of trains to access the city centre.

Upon completion of DART+ South West electrification, new DART trains will be used on this railway corridor, similar to those currently operating on the Malahide / Howth to Bray / Greystones Line.

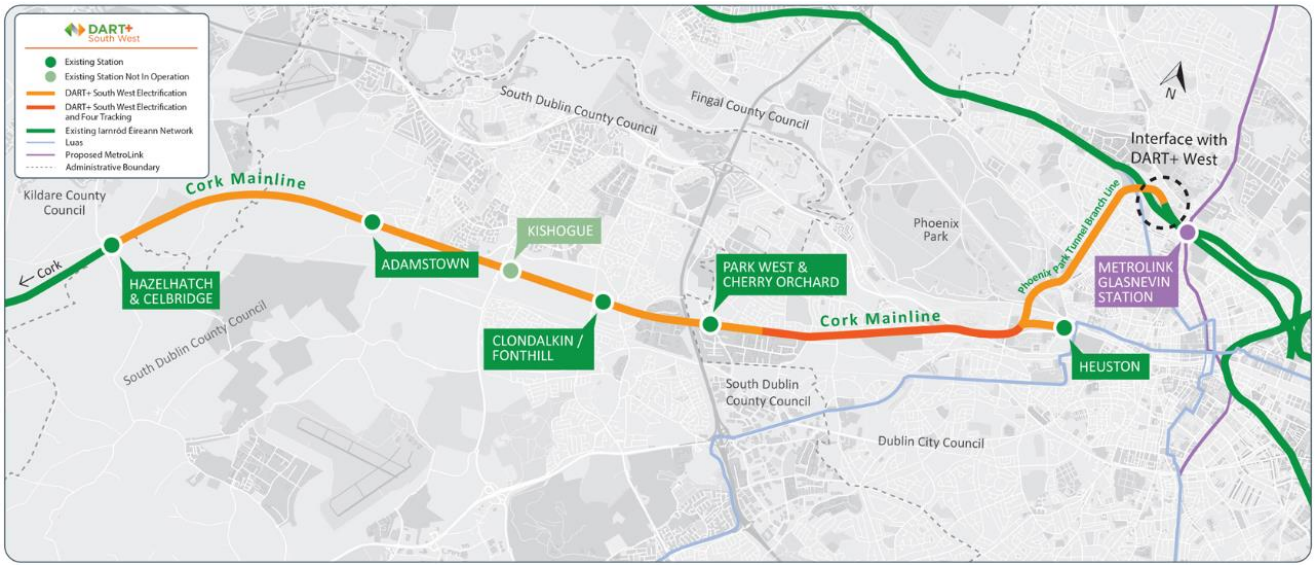


Figure ES-0-2 DART+ South West Route Map

ES1.2.1 Capacity Increases Associated with DART+ South West

DART+ South West will improve performance and increase train and passenger capacity on the route between Hazelhatch & Celbridge Station to Heuston Station and through the Phoenix Park Tunnel Branch Line to the City Centre, covering a distance of circa 20km. It will significantly increase train capacity from the current 12 trains per hour per direction to 23 trains per hour per direction (i.e. maintain the existing 12 services, with an additional 11 train services provided by DART+ South West). This will increase passenger capacity from the current peak capacity of approximately 5,000 passengers per hour per direction to approximately 20,000 passengers per hour per direction.

ES1.2.2 Key Infrastructure Elements of DART+ South West Project

The key elements of DART+ South West include:

- Completion of four-tracking from Park West & Cherry Orchard Station to Heuston Station, extending the works completed on the route in 2009.
- Electrification of the line from Hazelhatch & Celbridge Station to Heuston Station and also from Heuston Station to Glasnevin, via the Phoenix Park Tunnel Branch Line, where it will link with proposed DART+ West.
- Undertaking improvements / reconstructions of bridges to achieve vertical and horizontal clearances.
- Remove rail constraints along the Phoenix Park Tunnel Branch Line.
- Feasibility report and concept design for a potential new Heuston West Station.

The ‘Emerging Preferred Option’ will be compatible with future stations at Kylemore and Cabra, although the construction of these stations is not part of the DART+ South West Project.

ES1.3 The Emerging Preferred Option

The starting principle for the Project is to upgrade the existing railway corridor and undertake all works, within the railway corridor. This can be achieved over the majority of the route, including building on the groundwork carried out under the original Kildare Route Project, which delivered the existing four track system and several reconstructed bridges from Hazelhatch & Celbridge Station to Park West & Cherry Orchard Station. The last remaining significant constraint is the area between Park West and Heuston Station, where the rail corridor reduces to two tracks. Expanding to four tracks will require widening of the rail corridor and this will have a potential impact on adjoining property owners.

The process to determine the Emerging Preferred Option for the DART+ South West Project followed a two-step optioneering process – Stage 1: Preliminary Assessment (Sifting) (long list of options), followed by Stage 2: Multi-Criteria Analysis (feasible options), where appropriate. This led to the identification of Emerging Preferred Options in respect of interventions required. These, and general linear works required along the full length of the Project, are the key elements of the Emerging Preferred Option.

For the purpose of describing the Emerging Preferred Option, general linear works are described first followed by sections (from west to east) with similar Project requirements and resulting levels of works or interventions, as follows:

- General Linear Works.
- Hazelhatch & Celbridge Station to Park West & Cherry Orchard Station.
- Park West & Cherry Orchard Station to Heuston Station.
- East of St John’s Road Bridge to Glasnevin Junction.

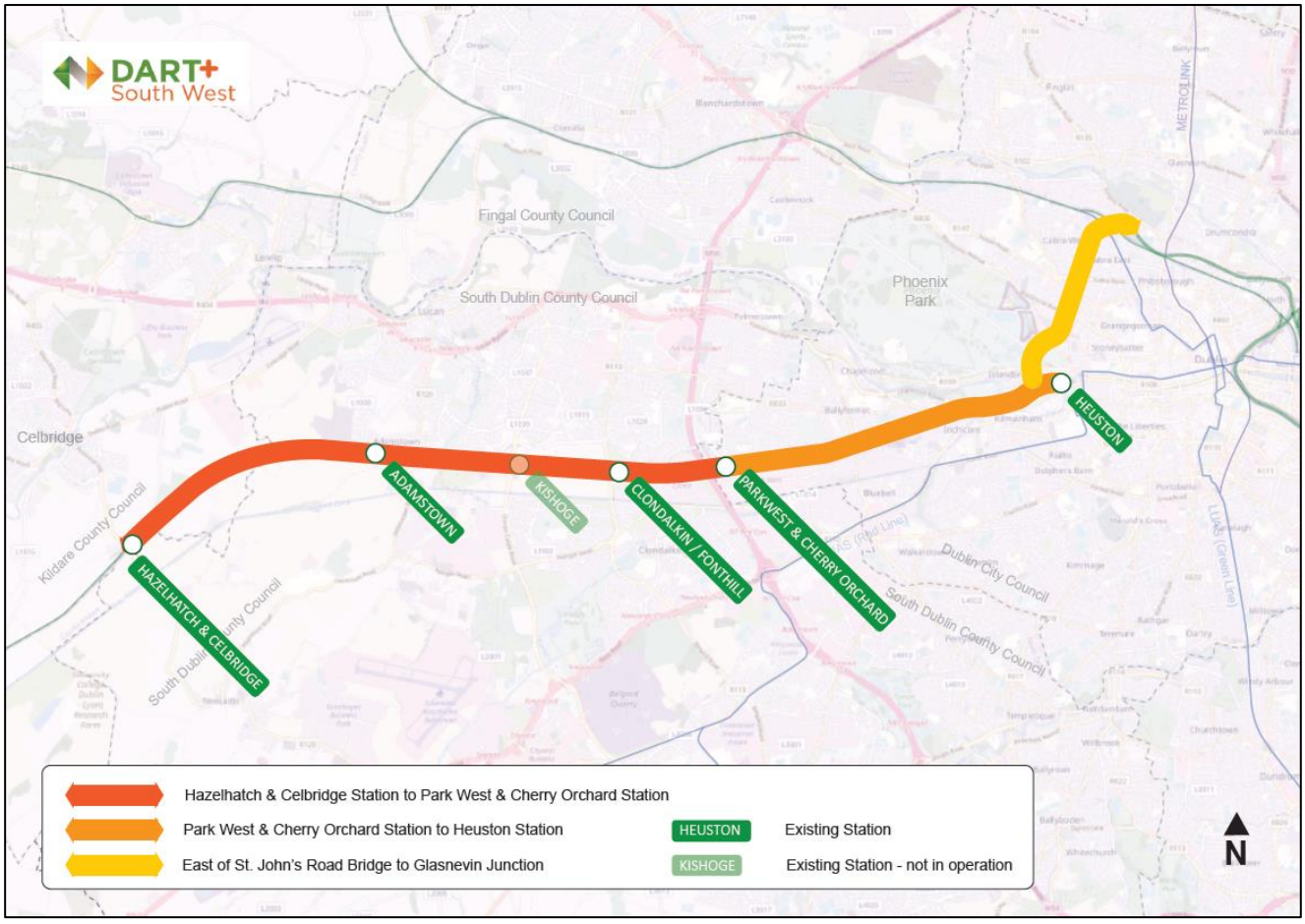


Figure ES-0-3 Sections of the Project Route Corridor with Similar Project Requirements and Resulting Levels of Works or Interventions

ES1.3.1 General Linear Works

The Project will require modernisation and modifications to the existing railway line. There is a range of general linear works required along the full length of the Project to enable the electrification of the line and the upgrade of the existing network. These are:

- Overhead electrification equipment (OHLE) will be required along the full extent of the railway line from Hazelhatch & Celbridge Station to Heuston Station and through the Phoenix Park Tunnel Branch Line up to Glasnevin Junction, where it will link with the proposed DART+ West Project. This will be similar to the overhead electrification equipment currently used on the existing DART network.
- Six electrical substations will be required at intervals along the rail line to provide power to the network.
- Signalling upgrades and additional signalling will be required to the upgraded infrastructure.

- Where existing bridges do not provide the necessary clearance for overhead electrification of the lines or lateral clearance for four tracking, options are being considered on a case-by-case basis, these include:
    - Provision of specialist electrical solutions for the OHLE with reduced clearance;
    - Lowering the rail track under the bridge;
    - Modification of the existing structure;
    - Removal of the existing structure and provision of a replacement structure; or
    - A combination of the above.
- Overhead electrified line protection works will be required at all existing rail overbridges.
- Interfaces with existing utilities, boundary treatments (including new retaining walls), drainage works, vegetation management and other ancillary works will be required along the length of the Project.

ES1.3.2 Hazelhatch & Celbridge Station to Park West & Cherry Orchard Station

The works carried out under the original Kildare Route Project between 2006 and 2009 provided the main groundwork for DART+ South West including the existing four track system and several reconstructed bridges.

The Emerging Preferred Option for this circa 11km section comprises the general linear works as outlined in ES1.3.1. The electrification works can be run under the existing bridges with no / minimal intervention in the bridge structures and minor localised track lowering works and use of specialist OHLE solutions to achieve the required clearance. All these works can be accommodated within the existing rail corridor.

ES1.3.3 Park West & Cherry Orchard Station to Heuston Station

The section between Park West & Cherry Orchard Station and Heuston Station requires electrification and widening to four tracks. To meet these Project requirements, the track corridor must be widened, and the physical surroundings must be altered. Extending to four tracks in this area will require an increase in the width of the existing rail corridor outside of lands owned by Iarnród Éireann, potentially interfering with property rights (on a permanent and / or temporary basis).

Following an option selection process that included developing and evaluating a number of options at each location, the Emerging Preferred Option for each location was established. These are described below.

ES1.3.4 Area around Le Fanu Road Bridge

The rail corridor on the Cork Mainline between Cherry Orchard Footbridge (OBC8B) and Le Fanu Road Bridge (OBC7), initially comprises three existing tracks and at Le Fanu Road Bridge (OBC7) narrows to two existing tracks. Increasing to four tracks requires the realignment of the existing tracks and an increase in the overall railway corridor width. Le Fanu Road Bridge (OBC7) is a narrow arch structure and is inadequate in both span length and height for the four tracks and electrification infrastructure.

The Emerging Preferred Option replaces the bridge with a longer span or spans to facilitate the additional width required for the additional tracks. To overcome the lack of height available for the electrification infrastructure, the road level will be raised in combination with lowering the rail track. Retaining walls are required to the north and south of the corridor adjacent to the new bridge to allow the widening of the corridor while minimising the impact on the adjacent properties. The raising of the road level will also mean that retaining walls will be required along the road to the north of the railway.

The proposed replacement bridge will be a modern structure that will provide segregation for pedestrians, cyclists and improved sightlines and will be a significant improvement on the existing situation for all road users.

The proposed new bridge is presented below in sectional elevation looking east.

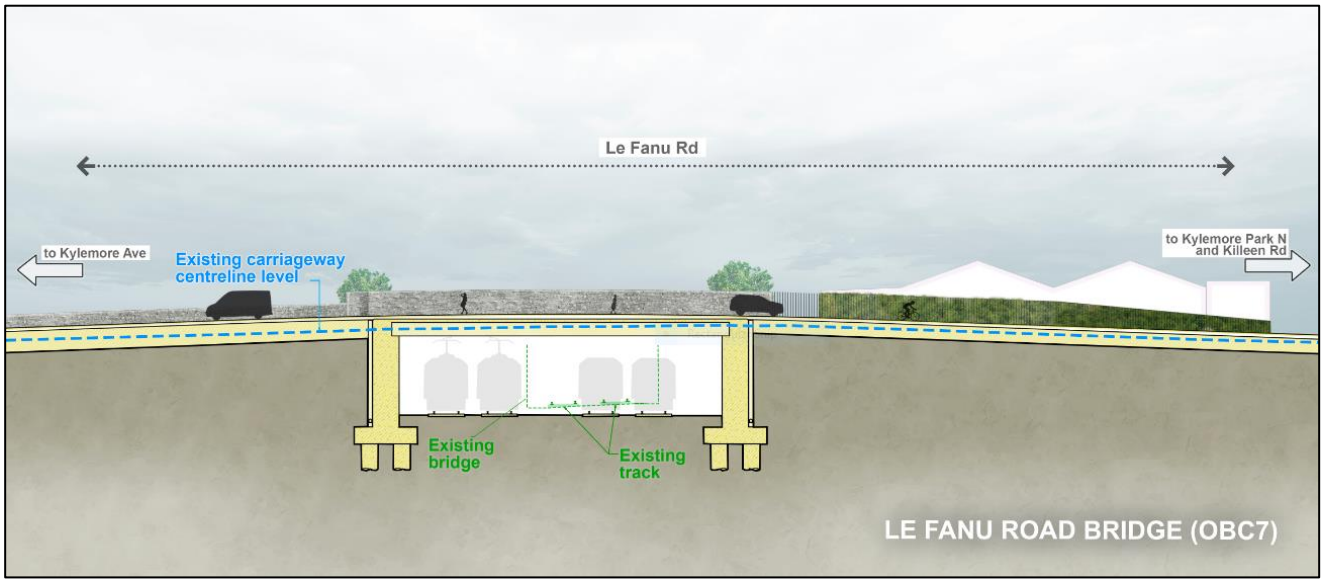


Figure ES-0-4 Emerging Preferred Option for Le Fanu Road Bridge (OBC7)

ES1.3.5 Area around Kylemore Road Bridge

This section of the railway comprises two existing tracks and one bridge structure (Kylemore Road Bridge (OBC5A)). The bridge does not have adequate span length to fit four tracks and is not high enough for the DART line electrification infrastructure to pass under. There are a number of constraints in this area including:

- The railway corridor is bounded on both sides by soil slopes.
- To the north and south of the bridge are road junctions and access points that that significantly restrict alterations that may be required to the road geometry.
- Kylemore Road is a potential route for a future LUAS line. Therefore, the design must consider this potential new infrastructure.
- The west of Kylemore Road Bridge has been identified for a potential future railway station to the west of the bridge. The designs for this area must not prejudice its delivery in the future.

The Emerging Preferred Option for Kylemore Road Bridge replaces the bridge with a longer span to facilitate the additional track width. To overcome the lack of height available for the electrification infrastructure, the road level will be raised in combination with lowering the rail track.

Retaining walls are required to the north and south of the corridor to allow the widening of the corridor while minimising the impact on the adjacent properties. The raising of the road level will also mean that retaining walls will be required along the road to the north and south of the railway.

The proposed new bridge is presented below in sectional elevation looking east.

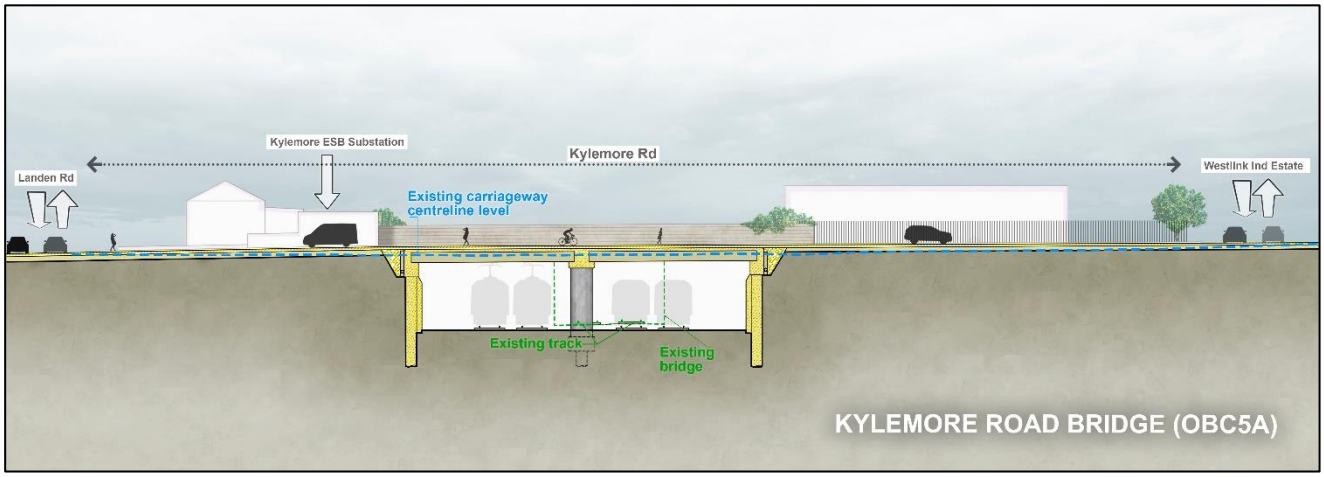


Figure ES-0-5 Emerging Preferred Option for the Kylemore Road Bridge (OBC5A)

ES1.3.6 Area around Inchicore Works

The railway in this area (between Kylemore Road Bridge (OBC5A) and Sarsfield Road Bridge (UBC4)) comprises two mainline tracks which are joined by two additional short tracks (or sidings) connected to the Inchicore Depot. The existing tracks through the area would not provide the required four tracking while maintaining the functionality of the depot. Therefore, the laying of additional tracks is required, which in turn requires the realignment of the existing tracks and an increase in the railway corridor width in this area.

The Emerging Preferred Option focuses this enhancement of the corridor to the south requiring the demolition / modification of some Iarnród Éireann facilities within the Inchicore Depot. There is potential interference to third party property rights but further design development and technical and construction related solutions will seek to minimise this.

Khyber Pass Footbridge

Khyber Pass Footbridge (OBC5) is an existing pedestrian overbridge linking Inchicore Works to Sarsfield Road to the north. The existing structure has three tracks beneath it and is not wide enough to safely accommodate an increase to four tracks.

The Emerging Preferred Option provides a new pedestrian bridge with sufficient height and width to meet the requirements for four-tracking and electrification. The extent of works may potentially interfere

with property rights in the immediate area but further design development and technical and construction related solutions will seek to minimise this.

The proposed new pedestrian bridge is presented below in sectional elevation looking east towards Heuston Station.

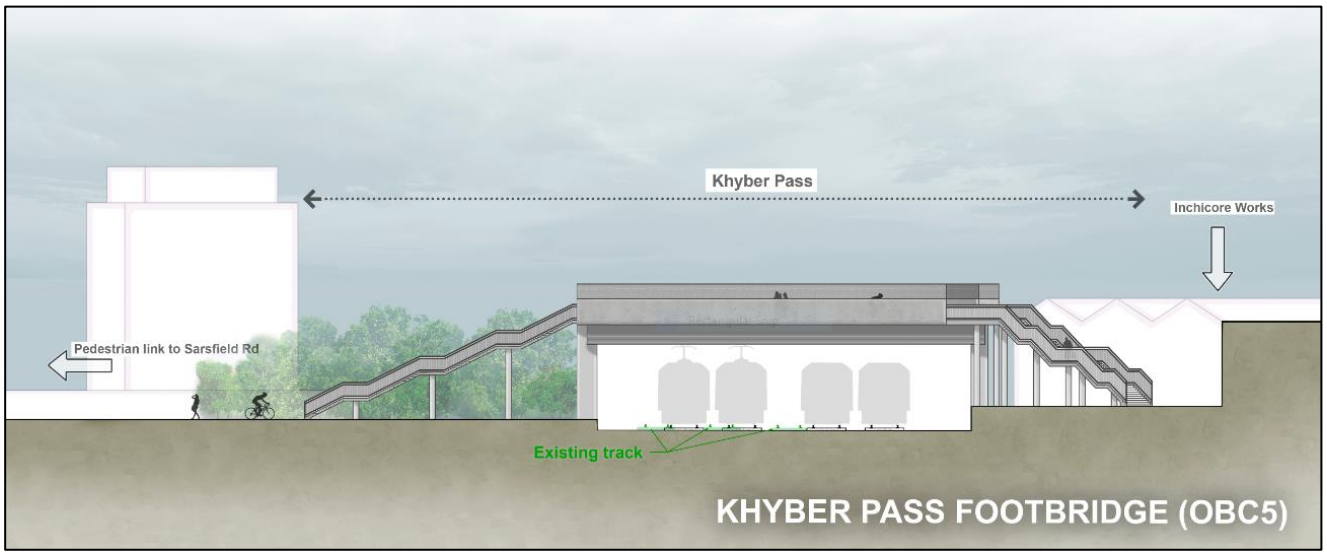


Figure ES-0-6 Emerging Preferred Option for Khyber Pass Footbridge (OBC5)

ES1.3.7 Sarsfield Road Bridge Area

Sarsfield Road underbridge (UBC4) carries the railway over Sarsfield Road. Both the bridge and the railway corridor in this area comprise three mainline tracks and are not wide enough to carry the fourth track that is required.

The Emerging Preferred Option replaces the existing bridge deck with two parallel bridge decks, one for the Intercity service and one for the DART service. The existing walls along Sarsfield Road would be mostly left untouched by the construction works. The proposed bridge is presented below in sectional elevation looking east towards Heuston Station.

There is potential interference to third party property rights but further design development and technical and construction related solutions will seek to minimise this.

Heading east of the bridge the corridor will predominantly be widened to the north to add a fourth track (into the embankment between the railway and Con Colbert Road).

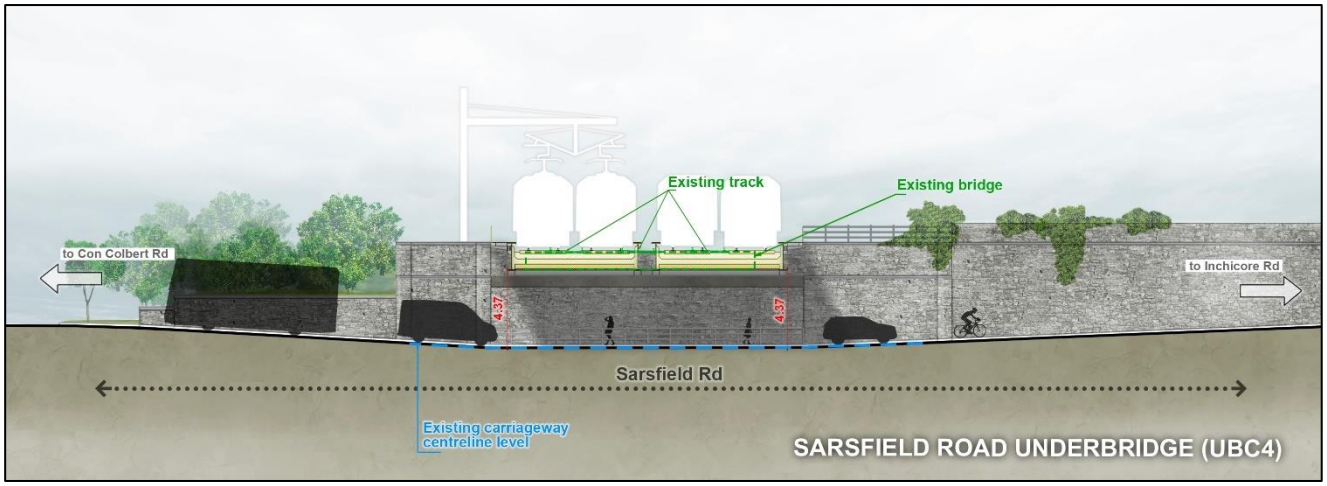


Figure ES-0-7 Emerging Preferred Option for Sarsfield Road Underbridge (UBC4)

ES1.3.8 Area around Memorial Road Bridge

The existing Memorial Road Bridge (OBC3) is too short in span length to accommodate the additional fourth track, so a longer span bridge is required. The existing bridge also does not have the height required to accommodate the electrification infrastructure beneath the bridge. The bridge is very close to the Con Colbert dual carriageway so any increases in the height of the road would have an impact on the dual carriageway.

The Emerging Preferred Option replaces the bridge with a longer span bridge. In addition, the rail tracks will be lowered to facilitate the electrification infrastructure beneath the new bridge. The masonry retaining walls on the southern side would need to be strengthened due to the lowering of the track and new retaining walls would be required along the northern side.

The permanent way boundary wall along Con Colbert Road will need to be reconstructed to a higher containment standard and height, as it will be removed to provide retaining wall construction access.

The proposed bridge is presented below in sectional elevation looking east towards Heuston Station.

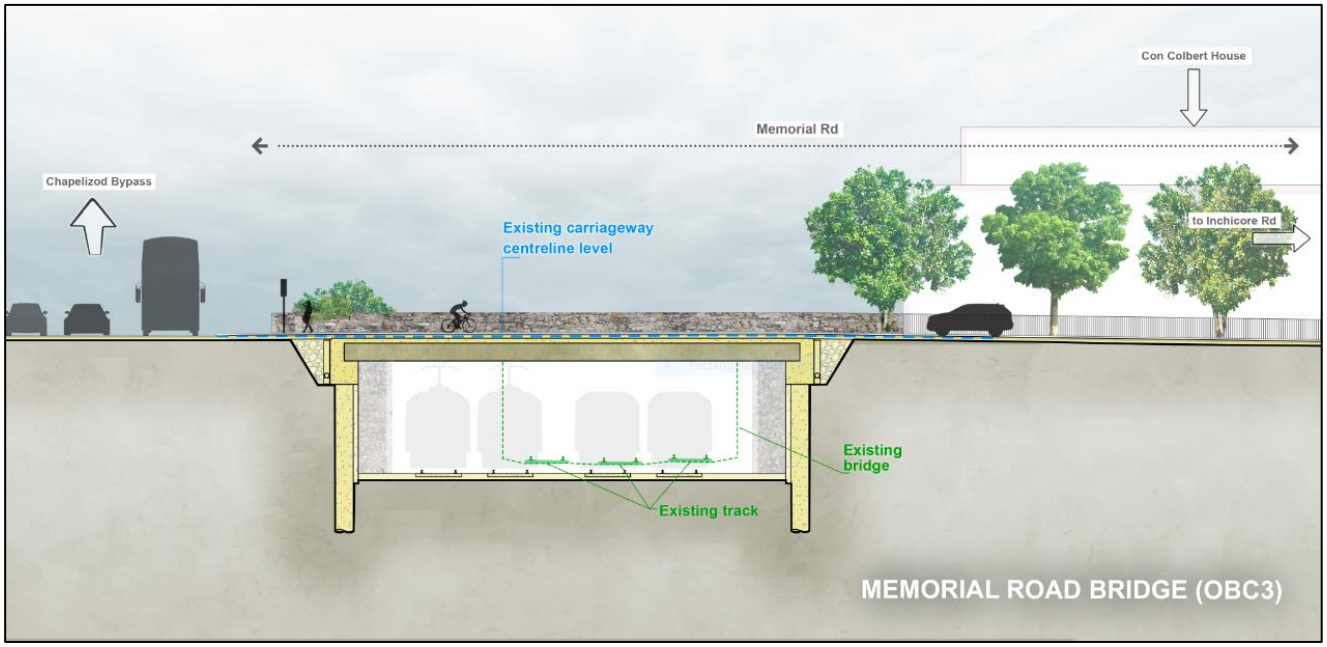


Figure ES-0-8 Emerging Preferred Option for Memorial Road Bridge (OBC3)

ES1.3.9 South Circular Road Junction Area

This area extends from Memorial Road Bridge (OBC3) to the South Circular Road Junction. There are two major bridge structures in this area which are part of the junction namely South Circular Road (OBC1) and St. John's Road Bridge (OBC0A). St. John's Road Bridge (OBC0A) has an adequate span length to enable a layout with the minimum four tracks requirement and is high enough for the electrification infrastructure required for DART. South Circular Road Bridge (OBC1) does not have adequate span length to fit four tracks and is not high enough for the electrification infrastructure to pass under.

The Emerging Preferred Option leaves South Circular Road Bridge (OBC1) in place and includes the construction of a new structure to the north of the existing bridge. The new structure would be for the new DART tracks and the existing Intercity service would continue under the existing South Circular Road Bridge (OBC1). The new structure requires retaining walls to be constructed on both sides beyond the junction area to the west.

The South Circular Road Junction is extremely busy and frequently has traffic queues, so any works in this area are likely to impact traffic. In order to minimise impact on traffic during the works, the construction will be carried out in phases, utilising all available road space to safely divert all road users around the affected area.

The new structure will accommodate DART trains. This means that the existing South Circular Road Bridge (OBC1) would not need to be electrified and the track levels can be left as they are currently.

The proposed intervention is presented below in sectional elevation looking east towards Heuston Station.

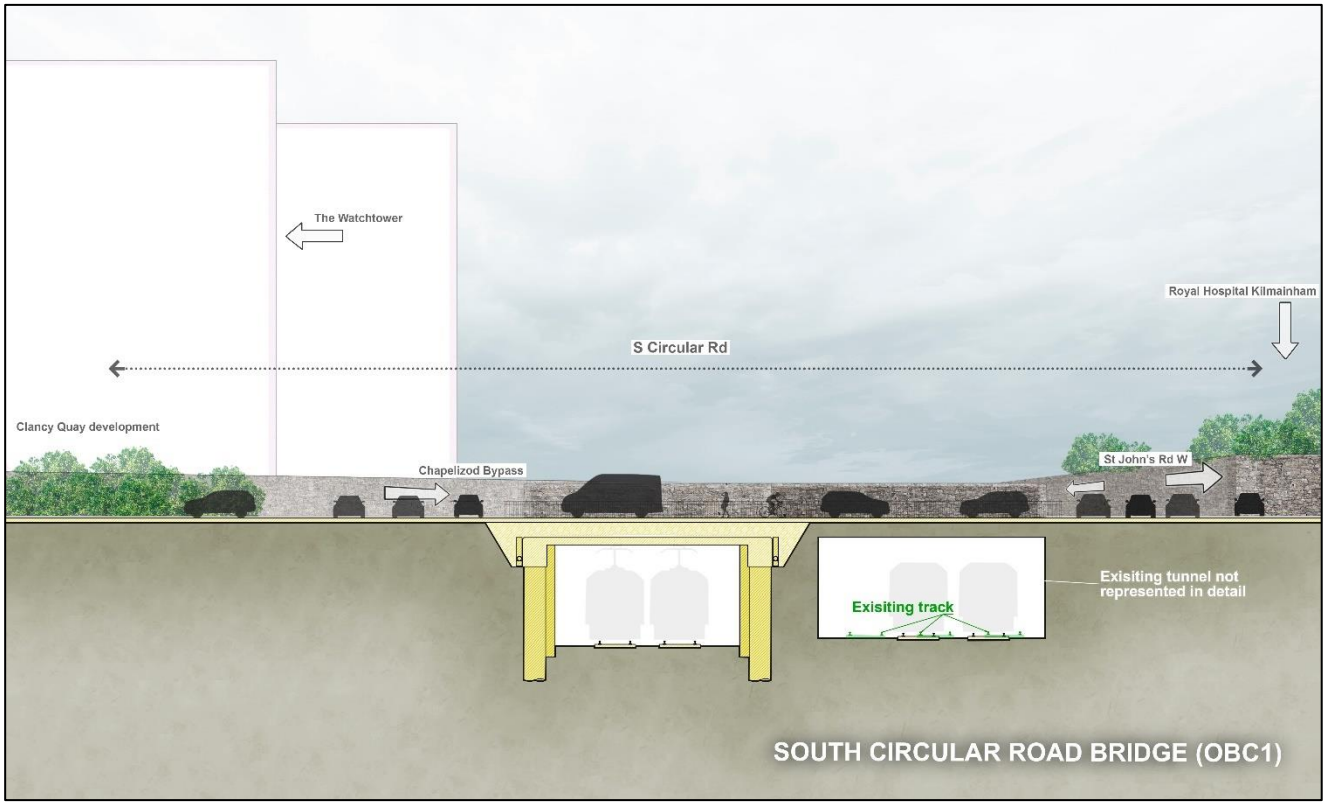


Figure ES-0-9 Emerging Preferred Option for South Circular Road Bridge (OBC1)

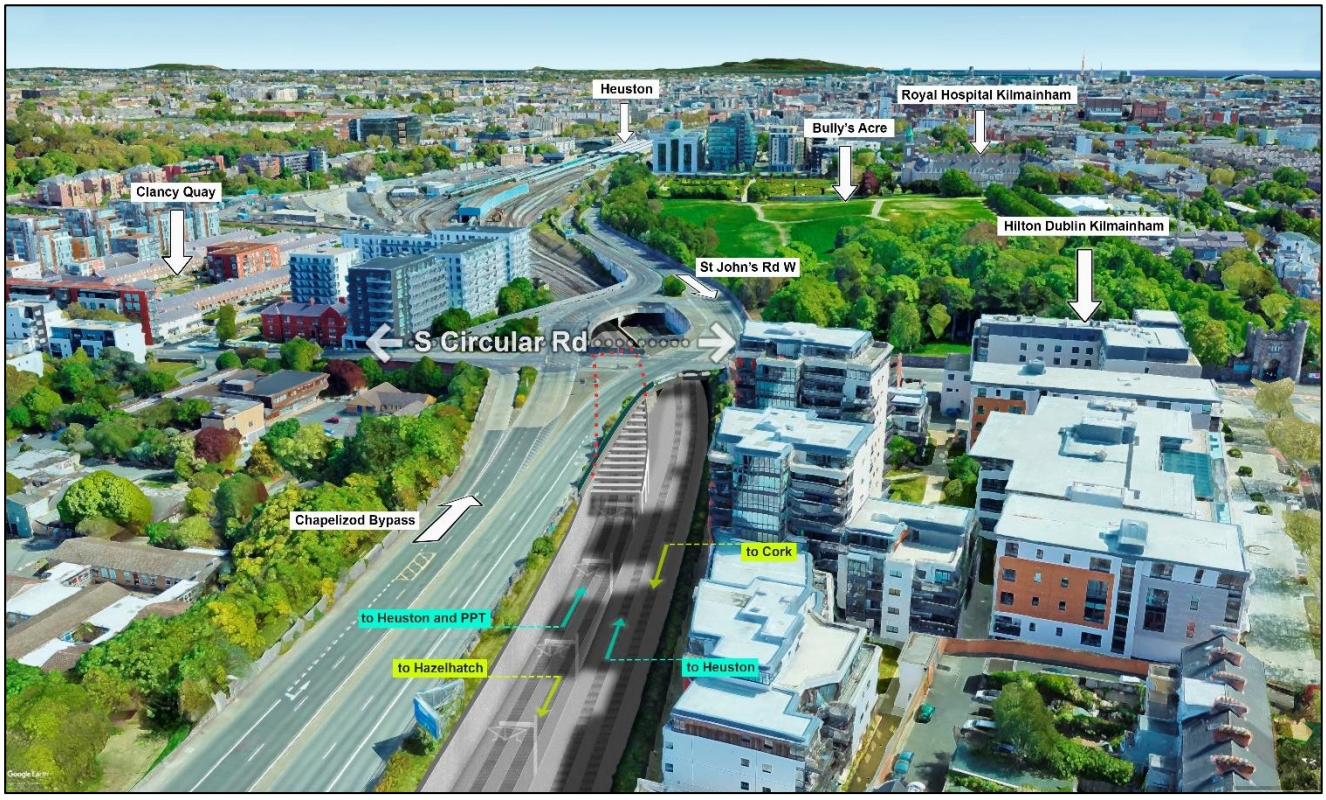


Figure ES-0-10 Aerial View of Emerging Preferred Option for South Circular Road Junction

ES1.3.10 Heuston Station and Yard

Heuston Station currently does not have any provisions for electrification. Platforms and sidings within the Heuston area are to be electrified to receive the DART+ Fleet. These works will require re-arrangement to provide access to the DART platforms and to update access to inter-city tracks.

In terms of Permanent Way works, the constraints on track work in Heuston Station are predominantly those posed by the need to maintain the operational capability of the existing freight routes, station platforms and servicing infrastructure (such as the train wash, service and stabling sidings), as well as the existing drainage and signalling. The sheer number of tracks, their configuration and connectivity through existing Points & Crossings (P&C's) mean that any modifications must be carefully considered to tie in with the platforms and service facilities.

In the station area, platforms and sidings will be electrified as required for the DART services. The scope of which will be fully concluded at Public Consultation No. 2.

All works can be undertaken within land owned by Iarnród Éireann.

ES1.3.11 East of South John's Road Bridge to Glasnevin Junction

This area extends from the east of St John's Road Bridge (OBC0A) and northwards over the River Liffey via the Liffey Bridge (UBO1) and under Conyngham Road Overbridge (OBO2) where it enters the Phoenix Park Tunnel.

Close to the junction of the Cabra Road and Navan Road the line exits the Phoenix Park Tunnel and continues north under several road bridges as follows: McKee Barracks Bridge (OBO3), Blackhorse Avenue Road Bridge (OBO4), Old Cabra Road Bridge (OBO5), Cabra Road Bridge (OBO6), Fassaugh Road Bridge (OBO7), Royal Canal and LUAS Twin Arch (OBO8), the Maynooth Line Twin Arch (OBO9) and Glasnevin Cemetery Road Bridge (OBO10). The line then continues east and interfaces with the proposed DART+ West Project at Glasnevin Junction.

A requirement of the DART+ South West Project is to investigate the feasibility of a new station at Heuston West, at the site of the existing Platform 10, located to the north west of the greater Heuston Station complex adjacent to the Liffey Bridge (UBO1). A preliminary assessment for the station has been undertaken by the Project Team and concept design options are being considered.

The Emerging Preferred Option for Liffey Bridge (UB01) features electrification and retention of the existing fixed track system.

The existing twin tracks along the Phoenix Park Tunnel Branch Line will be electrified. DART+ South West is currently undertaking surveys and analysis along this section, including within the tunnel, to understand the current characteristics and constraints. The Emerging Preferred Option will follow the existing rail corridor and may involve track lowering and/or bridge modifications at certain locations to achieve the height requirements for electrification.

The specific interventions at each bridge along this rail section will be based on the analysis of survey data and presented at Public Consultation No. 2.

Figure ES-0-11 Northern and Southern Portals to the Phoenix Park Tunnel and view of inside tunnel

ES1.3.12 Further Design Development & Option Selection

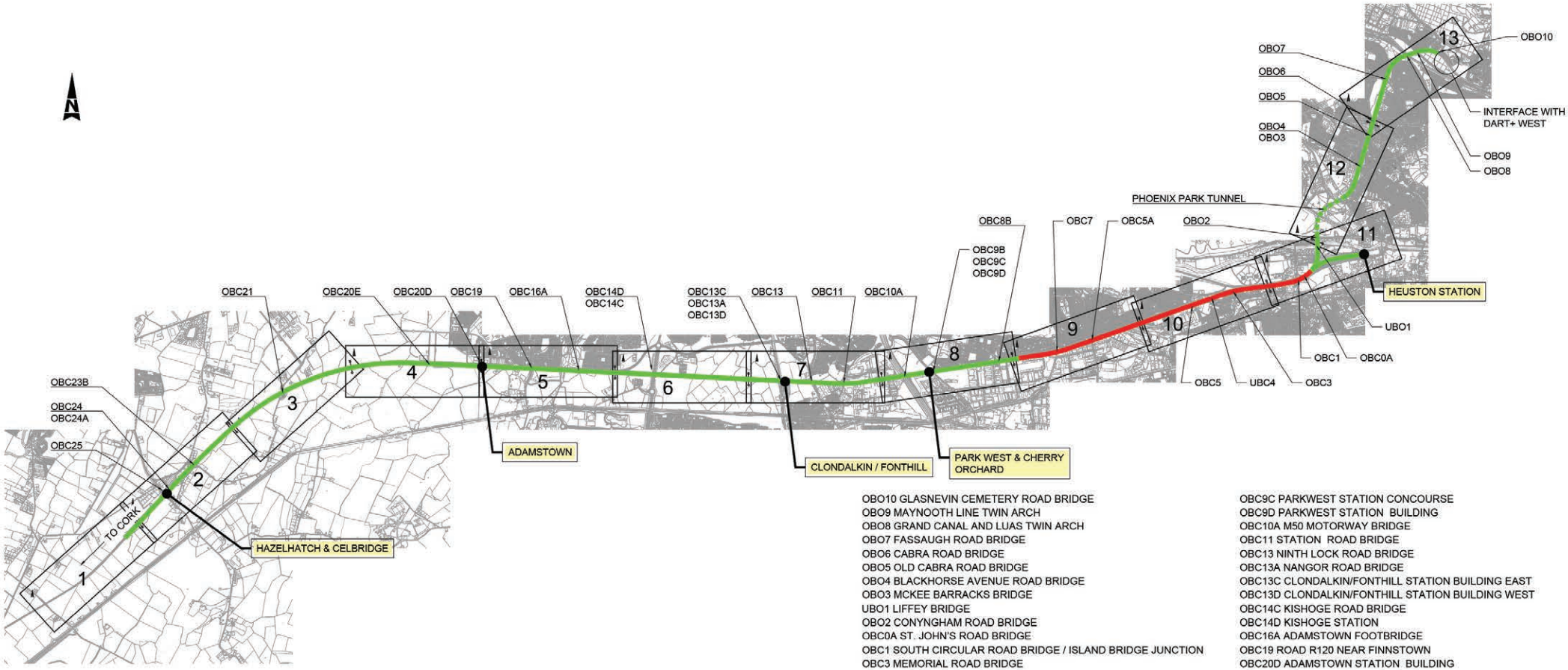
The preliminary options selection and design development that has been undertaken has led to the determination of the Emerging Preferred Option which is now the focus of this public consultation (Public Consultation No. 1).

Once the public consultation process on the Emerging Preferred Option is complete, all feedback and submissions received will be reviewed and considered as part of the next stage of the design development towards identifying the Preferred Route. Following a full appraisal of the feedback and consideration, a public consultation report will be prepared to document this process. This will be incorporated into the Options Selection Report that will be presented at Public Consultation No. 2.

All information gathered by the Project Team during these public consultation events will be used to inform the design development of the project which will be the subject of the Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) (if required), and ultimately the Railway Order application will be submitted to An Bord Pleanála for planning approval.

DART+ SOUTH WEST

EMERGING PREFERRED OPTION - KEY PLAN



OBO10 GLASNEVIN CEMETERY ROAD BRIDGE
OBO9 MAYNOOTH LINE TWIN ARCH
OBO8 GRAND CANAL AND LUAS TWIN ARCH
OBO7 FASSAUGH ROAD BRIDGE
OBO6 CABRA ROAD BRIDGE
OBO5 OLD CABRA ROAD BRIDGE
OBO4 BLACKHORSE AVENUE ROAD BRIDGE
OBO3 MCKEE BARRACKS BRIDGE
UBO1 LIFFEY BRIDGE
OBO2 CONYNGHAM ROAD BRIDGE
OBC0A ST. JOHN'S ROAD BRIDGE
OBC1 SOUTH CIRCULAR ROAD BRIDGE / ISLAND BRIDGE JUNCTION
OBC3 MEMORIAL ROAD BRIDGE
UBC4 SARSFIELD ROAD BRIDGE
OBC5 KHYBER PASS BRIDGE
OBC5A KYLEMORE ROAD BRIDGE
OBC7 LE FANU ROAD BRIDGE
OBC8B FOOTBRIDGE CHERRY ORCHARD
OBC9B PARK WEST AVENUE ROAD BRIDGE
OBC9C PARKWEST STATION CONCOURSE
OBC9D PARKWEST STATION BUILDING
OBC10A M50 MOTORWAY BRIDGE
OBC11 STATION ROAD BRIDGE
OBC13 NINTH LOCK ROAD BRIDGE
OBC13A NANGOR ROAD BRIDGE
OBC13C CLONDALKIN/FONTHILL STATION BUILDING EAST
OBC13D CLONDALKIN/FONTHILL STATION BUILDING WEST
OBC14C KISHOGE ROAD BRIDGE
OBC14D KISHOGE STATION
OBC16A ADAMSTOWN FOOTBRIDGE
OBC19 ROAD R120 NEAR FINNSTOWN
OBC20D ADAMSTOWN STATION BUILDING
OBC20E CROWLEY'S ROADBRIDGE
OBC21 STACUMMY ROAD BRIDGE
OBC23B NEW FOOTBRIDGE STRALEEK
OBC24 HAZELHATCH FOOTBRIDGE
OBC24A NEW HAZELHATCH FOOTBRIDGE
OBC25 HAZELHATCH R405 ROAD BRIDGE

LEGEND:

- EXTENT OF DART+ SOUTH WEST
- FOUR TRACKING
- EXISTING STATIONS
- OBXX EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
- UBXX EXISITING BRIDGE / ROAD / RIVER UNDER RAILWAY CORRIDOR

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail
Engineering Designer: TYPSA / ATKINS / TNC RAIL; Supported by: rps
Date: 22.04.21 | Scale: N.T.S | Drawn: AK | Checked: DM | Approved: DM
Project Code | Issuer: ATK | QMS Code

Project Title: DART+ SOUTH WEST
Drawing Title: EMERGING PREFERRED OPTION KEY PLAN MAP
Drawing File Name: DP-04-23-DWG-RO-TTA-07200 | Version: V01 | Status: S3

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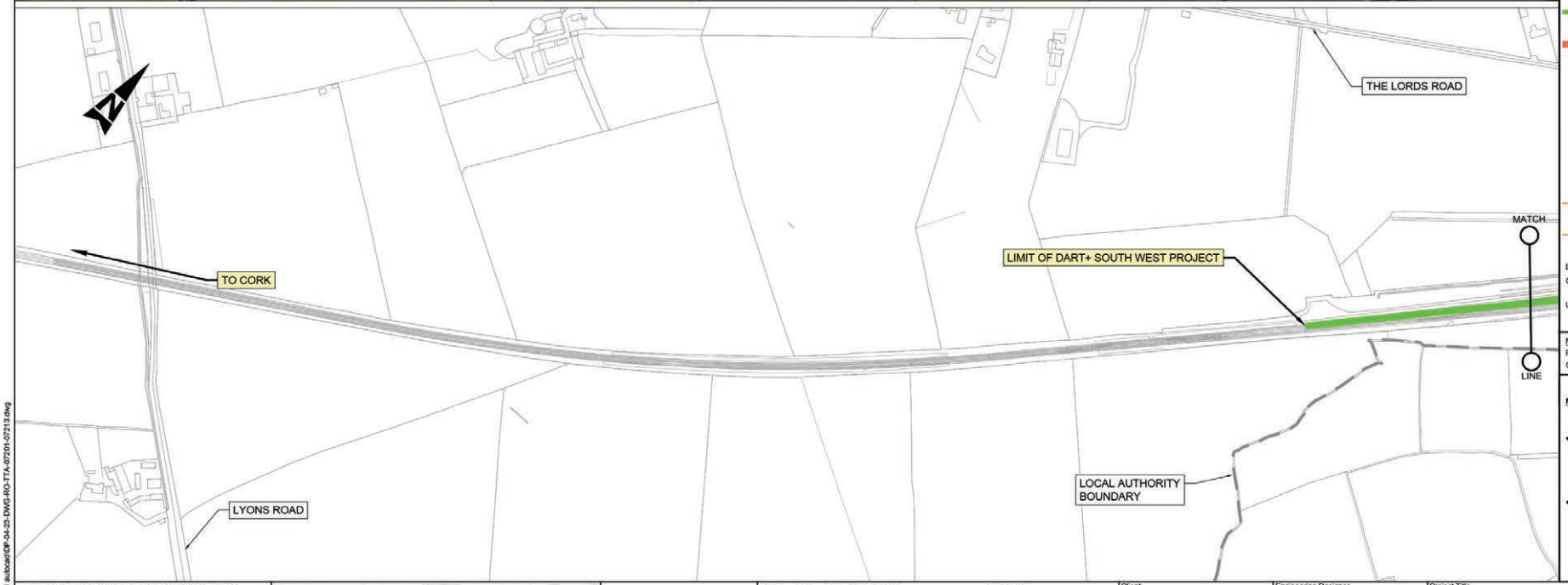

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

- NOT ALL DESIGN DETAIL OR CONSTRUCTION RELATED DETAILS ARE KNOWN AT THIS TIME, E.G, SUBSTATION LOCATIONS, CONSTRUCTION COMPOUNDS, TEMPORARY BRIDGE REQUIREMENTS, TEMPORARY UTILITY DIVERSIONS AND OTHER ELEMENTS.
- POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS IS BASED ON THE LEVEL OF INFORMATION AND DESIGN AVAILABLE AT THIS TIME. FURTHER WORK INCLUDING DETAILED DESIGN AND TECHNICAL AND CONSTRUCTION RELATED SOLUTIONS WILL SEEK TO MINIMISE POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS.

DART+ South West

NTA

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: ATKINS (Member of the SNC-Lavalin Group) — TYPSA — TUC RAIL — Supported by: CPS

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code	Issuer	QMS Code
	ATK	

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 1 OF 13 HAZELHATCH

Drawing File Name	Version	Status
DP-04-23-DWG-RO-TTA-07201	v01	S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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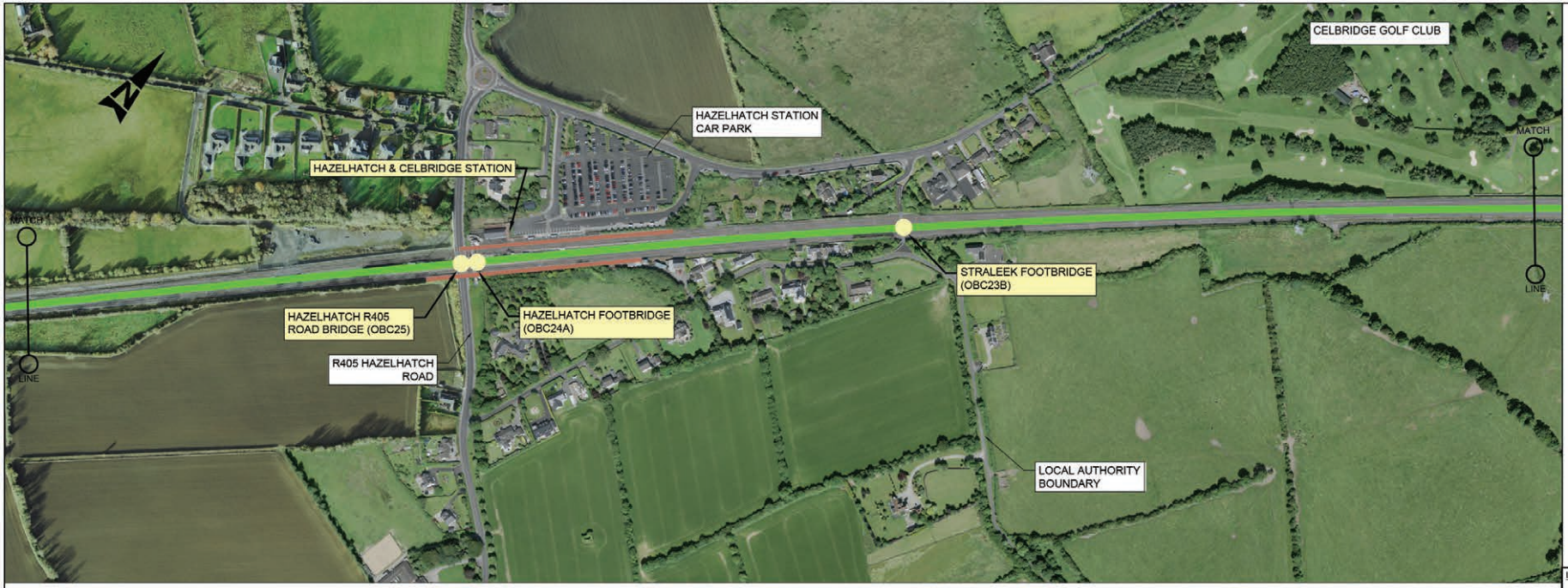

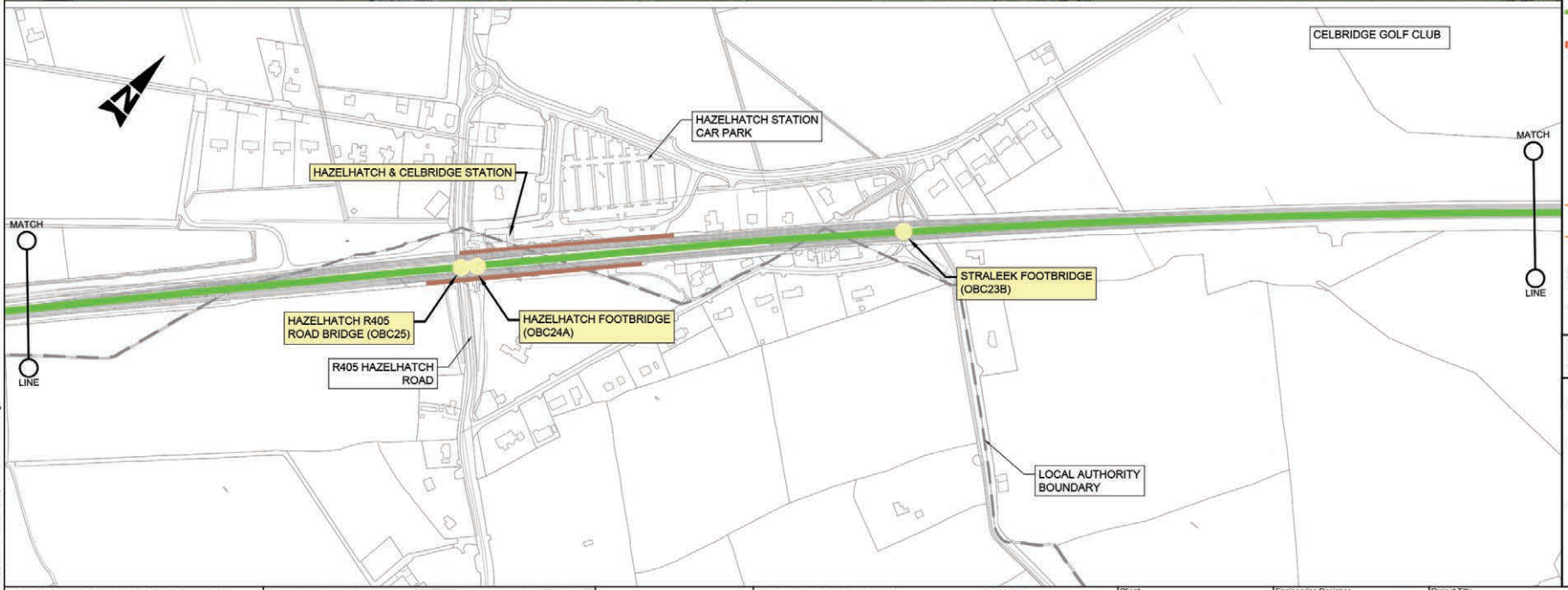

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

- NOT ALL DESIGN DETAIL OR CONSTRUCTION RELATED DETAILS ARE KNOWN AT THIS TIME, E.G, SUBSTATION LOCATIONS, CONSTRUCTION COMPOUNDS, TEMPORARY BRIDGE REQUIREMENTS, TEMPORARY UTILITY DIVERSIONS AND OTHER ELEMENTS.
- POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS IS BASED ON THE LEVEL OF INFORMATION AND DESIGN AVAILABLE AT THIS TIME. FURTHER WORK INCLUDING DETAILED DESIGN AND TECHNICAL AND CONSTRUCTION RELATED SOLUTIONS WILL SEEK TO MINIMISE POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS.

DART+ South West

NTA

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA, ATKINS, TSC RAIL. Supported by: rps

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code	Issuer	QMS Code
—	ATK	—

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 2 OF 13
HAZELHATCH & CELBRIDGE STATION AND SURROUNDS

Drawing File Name	Version	Status
DP-04-23-DWG-RO-TTA-07202	v01	S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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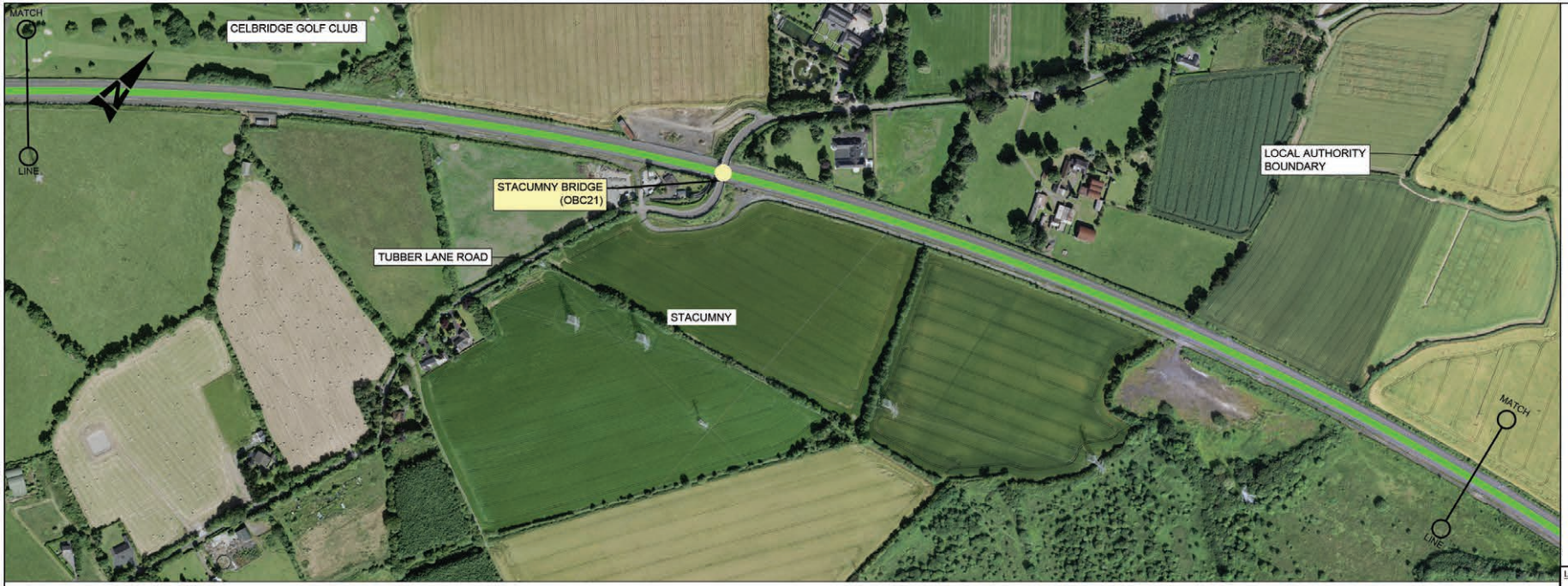

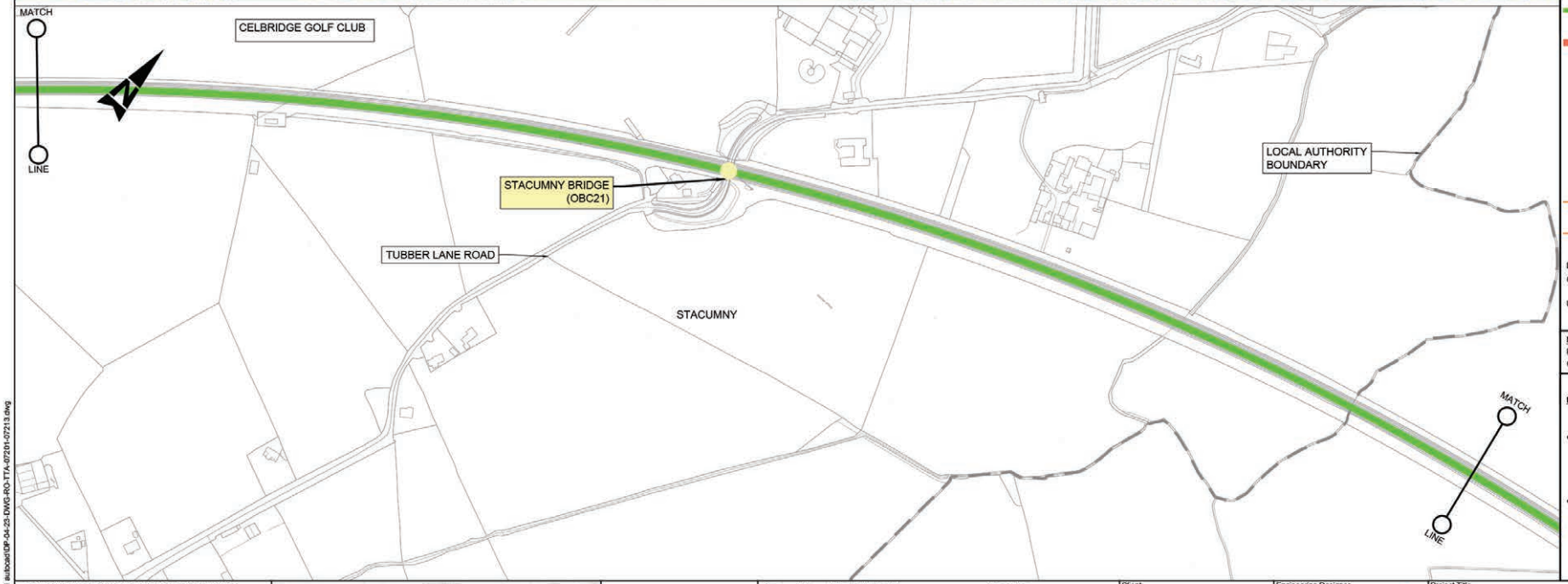

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

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DART+ South West

NTA

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA / ATKINS (Member of the SNC-Lavalin Group) / TUC RAIL — Supported by: CPS

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code	Issuer	QMS Code
—	ATK	—

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 3 OF 13
STACUMMY LANE AND TUBBER LANE ROAD AND SURROUNDS

Drawing File Name	Version	Status
DP-04-23-DWG-RO-TTA-07203	v01	S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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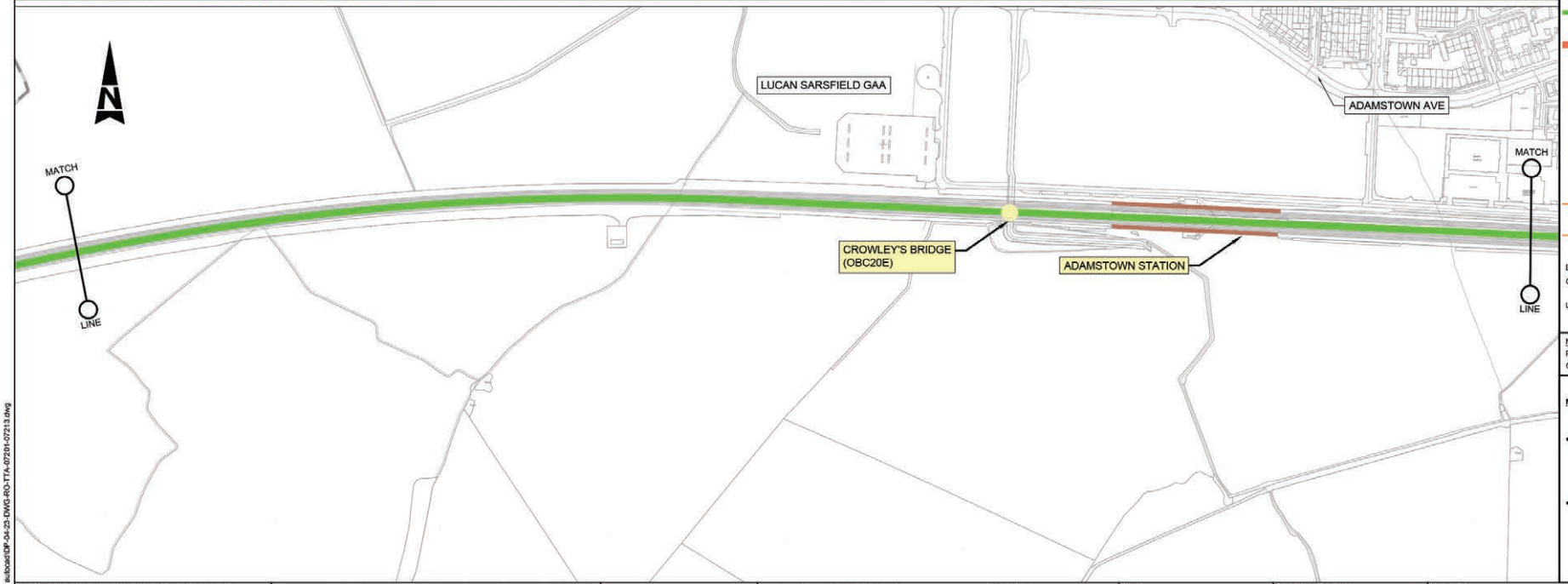

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

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DART+ South West

NTA

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA, ATKINS, TUC RAIL. Supported by: CPS

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code: —
Issuer: ATK
QMS Code: —

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 4 OF 13 ADAMSTOWN

Drawing File Name: DP-04-23-DWG-RO-TTA-07204 | Version: v01 | Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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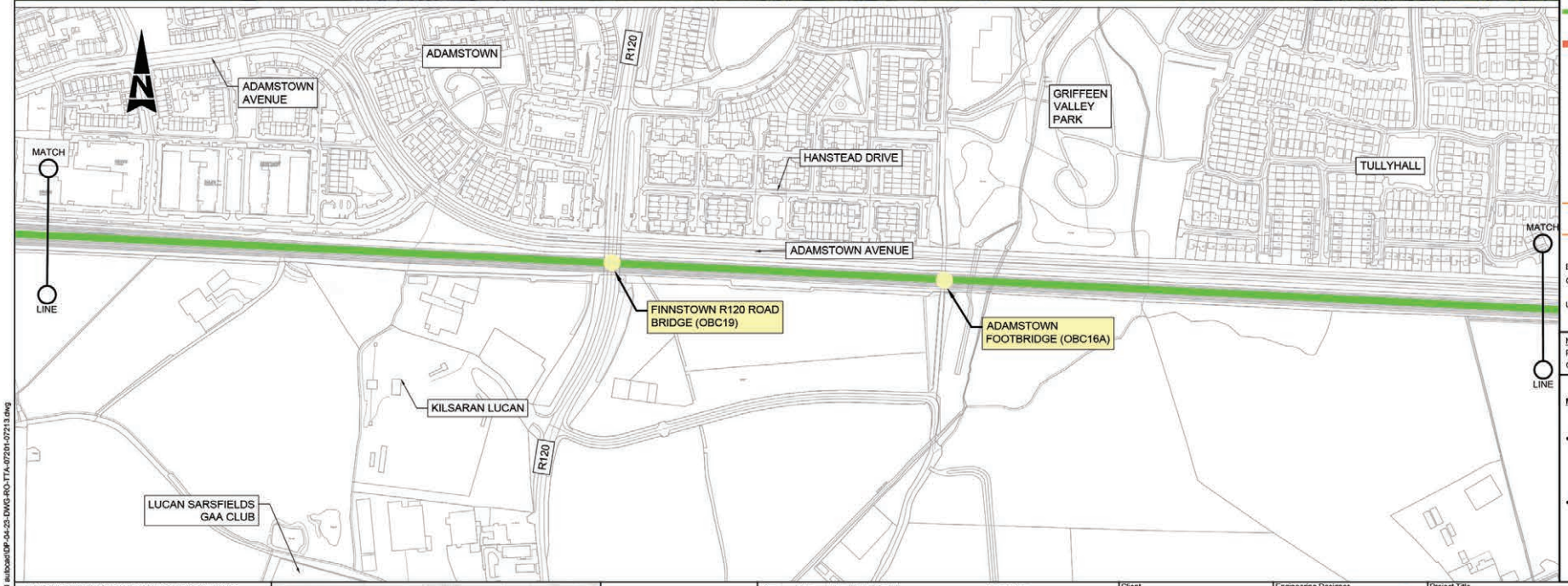

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

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All elevations are in metres and relate to OSi Geoid Model (OSGM02) Malin Head as defined by existing Project Control.
All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).

DART+ South West

NTA

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA / ATKINS (Member of the SNC-Lavalin Group) / TUC RAIL; Supported by rps

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code	Issuer	QMS Code
—	ATK	—

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 5 OF 13
ADAMSTOWN TO TULLYHALL

Drawing File Name: DP-04-23-DWG-RO-TTA-07205 | Version: V01 | Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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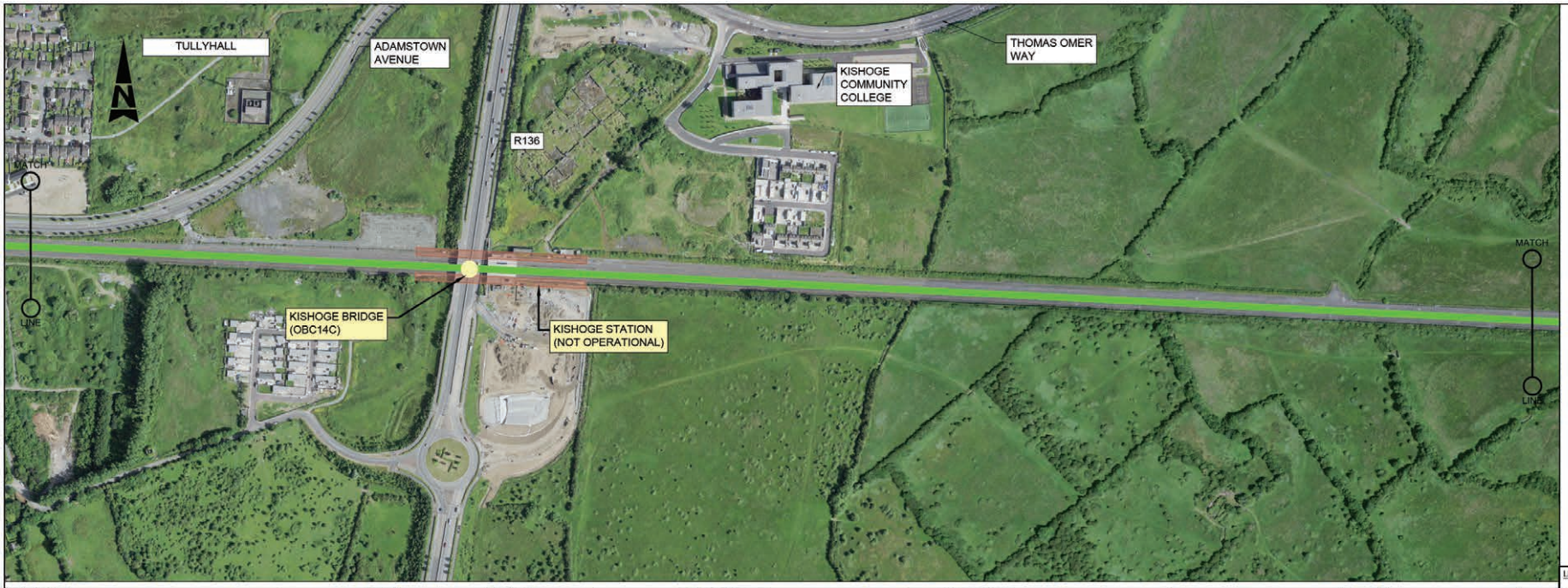

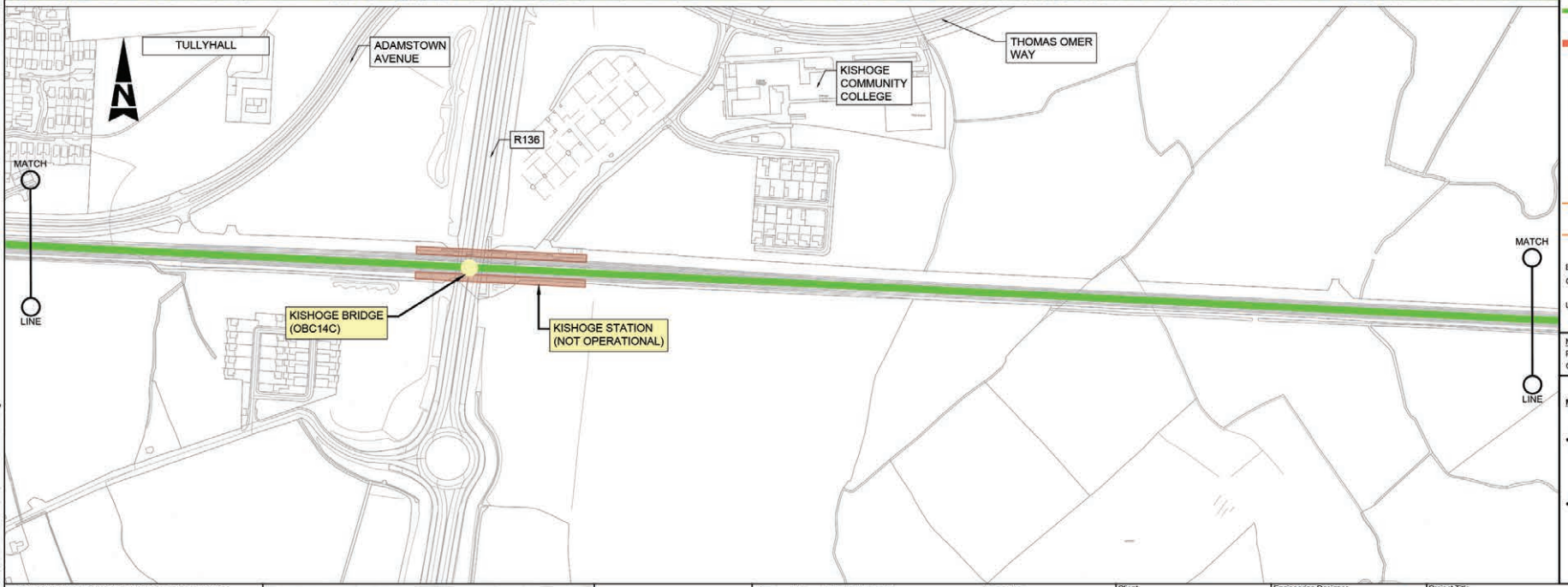

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

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DART+ South West

NTA

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA, ATKINS, TUC RAIL; Supported by: rps

Date 22.04.21	Scale N.T.S.	Drawn AK	Checked DM	Approved DM
Project Code —	Issuer ATK	QMS Code —		

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 6 OF 13 KISHOGE

Drawing File Name: DP-04-23-DWG-RO-TTA-07206 | Version v01 | Status S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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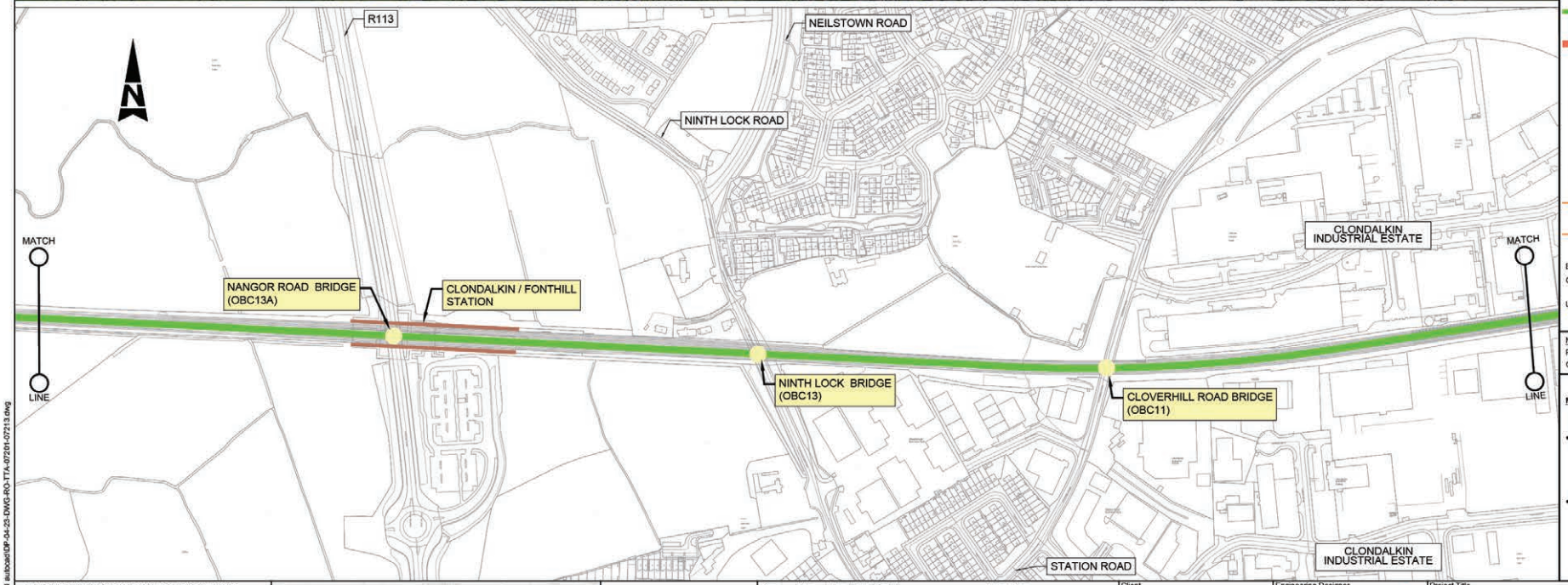

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

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DART+ South West
NTA
Ireland 2040

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail
Engineering Designer: TYPSA / ATKINS (Member of the SNC-Lavalin Group) / TUC RAIL (Supported by RPS)

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code	Issuer	QMS Code
—	ATK	—

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 7 OF 13 CLONDALKIN / FONTHILL STATION TO CLONDALKIN INDUSTRIAL ESTATE (WEST SIDE OF THE M50)

Drawing File Name	Version	Status
DP-04-23-DWG-RO-TTA-07207	v01	S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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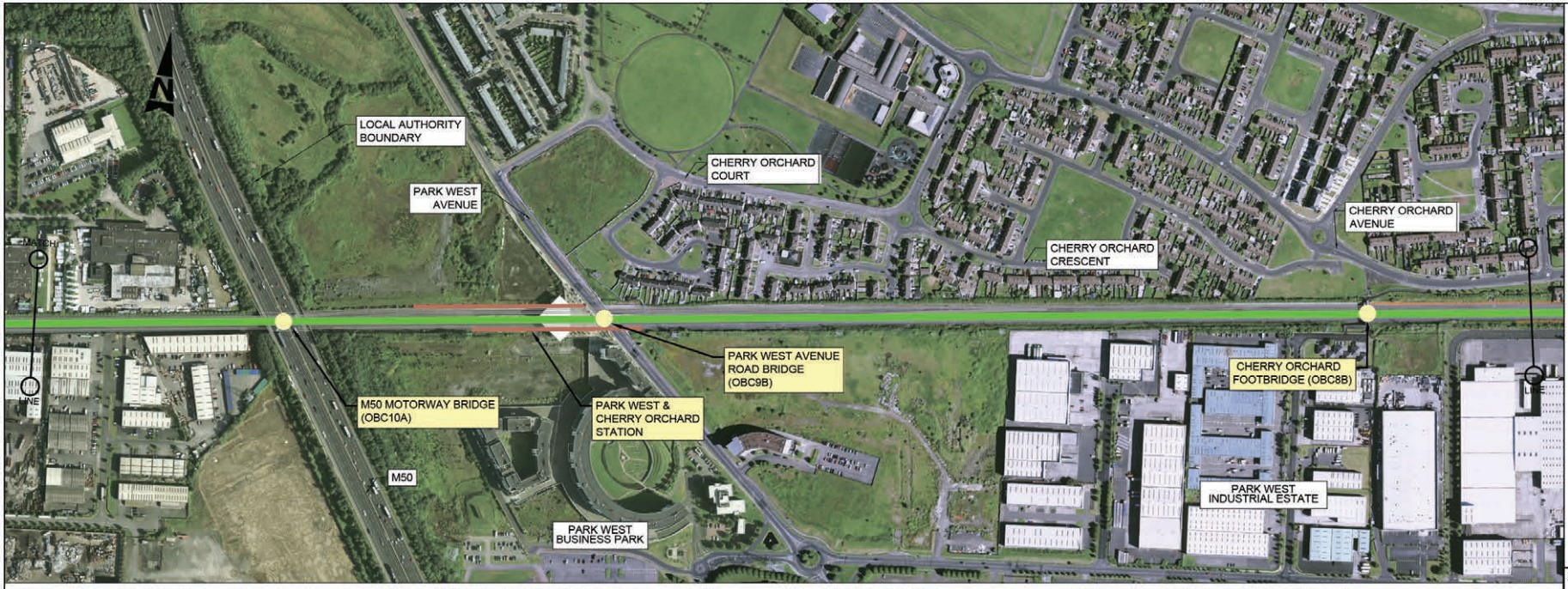

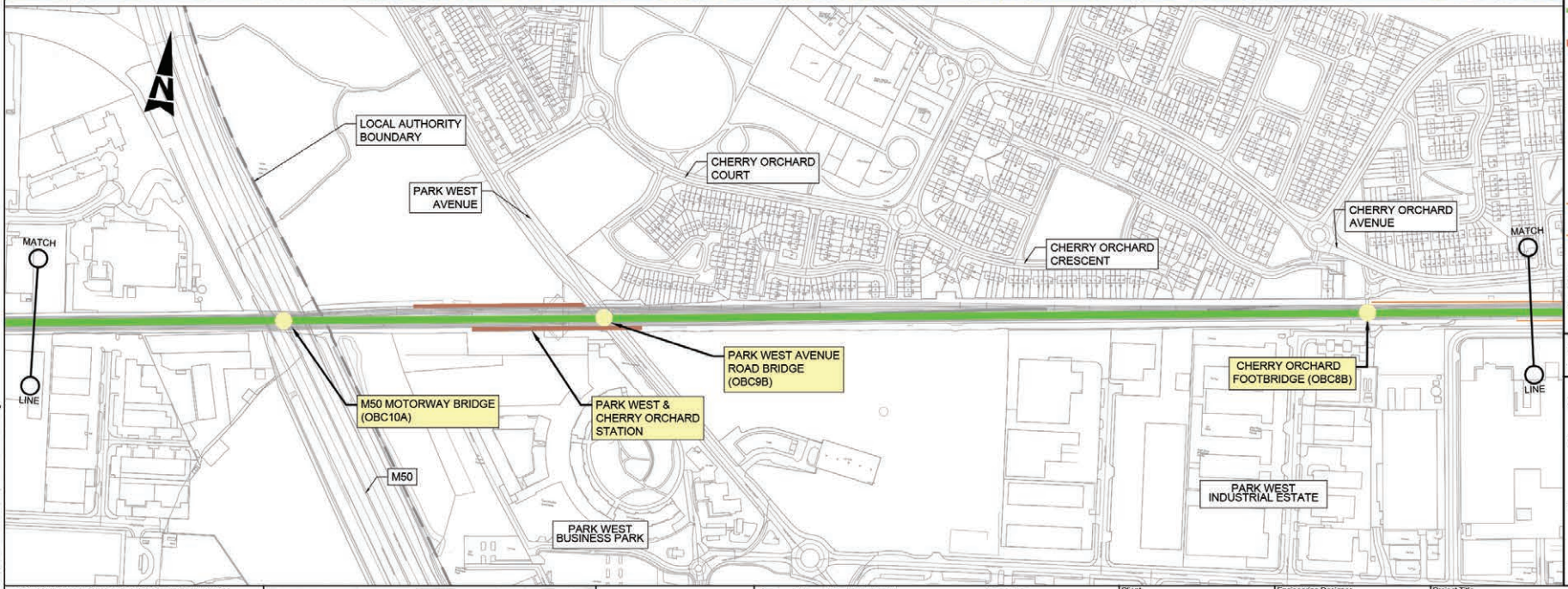

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
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BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
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DART+ South West

NTA

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: ATKINS (TYPSA, TUC RAIL) Supported by: rps

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code	Issuer	QMS Code
—	ATK	—

Project Title: **DART+ SOUTH WEST**

Drawing Title: EMERGING PREFERRED OPTION - MAP 8 OF 13
CLONDALKIN INDUSTRIAL ESTATE TO PARK WEST

Drawing File Name	Version	Status
DP-04-23-DWG-RO-TTA-07208	V01	S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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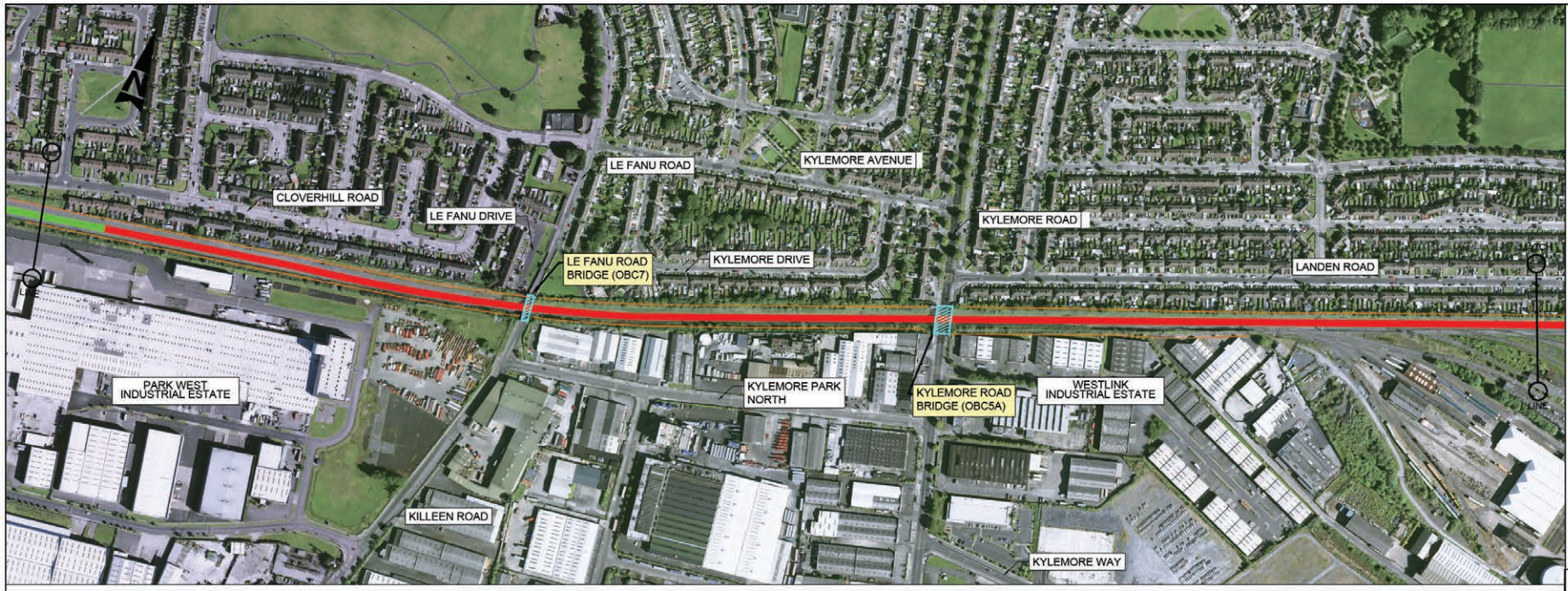

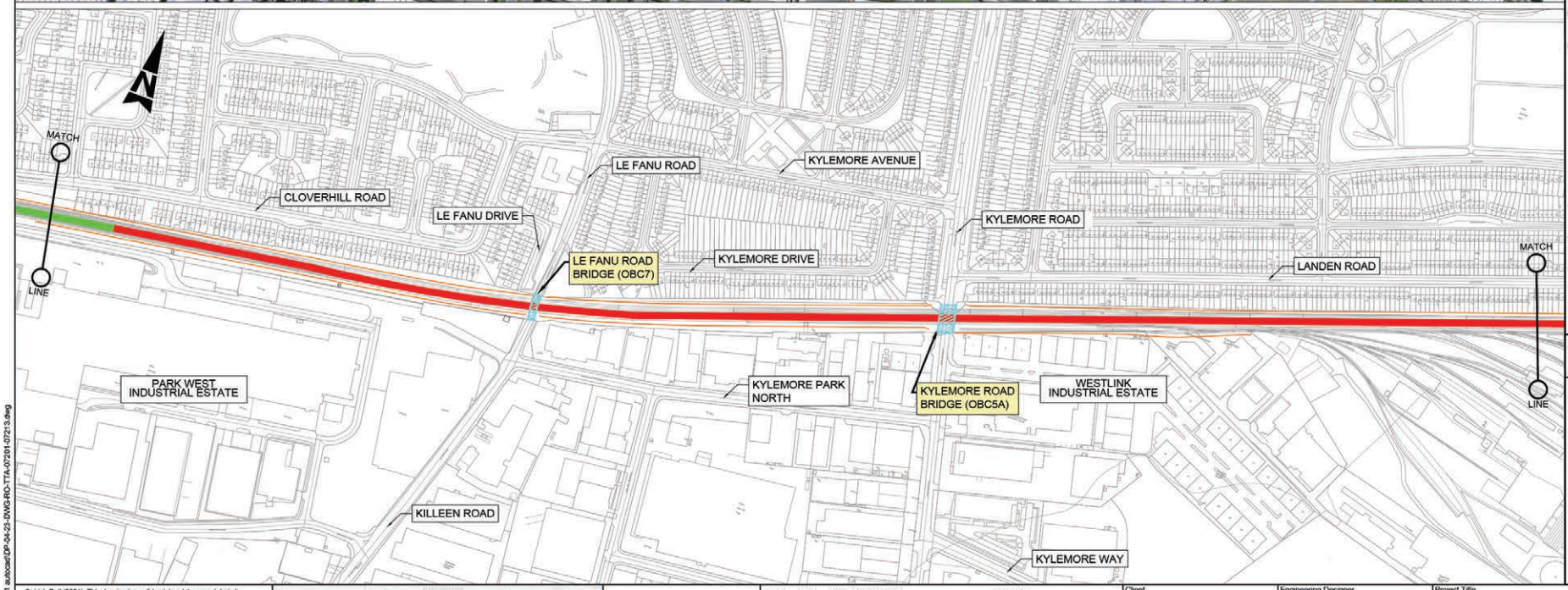

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
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BRIDGES:

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DART+ South West
NTA
Transport Infrastructure Ireland
Transportation Strategy Horizon Ireland 2040

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA, ATKINS, TUC RAIL
Supported by: rps

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code	Issuer	QMS Code
—	ATK	—

Project Title: **DART+ SOUTH WEST**

Drawing Title: EMERGING PREFERRED OPTION - MAP 9 OF 13
PARK WEST INDUSTRIAL ESTATE,
INCLUDING CLOVER HILL ROAD TO INCHICORE WORKS

Drawing File Name	Version	Status
DP-04-23-DWG-RO-TTA-07209	V01	S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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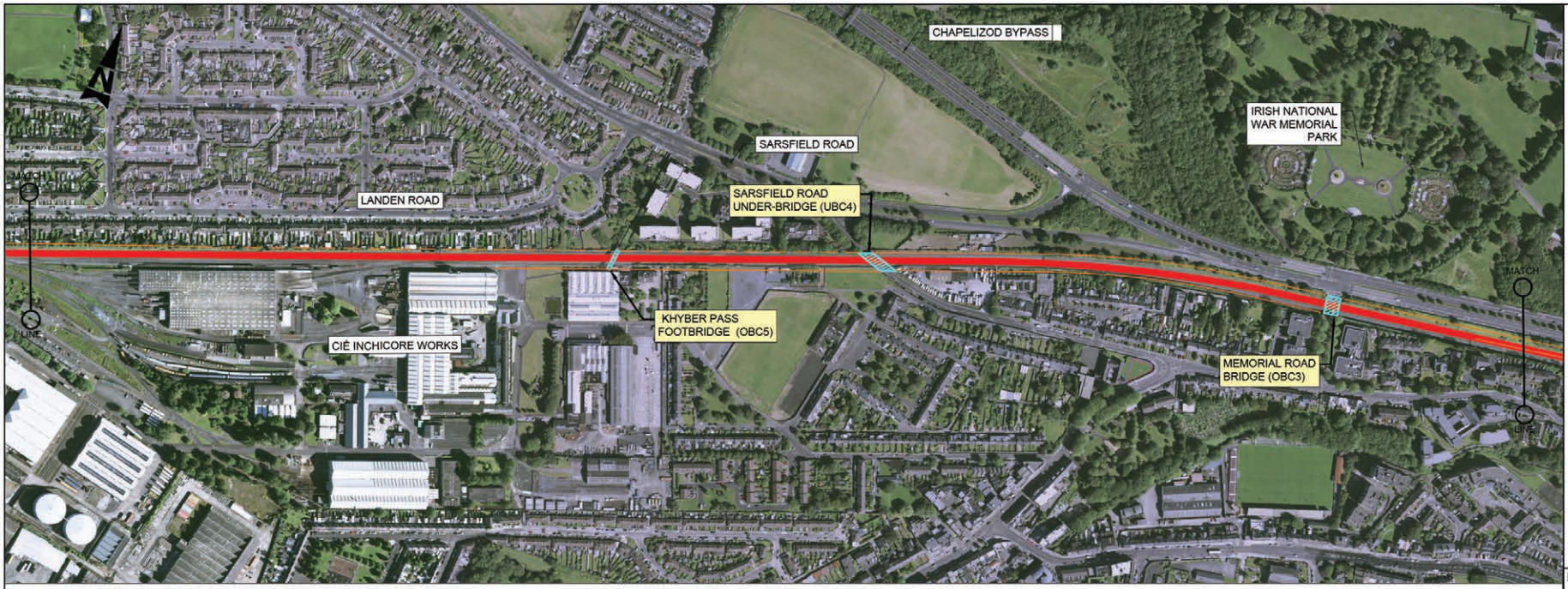

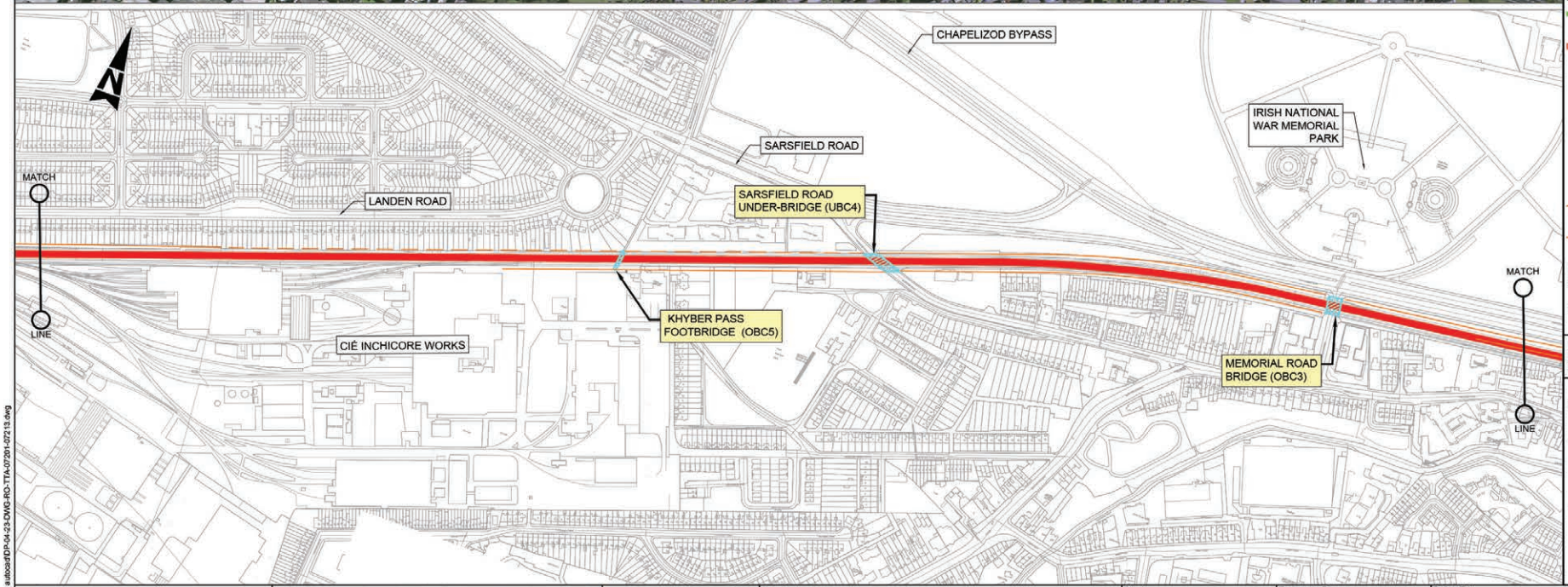

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
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BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

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DART+ South West
NTA
Transport Infrastructure Ireland
Investment Delivery Partner
2040
Government of Ireland
European Union

Rev	Date	Dm	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA / ATKINS / TUC RAIL
Supported by: rps

Date 22.04.21	Scale N.T.S.	Drawn AK	Checked DM	Approved DM
Project Code —	Issuer ATK	QMS Code —		

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 10 OF 13
INCHICORE WORKS, INCLUDING
LANDEN ROAD TO MEMORIAL GARDENS

Drawing File Name: DP-04-23-DWG-RO-TTA-07210 | Version v01 | Status S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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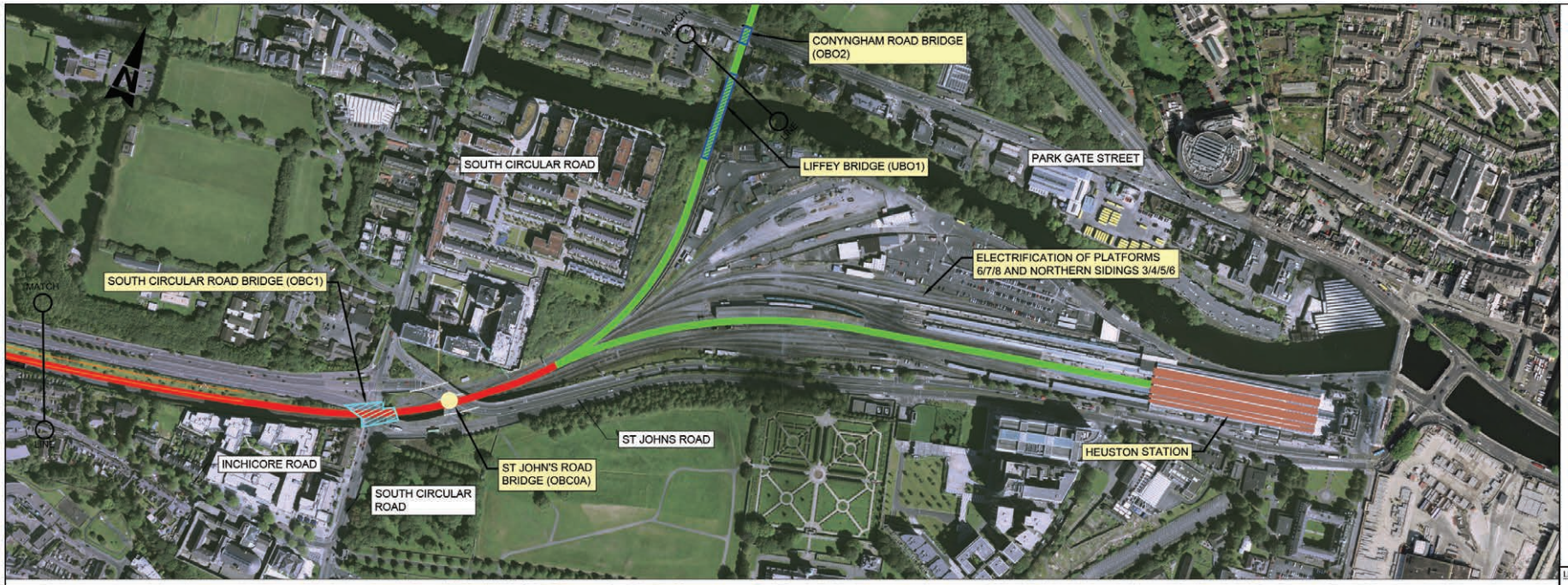

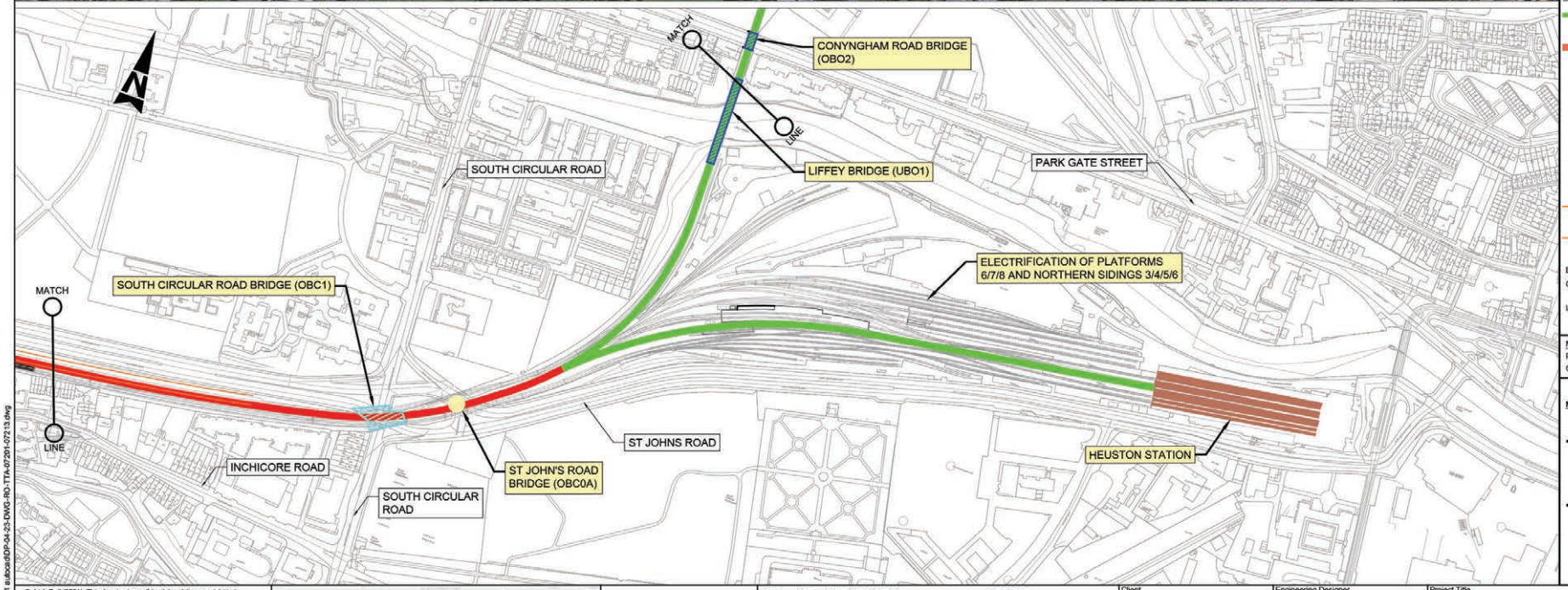

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

- NOT ALL DESIGN DETAIL OR CONSTRUCTION RELATED DETAILS ARE KNOWN AT THIS TIME, E.G, SUBSTATION LOCATIONS, CONSTRUCTION COMPOUNDS, TEMPORARY BRIDGE REQUIREMENTS, TEMPORARY UTILITY DIVERSIONS AND OTHER ELEMENTS.
- POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS IS BASED ON THE LEVEL OF INFORMATION AND DESIGN AVAILABLE AT THIS TIME. FURTHER WORK INCLUDING DETAILED DESIGN AND TECHNICAL AND CONSTRUCTION RELATED SOLUTIONS WILL SEEK TO MINIMISE POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS.

All elevations are in metres and relate to OSi Geoid Model (OSGM02) Malin Head as defined by existing Project Control.
All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).

DART+ South West
NTA
Transport Infrastructure Ireland
2040

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail
Engineering Designer: ATKINS (Member of the SNC-Lavalin Group) with TYPSA and TUC RAIL; Supported by: rps

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code: —
Issuer: ATK
QMS Code: —

Project Title: **DART+ SOUTH WEST**
Drawing Title: EMERGING PREFERRED OPTION - MAP 11 OF 13
MEMORIAL GARDENS TO EAST OF PHOENIX PARK TUNNEL
Drawing File Name: DP-04-23-DWG-RO-TTA-07211
Version: V01
Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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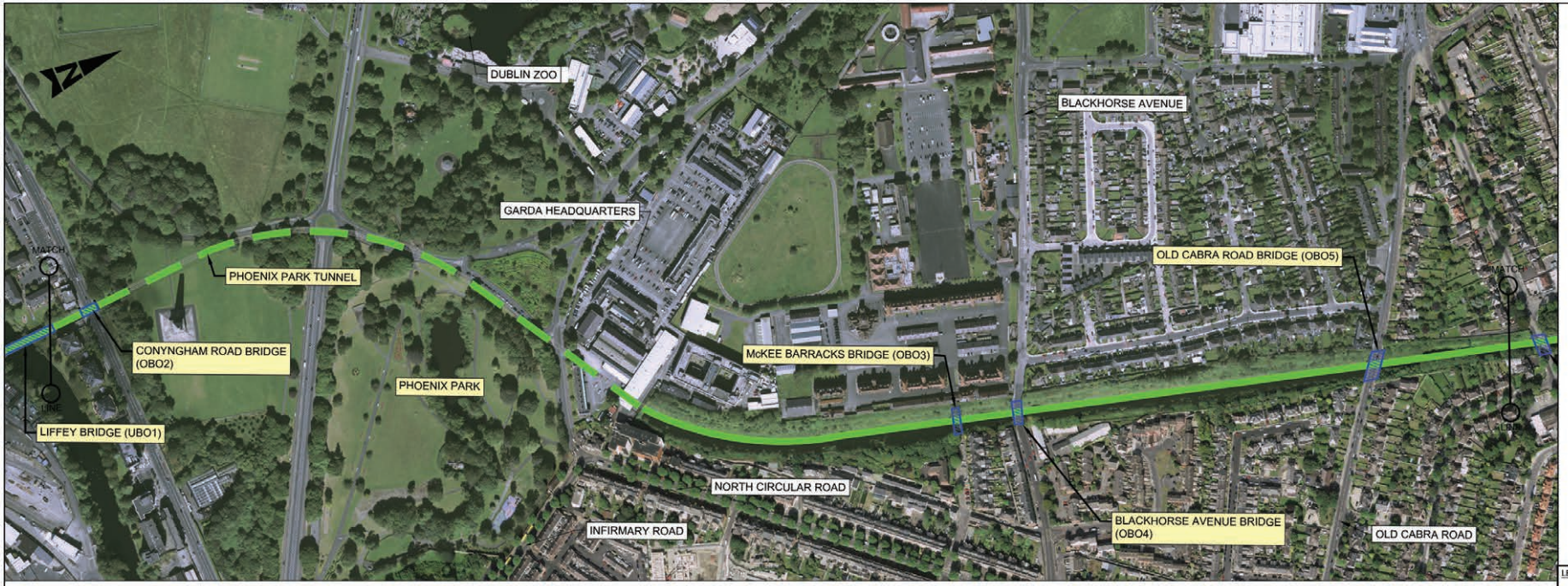

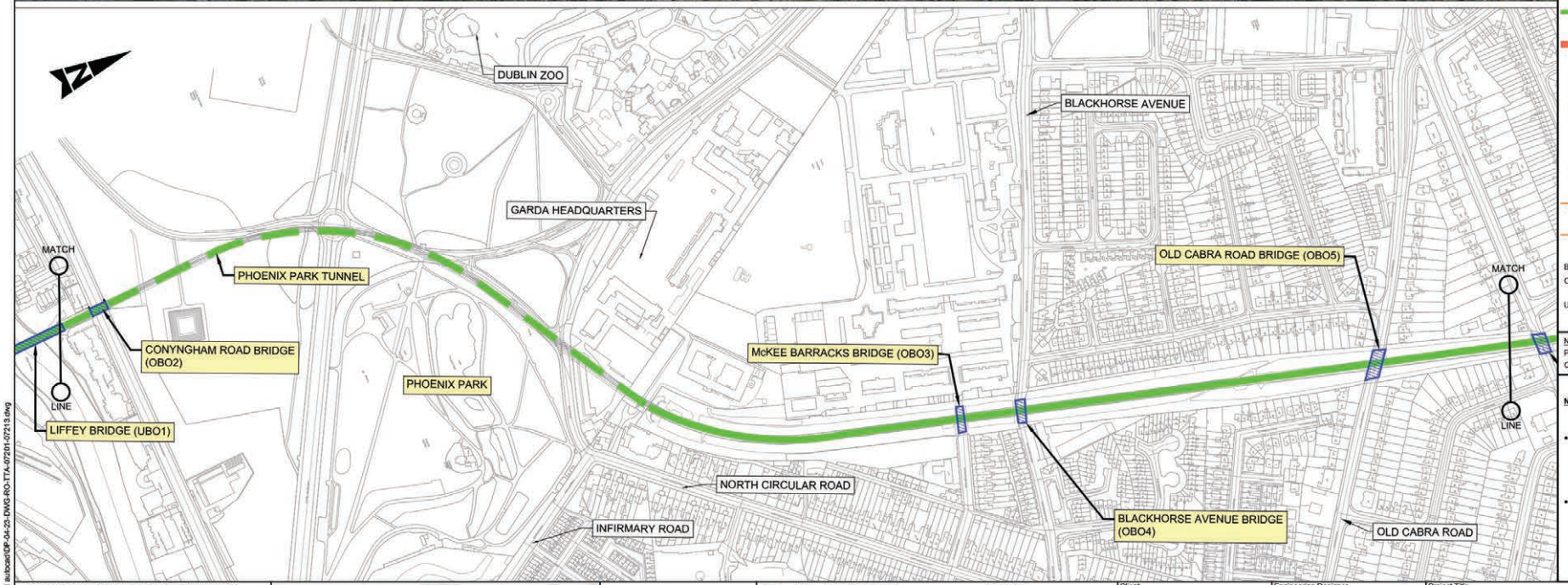

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

- NOT ALL DESIGN DETAIL OR CONSTRUCTION RELATED DETAILS ARE KNOWN AT THIS TIME, E.G, SUBSTATION LOCATIONS, CONSTRUCTION COMPOUNDS, TEMPORARY BRIDGE REQUIREMENTS, TEMPORARY UTILITY DIVERSIONS AND OTHER ELEMENTS.
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All elevations are in metres and relate to OSi Geoid Model (OSGM02) Malin Head as defined by existing Project Control. All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).

DART+ South West

NTA

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA, ATKINS, TUC RAIL; Supported by: rps

Date	Scale	Drawn	Checked	Approved
22.04.21	N.T.S.	AK	DM	DM

Project Code	Issuer	QMS Code
	ATK	

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 12 OF 13
EAST OF PHOENIX PARK TUNNEL TO CABRA ROAD BRIDGE

Drawing File Name	Version	Status
DP-04-23-DWG-RO-TTA-07212	v01	S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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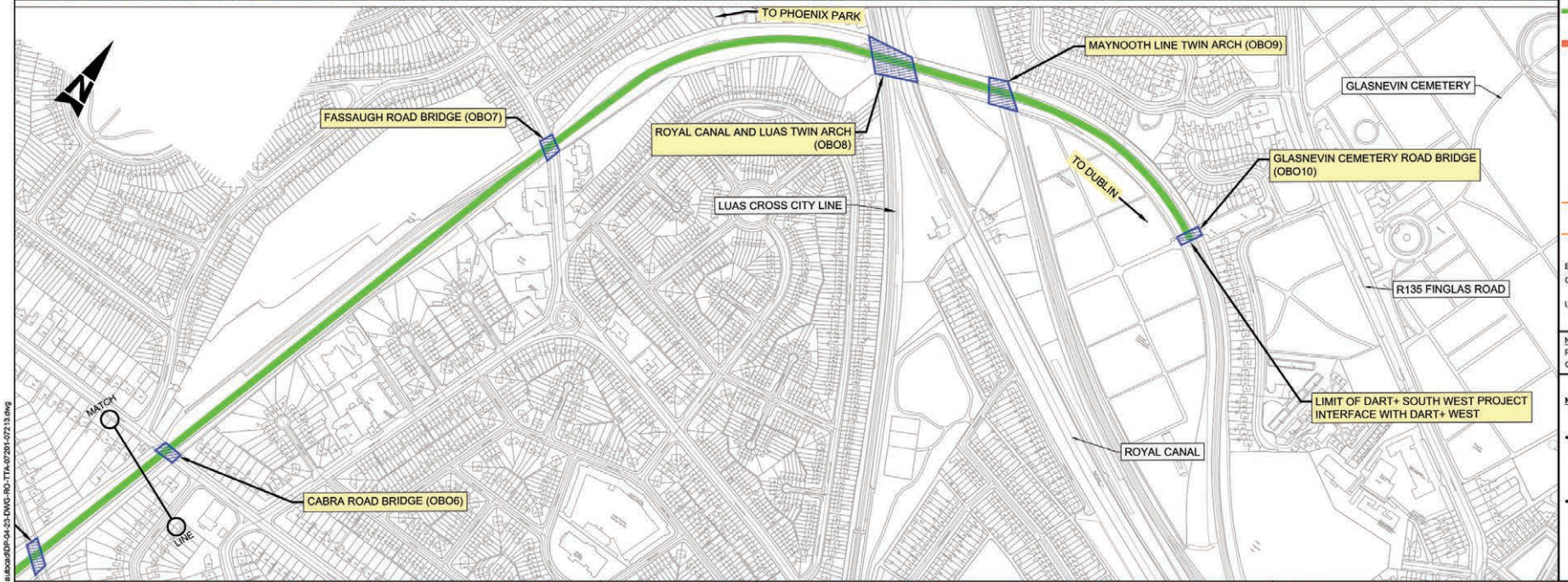

LEGEND:

- ELECTRIFICATION WITHIN EXISTING RAIL CORRIDOR
- FOUR TRACKING AND ELECTRIFICATION
- SIGNIFICANT WORKS / INTERVENTION REQUIRED (INCLUDING BRIDGE RECONSTRUCTION)
- WORKS / INTERVENTION REQUIRED
- MINOR WORKS REQUIRED
- EXISTING STATION
- RETAINING WALL REQUIRED
- EXISTING WALL TO BE RETAINED WHERE POSSIBLE (SUBJECT TO DESIGN DEVELOPMENT)

BRIDGES:

OBXX	EXISTING BRIDGE / ROAD OVER RAILWAY CORRIDOR
UBXX	EXISTING BRIDGE / ROAD/RIVER UNDER RAILWAY CORRIDOR

NOTE:
PROTECTION WORKS REQUIRED AT ALL BRIDGES FOR OVERHEAD LINE EQUIPMENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

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All elevations are in metres and relate to OSi Geoid Model (OSGM02) Main Head as defined by existing Project Control. All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).

DART+ South West
NTA
Transport Infrastructure Ireland
Rialtas na hÉireann Government of Ireland
2040
European Union

Rev	Date	Drn	Chk'd	App'd	Description
v01	22.04.21	AK	DM	DM	FOR PUBLIC CONSULTATION No 1

Client: Iarnród Éireann Irish Rail

Engineering Designer: TYPSA, ATKINS (Member of the SNC-Lavalin Group), TUC RAIL, Supported by: rps

Date 22.04.21	Scale N.T.S.	Drawn AK	Checked DM	Approved DM
Project Code —	Issuer ATK	QMS Code —	

Project Title: DART+ SOUTH WEST

Drawing Title: EMERGING PREFERRED OPTION - MAP 13 OF 13
CABRA ROAD BRIDGE TO GLASNEVIN

Drawing File Name: DP-04-23-DWG-RO-TTA-07213 | Version V01 | Status S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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