
Chapter 21

Architectural Heritage

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21. Architectural Heritage

21.1. Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) identifies, describes and presents an assessment of the likely significant effects of the proposed DART+ South West (hereafter referred to as the proposed Project) on Architectural Heritage. The assessment will examine the potential impacts during the construction and operational phases.

The assessment of Archaeology and Cultural Heritage is covered in Chapter 20.

21.2. Legislation, Policy and Guidance

The key legislation and guidance referenced in the preparation of the EIAR is outlined in Chapter 1 (Sections 1.5, 1.6 and 1.7). Specific to Architectural Heritage, the following legislation, policy and guidance has informed the assessment as outlined below.

21.2.1. Legislation

- The Planning and Development (Strategic Infrastructure) Act, 2006;
- The Planning and Development Act 2000 (as amended);
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999;
- National Monuments Acts 1930-2004; and
- Heritage Act, 1995 (as amended).

It is noted that Part IV of the Planning and Development Act 2000 (as amended) which inter alia sets out the procedures in relation to protected structures are disapplied where the works involved are authorised by a Railway Order by virtue of section 38 of the Transport (Railway Infrastructure) Act 2001 (“the 2001 Act”) and that the development is also deemed to be exempted development.

21.2.2. Policy

The assessment has had due regard to relevant policy that includes the following:

- Dublin City Development Plan 2022-2028¹;
- South Dublin County Development Plan 2022-2028;
- Kildare County Development Plan 2017-2023 (and draft plan 2023 – 2029 as available);
- Clonburris Planning Scheme 2019;
- Park West – Cherry Orchard Local Area Plan 2019;

¹ At the time of going to print the final geospatial datasets for the 2022 Plan were not publicly available. The datasets referred to and illustrated in this EIAR and supporting documentation including Volume 3A of this EIAR are therefore based on the previous 2016 Plan. The assessments have, however, had regard to the published PDF maps included as part of Volume 3 - Zoning Maps of the 2022 Plan.

- Adamstown Strategic Development Zone Planning Scheme 2014; and
- Celbridge Local Area Plan 2017-2023.

21.2.3. Guidance

Relevant guidance documents that have informed the assessment includes guidance on environmental impact assessment in general as outlined in Chapter 1, specific guidance relating to the assessment of architectural heritage on road projects – there being no similar guidance relating to railways. There is also general guidance in relation to the protection of architectural heritage.

- Draft Cultural Heritage Impact Assessment (CHIA) of TII Projects – Overarching Technical Document, 2021;
- National Inventory of Architectural Heritage (NIAH) Handbook, 2021;
- Understanding Historic Buildings: A Guide to Good Recording Practice, (Historic England, 2016);
- Architectural Heritage Protection Guidelines for Planning Authorities (Department of Arts, Heritage and the Gaeltacht² 2004 and 2011);
- Guidelines for the Assessment of Architectural Heritage Impacts on National Roads Schemes (NRA, 2005);
- Department of Culture, Heritage and the Gaeltacht² ‘advice series’; and
- ICOMOS International Charters including:
 - Venice Charter, ICOMOS, 1965;
 - Florence Charter, ICOMOS, 1982;
 - Granada Convention, Council of Europe, 1985;
 - Washington Charter, ICOMOS, 1987;
 - Burra Charter, ICOMOS Australia, 1999; and
 - Dublin Principles, ICOMOS, 2011.

21.3. Methodology

This study determines, as far as reasonably possible from existing records, the nature of the architectural heritage resource in the footprint of the proposed Project and in the vicinity of the proposed Project using appropriate methods of study. Desk-based assessment is defined as a programme of study of the historic environment within a specified area or site that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets. This leads to the following:

² Now the Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media.

- Determining the presence of known built heritage sites that may be affected by the proposed Project;
- Determining the impact upon the setting of known architectural heritage sites in the surrounding area (receiving environment); and
- Suggested mitigation measures based upon the results of the above research.

Research for the Architectural Heritage Chapter of this EIAR has been undertaken in two phases. The first phase comprised a paper survey of all available architectural, historical and cartographic sources. The second phase involved a field inspection of the proposed Project.

The study involved detailed interrogation of the historical and architectural nature of the receiving environment of the proposed Project. This included information from the record of protected structures (RPS) and development plans for counties Kildare and South Dublin and for Dublin City, the National Inventory of Architectural Heritage (NIAH) and cartographic and documentary records. Aerial photographs of the study area were also consulted. Field inspections were carried out along the route of the proposed DART+ South West Project in June 2022 in an attempt to identify any known architectural heritage sites and previously unrecorded features and structures within the study area.

21.3.1. Study Area

There are no published guidelines to determine the extent of the study area to be applied in the assessment of the potential impacts on architectural heritage of the construction and operation of a railway. In the absence of such guidance the study area has been taken to be the same as that used for the assessment of road schemes, as set down in the *Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes*, published by the National Roads Authority (now Transport Infrastructure Ireland).

The receiving environment at EIAR stage is defined in those guidelines as an area measuring 50m on either side of the centre line of the new road and in this assessment the equivalent distance would be the centre of the electrified railway line. For the purpose of this chapter a more conservative study area has been defined, being 50m from the proposed development boundary, which will ensure that where the development boundary extends to a distance from the railway line, structures of architectural heritage significance close to that boundary but at a greater distance from the railway are included in the assessment. Measurements are taken from the proposed development boundary to the nearest point of a site or structure.

21.3.2. Survey Methodology

Once the desktop study had identified the structures within the study area that were included in the Records of Protected Structures, the NIAH or the Dublin City Industrial Heritage Record (DCIHR) and the demesnes in the vicinity of the Project, the site was visited in stages to examine the buildings and demesnes to assess the potential effects of the project. Particular attention was paid during the surveys to those structures that would be directly affected by the works, such as the signal box at Inchicore Works and the various bridges along the route.

21.3.2.1. Desk Surveys

The following available data sources have been used to inform the assessment:

- National Inventory of Architectural Heritage (NIAH), which is a national survey and which covers the administrative areas of DCC, SDCC and KCC;
- Archaeological Survey of Ireland historical environment viewer, www.archaeology.ie, which provides, in map form, the location of sites and structures that are included in the Record of Monuments and Places (RMP) and those included in the Sites and Monuments Record (SMR) for inclusion in the next revision of the RMP;
- Charles Brooking, A Map of the City and Suburbs of Dublin and also the Arch Bishop and Earl of Meath's Liberties, 1728;
- Noble, John and James Keenan, 1752, *Map of the County of Kildare*;
- John Rocque, An Exact Survey of the City and Suburbs of Dublin, 1756;
- John Rocque, An Actual Survey of the County of Dublin, 1760;
- Bernard Scalé, An Accurate Survey of the City and Suburbs of Dublin by Mr Rocque with Additions and Improvements, 1773;
- Taylor, Alexander, 1783, *A Map of the County of Kildare*;
- Thomas Campbell, City of Dublin, 1811;
- John Taylor, The Environs of Dublin, 1816;
- William Duncan, 8 Sheet Map of the County of Dublin, 1821;
- Ordnance Survey, six-inch maps of Kildare, 1837 and 1870;
- Ordnance Survey six-inch maps of 1843, 1871, and 1930s, for Dublin city and county;
- Ordnance Survey five-foot maps of 1838, 1847, 1864 and 1886-1891 for Dublin city;
- Ordnance Survey 1:2500 maps of 1860s and 1907 for Dublin city and county;
- Ordnance Survey 1:2500 maps of 1907 for County Kildare;
- Current Ordnance Survey 1:1000 maps;
- Aerial photographs available through <http://map.geohive.ie/mapviewer.html> and Google Earth Pro;
- Casey, Christine, 2005, *Dublin – the City within the Grand and Royal Canals and the Circular Road with the Phoenix Park*, Yale University Press;
- Clarke, Howard, 2002, *Irish Historic Towns Atlas, Dublin part I*, Royal Irish Academy, Dublin;
- Goodbody, Rob, 2014, *Irish Historic Towns Atlas, Dublin part III, 1756-1847*, Royal Irish Academy, Dublin;
- Johnson, Stephen, 1997, *Johnson's Atlas & Gazetteer of the Railways of Ireland*, Midland Publishing Limited;

- Lennon, Colm, 2008, Irish Historic Towns Atlas – Dublin Part II, 1610 to 1756, Royal Irish Academy;
- O’Keefe, Peter, Simington, Tom and Goodbody, Rob, 2016, Irish Stone Bridges – history and heritage, 2nd ed., Irish Academic Press; and
- Shepherd, Ernie, 1994, The Midland Great Western Railway of Ireland, Midland Publishing Ltd., Leicester.

21.3.2.2. Field Surveys

Whist trackside access was not required for the architectural heritage survey, a drive-by windshield survey of the route and existing bridge crossings was carried out in June 2022 to review the landscape through which the railway corridor runs and to gain a greater appreciation of the local environment.

21.3.2.3. Models / Tools Used in Assessment

No modelling software/tools were used in the architectural heritage assessment.

21.3.3. Assessment Methodology

The quality and type of a potential impact can vary to include the following, as per TII’s *Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes* (NRA, 2005):

- Negative Impact: A change that damages or detracts from the setting of a structure of architectural heritage significance;
- Neutral Impact: A change that does not affect architectural heritage;
- Positive Impact: A change that improves or enhances the setting of a structure of architectural heritage significance;
- Direct Impact: Where an architectural feature or site is physically located within the footprint of a potential route and entails damage to or removal of the feature of architectural heritage significance;
- Indirect Impact: Where a feature or site of architectural heritage merit or its setting is located in close proximity to the footprint of a potential route alignment; and
- No Predicted Impact: Where the potential route does not adversely or positively affect an architectural heritage site.

It should be noted that whilst impact levels and definitions are applied consistently to the built heritage resource, direct impacts on sites that are subject to statutory protection are considered to be more significant than sites / structures not subject to statutory protection.

Impact definitions (as outlined in the TII’s *Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes* (NRA, 2005), are included in Table 21.1 below. These have been supplemented with the additional impact definitions as per the most recent EPA Guidelines (2022).

Table 21.1: Definition of Levels of Significance

Type of impact	Definitions relating to sites of architectural heritage significance
Profound	An impact that obliterates the architectural heritage of a structure or feature of national or international importance. These effects arise where an architectural structure or feature is completely and irreversibly destroyed by the proposed development. Mitigation is unlikely to remove adverse effects.
Very Significant	Effects which by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment.
Significant	An impact that by its magnitude, duration or intensity alters the character and/or setting of the architectural heritage. These effects arise where an aspect or aspects of the architectural heritage is/are permanently impacted upon leading to a loss of character and integrity in the architectural structure or feature. Appropriate mitigation is likely to reduce the impact.
Moderate	An impact that results in a change to the architectural heritage which, although noticeable, is not such that alters the integrity of the heritage. The change is likely to be consistent with existing and emerging trends. Impacts are probably reversible and may be of relatively short duration. Appropriate mitigation is very likely to reduce the impact.
Slight	An impact that causes some minor change in the character of architectural heritage of local or regional importance without affecting its integrity or sensitivities. Although noticeable, the effects do not directly impact on the architectural structure or feature. Impacts are reversible and of relatively short duration. Appropriate mitigation will reduce the impact.
Not significant	Effects which cause noticeable changes in the character of the environment but without noticeable consequences
Imperceptible	An impact on architectural heritage of local importance that is capable of measurement but without noticeable consequences.

21.3.3.1. Key Parameters for Assessment

The key activities that have potential to result in likely significant effects on the built heritage resource are outlined below:

Construction Phase

- Widening of the corridor for four-tracking may have direct impacts on built heritage features including permanent removal, relocation or setting;
- Modifications/interventions to bridges to achieve vertical and horizontal clearances;
- Physical damage to designated and non-designated architectural heritage assets during construction works;
- Impacts on designated architectural heritage features and other elements of architectural heritage due to the construction works (utility diversions and main infrastructure works) and permanent land-take;
- Impacts on the settings of any heritage features such as buildings, demesne landscapes and associated features, boundaries and gate lodges due to temporary and permanent land-take; and
- Visual impacts on Architectural Conservation Areas and Conservation Areas during construction works.

Operational Phase

- Visual impacts to Architectural Conservation Areas and Conservation Areas (ACAs & CA's respectively);
- Visual impact to architectural heritage assets due to fixed infrastructure such as Overhead Line Equipment (OHLE) including line conductors, supporting poles and gantries; and
- Indirect negative impacts associated with the operation of the proposed Project, where it is located in close proximity to architectural heritage structures.

21.3.3.2. Assessment Criteria and Significance

The buildings or other structures within the study area that have been identified as having some form of architectural heritage significance are listed in table form in Section 21.4.2 that describes the receiving environment, where each building or structure is assigned a BH- number, representing Built Heritage. A table is provided for each of the four geographic zones into which the project is divided as outlined in Chapter 4 Project Description, and these indicate the BH- number, a description of the structure, its distance from the development boundary for the proposed Project, its reference number in the record of protected structures (RPS) or NIAH and, if included in the DCIHR, those initials are noted.

Where a potential impact is identified these are also listed in tabular form in Section 21.5. The first column gives the BH number and subsequent columns provide the location, the impact, the magnitude and significance of the impact and an assessment of the impact prior to mitigation.

The potential impacts are separated into those that may occur during the Construction Phase and those which may occur during the Operational Phase. The latter includes day-to-day operation of the DART+ South West Project and also maintenance factors insofar as they are known at this stage. Maintenance of the track, signals, drainage, the stations and other elements of the proposed Project are described in Chapter 4 Project Description of this EIAR. However, it is not anticipated that there will be any significant impacts on architectural heritage arising through maintenance.

The system of evaluation, as set down in Table 21.2 below, ranks structures in terms of their significance as legally defined, or as recognised through some official survey. The highest rating (evaluation level 1) is given to those structures that are individually protected in law, being either national monuments or protected structures, while also including those structures that are so similar to protected structures as to require inclusion for the sake of consistency. This category also includes the highest ratings in the NIAH – i.e. International and National rating – though in practice all structures with these ratings are also protected structures and/or national monuments. Structures within an Architectural Conservation Area (ACA) also have a statutory protection.

The medium category (evaluation level 2) includes those structures that are not accorded the highest rating but are included in the NIAH building and garden surveys, which recognise their significance without according a statutory protection. In the case of the NIAH building surveys those structures considered to be of Regional significance would be included in a request from the Minister to the planning authority that the structures should be included in the record of protected structures.

The third category (evaluation level 3) – those of low rating – includes any structure identified in the Dublin City Industrial Heritage Record (DCIHR), but which have not been included in either the record of protected structures or the NIAH. The DCHIR is not established on a statutory basis and the onus is on the planning authority to decide whether or not to include structures included in the DCHIR in the record of protected structures.

The last category (evaluation level 4) recognises that there some structures of significance that are not worthy of protection, but where a record of them should be made in the event that it is necessary to demolish or significantly alter them.

Table 21.2: System of Evaluation

Evaluation level	Rating	Definition
1	High	National monuments, protected structures, proposed protected structures, structures assigned an International or National rating in the NIAH, structures on the RMP and SMR and structures within an ACA.
2	Medium	Structures assigned a Regional status in the NIAH and surviving historic features of a demesne that is included in the NIAH garden survey; paving listed in the development plan.
3	Low	Structures included in the DCIHR, CAs and structures identified in the survey as having a level of architectural heritage significance, while not a national monument and not included in the RMP, RPS or NIAH.
4	Very low, negligible or of no architectural heritage value	Structures that are included in the RPS or NIAH, but which are no longer extant and structures more than a century old, but of low architectural heritage significance such that they are not included in the RPS or NIAH.

Where the project has an effect on a building or other structure of architectural heritage significance the magnitude of this effect is assessed and, in each case, this is expressed in four categories – high, medium, low or negligible. This magnitude is independent of the evaluation level of the receptor and Table 21.3 below shows how a combination of the magnitude of the effect with the sensitivity or rating of the receptor (Table 21.2) to derive the significance of the effect.

Table 21.3: Matrix for the Significance of Effects

		Sensitivity of Receptor			
		High	Medium	Low	Negligible
Magnitude of Impact	High	Profound	Very significant	Moderate	Not significant to slight
	Medium	Significant to very significant	Significant	Slight to moderate	Not significant to slight
	Low	Moderate to significant	Slight to moderate	Moderate to significant	Not significant
	Negligible	Not significant	Not significant	Not significant	Imperceptible

The definitions of the levels of significance of the effects are shown in Table 21.4 below.

Table 21.4: Definitions of Significance of Effects

Effect	Definition
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate effects	An effect that alters the character of the environment in a manner that is consistent with existing or emerging baseline trends.
Significant effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound effects	An effect which obliterates sensitive characteristics.

21.3.4. Consultation

The overall project stakeholder and public consultation undertaken in respect of the Project is set out in the Public Consultation No. 1 Findings Report (for PC1) and Public Consultation No. 2 Findings Report (for PC2) which are included in Volume 4, Appendix 1.3 and 1.4. All feedback was collated, including feedback specific to the EIAR topic ‘Architectural Heritage’. This feedback has informed this chapter including the baseline and impact assessment presented.

Specific consultation was also undertaken with key stakeholders in relation to EIA Scoping. A summary of the issues raised in relation to the scope of the EIA is included in Volume 4, Appendix 1.2. Feedback on the scope and level of detail of the assessment, data sources and methodologies as they pertain to the EIAR topic ‘Architectural Heritage’ have been reviewed and have influenced this chapter of the EIAR.

Specific consultation was also undertaken with representatives of various Departments in Kildare, South Dublin and Dublin City Councils. This included a combination of presentations, workshops and meetings to discuss the project, technical design issues and environment and planning matters.

Nine pre-application meetings were held with ABP to explain the project and present technical and environmental information. A summary of the information presented and the environmental issues discussed at the nine meetings is provided in Volume 4, Appendix 1.6. Feedback relevant to the topic ‘Architectural Heritage’ has been reviewed and has influenced this chapter of the EIAR.

In addition to this broader consultation, topic specific consultation was also undertaken in the form of formal data requests, meetings and workshops. Those related to ‘Architectural Heritage’ are listed below in Table 21.5.

Table 21.5: Topic-Specific Consultation Summary regarding Architectural Heritage

Consultee	Summary of Consultation Response
Dublin City Council	Pre-application meeting (12 th Nov 2020) with DCC Conservation office to introduce the DART+ South West Project to the DCC Conservation Team.
Dublin City Council	Combined Pre-application meeting (19 th May 2021) with DCC City Archaeologist office and Conservation office to discuss the Emerging Preferred Option and matters related to Archaeology and Architectural Heritage.
Dublin City Council	Combined Pre-application meeting (3 rd Feb 2022) with DCC City Archaeologist office and Conservation office to discuss the Preferred Option and matters related to Archaeology and Architectural Heritage.
Dublin City Council	Pre-application meeting (5 th January 2023) with DCC Conservation office to discuss matters related to Architectural Heritage prior to RO lodgement.

21.3.5. Difficulties Encountered / Limitations

This Chapter of the EIAR has been prepared based upon review of currently available information and in accordance with current best practice and relevant guidelines.

There were no technical difficulties or otherwise encountered in the preparation of this chapter of the EIAR.

21.4. Receiving Environment

The project is largely, but not entirely, confined to existing railways. The proposed Project has been divided into four distinct geographic zones along the length of the corridor (Zones A to D) as outlined in Chapter 4 Project Description and summarised below. The proposed Project is described from west to east along the railway corridor.

- Zone A - Hazelhatch & Celbridge Station to Park West & Cherry Orchard Station (refer to Section 4.6);
- Zone B - Park West & Cherry Orchard Station to Heuston Station (incorporating Inchicore Works) (refer to Section 4.7);
- Zone C – Heuston Yard & Station (incorporating New Heuston West Station) (refer to Section 4.8); and
- Zone D - Liffey Bridge to Glasnevin Junction (Phoenix Park Tunnel Branch Line) (refer to Section 4.9).

The tables in Section 21.4.2 below identify the structures within the study area that have been assessed as being of architectural heritage significance through inclusion in the RPS as protected structures or proposed protected structures, in the NIAH, in industrial heritage surveys carried out for planning authorities or through other assessment. Supporting figures showing the location of all heritage features are presented in Volume 3A of the EIAR.

Inclusion within the NIAH does not confer statutory protection. However, any buildings that are also listed within the record of protected structures, are subject to statutory protection under the Planning and Development Act, 2000, as amended.

The inclusion of a site in the DCIHR or other industrial heritage surveys does not accord it statutory protection. However, many of the sites are additionally recorded as protected structures, in which case these sites receive statutory protection. A number of these sites are also listed in the NIAH, and they do not receive statutory protection.

It should be noted that some of the sites represent linear features (such as the railways). In these cases, the structure has been assigned a single reference number while the DCIHR records a number of locations for each of these industrial heritage features. The DCIHR did not allocate reference numbers to the structures included in the record.

A number of structures that are not included in the RPS, the NIAH or the industrial heritage surveys but are either scheduled for demolition as part of the proposed Project or have been assessed as having an architectural heritage significance are also noted.

21.4.1. Architectural Background

The Great Southern and Western Railway (GSWR) had its origins in 1842, at a time when railway construction in Ireland, and the rest of the world, was about to expand immensely. Ireland's first public railway, and one of the first in the world, had opened in 1834 between Dublin and Dunleary, later extending to the present Dun Laoghaire station, and this line proved to be very successful and very profitable. While some new railways were planned, the establishment of a royal commission to examine the potential for a railway system in Ireland delayed projects pending its outcome and recommendations. In the aftermath of that commission a group of Dublin businessmen devised a proposal to build a railway southward from Dublin with connections to Galway, Limerick and elsewhere. The project was greatly assisted by John MacNeill, the engineer who had worked with the railway commission. In view of its ambitious plans for extensive railways the company was launched with the title Great Southern and Western Railway, and it obtained an act of parliament for its proposals in 1844. The original design was for a railway from Dublin to Cashel, where a hub would connect to other lines, initially selecting a line to Carlow. This was reconsidered almost immediately, and the company now proposed to run to Charleville and Mallow, with a branch to Carlow running off the main line near Kildare.

The contract for the construction of the first stretch of the line, between Dublin and Hazelhatch, was granted to William Dargan and the section from Hazelhatch to Sallins was granted to William McCormick in November 1844, following which, in January 1845, the first sod for the work was cut by the duke of Leinster at Adamstown. Initially the company concentrated in the northern section of the main line together with the Carlow branch and Dargan and McCormick were jointly awarded the contract for the Carlow branch. The route between Dublin and Carlow opened to traffic in August 1846. The rest of the line was not ignored, and contracts were awarded for various sections of the route from April 1845. The route was opened to Portlaoise in June 1847, to Thurles in March 1848, Limerick Junction in July 1848 and Cork in November 1849.

Various intermediate stations were opened along the GSWR line from the outset. The terminus was established on the western outskirts of Dublin on land formerly part of the Royal Hospital Kilmainham, adjacent to a bridge over the River Liffey built in the 1820s and named King's Bridge in honour of the visit of George IV to Ireland in 1821. In view of the proximity to this well-known landmark the new railway terminus was named Kingsbridge Station. In the same year that this terminus came into service,

in 1846, stations were also opened at Clondalkin, Lucan and Hazelhatch, while the company also established its principal depot at Inchicore, close to the terminus.

Between 1834 and 1854, five railways were opened to connect Dublin with the rest of the country, each with its own terminus and with no provision to interconnect. Later in the nineteenth century various branches were provided to connect these lines and to provide connection to other locations, principally to the port of Dublin. The Midland Great Western Railway (MGWR) constructed a branch to Dublin Port at North Wall in 1864, initially for goods trains and later also for passengers. The GSWR also wanted to connect to the North Wall and in 1877 it opened a line between the rail yards at Islandbridge and a junction with the MGWR line at Glasnevin, with another branch line leading off the MGWR near the port to connect to a terminus at North Wall. The section between Islandbridge and Glasnevin Junction required a new bridge over the River Liffey and a tunnel beneath the Phoenix Park, while north of the park to Glasnevin the line was constructed in a deep cutting.

Over the years the GSWR acquired a number of other companies and expanded its network. Greater changes occurred following Irish independence in the 1920s, commencing with the amalgamation of the GSWR with other lines, including the MGWR, and the new company became Great Southern Railways in 1925. Transportation facilities nationwide were nationalised in 1945 under a new company to be called Córas Iompair Éireann (CIÉ) and this included the rail network. As the railways had been struggling financially CIÉ set about rationalising the system, leading to a closure of some stations and branch lines. As part of this move the stations at Clondalkin, Lucan and Hazelhatch were closed in 1947. With the provision of suburban services these three stations were reopened in 1994 with the names Clondalkin, Lucan South and Hazelhatch and Celbridge, while an additional station was opened at Park West & Cherry Orchard. In the early years of the twenty-first century the double track between Hazelhatch and Park West & Cherry Orchard was enhanced to provide for four tracks, necessitating the replacement of the overbridges along the line.

The construction of the Royal Canal commenced in 1790 at Glasnevin, from where the work proceeded both eastward and westward and it was finally completed in 1817 with one terminus at Broadstone and another at North Wall, where it connected to the River Liffey. The MGWR purchased the Royal Canal in 1845, marking the decline of the canal, though the MGWR was obliged to keep the canal open, constructing its railway adjacent to the canal. In 1877 the construction of the GSWR branch between Islandbridge and Glasnevin Junction required the construction of an aqueduct to carry the canal and a bridge alongside to carry the MGWR line. The Royal Canal remained open until it was officially closed in 1961. Following over 30 years of restoration works, the canal was reopened as a public amenity in 2010.

This evolution of the railway can be seen in the historic OS mapping of the proposed Project area. In the first edition OS map of Dublin, published in 1843, the GSWR railway has yet to be constructed. By the second edition of the OS six-inch maps of Dublin and Kildare in the 1870s the railway has been constructed and is labelled the Great Southern & Western Railway. The fourth edition OS maps of 1930s, show the railway as the Great Southern Railways. The maps also show the evolution of the rail yard at Heuston Station and the works at Inchicore.

21.4.2. Architectural Heritage Structures

This section describes the structures that are, or were, of architectural heritage significance (BH sites) within each of the four main geographic areas (Zones A to D) as outlined in Chapter 4 Project Description. The sites are illustrated in drawing DP-04-23-DWG-EV-TTA-23808 of Volume 3A of this EIAR.

21.4.2.1. Zone A: Hazelhatch & Celbridge Station to Park West & Cherry Orchard Station

In its choice of a route the GSWR needed to run the line as directly as possible between its various destinations while keeping to gradients suited to the power of locomotives of the 1840s and avoiding any feature that would result in unnecessary expense such as water bodies, valleys and high-cost land, which latter would include the grounds of the villas of the gentry. Being a long-distance route, it avoided smaller centres of population such as Clondalkin, Lucan and Celbridge, while providing stations at the nearest point on the line to those centres. For these reasons the land traversed through Zone A was primarily agricultural in the 1840s, with the occasional larger house in extensive grounds. Since that time development has occurred in the vicinity of the line.

One feature adjacent to the railway that relates to the agricultural character of the land is a lime kiln, located close to the northern side of the track to the west of Stacumny Bridge. This is a type of kiln known as a draw kiln, which became common after the middle of the eighteenth century and was used to burn limestone to produce lime as a fertiliser for the fields. The date of the kiln is not known, but it predates the railway and was depicted on the first edition Ordnance Survey map, published in the late 1830s.

A total of 16 structures that are, or were, of architectural heritage significance (BH sites) have been noted within Zone A. Three protected structures have been identified within the administrative area of Kildare County Council, two of which are also on the NIAH. Two protected structures noted within the administrative area of South Dublin County Council are both also included in the NIAH, while a further nine structures are included in the NIAH and not the RPS. Two structures in Zone A are included in the DCIHR. Five masonry-arched overbridges that were recorded in the NIAH in 2002 and one that was recorded in the DCIHR were subsequently replaced with concrete bridges as part of the move from two tracks to four tracks along this part of the line, while two houses at Neillstown, near Clondalkin Station, were also demolished since being recorded by the NIAH in 2002. These structures are included in the list below in the light of their listing in the NIAH and DCIHR.

Table 21.6 lists the structures within Zone A that have been included in the RPS, the NIAH or the DCIHR along with any other structures identified as being of potential heritage significance.

Table 21.6: Structures of Architectural Heritage Significance within Zone A

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-1	GSWR railway	Railway	All	DCIHR	0	All
BH-2	Hazelhatch R405 Road Bridge (OBC25)	Replacement concrete bridge	SDCC	NIAH 11207002	0	24+500
BH-3	Hazelhatch & Celbridge Station	Single-storey 19th-century station building	SDCC	RPS SDCC 150 NIAH 11207001	0	24+480
BH-4	Hazelhatch Footbridge (OBC24)	Late-19th century iron footbridge	KCC	RPS KCC 151 NIAH 11207010	0	24+410
BH-5	Hazelhatch Station gates	Rock-faced ashlar gate piers	SDCC	RPS SDCC 145 NIAH 11207013	0	21+270
BH-6	Lime Kiln	Stone lime kiln	KCC	RPS KCC B11-12	7.5	22+620
BH-7	Stacumny Lodge	Single-storey gate lodge	KCC	RPS KCC B11-10	30	22+400
BH-8	Finnstown R120 Road Bridge (OBC19)	Replacement concrete bridge	SDCC	NIAH 11204051	0	19+300
BH-9	Adamstown Footbridge (OBC16A)	Replacement concrete bridge	SDCC	NIAH 11204059	0	18+920
BH-10	Kishoge Road Bridge (OBC14C)	Replacement concrete bridge	SDCC	NIAH 11205034	0	15+735
BH-11	House at Newlands Road	No longer extant	SDCC	NIAH 11205032	28	15+680
BH-12	House at Newlands Road	No longer extant	SDCC	NIAH 11205033	14	15+680
BH-13	Coolevin House	Early 20th-century single-storey house	SDCC	NIAH 11205035	50	15+640
BH-14	Clondalkin/Fonthill Station	Single-storey, three-bay station building	SDCC	NIAH 11205037	0	15+400
BH-15	Ninth Lock Road bridge (OBC13)	Replacement concrete bridge	SDCC	NIAH 11205038	0	15+330

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-16	Park West Avenue Road Bridge (OBC9B)	Replacement concrete bridge	DCC	DCIHR	0	14+200

Note 1: Structures of architectural heritage significance (BH sites) with a distance denoted as “0” are within the proposed Development Boundary.

There are a number of demesnes in the vicinity of the railway within Zone A as outlined in Table 21.7, though many of these have been denatured or built over, while another has been laid out as a golf course.

Table 21.7: Demesnes and Gardens of Significance within Zone A

Ref no.	Location	Description	LA area	NIAH reference	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
D-1	Elm Hall	Former demesne, now a golf course	KCC	1926	0	23+200
D-2	Stacumny	Demesne in the vicinity of the railway	KCC	1928	10	23+210
D-3	Stacumny Cottage	Demesne adjacent to railway	KCC	n/a	0	22+200
D-4	Moorefield	Former demesne, now denatured	SDCC	n/a	0	15+800
D-5	Neillstown House	Former demesne, no longer extant	SDCC	n/a	0	15+720
D-6	Cappagh House	Former demesne, no longer extant	SDCC	n/a	0	15+730
D-7	Cloverhill	Former demesne, no longer extant	SDCC	n/a	0	14+900

Note 1: Demesnes and Gardens of significance (D sites) with a distance denoted as “0” are within the proposed Development Boundary.

21.4.2.2. Zone B: Park West & Cherry Orchard Station to Heuston Station (incorporating Inchicore Works)

As with Zone A, the land within Zone B was largely in agricultural use, with the occasional larger house in extensive grounds prior to the construction of the railway in the 1840s. At the eastern end of the line the route leading from the terminus ran through the grounds of the Royal Hospital Kilmainham, passing close to Islandbridge Barracks, which had been built in the 1790s to house the Royal Irish Regiment

of Artillery. A little to the west of this, the route passed through part of the grounds of Inchicore House before reaching open farmland.

Zone B is entirely within the administrative area of Dublin City Council. In this zone thirty five protected structures lie within the study area, thirty one of which are also on the NIAH. A further six structures are included in the NIAH and another eight that are on neither the RPS nor the NIAH are identified in the DCIHR – while nineteen other structures on the DCIHR are also protected structures, proposed protected structures or on the NIAH. The structures in this zone include seventeen buildings and other structures within the Inchicore railway works, a number of buildings in the surrounding streets in close proximity to the railway line and some bridges. The bridges include Le Fanu Road Bridge (OBC7), which is the only surviving masonry arch bridge on the GSWR main line within the DART+ South West Project and which, for some reason, was not included in the NIAH when all of the other masonry arch bridges on this section of the line were included. Also within this area is Memorial Road Bridge (OBC3), which carries Memorial Road over the railway. Memorial Road was originally laid out as the access from Inchicore Road to the National Memorial Gardens designed by Sir Edwin Lutyens, though the bridge appears to have been replaced by a later structure. Adjacent to Memorial Road Bridge, on the western side, are the stone abutments of an earlier accommodation bridge that had been built in the 1840s to facilitate landowner access across the railway cutting.

The following table lists the structures within Zone B that have been included in the RPS, the NIAH or the DCIHR along with any other structures identified as being of potential heritage significance.

Table 21.8: Structures of Architectural Heritage Significance within Zone B

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-17	Cherry Orchard Footbridge (OBC8B)	Steel footbridge	DCC	DCIHR	0	13+350
BH-18	Le Fanu Road Bridge (OBC7)	Masonry-arched bridge, 1840s that appears to have been overlooked by the NIAH and RPS	DCC	DCIHR	0	12+610
BH-19	Former smithy at Inchicore Works	Single-storey, three-bay copper smithy	DCC	DCC 8851 NIAH 50080421 DCIHR	0	10+980
BH-20	Office building at Inchicore Works	Two-storey office building	DCC	DCC 8853 NIAH 50080422 DCIHR	0	10+940
BH-21	Former forge and foundry at Inchicore Works	Double-height, multiple-bay former forge and foundry	DCC	DCC 8854 NIAH 50080423 DCIHR	0	10+940

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-22	Former boiler house at Inchicore Works	Eight-bay, double-height former boiler shop	DCC	DCC 8855 NIAH 50080424 DCIHR	0	10+980
BH-23	Office building at Inchicore Works	Single-storey, three-bay office building	DCC	DCC 8856 NIAH 50080425 DCHIR	0	10+780
BH-24	Office building at Inchicore Works	Two-storey, three-bay office building	DCC	DCC 8857 NIAH 50080426 DCIHR	0	10+780
BH-25	Former foundry and pattern shop at Inchicore Works	Two-storey, multiple-bay former foundry and pattern shop	DCC	DCC 8858 NIAH 50080427 DCIHR	0	10+850
BH-26	Former paint shop at Inchicore Works	Twelve-bay, double-height former paint shop	DCC	DCC 8859 NIAH 50080428 DCIHR	0	10+780
BH-27	Office building at Inchicore Works	Two-storey, four-bay office with dormer attic storey	DCC	DCC 8860 NIAH 50080468 DCIHR	0	10+760
BH-28	Hydrant at Inchicore Works	Cast-iron hydrant	DCC	DCC 8861 NIAH 50080411 DCIHR	0	11+240
BH-29	Former power house at Inchicore Works	Six-bay, double-height power house	DCC	DCC 8862 NIAH 50080412 DCIHR	0	11+110
BH-30	Former tool shop at Inchicore Works	Single-storey, nine-bay tool shop	DCC	DCC 8863 NIAH 50080420 DCIHR	0	11+150
BH-31	Turntable at Inchicore Works	Railway turntable	DCC	DCC 8864 NIAH 50080415 DCIHR	0	11+070
BH-32	Former store at Inchicore Works	Two-storey, three-bay office building	DCC	DCC 8865 NIAH 50080416 DCIHR	0	11+070

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-33	Signal box at Inchicore Works	Two-storey castellated signal box of brick and stone	DCC	DCC 8866 NIAH 50080417 DCIHR	0	11+020
BH-34	Former locomotive shed at Inchicore Works	Nineteen-bay, double-height locomotive shed	DCC	DCC 8867 NIAH 50080418 DCIHR	0	11+010
BH-35	Former running shed at Inchicore Works	Two-storey, eighteen-bay former erecting shop	DCC	DCC 8868 NIAH 50080419 DCIHR	0	11+030
BH-36	Extension to maintenance shed and shunting hut, Inchicore Works	Extension to maintenance shed and shunting hut, Inchicore works	DCC	DCIHR	0	11+300
BH-37	Wall at Inchicore Works	Boundary wall of coursed limestone rubble	DCC	RPS DCC 8744 NIAH 50080055 DCIHR	0	11+200
BH-38	Former gas works at Inchicore Works	No longer extant	DCC	DCIHR	0	11+210
BH-39	Former CIÉ chassis factory	Double-height, multiple-bay former bus and truck chassis factory	DCC	NIAH 50080485	0	11+280
BH-40	Seven Oaks, Sarsfield Road	Two-storey, three-bay former house	DCC	RPS DCC 7477 NIAH 50080378	43	10+700
BH-41	Inchicore Sports and Social Club	Single-storey, sixteen-bay former recreation centre	DCC	RPS DCC 8745 NIAH 50080406	35	10+560
BH-42	Retaining walls east of Inchicore	Retaining walls east of Inchicore	DCC	n/a	0	
BH-43	Sarsfield Road Bridge (OBC4)	Railway underbridge with concrete beam deck and rock-faced limestone abutments	DCC	DCIHR	0	10+520
BH-44	Clery's licensed premises, Sarsfield Road	Two-storey, three-bay licensed premises	DCC	RPS DCC 7475 NIAH 50080379	40	10+330

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-45	Memorial Road Bridge (OBC3)	Concrete beam bridge with stone parapets	DCC	DCIHR	0	10+000
BH-46	Abutments of former bridge	Stone abutments of former railway bridge to the west of Memorial Bridge	DCC	n/a	0	10+000
BH-47	Irish National War Memorial Gardens	Extensive gardens with garden buildings and memorial cross	DCC	RPS DCC 12028 NIAH 50080001	30	10+000
BH-48	Spire of former St Jude's Church	Gothic spire surviving from former St Jude's Church	DCC	RPS DCC 3991 NIAH 50080040	50	9+910
BH-49	59A Inchicore Road	Two-storey over basement, three-bay house	DCC	RPS DCC 3990 NIAH 50080041	50	9+790
BH-50	59 Inchicore Road	Two-storey over basement, two-bay house	DCC	RPS DCC 3989 50080042	50	9+780
BH-51	Kilmainham Congregational Church	Single-storey, three-bay church building	DCC	RPS DCC 3988 NIAH 50080043	30	9+720
BH-52	Spencer Terrace, 40-52 Inchicore Road	Terrace of seven late-19 th century houses	DCC	NIAH 50080045	50	9+600
BH-53	Chocolate and cocoa factory, Inchicore Road	No longer extant	DCC	DCIHR	10	9+550
BH-54	Railway bridge at South Circular Road	Original bridge no longer extant	DCC	DCIHR	0	9+500
BH-55	Richmond Tower, South Circular Road	Early 19 th century gate tower to Royal Hospital Kilmainham, moved to present site in 1840s	DCC	RPS DCC 5244 NIAH 50080056	50	9+430
BH-56	Bully's Acre, Royal Hospital Kilmainham	Medieval burial ground, in use until early 19 th century	DCC	NIAH 50080054	0	9+400

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-57	Military cemetery, Royal Hospital Kilmainham	Medieval burial ground, in use until early 20 th century	DCC	NIAH 50080051	9	9+370
BH-58	Military cemetery, Royal Hospital Kilmainham	Military burial ground in use until early 20 th century	DCC	NIAH 50080052	21	9+300
BH-59	Gateway to Irish National War Memorial Gardens	Iron gates held on iron piers and flanked by granite piers	DCC	NIAH 50080013	5	9+380
BH-60	Officers' House, Clancy Barracks	Two-storey over basement, five-bay, red-brick building	DCC	RPS DCC 1851 NIAH 50080025	20	9+320
BH-61	Guard House, Clancy Barracks	Single-storey, three-bay guard houses with verandah to front	DCC	RPS DCC 1851 NIAH 50080026	40	9+310
BH-62	Barracks, Clancy Barracks	Two-storey, seven-bay former barracks building	DCC	RPS DCC 1851 NIAH 50080024	37	9+300
BH-63	Stables, Clancy Barracks	Two-storey, multiple-bay former stables	DCC	RPS DCC 1851 NIAH 50080023	40	9+270

Note 1: Structures of architectural heritage significance (BH sites) with a distance denoted as "0" are within the proposed Development Boundary.

There were two demesnes in the vicinity of the railway within Zone B, though both of these have been denatured or built over; the section of the demesne of Inchicore House in the vicinity has been built over.

Table 21.9: Demesnes and Gardens of Significance within Zone B

Ref no.	Location	Description	LA area	NIAH reference	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
D-8	Ballyfermot Castle	Former demesne, no longer extant	DCC	n/a	0	12+630
D-9	Inchicore House	Former demesne, section in vicinity of railway is no longer extant	DCC	2300	0	10+500

Note 1: Demesnes and Gardens of significance (D sites) with a distance denoted as “0” are within the proposed Development Boundary.

21.4.2.3. Zone C: Heuston Station and Yard (including New Heuston West Station)

Zone C encompasses Heuston Station, and the railway yard associated with the station. This includes the extensive station building itself, dating from the 1840s and a protected structure, along with various other buildings and a substantial area of railway running track and sidings.

Prior to the construction of the railway this area was part of the lands of the Royal Hospital Kilmainham, which had been hived off from the Phoenix Park in the late seventeenth century. There were some houses in the vicinity of the bridge over the River Liffey at that time and into the eighteenth century and in the middle of that century the South Circular Road was laid out through the area, leading to Sarah Bridge, which replaced the previous bridge in 1791. Shortly after the opening of the bridge an area of land to the east of the South Circular Road, including some existing houses, was earmarked for the provision of a new headquarters for the Royal Irish Regiment of Artillery, which had previously been based at Chapelizod. The barracks was completed in 1798 and following the disbandment of the regiment in 1801 the barracks was occupied by the Royal Artillery Regiment. Other buildings were erected within the barracks over the ensuing years and the area occupied extended southward. Following independence in 1922 the barracks was handed over to the National Army, which remained in occupation until the 1990s. The barracks has since been developed for housing and other purposes.

Heuston Station was built to face onto Steevens Lane, which ran from James’s Street to a ferry over the River Liffey until the 1820s when the ferry was replaced by a bridge, which gave its name to Kingsbridge Station.

Zone C lies entirely within the administrative area of Dublin City Council. Within this zone eight protected structures have been identified within the study area, three of which are the main station building at Heuston Station, its booking office and its train shed. A garden building on the opposite side of St John’s Road West from the station is also protected, as is the Luas bridge over the River Liffey. All of these are also included in the NIAH, as are several other structures within the Heuston yard and the surrounding streets. Some other structures are included in the DCIHR, two of which are goods sheds that are no longer extant. Three structures within the railway yard are proposed for demolition and while they are not included in the RPS, NIAH or DCIHR they are included here for assessment.

Table 21.10 lists the structures within Zone C that have been included in the RPS, the NIAH or the DCIHR along with any other structures identified as being of potential heritage significance.

Table 21.10: Structures of Architectural Heritage Significance within Zone C

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-64	Workshop, Clancy Barracks	Two-storey, twenty-two bay former barracks	DCC	RPS DCC 1851 NIAH 50080016	27	9+080
BH-65	Workshop, Clancy Barracks	Two-storey, twenty-bay former barracks	DCC	RPS DCC 1851 NIAH 50080017	43	9+050
BH-66	Workshop, Clancy Barracks	Two-storey, twenty-bay former barracks	DCC	RPS DCC 1851 NIAH 50080018	42	9+080
BH-67	Garden pavilion, Royal Hospital Kilmainham	Two-storey over basement, three-bay garden house with cylindrical corner towers	DCC	RPS DCC 5244 NIAH 50080068	45	-
BH-68	Goods shed, Heuston Station	No longer extant	DCC	DCIHR	0	-
BH-69	Goods shed, Heuston Station	No longer extant	DCC	DCIHR	0	-
BH-70	Terminal building and offices at Heuston Station	Two-storey, nine-bay railway station building	DCC	RPS DCC 7576 NIAH 50080035 DCIHR	0	-
BH-71	Station building on St John's Road	Double-height, seven-bay ticket hall with portico to front	DCC	RPS DCC 7576 NIAH 50080036 DCIHR	0	-
BH-72	Gate lodge and gates at Heuston Station	Small, flat-roofed lodge and wrought-iron gates held on cylindrical cast-iron piers	DCC	NIAH 50080034	0	-
BH-73	Train shed at Heuston Station	Train shed with multi-pile roof of wrought-iron trusses on cast-iron columns and with a brick northern wall having blind arcading	DCC	RPS DCC 7576 NIAH 50080031 DCIHR	0	-

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-74	Irish Railway Records Society building	Two-storey, six-bay office building	DCC	NIAH 50080029	0	-
BH-75	Quay walls and wharf at Heuston Station	Quay walls of granite ashlar	DCC	NIAH 50080032	0	-
BH-76	Letter box on St John's Road	Cast-iron pillar letter box, late-19 th century	DCC	NIAH 50080037	6	-
BH-77	Seán Heuston Bridge	Cast-iron arched road bridge supported on granite abutments	DCC	RPS DCC 905 NIAH 50080033 DCIHR	36	-
BH-78	Sentry box at Clancy Barracks	Corner sentry box tower, mid-20 th century	DCC	NIAH 50080027	0	8+910
BH-79	GSWR North Wall Extension	Railway	DCC	DCIHR	0	9+000

Note 1: Structures of architectural heritage significance (BH sites) with a distance denoted as "0" are within the proposed Development Boundary.

The one demesne or garden within the vicinity of Zone C is the Royal Hospital Kilmainham as outlined in Table 21.11, which lies to the south of the rail yard of Heuston Station, on the opposite side of St John's Road West.

Table 21.11: Demesnes and Gardens of Significance within Zone C

Ref no.	Location	Description	LA area	NIAH reference	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
D-10	Royal Hospital Kilmainham	Extant grounds on land to the south of St John's Road West	DCC	2329	18m	-

Note 1: Demesnes and Gardens of significance (D sites) with a distance denoted as "0" are within the proposed Development Boundary.

21.4.2.4. Zone D: Liffey Bridge to Glasnevin Junction (Phoenix Park Tunnel Branch Line)

Zone D runs northward across the River Liffey, beneath Phoenix Park and northward to Glasnevin Junction.

Initially the GSWR had no connection to any other railway in Dublin. A problem it faced was access to Dublin Port, partly to facilitate passengers travelling on its line en route to the passenger ships at North Wall, but mainly for the movement of cattle to the port for export. Travelling eastward through the city was not a financial or practical option and the GSWR developed a plan to run northward to join the pre-existing MGWR line to the port at Glasnevin. The necessary act of parliament was passed in 1872 and the line opened for traffic in September 1877. At that time there was little development in the vicinity of the route northward beyond Phoenix Park; the North Circular Road had been a toll road, which had discouraged development until the mid-nineteenth century and the area to the north of the circular road was largely in use as market gardens. In 1888 construction commenced on a cavalry barracks on land at Grangegorman to the west of the railway cutting, though the bridge over the railway leading to the barracks was already in place, having been built at the time of the construction of the railway to access a market garden on the land at that time. As with Islandbridge Barracks, the barracks at Grangegorman, known as Marlborough Barracks, was handed over to the National Army in 1922, when it was renamed McKee Barracks.

Zone D is entirely within the administrative area of Dublin City Council. Within this zone the structures of architectural heritage significance include sixteen that are on both the RPS and the NIAH, three others on the RPS, ten others on the NIAH and six that are on neither the RPS nor the NIAH but are listed in the DCIHR. One other structure, the overbridge at Conyngham Road, is not on the RPS, the NIAH or the DCIHR, but is of heritage significance. The structures include five masonry arch bridges north of the Phoenix Park dating from the 1870s, some of which have been widened, and also includes a number of houses close to the route of the railway in Phoenix Park and on North Circular Road.

The following table lists the structures within Zone D that have been included in the RPS, the NIAH or the DCIHR along with any other structures identified as being of potential heritage significance.

Table 21.12: Structures of Architectural Heritage Significance within Zone D

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-80	Liffey Bridge (UBO1)	Wrought-iron lattice girder bridge	DCC	NIAH 50080277 DCIHR	0	8+880
BH-81	Conyngham Road Bridge (OBO2)	Beam bridge with limestone abutments	DCC	n/a	0	8+770
BH-82	Phoenix Park Tunnel (PPT)	Masonry-vaulted tunnel beneath park	DCC	DCIHR	0	8+500
BH-83	Wellington Monument	67-metre obelisk faced with granite ashlar and with bronze panels	DCC	RPS DCC 6762 NIAH 50060116	30	8+690

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-84	Seán Heuston Monument, Phoenix Park	Memorial bust	DCC	NIAH 50060076	46	8+380
BH-85	Garda Terrace, Phoenix Park	Terrace of ten red-brick houses	DCC	RPS DCC 6746	10	8+160
BH-86	Infirmiry Road Gate Lodge, Phoenix Park	Single-storey, three-bay gate lodge	DCC	NIAH 50060019	40	8+100
BH-87	Infirmiry Road gateway, Phoenix Park	Wrought-iron gates and piers with cast-iron embellishments	DCC	RPS DCC 6778 NIAH 50060018	50	8+100
BH-88	11 North Circular Road	Red-brick house with stepped gable to front	DCC	NIAH 50070134	13	8+010
BH-89	17-29 North Circular Road	Terrace of seven three-storey, three-bay houses	DCC	NIAH 50070135	14	7+970
BH-90	31 North Circular Road	Two-storey over basement, two-bay, semi-detached house	DCC	RPS DCC 1564 NIAH 50070002	17	7+940
BH-91	33 North Circular Road	Two-storey over basement, two-bay, semi-detached house	DCC	RPS DCC 1565 NIAH 50070002	25	7+930
BH-92	35 North Circular Road	Two-storey, three-bay, semi-detached house	DCC	RPS DCC 1566 NIAH 50070003	25	7+920
BH-93	37 North Circular Road	Two-storey, three-bay, semi-detached house	DCC	RPS DCC 1567 NIAH 50070003	30	7+915
BH-94	39 North Circular Road	Two-storey over basement, two-bay, semi-detached house	DCC	RPS DCC 1568 NIAH 50070004	40	7+910
BH-95	41 North Circular Road	Two-storey over basement, two-bay, mid-terrace house	DCC	RPS DCC 1569 NIAH 50070004	40	7+905
BH-96	43 North Circular Road	Two-storey over basement, two-bay, semi-detached house	DCC	RPS DCC 1570 NIAH 50070004	40	7+900

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-97	45 North Circular Road	Two-storey over basement, two-bay end of terrace house	DCC	RPS DCC 1571 NIAH 50070009	50	7+880
BH-98	47 North Circular Road	Two-storey over basement, two-bay terraced house	DCC	RPS DCC 1572 NIAH 50070009	45	7+875
BH-99	49 North Circular Road	Two-storey over basement, two-bay terraced house	DCC	RPS DCC 1573 NIAH 50070009	50	7+870
BH-100	51 North Circular Road	Two-storey over basement, two-bay terraced house	DCC	RPS DCC 1574 NIAH 50070009	50	7+865
BH-101	53 North Circular Road	Two-storey over basement, two-bay terraced house	DCC	RPS DCC 1575 NIAH 50070009	50	7+860
BH-102	55 North Circular Road	Two-storey over basement, two-bay terraced house	DCC	RPS DCC 1576 NIAH 50070009	50	7+855
BH-103	57 North Circular Road	Two-storey over basement, two-bay terraced house	DCC	RPS DCC 1577 NIAH 50070009	50	7+850
BH-104	McKee Barracks	Late-19 th century red-brick cavalry barracks	DCC	RPS DCC 768	0	7+700
BH-105	McKee Barracks Bridge (OBO3)	Single-span masonry-arch bridge	DCC	NIAH 50070001 DCIHR	0	7+700
BH-106	Blackhorse Avenue Bridge (OBO4)	Single-span masonry-arch bridge	DCC	NIAH 50060149 DCIHR	0	7+630
BH-107	35-36 Ellesmere Avenue	Pair of semi-detached houses with gabled breakfront	DCC	NIAH 50070023	13	7+370
BH-108	Old Cabra Road Bridge (OBO5)	Single-span masonry-arch bridge	DCC	NIAH 50060148 DCIHR	0	7+220

BH no.	Location	Description	LA area	Status	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
BH-109	Letter box at Old Cabra Road	Mid-20 th century cast-iron letter box	DCC	NIAH 50060147	24	7+225
BH-110	Cabra Road bridge (OBO6)	Single-span beam bridge	DCC	RPS DCC 879 DCIHR	0	7+030
BH-111	Faussagh Road Bridge (OBO7)	Single-span masonry-arch bridge, widened on both sides with concrete beam bridges	DCC	DCIHR	0	6+480
BH-112	Royal Canal and Luas Twin Arch (OBO8)	Combined railway bridge and aqueduct with staggered twin masonry arches	DCC	DCIHR	0	6+060
BH-113	MGWR railway	Railway	DCC	DCIHR	0	6+070
BH-114	Royal Canal	Late-18 th century canal and towpath	DCC	DCIHR	0	6+040
BH-115	Maynooth Line Twin Arch (OBO9)	Railway bridge with staggered twin masonry arches	DCC	DCIHR	0	5+920
BH-116	Glasnevin Cemetery Road Bridge (OBO10)	Single-span beam bridge with masonry abutments	DCC	DCIHR	0	5+650

Note 1: Structures of architectural heritage significance (BH sites) with a distance denoted as “0” are within the proposed Development Boundary.

The Phoenix Park is the only garden or demesne in the study area in the vicinity of Zone D and as the route passes in a tunnel beneath the park there would be no effect on the character of the park arising from the works.

Table 21.13: Demesnes and Gardens of Significance within Zone D

Ref no.	Location	Description	LA area	NIAH reference	Approx. Distance from proposed Development Boundary (m) ^{Note 1}	Approx. chainage
D-11	Phoenix Park	Railway is in tunnel beneath park	DCC	2309	0	8+500

Note 1: Demesnes and Gardens of significance (D sites) with a distance denoted as “0” are within the proposed Development Boundary.

21.4.3. Architectural Conservation Areas

There are no architectural conservation areas (ACAs) in the vicinity of the proposed Project at present. Paragraph 11.5.2 of the Dublin City Development Plan 2022-2028 includes an intention to consider the designation of further ACAs during the currency of the plan and states that sixteen potential ACAs have been identified for prioritisation, amongst which is the CIÉ estate at Inchicore. While this indicates and emphasises the special nature of the complex of buildings at Inchicore it is noted that the protection status will not change unless and until an ACA is adopted.

21.4.4. Evolution of the Environment in the absence of the Project (Do Nothing)

Annex IV of the EIA Directive sets out the information required to be included in an EIAR. This includes:

‘A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the Proposed Development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge’.

In the event that the proposed Project does not proceed, an assessment of the future baseline conditions has been considered and is described within this section.

In the “do-nothing” scenario the interventions for the modernisation of the railway corridor and areas outside of CIÉ lands for the Project would not be undertaken and includes the continued use of the existing railway line. The baseline condition of architectural heritage would remain unaltered and there would be no resulting impacts on architectural heritage. The various elements of architectural heritage that form part of the railway system have been maintained in use over the years and it is likely that this would continue, with diesel-powered trains running on the track, carrying passengers and goods, with no implications for architectural heritage. Receptors that lie beyond the lands controlled as part of the railway would also continue in their present uses with no changes resultant on the non-implementation of the project.

21.5. Description of Potential Impacts

The tables in Section 21.5.1 and Section 21.5.2 below list the predicted impacts on structures of heritage significance that have been identified within the study area. The tables provide a summary of the predicted impacts on structures of heritage significance (with its baseline rating, magnitude of effect and significance of effect) as per the assessment criteria outlined previously in Section 21.3.3.2.

Where a structure is listed in the tables in the previous Section 21.4.2 above as being within the study area and being of architectural heritage significance, but no positive or negative effects are predicted, that structure is excluded from the tables in Section 21.5.1 and Section 21.5.2 below.

21.5.1. Potential Construction Impacts

21.5.1.1. Direct Effects on Zone A

The description of the works within Zone A are outlined in Chapter 4 Project Description (Refer to Section 4.6). Within Zone A, the works will involve modifying the existing four tracks to provide two slow electrified lines (northern tracks) to provide for the DART service and two fast non-electrified lines

(southern tracks). The modification of the tracks will include track lowering in certain areas to ensure that there is sufficient clearance beneath overbridges for the OHLE.

There will be no direct effect arising from the works on any structures of architectural heritage significance other than the railway itself, which is included in the industrial heritage surveys. None of the bridges along the lines that are to be electrified in Zone A are of heritage significance, those that are included in the NIAH having been replaced with concrete bridges.

Table 21.14: Potential Direct Construction Impacts in Zone A

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-1	GSWR railway	3	Medium	Moderate	The track will be lowered in places resulting in an imperceptible negative effect and OHLE will be erected along the length of the study area, resulting in a moderate negative effect on the character of the railway

21.5.1.2. Direct Effects on Zone B

The description of the works within Zone B are outlined in Chapter 4 Project Description (Refer to Section 4.7). A number of structures will be demolished in Zone B, including Le Fanu Road Bridge (OBC7), which is a surviving masonry arch bridge, a signal box at the Inchicore works, which is a protected structure (RPS DCC 8866), a later addition to a maintenance shed at the Inchicore works that is included in the DCIHR and two other structures at Inchicore that are not of heritage significance. To the east of the Inchicore works the widening of the track corridor will necessitate the removal of low retaining walls at the toes of the embankments on either side of the track and their replacement further back into the embankments. Along this stretch, the deck of Sarsfield Road Under-Bridge (UBC4) will be reconstructed and widened, while the Memorial Road Bridge (OBC3) will also be replaced.

Table 21.15: Potential Direct Construction Impacts in Zone B

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-18	Le Fanu Road Bridge (OBC7)	2	High	Very significant	The bridge will be demolished to facilitate the move from two-track to four-track, resulting in a very significant negative impact
BH-33	Signal box at Inchicore Works	1	High	Profound	The signal box will be demolished to facilitate the move from two-track to four-track, resulting in a profound negative impact
BH-36	Extension to maintenance shed and shunting hut, Inchicore Works	3	High	Not significant	The single-storey structure is a later addition to the maintenance shed and will be demolished to facilitate the move from two-track to four-track, resulting in a negative impact that is not significant

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-37	Wall at Inchicore works	1	High	Profound	Part of the perimeter wall of the Inchicore works lies within the area required for four-tracking the line and will need to be removed, resulting in a profound negative impact on part of the wall
BH-42	Retaining walls east of Inchicore	4	Medium	Not significant	The retaining walls will need to be replaced in some locations due to the four-tracking, resulting in a negative impact on built heritage that would not be significant
BH-43	Sarsfield Road Under-Bridge (UBC4)	3	Medium	Moderate	The deck will be replaced by a wider structure, with new abutments piled behind the existing abutments and OHLE will be installed across the bridge deck, resulting in a moderate negative impact
BH-45	Memorial Road Bridge	4	High	Moderate	The bridge will be demolished to facilitate the move from two-track to four-track, resulting in a moderate negative impact

21.5.1.3. Direct Effects on Zone C

The description of the works within Zone C are outlined in Chapter 4 Project Description (Refer to Section 4.8). Within Zone C the works will include some modifications to the layout of the track and the construction of a new station to be known as Heuston West Station. The revisions to the track layout will necessitate the removal of some structures adjacent to sidings known as the Guinness sidings and a maintenance building. Some of the track leading into the current station will be provided with OHLE, leading to platforms 6, 7 and 8. These platforms lie outside the original train shed at the station and hence the OHLE will not enter the original station building, which is a protected structure.

The proposed Heuston West Station is to be constructed on the curved track that turns from the eastbound lines in from Inchicore to lead northward across the River Liffey toward the Phoenix Park tunnel. Platform 10 lies adjacent to this stretch of the track but is not used and it will be removed to facilitate the works.

Table 21.16: Potential Direct Construction Impacts in Zone C

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-79	GSWR North Wall Extension	3	Medium	Moderate	The track will be realigned along this route to facilitate headroom for OHLE and structural and passing clearances; slab track will replace the ballast track to provide improved restraint and retaining walls are to be constructed at the toes of the slopes of the banks flanking the cuttings, resulting in a

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
					negative impact that will not be significant. OHLE is to be erected along the length of the line within the study area, resulting in a moderate negative impact on the character of the line

21.5.1.4. Direct Effects on Zone D

The description of the works within Zone D are outlined in Chapter 4 Project Description (Refer to Section 4.9). The work proposed within Zone D includes the electrification of the GSWR extension to North Wall between the southern bank of the Liffey and Glasnevin Junction, where the DART+ South West Project extent ties in to the existing track at Glasnevin Junction and interfaces with the DART+ West Project. This will involve the installation of OHLE and some other works necessary to facilitate the OHLE and to ensure that safety standards are met.

Table 21.17: Potential Direct Construction Impacts in Zone D

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-80	Liffey Bridge (UBO1)	2	Medium	Significant	OHLE is to be attached to the bridge structure, resulting in a significant negative impact on the character of the bridge
BH-81	Conyngnam Road Bridge (OBO2)	3	Medium	Slight	The track will be lowered beneath the bridge and the southern parapet will be raised, resulting in a slight negative impact
BH-82	Phoenix Park Tunnel (PPT)	3	Low	Slight	The track will be lowered within the tunnel and a slab track laid to replace the ballast track; the OHLE will be attached to the vaulting of the tunnel. The negative impact on the tunnel will be slight.
BH-105	McKee Barracks Bridge (OBO3)	2	Medium	Moderate	Panels will be installed to raise the parapets, resulting in a moderate negative impact. The OHLE will pass beneath the bridge without direct connection.
BH-106	Blackhorse Avenue Bridge (OBO4)	2	Medium	Moderate	Panels will be installed to raise the parapets and the OHLE will be attached to the soffit of the bridge, resulting in a moderate negative impact. while a gravity sewer is to be removed from the face of the bridge, resulting in a moderate positive impact.

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-108	Old Cabra Road Bridge (OBO5)	2	Medium	Moderate	Panels will be installed to raise the parapets with a moderate negative impact. The OHLE will pass beneath the bridge without any direct connection.
BH-110	Cabra Road Bridge (OBO6)	1	Medium	Very significant	Panels will be installed to raise the parapets and the OHLE will be connected to the soffit of the bridge, resulting in a very significant negative impact
BH-111	Faussagh Road Bridge (OBO7)	3	Medium	Slight	Panels will be installed to raise the parapets and the OHLE will be connected to the soffit of the bridge with a slight negative impact
BH-112	Royal Canal and Luas Twin Arch (OBO8)	3	Low	Slight	The track beneath the arches will be lowered and the OHLE will be connected to the soffits of the bridge, resulting in a slight negative impact
BH-113	MGWR railway	3	Medium	Moderate	OHLE is to be erected along the length of the line within the study area, resulting in a moderate negative impact on the character of the line
BH-115	Maynooth Line Twin Arch (OBO9)	3	Low	Slight	The track beneath the arches will be lowered and the OHLE will be connected to the soffits of the bridge, resulting in a slight negative impact
BH-116	Glasnevin Cemetery Road Bridge (OBO10)	3	Medium	Slight	The bridge deck is to be replaced, with the road approach ramps raised and panels are to be installed to raise the parapets, resulting in a slight negative impact

21.5.1.5. Indirect Effects on Zone A

Within Zone A there are few structures that would be adversely indirectly affected by the proposed works. At Hazelhatch and Celbridge Station the historic iron footbridge and the original station building are on the fast lines, away from the OHLE and would not be affected to any significant degree by the works.

Further along the line a lime kiln lies in the vicinity of the track. A photomontage was requested by Kildare County Council to assess the impact of the proposed works on the setting and character of the Lime Kiln. The photomontage from Stacumny Road Bridge (OBC21) is presented in Volume 3B of this EIAR. This lime kiln predates the railway and is seen on the first-edition Ordnance Survey map, published in 1837-38, prior to the construction of the railway. The lime kiln is nevertheless close to the railway and there would be moderate effect on its setting arising from the presence of the OHLE (Refer

to Volume 3B of this EIAR). At Clondalkin Station the original station building is adjacent to the track close to the OHLE.

Table 21.18: Potential Indirect Construction Impacts in Zone A

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-3	Hazelhatch & Celbridge Station	1	Medium	Moderate	The presence of OHLE in the vicinity of the station building will result in a moderate negative effect on the setting of the building
BH-6	Lime Kiln	1	Low	Moderate	The OHLE would be erected in the vicinity of the lime kiln resulting in a moderate negative effect on the setting of the kiln
BH-6	Lime Kiln	1	Negligible	Not significant	The track will be lowered by a maximum of 0.1 metres resulting in a negligible negative effect
BH-14	Clondalkin Station	2	Low	Moderate	The OHLE would be erected in the vicinity of the station resulting in a moderate negative effect on the setting of the station

21.5.1.6. Indirect Effects on Zone B

There would be no significant indirect effects of the proposed works on architectural heritage within Zone B.

21.5.1.7. Indirect Effects on Zone C

Within Zone C the proposed OHLE would have some effect on the setting of three workshop buildings within the former Clancy Barracks, each of which is a protected structure.

Table 21.19: Potential Indirect Construction Impacts in Zone C

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-64	Workshop, Clancy Barracks	1	Low	Moderate	The OHLE would be erected in the vicinity of the workshop resulting in a moderate negative effect on the setting of the workshop
BH-65	Workshop, Clancy Barracks	1	Low	Moderate	The OHLE would be erected in the vicinity of the workshop resulting in a moderate negative effect on the setting of the workshop
BH-66	Workshop, Clancy Barracks	1	Low	Moderate	The OHLE would be erected in the vicinity of the workshop resulting in a moderate negative effect on the setting of the workshop

21.5.1.8. Indirect Effects on Zone D

There would be no significant indirect effects of the proposed works on architectural heritage within Zone D.

21.5.2. Potential Operational Impacts

21.5.2.1. Direct Effects

There would be no direct effects on architectural heritage arising from this project at operational stage in any of the four geographic zones.

The indirect effects at operational stage are similar to the indirect effects arising at construction stage, as they arise from the effect on the settings of buildings and other structures of architectural heritage significance. In addition to those structures included in the indirect construction effects listed in Section 21.5.1.5 to Section 21.5.1.8 above, there are some structures that were included in the direct construction impacts that will be impacted by the indirect operational impacts due to the effects on the character or settings arising from the ongoing presence of the OHLE. These include the railway lines and the historic bridges.

The level of predicted impact on the bridges varies in accordance with the conservation status of the bridge and its prominence. Hence the bridge crossing the River Liffey, the Liffey Bridge (UBO1) has a higher impact level than the bridge over Sarsfield Road (UBC4) – these being the only underbridges affected. The bridges over the northbound route to Glasnevin Junction are less visible, being in a deep cutting and hence the impact will be lower, the effects on the arches that carry the MGWR and the Royal Canal over the route being particularly low as these are not generally visible from a public place.

21.5.2.2. Indirect Effects in Zone A

Table 21.20 provides a summary of the assessment of the potential indirect impacts during the operational phase on structures of heritage significance in Zone A.

Table 21.20: Potential Indirect Operational Impacts in Zone A

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-1	GSWR railway	3	Medium	Moderate	The presence of the OHLE will result in a moderate negative effect on character of the railway line
BH-3	Hazelhatch and Celbridge Station	1	Medium	Moderate	The presence of the OHLE in the vicinity of the station building will result in a moderate negative effect on the setting of the building
BH-6	Lime Kiln	1	Low	Moderate	The presence of the OHLE in the vicinity of the lime kiln will result in a moderate negative effect on the setting of the kiln
BH-14	Clondalkin Station	2	Medium	Moderate	The presence of the OHLE in the vicinity of the station building will result in a moderate negative effect on the setting of the building

21.5.2.3. Indirect Effects in Zone B

Table 21.21 provides a summary of the assessment of the potential indirect impacts during the operational phase on structures of heritage significance in Zone B.

Table 21.21: Potential Indirect Operational Impacts in Zone B

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-43	Sarsfield Road bridge (OBC4)	3	Low	Moderate	The presence of the OHLE on the bridge will result in a moderate negative effect on the character of the bridge

21.5.2.4. Indirect Effects in Zone C

Table 21.22 provides a summary of the assessment of the potential indirect impacts during the operational phase on structures of heritage significance in Zone C.

Table 21.22: Potential Indirect operational impacts in Zone C

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-64	Workshop, Clancy Barracks	1	Low	Moderate	The presence of the OHLE in the vicinity of the workshop will result in a moderate negative effect on the setting of the workshop
BH-65	Workshop, Clancy Barracks	1	Low	Moderate	The presence of the OHLE in the vicinity of the workshop will result in a moderate negative effect on the setting of the workshop
BH-66	Workshop, Clancy Barracks	1	Low	Moderate	The presence of the OHLE in the vicinity of the workshop will result in a moderate negative effect on the setting of the workshop

21.5.2.5. Indirect Effects in Zone D

Table 21.23 provides a summary of the assessment of the potential indirect impacts during the operational phase on structures of heritage significance in Zone D.

Table 21.23: Potential Indirect Operational Impacts in Zone D

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
BH-64	Workshop, Clancy Barracks	1	Low	Moderate	The presence of the OHLE in the vicinity of the workshop will result in a moderate negative effect on the setting of the workshop
BH-65	Workshop, Clancy Barracks	1	Low	Moderate	The presence of the OHLE in the vicinity of the workshop will result in a moderate negative effect on the setting of the workshop
BH-66	Workshop, Clancy Barracks	1	Low	Moderate	The presence of the OHLE in the vicinity of the workshop will result in a moderate negative effect on the setting of the workshop
BH-79	GSWR North Wall Extension	3	Medium	Moderate	The presence of the OHLE will result in a moderate negative

BH-no.	Location	Baseline rating	Magnitude of effect	Significance of effect	Impact assessment prior to mitigation
					effect on the character of the railway line
BH-80	Liffey Bridge (UBO1)	2	Medium	Significant	The presence of the OHLE on the bridge will result in a significant negative effect on the character of the bridge
BH-105	McKee Barracks Bridge (OBO3)	2	Medium	Moderate	The presence of the OHLE beneath the bridge will result in a slight negative effect on the setting of the bridge
BH-106	Blackhorse Avenue Bridge (OBO4)	2	Medium	Moderate	The presence of the OHLE beneath the bridge will result in a slight negative effect on the setting of the bridge
BH-108	Old Cabra Road Bridge (OBO5)	2	Medium	Moderate	The presence of the OHLE beneath the bridge will result in a slight negative effect on the setting of the bridge
BH-110	Cabra Road Bridge (OBO6)	1	Medium	Very significant	The presence of the OHLE beneath the bridge will result in a moderate negative effect on the setting of the bridge
BH-111	Faussagh Avenue Bridge (OBO7)	3	Medium	Slight	The presence of the OHLE beneath the bridge will result in a slight negative effect on the setting of the bridge
BH-112	Royal Canal and Luas Twin Arch (OBO8)	3	Low	Not significant	The presence of the OHLE beneath the arches will result in a negative effect on the setting of the arches that is not significant
BH-113	MGWR railway	3	Low	Slight	The presence of the OHLE will result in a moderate negative effect on character of the railway line
BH-114	Royal Canal	3	Low	Not significant	The presence of the OHLE beneath the canal will result in a negative effect on the setting of the canal that is not significant
BH-115	Maynooth Line Twin Arch (OBO9)	3	Low	Not significant	The presence of the OHLE beneath the arches will result in a negative effect on the setting of the arches that is not significant
BH-116	Glasnevin Cemetery Road Bridge (OBO10)	3	Low	Not significant	The presence of the OHLE beneath the bridge will result in a negative effect on the setting of the bridge that is not significant

21.6. Mitigation Measures

21.6.1. Construction Phase

Considering the geographical extent of the proposed works and the nature of work that is proposed the predicted impact on architectural heritage is relatively small. In many cases there is little or no scope for mitigation. The principal impacts are the erection of the OHLE, the raising of the parapets on historic bridges and the demolition of the masonry-arched bridge at Le Fanu Road and the dismantling, storing and reconstruction of the signal box at the Inchicore works in an alternative location.

The requirements for OHLE are not flexible and there is no practical way of mitigating the impact; different arrangements of OHLE were considered at design stage as part of the optioneering process and the system now proposed was the arrangement adopted. Similarly, the raising of parapets is a safety requirement by providing suitable protection for the general public to prevent accidental contact with the OHLE, including with the aid of a stick or other long object. While demolition of masonry arch bridges can sometimes be avoided by actions such as lowering the track, in the case of Le Fanu Road Bridge (OBC7) the demolition and reconstruction is required in order to provide for four-tracking and the space available has insufficient horizontal clearance to accommodate 2 No. additional tracks within the corridor while using the existing arch. Similarly, the necessary additional width to add a new line of track at Inchicore can only be obtained by demolishing the signal box. As a result of design development, a track alignment solution was identified which enables the Turret structure to be retained on the opposite side of the track.

In some cases a certain amount of mitigation can be achieved through design, such as the selection of an appropriate means of raising bridge parapets, while the recording of structures that are to be demolished, while not preserving the structures, can ensure that knowledge of their existence and character is preserved for the future.

As per Chapter 5 Construction Strategy, a Conservation Architect will be appointed for the proposed Project to oversee and advise on works in proximity to heritage assets.

Condition Surveys will be carried out for engineering, property and conservation purposes; these will include structural surveys prior to works with high levels of vibration and / or in proximity to features of conservation.

21.6.1.1. Zone A

The proposed mitigation and impact assessment (following implementation of mitigation) is outlined in Table 21.24.

Table 21.24: Mitigation and Impact (following Mitigation) in Zone A

BH-no.	Location	Mitigation	Impact (following Mitigation)
BH-1	GSWR railway	No potential for mitigation	The impact following mitigation will be moderate

21.6.1.2. Zone B

The proposed mitigation and impact assessment (following implementation of mitigation) is outlined in Table 21.25.

Table 21.25: Mitigation and Impact (following Mitigation) in Zone B

BH-no.	Location	Mitigation	Impact (following mitigation)
BH-18	Le Fanu Road Bridge (OBC7)	The bridge should be recorded by means of photographs, written description and measured drawings to English Heritage Level 3	The impact following mitigation will be very significant
BH-33	Signal box at Inchicore works	The potential for reconstruction of the signal box on an alternative site as a museum piece should be explored and the signal box should be recorded by means of photographs, written description and measured drawings to English Heritage Level 3	The impact following mitigation will be profound
BH-36	Extension to maintenance shed and shunting hut, Inchicore works	The structures should be recorded by means of photographs and written description prior to their removal	The impact following mitigation will not be significant
BH-37	Wall at Inchicore Works	The section of the wall that is to be removed is to be recorded by means of photographs and written description prior to removal and the resulting new end of the wall is to be repaired in accordance with a method statement to be prepared by a qualified conservation specialist	The impact following mitigation will be significant
BH-42	Retaining walls east of Inchicore	The existing retaining walls are to be recorded by means of photographs and written description prior to removal	The impact following mitigation will not be significant
BH-43	Sarsfield Road Under-Bridge (UBC4)	The existing bridge is to be recorded by means of photographs and written description prior to the alterations	The impact following mitigation will be moderate
BH-45	Memorial Road Bridge (OBC3)	The parapets of the replacement bridge will replicate the masonry of the existing parapets	The impact following mitigation will be moderate

21.6.1.3. Zone C

The proposed mitigation and impact assessment (following implementation of mitigation) is outlined in Table 21.26.

Table 21.26: Mitigation and Impact (following Mitigation) in Zone C

BH-no.	Location	Mitigation	Impact (following mitigation)
BH-79	GSWR North Wall Extension	No potential for mitigation	The impact following mitigation will be moderate
BH-45	Memorial Road Bridge (OBC3)	No requirement for mitigation	The impact following mitigation will be moderate

21.6.1.4. Zone D

The proposed mitigation and impact assessment (following implementation of mitigation) is outlined in Table 21.27.

Table 21.27: Mitigation and Impact (following Mitigation) in Zone D

BH-no.	Location	Mitigation	Impact following mitigation
BH-79	GSWR North Wall Extension	No potential for mitigation	The impact following mitigation will be moderate
BH-110	Cabra Road Bridge (OBO6)	The impact of the raising of the parapet is to be mitigated by design, while the choice of design for the OHLE has mitigated the impact of fixing the OHLE to the bridge as far as is practicable.	The impact following mitigation will be moderate
BH-111	Faussagh Road Bridge (OBO7)	The impact of the raising of the parapet is to be mitigated by design	The impact following mitigation will not be significant
BH-112	Royal Canal and Luas Twin Arch (OBO8)	No potential for mitigation	The impact following mitigation will be slight
BH-113	MGWR railway	No potential for mitigation	The impact following mitigation will be moderate
BH-115	Maynooth Line Twin Arch (OBO9)	No potential for mitigation	The impact following mitigation will be moderate
BH-116	Glasnevin Cemetery Road Bridge (OBO10)	The impact is to be mitigated by design	The impact following mitigation will not be significant

21.6.2. Operational Phase

There is no scope for mitigating the indirect effects of the project on architectural heritage, as the effects all arise from the ongoing presence of the OHLE and its impact on the character or setting of each structure of architectural heritage significance.

21.7. Monitoring

There is no requirement for monitoring in relation to the effects on architectural heritage either at construction stage or operational stage.

21.8. Residual Effects

The residual effect of the project will be the effect of the OHLE on the character and settings of a number of structures of architectural heritage significance.

21.9. Cumulative effects

The cumulative assessment of relevant plans and projects is undertaken separately in Chapter 26 of this EIAR.

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