11 ARCHAEOLOGY AND CULTURAL HERITAGE

11.1 Introduction

This section describes the likely significant effects of the proposed development on the archaeological and cultural heritage environment within the proposed development site. The purpose of the study is to assess the possible significance of this receiving environment. It will also identify and evaluate the significance of the effect of the development on this environment and suggest appropriate ameliorative measures.

The proposed development of Block A residential building sits within a consented development (ABP Ref. 306569-20), with permission granted at the site for 321no. Build-to-Rent residential apartments, ancillary residents' amenity facilities, commercial office (c.3,698 sq. m), retail (c.214 sq. m) and café/restaurant (c.236 sq. m), accommodated in 5no. blocks ranging from 8 to 13 storeys (c. 31,146 sq. m) over ancillary basement area, and all associated and ancillary conservation, landscaping and site development works. Works to Protected Structures and other conservation works were also permitted under ABP-306569-20.

A detailed description of the proposed development is provided in Chapter 3, Description of the Proposed Development and Chapter 4, Construction.

The following aspects are particularly relevant to the archaeology and cultural heritage assessment:

Design:

- Foundation design (e.g. piling, ground beam layout, groundworks, attenuation, lift shafts etc.).

Construction:

- Earth-moving works (e.g. piling, drainage, services).

This Chapter has been prepared by Dr Clare Crowley of Courtney Deery Heritage Consultancy. Dr Crowley has 20 years' experience in the fields of archaeology, built heritage and cultural heritage. Dr Crowley has considerable experience in the management of the cultural heritage component of EIA for road schemes and motorway service areas.

Please refer to Chapter 1 for further details of her relevant qualifications and experience.

11.2 Assessment Methodology

11.2.1 General

The evaluation of the archaeological and cultural heritage resource of the proposed development site was based on a desk study of published and unpublished documentary and cartographic sources, supported by a site inspection (see Section **Error! Reference source not found.**). It also incorporated the results of archaeological monitoring of ground investigation works and archaeological testing at the site. This has facilitated the production of an archaeological and historical background to the proposed development site, identifying the nature of the recorded archaeological sites and finds arising from previous development and excavation in its environs. This has established, as far as the records allow, the archaeological potential of the site and its immediate environs.

11.2.2 Guidance and Legislation

The following legislation, standards and guidelines were consulted to inform the assessment:

- National Monuments Acts, 1930-2014, as amended;
- Planning and Development Act 2000, as amended;
- Heritage Act, 1995;
- UNESCO World Heritage Convention, 1972;

- ICOMOS Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas, 2005;
- Council of Europe Convention for the Protection of the Architectural Heritage of Europe (Granada) 1985, ratified by Ireland in 1991;
- Council of Europe European Convention on the Protection of the Archaeological Heritage (Valletta) 1992, ratified by Ireland in 1997;
- The Burra Charter, the Australia ICOMOS Charter for Places of Cultural Significance 2013;
- The European Landscape Convention (ELC), ratified by Ireland 2002. (The Department of the Environment, Heritage and Local Government 'Landscape and Landscape Assessment Guidelines' have been in draft form since 2000, however the Draft National Landscape Strategy (NLS) was launched in July 2014);
- Guidance on Heritage Impact Assessments for Cultural World Heritage Properties – A publication of the International Council on Monuments and Sites, January 2011;
- Environmental Protection Agency (EPA) (2017). Revised Guidelines on the information to be contained in Environmental Impact Statements, Draft August 2017.
- EPA (2015). Advice Notes for preparing Environmental Impact Statements, Draft September 2015.
- EPA (2002). Guidelines on the information to be contained in Environmental Impact Statements.
- EPA (2003). Advice Notes on Current Practice (in preparation of Environmental Impact Statements).
- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999, (formerly) Department of Arts, Heritage, Gaeltacht and Islands;
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 2000;
- Guidelines for the Assessment of Architectural Heritage Impact of National Road Schemes, 2006, NRA;
- Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes, 2006, NRA;
- Guidelines for the Testing and Mitigation of the Wetland Archaeological Heritage for National Road Schemes, 2006, NRA; and
- National Landscape Strategy for Ireland 2015-2025, Department of Arts, Heritage and the Gaeltacht;
- Historic England (July 2015), Historic Environment Good Practice Advice in Planning, Note 3: The Setting of Heritage Assets;
- Historic Scotland (October 2010), Managing Change in the Historic Environment; and
- The Heritage Council (2010), Proposals for Irelands Landscapes and International Council on Monuments and Sites (2011).

11.2.3 Study Area

The study area extends to an approximately 1km radius from the proposed development site and includes the areas of Kilmainham, Islandbridge and the Phoenix Park, which are archaeologically and historically important. The proposed development site is located on Parkgate Street, on the northern bank of the River Liffey opposite the point of discharge for the culverted River Camac. It lies immediately west of Sean Heuston Bridge. It is situated to the south of the Phoenix Park and within Arran Quay Ward, with the River Liffey acting as the boundary between Arran Quay Ward and Usher Quay Ward. Parkgate Street itself marks a Municipal Boundary, with the southern wall of the Phoenix Park acting as a County, City and Parliamentary Boundary.

The proposed development site lies within the statutory zone of archaeological potential for the Historic City of Dublin, RMP No. DU018-020. There are no specific RMP sites recorded within the subject site. Prominent landmark features in the surrounding urban landscape include the Royal Hospital, c. 545m southwest, the Wellington Monument, c. 600m to the northwest within the Phoenix Park, and Heuston Station, c. 100m south of the proposed development on the south side of the River Liffey.

11.2.4 Site Visits

A site inspection was undertaken on 23rd May 2019 to assess the current condition of the site.

11.2.5 Consultation

Consultation took place with the Dublin City Archaeologist on 21st May 2019, to discuss the results of the baseline assessment and archaeological monitoring of groundworks. An archaeological strategy of test excavation using a phased approach was agreed for the site, whereby testing would commence once the site had been vacated and continue when the existing buildings were cleared.

Consultation with the National Monuments Service of the Department of Housing, Local Government and Heritage (DHLGH) was requested on several occasions, including a formal meeting request through the Development Applications Unit on 7th May 2019. The National Monuments Service are aware of the project, having approved the method statement and issued a licence for the monitoring of site investigations on the site in February 2019 (Licence No. 19E0179). A further archaeological licence was issued by the National Monuments Service for archaeological test excavation (Licence No. 19E0781) in January 2020. A monitoring report was submitted to the National Monuments Service, National Museum of Ireland and Dublin City Archaeologist in May 2019, followed by a testing report in March 2020.

11.2.6 Categorisation of the Baseline Environment

The assessment has been conducted based on the available information and has followed the existing best practice format of desk and field study. The desk study used the following sources:

- National Monuments, Preservation Orders and Register of Historic Monuments lists, which were sourced directly from the Department of Culture, Heritage and the Gaeltacht ('DCHG');
- Record of Monuments and Places ('RMP') and Sites and Monuments Record ('SMR'). The SMR, as revised in the light of fieldwork, formed the basis for the establishment of the statutory RMP in 1994 (pursuant to Section 12 of the National Monuments (Amendment) Act, 1994). The RMP records known upstanding archaeological monuments, their original location (in cases of destroyed monuments) and the position of possible sites identified as cropmarks on vertical aerial photographs. The information held in the RMP files is read in conjunction with published constraint maps. Archaeological sites identified since 1994 have been added to the non-statutory SMR database of the Archaeological Survey of Ireland ('ASI', National Monuments Service, DCHG), which is available online at www.archaeology.ie and includes both RMP and SMR sites. Those sites designated as SMR sites have not yet been added to the statutory record, but are scheduled for inclusion in the next revision of the RMP;
- Dublin City Development Plan (2016-2022)1;
- The topographical files of the National Museum of Ireland ('NMI');
- Cartographic sources, which included deGomme (1673), Bolton, (1717), Brooking (1728), Rocque (1756), Taylor (1816), Clarke's map of a conjectural medieval city superimposed on the 1943 edition of the Ordnance Survey ('OS') map and various editions of the OS Maps;
- Excavations Bulletins and Excavations Database (1970-2020);

[1] *Dublin City Development Plan 2016-2022*, Dublin City Council

- Other documentary sources (as listed in the references, Section 11.7);
- Aerial imagery (Google Earth 2001–2020, Bing 2013; OSi 1995, 2000, 2006).

The site inspection was carried out within the context of an assessment of the archaeological and cultural heritage potential of the surrounding area (e.g. results of previous archaeological investigations nearby), taking cognisance of the potential implications of the development on the surviving cultural heritage landscape (e.g. where upstanding monuments might be visible).

The methodology has been designed so a full understanding of the potential effects on the character of the historic landscape can be assessed. A detailed archaeological and historical background has been included which describes the character of the immediate and wider historic landscape, as well as the individual heritage assets, and highlights the potential to reveal subsurface features. The methodology used is based on the EPA Guidelines[2], and both direct physical effects, as well as impacts to the setting of individual heritage assets, have been assessed.

By using all the different sources and data sets we have developed an understanding of the historic character that surrounds and is part of the proposed development. The modern urban streetscape is a result of change and modifications over the millennia and understanding how these processes occur and how they are represented in today's city is critical.

11.2.7 Impact Assessment Methodology

The assessment of the likely significant effects on the environment resulting from the construction and/or operation of the proposed development relies on a combination of qualitative and quantitative assessment.

Cultural heritage sites/landscapes are considered to be a non-renewable resource and cultural heritage material assets are generally considered to be location sensitive. In this context, any change to their environment, such as construction activity and ground disturbance works, could affect these sites. The likely significance of all effects is determined in consideration of the magnitude of the effects and the baseline rating of the cultural heritage asset (i.e. its sensitivity or value). Having assessed the magnitude of effect with respect to the sensitivity/value of the asset, the overall significance of the effect is then classified as imperceptible, slight, moderate, significant, or profound. A glossary of impact assessment terms, including the criteria for the assessment of impact significance, is contained in Appendix 11.2.

Cultural heritage is a broad term that includes a wide range of tangible and intangible cultural considerations. It encompasses aspects of archaeology and architecture and is expressed in the physical landscape as well as in non -physical ways (architectural heritage is assessed separately in Chapter 12). Cultural heritage can relate to settlements, former designed landscapes, building and structures, as well as folklore, townland and place names, historical events and traditions. Archaeological sites that are afforded protection as Recorded Monuments are regarded as being of high importance. Cultural heritage sites with upstanding features which are not afforded protection under the above criteria are considered to be of medium importance.

In accordance with the NRA 'Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes' (2006)[3], the significance (i.e. value) criteria used to evaluate an archaeological site, monument or complex are as follows: existing status (level of protection), condition or preservation, documentation or historical significance, group value, rarity, visibility in the landscape, fragility or vulnerability, and amenity value. The archaeological and cultural heritage environment is assigned a baseline rating, taking into account the importance, value and/or sensitivity of the receiving environment (Cf. Table 3, Appendix 11.2).

[2] EPA (2017) *Draft Guidelines on information to be contained in Environmental Impact Assessment Report*.

[3] As the only published guidelines specifically relating to archaeological impact assessment, these are accepted as best practice by the profession and are commonly applied to non-road related projects, for which they are referenced in conjunction with the EPA Guidelines.

11.3 Receiving Environment (Baseline Conditions)

11.3.1 Archaeological and Historical Background

11.3.1.1 Introduction

Cartographic analysis indicates that the usage of the site evolved from open meadow in the 18th century to the use of the site for industrial purposes from the early 19th century onwards (e.g. the Phoenix Iron Works in the early 1800s, followed by Kingsbridge Woollen Factory and the Parkgate Printing Works). The topography of the site has been altered in relatively modern times (19th century) with the construction of industrial units overlooking the River Liffey. Elements of buildings within the boundary of the site are listed as protected structures and are assessed in Chapter 12, Architectural Heritage.

11.3.1.2 Prehistoric Period (c. 9000BC to c. 500AD)

The earliest archaeological site in the wider landscape is a megalithic structure[4] that now stands within the Zoological Gardens in the Phoenix Park, c. 900m north-west. This is the closest known prehistoric site. It was originally uncovered in a sandpit close to Chapelizod not far from Knockmary in the Phoenix Park. A human skeleton was found within the tomb.[5]

There is also a Linkardstown-type burial[6] of late Neolithic date at Knockmary, in the Phoenix Park. The site was excavated in the early 19th century and comprised a mound overlying a central cist that contained two crouched skeletons. These were accompanied by a shell necklace, flint knife and bone toggle. Four small cists were also discovered dating from the Early Bronze Age, containing cremated bones and food vessels, two of which were bowls[7] . Although this site lies over 3km west of the subject site, this evidence suggests continuity of occupation in the prehistoric period, in the general Phoenix Park area.

Further evidence of continued occupation in the area, north of the river, during the prehistoric period can be found in the topographical files of the National Museum of Ireland, which record two Bronze Age axes and a bronze pin dated to the Iron Age, all found in the Phoenix Park. South of the river, there is additional Bronze Age activity. A pit burial[8] is recorded within the grounds of the former Infirmary of the Royal Hospital. It was uncovered during archaeological testing and was found to contain a tripartite Food Vessel cremation[9] .

11.3.1.3 Early Medieval Activity (c. 500AD to c. 1100AD)

One of the earliest references to this area of the city is the establishment of the ecclesiastical foundation at Kilmainham. The placename Kilmainham is derived from the Gaelic *Cill Maignenn* or *Cill Mhaighneann*, which refers to an early 7th century Irish saint known as Maignenn, who is thought to have founded a monastery at this location. The most likely location for this monastery is on a high ridge of land on the south side of the river, possibly at Bully's Acre cemetery, c. 975m southwest of the proposed development site. This ridge ran for 2km along the southern bank of the Liffey, from the confluence of the rivers Liffey and Camac westward to the War Memorial Park in Islandbridge.

The monastery was ideally located, and the elevated ridge on which it stood was recognised for its considerable strategic importance throughout the area's subsequent history. It held a prime position above the mouth of the river[10]. It also benefitted from proximity to the ford of *Kylmehanok* (possibly a later corruption of *Cill Mhaighneann*), which is believed to have been located upstream of where Island Bridge now spans the Liffey (formerly Sarah Bridge, c. 895m to the west of the proposed development).

[4] RMP No. DU018-007009
[5] Borlase 1897, 381, 2; Poe 1904, 5-6, cited in RMP file.
[6] RMP No. DU018-007011
[7] Wood-Martin 1895, 281, Fig.74; Waddell 1970, 115; Waddell 1990, 81, cited in RMP file.
[8] RMP No. DU018-112
[9] Licence No. 02E0067; Excavations Bulletin Ref. 2002:0610
[10] Kenny 1995

The better known 'ford of the hurdles', which gives its name to the city of Dublin (*Áth Cliath*), was situated approximately one kilometre downstream at the later, permanent Viking settlement.

In 919 Niall Glundubh, or 'Black-knee', reportedly led a combined force of Irish against the Vikings at Kilmainham and subsequently lost his life[11]. A century later, in 1013–14, Brian Bóruma (Brian Boru) set up his headquarters at the monastery, and it was from here that he launched his successful military offences against the Norse settlers of Dublin. This legendary Irish king is believed to have burned down whatever remained of the *Cill Mhaighneann* monastery before his final battle at Clontarf in 1014.

An early medieval bronze bell[12], found during the 19th century in the Kilmainham area and now housed in the National Museum, has been dated to the period AD 700–900. It is possible that this bell is a surviving relic of the monastic settlement of St Maignenn, or perhaps of another monastic centre in the Kilmainham area. Given the existence of the ecclesiastical foundation and the known fording points the vicinity of Parkgate Street, it is likely that there was also activity on the north side of the River Liffey during this period.

11.3.1.4 Viking Settlement

It is probable that the location of the Early Christian monastery of *Cill Mhaighneann* was adapted in the 9th century by Vikings and used as a longphort. The term longphort was first coined in 840 and it described the defended Viking ship encampments that were generally defined by an earthwork. The longphort also doubled as the place where trading and campaigning took place. O'Brien[13] points to the concentration of the recorded Viking activity west of the River Camac. She suggests the possibility of a 9th-century Viking settlement, in the land between the Camac and the Liffey rivers, located on the same ridge as St. Maighnenn's original monastery. Briggsand Graham-Campbell have also identified the monastic site as the possible focus of early Norse settlement[14]. This area lies on the south bank of the River Liffey, to the southwest of the proposed development site.

An examination of the location and context of all Viking material recovered since the 19th century has demonstrated the presence of two Viking cemeteries, one near the early monastic foundation in Kilmainham, the second further west in the vicinity of the War Memorial Park at Islandbridge[15]. The spread of Viking burials appears to have been extensive, stretching from Memorial Park / Islandbridge in the west to Heuston Station to the east (a distance of 1.5km) along the natural gravel ridge, bordered by the rivers Liffey (north) and the Camac (south)[16]. Two Viking brooches have also been discovered within Phoenix Park, which indicate that there is a possibility of recovering such isolated remains within the proposed development area on the north side of the Liffey. These burial sites and stray finds illustrate the extent of Viking activity along both the south and north banks of the Liffey, which also points to an interaction between both banks during the Viking settlement of the area.

[11] *Ibid*.
[12] NMI Ref: 1917:2
[13] O'Brien 1998
[14] Briggs (1985) and Graham-Campbell (1976)
[15] O'Brien 1998; Figure 11.1
[16] Simpson 2004

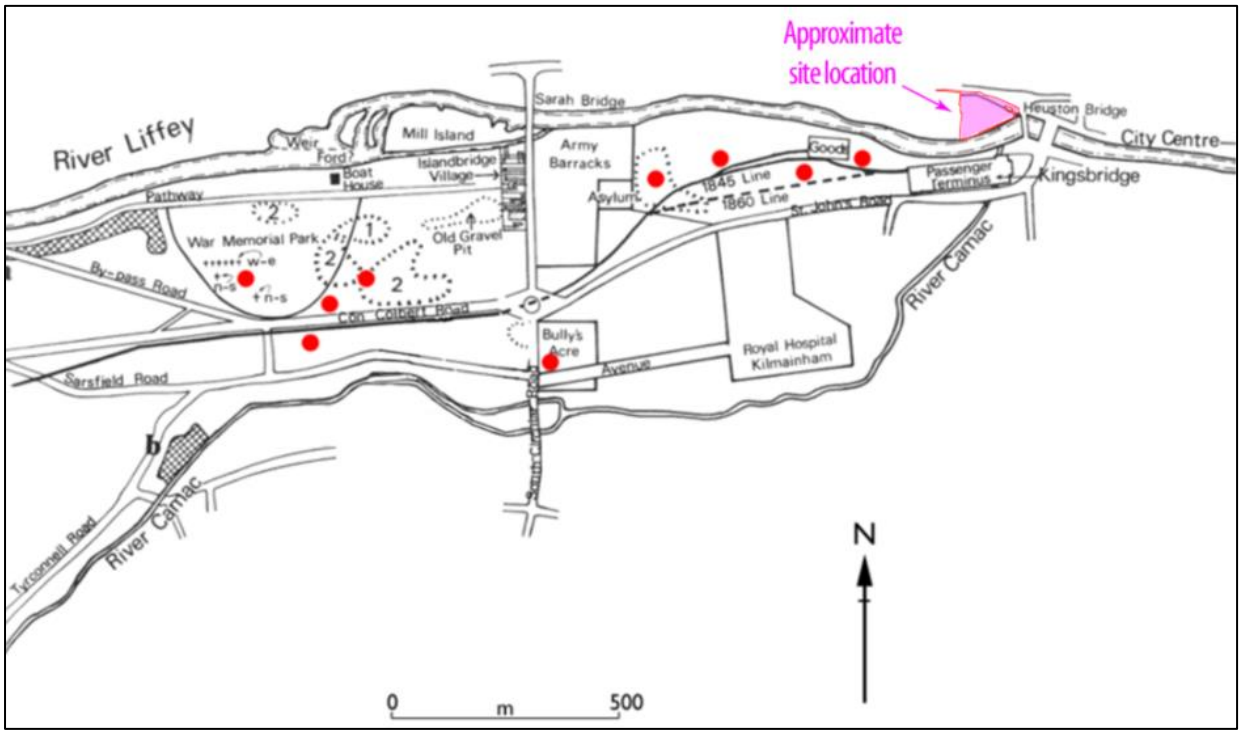

Figure 11.1: Map showing the locations (in red) of Viking material recovered in the 19th century (after O'Brien 1998)

11.3.1.5 Islandbridge

Activity spanning both sides of the Liffey becomes more tangible with the arrival of the Anglo-Normans in 1169 and a number of new religious orders from the continent. One such order was the Knights Hospitallers of Saint John of Jerusalem, a military and religious organisation founded in the wake of the crusades. Granted land in Kilmainham by Richard de Clare (Strongbow), the knights founded a new priory[17] in c.1174, close to the site of the old monastic buildings associated with *Cill Mhaighneann*. The priory was given lands from the Tyrrells of Castleknock, leaving it with landed possessions of over five hundred acres. Its possessions included a moiety (portion) of the River Liffey that reached as far as Conyngham Road and the entrance to the Phoenix Park in Parkgate Street, this became the source of numerous disputes between the local inhabitants and the priory[18].

The knights, during their occupation at Kilmainham, are reputed to have erected a six-arch bridge to connect their land on both sides of the river, near the ford of' Kilmehanoc'. A reference to "*the bridge of Kylmaynan*" in 1261 in the White Book of the City of Dublin offers evidence that the bridge was in existence from at least that time. The bridge is mentioned again during the reign of Henry VIII, so it appears to have continued in use until the 16th century. This same bridge is also believed to have given Islandbridge its name. In 1577, Lord Deputy Sidney erected a new stone bridge at Islandbridge to replace the original six-arched bridge.

11.3.1.6 Phoenix Park

During the Suppression of the Monasteries in the mid-16th century, the Crown acquired the lands owned by the Knights Hospitallers of St John of Jerusalem, which had formerly belonged to the Templars. These lands were in turn ceded to Sir Richard Sutton in 1611, who proceeded to sell them to Sir Edward Fisher. The name 'Phoenix' is first documented in 1619 and originally referred to a spring located within the grounds of the park called *Fionn-Uisge* meaning 'clear water' (rendered phonetically, the Irish words

[17] RMP No. DU018-020286
[18] Kenny 1995

became 'feenisk', which was anglicised to 'phoenix'). It was initially applied by Sir Edward Fisher to his residence on Thomas Hill[19]. In 1618 the Phoenix house and surrounding grounds were once more purchased by the Crown as a residence for the Irish Viceroy.

The Duke of Ormond instigated plans to enclose the lands of Inchicore, Island Bridge and Kilmainham as part of the Phoenix Park. It was hoped that the establishment of such a park would demonstrate how fashionable Dublin was becoming and encourage the English nobility to come to live in Dublin. But his decision was reversed when he established the Royal Hospital near the ruinous priory in Kilmainham, and the Park was reduced to its present limits. Islandbridge at this time became the scene of a considerable amount of development and was renowned for its market gardens and nurseries. Once plans for the Phoenix Park were finalised, Sir John Temple conducted the construction of the perimeter wall along the line of the road to Chapelizod in 1680. He did so in exchange for the lands between Conyngham Road and the River Liffey[20].

By 1734 the park residence had fallen out of use and was replaced by the Magazine Fort, which was constructed to secure the munitions necessary for the defence of the city. In the middle of the 18th century, the Park had become popular as a recreation ground for the citizens of Dublin, and shrubs and trees were planted and formal gravel walks were laid down. As such a public amenity it became the location for a series of commemoratory monuments the most visible of which is the Wellington Monument. The Wellington Monument was built to commemorate the military successes of the Iron Duke, Arthur Wellesley, and it remains a popular landmark. Although the foundation stone was laid in June 1817, the monument was not completed until June 1861, nine years after the duke's death[21].

11.3.1.7 Parkgate Street

Further development of the area surrounding Parkgate Street occurred with the advent of railway industry in the 19th century and the subsequent growth of residential development. To the west of the site lies the Liffey Viaduct, a section of the railway system that centres on Heuston Station. This railway bridge was constructed in 1877 and was linked to the longest railway tunnel in the city at the time, being a half-mile in length. The tunnel ran in a north-south direction under the Phoenix Park and its location is marked by a stone arch in the wall of the park itself[22], c. 700m to the west of the proposed site.

In 1786 the Wide Streets Commissioners were given the power to alter and widen the road westward from Barrack Street (now Benburb Street) to Island Bridge. The western part of the improved road was named Conyngham Road, while the eastern part – from the Phoenix Park gate to Temple Street West – is first named as Park Gate Street on a map produced by Sherrard for the commissioners of the Royal Barracks in 1790[23]. It is also so-named on *Wilson's Directory, Plan of Dublin* in 1804.

Sean Heuston Bridge had replaced the ferry crossing from Steevens Hospital to the north side of the River Liffey in 1828; the commemorative plaque marks the date of the royal visit in 1821, when funds were made available to design and build the bridge. The structure is a single-span seven-ribbed cast iron arched bridge designed by George Papworth. The bridge was initially named as Kings Bridge, but was also known as Sarsfield Bridge, and now as Sean Heuston Bridge.

The River Camac discharges into the River Liffey directly opposite the proposed development site. Prior to the building of Heuston railway station, the confluence of the River Camac and Liffey was, at high tide, a broad expanse of water, as shown on many views drawn by 18th century artists of the Liffey from Phoenix Park. The terminus building for Heuston Station was built over the channel of the River Camac, burying it in the culvert through which it now flows, beneath the station and into the Liffey.

[19] Joyce 1995
[20] Ball 1906
[21] Jordan 2005
[22] Conlin and De Courcy 1988
[23] Wide Streets Commissioners, 15

11.3.1.8 Former Hickey's Site (42A Parkgate Street)

The history of the proposed development site (42A Parkgate Street) was compiled from various documentary and online sources, including Thom's *Dublin Street Directory*, the *Freeman's Journal*, and Ordnance Survey maps.

The proposed development site was occupied by the Royal Phoenix Iron Works, also known as Robinson's Iron Works from the early 1800s (Figure 11.7). The Iron works was located over a large area which extended westwards outside the proposed development area and included a dwelling house, pleasure gardens, foundry workshops, a forge, outhouses and workers cottages (Figures 11.7 and 11.8). The owner was Richard Robinson, a native of Hull, an engineer and an iron founder, who had settled in Dublin in 1800. His foundry was responsible for casting King's Bridge (Sean Heuston Bridge), designed by George Papworth to commemorate the visit of George IV to Dublin in 1823; the foundry acquired the designation 'Royal' in this year[24].

The foundry was also responsible for casting "*new tobacco presses of a rare construction*" for Alderman Gardiner in 1843, at a cost of £1000. The presses were "*so constructed as to bring by a species of brass screw a pressure of ten tons weight on a quantity of tobacco without any manual labour whatever*' and were worthy of a visit by the Lord Mayor in January 1843"[25].

In 1839, a public exhibition was held at the foundry to raise funds for the Mendicity Institution. An advertisement for the exhibition appeared in the Freeman's Journal on January 8th and announced that "*to such as may not have seen the ordinary process of large Iron Works, Bar Iron heated, slit, and rolled into hoops, or Metal melted, and run into moulds, it is submitted that the sight will prove a most attractive one, and Parents, during those holiday times, cannot give their Children a greater treat, or a more instructive lesson, than by bringing them to see this truly wonderful exhibition*'. A notice in the same newspaper from three days previously commented on the type of objects produced at the works, ranging from '*the most delicate and richly finished articles to the largest factory wheels"*[26].

Robinson died in 1848 and is buried in St Michan's Church of Ireland church. By 1844 he had been succeeded in the business by William Robinson who carried on until 1858 or later. By 1863 the foundry had been taken over by Edward Toomey.[27]

The Iron works had been in operation from the early 1800s to approximately 1880. The demise of the site as an iron works was first noted from an advertisement in the *Freeman's Journal* on 20th July 1878 when there was a sale of machinery, bricks, granite quoins: *"To iron founders and others. To be disposed of, at the Royal Phoenix Ironworks, several engines and boilers to match, lathes, planning and drilling machines, punching presses and iron rollers, putty mill, scrab (crab?) winches, single and double purchase, shafting, pulleys and wheels, patterns of all descriptions, bellows, hearths, anvils and all tools necessary for smithy purposes. Foundry fixtures of all kinds, tools for boiler shop, viz:- furnace, templets and force pump, steam valves, mill machinery, leather belting and buckets, two sets of three through (throw) pumps, columns and pipes, beams, scales and weights; oil cisterns, tanks, timber, granite, quoins and bricks, with numberless other items. The above will be sold privately in convenient lots to suit purchasers".*

A further advertisement on 24th January 1880 in the *Freeman's Journal*, cited the sale of extensive premises, plant and stock etc at a site known as the Royal Phoenix Iron Works. The site was described as follows: "*together with the superior dwellinghouse, out-houses, pleasure grounds, gardens &c., the entire containing 3a 6r 38p statute measure, with a handsome entrance from Parkgate Street, the river Anna Liffey being its boundary in the south. There are also eight two-storied cottages for workmen, with foundry workshops, forge, &c. where a considerable trade was successfully carried on for many years, there being also a great facility of water carriage up and down the river Liffey for the export and import of heavy articles connected with the trade. The above premises are held under lease for ever at the extremely low rent of £84 per annum, the cottages along producing a rental of £150. The plant and stock consists of the usual machinery adapted to the trade, comprising steam engines, from 1 to 16 horse*

[24] De Courcy 1996 & www.buildingsofireland.com; NIAH Reg. No. 50060346
[25] *Freeman's Journal* 30 January 1843; cited in www.gracesguide.co.uk/Royal_Phoenix_Iron_Work
[26] www.gracesguide.co.uk/Royal_Phoenix_Iron_Work
[27] https://www.dia.ie/architects

power, and several large steam boilers, lathes, planning, drilling, punching and rolling machines, steam hammer anvils, and smiths' tools in general, also a quantity of boilermaker's tools, furnace for bending Figures, levelling blocks, bellows, hearths and troughs, cranes, core boxes, beam ladles, moulding boxes, core barrels, brass furnace, &c for foundry uses; also wheel pattern and models of all descriptions, crab, winches, double and single purchase pulley, blocks and chains, wrought iron shafting pulleys and wheels, steam gauges and boiler mountings, &c. Sale to commence at 11 o'clock with the machinery; interest of premises at 2 o'clock pm".

These advertisements would appear to indicate that the site, its machinery and buildings were stripped clean prior to its sale. There is also evidence to suggest that many of the buildings on the site were demolished (as indicated by a comparison of the 1864 and 1889 Ordnance Survey maps; Cf. Section 11.3.2.2), being replaced sometime after 1882 by new factory buildings for the Kingsbridge Woollen Mills, established by Edward C. Guinness (owner of the Guinness brewery and 1st Earl of Iveagh). Thom's Directories record the valuation for the Royal Phoenix Ironworks falling from £130 in 1870 and 1880 to just £10 in 1882. By 1886, under the direction of Guinness, the valuation had risen to £405. Guinness intended the mills to create employment for the daughters of Guinness workers, though the endeavour failed as the mills were closed down in less than a decade due to serious economic difficulties.[28]

The Kingsbridge Mills, a woollen manufacturer, occupied the site for a decade. Another manufacturer, Phoenix Park Works, was in operation on the site from approximately 1900 to 1910, though the specific type of manufacture is unknown.

While in the possession of the Phoenix Park Works, the strongly walled site was used as a location for a bomb-making factory during the First World War (listed in Thom's Directory from 1917-1920 as the 'Dublin National Shell Factory'. The munitions were carried down the river in barges that were loaded at a jetty beside the factory. The following two years saw the site taken over for use as Government Stores.[29] By 1924 a printing works was set up on site around ten years later (under the auspices of Cahill Printers), by which time the original site had been subdivided, with the Lucan Dairy Depot occupying the western half (i.e. the area now outside of and separate from the proposed development site; see Figure 11.11 below). The printing works remained in operation until the mid-1970s when the current owners, Hickey's Fabrics, took up residence.

11.3.2 Cartographic Sources

11.3.2.1 Earliest available sources

The 1656 Down Survey Parish Map of Kilmainham is the earliest cartographic source for the study area (Figure 11.2). It is possible to identify the approximate location of the proposed development site on this early map source using the course of the Liffey and the outlet for the Camac river as topographical pointers. Other features depicted on the map include a bridge crossing upstream on the Liffey (Sarah Bridge, now Island Bridge), which is flanked by two mills. At this time there was no bridge crossing the river at the site of the present Sean Heuston Bridge. The road to 'Maynoth from Dublin' appears to terminate at the bridge, though a route of some sort continuing along the north bank is likely. The bridge itself provided access to the network of principal roads on the south side of the river. A large house is shown on the map and represents the substantial residence built by Sir Edward Fisher in the former lands of Kilmainham Priory (now the Phoenix Park) and is named 'Phoenix' (this is the site of the present Magazine fort, DU018-007012).

[28] Corcoran 2005
[29] De Courcy 1996

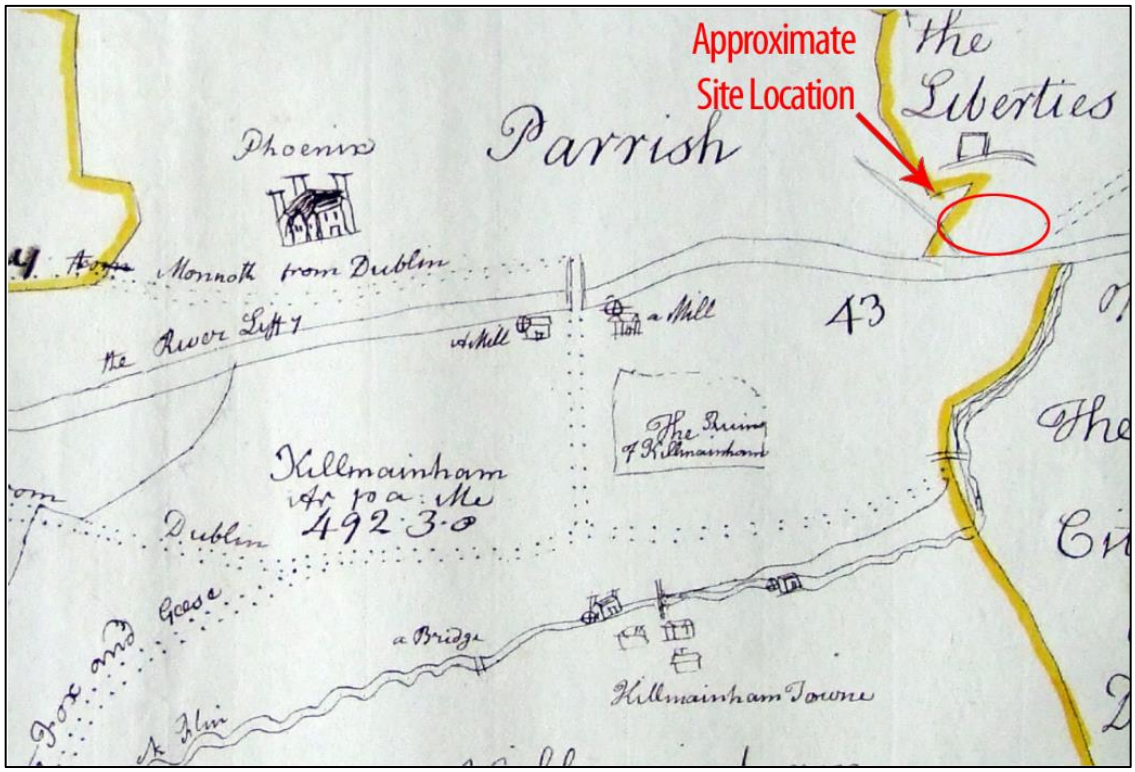

Figure 11.2: Down Survey map of the parish of Kilmainham, c. 1656

A slightly later 17th century map of the region is that of Thomas Taylor, dating to 1671 (not shown). It demonstrates that part of the present Parkgate Street was encased within the large expanse of the Phoenix Park, which at that time stretched across the River Liffey. The scale of the park was reduced in 1680 and its southern boundary was defined by a wall (along the northern edge of the present Conyngham Road), leaving a strip of land between the road and the River Liffey. This can be seen on two 18th century maps of Dublin, Brooking's 1728 map (not shown)[30] and John Rocque's 1756 map (Figure 11.3). Both maps show the area to the south of the Phoenix Park as an open meadow, which is named on Rocque's map as 'Long Meadows'. Rocque's map also shows a small channel leading from the bend of the River Liffey towards the 'road from Chapel Izzod'. It appears to be culverted beneath the road and presumably represents the tail end of the Viceregal Stream that flows down from the park and feeds a pond on the other side of the road.

One of the first instances of the road being named Parkgate Street is on Wilson's 1804 map, on which 'Park Gate Street' and 'Conyngham Road' follow the line of the old Chapelizod / Islandbridge thoroughfare. On Campbell's map of 1811 (Figure 11.4), a ferry crossing is shown linking Steeven's Lane on the south side of the Liffey to the north bank of the river, immediately to the east of the proposed development site. The latter is defined as a triangular property plot, similar to its present form. A range of buildings occupies the north-eastern side of the site (only the western end of the range is aligned with Park Gate Street), with one square structure extending southwards from it. The Camac river, culverted beneath Military Road, is shown entering the River Liffey on the south bank, opposite the proposed development site.

[30] This map provides no additional detail and is a smaller scale than Rocque's map of less than 30 years later.

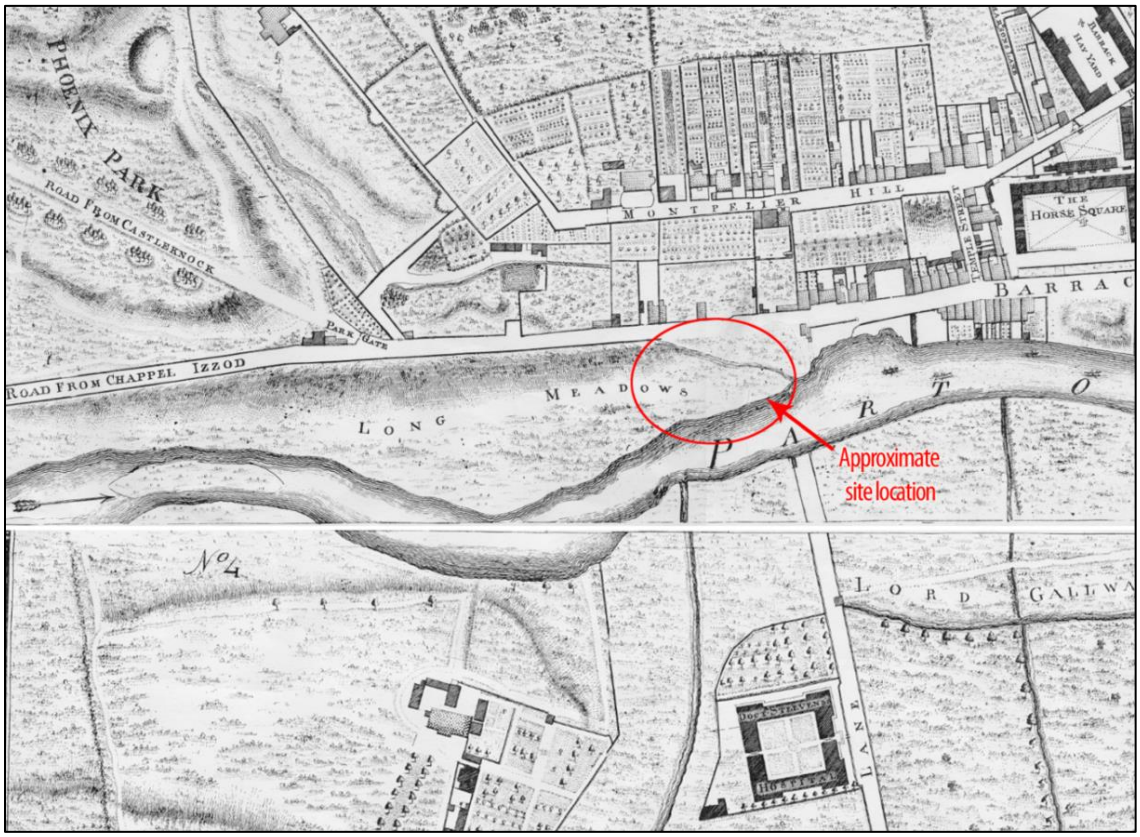

Figure 11.3: Rocque's map of Dublin City, 1756, showing approximate site location

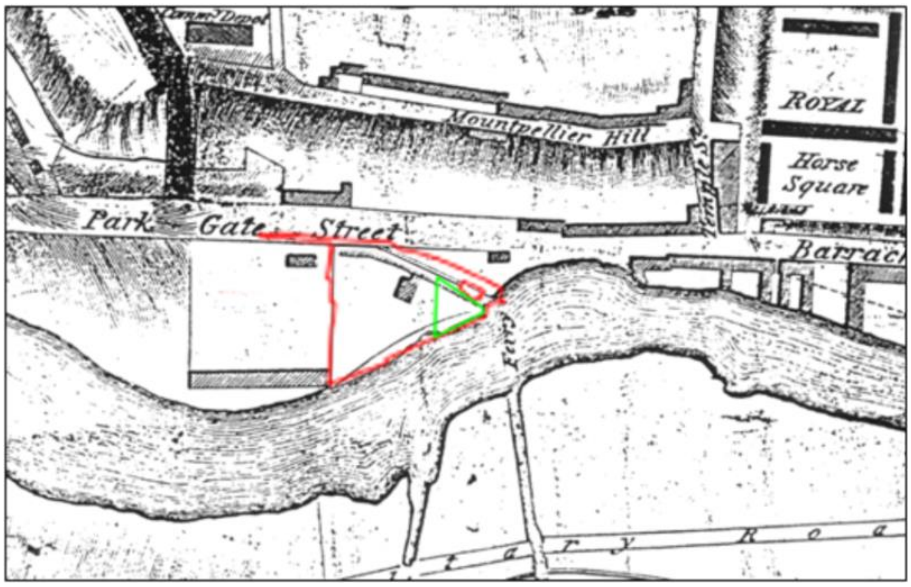

Figure 11.4: Thomas Campbell's map of the City of Dublin, 1811, with approximate locations of overall site in red and proposed development site in green

11.3.2.2 Ordnance Survey Maps

By the time of the first edition OS six-inch map of 1843, works occupied a large plot on the north river bank, accessed via an entrance onto Parkgate Street (the overall development site forms the eastern half of the original iron works site, with the proposed development site at the eastern end of the works). The house near the northwest corner of the present site was already there in 1843, as was the gateway

from Parkgate Street, and rounded turret at the eastern end of the site (within the proposed development site). A second turret at the south-western corner of the original iron works site (now gone) is also depicted. A significant development in the vicinity is King's Bridge, which was erected in 1828 but is first depicted on this map.

The works can be seen in greater detail on the 1847 and 1864 OS five-foot plans (Figures 11.6 and 11.7). The eastern half of the plot appears to house the majority of the iron works buildings, with extensive gardens and open space dominating the western half (becoming more elaborate by 1864), where the main dwelling and workers' cottages were located. There appears to be a slipway from the central yard down to the river. The building directly abutting the river at the western end of the site is shown as much smaller than the present building, with the adjoining long building range extending westwards, parallel to but set back from the river. This indicates that the present river wall can only partly date from the time of the Royal Phoenix Ironworks (see also Chapter 12).

The Kingsbridge Woollen Factory had replaced the irons works on the 1889 OS map (Figure 11.8) and in later editions the site was in use as a printing works. The layout of the buildings associated with the Woollen Factory, as shown on the 1889 map, are distinct from those shown on the earlier editions for the iron works. It is likely that many of the earlier buildings had been demolished (notably the range along the river side), making way for an expansive new factory building, occupying the space of the earlier buildings as well as the central yard. There were also two smaller buildings to the south-west. This coincides with the available historical information, as discussed in Section 11.3.1.8, and is similar to the layout on the site today. The 1889 map also shows the tram lines running along Parkgate Street and across King's Bridge.

The layout of the site was much the same in 1907 (Figure 11.9), though far more utilitarian in nature. The 'tennis ground' shown on the 1889 edition has been removed, as have the landscaped gardens and paths (though an enclosure of trees survives), and some of the ancillary buildings. The 1943 revised OS map (Figure 11.10) shows that the original iron works site had been subdivided and was now in use for two separate industries, with the printing works in the eastern half (within the proposed development site) and the Lucan Dairy Depot in the western half (outside the development site).

The development and significance of the buildings across the site is discussed in Chapter 12, Architectural Heritage.

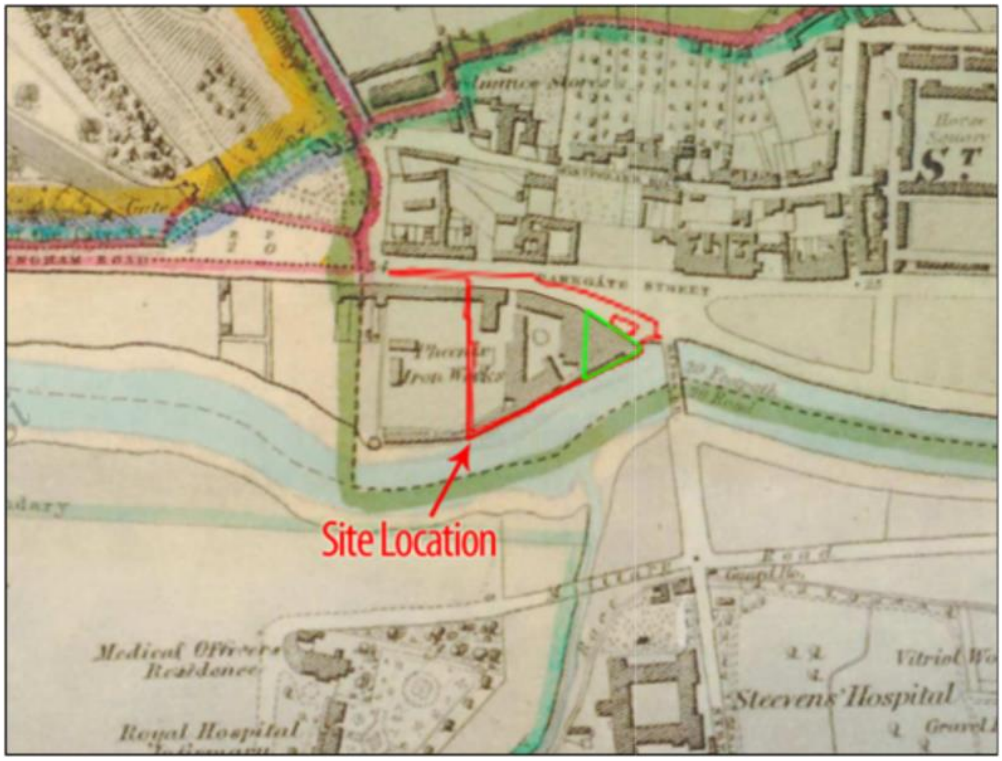

Figure 11.5: First edition OS map, 1843 (scale 1:10,560), with approximate location of proposed development site in green

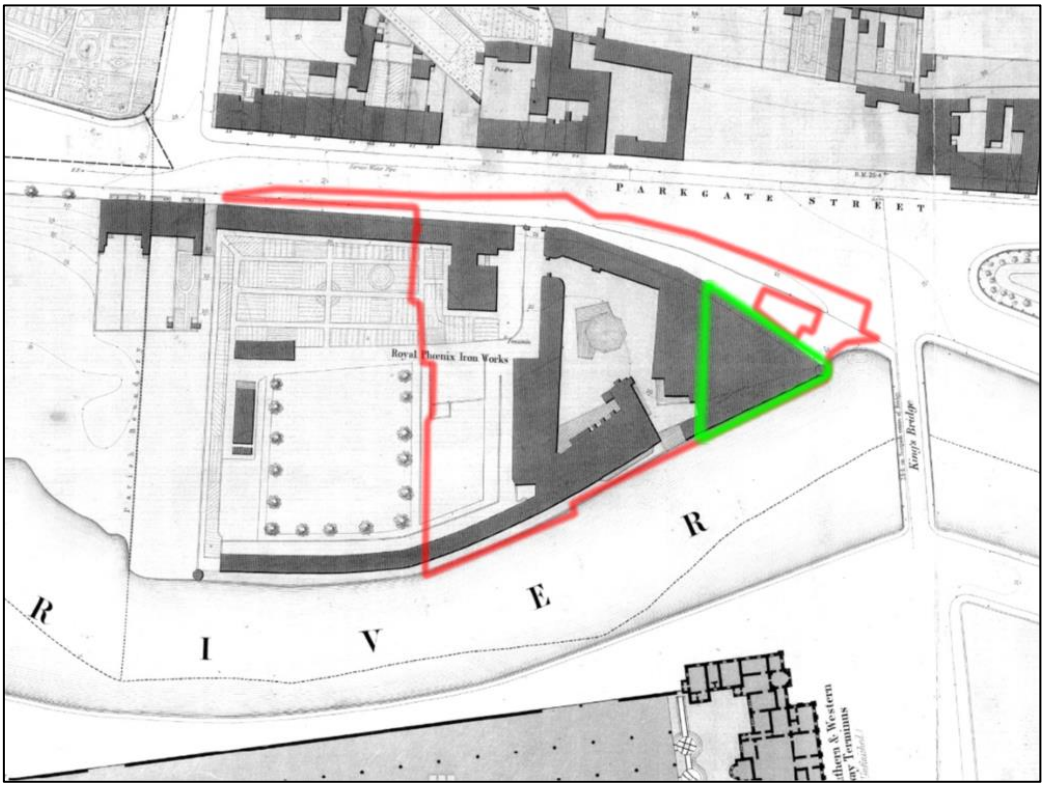

Figure 11.6: First edition OS map, 1847 (scale 1:1056), with approximate location of proposed development site in green

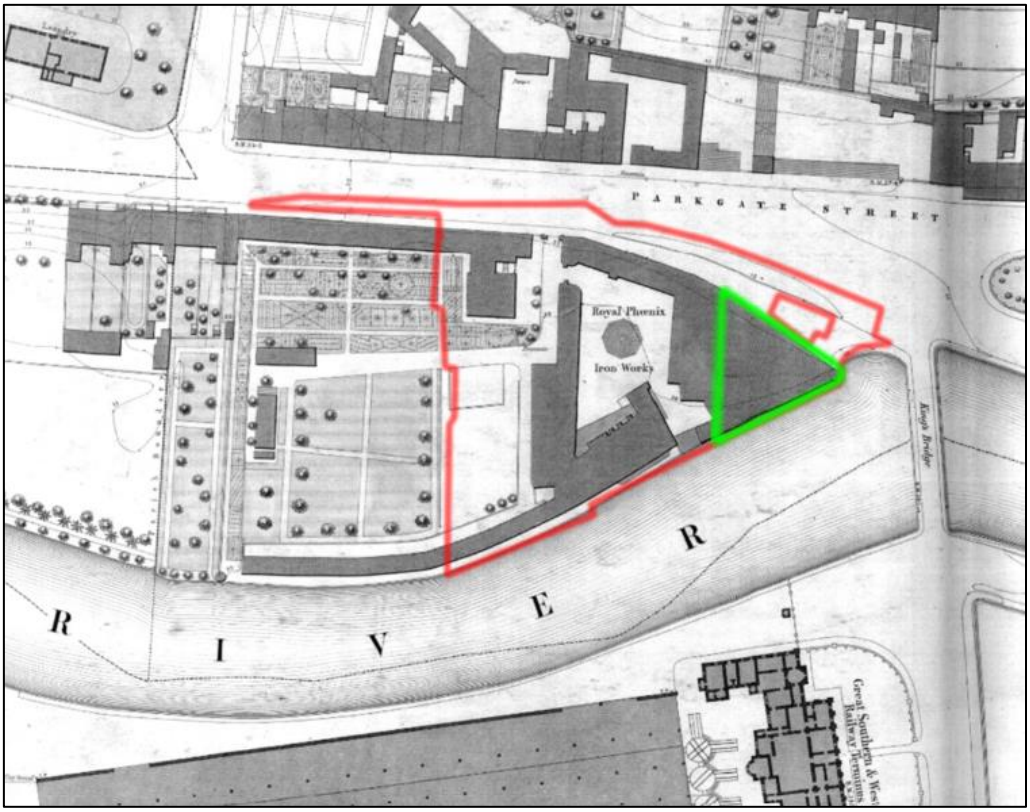

Figure 11.7: Revised edition OS map, 1864 (scale 1:1056), with approximate location of proposed development site in green

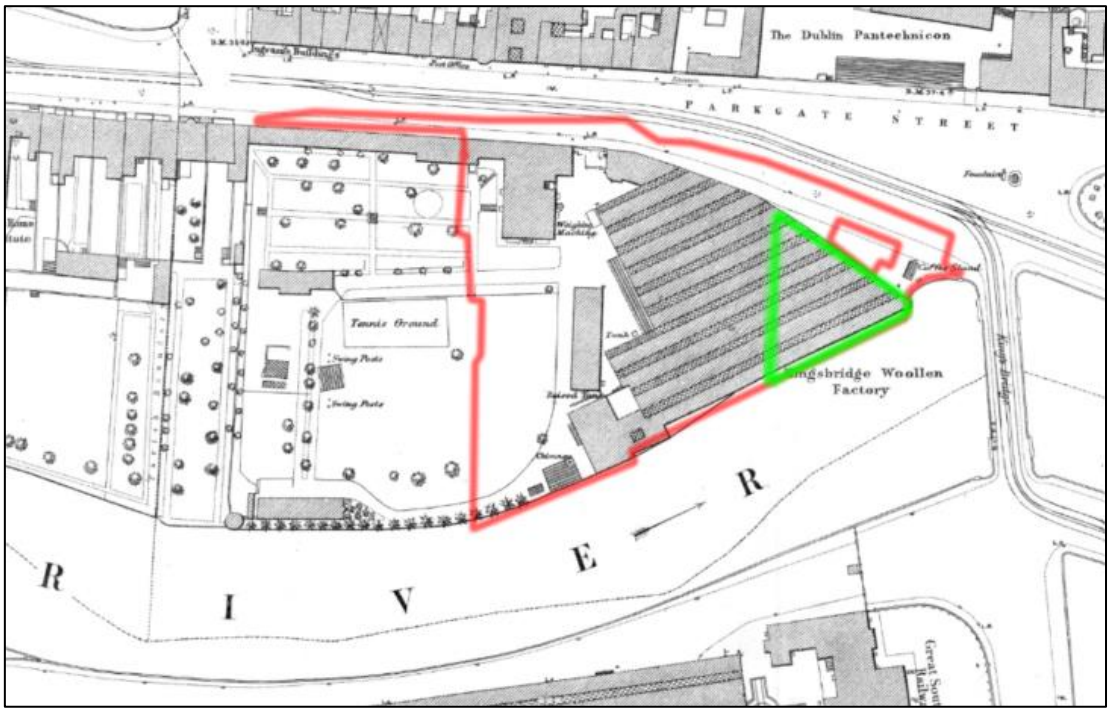

Figure 11.8: Revised edition OS map, 1889 (scale 1:1056), with approximate location of proposed development site in green

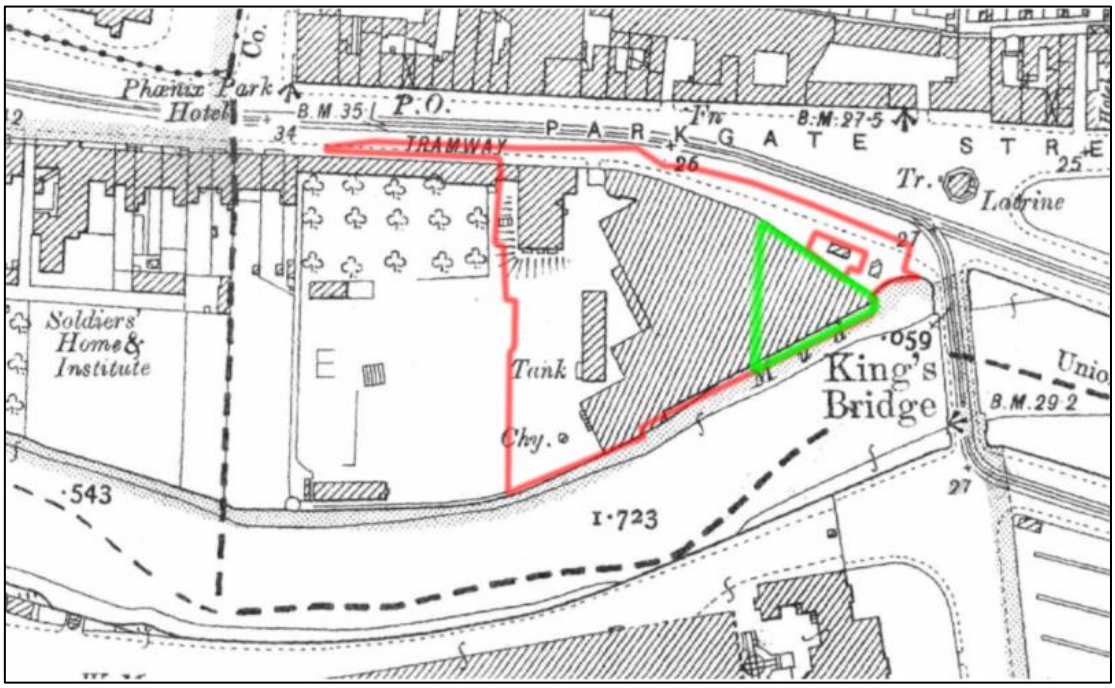

Figure 11.9: Revised edition OS map, 1907 (scale 1:2500), with approximate location of proposed development site in green

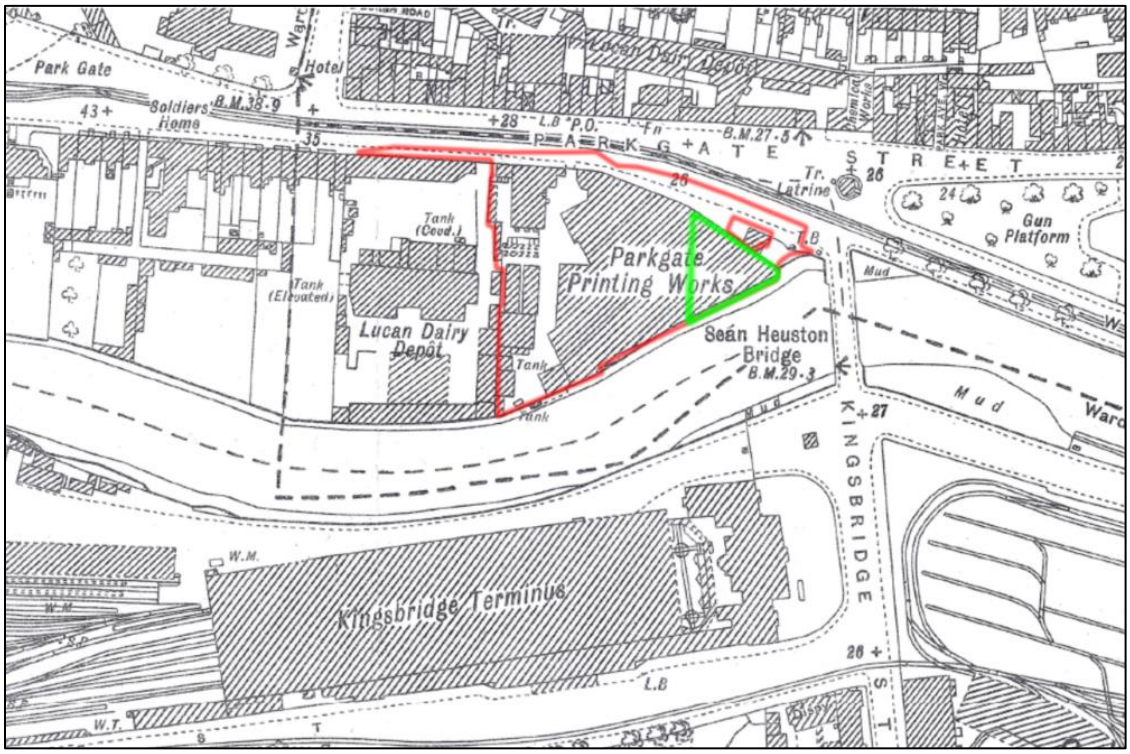

Figure 11.10: Revised edition OS map, 1943 (scale 1:1,560), with approximate location of proposed development site in green

11.3.3 Recorded Archaeological Sites (RMP/SMR sites)

The development site is situated within the statutory zone of archaeological potential for the 'Historic City of Dublin', RMP No. DU018-020 (Figure 11.11). There are no specific RMP / SMR sites recorded within the development site, however its location on the south-facing bank of the River Liffey offers a vantage point of many of the monuments in this region of the city.

The nearest recorded archaeological feature is the site of a dwelling, RMP DU018-020532, located on Montpelier Hill, c. 80m to the north (Figure 11.11).

The Phoenix Park archaeological complex (DU018-007, Figure 11.11) is located c. 105m north-west of the development site (c. 30m from the nearest drainage / transport works). The complex is composed of a number of different sites, including the deer park (DU018-007001), a tower house (DU018-007002), a mound (DU018-007003), a house site of indeterminate date (DU018-007004), a possible well (DU018-007005), a possible enclosure (DU018-007007), a well (DU018-007008), a megalithic structure (DU018-007009), a road (DU018-007010), a cemetery mound (DU018-007011) and the star-shaped fort (DU018-007012). The closest of these sites is the megalithic structure (present location), c. 900m to the north-west.

The Royal Hospital Kilmainham (DU018-020285) and associated gardens (DU018-020528) are located c. 600m south-west of the proposed development site. Collin's Barracks (DU018-020306), along with the burial ground at the military recreation ground (DU018-020447), are situated c. 200m east of the proposed development.

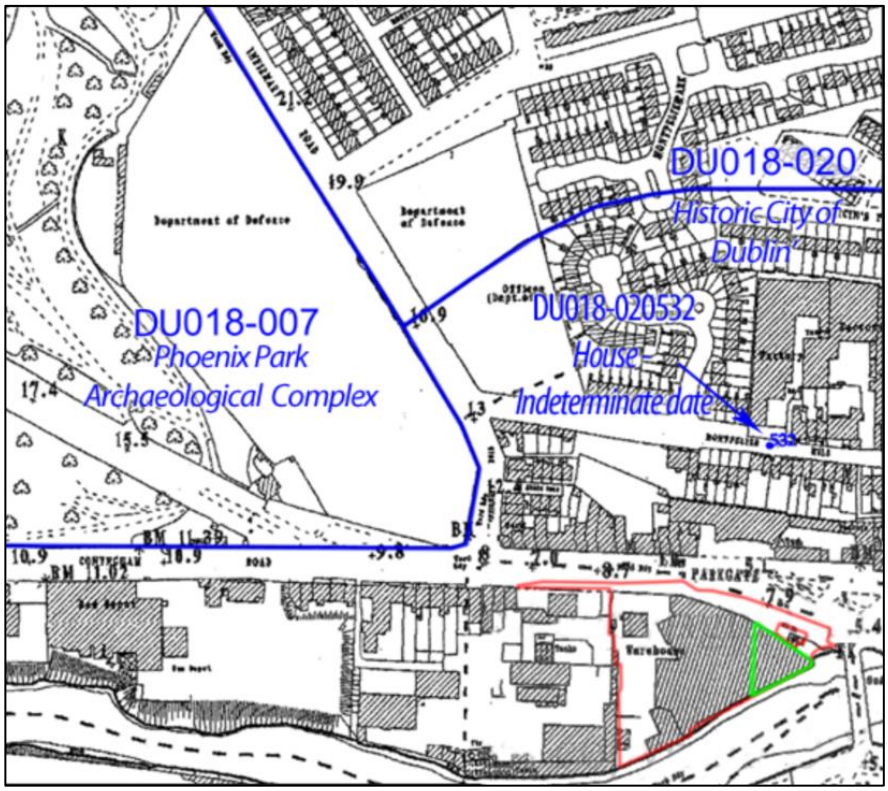

Figure 11.11: Published RMP map showing proposed development site location in green and overall site boundary in red

11.3.4 Previous Archaeological Investigations in the vicinity of the site

Archaeological monitoring of ground investigation works took place within the development site between March and May 2019 (discussed in Section 11.3.7). Archaeological testing was subsequently undertaken in February 2020 and the results are summarised in Section 11.3.7.

Some investigations have been carried out in the environs of the site in the 1990s and 2000s (outlined below and shown on Figure 11.12), but none revealed any substantial findings that might illuminate the potential of the site.

Archaeological testing (Licence No. 98E0188; Halpin 1988) in advance of the development in the adjacent plot to the west of the site (now the TII offices), did not reveal any features of archaeological significance. Post-medieval soils were identified, which lay directly on natural riverine silts and clays, and were probably the result of localised agricultural activity. There was also some evidence of reclamation from the river where introduced material was laid down.

Monitoring of drilling pits associated with the laying of a gas main from the junction of Infirmary Road / Parkgate Street along Conyngham Road did not reveal any archaeological features or remains (Licence No. 08E0483, Frazer 2008).

Archaeological investigation to the north of the proposed development at 15/16 Parkgate Street revealed no archaeological features (Licence No. 97E0217). The site lay upon a natural ridge overlooking the River Liffey and the assessment concluded that the terracing of the slope of the south-facing gravel ridge would have destroyed any pre-existing topsoil levels of archaeological potential. Remarkably, a small, naturally occurring cave was identified on the site in glacial gravel and sand deposits dating back to the last ice age (Corlett 1997). A second cavern, comprising a series of chambers, was found during the investigation in advance of an extension to the Aisling Hotel (Reid 1996); this cavern appeared to have been artificially enhanced for use.

Archaeological monitoring was carried out at the Criminal Courts Complex on the north side of Parkgate street (Licence No. 07E0488, Myles and McNerney 2007). It followed a built heritage survey and documentary research into the above-ground structures, including a masonry wall along the

Parliamentary Boundary, precinct walls of the Phoenix Park along Infirmary Road and Parkgate Street, Porter's Lodge, a Laundry Building, a drinking fountain, and the site of a chemical factory and a Research and Production Plant, which was in place from 1942–47. Whilst no archaeological features were identified, the possibility of the site having being a Viking 'longport' could not be discounted due to the significant truncation at subsoil level (this had been suggested on the basis of the course of the stream depicted on Rocque's map in relation to the Liffey and on the immediate topography).

The insertion of two 0.5m deep drainage trenches was archaeologically monitored at the rear of a house at 50 Montpelier Hill, a late 18th century building that may incorporate elements of an early 18th century warehouse (Licence No. 02E1755; Simpson 2002). The excavation of the trenches revealed the remains of a brick surface or floor outside the house, at the south-east corner. This lay just beneath the existing concrete of the yard and presumably relates to a 3m2 square return which is depicted on the 1847 OS map.

Archaeological testing to the north of the site on 12-24 Montpelier Hill (Licence No. 95E0197; Murphy 1995) did not reveal any archaeological features; the only finds recovered were of eighteenth century date or later.

Figure 11.12: Archaeological investigations in the vicinity (extracted from HeritageMaps.ie)

11.3.5 Site Visit

The site was inspected on 23rd May 2019, at which time the majority of it was occupied by the offices and warehouse operated by Hickey & Co. Ltd.

The former arched entrance gateway to the Royal Phoenix Iron Works site survives, located on the east side of the present entrance gates. The survival of the dressed-stone entrance gateway provides a point of interest on Parkgate Street, adding historic character to an otherwise neglected boundary treatment along this side of the site (Figures 11.13 & 11.14). This late 19th century boundary wall contains decorative elements, but the grey paint covering the brickwork, with traces of old graffiti and patches of mismatched paints, does little to enhance its character (Figure 11.13). A blocked-up round-headed door in the eastern wing of the gateway once accessed a small former gate lodge or entrance building, which survives to the rear of the wing, inside the site. The now-derelict early 19th century house associated with the Iron Works is visible from the exterior of the site, standing to the south-west of the gateway (Figure 11.13).

The interior of the site contains several buildings associated with the Iron Works and others associated with the later Kingsbridge Woollen Mills. The site itself has undergone changes of use, reconstruction and subdivision over the last two centuries. The derelict early 19th-century house, for example, now stands isolated in the tarmac- and concrete-surfaced yard and car park. Its original setting included extensive landscaped gardens to the west and south west, and a row of terraced workers' cottages that extended westwards from it along Parkgate Street. The former Iron Works (and later mill) site had been divided in two by the 1940s. The western half of the site is now occupied by a modern office complex and a river-side apartment building, both of which overlook the site.

The complex of buildings covering most of the site incorporates the large late 19th-century warehouse, with the earlier former gate lodge / entrance building at its northwest corner and some low modern structures to the west and south-west. Two gabled industrial buildings and a square turret, which date to the late 19th century, stand at the southwest corner of the warehouse (Figures 11.17 & 11.18). They are mostly obscured from view inside the site, forming part of the river-side boundary, at the west end of the river wall. Although not contemporary with the earliest phases of industrial activity on the site, they are an integral part of its industrial heritage. Both the buildings and the boundary wall, with a rounded turret at its east end, are also an important aspect of the riverscape as viewed from Heuston Station and Sean Heuston Bridge. At present there is no relationship with the river from the interior of the site.

11.3.6 Archaeological Monitoring of Groundworks within the Site

Archaeological monitoring of ground investigation (GI) works were undertaken at the development site under Licence No. 19E0179, between March and May 2019. The full report (Clancy & Courtney 2019) as submitted to the National Monuments Service (DHLGH) is contained in Appendix 11.3 and a summary of the results is presented below.

The ground investigation works comprised of 18 no. window sample (WS) holes to a depth of 4m BGL, 7 no. bore holes and 2 no. cable percussive boreholes (BH) with rotary core follow on (scheduled depth 15m BGL) (see Figure 11.14). One slit trench (ST) was excavated along the footpath to the north-east of the site on Parkgate Street, and two test pits (TP) in the south-west corner of the site (Figure 11.14). These were excavated by hand and a mechanical auger and also by mini-digger fitted with a drill and grading bucket that alternated between toothed and toothless as appropriate.

Three of the WS holes (WS110 to WS112), one borehole (BH105) and one test pit (TP2) lie within the proposed development site (summary results in Table 11.1) (Figure 11.14), with the remainder located throughout the overall development site (results summarised in narrative below and shown on Figure 11.14). The obstruction encountered in WS111 (Table 11.1) indicated the presence of sub-surface structures at this point; this was confirmed by the archaeological test pit excavated in this area (see Section 11.3.7). The results within the proposed development site also revealed deep deposits of industrial material (to a depth of 6.5m in BH105), reclamation deposits of at least 3.85m depth, below which were riverine gravels, but no organic materials.

Investigation	Concrete & rubble (m)	Industrial (m)	Reclamation (m)	Gravel (m)	Note
BH 105	0.00 – 1.30	1.30 – 6.50	-	6.50 – 8.50	-
TP 02	0.00 – 0.35	0.35 – 1.50	1.80 – 3.50	3.50	-
WS 110	0.00 – 1.00	-	1.00 – 3.85	3.85 – 4.00	-
WS 111	0.00-0.55	-	-	-	Obstruction 0.55m BGL
WS 112	0.00 – 0.60	-	0.60 – 3.00	-	-

Table 11.1: Summary of monitoring results within the proposed development site

Archaeological monitoring of the ground investigation works showed three main phases of deposition, across the overall site, buried beneath a meter of made-ground consisting of gravel and red-brick rubble which is sealed by a modern concrete slab.

The level of the original river and meadow (as depicted in the early cartographic sources) appears to be represented at c. 3.8 – 5m below the current ground levels. It was at these depths that deposits of riverine sands were encountered, as well as fragments of wood – possible root / branch material in BH102 – and a layer of peat in BH104, which would suggest that this level was either the original riverbank or the pre-reclamation river meadow ground surface. Prior to the construction of the Iron works it appears that c. 2m of made-ground of brown clays was imported on to the site, in an effort at land reclamation or perhaps associated with agricultural improvements to the riverside meadow.

Cartographic sources from the 19th century onwards indicate a sequence of industrial installations on the site, commencing with the Royal Phoenix Iron Works. A spread of black rubble-rich material, which varies in depth across the site, appears to be associated with the final phase / shut down of the Iron Works (1880s) and represents the demolition material associated with the foundry. It is possible that demolition materials were spread across the site to infill structures and to level the site in preparation for the next phase of construction. A possible ground surface was evident at 1.5m below the current ground level. Possible walls and sub-surface structures were visible within WS116.

The presence of slag in the industrial soils was concentrated in the south-western part of the site. This corresponds with an area of enclosed yards outside of the main Iron Works building, with the landscaped gardens to the west and north (as shown on the 1847 OS map, Figure 11.6). It may indicate that slag – a waste product of iron smelting – was being dumped in this area after being cleared from the furnaces.

The nature of the quay wall was investigated in TP101 (to a depth of 3.80m), in the south-western corner of the site, where four phases of construction were visible. The upstanding breeze-block wall had concrete foundation supports which extended 1.80m north of the wall. Incorporated into the foundations and the backfill were two large cut-granite blocks, one of which had two mortise holes and two perforations. It is possible that these were associated with the jetty or pier, the wooden elements of which are visible on the river side of the wall.

They were probably in use when the site was an ammunitions factory in the early 20th century. Ten courses of a red-brick wall survive beneath the breeze-block wall. This was set into a rubble and lime mortar foundation, lying directly on top of the remains of the original limestone quay wall.

The results of archaeological monitoring of the ground investigation works indicate the presence of the foundations of industrial buildings, and possible wall and floor levels associated with the iron-working phase and later phases on site (early 1800s onwards). In order to understand and ascertain the extent and nature of these industrial archaeological remains and potentially earlier deposits, further archaeological investigations were undertaken once the site had been vacated (see Section 11.3.7).

11.3.7 Archaeological Testing within the Site

In total twelve test pits measuring approximately 3m x 3m were archaeologically examined and recorded over a six-day period from the 6th to 13th February 2020, under Licence No. 19E0781. The test pits yielded early 19th and 20th century industrial deposits and features associated with the Phoenix Iron Works and later factories on the site. The full Archaeological Assessment Report (O'Donovan 2020) as submitted to the National Monuments Service (DHLGH) is contained in Appendix 11.4 and a summary of the results is presented below.

The archaeological test pits were roughly spaced throughout the development site footprint (Figure 11.13), with the testing undertaken to provide a broader understanding of the below-ground archaeological potential of the site. Test pits TP5, TP6, TP11 and TP12 were located in an external yard on the western side of the site. Test pits TP1, TP2, TP3, TP4, TP7, TP8, TP9 and TP10 were located indoors, within an existing factory building (Figure 11.13). The test pits were placed in areas previously identified during site investigation works as being free from contaminants.

Due to height and width restrictions within the warehouse, only a small mechanical excavator could access the interior test pits. This limited the depth of the investigation works to 2.8m. Test pits located inside the upstanding building were excavated with the assistance sub-5 tonne tracked excavator fitted

with a 1m toothless grading bucket (TP1, 2, 4, 7, 8, 9 and 10). A 12.5 tonne tracked machine with a 2m grading bucket was used for the excavation of the exterior test pits in the yard (TP5, 6, 11 and 12). A summary of the findings from each test pit is provided below in Table 11.1.

The archaeological deposits identified in the test pits consisted of late 18th and early 19th century episodes of site infilling, where the ground level was raised on the southern half of the site along the northern bank of the River Liffey. This occurred inside a contemporary quay wall that is likely to have been constructed at that time (*c.* 1800), as part of the construction works associated with the building of the Phoenix Iron Works.

Sub-surface remains of the late 18th and early 19th century redevelopment of the site as an Iron Works or foundry exist within the proposed development application area (Figure 11.13 & Table 11.2, TP4 and TP8). These comprise substantial walls and deposits of iron slag and clinker, or industrial waste from the iron foundry, that survive throughout the site under the present Victorian (1880) factory floor. These deposits are between 0.5m-3m deep and also survive below the rest of the existing factory floor and externally below ground in the yard.

Much of the fabric of the Kingsbridge Woollen Mills (1880) survives above ground and forms part of the fabric of the existing upstanding factory on site.

It is possible that other previously unknown archaeological features pre-dating the industrial features exist within the application area and survive as deeply buried sub-surface archaeological horizons relating to Viking or earlier activity. These features may survive below the areas developed in the late 18th and 19th century. The ability to locate and identify Viking 'boulder clay or lacustrine' archaeology in deep test trenches in urban stratified sites is limited and the excavation of further test trenches is unlikely to further define the pre-industrial archaeological potential of the site.

On Rocque's map of 1760, a stream traverses the north-eastern corner of the proposed development application area. This stream known as the Viceregal Stream and no evidence of this watercourse or culvert was revealed during test excavation.

While test excavation revealed the presence of subsurface features associated with the Phoenix Iron Works (*c.* 1800-1878) and the Kingsbridge Woollen Mills (1880-1890). It was also noted that there are remnants of upstanding structures relating to these industrial phases, that will require recording in order to ascertain how they relate to the below-ground features.

Test Pit	Dimensions	Findings
TP1	3m x 3m, depth 2.5m	A series of 19th century deposits were exposed, those found between depths 0.62m to 1.36m contained significant amounts of industrial waste material, the basal deposit exposed was not natural subsoil and contained 18th to 19th century material. Also exposed was a granite foundation plinth set into concrete possibly associated with the Knightsbridge Woollen Factory.
TP2	3m x 3.2m, depth 2.6m	A series of 19th and 20th century deposits were exposed. It is likely that the identified industrial deposits are associated with the Phoenix Iron Works (*c.* 1800-1878). Natural subsoil was not exposed in this test pit. In the north of the pit the remnants of a rather insubstantial red brick wall oriented roughly east-west was exposed, this wall dates from the 19th century and was constructed when the iron works was already active.
TP3	3m x 3m, depth 2.65m	A series of deposits of likely 19th or 20th century origin were revealed. At a much higher level than other test pits, a clay rich deposit without inclusions of man-made material was uncovered, this may be natural subsoil.
TP4	2.97m x 3.1m, depth 2.6m	A substantial loose and friable deposit was revealed which contained 18th and 19th materials including slag associated with the Phoenix Iron Works. Under this layer, at 2.15m below floor level, a compact sticky clay rich layer of redeposited material was uncovered. Natural subsoil was not exposed in this pit.
TP5	3m x 3m, depth 3.6m	A 19th century heat impacted working surface, presumably associated with the Phoenix Iron Works was revealed. Beneath this were a number of substantial layers that contained industrial waste. At a depth of 2.32m, sandy clay associated with the river began to be exposed, this deposit contained 18th to 19th century pottery. Under this thick layer at depth

Test Pit	Dimensions	Findings
		of 3.5m were river gravels, these gravels also contained occasional late post- medieval pottery fragments.
TP6	4.3m x 3m, depth 3.3m	Two concrete services were exposed, just beneath these services were 19th century limestone walls oriented parallel to the north wall of Parkgate House, these walls are presumably associated with the early stages or initial construction of the Phoenix Iron Works. Substantial layers of clay rich redeposited 18th or 19th century material was uncovered until at 3.15m below surface level. At this depth a silty estuarine clay that contained small snail shells was revealed.
TP7	3.1m x 3m, depth 2m	A 19th century heat affected working surface composed of what appears to be casting sand was exposed. This overlies a number of dump deposits containing various building materials including a cut granite block which may be in-situ. Excavation of this test pit was terminated when two large intact pipes were revealed, these appear to be 19th century and must have been in place before the casting sand working surface came into use. The pipes are oriented roughly north-south.
TP8	2.9m x 3m, depth 2.7m	A complex of substantial stone walls were uncovered. These walls were faced with roughly hewn limestone calp blocks and cored with rubble and mortar, the walls formed two large rectangular voids that had been backfilled with demolition rubble and broken red tiles, it should be noted that the most westerly wall (Wall A) was not keyed into the abutting walls (Walls B and D) Within the northern faces of both voids were two “holes” located below metal bands bonded to the wall, the easternmost hand “hole” was associated with a square section metal rod that functioned as a crank for air/water flow control. Neither void was fully bottomed with the maximum depth excavated being 2.7m.
TP9	3.1m x 3m, depth 2.42m	A number of 19th century industrial waste deposits were uncovered. These overlay a heat impacted possible working surface, at a similar level, remnants of a rather thin wall that ran roughly east-west was also revealed. It can be seen that a pure black waste deposit post-dates the wall as it built up against it. The walls size and its relationship to the industrial waste indicates it may have been a non-structural division within the Phoenix Iron Works. Under the working surface, at a depth of 1.26m to 2.42m, were 18th or 19th century clay rich deposits. Beneath this was revealed a smooth clay which is possibly natural a natural subsoil.
TP10	3m x 3m, depth 2.45m	A thin deposit of 19th century dump material was uncovered which overlay a thin sand rich working surface. Beneath this was a layer of 18th or 19th material. Possible natural subsoil was exposed at a depth of 2.3m
TP11	3m x 3m, depth 2.8m	Approximately half of this test pit was taken up by a substantial modern concrete pad that follows the line of the current yard and associated red brick and concrete wall. In the north half of the test pit deposits excavated were the typical 19th century, clay rich, slag free deposits found typically at lower levels throughout the site. The lack of industrial waste and working surfaces points to this area not being used for intensive industrial activity. Natural subsoil was not uncovered in this test pit.
TP12	3.5m x 4.2m, depth 3.3m	A working surface that may be associated with the similar surface found in test pit 5, was revealed at 0.95m below ground level. Beneath this layer, more 19th century industrial waste deposits were removed, a stained clay rich redeposit containing 18th to 19th century material was revealed at 1.7m deep, as well as a deposit of red brick occurred at a depth of 2.4m. A layer of possible natural clay subsoil that was odious was uncovered to a depth of 2.95m. Between 2.95m and 3.3m, highly odious, sandy river gravel was exposed. Overall the sequence of the deposits in this test pit resembles those found in pit 5, however the appearance and strong odour of the lowest deposits may indicate contamination.

Table 11.2: Summary of Findings from Test Pits TP1 to TP12 (Source: O’Donovan & Courtney 2020 in Appendix 11.4)

In summary, the overview profile within the site is as follows (notwithstanding the localised variations to this):

- 0.0m-0.80m Overburden;
- 0.8m-2.8m (at least) Evidence of iron works;
- 1.5m-3.8m Reclamation / agricultural soils;
- 3.8m-5.0m Riverine deposits / pre-reclamation river meadow deposits.

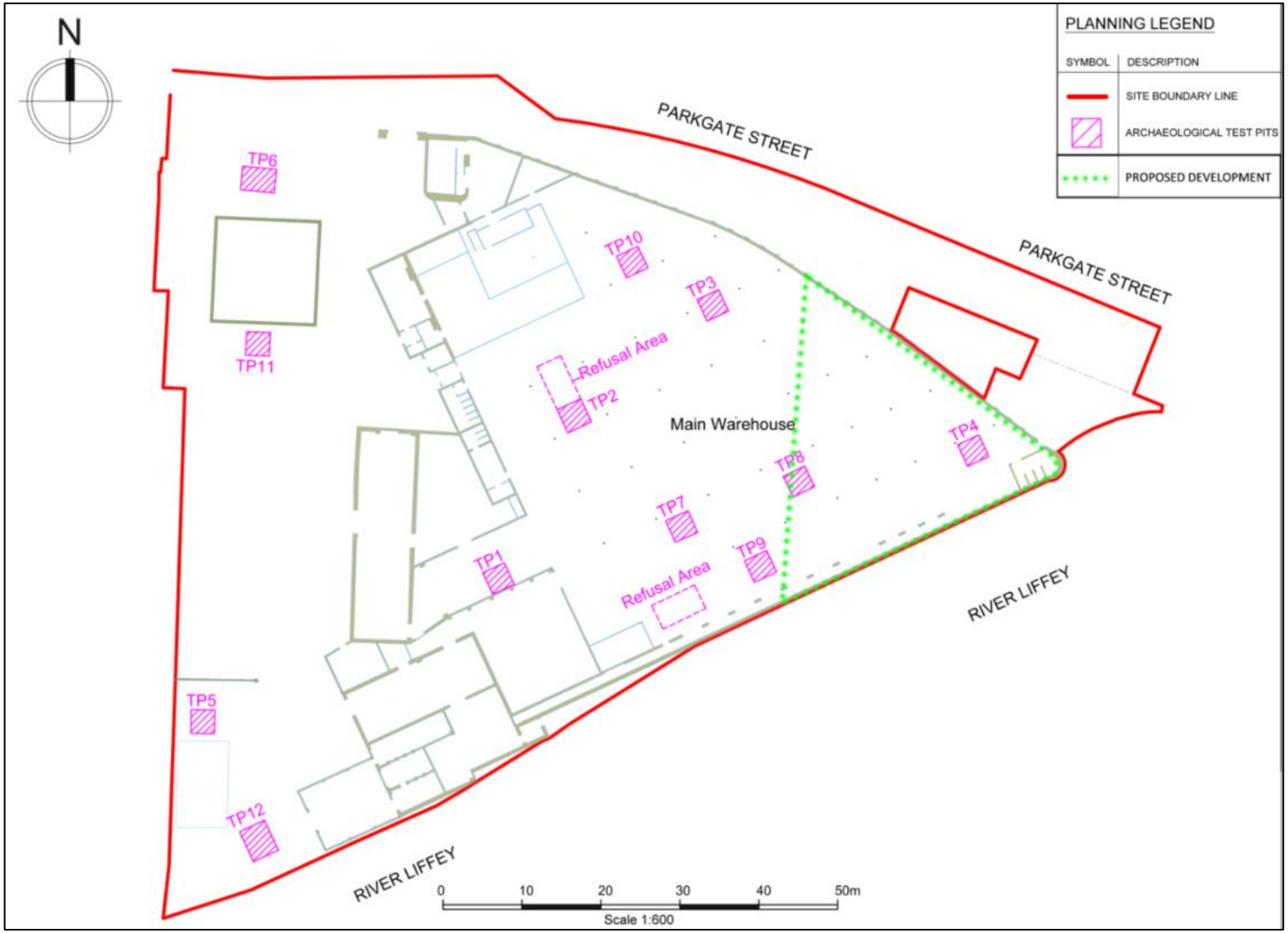

Figure 11.13: Locations of archaeological test pits

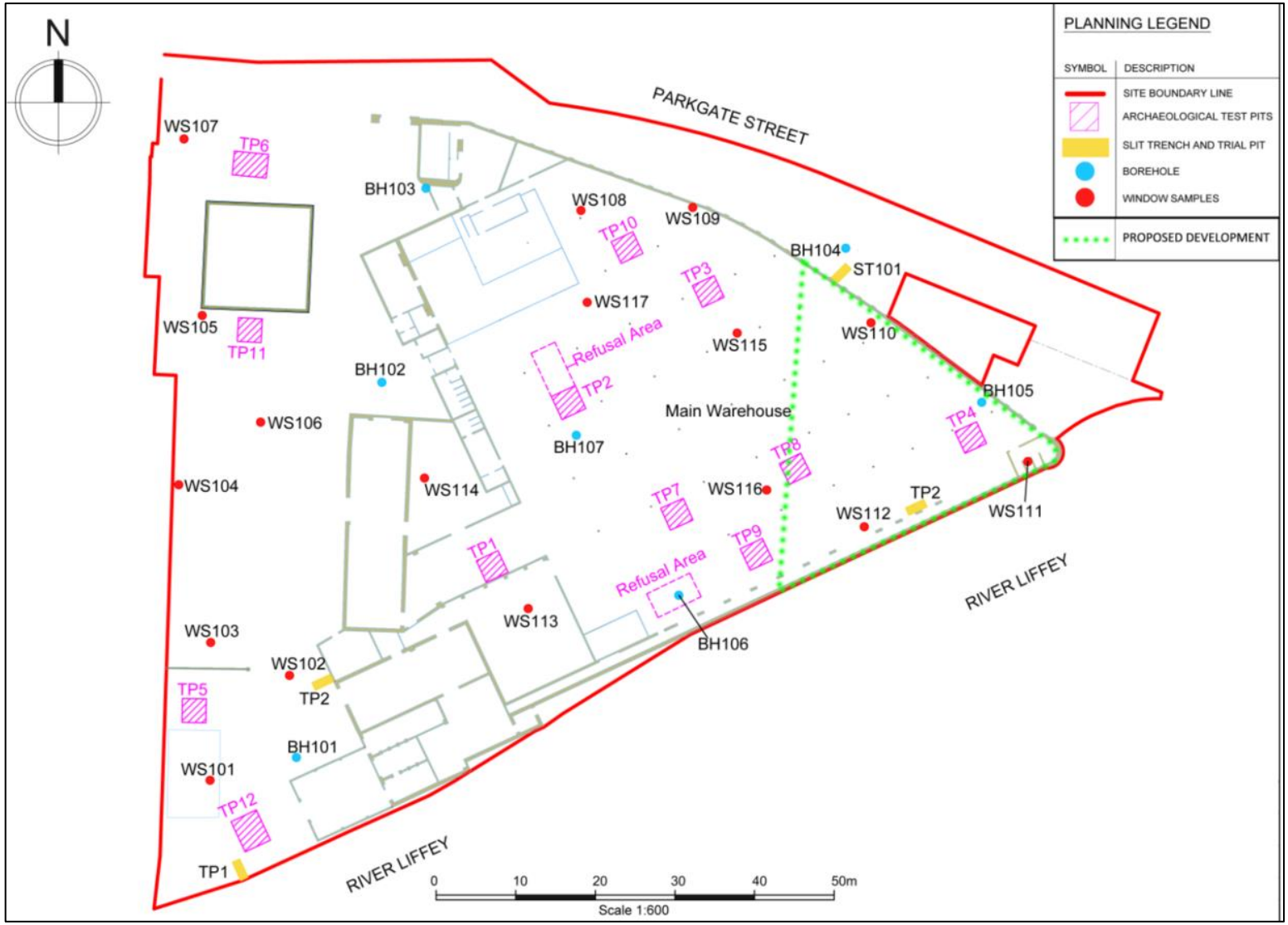

Figure 11.14: Locations of archaeological test pits and site investigations work

11.3.8 Summary of Archaeological Potential

The subject site lies within the designated zone of archaeological potential for the RMP historic city of Dublin DU018-020. The historical background of the surrounding area suggests that while there is a rich history of occupation since at least the Early Christian period, the site itself survived as open pasture until the 19th century; it was shown on Rocque's map of 1756 as 'Long Meadows', sloping southwards towards the River Liffey. There are no specific recorded archaeological sites (RMP / SMR sites) within the boundary of the site or in its immediate vicinity.

The existence of ecclesiastical foundations in the Kilmainham area and the presence of fording points in the vicinity of Parkgate Street, suggest the possibility of activity north of the River Liffey during the early medieval period, though there is as yet no archaeological evidence of such (archaeological investigations in advance of development in adjacent and nearby sites have not identified any archaeological features). The retrieval of numerous finds from the Viking Period at King's Ford Islandbridge and in Phoenix Park points to an interaction between both banks of the Liffey during the Viking settlement. Indeed, Ó Floinn (1998, 137) makes the suggestion that "*grave fields are strung out on both sides of the Liffey, some of which were located on the sites of earlier pre-historic or Early Christian cemeteries, and which, for the most part, are located close to water*".

An examination of documentary sources and historical maps for the area indicates that there were several phases of development at the subject site from the late 18th century onwards (i.e. the Phoenix Iron Works in the early 1800s, followed by Kingsbridge Woollen Factory and the Parkgate Printing Works). This development first involved the reclamation of the meadow with the introduction of at least 2m to 5m of fill across the floodplain and the building of a boundary wall to the river. This would suggest that deep beneath the existing ground level and the reclamation deposits, the original ground surface may be relatively intact, with little disturbance having occurred.

The evolution of the site from open meadow in the 18th century to the use of the site for industrial purposes from the early 19th century onwards was confirmed by the archaeological monitoring of GI works (Licence No. 19E0179) and subsequent archaeological testing (Licence No. 19E0781) (Figure 11.13). The monitoring confirmed the presence of riverine deposits and pre-reclamation river meadow deposits at 3.8m-5m. It indicated the survival sub-surface of foundations and possible wall and floor levels associated with the iron-working and later industrial activities on the site. It also revealed evidence of the iron-working (slag deposits) and the foundation remains of the original quay wall. Industrial activity relating to the 19th century iron works occurs at a depth of 0.8m-1.5m beneath the present ground level.

Twelve archaeological test trenches were excavated at the site, throughout the site footprint, two of which are located within the proposed development site (Figure 11.13). The archaeological deposits identified in the test trenches consisted of late 18th and early 19th century episodes of site infilling where the ground level was raised on the southern half of the site along the northern bank of the River Liffey. This occurred inside a contemporary quay wall that is likely to have been constructed at that time (c. 1800), as part of the construction works associated with the building of the Phoenix Iron Works in 1808. Sub-surface remains of the late 18th and early 19th century redevelopment of the site as an Iron Works or foundry exist within the proposed development application area (Figure 11.13 & Table 11.2, TP4 and TP8). These comprise substantial walls and deposits of iron slag and clinker, or industrial waste from the iron foundry, that survive throughout the site under the present Victorian (1880) factory floor. These deposits are between 0.5m-3m deep and also survive below the rest of the existing factory floor and externally below ground in the yard.

It is possible that previously unknown archaeological features dating from c. AD 1000 exist within the application area and survive as sub-surface features. These features may survive below the areas developed in the late 18th and 19th century. The ability to locate and identify Viking 'boulder clay or lacustrine' archaeology in deep test trenches in urban stratified sites is limited and the excavation of further test trenches is unlikely to further define the pre-industrial archaeological potential of the site.

11.3.9 Industrial and Cultural Heritage

The site as a whole is listed in the Dublin City Industrial Heritage Record (DCIHR) and is recorded as forming a significant component within the city's industrial heritage. In addition, the site is also

important in the cultural landscape of this part of the city, as buildings and the activities within them, both past and present, are culturally meaningful and contribute to the cultural heritage of an area.

The DCIHR record is extracted below. As noted in the record description, the original iron works was rebuilt in the late 19th century. This phase of rebuilding related to the establishment of a woollen mill on the site and it appears that much of the early 19th century iron works was demolished to make way for the new enterprise (see sections 11.3.2, 11.3.7, and Chapter 12, Architectural Heritage). Although the appraisal in the entry states that the early structures of the site are largely intact, this is contradicted by the most recent architectural heritage survey undertaken in 2019 (see Chapter 12, Architectural Heritage). It has identified that the majority of the standing buildings date to the late 1880s, including the river wall; the only elements that survive of the Iron Works are the gated entrance, house (known as Parkgate House), round turret and the walls of a flat-roofed structure on the west side of the warehouse.

Reference	Site Function	Location	Name
DCIHR 18 10021	Iron Works	Parkgate Street	Parkgate Printing works {Royal Phoenix Iron Works}
Description (after DCIHR): Former Royal Phoenix Ironworks originally built c.1800, rebuilt c.1880 and converted to printing works c.1920. Site now functioning as commercial premises. Site comprises variety of single-storey double-height brick buildings to southwest corner having differing roof profiles with some lit by rooflights and having brick corbelled chimneystacks and Flemish bonded brick walls. Two-storey smooth-rendered building adjoining to northwest with hipped slate roof and curved southwest corner containing large opening now functioning as window. Square-headed window openings with painted stone sills and replacement timber windows; tripartite window to ground floor west elevation; flat-roofed extension links buildings to main structures. Two-storey random coursed stone structures to southwest of site having pitched slate roofs, cast-iron rainwater goods and roof vents, dressed limestone quoins and segmental-headed window openings with brick block-and-start surrounds and replacement windows. Site bounded to north by painted Flemish bond brick wall with denticulated recessed panels and stone quoins; bounded to riverside (south) by random rubble stone wall having ashlar limestone turret with cornice to east and square tower with cut limestone quoins, pyramidal slate roof and segmental-headed openings with brick surrounds to west. Ashlar limestone entrance to northwest surmounted by cornice and stepped parapet and having round-arched gateway with dressed limestone voussoirs to north and concrete to arch to south; round-headed blocked openings to east of gateway formally giving access to interior or northwest building.			
Appraisal (after DCIHR): The Royal Phoenix Ironworks, also known as Robinsons Ironworks, appear to have been a substantial operation on the north bank of the Liffey and have left notable legacies on the riverscape with the parapet on Sarah Bridge (1816) and Sean Heuston Bridge (1827-28) both cast there. Of particular note is the site's solid riverside boundary wall with associated turret and tower which belie the buildings original function, though it was used in World War 1 as a bomb-making factory. With its brick northern boundary wall, ashlar entrance and largely intact early structures, the site forms an important component within the city's industrial heritage.			

Table 11.3: DCIHR entry for the Iron Works at Parkgate Street (Source: Dublin City Council 2003 to 2009)

11.4 Characteristics of the Proposed Development

11.4.1 Proposed Development

The proposed development comprises a 30-storey residential building ('Block A') (c.14,364 sq m gfa), including residential, café/restaurant, replacement office use and ancillary accommodation and works, located in the eastern apex of the site subject of otherwise consented development under ABP-306569-20.

The proposed new Block A building accommodates:

- 198no. 'Build To Rent' residential apartments (73no. studios, 97no. 1-bed, 27no. 2-bed & 1no. 3-bed) from 1st to 27th floors inclusive, including 53no. units with 'winter garden' balconies on the building's eastern elevation.
- Ancillary internal (c.384 sq m) and external (c.255 sq m) residents' private communal amenity areas and facilities, including ground floor reception/concierge area, lounge bars at mezzanine and 9th floors, roof gardens at 9th and 28th floors, and access to other residents' private communal amenity areas within the consented scheme ABP-306569-20.
- 1no. café/restaurant (c.223 sq m) at ground floor. Replacement office floor area (c.595.6 sq m total) accommodated between 1st and 8th floor levels of Block A.
- Ancillary residential bicycle storage (22no. spaces), refuse, circulation and plant, and non-residential back of house and circulation areas at ground and mezzanine floors.
- Building Maintenance Unit (BMU) at roof level.

Ancillary and associated site works and other structural and landscape works are proposed to tie the proposed new Block A building in with the consented development (ABP 306569-20). Proposed amendments to the consented scheme, include:

- At the interface of proposed Block A with the consented Block B2 office building:
    - a reduction by c.909 sq m total of office floor area over 6 floors within the consented Block B2 office building;
    - a reduction by c.35 sq m of external residential amenity and associated minor amendments to landscaping at roof level of consented Block B2; and,
    - localised changes to the northern Parkgate St façade of the consented Block B2 to include a shadow gap at its junction with proposed Block A.
- 16no. additional bicycle parking spaces accommodated within consented Block B1 undercroft area.
- Minor localised amendments to adjoining consented public realm area to tie in with proposed Block A at ground level.
- New telecommunications infrastructure at roof level of consented Block B1, including: 4no. 300mm microwave link dishes mounted on 2no. 2m high steel poles fixed to the consented lift shaft overrun, housed within GRP radio friendly shrouds, to mitigate potential for interference with existing telecommunication channels.

The site within which the proposed works sit, benefits from extant permission for residential-led mixed use strategic housing development under ABP 306569-20 (i.e. the consented development). Permission is not being re-sought for the consented development.

For avoidance of doubt, while the red line site boundary is drawn around the entire planning unit of ABP Ref. 306569-20, the development works for which permission is expressly sought are identified with a green dashed line, within the wider red line planning unit.

The overall site (c.0.82 ha) is principally bounded by Parkgate Street to the north, the River Liffey to the south, an existing electricity substation and the junction of Sean Heuston Bridge and Parkgate Street to the east, existing Parkgate Place office and residential development to the west. The application site includes areas of public footpath and roadway on Parkgate Street and a small landscaped area at the junction of Sean Heuston Bridge and Parkgate Street. There are Protected Structures on site.

11.4.2 Cumulative

In the split decision made by the Board (ABP Ref. 306569-20), permission was granted at this site for 321no. Build-to-Rent residential apartments, ancillary residents' amenity facilities, commercial office (c.3,698 sq. m), retail (c.214 sq. m) and café/restaurant (c.236 sq. m), accommodated in 5no. blocks ranging from 8 to 13 storeys (c. 31,146 sq. m) over ancillary basement area, and all associated and ancillary conservation, landscaping and site development works.

Permission was refused for Block A, a 29-storey residential tower (c.12,207 sq m gfa), accommodating 160no. 'BTR' residential apartments, ancillary residents' internal amenity areas and external roof gardens, 1no. café/restaurant (c.208 sq m) and ancillary plant / storage.

This SHD application seeks permission for a new Block A tower design, that addresses the concerns expressed by the planning authority and the Board in the case of ABP-306569-20. The revised design proposal seeks to achieve a building of exceptional architectural quality and an enduring landmark at the western gateway to Dublin city centre.

On the basis that the Block A building will rely on the permitted site works and shared amenities contained within the wider consented scheme, the red line planning application boundary is drawn around the wider planning unit containing the consented scheme and the proposed development. The extent of the proposed Block A works are delineated in green within the overall red line.

For the avoidance of doubt, however, permission is not being re-sought for the consented development ABP-306569-20. This includes the consented site development and infrastructure works that also serve Block A. Demolition, conservation and works to protected and non-protected structures are also already permitted under ABP-306569-20, and permission is not being re-sought for these works.

The proposed development, for which permission is sought, therefore comprises only revised Block A and alterations to approved Block B at the interface between Blocks A and B. Some localised adjustments to the public realm area to accommodate the changed tower footprint are also proposed, and additional bicycle parking spaces to serve the increase in residential unit numbers.

11.5 Potential Effect of the Proposed Development

In accordance with EPA guidelines, the context, character, significance and sensitivity of each heritage asset, was evaluated. The significance of the impact is then determined by consideration of the significance of the asset and the predicted magnitude of impact. A glossary of impacts as defined by the EPA is provided in Appendix 11.2.

11.5.1 Proposed Development

11.5.1.1 Construction Phase

Archaeological Heritage:

There will be no direct effects on any recorded archaeological sites. The subject site lies within the designated zone of archaeological potential for the historic city of Dublin RMP DU018-020, however, there are no specific recorded sites (RMP / SMR sites) within the boundary of the site or in its immediate vicinity.

The results of the GI works monitoring and subsequent archaeological testing identified the survival sub-surface of foundations and possible wall and floor levels associated with the iron-working and later industrial activities on the site (early 1800s onwards). It also revealed evidence of the iron-working (slag deposits). These features are discussed as part of the cumulative assessment in section 11.5.2.1.

The archaeological monitoring of GI works on the site confirmed the presence of some riverine and pre-reclamation river meadow deposits at 3.8m-5m deep. This would suggest that beneath the existing ground level and the reclamation deposits, the original ground surface may be relatively intact, with little disturbance having occurred. While no evidence was found for any pre-industrial archaeological remains, there is nonetheless the potential that previously unknown archaeological sites, features or deposits may survive at this pre-reclamation level.

There is significant ground contamination (heavy metals etc.) within the proposed development site. The presence of these contaminated deposits has led to a development design that leaves these fills in situ, with a consequent reduction in the depth of any ground disturbance. Given this and the depth of the made-ground within the proposed development site, the potential to impact on any previously unknown archaeological deposits that may be present at pre-reclamation levels is limited. The piling required for the proposed development of Block A residential building would, however, result in a moderate negative permanent effect on any such deposits that may be present.

11.5.1.2 Operation Phase

All archaeological and cultural heritage issues will be resolved during the pre-construction and construction phases.

11.5.1.3 Do-Nothing Impact

In the 'Do-Nothing' scenario the demolition of the existing late 19th century factory / warehouse and preparatory site works would still occur as part of the consented development (Planning Permission Ref. ABP-306569-20). This would have a moderate negative permanent effect on the archaeological remains of 19th century industry on the site.

While the factory / warehouse demolition would have a slight negative effect on the cultural heritage of the site, the retention of structural elements for reuse and of the historic river wall and turret (Planning Permission Ref. ABP-306569-20), and the new legibility of the site's history would result in an overall slight positive permanent effect.

11.5.2 Cumulative

11.5.2.1 Construction Phase

Archaeological Heritage:

The sub-surface remains associated with the iron-working and later industrial activities within the proposed development area are present across the entire development site. The foundation remains of the original quay wall also survive subsurface within the consented development site. Where these features are located within or partly within areas to be excavated or otherwise disturbed, they will be directly affected by the ground reduction works (to an approximate depth of 1.8m below existing ground level) that will take place across the entire site for the consented development (Planning Permission Ref. ABP-306569-20). This would result in a moderate negative permanent cumulative effect on the archaeological remains of 19th century industry on the site.

While no evidence was found for any pre-industrial archaeological remains, there is nonetheless the potential that previously unknown archaeological sites, features or deposits may survive at the pre-reclamation level. The piling required for the consented and proposed developments would result in a moderate negative permanent cumulative effect on any such deposits that may be present.

Cultural heritage:

With regard to cultural heritage, the site, its boundaries, and the buildings contained within it, are recorded in the Dublin City Industrial Heritage Survey as an important component within the city's industrial heritage. The present structures on the site largely date from the late 19th century (including the existing factory / warehouse that is located partly within the proposed development site and the river wall at its boundary), with several from the early 19th century (such as the turret at the eastern end of the proposed development site), as well as some modern structures.

There will be the removal of some of the existing heritage buildings and features in the overall site, and the addition of new buildings and functions, for the consented development (Planning Permission Ref. ABP-306569-20). This includes heritage buildings and features located within / adjacent to the proposed

development site (Planning Permission Ref. ABP-306569-20). This will have a slight negative cumulative effect on the cultural heritage of the site.

However, as part of the consented development (Planning Permission Ref. ABP-306569-20) the majority of the architecturally or industrially significant buildings will be retained, restored and integrated into the new development (a best practice approach; see Chapter 12, Architectural Heritage). Some of the large cast iron structural elements from the existing late 19th century factory / warehouse will also be retained for use in the new development (a compliance report for the salvaging of cast-iron elements has been drawn up to this effect; ARC 2020) (Planning Permission Ref. ABP-306569-20).

Furthermore, the site itself will be partly opened up to the public and will receive new legibility in terms of the relationship of the historic structures with Parkgate Street and the river (their original context), and to the broader cultural heritage context and its industrial past, e.g. the interrelationship between the site and Sean Heuston Bridge and Heuston Station. This is considered an overall slight positive permanent cumulative effect on an otherwise hidden but historic site.

The surviving above-ground structures associated with the industrial heritage on the site and the setting of the historic buildings / monuments in the surrounding urban landscape are assessed for any cumulative effects in Chapter 12, Architectural Heritage Impact Assessment and in Chapter 13, Landscape and Visual Impact Assessment.

The list of other developments contained in Appendix 21.1 of Chapter 21 has been reviewed and no further cumulative effects have been identified in relation to archaeology and cultural heritage.

11.5.2.2 Operation Phase

All archaeological and cultural heritage issues will be resolved during the pre-construction and construction phases.

11.5.2.3 Do-Nothing Impact

No cumulative effects were identified in relation to the Do-Nothing scenario.

11.6 Mitigation Measures (Ameliorative, Remedial or Reductive Measures)

11.6.1 Proposed Development

Archaeological monitoring of site investigation works and archaeological test excavation have already taken place across the overall development site, including the proposed development area for Block A. No evidence was found for any pre-industrial archaeological remains. The ability to locate and identify Viking 'boulder clay or lacustrine' archaeology in deep test trenches in urban stratified sites is extremely limited and the excavation of further test trenches is unlikely to further define the pre-industrial archaeological potential of the site. In addition, the depths of the reclamation levels and the contaminated soils would present significant logistical and health and safety issues. For these reasons, archaeological monitoring is considered the appropriate mitigation.

Archaeological monitoring will take place of any works requiring ground disturbance / excavation, including site preparation works for the piling regime for Block A and any ground disturbance works associated with the propping / stabilisation of the historic turret and river wall, where these have not already taken place for the consented development (Planning Permission Ref. ABP-306569-20).

Should archaeological material be identified, the remains will be preserved by record through archaeological excavation. It should be noted that the significant ground contamination that exists within the site may restrict the manual excavation of some deposits based on health and safety concerns.

11.6.2 Cumulative

Archaeological Heritage:

An archaeological strategy for the consented development site (including the proposed development area) (Planning Permission Ref. ABP-306569-20) has been drawn up for consultation with the City Archaeologist and the National Monuments Service (DHLGH). The proposed strategy seeks to employ preservation by record and to archaeologically excavate the industrial remains that will be exposed as a result of the basement design for the development. It provides for the recording and for the removal of archaeological material acceptable to the planning authority as detailed in the Archaeological Assessment Report (O'Donovan 2020). This includes the following elements:`

- Archaeological excavation to be carried out within the basement / undercroft footprint of the development (part of Block B and C);
- Archaeological monitoring to be carried out on the remainder of the site where any sub-surface works associated with the ground floor foundations of the development requires reduction. This will involve having the ground-breaking element of the development works monitored by an archaeologist. Should archaeological material be identified, further archaeological excavation shall proceed;
- Prior to the demolition of existing historic buildings on site, a full photographic and descriptive record of the upstanding remains in relation to the Phoenix Iron Works (c. 1800-1878) and Kingsbridge Woollen Factory (1880-1890) will take place in order to add to the archaeological record of the sub-surface industrial remains;

The strategy acknowledges that significant ground contamination with heavy metals etc. exists on the site and that this may restrict the manual excavation of some deposits based on health and safety concerns. The presence of these contaminated deposits has led to a development design leaving these fills in situ which has a consequent reduction in the area requiring archaeological excavation.

Cultural heritage:

The history of the site is significant for the cultural heritage of the immediate area and of Dublin City in general and this is recognised in the Dublin City Industrial Heritage Record. It is important that the changes to the cultural landscape as a result of the proposed and consented developments do not erase this history. The historic industrial fabric on the site is a tangible and integral part of this history, but one that is not well understood by, or visible to, the public. The site has not been publicly accessible and its history and importance are little known, both to the local community and to Dubliners in general. As the proposed development will include public open spaces, this offers an opportunity for the proposed development to remedy this and to make a cultural contribution to the area. The provision of information panels, placed in the communal lobby or public square of the development, could assist in the recognition and preservation of the history of the site. These could incorporate both the story of the industrial heritage of the site – providing context for the historic elements that will be retained – as well as the results of any new archaeological findings that may emerge from the archaeological testing and resolution on the site.

11.7 Residual Effect of the Proposed Development

11.7.1 Proposed Development

11.7.1.1 Construction Phase

No residual effects during construction phase were identified during the course of the assessment on archaeological or cultural heritage. Should any archaeological remains be uncovered, they will be fully resolved prior to the main construction stage (as detailed in Section 11.5.1).

11.7.1.2 Operation Phase

No residual effects were identified during operation phase.

11.7.1.3 Do-Nothing Impact

No residual effects were identified in relation to the Do-Nothing Scenario.

11.8 Monitoring

There will be no requirement for monitoring post-construction.

11.9 Reinstatement

There will be no requirement for reinstatement.

11.10 Difficulties Encountered

No difficulties were encountered during the assessment process.