

# CHAPTER 11: ARCHAEOLOGY AND CULTURAL HERITAGE

# 11

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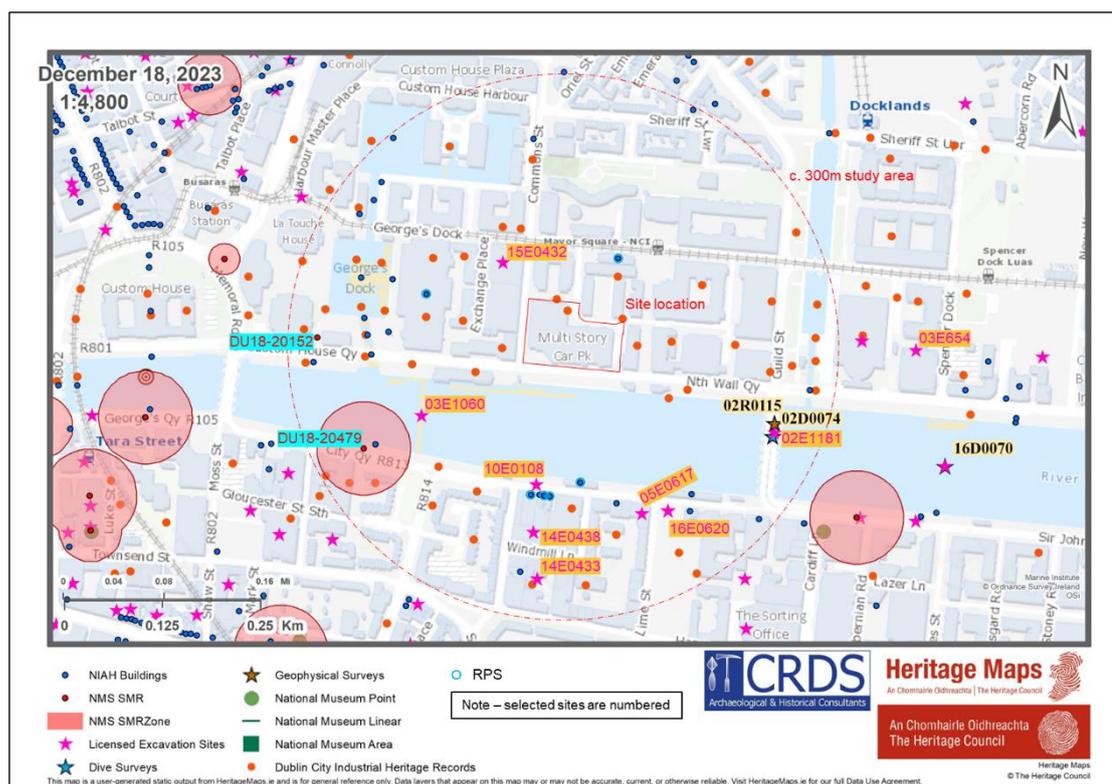
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## 11.0 ARCHAEOLOGY AND CULTURAL HERITAGE

### 11.1 INTRODUCTION

The following chapter assesses the predicted impacts of the proposed development on archaeological and cultural heritage. Please note that architectural heritage is being dealt with by CityDesigners in Volume 3 (Heritage, Townscape, Landscape and Visual Impact Assessment (HTLVIA)) of the EIAR. The proposed development is located at the junction of North Wall Quay and Commons Street, Dublin City (ITM E. 716841m, 734548m; see Figure 11.1).



**Figure 11.1** Site location map showing recorded archaeological and architectural heritage sites in the vicinity of the Proposed Development (source: [www.heritagemaps.ie](http://www.heritagemaps.ie)).

## 11.2 METHODOLOGY

### 11.2.1 Forecasting Methods and Difficulties Encountered

Archaeological and cultural heritage have been assessed in line with best practice at a National and EU level, in line with the following:

#### 11.2.1.1 Guidelines and Legislation

The following legislation, standards and guidelines were consulted as part of the assessment:

- National Monuments Acts, 1930 to 2014;
- The Planning and Development Act, 2000 (as amended);
- Heritage Act, 1995 (as amended);

- Guidelines on the Information to be contained in Environmental Impact Assessment Report 2022, EPA;
- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999, (formerly) Department of Arts, Heritage, Gaeltacht, and Islands; and
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 2000 and the Local Government (Planning and Development) Act 2000.

#### 11.2.1.2 The Valletta Convention

The Valletta Convention was adopted on 16 January 1992 in Valletta (Malta) and came into force on 25 May 1995 (Council of Europe Treaty Series no. 143). It is open for signature by member states of the Council of Europe and other states party to the European Cultural Convention and for accession by non-member states and the European Community.

The Valletta Convention (The European Convention for the Protection of the Archaeological Heritage (revised)) replaced and updated the original London Convention of 1969. It reflected the change in the nature of threats to the archaeological heritage, which now came less from unauthorised excavations, as in the 1960s, and more from the major construction projects carried out all over Europe from 1980 onwards. The revised Convention drew on twenty-two years of experience in implementing the original Convention. It established a body of new basic legal standards for Europe, to be met by national policies for the protection of archaeological assets as sources of scientific and documentary evidence, in line with the principles of integrated conservation.

No difficulties were encountered during the study.

### **11.2.2 Assessment Methodology**

To set the proposed development within its wider archaeological and cultural heritage landscape, and to assess the potential of encountering such features on the site, a paper survey of archaeological heritage, historical and cartographic sources was undertaken. A study area of approximately 300m from the proposed development was assessed, with reference to important relevant findings farther afield.

#### 11.2.2.1 Record of Monuments and Places

The Record of Monuments and Places (RMP), comprising the results of the Archaeological Survey of Ireland, is a statutory list of all recorded archaeological monuments known to the National Monuments Service ([www.archaeology.ie](http://www.archaeology.ie)). The relevant files for these sites contain details of documentary sources and aerial photographs, early maps, OS memoirs, the field notes of the Archaeological Survey of Ireland and other relevant publications. Sites recorded on the Record of Monuments and Places all receive statutory protection under the National Monuments Act 1994. The information contained within the RMP is derived from the earlier non-statutory Sites and Monuments Record (SMR); some entries, however, were not transferred to the statutory record as they refer to features that on inspection by the Archaeological Survey were found not to merit inclusion in that record or could not be located with sufficient accuracy to be included. Such sites however remain part of the SMR. The record is a dynamic one and is updated so as to take account of on-going research. The Record of Monuments and Places was consulted in the Archives of the Department of Arts, Heritage and the Gaeltacht. There are two recorded

archaeological monuments located within the study area (i.e. within 300m of the proposed development); see Figure 11.1 and Appendix 11.1).

#### 11.2.2.2 Recorded Archaeological Objects

The National Museum of Ireland's topographical files are a national archive of all known archaeological finds from Ireland. They relate primarily to artefacts but also include references to monuments and contain a unique archive of records of previous excavations. The topographical files were consulted to determine if any archaeological artefacts had been recorded from the area. Other published catalogues of prehistoric material were also studied: Raftery (1983 - Iron Age antiquities), Eogan (1965; 1993; 1994 - bronze swords, Bronze Age hoards and goldwork), Harbison (1968; 1969a; 1969b - bronze axes, halberds and daggers). No finds were recorded, although it is important to note that archaeological excavations in the area have also revealed numerous archaeological finds (see below).

#### 11.2.2.3 Recorded Archaeological Excavations

The excavation bulletin website ([www.excavations.ie](http://www.excavations.ie)) was consulted to identify previous excavations that have been carried out within the study area. This database contains summary accounts of excavations carried out in Ireland from 1970 to 2023. The study area has been subject to eight development led licensed excavations. A further important excavation, just east of the study area, is included. Summaries of these are listed in Appendix 11.2 (see also Table 11.1 and Figure 11.1).

#### 11.2.2.4 Cartographic Sources

**Down Survey** - Taken in the years 1656-1658, the Down Survey of Ireland is the first ever detailed land survey on a national scale anywhere in the world. The survey, led by William Petty, sought to measure all the land to be forfeited by the Catholic Irish in order to facilitate its redistribution to Merchant Adventurers and English soldiers ([www.downsurvey.tcd.ie](http://www.downsurvey.tcd.ie)). The Down Survey map of the county of Dublin is shown in Figure 11.2.

**De Gomme** - Sir Bernard de Gomme (1620 –1685) was a Dutch military engineer. By some he is considered the most important figure in 17th-century English military engineering. He produced a series of maps and drawings of the city and suburbs of Dublin, from Kilmainham to Rings-End wherein the rivers, streets, lanes, alleys, churches, gates etc are exactly described at a scale of Scale 1760 yards to 1 English mile. The 1673 map of the proposed development lands is shown as Figure 11.3 ([www.rmg.co.uk/collections/objects/rmgc-object-541695](http://www.rmg.co.uk/collections/objects/rmgc-object-541695)) .

**Rocque** - John Rocque (c.1705–62) was a cartographer and engraver of European repute, who could count among his achievement's maps of London, Paris, Berlin and Rome. Rocque's Irish work between 1754 and 1760, included a remarkable series of c.170 manuscript estate maps for the earl of Kildare, and a range of commercially driven projects that resulted in finely-engraved and printed surveys of the cities of Dublin. An extract from Rocque's 1760 map of south county Dublin is shown in Figure 11.4 ([www.dublinhistoricmaps.ie/maps/1600-1799/index.html](http://www.dublinhistoricmaps.ie/maps/1600-1799/index.html)) .

**Ordnance Survey Early Editions** - Reference to cartographic sources provides information on the development of the area. Manuscript maps consulted included the Ordnance Survey first edition 6" (1829-41) and second edition 25" (1897-1913) maps were also assessed ([www.heritagemaps.ie](http://www.heritagemaps.ie); see Figures 11.5 and 11.7).

**Insurance Plan of the City of Dublin** - This detailed 1893 plan (at a scale of 1 inch to 50 feet) of Dublin is one of a series of twenty sheets in an atlas originally produced to aid insurance companies in assessing fire risks. The building footprints, their use (commercial, residential, educational, etc.), the number of floors and the height of the building, as well as construction materials (and thus risk of burning) and special fire hazards (chemicals, kilns, ovens) were documented in order to estimate premiums. Names of individual businesses, property lines, and addresses were also often recorded. These maps, undertaken in between the first and second edition Ordnance Survey maps, provide a rich historical snapshot of the commercial activity and urban landscape of towns and cities at the time ([www.oldmapsonline.org/](http://www.oldmapsonline.org/); see Figure 11.6).

#### 11.2.2.5 Aerial Photography

Available online sources for aerial photography were consulted, including the Ordnance Survey and National Monuments Service collections (see Figures 11.8-19).

#### 11.2.2.6 Historical Research

The baseline historical research utilised sources including Lewis' Topographical Dictionary of Ireland (1837) and the Ordnance Survey Letters for County Dublin and local journals.

#### 11.2.2.7 County Development Plan

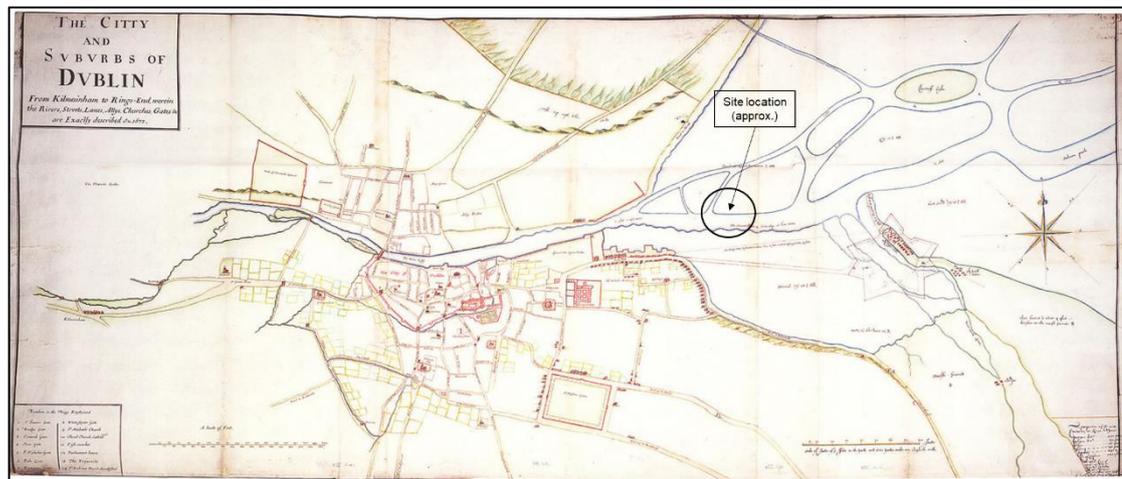
The Dublin City Development Plan 2022 – 2028 was consulted ([www.dublincity.ie/residential/planning/strategic-planning/dublin-city-development-plan/development-plan-2022-2028](http://www.dublincity.ie/residential/planning/strategic-planning/dublin-city-development-plan/development-plan-2022-2028)). The plan contains a plan of the city showing the evolution of the city from its medieval core, with the site of proposed development reclaimed in the 19<sup>th</sup> century (see Figure 11.10; source: [www.consult.dublincity.ie/en/consultation/draft-dublin-city-development-plan-2022-2028/chapter/chapter-11-built-heritage-and-archaeology](http://www.consult.dublincity.ie/en/consultation/draft-dublin-city-development-plan-2022-2028/chapter/chapter-11-built-heritage-and-archaeology)).

**Table 11.1:** Recorded archaeological excavations within the study area (source: [www.heritagemaps.ie](http://www.heritagemaps.ie); [www.excavations.ie](http://www.excavations.ie)).

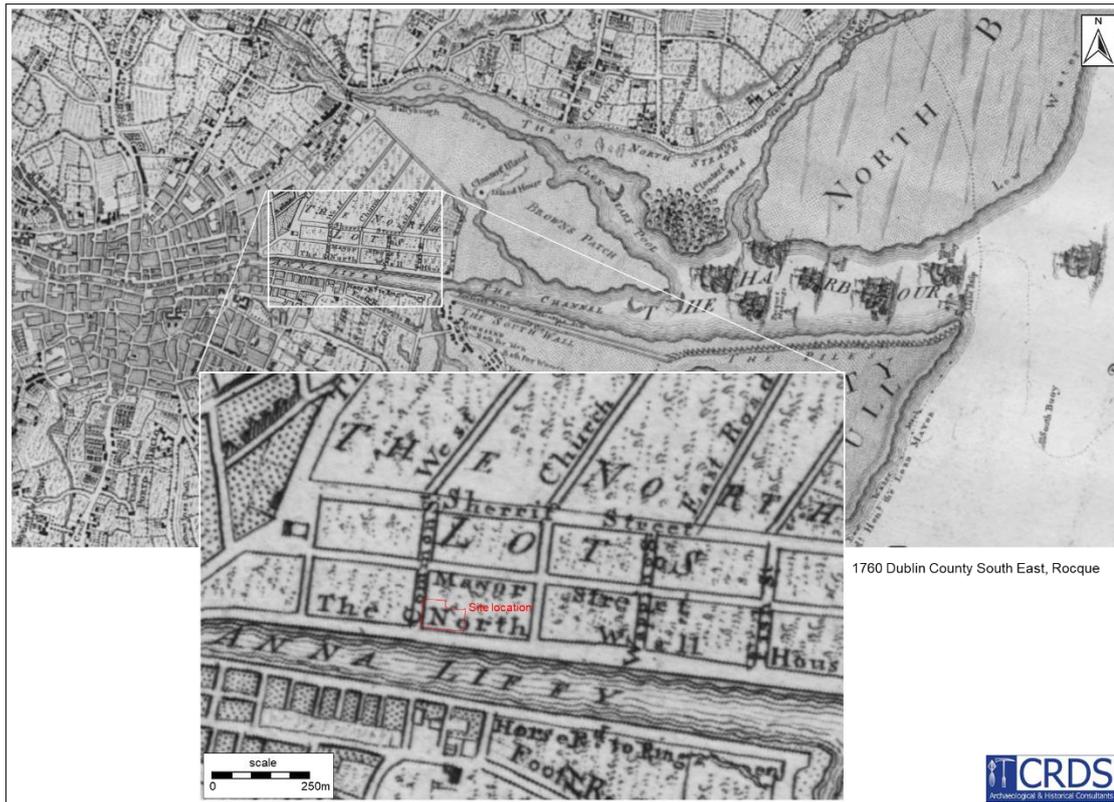
Licence No.	Site name	Site type
02E1181, 02D074, 02R115	Macken Street – Guild Street Bridge	No archaeological significance
03E0654	Building C, Spencer Dock, North Wall Quay	Late Mesolithic fish traps and post-medieval structures
03E1060	River Liffey, City Quay/Custom House Quay	No archaeological significance
05E0617	17–19 Sir John Rogerson's Quay	Urban post-medieval
10E108	George's Quay to Sir John Rogerson's Quay	Post-medieval reclamation deposits
14E0433	1-4 Windmill Lane	Urban post-medieval
14E0438	1-6 Sir John Rogerson's Quay / 16-25 Creighton Street	Urban post-medieval
15E0432	Exchange Facility, Mayor Street, IFSC	Urban medieval
16E0620	Lime Street	Land reclamation, early 18th- century houses



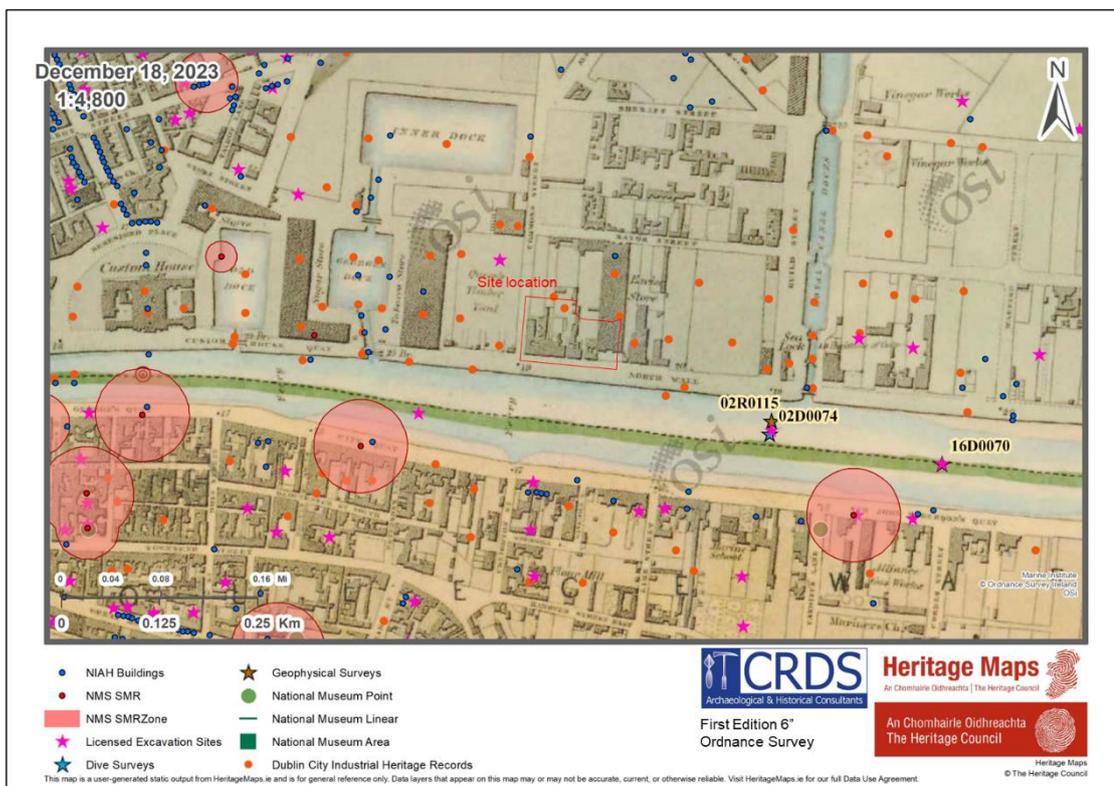
**Figure 11.2** Extract of Down Survey map of the County of Dublin ([www.downsurvey.tcd.ie](http://www.downsurvey.tcd.ie)).



**Figure 11.3** Extract from De Gomme's 1673 map of Dublin ([www.rmg.co.uk/collections/objects/rmgc-object-541695](http://www.rmg.co.uk/collections/objects/rmgc-object-541695))



**Figure 11.4** Extract from John Rocque's 1760 map of Dublin County South East ([www.dublinhistoricmaps.ie/maps/1600-1799/index.html](http://www.dublinhistoricmaps.ie/maps/1600-1799/index.html)).



**Figure 11.5** Extract from the Ordnance Survey c. 1830s First Edition map of Dublin ([www.heritagemaps.ie](http://www.heritagemaps.ie)).

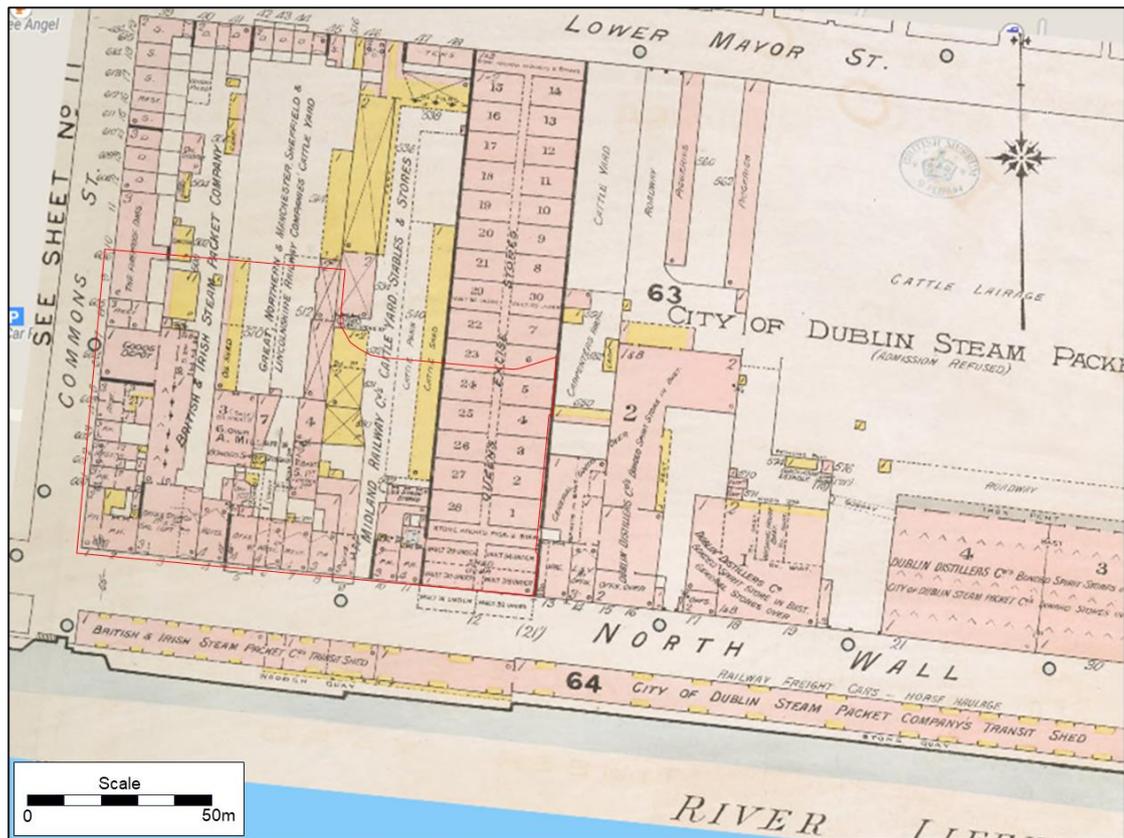


Figure 11.6 Extract from the 1893 Goad Fire Insurance Map of Dublin ([www.oldmapsonline.org/](http://www.oldmapsonline.org/)).

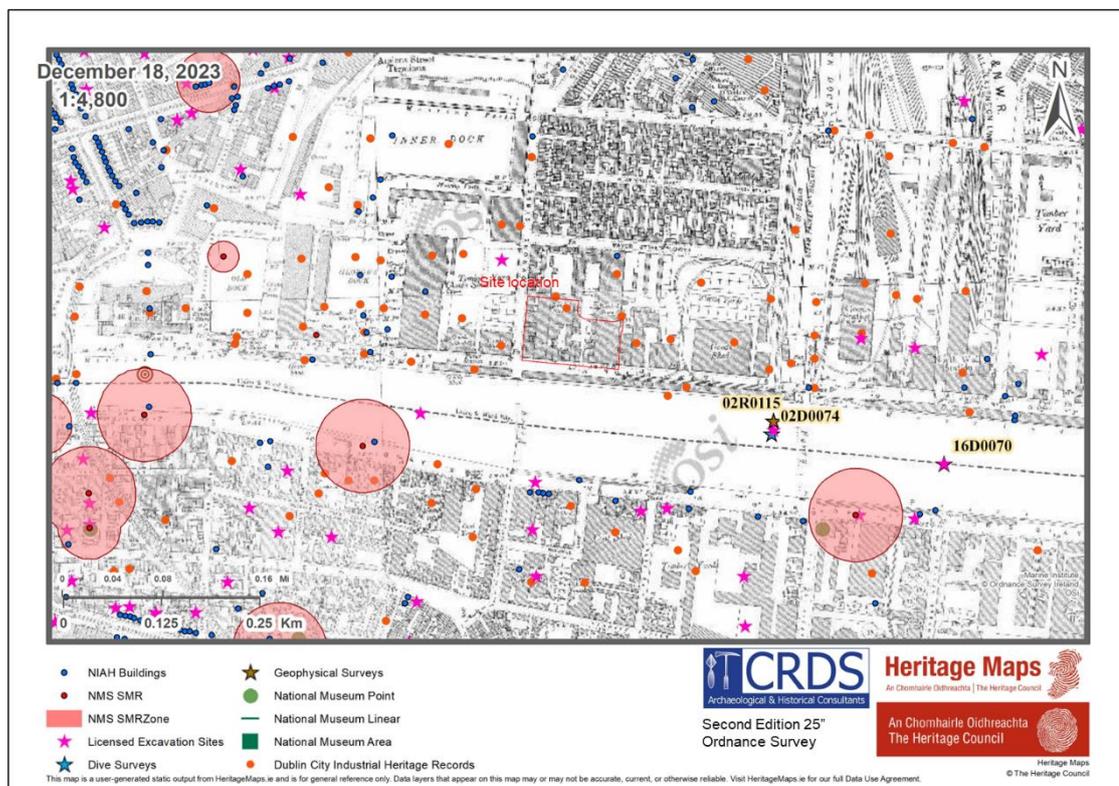


Figure 11.7 Extract from the Ordnance Survey c. 1910s Second Edition map of Dublin ([www.heritagemaps.ie/](http://www.heritagemaps.ie/)).

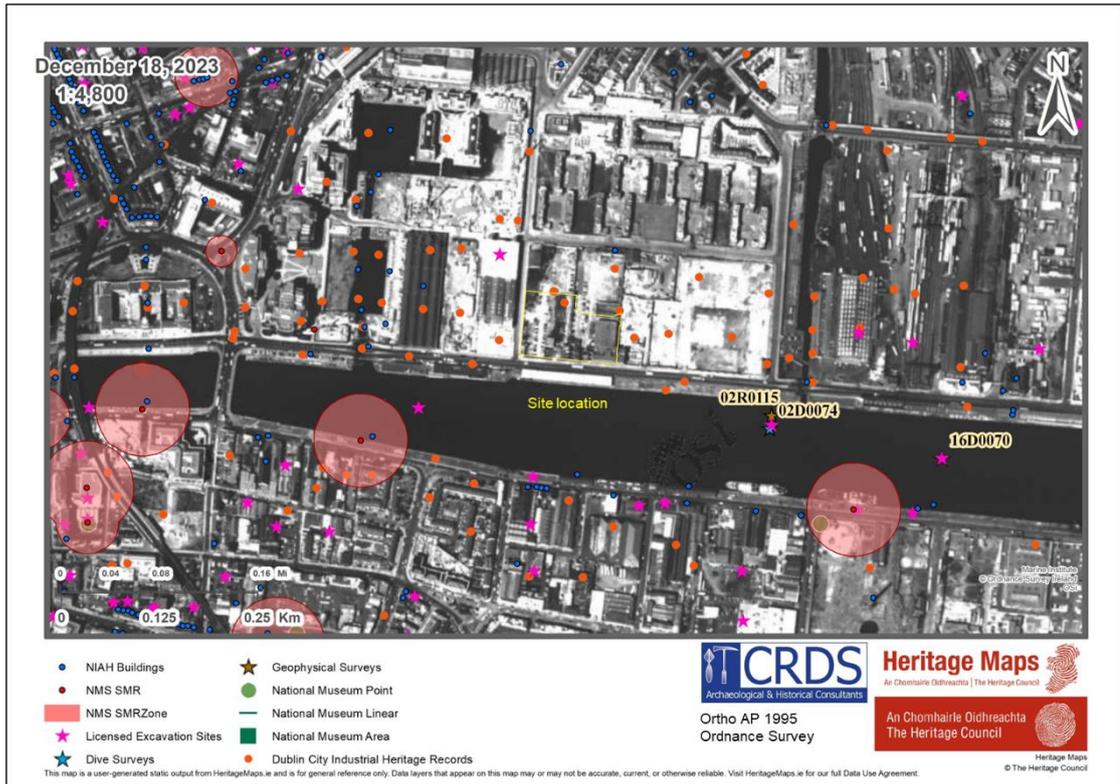


Figure 11.8 Extract from the Ordnance Survey 1995 Aerial Photograph of Dublin ([www.heritagemaps.ie](http://www.heritagemaps.ie)).

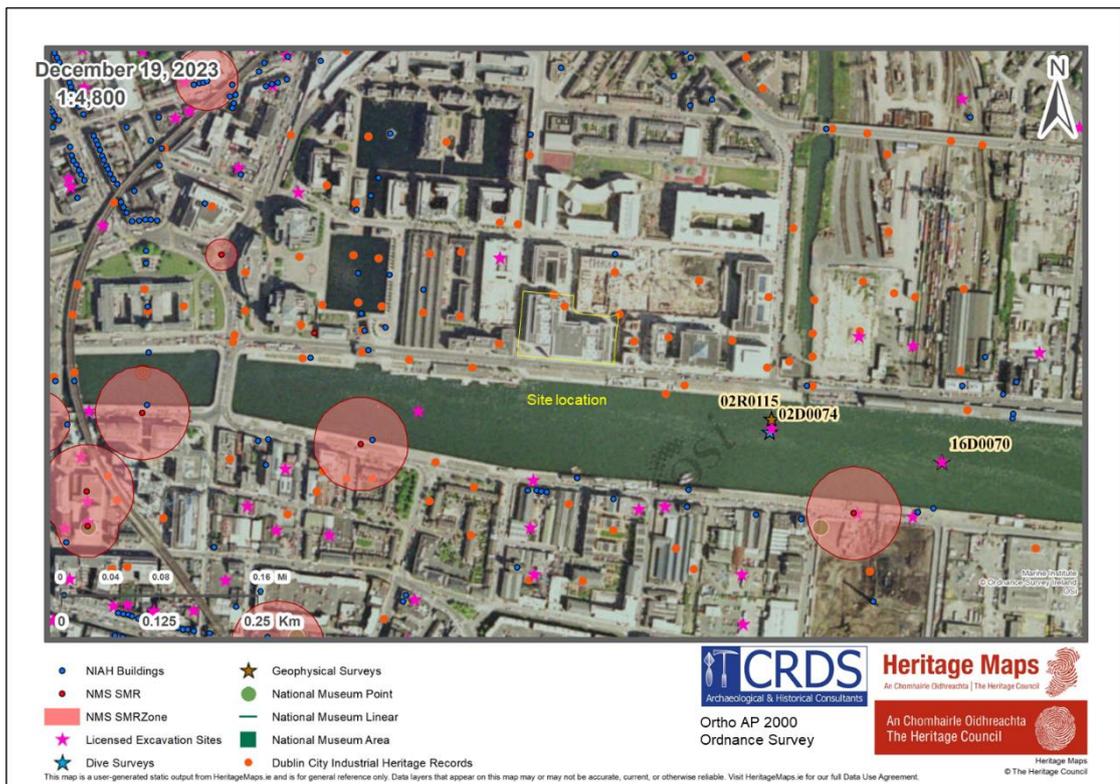
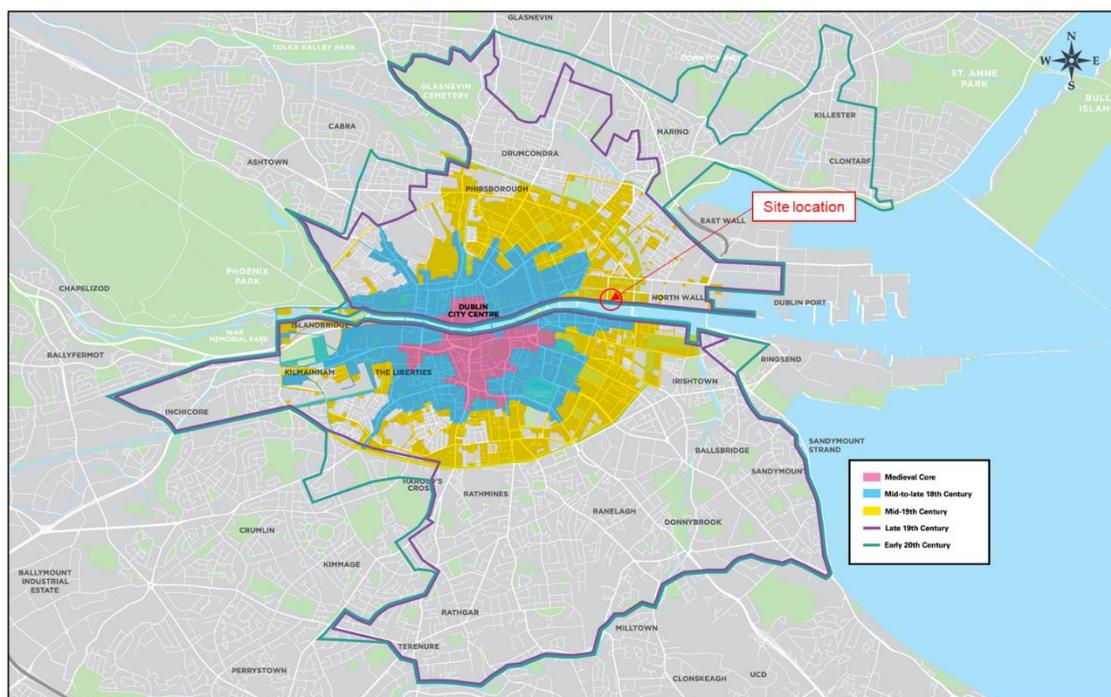


Figure 11.9 Extract from the Ordnance Survey 2000 Aerial Photograph of Dublin ([www.heritagemaps.ie](http://www.heritagemaps.ie)).



**Figure 11.10** Extract from the Dublin City Development Plan showing the historic development of the city ([www.consult.dublincity.ie/en/consultation/draft-dublin-city-development-plan-2022-2028/chapter/chapter-11-built-heritage-and-archaeology](http://www.consult.dublincity.ie/en/consultation/draft-dublin-city-development-plan-2022-2028/chapter/chapter-11-built-heritage-and-archaeology)).

### 11.3 RECEIVING ENVIRONMENT

The proposed development area is located within the zone of archaeological potential for the historic centre of Dublin City, which is a recorded monument (DU018-020; see Appendix 11.1). The area lay undeveloped until the early 18<sup>th</sup> century when a focused programme of land reclamation commenced. The site has been subject to continuous redevelopment in following centuries.

#### 11.3.1 Pre-history (c. 8000 BCE – 400 AD)

There is evidence of human habitation in Ireland during the late Palaeolithic in Co. Clare (see Dowd and Carden 2016), however, by the Mesolithic period there is widespread and unequivocal evidence of human activity throughout the island. The coastline, rivers and lakes played a vital role in the movement and settlement patterns of these hunter gatherer societies in what would have been a densely wooded environment. The River Liffey is an important waterway sourcing in the Wicklow mountains and flowing some 130km, entering the Irish Sea. Evidence of human activity associated with the river was found in 2004 with the discovery of Mesolithic fish traps during the development of the Spencer Dock area, c. 400m east of the proposed development area (Bennett 2004:0565, Licence No. 03E0654).

The fish traps were found to be late Mesolithic in date and during the excavations the Mesolithic shoreline was identified 5m below the current ground level and 30m north of the current edge of the River Liffey. This area may represent the northern bank of the river or an estuarine island. The traps were set in estuarine silts and preserved under a later accumulation of silts. The silts had been sealed by reclamation deposits. The fish traps were constructed almost exclusively of hazel, and while fragmentary, were in a relatively good state of preservation, with tool marks in evidence. Radiocarbon dates from five wood samples returned a date range of between 6100 -

5720BC. A further trap was found higher up in the silts, which returned a Neolithic date (McQuade 2008, 8-11).

### **11.3.2 Early Medieval Period (c. 400 AD – 1100 AD)**

During the early medieval period, County Dublin straddled two ancient kingdoms, Brega to the north of the River Tolka and Laigin to the south. The early cartographic representations of Dublin city indicate the position of the estuary shoreline prior to the commencement of reclamation works. On the northern side of the river, it is possible that Amiens Street (formerly the North Strand), represents this former shoreline (De Courcy 1996, 270); whilst the southern shoreline would have been dominated by a marshy delta at the mouth of the River Dodder. De Courcy also argues that this is likely to have been the position of the shoreline as far back as AD 850 (De Courcy 1996, xxvii).

The name "Dublin," meaning 'black pool,' originated from a pond southeast of present-day Dublin Castle, tying to an early ecclesiastical foundation referenced in AD 790 (Duffy 2016).

The proposed development area lay downriver from this early settlement focus near the 'ford of the hurdles.' Pre-18th century, it likely sat within the River Liffey's course, possibly as mud flats impacted by tidal flooding. While unsuitable for habitation, it was likely used for resource gathering like shellfish, seabird hunting, and seaweed harvesting due to its proximity to settlements. The estuary might have employed tidal fish traps similar to those found in the Shannon Delta (O'Sullivan et al. 2014, 212).

Dublin underwent a significant transformation with the arrival of Vikings in the 9th century. Their settlement established itself by the Liffey and Steine confluence, marked by 'The Long Stone' (De Courcy 1996, 235). Initially a raiding base, the Viking longphort evolved into a commercial hub for slave trade and luxury goods over 60 years before being driven away in 902. They returned in 917 to a new site overlooking the Liffey and Poddle confluence, developing a trading town with property plots, streets, and earth defences from Christchurch Cathedral to Dublin Castle.

Throughout the 11<sup>th</sup> century, Dublin expanded, covering around 12 hectares on the southern side of the river (Bradley 1998). This growth likely led to increased resource exploitation in the proposed development area, evidenced by abundant shell remains found at Woodquay, including cockle, mussel, oyster, and scallop shells. Notably, the region east of the proposed area was renowned for its oyster beds until the 18<sup>th</sup> century (De Courcy 1996, 290).

### **11.3.3 Later Medieval Period (c. 1100 AD – 1650 AD)**

Following the Anglo-Norman invasion in 1169, medieval Dublin experienced a period of growth and prosperity extending into the 14<sup>th</sup> century. The Anglo-Norman administration reinforced town walls with defensive towers and erected gates on streets outside these walls, fortifying the city. Significant reclamations of land along the Liffey at Woodquay started around the late 12<sup>th</sup> century, indicating extramural development (Halpin 2000, 34).

The proposed development site, initially tidal mudflats about 1km east of the walled town, remained relatively unchanged until the 17<sup>th</sup> century. The Down Survey map of 1641 (Figure 11.2) and De Gomme's 1673 map (Figure 11.3) provide insights into the medieval period's landscape. Notably, the Augustinian Priory of All Saints (later becoming Trinity College) was established in 1166, 650m southwest of the site,

eventually amassing substantial wealth through estates, farming, and rentals (Gwynn and Hadcock 1970, 171). However, it was dissolved in 1538, its possessions granted to Dublin citizens for their loyalty during the Silken Thomas Rebellion of 1534 (Gilbert 1861, 3-4).

East of the town, another religious foundation emerged in 1220, established by Archbishop Henry of London, this site catered to pilgrims and possibly operated as a place for lepers, likely lending its name to the area—initially "Lazar's Hill," later becoming "Lazy Hill" and then Townsend Street (Takeda 2011, 118).

During the medieval period, the proposed site likely served as a foreshore resource, with intensified exploitation as Dublin's population grew. Shellfish, seabirds, seaweed, and sand from the coast were harvested. Fishing activity increased, evidenced by discoveries of fishhooks, sinkers, eel-spears, and netting-needles in Dublin and Howth. As Dublin's population expanded and various religious and landholding establishments grew, the control and regulation of coastal resources intensified. Fishing and resource harvesting rights became valuable possessions administered by different landlords (Murphy and Potterton 2010).

#### **11.3.4 Post-Medieval Period (c. 1650 AD – )**

Major improvements to the City of Dublin took place in the latter half of the 17<sup>th</sup> century and this included the development of lands along the Liffey that had been part of the margins of the river or low-lying land adjacent. This was facilitated by Dublin's Norman charter, which granted to the city all of the tidal area, so that any land reclaimed from the water became city property with potential rental income. From the 17<sup>th</sup> century, reclamation projects involving wooden revetments were undertaken within the vicinity of the proposed development site.

Lands reclaimed frequently carry the names of those who received leases from the city at this time, such as Usher, Ellis and Jervis. The sequence of the quays is encoded into the names that they bear, with Usher's Island and Usher's Quay, Ellis Quay, Arran Quay and Ormond Quay dating from the 17<sup>th</sup> century. George's Quay, City Quay, Sir John Rogerson's Quay, Aston Quay, North Wall Quay and Crampton Quay date to the 18<sup>th</sup> century Burgh Quay, Wolfe Tone Quay and Victoria Quay date to the 19<sup>th</sup> century. The largest programme of land reclamation from the river and its estuary began in the early 18<sup>th</sup> century. This took place to the north and south of the river, with the construction of river walls along North Wall Quay and East Wall on the northern side and George's Quay, City Quay and Sir John Rogerson's Quay on the southern side. Huge tracts of land were reclaimed and were suitable for building by the end of the century (Lennon 2008, 6).

The 18<sup>th</sup> century expansion of the port of Dublin, which led to the construction of the quays, created moorage for shipping as far as Carlisle Bridge (now O'Connell Bridge). This culminated in the construction of the new Custom House in the 1780s and 90s, which shifted the focus of port activity definitively to the area surrounding Custom House Quay, City Quay, North Wall Quay and Sir John Rogerson's Quay. The newly constructed quays and reclaimed land are depicted on Rocque's 1760 map of Dublin County South East (Figure 11.4).

The Grand Canal dock was also constructed at this time (De Courcy 1996, 176). The port was further augmented in the early 19<sup>th</sup> century with the provision of docks adjacent to the Custom House, on the site now occupied by Memorial Road.

The Royal Canal reached the Liffey in the 19<sup>th</sup> century, necessitating the provision of bridges over the canal lock and resulting in the provision of Spencer Dock. The mechanisation of the port facilities gradually brought rail tracks along the northern and southern quays, particularly North Wall Quay and Sir John Rogerson's Quay. Most of these rail lines were privately owned, and enabled bulk goods to be moved efficiently between the ships moored at the quays and the warehouses and industrial units nearby.

The development of the area north of the quays, including the land in which the proposed development is to be sited, is well illustrated in the first (1830s) and second (1910s) edition Ordnance Survey maps (Figures 11.5 and 11.7), and in particular, the Goad Fire Insurance Map of 1893 (Figure 11.6). This detailed 1893 plan (at a scale of 1 inch to 50 feet) of Dublin is one of a series of twenty sheets in an atlas originally produced to aid insurance companies in assessing fire risks. The building footprints, their use (commercial, residential, educational, etc.), the number of floors and the height of the building, as well as construction materials (and thus risk of burning) and special fire hazards (chemicals, kilns, ovens) were documented in order to estimate premiums. Names of individual businesses, property lines, and addresses were also often recorded. These maps, undertaken in between the first and second edition Ordnance Survey maps, provide a rich historical snapshot of the commercial activity and urban landscape of towns and cities at the time. The area of the proposed development, at this time, comprised a series of buildings related to the Midland Railway Company's Cattle Yard and Stables ([www.oldmapsonline.org/](http://www.oldmapsonline.org/); see Figure 11.6).

Aerial photography images from 1995 (Figure 11.8) and 2000 (Figure 11.10) indicate the land proposed for development has been redeveloped extensively in the recent past, during the construction of the Financial District along the north side of the quays. Whilst the streetscape remains unchanged since the time of the building of the quay walls and reclamation of the land in the 18<sup>th</sup> century (see Figures 11.4-11.7), the layout of buildings as depicted on the Goad Fire Insurance Map of 1893 is completely gone.

## **11.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT**

The purpose of this section is to provide an overview of the key relevant details of the construction phase and operational phase of the proposed development. The information presented in this section is informed by the project design, but it is not a complete description of the Proposed Development. Therefore, it should be read in conjunction with the full development package. For a more comprehensive understanding of the Proposed Development, please refer to Chapter 2 (Description of the Proposed Development) of the EIA Report. Chapter 2 provides a detailed overview of the lifecycle of the project, including reference to the architectural and civil engineering, drawings, plans, reports, and other relevant document in order to define the proposed development.

### **11.4.1 Construction Phase**

In relation to archaeology and cultural heritage, the proposed development will comprise substantial ground disturbance in the construction of underground car parking. There will also be deeper ground disturbance relating to the driving of piles, pile walls and basement pile caps, and in relation to the insertion of a water and gas-proof membrane.

### 11.4.2 Operational Phase

There will be no ground disturbance during the operational phase of the proposed development.

## 11.5 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

### 11.5.1 Construction Phase

There are no recorded archaeological sites within the proposed development, although it should be noted that the development lies within the zone of archaeological potential for the city of Dublin (SMR No. DU18-020). There are two recorded archaeological sites listed in the RMP within the study area. Neither of these will be impacted, directly or indirectly, by the proposed development.

There have been numerous development led licensed archaeological investigations in the area of the proposed development, including eight within c. 300m of the site. One of these revealed medieval remains, and four revealed post-medieval remains. More significantly, c. 450m east of the proposed development site, the remains of Mesolithic fish traps were recovered from beneath the overlying 18<sup>th</sup> century reclaimed land.

The desktop survey did not highlight any previously unrecorded archaeological sites within the site of the proposed development.

The land on which the proposed development is sited has been subjected to substantial development in the recent past and is currently offices with a basement car park.

However, given that the proposed development will involve ground disturbance to a deeper level than for previous recent developments, potentially below the depth of reclaimed land, there is the potential for impact on archaeological features or finds that may survive below the land infilled in the 18<sup>th</sup> century.

Therefore, the potential impact of the proposed development on the archaeological and cultural heritage is deemed to be **negative, moderate** and **permanent**.

### 11.5.2 Operational Phase

No impacts on archaeological and cultural heritage are expected as a result of the operational phase of the Proposed Development.

## 11.6 MITIGATION MEASURES

### 11.6.1 Construction Phase

In order to mitigate against the potential impacts of the proposed development on archaeological heritage, the following will be required:

A suitably qualified archaeological consultant will be required to oversee the works and undertake the required archaeological mitigation strategy.

The appointed archaeological consultant should consult with the Dublin City Archaeologist and National Monuments Service of the Department of Housing, Local Government and Heritage, to discuss the construction methodology and agree an

appropriate strategy to mitigate against the potential impacts of the proposed development on archaeology.

It is envisaged that archaeological monitoring of ground works will be carried out to identify features or deposits of archaeological significance. Should such features be discovered, further mitigation may be required, such as preservation by record or in-situ.

Financial, logistical and time provision should be made for archaeological excavation, if required.

Should these mitigation measures be implemented, the potential impact of the proposed development on the archaeological and cultural heritage is deemed to be **positive** and **moderate**.

Please note that the recommendations given here are subject to the approval of the Dublin City Archaeologist and the National Monuments Service, Department of Housing, Local Government and Heritage.

### **11.6.2 Operational Phase**

No mitigation measures are required for archaeological and cultural heritage during the operational phase of the Proposed Development.

## **11.7 MONITORING OR REINSTATEMENT MEASURES**

### **11.7.1 Construction Phase**

There are no ongoing monitoring or reinstatement requirements during the construction phase relating to archaeological and cultural heritage.

### **11.7.2 Operational Phase**

There are no ongoing monitoring or reinstatement requirements during the operational phase relating to archaeological and cultural heritage.

## **11.8 RESIDUAL EFFECTS OF THE PROPOSED DEVELOPMENT**

### **11.8.1 Construction Phase**

There are no identified residual effects during the construction phase relating to archaeological and cultural heritage.

### **11.8.2 Operational Phase**

There are no identified residual effects during the operational phase relating to archaeological and cultural heritage.

## **11.9 CUMULATIVE IMPACTS OF THE PROPOSED DEVELOPMENT**

### **11.9.1 Construction Phase**

During construction there is low potential for cumulative impact as the lands on which the proposed development are sited as they have been extensively and significantly

developed in the past. Should any features exist, they will be archaeologically recorded in advance of construction works in these areas.

Previous development in the wider area has uncovered previously unrecorded archaeology. The academic knowledge gained from the excavation of these features, has resulted in a net cumulative **permanent, significant, positive** impact.

### 11.9.2 Operational Phase

During operation there is no potential for cumulative impact as there will be no disturbance to ground.

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