CourtneyDeery

ARCHAEOLOGY & CULTURAL HERITAGE

Cultural Heritage Impact Assessment

LRD at 42A Parkgate Street,

Blocks B1 and C,

Dublin 8

For

Ruirside Developments

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EXECUTIVE SUMMARY

This report provides an Archaeological and Cultural Heritage Impact Assessment to accompany a Large-Scale Residential Development (LRD) application for lands at 42A Parkgate Street, Dublin 8. Planning was previously granted for the development by An Bord Pleanála (ABP ref.: ABP-306569-20), and it is now proposed to update the design to comply with the new Apartment Design Guidelines. This report will assess the impact of the new layout on archaeology and cultural heritage. It follows archaeological monitoring of site investigations and archaeological testing (Clancy & Courtney 2019; O'Donovan & Courtney 2020) which were undertaken in advance of planning, and further monitoring of site investigations (Deery 2022) carried out as a condition of the previously consented development (ABP ref.: ABP-306569-20).

The proposed development site lies within the statutory zone of notification for the Historic City of Dublin (RMP DU018-020). There are no specific RMP / SMR sites recorded within the subject site or in its immediate vicinity. The historical background of the surrounding area nonetheless 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, sloping southwards towards the River Liffey. 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 Liffey during the early medieval period, though there is as yet no archaeological evidence of such. 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.

An examination of documentary sources and historical maps for the area indicates that there were several phases of development at the site from the late 18th century onwards (e.g. 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 up to 5m of fill across the floodplain and the building of a boundary wall to the river.

Archaeology

Potential Impacts

There will be no direct impact on any recorded archaeological sites. The subject site lies within the designated zone of notification 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).

The foundation remains of the original quay wall 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 that will take place across the entire site. This would result in a moderate negative permanent cumulative effect on the archaeological remains of 19th century industry on the site.

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 basement excavations and piling required for the proposed development of Blocks B and C would, however, result in a moderate negative permanent effect on any such deposits that may be present.

Mitigation Measures

A detailed archaeological method statement (Courtney & Deery 2022) for the previously consented development site (Planning Permission Ref. ABP-306569-20) was drawn up for consultation with the City Archaeologist and the National Monuments Service (DHLGH). This agreed-upon strategy forms the basis of the mitigation measures outlined below and will be applied to the revised development, if permitted. 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 and 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 of any works requiring ground disturbance / excavation, including site preparation works for the piling regime for Block B and C and any ground disturbance works associated with the propping / stabilisation of the historic turret and river wall. 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 demolition of the buildings and quay wall will be carried out under archaeological supervision (as required). Recording of any newly exposed walls or structures will take place.
- Where excavation of the pile caps are likely to reveal in-situ walls or features, archaeological hand excavation and recording will be required in these locations in order to expose and record the nature and extent of the industrial heritage features.

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

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 proposed development. This includes heritage buildings and features located within / adjacent to the proposed development site. This will have a slight negative cumulative effect on the cultural heritage of the site.

As part of the proposed development, the majority of the architecturally or industrially significant buildings will be retained, restored and integrated into the new development (a best practice approach; see Architectural Heritage Impact Assessment).). It is also possible that some of the large cast iron structural elements from the existing late 19th century factory / warehouse can be retained for use in the new development. 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. The provision of heritage information panels, placed in the communal lobby or public square of the development, will also assist in the recognition and preservation of the history of the site. This is considered an overall slight positive permanent effect on an otherwise hidden but historic site. The surviving above-ground structures associated with the industrial heritage on the site are assessed in a separate Architectural Heritage Impact Assessment.

1. INTRODUCTION

1.1. General

This report provides a Cultural Heritage Impact Assessment to accompany a Large-Scale Residential Development (LRD) application for lands at 42A Parkgate Street, Dublin 8, regarding Blocks B1 and C (including site works). It has been prepared by Courtney Deery Heritage Consultancy Ltd on behalf of Ruirside Developments. Planning was previously granted for the development by An Bord Pleanála (ABP ref.: ABP-306569-20), and it is now proposed to update the design to comply with the new Apartment Design Guidelines.

This LRD report will assess the impact of the new layout on archaeology and cultural heritage. A separate report has been compiled regarding architectural heritage. This report follows archaeological monitoring of site investigations and archaeological testing (Licence no. 19E0179; 19E0781; Clancy & Courtney 2019; O'Donovan & Courtney 2020) which were undertaken in advance of planning, and further monitoring of site investigations (Licence no.: 21E0033Ext; Deery 2022) carried out as a condition of the previously consented development (ABP ref.: ABP-306569-20; see Section 6.1).

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

Design:

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

Construction:

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

1.2. 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 (Figure 1). 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 / SMR 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.

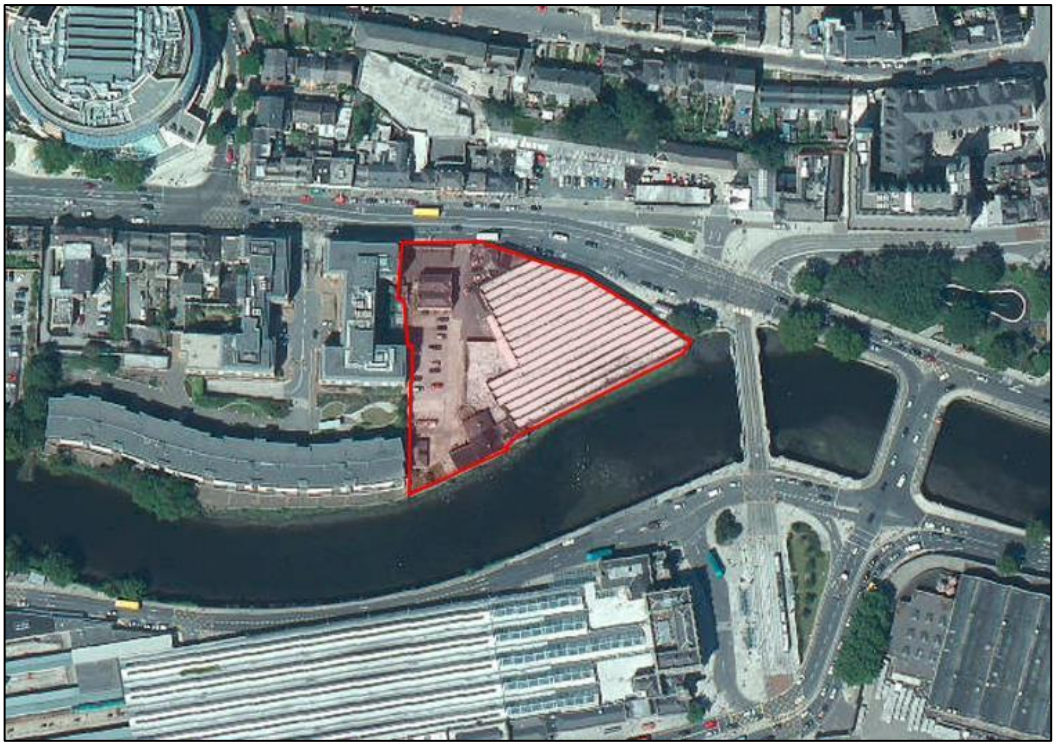


Figure 1 Site location

1.3. Methodology

The evaluation of the archaeological and cultural heritage resource was based on a desk study of published and unpublished documentary and cartographic sources, supported by a site inspection. 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.

1.3.1. Desk Study

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:

- UNESCO World Heritage Sites (WHS) and Tentative World Heritage Sites and those monuments on the tentative list;
- National Monuments in State care, as listed by the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH);
- Sites with Preservation Orders;
- Sites listed in the Register of Historic Monuments;
- Record of Monuments and Places (RMP) and the Sites and Monuments Record (SMR) from the Archaeological Survey of Ireland; The statutory 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. Archaeological sites identified since 1994 have been added to the non-statutory SMR database of the Archaeological Survey of Ireland (National Monuments Service, DHLGH), which is available online at www.archaeology.ie and

includes both RMP and SMR sites. Archaeological sites identified since 1994 are placed on the SMR and are scheduled for inclusion on the next revision of the RMP;

- Record of Protected Structures (RPS) in the Dublin City Development Plan (2022-2028);
- County Councils Architectural Conservation Areas (ACAs) and their statements of character;
- National Inventory of Architectural Heritage (NIAH) Building Survey (NIAH ratings are international, national, regional, local and record, and those of regional and above are recommended for inclusion in the RPS);
- National Inventory of Architectural Heritage (NIAH) Garden Survey (paper survey only);
- A review of artefactual material held in the National Museum of Ireland;
- Cartographical Sources, OSi Historic Mapping Archive, including early editions of the Ordnance Survey including historical mapping (such as Down Survey 1656 Map);
- The Irish archaeological excavations catalogue i.e. Excavations bulletin and Excavations Database;
- Place names; Townland names and toponomy (loganim.ie);
- National Folklore Collection (Duchas.ie);
- Dublin City Development Plan (2022-2028).
- A review and interpretation of aerial imagery (OSI Aerial Imagery 1995, 2000, 2005, Aerial Premium 2013-2018, Digital Globe 2011-2013, Google Earth 2001–2024, Bing 2024) to be used in combination with historic mapping to map potential cultural heritage assets.
- A review of existing guidelines and best practice approaches.

A bibliography of sources used is provided in the References section.

1.3.2. Site Inspections and Investigations

Numerous site inspections were undertaken of the site between 23rd May 2019 and 22nd October 2024 in order to assess the condition of the site and the potential implications of the development on the surviving cultural heritage landscape.

Archaeological investigations comprised the archaeological monitoring of site investigations (Licence no. 19E0179; Clancy & Courtney 2019), archaeological testing (Licence no.: 19E0781; O'Donovan & Courtney 2020) and further archaeological monitoring of site investigations (Licence no.: 21E0033Ext; Deery 2022).

1.3.3. 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, and another for archaeological monitoring (Licence no.: 21E0033Ext) in December 2020. All three phases of investigations have had reports submitted to the National Monuments Service, National Museum of Ireland and Dublin City Archaeologist in May 2019, March 2020 and June 2022 respectively.

A detailed archaeological method statement (Courtney & Deery 2022) for the previously consented development site (Planning Permission Ref. ABP-306569-20) was drawn up for consultation with the City Archaeologist and the National Monuments Service (DHLGH). The methodology was agreed in principle by the City Archaeologist and a licence (now expired) was subsequently granted by National Monuments Service for the construction phase, which did not ultimately take place. This agreed-upon strategy forms the basis of the mitigation measures presented in Section 6.

1.4. Standards and Guidelines

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

- Historic and Archaeological Heritage and Miscellaneous Provisions Act, 2023;
- National Monuments (Amendments) Acts, 1930-2014;
- Planning and Development Bill, 2024;
- The Planning and Development Act 2000, as amended;
- Heritage Act, 1995;
- 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;
- 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.

The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 was enacted in October 2023 and this this Act is now law. The Minister for Housing, Local Government and Heritage commenced certain provisions in May 2024 (S.I. No. 252/2024); however, until the Act is fully commenced, the National Monuments Acts have therefore not yet been repealed and remain in force.

The Planning and Development Bill 2024 passed through the Oireachtas on 9th October 2024 and has been sent to the President to be signed into law.

1.5. Ratings of Impacts

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 adversely affect these sites. The methodology used is based on the EPA Guidelines (2022), and both direct physical effects, as well as impacts to the setting of individual heritage assets, have been assessed. The likely significance of all impacts is determined in consideration of the magnitude of the impact and the baseline rating upon which the impact has an effect (i.e. the sensitivity or value of the cultural heritage asset). Having assessed the magnitude of impact with respect to the sensitivity/value of the asset, the overall significance of the effect is then classified as Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant, or Profound.

1.6. Characteristics of the Proposed Development

The updated proposal comprises changes to the permitted layout, the most relevant of which to archaeological impact is the change to the footprint of the development. Under the new proposal, the external courtyard will be reduced from 21m width (1605sqm.) to 17.5m (1001sqm.).

Brownfield site of former Parkgate Printing Works, now known as Parkgate House. There are Protected Structures on site, including (a) riverside stone wall; (b) turret; (c) square tower; and (d) stone arch.

The site 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, subject of proposed associated public realm enhancement and drainage works.

The proposed development adjoins consented development within the same application site boundary, including LRD6042/23 (Block B2 – 40no. apartments, café/restaurant unit (236 sq m) and community/cultural space (c. 52 sq m)) and SHD-310567-21 (Block A – 198no. apartments and restaurant/café (c.187 sq m)).

The proposed development comprises mixed use residential, community and commercial redevelopment (c. 25,777 sq m gross floor area), accommodated in 2no. blocks (Block B1 and Block C) ranging in height from 8 to 13 storeys with basement and undercroft, and including: 316no. apartments (178no. 1-bed units and 138no. 2-bed units), with associated private balconies on north, south, east and west building elevations and communal roof terraces at Levels 07, 08, 09 and 12; ancillary internal residents' amenity facilities (c.226 sq m); multi-functional space accommodating co-working/cultural/community/exhibition uses available for public hire (c.496 sq m); ground level retail (c.147 sq m).

And all associated and ancillary demolition, conservation, landscaping and site development works, including:

- Public open space (c.1,430 sq. m), including a plaza and riverside walkway.
- Residents' communal open space courtyard at ground level between Blocks B1 and C.
- Conservation, refurbishment, repair and adaption of existing protected structures, including:
  - Entrance stone archway (protected structure) to be conserved, refurbished, repaired and adapted for use as pedestrian access to proposed residents' communal open space, entrance foyers to Block B1 and Blocks C1, C2 and C3 and ancillary amenities.
  - Riverside stone wall (protected structure) to be conserved, refurbished, repaired and adapted, including partial demolition comprising the enlargement of existing opes and creation of new opes and lintel treatments for incorporation within the riverside stone wall, as part of the proposed riverside amenity walkway.
  - Turret (protected structure) at the eastern end of the riverside stone wall to be conserved, refurbished, repaired and adapted as an integrated part of riverside stone wall and proposed amenity walkway.
  - Square Tower on riverfront (protected structure) to be conserved, refurbished, repaired and adapted as an integrated part of riverside stone wall proposed and amenity walkway.
- Conservation, refurbishment, repair and adaption of the larger of the two riverfront gabled building ('River Building') for use as part of the multi-functional space accommodating cultural/community uses and gym, accessible from Block C1 undercroft and residents'

courtyard at ground level, and incorporation of building as integrated part of riverside stone wall and proposed riverside amenity walkway.

- Conservation, refurbishment, repair and adaption of the southern façade of the smaller riverfront gabled building as part of riverside wall and incorporated with the amenity walkway. Demolition of the remainder of the building fabric.
- Demolition of all other structures within the former Hickey's Fabrics site, including the large single storey warehouse building with curved wall to Parkgate Street and all warehouse internal walls and partitions including the southern brick wall running parallel to the interior of the riverside stone wall, a small two storey building adjacent to the entrance stone archway and the former 2-storey detached house (Parkgate House, partially collapsed) at the north west corner of the site, and other miscellaneous structures.
- 2no. new pedestrian site entrances at Parkgate Street, connecting to proposed public plaza and the proposed riverside amenity walkway.
- 1no. new vehicular access via Parkgate Street to surface areas at western edge of the site.
- 24no. car parking spaces (total) at surface.
- 742no. bicycle parking spaces (total) at surface, undercroft and basement levels.
- Ancillary plant, bin storage and remote storage at ground and basement levels.
- Ancillary plant and telecommunications antennae at roof level.
- Solar panels on the roof of proposed Blocks B and C.
- Ancillary works along the southern footpath on Parkgate Street and in the public roadway, including new loading bay, removal of recycling bins and Dublin Bikes Station No. 92 and surface water drainage works including new sections of pipework.

Figure 2 Layout of permitted development (Ground level)

Figure 3 Layout of proposed development (Ground level)

Figure 4 Basement layout of proposed development

2. THE EXISTING RECEIVING ENVIRONMENT

2.1. Archaeological Heritage

2.1.1. Archaeological and Historical Background

2.1.1.1. 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 separately.

2.1.1.2. Prehistory (c. 8000BC-c. AD500)

The earliest archaeological site in the wider landscape is a megalithic structure (RMP DU018-007009) 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 (Borlase 1897; Poe 1904; cited in RMP file).

There is also a Linkardstown-type burial (RMP DU018-007011) 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 (Wood-Martin 1895, 281, Fig.74; Waddell 1970, 115; Waddell 1990, 81, cited in RMP file). 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 (RMP DU018-112) 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 (Licence No. 02E0067; Walsh 2002).

2.1.1.3. Early Medieval Period (c. AD500-c. AD1100)

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 (Kenny 1995). 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). 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 (Ibid.). 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 (NMI Ref: 1917:2), 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.

2.1.1.4. 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 (1998) 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. Briggs (1985) and Graham-Campbell (1976) have also identified the monastic site as the possible focus of early Norse settlement. 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 (O'Brien 1998; Figure 5). 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) (Simpson 2004). 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 River Liffey. These burial sites and stray finds illustrate the extent of Viking activity along both the south and north banks of the River Liffey, which also points to an interaction between both banks during the Viking settlement of the area.

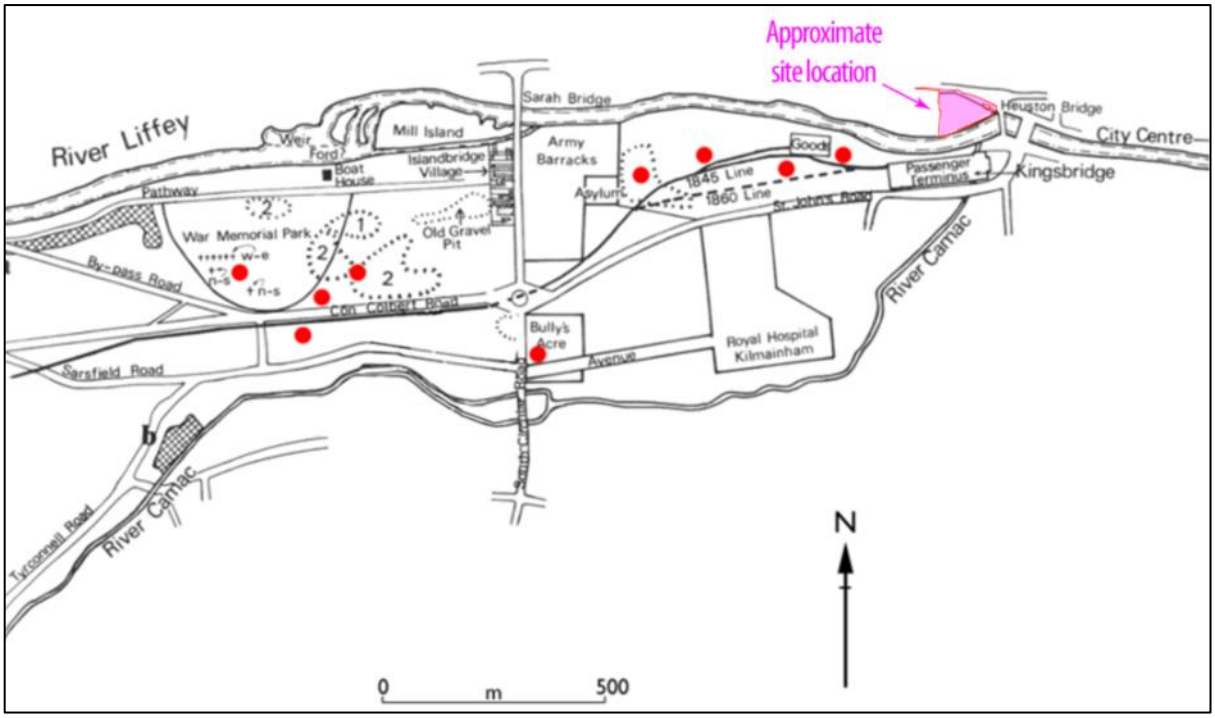


Figure 5 Map showing the locations (in red) of Viking material recovered in the 19th century (after O'Brien 1998)

2.1.1.5. Islandbridge

Activity spanning both sides of the River 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 (RMP No. DU018-020286) 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 (Kenny 1995).

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.

2.1.1.6. 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 became 'feenisk', which was anglicised to 'phoenix'). It was initially applied by Sir Edward Fisher to his residence on Thomas Hill (Joyce 1995). 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 (Ball 1906).

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.

2.1.1.7. 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 (Conlin & De Courcy 1988), 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 (Wide Streets Commissioners, 15). 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 River Liffey.

2.1.1.8. 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 9). 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 (Figure 10). 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 (Corcoran 2005).

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" (Freeman's Journal 30 January 1843; cited in Grace's Guide 2014).

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"* (Grace's Guide 2014).

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 (Dictionary of Irish Architects 2024).

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 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 2.1.2.2), 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 (Corcoran 2005).

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 (De Courcy 1996). 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 14 below). The printing works remained in operation until the mid-1970s when Hickey's Fabrics took up residence.

2.1.2. Cartographic Sources

2.1.2.1. Earliest Available Sources

The 1656 Down Survey Parish Map of Kilmainham is the earliest cartographic source for the study area (Figure 6). It is possible to identify the approximate location of the proposed development site on this early map source using the course of the River Liffey and the River Camac as topographical pointers. Other features depicted on the map include a bridge crossing upstream on the River 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).

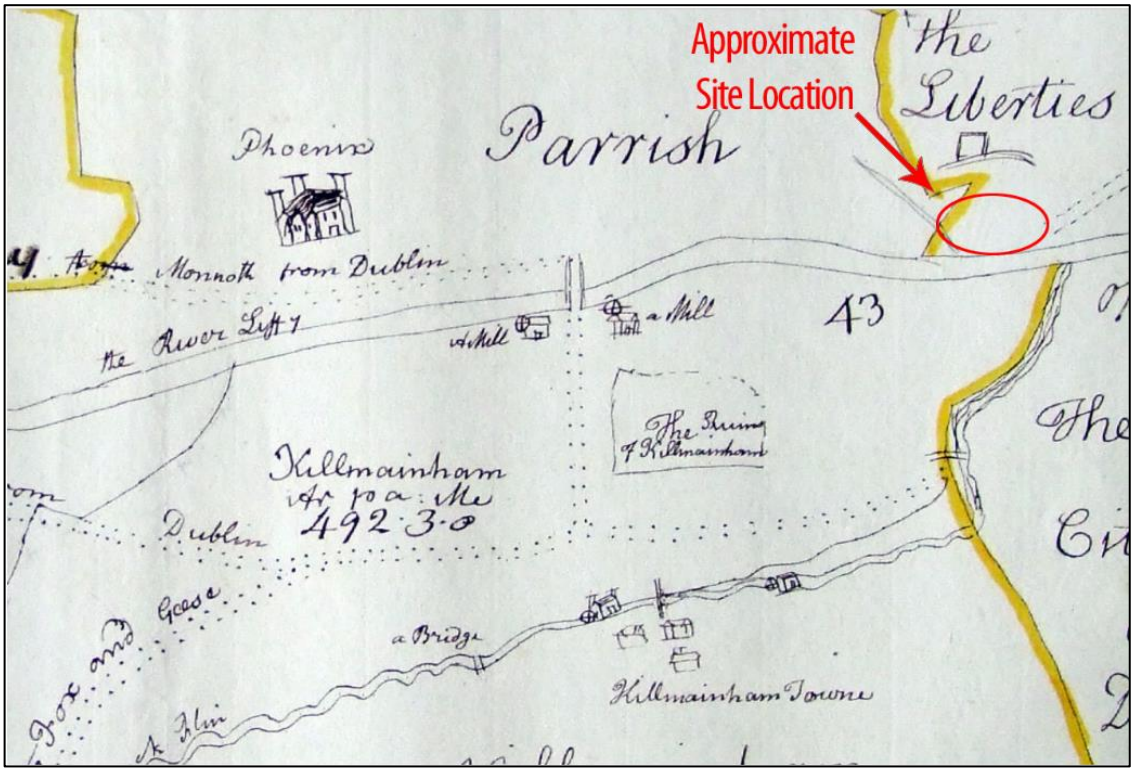


Figure 6 Down Survey map of the parish of Kilmainham, c. 1656

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) and John Rocque's 1756 map (Figure 7). 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.

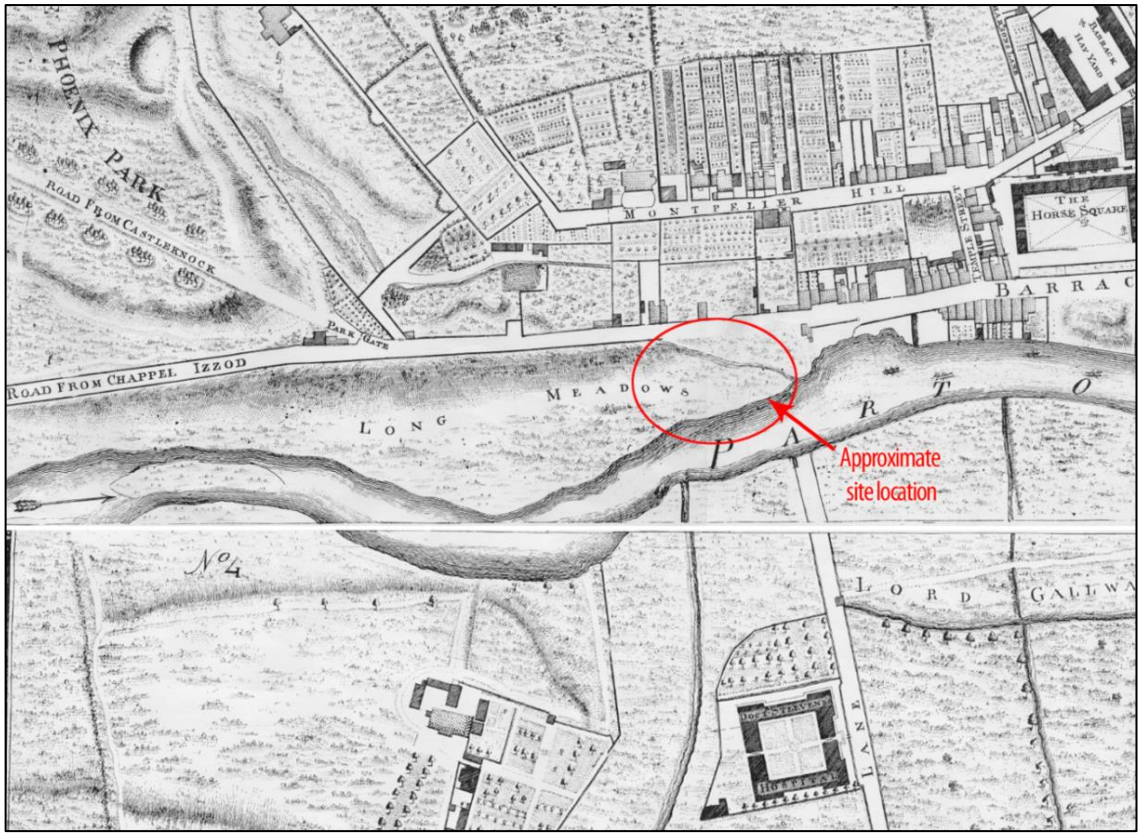


Figure 7 Rocque's map of Dublin City, 1756, showing site location

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 8), 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.

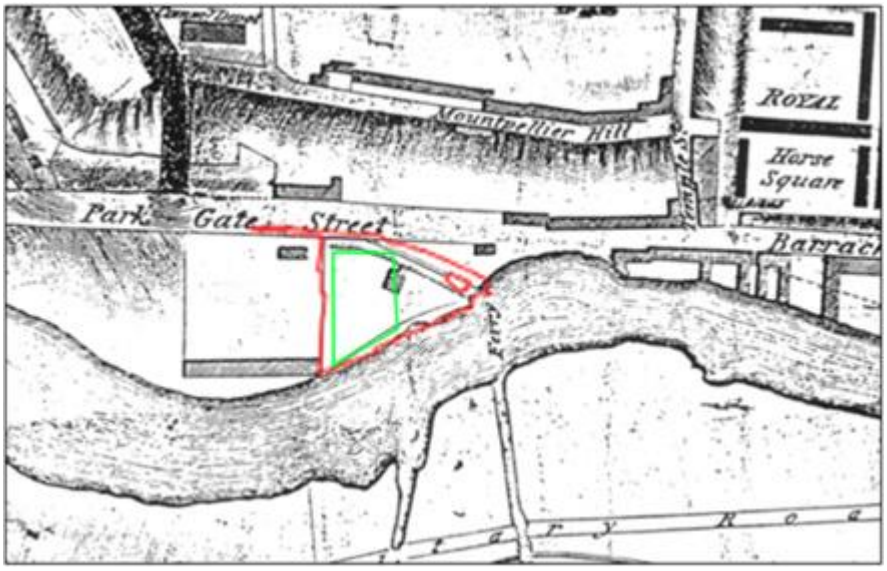


Figure 8 Thomas Campbell's map of the City of Dublin, 1811, with approximate locations of overall site in red and proposed development site in green

2.1.2.2. Ordnance Survey Maps

By the time of the first edition OS six-inch map of 1843 (Figure 9), iron 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 centre 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. 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 (Figure 10, Figure 11). 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.

The Kingsbridge Woollen Factory had replaced the irons works on the 1889 OS map (Figure 12) 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 2.1.1, 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 13), 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 14) 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 and the Lucan Dairy Depot in the western half.

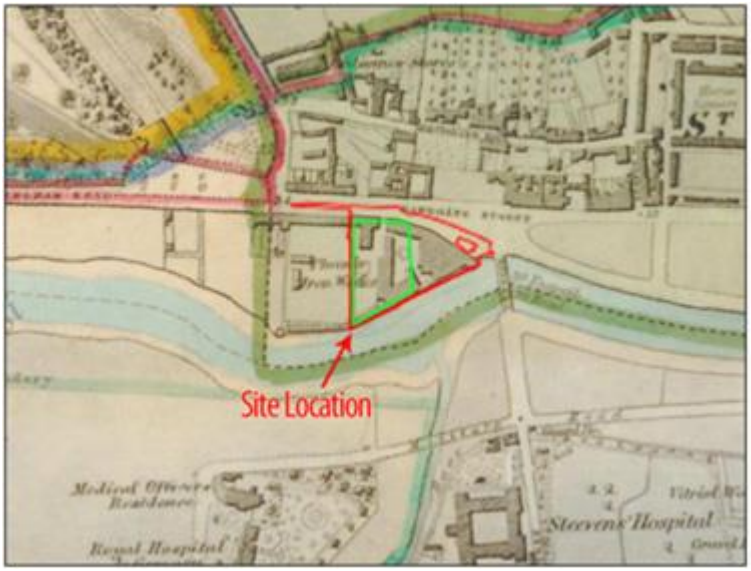


Figure 9 First edition 6-inch OS map, 1843 with approximate location of proposed development site in green

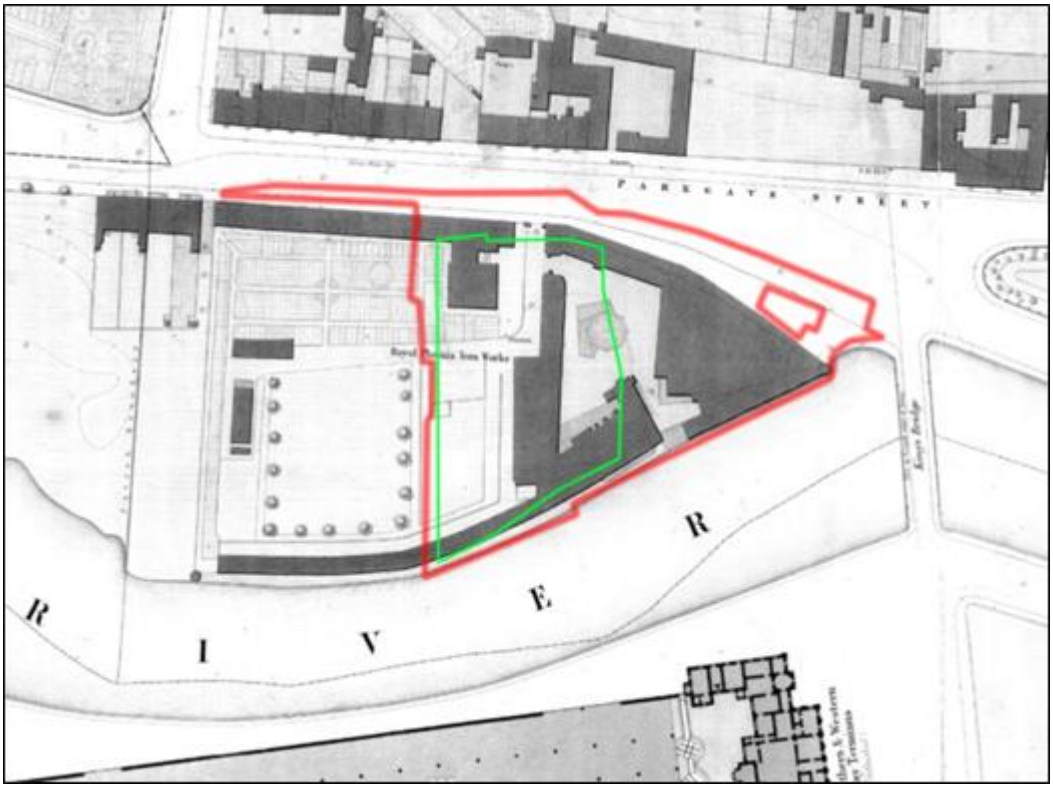


Figure 10 First edition five foot OS map, 1847, with approximate location of proposed development site in green

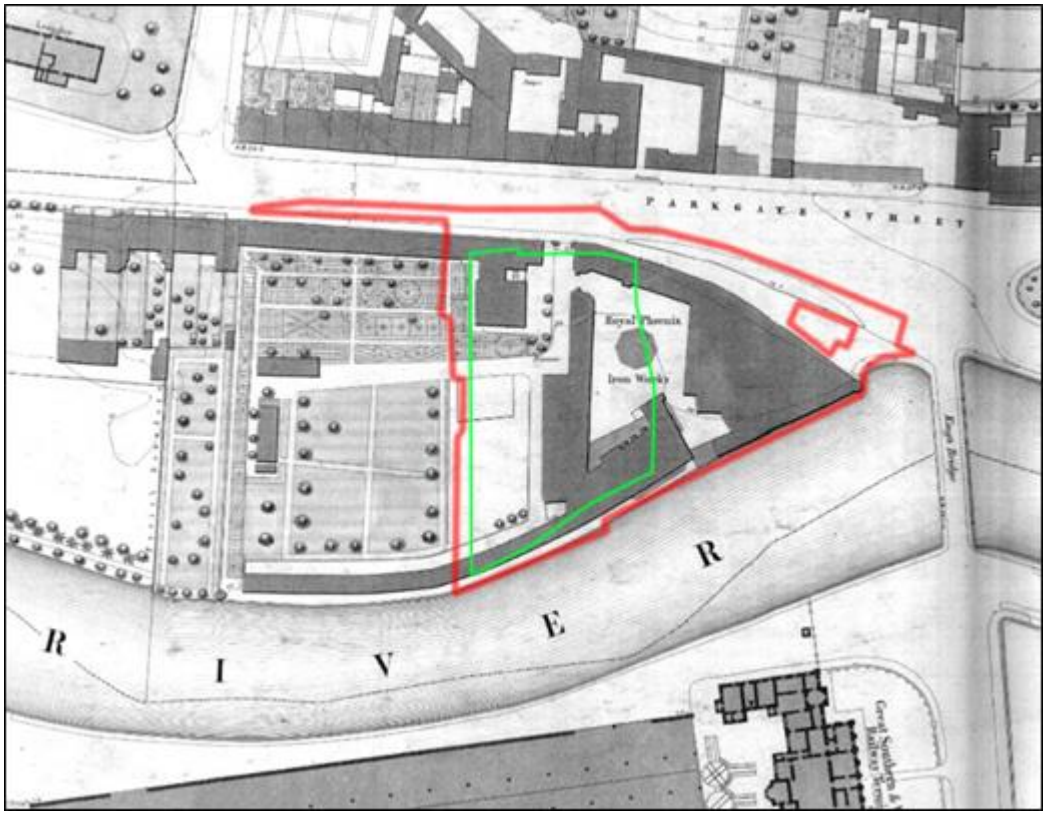


Figure 11 Revised edition five foot OS map, 1864, with approximate location of proposed development site in green

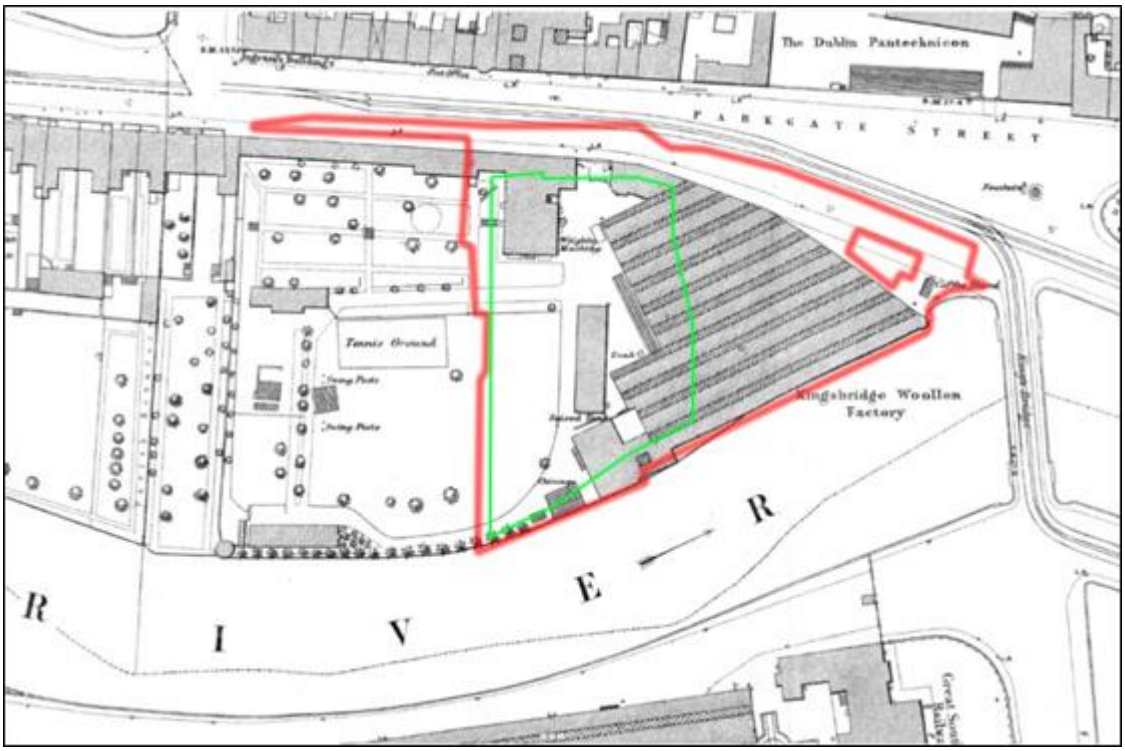


Figure 12 Revised edition five foot OS map, 1889, with approximate location of proposed development site in green

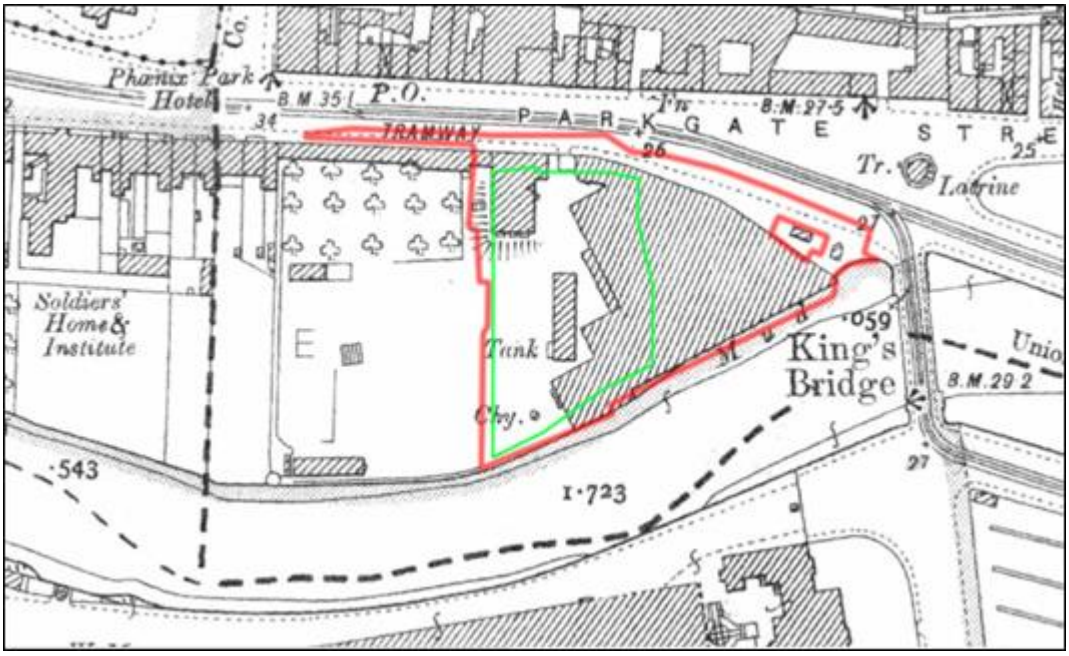


Figure 13 Revised edition 25-inch OS map, 1907, with approximate location of proposed development site in green

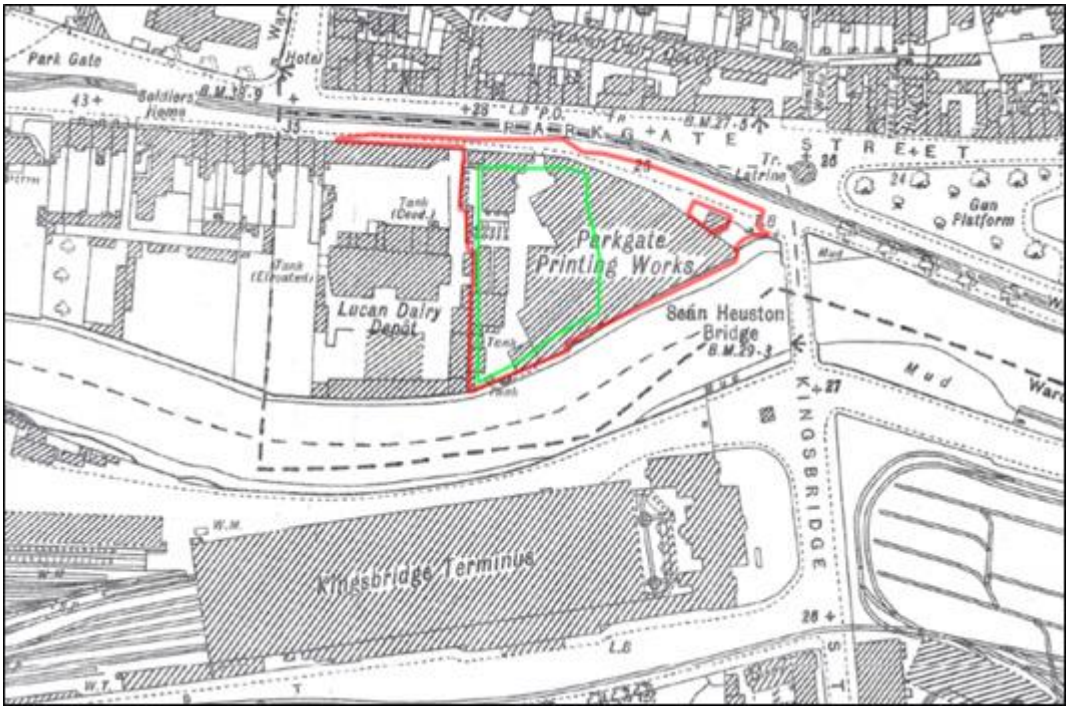


Figure 14 Revised edition 6-inch OS map, 1943, with approximate location of proposed development site in green

2.1.3. RMP / SMR Sites

The development site is situated within the statutory zone of notification for the 'Historic City of Dublin', RMP No. DU018-020 (Figure 15). 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 15).

The Phoenix Park archaeological complex (DU018-007, Figure 15) 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.

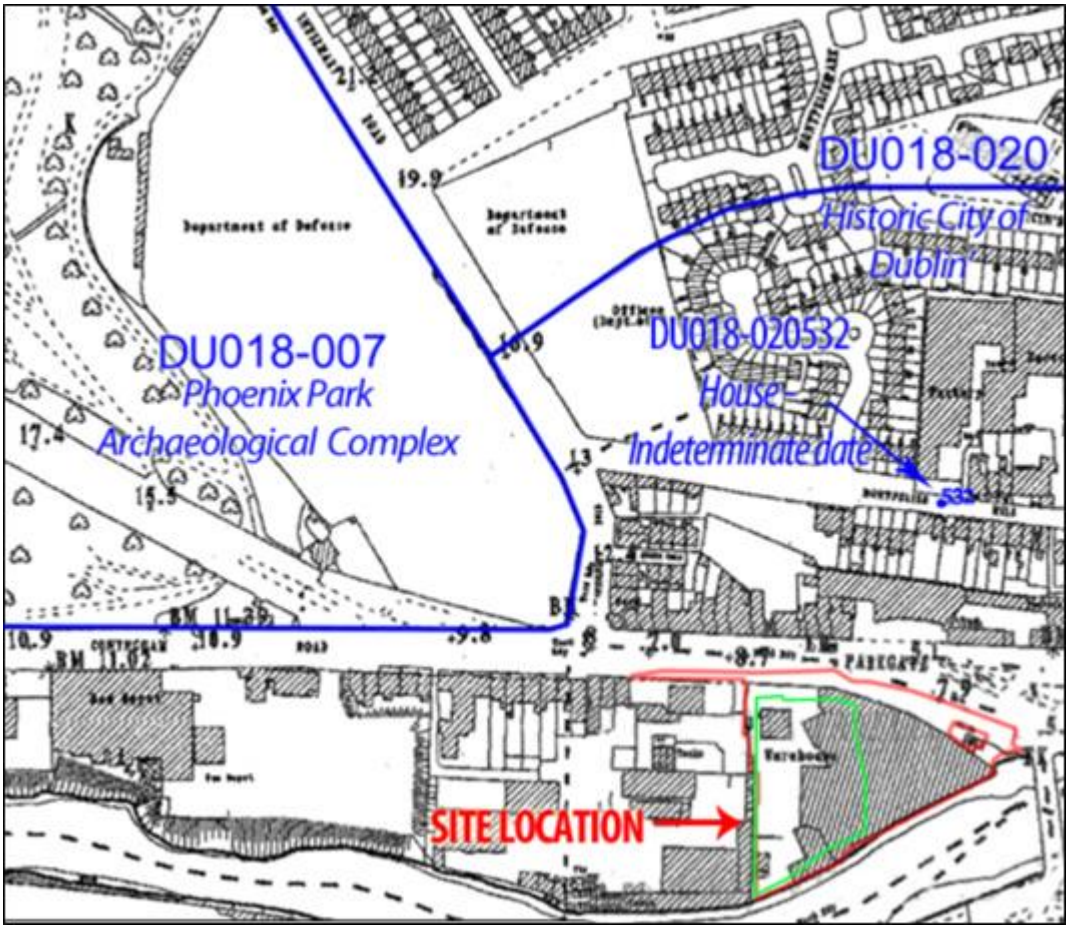


Figure 15 Published RMP map showing the proposed development site location in green and overall site boundary in red

2.1.4. Previous Archaeological Investigations in the Vicinity of the Site

Archaeological monitoring and testing within the development site took place between 2019 and 2022 and are discussed in Section 3.

Some investigations have been carried out in the environs of the site in the 1990s and 2000s (outlined below and shown on Figure 16), but none revealed any substantial findings that might illuminate the potential of the site.

Archaeological testing (Licence No. 98E0188; Halpin 1998) 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 2009).

Archaeological investigation to the north of the proposed development at 15/16 Parkgate Street revealed no archaeological features (Licence No. 97E0217; Corlett 1997). 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 (Licence No. 96E0250Ext; Reid 1997); 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 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 3m^2 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 18th century date or later.

Archaeological monitoring of a redevelopment at 14-16 Parkgate Street revealed no archaeological material (Licence no.: 15E0546; Bailey 2016).

Figure 16 Archaeological investigations in the vicinity (extracted from HeritageMaps.ie)

3. ARCHAEOLOGICAL INVESTIGATIONS WITHIN THE SITE

3.1. Introduction

To date the following archaeological reporting has taken place in relation to 42A Parkgate Street:

- Archaeological Desk Study (Deery 2018)
- Archaeological Monitoring of GI Works (Licence No. 19E0179) (Clancy & Courtney 2019)
- Consultation with the City Archaeologist (21st May 2019)
- Preparation of an archaeological chapter for EIAR (January 2020)
- Archaeological Assessment Report (Test Excavation) (Licence No. 19E0781) (O'Donovan and Courtney 2020)
- Archaeological Monitoring of Additional GI Works (Licence No. 21E0033) (Deery 2022)
- Archaeological Method Statement (Courtney & Deery 2022)

3.2. Site Visit

The site was first inspected on 23rd May 2019, at which time the majority of it was occupied by the offices and warehouse operated by Hickey & Co. Ltd. A supplementary walkover inspection was carried out on 22nd October 2024 for the purpose of the current application. The site is now vacant.

The former arched entrance gateway to the Royal Phoenix Iron Works site survives, located on the east side of the present modern 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 (Plate 1). This late 19th century boundary wall contains decorative elements, but the grey paint covering the brickwork does little to enhance its character (Plate 2). 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 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. The upper floor has been demolished, leaving only the ground floor of the house standing (Plate 3, Plate 4).

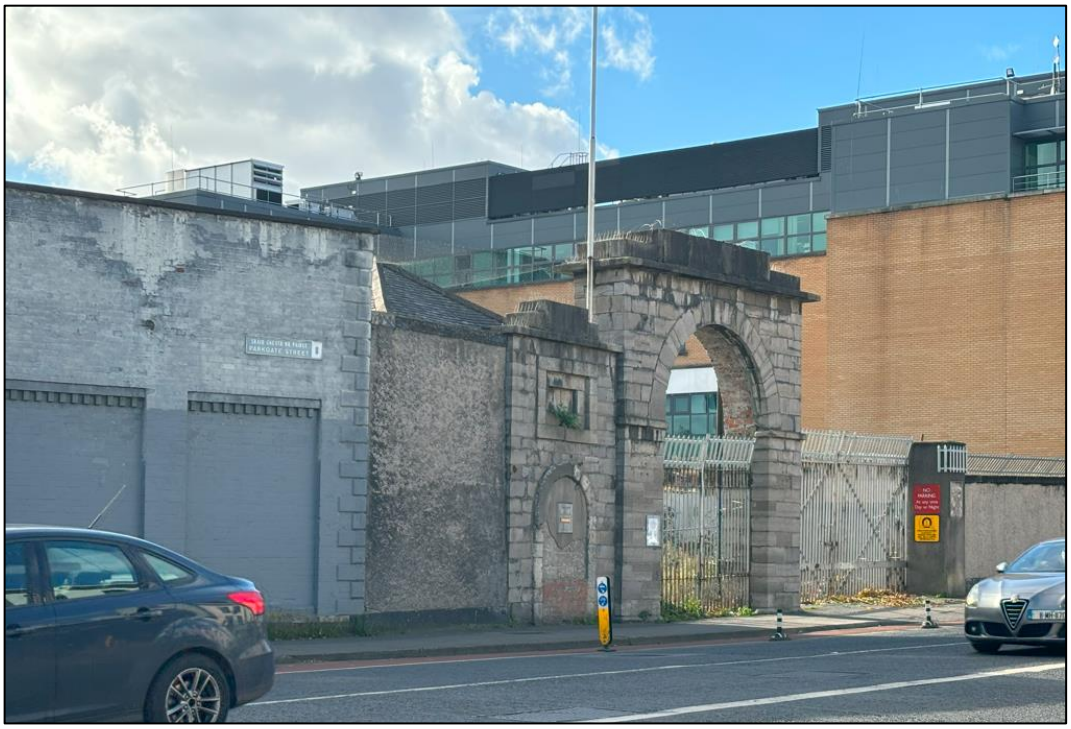


Plate 1 Original entrance gate to east of modern gates on Parkgate Street, facing SW

Plate 2 Exterior boundary wall along Parkgate Street, facing SE

Plate 3 Part-demolished 19th century house, facing SW, with new development overlooking to rear

Plate 4 Part-demolished 19th century house, facing NE

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 part-demolished early 19th-century house, for example, 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 (Plate 5), 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 (Plate 6) and a square turret, which date to the late 19th century, stand at the southwest corner of the warehouse. 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 (Plate 8). At present there is no relationship with the river from the interior of the site (Plate 7).

Plate 5 Late 19th century warehouse and ancillary buildings in eastern half of the site, facing SE

Plate 6 19th century industrial building and ancillary modern structures at south end of the site, facing ESE

Plate 7 View SSW across the site to rear boundary wall, with Heuston Station visible beyond it

Plate 8 View of riverside wall, turret and buildings from the south side of the River Liffey

3.3. Archaeological Monitoring of Groundworks

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 2 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 17). 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 17). 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.

Six of the WS holes (WS 101-WS103, WS105-WS106, WS113) and two boreholes (BH101, BH103) lie within the footprint of the proposed development (summary results in Table 1) (Figure 17), with the remainder located throughout the overall development site (results summarised in narrative below and shown on Figure 17. The results within the proposed development site also revealed deep deposits of industrial material (to a depth of 3.3m in WS103), reclamation deposits to a depth of up to 5.7m depth, below which were riverine gravels, but no organic materials.

Table 1 Summary of monitoring results

Investigation	Concrete & rubble (m)	Industrial (m)	Reclamation (m)	Gravel (m)	Note
WS101	0.00 – 0.55	0.55 – 1.60	1.60 – 4.00	-	0.10m BGL stones
WS102	0.00 -0.40	0.40 – 1.20	-	-	Asbestos 1.20m BGL
WS103	0.60	0.60 – 3.30	3.30 – 3.60	3.60 – 4.00	-
WS105	0.00 -0.50	-	-	-	Asbestos 1.50m BGL

Investigation	Concrete & rubble (m)	Industrial (m)	Reclamation (m)	Gravel (m)	Note
WS106	0.00 – 0.65	0.65 – 2.50	2.50 - 3.00	3.00 – 3.70	-
WS113	0.00 – 1.40	1.40 – 2.50	2.50 – 3.00	-	-
BH101	0.00 – 0.60	0.60 – 1.50	1.50 -3.40	3.40 – 7.10	-
BH103	0.00 – 1.00	1.00 – 2.40	2.40 – 5.70	5.70 – 6.70	-

Archaeological monitoring of the ground investigation works showed three main phases of deposition, across the overall site, buried beneath a metre 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 10). 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 3.4).

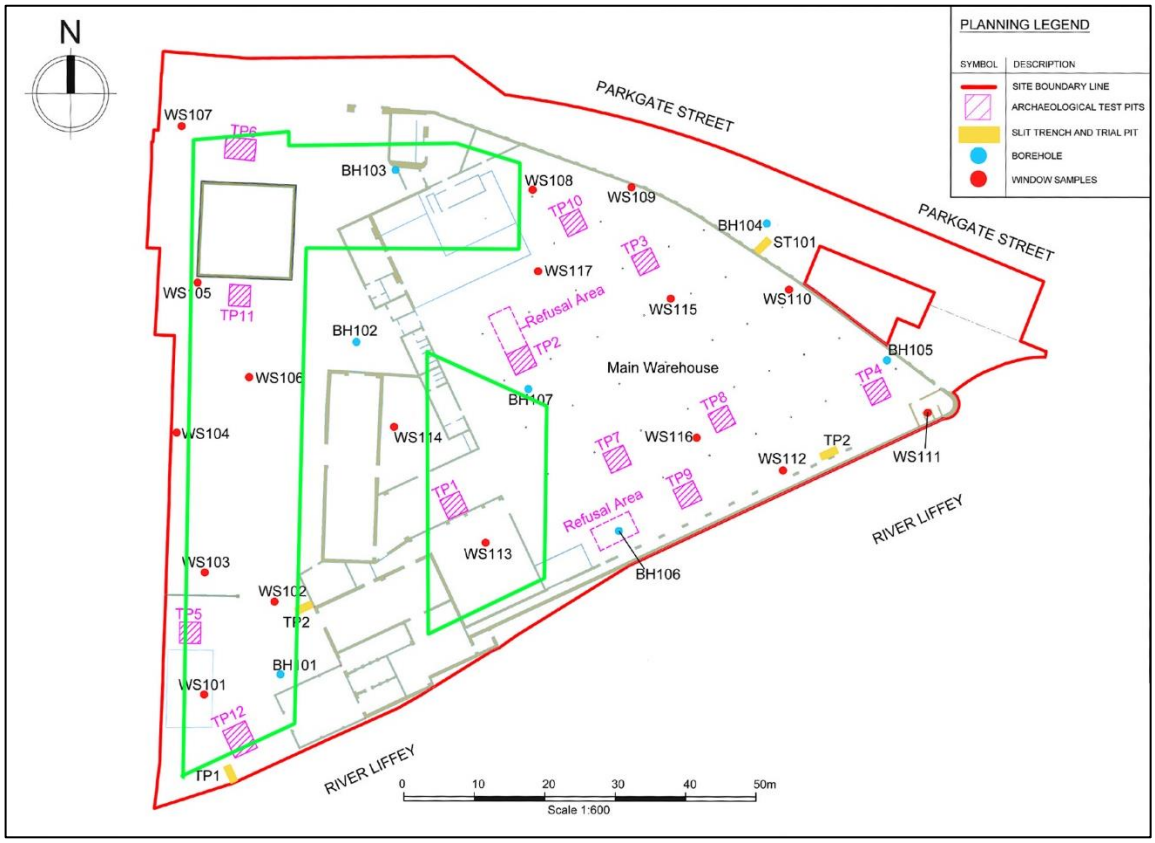


Figure 17 Locations of site investigation work (19E0179) and archaeological test pits (19E0781 in pink) (approximate footprint of Blocks B and C in green)

3.4. Archaeological Testing

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 & Courtney 2020) as submitted to the National Monuments Service (DHLGH) is contained in Appendix 3 and a summary of the results is presented below.

The archaeological test pits were roughly spaced throughout the development site footprint (Figure 17), 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 17). 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 2.

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 below ground in the yard (Table 2, TP5, TP6, TP12). These comprise stone walls, a heat impacted working surface, layers of industrial waste and deposits of iron slag and clinker, or industrial waste from the iron foundry, that survive throughout the site. These deposits are between 0.5m-3m deep and also survive below Victorian (1880) factory floor and the rest of the existing factory floor.

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 area (Figure 7). This stream is 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.

Table 2 Summary of testing results

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

Test Pit	Dimensions	Findings
		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 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

Test Pit	Dimensions	Findings
		found in pit 5, however the appearance and strong odour of the lowest deposits may indicate contamination.

3.5. Further Archaeological Monitoring of Ground Investigations

A further phase of archaeological monitoring of ground investigations was undertaken from 21st March to 2nd April 2022 by Siobhán Deery (Licence no.: 21E0033Ext). The full report (Deery 2022), as submitted to the National Monuments Service (DHLGH), is contained in Appendix 4 and a summary of the results is presented below.

Twenty-six slit trenches, measuring 0.7m by 3m to a scheduled depth up to 3m BGL, were opened (less than 2m depth was achieved in four trenches, TP13, TP11, TP3 and TP14) (Figure 18). Of these, eight were fully or partially within the footprint of Blocks B and C (TP2-TP4, TP6, TP11, TP13-TP15). Six test trenches were opened in the concrete yard (TP1-TP5, TP24), and eighteen were within the factory inside the main building (TP6-TP23). The aim of the archaeological monitoring was to record the stratigraphy within each test pit to establish the archaeological potential of the lands and to highlight if there are any further archaeological considerations for the development of the site.

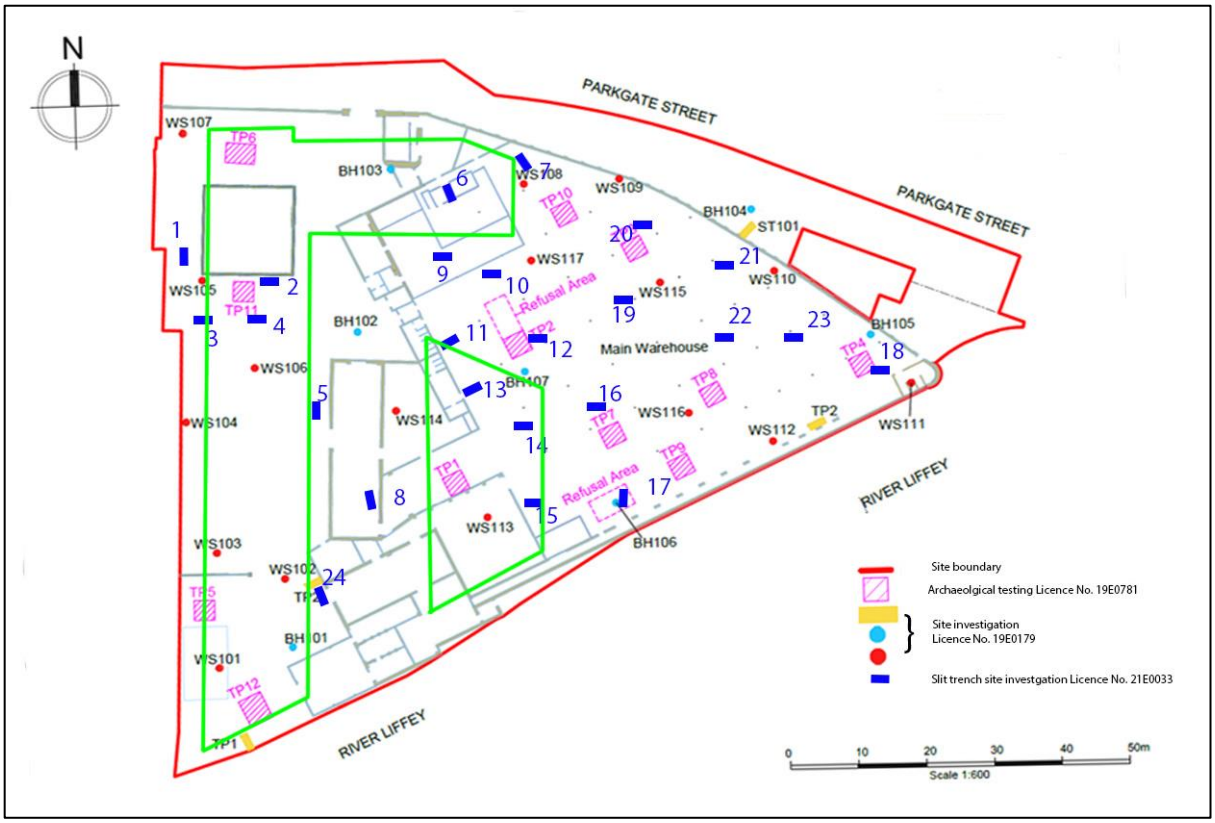


Figure 18 Additional SI work locations and archaeological test pits (21E0033ext in blue) (approximate footprint of Blocks B and C in green)

The pits were excavated by a mini-digger fitted with a grading bucket that alternated between toothed and toothless, as appropriate. It was not possible to get into the trenches, so the assessment was visual, and measurements were estimates only.

In general, site investigation works confirmed the findings of previous monitoring and assessment works carried out on the site (O'Donovan and Courtney 2020). The stratigraphy comprises made-

ground and demolition rubble (representing the 18th, 19th and 20th century) up to approximately 2.20m BGL, overlying possible reclamation deposits and then natural riverine silts.

Beneath the modern ground surfaces of concrete and tarmac is a layer of building rubble with a high concentration of red brick. The rubble fills overlay deposits of industrial waste material, which appeared to be spread across the site in bands; these were characterised by black charcoal-rich clays and grey mortar with varying degrees of sands and gravels. Inclusions of slag, ash and mortar were noted. These deposits ranged between 0.45m – 1.90m BGL and may be associated with the demolition of the 19th-century ironworks.

Results also indicate foundations, possible wall and floor levels associated with the ironworks and later phases on site. Inside the factory, possible structural remains were encountered in TP17 (red brick at 1.85-2.6m BPL), TP19 (red brick, at 1.70m-2m), TP15 (masonry at 0.80-2.6m; Plate 10). Outside the factory, an unbonded red-brick floor was identified in TP24 and TP5 (immediately adjacent to the Block C footprint; Plate 9); it lay immediately beneath the concrete surface.

Possible reclamation material was identified from c.2m BGL, comprising a compact, mid to dark grey black silt; whist it was reminiscent of black boulder clay, the deposit contained frequent slate and oyster shell, as well as occasional slag and black and creamware pottery. Largely beneath the industrial deposits, where the depths could be achieved (c 2.6m-3m+ BGL), riverine deposits comprising dark grey-blue and mid-brown sticky clayey slit were encountered in some of the trenches. No inclusions were noted in these deposits, and they were interpreted as natural.

A summary of the findings from the test pits within or partially within the footprint of Blocks B and C are presented in Table 3 below.

Table 3 Summary of findings of test pits within Blocks B and C

Test Pit 2		
Depth	**Description**	**Interpretation**
0–0.1m	Concrete slab forming present surface	20th century Surface
0.1–0.10m	Soft, mid grey-brown, clayey silty with inclusions of red brick, mortar and stones	20th century layer
0.10–2.9m	Soft, mid to dark grey-brown, clayey silt with dark mottling of stained gravel. Contains inclusions of red brick, mortar and stones	20th century backfill
2.9+m	Dark grey, silty clay with rare inclusions of red brick fragments, mortar fragments, and shell	18th to 19th century redeposited material
Test Pit 3		
Depth	**Description**	**Interpretation**
0–0.1m	Concrete slab forming present surface	20th century Surface
0.1–0.20m	Garden Soil	20th century layer
0.20–40m	Mid- brown sandy clay with red brick and burnt red brick, iron waste, slag and clinker	19th century industrial waste
0.40-0.45	Black iron waste with slag and clinker.	19th century industrial waste
4.5+m	Concrete surface	19th century structural – foundation or ground slab.
Test Pit 4		
Depth	**Description**	**Interpretation**
0–0.5m	Concrete slab forming present surface	20th century Surface
0.5–0.30m	Crushed stone and loose gravel with red and yellow brick	20th century layer
0.30–1.2m	Compact stone and mid brown clay and sandy mortar spread with large limestone blocks slate and rubble, burnt yellow brick and clumps of clinker	19th century demolition layer and industrial waste
1.2+m	Concrete slab	19th century structural – foundation or ground slab.

Test Pit 6		
Depth	**Description**	**Interpretation**
0–0.10m	Concrete slab forming present surface	20th century floor
0.10–0.50m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	19th to 20th century demolition layer
0.5–1.20m	Slightly compact, dark brownish grey boulder clay, containing decayed limestone pebbles, and occasional inclusions of red brick, mortar	18th to 19th century dump / redeposit
1.20–3m+	Grey black silty clay, wet, boulder clay, a gravely clay with black mottling due to presence of decayed round limestone pebbles	Possibly natural subsoil
Test Pit 11		
Depth	**Description**	**Interpretation**
0–0.08m	Concrete slab forming present surface	20th century floor
0.08–0.25m	Crushed red brick	20th century sub-floor
0.25–0.40m	Layer of crushed mortar cement /concrete	19th to 20th century sub floor
0.40–1m	Black silty fine grained, ash material containing sand, clinker metal	Industrial waste
1.–2+m	Moderately compact, mid grey, silty clay with mortar flecking, occasional stones, infrequent oyster shell. The deposit contained a piece of likely 18th century painted pottery	Pre-19th century Layer of redeposit/dumped material
Test Pit 13		
Depth	**Description**	**Interpretation**
0–0.15m	Concrete slab forming present surface.	20th century floor
0.15-1.5m	Loose layers with rubble stone, layers of loose red brick and gravel with slate, stone red brick and yellow brick.	20th century sub-floor/demolition layer
1.5+	Concrete base	20th century
Test Pit 14		
Depth	**Description**	**Interpretation**
0-0.2m	Concrete surface	20th century.
0.2-0.35m	Loose demolition layer with red bricks, lumps of mortar and limestone fragments.	20th century.
0.35-1.1m	Loose greyish sandy silty clay. It includes yellow and red brick and small limestone fragments sized (0.08-0.010m).	19th century industrial waste dumped deposit.
1.1-1.7m	Loose black organic silt layer with lumps of coal (0.04-0.07m) as inclusions.	19th century industrial waste dumped deposit.
Test Pit 15		
Depth	**Description**	**Interpretation**
0-0.2m	Concrete surface	20th century
0.2-0.80m	Loose mid grey silt with red brick fragments and flecks of mortar	20th century industrial waste
0.80-2.6m	Dry limestone wall located to E side of the trench at 0.80m deep. Stone sized from L 0.35m W 0.12m D 0.20m the smallest to L 1.20m W 0.42m D 0.12m the biggest. To the west side of the trench a dark grey organic silty clay deposit with fragments of animal bone At 1.7m deep, it was reached of what it seemed a solid surface/rock (or wall), not visible from the top. It was not possible to gain further insight.	19th century structure

Plate 9 Unbonded red brick floor, test pit 5

Plate 10 Test pit 15, possible masonry remains

Plate 11 Typical cross-section of upper levels, photo of TP5

3.6. Summary of Archaeological Findings

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

Depth (m)	General description
0.0- 0.30m	Concrete modern surfaces.
0.30-0.80m	Redbrick rubble and gravel.
0.80-1.5m	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 face of construction. Cartographic sources, from the 19th century onwards, indicate a sequence of industrial installations on the site, commencing with the Royal Phoenix Iron Works. At 1.50m below present ground level, a possible ground surface associated with the industrial structures is evident. Possible walls and sub-surface structures were visible within WS116, in TP17 (red brick at 1.85-2.6m BPL), TP19 (red brick, at 1.70m-2m), TP15 (masonry at 0.80-2.6m).
1.5-3.8m	Reclamation/ agricultural soils pre-1800s (prior to the Iron Works) were encountered, brown clays were imported onto the site. Ceramics (post medieval) and fragments of animal bone.
3.8-5m+	The original river and meadow level as represented in the early cartographic sources appears to be represented at 4-5m below the current ground levels. The presence of fragments of wood (possible root/branch material) at 5.25 (BH102) and a layer of peat at 5.80 (BH104) would suggest that this level was either the original riverbank or the pre-reclamation river meadow ground surface. At 3.8m + gravels were encountered indicating a sealed riverine dynamic environment.

4. SUMMARY OF ARCHAEOLOGICAL AND CULTURAL HERITAGE POTENTIAL

4.1. Archaeological Heritage Potential

The subject site lies within the designated zone of notification 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 River 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 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. Substantial walls and deposits of iron slag and clinker or industrial waste from the iron foundry survive throughout the site under the present Victorian (1880) factory floor. The findings of the archaeological testing indicate the following:

- 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 application area. These deposits are between 0.5m-3m deep and survive below the existing factory floor and externally below ground in the yard. Much of the fabric of the Kingsbridge Woolen 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 what is now the application area. This stream is known as the Viceregal Stream and no evidence of this watercourse or culvert was revealed during test excavation, though associated features or deposits may still be present at deeper levels within the site.

The results of monitoring the ground investigation works appear to indicate foundations, possible wall and floor levels associated with the iron working and later activity on site (early 1800s onwards). It also indicates that a number of phases of infill have occurred across this site. It appears that industrial activity relating to the 19th century iron works occurs at a depth between 1.50-2.90m beneath the present ground level.

It is possible that earth-moving works will reveal intact or truncated structural remains of the 18th and early 19th century redevelopment of the site as an Iron Works alongside dumped industrial material. It is likely that this will be found during the excavation of the basements. 18th century redeposited reclamation material is also likely to be encountered.

The only opportunity to examine the pre-industrial or natural levels of the site is during the excavation of the basement structure in the site.

4.2. 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 2.1.2, 3.4). Although the appraisal in the entry states that the early structures of the site are largely intact, this is contradicted by the architectural heritage survey undertaken for the development site (Hastings 2020). 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.

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

Table 4 DCIHR entry for the Iron Works at Parkgate Street (Source: Dublin City Council 2003 to 2009)

Reference	Site Function	Findings	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			

Reference	Site Function	Findings	Name
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.			

5. POTENTIAL IMPACTS OF PROPOSED DEVELOPMENT

All archaeological and cultural heritage issues will be resolved during the pre-construction and construction phases, and all impacts to archaeology and cultural heritage therefore relate to the construction phase.

5.1. Archaeological Heritage

There will be no direct impact on any recorded archaeological sites. The subject site lies within the designated zone of notification 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).

The foundation remains of the original quay wall survive subsurface within the proposed 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 that will take place across the entire site. This would result in a moderate negative permanent cumulative effect on the archaeological remains of 19th century industry on the site.

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 basement excavation and piling required for the proposed development of Blocks B and C would, however, result in a moderate negative permanent effect on any such deposits that may be present.

5.2. 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 site outside the application area), 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 proposed development. This includes heritage buildings and features located within / adjacent to the proposed development site. This will have a slight negative effect on the cultural heritage of the site.

It is intended that the majority of the architecturally or industrially significant buildings will be retained, restored and integrated into the new development (a best practice approach; see Architectural Heritage Impact Assessment which accompanies the planning application). It is also possible that some of the large cast iron structural elements from the existing late 19th century factory / warehouse can be retained for use in the new development (a report produced on the description and schedule of salvaged cast iron elements on the site proposes that between 30-50% of the cast iron elements could be reused within the development; Hastings 2022).

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 in a separate Architectural Heritage report and Landscape and Visual Impact Assessment.

6. MITIGATION MEASURES

6.1. Planning Conditions

The previously consented (ABP re.: ABP 306569-20) development of Blocks B and C were subject to a number of conditions of which Condition 24 relates to archaeology:

Condition 24:

The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. In this regard, the developer shall –

(a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development,

(b) employ a suitably qualified archaeologist who shall carry out site testing and monitor all site investigations and other excavation works, and

(c) provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.

(d) Agree in writing the archaeological method statements for mitigation with the Department of Culture, Heritage and the Gaeltacht, prior to commencement of any works on site

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the site and to secure the preservation and protection (in situ or by record) of any remains that may exist within the site

All mitigation measures outlined below will comply with the conditions which were previously set out for the site. Archaeological and cultural heritage mitigation measures are set out below and architectural mitigation is included in a separate Architectural Heritage Impact Assessment.

6.2. Archaeological Heritage

A detailed archaeological method statement (Courtney & Deery 2022) for the previously consented development site (Planning Permission Ref. ABP-306569-20) was drawn up for consultation with the City Archaeologist and the National Monuments Service (DHLGH). This agreed-upon strategy forms the basis of the mitigation measures outlined below and will be applied to the revised development, if permitted. 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 & Courtney 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 of any works requiring ground disturbance / excavation, including site preparation works for the piling regime for Block B and C and any ground disturbance works associated with the propping / stabilisation of the historic turret and river wall. 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 demolition of the buildings and quay wall will be carried out under archaeological supervision (as required). Recording of any newly exposed walls or structures will take place.
- Where excavation of the pile caps are likely to reveal in-situ walls or features, archaeological hand excavation and recording will be required in these locations in order to expose and record the nature and extent of the industrial heritage features.

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.

6.3. 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 monitoring and resolution on the site.

7. REFERENCES

Bailey, F. (2016) '14, 15 and 16 Parkgate Street, Dublin 8, Dublin'. Available at https://excavations.ie/report/2016/Dublin/0024613/ [Accessed 17/10/24]

Ball, F. E. (1906) *A History of the County Dublin, Part IV*, the H.S.P. Library, Dublin.

Bennet, D. (1991) *Encyclopaedia of Dublin,* Gill and Macmillan, Dublin.

Borlase, W.C. (1897) *The Dolmens of Ireland*, 3 vols. London. Chapman and Hall.

Briggs, C.S. (1985) 'A neglected Viking burial with beads from Kilmainham, Dublin, discovered in 1847', *Medieval Archaeology* 29, 94-108.

Clancy, P. (2003) 'Proposed redevelopment of Conyngham Road' Planning Reference 5424/03. Unpublished report. Margaret Gowen & Co Ltd.

Clancy, P. & Courtney, L. (2019) 'Archaeological Assessment. Monitoring of Ground Investigation Works. Licence No. 19E0179. Hickey's Factory, Parkgate Street, Dublin 8'. Unpublished report: Courtney Deery Heritage Consultancy Ltd.

Conlin, S and De Courcy, J. (1988) *Anna Liffey: The River of Dublin*, Dublin.

Corcoran, T. (2005) *The Goodness of Guinness: A Loving History of the Brewery, Its People, and the City of Dublin*. Skyhorse.

Corlett, C. (1997) 'Dublin: Parkgate Street, Dublin'. Available at https://excavations.ie/report/1997/Dublin/0002706/ [Accessed 17/10/24]

Courtney, L. (2005) 'Archaeological Appraisal of proposed development at Hickeys Factory, Parkgate Street, Dublin 8'. Unpublished report. Margaret Gowen & Co Ltd.

Courtney, L. & Deery, S. (2022) 'Archaeological Method Statement. No. 42A Parkgate Street (former Hickeys Site), Dublin 8'. Unpublished report: Courtney Deery Heritage Consultancy Ltd.

De Courcy, J. W. (1996) *The Liffey in Dublin.* Gill and Macmillan, Dublin.

Deery, S. (2018). 'Hickey's Factory Parkgate Street, Archaeological Desk Study'. Unpublished report. Courtney Deery Heritage Consultancy Ltd.

Deery, S. (2022) 'Monitoring of Ground Investigation Works. Licence No. 21E0033Ext. Hickey's Factory, Parkgate Street, Dublin 8'. Unpublished report: Courtney Deery Heritage Consultancy Ltd.

Dictionary of Irish Architects (2024) 'Robinson, Richard [1]'./10/24] Available at https://www.dia.ie/architects/view/4625/ROBINSON-RICHARD%5B1%5D%2A [Accessed 17/10/24]

EPA (2022) 'Guidelines on the information to be contained in Environmental Impact Assessment Reports'. EPA.

Grace's Guide (2014) 'Royal Phoenix Iron Works'. Available at https://blog.gracesguide.co.uk/Royal_Phoenix_Iron_Works [Accessed 17/10/24]

Graham-Campbell, J. (1976) 'The Viking-Age silver hoards of Ireland'. In B. Almqvist and D. Greene (eds), *Proceedings of the Seventh Viking Congress*, 39-74, Royal Irish Academy, Dublin.

Frazer, W.O. (2009) 'Conyngham Road / South Circular Road, Islandbridge, Dublin'. Available at https://excavations.ie/report/2009/Dublin/0020707/ [Accessed 17/10/24]

Halpin, E. (1998) 'Parkgate Street, Dublin'. Available at https://excavations.ie/report/1998/Dublin/0003355/ [Accessed 17/10/24]

Hastings, W. (2020) 'Former Industrial Buildings, Parkgate Street, Dublin. Architectural Heritage Impact Assessment'. Unpublished report: Arc Consultants.

Hastings, W. (2022) 'Description & Schedule of Salvaged Cast Iron Elements at 42A Parkgate Street, Dublin 8'. Unpublished report: Arc Consultants.

Joyce, W. St. J. (1995) *The Neighbourhood of Dublin*, Hughes and Hughes Ltd, Dublin.

Kenny, C. (1995) *Kilmainham: The History and Settlement Older than Dublin*, Dublin.

Murphy, M. (1995) 'Dublin: 12-24 Montpelier Hill, Dublin'. Available at https://excavations.ie/report/1995/Dublin/0001921/ [Accessed 17/10/24]

Myles, F. (2007) 'Criminal Courts Complex, Infirmary Road, Dublin, Dublin'. Available at https://excavations.ie/report/2007/Dublin/0017454/ [Accessed 17/10/24]

O'Brien, E. (1998) 'The location and context of Viking burials at Kilmainham and Islandbridge, Dublin', in Clarke, H.B., Ní Mhaonaigh, M. & Ó Floinn, R. (eds) *Ireland and Scandinavia in the Early Viking Age*, Dublin, 203-21.

O'Donovan. E. & Courtney, L. (2020) 'Archaeological Assessment Report: No. 42A Parkgate Street (Former Hickey's Fabric Factory), Dublin 8'. Licence no.: 19E0781. Unpublished report: Courtney Deery Heritage Consultancy Ltd.

Ó'Floinn, R. (1998) 'The archaeology of the Early Viking Age in Ireland' in Clarke, H.B, Ní Mhaonaigh, M. & Ó Floinn, R. (eds), *Ireland and Scandinavia in the Early Viking Age,* 132-65. Cornwall.

Poe, J.W. (1904) *Cromlechs of County Dublin*. Dublin. Carraig Books.

Reid, M. (1997) 'Dublin: Aisling Hotel, Parkgate Street, Dublin'. Available at https://excavations.ie/report/1997/Dublin/0002705/ [Accessed 17/10/24]

Simpson, L. (2002) 'Dublin: 50 Montpelier Hill, Dublin' Available at https://excavations.ie/report/2002/Dublin/0007882/ [Accessed 17/10/24]

Simpson, L. (2004) 'Stratigraphic reports for Bully's Acre, Kilmainham, Dublin 8 (Licence no. 598) and Con Colbert Road/memorial park (Inchicore North) Island bridge, Dublin 8' (Licence no E497)

Slattery, D. (2005) 'Report on the Architectural/Historic Significance of Buildings and structures at Hickeys Fabrics Parkgate House, Parkgate Street, Dublin 8'. Unpublished Report.

Waddell, J. (1970) 'Irish Bronze Age cists, a survey'. *Journal of the Royal Society of Antiquaries of Ireland* 100, 91-139.

Waddell, J. (1990) *The Bronze Age burials of Ireland*. Galway University Press.

Walsh, C. (2002) 'Kilmainham: Eircom Site, St John's Road, Dublin'. Available at https://excavations.ie/report/2002/Dublin/0007927/ (Accessed 17/10/24)

Wood-Martin, W. G. (1895) *Pagan Ireland; an archaeological sketch: A handbook of Irish pre-Christian antiquities*. London and New York, Longmans, Green and Co.

7.1. Online Sources

www.archaeology.ie

www.downsurvey.tcd.ie

www.excavations.ie

www.heritagemaps.ie

www.osi.ie

APPENDIX 1 SUMMARY OF RELEVANT LEGISLATION

Historic and Archaeological Heritage and Miscellaneous Provisions Act (2023)

The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 was enacted in October 2023 and this this Act is now law. The Minister for DHLGH commenced certain provisions in May 2024 (S.I. No. 252/2024) which relate to World Heritage Property in the State, inventories, the protection of certain records, the promotion of heritage, and the issuing of statutory guidance. Certain related and supporting provisions concerning implementation and enforcement are also commenced. However, until the Act is fully commenced, the National Monuments Acts and the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act have not yet been repealed and therefore remain in force.

The Act also contains transitional provisions which will, if necessary, enable certain aspects of the existing National Monuments Acts 1930 to 2014 to continue in operation while successor provisions are being brought fully into operation. An example of this would be provisions enabling the Record of Monuments and Places to continue to have effect pending the establishment of a new Register of Monuments.

A person performing a function under this Act shall recognise and take due account of the following principles in performing that function:

a) that historic heritage is a non-renewable resource of great cultural and scientific importance which, in addition to its intrinsic value, provides evidence for the development of society and promotes public understanding and appreciation of all periods of the past;

b) that the first option to be considered should be the protection in situ of historic heritage and that there ought to be a presumption in favour of this option;

c) that any removal or alteration of historic heritage should be accompanied by all necessary and appropriate recording of such heritage;

d) that the Valletta Convention should be adhered to as well as any other international treaty, to which the State is a party, the provisions of which are aimed at promoting or securing the protection of the archaeological, architectural or other historic heritage;

e) that responsibility for the protection of historic heritage is, as a resource of benefit to all, shared by all and, accordingly, that those permitted to remove or interfere with such heritage should, in the normal course, bear the costs of any recording or protective work necessitated by, or associated with, such removal or interference.

For the avoidance of doubt, it is hereby declared that the destruction, whether in whole or in part and by whatever means, of a monument to which general protection or special protection applies shall not prejudice the continuation of such protection to the remainder (if any) of the monument, including the site, surrounding area and immediate surroundings of the monument.

The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 will establish a Register of Monuments which will replace and supersede the existing Record of Monuments and Places and the Register of Historic Monuments. The Register shall include

a) prescribed monuments known to the Minister which are deemed appropriate to be entered in the Register;

b) relevant things of a relevant interest deemed appropriate to be entered in the Register.

A prescribed monument will be a relevant thing of archaeological interest or of other relevant interest. It may be prescribed by reference to any one or more than one of the following criteria:

(a) age, date or period (including by reference to any terminology relating to periods) that, in the opinion of the Minister, is or has been in use in archaeology or other relevant disciplines;

(b) morphology;

(c) condition;

(d) typology (including by reference to typologies which, in the opinion of the Minister, are or have been in use in archaeology or other relevant disciplines);

(e) the environment in which the relevant thing is situated (including whether or not the relevant thing is situated under water);

(f) the circumstances in which the relevant thing is found (including the manner of finding);

(g) whether the relevant thing is or is not marked or shown on any—

i. edition of any ordnance map, or

ii. map prescribed for the purposes of this paragraph.

“Relevant thing” means any of the following things:

a) any artificial structure, construction, deposit, feature or layer (including any building and any burial or interment);

b) any artificially altered structure, construction, deposit, feature or layer, whether or not natural in origin;

c) any wreck;

d) any ritual or ceremonial site;

e) any site where an historic event took place, including any other site directly associated with that event;

f) any battlefield;

g) any site with legendary or mythological associations;

h) any feature, deposit or layer, whether or not natural in origin and whether or not artificially altered, containing or providing information or evidence relating to the past environment;

The Register shall be in the form of an electronic database which is easily accessible to members of the public through public telecommunication networks. The registered monument may include a surrounding area which is considered reasonably necessary to secure the protection of the monument or thing.

Where a person finds, or believes that he or she has found a prescribed monument other than a registered monument, the person shall make a preliminary report Minister or a member of An Garda Síochána within 72 hours, or in the case of discovery in the course of licensable activity, that it be reported to the Minister in such a manner as specified in the licence.

Special protection may be applied to a registered monument taking into account whether the monument is, in terms of such heritage, of special or particular interest, character, integrity, community or amenity value, whether at a local, regional, national or international level. This includes

a) a national monument,

b) a wreck of 100 or more years old, or

c) a guardianship monument.

A person shall not carry out works at, on, in, under, to, or within the immediate surroundings of a monument to which special protection applies, or direct or authorise the carrying out of such works, other than under and in accordance with a licence. This shall be deemed to apply to a registered monument in the ownership or guardianship of the Minister or a local authority where special protection does not otherwise apply to the monument.

General protection applies to

a) a registered monument to which special protection does not apply, and

b) a prescribed monument (not being a registered monument).

A person shall not carry out works at, on, in, under, to, or within the immediate surroundings of a monument to which general protection applies, or direct or authorise the carrying out of such works, other than under and in accordance with a licence.

A person shall not, except under and in accordance with a licence, do any of the following at, on, in, over, under or in the vicinity of a wreck 100 or more years old, a registered monument or prescribed monument which is under water, or an archaeological object which is underwater:

a) dive or direct or authorise diving;

b) use or possess, or direct or authorise the use or possession of, diving, survey or salvage equipment;

c) dump or deposit, or direct or authorise the dumping or deposition of, any thing whether or not it interferes with or causes damage to the thing;

d) interfere, remove or tamper in any way (whether with or without causing damage) with the thing.

The Minister may prescribe a licence, consent, approval, permission or other authorisation where

a) a licence, consent, approval, permission or other authorisation is required to be granted, issued or given under an enactment (not being the Act of 2000) for works to be carried out which may require an EIA, and

b) the Minister is satisfied that such works are capable of being at, on, in, under, to, or within the immediate surroundings of a monument, and it is reasonable and proportionate to do so and compatible with the protection of monuments,

The Minister shall consider whether or not the relevant works in respect of which they should be made subject to conditions and may require all or any of the following:

a) the carrying out of an assessment of heritage interest or potential including an assessment by way of archaeological excavation, use of detection devices or any form of photographic or geophysical survey equipment or any other appropriate form of survey or inspection;

b) the recording of the monument as a whole or any part or aspect of it (including its immediate surroundings) or any objects on, in, under or within it or its immediate surroundings including recording by way of archaeological excavation, use of detection devices or any form of photographic or geophysical survey equipment or any other appropriate form of survey or inspection;

c) the carrying out of any form of monitoring (including archaeological monitoring), supervision or inspection;

d) the salvaging, collection or protection of any part of the monument (including its immediate surroundings) or any object on, in, under or within it or its immediate surroundings and, where appropriate, the preparation of such part or object for deposition in an appropriate museum or other site for such deposition;

e) the specification of the time period when the relevant works are to be carried out;

f) that the relevant works be done in a specified manner or be funded or carried out by a specified person or a person falling within a specified category of persons.

The Minister shall make a screening determination for EIA in respect of the proposed relevant works on the basis of the information provided by the applicant. The Minister shall ensure that, before the application is determined, proposed relevant works likely to have significant effects on the environment by virtue of their nature, size or location (or any combination thereof) are made subject to an EIA. The applicant shall in this case submit to the Minister an EIAR in respect of the proposed relevant works, having regard to guidelines issued by the Minister.

The Minister may appoint himself or herself, or with the consent of a local authority, appoint the local authority as the guardian of a registered monument to which special protection applies. A

national monument under the Act of 1930 will be deemed both a registered monument and a guardianship monument.

Any archaeological object where such object has no known owner shall be vested in the State. An owner or owner exception of land, not being the State, or a finder of an archaeological object is deemed not to acquire any rights of ownership to an archaeological object found on, in or under the land.

Where a person finds, or believes that he or she has found an archaeological object, the person shall make a preliminary report of the finding of the thing to the Board of the National Museum of Ireland or a member of An Garda Síochána within 72 hours, in the case of licensable activity, to the Minister or the Board in such manner as is specified in the licence. A person, other than a relevant person, shall not interfere with or remove a relevant archaeological object, or cause it to be interfered with or removed, except under and in accordance with a licence, or where there is reasonable grounds to believe that it is necessary to remove the thing from the site where he or she found it for the purposes of the safekeeping of the thing.

“Architectural heritage” means—

a) structures and buildings together with their settings and attendant grounds, fixtures and fittings,

b) groups of structures and buildings referred to in paragraph (a), and

c) sites,

that are of archaeological, architectural, cultural, historic, scientific, social or technical interest;

A person shall not, other than under and in accordance with a licence—

a) undertake or carry out, or direct or authorise the undertaking or carrying out of, archaeological excavation,

b) … archaeological monitoring,

c) search for or collect… archaeological objects lying exposed on the surface of land, whether or not any such object is known to be on, in or under that land,

d) search for… wrecks one hundred or more years old or archaeological objects or prescribed monuments, or other relevant things of archaeological interest, situated on, in or under the sea bed or land covered by water…

e) be in possession of a detection device in, at, on, over or above, or within the immediate surroundings of, a registered monument or a wreck one hundred or more years old, or

f) use… a detection device for the purpose of identifying, locating (including searching for), investigating, surveying or recording any archaeological object or monument or relevant thing of archaeological interest…

Anything done by a person in the course of his or her employment shall, in any proceedings brought under this Act, be treated as done also by that person's employer, whether or not it was done with the employer's knowledge or approval. Anything done by a person as agent for another person, with the authority (whether express or implied and whether precedent or subsequent) of that other person shall, in any proceedings brought under this Act, be treated as done also by that other person.

National Monuments Legislation (1930-2014)

The National Monument Act, 1930 (as amended) provides the formal legal mechanism to protect monuments in Ireland. Protection of a monument is provided via:

Record of Monuments and Places (RMP);

National Monument in the ownership or guardianship of the Minister for Arts, Heritage, Regional, Rural & Gaeltacht Affairs or a Local Authority;

National Monument subject to a Preservation Order (or temporary Preservation Order);

Register of Historic Monuments (RHM).

The definition of a monument is specified as:

any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections;

any artificial cave, stone or natural product, whether forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position;

any, or any part of any, prehistoric or ancient tomb, grave or burial deposit, or (ii) ritual, industrial or habitation site; and

any place comprising the remains or traces of any such building, structure or erection, any cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site.

Under Section 14 of the Principal Act (1930):

It shall be unlawful...

to demolish or remove wholly or in part or to disfigure, deface, alter, or in any manner injure or interfere with any such national monument without or otherwise than in accordance with the consent hereinafter mentioned (a licence issued by the Office of Public Works National Monuments Branch),

or

to excavate, dig, plough or otherwise disturb the ground within, around, or in the proximity to any such national monument without or otherwise than in accordance...

Under Amendment to Section 23 of the Principal Act (1930):

A person who finds an archaeological object shall, within four days after the finding, make a report of it to a member of the Garda Síochána...or the Director of the National Museum...

The latter is of relevance to any finds made during a watching brief.

In the 1994 Amendment of Section 12 of the Principal Act (1930), all the sites and 'places' recorded by the Sites and Monuments Record of the Office of Public Works are provided with a new status in law. This new status provides a level of protection to the listed sites that is equivalent to that accorded to 'registered' sites [Section 8(1), National Monuments Amendment Act 1954] as follows:

The Commissioners shall establish and maintain a record of monuments and places where they believe there are monuments and the record shall be comprised of a list of monuments and such places and a map or maps showing each monument and such place in respect of each county in the State.

The Commissioners shall cause to be exhibited in a prescribed manner in each county the list and map or maps of the county drawn up and publish in a prescribed manner information about when and where the lists and maps may be consulted.

In addition, when the owner or occupier (not being the Commissioners) of a monument or place which has been recorded, or any person proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Commissioners and shall not, except in the case of urgent necessity and with the consent of the Commissioners, commence the work for a period of two months after having given the notice.

The National Monuments Amendment Act enacted in 2004 provides clarification in relation to the division of responsibilities between the Minister of Environment, Heritage and Local Government, Finance and Arts, Sports and Tourism together with the Commissioners of Public Works. The Minister of Environment, Heritage and Local Government will issue directions relating to archaeological works and will be advised by the National Monuments Section and the National Museum of Ireland. The Act gives discretion to the Minister of Environment, Heritage and Local Government to grant consent or issue directions in relation to road developments (Section 49 and 51) approved by An Bord Pleanála and/or in relation to the discovery of National Monuments.

14A. (1) The consent of the Minister under section 14 of this Act and any further consent or licence under any other provision of the National Monuments Acts 1930 to 2004 shall not be required where the works involved are connected with an approved road development.

14A. (2) Any works of an archaeological nature that are carried out in respect of an approved road development shall be carried out in accordance with the directions of the Minister, which directions shall be issued following consultation by the minister with the Director of the National Museum of Ireland.

Subsection 14A (4) Where a national monument has been discovered to which subsection (3) of this section relates, then the road authority carrying out the road development shall report the discovery to the Minister subject to subsection (7) of this section, and pending any directions by

the Minister under paragraph (d) of this subsection, no works which would interfere with the monument shall be carried out, except works urgently required to secure its preservation carried out in accordance with such measures as may be specified by the Minister.

The Minister will consult with the Director of the National Museum of Ireland for a period not longer than 14 days before issuing further directions in relation to the national monument.

The Minister will not be restricted to archaeological considerations alone, but will also consider the wider public interest.

Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999

This Act provides for the establishment of a national inventory of architectural heritage and historic monuments.

Section 1 of the act defines "architectural heritage" as:

(a) all structures and buildings together with their settings and attendant grounds, fixtures and fittings,

(b) groups of such structures and buildings, and,

(c) sites

which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

Section 2 of the Act states that the Minister (for Arts, Heritage, Gaeltacht and the Islands) shall establish the NIAH, determining its form and content, defining the categories of architectural heritage, and specifying to which category each entry belongs. The information contained within the inventory will be made available to planning authorities, having regard to the security and privacy of both property and persons involved.

Section 3 of the Act states that the Minister may appoint officers, who may in turn request access to premises listed in the inventory from the occupiers of these buildings. The officer is required to inform the occupier of the building why entry is necessary, and in the event of a refusal, can apply for a warrant to enter the premises.

Section 4 of the Act states that obstruction of an officer or a refusal to comply with requirements of entry will result in the owner or occupier being guilty of an offence.

Section 5 of the Act states that sanitary authorities who carry out works on a monument covered by this Act will as far as possible preserve the monument with the proviso that its condition is not a danger to any person or property, and that the sanitation authority will inform the Minister that the works have been carried out.

The provisions in the Act are in addition to and not a substitution for provisions of the National Monument Act (1930–94), and the protection of monuments in the National Monuments Act is extended to the monuments covered by the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act (1999).

The Local Government (Planning and Development) Act, 1999

The Local Government (Planning and Development) Act, 1999, which came into force on 1st January 2000, provides for the inclusion of protected structures into the planning authorities' development plans and sets out statutory regulations regarding works affecting such structures, thereby giving greater statutory protection to buildings. All structures listed in the development plan are now referred to as Protected Structures and enjoy equal statutory protection. Under the 1999 Act the entire structure is protected, including a structures interior, exterior, the land lying within the curtilage of the protected structure and other structures within that curtilage. This Act was subsequently repealed and replaced by the Planning and Development Act, 2000, where the conditions relating to the protection of architectural heritage are set out in Part IV of the Act.

Protected Structures, Curtilage & Attendant Grounds

A protected structure is defined in the Local Government (Planning and Development) Act 2000 as any structure or specified part of a structure, which is included in the planning authorities' Record of Protected Structures (RPS). Section 57 (1) of the 2000 Act states that "…the carrying out of works to a protected structure, or a proposed protected structure, shall be exempted development only if those works would not materially affect the character of

(a) the structure, or

(b) any element of the structure, which contributes to its special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

By definition, a protected structure includes the land lying within the curtilage of the protected structure and other structures within that curtilage and their interiors. The notion of curtilage is not defined by legislation, but according to Architectural Heritage Protection Guidelines for Planning Authorities (2004) and for the purposes of this report it can be taken to be the parcel of land immediately associated with that structure and which is (or was) in use for the purpose of the structure.

The attendant grounds of a structure are lands outside the curtilage of the structure but which are associated with the structure and are intrinsic to its function, setting and/or appreciation. The attendant grounds of a country house could include the entire demesne, or pleasure grounds, and any structures or features within it such as follies, plantations, lakes etc.

APPENDIX 2 19E0179 ARCHAEOLOGICAL MONITORING REPORT

COURTNEY • DEERY

ARCHAEOLOGY & CULTURAL HERITAGE

Archaeological Assessment

Monitoring of Ground Investigation Works

Licence No. 19E0179

Hickey's Factory

Parkgate Street

Dublin 8

By

Padraig Clancy and Lisa Courtney

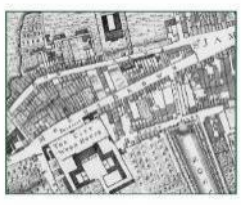
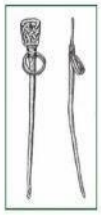
for

Courtney Deery Heritage Consultancy Ltd

On behalf of

Lafferty

24 June 2019

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EXECUTIVE SUMMARY

This report describes the results of the archaeological monitoring of ground investigation works undertaken at the site of Hickeys (No. 43) Parkgate Street, Dublin 8. Archaeological monitoring was undertaken by Padraig Clancy under Licence No. 19E0179 between March and May 2019.

The ground investigation works comprised of 18 no. window sample holes to a depth of 4m BGL, 7 bore holes and 2 no. cable percussive boreholes with rotary core follow on (scheduled depth 15m BGL). Five slit trenches were excavated, one along the footpath to the northeast of the site on Parkgate Street, and two in the southwest corner of the site. The pits 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.

Buried beneath a meter of made ground consisting of gravel and red brick rubble which is sealed by a modern concrete slab, archaeological monitoring of the ground investigation works showed three main phases of deposition. The original river and meadow level as represented in the early cartographic sources appears to be represented at 4 – 5m below the current ground levels. Prior to the construction of the Iron works, land reclamation or land improvements is evident with c. 2m of made up ground of brown clays being imported on to the site.

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 face of construction. A possible ground surface is evident at 1.5m below the current ground level. Possible walls and sub-surface structures were visible within WS116.

The results of monitoring the ground investigation works appear to indicate foundations, possible wall and floor levels associated with the iron working phase and later phases on site (early 1800's onwards). In order to understand and ascertain the extent and nature of these industrial archaeological remains and potentially earlier deposits it will be necessary to archaeologically investigate.

The presence of industrial archaeological features and potentially earlier archaeological horizons will have to be taken into account and archaeological investigation including excavation will have to be considered in the overall timeframe and delivery of the project.

Consultation has taken place with the City Archaeologist on the 21st May 2019 where it was indicated that archaeological test excavation would inform the archaeological strategy on site.

Once the site is vacated it is recommended that archaeological test excavation takes place. Test excavation may also require the demolition of the existing warehouse on site in order to provide access for machinery to remove the ground slab and overburden.

Once the site is cleared test excavation can proceed, it is envisaged that this could take place on a phased basis, utilising the ground slab as a working platform to investigate adjacent areas.

Where possible large testing blocks could be cut through the concrete slab to expose voids or structures beneath the concrete. Once structural elements were identified and recorded, a series of archaeological trial pits could be excavated within each of the blocks to confirm that depth of reclamation soils. This is to establish the original pre- 19th century ground levels and to ascertain the archaeological potential of these soils. It will also inform the subsequent piling programme.

If structural remains of the nineteenth century iron works are discovered, they will be recorded to the specification of the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht and the City Archaeologist. Preservation in situ by design will also be explored in relation to the piling layout in order to avoid or minimise an impact on the industrial heritage remains.

Archaeological excavation in an urban environment where there are existing buildings on site and underpinning of boundary and quay walls etc may be necessary, is challenging especially when deposits have been identified up to 2m deep –as this creates a lot of spoil within a confined space. A build-up of post medieval horizons takes time to excavate and depending on the findings can introduce redesign issues, additional costs and delays to the overall programme.

Therefore, it is critical that a phased approach to the archaeological investigation and mitigation takes place in consultation with the City Archaeologist and the statutory authorities and is placed within the demolition and construction programme for the site. Subject to approval with the authorities and the City Archaeologist, this approach will inform the extent and the timing of the archaeological investigation required on site.

1. INTRODUCTION

1.1. General

This report describes the results of the archaeological monitoring of ground investigation works undertaken at the site of Hickeys (No. 43) Parkgate Street, Dublin 8. Archaeological monitoring was undertaken by Padraig Clancy under Licence No. 19E0179 between March and May 2019.

Features relating to the former industrial activity on the site during the 19th century were exposing during the monitoring works.

The information gained from the site investigations will be used to inform the archaeological chapter of the EIAR currently being prepared as part of the planning application for the proposed development.

As part of this process and in order to agree an archaeological strategy for the site, a meeting has been sought the National Monuments Service through the Development Application Unit (DAU, 7th May). A meeting has taken place with the City Archaeologist (21st May 2019) in order to advise the authorities of the archaeological findings to date from the baseline report issued in 2018 and the monitoring results (2019).

1.2. Site Location

The site is located on Parkgate Street, on the northern bank of the River Liffey, opposite the point of discharge for the River Camac and immediately west of Sean Heuston Bridge (Figure 1). It lies 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 of the 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, 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.

Cartographic analysis indicates that the usage of the site evolved from open meadow in the eighteenth century to the use of the site for industrial purposes from the early nineteenth century onwards (e.g. the Phoenix Iron Works in the early 1800s, followed by Kingsbridge Woollen Factory and the Parkgate Printing Works).

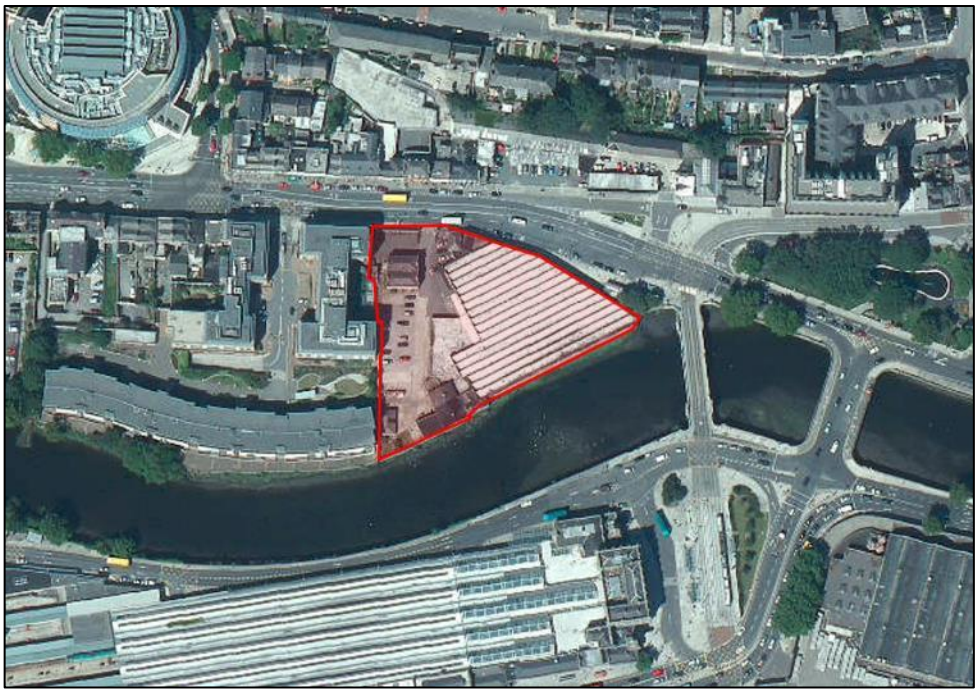

Figure 1 Site location

1.3. Description of Ground Investigation Works and Methodology

The ground investigation (GI) works comprised of 18 no. window sample holes to a depth of 4m BGL, 7 bore holes and 2 no. cable percussive boreholes with rotary core follow on (scheduled depth 15m BGL). Three slit trenches were excavated, one along the footpath to the northeast of the site on Parkgate Street, and two in the southwest corner of the site. The location of the GI works are indicated on Figure 2 below.

The aim of the archaeological monitoring was to establish the archaeological potential of the lands are and to highlight if there are any archaeological considerations for the development of the site. The baseline information used in the report draws on archaeology and cultural heritage reports for the site prepared by Courtney Deery Heritage Consultancy in 2018 and 2019.

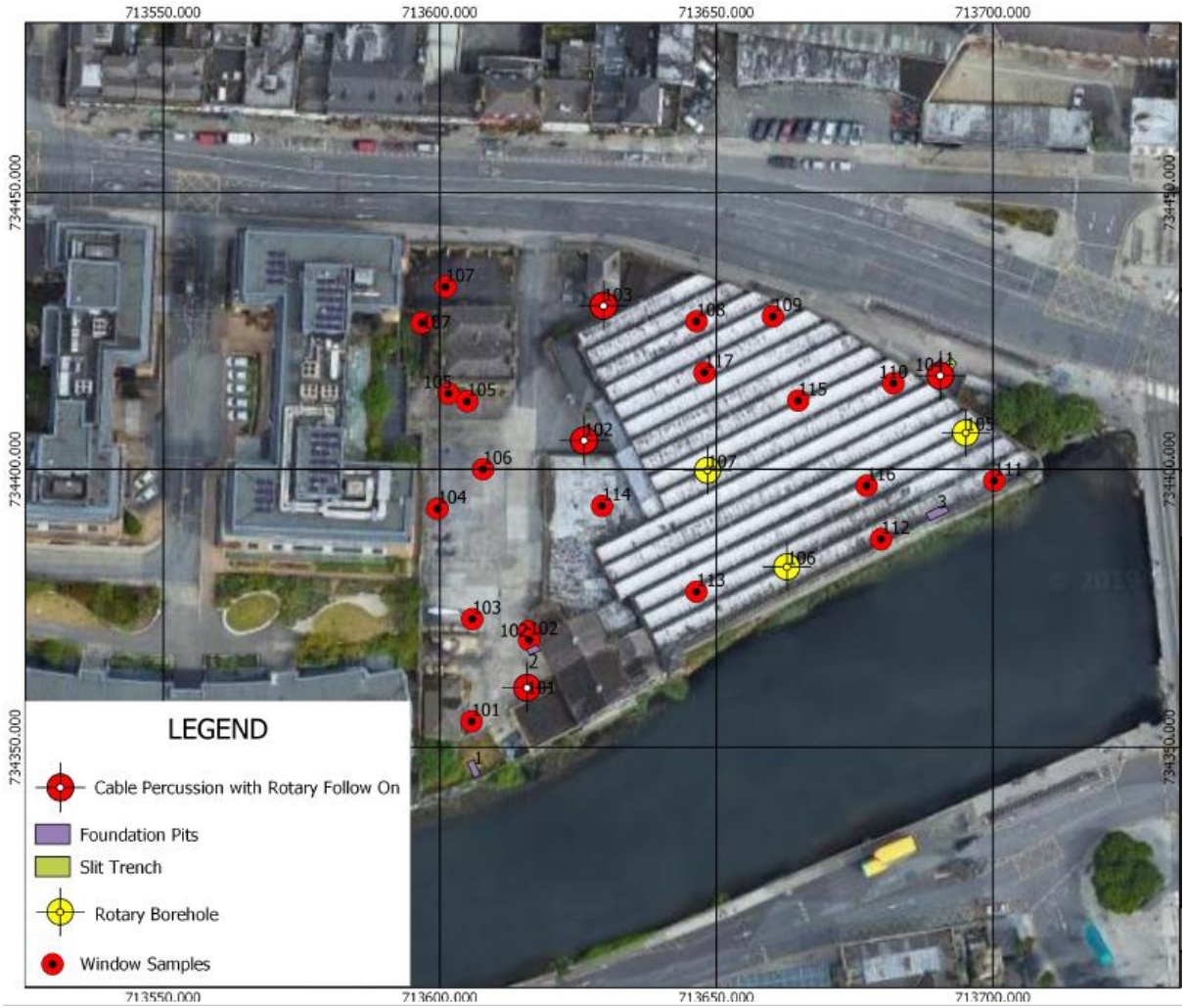

Figure 2 Locations of Ground Investigation Works

2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1. Introduction

The topography of the site has been altered in relatively modern times with the construction of industrial units overlooking the River Liffey. Elements of building within the boundary of the site are listed as protected structures; these have previously been assessed in a separate conservation report by David Slattery and are undergoing additional assessment by ARC as part of the EIAR process for the proposed development. Cartographic evidence indicates that the usage of the site changed from open meadow to industrial use in the early-mid-19th century, when the site was occupied by the Phoenix Iron Works, followed by Kingsbridge Woollen Factory and then the Parkgate Printing Works.

2.2. Prehistoric Period (c.9000BC-c.500AD)

The earliest archaeological site in the wider landscape is a megalithic structure that now stands within the Zoological Gardens in the Phoenix Park, c. 955m north-west (DU018-007009). 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 (Borlase 1897, 381, 2; Poe 1904, 5-6, cited in SMR file).

There is also a Linkardstown-type burial of late Neolithic date at Knockmaree, in the Phoenix Park (DU018-00711). 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 (Wood-Martin 1895, 281, Fig.74; Waddell 1970, 115; Waddell 1990, 81, cited in SMR file). 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 is recorded within the grounds of the former Infirmary of the Royal Hospital (DU018-112). It was uncovered during archaeological testing and was found to contain a tripartite Food Vessel cremation (Licence No. 02E0067; Excavations Bulletin Ref. 2002:0610).

2.3. Early Medieval activity (c.500AD-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 seventh 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 two kilometres 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 (Kenny 1995). 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. 980m to the west of the proposed development). 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 (Kenny 1995). 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, 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 (NMI Ref: 1917:2). 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.

2.4. Viking Settlement

It is probable that the location of the Early Christian monastery of *Cill Mhaighneann* was adapted in the ninth 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 (1998) points to the concentration of the recorded Viking activity west of the River Camac. She suggests the possibility of a ninth-century Viking settlement, in the land between the Camac and the Liffey rivers, located on the same ridge as St. Maighnenn's original monastery. Briggs (1985) and Graham-Campbell (1976) have also identified the monastic site as the possible focus of early Norse settlement. This area lies on the south bank of the River Liffey, to the southwest of the proposed development site.

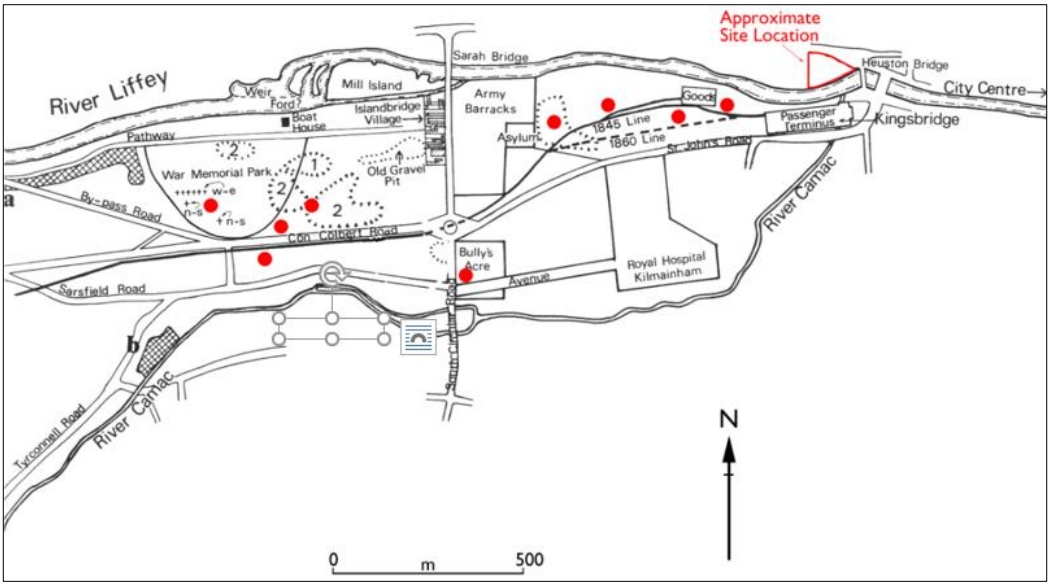

Figure 3 Map showing the locations (in red) of Viking material recovered in the 19th century (after O'Brien 1998)

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 (O'Brien 1998; Figure 3). Simpson (2004) has suggested that the spread of Viking burials was extensive, stretching at least from Memorial Park/Islandbridge in the west to Heuston Station to the east, a distance of 1.5km but confined to the natural gravel ridge, bordered by the Liffey on the north and the Camac River to the south. 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. 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.

2.5. 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 in c.1174 (RMP DU018-020286), 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 (Kenny 1995).

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 sixteenth 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.

2.6. Phoenix Park

During the Suppression of the Monasteries in the mid-sixteenth 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 became 'feenisk', which was anglicised to 'phoenix'). It was initially applied by Sir Edward Fisher to his residence on Thomas Hill (Joyce 1995). 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 (Ball 1906).

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 dominates much of this area of the city. Built to commemorate the military successes of the Iron Duke, Arthur Wellesley, 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 (Jordan 2005).

2.7. 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 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 (Conlin and De Courcy 1988), 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 (WSC 15). 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.

2.8. No. 43 Parkgate Street – Hickey's Fabric Site

The history of the subject site at No. 43 Parkgate Street was compiled from various documentary sources, including Thom's Dublin Street Directory, Ordnance Survey and historical maps.

The proposed development site was occupied by the Royal Phoenix Iron Works, also known as Robinson's Iron Works from the early 1800's (Figure 4). The Iron works was located over a large area (Figures 8, 9 and 10) which extended westwards outside the proposed development area and included a dwelling house, pleasure gardens, foundry workshops, a forge, outhouses and workers cottages. The owner, Richard Robinson, a native of Hull, had settled in Dublin in 1800. His Phoenix foundry was responsible for casting King's 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. 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. (https://www.dia.ie/architects/view/4625/ROBINSON-RICHARD%5B1%5D%2A). The metalwork for Sean Heuston Bridge was cast here and the strongly walled site was used as a location for a bomb-making factory during the First World War. The munitions were carried down the river in barges that were loaded at a jetty beside the factory (De Courcy 1996).

Figure 4 William Sadler (1782-1839) c.1861 A View of the Royal Hospital at Kilmainham and the Wellington Monument in Phoenix Park (Iron Works in foreground)

The demise of the site as an iron works was first noted from an advertisement in the Freeman's Journal on the 20 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, templates 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 the 24 of 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 3a6r38p 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 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 plates, 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. The Iron works was in operation from the early 1800s to approximately 1880, after which the site was occupied for a decade by The Kingsbridge Mills, a woollen worsted manufacturer. 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 site then lay vacant until about 1920, when it was taken over for use as Government Stores. A printing works was set up on site around ten years later, 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 12 below). The printing works remained in operation until the mid-1970s when the current owners, Hickey's Fabrics, took up residence.

3. CARTOGRAPHIC SOURCES

3.1. Earliest available sources

The 1656 Down Survey Parish Map of Kilmainham is the earliest cartographic source for the study area (Figure 5). 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) is depicted on the map and named 'Phoenix' (this is the site of the present Magazine fort, DU018-007012).

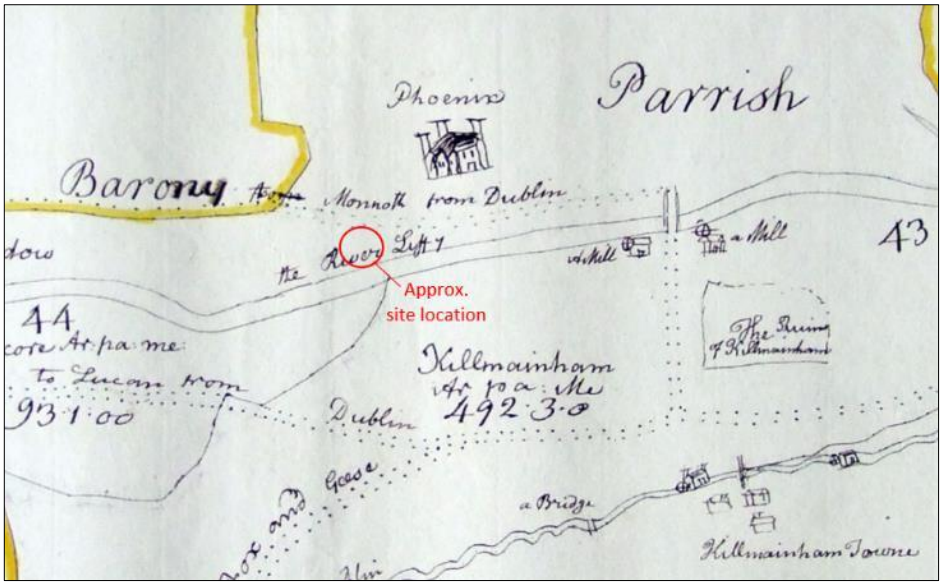

Figure 5 Down Survey map of the parish of Kilmainham, c. 1656

A slightly later seventeenth 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) and John Rocque's 1756 map (Figure 6). 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 a 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 (not shown), on which 'Park Gate Street' and 'Conyngham Road' follow the line of the old Chapelizod / Islandbridge thoroughfare. On Campbell's map of 1811 (Figure 7), 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 northeastern 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.

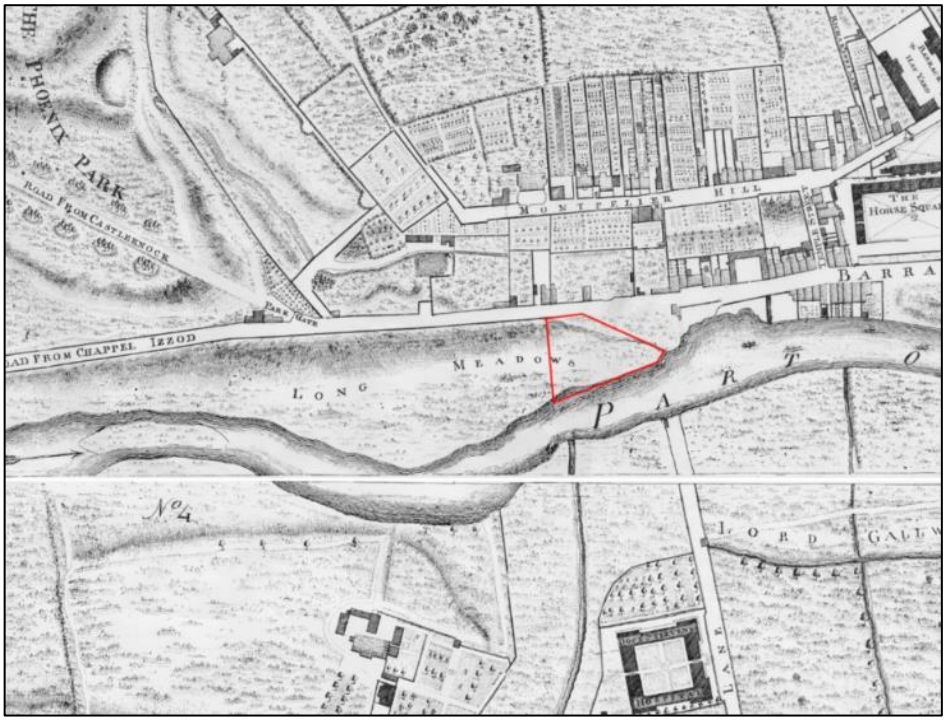

Figure 6 Rocque's County Map of Dublin, 1760, with approximate site location in red

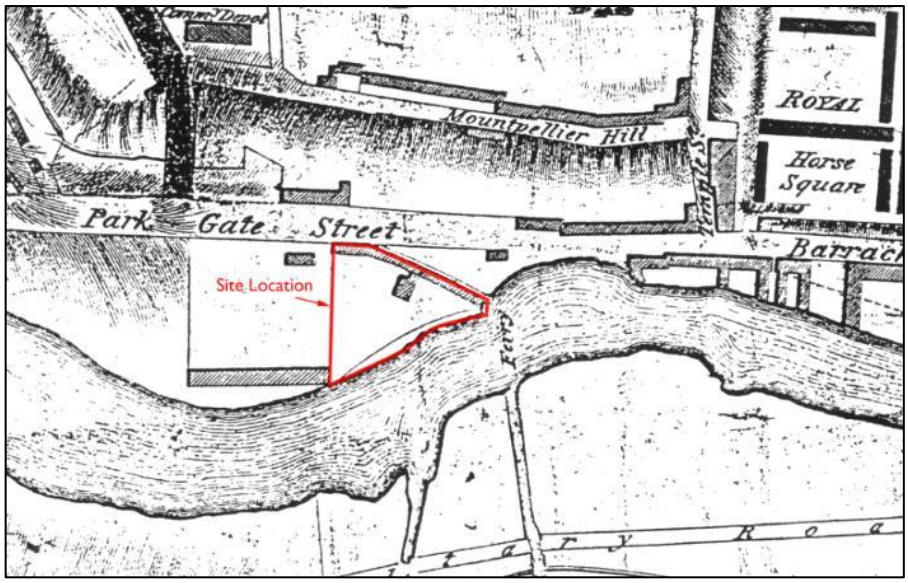

Figure 7 Thomas Campbell map of 1811 of the City of Dublin, 1811, with approximate site location in red

3.2. Ordnance Survey maps

By the time of the first edition Ordnance Survey (OS) 1843 six-inch map (Figure 8), the Royal Phoenix Iron Works occupy a large plot on the north river bank, accessed via an entrance onto Parkgate Street (the proposed development site forms the eastern half of the original iron works site). A significant development in the vicinity is King's Bridge, which was erected in 1828.

The works can be seen in greater detail on the 1847 and 1864 OS five-foot plans (Figures 9 and 10). The eastern half of the plot appears to house the majority of the iron works buildings, with gardens and open space dominating the western half (becoming more elaborate by 1864).

The Kingsbridge Woollen Factory replaces the irons works on the 1889 OS map (Figure 11) and in later editions the site was in use as a printing works. The 1889 map also shows the tram lines running along Parkgate Street and across King's Bridge.

The 1943 revised OS map (Figure 12) shows that the original iron works site 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 proposed development site).

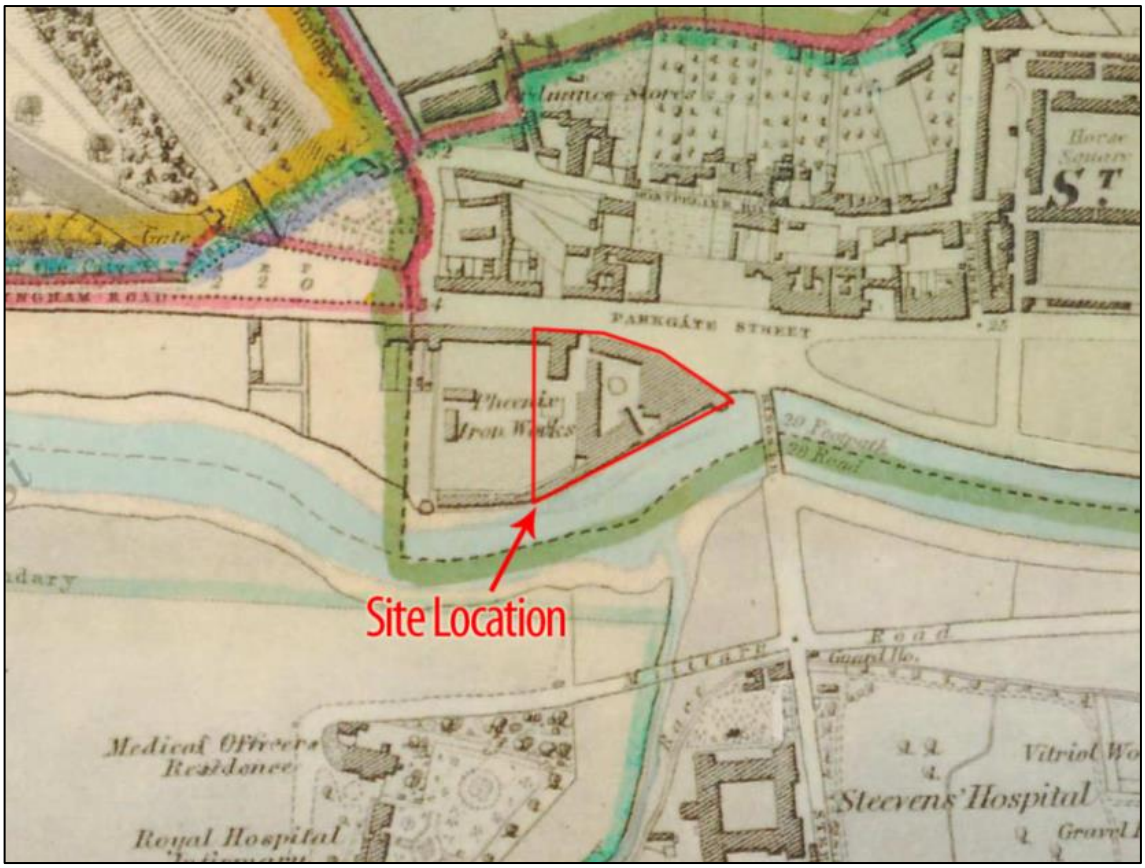

Figure 8 First edition OS map, 1843 (scale 1:10,560), showing approximate site location

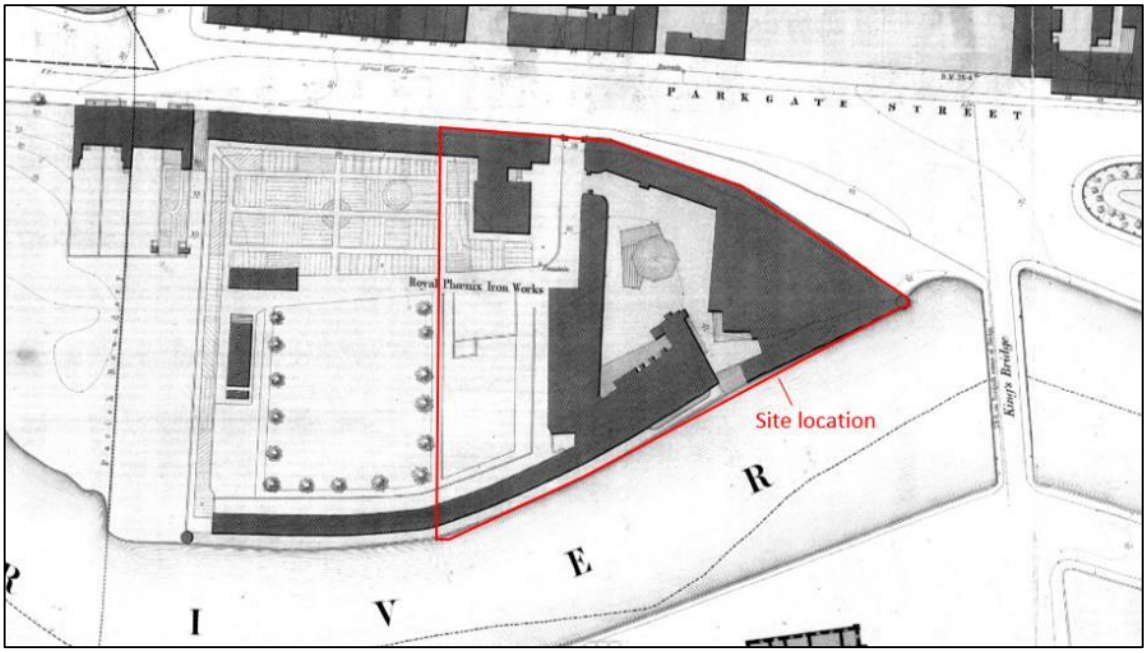

Figure 9 First edition 1:1056 OS Map 1847, (scale 1:1056), showing approximate site location

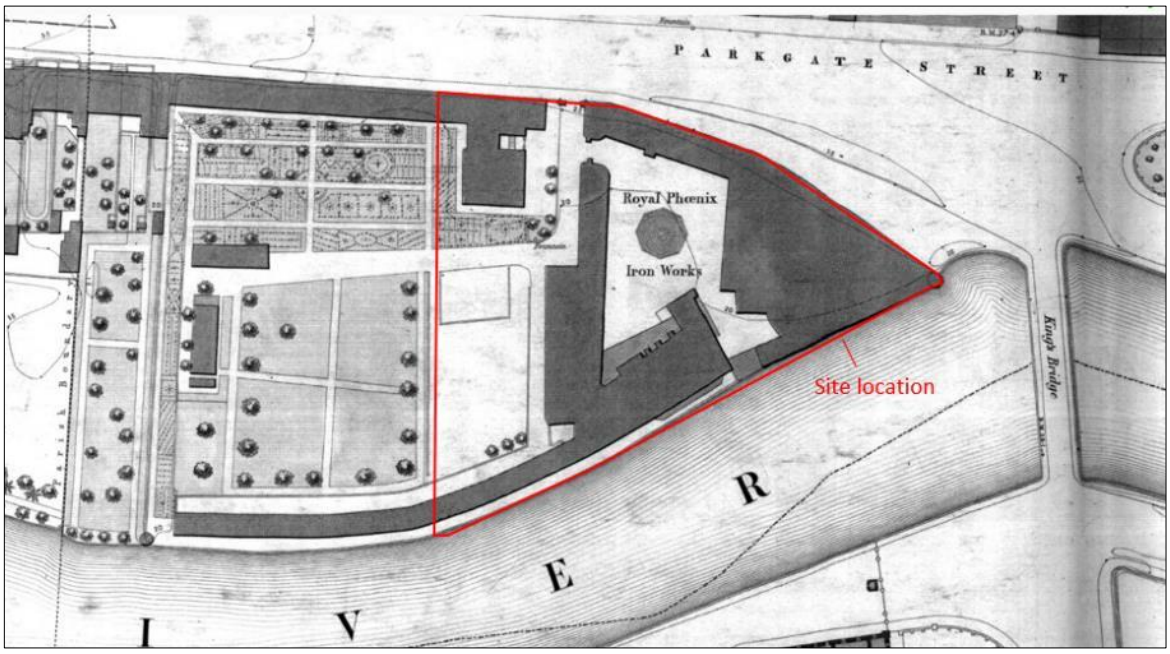

Figure 10 Revised edition OS map, 1864 (scale 1:1056), showing approximate site location

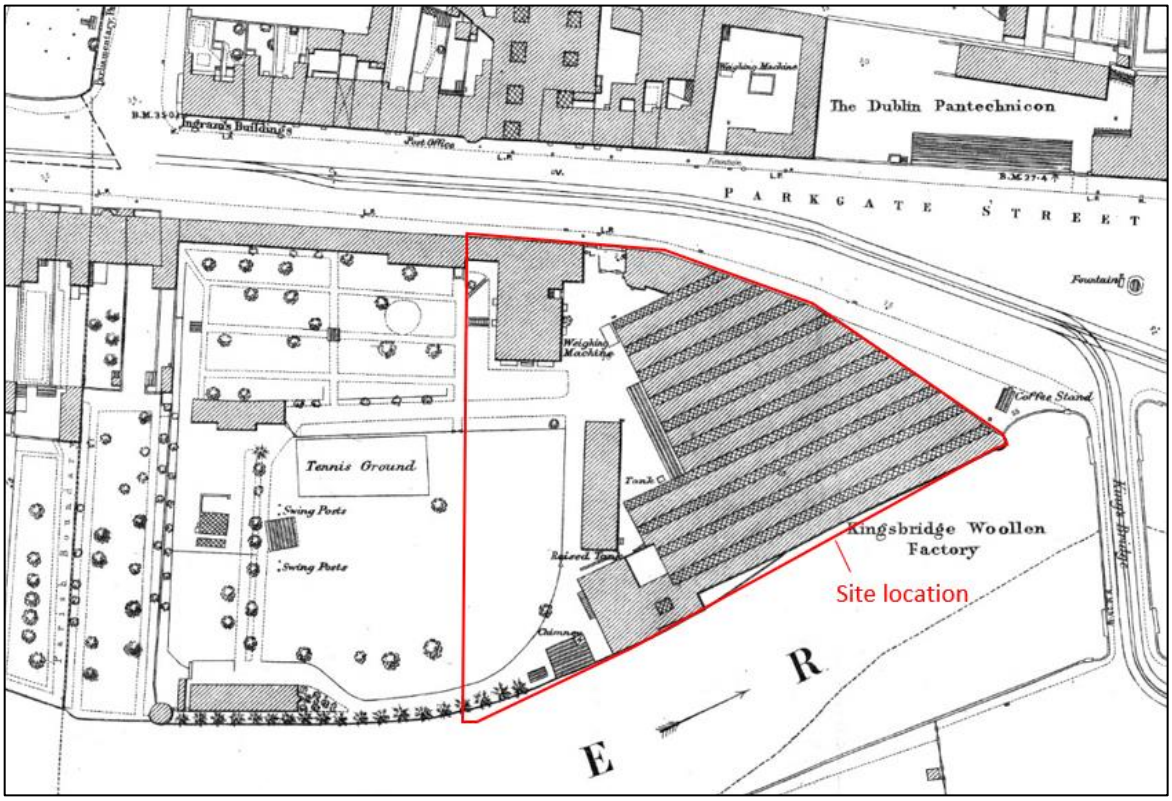

Figure 11 Revised edition OS map, 1889 (scale 1:1056), showing approximate site location

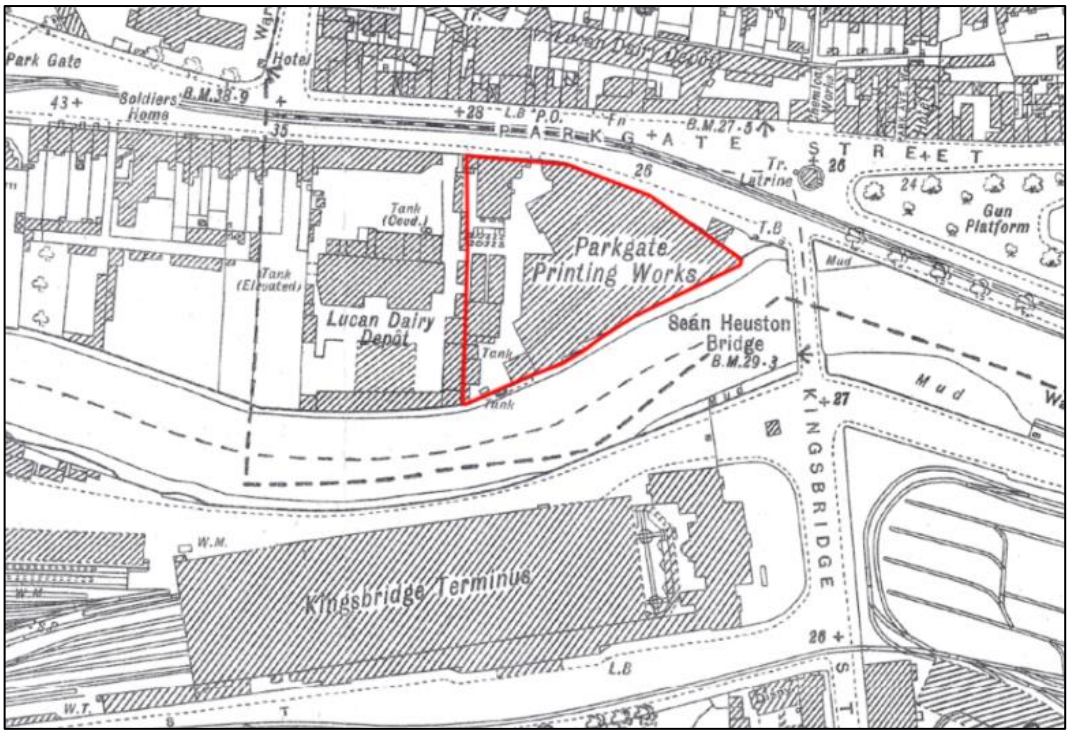

Figure 12 Revised edition OS map, 1943 (scale 1:1,560), showing approximate site location

4. RECORDED MONUMENTS AND PREVIOUS EXCAVATIONS

4.1. Record of Monuments and Places Sites (RMP sites)

The proposed development site is situated within the statutory zone of archaeological potential 'Historic City of Dublin', RMP No. DU018-020. There are no specific Record of Monuments and Places (RMP) sites recorded within the subject site, however its location on the south-facing bank of the River Liffey and offers a vantage point of many of the monuments in this region of the city (Figure 13).

The nearest recorded archaeological feature is the site of a dwelling (DU018-020-532) located on Montpelier Hill 100m to the north.

The Phoenix Park archaeological complex (DU018-007) is located c. 105m northwest of the development site (Figure 13). 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).

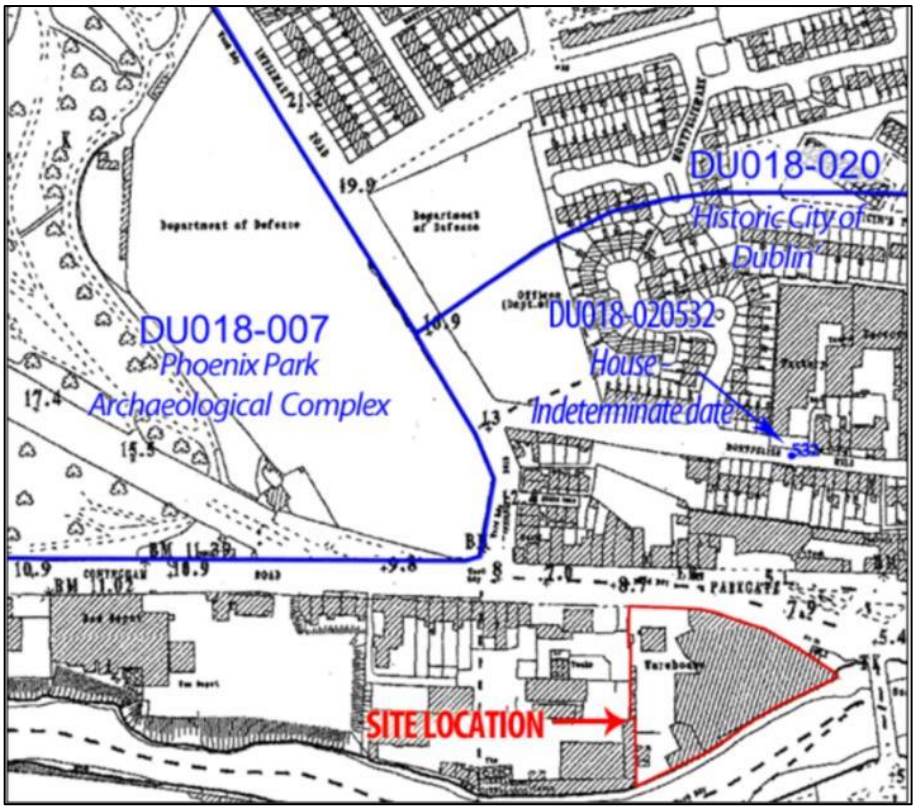

Figure 13 Published RMP map showing site location

The Royal Hospital Kilmainham (DU018-020-285) and associated gardens (DU018-020-528) are located directly south of Conyngham Road and south west of the site. Collin's Barracks (DU018-020-306) and the burial ground at the military recreation ground (DU018-020-447) located to the south of the barracks are situated 200m east of the proposed development.

Prominent landmark features in the surrounding urban landscape include the Royal Hospital, c. 600m to the southwest and the Wellington Monument, c. 600m to the northwest within the Phoenix Park and Sean Heuston Station, c. 100m south of the proposed development and south of the River Liffey.

4.2. Industrial Heritage Sites

The site as a whole is listed in the Dublin City Industrial Heritage Record (DCIHR) and is recorded as forming an important component within the city's industrial heritage. This record is extracted as follows.

Reference	DCIHR 18 10021
Site function	Iron Works
Location	Parkgate Street
Name	Parkgate Printing works {Royal Phoenix Iron Works}
Description	
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
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.

4.3. Previous Archaeological Excavations

No archaeological investigations have been carried out within the subject site. Some investigations have however been carried out in the environs of the site (Figure 13) but did not reveal any substantial findings that might illuminate the potential of the site.

Archaeological testing (Licence No. 98E0188 Halpin, 1988) in advance of the development immediately west of the site (now the TII offices), did not reveal any features of archaeological significance. Post-medieval soils were identified, these 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 gas main from the junction of Infirmary Road/Parkgate Street along Conyngham Road (Licence No. 08E0483, Frazer 2008) did not reveal any archaeological features or remains.

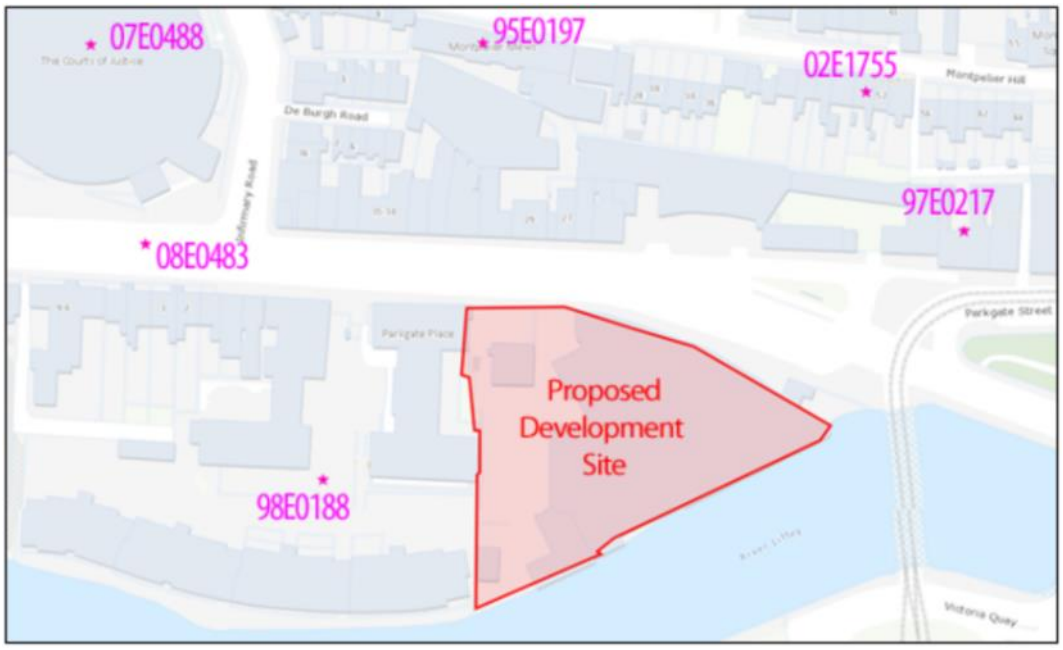

Figure 13 Archaeological investigations site locations (extracted from HeritageMaps.ie)

Archaeological investigation to the north of the proposed development in 15/16 Parkgate Street (Licence No. 97E0217), which lay upon a natural ridge overlooking the river Liffey, revealed no archaeological features. 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 the Aisling Hotel (Reid, 1996), this cavern appeared to have been artificially enhanced for use.

Archaeological monitoring carried out at the Criminal Courts Complex north of Parkgate street was carried out (Licence No. 07E0488, Myles & McNerney 2007). It followed a built heritage survey and documentary research into all above ground structures including a masonry wall along the Parliamentary Boundary, precinct walls of Phoenix Park along Infirmary Road and Parkgate Street, Porter's Lodge, a Laundry Building, a drinking fountain and evidence for a chemical factory and a Research and Production Plant, which occupied the site from 1942–7. Whilst no archaeological features were identified at the site, on the basis of the position of the watercourse depicted on Rocque in relation to the Liffey and on the immediate topography the possibility of the site being a 'longphort' could not be discounted due to the significant truncation at subsoil level at the site.

The monitoring of the insertion of two 0.5m deep drainage trenches at the rear of the house drainage trenches at 50 Montpelier Hill, a late 18th century building that may incorporate elements of an early 18th-century warehouse (Licence Ref: 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 $3m^2$ square return which is depicted on the OS map, dated to 1847.

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 18th century date or later.

5. MONITORING RESULTS

5.1. Summary of Findings

Archaeological monitoring of site investigation works took place under Licence No. 19E01779 from 30th March to the 13th May 2019. The ground investigation works comprised of 18 no. window sample holes to a depth of 4m BGL, 7 bore holes and 2 no. cable percussive boreholes with rotary core follow on (scheduled depth 15m BGL). Three slit trenches were excavated, one along the footpath to the northeast of the site on Parkgate Street, and two in the southwest corner of the site. TP101 was excavated against the boundary wall with the River Liffey. The pits 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. All investigations are detailed in Appendix 1.

In summary, the results of the ground investigations confirmed the presence of made ground across the site to a depth of 3 – 5 meters BGL. Beneath the modern ground surfaces of concrete and tarmac is a layer of building rubble with a high concentration of red brick. These ranged in depth between 0.35m – 1.80m BGL.

The rubble fills overlay deposits of industrial materials, these were characterised by black charcoal-rich clays with varying degrees of sands and gravels. Inclusions of slag, shell, bone and mortar were noted. These deposits ranged between 0.45m – 1.90m BGL. They were predominately located in the southern half (south of ST101 and WS102) of the site and appear to infill sub-surface foundations/ structures. These deposits are possibly associated with the demolition of the 19th century Iron Works. The void revealed in WS 116 and the obstructions in WS 111 and WS101 would also indicate the presence of sub-surface structures at these points.

Largely beneath the industrial deposits were brown clays between 0.50m – 3.90m BGL. Inclusions of bone and ceramic were noted in these deposits. The uniform nature of these clays across the site would suggest that they are reclamation deposits, perhaps associated with agricultural improvements to the riverside meadow before the construction of the Iron Works.

These deposits overlay riverine sands and dark grey clay with high percentage of gravels and sands. In TP101 bone was recovered from the riverine sands.

Table 1 Summary of Monitoring results (Details in Appendix 1)

Investigation	Concrete & rubble (m)	Industrial (m)	Reclamation (m)	Gravel (m)	Note
BH 101	0.00 – 0.60	0.60 – 1.50	1.50 -3.40	3.40 – 7.10	
BH 102	0.00 – 0.30	0.30 – 2.10	2.10 – 3.50	3.50 – 6.40	Wood at 5.25m BGL
BH 103	0.00 – 1.00	1.00 – 2.40	2.40 – 5.70	5.70 – 6.70	
BH 104		0.00 – 5.00		5.00 – 7.40	Peat at 5.80m – 6.20m
BH 105	0.00 – 1.30	1.30 – 6.50		6.50 – 8.50	
BH 106	0.00 – 0.10	0.10 – 2.20	2.20 – 4.70	4.70 – 8.00	
BH 107	0.00 – 0.10		0.10 – 3.70	3.70 – 7.50	
ST 101	0.00 – 0.35	0.35 -1.15	1.15 – 2.50		
TP 01	0.00 – 1.80		1.80 – 2.80	2.80 -3.80	
TP 02	0.00 – 0.35	0.35 – 1.50	1.80 – 3.50	3.50	
TP 03	0.00 – 0.12	0.12 – 1.90			
WS 101	0.00 – 0.55	0.55 – 1.60	1.60 – 4.00		0.10m BGL stones
WS 102	0.00 -0.40	0.40 – 1.20			Asbestos 1.20m BGL
WS 102A	0.00 – 1.10	0.10 – 1.90	1.90 – 2.90	2.90 -4.00	
WS 103	0.0- 0.60	0.60 – 3.30	3.30 – 3.60	3.60 – 4.00	
WS 104	0.00 – 0.84	0.84- 1.80	1.80 - 2.60	2.60-2.84	
WS 105	0.00 -0.50				Asbestos 1.50m BGL
WS 105A	0.16 – 1.00	1.00 – 1.30			Obstruction 1.30m BGL
WS 106	0.00 – 0.65	0.65 – 2.50	2.50 - 3.00	3.00 – 3.70	
WS 107	0.00 – 1.60	1.60 – 2.10	2.10 – 3.10	3.10 – 3.70	
WS 108	0.00 – 0.70	0.70 – 1.90	1.90 – 3.50		
WS 109	0.00 -0.08		0.08 – 4.00		
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		
WS 113	0.00 – 1.40	1.40 – 2.50	2.50 – 3.00		
WS 114	0.00 – 1.30	1.30 – 2.60	2.60 – 3.00		
WS 115	0.00 – 0.30		0.30 – 3.30		
WS 116	0.00 – 0.20				0.20m BGL void-possible walls visible under concrete surface
WS 117	0.00 – 0.70		1.70 – 3.90	3.90 – 4.00	

TP 101 (Plates 1- 4) was excavated to a depth of 3.80m to establish the nature of the quay wall. 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.

These were probably in use when the site was an ammunitions factory. Under the breeze-block wall was a red-brick wall, 10 courses in height and set into a rubble and lime mortar foundation. These foundations lay directly on top of the remains of the limestone quay wall. The upper section of this quay wall consisted of limestone blocks to a depth of 2.20m, the lower section of the wall was constructed of irregular mudstones to a depth of 3.80m. The mudstone was visible in the section and tapered c.0.70m north from the wall.

Table 2 TP 101 - River trench - wall face

TP 101 - River Trench - wall face		
Depth (BGL)	**Description**	**Interpretation**
2.20 – 0.00	Breeze block wall	Modern
0.00 – 0.15	Concrete	Modern
0.15 – 0.20	Layer of red brick set in sandy mortar	Demolition material
0.20 – 0.30	Brown clay friable	Garden soils
0.30 – 1.50	Red brick – c.10 courses visible with grey- white lime mortar	Wall
1.50 – 1.80	Small to average sized lime stones and mortar	Foundation of redbrick wall
1.80 – 2.20	Limestone blocks and large stones	Quay wall upper
2.20 – 3.80	Mudstone slabs and irregular shapes stones	Quay wall lower

Plate 1 Concrete wall supports

Plate 2 Granite block removed from test trench

Plate 3 Inner face of quay wall

Plate 4 Mudstone at base of quay wall

FIP 101 (Plates 5 & 6) was excavated to a depth of 4m. Beneath the concrete slab and rubble fill were industrial fills, which abutted the upstanding limestone structure, and a subsurface redbrick structure to a depth of 1.50m. The granite cornerstones of the upstanding structure were visible beneath the current ground surface and extended to 1.50m below ground surface. The wall foundations extended from 1.50m – 3.50m.

In the south-facing section, the remains of a redbrick structure were visible (seven courses in height and constructed over a drain) abutting the upstanding structure. This drain was lined with red brick, two courses deep, and capped with a layer of lime mortar. The lime mortar layer was evident across the section and possibly delineates the original ground level when the upstanding structure was constructed. The brown reclamation clays lay directly under this mortar layer.

Plate 5 South-facing section of TP102

Plate 6 West-facing foundations of structure TP102

6. CONCLUSIONS

6.1. Summary

Buried beneath a meter of made ground consisting of gravel and red brick rubble which is sealed by a modern concrete slab, archaeological monitoring of the ground investigation works showed three main phases of deposition.

- 5m- 3.8m: The original river and meadow level as represented in the early cartographic sources appears to be represented at 4 – 5m below the current ground levels. The presence of fragments of wood (possible root/branch material) at 5.25 (BH102) and a layer of peat at 5.80 (BH104) would suggest that this level was either the original riverbank or the pre-reclamation river meadow ground surface. At 3.8m + gravels were encountered indicating a sealed riverine dynamic environment.
- At 3.8m-1.5m reclamation/ agricultural soils pre 1800's (prior to the Iron Works) were encountered, brown clays were imported onto the site. Ceramics (post medieval) and a fragment of animal bone were revealed.
- At 1.50m below present ground level a possible ground surface associated with the industrial structures is evident. Possible walls and sub-surface structures were visible within WS116.
- At 1.5m-0.8m there is 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 face of construction. Cartographic sources from the 19th century onwards, indicate a sequence of industrial installations on the site, commencing with the Royal Phoenix Iron Works.

- 0.80-0.30 – Redbrick rubble and gravel.
- 0.30-0.00 – Concrete modern surfaces.

The results of monitoring the ground investigation works appear to indicate foundations, possible wall and floor levels associated with the iron working phase and later phases on site (early 1800's onwards). In order to understand and ascertain the extent and nature of these remains it will be necessary to archaeologically investigate.

If structural remains of the nineteenth century iron works are discovered, they will be recorded prior to removal, to the specification of the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht and the City Archaeologist. Preservation in situ by design will also be explored in relation to the piling layout in order to avoid or minimise an impact on the industrial heritage remains.

6.2. Proposed Archaeological Strategy for the Site

The subject site is located on the banks of the River Liffey, within the Zone of Archaeological Potential for Dublin (DU018-020) in an area of the city where Viking activity has been recorded. A standard requirement within this statutory zone is archaeological testing in advance of development.

At this site, as demonstrated by the ground investigation works, a number of phases of infill have occurred across this site. It appears that industrial activity relating to the 19th century iron works occurs at a depth between 1.50-2.90m beneath the present ground level.

Due to the environmental constraints at the site, and the unknown impact of the piling on the original ground levels, the specific strategy for the archaeological investigation and recording at the site will need to be devised in consultation with the City Archaeologist and the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht. Given the findings to date and the potential of the site, it was indicated by the City Archaeologist that test excavation would be required once the site has been vacated by the tenants.

It is recommended that the programme of archaeological works would commence in advance of the main construction stage at the site clearance/ ground reduction/demolition stage. Once existing structures and the ground slab have been cleared from the site, a systematic programme of investigation should take place to establish the nature and extent of the surviving sub-surface structures. It is envisaged that this could take place on a phased basis, utilising the ground slab as a working platform to investigate adjacent areas.

Where possible large testing blocks could be cut through the concrete slab to expose voids or structures beneath the concrete. Once structural elements were identified and recorded, a series of archaeological trial pits could be excavated within each of the blocks to confirm that depth of reclamation soils. This is to establish the original pre- 19th century ground levels and to ascertain the archaeological potential of these soils. It will also inform the subsequent piling programme.

We would suggest that a commitment to split the contract would somewhat alleviate the risk and remove the burden from the construction phase, this is a proven methodology in urban sites. The construction contract would be preceded by an archaeological investigation contract (i.e. in the site preparation phase supported by a small contractor team). The investigations would establish the location, nature and depths of the industrial archaeological deposits across the site. In this way, the impact of the developmental can be established and adequate time would be allowed for an integrated design response, by the archaeologist, engineer and architect to be developed in consultation with and approval from the City Archaeologist to ensure minimal impact to the archaeological remains. The detailed design will focus on the avoidance of significant industrial archaeological deposits and for the archaeological resolution and detailed recording of some areas if necessary (which will involve an archaeological excavation crew). Once this work is completed the main construction contract can commence.

6.3. General

All recommendations are subject to the approval of the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht and the City Archaeologist for Dublin. This suggested strategy does not prejudice recommendations made by the National Monuments Service, the Dublin City Archaeologist and the planning authority who may make additional recommendations.

The developer will make provision to allow for and fund whatever archaeological work may be required at the site and the post excavation requirements in accordance with the National Monuments Legislation (1930–2004; Appendix 2).

7. REFERENCES

Ball, F. E. (1906) *A History of the County Dublin, Part IV*, the H.S.P. Library, Dublin.

Bennet, D. (1991) *Encyclopaedia of Dublin,* Gill and Macmillan, Dublin.

Bermingham, N. (2000) in Bennett, I. (ed.) *Excavations 1999: Summary Accounts of Archaeological Excavations in Ireland*, Dublin, 63.

Briggs, C.S. (1985) A neglected Viking burial with beads from Kilmainham, Dublin, discovered in 1847, *Medieval Archaeology* 29, 94-108.

Clancy, P. (2003) *Proposed redevelopment of Conyngham Road*, Planning Reference 5424/03. Unpublished report. Margaret Gowen & Co Ltd.

Courtney, L. (2005) *Archaeological Appraisal of proposed development at Hickeys Factory, Parkgate Street, Dublin 8.* Unpublished report. Margaret Gowen & Co Ltd.

Conlin, S and De Courcy, J. (1988) *Anna Liffey: The River of Dublin*, Dublin.

Corlett, C. (1997) in Bennett, I. (ed) *Excavations 1996: Summary Accounts of Archaeological Excavations in Ireland*, Dublin.

De Courcy, J. W. (1996) *The Liffey in Dublin.* Gill and Macmillan, Dublin.

Deery, S. (2018). *Hickey's Factory Parkgate Street, Archaeological Desk Study*. Unpublished report. Courtney Deery Heritage Consultancy Ltd.

Graham-Campbell, J., 1976 The Viking-Age silver hoards of Ireland. In B. Almqvist and D. Greene (eds), *Proceedings of the Seventh Viking Congress*, 39-74, Royal Irish Academy, Dublin.

Halpin, E. (1998) *Parkgate Street, Dublin*

Joyce, W. St. J. (1995) *The Neighbourhood of Dublin*, Hughes and Hughes Ltd, Dublin.

Kenny, C. (1995) *Kilmainham: The History and Settlement Older than Dublin*, Dublin.

Murphy, M. (1995) 12-24 Montpelier Hill, Dublin, Dublin, Excavations.ie Ref: 1995:079 - (accessed 27/08/2018)

O'Brien, E. (1998) 'The location and context of Viking burials at Kilmainham and Islandbridge, Dublin', in Clarke, H.B., Ní Mhaonaigh, M. & Ó Floinn, R. (eds) *Ireland and Scandinavia in the Early Viking Age*, Dublin, 203-21.

Ó'Floinn Raghnall, 1998, 'The archaeology of the Early Viking Age in Ireland' in Howard B. Clarke, Máire Ní Mhaonaigh and Raghnall Ó Floinn (eds), *Ireland and Scandinavia in the Early Viking Age,* 132-65. Cornwall.

Scally, G. (1997) in Bennett, I. (ed.) *Excavations 1996: Summary Accounts of Archaeological Excavations in Ireland*, Dublin.

Scally, G. (1999) in Bennett, I. (ed.) *Excavations 1998: Summary Accounts of Archaeological Excavations in Ireland*, Dublin.

Simpson, L. (2002) 50 Montpelier Hill, Dublin 2002:0565 Excavations.ie

Simpson, L. (2004) Stratigraphic reports for Bully's Acre, Kilmainham, Dublin 8 (Licence no. 598) and Con Colbert Road/memorial park (Inchicore North) Island bridge, Dublin 8 (Licence no E497)

Slattery, D. (2005) *Report on the Architectural/Historic Significance of Buildings and structures at Hickeys Fabrics Parkgate House, Parkgate Street, Dublin 8*. Unpublished Report.

www.excavations.ie website

Online Resources:

www.archaeology.ie
www.downsurvey.tcd.ie
www.excavations.ie
www.gsi.ie
www.logainm.ie
www.heritagemaps.ie
www.osi.ie

APPENDIX 1 TABLES SHOWING RESULTS OF MONITORING

BH 101		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.10	Concrete	Modern
0.10 – 0.60	Rubble fills, gravels with inclusions of brink, bone and mortar	Demolition material
0.60 – 1.50	Dark brown to black silty clay with inclusions of shell and slag	Industrial materials
1.50 – 2.50	Brown slightly silty clay with occasional mortar charcoal and red brick	Reclamation soils
1.50 – 3.40	Soft light brown sandy silty clay	Reclamation soils
3.40 – 4.50	Medium dense brown sandy slightly clayey sub- angular to rounded fine to medium gravel	Gravel
4.50 – 5.50	Loose sandy slightly clayey sub- angular to rounded fine to medium gravel with sub-angular to round cobbles	Gravel
5.50 – 7.10	Medium dense grey slightly clayey sandy fine to medium angular to sub-rounded gravel	Gravel
7.10 – 8.60	Weathered mudstone and limestone	Rock
8.60 – 12.60	Bedrock	Rock
		

BH 102		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.05	Tramacadam	Modern
0.05 – 0.30	Grey brown slightly clayey sandy fine to coarse sub-angular. Gravel with cement.	Demolition material
0.30 – 1.50	Brown sandy very clayed fine to coarse angular to sub-round gravel	Industrial
1.50 – 2.10	Light brown mottled dark brown slightly sandy gravelly clay with mortar and redbrick fragments	Industrial
2.10 – 3.00	Soft dark grey slightly sandy slightly gravelly clay	Reclamation soils
3.00 – 3.50	Firm dark grey slightly sandy slightly gravelly clay	Reclamation soils

BH 102		
Depth (BGL)	**Description**	**Interpretation**
3.50 – 5.25	Loose brown slightly clayey sandy sub-angular to sub-rounded fine to medium gravel	Gravel
5.25 – 6.00	Medium dense brown slightly clayey sandy sub-angular to sub-rounded to medium gravel with wood fragments	Gravel
6.00 – 6.40	Firm dark grey slightly sandy slightly gravelly silty clay	Riverine
6.40 – 15.50	Bedrock	Rock

BH 103		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.30	Tramacadam	Modern
0.30 – 1.00	Brown slightly sandy very clayey fine to coarse angular to sub-rounded Gravel with concrete tarmacadam and redbrick.	Demolition material
1.00 – 2.40	Brown slightly sandy gravelly Clay with mortar and charcoal fragments.	Industrial materials
2.40 – 3.60	Firm grey slightly gravelly silty clay	Reclamation soils
3.60 – 3.90	Loose grey slightly sandy very clayey fine to coarse sub-angular to sub-rounded gravel	Reclamation soils
3.90 – 5.70	Soft to firm grey slightly sandy very gravelly clay	Riverine
5.70 – 6.70	Clay with fine gravels and boulders	Riverine
6.70 – 15.10	Bedrock	Rock

BH 104		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 5.00	Greyish brown slightly sandy gravelly clay with occasional subrounded cobbles and some ceramic, concrete and red brick fragments	Industrial materials
5.00 – 6.20	Stiff greyish brown slightly sandy gravelly clay. Gravel is angular to subrounded. Lense of soft grey mottled black gravelly clay with spongy Pseudofibrous Peat occurs between 5.80m to 6.20m BGL	Reclamation soils
6.20 – 7.40	Dense grey sandy gravel. Sand is predominately coarse and gravel is subangular to rounded	Riverine
7.40 – 15.60	Rock	Rock

BH 105		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 1.30	Concrete	Modern
1.30 – 6.50	Poor recovery - recovery consists of brown slightly sandy slightly gravelly silt. Gravel is fine subrounded and sand is predominately fine. Drillers notes: Sandy silt (Soft)	Industrial materials / Reclamation soils
6.50 – 8.50	Poor recovery - recovery consists of grey sandy fine to coarse angular to subrounded gravel of variable lithology. Drillers notes: Sand - Gravel (Loose)	Riverine

BH 105		
Depth (BGL)	**Description**	**Interpretation**
8.50 – 17.00	Rock	Bedrock

BH 106		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.10	Concrete	Modern
0.10 – 2.20	Clay and gravel	Industrial
2.20 – 3.70	Natural brown sandy gravelly clay (soft)	Reclamation soils
3.70 – 4.70	Brown slightly sandy silty clay (Soft to firm)	Reclamation soils
4.70 – 6.70	Loose to medium dense brown sandy clayey fine to coarse sub-angular to sub-rounded gravel	Riverine
6.70 – 8.00	Grey slightly sandy slightly clayey fine to coarse sub-angular to sub-rounded gravel (Loose) with occasional cobbles. Grey brown slightly sandy silt (Soft).	Riverine
8.00 – 12.70	Bedrock	Rock

BH 107		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.10	Concrete	Modern
0.10 – 3.70	Poor recovery. Brown sandy clay	Reclamation soils
3.70 – 7.50	Poor recovery. Sandy gravel	Riverine
7.50 – 12.00	Bedrock	Rock

Window Sampling

WS 101		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.10	Concrete	Modern
0.10 – 0.55	Stones gravel	Modern
0.55 – 1.60	Grey brown sandy very gravelly clay with some old redbrick, mortar, slag and charcoal fragments (1.00-2.00m - 65% Recovery)	Industrial
1.60 – 2.00	Light brown slightly sandy silty clay with occasional charcoal and mortar fragments	Reclamation
2.00 – 2.90	Soft light brown slightly sandy silty clay (2.00-3.00m – 45% Recovery)	Reclamation
2.90 – 4.00	Brown slightly clayey gravelly fine to coarse sand with occasional cobbles (3.00-4.00m – 55% Recovery)	Reclamation

WS 102		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.09	Concrete	Asbestos
0.09 – 0.40	Brown sandy very clayey angular to sub rounded fine to coarse gravel with some angular to sub angular cobbles and boulders	Modern
0.40 – 1.20	Dark grey mottled slightly sandy very gravelly clay with redbrick, ash and slag fragments	Industrial
1.20	Cobble or Boulder	

WS 102 A		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.10	Concrete	Modern
0.10– 1.90	Black to brown sandy clay flecked with charcoal and inclusion of mortar and post medieval ceramic (0.00-0.60m - Handpit 0.60-1.00m - 40% Recovery 1.00-2.00m - 65% Recovery)	Demolition material
1.90 – 2.90	Brown clay silt with inclusions of shell and slay	Reclamation soils
2.90 – 4.00	Brown fine sand and gravels	Riverine
		

WS 103		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.24	Concrete	Modern
0.24 – 0.60	Brown slightly sandy very gravelly clay	Modern
0.60 – 1.00	Dark brown black mottled orange sandy clayey angular to subrounded fine to medium gravel with redbrick, mortar and slag fragments	Industrial
1.00 – 1.60	Dark grey brown slightly sandy gravelly clay with ceramic and mortar fragments	Industrial
1.60 – 3.30	Dark grey brown sandy very clayey angular to subrounded fine to coarse gravel with many slag fragments	Industrial

WS 103		
Depth (BGL)	**Description**	**Interpretation**
	(2.00-3.00m - 50% Recovery)	
3.30 – 3.60	Soft to firm brown slightly sandy silty clay	Reclamation
3.60 – 4.00	Brown gravelly subangular to subrounded fine to coarse sand	Riverine

WS 104		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.14	Concrete	Modern
0.14 – 0.84	Rubble fills, gravels with inclusions of brink, bone and mortar	Demolition material
0.84 – 1.80	Dark brown to black silty clay with inclusions of charcoal shell and slag	Industrial material
1.80 – 2.00	Brown slightly sandy slightly gravelly silty clay with occasional mortar and charcoal fragments	Reclamation soils
2.00 – 2-60	Soft brown silt clay	Reclamation soils
2.60 – 2.80	Brown sandy gravels	Obstruction 2.80 cobble/boulder
		

WS 105		
Depth (BGL)	**Description**	**Interpretation**
0.00 -0.50	Asbestos	

WS 105A		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.16	Concrete	Modern
0.16 – 1.00	Dark grey brown slightly clayey angular to subrounded fine to medium gravel with many old redbrick, tarmacadam, mortar and slag fragments	Modern

WS 105A		
Depth (BGL)	**Description**	**Interpretation**
1.00 – 1.30	Brown slightly sandy very clayey angular to subangular fine to coarse gravel	Industrial (Obstruction 1.30 cobble/boulder)

WS 106		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.14	Concrete	Modern
0.14 – 0.65	Rubble fills, gravels with inclusions of brink, bone and mortar	Demolition material
0.65 – 1.25	Brown sandy clay with inclusions of shell and slag	Industrial material
1.25 – 2.10	Rubble fills, gravels with inclusions of brick, bone and mortar	Industrial material
2.10 – 2.50	Black sandy clay with inclusions of mortar and slag	Industrial material
2.50 – 3.00	Brown silty clay	Reclamation soils
3.00. – 4.00	Fine gravels and riverine sands	Riverine deposits
		

WS 107		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 1.60	Grey brown slightly sandy very gravelly clay with some redbrick fragments	Modern
1.60 – 2.10	Brown slightly sandy slightly gravelly clay with some redbrick fragments	Industrial material
2.10 – 3.10	Soft grey slightly gravelly silt/clay with occasional shell fragments	Reclamation soils
3.10 – 3.70	Grey brown sandy very clayey angular to subrounded fine to medium gravel	Reclamation soils (contamination?)

WS 107		
Depth (BGL)	**Description**	**Interpretation**
		

WS 108		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.12	Concrete	Modern
0.12 – 0.70	Rubble fills, gravels with inclusions of brink and mortar	Demolition material
0.70 – 1.90	Brown silty clay with inclusions of red brick, mortar and charcoal	Industrial material
1.90 – 2.60	Brown silty clay with flecks of mortar and charcoal	Reclamation soils
2.60 – 3.50	Soft to firm brown slightly sandy gravelly clay	Reclamation soils
3.00 – 3.50	Grey brown silty clay	
		

WS 109		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.08	Concrete	Modern
0.08 – 4.00	Brown sandy clay flecked with charcoal and inclusion of mortar and post medieval ceramic	Reclamation soils

WS 109		
Depth (BGL)	**Description**	**Interpretation**
		

WS 110		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.09	Concrete	Modern
0.09- 1.00	Rubble gravel fills with redbrick	Demolition material
1.00 – 2.40	Brown sandy clay flecked with charcoal and inclusion of mortar chuck and bone	Reclamation soils
2.40 – 3.30	Brown sandy clay similar to above but with a higher percentage of gravels	Reclamation soils
3.30 – 3.80	Dark grey silty clay with high percentage of gravels and sand with occasional shell. (Odorous)	Reclamation soils
3.80 – 4.00	Gravels	Riverine
		

WS 111		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.11	Concrete	Modern
0.11 – 0.55	Grey brown mottled yellow slightly sandy clayey fine to coarse angular to sub-rounded gravel with some yellow brick fragments	Demolition

WS 111		
Depth (BGL)	**Description**	**Interpretation**
0.55	Competed	Unknown

WS 112		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.60	Concrete	Modern
0.60 – 2.00	Brown sandy clay flecked with charcoal and inclusion of mortar chucks	Reclamation soils
2.00 – 2.60	Void	
2.60 – 2.80	Dark stained to brown clay with a higher percentage of gravels with inclusions of brick, mortar and charcoal	Reclamation soils
		

WS 113		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 1.10	Concrete	Modern
1.10 – 1.40	Rubble fills, gravels with inclusions of brink, shell and mortar	Demolition material
1.40 – 1.90	Dark brown to black silty clay with inclusions of shell and flecks of slag	Industrial material
1.90 – 2.50	Brown silty clay flecked with charcoal with inclusions of red brick and chunks of mortar	Industrial material
2.50 – 3.00	Brown silty clay	Reclamation soils

WS 113		
Depth (BGL)	**Description**	**Interpretation**
		

WS 114		
Depth (BGL)	**Description**	**Interpretation**
0.00 - 0.70	Concrete	Modern
0.70 - 1.00	Dark brown silty clay	Modern
1.00 - 1.30	Re-deposit brown clay with a high percentage of mica	Modern
1.30 – 2.00	Dark brown and black friable sandy clay with inclusions of rubble and brick	Industrial material
2.00 – 2.60	Brown gravelly silty clays flecked with charcoal and inclusions of mortar fragments	Industrial material
2.60 – 3.00	Brown silty clay	Reclamation soils
		

WS 115		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.08	Modern surface	Modern
0.08 – 0.30	Rubble gravel fills with redbrick	Demolition material
0.30 – 1.80	Brown silty clay flecked with charcoal and inclusions of pebbles	Reclamation soils
1.80 – 3.30	Brown clay flecked with charcoal and inclusion of mortar flecks	Reclamation soils
		

WS 116		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.20	Concrete	Modern
0.20	Void – Wall visible beneath the concrete	Unknown

WS 117		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.04	Black gravels ground surface	Modern
0.04 – 0.70	Rubble gravel fills with redbrick	Demolition material
0.70 – 2.90	Mid - brown silty clay flecked with charcoal and inclusions of pebbles and mortar flecks	Reclamation soils
2.90 – 3.90	Dark brown silty clay flecked with charcoal, inclusions of shell and ceramic	Reclamation soils (contamination?)
3.90 – 4.00	Dark grey silty clay with high percentage of gravels. (Odorous)	Riverine fills

WS 117		
Depth (BGL)	**Description**	**Interpretation**
		

Test Pits

TP 01- Foundation Trench 1 (River Trench)		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.10	Concrete	Modern
0.10 – 0.26	Rubble gravel fills with redbrick	Demolition material
0.26 – 0.80	Brown clay, friable	Garden soils
0.80 – 1.80	Dark brown mottled light grey slightly sandy very clayey angular to subangular fine to coarse gravel with many slag, redbrick and mortar fragments and some glass and ash fragments	Demolition material
1.80 – 2.20	Brown slightly sandy slightly gravelly clay with some charcoal and redbrick fragments and old rootlets and shell fragments	Reclamation soils
2.20 – 2.80	Mid - brown clay with a high percentage of fine sand	Reclamation soils
2.80 – 3.80	Fine sandy with pockets of clay and gravels, inclusions of bones	Riverine

TP 01- Foundation Trench 1 (River Trench) - wall face		
Depth (BGL)	**Description**	**Interpretation**
2.20 – 0.00	Breeze block wall	Modern
0.00 – 0.15	Concrete	Modern
0.15 – 0.20	Layer of red brick set in sandy mortar	Demolition material
0.20 – 0.30	Brown clay friable	Garden soils
0.30 – 1.50	Red brick – c.10 courses visible with grey- white lime mortar	Wall
1.50 – 1.80	Small to average sized lime stones and mortar	Foundation of redbrick wall
1.80 – 2.20	Limestone blocks and large stones	Quay wall upper
2.20 – 3.80	Mudstone slabs and irregular shapes stones	Quay wall lower

TP 02- Foundation Trench 2 (Yard Trench)		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.10	Concrete	Modern
0.10 – 0.35	Grey brown rubble fill with bricks	Demolition material
0.35 – 0.90	Dark brown slightly sandy very clayey angular to subangular fine to coarse Gravel with limestone boulders, redbrick, granite block and mortar fragments	Industrial material
0.90 – 1.50	Light brown stones and rubble	Industrial material
1.50 – 1.70	Layer of lime mortar	Ground surface when structure was built
1.80 – 3.00	Brown silty clay with inclusion of shell and bone	Reclamation soils
3.00 – 3.50	Brown sandy clay with inclusion of ceramic	Reclamation soils
3.50	Dark grey gravels	Riverine ?

TP 02- Foundation Trench 2 (Yard Trench) – wall face		
Depth (BGL)	**Description**	**Interpretation**
	Upstanding limestone block wall with granite corner stones	Upstanding structure
0.00 – 0.15	Concrete	Modern yard surface
0.15 – 1.00	Upstanding limestone block wall with granite corner stones	Upstanding structure
1.00 – 2.20	Rough limestone and mortar fill (set 0.15m) out from wall)	Foundation
2.20 – 2.90	Rough limestone and mortar fill (set 0.30m) out from wall)	Foundation
2.90 – 3.50	Brown clays	Reclamation soils

TP 03- Foundation Trench 3 (Warehouse Trench)		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.12	Concrete	Modern
0.10 – 1.90	Grey brown rubble fill with bricks, roof slates and limestone stones.	Demolition material

TP 03- Foundation Trench 3 (Warehouse Trench) – wall face		
Depth (BGL)	**Description**	**Interpretation**
	Upstanding limestone block wall	Upstanding structure
0.00 – 0.40	Upstanding limestone block wall	Upstanding structure
0.40 – 1.55	Limestone blocks/stones some signs of pointing (stepped 0.08m from wall)	Foundation
1.55 – 0.90	Limestone blocks/stones (stepped 0.12m from layer above)	Foundation

TP 04		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.17	Concrete	Modern

TP 04		
Depth (BGL)	**Description**	**Interpretation**
0.17 – 1.55	Brown sandy gravels with rebrick and mortar fragments East of concrete wall located directly below concrete slab and 1.30 m east of the boundary wall, orientated north south.	Industrial material
0.17 – 1.35	Dark brown black rubble fills with inclusions of redbrick slag, plastics and metal piping. Located west of concrete wall, lead piping 1.30m below ground surface.	Industrial material
		

TP 05		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.17	Concrete	Modern
0.17 – 1.40	Dark brown black rubble fills with inclusions of redbrick slag, plastics and metal piping	Industrial material
1.40	Concrete	Concrete floor of structure
		

Slot Trench

ST 01 – Slot Trench Road Side		
Depth (BGL)	**Description**	**Interpretation**
0.00 – 0.15	Concrete	Modern
0.15 – 0.35	Brown sandy gravels fills	Modern
0.35 – 0.65	Mid to dark brown sandy gravels with mortar chucks	Industrial material
0.65 – 0.95	Brown silty clay flecked with charcoal with inclusions of shell and bone	Industrial material
0.95- 1.15	Grey brown silty clays at the base of which was s higher concentration of mortar	Industrial material
1.15 – 2.50	Brown silty clay with gravels and inclusions of red brick	Reclamation soils
		

APPENDIX 2 SUMMARY OF RELEVANT LEGISLATION

National Monuments Legislation 1930-2004

All archaeological sites have the full protection of the national monuments legislation (Principal Act 1930; Amendments 1954, 1987, 1994 and 2004).
In the 1987 Amendment of Section 2 of the Principal Act (1930), the definition of a national monument is specified as:
any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections,
any artificial cave, stone or natural product, whether forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position,
any, or any part of any, prehistoric or ancient
(i) tomb, grave or burial deposit, or
(ii) ritual, industrial or habitation site,
and
any place comprising the remains or traces of any such building, structure or erection, any cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site...
Under Section 14 of the Principal Act (1930):
It shall be unlawful...
to demolish or remove wholly or in part or to disfigure, deface, alter, or in any manner injure or interfere with any such national monument without or otherwise than in accordance with the consent hereinafter mentioned (a licence issued by the Office of Public Works National Monuments Branch),
or
to excavate, dig, plough or otherwise disturb the ground within, around, or in the proximity to any such national monument without or otherwise than in accordance...
Under Amendment to Section 23 of the Principal Act (1930),
A person who finds an archaeological object shall, within four days after the finding, make a report of it to a member of the Garda Síochána...or the Director of the National Museum...

The latter is of relevance to any finds made during a watching brief.
In the 1994 Amendment of Section 12 of the Principal Act (1930), all of the sites and 'places' recorded by the Sites and Monuments Record of the Office of Public Works are provided with a new status in law. This new status provides a level of protection to the listed sites that is equivalent to that accorded to 'registered' sites [Section 8(1), National Monuments Amendment Act 1954] as follows:
The Commissioners shall establish and maintain a record of monuments and places where they believe there are monuments and the record shall be comprised of a list of monuments and such places and a map or maps showing each monument and such place in respect of each county in the State.
The Commissioners shall cause to be exhibited in a prescribed manner in each county the list and map or maps of the county drawn up and publish in a prescribed manner information about when and where the lists and maps may be consulted.

- In addition, when the owner or occupier (not being the Commissioners) of a monument or place which has been recorded, or any person proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Commissioners and shall not, except in the case of urgent necessity and with the consent of the Commissioners, commence the work for a period of two months after having given the notice.

The National Monuments Amendment Act 2004

The National Monuments Amendment Act enacted in 2004 provides clarification in relation to the division of responsibilities between the Minister of Environment, Heritage and Local Government, Finance and Arts, Sports and Tourism together with the Commissioners of Public Works. The Minister of Environment, Heritage and Local Government will issue directions relating to archaeological works and will be advised by the National Monuments Section and the National Museum of Ireland. The Act gives discretion to the Minister of Environment, Heritage and Local Government to grant consent or issue directions in relation to road developments (Section 49 and 51) approved by An Bord Pleanála and/or in relation to the discovery of National Monuments

14A. (1) The consent of the Minister under section 14 of this Act and any further consent or licence under any other provision of the National Monuments Acts 1930 to 2004 shall not be required where the works involved are connected with an approved road development.

(2) Any works of an archaeological nature that are carried out in respect of an approved road development shall be carried out in accordance with the directions of the Minister, which directions shall be issued following consultation by the minister with the Director of the National Museum of Ireland.

Subsection 14A (4) Where a national monument has been discovered to which subsection (3) of this section relates, then

(a) the road authority carrying out the road development shall report the discovery to the Minister
(b) subject to subsection (7) of this section, and pending any directions by the minister under paragraph (d) of this subsection, no works which would interfere with the monument shall be carried out, except works urgently required to secure its preservation carried out in accordance with such measures as may be specified by the Minister

The Minister will consult with the Director of the National Museum of Ireland for a period not longer than 14 days before issuing further directions in relation to the national monument.

The Minister will not be restricted to archaeological considerations alone, but will also consider the wider public interest.

APPENDIX 3 19E0781 ARCHAEOLOGICAL ASSESSMENT REPORT

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Archaeological Assessment Report:

No 42A Parkgate Street

(Former Hickey's Fabric Factory)

Dublin 8

Planning ref.: N/A Preplanning

Licence No. 19E0781

ITM: 713663 734400

Licenced Archaeological Director: Edmond O'Donovan

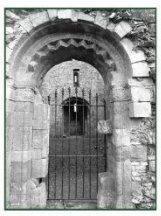
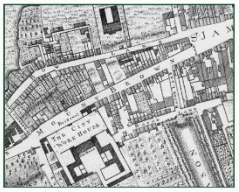
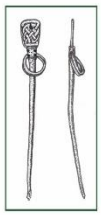
Archaeological Consultant: Lisa Courtney

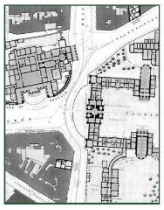
Graphics: Reddy Architecture+Urbanism

For

Chartered Land Ltd

20th March 2020



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EXECUTIVE SUMMARY

This report describes the results of an archaeological assessment undertaken at 42A Parkgate Street Northwest Dublin 8 (Licence no.: 19E0781). It was undertaken on behalf of Chartered Land Ltd. The testing was carried out under licence by Edmond O'Donovan.

In total twelve test pits approximately measuring 3m x 3m were archaeological examined and recorded over a six-day period from the 6th-13th February 2020. The test pits yielded early 19th and 20th century industrial deposits and features associated with the Phoenix Iron Works and later factories on site.

Based upon development design and impact of a dense piling layout and having considered the archaeological findings, it is recommended that the Dublin City Council (subject to planning approval) attach a condition requiring that archaeological excavation be carried out within the basement / undercroft footprint of the proposed development (part of Block B and C) and also that archaeological excavation be carried out under Block A.

Prior to the demolition of existing 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) should take place in order to add to the archaeological record of the subsurface industrial remains.

These works should be accommodated within a designated window for archaeological work established within the demolition and ground works construction contract with a suitable programme for archaeological work which must be accommodated within the construction programme.

All recommendations are subject to the approval of the City Archaeologist of Dublin City Council and the National Monuments Service of the Department of Culture Heritage and the Gaeltacht.

Illustration 1 View from Heuston Station

1. INTRODUCTION

1.1. Report Brief

This report provides the results of archaeological assessment based upon archaeological test excavation undertaken to provide a broader understanding of the below ground archaeological potential of the site at 42A Parkgate Street (Figure 1).

The proposed development (Figure 1) is located within the constraint area or zone of archaeological potential for the Historic City of Dublin, which is a Recorded Monument / Place (RMP Ref: DU018-020---). This affords the site protection under National Monuments Legislation (Appendix 1).

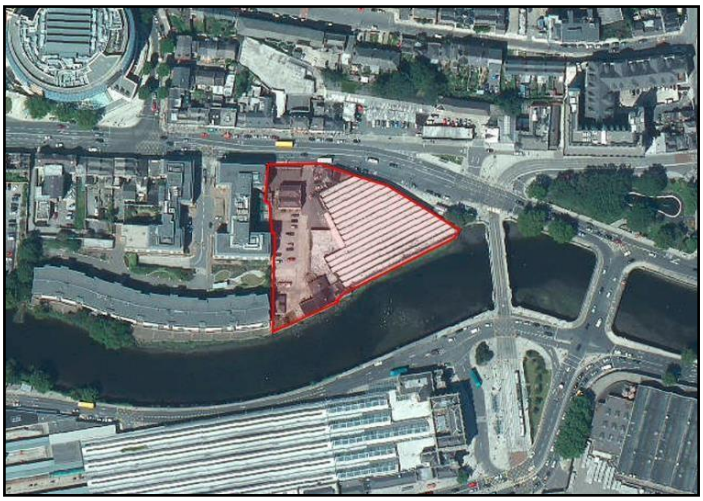


Figure 1 Site location

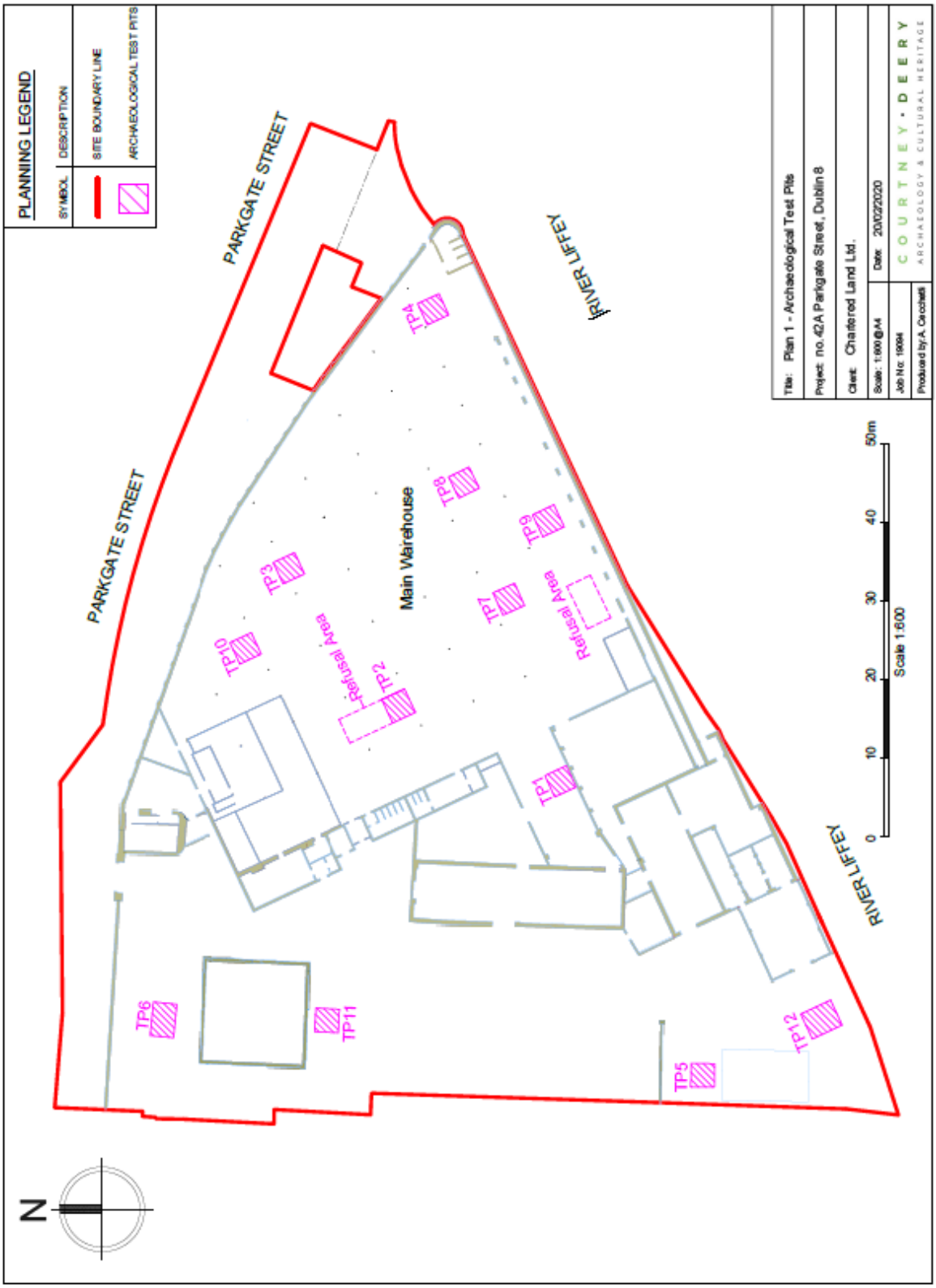
The archaeological investigation was undertaken in response to the proposed development (described below) that is currently being considered on the site. It was also undertaken in response to consultation with the City Archaeologist where it was suggested that the site would benefit from archaeological assessment as early as possible in the design and planning process.

In particular, the assessment was conducted in order to address two key questions in relation to the archaeology at the site:

- Is there the potential to uncover medieval or earlier archaeological remains specifically dating to the Viking Period on site?
  and
- to what extent do the industrial heritage remains of 19th century date survive below ground level?

Test excavation was carried out by Edmond O'Donovan under licence to the statutory authorities (Licence 19E0781) once the site was vacated in February 2020. In total, twelve test pits were examined, 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 (Plan 1).



1.2. Site Location

The site is located on Parkgate Street, on the northern bank of the River Liffey, opposite the point of discharge for the River Camac and immediately west of Sean Heuston Bridge (Figure 2). It lies 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.

Figure 2 View of proposed development site looking north

1.3. Proposed Site Description

The landowner, Chartered Land Ltd, is proposing to redevelop the site with the demolition of the existing factory buildings whilst retaining the historic protected building/ structures. The development involves the construction of three interconnecting tall buildings with a basement under the central structure for a mixed-use development.

Illustrations by Reddy Architecture + Urbanism of the proposed development are placed throughout the report to provide an understanding of how various heritage features will present (Illustration 1-5) (these features and structures are discussed in detail in Chapter 12 Architectural Heritage of the EIAR for Parkgate Street) and how the overall development will look from various viewpoints (Appendix 4).

1.4. Previous Archaeological Assessment and Investigations at 42A Parkgate Street Site Description

Test excavation follows on from the ground investigation (GI) phase of works which were conducted throughout March-May 2019 on behalf of Chartered Land Ltd. This phase of works was archaeologically monitored under licence (19E01779) (Clancy 2019) (Plan 2).

In summary, the results of the ground investigations confirmed the presence of made ground across the site to a depth of 3 – 5 meters BGL (Beneath Ground Level). Beneath the modern ground surfaces of concrete and tarmac is a layer of building rubble with a high concentration of red brick. This ranged in depth between 0.35m – 1.80m BGL.

The rubble fills overlay deposits of industrial material, these were characterised by black charcoal-rich clays with varying degrees of sands and gravels. Inclusions of slag, shell, bone and mortar were noted. These deposits ranged between 0.45m – 1.90m BGL. They were predominately located in the southern half of the site and appear to infill sub-surface foundations/ structures. These deposits are possibly associated with the demolition of the 19th century iron works.

It appears that industrial activity relating to the 19th century iron works occur at a depth of approximately 0.5m to 2m BGL. Results appear to indicate foundations, possible wall and floor levels associated with the iron works and later phases on site.

Largely beneath the industrial deposits were brown clays at 2m-3m+ BGL. Inclusions of bone and ceramic were noted in these deposits. The uniform nature of these clays across the site would suggest that they are reclamation deposits, perhaps associated with agricultural improvements to the riverside meadow before the construction of the iron works. These deposits overlay riverine sands and dark grey clay with high percentage of gravels and sands.

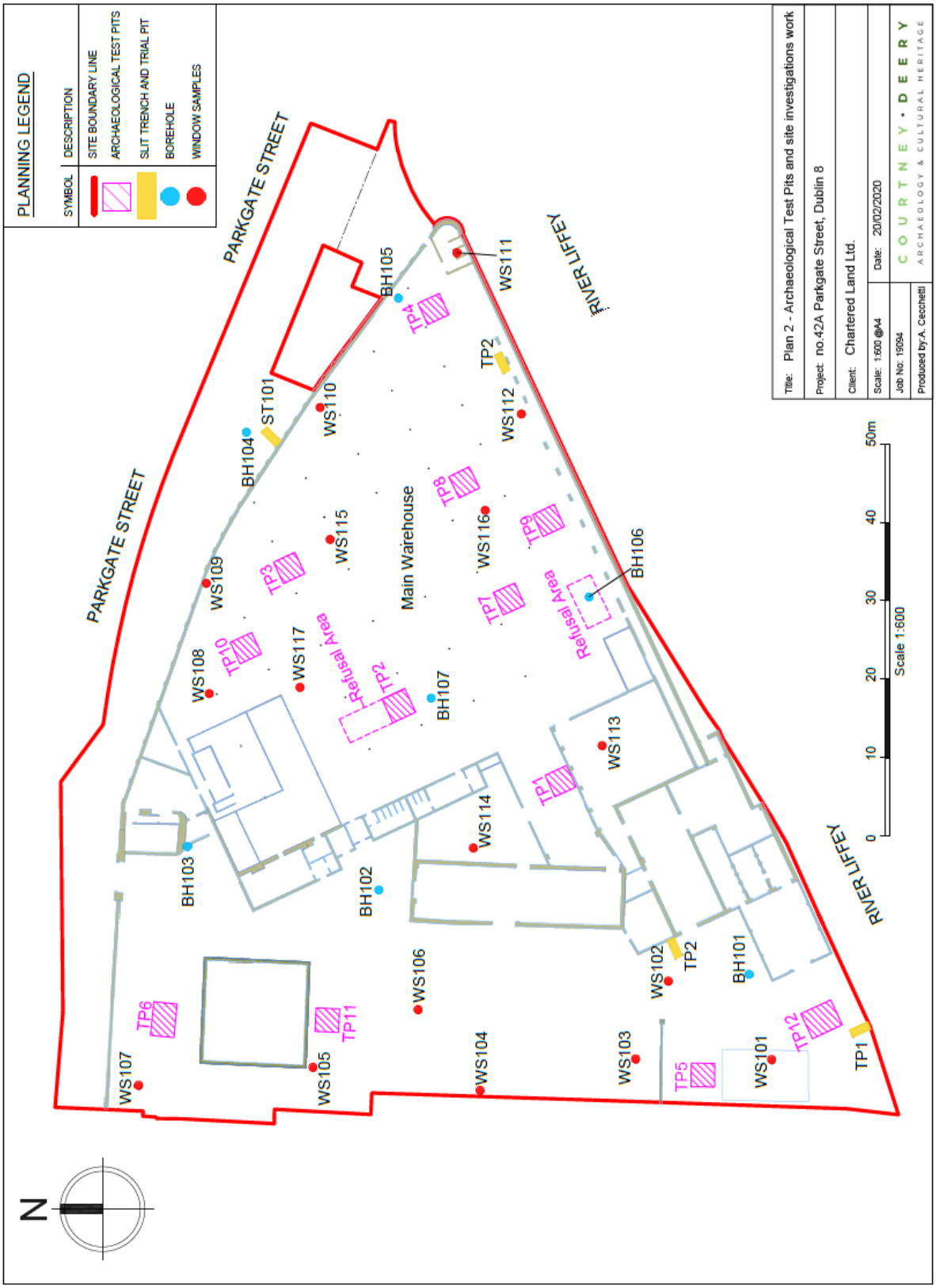
To date the following archaeological reporting has taken place in relation to 42A Parkgate Street:

- Archaeological Desk Study (2018)
- Archaeological Monitoring of GI Works (Licence No. 19E0179)
- Consultation with the City Archaeologist (21st May 2019)
- Preparation of an archaeological chapter for inclusion in the EIAR (January 2020)

1.5. Archaeological Context

The proposed development site lies within the zone of archaeological potential for the Historic City of Dublin (RMP No. DU018-020) (Figure 3). There are no specific recorded monuments located within the site boundary. The nearest recorded archaeological feature is the site of a dwelling, RMP DU018-020532,

located on Montpelier Hill, *c*. 80m to the north. However, the sites location on the south-facing bank of the River Liffey was a significant strategic location throughout the growth and development of the historic city.



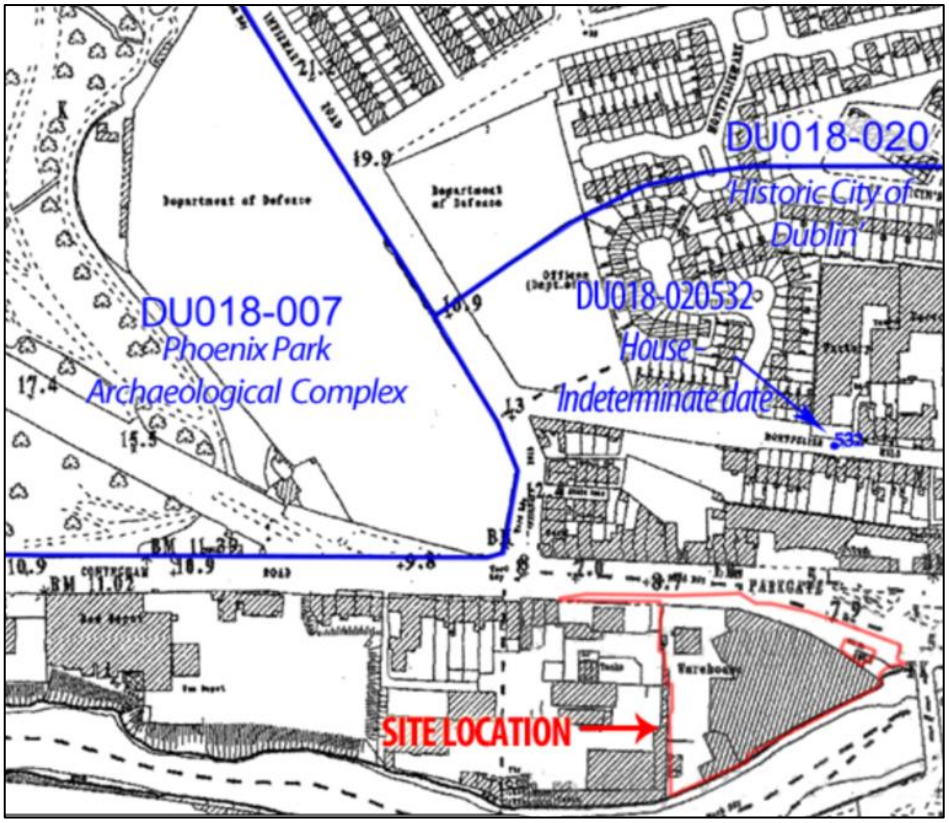


Figure 3 RMP Site Location

The development site does have a medieval archaeological potential as a prominent location between the medieval city centred on Christchurch Cathedral and the known Viking cemeteries around Islandbridge, but this is based on the site's proximity between the two foci of Viking and later medieval settlement. The early post-medieval Down Survey map of *c*. 1656-1658 records the location of a gallows just to the north of the site described as 'Gallows Green'. The gallows appear to be contemporary as it is depicted with wooden posts. It was most likely located west of Collins Barracks around Montpelier Hill, *c*. 100m north of the development site.

Cartographic analysis indicates that the usage of the site evolved from open meadow in the 17th and 18th century up to its use for industrial purposes from the early 19th century onwards with the development of the Phoenix Iron Works in the early 1800s. This was followed by the construction of the Kingsbridge Woollen Factory and the Parkgate Printing Works. One of the sites of cities 'Gallows' was located to the north of the site on low hill as illustrated on the Down Survey maps of the area.

The Phoenix Iron Works was established at the beginning of the 1800's as a large iron foundry involved in moulding and casting, some of the fabric of the iron works survives on site today. It was sold and rebuilt as Kingsbridge Woollen Mills in 1880. Much of the current buildings that remain at No. 42 Parkgate Street date from the 1880 (Plates 1 and 2) and reflect the significant reconstruction and rebuilding of the site at that time when much of the Phoenix Iron Works was demolished.

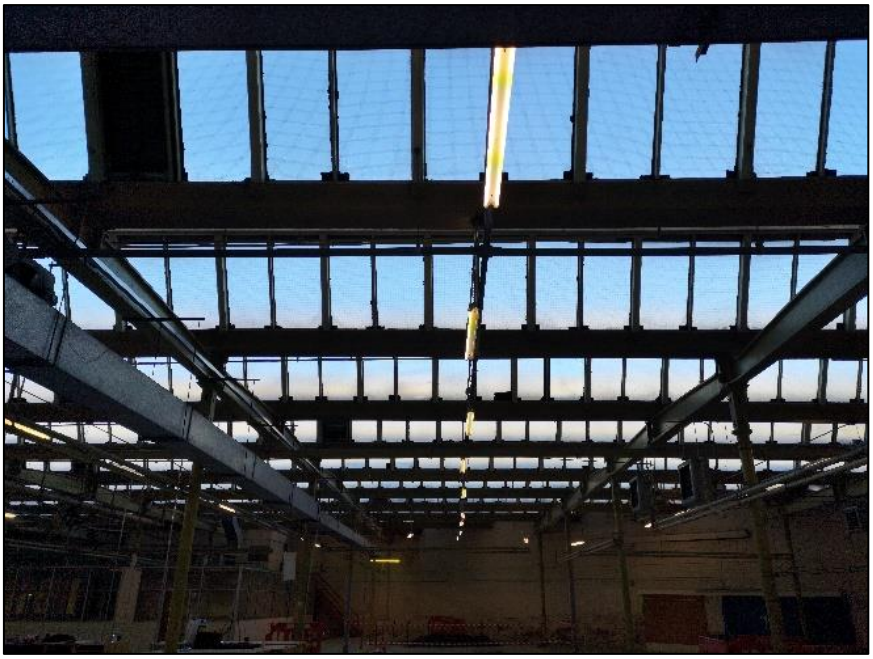


Plate 1 Rooflights c. 1880

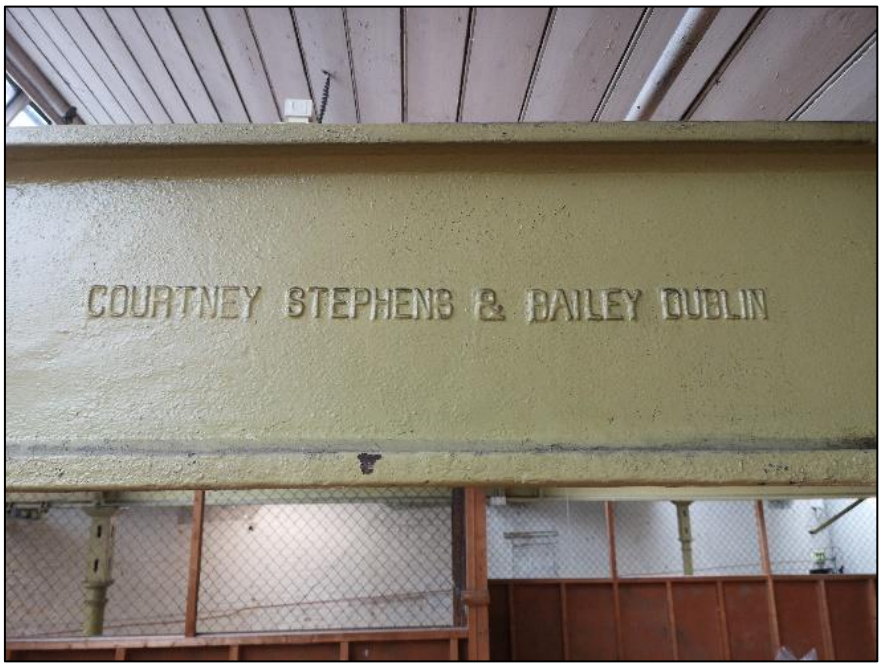
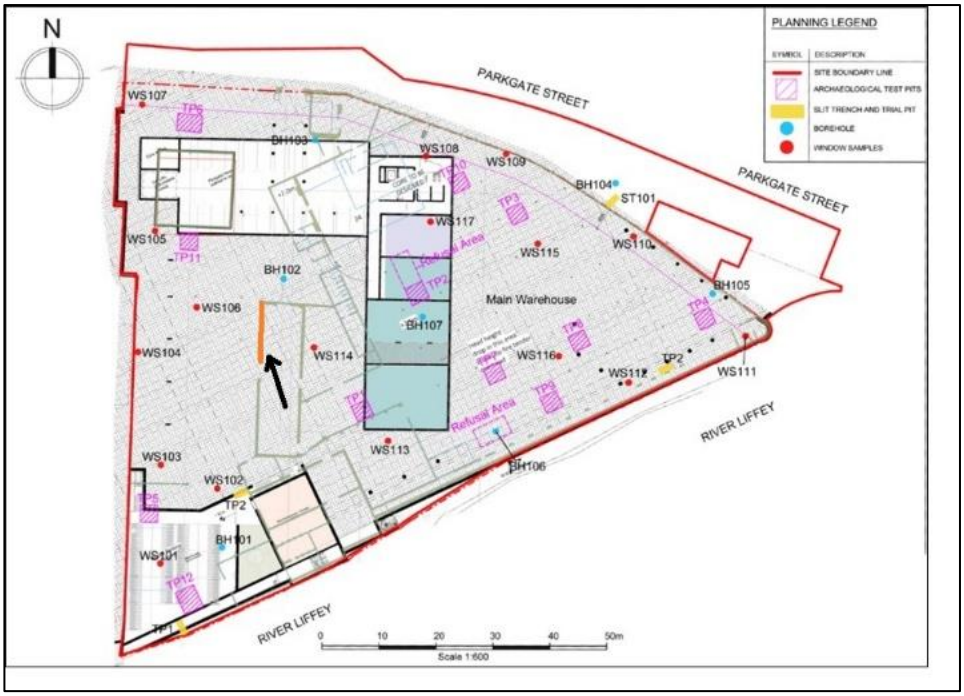


Plate 2 An example of Ironwork within the factory from an engineering partnership formed in 1865

Fragmentary buildings from the iron works also survive as standing buildings (Plate 3, Plan 3 and Figures 4 and 5). During the First World War the woollen mill was converted into a bomb factory (Plate 4 and 5). From the 1920s the factory building was taken over for use as Government Stores. In the 1930s the site was used as a printing factory known as the Parkgate Printing Works (Plate 6). It was bought by the Hickey Fabric Co. in the mid-1970s until it was acquired by Chartered Land Ltd. in 2020.

Plate 3 Wall and Window opes dating to the Phoenix Iron Works



Plan 3 Showing location of wall

Plate 4 Factory workers c. 1914-1918 at the Parkgate Street Dublin National Shell Factory

Plate 5 Canteen c. 1914-1918 at the Parkgate Street Dublin National Shell Factory

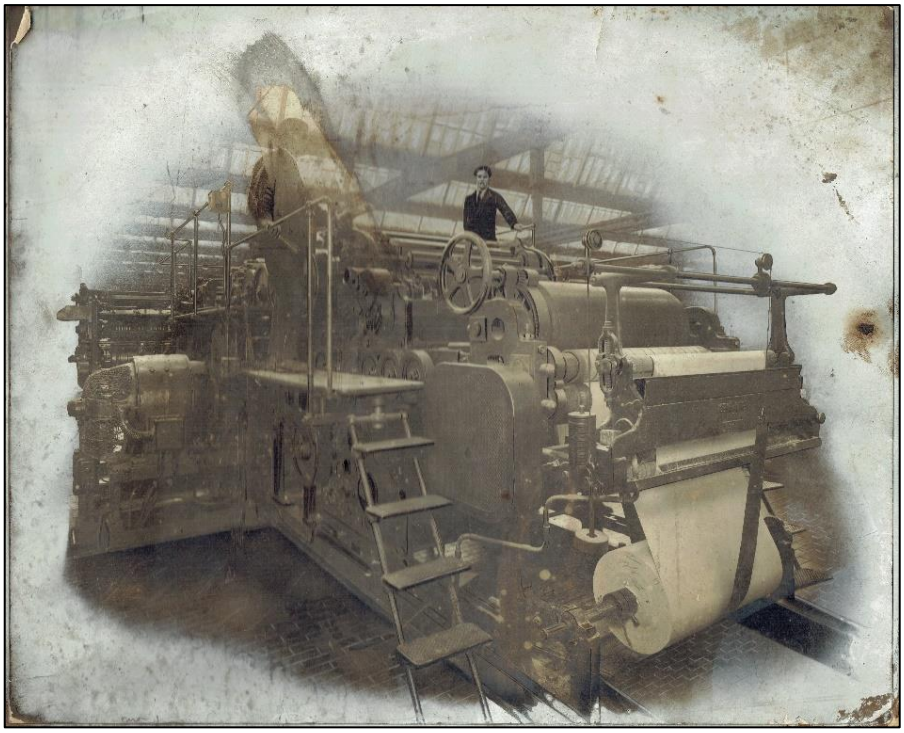


Plate 6 Cahill & Co. Printers c. 194, Parkgate Printing Works

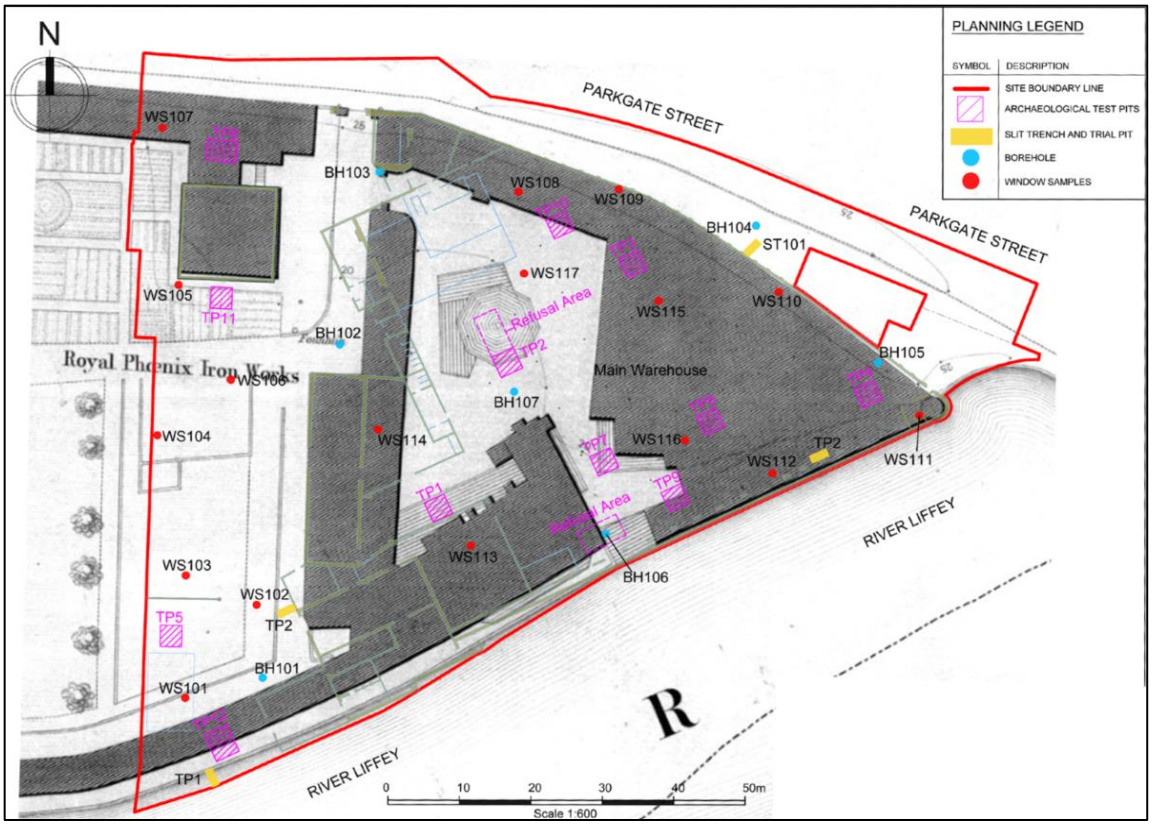


Figure 4 Overlay onto five foot plan, 1847, showing the Royal Phoenix Iron Works

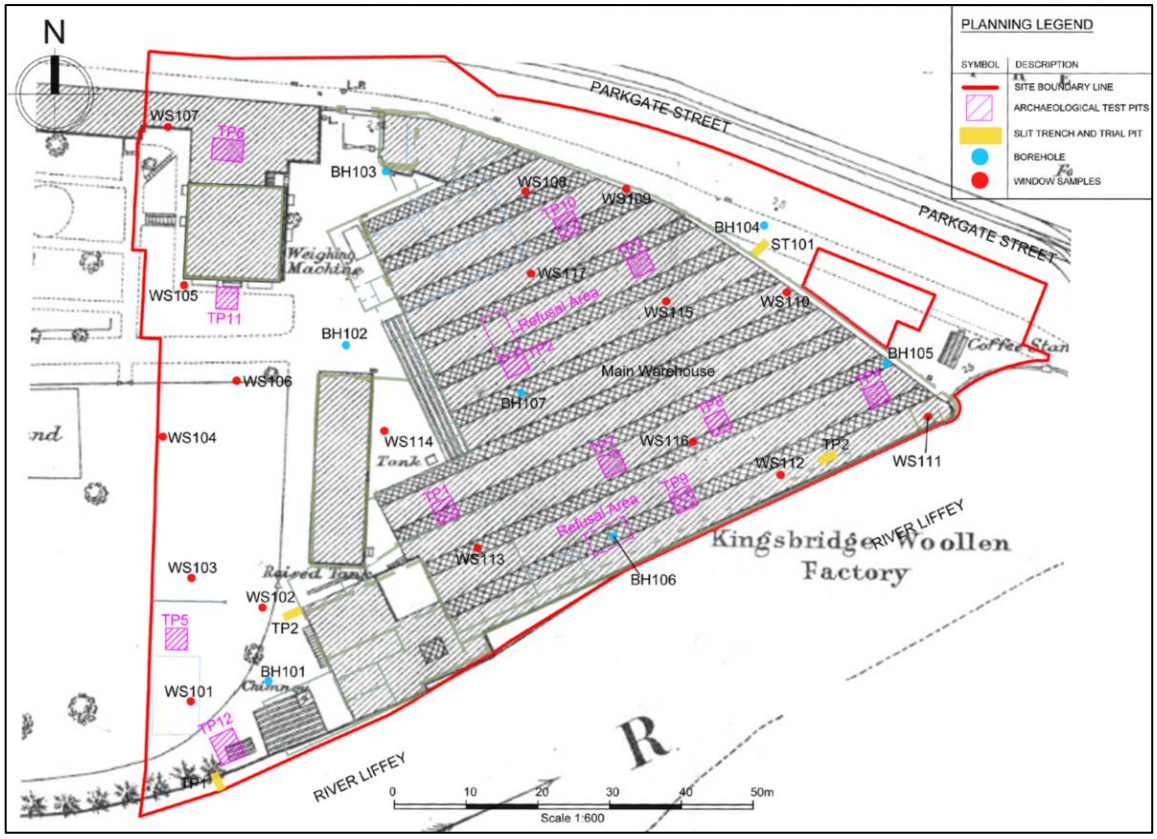


Figure 5 Overlay onto five foot plan, 1889 showing the Kingsbridge Woollen Factory

The proposed development site was occupied by the Royal Phoenix Iron Works, also known as Robinson's Iron Works from the early 1800s. 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 4 and 5). 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.

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.

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'*.

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.

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 Iron Works, 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 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), 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 Iron Works 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.

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.

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). The printing works remained in operation until the mid-1970s when Hickey's Fabrics, took up residence.

Illustration 2 View of Stone Arch Entrance into private communal courtyard

2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1. 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 building adjacent to the River Liffey.

2.2. Activity during the Prehistoric Period

The earliest archaeological site in the wider landscape is a megalithic structure 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.

There is also a Linkardstown-type burial 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. 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 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 (Licence No. 02E0067).

2.3. 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 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. This area lies on the south bank of the River Liffey, to the southwest of the proposed development site (Figure 6).

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. It has been suggested that the spread of Viking burials was extensive, stretching at least from Memorial Park/Islandbridge in the west to Heuston Station to the east, a distance of 1.5km but confined to the natural gravel ridge, bordered by the Liffey on the north and the Camac River to the south. 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. 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.

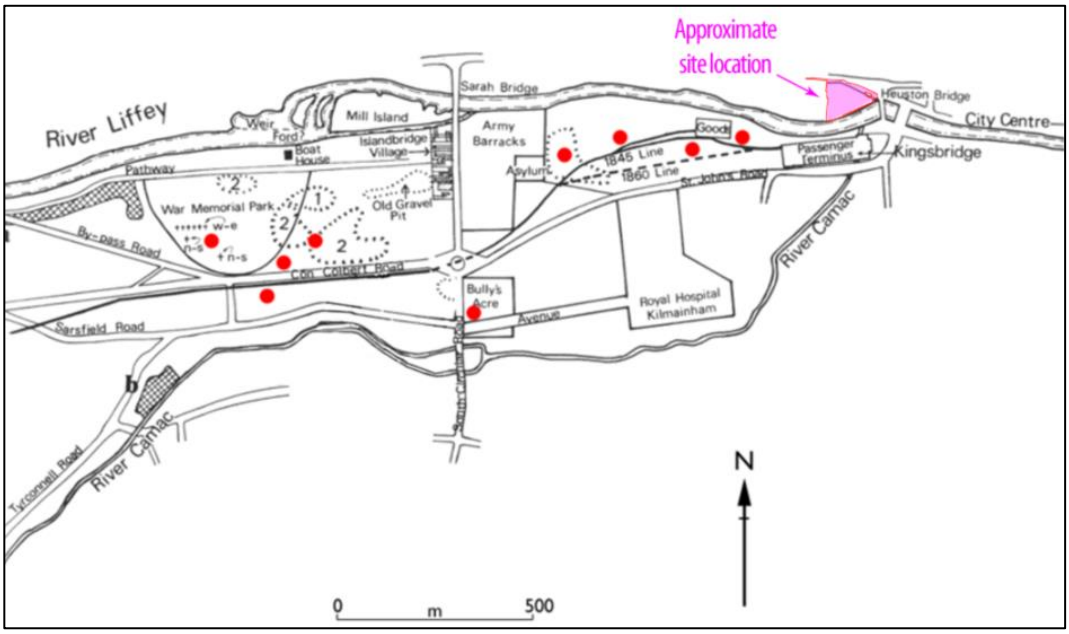


Figure 6 Map showing the locations (in red) of Viking material recovered in the 19th century (after O'Brien 1998)

2.4. 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 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.

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.

2.5. 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 became 'feenisk', which was anglicised to 'phoenix'). It was initially applied by Sir Edward Fisher to his residence on Thomas Hill. 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.

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.

2.6. 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, *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 . 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.

The Viceregal Stream (also known as the Finisk Stream) (Doyle 2008) is shown on Rocque's map (1760) (Figure 10) flowing along the eastern boundary of Phoenix Park through the area now occupied by the northeastern corner of No 42A Parkgate Street and issuing into the Liffey opposite the discharge point for the River Camac.

2.7. Previous Archaeological Investigations in the vicinity of Parkgate Street (Figure 7)

Archaeological testing (Licence No. 98E0188; Halpin 1988) in advance of the development immediately 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 (Licence No. 08E0483, Frazer 2008) did not reveal any archaeological features or remains.

Archaeological investigation to the north of the proposed development at 15/16 Parkgate Street (Licence No. 97E0217) revealed no archaeological features. 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 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 18th century date or later.

Figure 7 Previous Archaeological Investigation in vicinity

2.8. Cartographic Analysis

2.8.1. Early maps: Down Survey, c. 1656 and an 1682 Map of the Strand

The 1656 Down Survey Parish Map of Kilmainham is the earliest cartographic source (Figure 8). 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) is depicted on the map and named 'Phoenix' (this is the site of the present Magazine fort, DU018-007012).

The early map of 1682 (Figure 9) shows that the site as part of Sir John Temple's land. Sir John Temple was the Solicitor General of Ireland, he was responsible for building the wall the originally enclosed the Phoenix Park.

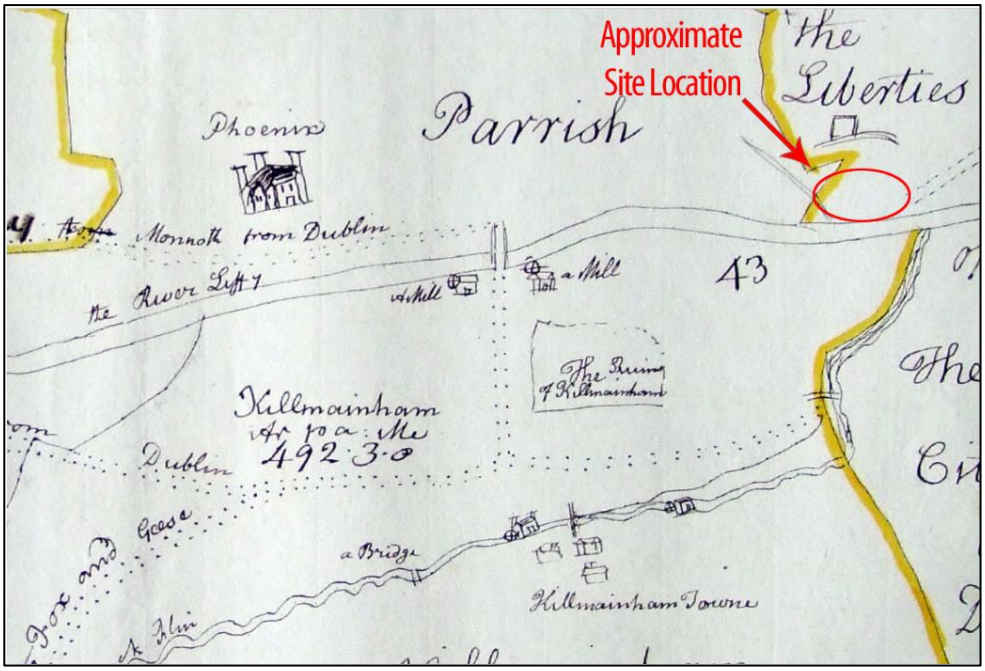


Figure 8 Down Survey c.1656

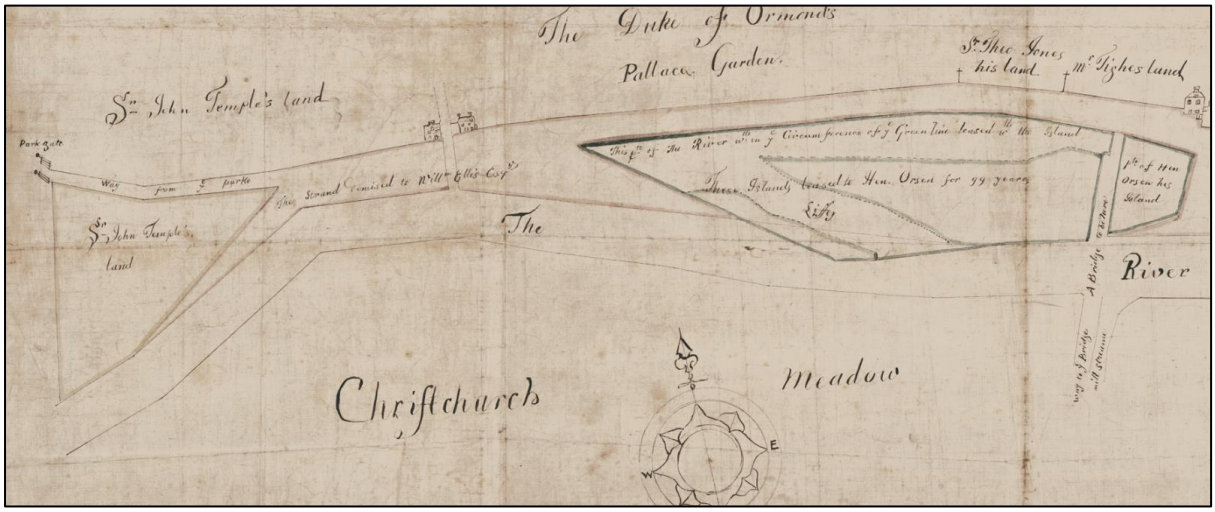


Figure 9 1682 map of the strand from Parkgate (shown) to the wall of Lord Lowther's Garden (not shown)

2.8.2. Rocque's map of County Dublin, 1760

On Rocque's map, the area of open land to the south of the Phoenix Park is named as 'Long Meadows'. Rocque's map also shows a small channel (known now as the Viceregal Stream) 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 a stream that flows down from the park and feeds into the River Liffey.

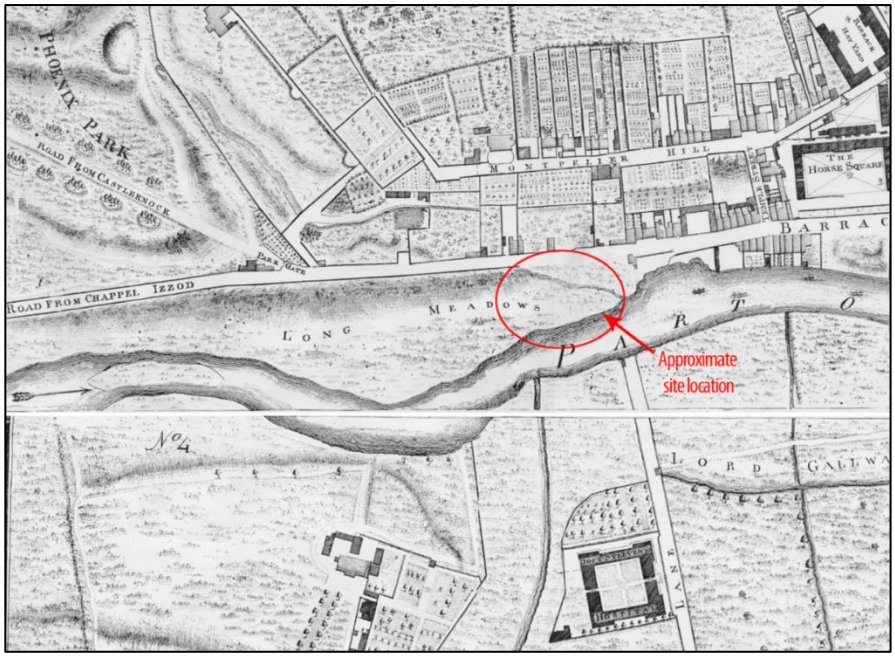


Figure 10 Rocque's map of County Dublin, 1760

2.8.3. Ordnance Survey six-inch map (1843 & 1847) and 25-inch map (1907)

By the time of the first edition Ordnance Survey (OS) 1843 six-inch map (Figure 11), the Royal Phoenix Iron Works occupy a large plot on the north river bank, accessed via an entrance onto Parkgate Street (the proposed development site forms the eastern half of the original iron works site). A significant development in the vicinity is King's Bridge, which was erected in 1828.

The works can be seen in greater detail on the 1847 (Figures 12 and 4). The eastern half of the plot appears to house the majority of the iron works buildings, with gardens and open space dominating the western half.

The Kingsbridge Woollen Factory replaces the irons works on the 1889 OS map (Figure 5) and in later editions the site was in use as a printing works. The 1889 map also shows the tram lines running along Parkgate Street and across King's Bridge (Figure 13).

The 1943 revised OS map shows that the original iron works site 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 proposed development site).

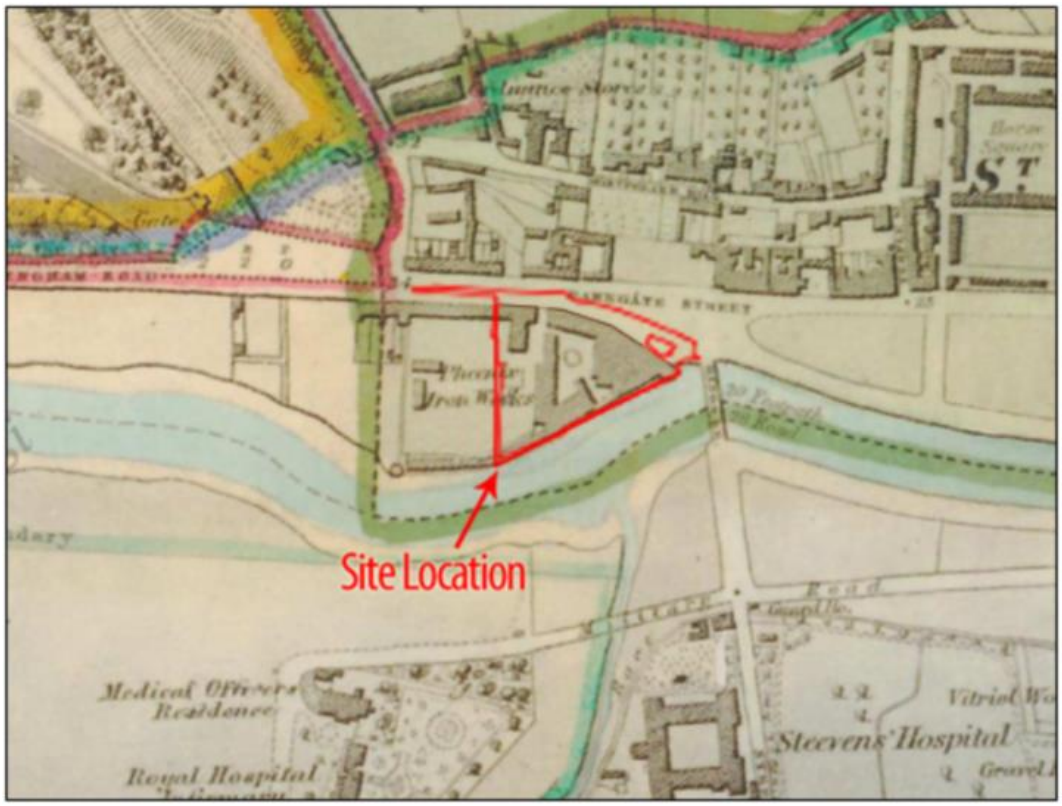


Figure 11 First edition OS map, 1843 (scale 1:10,560)

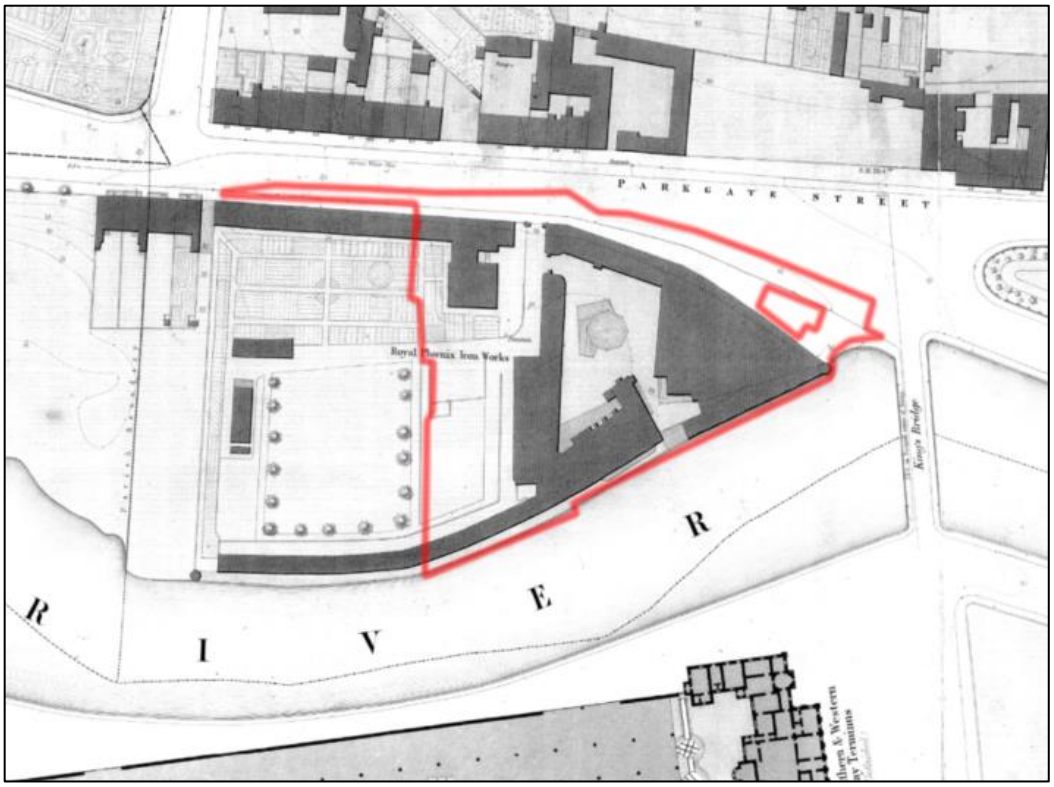


Figure 12 Ordnance Survey 1847, 5-foot plan showing the Royal Phoenix Iron Works

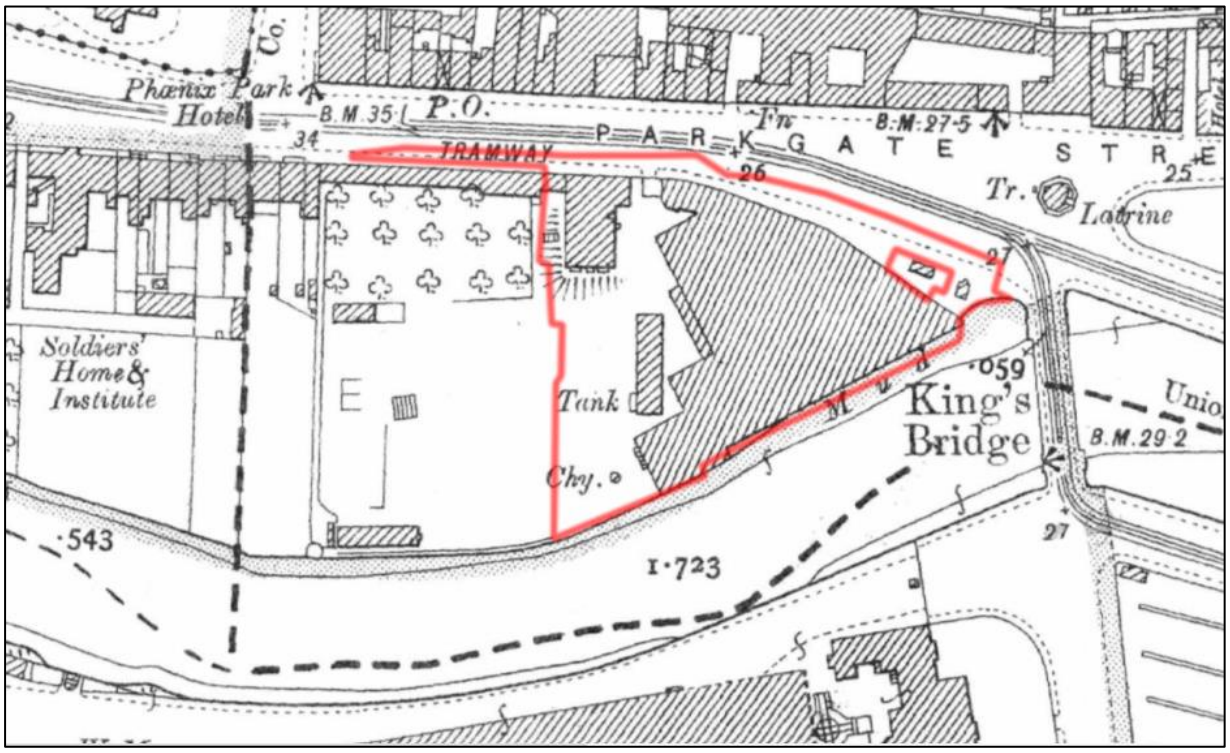


Figure 13 Revised edition OS map (1839) (scale 1:2500)

3. INDUSTRIAL HERITAGE SITES

The site is listed in the Dublin City Industrial Heritage Record (DCIHR) and is recorded as forming an important component within the city's industrial heritage. This record is extracted as follows.

Table 1 Parkgate Printing works in the Dublin City Industrial Heritage Record

Reference	DCIHR 18 10021
Site function	Iron Works
Location	Parkgate Street
Name	Parkgate Printing works {Royal Phoenix Iron Works}
Description	
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	
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.	

4. RESULTS OF ARCHAEOLOGICAL TESTING

4.1. Methodology

Archaeological testing took place from the 6th-13th of February 2020 over a 6-day period. Twelve test pits measuring approximately 3m x 3m were opened to provide a better understanding of the extent of industrial remains from the Phoenix Iron Works period of the site (19th century) and to ascertain if there was any evidence for earlier deposits or archaeological layers/ strata.

Test excavation (Plan 1) was undertaken throughout the site in areas that had been previously identified in the Site Investigation Works (Kealy S, 2019) as being free from contaminants (Plan 2).

Due to height and width restrictions within the warehouse, a small mechanical excavator could only access the interior test pits. This limited the depth of the investigation works to 2.8m. Test pits (TP) located inside the upstanding building (1, 2, 4, 7, 8, 9 and 10) were excavated with the assistance sub-5 tonne tracked excavator fitted with a 1m toothless grading bucket.

A 12.5 tonne tracked machine with a 2m grading bucket was used for the excavation of the exterior test pits (5, 6, 11 and 12) in the yard.

A number of test pits were moved slightly to adjust for internal walls, columns and environmental issues. For example, TP 1 was moved slightly north as the original positioning encountered a wall, TP 2 and TP 9 were adjusted due to the thickness of the concrete slab encountered.

A range of post medieval archaeological deposits dating to the 19th century were uncovered during testing. The table below (Table 2) provides a synopsis of the finds from each of the twelve test pits, in addition to their respective dimensions and depths.

Table 2 Summary of Findings from Test Pits 1-12

Test Pit	Dimensions	Findings
Test Pit 1	3m x 3m, depth 2.5m *Plate:7*	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.
Test Pit 2	3m x 3.2m, depth 2.6m *Plate 8-9*	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.
Test Pit 3	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

Test Pit	Dimensions	Findings
	Plate:10	inclusions of man-made material was uncovered, this may be natural subsoil.
Test Pit 4	2.97m x 3.1m, depth 2.6m *Plate:11*	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.
Test Pit 5	3m x 3m, depth 3.6m *Plate:12-13*	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 of 3.5m were river gravels, these gravels also contained occasional late post- medieval pottery fragments.
Test Pit 6	4.3m x 3m, depth 3.3m *Plate:14-15*	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.
Test Pit 7	3.1m x 3m, depth 2m *Plate:16-17*	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.
Test Pit 8	2.9m x 3m, depth 2.7m *Plate:18-22* *Plan 4*	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 east most 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.
Test Pit 9	3.1m x 3m, depth 2.42m *Plate:23*	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.
Test Pit 10	3m x 3m, depth 2.45m *Plate:24-25*	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

Test Pit	Dimensions	Findings
Test Pit 11	3m x 3m, depth 2.8m *Plate:26*	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.
Test Pit 12	3.5m x 4.2m, depth 3.3m *Plate:27*	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.

4.1.1. Test Pit 1

Test pit 1 is located within a wide hallway/ loading dock leading to the main factory floor (Plan 1). It was excavated to a maximum depth of 2.5m and measured 3m x 3m in dimensions. This test pit revealed early modern/ post medieval deposits likely to be associated with the Phoenix Iron Works (*c.* 1800-1878).

A relatively substantial foundation plinth, <C3>, was exposed, (Plate 7) acting as a support for a beam on which the current wall was laid. This concrete plinth was capped by a reused cut granite block. This plinth was bedded into deposits that contain 18th or 19th century materials and may have been associated with the Knightsbridge Woollen Factory (Figure 5). The plinth lies at 0.15m BGL and extends to approximately 1.2m deep. Natural subsoil was not reached in this test pit.

Table 3 Test Pit 1 (Ground Level: 4.23m OD)

Context	Depth	Description	Interpretation
C1	0–0.15m	Concrete slab forming present surface	20th century floor
C2	0.15–0.62m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
C4	0.62–1.12m	Loose, dark brown, gravelly clay, with inclusions of red brick and containing occasional willow pattern ceramic and slag	19th century dump deposit
C5	1.12–1.3m	Loose layer of crushed mortar with red brick inclusions and occasional fragments of oyster shell, appears to be the remnants of a surface	Early 19th century surface
C6	1.3–1.36m	A thin layer of compact, hard back clay containing deposits of aquamarine vitrified bright industrial by-product	19th century surface
C7	1.36–1.89m	Loose, dark brown, gravelly clay, with inclusions of red brick, containing frequent oyster shell and slate, and with occasional animal bone. Within this context at 1.88m deep	19th century deposit

		there is a thin layer of broken slates approximately 0.1m thick	
C8	1.89–2.5m+	Compact, grey/green clay containing frequent mortar, broken slate, hand-made red brick and small red brick fragments, including animal bone and oyster shell	18th to 19th century layer of dumped material

4.1.2. Test Pit 2

Test pit 2 is located within the former factory/warehouse building (Plates 8 and 9). It was excavated to a depth of 2.6m and measured 3m x 3.2m in dimensions. Beneath the demolition rubble, post-medieval industrial deposits were recorded at a depth of 0.7m and extended to a depth of 2.6m BGL.

On the north edge of the test pit a red brick wall, <C15>, was exposed to a depth of 0.95m BGL. This consisted of standard sized unfrogged brick of 19th to 20th century type. The wall was oriented east-northeast to west-southwest across the test pit. At its west-southwest extent it was only 2 bricks wide (Plate 3). In the east-northeast, it was more substantial being approximately 4 bricks wide, this may form a pad. The wall extended for 3m and varied in width from 04m to 0.22m, it was approximately 0.35m in thickness. The wall appears to have been built on top of materials that contain slag. It may have been a non-structural division, constructed some point after the Phoenix Iron Works had been active for a period or it is associated with the later Knightsbridge Woollen Mills or possibly associated with a temporary structure as shown on the 1847 OS map (Figure 4).

Natural sub-soil was not reached in this test pit indicating the raising and levelling of this riverside area during the 18th and 19th century.

Table 4 Test Pit 2 (Ground Level – 4.23m OD)

Context	Depth	Description	Interpretation
C1	0–0.3m	Concrete slab forming the present ground surface	20th century floor
C2	0.3–0.7m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
C9	0.7–1m	Loose deposit of crushed mortar, small angular limestone pebbles, red brick fragments, containing more mortar and silty material than C2 above. Pale in colour with dark patches where silty	20th century Dumping and bedding deposit
C10	1–1.3m	Layer of dark to black with occasional orange patches, extremely loose fine-grained material with a nearly pure composition. Appears to be industrial waste	19th century Industrial waste dump deposit
C11	1.3–1.45m	Resembles C9 towards the top of this deposit but comes onto a more compact dark brownish grey silty clay which still contains significant amounts of industrial waste	19th century Industrial waste dump deposit
C12	1.45–1.6m	Resembles the lower portions of C11, however it has a more reddish colour and a significant presence of slag	19th century Industrial waste dump deposit

Context	Depth	Description	Interpretation
C13	1.6–2.1m	Moderately compact, mid grey, silty clay with mortar flecking, occasional stones, infrequent oyster shell. The deposit contained a piece of transfer printed pottery and a clay pipe stem. In the west of the pit at 1.7m depth, there was a looser ashy, mortar rich deposit with a pink colour that may indicate burning/heat exposure, which contained two pieces of likely 18th century transfer printed and painted pottery	18th to 19th century layer of dumped material
C14	2.1–2.6m+	Compact, mid to dark grey black, in areas resembling black boulder clay, however this deposit contained frequent slate and oyster shell as well as occasional slag and black and creamware pottery	18th to 19th century layer

4.1.3. Test Pit 3

Test pit 3 is located within the former factory/warehouse building (Plate 10). It was excavated to a depth of 2.65m and measured 3m x 3m in dimensions. This test pit did not reveal any strong evidence for industrial activity associated with the iron works, 19th or 20th century deposits of building material and rubble were encountered. Unlike other test pits natural sub-soil appears to have been reached quite quickly at a depth of 1.28m, this may indicate potential for undisturbed pre-19th century archaeology.

Table 5 Test Pit 3 (Ground Level: 4.27m OD)

Context	Depth	Description	Interpretation
C1	0–0.2m	Concrete slab forming present surface	20th century floor
C2	0.2–0.55m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
C16	0.55–0.85m	Loose, light grey, silty fine sandy deposit	20th century fill
C17	0.85–1.28m	Loose, dark grey, stony clay with frequent gravel in parts similar to C2	20th century fill
C18	1.28–2.65m+	Very compact at top, dark grey / brown sandy clay with a silt component. It includes frequent sub-angular to angular limestone (sized 0.04 to 0.15m). Towards the bottom of the test (at *c.* 2.4m) this layer became softer and pebbles began to replace the larger more angular stones. No inclusions were present	Interpreted as natural boulder clay

4.1.4. Test Pit 4

Test pit 4 is located within the former factory/warehouse building (Plate 4). It was excavated to a depth of 2.6m and measured 3.1m x 2.97m in dimensions. Within (C2), a concrete pad was exposed in the southwest corner of the test pit. Beneath, (C2), a deep deposit of early modern fill material from demolition activities was encountered for 2m. Natural sub-soil was not reached in this test pit indicating the raising and levelling of this riverside area.

Table 6 Test Pit 4 (Ground Level: 4.25m OD)

Context	Depth	Description	Interpretation
C1	0–0.1m	Concrete slab forming present surface	20th century floor
C2	0.1–0.95m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
C19	0.95–2.15m	Friable crumbly / gritty silty sand with crushed red brick and mortar flecks. The deposit also contained a sherd of black-ware pottery, oyster shell, and small lumps of slag	18th to 19th century fill / layer
C20	2.15–2.6m+	A very compact deposit containing a substantial amount of sub-angular stones, with a soft slightly tacky mid brown-grey silty clay component. This deposit contained inclusions of mortar	18th to 19th century layer

4.1.5. Test Pit 5

Test pit 5 is in the yard (Plates12 and 13), north of an upstanding shed and south of external wall division. It was excavated to a depth of 3.6m and measured 3m x 3m in dimensions.

After the bedding surfaces for the modern yard surface were stripped away, a 19th century crushed red brick working surface was revealed, this showed evidence of burning. Under the working surface, between 0.64m and 2.32m deep were 19th century industrial deposits. At lower levels the deposits were estuarine in nature, being composed of alluvial/estuarine clays overlying river gravels. The river gravels found at the lower level are probably no earlier than the late 18th or 19th century and were disturbed, containing pottery sherds.

Table 7 Test Pit 5 (Ground Level: 3.46m OD)

Context	Depth	Description	Interpretation
C1	0–0.1m	Concrete slab forming present surface	20th century surface
C2	0.1–0.34m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century hard-core
C21	0.34–0.51m	Thin, moderately loose, black stained gravel deposit	20th century layer
C22	0.51–0.64m	Compact, relatively level possible surface composed of crushed red brick, red brick fragments and small limestone slabs, evidence of burning	19th century working surface
C23	0.64–0.83m	Soft, grey brown, silty deposit with an area towards top of dark grey. Did not contain many inclusions	19th century dump deposit
C24	0.83–1.06m	Soft, grey, silt deposit. Did not contain many inclusions	19th century dump deposit
C25	1.06–1.26m	Deposit of dark brown to black, orange mottled gravel, silt, clay with slag, the deposit included red brick and a small sherd of transferware pottery	19th century dumped deposit
C26	1.26– 1.45m	Soft, mid grey-brown silty rich deposit with few inclusions	Late 18th- 19th century
C27	1.45–*c.* 1.75m	In the eastern end of the test pit only. Deposit made up of small water rolled stones, red brick, animal bone and clay tobacco pipe	Late 18th / 19th century

Context	Depth	Description	Interpretation
C28	1.45–2.32m	Sandy gravely silty clay, dark and wet with considerable quantities of slag, also contained transfer print pottery	Late 18th / early 19th century dump deposit containing slag
C29	2.32–3.50m	Grey brown to yellow, sandy clay, lacustrine/river alluvial tidal flat clay, contains transfer print pottery	Late 18th / early 19th century riverine deposits
C30	3.5–3.6m+	River gravels, contained transfer print pottery	Late 18th/ early 19th century riverine deposits

4.1.6. Test Pit 6

Test pit 6 is located between the northern external boundary wall with Parkgate Street and Parkgate House. It was excavated to a depth of 3.3m and measured 4.3m x 3m in dimensions (Plates 14-15). Once the yard surfaces were removed a sandy deposit associated with two modern encased services that were oriented north to south was revealed in Test Pit 6.

Uncovered at a depth of 0.45m were two east -west oriented, limestone calp walls. These walls are parallel to Parkgate House (built *c*. 1820) and the Parkgate Street boundary wall, they were separated by a distance of 2.14m. The wall furthest from Parkgate House is referred to as Wall F <C36>. It is composed of 7 courses of roughly hewn black limestone calp blocks bonded together with lime mortar, the wall was 1.2m high. The upper 0.35m of Wall F was either cased or formed of concrete with a single course of 19th to 20th century red brick overlying this. Wall F had courses composed of roughly 0.08m to 0.12m high in 0.8m long slabs.

The wall closest to Parkgate House is referred to as Wall G <C37>. From the top of Wall G to its plinth was 0.57m, and from top to base measured 0.68m, the plinth extending from the wall was 0.08m wide and tapered under to the base of the foundation trench. Wall G was made of courses of stones roughly 0.1m to 0.2m high and 0.35m to 0.45m long.

Both walls appear to be typical 19th century limestone calp walls. The full width of these walls was not uncovered within the bounds of the test pit. These walls lay above pre 19th century redeposited material. The lowest deposit revealed in this test pit at 3.15m to 3.3m BGL was an estuarine deposit with no visible inclusions apart from very small intact snail shells.

Table 8 Test Pit 6 (Ground Level: 4.61m OD)

Context	Depth	Description	Interpretation
C1	0–0 .45m	Concrete slab forming present surface	20th century surface
C2	0.45–0 .57m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor

Context	Depth	Description	Interpretation
C31	0.57–0.9m	Sandy deposit surrounding concrete foundation and services	Late 20th century
C32	0.9–1.95m	Within box formed by services and walls. Silty clay with some sand, inclusions of red brick and some animal bone, a relatively clean deposit	19th to 20th century
C33	1.95–2.45m	Tan coloured, silty clay, with infrequent inclusions of red brick and shell	18th to 19th century redeposited material
C34	2.45–3.15m	Dark grey, silty clay with rare inclusions of red brick fragments, mortar fragments, and shell	18th to 19th century redeposited material
C35	3.15–3.3m+	Orange flecked, dark tan silty clay, contains occasional very small intact snail shells	Estuarine deposit

4.1.7. Test Pit 7

Test pit 7 is located within the former factory/warehouse building (Plates 16 and 17). It was excavated to a depth of 2m and measured 3.1m x 3m in dimensions.

Test pit 7 exposed a 19th century heat affected working surface composed of what appears to be casting sand. This overlies a number of industrial 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 were oriented roughly north-south.

The working surface is was likely associated with the later activities of the Phoenix Iron Works, possibly resulting from a similar phase of activity as the surfaces uncovered in test pit 1 and test pit 5, (C5) and (C22).

Table 9 Test Pit 7 (Ground Level: 4.23m OD)

Context	Depth	Description	Interpretation
C1	0–0.12m	Concrete slab forming present surface	20th century floor
C2	0.12–0.48m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
C38	0.48–0.56m	Course, yellow sand that forms a level surface with some occasional small red brick fragments, evidence of oxidization shown by occasional orange mottling. Likely a layer of casting sand	19th century sandy surface
C39	0.56–1.26m	Compact, brown-grey gravelly mortar flecked clay with inclusions of limestone blocks of size 0.27m	19th century dump deposit
C40	1.26m	Horizontal granite block (*in situ*). 0.5m long and 0.11m deep, in the section face	19th century block
C41	1.26–1.65m	Compact, grey gravelly clay with inclusions of mortar fragments and red brick flecks	19th century layer

C42	1.65–2m+	Two buried iron pipes oriented north / south, spaced 1m apart. Between these pipes, excavation continued to a depth of 2m with the material removed resembling a darker deposit of the material found between 1.26–1.65m	19th century pipes and backfill

4.1.8. Test Pit 8

Test pit 8 is located within the former factory/warehouse building (Plan 1). It was excavated to a depth of 2.7m and measured 2.9m x 3m in dimensions. A complex of substantial stone wall was uncovered at a depth of 0.52m (Plates 18 and 19). These walls are labelled A – E (Wall A - <C44>, Wall B - <C45>, Wall C - <C46>, Wall D - <C47>, Wall E <C48>) (Plan 4).

The walls created two rectangular voids which had been backfilled with 19th century demolition rubble, neither void was fully bottomed with the maximum depth excavated being 2.7m. At this point wall foundations were not visible.

Wall A <C44>, oriented north-northeast to south-southwest, was only visible in the overcut western side of the test pit. It was constructed of roughly hewn black limestone calp blocks. This wall was not keyed into Walls B and Wall D (Plate 20). Wall B, Wall D, Wall E, are constructed of roughly hewn black limestone calp blocks bonded by limestone mortar. These are coursed with blocks up to 0.52 x 0.32 x 0.2m wide and mixed with shallower courses 0.04 x 0.23 x 0.2m deep, in total 12 courses were exposed. The outer edge of Wall B was also exposed revealing a width of 1.2m with an inner core of mortar and rubble.

Wall B <C45>, oriented east-southeast to west-northwest, has “vents” on either side of Wall C, these are approximately 0.28m wide and located at a depth of 1.91m and 1.94m BGL (Plate 21). Above each “vent” is a vertical iron bond (Plate 22), in-line with the eastern hole is an iron rod 0.29m long, with a square section 0.035m. It is set in a Dublin stock brick (0.9 x 0.21 x 0.7m), rotating this crank, reveals it to have been part of mechanism to open or close the “hole”. This possibly indicates they functioned as “flues” for either water or more likely due to the metal working nature of the site to control air flow.

Wall C <C46>, is oriented north-northeast to south-southwest, it appears to be contemporary with Wall B and Wall D and is keyed into them with smaller stones measuring 0.1 x 0.37 x 0.2m and 0.03 x 0.17 x 0.12m up to 0.22 x 0.22m in size. Wall C has a width of 0.6m and a length of 0.68m. Wall D <C47>, oriented east-southeast to west-northwest, is parallel to Wall B.

Wall E <Contest 48>, oriented north-northeast to south-southwest, is parallel to Walls A and C, located mostly under the eastern edge of the test pit. It is constructed of roughly hewn black limestone calp blocks. This wall was keyed into Walls B and Wall D and had a slight step out at the mid-point of its currently exposed depth.

The substantial nature of the walls point to the large scale industrial nature of the site and may be why they have survived.

Table 10 Test Pit 8 (Ground Level: 4.23m OD)

Context	Depth	Description	Interpretation
C1	0–0.06m	Concrete slab forming present surface	20th century floor
C2	0.19–0.54m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
C43	0.54–2.7m+	The fill within the two voids formed by the walls, demolition rubble including iron stained red brick, burnt clay, and red tiles	19th century rubble dump

4.1.9. Test Pit 9

Test pit 9 is located within the former factory/warehouse building (Plan 1). It was excavated to a depth of 2.42m and measured 3.1m x 3m in dimensions. Industrial waste deposits and a possible working surface were revealed at a depth of 0.94m to 1.22m, within this layer at a depth of 1.16m the remnants of a wall, <C56>, was exposed. This wall runs east to west through the middle of the test pit. The remains are made up of a layer of mortar bedding with indents likely for brick. Deposit (C50) is confined to the north indicating that the wall was at least partially upstanding when it was deposited.

Under these deposits 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.

Table 11 Test Pit 9 (Ground Level: 4.23m OD)

Context	Depth	Description	Interpretation
C1	0–0.1m	Concrete slab forming present surface	20th century Floor
C2	0.1 –0.6m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
C49	0.6 –0.94m	Mid grey brown, loose silty sand, with occasional mortar flecks, small fragments of red brick, and occasional stones	19th to 20th century layer
C50	0.94–1.22m	Compact but loose and crumbly when chipped off, black, sandy silty material with lots of very fine nodules/grit/very small pebbles approximately 1mm – 5mm. Most likely industrial waste from a type of heated/burning process. Located mostly to the north of the pit	19th century Industrial waste deposit
C51	0.94–1.22m	As layer recorded above, but oxidized orange reddish brown, located exclusively on the north side of the trench	19th century Industrial waste
C52	1.22– 1.26m	Very compact, forms a surface made up of heat affected stones, slag, and materials like layer immediately above. Appears to have been heavily impacted by heat	19th century layer
C53	1.26–1.72m	Green-grey tan, compact clay with gravel and a lot of stone present (dia. 0.08m), also contains substantial amounts of red brick and mortar	18th to 19th century dump deposit

Context	Depth	Description	Interpretation
C54	1.72–2.42m	Mid grey, compact, silty gravely clay, with some mortar flecking and small pebbles, contains no red brick and less stone than the layer above	18th to 19th century dump deposit
C55	2.42m+	Tan-black, patchy, smooth clay	Possible natural subsoil

4.1.10. Test Pit 10

Test pit 10 is located within the former factory/warehouse building (Plan 1). It was excavated to a depth of 2.45m and measured 3m x 3m in dimensions. Loose demolition material and layers and a sand rich, working surface were uncovered. Between 0.47m to 2.3m there was number of 18th or 19th century deposits, at close to the limit of excavation of the test pit between 2.3m to 2.45m possible natural subsoil was revealed.

Table 12 Test Pit 10 (Ground Level: 4.27m OD)

Context	Depth	Description	Interpretation
C1	0–0.08m	Concrete slab forming present surface	20th century floor
C2	0.08–0.25m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
C57	0.25–0.45m	Mid to dark brown, soft, silty clay with red brick inclusions	19th to 20th century layer
C58	0.45–0.47m	Light pinkish grey, compact, mix of sand and mortar that forms a thin level surface	19th century Surface
C59	0.47–0.8m	Mid grey-brown, silty clay, with red brick inclusions	19th century layer
C60	0.8–1.52m	Slightly compact, dark brownish grey boulder clay, containing decayed limestone pebbles, and occasional inclusions of red brick, mortar and animal bone	18th to 19th century dump / redeposit
C61	1.52–2.30m	Compact, black brownish grey boulder clay containing decayed limestone pebbles sized 0.02 to 0.03m, contained rare inclusions of mortar, a solitary oyster shell and a 17th or 18th century piece of red glazed earthenware	Pre-19th century Layer of redeposit/dumped material
C62	2.30–2.45m+	Very sticky, grey black boulder clay, a gravely clay with black mottling due to presence of decayed round limestone pebbles	Possibly natural subsoil

4.1.11. Test Pit 11

Test pit 11 is located a metre to the south of Parkgate House (Plan 1). It was excavated to a depth of 2.8m and measured 3m x 3m in dimensions. Approximately half of this test pit was taken up by an upright wall made of concrete and red brick, it was 0.2m thick. This was associated with a thick slab of concrete, approximately 0.3m thick and located 0.8m below the surface. These features make up the south half of the test pit (Plate 26). In the north area of the pit, 19th century garden soils were exposed.

The lack of industrial waste and working surfaces points to this area not being used for intensive industrial activity, this is likely due to being located directly south of Parkgate House and likely to be part of a garden (Figure 4 and 5).

Table 13 Test Pit 11 (Ground Level: 3.9m OD)

Context	Depth	Description	Interpretation
C1	0 – 0.1m	Concrete slab forming present surface	20th century Surface
C63	0.1m – 1.7m	Soft, mid grey brown, clayey silty with inclusions of red brick, mortar and stones	20th century Layer
C64	1.7m – 2.3m	Soft, mid to dark grey brown, clayey silt with dark mottling of stained gravel. Contains inclusions of red brick, mortar and stones	19th to 20th century deposit
C65	2.3m – 2.8m+	Soft, dark grey clay, with inclusions of mortar flecking, red brick and shell	19th century Deposit

4.1.12. Test Pit 12

Test pit 12 is located 2.4m north of Parkgate House (Plan 1). It was excavated to a depth of 3.3m and measured 3.5m x 4.2m in dimensions. Once the initial 20th century deposits were removed, 19th century industrial waste deposits were uncovered. Under this deposit at depth 0.95m to 1.10m a probable working surface was exposed. This surface may be associated with working surface found to the north in Test Pit 5. Beneath this surface more 19th century industrial deposits were encountered.

Odious deposits of redeposited clay, rich in 19th century material and a deposit of red brick were encountered at a depth of 2.4m. A thick layer of possible natural clay was uncovered at a depth of 2.95m. Between 2.95m and 3.3m sandy river gravel was exposed, this was highly odious and possibly contaminated.

Table 14 Test Pit 12 (Ground Level: 3.66m OD)

Context	Depth	Description	Interpretation
C2	0–0.4m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century surface
C67	0.4–0.8m	Burgundy, sticky plastic clay, with mortar, red brick and slag	20th century redeposited clay
C68	0.8m – 0.95m	Black, gritty sandy deposit with bright orange patches, contains slag and clinker	19th century industrial waste deposit
C69	0.95–1.10m	Very compact, crushed mortar, red brick, stone, probable mortar floor	19th century floor surface
C70	1.10–1.70m	Brown and grey, gravely clay, with lots of burnt sand and clinker	19th century industrial waste dumping deposit
C71	1.70–2.40m	Tan grey, mottled, sandy clay, with considerable staining	18th to 19th century redeposited layer

Context	Depth	Description	Interpretation
C72	2.40–2.50m	A deposit of loose red bricks	18th to 19th century red brick deposit
C73	2.50–2.95m	Compact black grey, fine, stone free clay. Odious	Odious riverine clay
C74	2.95–3.3m+	River gravel, grey blue, sandy river gravel, stained and odious	Odious river gravel

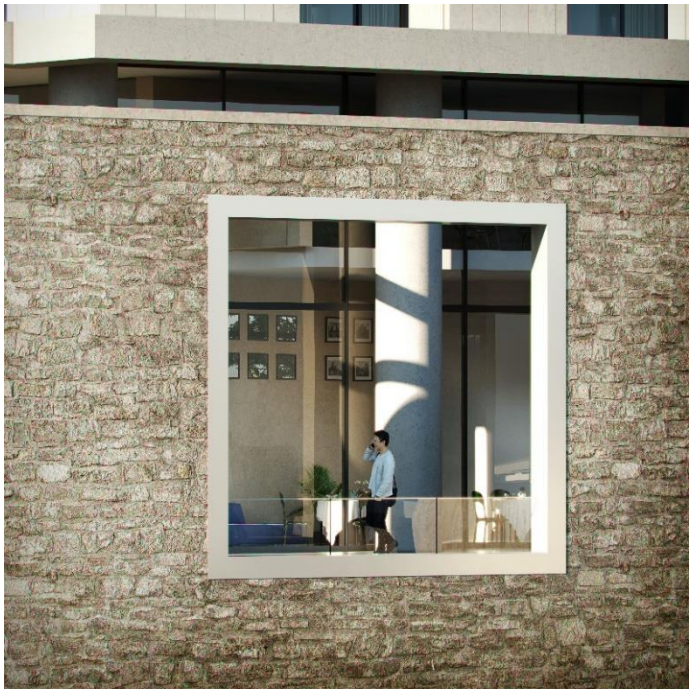


Illustration 3 View of proposal showing restored Quay Wall with new opening and walkway behind

Illustration 4 View of proposal showing restored Quay Wall and River buildings

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Findings

Twelve archaeological test trenches were excavated at the site. The trenches were roughly located throughout the site footprint (Plans 1 and 2). 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. Substantial walls and deposits of iron slag and clinker or industrial waste from the iron foundry survive throughout the site under the present Victorian (1880) factory floor.

- 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 application area. These deposits are between 0.5m-3m deep and survive below 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 what is now the 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.

5.2. Development Design

Chartered Land Ltd propose a mixed use residential and office scheme of 481 rented residential units, 3,698 square meters of commercial office space. There is also 444 square meters of café/ restaurant floor space and 214square meters of retail space. The development is contained within three Building Blocks (A, B and C). A new public square is provided, along with a public riverside walk and private amenity courtyard. The

residential units are served by amenity and management areas including a reception area, a post room, a quiet room, gym, business suites, lounge and TV rooms and other bookable rooms. In addition to the above amenity facilities are miscellaneous support facilities including sub/switch room, refuse and waste management areas, electric meters, administrative areas and cycle parking areas. At basement / undercroft level further bicycle parking is provided, as well as car parking.

To facilitate the proposed development, a number of structures on site will be demolished, including Parkgate House. All structures contained within the Record of Protected structures will be retained, restored and adapted. This includes the riverside stone wall, the turret at the eastern end of the site, the square tower on the riverfront and the entrance stone arch on the Parkgate Street frontage. For the purpose of the EIAR a Conservation Architect has assessed the specific architectural issues and potential on the site.

It is also proposed to retain the larger of the two gabled industrial buildings on the river front for use as the residents gym and part of the smaller gabled building. All other structures are proposed for demolition, it is proposed to retain some of the large cast iron structural elements from the Woollen Mills factory of *c*. 1880 for use in the new development.

The development proposal will include works to the river wall (a Protected Structure). This is to provide opes to allow light into the newly formed open spaces and create new river walk.

The signature architectural element of the proposed development will be the 29-storey residential tower, which is sited at the east end of the site near Heuston Bridge where the site naturally angles (known as Block A). The tower will be generally triangular and slender in form. The building is accessed off Parkgate Street with a central core serving 29 floors of accommodation. All the apartments will benefit from panoramic views over the city.

The proposal will contain significant areas of public open space with the aim to bring vitality to the public realm. The plan orientates the primary open space on a north-south axis centred on the protected 'Gateway' arch off Parkgate Street with a scale, quality and sense of place providing a high-quality urban space.

A second public open space is formed between Block B (in the centre of the site orientated north / south) and the residential tower (Block A) that sits on the prominent corner at Heuston Bridge and provides a further public connection from Parkgate Street to the river. The rejuvenation of the public realm at street level is further reinforced with a mix of active uses of residential amenity, office and café/ restaurant with a viewing terrace giving a new dynamic perspective and interface with the city and a view across the river to Heuston Station. Block C is located along the western boundary of the site parallel to Block B. Block B and C are linked along the Parkgate street front.

5.3. Development Impact

The foundation design specification is preliminary and subject to further detail design detail which is being prepared by ARUP Consulting Engineers. The proposal is to construct 3 principal building blocks on the site supporting framed concrete buildings (Blocks A, B and C).

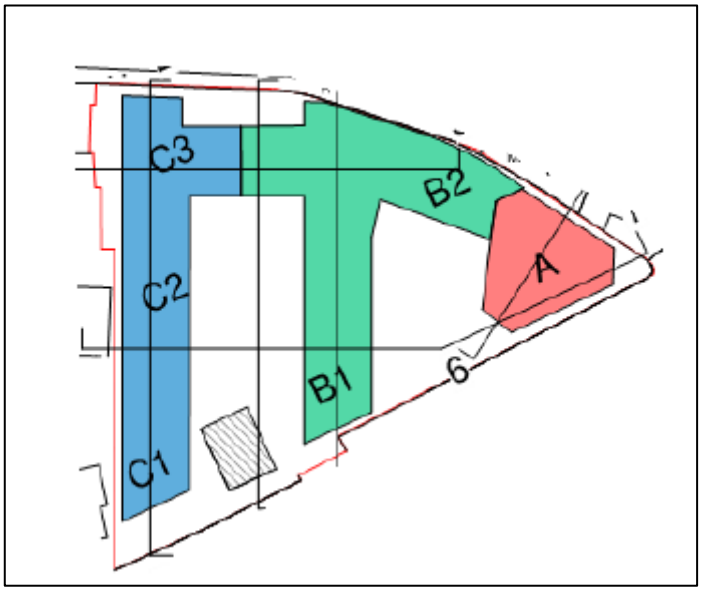


Figure 14 Building Layout, Block A, B and C

These buildings are supported on piles drilled to bedrock across the site, ground investigation works suggest that rock head ranges from 6.7-9.7m below existing ground levels. Piling will require a piling platform of 600mm of crushed concrete or imported stone. Piles for Blocks B and C will be 600mm diameter Continuous Flight Augered (CFA) piles. These piles are estimated to be 9m in total length and less below the basement/ undercroft.

Piles for Block A will be 900mm diameter rock socked bored piles with their permanent casing in rock and temporary casing in overburden. The rock socketed bored pile will be formed by either odex or rotary/ rock auger technique. Piles are estimated to be 9m in total length.

It is anticipated that pairs of 600mm diameter piles are used across the site at 1800mm intervals under Blocks B and C. With 20 x 900mm diameter piles proposed under Block A at 2800mm intervals. Pile groups support pile caps under columns and piled raft foundations under stability cores. All cores will be founded on a 1200mm raft slab.

Approximate % of total piles per block as follows, Block A 15%, Block B 45% and Block C 40%

Different pile sizes not accounted for here, this is a comparison of number of piles for each block. The number of piles required will be adjusted following pile testing however this will have little effect on the above.

Block A

This block refers to the proposed tower, located at the south-eastern corner of the site. The pilecaps for the 900mm bored piles are 1.2m x 3.9m and 1.2m x 3.7m x 3.9m. The depth of the pile cap will be in the region of 1650mm (Figure 15).

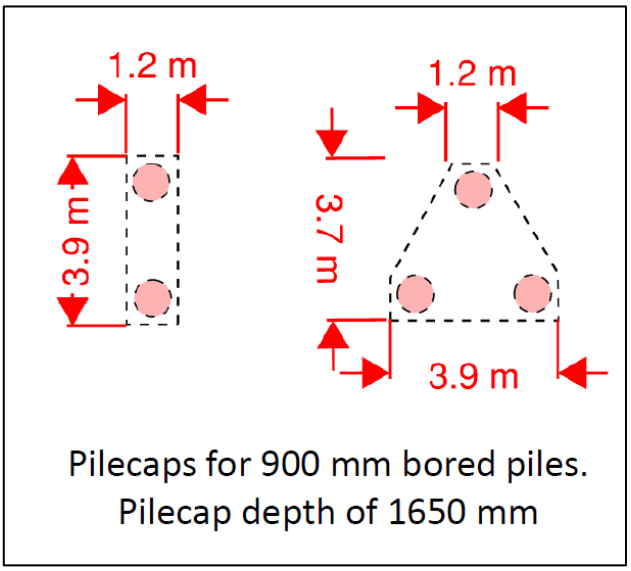


Figure 15 Pilecaps for Block A

Block B and C

Blocks B and C form the majority of the ground works on site. The pilecaps for the 600mm CFA piles are 2.7 x 2.7m, 4.5m x 2.7m, 4.5m x 4.1m x 2.7m and 4.5m x 4.5m (Figure 16).

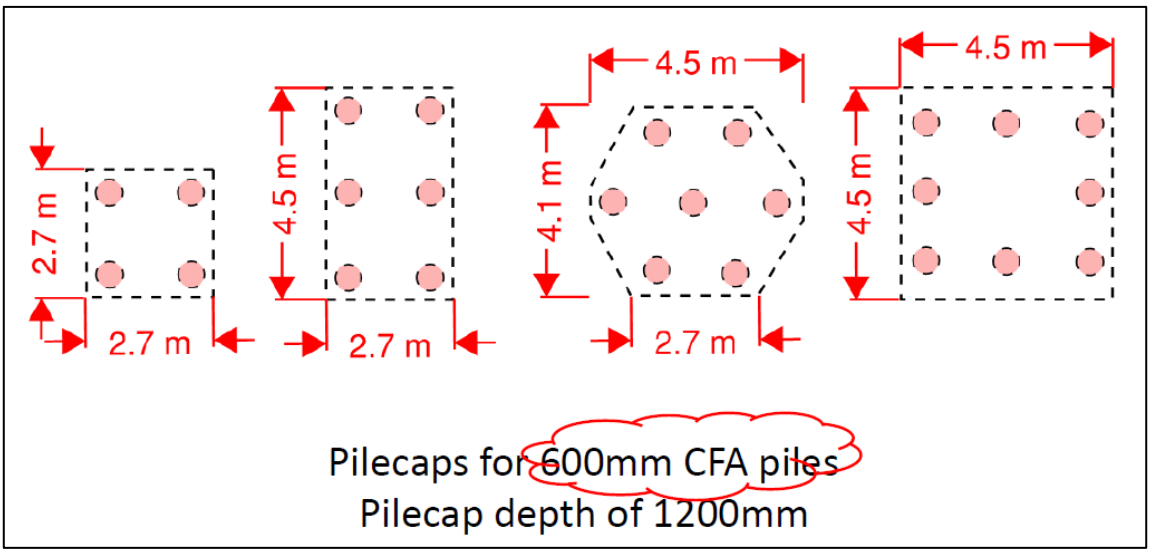


Figure 16 Pilecaps for Blocks B and C

An undercroft/ basement structure is proposed under Block B and partially under Block C. The undercroft structure will consist of a reinforced concrete suspended base slab and retaining walls, supported on piles. The proposed undercroft floor level is set below the existing ground level by approximately 1m at lowest excavation level on the south end of the site adjacent to the river and is set below ground level by approximately 3.2m at the highest excavation on the north end of the site up adjacent to Parkgate Street.

A reinforced concrete ramp will be provided for vehicular access, which is approximately 7m wide and 30m in length. The basement / undercroft is *c*. 60m north / south under Block B and is 15m wide, it is also L–shaped with a further 50m long section along the Parkgate Street frontage that is *c*. 15m wide.

A further basement area adjacent to the quay wall at the southwest corner of the site is proposed for the storage of bicycles.

The following figures show the piling and column layout as well as the extent of the proposed basement areas on site (Figure 17 and 18). The basement layout is also overlaid with the test pit location (Figure 19). Piling will have an impact on any in-situ archaeological remains, as given their depths the piles will cut down through intact archaeological material. In addition to these interventions, there will also need to be trenches for services, utilities and drainage *etc*.

Figure 17 Substructure Floor Plans showing piling layout

Figure 18 Substructure Floor Plan showing the basement and columns

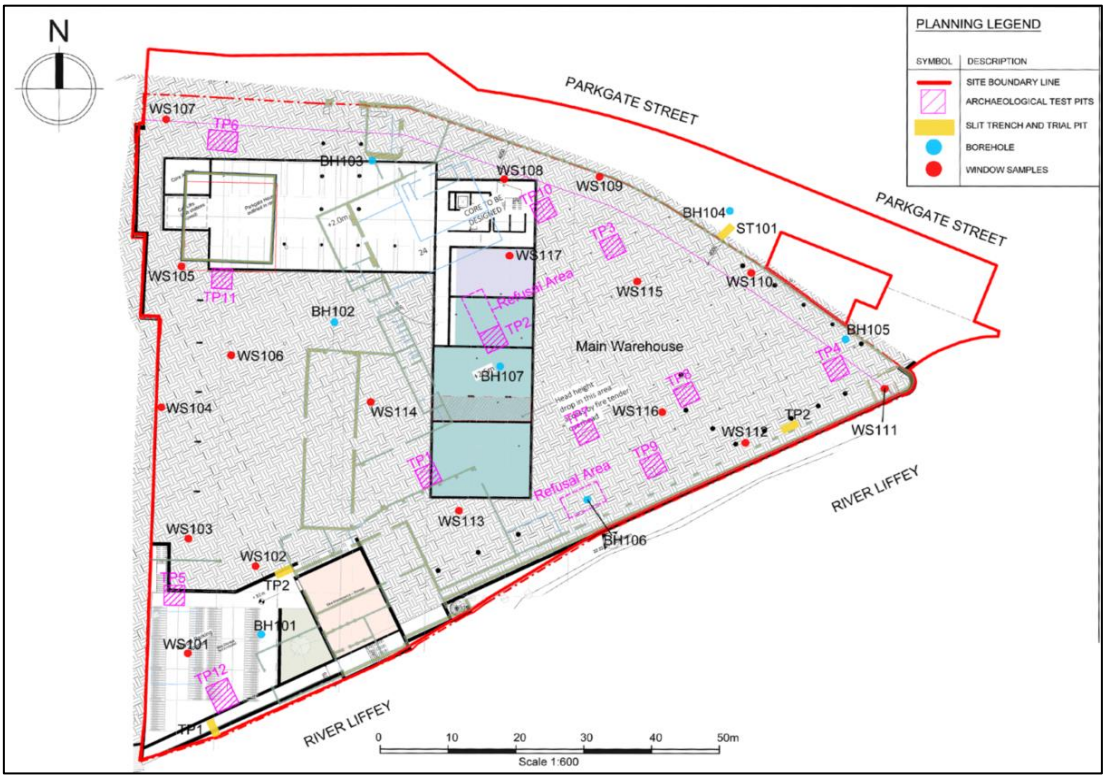


Figure 19 Overlay of existing site with test pit locations onto the proposed basement layout

5.4. Recommendations

Based upon development design and the impact of a dense piling layout and having considered the archaeological findings, it is recommended that the Dublin City Council (subject to planning approval) attach a condition requiring that archaeological excavation be carried out within the basement / undercroft footprint of the proposed development (part of Block B and C) (Figures 17 and 18) and also that archaeological excavation be carried out under Block A (Figure 14).

Further to this, archaeological monitoring should be carried out on the remainder of the site where any sub-surface works associated with the ground floor foundations of the proposed development requires reduction. This will involve having the ground-breaking element of the development works monitored by an archaeologist. Should archaeological material be then identified, further archaeological excavation shall proceed.

Archaeological excavations should focus on the remains of the Phoenix Iron Works and on the natural boulder clay / lacustrine levels. It is noted that significant ground contamination with heavy metal *etc*. exists on the site and 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.

All archaeological works have to be undertaken under license to the National Monuments Service in the Department of the Culture, Heritage and the Gaeltacht (DoCHG). Monitoring and excavation should be undertaken by a qualified archaeologist as required under National Monuments Legislation. Archaeological monitoring should focus on the excavation for foundations, basement and services.

The specific foundation design is evolving and accordingly the full detail and sequence of works will be fully developed as part of the construction management plan. Research, monitoring and testing has informed the archaeological mitigation, allowing an approach to be developed in terms of excavation and recording. However, the specific scale of the archaeological excavation required is subject to the final foundation design that should be presented in the archaeological method statement that would accompany any license application to carry out further predevelopment archaeological excavations at the site.

Prior to the demolition of existing 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) should take place in order to add to the archaeological record and further understand the subsurface industrial remains. As part of the EIAR process, these structures have been discussed and assessed in Chapter 12 Architectural Heritage (Section 12.4.1) for the proposed development. Mapping from this chapter, shows the extent of upstanding structures that predate the 1837 First edition Ordnance Survey map (Figure 20 (Figure 12.1)).

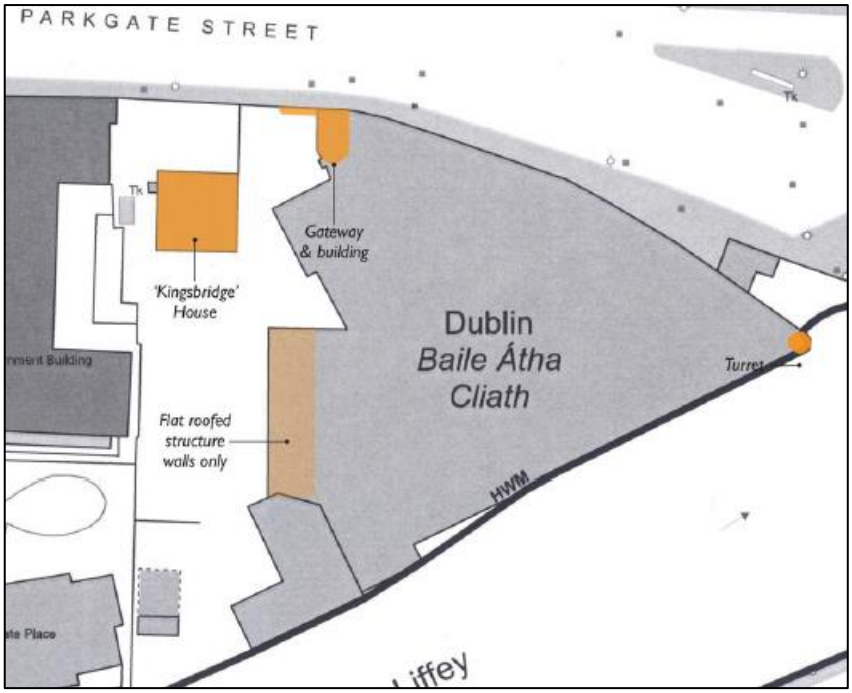


Figure 20 Mapping extract from Chapter 12 Parkgate Street EIAR Architectural Heritage, Figure 12.1 showing structures on the site that predate the 1837 First edition ordnance survey map. Most of the other structures date from the mid-1880s.

These works should be accommodated within a designated window for archaeological work established within the demolition and ground works construction contract with a suitable programme for archaeological work which must be accommodated within the construction programme.

It is recommended that the programme of archaeological works would commence in advance of the main construction stage at the site clearance/ ground reduction/demolition stage. Once existing structures and the ground slab have been cleared from the site, a systematic programme of investigation/ excavation could take place to establish the nature and extent of the surviving sub-surface structures. It is envisaged that this could take place on a phased basis, utilising the existing ground slab as a working platform to investigate adjacent areas.

All recommendations are subject to the approval of the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht and the City Archaeologist for Dublin. This suggested strategy does not prejudice recommendations made by the National Monuments Service, the Dublin City Archaeologist and the planning authority who may make additional recommendations.

The developer will make provision to allow for and fund whatever archaeological work may be required at the site and the post excavation requirements in accordance with the National Monuments Legislation (1930–2004; Appendix 1).

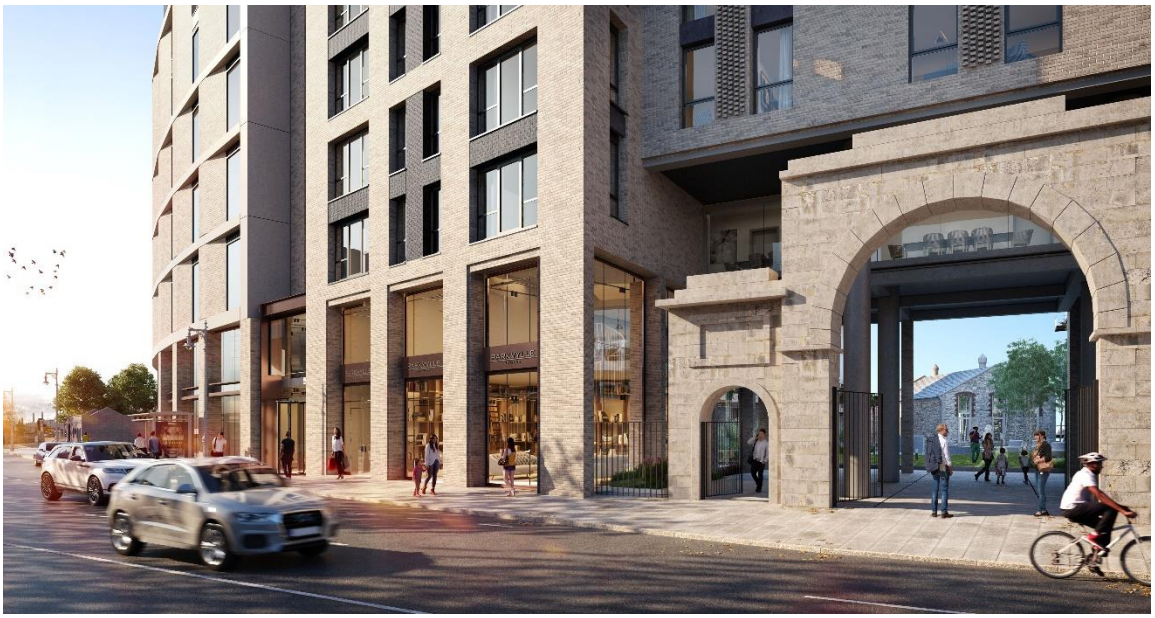


Illustration 5 View of Proposal along Parkgate Street looking east.

6. REFERENCES

Ball, F. E. (1906) A History of the County Dublin, Part IV, the H.S.P. Library, Dublin.

Bennet, D. (1991) Encyclopaedia of Dublin, Gill and Macmillan, Dublin.

Bermingham, N. (2000) in Bennett, I. (ed.) Excavations 1999: Summary Accounts of Archaeological Excavations in Ireland, Dublin, 63.

Briggs, C. S. (1985) A neglected Viking burial with beads from Kilmainham, Dublin, discovered in 1847, Medieval Archaeology 29, 94-108.

Clancy, P. (2003) Proposed redevelopment of Conyngham Road, Planning Reference 5424/03. Unpublished report. Margaret Gowen & Co Ltd.

Clancy, P. (2019) Monitoring of Ground Investigation Works. Hickey's Factory, Parkgate Street, Dublin 8. Licence No. 19E0179. Unpublished report Courtney Deery Heritage Consultancy Ltd.

Courtney, L. (2005) Archaeological Appraisal of proposed development at Hickeys Factory, Parkgate Street, Dublin 8. Unpublished report. Margaret Gowen & Co Ltd.

Conlin, S and De Courcy, J. (1988) Anna Liffey: The River of Dublin, Dublin.

Corlett, C. (1997) in Bennett, I. (ed) Excavations 1996: Summary Accounts of Archaeological Excavations in Ireland, Dublin.

De Courcy, J. W. (1996) The Liffey in Dublin. Gill and Macmillan, Dublin.

Deery, S. (2018). Hickey's Factory Parkgate Street, Archaeological Desk Study. Unpublished report. Courtney Deery Heritage Consultancy Ltd.

Graham-Campbell, J., 1976 The Viking-Age silver hoards of Ireland. In B. Almqvist and D. Greene (eds), Proceedings of the Seventh Viking Congress, 39-74, Royal Irish Academy, Dublin.

Halpin, E. (1998) Parkgate Street, Dublin

Joyce, W. St. J. (1995) The Neighbourhood of Dublin, Hughes and Hughes Ltd, Dublin.

Kealy, S. (2019) Hickeys 43 Parkgate Place: Ground Investigation Report. Ground Investigations Ireland, Unpublished.

Kenny, C. (1995) Kilmainham: The History and Settlement Older than Dublin, Dublin.

Murphy, M. (1995) 12-24 Montpelier Hill, Dublin, Dublin, Excavations.ie Ref: 1995:079 - (accessed 27/08/2018)

O'Brien, E. (1998) 'The location and context of Viking burials at Kilmainham and Islandbridge, Dublin', in Clarke, H.B., Ní Mhaonaigh, M. & Ó Floinn, R. (eds) Ireland and Scandinavia in the Early Viking Age, Dublin, 203-21.

Ó'Floinn Raghnall, 1998, 'The archaeology of the Early Viking Age in Ireland' in Howard B. Clarke, Máire Ní Mhaonaigh and Raghnall Ó Floinn (eds), Ireland and Scandinavia in the Early Viking Age, 132-65. Cornwall.

Scally, G. (1997) in Bennett, I. (ed.) Excavations 1996: Summary Accounts of Archaeological Excavations in Ireland, Dublin.

Scally, G. (1999) in Bennett, I. (ed.) Excavations 1998: Summary Accounts of Archaeological Excavations in Ireland, Dublin.

Simpson, L. (2002) 50 Montpelier Hill, Dublin 2002:0565 Excavations.ie

Simpson, L. (2004) Stratigraphic reports for Bully's Acre, Kilmainham, Dublin 8 (Licence no. 598) and Con Colbert Road/memorial park (Inchicore North) Island bridge, Dublin 8 (Licence no E497)

www.excavations.ie website

Online Resources:

www.archaeology.ie

www.downsurvey.tcd.ie

www.excavations.ie

www.gsi.ie

www.logainm.ie

www.heritagemaps.ie

www.osi.ie

APPENDIX 1 NATIONAL MONUMENTS LEGISLATION

All archaeological sites have the full protection of the national monuments legislation (Principal Act 1930; Amendments 1954, 1987, 1994 and 2004).

In the 1987 Amendment of Section 2 of the Principal Act (1930), the definition of a national monument is specified as:

any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections,

any artificial cave, stone or natural product, whether forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position,

any, or any part of any, prehistoric or ancient

(i) tomb, grave or burial deposit, or

(ii) ritual, industrial or habitation site,

and

any place comprising the remains or traces of any such building, structure or erection, any cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site...

Under Section 14 of the Principal Act (1930):

It shall be unlawful...

to demolish or remove wholly or in part or to disfigure, deface, alter, or in any manner injure or interfere with any such national monument without or otherwise than in accordance with the consent hereinafter mentioned (a licence issued by the Office of Public Works National Monuments Branch),

or

to excavate, dig, plough or otherwise disturb the ground within, around, or in the proximity to any such national monument without or otherwise than in accordance...

Under Amendment to Section 23 of the Principal Act (1930), a person who finds an archaeological object shall, within four days after the finding, make a report of it to a member of the Garda Síochána...or the Director of the National Museum...

The latter is of relevance to any finds made during a watching brief.

In the 1994 Amendment of Section 12 of the Principal Act (1930), all of the sites and 'places' recorded by the Sites and Monuments Record of the Office of Public Works are provided with a new status in law. This new status provides a level of protection to the listed sites that is equivalent to that accorded to 'registered' sites [Section 8(1), National Monuments Amendment Act 1954] as follows:

The Commissioners shall establish and maintain a record of monuments and places where they believe there are monuments and the record shall be comprised of a list of monuments and such places and a map or maps showing each monument and such place in respect of each county in the State.

The Commissioners shall cause to be exhibited in a prescribed manner in each county the list and map or maps of the county drawn up and publish in a prescribed manner information about when and where the lists and maps may be consulted.

In addition, when the owner or occupier (not being the Commissioners) of a monument or place which has been recorded, or any person proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Commissioners and shall not, except in the case of urgent necessity and with the consent of the Commissioners, commence the work for a period of two months after having given the notice.

The National Monuments Amendment Act 2004

The National Monuments Amendment Act enacted in 2004 provides clarification in relation to the division of responsibilities between the Minister of Environment, Heritage and Local Government, Finance and Arts, Sports and Tourism together with the Commissioners of Public Works. The Minister of Environment, Heritage and Local Government will issue directions relating to archaeological works and will be advised by the National Monuments Section and the National Museum of Ireland. The Act gives discretion to the Minister of Environment, Heritage and Local Government to grant consent or issue directions in relation to road developments (Section 49 and 51) approved by An Bord Pleanála and/or in relation to the discovery of National Monuments

14A. (1) The consent of the Minister under section 14 of this Act and any further consent or licence under any other provision of the National Monuments Acts 1930 to 2004 shall not be required where the works involved are connected with an approved road development.

(2) Any works of an archaeological nature that are carried out in respect of an approved road development shall be carried out in accordance with the directions of the Minister, which directions shall be issued following consultation by the minister with the Director of the National Museum of Ireland.

Subsection 14A (4) Where a national monument has been discovered to which subsection (3) of this section relates, then

(a) the road authority carrying out the road development shall report the discovery to the Minister

(b) subject to subsection (7) of this section, and pending any directions by the minister under paragraph

(d) of this subsection, no works which would interfere with the monument shall be carried out, except works urgently required to secure its preservation carried out in accordance with such measures as may be specified by the Minister

The Minister will consult with the Director of the National Museum of Ireland for a period not longer than 14 days before issuing further directions in relation to the national monument.

The Minister will not be restricted to archaeological considerations alone but will also consider the wider public interest.

APPENDIX 2. CONTEXT REGISTER

Context	Test Pit	Description
C1	TP1-TP11	Concrete slab forming present surface
C2	TP1-TP10, TP12	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel
<C3>	TP1	A large rectangular cut granite block inset into a pile of concrete. Appears to form a foundation pad.
C4	TP1	Loose, dark brown, gravelly clay, with inclusions of red brick and containing occasional willow pattern ceramic and slag
C5	TP1	Loose layer of crushed mortar with red brick inclusions and occasional fragments of oyster shell, appears to be the remnants of a surface
C6	TP1	A thin layer of compact, hard back clay containing deposits of vitrified bright aquamarine industrial by-product
C7	TP1	Loose, dark brown, gravelly clay, with inclusions of red brick, containing frequent oyster shell and slate, and with occasional animal bone. Within this context at 1.88m deep there is a thin layer of broken slates approximately 0.1m thick
C8	TP1	Compact, grey/green clay containing frequent mortar, broken slate, hand-made red brick and small red brick fragments, animal bone and oyster shell
C9	TP2	Loose deposit of crushed mortar, small angular limestone pebbles, red brick fragments, containing more mortar and silty material than C2 above. Pale in colour with dark patches where silty
C10	TP2	Layer of dark to black with occasional orange patches, extremely loose fine-grained material with a nearly pure composition. Appears to be industrial waste
C11	TP2	Resembles C9 towards the top of this deposit but comes onto a more compact dark brownish grey silty clay which still contains significant amounts of industrial waste
C12	TP2	Resembles the lower portions of C11, however it has a more reddish colour and a significant presence of slag
C13	TP2	Moderately compact, mid grey, silty clay with mortar flecking, occasional stones, infrequent oyster shell. The deposit contained a piece of transfer printed pottery and a clay pipe stem. In the west of the pit at 1.7m depth, there was a looser ashy, mortar rich deposit with a pink colour that may indicate burning/heat exposure, which contained two pieces of likely 18th century transfer printed and painted pottery.
C14	TP2	Compact, mid to dark grey black, in areas resembling black boulder clay, however this deposit contained frequent slate and oyster shell and occasional slag and black and creamware pottery.
<C15>	TP2	Wall H. A red brick wall in the north side of the pit, oriented east-northeast to west-southwest. In its west-southwest extent is only 2 bricks wide, in the east-northeast it is more substantial being approximately 4 bricks wide. It may form a pad. Composed of unfrogged red brick of standard 19th/20th century size. Length 3m, width 0.4 to 0.22m, thickness up to 0.35m approximately.
C16	TP3	Loose, light grey, silty fine sandy deposit.
C17	TP3	Loose, dark grey stony clay with frequent gravel in parts similar to C2
C18	TP3	Very compact at top, dark grey / brown sandy clay with a silt component. It includes frequent sub-angular to angular limestone (sized 0.04 to 0.15m). Towards the bottom of the test pit (*c.* 2.4m) this layer became softer and pebbles began to replace the larger more angular stones. No inclusions were present.

Context	Test Pit	Description
C19	TP4	Friable, crumbly / gritty silty sand with crushed red brick and mortar flecks., The deposit also contained a sherd of black-ware pottery, oyster shell, and small lumps of slag
C20	TP4	A very compact deposit containing a substantial amount of sub-angular stones, with a soft slightly tacky mid brown-grey silty clay component. This deposit contained inclusions of mortar
C21	TP5	Thin, moderately loose, black stained gravel deposit
C22	TP5	Compact, relatively level possible surface composed of crushed red brick, red brick fragments and small limestone slabs, evidence of burning
C23	TP5	Soft, grey brown, silty deposit with an area towards the top of dark grey. Did not contain many inclusions
C24	TP5	Soft, grey silt deposit. Did not contain many inclusions
C25	TP5	Deposit of dark brown to black, orange mottled gravel, silt, clay with slag, the deposit included red brick and a small sherd of transferware pottery
C26	TP5	Soft, mid grey-brown silty rich deposit with few inclusions
C27	TP5	In the eastern end of the test pit only. Deposit made up of small water rolled stones, red brick, animal bone and clay tobacco pipe
C28	TP5	Sandy gravely silty clay, dark and wet with considerable quantities of slag, also contained transfer print pottery
C29	TP5	Grey brown to yellow, sandy clay, lacustrine/river alluvial tidal flat clay, contains transfer print pottery
C30	TP5	River gravels, contained transfer print pottery
C31	TP6	Sandy deposit surrounding concrete foundation and services
C32	TP6	Within box formed by services and walls. Silty clay with some sand, inclusions of red brick and some animal bone, a relatively clean deposit
C33	TP6	Tan coloured, silty clay, with infrequent inclusions of red brick and shell
C34	TP6	Dark grey, silty clay with rare inclusions of red brick fragments, mortar fragments, and shell
C35	TP6	Orange flecked, dark tan silty clay, contains occasional very small intact snail shells
<C36>	TP6	Wall F. Composed of 7 courses of roughly hewn black limestone calp blocks bonded together with lime mortar, the wall had a hight of 1.2m. The upper 0.35m of wall F was either cased or formed of concrete with a single course of 19th to 20th century red brick overlying this. Wall F had courses composed of roughly 0.08m to 0.12m high and 0.8m long slabs
<C37>	TP6	Wall G. From the top of Wall G to its plinth was 0.57m, and from top too base measured 0.68m, the plinth extending from the wall was 0.08m wide and tapered under to the base of the foundation trench. Wall G had a blockier construction than Wall F being made of courses of stones rough 0.1m to 0.2m high and 0.35m to 0.45m long
C38	TP7	Course, yellow sand that forms a level surface with some occasional small red brick fragments, evidence of oxidization shown by occasional orange mottling. Likely a layer of casting sand
C39	TP7	Compact, brown-grey gravelly mortar flecked clay with inclusions of limestone blocks of size 0.27m
C40	TP7	Horizontal granite block (in situ). 0.5m long and 0.11 deep, in the section face
C41	TP7	Compact, grey gravelly clay with inclusions of mortar fragments and red brick flecks
C42	TP7	Two buried iron pipes oriented north – south, spaced 1m apart. Between these pipes, excavation continued to a depth of 2m with the material removed resembling a darker deposit of the material found between 1.26 – 1.65m
C43	TP8	The fill within the two voids formed by the walls, demolition rubble including iron stained red brick, burnt clay, and red tiles

Context	Test Pit	Description
<C44>	TP8	Wall (Wall A TP8) oriented north-northeast to south-southwest that was only visible in the overcut western side of the test pit. It was constructed of roughly hewn black limestone calp blocks. This wall was not keyed into Walls B and Wall D
<C45>	TP8	Wall (Wall B TP8) oriented east-northeast to west-northwest, constructed of roughly hewn black limestone calp blocks bonded by strong limestone mortar, these are coursed with blocks up to 0.52 x 0.32 x 0.2m wide and mixed with shallower courses 0.04 x 0.23 x 0.2m deep, 12 courses were exposed. This wall has "holes" on either side of Wall C, these are approximately 0.28m wide and located at a depth of 1.91m and 1.94m below surface level, above each "hole" is an vertical iron bond, in-line with the eastern hole is an iron rod of length 0.29m, with a square section of 0.035m, it is set in a Dublin stock brick (0.9 x 0.21 x 0.7m), rotating this crank reveals it to have been part of mechanism to open or close the "hole", indicating they functioned as "flues"
<C46>	TP8	Wall (Wall C TP8) constructed of roughly hewn black limestone calp blocks bonded by strong limestone mortar, oriented north-northeast to south-southwest, it appears to be contemporary with Wall B and Wall D and is keyed into them with smaller stones measuring 0.1 x 0.37 x 0.2m and 0.03 x 0.17 x 0.12m up to 0.22 x 0.22m in size. Wall C has a width of 0.6m and a length of 0.68m
<C47>	TP8	Wall (Wall D TP8) oriented east-northeast to west-northwest ,parallel to Wall B. Constructed of roughly hewn black limestone calp blocks bonded by strong limestone mortar, these are coursed with blocks up to 0.52 x 0.32 x 0.2m wide and mixed with shallower courses 0.04 x 0.23 x 0.2m deep, 12 courses were exposed
<C48>	TP8	Wall (Wall E TP8), oriented north-northeast to south-southwest, parallel to Walls A and C, located mostly under the eastern edge of the test pit. It was constructed of roughly hewn black limestone calp blocks. This wall was keyed into Walls B and Wall D, this wall had a slight step out at the mid-point of its currently exposed depth
C49	TP9	Mid grey brown, loose silty sand, with occasional mortar flecking, small fragments of red brick, and occasional stones
C50	TP9	Compact but loose and crumbly when chipped off, black, sandy silty material with lots of very fine nodules/grit/very small pebbles approximately 1mm – 5mm. Most likely industrial waste from a type of heated/burning process. Located to the north of the pit
C51	TP9	As layer recorded above but oxidized orange reddish brown, located exclusively on the north side of the trench
C52	TP9	Very compact, forms a surface made up of heat affected stones, slag, and materials similar to layer immediately above. Appears to have been heavily impacted by heat
C53	TP9	Green-grey tan, compact clay with gravel and a lot of stone present (dia.0.08m), also contains substantial amounts of red brick and mortar
C54	TP9	Mid grey, compact, silty gravely clay, with some mortar flecking and small pebbles, contains no red brick and less stone than the layer above
C55	TP9	Tan-black patchy, smooth clay
<C56>	TP9	Wall I. The remains of a wall, width approximately 0.26m, length oriented east to west through middle of test pit is 3m. These remains are composed of a layer of mortar, which served as bedding for the wall, indents in the mortar can be observed that appear to have been formed by now absent bricks The black industrial waste deposit, C50, in section reveals that the wall was at least partially upstanding when it formed, this is shown by how

Context	Test Pit	Description
		the deposit formed against what would have been the north face of the now absent wall
C57	TP10	Mid to dark brown, soft, silty clay with red brick inclusions
C58	TP10	Light pinkish grey, compact, mix of sand and mortar that forms a thin level surface.
C59	TP10	Mid grey-brown, silty clay, with red brick inclusions
C60	TP10	Slightly compact, dark brownish grey boulder clay, containing decayed limestone pebbles, and occasional inclusions of red brick, mortar and animal bone
C61	TP10	Compact, black brownish grey boulder clay containing decayed limestone pebbles sized 0.02 to 0.03m, contained rare inclusions of mortar, a solitary oyster shell and a 17th or 18th century piece of red glazed earthenware
C62	TP10	Very sticky, grey black boulder clay, a gravely clay with black mottling due to presence of decayed round limestone pebbles
C63	TP11	Soft, mid grey brown, clayey silty with inclusions of red brick, mortar and stones
C64	TP11	Soft mid to dark grey brown clayey silt with dark mottling of stained gravel. Contains inclusions of red brick, mortar and stones
C65	TP11	Soft, dark grey clay with inclusions of mortar flecking, red brick, and shell
<C66>	TP11	Approximately half of test pit 11 was taken up by an upright wall made up of concrete and red brick, 0.2m thick, this was associated with a thick slab of smoothed concrete 0.3m thick and located 0.8m below surface, which makes up the southern 1.75m of the south of the pit wall and slab share this context number
C67	TP12	Burgundy, sticky plastic clay, with mortar, red brick and slag
C68	TP12	Black, gritty sandy deposit with bright orange patches, contains slag and clinker
C69	TP12	Very compact, crushed mortar, red brick, stone, probable mortar floor
C70	TP12	Brown and grey, gravely clay, with lots of burnt sand and clinker
C71	TP12	Tan grey mottled, sandy clay, with considerable staining
C72	TP12	A deposit of loose red brick
C73	TP12	Compact black/grey, fine, stone free clay. Odious.
C74	TP12	River gravel - grey blue, sandy river gravel, stained and highly odious.

APPENDIX 3. PLATES

Plate 7 Test Pit 1, view to west-southwest

Plate 8 Test Pit 2 view to east-northeast

Plate 9 Test Pit 2 showing wall, view to northwest

Plate 10 Test Pit 3 view to east-northeast

Plate 11 Test Pit 4, view to west-northwest

Plate 12 Test Pit 5, top of heat affected redbrick surface, view to east

Plate 13 Test Pit 5 showing industrial layers, view to southeast

Plate 14 Test Pit 6 Wall F, view to north

Plate 15 Test Pit 6 Wall G and concrete encased services, view to south

Plate 16 Test Pit 7 showing sand surface, view to east-northeast

Plate 17 Test Pit 7 showing deposits and services, view to south-southeast

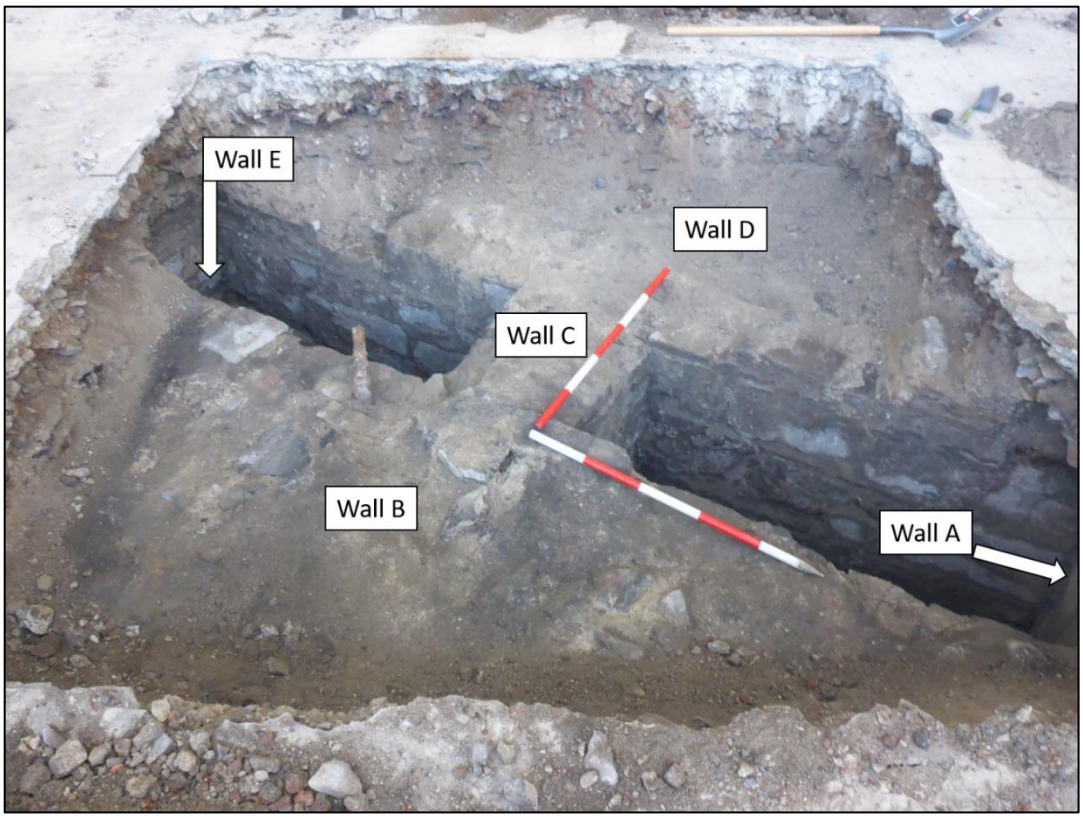


Plate 18 Test Pit 8 showing walls (A-E) and voids, view to south-southeast

Plate 19 Test Pit 8 looking southeast showing the possible limestone flue structure, view to southeast

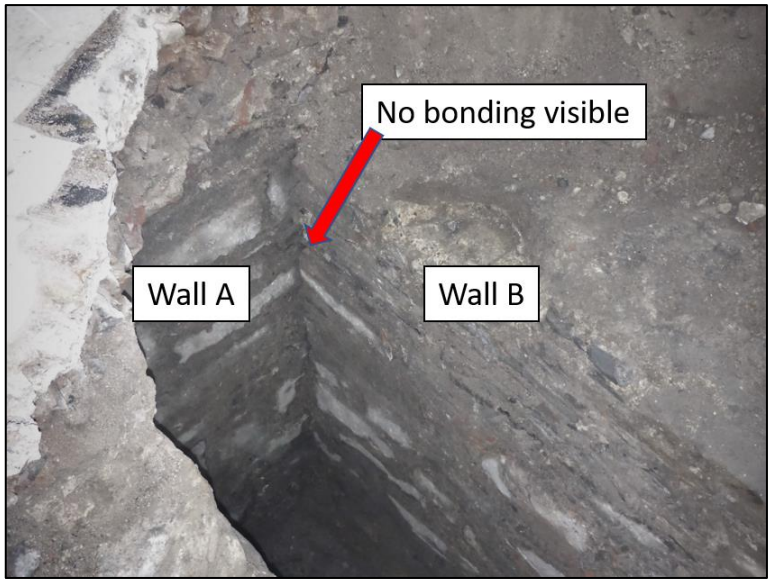


Plate 20 Test Pit 8 showing that Wall A and B are not tied in, view to northwest

Plate 21 Test Pit 8 showing air flue at the base of the ranging rod, view to north-northwest

Plate 22 Test Pit 8 showing iron bands on either side of Wall C and the lever/crank to open/ close the flues, view to northeast

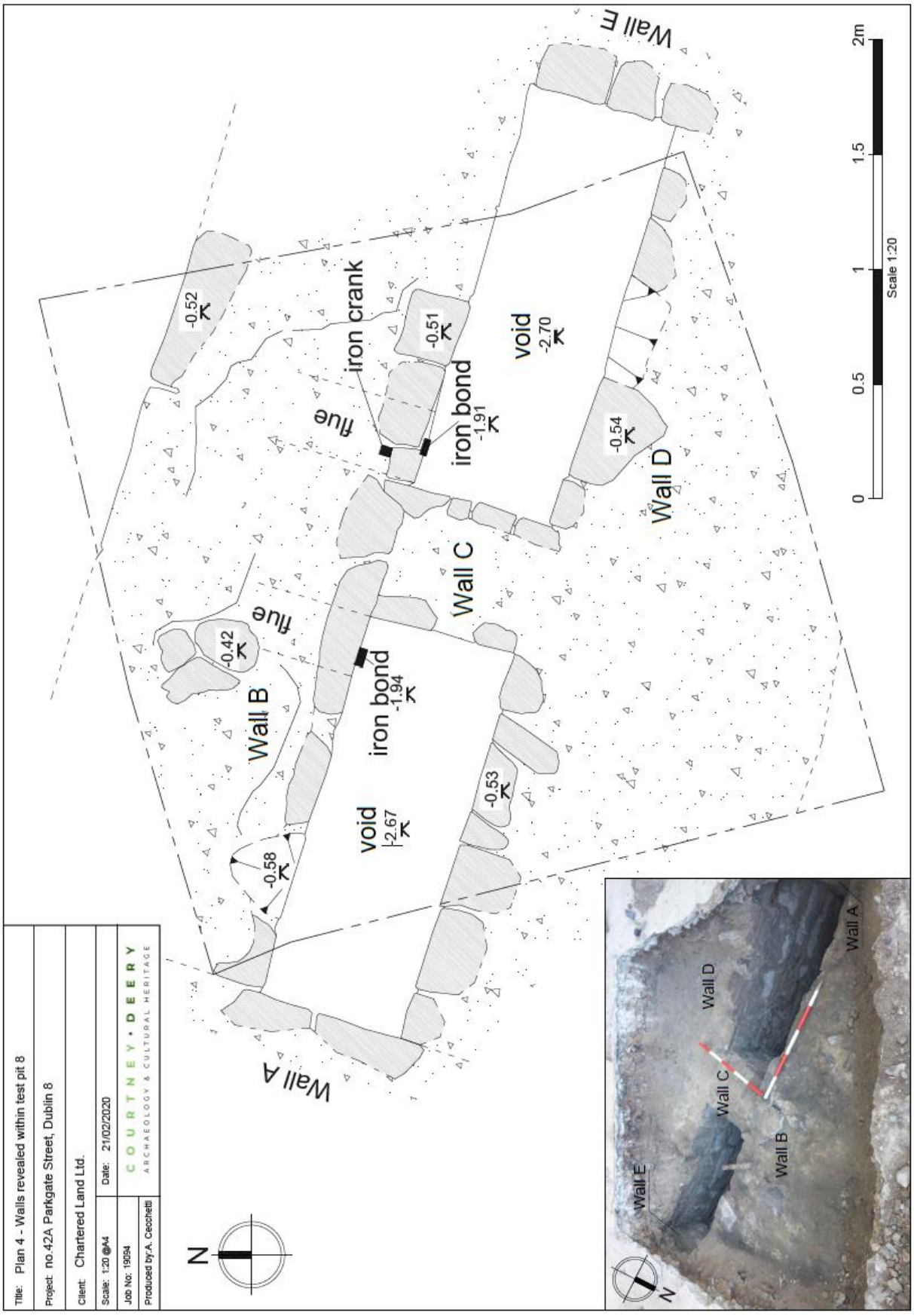
Plate 23 Test Pit 9 showing 19th century post medieval layers, view to east-northeast

Plate 24 Test Pit 10 Compact sandy surface, view to southeast

Plate 25 Test Pit 10 Section face, view to north-northeast

Plate 26 Test Pit 11 Section and original concrete surface, view to west

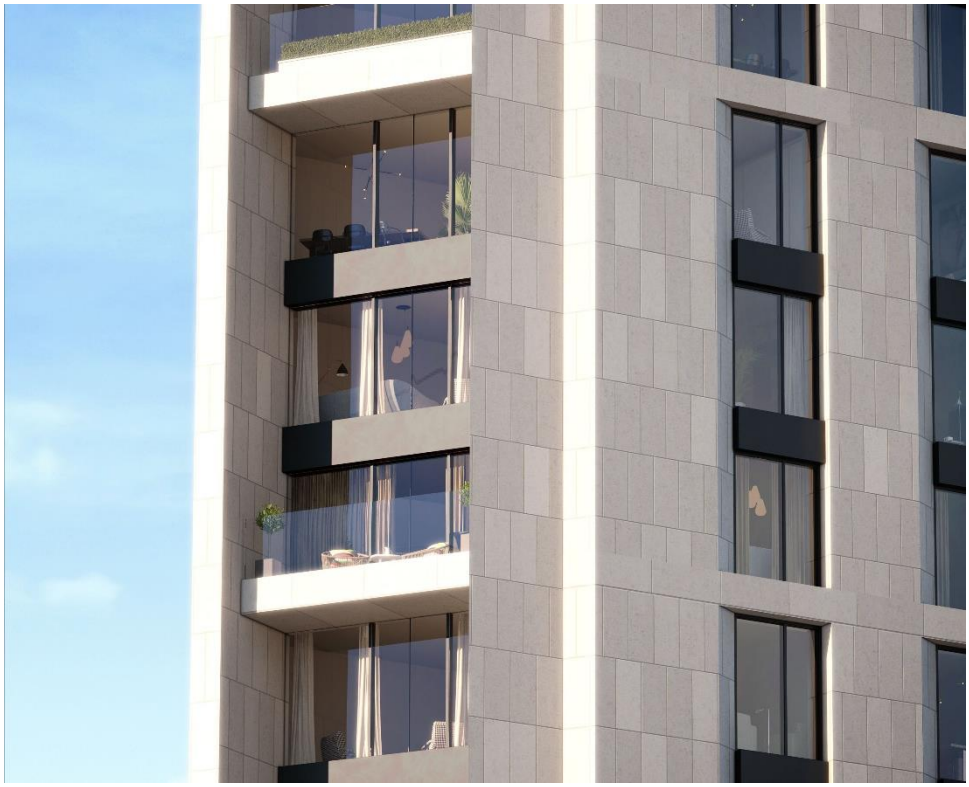
Plate 27 Test Pit 12 Section face, view to west-southwest


Wall E
Wall D
Wall C
Wall B
Wall A
iron crank
iron bond
-1.91
iron bond
-1.94
void
-2.70
void
-2.67
flue
flue
-0.52
-0.51
-0.54
-0.42
-0.58
-0.53
0
0.5
1
1.5
2m
Scale 1:20
N
Wall E
Wall B
Wall C
Wall D
Wall A
N
Title: Plan 4 - Walls revealed within test pit 8
Project: no.42A Parkgate Street, Dublin 8
Client: Chartered Land Ltd.
Scale: 1:20 @A4
Date: 21/02/2020
Job No: 19094
Produced by:A. Ceschetti
COURTNEY • DEERY
ARCHAEOLOGY & CULTURAL HERITAGE

APPENDIX 4 ILLUSTRATIONS OF THE PROPOSED DEVELOPMENT

View from Frank Sherwin Bridge

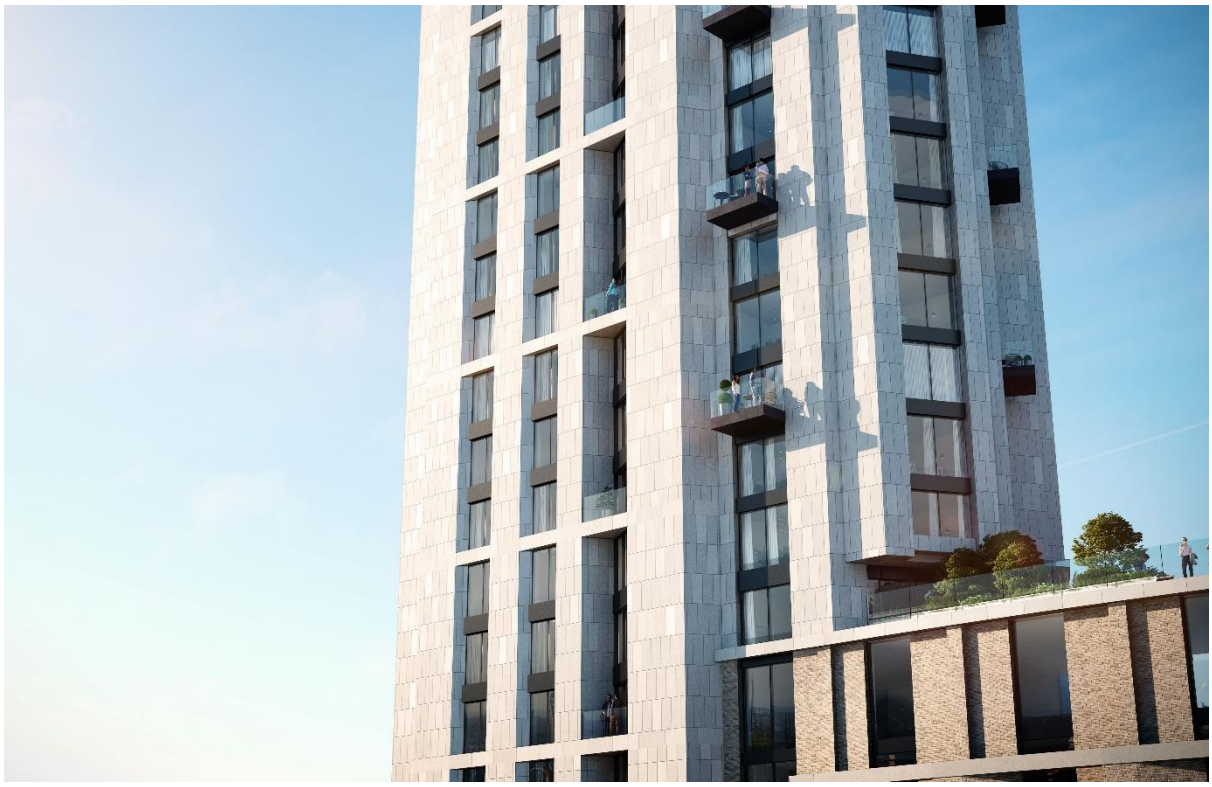
Close up vignette of Tower and Office



Close up vignette of tower looking west

View from Benburb Street 1

View From Benburb Street 2



Close up Vignette of Tower and office

Close up vignette of restored Stone Arch leading to Communal Courtyard

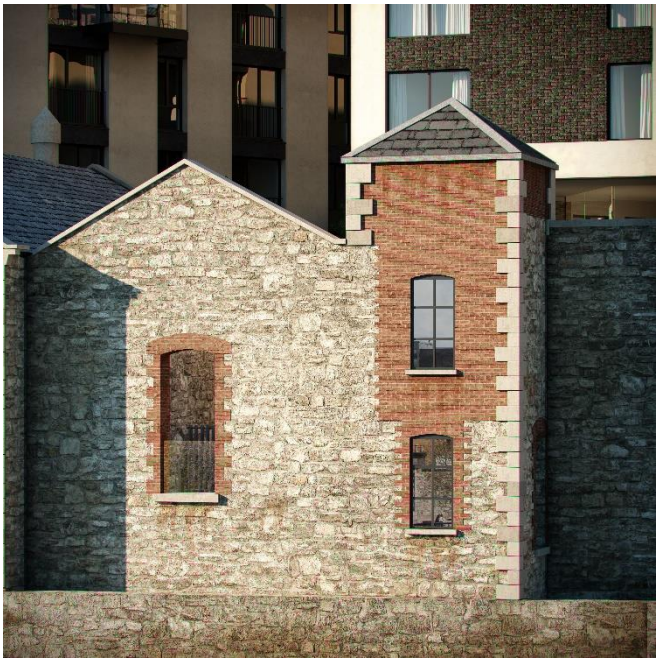
View from Parkgate St looking into entrance to public square

View from Parkgate St into public square

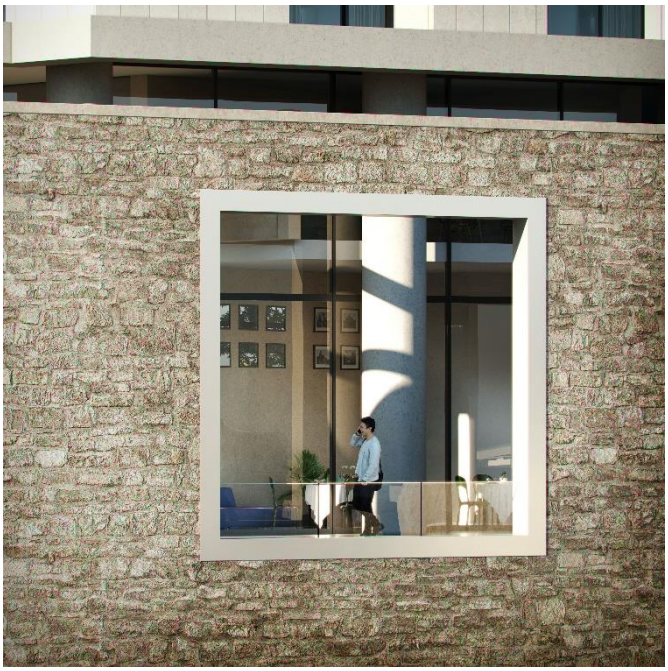
View from Parkgate St looking east

Close up vignette of 5th floor of office.

View from across the Liffey at Heuston Station



Close up vignette of restored Quay wall buildings



Close up vignette of Quay wall opening

Close up vignette of tower at Quay Wall turret

Close up vignette of the residential courtyard buildings

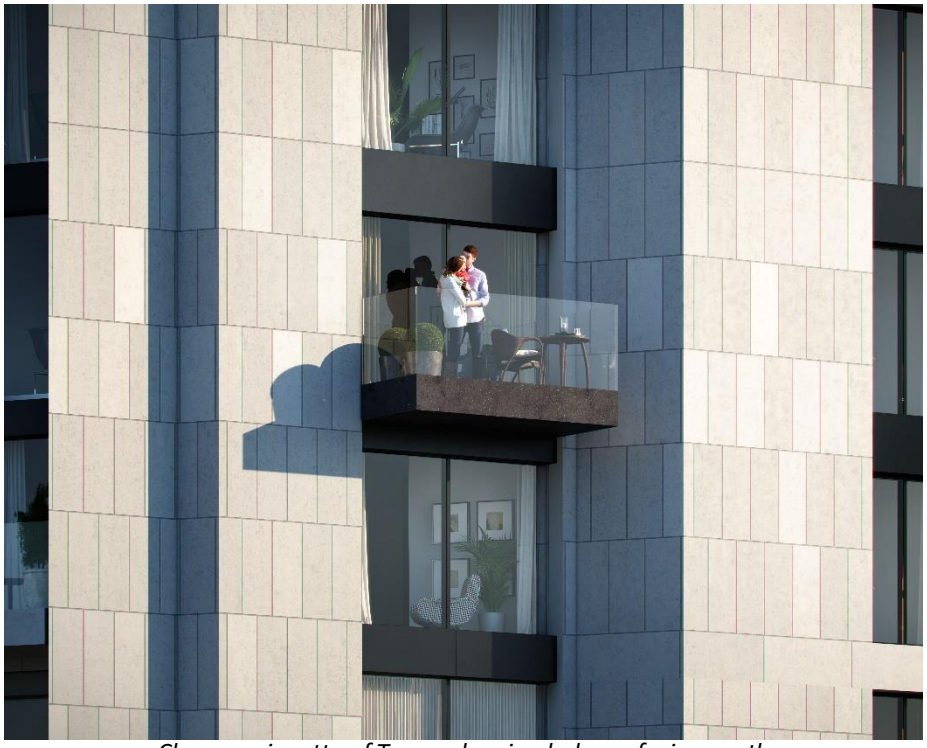
Close up vignette of the tower and Block B facing south

View of Residential Communal Courtyard

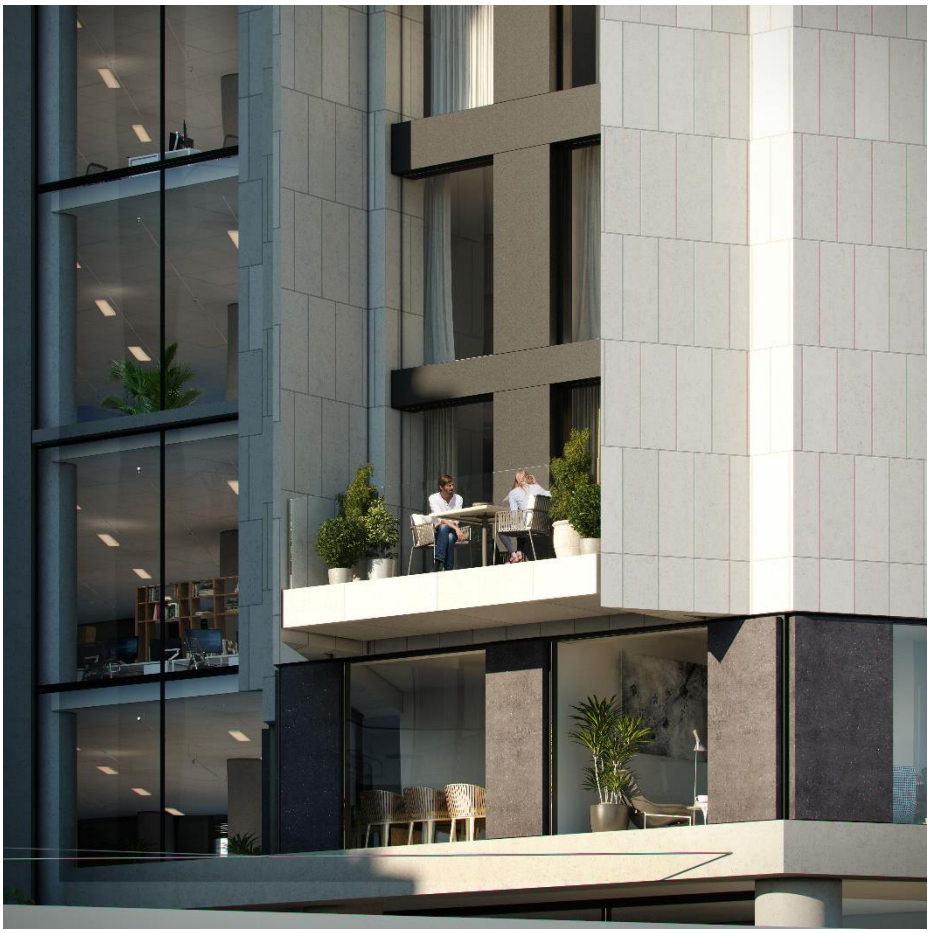
View of Public Courtyard

Evening time view of scheme from Frank Sherwin bridge

View from Heuston Station



Close up vignette of Tower showing balcony facing south



Close up vignette of Tower showing balcony facing west

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APPENDIX 4 21E0033Ext ARCHAEOLOGICAL MONITORING REPORT

COURTNEY • DEERY

ARCHAEOLOGY & CULTURAL HERITAGE

Monitoring of Ground Investigation Works

Licence No. 21E0033Ext

Hickey's Factory

Parkgate Street

Dublin 8

By

Siobhán Deery

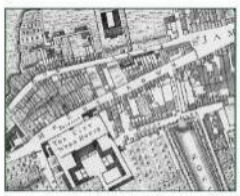
for

Courtney Deery Heritage Consultancy Ltd

On behalf of

Ruirside Developments Ltd

14/03/2022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EXECUTIVE SUMMARY

This report describes the results of the archaeological monitoring of a second phase of ground investigation works undertaken at the site of Hickeys (No. 43) Parkgate Street, Dublin 8. Archaeological monitoring was undertaken by Siobhán Deery under Licence No. 21E0033Ext from the 21st of March to the 2nd of April 2022.

Twenty-six slit trenches, measuring 0.7m by 3m to a scheduled depth up to 3m BGL, were opened (less than 2m depth was achieved in four trenches, TP13, TP11, TP3 and TP14). Six test trenches were opened in the concrete yard (TP1-TP5, TP24), and eighteen were within the factory inside the main building (TTP6-TP23).

Ground investigation monitoring and archaeological test trenching was carried out previously on the site. The first phase of ground investigations monitoring comprised 18 no. window sample holes, 7 bore holes, 2 no. with cable percussive boreholes with rotary core follow on and five slit trenches (Clancy 1999, Licence No. 19E017). This was followed by archaeological test excavation, which examined 12 no test pits measuring 3m x 3m in 2020 (Manktelow and O'Donovan 2020, under Licence No. 21E0033Ext).

The test pits and site investigation work yielded early 19th and 20th -century industrial deposits and features associated with the Phoenix Iron Works and later on-site factories.

Please note the results are a visual survey only and are not for geotechnical purposes and should not be relied on for any geotechnical/construction information.

A separate Archaeological Impact Assessment report and method statement based on the cumulative results of all ground investigation works and archaeological test excavation carried out on the site has been submitted to the City Archaeologist and the National Monuments Service (NMS) in response to the planning compliance documentation (ABP 306569-20 (Blocks B and C), Condition 24 ABP-310567-21 (Block A), Condition 26). It will be subject to review by the City Archaeologist and will form part of the licence application for the construction works. This will update a previous AIA which was based on a superseded site layout and planning details (O'Donovan and Courtney 2022).

1. INTRODUCTION

1.1. General

This report describes the results of archaeological monitoring of ground investigation works undertaken at No. 43 Parkgate Street (former Hickey's site, Figure 1), Dublin 8. Archaeological monitoring was carried out by Siobhán Deery from 21st March to 2nd April 2022, under an extension to Licence no 21E0033Ext. This report was prepared by Courtney Deery Heritage Consultancy (CDHC) for on behalf of Ruirside Developments Ltd. The consented development comprises mixed use residential and commercial redevelopment of an urban brownfield site.

Please note the results are a visual survey only and are not for geotechnical purposes and should not be relied on for any geotechnical/construction information.

1.2. Site Location

The site is located on Parkgate Street, on the northern bank of the River Liffey, opposite the point of discharge for the River Camac and immediately west of Sean Heuston Bridge (Figure 1). It lies 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 of the City' and Parliamentary Boundary.

The permitted 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, 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.

Cartographic analysis indicates that the usage of the site evolved from open meadow in the eighteenth century to the use of the site for industrial purposes from the early nineteenth century onwards (e.g., the Phoenix Iron Works in the early 1800s, followed by Kingsbridge Woollen Factory and the Parkgate Printing Works).

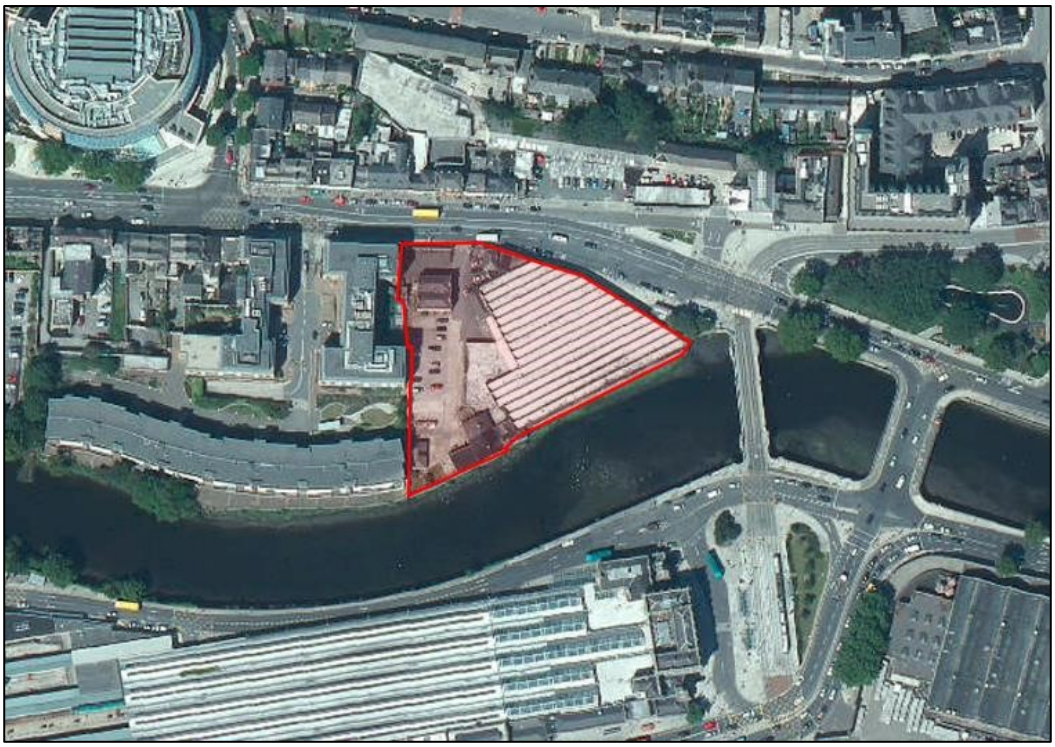

Figure 1 Site location

1.3. Description of Ground Investigation Works and Methodology

Twenty-six slit trenches, measuring 0.7m by 3m to a scheduled depth up to 3m BGL, were opened (less than 2m depth was achieved in four trenches, TP13, TP11, TP3 and TP14). Six test trenches were opened in the concrete yard (TP1-TP5, TP24), and eighteen were within the factory inside the main building (TTP6-TP23).

The aim of the archaeological monitoring was to record the stratigraphy within each test pit to establish the archaeological potential of the lands are and to highlight if there are any further archaeological considerations for the development of the site.

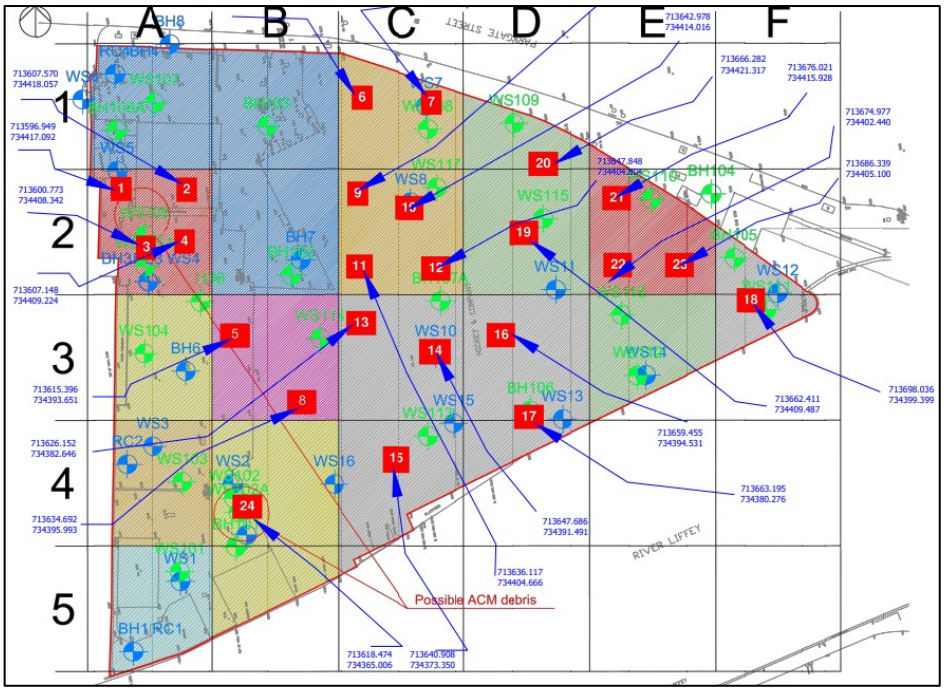

Figure 2 Locations of Ground Investigation Works

Ground investigation monitoring (2019) and archaeological test trenching (2020) was carried out previously on the site. The first phase of ground investigations monitoring comprised 18 no. window sample holes, 7 bore holes, 2 no. with cable percussive boreholes with rotary core follow on and five slit trenches (Clancy 1999, Licence No. 19E017). This was followed by archaeological test excavation, which examined 12 no test pits measuring 3m x 3m in 2020 (Manktelow and O'Donovan 2020, under Licence No. 21E0033).

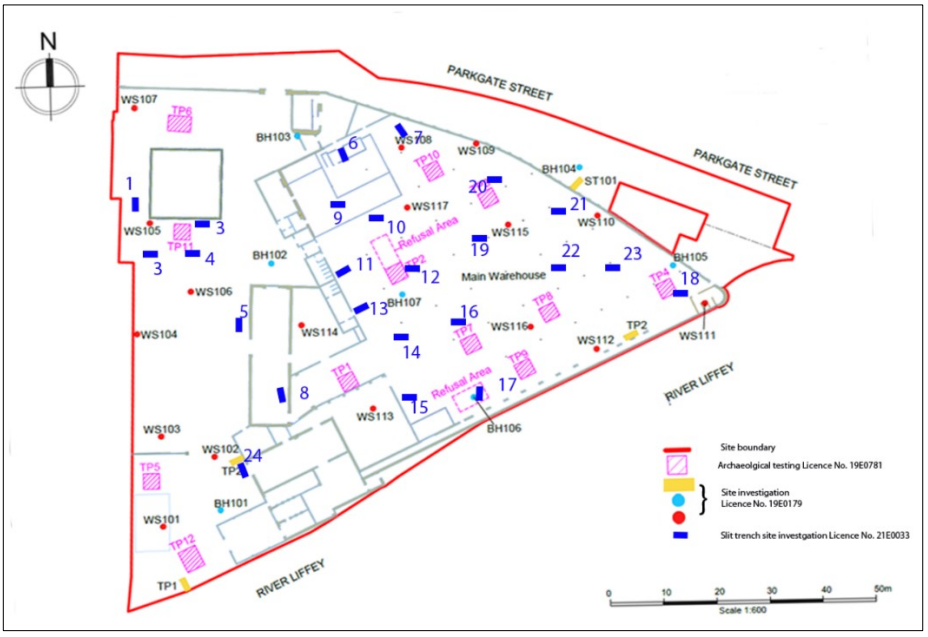

Figure 3 Stage 1 (2019), Stage 2 (2022) SI works locations and archaeological test pits (2020)

A separate Archaeological Impact Assessment report based on the cumulative results of all ground investigation works and archaeological test excavation carried out on the site has been submitted to the City Archaeologist and the National Monuments Service (NMS) in response to the planning compliance documentation (ABP 306569-20 (Blocks B and C), Condition 24 ABP-310567-21 (Block A), Condition 26) and will be subject to review by the City Archaeologist. This will update a previous AIA which was based on a superseded site layout and planning details (O'Donovan and Courtney 2022).

2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1. Introduction

An extensive archaeological and historical background and cartographic review has been compiled for the primary report for Licence number Licence No. 21E0033 (O'Donovan 2020), the following presents a summary of the most relevant background.

There are no specific Record of Monuments and Places (RMP) sites recorded within the subject site, however its location on the south-facing bank of the River Liffey and offers a vantage point of many of the monuments in this region of the city (Figure 4). The nearest recorded archaeological feature is the site of a dwelling (DU018-020-532) located on Montpelier Hill 100m to the north.

The site is listed in the Dublin City Industrial Heritage Record (DCIHR 18 10021) Parkgate Printing works {Royal Phoenix Iron Works} and is recorded as forming an important component within the city's industrial heritage. The proposed development site is situated within the statutory zone of archaeological potential 'Historic City of Dublin', RMP No. DU018-020.

The Phoenix Park archaeological complex (DU018-007) is located c. 105m northwest of the development site (Figure 13). 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).

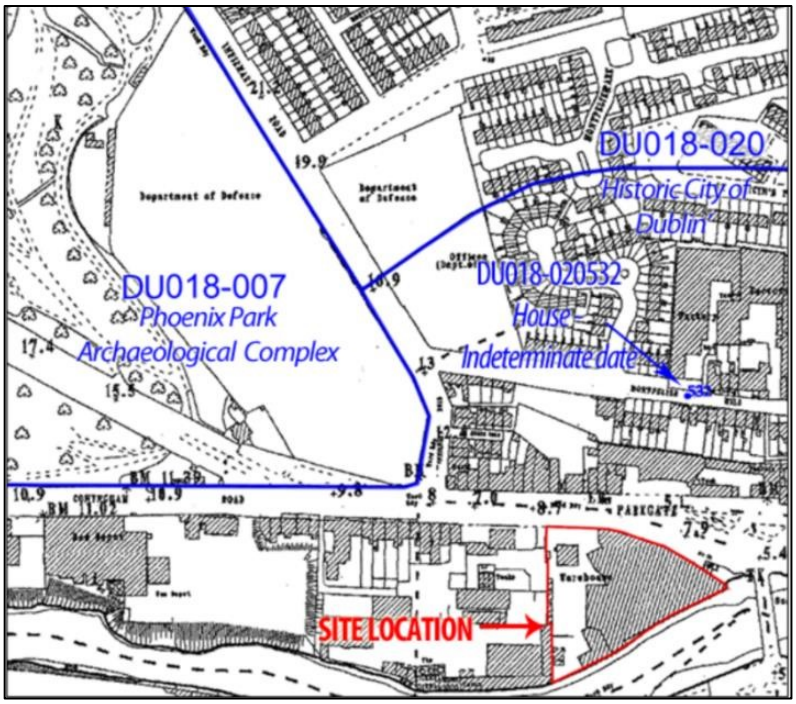

Figure 4 Published RMP map showing site location

The development site was occupied by the Royal Phoenix Iron Works, also known as Robinson's Iron Works from the early 1800's. 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. The owner, Richard Robinson, a native of Hull, had settled in Dublin in 1800. His Phoenix foundry was responsible for casting King's 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. 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[1]. The metalwork for Sean Heuston Bridge was cast here and the strongly walled site was used as a location for a bomb-making factory during the First World War. The munitions were carried down the river in barges that were loaded at a jetty beside the factory (De Courcy 1996).

The demise of the site as an iron works was first noted from an advertisement in the Freeman's Journal on the 20 July 1878 when there was a sale of machinery, bricks, granite quoins. A further advertisement on the 24 of 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. These advertisements would appear to indicate that the site, its machinery and buildings were stripped clean prior to its sale.

[1]https://www.dia.ie/architects/view/4625/ROBINSON-RICHARD%5B1%5D%2A

The Iron works was in operation from the early 1800s to approximately 1880, after which the site was occupied for a decade by The Kingsbridge Mills, a woollen worsted manufacturer. 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 site then lay vacant until about 1920, when it was taken over for use as Government Stores.

A printing works was set up on site around ten years later, 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 12 below). The printing works remained in operation until the mid-1970s when Hickey's Fabrics, took up residence.

This can be seen on two 18th century maps of Dublin, Brooking's 1728 map (not shown) and John Rocque's 1756 map (Figure 5). 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 a 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 (not shown), on which 'Park Gate Street' and 'Conyngham Road' follow the line of the old Chapelizod / Islandbridge thoroughfare.

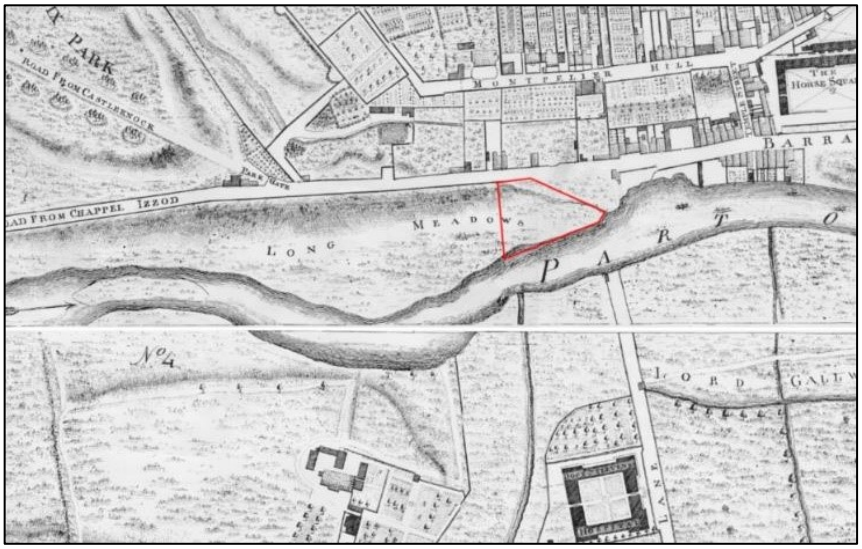

Figure 5 Rocque's County Map of Dublin, 1760, with approximate site location in red

On Campbell's map of 1811 (Figure 6), 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

northeastern 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.

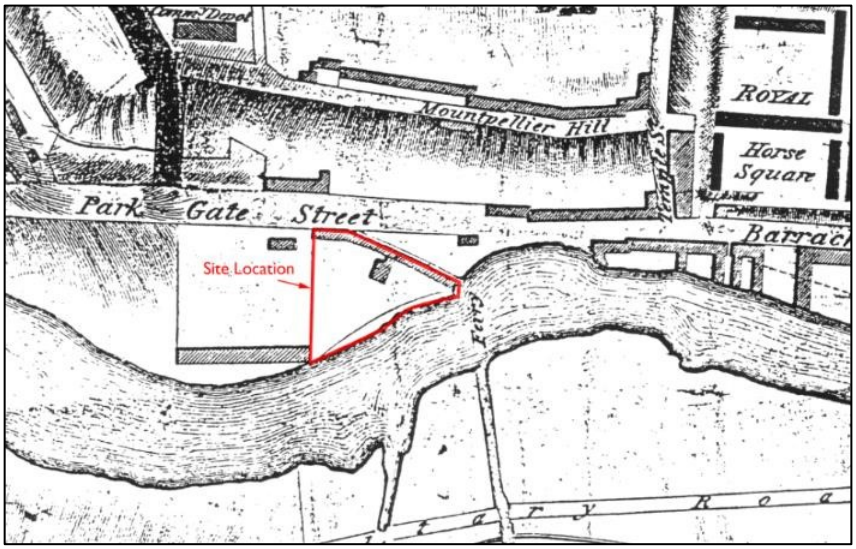

Figure 6 Thomas Campbell map of 1811 of the City of Dublin, 1811, with approximate site location in red

2.2. Ordnance Survey maps

By the time of the first edition Ordnance Survey (OS) 1843 six-inch map (Figure 7), the Royal Phoenix Iron Works occupy a large plot on the north river bank, accessed via an entrance onto Parkgate Street (the proposed development site forms the eastern half of the original iron works site). A significant development in the vicinity is King's Bridge, which was erected in 1828.

The works can be seen in greater detail on the 1847 and 1864 OS five-foot plans (Figures 8 and 9). The eastern half of the plot appears to house the majority of the iron works buildings, with gardens and open space dominating the western half (becoming more elaborate by 1864).

The Kingsbridge Woollen Factory replaces the irons works on the 1889 OS map (Figure 10) and in later editions the site was in use as a printing works. The 1889 map also shows the tram lines running along Parkgate Street and across King's Bridge.

The 1943 revised OS map (Figure 11) shows that the original iron works site 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 proposed development site).

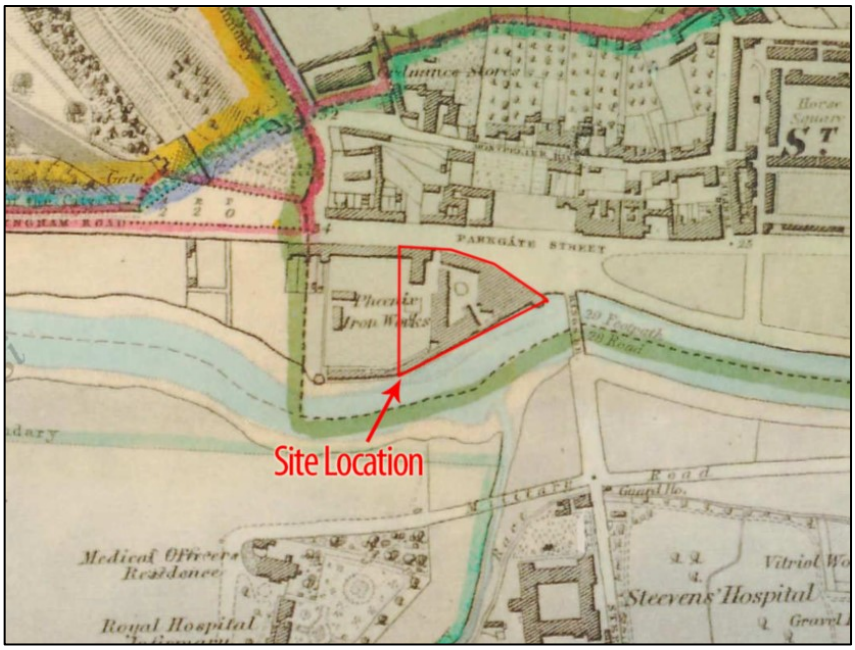

Figure 7 First edition OS map, 1843 (scale 1:10,560), showing approximate site location

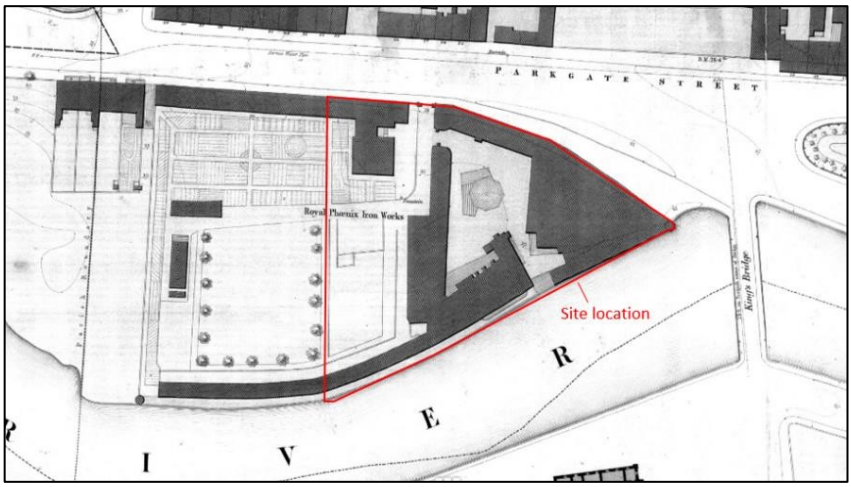

Figure 8 First edition 1:1056 OS Map 1847, (scale 1:1056), showing approximate site location

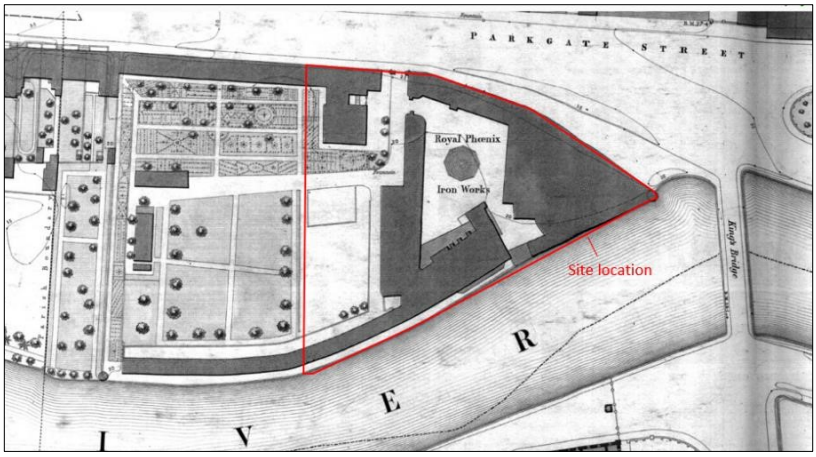

Figure 9 Revised edition OS map, 1864 (scale 1:1056), showing approximate site location

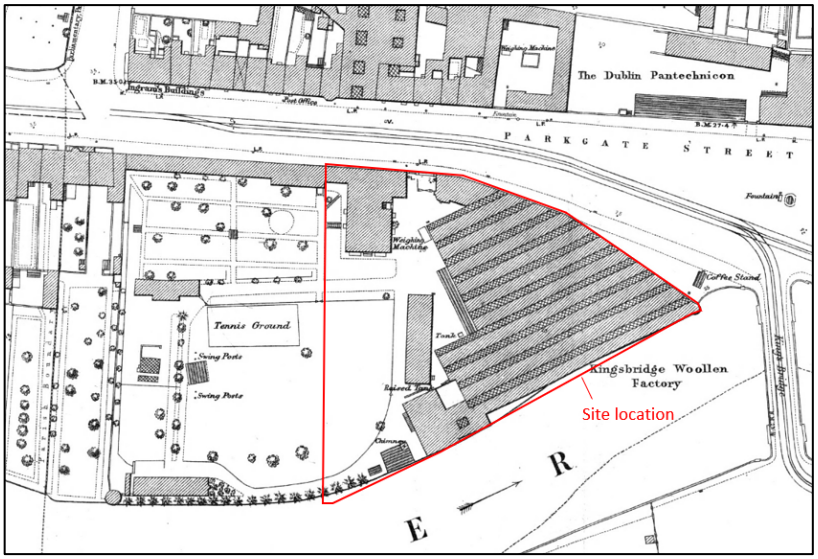

Figure 10 Revised edition OS map, 1889 (scale 1:1056), showing approximate site location

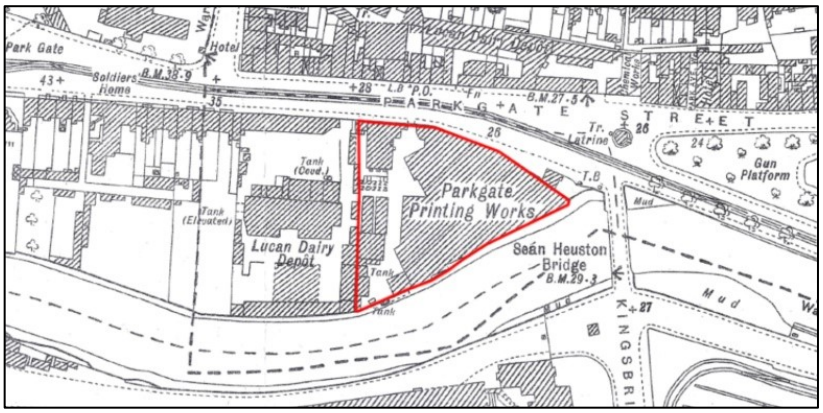

Figure 11 Revised edition OS map, 1943 (scale 1:1,560), showing approximate site location

3. MONITORING RESULTS

3.1. Introduction

Archaeological monitoring of site investigation works took place from the 21st of March to the 2nd of April 2022 under an extension to Licence number 21E0033. Twenty-six slit trenches, measuring 0.7m by 3m to a scheduled depth up to 3m BGL, were opened (less than 2m depth was achieved in four trenches, TP13, TP11, TP3 and TP14). Six test trenches were opened in the concrete yard (TP1-TP5, TP24), and eighteen were within the factory inside the main building (TTP6-TP23, Plate1).

Plate 1 Building interior view towards the southeast corner of the building showing test pit locations

The pits were excavated by a mini-digger fitted with a grading bucket that alternated between toothed and toothless as appropriate.

The ground Level within the building was 4.23m OD, outside the building it varied from 3.9m OD at the northern end of the site and 3.66m OD at the southern end.

It was not possible to get into the trenches, so the assessment was visual, and measurements were estimates only. The stratigraphy of each trench is described below, and some photos are provided in Appendix 1.

3.1.1. Inside the main building (TTP6-TP23)

3.1.1.1. Test Pit 6

Depth	Description	Interpretation
0–0.10m	Concrete slab forming present surface	20th century floor
0.10–0.50m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	19th to 20th century demolition layer
0.5–1.20m	Slightly compact, dark brownish grey boulder clay, containing decayed limestone pebbles, and occasional inclusions of red brick, mortar	18th to 19th century dump / redeposit
1.20–3m+	Grey black silty clay, wet, boulder clay, a gravely clay with black mottling due to presence of decayed round limestone pebbles	Possibly natural subsoil

3.1.1.2. Test Pit 7

Depth	Description	Interpretation
0–0.13m	Concrete slab forming present surface	20th century floor
0.13–0.35m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
0.35–1.45m	Mid to dark brown, soft, silty clay with red brick inclusions	19th to 20th century layer
0.8–1.52m	Slightly compact, dark brownish grey boulder clay, containing decayed limestone pebbles, and occasional inclusions of red brick, mortar and animal bone	18th to 19th century dump / redeposit
1.52–2.7m	Compact, black brownish grey boulder clay containing decayed limestone pebbles sized 0.02 to 0.03m, contained rare inclusions of mortar and a single a clay pipe stem and rare occurrences of animal bone and glass	Pre-19th century Layer of redeposit/dumped material
2.7–3m+	Very sticky, grey black boulder clay, a gravely clay and water at the base	Possibly natural subsoil

3.1.1.3. Test Pit 9

Depth	Description	Interpretation
0–0.11m	Concrete slab forming present surface	20th century floor
0.11–0.40m	Loose demolition layer, composed of crushed concrete, slate, angular limestone fragments, red brick, sandy gravel	20th demolition
0.40–0.50m	Concrete	20th subfloor
0.5–1.40m	Slightly compact, brown sandy clay with inclusions of slate, red and yellow brick, mortar.	18th to 19th century dumped deposit
1.40-1.9m	Sticky brown silty clay with few inclusions of slag waste	Layer industrial waste material
1.9–2.45m+	Very sticky, grey black boulder clay, a gravely clay with black mottling due to presence of decayed round limestone pebbles	Possibly natural subsoil

3.1.1.4. Test Pit 10

Depth	Description	Interpretation
0–0.12m	Concrete slab forming present surface	20th century floor
0.12–0.30m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century demolition layer
0.40–0.50m	Loose deposit of crushed white sandy mortar forming a thin level surface	19th century layer
0.50–1.60m	Mid grey-brown, silty clay and gravel with a 40cm thick layer of red and yellow brick inclusions	19th century surface
1.60-1.70m	Thin layer of black loose fine-grained material with some slag.	Industrial waste
1.70-2.60m	Compact, mid brown, yellowy sicky sandy clay with some fragments of broken red brick.	18th to 19th century dump / redeposit

Depth	Description	Interpretation
2.6m+	Very sticky, grey black boulder clay, a gravely clay with black mottling due to presence of decayed round limestone pebbles	Possibly natural subsoil

3.1.1.5. Test Pit 20

Depth	Description	Interpretation
0–0.15m	Concrete slab forming present surface	20th century floor
0.15–0.60m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
0.60–0.80m	Loose, grey, silty fine sandy deposit with mortar and stone	19th to 20th century fill
0.80–1.30m	Loose, dark grey, stony clay with frequent gravel	19th to 20th century fill
1.30–3m+	Soft yellow silty clay and dark grey / brown sandy clay with a silt component. No inclusions were present	Natural boulder clay

3.1.1.6. Test Pit 11

Depth	Description	Interpretation
0–0.08m	Concrete slab forming present surface	20th century floor
0.08–0.25m	Crushed red brick	20th century sub-floor
0.25–0.40m	Layer of crushed mortar cement /concrete	19th to 20th century sub floor
0.40–1m	Black silty fine grained, ash material containing sand, clinker metal	Industrial waste
1.–2+m	Moderately compact, mid grey, silty clay with mortar flecking, occasional stones, infrequent oyster shell. The deposit contained a piece of likely 18th century painted pottery	Pre-19th century Layer of redeposit/dumped material

3.1.1.7. Test Pit 12

Depth	Description	Interpretation
0–0.8m	Concrete slab forming the present ground surface	20th century floor
0.8–0.35m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
0.35m-0.55m	Thin layer of blackened gritty sand with some stone, wood, limestone blocks, slag and redbrick.	19th to 20th century fill
0.55m–1.3m	Layer of dark brown to black with occasional orange patches, extremely loose fine-grained material with some stone inclusions. Appears to be industrial waste	19th to 20th century fill
1.3–1.90m	Mid brown – light sandy -smooth compact silty clay, sticky with some stone mortar.	19th to 20th century fill
1.9m –3m+	Compact sticky grey to dark brown/black boulder clay with some stone	Natural

3.1.1.8. Test Pit 19

Depth	Description	Interpretation
0–0.8m	Concrete slab forming the present ground surface	20th century floor
0.8–0.30m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor,
0.30m-0.55m	Thin layer white mortar over thick burnt fine ash layer	19th century Industrial waste dump deposit
0.55m–1.35m	A red brick floor at the northern end of the trench, indications of a red brick wall/ arch pier running in a NW-SE direction with crushed brick around it	19th century Industrial floor and wall
1.35–1.90m	Mid brown – light sandy -smooth compact silty clay, sticky with some stone mortar.	19th century Industrial waste dump deposit
1.9m –3m+	Compact sticky grey to dark brown/black boulder clay with some stone	Natural

Plate 2 Wall in trench 19 northern side of the trench.

3.1.1.9. Test Pit 21

Depth	Description	Interpretation
0–0.15m	Concrete slab forming present surface.	20th century floor
0.15–0.35m	Loose demolition layer, composed of mid brown loose sand with red brick, yellow brick and a gritty mortar.	20th century sub-floor/demolition layer
0.35–0.45m	Thin layer of blackened gritty sand with stone wood, limestone blocks slag and redbrick.	19th to 20th century fill
0.45–1 m	Mid-brown sandy clay with stone inclusions.	19th to 20th century fill
1–1.9m	Mid to light sandy clay compact and stickly with stone and mortar	19th to 20th century fill
1.9-3+m	Sticky grey-brown boulder clay with some stone	Natural

3.1.1.10. Test Pit 13

Depth	Description	Interpretation
0–0.15m	Concrete slab forming present surface.	20th century floor
0.15-1.5m	Loose layers with rubble stone, layers of loose red brick and gravel with slate, stone red brick and yellow brick.	20th century sub-floor/demolition layer
1.5+	Concrete base	20th century

3.1.1.11. Test Pit 8

Depth	Description	Interpretation
0-0.3m	Concrete surface	20th century.
0.3-0.55m	Loose demolition layer with red bricks, lumps of mortar and limestone fragments.	20th century.
0.55-0.65m	Layer of blackened gritty soil and mortar	19th century industrial waste dumped deposit.
0.65-2.2m	Loose greyish sandy silty clay. It includes yellow and red brick and limestone block fragments sized (0.08-0.010m)., includes dark brown /black sandy stone with some slag	19th century demolition deposit.
2.2+m	Mid brown and grey interbedded silt, riverine no inclusions	Natural

3.1.1.12. Test Pit 14

Depth	Description	Interpretation
0-0.2m	Concrete surface	20th century.
0.2-0.35m	Loose demolition layer with red bricks, lumps of mortar and limestone fragments.	20th century.
0.35-1.1m	Loose greyish sandy silty clay. It includes yellow and red brick and small limestone fragments sized (0.08-0.010m).	19th century industrial waste dumped deposit.
1.1-1.7m	Loose black organic silt layer with lumps of coal (0.04-0.07m) as inclusions.	19th century industrial waste dumped deposit.

3.1.1.13. Test Pit 16

Depth	Description	Interpretation
0–0.15m	Concrete slab forming present surface	20th century floor
0.15–0.95m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel. At the eastern side of the trench to up to 2m a wall or base of a redbrick pier/top of cellar.	20th century sub-floor and redbrick wall
0.95–1.1m	Course, yellow sand that forms a level surface with some occasional small red brick fragments, evidence of oxidization shown by occasional orange mottling. Likely a layer of casting sand.	19th century sandy surface
1.1m–1.2m	Compact, grey gravelly clay with inclusions of mortar fragments and red brick flecks	19th century dump deposit
1.2-3+m	Soft sticky grey-brown boulder clay with some stone	Natural

3.1.1.14. Test Pit 22

Depth	Description	Interpretation
0–0.10m	Concrete slab forming present surface.	20th century floor
0.10–0.35m	Loose demolition layer, composed of mid brown loose sand with red brick, yellow brick, slate and a gritty mortar. Displaced limestone floor slabs	20th century sub-floor/demolition layer
0.35–0.45m	Thin layer white mortar over thick burnt fine ash layer with metal waste	19th to 20th industrial waste
0.45–1.9m	Mid to light sandy clay compact and stickly with stone and mortar, slate, tile, brick and stone.	19th to 20th century fill
1.9-3+m	Sticky grey-brown boulder clay with some stone	Natural

3.1.1.15. Test Pit 23

Depth	Description	Interpretation
0–0.15m	Concrete slab forming present surface.	20th century floor
0.15–0.90m	Loose demolition layer, composed of mid brown loose sand with red brick, yellow brick, slate and a gritty mortar.	20th century sub-floor/demolition layer
0.90–1.90m	Thin layer loose fine grain blackened silty clay with some blackened stone and red brick – may have represented a pit within burnt material dumped into it.	19th to 20th century dumped industrial waste
0.45–1.9m	Mid to light sandy clay compact and stickly with stone and mortar, slate, tile, brick and stone	19th to 20th century fill
1.9-2.8 +m	Mid brown sandy silt with industrial waste comprising steel, slate, limestone blocks and broken flagstone and red brick. Glazed Blackware sherd.	19th century demolition and industrial waste
2.8-3+	Soft rusty grey silt and a compact yellowy brown silt	Natural

3.1.1.16. Test Pit 15

Depth	Description	Interpretation
0-0.2m	Concrete surface	20th century
0.2-0.80m	Loose mid grey silt with red brick fragments and flecks of mortar	20th century industrial waste
0.80-2.6m	Dry limestone wall located to E side of the trench at 0.80m deep. Stone sized from L 0.35m W 0.12m D 0.20m the smallest to L 1.20m W 0.42m D 0.12m the biggest. To the west side of the trench a dark grey organic silty clay deposit with fragments of animal bone At 1.7m deep, it was reached of what it seemed a solid surface/rock (or wall), not visible from the top. It was not possible to gain further insight.	-9th century structure

Plate 3 *Test pit 15, possible masonry remains*

3.1.1.17. Test Pit 17

Depth	Description	Interpretation
0–0.10m	Concrete slab forming present surface.	20th century floor
0.10–1m	Loose demolition layer, composed of mid brown loose sand with red brick, yellow brick, tiles, slate and a gritty mortar. @0.50m on the eastern side of the trench a red brick wall measuring at least 1.20m was identified.	20th century sub-floor/demolition layer and structural remains
1-1.20m	White mortar layer with black gritty sand and some crushed redbrick.	19th to 20th century industrial
1–1.50m	Mid to light sandy clay compact and stickly with stone and mortar, slate, tile, brick and stone. End of trench	19th to 20th century dumped industrial waste

Plate 4 Test pit 17, Red brick wall on eastern side of the trench

3.1.1.18. Test Pit 18

Depth	Description	Interpretation
0–0.1m	Concrete slab forming present surface	20th century floor
0.1–0.95m	Loose demolition layer, composed of crushed concrete, angular limestone fragments, red brick, sandy gravel	20th century sub-floor
0.95–2.15m	Friable crumbly / gritty silty sand with crushed red brick and mortar flecks. The deposit also contained a sherd of black-ware pottery, oyster shell, and small lumps of slag.	18th to 19th century fill / layer
2.15–2.6m+	A very compact deposit containing a substantial amount of sub-angular stones, with a soft slightly tacky mid brown-grey silty clay component. This deposit contained inclusions of mortar. Natural sub-soil was not reached in this test pit indicating the raising and levelling of this riverside area.	18th to 19th century layer

3.1.2. Outside the main building

3.1.2.1. Test Pit 1

Depth	Description	Interpretation
0–0.5m	Thin layer of dark-brown silty clay	Garden soil
0.5–0.10m	Thin layer of rubble stone	20th century backfill
0.10–1m	Loose mid -brown sandy clay and dark brown silty clay with red brick tile and some shell. A clay water pipe and copper wire ran along the eastern side of the trench	20th century backfill
1m-1.9m	Light brown stickly sandy clay with slate and Blackware sherd	19th century layer
1.90m-2.6+m	Mid grey and brown sandy silt	Possible natural subsoil

3.1.2.2. Test Pit 2

Depth	Description	Interpretation
0–0.1m	Concrete slab forming present surface	20th century Surface
0.1–0.10m	Soft, mid grey-brown, clayey silty with inclusions of red brick, mortar and stones	20th century layer
0.10–2.9m	Soft, mid to dark grey-brown, clayey silt with dark mottling of stained gravel. Contains inclusions of red brick, mortar and stones	20th century backfill
2.9+m	Dark grey, silty clay with rare inclusions of red brick fragments, mortar fragments, and shell	18th to 19th century redeposited material

3.1.2.3. Test Pit 3

Depth	Description	Interpretation
0–0.1m	Concrete slab forming present surface	20th century Surface
0.1–0.20m	Garden Soil	20th century layer
0.20–40m	Mid- brown sandy clay with red brick and burnt red brick, iron waste, slag and clinker	19th century industrial waste
0.40-0.45	Black iron waste with slag and clinker.	19th century industrial waste
4.5+m	Concrete surface	19th century structural – foundation or ground slab.

3.1.2.4. Test Pit 4

Depth	Description	Interpretation
0–0.5m	Concrete slab forming present surface	20th century Surface
0.5–0.30m	Crushed stone and loose gravel with red and yellow brick	20th century layer
0.30–1.2m	Compact stone and mid brown clay and sandy mortar spread with large limestone blocks slate and rubble, burnt yellow brick and clumps of clinker	19th century demolition layer and industrial waste
1.2+m	Concrete slab	19th century structural – foundation or ground slab.

3.1.2.5. Test Pit 5

Depth	Description	Interpretation
0–0.8m	Concrete slab forming present surface	20th century Surface
0.8–0.20cm	Unbonded redbrick floor with slate providing the underfloor base.	19th-20th century floor
0.20–30m	Thin smooth black ash layer	19th -20th century industrial waste

0.30m-0.80m	Mid brown demolition rubble and sandy silt.	19th century demolition rubble
0.80-2.50m	Black- dark brown odious industrial waste material with hydrocarbons, with wet dark clay within it and dark brown silt with gravel. @1.8m a clay pipe was identified.	19th century industrial waste
2.5+m	Very sticky, grey black boulder clay, a gravely clay	Possibly natural subsoil

Plate 5 Unbonded red brick floor, test pit 5

3.1.2.6. <u>Test Pit 24</u>

Depth	Description	Interpretation
0–0.10m	Concrete slab forming present surface over crushed gravel	20th century Surface
0.10–0.30cm	Rubble backfill material with limestone blocks	20th century subfloor
0.30–60m	Unbonded redbrick floor with mortar underneath	19th -20t h century floor
0.60m-1.40	Black ashy rubble with slag, clinker and stone conglomerate and limestone blocks	19th century demolition rubble
1.40-2.60m	Mid brown gritty sand and stone, with slag and pieces of redbrick, slate and granite boulders	19th century industrial waste
2.6+m	Very sticky, grey black boulder clay, a gravely clay	Possibly natural subsoil

Plate 6 Unbonded red brick floor, test pit 5

4. CONCLUSIONS

The site investigation works included the opening of 26 slit trenches, measuring 0.7m by 3m to a scheduled depth up to 3m BGL, (less than 2m depth was achieved in four trenches, TP13, TP11, TP3 and TP14); and six test trenches were opened in the concrete yard (TP1-TP5, TP24), and 18 were within the factory inside the main building (TP6-TP23).

The investigations confirmed a stratigraphy that comprised made ground and demolition rubble including layers of industrial waste (representing the 18th, 19th and 20th century, Plate 7) up to approximately 2.20m BGL overlying possible reclamation deposits and then natural riverine silts.

Beneath the modern ground surfaces of concrete and tarmac is a layer of building rubble with a high concentration of red brick. The rubble fills overlay deposits of industrial waste material, which appeared to be spread across the site in bands; these were characterised by black charcoal-rich clays and grey mortar with varying degrees of sands and gravels. Inclusions of slag, ash and mortar were noted. These deposits ranged between 0.45m – 1.90m BGL. These deposits are possibly associated with the demolition of the 19th-century ironworks. Results also indicate foundations, possible wall and floor levels associated with the ironworks and later phases on site. Inside the factory, possible structural remains were encountered in TP17 (red brick at 1.85-2.6m), TP19 (red brick, at 1.70m-2m), TP15 (masonry at 0.80-2.6m). Outside the factory, an unbonded red brick floor was identified in TP24 and TP5; it lay immediately beneath the concrete surface.

Possible reclamation material was identified from c.2m BGL, comprising a compact, mid to dark grey black silt, whist it was reminiscent of black boulder clay the deposit contained frequent slate and shell as well as

occasional slag and black and creamware pottery. Largely beneath the industrial deposits, where the depths could be achieved (c 2.6m-3m+ BGL) riverine deposits comprising dark grey-blue and mid-brown sticky clayey slit were encountered some of the trenches. No inclusions were noted in these deposits, and they were interpreted as natural.

A summary of the stratigraphy across the site is as follows:

Depth (m)	General description
0.0- 0.30m	Concrete modern surfaces.
0.30-0.80m	Redbrick rubble and gravel.
0.80-1.5m	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 face of construction. Cartographic sources from the 19th century onwards, indicate a sequence of industrial installations on the site, commencing with the Royal Phoenix Iron Works. At 1.50m below present ground level a possible ground surface associated with the industrial structures is evident. Possible walls and sub-surface structures were visible within, in TP17 (red brick), TP19 (red brick), TP15 (masonry).
1.5-3+ m	Reclamation/ agricultural soils pre 1800's (prior to the Iron Works) were encountered, brown clays were imported onto the site. Ceramics (post medieval) and fragments of animal bone.
3m+	The original river and meadow level as represented in the early cartographic sources appears to be represented at over 3m below the current ground levels.

Plate 7 Typical cross section of upper levels, photo of TP5

The results of monitoring the ground investigation works appear to indicate foundations, possible wall and floor levels associated with the iron working phase and later phases on site (early 1800's onwards).

A separate Archaeological Impact Assessment report and method statement based on the cumulative results of all ground investigation works and archaeological test excavation carried out on the site has been submitted to the City Archaeologist and the National Monuments Service (NMS) in response to the planning compliance documentation (ABP 306569-20 (Blocks B and C), Condition 24 ABP-310567-21 (Block A), Condition 26). It will be subject to review by the City Archaeologist and will forms part of a new licence

application for the construction works. This will update a previous AIA which was based on a superseded site layout and planning details (O'Donovan and Courtney 2022).

5. REFERENCES

Ball, F. E. (1906) *A History of the County Dublin, Part IV*, the H.S.P. Library, Dublin.

Bennet, D. (1991) *Encyclopaedia of Dublin,* Gill and Macmillan, Dublin.

Bermingham, N. (2000) in Bennett, I. (ed.) *Excavations 1999: Summary Accounts of Archaeological Excavations in Ireland*, Dublin, 63.

Briggs, C.S. (1985) A neglected Viking burial with beads from Kilmainham, Dublin, discovered in 1847, *Medieval Archaeology* 29, 94-108.

Clancy, P. (2003) *Proposed redevelopment of Conyngham Road*, Planning Reference 5424/03. Unpublished report. Margaret Gowen & Co Ltd.

Courtney, L. (2005) *Archaeological Appraisal of proposed development at Hickeys Factory, Parkgate Street, Dublin 8.* Unpublished report. Margaret Gowen & Co Ltd.

Conlin, S and De Courcy, J. (1988) *Anna Liffey: The River of Dublin*, Dublin.

Corlett, C. (1997) in Bennett, I. (ed) *Excavations 1996: Summary Accounts of Archaeological Excavations in Ireland*, Dublin.

De Courcy, J. W. (1996) *The Liffey in Dublin.* Gill and Macmillan, Dublin.

Deery, S. (2018). *Hickey's Factory Parkgate Street, Archaeological Desk Study*. Unpublished report. Courtney Deery Heritage Consultancy Ltd.

Graham-Campbell, J., 1976 The Viking-Age silver hoards of Ireland. In B. Almqvist and D. Greene (eds), *Proceedings of the Seventh Viking Congress*, 39-74, Royal Irish Academy, Dublin.

Halpin, E. (1998) *Parkgate Street, Dublin*

Joyce, W. St. J. (1995) *The Neighbourhood of Dublin*, Hughes and Hughes Ltd, Dublin.

Kenny, C. (1995) *Kilmainham: The History and Settlement Older than Dublin*, Dublin.

Murphy, M. (1995) 12-24 Montpelier Hill, Dublin, Dublin, Excavations.ie Ref: 1995:079 - (accessed 27/08/2018)

O'Brien, E. (1998) 'The location and context of Viking burials at Kilmainham and Islandbridge, Dublin', in Clarke, H.B., Ní Mhaonaigh, M. & Ó Floinn, R. (eds) *Ireland and Scandinavia in the Early Viking Age*, Dublin, 203-21.

Ó'Floinn Raghnall, 1998, 'The archaeology of the Early Viking Age in Ireland' in Howard B. Clarke, Máire Ní Mhaonaigh and Raghnall Ó Floinn (eds), *Ireland and Scandinavia in the Early Viking Age,* 132-65. Cornwall.

Scally, G. (1997) in Bennett, I. (ed.) *Excavations 1996: Summary Accounts of Archaeological Excavations in Ireland*, Dublin.

Scally, G. (1999) in Bennett, I. (ed.) *Excavations 1998: Summary Accounts of Archaeological Excavations in Ireland*, Dublin.

Simpson, L. (2002) 50 Montpelier Hill, Dublin 2002:0565 Excavations.ie

Simpson, L. (2004) Stratigraphic reports for Bully's Acre, Kilmainham, Dublin 8 (Licence no. 598) and Con Colbert Road/memorial park (Inchicore North) Island bridge, Dublin 8 (Licence no E497)

Slattery, D. (2005) *Report on the Architectural/Historic Significance of Buildings and structures at Hickeys Fabrics Parkgate House, Parkgate Street, Dublin 8*. Unpublished Report.

Online Resources:

www.archaeology.ie
www.downsurvey.tcd.ie
www.excavations.ie
www.gsi.ie
www.logainm.ie
www.heritagemaps.ie
www.osi.ie

APPENDIX 1 INDICATIVE PLATES SHOWING RESULTS OF MONITORING

Test pit 6

Test pit 7

Test pit 9

Test pit 10

Test pit 20

Test pit 19

Test pit 14

Test pit 15

Test pit 22

Test pit 23

Test pit 17

Test pit 18

Test pit 1

Test pit 2

Test pit 24

Test pit 3

Test pit 4

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COURTNEY • DEERY

ARCHAEOLOGY & CULTURAL HERITAGE

APPENDIX 5 ARCHAEOLOGICAL METHOD STATEMENT

CourtneyDeery

ARCHAEOLOGY & CULTURAL HERITAGE

Archaeological Method Statement

No.42A Parkgate Street

(former Hickeys Site)

Dublin 8

ABP 306569-20 (Blocks B and C), Condition 24

ABP-310567-21 (Block A), Condition 26

DHLGH Licence Number 21E0033

For

Ruirside Developments Ltd

Author

Lisa Courtney and Siobhán Deery

Date

10/05/2022

Revision 2

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EXECUTIVE SUMMARY

This archaeological method statement was prepared by Courtney Deery Heritage Consultancy (CDHC) for 42A Parkgate Street (the former Hickey's Fabrics site) on behalf of Ruirside Developments Ltd. The consented development comprises mixed use residential and commercial redevelopment of an urban brownfield site.

Condition 24 of ABP 306569-20 (Blocks B and C), and Condition 26 of ABP-310567-21 (Block A), detail the requirements for an archaeological method statements detailing mitigation measures to be agreed in advance with the Department of Housing Local Government and Heritage (DHLGH) (formerly Department of Culture, Heritage and the Gaeltacht).

1. INTRODUCTION

1.1. General

This archaeological method statement was prepared by Courtney Deery Heritage Consultancy (CDHC) for 42A Parkgate Street (the former Hickey's Fabrics site) on behalf of Ruirside Developments Ltd. The consented development comprises mixed use residential and commercial redevelopment of an urban brownfield site.

The development was subject to a Strategic Housing Development (SHD) application which contained an EIAR. An Bord Pleanála granted permission for Blocks B and C (ABP Ref. 306569-20, 321 no. Build To Rent units (BTR)) and refused Block A (160 no. BTR units) in a split decision in respect of the same site. The reason for refusing Block A related to the architectural standard of Block A and the design and materiality of proposed building. A separate application for Block A addressing the Bord's concerns was resubmitted and subsequently granted permission in 2021 (ABP-310567-21).

Condition 24 of ABP 306569-20 (Blocks B and C), and Condition 26 of ABP-310567-21 (Block A), detail the requirements for archaeological the archaeological method statements for mitigation to be agreed in advance with the Department of Housing Local Government and Heritage (DHLGH) (formerly Department of Culture, Heritage and the Gaeltacht):

> The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. In this regard, the developer shall –
>
> *(a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development,*
>
> *(b) employ a suitably qualified archaeologist who shall carry out site testing and monitor all site investigations and other excavation works, and*
>
> *(c) provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.*
>
> *(d) Agree in writing the archaeological method statements for mitigation with the Department of Culture, Heritage and the Gaeltacht, prior to commencement of any works on site*
>
> *In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.*
>
> Reason: In order to conserve the archaeological heritage of the site and to secure the preservation and protection (in situ or by record) of any remains that may exist within the site

The mitigation strategy proposed in this method statement is based on archaeological testing and monitoring carried out in the site, summarised in Section 2 below.

1.2. Site Location and consented development

The site (0.82 ha) is located on Parkgate Street, on the northern bank of the River Liffey, opposite the point of discharge for the River Camac and immediately west of Sean Heuston Bridge (Figure 1). It lies 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 of the City' and Parliamentary Boundary.

Figure 1 Site location

Block C and B comprise 321no. Build-to-Rent (BTR) 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. Block A is a 30-storey residential building (c.14,364 sq m gfa), to accommodate 198no. BTR residential units, café/restaurant, replacement office use and ancillary accommodation and works, located in the eastern apex of Blocks B and C (Figure 2).

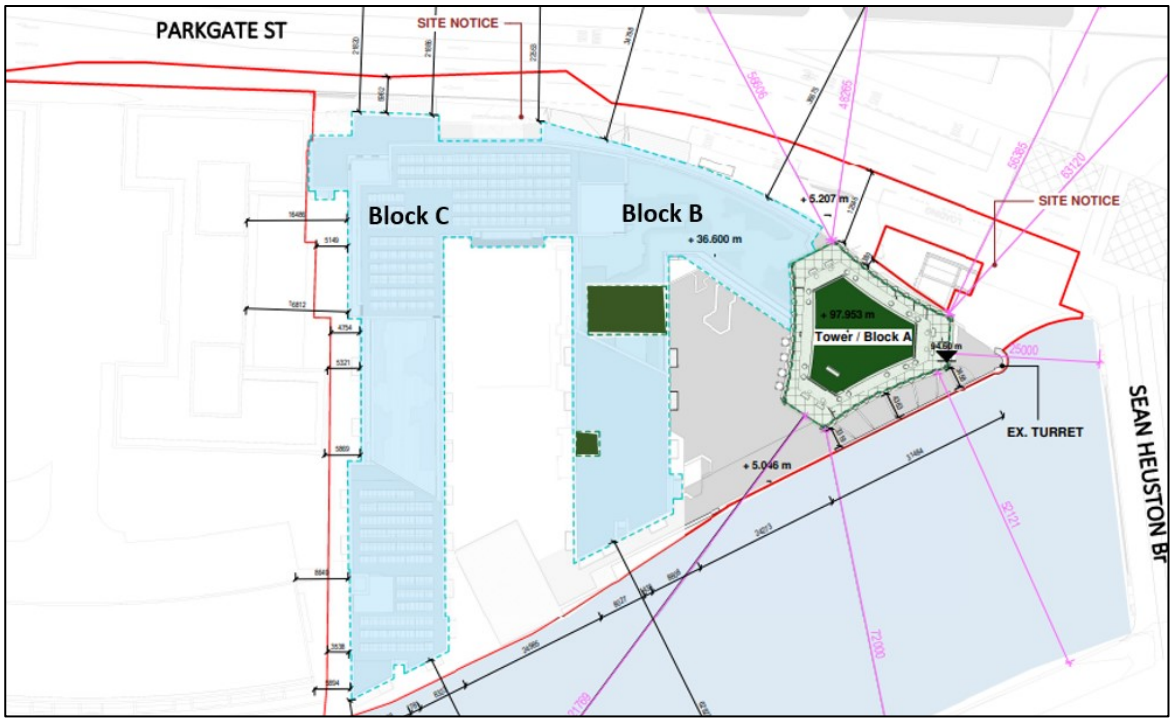


Figure 2 Permitted development site layout

1.3. Archaeological Context

The proposed development site lies within the statutory zone of archaeological potential for the Historic City of Dublin (RMP No. DU018-020). No specific known archaeological sites recorded within the site boundary pre-dating AD 1700. However, the sites' location on the south-facing bank of the River Liffey was most certainly a significant strategic location throughout the growth and development of the historic city.

The development site does have a medieval archaeological potential as a prominent location between the medieval city centred on Christchurch Cathedral and the known Viking cemeteries around Islandbridge and Kingsbridge (Heuston Station) on the southern side of the Liffey, but this is based on the site's proximity between the two foci of Viking and later medieval settlement.

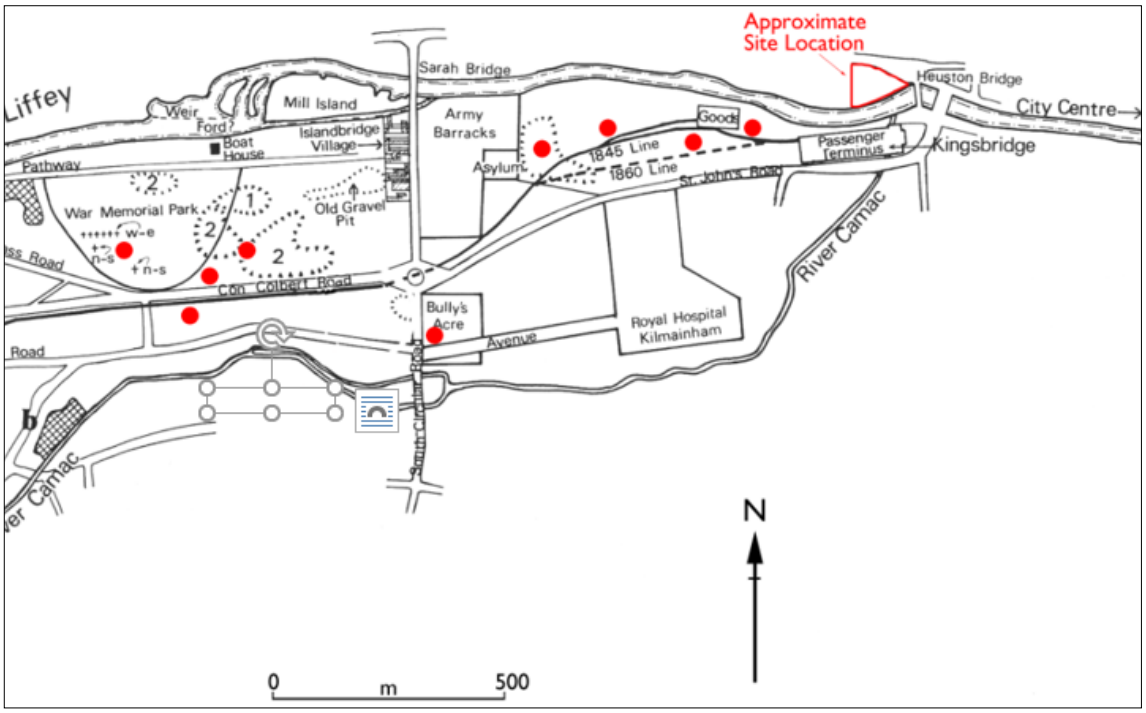


Figure 3 Map showing the locations (in red) of Viking material recovered in the 19th century (after O'Brien 1998)

The early post-medieval Down Survey map of c. 1656-1658 records the location of a gallows just to the north of the site described as 'Gallows Green'. The gallows appear to be contemporary as it is depicted with wooden posts. It was most likely located west of Collins Barracks around Montpelier Hill, c. 100m north of the development site.

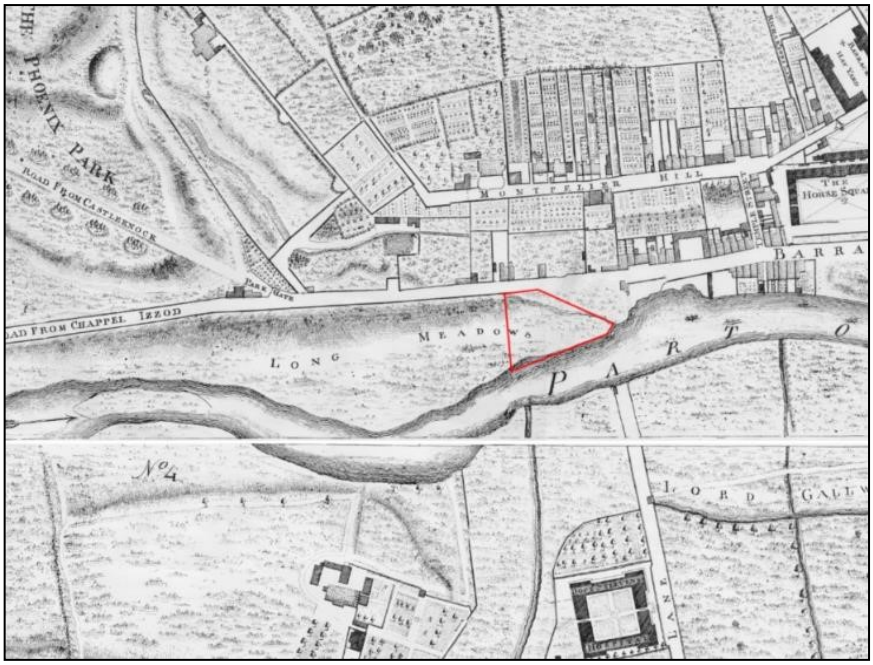


Figure 4 Rocque's County Map of Dublin, 1760, with approximate site location in red

Cartographic analysis indicates that the usage of the site evolved from open meadow in the 17th and 18th century up to its use for industrial purposes from the early 19th century with the development of the Phoenix Iron Works in the early 1800s. This was followed by the construction of the Kingsbridge Woollen Factory and the Parkgate Printing Works. The Phoenix Iron works was established in 1808 as a large iron foundry involved in moulding and casting, some of the fabric of the iron works survives on site today (Figure 5–Figure 8). It was sold and rebuilt into the Kingsbridge Woollen Mills in 1880 (Figure 8). Much of the current buildings that remain at No. 42 Parkgate Street date from the 1880 and reflect the significant reconstruction and rebuilding of the site at that time. Fragmentary buildings from the Ironworks also survive as standing buildings. During the First World War the woollen mill was converted into a bomb factory.

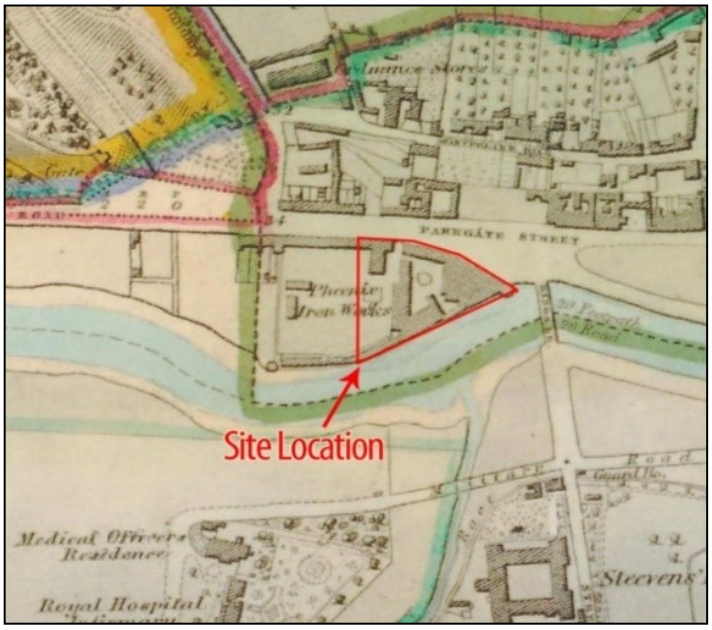


Figure 5 First edition OS map, 1843 (scale 1:10,560), showing approximate site location

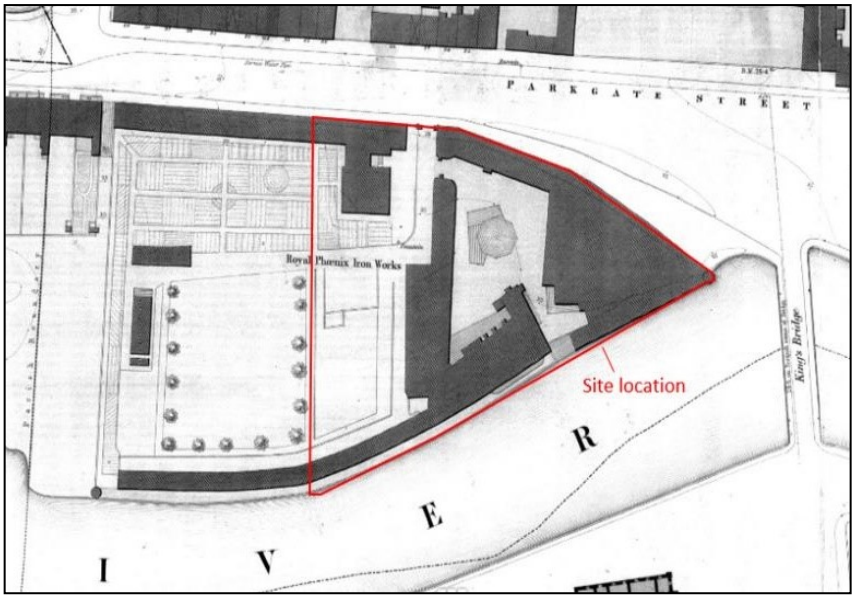


Figure 6 First edition 1:1056 OS Map 1847, (scale 1:1056), showing approximate site location

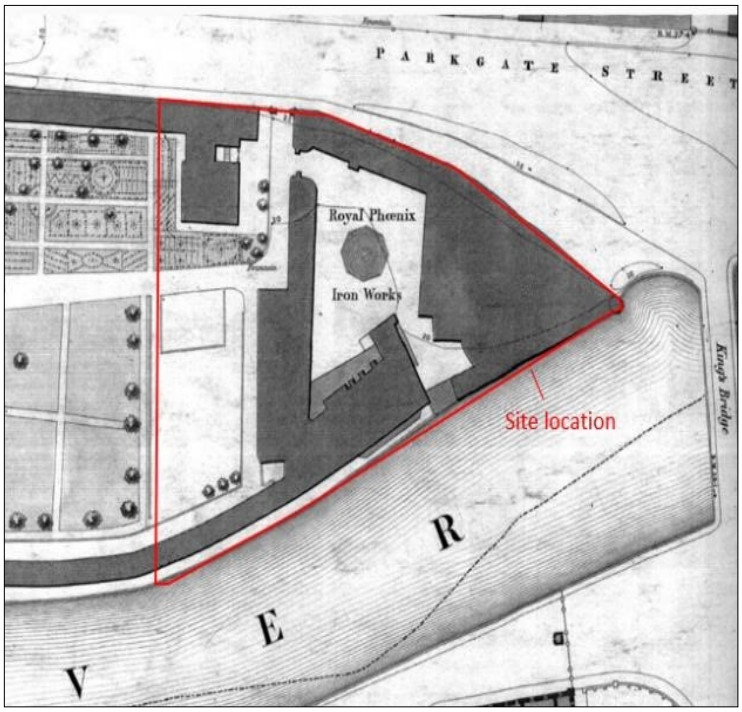


Figure 7 Revised edition OS map, 1864 (scale 1:1056), showing approximate site location

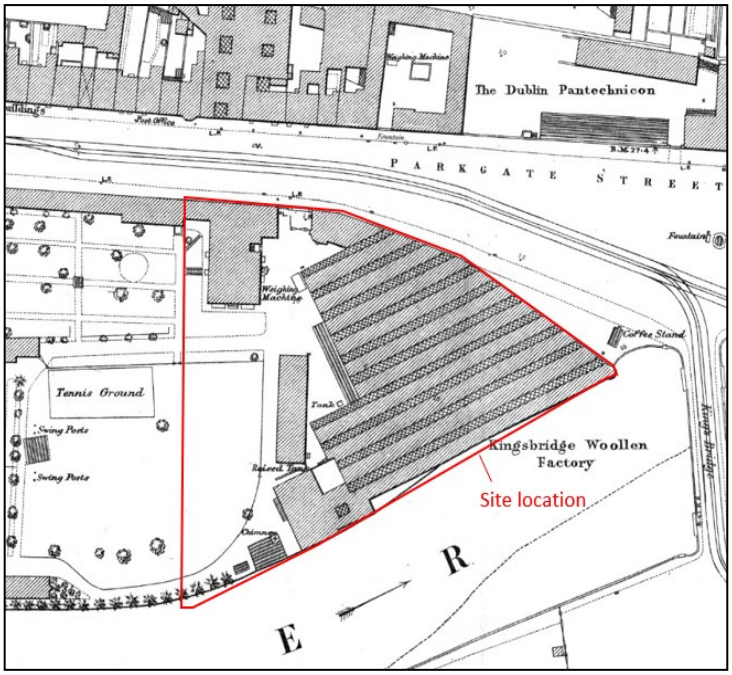


Figure 8 Revised edition OS map, 1889 (scale 1:1056), showing approximate site location

From the 1920s the factory building was taken over for use as Government Stores. In the 1930s the site was used as a printing factory known as the Parkgate Printing Works (Figure 9). It was bought by the Hickey Fabric Co. in the mid-1970s until it was acquired by Chartered Land Ltd. in 2020.

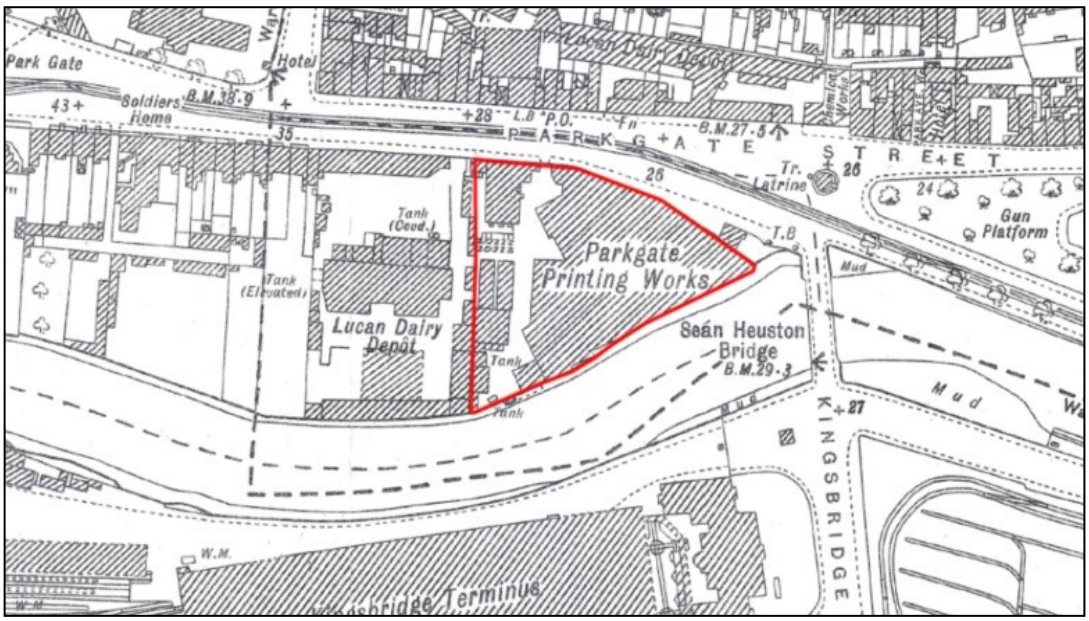


Figure 9 Revised edition OS map, 1943 (scale 1:1,560), showing approximate site location

The site as a whole is listed in the Dublin City Industrial Heritage Record (DCIHR) and is recorded as forming an important component within the city's industrial heritage. This record is extracted as follows:

Reference	DCIHR 18 10021
Site function	Iron Works
Location	Parkgate Street
Name	Parkgate Printing works {Royal Phoenix Iron Works}
Description	
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	
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.	

2. ARCHAEOLOGICAL INVESTIGATIONS AND MONITORING

2.1. Introduction

To date the following archaeological reporting has taken place in relation to 42A Parkgate Street:

- Archaeological Desk Study (2018)
- Archaeological Monitoring of GI Works (Licence No. 19E0179) (Clancy 2019)
- Consultation with the City Archaeologist (21st May 2019)
- Preparation of an archaeological chapter for EIAR (January 2020)
- Archaeological Assessment Report (Test Excavation) (Licence No. 19E0781) (O'Donovan and Courtney 2020)
- Archaeological Monitoring of Additional GI Works (License No. 21E0033) (Deery 2021)

Two phases of ground investigation work, and a stage of archaeological testing was carried out at the site (Figure 10, Figure 11).

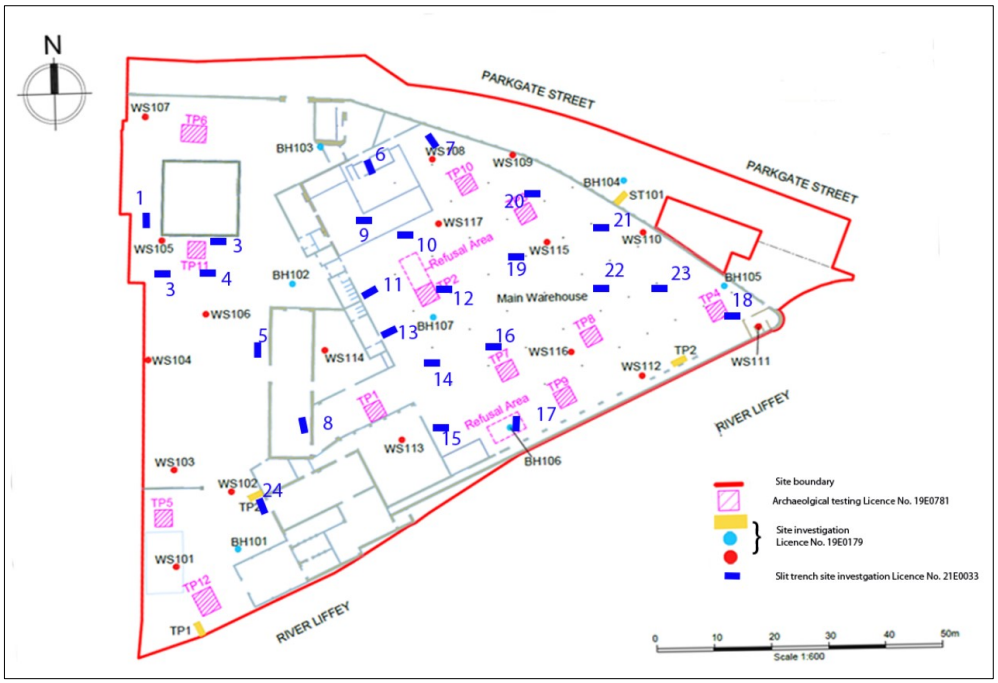


Figure 10 Stage 1 (2019), Stage 2 (2022) SI works locations and archaeological test pits (2020)

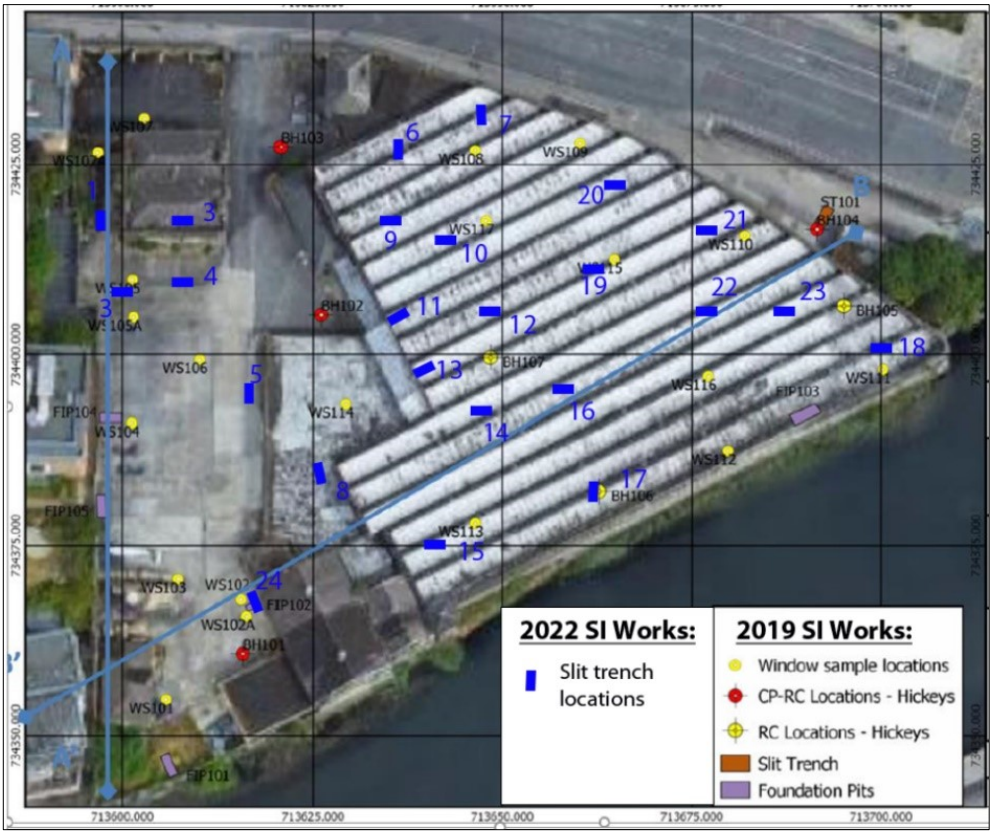


Figure 11 Stage 1 (2019) and Stage 2 (2022) SI works locations on aerial imagery

2.1.1. Archaeological Monitoring of Site Investigation works (Licence No. 19E0179 and 21E0033)

Two stages of site or ground investigation works were carried out onsite (Clancy 2019, Deery 2022) (Figure 11). The first stage comprised 18 no window sample holes to a depth of 4m BGL and 6 no cable percussive

boreholes with rotary core follow on (scheduled depth 15m BGL) both internally and externally around the existing building. Two slit trenches to be hand dug (typically 0.5m wide x 1.2m to 1.5m deep) are proposed to map services in the footpath to the north of the building. The second stage included the opening of 26 slit trenches, measuring 0.7m by 3m to a scheduled depth up to 3m BGL, (less than 2m depth was achieved in four trenches, TP13, TP11, TP3 and TP14). Six test trenches were opened in the concrete yard (TP1-TP5, TP24), and 18 were within the factory inside the main building (TP6-TP23).

The investigations confirmed a stratigraphy that comprised made ground and demolition rubble including layers of industrial waste (representing the 18th, 19th and 20th century, Plate 1) up to approximately 2.20m BGL overlying possible reclamation deposits and then natural riverine silts.

Beneath the modern ground surfaces of concrete and tarmac is a layer of building rubble with a high concentration of red brick. The rubble fills overlay deposits of industrial waste material, which appeared to be spread across the site in bands; these were characterised by black charcoal-rich clays and grey mortar with varying degrees of sands and gravels. Inclusions of slag, ash and mortar were noted. These deposits ranged between 0.45m – 1.90m BGL. These deposits are possibly associated with the demolition of the 19th-century ironworks. Results also indicate foundations, possible wall and floor levels associated with the ironworks and later phases on site. Inside the factory, possible structural remains were encountered in TP17 (red brick at 1.85-2.6m), TP19 (red brick, at 1.70m-2m), TP15 (masonry at 0.80-2.6m) and in WS116. Outside the factory, an unbonded red brick floor was identified in TP24 and TP5; it lay immediately beneath the concrete surface.

Possible reclamation material was identified from c.2m BGL, comprising a compact, mid to dark grey black silt, whist it was reminiscent of black boulder clay the deposit contained frequent slate and oyster shell as well as occasional slag and black and creamware pottery. Largely beneath the industrial deposits, where the depths could be achieved (c 2.6m-3m+ BGL) riverine deposits comprising dark grey-blue and mid-brown sticky clayey slit were encountered some of the trenches. No inclusions were noted in these deposits, and they were interpreted as natural.

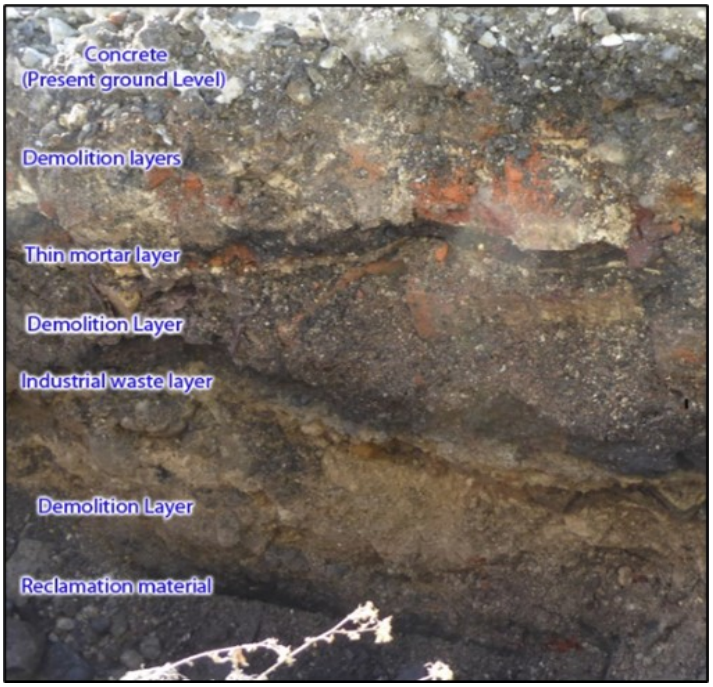


Plate 1 Typical cross section of upper levels, photo of TP5 of the first 1.5m of the pit

A summary of the stratigraphy across the site is as follows:

Depth (m)	General description
0.0- 0.30m	Concrete modern surfaces.
0.30-0.80m	Redbrick rubble and gravel.
0.80-1.5m	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 face of construction. Cartographic sources from the 19th century onwards, indicate a sequence of industrial installations on the site, commencing with the Royal Phoenix Iron Works. At 1.50m below present ground level a possible ground surface associated with the industrial structures is evident. Possible walls and sub-surface structures were visible within WS116, in TP17 (red brick at 1.85-2.6m BPL), TP19 (red brick, at 1.70m-2m), TP15 (masonry at 0.80-2.6m).
1.5-3.8m	Reclamation/ agricultural soils pre 1800's (prior to the Iron Works) were encountered, brown clays were imported onto the site. Ceramics (post medieval) and fragments of animal bone.
3.8-5m+	The original river and meadow level as represented in the early cartographic sources appears to be represented at 4 – 5m below the current ground levels. The presence of fragments of wood (possible root/branch material) at 5.25 (BH102) and a layer of peat at 5.80 (BH104) would suggest that this level was either the original riverbank or the pre-reclamation river meadow ground surface. At 3.8m + gravels were encountered indicating a sealed riverine dynamic environment.

2.1.2. Archaeological Testing (19E0781)

Archaeological testing comprising 12 test pits measuring 3mx3m was carried out in February 2020 (O'Donovan and Courtney 2020) to provide a better understanding of the extent of industrial remains from the Phoenix Iron Works period of the site (19th century) and to ascertain if there was any evidence for earlier deposits or archaeological layers/ strata (Figure 12).

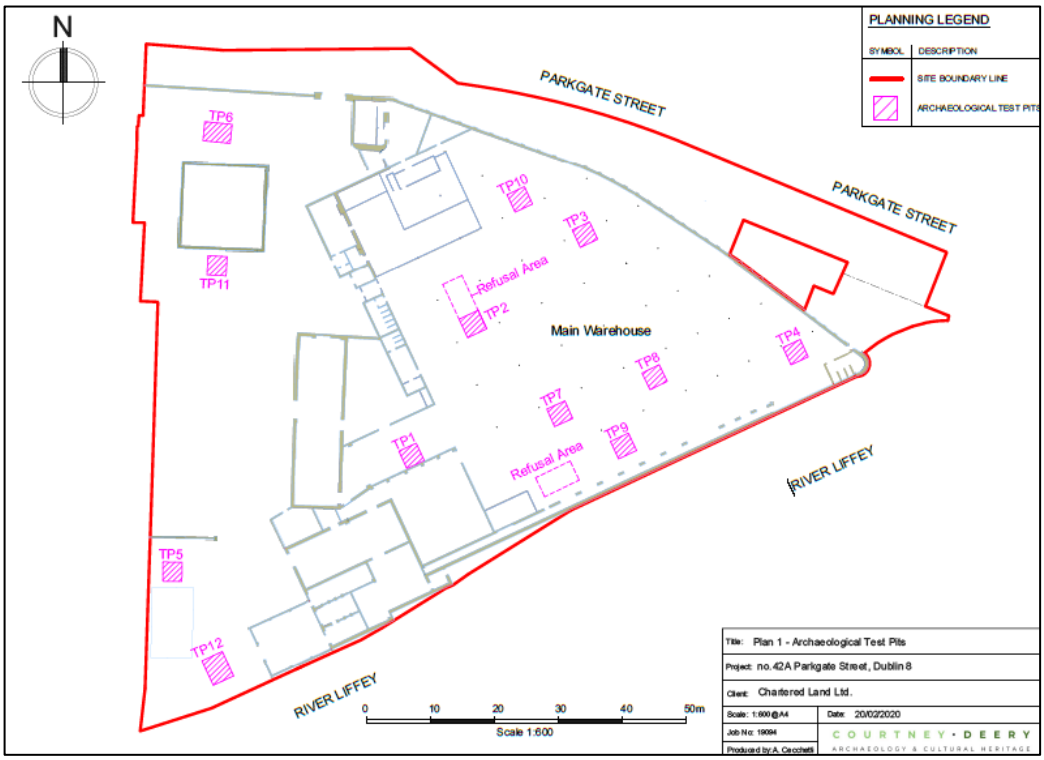


Figure 12 Archaeological test pits 1999

Table 1 below summarises the findings from Test Pits TP1 to TP12 undertaken in February 2020 (Licence No. 19E0781, O'Donovan 2020).

Table 1 Archaeological Findings

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 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.

Test Pit	Dimensions	Findings
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.

Walls/ structural remans were identified in TP6 at the northern end of the site and in TP8 and TP9 within the factory building. The walls from TP8 were substantial and may have been part of a flue-type system.

2.2. Archaeological Findings Summary

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. Substantial walls and deposits of iron slag and clinker or industrial waste from the iron foundry survive throughout the site under the present Victorian (1880) factory floor.

- 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 application area. These deposits are between 0.5m-3m deep and survive below the existing factory floor and externally below ground in the yard. Much of the fabric of the Kingsbridge Woolen 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 what is now the 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 Woolen Mills (1880-1890). It was also noted that there are remnants of upstanding structures relating to these industrial phases, that will require recording to ascertain how they relate to the below ground features.

The results of monitoring the ground investigation works appear to indicate foundations, possible wall and floor levels associated with the iron working and later activity on site (early 1800's onwards). It also indicates that a number of phases of infill have occurred across this site. It appears that industrial activity relating to the 19th century iron works occurs at a depth between 1.50-2.90m beneath the present ground level.

It is earth moving works will reveal intact or truncated structural remains of the 18th and early 19th century redevelopment of the site as an Iron Works century iron works alongside dumped industrial material. It is likely that this will be found during the excavation of the basements. Eighteenth century redeposited reclamation material is also likely to be encountered.

The only opportunity to examine the pre-industrial or natural levels of the site is during the excavation of the basement structure in the site.

3. DESIGN MITIGATION

The site slopes from north to south, from 5mOD in the north to 3.5mOD in the south. The topography of the site slopes generally from north to south, towards the river. The stratigraphy across the site varies, with made ground overlying silty clay and loose to dense sands and gravels. The depth to bedrock varies from 6.5 to 8.5m across the site. Contaminated soil has been recorded across the site; this reflects the site's industrial heritage.

The proposed development has been designed and planning approved on the principle of building up the existing ground level, minimising the extent of excavation and thereby minimising disturbing contaminated soils on site. This has led to a reduction of potential archaeological impact across areas of the site.

Basements are therefore only proposed under Block B and partially under Block C and none in Block A (see details below, Figure 2).

4. SITE WORKS PLAN

4.1. Introduction

An initial site works programme has been developed by John Paul Construction for the complete site (Blocks A–C) (the construction sequencing is illustrated in Appendix 1).

Block C is located along the western boundary of the site parallel to Block B. Block B and C are linked along the Parkgate street front and Block A is the easternmost structure in the development (Figure 13).

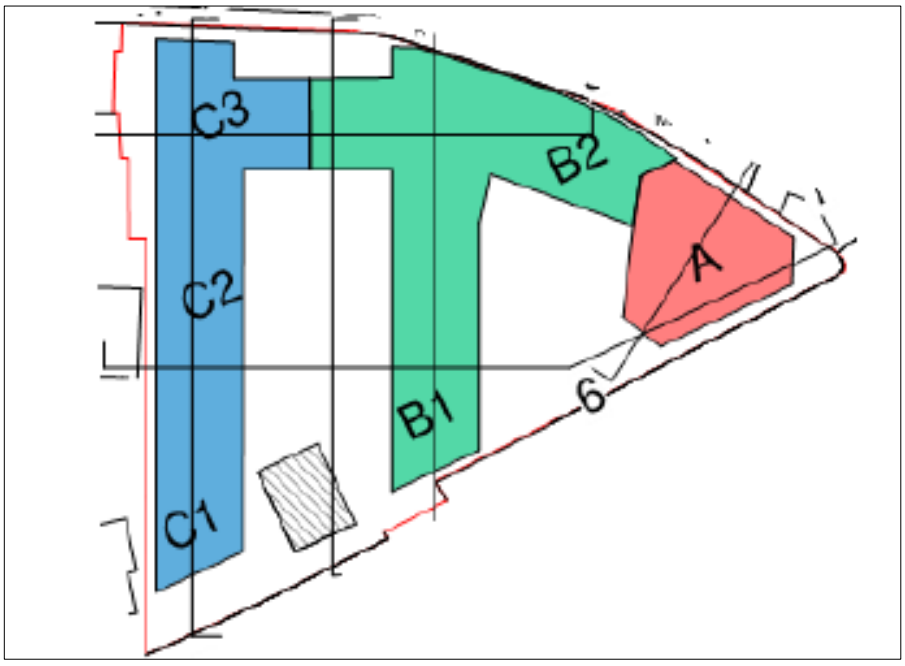


Figure 13 Location of Blocks A, B and C

4.2. Mobilisation Phase

4.2.1. Enabling Works

Enabling Works set up will involve the following:

- Construction compound and erection of secure site hoarding and gates and protected walkway along Parkgate Street.
- Relocate Bus Stop, Dublin Bikes and Lamp Posts, Alterations/dishing to footpaths
- Protection of existing site features to be retained.
- Removal and disposal of asbestos.

Enabling Works Mitigation

Any earthmoving works required for the enabling works will be monitored under license.

4.2.2. Demolition of structures

Most of the structures on site will be demolished, including Parkgate House. All structures listed within the Record of Protected structures will be retained, restored and adapted. This includes the riverside stone wall, the turret at the eastern end of the site, the square tower on the riverfront and the entrance stone arch on the Parkgate Street frontage. It is also proposed to retain the larger of the two gabled industrial buildings on the river front for use as the resident's gym and part of the smaller gabled building (Figure 14).

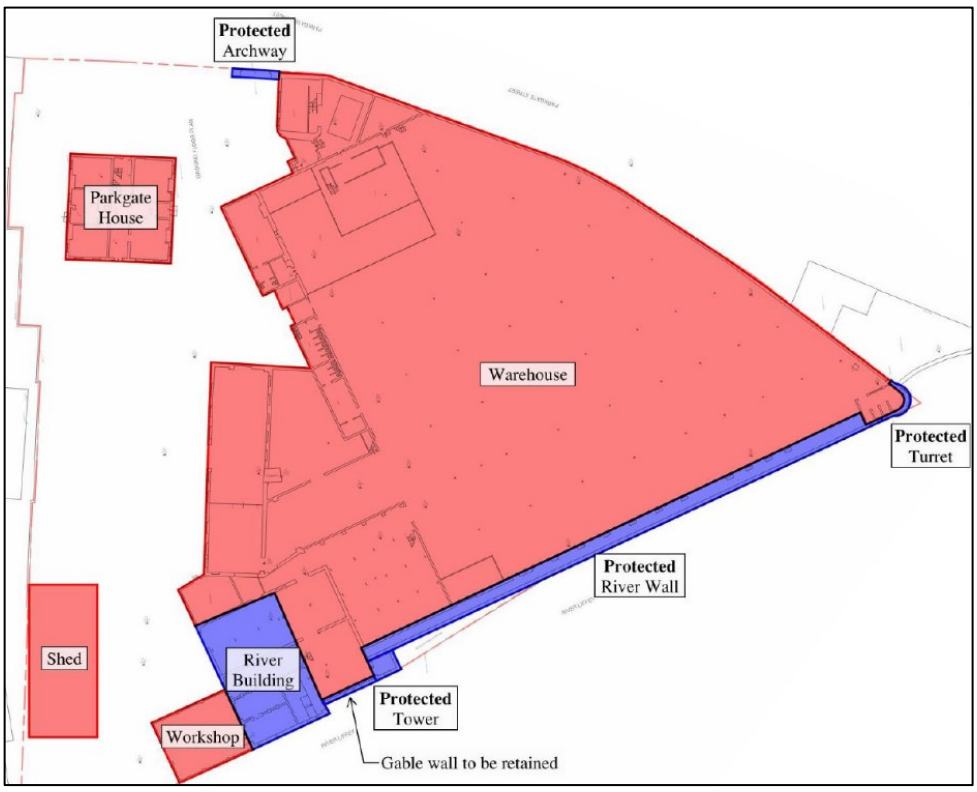


Figure 14 Demolition plan, those marked in red to be demolished and blue to be retained

Demolition and temporary works of sections of the quay wall will also be carried out during this phase. This will involve the erection of temporary structures for retention of existing structures around the quay wall and the erection of permanent works for the retention of proposed fill to back of existing quay wall and to interface with existing River Building.

In line with permitted planning permission, the existing River Liffey wall will be fully propped by temporary works, which will be removed upon installation of the permanent lateral restraint (after the Level 1 slab construction has been cast). The build-up in ground levels will result in new retaining structures installed to the internal side of the façade of the River Liffey wall.

Modifications to the wall will be either broken out or saw cut. Where rebuilding is necessary the opening will be redressed and strengthened with new fabricated steel supports.

Works along the south footpath on Parkgate Street will be carried out in phases, where works are required for surface water improvements, this will be installed by trench excavations. Approximately 20m of trenching will be open at any one time of this 150m long trench and this will be archaeological monitored. The trench will be excavated to a depth of approx. 1800-2000mm.

Demolition Mitigation

In response to Condition 23(e) of the ABP permission to grant (ABP 306569-20), an architectural survey, drawing and photographic record of all structures to be demolished has been produced. A description and schedule of reused cast iron elements has also been produced in response to Condition 4 (v).

Protected structures of heritage interest on the site include the riverside stone wall, the turret and the square tower, these will be protected for the duration of the works and conserved, refurbished, repaired and adapted as part of the overall development. Conservation will also take place to the river front gabled building (River Building). The stone entrance archway on Parkgate Street will be catalogued and removed for safekeeping for the duration of the construction works and will be re-erected at the final stages of construction. The conservation architect for the development must monitor and coordinate this work.

Other existing structures have been scheduled for removal and demolition. These include a single storey warehouse building with curved wall to Parkgate Street and all warehouse internal walls and partitions including the southern brick wall running parallel to the interior of the riverside stone wall, a small two storey building adjacent to the entrance stone archway and the former two-storey over basement detached house (Parkgate House) at the northwest corner of the site and other miscellaneous structures. The upper floors of Parkgate House were recently demolished for safety purposes (Plate 2).

Plate 2 Parkgate House post demolition of upper floors

This will be demolished along with the remainder of the non-protected structures onsite. All works to Protected Structures will be guided by conservation architects and the required specialists as specified in the Conditions attached to the permitted development.

The demolition of the buildings and quay wall will be carried out under archaeological supervision (as required). Recording of any newly exposed walls or structures will take place. Any ground reduction works will be archaeological monitored, if any subsurface features are revealed they will be recorded through archaeological hand excavation 'preservation by record' and removed.

Should undertraining be required to the standing buildings or the quay walls it will be localised.

4.3. Groundworks

4.3.1. Current site levels

The existing site finished floor levels vary throughout the site, being highest at the entrance gate (4.4m OD) and falling towards the river (+3.62m OD) with the main warehouse building being at 4.28m OD. The existing site levels are shown in Figure 15.

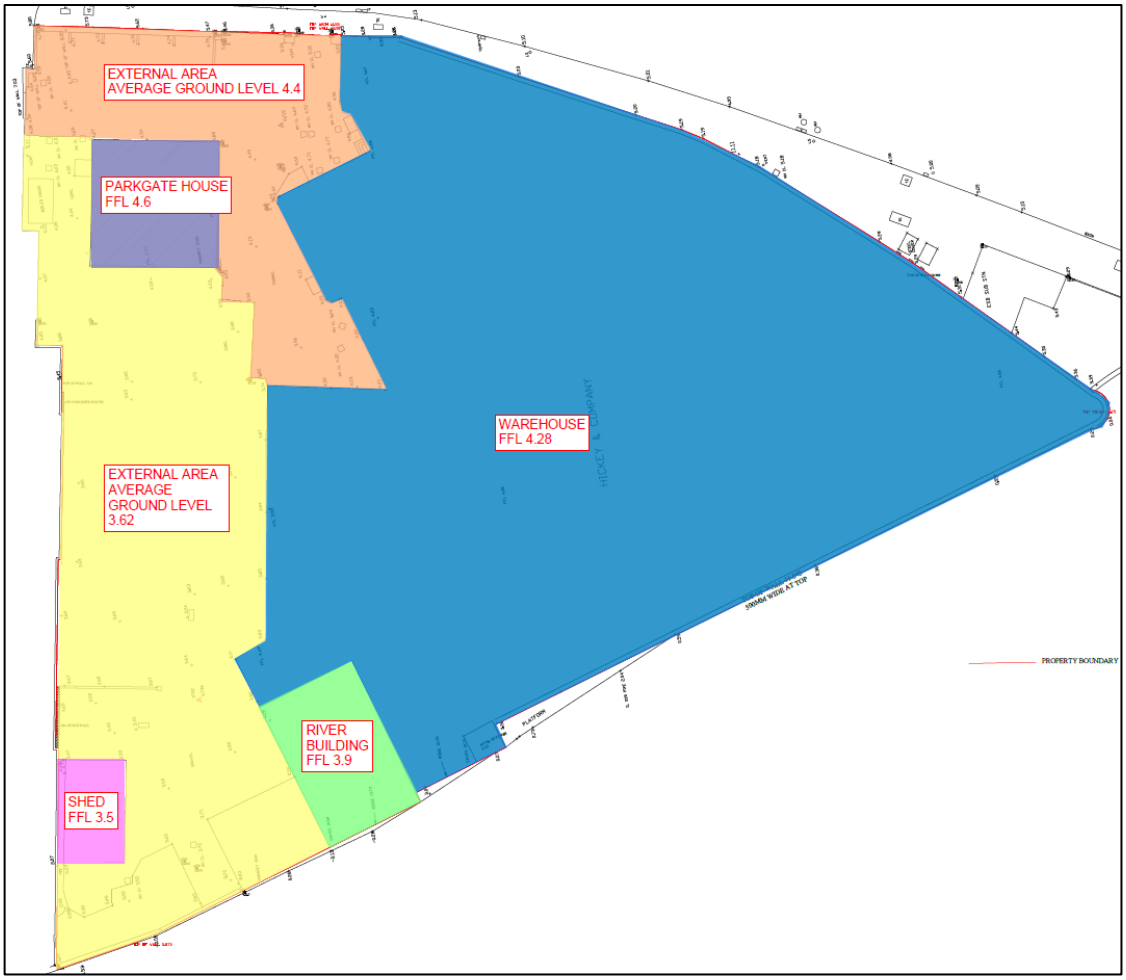


Figure 15 Existing levels across the site (after Arup)

4.3.2. Initial ground reduction

After the demolition works and the removal of ground slab, the ground reduction to excavation levels will take place. The required levels will vary across the site as shown in Table 2 below and in Figure 16. .

Table 2 Detail of the existing levels and proposed levels the general excavation and pile cap excavation across the site (after Arup, see Figure below for location)

Site Area	Existing FFL level (OD)	Proposed level (OD)	General Excavation Level Below Ground (OD)	Excavation at pile caps (OD)
Block A	+4.28m	+5.20m	~0.5m	~1.85m
Block B1 (Basement)	+4.28m	+2.0m	~2.95m	~4.15m
Block B2 and C3	+4.28m	+5.25m	~0.5m	~1.5m
Block C1 undercrofts	+3.62m	+3.0m	~1.2m	~2.9m
Block C1 and C2	+3.62m	+5.75m	N/a	~0.65m
Block C3	+3.62m	+5.550m	N/a	~0.65m
River Building	+3.90m	+3.00m	~1.5m	N/a
Public Courtyard	+4.28m	+5.00m	~3.8m	N/a
Private Courtyard	+4.28m	+5.75m	~3.8m	N/a
At Grade Parking	+3.62m	+5.75m	No excavation	N/a
River Walk	+3.62m	+3.0m	~2.4	N/a

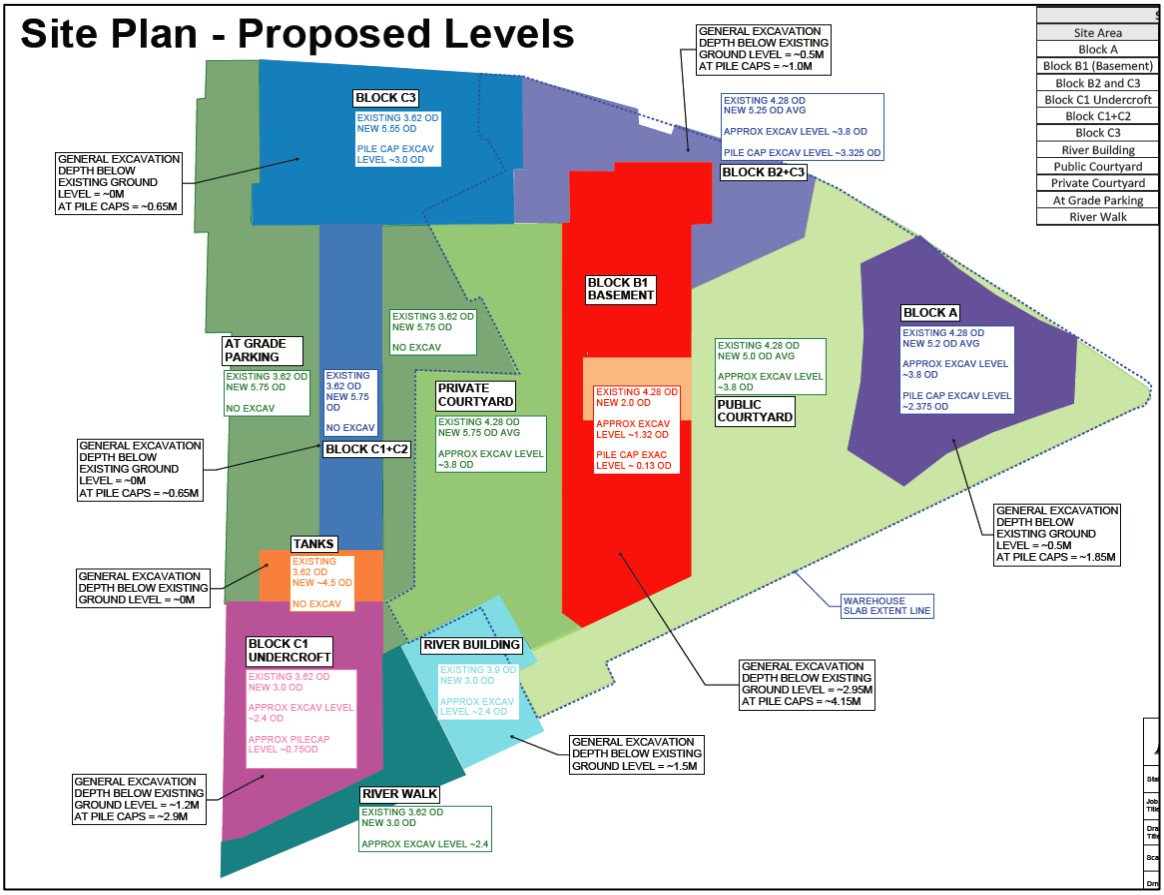


Figure 16 Site Plan excavation levels (see summary table above for detail)

Contamination soils/ hazardous material will be moved during this phase, depending on the material type this will be carried out across the site in discrete blocks (see Appendix 1) for indicative sequence.

General Groundworks Mitigation

Once the existing structures have been removed and the ground slab has been cleared, all ground reducing activities will be archaeologically monitored to identify the nature and extent of surviving subsurface industrial heritage remains.

Test excavation and SI monitoring has confirmed the presence of industrial archaeological remains associated with the iron works across the site (O'Donovan 2020). These remains, where encountered will be removed under strict archaeological supervision and recording.

Time will be allowed within the contractor's programme to enable all newly revealed industrial heritage features that are encountered, be physically recorded and removed by archaeologists to the satisfaction of the City Archaeologist and the National Monuments Service.

Services/utility diversion/Propping system will be monitored by an archaeologist if the final design includes the insertion of pads (and rakers). Any findings of an archaeological nature will be assessed and recorded.

4.3.3. Piling

Piling Mat

The next stage of the development will be the laying of piling mat across the areas in preparation of piling. Prior to the construction of the pile mat, the formation level shall be prepared. The pile mat material shall be appropriately compacted in layers in accordance with the Piling Specialist requirements.

Piling

Piling works will be carried within each block to support the reinforced concrete pile caps and piled rafts and stair core bases.

Block B and C

Continuous flight auger (CFA) piles measuring 600mm in diameter is proposed for Block B and C and basements (Figure 17 and Figure 18).

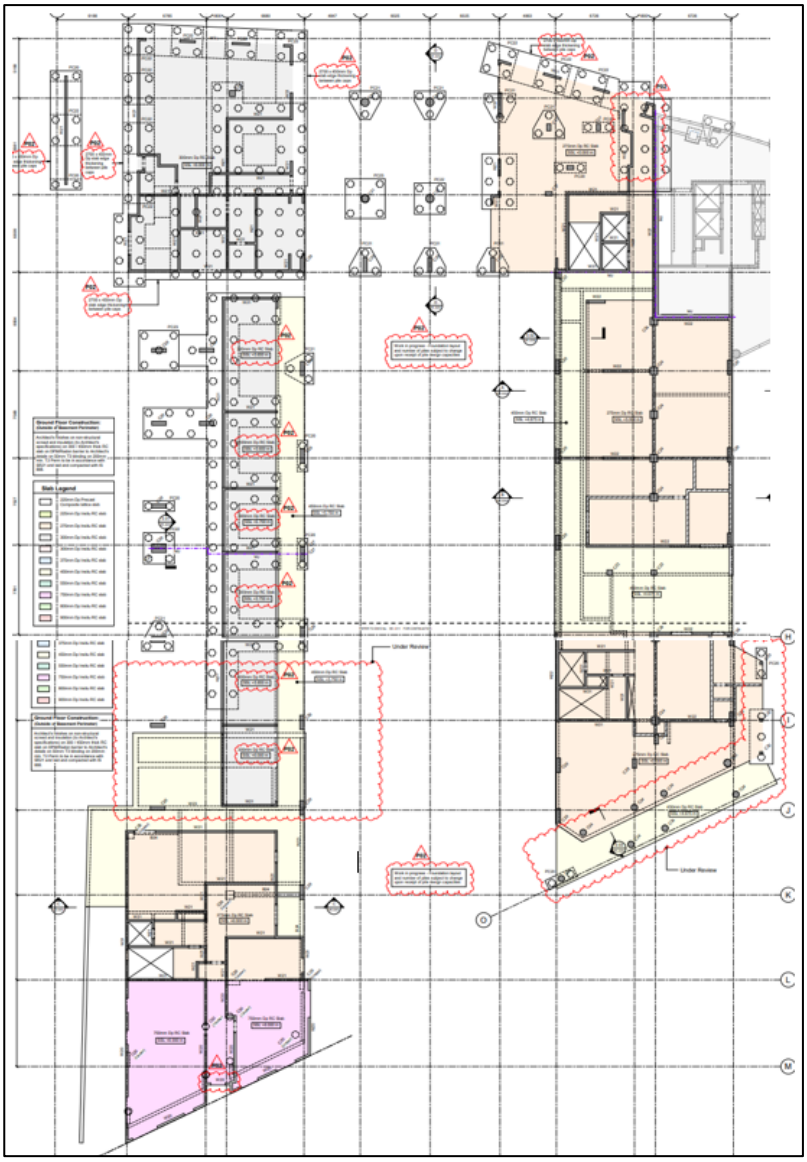


Figure 17 Block B & C (north), Level 01 plan showing pile layout and basements

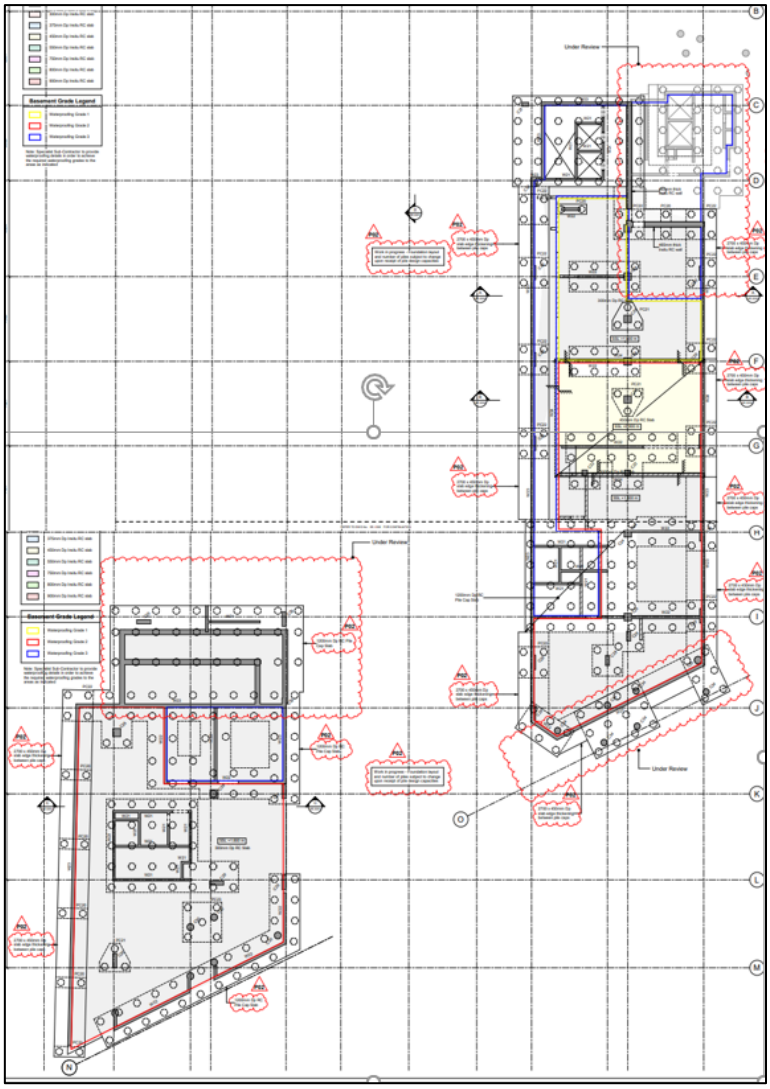


Figure 18 Block B & C (north), Level 00 plan showing pile layout in the basements

In Block B and C the piles are arranged in groups of 2, 4, 6 or 8 with the pile caps measuring depths of 1200mm, 1500mm, 1500mm and 2200m respectively (Figure 19).

Stair core bases of various sizes up to 1200mm deep will also be required (8500mm x 900mm north of Block C -north; 8100mm x 8100mm of Block C-south; 6300mm x 8100mm Block B-north and 8100mm x 9000mm Block B- south).

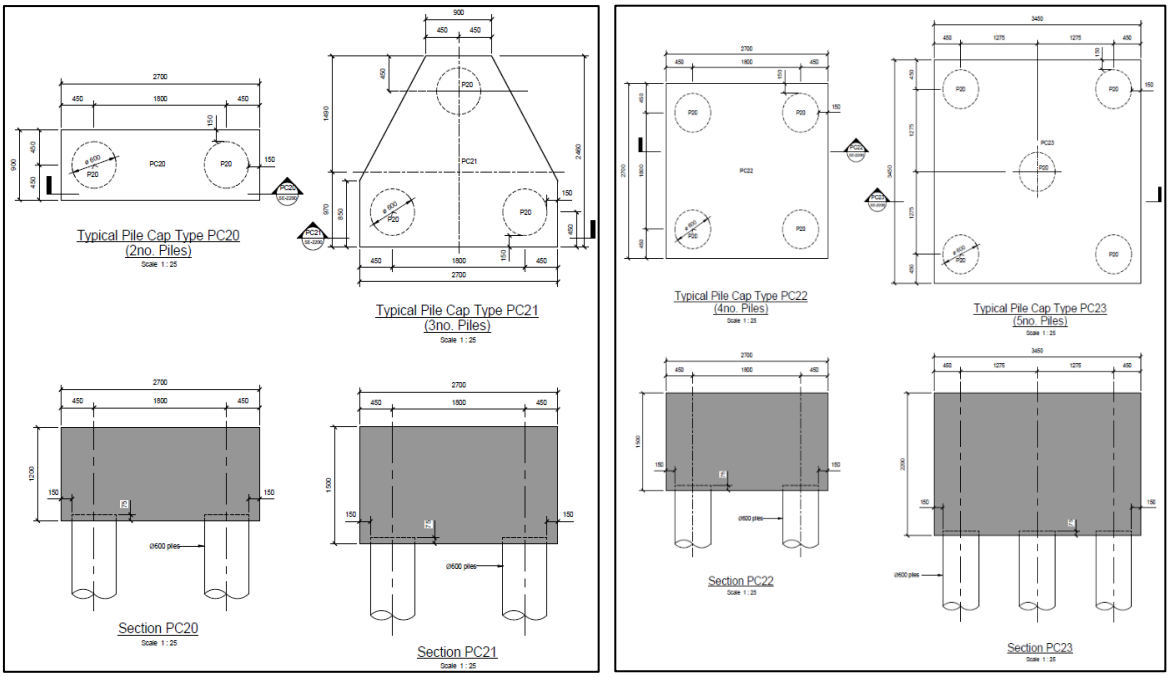


Figure 19 Typical Block B and C pile and pile caps, cross section and plan

Block B2

In Block B2 CFA piles measuring 600mm in diameter are proposed, They are arranged in groups of 3 and 5, with the pile caps measuring depths of 1500mm and 2200m respectively (Figure 21).

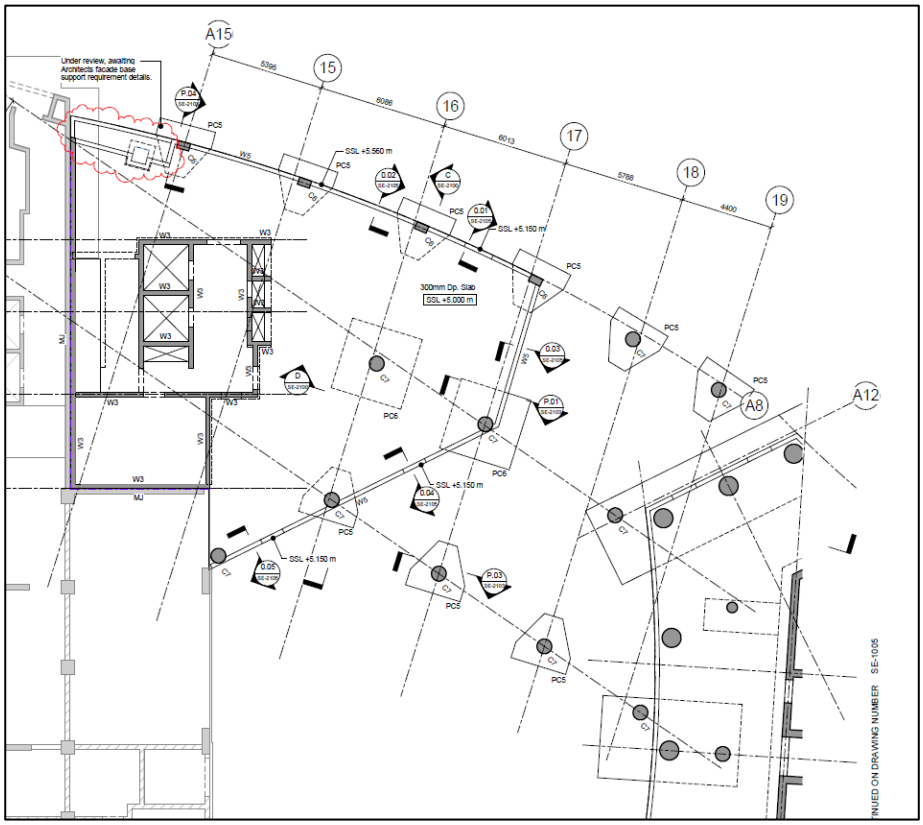


Figure 20 Block B2 pile layout

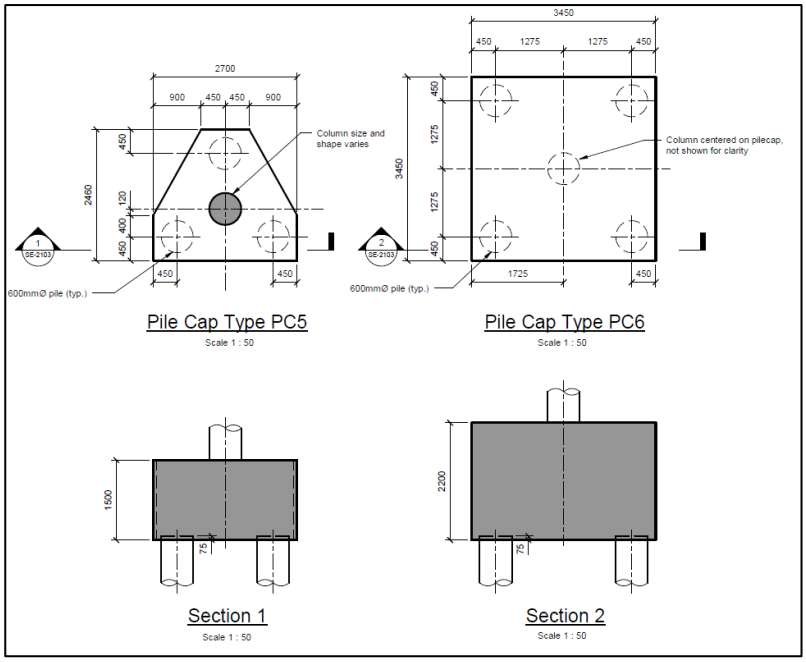


Figure 21 Block B2 pile Cap, cross section and plan

Block A

Block A will be founded on rotary piles measuring 900mm diameter as a single pile with pile caps measuring 2000mm deep BEGL (Figure 22, Figure 23). The floor slab will be at least 2000mm thick and up to 2500 mm above the piles in places.

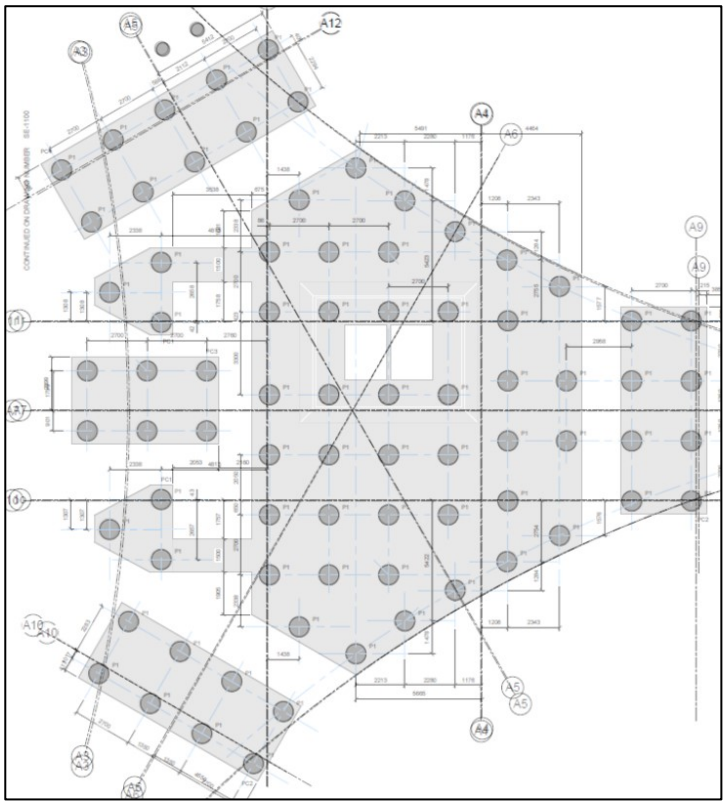


Figure 22 Block A pile locations and pile cap plan overlaid

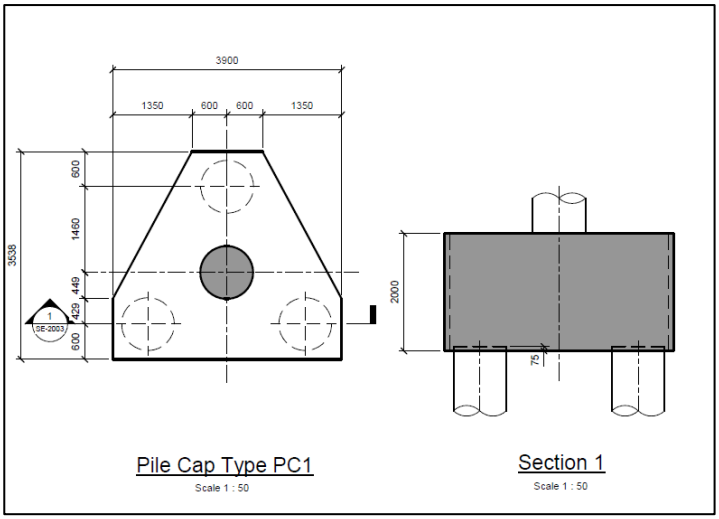


Figure 23 Typical Block A pile cap, cross section and plan

Piling Mitigation

Any ground reduction works required for the piling mat will be archaeologically monitored.

It will not be possible to carry out monitoring of the CFA piles or the rotary piles. However, should any excavation work be required during the piling stage (including any guide walls etc. or localised digging, or underpinning) an archaeologist must be present.

The archaeological testing and monitoring have shown that the excavation for the pile caps and stair core excavation (at 1200mm deep) will impact on the historic demolition and infill layers that occur across the site. However, in some locations within Block B and C, the excavation of the pile caps is likely to reveal in-situ walls or features associated with the earlier industrial activity across the site. Archaeological hand excavation and recording will be required in these locations in order to expose and record the nature and extent of the industrial heritage features.

4.3.4. Basement excavation

After the piling is complete the bulk excavation works to the formation level for the for the basements will be carried out, the piles in these areas will be broken down to the foundation level. There will be an open dig to the basement area. Basements are proposed under Block B and partially under Block C. There is none in Block A.

The basement / undercroft is c. 60m north / south under Block B is 15m wide and 2.95m deep below existing site level and 4.15m at the pile caps. Block C basement area adjacent to the quay wall at the southwest corner of the site is proposed for the storage of bicycles, the anticipated depth at this location is approximate 1.2m BEGL and 2.95m deep at the pile caps.

Along the western boundary of the site, the area proposed for Block C, excavation works are minimised, and work will take place at the exiting ground level.

The undercrofts/basement structures will consist of a reinforced concrete suspended base slab and retaining walls, supported on piles.

Basement Excavation Mitigation

The bulk excavations for the basements will have to be carried out after the piling. From an archaeological perspective this is not ideal. Test excavation has confirmed the presence of industrial archaeological

remains associated with the iron works across the site (O'Donovan 2020) and within the footprint of the basement/undercroft proposed for Blocks B and C.

There will be an open dig at the basement area, with localised retention works at existing structures. The rising perimeter wall will be constructed with two-sided shutters, propped in position and supported off the basement slab.

The basement will be mechanically cleared under strict archaeological supervision. Should archaeological material be identified, all works will cease in that area and 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. Excavation will be carried out as part of a condition of planning (Condition 26 and 24) by a small number of archaeologists to site formation levels under archaeological licence. Such an excavation would require a qualified team under an archaeological director, use of a digger, dumper truck, pump etc. along with accommodation, toilets, secure lock up, safe ingress and egress.

The basement excavation will be archaeologically investigated, all features that are revealed, will be identified, fully revealed, recorded by hand, and removed. All work to be agreed with DCC. Works may require the resources of a small archaeological team.

4.3.5. Tower crane

Four temporary tower crane locations are proposed. The use of mobile cranes may be adopted to assist in the installation of the façade and plant.

Tower Crane Pad Excavation Mitigation

The archaeological monitoring of the excavation of a tower crane base will be required in order to identify and record any industrial heritage archaeological remains. If the crane base is installed after excavation, there will be no impact and no requirement for further monitoring.

4.3.6. Works in the River Liffey

The works to the River Liffey will be largely land based. However, some works from the River Liffey may be necessary, for example maintenance and repair work and repointing of mortar.

River works Mitigation

In advance of any works within the river should this be necessary, the contractor will obtain a Foreshore Licence for the placement of temporary scaffolding in the River Liffey to facilitate the works. an archaeological licence shall be applied for to investigate the area, that will be disturbed by the temporary placement of scaffolding. The services of an underwater archaeological specialist may be required depending on the work being carried out.

5. GENERAL MITIGATION AND LICENCING

5.1. Archaeological mitigation

The proposed archaeological mitigation has been outlined at each stage of construction above.

In general, the mitigation strategy proposed is to employ preservation by record (Appendix 2) and to archaeologically investigate, record and remove any industrial remains that will be exposed as a result of the basement construction and ground reducing works proposed for the development.

This will involve exposing, recording and removing industrial features and deposits as an archaeological exercise that were revealed during test excavation (O'Donovan 2020) and all other features of an industrial heritage and archaeological heritage interest that are revealed as a result of works on site.

The monitoring, recording and excavation works will be accommodated within a designated window for archaeological work established within the demolition and groundworks construction contract with a suitable programme for archaeological work. No unauthorised digging/excavation will occur on-site without prior approval from the site archaeologist. The site preparation and construction programme will accommodate all archaeological findings and their resolution.

All recommendations are subject to the approval of the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht and the City Archaeologist for Dublin. This suggested strategy does not prejudice recommendations made by the National Monuments Service, the Dublin City Archaeologist and the planning authority who may make additional recommendations.

The developer will make provision to allow for and fund whatever archaeological work may be required at the site and the post excavation requirements in accordance with the National Monuments Legislation (1930–2004; Appendix 1).

5.2. Licencing and compliance

As the construction works will take place for the complete site (i.e., Blocks A-C and ancillary development) it is recommended that a single licence is sought for the site, either as an extension to existing Licence Number 21E0033 or as a new licence, whichever is appropriate.

The archaeological response to Condition 24 of ABP 306569-20, (Blocks B and C) and Condition 26 of ABP-310567-21 (Block A) will therefore be a single response.

6. REFERENCES

ARC (2020) Former Industrial Buildings, Parkgate Street, Dublin Architectural Heritage Impact Assessment.

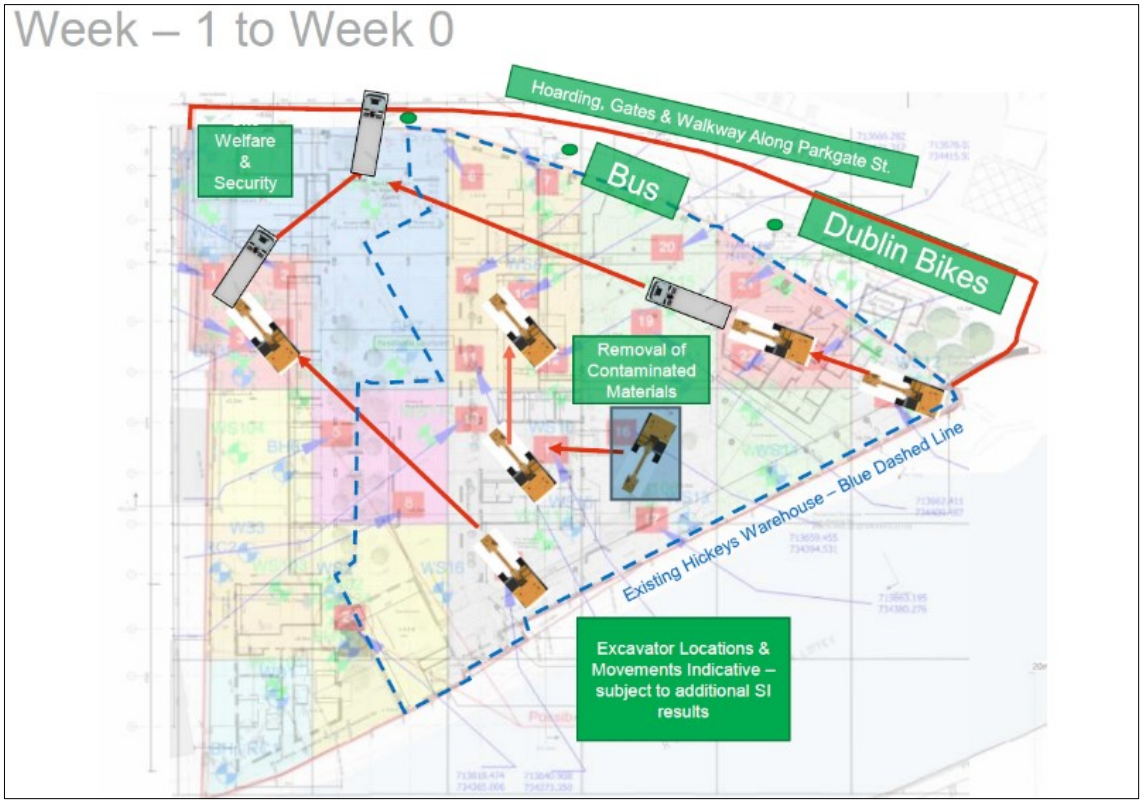
Clancy, P. (2019) Monitoring of Ground Investigation Works, Hickey's Factory, Parkgate Street, Dublin 8. Licence No. 19E0179. Unpublished report Courtney Deery Heritage Consultancy Ltd.

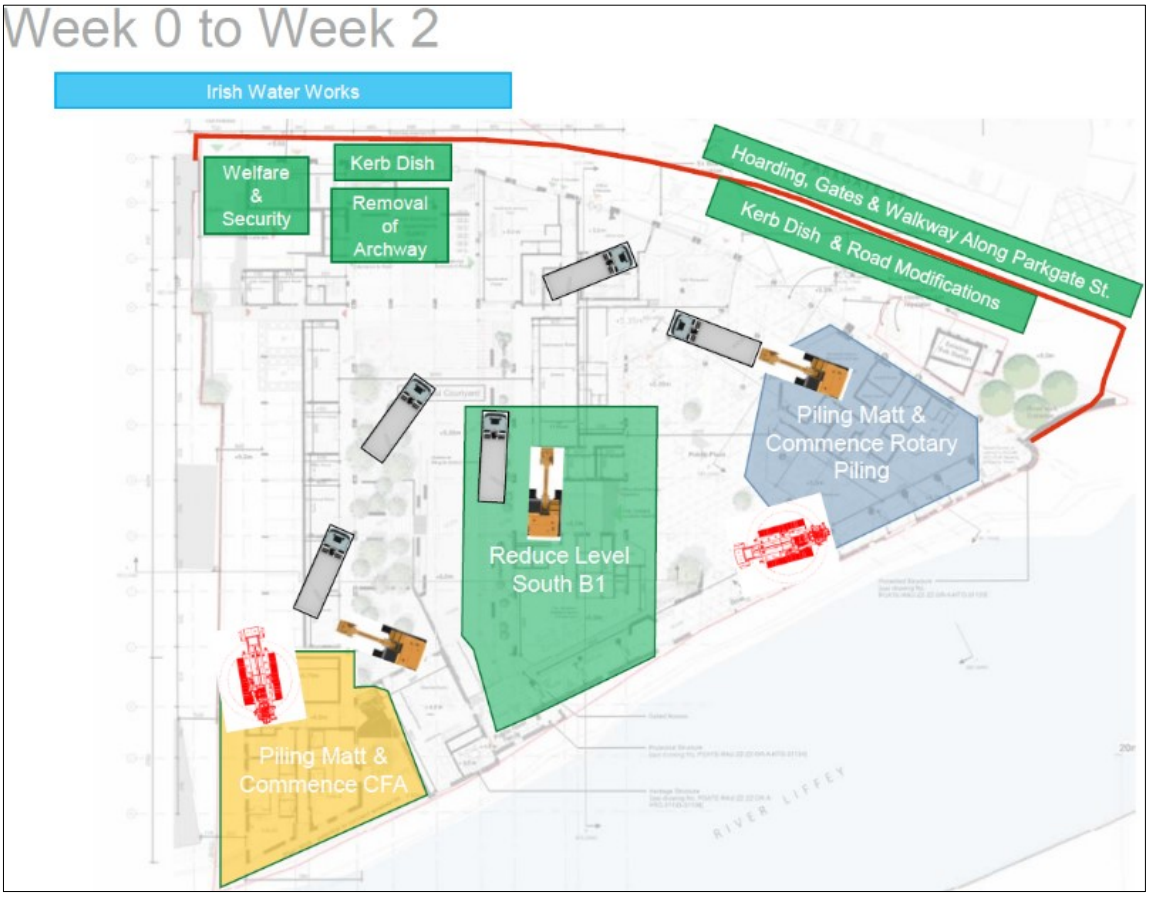
Kealy, S. (2019) Hickey's 43 Parkgate Place: Ground Investigation Report. Ground Investigations Ireland, Unpublished.

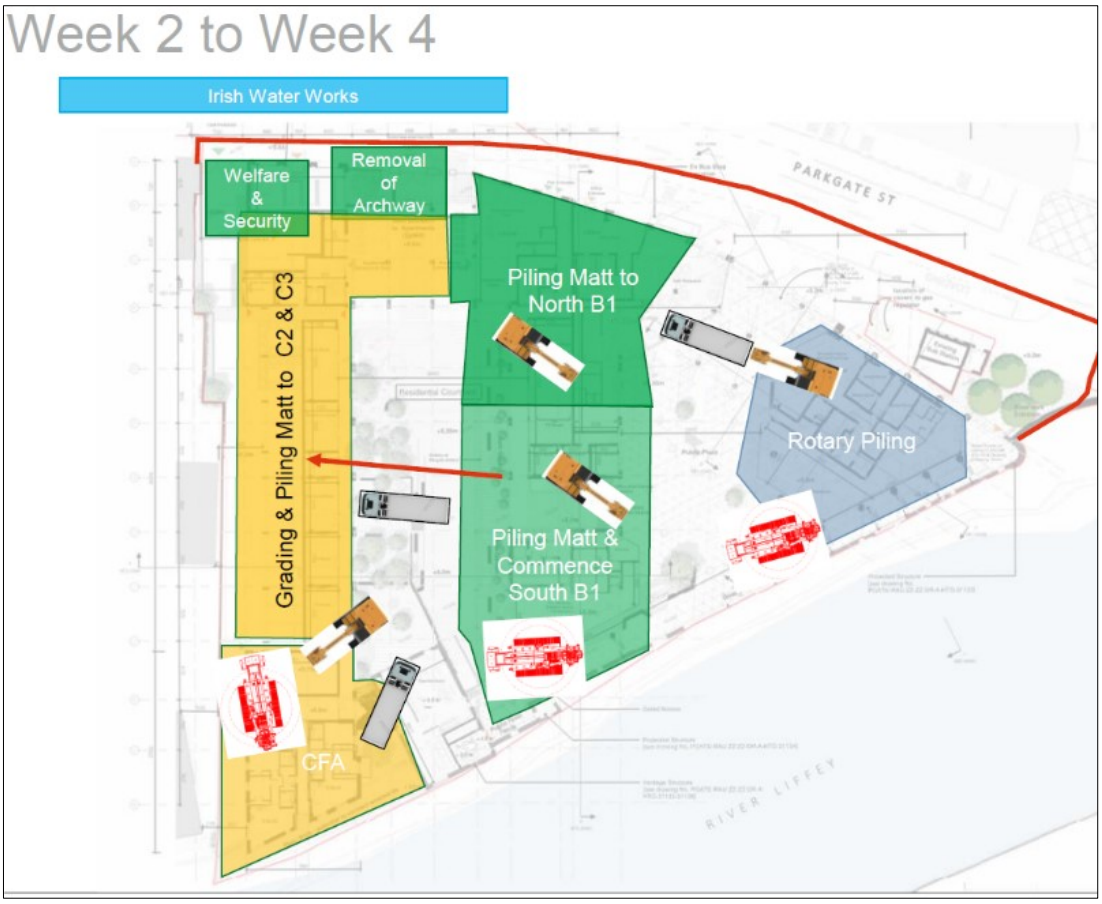
O'Donovan, E. (2020) Archaeological Assessment Report: No 42A Parkgate Street Dublin 8. Licence No. 19E0781. Unpublished report Courtney Deery Heritage Consultancy Ltd.

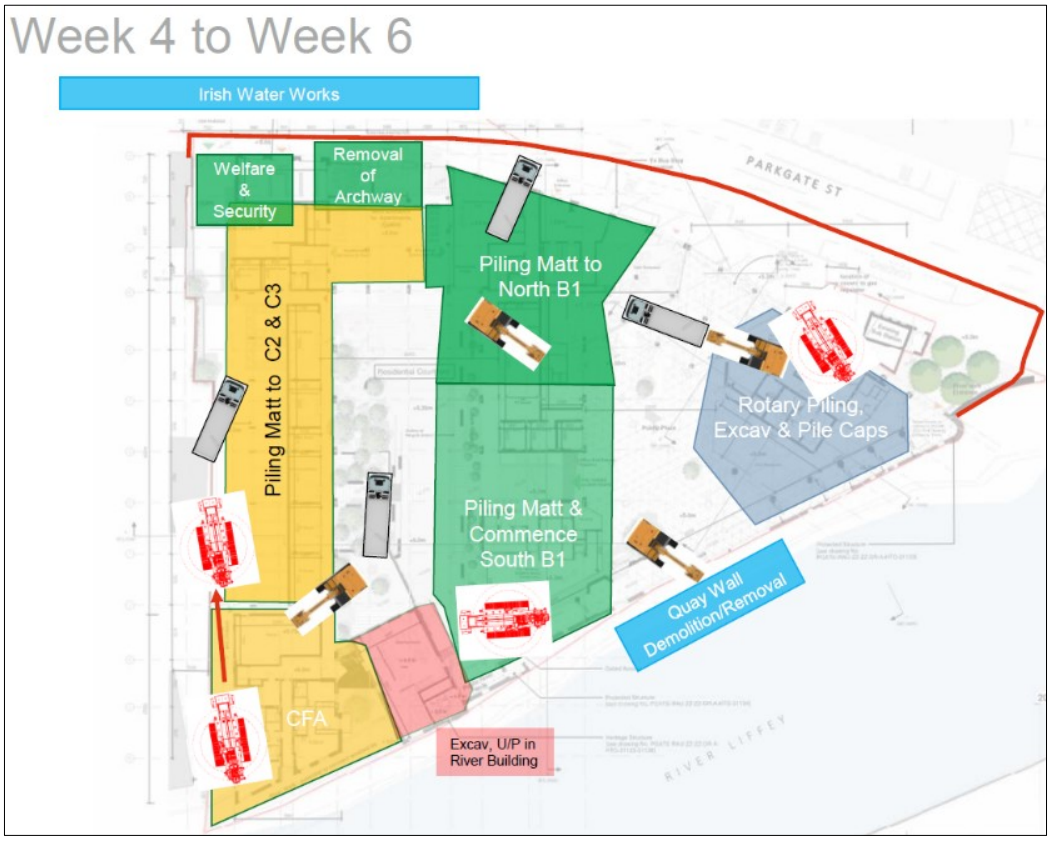
Deery, S (2022) Monitoring of Ground Investigation Works, Hickey's Factory, Parkgate Street, Dublin 8. Licence No. 19E0179. Unpublished report Courtney Deery Heritage Consultancy Ltd.

APPENDIX 1 Indicative Construction Sequencing (John Paul Construction)

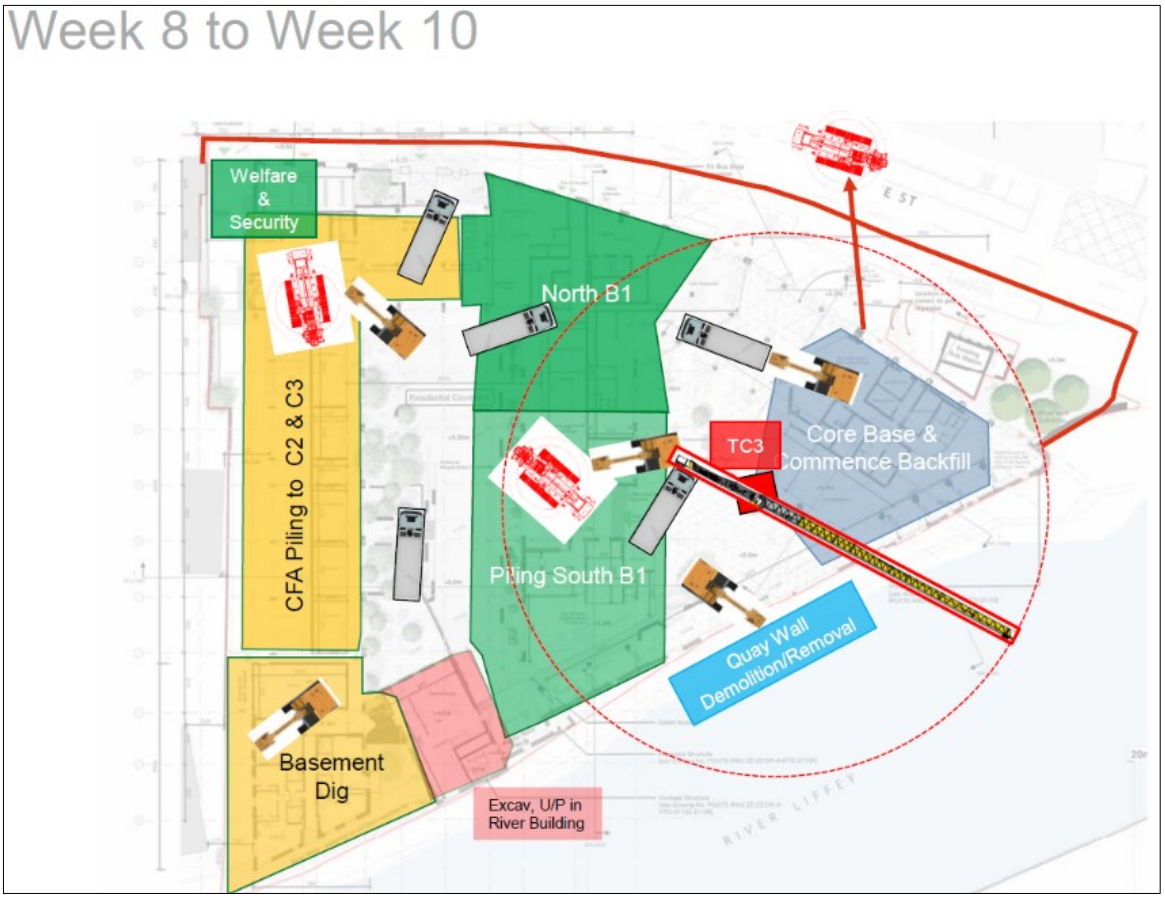


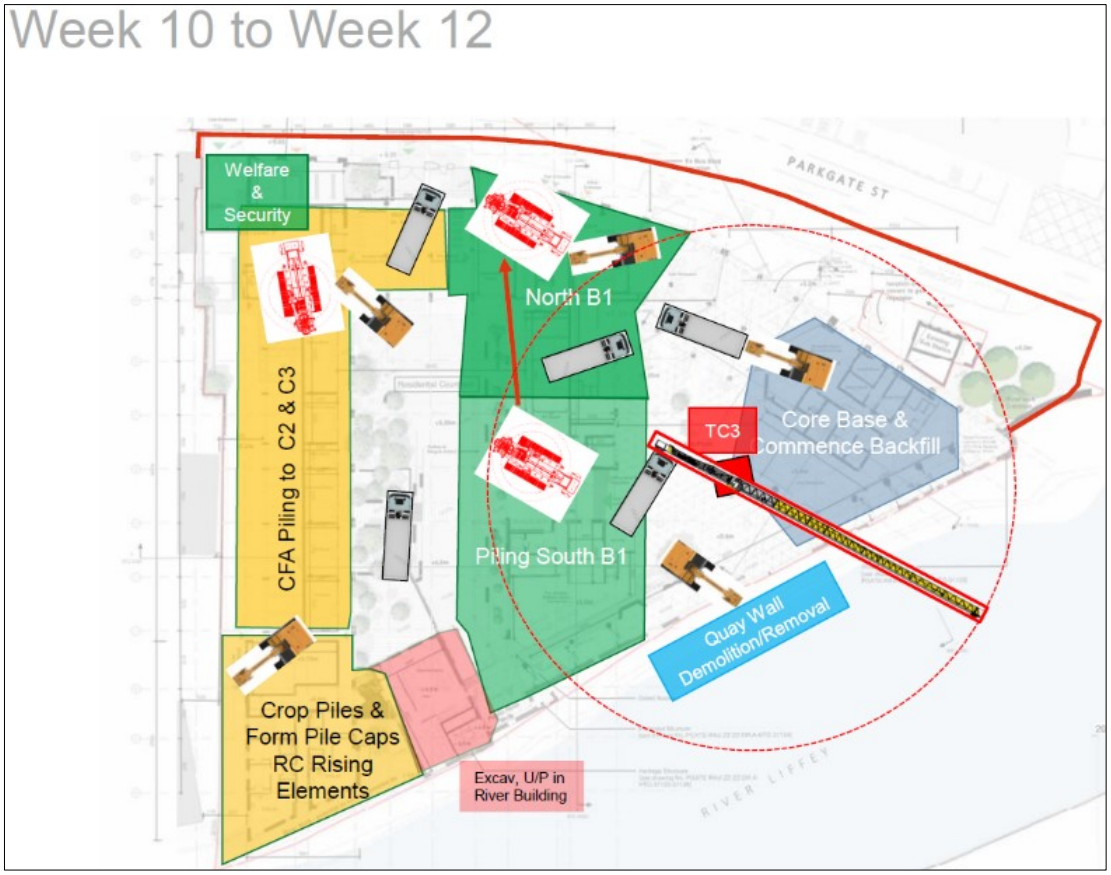


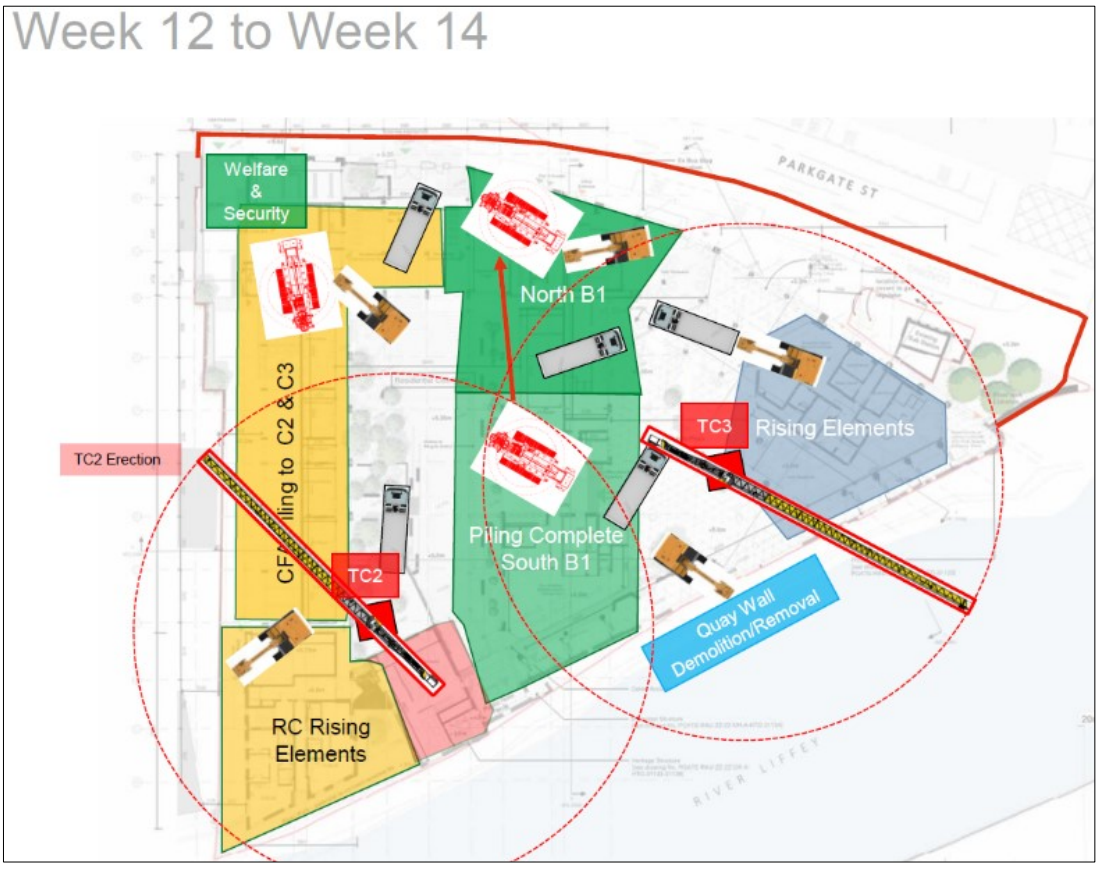

Week 2 to Week 4
Irish Water Works
Welfare & Security
Removal of Archway
Grading & Piling Matt to C2 & C3
Piling Matt to North B1
Piling Matt & Commence South B1
Rotary Piling
CFA
PARKGATE ST
RIVER LIFFEY

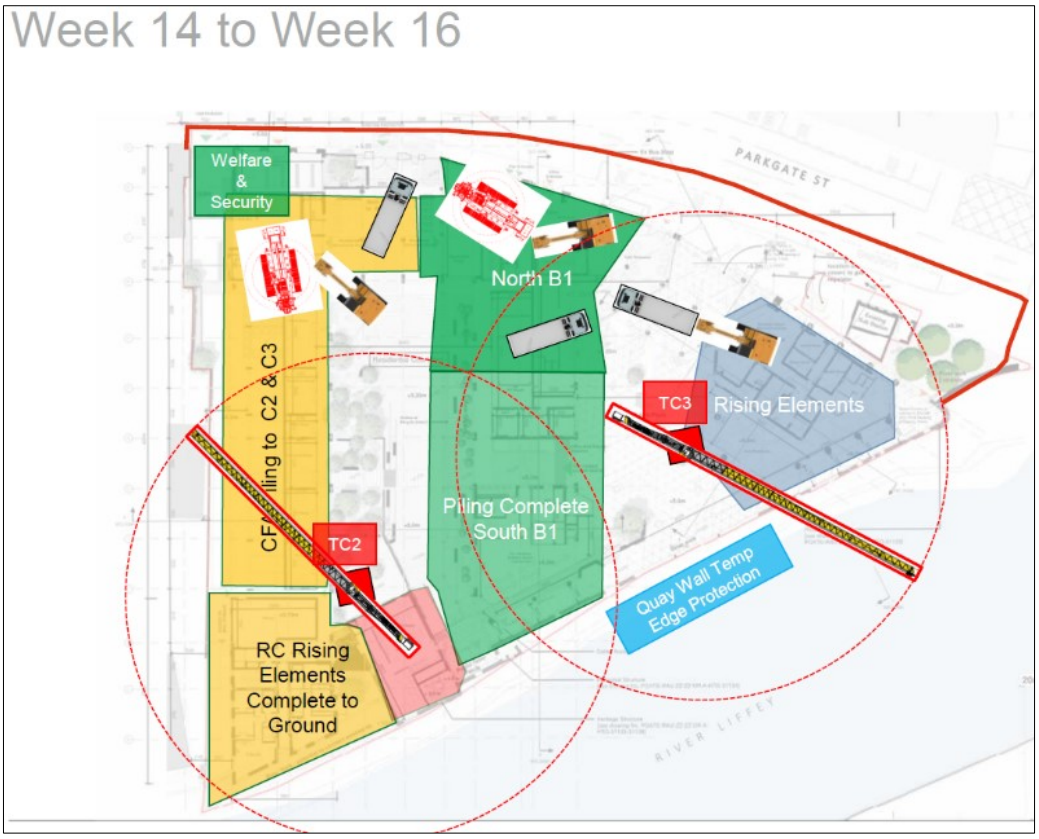

Week 4 to Week 6
Irish Water Works
Welfare & Security
Removal of Archway
Piling Matt to C2 & C3
Piling Matt to North B1
Piling Matt & Commence South B1
Rotary Piling, Excav & Pile Caps
Quay Wall Demolition/Removal
CFA
Excav, U/P in River Building
PARKGATE ST
RIVER LIFFEY

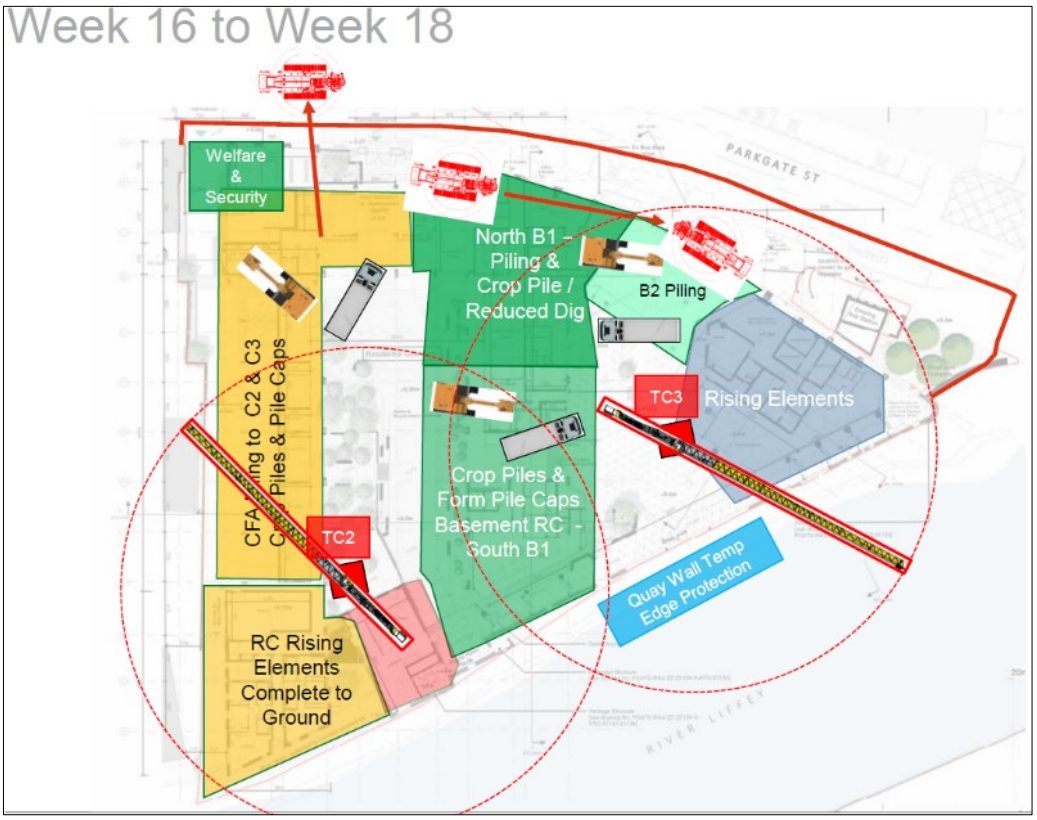

Week 6 to Week 8
Welfare & Security
CFA Piling to C2 & C3
North B1
Piling South B1
TC3
Excav & Pile Caps
TC3 Erection
Quay Wall Demolition/Removal
Basement Dig
Excav, U/P in River Building

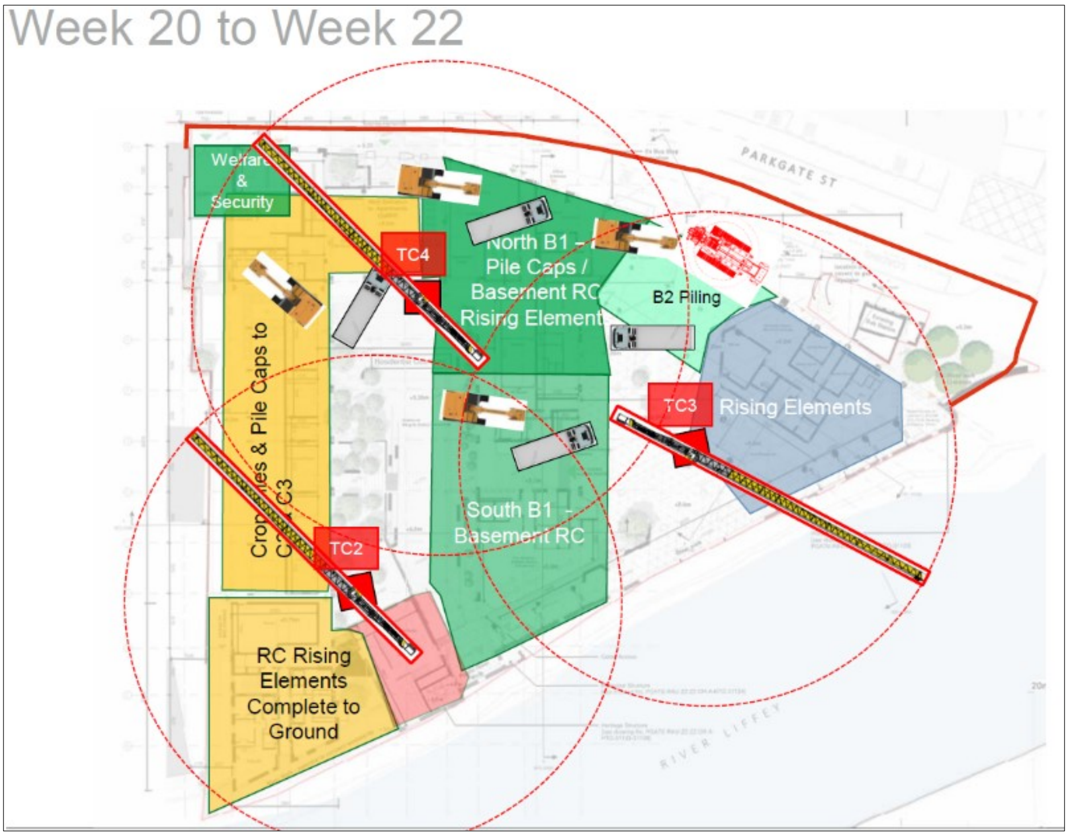

Week 8 to Week 10
Welfare & Security
CFA Piling to C2 & C3
North B1
Piling South B1
TC3
Core Base & Commence Backfill
Quay Wall Demolition/Removal
Basement Dig
Excav, U/P in River Building


Week 10 to Week 12
Welfare & Security
North B1
CFA Piling to C2 & C3
TC3
Core Base & Commence Backfill
Piling South B1
Quay Wall Demolition/Removal
Crop Piles & Form Pile Caps RC Rising Elements
Excav, U/P in River Building
PARKGATE ST
RIVER LIFFEY


Week 12 to Week 14
Welfare & Security
North B1
TC2 Erection
TC3
Rising Elements
Piling Complete South B1
TC2
Quay Wall Demolition/Removal
RC Rising Elements
PARKGATE ST
RIVER LIFFEY


Week 14 to Week 16
Welfare & Security
North B1
TC3
Rising Elements
Piling Complete South B1
TC2
Quay Wall Temp Edge Protection
RC Rising Elements Complete to Ground
PARKGATE ST
RIVER LIFFEY


Week 16 to Week 18
Welfare & Security
North B1 Piling & Crop Pile / Reduced Dig
B2 Piling
TC3
Rising Elements
Crop Piles & Form Pile Caps Basement RC - South B1
TC2
Quay Wall Temp Edge Protection
RC Rising Elements Complete to Ground
PARKGATE ST
RIVER LIFFEY


Week 20 to Week 22
Welfare & Security
North B1 – Pile Caps / Basement RC Rising Element
TC4
B2 Piling
TC3
Rising Elements
South B1 – Basement RC
TC2
RC Rising Elements Complete to Ground
PARKGATE ST
RIVER LIFFEY

APPENDIX 2 SUMMARY OF RELEVANT LEGISLATION

National Monuments Legislation (1930-2004)

The National Monument Act, 1930 (as amended) provides the formal legal mechanism to protect monuments in Ireland. Protection of a monument is provided via:

- Record of Monuments and Places (RMP);
- National Monument in the ownership or guardianship of the Minister for Arts, Heritage, Regional, Rural & Gaeltacht Affairs or a Local Authority;
- National Monument subject to a Preservation Order (or temporary Preservation Order);
- Register of Historic Monuments (RHM).

The definition of a monument is specified as:

any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections;

any artificial cave, stone or natural product, whether forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position;

any, or any part of any, prehistoric or ancient tomb, grave or burial deposit, or (ii) ritual, industrial or habitation site; and

any place comprising the remains or traces of any such building, structure or erection, any cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site.

Under Section 14 of the Principal Act (1930):

It shall be unlawful...

to demolish or remove wholly or in part or to disfigure, deface, alter, or in any manner injure or interfere with any such national monument without or otherwise than in accordance with the consent hereinafter mentioned (a licence issued by the Office of Public Works National Monuments Branch),

or

to excavate, dig, plough or otherwise disturb the ground within, around, or in the proximity to any such national monument without or otherwise than in accordance...

Under Amendment to Section 23 of the Principal Act (1930):

A person who finds an archaeological object shall, within four days after the finding, make a report of it to a member of the Garda Síochána...or the Director of the National Museum...

The latter is of relevance to any finds made during a watching brief.

In the 1994 Amendment of Section 12 of the Principal Act (1930), all the sites and 'places' recorded by the Sites and Monuments Record of the Office of Public Works are provided with a new status in law. This new status provides a level of protection to the listed sites that is equivalent to that accorded to 'registered' sites [Section 8(1), National Monuments Amendment Act 1954] as follows:

The Commissioners shall establish and maintain a record of monuments and places where they believe there are monuments, and the record shall be comprised of a list of monuments and such places and a map or maps showing each monument and such place in respect of each county in the State.

The Commissioners shall cause to be exhibited in a prescribed manner in each county the list and map or maps of the county drawn up and publish in a prescribed manner information about when and where the lists and maps may be consulted.

In addition, when the owner or occupier (not being the Commissioners) of a monument or place which has been recorded, or any person proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Commissioners and shall not, except in the case of urgent necessity and with the consent of the Commissioners, commence the work for a period of two months after having given the notice.

The National Monuments Amendment Act enacted in 2004 provides clarification in relation to the division of responsibilities between the Minister of Environment, Heritage and Local Government, Finance and Arts, Sports and Tourism together with the Commissioners of Public Works. The Minister of Environment, Heritage and Local Government will issue directions relating to archaeological works and will be advised by the National Monuments Section and the National Museum of Ireland. The Act gives discretion to the Minister of Environment, Heritage and Local Government to grant consent or issue directions in relation to road developments (Section 49 and 51) approved by An Bord Pleanála and/or in relation to the discovery of National Monuments.

14A. (1) The consent of the Minister under section 14 of this Act and any further consent or licence under any other provision of the National Monuments Acts 1930 to 2004 shall not be required where the works involved are connected with an approved road development.

14A. (2) Any works of an archaeological nature that are carried out in respect of an approved road development shall be carried out in accordance with the directions of the Minister, which directions shall be issued following consultation by the minister with the Director of the National Museum of Ireland.

Subsection 14A (4) Where a national monument has been discovered to which subsection (3) of this section relates, then the road authority carrying out the road development shall report the discovery to the Minister subject to subsection (7) of this section, and pending any directions by the Minister under paragraph (d) of this subsection, no works which would interfere with the monument shall be carried out, except works urgently required to secure its preservation carried out in accordance with such measures as may be specified by the Minister.

The Minister will consult with the Director of the National Museum of Ireland for a period not longer than 14 days before issuing further directions in relation to the national monument.

The Minister will not be restricted to archaeological considerations alone but will also consider the wider public interest.

Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999

This Act provides for the establishment of a national inventory of architectural heritage and historic monuments.

Section 1 of the act defines “architectural heritage” as:

(a) all structures and buildings together with their settings and attendant grounds, fixtures and fittings,

(b) groups of such structures and buildings, and,

(c) sites

which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

Section 2 of the Act states that the Minister (for Arts, Heritage, Gaeltacht and the Islands) shall establish the NIAH, determining its form and content, defining the categories of architectural heritage, and specifying to

which category each entry belongs. The information contained within the inventory will be made available to planning authorities, having regard to the security and privacy of both property and persons involved.

Section 3 of the Act states that the Minister may appoint officers, who may in turn request access to premises listed in the inventory from the occupiers of these buildings. The officer is required to inform the occupier of the building why entry is necessary, and in the event of a refusal, can apply for a warrant to enter the premises.

Section 4 of the Act states that obstruction of an officer or a refusal to comply with requirements of entry will result in the owner or occupier being guilty of an offence.

Section 5 of the Act states that sanitary authorities who carry out works on a monument covered by this Act will as far as possibly preserve the monument with the proviso that its condition is not a danger to any person or property, and that the sanitation authority will inform the Minister that the works have been carried out.

The provisions in the Act are in addition to and not a substitution for provisions of the National Monument Act (1930–94), and the protection of monuments in the National Monuments Act is extended to the monuments covered by the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act (1999).