

---

# **Chapter 21**

## **Architectural Heritage**

---

## Table of contents

<b>21. ARCHITECTURAL HERITAGE .....</b>	<b>21/2</b>
21.1 Introduction .....	21/2
21.2 Legislation, policy and guidance .....	21/2
21.2.1 Legislation .....	21/2
21.2.2 Policy .....	21/2
21.2.3 Guidance .....	21/3
21.3 Methodology .....	21/3
21.3.1 Study Area .....	21/4
21.3.2 Survey methodology .....	21/4
21.3.3 Assessment methodology .....	21/4
21.3.4 Consultation .....	21/5
21.3.5 Difficulties encountered/ Limitations .....	21/7
21.4 Receiving environment .....	21/7
21.4.1 Dublin City .....	21/7
21.4.2 Fingal County .....	21/20
21.4.3 Meath County .....	21/24
21.4.4 Kildare County .....	21/26
21.5 Description of potential impacts .....	21/29
21.5.1 Potential Direct Construction Impacts .....	21/31
21.5.2 Potential Indirect Construction Impacts .....	21/38
21.5.3 Potential Operational Impacts .....	21/41
21.6 Mitigation measures .....	21/45
21.7 Monitoring .....	21/51
21.8 Residual effects .....	21/51
21.9 Cumulative effects .....	21/52
21.10 References .....	21/52

## 21. ARCHITECTURAL HERITAGE

### 21.1 Introduction

This chapter of the EIAR consists of an appraisal of the proposed 'DART+ West' (hereafter referred to as the 'proposed development') under the heading of architectural heritage.

This chapter initially sets out the legislation, policy and guidance (Section 21.2) and Section 2.3 outlines the methodology followed in carrying out the assessment, Section 21.4 describes the receiving environment and summarises the main characteristics of the proposed development which are of relevance to the architectural heritage. The description of potential impacts of the proposed development on architectural heritage are described in Section 21.5. Section 21.6 describes the mitigation measures proposed to mitigate these impacts. Residual impacts are described in Section 21.7. References are detailed at the end of this Chapter.

Appendix A21.1 Protection of the Architectural Heritage Resource in Volume 4 of this EIAR contains a summary of the legislation relating to the protection of built heritage and extracts from the various development plans and draft development plans that relate to the protection of architectural heritage within the study area. Appendix A21.2 Built Heritage Sites in Volume 4 of this EIAR includes lists of the built heritage sites identified within the study area, while Appendix A21.3 Demesnes in Volume 4 of this EIAR lists the demesnes that are within, or partly within the study area. Appendix A21.4 Conservation Report in Volume 3 of this EIAR which examines those bridges along the proposed DART+ West project that are potentially of architectural heritage significance and where there will be a direct impact on the bridge, including the installation of OHLE. Appendix A21.5, A21.6 and A27.7 contain an Architectural Heritage Impact Assessment for Broome Bridge, Castleknock, and Cope Bridge respectively prepared by Blackwood Associates Architects and Building Conservation Consultants.

### 21.2 Legislation, policy and guidance

#### 21.2.1 Legislation

The assessment of the architectural heritage resource has been conducted under the relevant legislation and planning frameworks applicable to the Republic of Ireland. These include:

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

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 project extends over the administrative areas of four local authorities, namely Dublin City Council, Fingal County Council, Meath County Council and Kildare County Council. The development plans and local area plans of each of these local authorities has been considered in this study:

- Dublin City Development Plan 2016-2022.
- Draft Dublin City Development Plan 2022-2028.

- Fingal Development Plan 2017-2023.
- Draft Fingal Development Plan 2023-2029.
- Meath County Development Plan 2021-2027.
- Kildare County Development Plan 2017-2023.
- Draft Kildare County Development Plan 2023-2029.
- Barnhill Local Area Plan 2019.
- Kellystown Local Area Plan 2021.
- Maynooth Local Area Plan 2013-2019.
- Leixlip Local Area Plan 2020-2023.

### 21.2.3 Guidance

A range of guidance has been published that is of relevance to the proposed development. This includes guidance on environmental impact assessment in general, 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.

- Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2003).
- Advice Notes on Current Practice (in preparation of Environmental Impact Statements) (EPA, 2003).
- Draft Advice Notes on Current Practice (in preparation of Environmental Impact Statements) (EPA, 2015).
- Guidelines on the information to be contained in environmental impact assessment reports (May 2022, EPA).
- Guidelines for the Assessment of Architectural Heritage Impacts on National Roads Schemes (2005).
- Architectural Heritage Protection Guidelines for Planning Authorities (2004 and 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 development and in the vicinity of the proposed development 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 (IFA 2012). This leads to the following:

- Determining the presence of known built heritage sites that may be affected by the proposed development.
- Determining the impact upon the setting of known architectural heritage sites in the surrounding area (receiving environment).
- 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 development.

The study involved detailed interrogation of the historical and architectural nature of the receiving environment of the proposed development. This included information from the record of protected structures and development plans for counties Kildare, Meath and Fingal 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+ West

project between December 2020 and January 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 TII). The receiving environment at EIAR stage is defined in those guidelines as an area measuring 50 m 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 50 m 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 DCIHR and the demesnes in the vicinity of the proposed development, the site was visited in stages to examine the buildings and demesnes to assess the potential effects of the proposed development. Where necessary, the surveys included access to the railway track in accordance with the safety requirements set down by Iarnród Éireann. Particular attention was paid during the surveys to those structures that would be directly affected by the works, such as the vaults at Connolly Station and the various bridges along the route. In the latter cases the proximity of canal bridges was frequently a matter of concern and the potential impacts on those bridges was assessed wherever the adjacent railway bridge would be altered. Impacts on other structures along the route were considered, including the demesne of Ashton House, Ashtown Oil Mill and Clonsilla School. Due to the length of time over which the proposed development has been developed, repeated visits to certain parts of the route were undertaken so as to assess potential changes to the landscape in the vicinity of the proposed development that may have taken place.

### 21.3.3 Assessment methodology

The quality and type of a potential impacts 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.
- **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 Effect	Definitions relating to sites of an architectural nature
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.

### 21.3.4 Consultation

Following the initial research, a number of statutory and non-statutory bodies were consulted to gain further insight into the cultural background of the receiving environment and study area, including:

- National Inventory of Architectural Heritage: Counties Dublin, Meath and Kildare.
- Dublin City Council: Planning Department and Conservation Officer.
- Fingal County Council: Planning Department and Conservation Officer.
- Meath County Council: Planning Department and Conservation Officer.
- Kildare County Council: Planning Department and Conservation Officer.
- Study area and Baseline Data Collection.

Formal written submissions have been received from each of the four planning authorities that manage the administrative areas in which the project is located. The architectural heritage elements of each of these submissions are summarised below, taking each in turn from east to west. It is noted that in the months since receipt of these submissions there have been several changes to the design of the project, some of which affect the points of concern raised by the planning authorities.

#### 21.3.4.1 Dublin City Council

Observations submitted by Dublin City Council in September 2021 included detailed comments from the city's Conservation Office. This includes specific concerns in relation to particular structures such as the water tower and signal box at Sheriff Street, the Royal Canal and the various bridges along the route and to certain proposed works such as the raising of the parapets of bridges and the lowering of the track bed. The recommendations of the submission by the Conservation Office are, in summary:

- That a Grade 1 Conservation Architect be employed to design, manage, monitor and implement the works to historic structures.
- Raising of historic parapets and walls and the dismantling and reconstruction of bridges is a conservation concern and design details should be agreed with the Dublin City Council Conservation Section in advance.
- Project impacts should be monitored continuously by the design team to mitigate adverse impacts on architectural heritage.
- All works to historic structures should be carried out in accordance with best conservation practice and in accordance with the Architectural Heritage Protection Guidelines for Planning Authorities and the advice series issued by the Department of Housing, Local Government and Heritage.
- All existing original features of historic structures should be protected during the works.
- All repair of original fabric in the vicinity of the works should be carried out by experienced conservators of historic fabric.
- Architectural detailing, materials and new work to historic structures should be executed to the highest standards.
- Iarnród Éireann and its Grade 1 conservation architect should engage with the Conservation Section of Dublin City Council throughout the design, tender and construction process.

A Grade 1 conservation architect has been engaged and has worked closely with the design team on matters such as the alterations to the vaults at Connolly Station, the alterations to historic bridges and other aspects of architectural heritage import. The points raised in this submission have been taken on board in the architectural heritage assessment.

#### **21.3.4.2 Fingal County Council**

Fingal County Council made a written submission in October 2021 and a further submission in April 2022 and these included comments in relation to built heritage. These submissions drew attention to the presence of a number of protected structures close to the project area and to the existence of other structures such as historic houses and rail bridges that, while not protected structures, nonetheless have a value as part of the surviving building stock. Attention was also drawn to the number of large houses in the vicinity of the proposed development that retain their designed landscapes.

The submission states that high quality design and sensitive interfacing of proposed works, particularly relating to new rail overbridge structures, underpasses and compounds is required throughout the proposed development. The design response must respect and enhance the surrounding environment.

These comments have been taken into account in the preparation of this chapter.

#### **21.3.4.3 Meath County Council**

The submission from Meath County Council was received in September 2021. The works within the administrative area of Meath County Council do not affect many historic structures. The principal concern raised in relation to architectural heritage relates to the proposed lowering of the track level to achieve the necessary clearance for the OHLE under Dunboyne Bridge and the possible undermining of the bridge foundations. This comment has been taken into account in this chapter.

#### **21.3.4.4 Kildare County Council**

The submission from Kildare County Council received in October 2021 raises concerns that the designs for Cope Bridge, adjacent to Leixlip Confey Station, were insufficient to meet traffic requirements as this bridge is critical to the objective to deliver the significant urban expansion planned for the area to the north of the bridge. The county council's position is that the planned intervention to the existing bridge should include provision for widening the vehicular carriageway to 7 metres and for the provision of footpaths and cycle lanes.

The submission accepts the need to raise the parapets of bridges crossing the railway line and welcomes the engagement of a Grade 1 conservation architect as part of the design team for these works. The planning

authority's position is that increasing the height of the stone parapet walls of the existing railway bridges would dramatically alter the proportion of these structures and the adjacent canal bridges. Alternative approaches are suggested, including a railing or metal barrier, a framed glass barrier or a shelf projecting from the parapet.

The options for works to heritage structures should be assessed by a Grade 1 conservation architect, including any works that would have a direct or indirect on the setting of the Royal Canal and the works to the railway bridges. Kildare County Council supports the proposal to lower the track bed beneath Pike Bridge, rather than to raise the bridge deck.

The design of the OHLE should reflect the sensitive nature of the landscape and the setting of the Royal Canal and other historic structures and the visual impact should be assessed by a Grade 1 conservation architect.

It is noted that the designs for Cope Bridge have progressed since this submission was written to address the concerns of the county council. The comments raised in this submission have been taken into account in the preparation of the architectural heritage chapter.

#### **21.3.4.5 Other submissions**

Submissions have been made by others during the consultation processes and these have been taken into account in the writing of this chapter.

#### **21.3.5 Difficulties encountered/ Limitations**

In the initial stages of this project the appearance of the Covid-19 pandemic had some effect on the preparation of this chapter. While travel was restricted during the periods of lockdown no restrictions were imposed on travel for site inspections for the proposed development. However, libraries and archives closed for a significant period, curtailing access for research purposes. Access to libraries and archives eased later on during the research period, though generally still with some restrictions in place.

### **21.4 Receiving environment**

This section of the Chapter describes the architectural heritage assets (BH sites) within the study area of the proposed development under four administrative areas of Dublin City Council (DCC), Fingal County Council, Kildare County Council (KCC), and Meath County Council (MCC). The record of protected structures (RPS) or proposed protected structure (PPS) number is given for each structure and the letters DCC, FCC, MCC or KCC is added as appropriate to distinguish between the records of protected structures for each administrative area. A Built Heritage (BH) number is added to each structure of architectural heritage significance shown in tables below and on Drawing no. MAY-MDC-ENV-ROUT-DR-V-210000-D to 210015-D in Volume 3A of this EIAR.

#### **21.4.1 Dublin City**

##### **21.4.1.1 General**

Within the administrative area of Dublin City Council, the proposed development is largely, but not entirely, confined to existing railways. Commencing at the eastern end, the proposed development will involve the provision of greater capacity for passengers at Connolly Station, with consequent works to the station building, which is a protected structure. These works will involve modifications to a series of vaults beneath the running lines and platforms to provide for new accesses, including emergency escape. This element will also involve works to the streetscape at Preston Street, where the four houses and a former parcels office are protected structures.

A second terminus at the eastern end is a proposed new station at Mayor Street and Sheriff Street, to be known as Spencer Dock Station. This will involve the removal and replacement of a section of a road bridge

over the railway lands at Sheriff Street, which is listed in the Dublin City Industrial Heritage Record (DCIHR). There will also be a large construction compound on railway land to the north of Sheriff Street.

The remainder of the works within Dublin City will involve the provision of OHLE along two railway lines, one being the former MGWR (Midland Great Western Railway) line running alongside the Royal Canal, the other the former GSWR (Great Southern and Western Railway) line running to the north of the MGWR line through Drumcondra. The two lines interconnect to the west of Prospect Road, Glasnevin. Along those routes it will be necessary for safety reasons to raise the parapets of the railway overbridges. In order to ensure that there is sufficient clearance for the OHLE it will be necessary to lower the track bed along much of the MGWR route and to remove and replace some of the overbridges. A long the GSWR route, which is raised on a viaduct for much of its length within the city, the OHLE will have some visual impact on the settings of structures of architectural heritage significance, including the railway bridges.

#### **21.4.1.2 Architectural Background**

The Royal Canal originated as a result of a former director of the Grand Canal establishing a rival route to link the Shannon and the city of Dublin. Two routes had been previously discussed with the Grand Canal route taking precedent in 1755. The act of parliament, which established the Royal Canal, was passed in 1789 and the first stone was laid in the following year by the Lord Lieutenant, the Earl of Westmoreland, and was finally completed in 1817. The Royal Canal was never hugely successful, with its construction marred by several costly mistakes, including changes of alignment at Maynooth and Kinnegad and running through a large quarry at Porterstown. The management of the project was so bad that the original company was laid down by the government in 1813, when the construction and completion of the canal came into state control. Following the completion of the works in 1817 a new company was established in 1818 to run the canal. The revenues of the canal suffered badly from competition by road, particularly with the improvement in roads and road vehicles that took place from the late eighteenth century. The Midland Great Western Railway Company (MGWR) purchased the Royal Canal in 1845, marking the decline of the canal, though the MGWR was obliged to keep the canal open, and it 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. The Royal Canal and its associated infrastructure such as locks, lock houses, bridges and tow paths, dominate the architectural heritage of the study area of the proposed development. A number of these features are recorded within the Dublin City Industrial Heritage Record, highlighting their significance to the industrial heritage of north Dublin City.

The Midlands Great Western Railway was granted a large sum in 1845 to purchase the entire route of the Royal Canal in order to build a railway from Dublin to Mullingar and Longford. Construction began the following year and was completed to Mullingar in 1848. Following the establishment of the Irish Free State, many of the existing railways in Ireland were merged c.1924. As a result, the MGWR became a part of the Great Southern Railways. This evolution of the railway can be seen in the historic OS mapping of the proposed development area. In the first edition OS map of 1843, the 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 alongside the Royal Canal and is labelled the Midlands Great Western Railway. The fourth edition OS maps of 1930s, show the railway as the Great Southern Railways.

During the 19th and 20th centuries, the docklands and industrial development of the north of Dublin City, led to a great increase in the construction of high-density housing to accommodate the workforce, mostly in the form of terraced housing. Many of these structures survive today and many are recorded as protected structures.

#### **21.4.1.3 Architectural heritage structures within the Receiving Environment**

A total of 145 structures of architectural heritage significance (BH sites) have been noted within section of the study area that is in the administrative area of Dublin City Council. Analysis of the Dublin City Development Plan 2016-2022 has shown that a total of 48 protected structures are recorded within the study area of the proposed development. In Table 21-2 the buildings included in the record of protected structures (RPS) are identified for the DCC area. The NIAH includes 94 structures within the Dublin City part of the study area, of which 45 are also included in the record of protected structures. The Dublin City Industrial Heritage Record

(DCIHR) lists 57 structures in the area and the table below also includes six other structures that are potentially of architectural heritage significance but are not listed in the other sources.

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 Dublin City DCIHR 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 a number of the DCIHR sites in Table 21-2 below represent linear features (such as the Royal Canal, Canal towpath and 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 DCIHR have been identified as being potentially affected by the project. Within the Dublin City area six such structures were identified, namely the Great Southern and Western Railway (GSWR) through Drumcondra, and four railway bridges carrying the GSWR at Bessborough Avenue (UBLL 4), Strandville Avenue (UBLL 2), Spring Garden Street (UBO 28 and UBO 30) and St Joseph's Avenue adjacent to Drumcondra Station (UBO 14) and a pedestrian arch beneath the GSWR at Jones's Road (UBO 21).

**Table 21-2 Structures of architectural heritage significance within 50 m of the proposed development area in Dublin City**

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-1	Electricity substation, East Wall Road	Detached two-storey electricity substation faced with brick	Detached two-storey electricity substation faced with brick	38 m east	NIAH 50011170
BH-2	GSWR siding to Alexandra Road	Railway line	Railway siding running eastward along Alexandra Road	Within proposed development area	DCIHR
BH-3	Former Castle Forbes Works	Industrial building	Three-storey, eighteen-bay, brick-fronted commercial premises	Rear of site adjoins red line	DCIHR
BH-4	Pumping station, East Road	Pumping Station	Sewage pumping station built c1905 and substantially rebuilt c1995; some elements of original building survive	18m south	DCIHR
BH-5	Railway overbridge, East Road	Railway bridge	Single-span bridge with original masonry piers and replacement concrete deck	Within proposed development area	DCIHR
BH-6	Railway overbridge, Sheriff Street Upper	Railway bridge	Seven-span road bridge over former railway sidings. Brick piers supporting wrought-iron beams and with brick parapets	Within proposed development area	DCIHR
BH-7	Railway water tower, Sheriff Street Upper	Water tower	Cast-iron water tank on high brick tower	Within proposed development area	NIAH 50120264
BH-8	Disused LNWR railway line	Railway line	Disused railway line.	Within proposed development area	DCIHR

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-9	Railway signal box	Signal box	Two-storey railway signal box with rock-faced ashlar ground floor and timber upper floor	Within proposed development area	DCIHR
BH-10	MGWR extension to north wall	Railway line	Railway branch to North Wall now comprising tracks on concrete sleepers	Within proposed development area	DCIHR
BH-11	Railway overbridge, Sheriff Street Upper	Railway bridge	Masonry arch bridge with eight arches.	Immediately south	DCIHR
BH-12	Spencer Bridge, Sheriff Street	Lifting bridge	Iron lifting bridge with counterbalanced beam.	Within proposed development area	NIAH 50010016; DCIHR
BH-13	Spencer Dock, Royal Canal	Canal dock	Widened area of canal forming curved linear dock	Within proposed development area	DCIHR
BH-14	6 Oriel Street Upper	House	Two-bay, two-storey over basement, brick-fronted house	c. 18 m east of the proposed development area	NIAH 50010030
BH-15	7 Oriel Street Upper	House	Two-bay, two-storey over basement, brick-fronted house	c. 18 m east of the proposed development area	NIAH 50010031
BH-16	Group Property Management, Sheriff Street Lower	Single-storey office building	Single-storey, multi-bay brick office building.	Within proposed development area	NIAH 50060567
BH-17	Railway goods shed, Sheriff Street Lower	Goods shed	Three-bay, single-storey, stone-built former goods shed	Within proposed development area	DCIHR
BH-18	Railway goods shed, Sheriff Street Lower	Warehouse	Two-storey, fourteen-bay, stone-built warehouse	Within proposed development area	RPS 130 DCC; NIAH 50010132
BH-19	54 Talbot Street	Commercial premises	Three-storey, two-bay building with shopfront	c. 44 m west of the proposed development area	NIAH 50010139
BH-20	53 Talbot Street	Commercial premises	Three-storey, two-bay building with shopfront	c. 38 m west of the proposed development area	NIAH 50010138
BH-21	51-52 Talbot Street	Commercial premises	Three-storey corner property on Talbot Street and Amiens Street	c. 31 m west of the proposed development area	RPS 8693 DCC; NIAH 50010125
BH-22	49 Talbot Street	Commercial premises	Three-storey, two-bay, brick-faced building with shopfront	c. 38 m west of the proposed development area	NIAH 50010135
BH-23	Connolly Station	Railway station	Extensive complex of railway buildings including thirteen-bay, two-storey main station building with three towers, the original canopy over the platform of the DART station and also including extensive arches beneath railway line to the north	Within proposed development area	RPS 130 DCC; NIAH 50010119
BH-24	North Star Hotel, 26-30 Amiens Street	Hotel	Three-storey, ten-bay, hotel building with rendered facade	c. 30 m west of the proposed development area	RPS 98 DCC; NIAH 50010124

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-25	36 Amiens Street	Commercial premises	Three-storey, three-bay commercial premises with original shopfront	c. 27 m west of the proposed development area	RPS 99 DCC; NIAH 50010122
BH-26	37 Amiens Street	Commercial premises	Three-storey, single-bay, brick-fronted commercial premises with shopfront	c. 30 m west of the proposed development area	RPS 100 DCC; NIAH 50010120
BH-27	38 Amiens Street	Commercial premises	Four-storey, two-bay, brick-fronted commercial premises with shopfront	c. 30 m west of the proposed development area	RPS 101 DCC; NIAH 50010120
BH-28	Railway bridge, Amiens Street	Railway overbridge	Wrought-iron beam bridge supported on fluted cast-iron columns	immediately west of the proposed development area	NIAH 50010117; DCIHR
BH-29	Irish Rail Head Office, Connolly Station, Amiens Street	Nineteenth-century office building	Two-storey over basement, multi-bay, red-brick office building with corner tower	Within proposed development area	NIAH 50010118
BH-30	Railway spanning Sheriff Street	Railway viaduct	Wrought-iron bridge with fluted cast-iron columns, supporting railway station with blind arcaded brick superstructure	Within proposed development area	RPS 130 DCC; NIAH 50010123; DCIHR
BH-31	Loopline railway viaduct	Railway viaduct	Viaduct consisting partly of solid material between retaining walls, partly of arches with brick vaulting and partly of wrought-iron bridges	Within proposed development area	DCIHR
BH-32	Dublin Junction Railway station, Amiens Street	Late-19th-century station	Single-storey, twenty-bay railway station elevated on arched viaduct and with canopy roofs held on wrought- and cast-iron structures	Within proposed development area	RPS 130 DCC; NIAH 5001009
BH-33	Cast-iron gas lamp standard, Amiens Street	Lamp Standard	Decorative cast-iron lamp standard carrying three lamps	c. 21 m west of the proposed development area	NIAH 50010116
BH-34	1 Buckingham Street Lower	House	Four-storey over basement, three-bay, brick-fronted terraced house	c. 41 m west of the proposed development area	NIAH 50011163
BH-35	2 Buckingham Street Lower	House	Four-storey over basement, three-bay, brick-fronted terraced house	c. 47 m west of the proposed development area	RPS 999 DCC; NIAH 50011162
BH-36	Burke's Bar, 47-48 Amiens Street	Licensed premises	Four-storey, four-bay, brick-fronted corner building	38 m north	RPS 102 DCC; NIAH 50010115
BH-37	109 Amiens Street	House	Three-storey over basement, three-bay, brick-fronted terraced house	c. 25 m west of the proposed development area	RPS 129 DCC; NIAH 50010114
BH-38	108 Amiens Street	House	Three-storey over basement, three-bay, brick-fronted terraced house	c. 26 m west of the proposed development area	RPS 128 DCC; NIAH 50010113

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-39	107 Amiens Street	House	Three-storey over basement, three-bay, brick-fronted terraced house	c. 30 m west of the proposed development area	RPS 127 DCC; NIAH 50010112
BH-40	1 Preston Street	House	Three-storey over basement, three-bay, brick-fronted end-of-terrace house	c. 33 m west of the proposed development area	RPS 6847 DCC; NIAH 50010111
BH-41	2 Preston Street	House	Three-storey over basement, three-bay, brick-fronted terraced house	c. 23 m west of the proposed development area	RPS 6848 DCC; NIAH 50010110
BH-42	3 Preston Street	House	Three-storey over basement, three-bay, brick-fronted terraced house	c. 15 m west of the proposed development area	RPS 6849 DCC; NIAH 50010109
BH-43	4 Preston Street	House	Three-storey over basement, three-bay, brick-fronted terraced house	Immediately west of the proposed development area	RPS 6850 DCC; NIAH 50010108
BH-44	Former railway parcels office, Amiens Street	Former railway parcels office	Seven-bay over basement, two-storey, brick-fronted former parcels office	Immediately west of the proposed development area	RPS 126 DCC; NIAH 50010042
BH-45	Railway water tower, Amiens Street	Water Tower	Iron tank supported on arched tower of stone with brick corners and arching ring	Within proposed development area	NIAH 50010041
BH-46	Railway viaduct and arches, Seville Place, Dublin 1	Railway Building	Stone-built railway viaduct with yellow brick blind arcade and red brick parapet wall	Within proposed development area	RPS 130 DCC; NIAH 50010032
BH-47	St Laurence O'Toole School, Seville Place, Dublin 1	Saint Laurence O'Toole School	Three-bay, three-storey school building with rendered façade	c. 50 m east of the proposed development	NIAH 50010033
BH-48	Dublin Junction Railway bridge, Seville place	Railway underbridge	Railway bridge with concrete deck supported on concrete columns and with an iron façade on western side	Within proposed development area	DCIHR
BH-49	DDR railway bridge, Seville place	Railway underbridge	Railway bridge with concrete deck supported on either side of carriageway by brick walls	Within proposed development area	DCIHR
BH-50	9 Seville Place	House	Two-storey over basement, two-bay brick-fronted house	c. 34 m west of the proposed development area	RPS 7493 DCC; NIAH 50010043
BH-51	8 Seville Place	House	Two-storey over basement, two-bay brick-fronted house	c. 42 m west of the proposed development area	RPS 7492 DCC; NIAH 50010044
BH-52	7 Seville Place	House	Two-storey over basement, two-bay brick-fronted house	c. 49 m west of the proposed development area	RPS 7491 DCC; NIAH 50010045

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-53	100 Seville Place	House	Three-storey over basement, two-bay house with rendered facade	immediately west of the proposed development area	RPS 7496 DCC; NIAH 50010036
BH-54	101 Seville Place	House	Three-storey over basement, two-bay house with painted brick facade	c. 10 m west of the proposed development area	RPS 7497 DCC; NIAH 50010037
BH-55	102 Seville Place	House	Three-storey over basement, two-bay brick-fronted house	c. 17 m west of the proposed development area	RPS 7498 DCC; NIAH 50010038
BH-56	103 Seville Place	House	Three-storey over basement, two-bay brick-fronted house	c. 23 m west of the proposed development area	RPS 7499 DCC; NIAH 50010039
BH-57	104 Seville Place	House	Three-storey over basement, two-bay brick-fronted house	c. 29 m west of the proposed development area	RPS 7500 DCC; NIAH 50010040
BH-58	Coburg Place	Railway Service Building	Two-storey building with stone lower floor and yellow brick upper floor.	Within proposed development area	RPS 130 DCC; NIAH 50010035
BH-59	Seville Place, Dublin 1	Locomotive Shed	Double-height, eighteen-bay, brick-built engine shed	Within proposed development area	RPS 130 DCC; NIAH 50010034; DCIHR
BH-60	MGWR railway	Railway line	Section of railway originally connecting Broadstone Station with North Wall, running mostly in a cutting with limestone walls	Within proposed development area	DCIHR
BH-61	GSWR railway	Railway line	Section of railway connecting Heuston Station to the North Wall and Connolly Station via the Phoenix Park tunnel; partly elevated and partly in cut	Within proposed development area	DCHIR
BH-62	Bridge on GSWR North Wall extension, Ossory Road	Railway overbridge	Railway bridge with cast-iron deck supported on brick piers and with replacement steel parapets	Within proposed development area	DCIHR
BH-63	Railway underbridge on GNR North Wall Extension, West road	Railway underbridge	Railway bridge with concrete deck supported on rock-faced ashlar abutments and with rock-faced ashlar wing walls	Within proposed development area	DCIHR
BH-64	Bridge carrying GNR railway over GSWR North Wall extension	Railway bridge	Railway bridge with replacement deck supported on rock-faced limestone pier	Within proposed development area	DCIHR
BH-65	Bridge carrying DDR railway over East Wall Road, Stoney Road	Railway underbridge	Replacement bridge of steel and concrete with surviving original rock-faced ashlar abutment on southern side	Within proposed development area	DCIHR

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-66	Great Northern Railway (GNR)/Dublin and Drogheda Railway (DDR)	Railway	Railway running north from Connolly Station on a series of arches, beyond which is a viaduct between retaining walls, while north of the Tolka the railway is on an embankment	Within proposed development area	DCIHR
BH-67	DDR railway bridge and GSWR railway bridge, Ossory Road	Two railway underbridges	Original DDR road bridge is a singles-span, three-centred masonry arch over Ossory Road and another to the south of the Royal Canal, between which the railway runs on a beam bridge supported on rock-faced ashlar piers; the bridge is extended on the eastern side with a concrete bridge; The GSWR bridge crosses Ossory Road with a steel deck supported on rock-faced ashlar piers, while to the south the bridge has Pratt trusses supported on cast-iron columns	Within proposed development area	NIAH 50060481; DCIHR
BH-68	GSWR underbridge at Bessborough Avenue	Railway underbridge	Brick viaduct and abutments with rock-faced limestone quoins supporting a replacement steel deck	Within proposed development area	
BH-69	GSWR North Wall Extension bridge at Strandville Avenue	Railway underbridge	Brick viaduct and abutments with rock-faced limestone quoins supporting a replacement steel deck	Within proposed development area	
BH-70	GSWR underbridge at Strandville Avenue	Railway underbridge	Brick abutments with rock-faced limestone quoins supporting a deck over a pedestrian underpass	Within proposed development area	
BH-71	Lifting bridge, Royal Canal	Lifting bridge	Lifting bridge with posts at each corner to lift a section of railway track crossing the Royal Canal	Within proposed development area	DCIHR
BH-72	Newcomen Bridge and 1st Lock, North Strand Road	Canal bridge and lock	Three-span bridge with segmental central arch flanked by pointed Gothic arches; lock is single-chamber	Within proposed development area	RPS 911 DCC; NIAH 50010063, 50060480; DCIHR
BH-73	Railway bridge, North Strand Road	Railway overbridge	Concrete deck bridge supported on rock-faced limestone abutments		DCIHR
BH-74	Lock keeper's cottage, North Strand Road	Lock-keeper's cottage	Single-storey, three-bay former lock-keeper's cottage with painted rendered façade	Immediately west	RPS 5824 DCC
BH-75	8 Charleville Mall	House	Two-storey over basement, two-bay, brick-fronted house	c. 41 m south of the proposed development area	NIAH 50010067
BH-76	9 Charleville Mall	House	Two-storey over basement, two-bay, brick-fronted house	c. 41 m south of the proposed development area	NIAH 50010068
BH-77	10 Charleville Mall	House	Two-storey over basement, two-bay, brick-fronted house	c. 41 m south of the proposed development area	NIAH 50010069
BH-78	11 Charleville Mall	House	Two-storey over basement, two-bay, brick-fronted house	c. 41 m south of the proposed development area	NIAH 50010070

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-79	12 Charleville Mall	House	Two-storey over basement, two-bay, brick-fronted house	c. 41 m south of the proposed development area	NIAH 50010071
BH-80	13 Charleville Mall	House	Two-storey over basement, two-bay, brick-fronted house	c. 41 m south of the proposed development area	NIAH 50010072
BH-81	14 Charleville Mall	House	Two-storey over basement, two-bay, brick-fronted house	c. 41 m south of the proposed development area	NIAH 50010073
BH-82	15 Charleville Mall	House	Two-storey over basement, two-bay, brick-fronted house	c. 41 m south of the proposed development area	NIAH 50010074
BH-83	Charleville Mall Library, Charleville Mall	Library	Single-storey, ten-bay, brick library building with pedimented breakfront	c. 49 m south of the proposed development area	NIAH 50010075
BH-84	27 Summerhill Parade	House	Three-storey over basement, two-bay, brick-fronted house	c. 50 m south of the proposed development area	RPS 7869 DCC; NIAH 5001133
BH-85	26 Summerhill Parade	House	Three-storey over basement, two-bay, brick-fronted house	c. 43 m south of the proposed development area	RPS 7868 DCC; NIAH 5001134
BH-86	Clarke Bridge, Summerhill Parade/Ballybough Road	Canal bridge	Single span, masonry-arched canal bridge	Immediately south of the proposed development area	RPS 910 DCC; NIAH 50060476; DCIHR
BH-87	Railway overbridge at Ballybough Road	Railway overbridge	Concrete bridge deck supported on rock-faced ashlar abutments	Within proposed development area	DCIHR
BH-88	1 Clonmore Villas, Ballybough Road	House	Two-storey over basement, three-bay, brick-fronted house with attic storey	5 m north east	NIAH 50120253
BH-89	2 Clonmore Villas, Ballybough Road	House	Two-storey over basement, three-bay, brick-fronted house with attic storey	10 m north east	NIAH 50120252
BH-90	3 Clonmore Villas, Ballybough Road	House	Two-storey over basement, three-bay, brick-fronted house with attic storey	16 m north-east	NIAH 50120251
BH-91	4 Clonmore Villas, Ballybough Road, Dublin 3, DUBLIN	House	Two-storey over basement, three-bay, brick-fronted house with attic storey	21 m north-east	NIAH 50120250
BH-92	Royal Canal towpath	Canal Tow Path	Towpath along northern side of Royal Canal	c. 21 m south	DCIHR
BH-93	Royal Canal	Canal	Canal connecting Dublin with the Shannon via Mullingar	Immediately south	DCIHR
BH-94	Waterloo Terrace, 130 North Strand Road, Xavier Avenue	House	Two-storey over basement, two-bay house with rendered facade	35 m west	NIAH 50120257
BH-95	Waterloo Terrace, 129 North Strand Road	House	Two-storey over basement, two-bay house with rendered facade	30 m west	NIAH 50120256
BH-96	128 North Strand Road	House	Two-storey over basement, two-bay house with rendered facade	26 m west	NIAH 50120255

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-97	127 North Strand Road	House	Two-storey over basement, two-bay house with rendered facade	21 m west	NIAH 50120254
BH-98	St Columba's Infant and National Schools, North Strand Road	School	Gable-fronted school building with snecked limestone façade and brick detailing	44 m west	RPS 5834 DCC; NIAH 50120236
BH-99	Railway underbridge, North Strand Road and Northbrook Avenue Lower	Railway underbridge	Double-span bridge with trusses spanning North Strand Road with decorative cast-iron panels and supported on cast-iron columns, the second span at Nottingham Street has solid iron panels and is supported on limestone piers	Within proposed development area	RPS 888 DCC; NIAH 50120209; DCIHR
BH-100	Railway underbridge at Spring Garden Street and Annesley Avenue	Railway underbridge	Double-span bridge with iron decks supported on rock-faced ashlar abutments, the two spans being separated by a brick viaduct with a single arch	Within proposed development area	
BH-101	Railway underbridge, Ballybough Road	Railway underbridge	Single-span bridge with trusses spanning Ballybough Road with decorative cast-iron panels and supported on rock-faced ashlar abutments with one cast-iron column	North of proposed development area	RPS 877 DCC; NIAH 50120208; DCIHR
BH-102	Railway underbridge, Clonliffe avenue	Railway underbridge	Single-span railway bridge with deck of wrought iron and cast iron supported on rock-faced ashlar abutments	Within proposed development area	DCIHR
BH-103	Railway underbridge, St James's Avenue	Railway underbridge	Single-span railway bridge with deck of wrought iron and cast iron supported on rock-faced ashlar abutments	Within proposed development area	DCIHR
BH-104	Railway underbridge, St Joseph's Avenue	Railway underbridge	Single-span railway bridge with deck of wrought iron and cast iron supported on rock-faced ashlar abutments; bridge extended on southern side with mass concrete	Within proposed development area	DCIHR
BH-105	Pedestrian underbridge at Jones's Road	Railway underbridge	Brick vault on rock-faced ashlar abutments and with rock-faced ashlar spandrels and parapets	Within proposed development area	
BH-106	Railway underbridge, Jones's road	Railway underbridge	Single-span railway bridge with deck of wrought iron and cast iron supported on rock-faced ashlar abutments	Within proposed development area	RPS 884 DCC; NIAH 50120269; DCIHR
BH-107	Railway underbridge, Mabel Street	Railway underbridge	Single-span railway bridge with deck of wrought iron and cast iron supported on rock-faced ashlar abutments	Within proposed development area	DCIHR
BH-108	Clonliffe Bridge, Russell Street	Canal bridge	Single-span canal bridge of limestone rubble with granite voussoirs. Widened with concrete bridge on southern side	Within proposed development area	DCIHR
BH-109	Railway bridge on MGWR line, Jones's Road	Railway overbridge	Concrete beam bridge with red-brick parapets, supported on limestone abutments	Within proposed development area	DCIHR

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-110	Railway underbridge, St George's Avenue	Railway underbridge	Single-span railway bridge with deck of wrought iron and cast iron supported on rock-faced ashlar abutments	Within proposed development area	DCIHR
BH-111	GSWR railway underbridge at Drumcondra Road	Railway underbridge	Single-span iron truss bridge supported on rock-faced ashlar abutments	Within proposed development area	NIAH 50120207 DCIHR
BH-112	GSWR railway underbridge at St Joseph's Avenue	Railway underbridge	Central iron brick deck flanked by mass concrete bridges, all supported on rock-faced ashlar abutments	Within proposed development area	NIAH 50130202
BH-113	Drumcondra Station, Drumcondra Road	Railway station	Red brick station building facing Drumcondra Road with concrete-faced viaduct on St Anne's Road, topped with red-brick curtain wall	Within proposed development area	NIAH 50130208; DCIHR
BH-114	GSWR railway underbridge at St Patrick's Road	Railway underbridge	Iron bridge supported on rock-faced ashlar abutments	Within proposed development area	DCIHR
BH-115	Binns Bridge, Drumcondra Road Lower	Canal bridge	Single-arched canal bridge of limestone rubble with granite archivolt	Immediately south of the proposed development area	RPS 908 DCC; NIAH 50060189; DCIHR
BH-116	MGWR Railway bridge, Drumcondra Road Lower	Railway overbridge	Twin-arched railway bridge of limestone with rock-faced limestone voussoirs	Within proposed development area	RPS 908 DCC; NIAH 50060296; DCIHR
BH-117	2nd lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	Immediately south of the proposed development area	NIAH 50060188; DCIHR
BH-118	1 Drumcondra Road Lower	House	Three-storey, three-bay, brick-fronted house	20 m north-east	NIAH 50120225
BH-119	3 Drumcondra Road Lower	House	Three-storey, two-bay, brick-fronted house	28 m north-east	NIAH 50120224
BH-120	3rd Lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	Immediately south of the proposed development area	NIAH 50060187
BH-121	4th Lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	Immediately south of the proposed development area	NIAH 50060186
BH-122	Drumcondra Hospital, Whitworth Road	Former hospital, now offices	Three-storey, three-bay, brick building with single-bay breakfront	c.39 m north of the proposed development area	RPS 8556
BH-123	Pedestrian footbridge at Claude Road	Footbridge	Surviving fragments of bridge beneath later concrete bridge	Within proposed development area	DCIHR
BH-124	Cross Guns Tunnel, Prospect Road	Railway tunnel	Single-span tunnel of rubble limestone with rock-faced limestone voussoirs; extended to east with concrete deck	Within proposed development area	NIAH 50060112
BH-125	Cross Guns Bridge, Prospect Road	Canal bridge	Cast-iron bridge with cast-iron parapets; supported on splayed limestone ashlar abutments	Immediately south of the proposed development area	PPS DCC 8807; NIAH 50060185

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-126	Accommodation bridge to west of Prospect Road	Railway overbridge	Single-span railway bridge of rock-faced limestone	Within development area	DCIHR
BH-127	5th Lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	c.16 m south of the proposed development area	NIAH 50060184
BH-128	Glasnevin Station, Prospect Road	Former station	Two-storey, red-brick railway station with limestone detailing	Immediately north	DCIHR
BH-129	Hedigan's, The Brian Boru, 5 Prospect Road	Licensed premises	Two-storey, three-bay licensed premises with rendered façade and painted representation of Brian Boru on first floor front	Immediately north of the proposed development area	NIAH 50130022
BH-130	Prospect Lodge, Dalcassian Downs	House	Three-bay, three-storey brick house	c.10 m north of the proposed development area	RPS 2097 DCC; NIAH 50130020
BH-131	North City Flour Mills, Phibsborough Road	Former flour mill	Five-storey, eleven-bay former mill with attic storey and built with limestone	c.38 m south of the proposed development area	RPS 6732 DCC; NIAH 50060183
BH-132	Shandon Mills, Phibsborough Road	Former mill, now apartments	Three-storey, two-bay, gable-fronted former mills built with limestone	c.41 m south of the proposed development area	RPS 6733 DCC
BH-133	Liffey Junction	Railway station	Former railway station	Within proposed development area	DCIHR
BH-134	6th Lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	Immediately south of the proposed development area	NIAH 50060182
BH-135	7th Lock, Royal Canal	Canal lock	Single-chamber canal lock of limestone ashlar	Immediately north of the proposed development area	NIAH 50060047
BH-136	Bridge at Moyle Road	Railway bridge over canal	Iron bridge supported on limestone ashlar abutments	Within proposed development area	NIAH 50060127
BH-137	Liffey Junction Station	Surviving walls of station platform	Remnants of station platform on norther side of railway	Within proposed development area	DCIHR
BH-138	Water tower	Railway water tower and standpipe	Cast-iron water tank raised on tower of rock-faced ashlar with brick quoins, to the west of which is a cast-iron standpipe	Within proposed development area	DCIHR
BH-139	Broome Bridge, Broombridge Road	Road bridge over canal and railway	Limestone bridge with segmental arch over Royal Canal and three-centred arch over MGWR railway	Within proposed development area	RPS 909 DCC; NIAH 50060126
BH-140	H.S. Reilly Bridge, Ratoath Road	Canal bridge	Single-span canal bridge with elliptical arch supported on limestone ashlar abutments	Immediately north of the proposed development area	RPS 913 DCC; NIAH 50060125
BH-141	8th Lock, Royal Canal	Canal lock	Single-chamber canal lock of limestone ashlar	Immediately north of the proposed development area	NIAH 50060124
BH-142	9th Lock, Royal Canal	Canal lock	Single-chamber canal lock of limestone ashlar	Immediately north of the proposed development area	DCIHR

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-143	10th Lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	Immediately north of the proposed development area	NIAH 50060121
BH-144	Level Crossing, Ashtown Road	Level crossing	Manned level crossing	Within proposed development area	DCIHR
BH-145	Longford Bridge, Ashtown	Canal bridge	Single-span segmental arched bridge of limestone	Immediately north of the proposed development area	RPS 907 DCC, 0693 FCC; NIAH 11362066

#### 21.4.1.4 Architectural Conservation Areas

A number of architectural conservation areas are defined within the Dublin City Development Plan 2016-2022; however, none of these are located within 50 m of the proposed development area within Dublin City.

#### 21.4.1.5 Demesnes

Two demesnes have been identified in Dublin City within the 50 m study area of the proposed development in Table 21-3. The landscapes are shown as 'demesne' landscapes on the first edition OS mapping. These environments were intended to represent a natural parkland setting for a large house, a practice that became fashionable from the middle of the 18th century onwards, though the shaded areas also included fields used for grazing or agriculture in connection with the occupation of the main house. The landscapes, which can vary greatly in size, often possess specific features, such as long driveways, gate lodges, stately entrances, walled gardens, bodies of water and belts, avenues and clumps of deciduous and specimen trees.

The identified demesnes are listed in Table 21-3 and shown on Drawing no. MAY-MDC-ENV-ROUT-DR-V-210000-D to 210015-D Figures in Volume 3A of this EIA.

**Table 21-3 Demesnes (DL) located within the receiving environment in Dublin City**

DL No.	NIAH Garden Ref.	Location	Description
DL 1	Not listed	Ballyboggan South	Tolka Park demesne. Tolka Park is shown on the first-edition OS map of 1843 as having a possible walled garden or orchard. The house is accessed by driveway from the Broombridge Road to the west. The site is now completely covered with commercial development. The demesne was immediately to the north of the proposed development.
DL 2	2330	Ballyboggan South	Tolka Lodge demesne. The first-edition OS map of 1843 shows Tolka Lodge as lying to the north of the Royal Canal and to the east of Broombridge Road, a gate lodge to the north-west. In the later OS map of 1906-9, Tolka Lodge is labelled Broombridge House. NIAH Survey lists the site as 'Completely covered by industrial or commercial development'. The demesne was immediately to the north of the proposed development.

#### 21.4.1.6 Field Inspection

The field inspection sought to assess the architectural heritage resource along the proposed development. During the course of the field investigation the full extent of proposed development, and, where practicable, its immediate surrounding environs were inspected for known or previously unknown sites of architectural heritage significance. The inspections were carried out between December 2020 and January 2022.

The proposed development follows the existing Dublin to Maynooth, and M3 Parkway railway lines established in the mid-19th century in Dublin city and westward through Fingal, Meath and Kildare. Structures associated

with this railway and the adjacent Royal Canal account for the majority of the architectural sites within the study area of the proposed development within the jurisdiction of Dublin City Council.

## **21.4.2 Fingal County**

### **21.4.2.1 General**

Through the administrative area of Fingal County Council, the route of the proposed development runs through an area that is partly suburban and partly agricultural, all of it at or near ground level. In the western part of the county the route divides into two, with one line following the railway northward into County Meath and the other continuing westward to enter County Kildare.

Within this area wherever the adjacent Royal Canal is at or above ground level the original canal bridge was extended by the addition of a railway bridge. Where the canal is below ground level in a cutting the canal bridge has a low rise or the road over the bridge is more or less level with the ground and in these instances the road crosses the railway via a level crossing. It will be necessary to close all of the level crossings and the means of doing so varies according to the local circumstances. Some pedestrian and cycle bridges are proposed at these locations, with potential impacts on the settings of structures of architectural heritage significance.

### **21.4.2.2 Architectural Background**

The area through which the railway line passes in Fingal was mainly agricultural until the latter part of the twentieth century. Some larger houses with demesne lands were located near the route and many of these are still extant. The Royal Canal was constructed through this area in about 1792 to 1794, necessitating the construction of a number of canal bridges. The arrival of the railway fifty years later resulted in the provision of some new railway bridges and also associated structures such as station buildings and signal boxes. Later in the nineteenth century an iron footbridge was constructed at Clonsilla Station. The water supply brought through the area with the Royal Canal enabled the establishment of industries in various locations, leasing the use of flowing water from the canal company to power mills. Within the Fingal area the Ashtown Oil Mills was established in 1831 to crush locally grown rape seed and flax seed to produce rape oil, linseed oil and animal feed, availing of the fall in the level of the Royal Canal at the 10<sup>th</sup> lock.

### **21.4.2.3 Architectural heritage structures within the Receiving Environment**

A total of 32 structures of architectural heritage significance (BH sites) have been noted within section of the study area that is in the administrative area of Fingal County Council. The record of protected structures for Fingal includes a total of 20 protected structures within the study area of the proposed development (Table 21-4). The NIAH includes 17 structures within the study area, of which 15 are also included in the record of protected structures. Inclusion of structures within the NIAH does not confer statutory protection. However, any buildings that are also listed in the record of protected structures, are subject to statutory protection under the Planning and Development Act, 2000, as amended.

Ten structures within Fingal that are not included in the RPS or the NIAH have been identified as being potentially affected by the project. Three are railway bridges that are adjacent to canal bridges that are protected structures, namely Talbot Bridge at Old Navan Road, Granard Bridge at Castleknock Road and Collins Bridge at Westmanstown. Those at Westmanstown and Castleknock Road are of similar type to other railway bridges that are protected structures or included in the NIAH, while the railway bridge at Old Navan Road has a replacement deck, though the original abutments remain in place. Pelletstown House, an early nineteenth century farmhouse with stone outbuildings is located at Ashtown. The former Coldblow and Lucan Station, which opened in 1847 and closed in 1941, following which it was converted to a private house, lies adjacent to the railway and while not directly affected, there may be an impact on its setting. The level crossings at Ashtown, Coolmine, Porterstown and Clonsilla are also included in the survey. At Porterstown the former Clonsilla School (BH-163), now vacant, is a protected structure and lies to the north of the canal, close to the site for the proposed pedestrian and cycle bridge.

It should be noted that the first two BH sites (BH-144 and BH-145) in Table 21-4 below, which are the level crossing at Ashtown Road and the adjacent Longford Bridge, were also included in the table for Dublin City, as they straddle the boundary between the City and Fingal. Longford Bridge is included as a protected structure in the development plans of both planning authorities, while the level crossing is included in the Dublin City Industrial Heritage Record.

The location of each BH site is included on Drawing no. MAY-MDC-ENV-ROUT-DR-V-210000-D to 210015-D Figures in Volume 3A of this EIAR.

**Table 21-4 Structures of architectural heritage significance within 50 m of the proposed development area in Fingal**

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-144	Level Crossing, Ashtown Road	Level crossing	Manned level crossing	Within proposed development area	DCIHR
BH-145	Longford Bridge, Ashtown	Canal bridge	Single-span segmental arched bridge of limestone	Immediately north of the proposed development area	RPS 907 FCC; NIAH 11362066
BH-146	Royal Canal	Canal	Canal connecting Dublin with the Shannon via Mullingar	Within the proposed development area	RPS 944a FCC
BH-147	10 <sup>th</sup> Lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	Within the proposed development area	RPS 944b FCC
BH-148	Mill Lane, Ashtown	Disused mill	Five-storey, four-bay former mill of limestone	c.50 m south of the proposed development area	RPS 691 FCC; NIAH 11362067
BH-149	Ashton House, Ashtown	House	Three-storey over basement, three-bay house with rendered façade	c.83 m north of the proposed development area	RPS 690 FCC; NIAH 11362065
BH-150	Pelletstown House, Ashtown	House and outbuildings	Two-storey, four-bay, double-pile house with roughcast rendered façade	Within the proposed development area	
BH-151	11th Lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	Immediately north of the proposed development area	RPS 944c FCC
BH-152	Ranelagh Bridge	Canal bridge	Single-span canal bridge of limestone with elliptical arch	Immediately north of the proposed development area	RPS 694 FCC; NIAH 11354004
BH-153	Talbot Bridge	Canal bridge	Single-span canal bridge of limestone with splayed segmental arch	Within proposed development area	RPS 695 FCC; NIAH 11354003
BH-154	Railway overbridge at Old Navan Road	Railway overbridge	Concrete deck and parapets supported on limestone abutments	Within proposed development area	
BH-155	12th Lock, Royal Canal	Canal lock	Double-chamber canal lock of limestone ashlar	c.18 m north of the proposed development area	RPS 944d FCC
BH-156	Granard Bridge, Castleknock Road	Canal bridge	Single-span limestone canal bridge with elliptical arch	Within proposed development area	RPS 696 FCC; NIAH 11354002
BH-157	Railway bridge, Castleknock Road	Railway overbridge	Single-span, three-centred, skew railway bridge of limestone	Within proposed development area	
BH-158	Kirkpatrick Bridge, Carpenterstown Road	Canal bridge	Single-span, segmental, limestone canal bridge	Within proposed development area	RPS 697 FCC; NIAH 11361032

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-159	Coolmine level crossing	Level crossing	Automatic level crossing	Within the proposed development area	
BH-160	Kennan Bridge, Porterstown Road	Canal bridge	Single-span, segmental, limestone canal bridge	Within proposed development area	RPS 698 FCC; NIAH 11361004
BH-161	Porterstown level crossing	Level crossing	Automatic level crossing	Within the proposed development area	
BH-162	Crossing keeper's house, Porterstown Road	Crossing keeper's house	Single-storey, three-bay house with rendered façade and projecting porch	Within proposed development area	RPS 699 FCC; NIAH 11361005
BH-163	Clonsilla School, Porterstown Road	Disused school building	Two-storey over basement, three-bay, roughcast rendered former school	c.44 m north of the proposed development area	RPS 700 FCC; NIAH 11361001
BH-164	Water pump, Porterstown Road	Water pump	Cast-iron roadside water pump	Immediately north of the proposed development area	NIAH 11361002
BH-165	Clonsilla Railway Station, Clonsilla Road	Railway station	Single-storey, five-bay, roughcast rendered house with red tiled roof	Immediately north of the proposed development area	NIAH 11353006
BH-166	Signal box at Clonsilla Station	Signal box	Two-storey signal box with brick lower floor and timber upper floor	Within proposed development area	RPS 707 FCC; NIAH 11353004
BH-167	Footbridge at Clonsilla Station	Footbridge	Footbridge of cast- and wrought-iron	Within proposed development area	RPS 707 FCC; NIAH 11353004
BH-168	Clonsilla level crossing	Level crossing	Manned level crossing	Within the proposed development area	
BH-169	Callaghan Bridge, Clonsilla Road	Canal bridge	Single-span, elliptical arch limestone canal bridge	Within proposed development area	RPS 706 FCC; NIAH 11353003
BH-170	Barnhill Bridge, R149 Road, Barnhill	Railway overbridge	Single-span railway bridge with three-centred arch	Within proposed development area	RPS 712 FCC; NIAH 11352001
BH-171	Packenham Bridge, Barberstown Lane	Canal bridge	Single-span limestone canal bridge with elliptical arch	Within proposed development area	RPS 711 FCC; NIAH 11352002
BH-172	Barberstown level crossing	Level crossing	Automatic level crossing	Within the proposed development area	
BH-173	Former Coldblow & Lucan Station	Former station, now a house	Two-storey house presenting two gables toward the railway, between which is a single-storey glazed conservatory	Adjacent to the proposed development area to the south-east	
BH-174	Collins Bridge, Westmanstown	Canal bridge	Single-span limestone canal bridge with elliptical arch	Immediately north of the proposed development area	RPS 713 FCC; NIAH 11360002
BH-175	Railway bridge at Westmanstown	Railway overbridge	Single-span limestone railway bridge with three-centred arch	Within proposed development area	

#### 21.4.2.4 Architectural Conservation Areas

There are no architectural conservation areas within the study area in the administrative area of Fingal County Council.

### 21.4.2.5 Demesnes

A total of thirteen demesnes have been identified in Fingal within the 50 m study area of the proposed development (Table 21-5). The landscapes are shown as stippled 'demesne' landscapes on the first edition OS mapping. These environments were intended to represent a natural parkland setting for a large house, a practice that became fashionable from the middle of the 18th century onwards, though the shaded areas also included fields used for grazing or agriculture in connection with the occupation of the main house. The landscapes, which can vary greatly in size, often possess specific features, such as long driveways, gate lodges, stately entrances, walled gardens, bodies of water and belts, avenues and clumps of trees and specimen trees.

**Table 21-5 Demesnes (DL) located within the receiving environment**

DL No.	NIAH Garden Ref.	Location	Description
DL 3	2292	Ashtown	Ashton House with gate lodge and walled garden. Principal structure survives. The demesne is partly within the proposed development area.
DL 4	2289	Ashtown	Ashbrook has a walled garden and a gate lodge to the north of the principal structure, which is extant. Rugby club grounds now within the parkland. The demesne is immediately to the north of the proposed development area.
DL 5	2288	Ashtown	Ashtown Lodge has its own gate lodge and walled garden. The demesne is immediately to the north of the proposed development area.
DL 6	n/a	Carpenterstown / Sheepmoor	Woodville Lodge. Small demesne to the north of the Royal Canal. Gate lodge shown in the southwest corner of the demesne. Completely developed as residential estates. The demesne is located approximately 50 metres from the proposed development area.
DL 7	n/a	Carpenterstown	Mary Villa. Small demesne of Mary Villa with principal structure approached by a driveway south. A small gate lodge is shown on the first edition OS map of 1843 outside the study area, to the south. Almost entirely developed with modern residential housing.
DL 8	n/a	Sheepmoor	Abbey Cottage. Small demesne with house near road frontage and walled garden to rear. Now fully built over. The demesne was immediately adjacent to the proposed development area to the south.
DL 9	n/a	Kellystown	Kellystown. Small demesne to the south of the Royal Canal. Gate lodge shown to the southeast of the principal structures and outside the study area. Referred to as 'Dolland' in the later OS mapping. Appears to be occupied by an agricultural complex today, although the house survives, and the parkland has been subsumed back into agricultural land. The demesne was immediately adjacent to the proposed development area to the south.
DL 10	n/a	Kellystown	Greenmount Demesne. Small demesne shown on first edition OS mapping with formal gardens to the west of the principal structures. Principal structures remain extant.
DL 11	n/a	Beechpark	Beech Park House. Demesne shown on the first edition OS map complete with gate lodge to the northeast of the parkland and walled garden to the immediate west of the house. The house and outbuildings (arranged around a courtyard) together form an agricultural complex. Today, much of the demesne has been subsumed back into agricultural use, however, a large area of mature planting is located to the east of the principal structure and the walled garden appears to have survived in some form. Much of the north of the parkland appears to be in use as allotments. The demesne is located immediately adjacent to the proposed development area to the south.

DL No.	NIAH Garden Ref.	Location	Description
DL 12	2231	Clonsilla	Clonsilla House is shown on the first edition OS map as having extensive outbuildings, with gate lodge to the south. The majority of the demesne is now covered by residential development and the house and outbuildings are no longer extant. The demesne was located approximately 50 metres from the proposed development area.
DL 13	2224	Clonsilla	Clonsilla Lodge is shown on the first-edition OS map as having a gate lodge, a walled garden and some outbuildings. the demesne has been partly developed for institutional use and partly for housing. The demesne was located immediately adjacent to the proposed development area to the north, separated only by the width of the canal and its towpath.
DL 14	n/a	Barberstown	Barberstown. Small demesne shown on the first-edition OS mapping. MGWR railway subsequently severed the northern margin of the demesne.
DL 15	2225	Woodlands	Woodlands demesne. Large demesne incorporating large pond and number of gate lodges. Only the north-west portion of the demesne is within the study area. The first edition OS map appears to show the remains of a tree-lined avenue in the north-west of the parkland. The principal structures are extant. A golf course has been established in the east of the parkland.

#### **21.4.2.6 Field Inspection**

The field inspection sought to assess the architectural heritage resource along the proposed development. During the course of the field investigation the full extent of proposed development, and, where practicable, its immediate surrounding environs were inspected for known or previously unknown sites of architectural heritage significance. The inspections were carried out between December 2020 and January 2022.

The proposed development follows the existing Dublin to Maynooth and M3 Parkway railway lines established in the mid-19th century in Dublin city and westward through Fingal, Meath and Kildare. Structures associated with this railway and the adjacent Royal Canal account for the majority of the architectural sites within the study area of the proposed development within the jurisdiction of Fingal County Council.

### **21.4.3 Meath County**

#### **21.4.3.1 General**

The section of the route that runs through the administrative area of Meath County Council is part of the former MGWR branch line from Clonsilla to Navan, which opened in 1862 and was extended to Kingscourt in 1875. This line was closed to passengers in 1947 and closed to goods traffic in 1963. The route was reopened as far as Dunboyne in 2010 and subsequently extended to the M3 Parkway.

The works within this area involve the provision of OHLE along the length of the track as far as the M3 Parkway. Only one overbridge remains on this stretch of the line and no works to it are necessary as it was upgraded when the line was being prepared for reopening. No other structures of architectural heritage significance would be directly affected by the proposals, though the settings of some structures will be impacted by the presence of the OHLE

#### **21.4.3.2 Architectural Background**

The part of the study area that lies within Meath is agricultural, though with some larger houses in demesne land. The only structures of architectural heritage significance within the study area in Meath are associated with the railway.

### 21.4.3.3 Architectural heritage structures within the Receiving Environment

A total of 3 structures of architectural heritage significance (BH sites) have been noted within section of the study area that is in the administrative area of Meath County Council. None of these are included in the record of protected structures set down in the Meath County Development Plan 2021-2027 (Table 21-6). 3 structures within the study area in County Meath which are not protected structures but are included in the NIAH have been recorded. All three are associated with the railway.

The location of each BH site is marked on Drawing no. MAY-MDC-ENV-ROUT-DR-V-210000-D to 210015-D Figures in Volume 3A of this EIAR.

**Table 21-6 Structures of architectural heritage significance within 50 m of the proposed development area in Meath**

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-176	Water tower to the south of Dunboyne Station	Railway water tower	Iron water tower on two-storey tower of rock-faced limestone with brick dressings to corners and openings	Within proposed development area	NIAH 14341001
BH-177	Dunboyne Bridge	Railway overbridge	Single-span limestone bridge with three-centred arch and replacement concrete parapets	Within proposed development area	NIAH 14341002
BH-178	Railway bridge at Bennetstown	Railway overbridge	Demolished	Within proposed development area	NIAH 14405001

### 21.4.3.4 Architectural Conservation Areas

A number of architectural conservation areas are defined within the Meath County Development Plan 2021-2027; however, none of these are located within 50 m of the proposed development area within County Meath.

### 21.4.3.5 Demesnes

Two demesnes have been identified in County Meath within the 50 m study area of the proposed development (Table 21-7). The landscapes are shown as shaded 'demesne' landscapes on the first edition OS mapping. These environments were intended to represent a natural parkland setting for a large house, a practice that became fashionable from the middle of the 18th century onwards, though the shaded areas also included fields used for grazing or agriculture in connection with the occupation of the main house. The landscapes, which can vary greatly in size, often possess specific features, such as long driveways, gate lodges, stately entrances, walled gardens, bodies of water and belts, avenues and clumps of deciduous and specimen trees.

**Table 21-7 Demesnes (DL) located within the receiving environment in County Meath**

DL No.	NIAH Garden Ref.	Location	Description
DL 16	5190	Hilltown	Stirling House. Centrally located principal structures which survive. The parkland retains much of its character with mature tree-lined borders. The proposed development area is approximately 40 metres from the nearest point of the demesne.
DL 17	5174	Rusk	Rusk House. Large demesne with house approached via driveway from the south. Walled garden shown on first edition OS mapping. There has been small-scale residential development in the southern portion of the parkland. The proposed development area runs through the eastern part of the demesne.

#### **21.4.3.6 Field Inspection**

The field inspection sought to assess the architectural heritage resource along the proposed development. During the course of the field investigation the full extent of the proposed development, and, where practicable, its immediate surrounding environs were inspected for known or previously unknown sites of architectural heritage significance. The inspections were carried out between December 2020 and January 2022.

The proposed development follows the existing Dublin to Maynooth and M3 Parkway railway lines established in the mid-19th century in Dublin city and westward through Fingal, Meath and Kildare. Structures associated with this railway account for the majority of the architectural sites within the study area of the proposed development within the jurisdiction of Meath County Council.

#### **21.4.4 Kildare County**

##### **21.4.4.1 General**

Within County Kildare the route will pass through agricultural land, though it will also skirt the northern boundaries of the town of Leixlip and will pass through the town of Maynooth. Within this area the railway line is at or near to ground level and it is crossed by seven masonry arch bridges. The works will involve the erection of OHLE, the raising of the parapets on some of the bridges and the replacement of the spans of some of the bridges. At the western end of the route, beyond Maynooth and towards Kilcock, a substantial area of land is to be developed to provide the depot for the railway. There are no structures of architectural heritage significance on the proposed site for the depot; a canal bridge adjacent to the site will not be directly affected.

##### **21.4.4.2 Architectural Background**

As with the parts of the study area within Fingal and Meath, the route through Kildare was traditionally in agricultural use, with some larger houses set in demesnes. Where the route passes Leixlip and runs through Maynooth the developed areas in the vicinity represent late-twentieth- and early-twenty-first century suburbs, while the earlier parts of the towns are at a greater distance, beyond the study area. The principal structures of architectural heritage significance within the Kildare area are those associated with the canal, constructed through this area between 1794 and 1796, and with the railway, built in 1846-1847. During the construction of the canal, a spa was discovered near Leixlip and quickly became a popular site for visitors and the spa and brick-built baths from that period survive to the north of Louisa Bridge.

##### **21.4.4.3 Architectural heritage structures within the Receiving Environment**

A total of 18 structures of architectural heritage significance (BH sites) have been noted within section of the study area that is in the administrative area of Kildare County Council. The record of protected structures set down in the Kildare County Development Plan 2017-2023 includes a total of 8 protected structures within the study area of the proposed development (Table 21-8). All of these structures are listed within the National Inventory of Architectural Heritage (NIAH), which also includes one other structure. Inclusion of structures 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.

Seven structures within the study area have been included as proposed protected structures in the Draft Kildare County Council Development Plan 2023-2029, namely the former Leixlip Station (BH-184), Louisa Bridge (BH-185), a hexagonal well to the west of the Royal Canal (BH-182), a Romanesque bath (BH-183), the Rye Water Aqueduct (BH-180), a toll house on the Royal Canal (BH-181) and Cope Bridge (BH-179). Cope Bridge is a bridge over the railway and canal adjacent to Leixlip Confey Station and Louisa Bridge is a canal bridge adjacent to Louisa Bridge Station. Both of these bridges are of a similar type to other railway and canal bridges that are either protected structures or are included in the NIAH. It is noted that along the stretch of the Royal Canal that lies within the study area there are 22 original masonry arch bridges and Cope Bridge and Louisa Bridge were the only two that were not included in the record of protected structures of their respective

planning authorities; the inclusion of the seven structures as proposed protected structures affords them the full protection under the Planning and Development Act, 2000, as amended, pending confirmation of their inclusion in the record of protected structures when the draft plan is adopted. The railway bridge on the R148 (BH-186) adjacent to Louisa Bridge Station is not included in the RPS or the NIAH; this bridge has a replacement deck, while the original abutments remain in place.

The location of each BH site is marked on Drawing no. MAY-MDC-ENV-ROUT-DR-V-210000-D to 210015-D Figures in Volume 3A of this EIAR.

**Table 21-8 Structures of architectural heritage significance within 50 m of the proposed development area in Kildare**

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-179	Cope Bridge, Leixlip Confeiy	Railway and canal overbridge	Limestone bridge with elliptical arch over Royal Canal and three-centred arch over MGWR railway	n/a	PPS 20 KCC
BH-180	Rye Water Aqueduct	Aqueduct	Single-span masonry arch aqueduct with later railway bridge	Within the proposed development area	PPS 9 KCC
BH-181	Toll house on Royal Canal	Toll house	Derelict single-storey building on western side of Royal Canal	c25 m from proposed development area	PPS 10 KCC
BH-182	Leixlip Spa	Hexagonal well	Hexagonal water body close to the canal and lined with stone walls, now filled with water	40 m from proposed development area	PPS 7 KCC
BH-183	Leixlip Spa	Romanesque bath	Rectangular sunken bath with rounded ends, lined with brick and with stone steps at each end. No longer holding water.	60 m from proposed development area	PPS 8 KCC
BH-184	Former Leixlip railway station	Railway station	Single-storey, three-bay former station	Adjacent to the proposed development area	PPS 3 KCC
BH-185	Louisa Bridge	Canal bridge	Single-arched elliptical canal bridge of limestone	Adjacent to the proposed development area to the west	PPS 6 KCC
BH-186	Railway bridge on R148 at Louisa Bridge station	Railway overbridge	Concrete deck bridge supported on rock-faced ashlar abutments	Within proposed development area	None
BH-187	Deey Bridge and 13th Lock, Blakestown	Canal bridge and lock	Single-span canal bridge with segmental arch	Immediately north of the proposed development area	RPS B06-14 KCC; NIAH 11900602
BH-188	Blakestown level crossing	Level crossing	Automatic level crossing	Within the proposed development area	None
BH-189	Pike Bridge, Royal Canal	Railway and canal overbridge	Limestone bridge with elliptical arch over Royal Canal and three-centred arch over MGWR railway	Within proposed development area	RPS B06-13 KCC; NIAH 11900601
BH-190	Mullen Bridge, Railpark, Maynooth	Canal bridge	Single-span canal bridge with segmental arch, now pedestrianised	Immediately north of the proposed development area	RPS B05-60 KCC; NIAH 11803103
BH-191	Royal Canal, Maynooth	Canal	Canal connecting Dublin with the Shannon via Mullingar	Immediately north of the proposed development area	NIAH 11803136

BH No.	Location	Classification	Description	Distance from proposed development	Status
BH-192	Signal box at Maynooth Station	Signal box	Two-storey signal box with rock-faced granite ashlar ground floor and timber-clad upper floor	Within proposed development area	RPS B05-62 KCC; NIAH 11803107
BH-193	Station Master's House, Maynooth Station	House	Two-storey, three-bay, red-brick house with gabled breakfront	Immediately south of the proposed development area	RPS B05-33 KCC; NIAH 11803106
BH-194	Bond Bridge, Parson Street, Maynooth	Canal bridge	Demolished. Replaced with concrete bridge with spandrels and parapets faced with stone	Immediately north of the proposed development area	RPS B05-74 KCC; NIAH 11803133
BH-195	Jackson Bridge and 14th Lock, Laraghbryan	Railway and canal overbridge and lock	Five-span limestone bridge, incorporating segmental canal bridge, three-centred railway bridge and three semi-circular arches accommodating a farm access, a river and the canal towpath	Within proposed development area	RPS B05-36 KCC; NIAH 19005050
BH-196	Chambers Bridge and 15th Lock	Canal bridge and lock	Single-span segmental canal bridge of limestone	Immediately north of the proposed development area	RPS B05-35 KCC; NIAH 19005040

#### 21.4.4.4 Architectural Conservation Areas

The Maynooth Architectural Conservation Area has been defined in the Kildare County Development Plan 2017-2023, though no part of it lies within the study area, the nearest part being the south-western corner of the ACA at Parson Street, Maynooth, which lies about 100 m to the north of the study area. The boundary of the Maynooth ACA as shown in the Draft Kildare County Development Plan 2023-2029 covers a wider area and now incorporates the Royal Canal and the adjacent railway, including Maynooth Railway Station. The eastern boundary is at Straffan Road, with Mullen Bridge within the ACA boundary, while to the west the boundary runs a little beyond Newtown Road, thereby incorporating Bond Bridge.

There is also an ACA at Leixlip, the Leixlip Architectural Conservation Area, though this is more than a kilometre from the study area and hence is also not within the study area.

#### 21.4.4.5 Demesnes

Three demesnes have been identified within the receiving environment of the proposed development, defined as within 50 m of the proposed development area in Meath (Table 21-9). The landscapes are shown as stippled 'demesne' landscapes on the first edition OS mapping. These environments were intended to represent a natural parkland setting for a large house, a practice that became fashionable from the middle of the 18th century onwards, though the shaded areas also included fields used for grazing or agriculture in connection with the occupation of the main house. The landscapes, which can vary greatly in size, often possess specific features, such as long driveways, gate lodges, stately entrances, walled gardens, bodies of water and belts, avenues and clumps of deciduous and specimen trees.

**Table 21-9 Demesnes (DL) located within the receiving environment in County Kildare**

DL No.	NIAH Garden Ref.	Location	Description
DL 18	6048	Collinstown	Collinstown House. Small demesne shown on first edition OS map. The house is a protected structure (B11-117). There has been significant development within the former parkland, though a small area around the house has been retained. The demesne lies immediately to the north of the Royal Canal, approximately 50 metres from the proposed area of construction.

DL No.	NIAH Garden Ref.	Location	Description
DL 19	1915	Carton Demesne	Carton and demesne. Large demesne featuring a naturalistic water feature, avenues, formal gardens and walled gardens. Only the southernmost portion of the former parkland is located within the study area, with the house and outbuildings located to the north. The former demesne is today in use as a golf course. The nearest point of the demesne is approximately 40 metres from the area of construction.
DL 20	1907	Collegeland	NUI Maynooth is marked as Royal College of St. Patrick on the first edition OS map. The demesne landscape was then dominated by a large avenue running southwest from the principal structures. By the time of the 25-inch OS map, the principal structures have been extended to the west, many of these buildings survive and several are protected structures. The nearest point of the demesne is approximately 40 metres from the area of construction.

#### 21.4.4.6 Field Inspection

The field inspection sought to assess the architectural heritage resource along the proposed development. During the course of the field investigation the full extent of the proposed development, and, where practicable, its immediate surrounding environs were inspected for known or previously unknown sites of architectural heritage significance. The inspections were carried out between December 2020 and January 2022.

The proposed development follows the existing Dublin to Maynooth, and M3 Parkway railway lines established in the mid-19th century in Dublin City and westward through Fingal, Meath and Kildare and also includes a large area of land at the western end of the study area to accommodate a depot. Structures associated with the railway and the adjacent Royal Canal account for the majority of the architectural sites within the study area of the proposed development within the functional area of Kildare County Council.

## 21.5 Description of potential impacts

This section examines the study area in the same sequence as the study of the baseline environment. Where a potential impact is identified it is included in tabular form. 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 operation phase. The latter includes day-to-day operation of the DART+ West project and also maintenance factors insofar as they are known at this stage. Rolling stock are to be maintained at the depot, away from elements of architectural heritage. Maintenance of the track, signals, drainage, the stations and other elements of the proposed development are described in Chapter 4 Project Description in this EIAR. However, it is not anticipated that there will be any significant impacts on architectural heritage arising through maintenance.

The description of the impacts is divided in accordance with the six zones into which the project is separated, commencing with Zone A at Loop Line Bridge (northern side) through Connolly Station, which then runs along the Northern line to the bridge over the River Tolka and along the GSWR line through Drumcondra Station to Glasnevin, with a spur off the line to Connolly Station to provide connectivity with the MGWR line, which is part of Zone B. Zone A is entirely within the administrative area of Dublin City Council. Zone B is also within the Dublin City Council area and includes the proposed new station at Spencer Dock, with rail lines running south-eastward and to the north and north-west, the latter consisting of three lines connecting to the MGWR route to Maynooth, the GSWR route through Drumcondra and the Northern route to Howth and Malahide. Zone C commences to the west of the proposed Glasnevin Station and runs to Clonsilla and lies partly with the Dublin City Council administrative area and partly within Fingal. Zone D lies partly within the administrative area of Fingal County Council and partly within the Meath County Council area and runs from Clonsilla, turning

northward to M3 Parkway to the north of Dunboyne. Zone E runs from Clonsilla along the MGWR line to Maynooth, the eastern part being within the Fingal County Council area and the western part within County Kildare. Zone F runs from Maynooth Station to the proposed depot to the west of Maynooth, the entire zone lying within the administrative area of Kildare County Council.

The system of evaluation, as set down in Table 21-10 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 21-10 System of evaluation**

Evaluation level	Rating	Definition
1	High	National monuments, protected structures, structures that, while not protected structures, are very similar to structures that are protected, structures assigned an International or National rating in the NIAH 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.
3	Low	Structures included in the Dublin City Industrial Heritage Record –and structures identified in the present survey as having a level of architectural heritage significance, while not a national monument and not included in the 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.

**Table 21-11 Significance of Effects Matrix**

		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

		Sensitivity of Receptor			
		High	Medium	Low	Negligible
	Low	Moderate to significant	Slight to Moderate	Moderate to significant	Not significant
	Negligible	Not significant	Not significant	Not significant	Imperceptible

**Table 21-12 Definitions of Significance of Effects**

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

### 21.5.1 Potential Direct Construction Impacts

The proposed development will encompass Connolly Station and two routes leading northward from the station, the first running westward through Drumcondra on the former GSWR line and the second along the former MGWR line alongside the Royal Canal. It will also include a new station at Spencer Dock and the line leading from that station to connect with the other routes mentioned. The proposed development will include the railway lines out through Fingal, branching to the M3 Parkway Station in County Meath and to Maynooth in County Kildare, with a major depot to be located to the west of Maynooth.

The description of the works and their implication for architectural heritage is described below, taking each of the zones in turn, from east to west. The descriptions are followed by tables listing the predicted impacts of the proposal, divided into direct impacts (those that alter or damage the fabric of a structure) at construction stage (Table 21-13), indirect impacts at construction stage (Table 21-14) and impacts at operational stage (Table 21-15).

#### 21.5.1.1 Zone A

The works in Zone A include the provision of a new access via Preston Street to Connolly Station (RPS DCC 130). The track and platforms at Connolly Station are raised to a significant height above street level, supported on a network of arches. The station was built to serve the Dublin and Drogheda Railway, with its track leading northward to cross the River Tolka and the entire length of this railway as far as the Royal Canal was on a series of seventy-five arches. As the railway network was extended, the number of lines leading northward from Connolly Station increased and the arch network was augmented, culminating in the 1890s with the construction of the Dublin Junction Railway, which was also raised on a series of arches. The spans of the arches generally ran north-south, while the connection between the Dublin Junction Railway arches and the original arches was spanned by a vault that spanned from east to west to form a long corridor stretching to Seville Place. These arches and vaults have been under used over the years and are mainly unoccupied other than a few stores, including one in the arch at the eastern end of Preston Street.

It is proposed to provide new access to and from Connolly Station platforms 5, 6 and 7, via the vaults. This will involve a number of interventions, including escalators in three locations, two staircases and two lifts. The stairs and escalators will require cutting through the vaulting of a number of the arches and the two lift shafts

will each pierce a vault. In addition, a section of the long-vaulted passageway and sections of a number of the side arches will be refurbished to provide circulation areas, retail space and staff facilities; this will include a new access to Preston Street and two emergency exits. The refurbishment of the vaults will consist of cleaning of the brickwork, refurbishing the drainage to reduce water penetration and provision of lighting and granite paving. Further details in relation to the water penetration will become evident when the cleaning works are undertaken, permitting closer inspection of the structure.

The installation of the escalators, stairways and lifts will result in negative impacts within limited areas of a very extensive area of vaults. The refurbishment of the vaults will be a conservation gain, particularly where it identifies and repairs damage to the masonry. The insertion of retail and other facilities will for the most part be reversible, with little direct impact on the fabric of the vaults. A significant positive feature of the works will be the introduction of a new purpose to the vaults, in the words of the Venice Charter, "*The conservation of monuments is always facilitated by making use of them for some socially useful purpose.*" (International Charter for the Conservation and Restoration of Monuments and Sites, 1964, article 5). The vaults had been constructed with a view to their use for commercial purposes, though the extent of this use was never more than minimal. Above the vaults the original canopy above the platform of the DART station is part of the protected structure and temporary works will be required to support this structure during the works to facilitate the opening up of the platform to provide for an escalator.

The upgrading of Connolly Station to accommodate greater numbers of rail users will include the provision of a new entrance to the station at Preston Street, which will involve some works to the existing station. The existing archway entrance onto the end of the street is to be provided with a new façade, which will be attached to the existing face of the viaduct and would be removable in the future without significant impact on the historic wall. The adjacent archway to the south is to be used for cycle parking and a new entrance to that archway will be provided from Preston Street. The street is to be landscaped, with new paving and trees and with restricted access for vehicles. This will enhance the setting of the protected structures in the street (RPS DCC 6847 to 6850 and 126) through the provision of tree planting, new paving and the elimination of on-street parking. There are historic stone setts at the two entrances to the former Parcels Office on Preston Street and in the rainwater channels on either side of the street. These are noted in Appendix 2.1 of the Draft Dublin City Development Plan 2023-2029 to be protected and hence care will need to be taken during these works to ensure that the paving is incorporated in the designs for the streetscape and is preserved.

For much of its length the railway at Zone A is elevated and it crosses above twelve streets between North Strand Road and Glasnevin via bridge structures. Three of these bridges are protected structures, at North Strand Road (RPS DCC 888), Ballybough Road (RPS DCC 877) and Jones's Road (RPS DCC 884) and five others are included in the Dublin City Industrial Heritage Record (DCIHR), at Clonliffe Road, St James's Avenue, St Joseph's Avenue, Mabel Street and St George's Avenue. Two other bridges, at Spring Garden Street and Annesley Avenue, are not included in the RPS, NIAH or DCIHR, though they form part of the GSWR railway line that is listed in the DCIHR. All of these bridges and the railway line within the study area will have structures and cables erected to facilitate the OHLE.

Works to the track will involve track lowering at Prospect Road bridge to achieve adequate clearance under bridge to allow for the installation of OHLE and an additional crossover will be provided between tracks on the northern railway line approach to Connolly Station to increase capacity on the system. The predicted impacts on built heritage sites are set out in Table 21-13 to Table 21-15 below.

#### **21.5.1.2 Zone B**

Works in Zone B will include the provision of a new station at Spencer Dock with a consequent requirement to lower the track bed beneath the bridge at Sheriff Street Upper, the demolition and reconstruction of part of that bridge and some alteration to the tracks in the vicinity of the station and the provision of a substation within the railway lands nearby. To the north of the bridge there is a water tower and a signal box, both of which date from the later nineteenth century. The signal box is a rare survivor that includes historic signalling equipment, possibly one of the first examples of block signalling in Ireland. The proposed railway track to Spencer Dock station would run through the signal box.

Along all of the railway track on the MGWR line within the study area, structures and cabling will be erected to facilitate the OHLE.

Modifications to some of the bridges along the various tracks in Zone B will be required including demolition and reconstruction of five spans of the overbridge at Sheriff Street Upper (BH-6), which is listed in the Dublin City Industrial Heritage Record (DCIHR). The spans of other bridges will not be impacted in this zone, as the necessary clearance will be achieved by track lowering. Bridge parapet heights will need to be raised to meet requirements for safety and this will be achieved at Ossory Road bridge on the GSWR line with steel panels, perforated in the upper section, in place of the present corrugated sheet. The concrete beam railway bridge adjacent to Newcomen Bridge will have its concrete piers raised and steel mesh infilling between the piers; at Clarke Bridge the parapet of the railway bridge will be raised using similar masonry to the present parapet and the railway bridge adjacent to Clonliffe Bridge will have its parapets raised using angular pre-cast concrete. The twin-arched bridge at Drumcondra Road will have its parapet raised using similar masonry to the existing, and with an angular coping and a similar approach will be taken at the eastern parapet of the Cross Guns Tunnel beneath Prospect Road; there is no parapet on the western side of Prospect Road. The accommodation bridge to the west of Prospect Road will have its parapets raised with solid sheet in the lower area and expanded metal above. Most of these railway bridges are not included in the RPS, the exception being the bridge at Drumcondra Road (RPS DCC 908, included with the adjacent Binns Bridge on the Royal Canal). The railway tunnel at Prospect Road is included in the NIAH and the adjacent canal bridge, Cross Guns Bridge, is a proposed protected structure (PPS DCC 8807). In each of the other cases, the bridge alongside a canal bridge that is a protected structure, or is of equal quality to a protected structure, namely Newcomen Bridge (RPS DCC 911), Clarke Bridge (RPS DCC 9101) and Clonliffe Bridge. The predicted impacts on each of these bridges is included in Table 21-13, Table 21-14, and Table 21-15.

Along the GSWR route, which is raised on a viaduct for much of its length within the city, the OHLE will have some visual impact on the settings of structures of architectural heritage significance, including the railway bridges.

### **21.5.1.3 Zone C**

Within Zone C the works will include the closure of level crossings at Ashtown, Coolmine, Porterstown and Clonsilla and the provision of alternative means of crossing the railway. At Ashtown, the railway is slightly above the existing ground level and is close to the Royal Canal. The proximity of buildings close to the railway and canal, particularly on the northern side, makes the provision of a bridge difficult. As a consequence, it is proposed to construct a new road leading off two existing roads on either side of the canal to the west of the existing Ashtown level crossing. The new road will pass beneath the canal via an underpass. The canal is at a higher level at this point than at the existing level crossing and it descends via two locks before reaching the canal bridge and level crossing. As a result, the cutting will not need to be as deep to cross under the canal as it would further to the east.

The proposed Ashtown level crossing road replacement infrastructure will have a direct impact on a number of historic structures. On the northern side, the gateway to Ashton House (RPS FCC 690) and a section of the demesne wall will be taken down and rebuilt further into the property to allow for the upgrading of Mill Lane and its descent into the cutting, with the driveway ramped down to the new road. This will also affect access to the gate lodge, which will face onto the lowered driveway. The new road will cut through the south-eastern corner of the demesne of Ashton House, through an area of woodland. To the south of the canal and railway the new road will run at the rear of the disused mill, affecting the setting of the mill and running through the site of the millpond and headrace that served the mill. For the duration of the construction of the underpass beneath the canal and railway, it will be necessary to close this section of the canal. The construction of a footbridge at the existing rail crossing at Ashtown will also require the temporary closure of the canal as works for the construction of the bridge will need to be carried out from the canal.

With the closure of the level crossing at Coolmine, vehicular traffic except bicycles will be diverted to cross the railway and canal via the existing road network. A new bridge is to be provided at the present crossing to carry mobility impaired, pedestrians and cyclists over the railway and canal. Due to the proximity of the canal this

will require the temporary closure of this section of the canal and the provision of piles at the edge of the canal to support the bridge. All works to the canal will be undertaken in consultation with Waterways Ireland.

There will be no direct impact on any structure of architectural heritage significance arising from the closure of the Coolmine level crossing.

A similar arrangement will be undertaken at Porterstown and Clonsilla, with the closure of the existing level crossings and the provision of new bridges for mobility impaired, pedestrians and cyclists. There will be no direct impact on any structure of architectural heritage significance arising from the works associated with the closure of these crossings. The proposed pedestrian bridge will have an indirect effect on the settings of the former Clonsilla School, Kennan Bridge on the Royal Canal and the former crossing keeper's lodge adjacent to the level crossing.

There are eleven overbridges in Zone C, three of which are of architectural heritage significance, while a fourth is associated with a canal bridge of heritage significance. Two of these, the railway arch at Broome Bridge (OBG5) (NIAH 50060126) and the railway arch at Granard Bridge on Castleknock Road (OBG 11) (RPS FCC 696), are masonry arch bridges without adequate clearance for OHLE and it is proposed to remove the existing railway arches and provide new concrete arches. Broome Bridge (NIAH 50060126) will be raised by approx. 620mm, which will necessitate the raising of the road surface over the adjacent canal bridge, resulting in a slight impact; in each case it is proposed to use a lightweight flexible fill to raise the deck to minimize the additional dead load. The parapet of the railway bridge will also need to be raised, including the wall descending southward from the railway bridge. At Castleknock Road the replacement of the arch of the railway bridge will allow for an increase in headroom of approx. 410mm, while the parapet of the bridge will also need to be raised, including the wall adjacent to the approach ramp on the southern side. There is sufficient separation between the railway bridge and the canal bridge (RPS FCC 696) that there will be no significant impact on the latter. The bridge at the Old Navan Road (OBG 9) has a concrete deck resting on the original stone abutments and it is proposed to lift the deck by approx. 320mm.

At Clonsilla Station there is a historic iron footbridge (OBG12) (RPS FCC 707). There is sufficient clearance beneath the bridge deck for the OHLE but the problem of isolating the OHLE from those using the bridge is exacerbated by the open lattice form of the bridge parapet. The adopted solution is to leave the bridge parapet as it is and to provide polycarbonate panels beneath the bridge deck and extending out from the bridge on either side to prevent any attempt at touching the OHLE.

Substations are to be provided opposite Castleknock Station, on the northern side of the railway and another at Coolmine Station, on the southern side of the railway to the west of the existing crossing. These will be sufficiently remote from structures of architectural heritage significance that there would be no predicted impact. A siding to the east of Clonsilla Station is to be increased in length, with no effect on architectural heritage.

A total of thirteen demesnes lie partly within the study area in Zone C. Some of these no longer exist as open landscapes, having been built over, such as Tolka Park (DL 1), Tolka Lodge (DL 2) within the Dublin city area, while in Fingal those that have been built over include Woodville Lodge 9 (DL 6) and Abbey Cottage (DL 8), while Mary Villa (DL 7) has been largely built over and the part of the demesne of Beech Park House (DL 11) close to the railway is now laid out as allotments. The only demesne that would be affected by the proposed project within Zone C is Ashton House (DL 11) and the impact on that demesne is described below under the consideration of Ashton House (BH-149).

#### **21.5.1.4 Zone D**

Within this zone the works will include the provision of a substation near Hansfield Station. Ancillary buildings are to be provided at M3 Parkway Station. There will be no works to the two surviving historic bridges, Barnhill Bridge (OBCN286) (RPS FCC 0712) and Dunboyne Bridge (OBCN287) (NIAH 14341002) in this zone as the track is to be lowered beneath them to provide clearance for the OHLE, while the parapets have already been replaced with high concrete parapets.

In the light of the above there will be no impacts on structures of architectural heritage significance within Zone D.

There will be no direct impact on any demesnes in County Meath or in Fingal within Zone D. The route runs through the former demesne of Rusk House (DL 115), though the land in the vicinity of the railway is now in agricultural use, while Rusk House is in ruins.

#### **21.5.1.5 Zone E**

Within Zone E the level crossing at Barberstown is to be closed and a new road bridge provided to cross the railway and canal. This will be located approx. 200m to the west of the existing level crossing with no direct impact on architectural heritage.

At two of the historic railway bridges in Zone E, Collins Bridge (RPS FCC 713) and Pike Bridge (RPS B06-13 KCC), the track is to be lowered to achieve sufficient clearance for the OHLE and the parapets will be raised to meet the safety requirements. In two other cases track lowering is not a viable option. At Cope Bridge (PPS KCC 20) the masonry arch of the railway bridge is to be removed and replaced with a precast concrete arch with higher clearance; this will necessitate raising the road deck over the canal arch and it is proposed to use a lightweight flexible fill to raise the deck to minimize the additional dead load. At present Cope Bridge has inadequate road width, and this is currently managed through signal-controlled access for vehicles (shuttle system). The proposal includes the resolution of that issue by separating pedestrian and cycle traffic from motorised traffic by means of new pedestrian/cycle bridges on either side of the existing bridge. It is proposed to provide an electricity substation on the southern side of the railway, to the east of Cope Bridge. At Louisa Bridge the original deck of the railway bridge has been replaced with concrete beams and the raising of the decks will have minimal impact on the visual character of the bridge. It is proposed to use lightweight to replace the existing fill at Louisa Bridge on the Royal Canal (PPS KCC 6) adjacent to the railway bridge.

Four demesnes include land within the study area of Zone E. The part of Barberstown (DL 14) adjacent to the railway has been built over, the grounds of Collinstown (DL 18) have been partly built over and Woodlands (DL 15) is at a distance from the railway, which runs in a cutting near the closest point to the Woodlands demesne. The most important demesne close to the study area is Carton (DL 19), which is of very high significance and retains much of its original character. Carton is well screened from the railway by its demesne wall and dense tree cover alongside the canal and railway and there would be no impact on the demesne of Carton arising from the project.

#### **21.5.1.6 Zone F**

Within Zone F there will be no interventions with direct effects on historic bridges. The existing track is to be diverted to the south of Jackson Bridge (RPS KCC B05-36), avoiding the necessity for works to the bridge. A bridge over the canal and railway further to the west at Maws townland is to be demolished and rebuilt, though it is a concrete bridge and is not of architectural heritage significance. While an extensive depot is to be constructed within this zone, there will be no direct impact on any structures of architectural heritage significance. The work will have indirect effects on the settings of Jackson Bridge, Chambers Bridge (RPS B-05 35 KCC) and the Royal Canal.

The south campus at Maynooth University is a demesne (DL 20) and is sufficiently screened by the perimeter wall and a dense belt of trees that there would be no impact on the demesne arising from the project.

#### **21.5.1.7 Summary**

Table 21-13 provides a summary assessment of the potential direct impacts during construction on structures of architectural significance (BH sites).

**Table 21-13 Potential direct construction impacts**

BH No.	Location	Baseline rating	Magnitude of effect	Potential Significance of effect	Impact assessment prior to mitigation
BH-6	Sheriff Street bridge	3	High	Moderate	The work for the construction of Spencer Dock Station will involve the demolition and reconstruction of several spans of the bridge
BH-9	LNWR signal box	3	High	Very significant	The laying of the proposed railway line to Spencer Dock Station would necessitate the demolition of the signal box.
BH-23	Connolly vaults	1	Medium	Significant	The works to the vaults beneath the station would be invasive but would affect only a small area of the extensive vaults, while making use of a large under-used area. The works will include the refurbishment of the section of the vaults that would be brought into use for the station. The works at platform level will require protection of the 1890s canopy over platform 5.
BH-60	MGWR railway	3	High	Significant	The track bed of the railway will be lowered to provide clearance for OHLE in the vicinity of the bridges at North Strand Road, Ballybough Road, Jones's Road, Drumcondra Road and Prospect Road with the possibility of undermining the foundations of the bridges and retaining walls. Along the entire length of the railway within the study area structures and cables for the OHLE will be erected.
BH-61	GSWR railway	3	Low	Not significant	The track bed of the railway will be lowered in places to provide clearance for OHLE. Along the entire length of the railway within the study area structures and cables for the OHLE will be erected.
BH-62	Bridge at Ossory Road	2	Medium	Significant	The parapets of the bridge will be raised for safety reasons
BH-73	Railway overbridge at North Strand Road	3	High	Significant	The parapets of the bridge will be raised for safety reasons. The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-87	Railway overbridge at Ballybough Road	3	High	Significant	The parapets of the bridge will be raised for safety reasons. The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-99	Railway underbridge, North Strand Road	1	Medium	Significant	Gantries and other equipment will be erected on the bridge to facilitate the OHLE
BH-101	Railway underbridge, Ballybough Road	1	Medium	Significant	Gantries and other equipment will be erected on the bridge to facilitate the OHLE
BH-102	Railway underbridge, Clonliffe Avenue	3	Medium	Moderate	Gantries and other equipment will be erected on the bridge to facilitate the OHLE
BH-103	Railway underbridge, St James's Avenue	3	Medium	Moderate	Gantries and other equipment will be erected on the bridge to facilitate the OHLE
BH-104	Railway underbridge, St Joseph's Avenue	3	Medium	Moderate	Gantries and other equipment will be erected on the bridge to facilitate the OHLE

BH No.	Location	Baseline rating	Magnitude of effect	Potential Significance of effect	Impact assessment prior to mitigation
BH-106	Railway underbridge, Jones's road	1	Medium	Significant	Gantries and other equipment will be erected on the bridge to facilitate the OHLE
BH-107	Railway underbridge, Mabel Street	3	Medium	Moderate	Gantries and other equipment will be erected on the bridge to facilitate the OHLE
BH-109	Railway overbridge at Jones's Road	3	High	Significant	The parapets of the bridge will be raised for safety reasons. The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-110	Railway underbridge, St George's Avenue	3	Medium	Moderate	Gantries and other equipment will be erected on the bridge to facilitate the OHLE
BH-111	Railway overbridge at Drumcondra Road	1	High	Significant	The parapets of the bridge will be raised for safety reasons. The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-124	Cross Guns tunnel	2	High	Significant	The parapet of the bridge will be raised for safety reasons. The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-126	Accommodation bridge	4	High	Significant	The parapets of the bridge will be raised for safety reasons. The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-139	Broome Bridge	1	High	Profound	The arch of the railway bridge is to be removed and replaced with a concrete arch with higher parapets and the road over the canal bridge is to be raised using a lightweight fill.
BH-144	level crossing	3	Low	Not significant	The level crossing is to be closed
BH-146	Royal Canal	1	High	Very significant	The canal will be closed during the construction of the underpass and the pedestrian/cycle bridge, with interventions into the canal to facilitate the construction.
BH-148	Disused mill at Ashtown	1	Medium	Very significant	The cutting for the underpass will run through the site of the millpond and is likely to sever the head race from the mill
BH-149 DL 3	Ashton House, demesne, gates and gate lodge	1	High	Profound	The gateway and a section of the demesne wall are to be removed and reconstructed further back from the road, with the driveway ramped down to the new road alignment. The new road will cut through the corner of the demesne. A construction compound is to be sited within the grounds of the house.
BH-154	Old Navan Road railway bridge	4	Low	Not significant	The deck of the bridge is to be raised and the parapets increased in height
BH-156	Granard Bridge	1	High	Profound	The road deck over the bridge will be raised slightly and the road over the canal bridge is to be raised using a lightweight fill.
BH-157	Railway bridge at Castleknock Road	1	High	Profound	The arch of the railway bridge is to be removed and replaced with a concrete arch with higher parapets
BH-159	Coolmine level crossing	3	Low	Not significant	The level crossing is to be closed

BH No.	Location	Baseline rating	Magnitude of effect	Potential Significance of effect	Impact assessment prior to mitigation
BH-161	Porterstown level crossing	3	Low	Not significant	The level crossing is to be closed
BH-166	Clonsilla pedestrian bridge	1	Low	Moderate	Panels are to be fitted below the bridge deck for safety reasons
BH-168	Clonsilla level crossing	3	Low	Not significant	The level crossing is to be closed
BH-170	Barnhill Bridge	1	High	Significant	The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-172	Barberstown level crossing	3	Low	Not significant	The level crossing is to be closed
BH-175	Railway bridge adjacent to Collins Bridge	1	High	Significant	The parapets of the bridge will be raised for safety reasons. The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-177	Dunboyne Bridge	1	High	Significant	The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.
BH-179	Cope Bridge	1	High	Profound	The arch of the railway bridge is to be removed and replaced with a concrete arch with higher parapets and the deck of the canal bridge is to be raised using a lightweight fill. New cycle/pedestrian bridges are to be erected on either side of the bridge.
BH-180	Rye Water Aqueduct	1	Medium	Significant	Gantries and other equipment will be erected on the railway bridge to facilitate the OHLE
BH-185	Louisa Bridge	1	High	Profound	The road deck over the bridge will be raised slightly using a lightweight fill
BH-186	Railway bridge adjacent to Louisa Bridge	4	Low	Not significant	The deck of the bridge is to be raised and the parapets increased in height
BH-188	Blakestown level crossing	3	Low	Not significant	The level crossing is to be closed
BH-189	Pike Bridge	1	High	Significant	The parapets of the bridge will be raised for safety reasons. The track beneath the bridge will be lowered, with the potential to undermine the foundations of the bridge.

## 21.5.2 Potential Indirect Construction Impacts

Indirect impacts are those that do not alter or damage the fabric of a structure, but which have an impact on the setting of the structure. The indirect impacts within each of the zones is set out below and are listed in Table 21-14.

### 21.5.2.1 Zone A

As the greater part of the works will take place within the current railway corridor the indirect impacts on structures of architectural heritage significance are limited.

A new entrance to Connolly Station is to be located at Preston Street and the street is to be pedestrianized, with new paving and planting. There will be a temporary negative effect on the settings of the protected structures during the construction stage on the southern side of Preston Street and the former parcels depot on the northern side (BH-40 – BH-44).

### 21.5.2.2 Zone B

Within Zone B, construction compounds that in totality occupy a large area of land to the north-west of Sheriff Street and to the north-east of the Royal Canal at Spencer Dock. The proposed Spencer Dock Station will lie immediately to the north-east of the compound. There is one structure of architectural heritage significance within this area, which is a railway water tower (NIAH 50120264), located close to the proposed Spencer Dock Station. This water tower will need to be safeguarded from damage by vehicles or machinery during construction.

### 21.5.2.3 Zone C

Zone C includes the works at Ashtown where a new road is to be constructed beneath the canal; here the construction site will encroach into part of the lands of the disused oil mill (RPS FCC 691), impacting on the setting of the mill.

Level crossings at Ashtown, Coolmine, Porterstown and Clonsilla are to be closed. To replace the pedestrian and cyclists' access at each of these locations, a footbridge will be constructed to take pedestrians and cyclists over the railway and canal. At each location there is a historic canal bridge – Longford Bridge at Ashtown (RPS 907 DCC, RPS 0693 FCC) Kirkpatrick Bridge at Carpenterstown Road (RPS 697 FCC), Kennan Bridge at Porterstown Road (RPS 698 FCC) and Callaghan Bridge at Clonsilla (RPS 707 FCC). Some of the construction traffic may need to use the canal bridge, with potential damage to the bridge and its parapets. Other structures of architectural heritage significance in proximity to the footbridge construction sites are the crossing keeper's house at Porterstown Road, Clonsilla School, at Porterstown, and the signal box at Clonsilla Station and each of these will need to be safeguarded during construction.

### 21.5.2.4 Zone D

No indirect construction impacts are predicted in Zone D.

### 21.5.2.5 Zone E

Within Zone E the proposal includes the closure of the level crossing at Barberstown Lane and its replacement with a new road bridge approx. 200 metres to the west. Pakenham Bridge (RPS 711 FCC) over the Royal Canal is adjacent to the level crossing and will be used by construction traffic while the road bridge is being built. The bridge and its parapets will need to be safeguarded during construction works.

### 21.5.2.6 Zone F

In Zone F the construction of the new alignment of the railway and of the new depot will be close to Jackson Bridge and will have an impact on the setting of the bridge and the Royal Canal. Chambers Bridge (RPS B05-35 KCC) crosses the Royal Canal immediately to the north of the depot at Maws townland. It is not intended that this bridge would be used by construction traffic and the indirect construction impact will affect only the setting.

### 21.5.2.7 Summary

Table 21-14 provides a summary assessment of the potential direct impacts during construction on structures of architectural significance (BH sites).

**Table 21-14 Potential indirect construction impacts**

BH No.	Location	Baseline rating	Magnitude of effect	Potential Significance of effect	Impact assessment prior to mitigation
BH-7	Water tower at Sheriff Street	2	Medium	Moderate	The works to lay new track and construct Spencer Dock station will take place in close proximity to the water tower

BH No.	Location	Baseline rating	Magnitude of effect	Potential Significance of effect	Impact assessment prior to mitigation
BH-40	1 Preston Street	1	Low	Moderate	Works will be undertaken in the street to the front of the house during construction
BH-41	2 Preston Street	1	Low	Moderate	Works will be undertaken in the street to the front of the house during construction
BH-42	3 Preston Street	1	Low	Moderate	Works will be undertaken in the street to the front of the house during construction
BH-43	4 Preston Street	1	Low	Moderate	Works will be undertaken in the street to the front of the house during construction
BH-44	Former parcels office, Amiens Street	1	Low	Moderate	Works will be undertaken in the street to the front of the house during construction
BH-148	Disused mill at Mill Lane	1	Low	Moderate	The construction of the new road at Ashtown will affect the setting of the rear of the mill
BH-158	Kirkpatrick Bridge, Carpenterstown Road	1	Medium	Significant	Potential damage to the bridge from construction traffic during the construction of the footbridge
BH-160	Kennan Bridge, Porterstown Road	1	Medium	Significant	Potential damage to the bridge from construction traffic during the construction of the footbridge
BH-162	Crossing keeper's house, Porterstown Road	1	Medium	Significant	The setting of the house will be affected and there could be potential damage to the house during the construction of the footbridge
BH-163	Clonsilla School, Porterstown Road	1	Medium	Significant	The setting of the schoolhouse will be affected and there could be potential damage to the former school during the construction of the footbridge
BH-165	Signal box and footbridge, Clonsilla Station	1	Medium	Significant	The setting of the signal box will be affected and there could be potential damage to the signal box during the construction of the footbridge
BH-169	Callaghan Bridge, Clonsilla Road	1	Medium	Significant	The setting of the bridge will be affected and there could be potential damage to the bridge from construction traffic during the construction of the footbridge
BH-171	Pakenham Bridge, Barberstown Lane	1	Medium	Significant	Potential damage to the bridge from construction traffic during the construction of the footbridge
BH-179	Cope Bridge	1	High	Very significant	The works to construct pedestrian and cycle bridges on either side of Cope Bridge and a substation to the east of the bridge will have a negative indirect effect on the setting of the bridge.
BH-184	Former Leixlip Railway Station	1	Medium	Significant	Gantries and other equipment will be erected on the railway adjacent to the former station to facilitate the OHLE
BH-195	Jackson Bridge	1	Medium	Significant	The setting of the bridge will be affected by the works to construct the new railway alignment and the depot.
BH-196	Chambers Bridge and 15 <sup>th</sup> lock	1	Medium	Significant	The setting of the bridge and lock will be affected by the works to construct the new depot.

### 21.5.3 Potential Operational Impacts

Operational impacts are those occur after the completion of construction, and which arise from the operation of the electrified DART line. In this assessment they include those impacts which arise from the electrification and do not include those impacts which may have been in existence prior to the electrification. The operational impacts within each of the zones is set out below and are listed in Table 21-15.

#### 21.5.3.1 Zone A

The vaults at Connolly Station will be used as a means of access to and from the station, with the positive impact that the vaults will be brought into use and improved.

Within Zone A the roadway at Preston Street is to be upgraded, including paving and landscaping. This will have a significant positive impact on the four houses and the former parcels depot that are located on Preston Street, all of which are protected structures, see Table 21-15.

A significant length of the railway within this zone is elevated and crosses streets on ten bridges, three of which, at North Strand Road, Ballybough Road and Jones's Road, are protected structures, five more, at Clonliffe Avenue, St James's Avenue, St Joseph's Avenue, Mabel Street and St George's Avenue, are listed in the DCIHR, while another two are not included in the RPS, the NIAH or the DCIHR, though they are part of the GSWR railway line that is included in the DCIHR. The GSWR railway and the ten bridges will all be affected by the erection of cables and support structures for the OHLE, resulting in an impact on the character of these elements at operational stage, as listed in Table 21-15.

#### 21.5.3.2 Zone B

Along the MGWR railway line, Zone B will include a number of bridges where the line runs beneath the city streets. In each case the track bed will be lowered as part of the proposed development to provide sufficient clearance for the OHLE and every bridge will require a higher parapet to ensure that no-one on the bridge can reach the OHLE cables. This will have an impact on the character of the bridges at operational stage, including the bridge at Drumcondra Road (BH-116) and the Cross Guns tunnel (BH-124), both of which are listed in the NIAH; this will also affect the bridge at North Strand Road that is included in the DCIHR and the accommodation bridge to the west of Prospect Road that is of heritage significance (BH-126).

Adjacent to the line of the MGWR there are several canal bridges that are of architectural heritage significance and there will be some impact on the settings of these bridges due to the raising of the parapets of the railway bridges. This includes three that are protected structures - Newcomen Bridge, Clarke Bridge and Binns Bridge, as well as Clonliffe Bridge, which is of similar quality to the protected structures.

#### 21.5.3.3 Zone C

Within Zone C the historic railway bridge arches at Broombridge Road (BH-139) and Castleknock Road (BH-157) will be replaced and will have higher parapets, while the parapet of the railway bridge on the Old Navan Road (BH-154) will also be raised. In each case there will be an ongoing impact on the settings of the adjacent canal bridge, each of these being a protected structure.

At Ashtown, the provision of an underpass beneath the railway and canal will have an adverse impact on the setting of the disused oil mill adjacent to the canal, this being a protected structure.

The electrification project will have a significant positive impact on Longford Bridge (BH-145), Kirkpatrick Bridge (BH-158), Kennan Bridge (BH-160) and Callaghan Bridge (BH-169), each of which is on the Royal Canal and a protected structure. These bridges are relatively narrow and have been carrying vehicular traffic and as a result of the works they will now be closed to vehicular traffic, removing the potential for damage by traffic. At the same time, however, there will be a moderate adverse impact on the settings of Kirkpatrick Bridge, Kennan Bridge and Callaghan Bridge through the construction of a pedestrian and cycle bridge overhead. There will be a moderate adverse impact on the settings of the signal box at Clonsilla Station (BH-

166) and the former Clonsilla School (BH-163) due to the construction of footbridges. Although in the case of Clonsilla School, the ramp of the footbridge would be about two metres above present ground level at its nearest point to the school, at a distance of about 20 metres.

#### 21.5.3.4 Zone D

The only impact on architectural heritage that is predicted at operational stage within Zone D is and indirect the impact on the setting of the water tower adjacent to Dunboyne Bridge (BH-176) arising from the erection of cables and support structures for the OHLE adjacent to the tower.

#### 21.5.3.5 Zone E

Within Zone E there will be a significant positive impact on Pakenham Bridge (BH-171) and Deey Bridge (BH-187) at operational stage due to the closure of the bridges to vehicular traffic.

There will be some impacts on the settings of the former Coldblow and Lucan Station (BH-173) through the erection of cables and support structures for the OHLE.

The higher parapets on railway bridges will have an impact on the settings of some canal bridges, including Collins Bridge (RPS FCC 713), Cope Bridge (PPS KCC 20), Louisa Bridge (PPS KCC 6) and Pike Bridge (RPS KCC B6-13).

#### 21.5.3.6 Zone F

There will be some impacts on the settings of the signal box and station master's house at Maynooth Station (BH-192 and BH-193) through the erection of cables and support structures for the OHLE, the impacts on the former station not being significant, while those on the signal box and station master's house will be slight.

There will be a significant positive impact on Jackson Bridge (BH-195) at operational stage due to the closure of the bridge to traffic. No other impacts are expected on architectural heritage arising from the works within Zone F.

#### 21.5.3.7 Summary

Table 21-15 provides a summary assessment of the potential direct impacts during construction on structures of architectural significance (BH sites).

**Table 21-15 Potential operational impacts**

BH No.	Location	Baseline rating	Magnitude of effects	Potential Significance of effects	Impact assessment prior to mitigation
BH-23	Connolly vaults	1	Medium positive	Significant positive	At operational stage the works in Connolly Vaults will bring the vaults into use with an overall positive impact.
BH-40	1 Preston Street	1	Medium	Significant positive	The paving and lighting of the street to the front of the house is to be upgraded, improving the setting of the protected structure
BH-41	2 Preston Street	1	Medium	Significant positive	The paving and lighting of the street to the front of the house is to be upgraded, improving the setting of the protected structure
BH-42	3 Preston Street	1	Medium	Significant positive	The paving and lighting of the street to the front of the house is to be upgraded, improving the setting of the protected structure

BH No.	Location	Baseline rating	Magnitude of effects	Potential Significance of effects	Impact assessment prior to mitigation
BH-43	4 Preston Street	1	Medium	Significant positive	The paving and lighting of the street to the front of the house is to be upgraded, improving the setting of the protected structure
BH-44	Former parcels office, Amiens Street	1	Medium	Significant positive	The paving and lighting of the street to the front of the building is to be upgraded, improving the setting of the protected structure
BH-63	Railway underbridge on GNR North Wall Extension, West road	3	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-72	Newcomen Bridge	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge
BH-86	Clarke Bridge	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge
BH-99	Railway underbridge, North Strand Road	1	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-101	Railway underbridge, Ballybough Road	1	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-102	Railway underbridge, Clonliffe Avenue	3	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-103	Railway underbridge, St James's Avenue	3	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-104	Railway underbridge, St Joseph's Avenue	3	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-106	Railway underbridge, Jones's road	1	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-107	Railway underbridge, Mabel Street	3	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-108	Clonliffe Bridge, Russell Street	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge
BH-110	Railway underbridge, St George's Avenue	3	Medium	Moderate negative	The appearance of the bridge will be altered due to the provision of the OHLE
BH-115	Binns Bridge	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge
BH-139	Broome Bridge, Broombridge Road	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the adjacent bridge and its parapet
BH-145	Longford Bridge, Ashtown	1	Medium	Significant positive	The bridge will be closed

BH No.	Location	Baseline rating	Magnitude of effects	Potential Significance of effects	Impact assessment prior to mitigation
BH-148	Disused mill at Mill Lane	1	Low	Moderate negative	The new road will affect the setting of the rear of the protected structure
BH-149, DL 3	Ashton House, Ashtown Road	1	Medium	Very significant negative	The entrance to the protected structure will be altered, the new road passing beneath the Royal Canal will pass through the south-west corner of the demesne and the setting of the gate lodge will be impacted
BH-156	Granard Bridge, Castleknock Road	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge
BH-158	Kirkpatrick Bridge, Carpenterstown Road	1	Low	Moderate negative	The setting of the bridge will be altered through the construction of the new pedestrian and cycle bridge overhead
BH-158	Kirkpatrick Bridge, Carpenterstown Road	1	Medium	Significant positive	The bridge will be closed
BH-160	Kennan Bridge, Porterstown Road	1	Low	Moderate negative	The setting of the bridge will be altered through the construction of the new pedestrian and cycle bridge overhead
BH-160	Kennan Bridge, Porterstown Road	1	Medium	Significant positive	The bridge will be closed
BH-162	Crossing keeper's house, Porterstown Road	1	Low	Moderate negative	The setting of the house will be altered through the construction of the new pedestrian and cycle bridge in close proximity
BH-163	Clonsilla School, Porterstown	1	Low	Moderate negative	The setting of the school will be altered through the construction of the ramp of the new pedestrian and cycle bridge in close proximity
BH-166	Signal box and footbridge, Clonsilla Station	1	Low	Moderate negative	The setting of the signal box will be altered through the construction of the ramp of the new pedestrian and cycle bridge in close proximity
BH-169	Callaghan Bridge, Clonsilla Road	1	Low	Moderate negative	The setting of the bridge will be altered through the construction of the new pedestrian and cycle bridge overhead
BH-169	Callaghan Bridge, Clonsilla Road	1	Medium	Significant positive	The bridge will be closed
BH-171	Pakenham Bridge, Barberstown Lane	1	Medium	Significant positive	The bridge will be closed
BH-173	Former Coldblow & Lucan Station	4	Low	Not significant negative	The setting of the former station will be altered through the installation of the OHLE close to the rear of the former station building
BH-174	Collins Bridge, Westmanstown	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge
BH-176	Water tower to the south of Dunboyne Station	2	Low	Slight negative	The setting of the water tower will be altered through the installation of the OHLE close by
BH-179	Cope Bridge, Leixlip Confey	1	High	Significant negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge and through the provision of new cycle/pedestrian bridges on either side of the existing bridge.

BH No.	Location	Baseline rating	Magnitude of effects	Potential Significance of effects	Impact assessment prior to mitigation
BH-185	Louisa Bridge	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge
BH-187	Deey Bridge and 13th Lock, Blakestown	1	Medium	Significant positive	The bridge will be closed
BH-189	Pike Bridge, Royal Canal	1	Low	Moderate negative	The setting of the bridge will be altered through the raising of the parapet of the adjacent bridge
BH-192	Signal box at Maynooth Station	1	Low	Slight negative	The setting of the water tower will be altered through the installation of the OHLE close by
BH-193	Station Master's House, Maynooth Station	1	Low	Slight negative	The setting of the water tower will be altered through the installation of the OHLE close by
BH-195	Jackson Bridge	1	Medium	Significant positive	The road is to be closed to the south of the bridge, with a consequent significant reduction in traffic
BH-195	Jackson Bridge	1	Medium	Moderate negative	The presence of the new depot will have a negative effect on the setting of the bridge
BH-196	Chambers Bridge and 15 <sup>th</sup> lock	1	Medium	Moderate negative	The presence of the new depot will have a negative effect on the setting of the bridge and lock

## 21.6 Mitigation measures

In most cases where architectural heritage is impacted as a result of the proposed development there will be no requirement or no opportunity for mitigation. In some instances, such as the lowering of the track at certain locations along the MGWR railway and the GSWR railway the impacts will be so small as to be imperceptible provided the adjacent retaining walls and bridges are not undermined. Structural surveys will be carried out wherever appropriate to determine the condition of retaining walls and bridges and to determine the depth of foundations. In the case of the erection of cables and structures for the OHLE there are no mitigation measures that could be implemented that would reduce or eliminate the impacts and this would also be the case where the raising of the parapets on railway bridges would affect the settings of the adjacent canal bridges and where the erection of footbridges would affect the settings of canal bridges and other structures in the vicinity. In many cases mitigation has been achieved to a greater or lesser extent through design, such as the choice of means of raising the parapets of bridges.

Mitigation will also include monitoring of the masonry of the canal bridges where it is proposed to remove the arches from adjacent railway bridges, to ensure that no damage occurs to the canal bridge through vibration or settlement during construction, or through the removal of support for the canal abutment adjacent to the railway bridge. Works to the vaults at Connolly Station will also need to be monitored to ensure that cutting into parts of the vaults during construction does not cause damage to other parts of the vaults.

Mitigation measures for each affected structure are listed in Table 21-16, below and include protection of the structure from damage during construction and recording of those structures that are to be removed prior to works commencing. Where masonry arch bridges are to have their arches removed and replaced with concrete arches the geometry and design of the concrete arch should be prepared in consultation with a Grade 1 conservation architect. Where the road is to be raised over the canal bridges due to the raising of the decks of the adjacent railway bridges the choice of fill needs to be selected carefully in order to prevent consequential damage to the bridges.

**Table 21-16 Mitigation of direct impacts during construction**

BH No.	Location	Mitigation	Potential Residual effects (following mitigation)
BH-6	Sheriff Street bridge	Bridge is to be recorded by photographs, written description and measured drawings prior to demolition. The brick in the piers and parapets and the granite are to be removed and reused in the reconstructed bridge, which is to be carried out to best conservation practice in accordance with a method statement to be prepared by the Grade 1 conservation architect.	Moderate negative
BH-9	Signal box to the north of Sheriff Street	The signal box is to be recorded by measured drawings, photographs and written description prior to its removal and is to be offered to heritage parks, museums and other appropriate bodies for re-erection and display.	Significant negative
BH-23	Connolly vaults	Vaults are to be recorded by photographs and written description prior to the works. The alterations to the vaults and the historic station canopy are to be carried out in accordance with a method statement to be prepared by a Grade 1 conservation architect.	Significant negative
BH-44	Former parcels office, Amiens Street	Retain stone setts at entrances to parcels office and setts in rainwater channels, with repairs to the areas of setts at the entrances using salvaged setts of similar stone and similar colour.	Imperceptible negative
BH-60	MGWR railway	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the retaining walls are not undermined.	Not significant
BH-61	GSWR railway	No mitigation necessary.	Not significant
BH-62	Bridge at Ossory Road	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Significant negative
BH-73	Railway overbridge at North Strand Road	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Moderate negative
BH-87	Railway overbridge at Ballybough Road	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Moderate negative
BH-99	Railway underbridge, North Strand Road	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Significant negative
BH-101	Railway underbridge, Ballybough Road	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Significant negative
BH-102	Railway underbridge, Clonliffe avenue	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Moderate negative
BH-103	Railway underbridge, St James's Avenue	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Moderate negative
BH-104	Railway underbridge, St Joseph's Avenue	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Moderate negative

BH No.	Location	Mitigation	Potential Residual effects (following mitigation)
BH-106	Railway underbridge, Jones's road	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Significant negative
BH-107	Railway underbridge, Mabel Street	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Moderate negative
BH-109	Railway overbridge at Jones's Road	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Moderate negative
BH-110	Railway underbridge, St George's Avenue	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Moderate negative
BH-111	Railway overbridge at Drumcondra Road	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Significant negative
BH-124	Cross Guns tunnel	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the tunnel are not undermined.	Significant negative
BH-126	Accommodation bridge	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Slight negative
BH-139	Broome Bridge	Replacement arch is to be designed and built to a high quality in association with a Grade 1 conservation architect. The works to raise the deck level of the canal bridge should utilise a light flexible fill to minimise the possibility of damage to the bridge structure.	Very significant negative
BH-144	Ashtown level crossing	The level crossing is to be recorded by photographs and written description prior to its removal.	Not significant negative
BH-146	Royal Canal	The works to build the footbridge and the underpass are to be carried out in conjunction with Waterways Ireland to ensure that there is no long-term impact on the canal.	Moderate negative
BH-148	Disused mill at Mill Lane	No opportunity for mitigation other than to produce a written and photographic record of the structure that is to be demolished prior to the commencement of the works	Moderate negative
BH-149, DL 3	Ashton House, demesne, gates and gate lodge	The gateway and demesne wall are to be recorded by photographs, written description and measured drawings prior to removal; the wall and gateway are to be taken down carefully in accordance with a conservation method statement and reinstated using a lime-based mortar.	Very significant negative
BH-154	Old Navan Road railway bridge	No mitigation necessary.	Not significant negative
BH-156	Granard Bridge	The works to raise the deck level should utilise a light flexible fill to minimise the possibility of damage to the bridge structure.	Imperceptible negative
BH-157	Railway bridge at Castleknock Road	The replacement arch is to be designed and built to a high quality in association with a Grade 1 conservation architect.	Very significant negative
BH-159	Coolmine level crossing	The level crossing is to be recorded by photographs and written description prior to its removal.	Not significant negative
BH-161	Porterstown level crossing	The level crossing is to be recorded by photographs and written description prior to its removal.	Not significant negative

BH No.	Location	Mitigation	Potential Residual effects (following mitigation)
BH-166	Clonsilla pedestrian bridge	No opportunity for mitigation other than to produce a photographic record of the bridge prior to the installation of the OHLE.	Moderate negative
BH-168	Clonsilla level crossing	The level crossing is to be recorded by photographs and written description prior to its removal.	Not significant negative
BH-170	Barnhill Bridge	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Imperceptible negative
BH-172	Barberstown level crossing	The level crossing is to be recorded by photographs and written description prior to its removal.	Not significant negative
BH-175	Railway bridge adjacent to Collins Bridge	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Significant negative
BH-177	Dunboyne Bridge	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Imperceptible negative
BH-179	Cope Bridge	The replacement arch is to be designed and built to a high quality in association with a Grade 1 conservation architect. The works to raise the deck level of the canal bridge should utilise a light flexible fill to minimise the possibility of damage to the bridge structure. The impact of the pedestrian/cycle bridges has been minimised through design.	Very significant negative
BH-185	Louisa Bridge	The works to raise the deck level should utilise a light flexible fill to minimise the possibility of damage to the bridge structure.	Imperceptible negative
BH-186	Railway bridge adjacent to Louisa Bridge	No mitigation necessary.	Not significant negative
BH-188	Blakestown level crossing	The level crossing is to be recorded by photographs and written description prior to its removal.	Not significant negative
BH-189	Pike Bridge	Excavations to lower track bed are to be designed and carried out in accordance with a method statement prepared by the Grade 1 conservation architect to ensure that the foundations of the bridge are not undermined.	Significant negative

**Table 21-17 Mitigation of indirect impacts during construction**

BH No.	Location	Mitigation	Potential Residual effects (following mitigation)
BH-7	Water tower, Sheriff Street Upper	Erect hoardings around water tower to protect it from impact during construction.	Imperceptible negative
BH-40	1 Preston Street	Protect front railings from damage during construction.	Imperceptible negative
BH-41	2 Preston Street	Protect front railings from damage during construction.	Imperceptible negative
BH-42	3 Preston Street	Protect front railings from damage during construction.	Imperceptible negative
BH-43	4 Preston Street	Protect front railings from damage during construction.	Imperceptible negative

BH No.	Location	Mitigation	Potential Residual effects (following mitigation)
BH-44	Former parcels office, Amiens Street	Protect front railings from damage during construction.	Imperceptible negative
BH-148	Disused mill at Mill Lane	No opportunity for mitigation other than to produce a written and photographic record of the structure that is to be demolished prior to the commencement of the works.	Moderate negative
BH-158	Kirkpatrick Bridge, Carpenterstown Road	Protect parapets of bridge from damage and set load limits consistent with the bearing capacity of the bridge.	Imperceptible negative
BH-160	Kennan Bridge, Porterstown Road	Protect parapets of bridge from damage and set load limits consistent with the bearing capacity of the bridge.	Imperceptible negative
BH-162	Crossing keeper's house, Porterstown Road	Erect hoardings to protect house from damage.	Imperceptible negative
BH-163	Clonsilla School, Porterstown Road	Erect hoardings to protect school from damage. The impact on the setting has been mitigated as far as possible by design.	Moderate negative
BH-166	Signal box and footbridge, Clonsilla Station	Erect hoardings to protect signal box from damage.	Imperceptible negative
BH-169	Callaghan Bridge, Clonsilla Road	Protect parapets of bridge from damage and set load limits consistent with the bearing capacity of the bridge.	Imperceptible negative
BH-171	Pakenham Bridge, Barberstown Lane	Protect parapets of bridge from damage and set load limits consistent with the bearing capacity of the bridge.	Imperceptible negative
BH-195	Jackson Bridge	No opportunity for mitigation.	Moderate negative
BH-196	Chambers Bridge and 15 <sup>th</sup> lock	No opportunity for mitigation.	Moderate negative

**Table 21-18 Mitigation of impacts operation**

BH No.	Location	Mitigation	Residual effects (following mitigation)
BH-23	Connolly vaults	No mitigation necessary	Significant positive
BH-40	1 Preston Street	No mitigation necessary	Significant positive
BH-41	2 Preston Street	No mitigation necessary	Significant positive
BH-42	3 Preston Street	No mitigation necessary	Significant positive
BH-43	4 Preston Street	No mitigation necessary	Significant positive
BH-44	Former parcels office, Amiens Street	No mitigation necessary	Significant positive
BH-63	Railway underbridge on GNR North Wall Extension, West road	No opportunity for mitigation	Moderate negative
BH-72	Newcomen Bridge	No opportunity for mitigation	Moderate negative
BH-86	Clarke Bridge	No opportunity for mitigation	Moderate negative

BH No.	Location	Mitigation	Residual effects (following mitigation)
BH-99	Railway underbridge, North Strand Road	No opportunity for mitigation	Moderate negative
BH-101	Railway underbridge, Ballybough Road	No opportunity for mitigation	Moderate negative
BH-102	Railway underbridge, Clonliffe avenue	No opportunity for mitigation	Moderate negative
BH-103	Railway underbridge, St James's Avenue	No opportunity for mitigation	Moderate negative
BH-104	Railway underbridge, St Joseph's Avenue	No opportunity for mitigation	Moderate negative
BH-106	Railway underbridge, Jones's road	No opportunity for mitigation	Moderate negative
BH-107	Railway underbridge, Mabel Street	No opportunity for mitigation	Moderate negative
BH-108	Clonliffe Bridge, Russell Street	No opportunity for mitigation	Moderate negative
BH-110	Railway underbridge, St George's Avenue	No opportunity for mitigation	Moderate negative
BH-115	Binns Bridge	No opportunity for mitigation	Moderate negative
BH-139	Broome Bridge, Broombridge Road	No opportunity for mitigation	Moderate negative
BH-145	Longford Bridge, Ashtown	No mitigation necessary	Significant positive
BH-148	Disused mill at Mill Lane	Landscaping should be undertaken to screen the mill from the road.	Moderate negative
BH-149	Ashton House, Ashtown Road	No opportunity for mitigation	Very significant negative
BH-156	Granard Bridge, Castleknock Road	No opportunity for mitigation.	Moderate negative
BH-158	Kirkpatrick Bridge, Carpenterstown Road	No opportunity for mitigation	Moderate negative
BH-158	Kirkpatrick Bridge, Carpenterstown Road	No mitigation necessary	Significant positive
BH-160	Kennan Bridge, Porterstown Road	No opportunity for mitigation	Moderate negative
BH-160	Kennan Bridge, Porterstown Road	No mitigation necessary	Significant positive
BH-162	Crossing keeper's house, Porterstown Road	No opportunity for mitigation	Moderate negative
BH-163	Porterstown School House	No opportunity for mitigation	Moderate negative
BH-166	Signal box and footbridge, Clonsilla Station	No opportunity for mitigation	Moderate negative
BH-169	Callaghan Bridge, Clonsilla Road	No mitigation necessary	Significant positive
BH-169	Callaghan Bridge, Clonsilla Road	No mitigation necessary	Significant positive
BH-171	Pakenham Bridge, Barberstown Lane	No opportunity for mitigation	Moderate negative

BH No.	Location	Mitigation	Residual effects (following mitigation)
BH-173	Former Coldblow & Lucan Station	No mitigation necessary	Not significant negative
BH-174	Collins Bridge, Westmanstown	No opportunity for mitigation	Moderate negative
BH-176	Water tower to the south of Dunboyne Station	No mitigation necessary	Slight negative
BH-179	Cope Bridge, Leixlip Confey	No opportunity for mitigation	Moderate negative
BH-185	Louisa Bridge	No opportunity for mitigation	Moderate negative
BH-187	Deey Bridge and 13th Lock, Blakestown	No mitigation necessary	Significant positive
BH-189	Pike Bridge, Royal Canal	No opportunity for mitigation	Moderate negative
BH-192	Signal box at Maynooth Station	No mitigation necessary	Slight negative
BH-193	Station Master's House, Maynooth Station	No mitigation necessary	Slight negative
BH-195	Jackson Bridge	No mitigation necessary in relation to the closure of the bridge to traffic	Significant positive
BH-195	Jackson Bridge	Screen planting in the vicinity of the depot will reduce the impact on the setting of the bridge	Slight negative
BH-196	Chambers Bridge and 15 <sup>th</sup> lock	Screen planting in the vicinity of the depot will reduce the impact on the setting of the bridge	Slight negative

## 21.7 Monitoring

It will be necessary to monitor the masonry of the stone bridges where works have been carried out to ensure that no settlement or damage occurs over a period of a year following the completion of the works to allow for curing of the mortars used in the construction. Works to the vaults at Connolly Station will also need to be monitored after the completion of the works where the integrity of any of the vaults has been disturbed to ensure that no undue settlement or movement of the masonry occurs.

## 21.8 Residual effects

The most prevalent residual impact on architectural heritage will relate to various overbridges along the route, refer to Section 21.6 for full list of structures and the residual impact. The character of a significant number of underbridges of architectural heritage significance will be altered through the erection of OHLE on the bridge decks. There will be a loss of some of the masonry arch railway bridges due to the replacement of the original arch with a concrete arch with consequent loss of character. The raising of the parapets of many historic railway bridges will also alter their character and will have negative impacts on the settings of adjacent canal bridges.

The proposed bridges for pedestrians and cyclists to replace existing level crossings will have negative impacts on structures of architectural heritage significance in the vicinity, including the former schoolhouse at Porterstown, the canal bridges adjacent to the level crossings and the signal box at Clonsilla Station.

There will also be positive residual impacts, including the bringing into public use of the vaults at Connolly Station and the upgrading of the public realm at Preston Street. In a number of instances there will be positive residual impacts on canal bridges, including those that will no longer carry motorised traffic once the adjacent level crossings are closed. There will also be residual positive effects to Jackson Bridge, where the provision of a new road crossing will bypass the requirement to use the protected structure bridge.

## 21.9 Cumulative effects

The impacts of the present proposal on architectural heritage predominantly affect bridges, including the provision of OHLE on the bridges along the elevated section of the GSWR line and the fitting of OHLE beneath the bridges on the MGWR line. In each case the bridges form a group with a certain degree of unity among the iron beam bridges and among the original arched bridges and this project in itself has a cumulative effect on each of these groups. Of the thirteen surviving masonry arched railway overbridges within the study area, three would have their arches removed and replaced with concrete arches, while most of the remainder would have their parapets raised, the exceptions being Barnhill Bridge and Dunboyne Bridge, where the parapets have already been raised. Both the addition of OHLE to underbridges and the alterations to the parapets and arches of overbridges reduce the number of bridges in their original condition within the city and adjacent counties, representing a cumulative effect. The cumulative effect will be moderate, and the design of the parapets and new bridge arches will mitigate the effect to some degree, though the effect after mitigation will still be moderate.

As the MGWR runs alongside the Royal Canal along much of its route within the study area the erection of OHLE and the other works such as installation of pedestrian/cycle bridges and the alterations to railway bridges adjacent to the canal have a cumulative effect on the character of the canal. The cumulative effect will be slight, and mitigation is not possible other than some localised planting, so the effect after mitigation will still be slight.

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

## 21.10 References

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.

Clarke, Peter, 1992, *The Royal Canal: the complete story*, Elo Publications

Colgan, John, 2005, *Leixlip, County Kildare*, published by the author.

Delany, Ruth and Ian Bath, 2010, *Ireland's Royal Canal, 1789-2009*, The Lilliput Press.

Goodbody, Rob, 2014, *Irish Historic Towns Atlas, Dublin part III, 1756-1847*, Royal Irish Academy, Dublin.

Horner, Arnold, 1994, 'Maynooth', in Anngret Simms and J H Andrews, *Irish Country Towns*, Mercier Press, Cork and Dublin.

Horner, Arnold, 1995, *Irish Historic Towns Atlas, No. 7, Maynooth*, Royal Irish Academy, Dublin.

Horner, Arnold, 2007, *Mapping Meath in the early nineteenth century*, Dublin, Wordwell.

*Illustrated Record and Descriptive Catalogue of the Dublin International Exhibition of 1865.*

Johnson, Stephen, 1997, *Johnson's Atlas & Gazetteer of the Railways of Ireland*, Midland Publishing Limited.

Larkin, William, 1812, *County of Meath*.

Lennon, Colm, 2008, *Irish Historic Towns Atlas – Dublin Part II, 1610 to 1756*, Royal Irish Academy.

Mulligan, Kevin, 2001, *Buildings of Meath*, Kells, The Fieldgate Press.

Noble, John and James Keenan, 1752, *Map of the County of Kildare*.

O'Keefe, Peter, Simington, Tom and Goodbody, Rob, 2016, *Irish Stone Bridges – history and heritage*, 2<sup>nd</sup> ed., Irish Academic Press.

Ordnance Survey, 1836, first edition six-inch map of Meath, sheets 50, 51, 53 and 53a.

Ordnance Survey, 1837, first edition six-inch map of Kildare, sheets 5, 6, 10 and 11.

Ordnance Survey, 1843, first edition six-inch map of Dublin, sheets 13, 14, 17 and 18.

Ordnance Survey, 1870, second edition six-inch map of Kildare, sheets 5, 6, 10 and 11.

Ordnance Survey, 1870, second edition six-inch map of Dublin, sheets 13, 14, 17 and 18.

Ordnance Survey, 1884, second edition six-inch map of Meath, sheets 50, 51, 53 and 53a.

Ordnance Survey, 1907, 1:2500 map of Kildare, sheets 5-10, 5-11, 5-15, 5-16, 6-14 to 6-16, 10-3, 10-4 and 11-1 to 11-4.

Ordnance Survey, 1907-1909, 1:2500 map of Dublin, sheets 13-14 to 13-16, 14-3, 14-4, 17-3, 17-4, 18-1 to 18-3, 18-7 and 18-8.

Ordnance Survey, 1911, 1:2500 map of Meath, sheets 50-12, 15-16, 51-13, 53-4 and 50a-1.

Rocque, John, 1757, *A Survey of the Lands of Maynooth*.

Rocque, John, 1757, *Map of the Manor of Maynooth*.

Rocque, John, 1760, *An Actual Survey of the County Dublin*.

Shepherd, Ernie, 1994, *The Midland Great Western Railway of Ireland*, Midland Publishing Ltd., Leicester.

Taylor, Alexander, 1783, *A Map of the County of Kildare*.