



**Connolly Station - Point Theatre**

**LUAS C1 Extension**

**Preliminary Archaeological Monitoring Report**



**Licence Number: 07E167**

**Francis Mallon**

**Railway Procurement Agency**

**April 2007**

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### Project Details

**Licence No.:** 07E0167  
**Licensee:** Frank Mallon  
**Previous licence holders:** Sylvia Desmond;  
Aaron Johnston.

**Client:** Railway Procurement Agency  
**Project:** Luas Line C1 extension from Connolly Station to the Point  
Depot

**Nat. Grid Ref:** 316556E 234712N: Connolly Station  
318003E 234556N: Terminus at Point Depot

**Project duration:** 12 months  
**Excavation start date:** 09/03/2007  
**Excavation end Date:** 8/04/2007  
**Report Date:** April 2008

## **Abstract**

The following is a preliminary report on archaeological monitoring of groundworks associated with the Luas C1 development. The initial licence holder was Sylvia Desmond who held the licence for the project from March 2007 to July 2007 when the Licence was transferred to Aaron Johnston of CRDS. The Licence was transferred to Frank Mallon in November 2007 who carried out archaeological monitoring from that date to 18 April 2008.

The development extends for 1.5km from Connolly Station to the termination at the Point Depot, and will largely be constructed on road surface.

The alignment is located in areas along the north side of the Liffey that were reclaimed from the 1730's and later. The majority of the land was used extensively in the 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup> century for heavy industry, rail and shipping use, but evidence for earlier use has been identified. Previous excavations within 150m south of the development uncovered the remains of Mesolithic and Neolithic fish traps, the earliest dated examples recorded in either Ireland or the UK, and therefore of international importance.

No recorded monuments or protected structures were directly impacted by the development.

No major archaeological finds or features were uncovered. Several sections of wall foundations for buildings that are depicted on the 19<sup>th</sup> century editions of the OS maps for the area were located. These were not impacted on and were reburied.

A series of brick lined sewers dating to the 19<sup>th</sup> century were also located. These were observed in several locations along the alignment of Mayor Street Upper and Lower. In some cases it was necessary to break through these brick lined sewers and reinforce them to prevent collapse.

A 19<sup>th</sup> century plank lined drain was located at the site of the electrical substation at the Spencer Dock stop, along with 42 glazed pottery fragments, and 2 clay pipe stems, again, all of 19<sup>th</sup> century date.

No further archaeological monitoring is recommended for this development.

## 1.0 Introduction

### Site location

Line C1 is approximately 1500m in length and comprises a double track Luas extension from the existing terminal stop at Connolly Station. This alignment runs for a short distance along Amiens Street before turning eastwards across the junction of Harbourmaster Place and Mayor Street Lower.

Line C1 continues to run eastwards along Mayor Street Lower, crossing Georges Dock via the existing bridge. The route continues along Mayor Street Lower, crossing Guild Street and over the Royal Canal at Spencer Dock via the construction of a new bridge. The route will continue through the Spencer Dock Development and re-establish the connection between Mayor Street Lower and Upper. It crosses New Wapping Street and Castleforbes Road, continuing along Mayor Street Upper before terminating at the Point Depot, see **Figure 1** for a general location plan.

### Project details

All works will be contained within a 15m corridor, with track being laid on road surface. The general working depth ranged from 1.2m to 1.5m within this corridor with occasional deeper excavations to c.3m to facilitate rerouting utilities and constructing associated manholes.

As part of the enabling works it was necessary to widen Mayor Street Bridge, construct a new bridge over the Grand Canal at Spencer Dock and excavate a 30m by 10m by 6m deep excavation for an electrical substation located 160m due east of Spencer Dock.

The Mayor Street Bridge widening scheme involved widening and strengthening the current bridge to allow for the running of the Luas. The bridge deck was widened to achieve the minimum width requirements including footpaths and the external longitudinal beams were strengthened. Where feasible, all parapets, granite kerbing, cobbles and other surfaces were reused in order to retain the appearance of the existing bridge.

A new bridge will be constructed over the Royal Canal at the Spencer Dock site, adjacent to the intersection of Guild Street and Mayor Street Lower. It will form a key feature in the proposed Linear Park within the wider Spencer Dock development. It has been designed to accommodate the dual track for the tram, two cycling lanes and two footpaths. The construction of this bridge involved piling for a bridge abutment either side of the dock, with a central pier being constructed in the centre of the

canal itself. After the piling for the abutments were placed the ground around them was reduced by 2m to allow for the construction of the bridge structure.

The four stops along the alignment will be constructed at Georges Dock at Mayor Street Lower; Mayor Square on Mayor Street Lower; within the Spencer Dock Development; and will terminate with a stop at the Point Depot.

For the purposes of this report the project will be broken up into four distinct sections:

- Enabling works along Mayor Street Lower;
- Bridge construction at Spencer Dock;
- Electrical substation construction Spencer Dock stop;
- Enabling works along Mayor Street Upper.

### **Archaeological Monitoring Methodology**

Archaeological monitoring was carried out at regular intervals when shallow utilities trenches were excavated and daily when deeper excavations were required. The two main deep excavations that required daily monitoring were the substation and Spencer Dock Bridge abutment excavations, both of which were excavated from January 2008 to the end of March 2008.

Site inspection daily records were written up each day, with site visit photographs being appended.

When archaeological features were uncovered they were recorded by the licensee with surveying being conducted by either the sub-contractor surveyors or RPA surveyors.

It was planned to retain all pre 19<sup>th</sup> century archaeological finds, and any significant later finds. However, none were identified during monitoring.

Sampling would have involved retaining organic deposits (i.e. peat deposits sealed in estuarine deposits) and any other suitable material, however, none were identified during monitoring.

### **2.0 Archaeological Significance before Excavation**

The following sources were consulted during the preparation of this monitoring report:

- *Sites and Monuments Record (SMR)* of the National Parks and Wildlife Service and the Office of Public Works (OPW). The SMR forms the basis for the statutory Record of Monuments and Places (RMP), which is the list of all archaeological monuments protected under the National Monuments Acts. SMR entries for all RMPs adjacent to the route alignment were reviewed (**Figure 2** and **Appendix 1**);
- *Topographical files of the National Museum of Ireland (NMI)*; these identify recorded stray finds, provenanced to townland or city ward or street, and are held in the museum's archive. **Appendix 3** lists all recorded finds from the area;
- *Dublin City Development Plan 2005-2011* was consulted to identify buildings, features, sites and other structures listed for preservation or protection (**Figure 2** and **Appendix 2**).

### **Historical and Archaeological Background**

Archaeological monitoring and excavations at two locations adjacent to Spencer Dock in 2004 and 2007 uncovered the remains of Mesolithic and Neolithic fish traps (McQuade 2004, 2007). These consisted of a series of hazel wooden stakes driven into the intertidal zone of the northern Mesolithic and Neolithic edge of the River Liffey or on the shore of an island within the out reaches of the Dublin estuary.

Throughout the Neolithic, Bronze Age and later waterways were often used as a means of communication and offered easy access into the hinterland around Ireland's coasts. The amount of traffic has been attested by numerous finds of dugout canoes in riverine areas, and even one Neolithic dugout found in a maritime context off the coast of Gormanstown, Drogheda (Brady, 2002).

Viking evidence in Dublin tends to be concentrated further up the River Liffey at Wood Quay and Islandbridge but possible Viking finds have been found close to the development area (i.e. the knife blade listed in **Appendix 3**).

During the medieval period the shoreline extended from a small promontory near the Abbey Theatre to the corner of Amiens Street and Store Street. It continued along Amiens Street as far as its junction with Portland Row and Seville Street, then ran between Ballybough Road and North Strand Road to Luke Kelly Bridge and on to Fairview and Clontarf towards Sutton (De Courcy 1996). The land above high tide consisted of coarse river meadows and would have been dotted with shrubs and trees.

A lease granted in 1675 to a Jonathan Amory, giving permission to make new land along the north shore of the Liffey, names the 'water mill lately built by Mr Gilbert Mabbott' as the eastern limit of the grant (DU018:020501). It also mentions 'the corner of the wall beyond the said mill' as the eastern end of a highway to be made in conjunction with Amory's lease. The land on which the Custom House was built is marked on Rocque's 1756 map as Amory's Ground. This corner is shown on a map by de Gomme (1673) and named on Bolton's map (1717) as the 'corner of Mabbot's wall'. The corner of Mabbot's wall lay at, or very near to, the modern Store Street and Amiens Street, close to the city morgue. Memorial Road now joins Amiens Street at this corner (De Courcy 1996, 240).

The building of the North Wall (DU018:020564) began in 1710, and in 1717 the city allocated the new land, which was known as the North Lotts, east of the North Strand to one hundred and thirty two individuals. In that year the boundaries of the new land to be divided into the North Lotts by the Corporation was defined as Mabbot's mill to the southeast and the Furlong of Clontarf to the north. In 1685 a map by Phillips showed an extensive tidal pool, which he described as a millpond, between Mabbot's corner and the future Mabbot Street (at high tide, two large pools lay behind the shoreline between the Portland Row and Amiens Street junction), suggesting that the mill lay behind Mabbot's Wall and near Mabbot Street. Rocque makes no reference to Mabbot's mill in his map of 1756 (see **Figure 3**), as by this time the millpond had been filled in to become pasture and gardens. Mabbot Street is first shown by Brooking in 1728 (see **Plate 1**). By 1935 the street had been renamed Corporation Street.

The reclamation of the area between the city and Ringsend on the southern side of the Liffey was accelerated by the granting of an estate along the strand in 1713 to Sir John Rogerson, who immediately began to enclose his new land with a massive sea wall, thus relieving the newly established Ballast Office of the responsibility. Plans were made to extend Rogerson's wall out into the bay to provide safer entry for shipping into the port, allowing the Ballast Office to concentrate its efforts on the northern bank of the river, and as early as May 1712, work commenced along the line of the present-day Eden and Custom House Quays. By October, 686 kishes (baskets filled with stone) had been laid down, approximately as far as the western end of the North Wall (*Calendar of Ancient Records of Dublin* vi). As the northern wall began to extend further into the eastern sloblands, the City Assembly ordered that the area between the Tolka and the Liffey rivers, along with the sloblands between the Tolka and Clontarf, be re-surveyed and notionally divided into 132 lots, to be known as the North Lots (*Calendar of Ancient Records of Dublin* vii, 30-34).

The survey was carried out by Macklin in 1717, and the resultant schematic map (known as Bolton's Map after the sitting lord mayor) shows both the plots themselves and the names of the initial

leaseholders. The map also demonstrates confidence in the future development of what effectively became a polder. The best illustration of what the City Assembly intended, is Rocque's *Plan of the city of Dublin and the environs* (1756), published just as the reclamation project should have been nearing completion (see **Figure 3**).

The street pattern was to be laid out in grid form, the uniformity of which contrasts with the medieval city to the southwest, sprawling out over its walls and merging into the great urban estates, such as the Fitzwilliam estate, which were themselves in their final state of initial development. Rocque depicts the great North Wall as having an underlying strand extending eastwards for over half its length, fronted by a wide quayside, with Mayor Street running parallel to the north. These two thoroughfares were linked by six streets, spaced at regular intervals: an unnamed street to the west, Commons Street, Guild Street, Wapping Street, Fish Street and the East Wall; the areas in between were divided into plots as indicated on the earlier Bolton's Map. Further to the north lay Sheriff Street, again linked to the waterfront by connecting streets that terminated along its line. The plots between Mayor Street and Sheriff Street were wider than those on the waterfront and were possibly laid out to accommodate the larger houses of the new inhabitants. The area north of Sheriff Street is laid out in larger plots that were accessible from the Strand to the west and from West Road, Church Road, East Road and the East Quay, all angled off Sheriff Street, to the northeast. A pool of water is depicted in the north-eastern corner of the polder, while there still appear to be streams running through the northern part of the area, indicating the unfinished state of the reclamation work. The original idea to extend the polder across the Tolka and to lay out the area as far as Clontarf had been abandoned by the 1730s, and the Tolka was never channelled into a canal. Reclamation in this area did not commence until the early years of the twentieth century (Myles 2000).

Following the building of the North Quay wall from 1710, the development of the North Strand Road, originally known as the Strand, and Amiens Street began. This was an important thoroughfare, and in 1717 the Corporation recommended that 'the road or strand leading from the Abbots [Mabbot's] Wall toward Ballybough Bridge be all eighty feet wide' (De Courcy 1996, 270). Eighteenth-century maps of the Wide Streets Commissioners show that the Strand started on Abbey Street Old, behind Liberty Hall, and ran in a slight curve across Beresford Place to a point near the present corner of Store Street and Amiens Street. Before the end of the century, the Wide Streets Commission had begun to use the name North Strand. In the final decade of the eighteenth century, following the building of the Custom House and the development of Beresford Place, the city end of North Strand was relocated at the junction of Store Street and Amiens Street. There had been virtually no building along the North Strand during the eighteenth century; however, building continued steadily throughout the succeeding century. The Ordnance Survey map of 1838 shows the west side largely

complete, although the east side was undeveloped except in the vicinity of modern Seville Place. The use of the name, Amiens Street, had been adopted by the Wide Streets Commission by 1826, and applied to that portion of the North Strand from the junction of Portland Row and Seville Place to the city. The street was renamed after Viscount Amiens, created Earl of Aldborough in 1777, who in 1796 built Aldborough House on Portland Row.

Construction for the Royal Canal started in 1790 and was finally completed when it reached the river at Clondra, Co. Longford 1817. The canal joins the Liffey at Spencer Dock which was in constant use in to the 20<sup>th</sup> century and saw renewed activity during the 'emergency' period for the transportation of coal.

A series of lift bridges were constructed in the 1900's, known as the Scherzer Bridges and protected as RPS 2137, RPS 5944 and RPS 5945 (see **Figure 2**). Designed by William Scherzer of Chicago, they were a popular type of movable bridge around 1900. Steel trusses or girders across the navigable channel are supported by, and rigidly connected at their ends to large steel rollers or rockers that have a weight at the rear end to counterbalance the front end. They are no longer in use as their diesel engines (which pumped water into and out of the counter balance tank to allow for rapid opening and closing) have been removed.

Shipwreck material from all periods (be it actual wrecks, artefacts lost overboard, or wreck material reused to build sea walls, piers, floor foundations etc...) may be uncovered in this area.

During the dredging of Dublin Harbour, between the Bull Wall and the North Wall extension in 1970, a wooden boat was discovered. Although the workmen were not able to lift the boat, they did recover a rim sherd of red pottery, part of a thin copper vessel, clay pipe fragments (NMI ref. 1970:190–197) and a quantity of animal bones.

### **Cartographic sources**

As described above, Dublin developed on the edge of the tidal mudflats of the Liffey delta, and this part of the city was not reclaimed until the late seventeenth century. Speed's map of Dublin (1673) shows the city on the northern side of the Liffey extending no further east than the approximate line of what would eventually become O'Connell Street.

The map entitled 'The City and Suburbs of Dublin from Kilmainham to Rings-End' by Bernard de Gomme, dated to 1673, shows the 'Road to *Howth*', and shows the bay extending from the Strand (now the North Strand Road) in a series of tidal islands, as the quay walls were yet to be built. A wall

shown by de Gomme running along the Strand road is believed to be Mabbot's Wall, mentioned above. A second map described as 'A Map of Dublin Harbour 1673' also by de Gomme describes all of the area now comprising O'Connell Street, Gardiner Street and Abbey Street as 'marsh ground' (De Courcy 1996).

Charles Brooking's map of 1728 records that the North Quay wall had been built by this time (see **Plate 1**). The area was still liable to flooding and the area behind the North Wall Quay and Custom House Quay, neither of which is named, is marked 'This Part is Walled in but as yet over flow'd by ye Tide.' Development up to this date has been contained to the west of Strand Road, which is also unnamed. One structure to the east of this road appears to be located on what is now Beresford Place or in the grounds of the Custom House. Mabbot Street, now Corporation Street, is first named by Brooking.

The plots of land known as the North Lotts, which were laid out to the rear of the North Wall, are recorded on Rocque's 1760 map of the city of Dublin (see **Figure 3**). The northern wall at this location was known as the North Strand Quay and as the Strand Wall, and now forms most of Custom House Quay. Rocque's map predates the building of the Customs House and Beresford Place, so that Store Street and the city end of the present Amiens Street remain reclaimed and undeveloped land. The site on which the Custom House was to be built a few years later is marked as 'Amory's Ground'. The only identifiable structures recorded by Rocque on the newly reclaimed ground are a glasshouse on the quays (DU018:020152), and 'The Pound', an enclosure for the detention of stray animals, shown where the entrance to the Connolly Station vehicle ramp previously stood. In 1753 the city had agreed to a request that the pound and its grounds be made available for a new church for the parish of St Thomas, but the project was never carried through and the pound was still in use in 1800. Rocque also shows the Strand, the newly laid-out Sheriff Street ('Sherriff Street') and Mayor Street, which are divided into narrow lots. The reclaimed land ends at what is named East Quay.

Duncan's map of Dublin, published in 1821, shows no additional reclamation, but does indicate that the newly reclaimed land was being rapidly developed. The Custom House is shown, as is the newly completed Royal Canal. The Royal Canal Dock and Spencer Dock, and the Old Dock (beside the Custom House), Inner Dock and Richmond Dock are all shown.

The first edition Ordnance Survey six-inch map shows increased development around the docks, with timber yards, warehouses, and a variety of industries extending down the North Wall. These include a Vitriol Works (i.e. a sulphuric acid factory). between Mayor Street and Wapping Street, and

a Vinegar Works at the corner of Sheriff Street and Spencer Dock (see **Figure 4**). Mayor Street is a continuous line from Commons Street to the East Wall Road, although the dotted lines along parts of the street suggest the area had not been fully developed. There is a 'Baths' shown at the junction of Mayor Street and East Wall Road. All these structures are also depicted on a panoramic view of Dublin produced in the London Illustrated News from 1846 (see **Plate 2**).

By the time the second edition Ordnance Survey map was produced in 1875, the 'Drogheda Railway Terminus' had been constructed (see **Figure 5**), but the Station vehicle ramp, constructed in 1875, would not be recorded until a later edition, published in 1907 (see **Figure 6**). An enclosing wall around the site of the new terminal on the second edition continues along the line of Amiens Street to Store Street. This map shows extensive stores around the new Dublin and Drogheda line (subsequently the Great Northern Railway) terminus, including goods stores, a tobacco store (Stack A, now the CHQ building), a sugar store, and two 'Spirit Vaults'. Also shown is a whiskey store, the remains of which were uncovered during the monitoring scheme and assigned the label **F8** and **F13**, see **Appendix 5** and **Figure 10**. The railway station itself has a luggage store, engine sheds, workshops and a sawmill. One of the main effects the railways had was to interrupt the streets running down through North Wall; while bridges were built over Sheriff Street, Mayor Street was divided between Mayor Street Lower to the west of the Royal Canal, and Mayor Street East to the east of the London and North Western Railway Station. The street was also truncated at the eastern end by the Great Southern and Western Railway station.

In addition to the Dublin and Drogheda terminus, two other termini were also built: the London and North-western Railway with its stations between the Grand Canal Docks and Wapping Street, and the Great Southern and Western Railway, with a station between East Wall or East Quay and North Wall. Further land had been reclaimed by the late nineteenth century and further slips and yards are shown to the east of the East Wall.

As the Wide Street Commissioners laid out Store Street and Beresford Place during the late eighteenth century, a terrace of vast warehouses was erected on what was subsequently the site of Busáras (McCullough, 1989). On the 1847, 1866 and 1889 Ordnance Survey map editions, the warehouses, comprising 'Old tobacco stores' and 'Stores for general goods' extend across Amiens Street at its junction with Store Street. The Old Dock beside the Customs House was not filled in until 1927, and only as recently as 1952 was Beresford Place extended over the new ground to enclose the Custom House in a semicircular street. This extension also branched northwards to meet the junction of Store Street and Amiens Street to form Memorial Street.

The 1907 Ordnance Survey map edition shows how the railway network has expanded, with additional lines coming into both the east and west side of Spencer Dock and others feeding into the coal yard at the Point Depot.

The latest edition Ordnance Survey map at 1:1000, shows the modern make up of the area, after the construction of the IFSC in the mid 1990's but prior to the start the various developments east of Spencer Dock (Treasury Holdings-Spencer Dock Development; Daninger Development (the old timber yard and saw mill on North Wall Quay); and the Point Depot Village development, from 2006), see **Figure 7**.

In the Spencer Dock area on **Figure 7** and **Figure 12** it is clear how much of the dock was reclaimed by CIE when one of their warehouses burnt down in the 1960's. A goods store (containing a consignment of Belleek pottery) burnt down, the remains of the building being bulldozed into the canal and retained by steel larsen sheet piles. The **front cover** picture shows the removal of this debris from the dock.

### **3.0 Archaeological Monitoring Results**

#### **Enabling works along Mayor Street Lower**

A total of six archaeological features were uncovered along this section, see **Appendix 5** for more details in the feature register and **Figure 10** for the location.

The first feature encountered was **F1**, the remains of a nineteenth century sewer, located just east of George's Dock Bridge and adjacent to the north west corner of the CHQ building. It had a red and yellow brick arch (bonded with a coarse lime mortar), supported by limestone walls. It was partially exposed and was located at the base of the utility trench. It measured 5.6m in length (but continued under the road) and had a maximum width of 2.7m and an internal height of 1.83m.

**F2** was found to be the remains of limestone wall foundations of rough hewn, undressed but regular limestone masonry construction. It was uncovered during the excavation of shallow utilities trenches on the south side of Mayor St. Lower just in front of the CHQ building.

It was not fully exposed but ran east west under the façade for 20m and was located at 3.31m OD (directly under the pavement) and continued beneath the base of the shallow utility trench which had a maximum depth of 1.5m. A second short section of limestone wall foundation was located at the

north east corner of the CHQ building and is most likely a continuation of **F2**. Only 2m of this wall was exposed in the trench. This feature was labelled as **F6**. The foundations were not impacted on and reburied.

Another section of limestone wall foundation, again in two parts, was found in a shallow utility trench 88m due east of the north east corner of the CHQ building, directly under the façade of the FFI building (corner of Commons Street and Mayor Street Lower. The first section was labelled as **F8** and consisted of a limestone wall foundations of rough hewn, undressed but regular limestone masonry construction. with internal red brick wall remnants running off at a right angle to the north (measuring c.0.32m in width by 0.8m in height, extends north less than 0.5m but has been broken through). The limestone wall is much broken through by modern utilities and has been rebuilt in sections with concrete (pre-Luas construction).

There is a break of seven metres where there are no longer any wall foundations, probably broken through during the construction of the doorway to the FFI (the exact position of the present doorway). The remains of the almost identical **F13** are located just west of this break and extend to the north west corner of the building to a distance of 14m. **F13** was of almost identical construction and consists of a limestone wall foundation of rough hewn, undressed but regular limestone masonry construction, however, the red brick internal walls seen associated with **F8** were not found to be connected with **F13**.

The last feature encountered in this area was **F7**, the remains of a brick lined sewer. This sewer had limestone wall foundations, c.0.75m high by 0.9m in width finished off with a brick arch on top of the foundations, adding 1.25m to internal height of sewer, total height: 2m. Certain sections of the sewer had been rebuilt or reinforced some time in the past with concrete (probably during the 1990's during the construction of the IFSC). Only a short section of this sewer was uncovered, construction works broke through **F7** and reinforced the structure.

### **Bridge construction at Spencer Dock**

A total of five archaeological features were uncovered along this section, see **Appendix 5** for more details in the feature register and **Figure 12** for the location.

As shown in **Figure 12** a large area of the canal had been filled in and retained with sheet piles, with approximately 11265m<sup>3</sup> of debris fill being removed prior to the start of Luas construction works.

After the debris had been removed it was possible to look at the condition of the east dock wall in the area the new bridge would be spanning. It became immediately apparent that the section of wall that had been buried since the 1960's was in a poor condition. Almost all the capstones to the wall were missing and several courses of masonry were also missing – in some isolated areas as much as six courses (see elevation drawing in **Figure 12**).

The first feature uncovered in this section was **F11**, a limestone arched culvert built into the east wall of the dock. It measured 5m in width at its widest point and had an internal height of 1.3m (not fully exposed and not the full height), the top of the arch was at 0m OD exactly. The arch itself was keyed into the masonry making up the east dock wall and clearly built as part of that structure. Some time after construction the arch itself was walled in with much coarser masonry, comprised of rough hewn, undressed limestone and calp blocks of various sizes.

Another, identical arch was located 4.92m to the south of **F11**, **F12**.

Directly opposite the arches on the west dock wall where two identical arches **F9** and **F10**. **F9** is opposite **F11** and **F10** is opposite **F12**. A geo-radar survey was conducted over the suspected **F9** and **F10** sewer locations to see if they were intact (see **Plate 5**). Results were inconclusive.

After the canal was reinstated piling work took place for the west and east bridge abutments (see **Figure 12** for their location). These works were monitored but nothing of archaeological significance was encountered (the piling rig did break one of its teeth when it hit an obstruction, this was investigated and turned out to be part of a railway track that had been buried in concrete, probably to be used as a roof support of a temporary warehouse structure).

After piling in each abutment area was completed the ground was excavated to a general depth of 2m. Nothing of archaeological significance was observed during the ground reduction at the east abutment (all made ground with general waste, plastic, modern metal waste etc...).

One feature was located during the excavation for the west abutment, **F26**, a short length of timber planking (see **Plate 7** and **Plate 8**). At a depth of 1.5m below the top of the west wall (i.e. 1.24m OD) on the western side a line of pine planking, driven in to the ground was encountered. This was 0.5m west of the face of the quay wall. Similar timber shuttering has been observed during the demolition of the Spencer Dock Lock on the Pearse site, 140m due south of the west abutment site. Each plank was c.3cm thick, c.28cm wide and of an indeterminate length (being left *in situ*, not being impacted on and not fully exposed).

Positioned 4m south of the timber planking and on top of the wall two cast iron hooks (**F27**) attached to a ring which in turn is attached to a ring bolt driven into the top of the dock wall on the west side. These are mooring hooks, similar to hooks protected as RPSs and retained as features along the Liffey quays (see **Plate 9**).

### **Electrical substation construction at Spencer Dock stop**

A total of two archaeological features were uncovered along this section, see **Appendix 5** for more details in the feature register and **Figure 8** and **Figure 12** for the location.

There had been potential for excavation works to impact on possible pre-reclamation archaeological features as the general working depth for the substation was -4m OD, well below reclamation layer and into possible Neolithic and Mesolithic deposits that were excavated 120m due south of the substation at -4.7m, and others 180m to the south west at between -2.5m OD and -4.5m. However, no pre-historic material was observed.

The first feature encountered was **F28**, a brick lined sewer of a similar type to those previously discussed. **F28**, orientated east west, was located in a highly disturbed layer of about 3m in depth which contained several modern concrete sewers which had similar alignments, see **Figure 8**. The substation itself was located under the railway lines that led to the CIE depot and the remains of existing railway lines from the 19<sup>th</sup> century were also observed. Due to the highly disturbed nature of the bulk of the ground it was not possible to identify 18<sup>th</sup> century reclamation deposits.

At -1.7m OD in the south west corner of the substation **F29**, a short section of a plank lined drain was located, also depicted on **Figure 8**. A total of 42 post medieval pottery fragments and 2 clay pipe stems found associated with this feature. The feature was cut into a deposit which had frequent occurrences of oyster shell. The planks formed a box profile, originally made up of 4 planks (top in this section missing). It extends north west outside the area of the substation (feature cut by pile wall). The planks were not fixed to each other but simply abutted.

### **Enabling works along Mayor Street Upper**

A total of two archaeological features were uncovered along this section, see **Appendix 5** for more details in the feature register and **Figure 11** for the location.

The only features to be found along this section were the remains of two brick lined sewers, **F5** and **F14**.

The first to be encountered was **F5** which was located at the base of a shallow utilities trench, along the southern side of Mayor St. Upper between New Wapping Street and Castle Forbes Street. As with the previous sewers it was orientated east west, in line with the road. It was made up of red and yellow bricks, and measured at least 20m in length (only located in deep sections of the trench and therefore not fully exposed, but likely to continue). At least 1.5m width of the top of the sewer was exposed but as the trench was so narrow the full width was not exposed.

The second feature was **F14**, the remains of a smaller north south sewer that would have fed into the main east west sewers under Mayor Street (Upper and Lower), identical to F7 in dimension and orientation, see **Figure 11**.

#### **4.0 Stratigraphy**

The stratigraphy for all areas was recorded from on site monitoring observations of shallow utility diversion trenches and from the deeper excavations at Spencer Dock. Information on the much deeper levels was obtained from geotechnical borehole records conducted by IGSL Ltd for the Luas C1 development, of which the following is a summary:

*'Available geotechnical intrusive information for the area indicates that the shallow geological sequence comprises made ground/fill deposits underlain by alluvial deposits including interbedded silts, sands and gravels. The alluvial deposits are in turn underlain by glacial deposits (upper till) with sands and gravels over a Calp Limestone bedrock of Chadian - Brigantian age.'* (IGSL, 2007)

#### **Mayor Street Lower**

Trenches along this section were excavated solely along the current road alignment and the stratigraphy was therefore highly disturbed. Ground level along this section was generally around 3m OD (to the top of the road). The top layers consisted of made ground of pavement/tarmac and gravel/sand fill material. Below this a black to grey clayey, slightly gravelly medium sand with occasional cobbles was encountered. In some locations red brick fragments and shell fragments were observed.

No further information was obtained from geotechnical surveys as no deep boreholes were drilled in this section.

## **Spencer Dock**

Ground in this section has been highly disturbed from the 19<sup>th</sup> century onwards with the construction of Spencer Dock and the Royal Canal and a series of rail networks (continually refurbished and re-laid) right up to the 1980's) and various industrial sites and factories. In the 1960's a very large CIE warehouse at Spencer Dock burnt down (now the site of the National Conference Centre), with the building remains simply being bulldozed over the entire site and into the canal, which was then concreted over.

Ground level was generally 2.3m OD. Beneath this there was a 1m deposit of a soft black sandy gravelly clay fill with limestone blocks and brick fragments.

Between 1.3m OD and -2.3m OD there was a 3.6m layer of soft to firm black, slightly sandy, slightly gravelly clay with some shell fragments. Gravel is sub-angular to sub-rounded fine to coarse. A large amount of industrial material, broken railway sleepers, broken railway tracks etc... was encountered in this level, and is identified as made ground.

Estuarine deposits of a pre 18<sup>th</sup> century reclamation date were encountered at -2.3m OD. This consisted of a very dense grey sandy gravel. The gravel is angular to round fine to coarse.

Beneath this and located between -5.1m OD to -8.2 a glacial fill deposit was located. It is a very stiff to hard dark grey slightly sandy slightly gravelly clay with cobbles. Gravel is sub-angular to angular fine to medium. Sand is medium.

Between -8.2m OD and -9.2m OD there was a 1m deposit of slightly different glacial deposit. It was very dense grey slightly clayey sandy gravel with occasional cobbles. Gravel is sub-angular fine to coarse. Sand is fine.

The last layer of glacial deposit was located between -9.2m OD to the end of the borehole at -20m OD (not the end of the deposit). This is a very stiff to hard dark grey brown sandy slightly gravelly clay with occasional cobbles. Gravel is sub-rounded to rounded and fine. Sand is fine to medium.

## **Substation**

As previously discussed (4.0 this document) the top 3m of the ground at the substation was highly disturbed by industrial and rail activity. This was comprised of around three separate layers of made ground. Feature numbers were assigned to each layer as they were excavated during the bulk ground reduction.

**F15** consisted of a compacted hard core fill material with a lot of modern material (i.e. broken pvc pipes, plastic bags, metal fragments etc...) and was located between ground level at 2.4m OD and 0.62m OD.

**F16** consisted of a stiff brown, gravelly clay fill material, and was located between 0.62m OD and 0.42m OD.

**F17** consisted of a firm, yellow brown, silty fine sand, 19<sup>th</sup> century construction fill material for backfilling brick lined sewer trench. It was located between 0.42m OD and -0.68m OD.

**F18** consisted of a soft grey sandy silt/clay, possible estuarine deposit located between -0.68m OD and -2.38m OD.

**F19** consisted of a firm blue grey silt, thin estuarine deposit located between -2.38 and -2.58m OD.

**F20** consisted of a stiff brown, gravelly clay fill material, located between -2.58m OD and -3.08m OD.

**F21** consisted of a medium dense, grey/brown, fine to coarse sand with many cobbles (estuarine deposit), located between -3.08m OD and -3.78m OD.

**F22** consisted of a dense, grey /brown, fine to medium, gravel with some cobbles and intermittent bands of fine grey sand (estuarine deposit), located between -3.78m OD and -6.08m OD.

**F23** consisted of a very stiff to locally hard, dark grey/black, slightly sandy, gravelly clay with some cobbles (glacial till), located between -6.08m OD and -10.18m OD. The excavation for the substation ended within this layer.

**F24** consisted of a dense, grey /brown, fine to medium, gravel with some cobbles (glacial till), located between -6.08m OD and -10.78m OD.

**F25** consisted of a very stiff to locally hard, dark grey/black, slightly sandy, gravelly clay with some cobbles (glacial till), located between -10.78m OD and the end of the borehole at -13.88m OD.

## **Mayor Street Upper**

Trenches along this section were excavated solely along the current road alignment and was therefore highly disturbed. Ground level along this section was generally around 3.2m OD (to the top of the road).

The top layers consisted of made ground of pavement/tarmac and gravel/sand fill material. Below this a black to grey clayey, slightly gravelly medium sand with occasional cobbles was encountered. In some locations red brick, and concrete fragments were observed.

## **5.0 Discussion**

### **Enabling works along Mayor Street Lower**

Given the amount of previous disturbance along this section of the route alignment for previous road works and also for the IFSC development few sites of archaeological potential were expected. Also, due to the relatively shallow works along this section (1.5m general, 3m for some manhole construction) the development was not considered likely to impact on any pre-reclamation material, and this was borne out during field observations.

The brick lined sewers were of good construction and in a very good condition and represent a little known (and under researched) aspect of post medieval industrial Dublin. Attempts had been made by the RPA to obtain maps and/or records of the Dublin Drainage system pre-1900 but there appears to be no comprehensive archive.

Sewer **F7** is orientated almost due north to south and is likely to feed into the larger east west 19<sup>th</sup> century sewers at a 90° angle (although no actual junctions between the north south feeder sewers and the larger main east west sewers were uncovered during monitoring works).

The remains of what would have been the whiskey stores under the façade of the FFI building at the junction of Commons Street and Mayor Street Lower are of interest, and match the 1843 and 1875 edition of the Ordnance survey maps for the area.

The position of the tobacco and whiskey store is no doubt due to the nearby location of the nearby Georges Dock (for the loading and unloading of goods) and would have had regular dealings with the Excise Building (built in 1810, located 266m due east of the CHQ building).

### **Bridge construction at Spencer Dock**

The tidal sewers feeding into Spencer Dock are all orientated east west and run under the alignment of Mayor Street, Upper and Lower. The sewers were comprised of arches built into the east and west wall of the canal and contemporary with the initial construction of this section of the canal and were built with dressed ashlar limestone masonry blocks. All arches were subsequently walled in using rough hewn irregular shaped limestone and calp blocks of varying sizes. They were possibly filled in shortly after construction of canal proper (i.e. when canal dropped out of use and when railways constructed on the site, c.early 1870s).

It is possible that the line of upright timber planks **F26** are the remains of 19th century shuttering from the construction of the canal walls. They may also be related to the construction of the culverts **F9** and **F10**, but it is likely these culverts were constructed contemporaneously with the canal. They may also date to the filling in of the culverts which is likely to have occurred in the early 20thc.

### **Electrical substation construction at Spencer Dock stop**

The brick lined sewer **F28** is probably from the same drainage network found all along Mayor street Lower and Upper, and is likely to have once fed directly into Spencer Dock through either culvert arch **F11** or **F12**.

The plank lined drain was located in layer **F20** which may be an estuarine deposit, but given the high quantity of 19th century pottery sherds (none of which showed any signs of being water rolled and therefore not derived from the river Liffey) found directly associated with it, it is more likely to be fill material. During the construction of the 19<sup>th</sup> century buildings and factories in the North Lotts area a lot of building material was dredged up from the Liffey and or the beach at Clontarf which would have contained shell material.

### **Enabling works along Mayor Street Upper**

The two sewers located in this section are, as with the others, likely to be part of the 19<sup>th</sup> century drainage network for the North Lotts and Mayor Street Upper and Lower.

## **6.0 Conclusion**

The only impact the development had was on the nineteenth century sewers and the plank lined drain **F29**. No other nineteenth century structures were impacted on.

All ground along the C1 alignment has now been monitored archaeologically. The construction work will continue but only along ground that has already been disturbed by the development.

Sites or features of highest archaeological potential for this development would all have been below the reclamation layer i.e. at a depth greater than 3m (or generally -1m OD across the alignment). The features or finds that have been encountered below this depth date to Neolithic and Mesolithic (the fish traps excavated in 2004 and 2007 at Spencer Dock), 9<sup>th</sup> to 12<sup>th</sup> century (the possible Viking knife NMI 1954:168) or the 18<sup>th</sup> century (the wreck remains NMI 1970:190-197).

Sites of industrial archaeological potential included all 19<sup>th</sup> century railway lines and depots (the Point Depot and lines running into Spencer Dock and the old London and North West Railway station and associated hotel) and Spencer Dock itself.

Some broken railway sleepers were observed during the excavation for the substation at the Spencer Dock stop, otherwise no remains of 19<sup>th</sup> century railway architecture or furniture were found.

The Dublin Docklands Development Authority (DDDA) and Waterways Ireland are creating a linear park along the Royal Canal which will include the reinstatement of Spencer Dock. The construction of the bridge was therefore designed to have no impact and place no load on the existing dock structure.

The section of Spencer Dock that had been filled in during the late 1960's with building debris was removed prior to the RPA being granted access to the site (and found to be in very poor condition in sections), but will remain untouched while the bridge is being constructed.

## **7.0 Location of archive**

In addition, the archive also contains the written and digital copies of all of the site daily archaeological monitoring reports, 810 digital stills photographs (and register) taken during site inspections, feature register, finds register, GIS mxd files produced for all of the illustrations and all relevant research documents.

## 8.0 Bibliography

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## Appendix 1: Recorded Archaeological Sites and Monuments in the vicinity

From SMR archive

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020439	316648	234056	Site of a Brickworks.	Junction of Westland Row and Pearse Street, Dublin South City
<b>Description</b>				
<p>(Excerpt from De Courcy, 1996, sole entry in SMR archive for this monument).</p> <p><i>'Before 1710 an area of about 2 hectare on the intersection of Westland Row and Pearse Street was a brickfield. In 1710 William Westland senior, bought this land from John Hansard, and by 1772 Westland Row and Hansard Street had been built. The north boundary of the property was shown as Lazars Hill.'</i></p>				

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020479	316653	234382	City Quay	South of the Liffey, Moss Street to Cardiff Lane , Dublin South City
<b>Description</b>				
<p>(Excerpt from De Courcy, 1996, sole entry in SMR archive for this monument)</p> <p><i>'The Croft lease taken over by John Mercer in 1712 required Mercer to complete a river wall from the Hawkins wall to a point eastward of Modern Creighton Street. At the same time Sir John Rogerson was negotiating the grant that he was to be given in 1713.</i></p> <p><i>One of the terms of this grant was that he would build a river wall from the east end of Mercer's wall to the mouth of the River Dodder at Ringsend. It appears that in 1712 the city realised that Mercer was not going to complete the wall in his lease. Not wishing to have a gap in the wall system, it decided to take into its own hands the constructing the remainder.</i></p> <p><i>Precise dimensions are not available, but in 1715 the city began work along a length of river wall incorporating the part now known as City Quay, east ward from Moss Street to Cardiff Lane'</i></p>				

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020201	317283	234293	John Rogerson's Quay	Dublin South City
<b>Description</b>				
<p>(Excerpt from De Courcy, 1996, sole entry in SMR archive for this monument, see also entry above for City Quay).</p> <p><i>'The process of making the river wall and the quay wall was to build a wall facing the river, and a second or back wall some distance away, and then to fill the space between them with gravel and sand dredged from the channel of the river, if possible in the immediate vicinity.'</i></p> <p>1716: Rogerson began construction.</p> <p>1717: The city appointed a committee to "...to see the said strand stacked out between the anchor smiths shop and Ringsend Point."</p> <p>1718: Rogerson built the Fountain Tavern, the first building said to be constructed on the new quay.</p> <p>1720: Rogerson granted a reduction in the cost of sand and gravel.</p>				

1728: Brooking shows the wall completed by 1728, although detail at the east end is obscure (see **Plate 1**).

1788: A document in the Assembly records suggests that Rogerson finished his wall by turning it through a right angle at the Dodder confluence and building along the Dodder to the Bridge Site at Ringsend. This short north south section would have been largely remade when the entry lock system for the Grand Canal Docks was made in c.1795

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020152	316594	234525	Glasshouse.	Dublin North City
Description				
Glasshouse.				

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020564	317784	234408	Custom House Quay and North Wall Quay.	Dublin North City.
Description				
<p>(Excerpt from De Courcy, 1996, sole entry in SMR archive for this monument).</p> <p><i>'The north side of the Liffey was first embanked by the ballast office c.1715 – 1725. Gandon recorded that the quay wall was "...an old embankment made about the year 1725; it was 60ft wide at the top, and badly constructed; the walls of black stone [probably local calp limestone]; it's foundations laid on the surface of the strand; on the side next the river it was 12ft high but on the inside only 8ft; the filling between the walls was a sand used for ballast; the base of the foundations stood at least 6ft above the bed of the river; the tide not only soaked under them but filtered in several places through the joints of the masonry.'</i></p> <p>As early as 1731 the Ballast office was repairing the wall and shortly after the establishment of the Ballast Board in 1786, Francis Turnstall, its first inspector of works, recommended the demolition and rebuilding of the whole wall "...from the piling of the Custom House eastwards."</p> <p>By 1834 some of the wall was collapsing and the deeper water at the quayside was becoming increasingly necessary [with the advent of steam vessels of deeper draught and load capacity were using the Port of Dublin]. In 1840 the quay wall was fronted with timber wharves projecting into the channel and supported on piling.</p> <p>In 1836 the Board issued instructions to build the northwall lighthouse at the corner of the wall opposite Ringsend. It would replace the earlier watch-house. From this corner, the wall turned north. This part of the wall was already a graving slip [cleaning and repairing ships exterior hull], and the Board's then inspector of works, George Halpin, had a large hole excavated immediately to the east of the east quay and formed an earthen embankment to the east of the hole as a breakwater. This was known at the time as Halpin's hole and would later form part of the site of the Alexandra Basin.'</p>				

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020347	316547	234120	St Marks Church and graveyard site.	Marks Lane, Mark Street, Pearse Street. Dublin South City
Description				
St Marks Church and graveyard site, seventeenth century. No other information in the SMR archive.				

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020325	316723	234060	Glass works or 'glasshouse site'.	Pearse Street, Dublin South City
<b>Description</b>				
<p>(2 entries in SMR archive. One from P.R.I.A. from 1909 on place names in the area and one from Maclysaght (ed) 1982. John Dinton: Teague Land, or a Merry Ramble to the Wild Irish (original text from 1698).</p> <p><i>"Lazy or Lacy's Hill is in a suburb of Dublin in which are very good houses, here dwell anchor-smiths, and stood 2 glass houses, though none of them were at work by reason of the scarcity of coals: the glass made here and at another in the northern suburb are very fine and clear, and at not a very great price, a flint glass of about a pint and a half being sold for 8 or 9 pence."</i></p>				

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-053003	318108	233933	House, 16 <sup>th</sup> /17 <sup>th</sup> century.	Dublin South City
<b>Description</b>				
House, 16 <sup>th</sup> /17 <sup>th</sup> century.				

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020501	316455	234852	Tide mill and mill pond.	Dublin North City
<b>Description</b>				
<p>A tide mill is one in which water is let into a basin at high tide, dammed, and allowed to flow as the tide ebbs, thus driving a mill wheel. Phillips's map of 1685 shows an extensive tidal pool, which he described as a millpond, between Mabbot's corner and the future Mabbot Street (at high tide, two large pools lay behind the shoreline between the Portland Row and Amiens Street junction), suggesting that the mill lay behind Mabbot's Wall and near Mabbot Street. Rocque makes no reference to Mabbot's mill in his map of 1756, as by this time the millpond had been filled in to become pasture and gardens.</p>				

SMR No	NGR easting	NGR northing	SMR Designation	Townland
DU018-020505	316474	234626	Sea wall.	Dublin North City
<b>Description</b>				
The sea wall built here is the most southerly element of what was to become the North Strand. A wall is shown at this point on de Gomme's map of Dublin.				

## Appendix 2: Recorded Protected Structures in the vicinity

Taken from the Dublin City Development Plan: 2005-2011.

RPS Ref	NGR easting	NGR northing	Address	Description
8023	316499	234729	Store Street	Coroner's court: Facade
8022	316457	234687	Store Street	Busáras, central bus station and offices
100	316609	234869	Amiens Street	Connolly station: all 19th century portions of main railway station complex
4062	316647	234754	Inner Dock off Custom House Quay	Limestone ashlar dock walls with granite copings, granite and cast iron bollards, steps, lock gates, cast-iron mooring rings, ladders and winches
3205	316685	234593	George's Dock	Limestone ashlar dock walls with granite copings, granite and cast iron bollards, steps, lock gates, cast-iron mooring rings, ladders and winches
2136	316650	234686	Custom House Dock	Harbourmaster: Licenced premises
2135	316729	234591	Custom House Dock	Stack 'A' (whole), Stack 'C' (vaults), warehouse (now the CHQ building)
5168	316978	234629	Mayor Street Lower	Former excise building
2137	316662	234502	Custom House Dock	Scherzer swing bridge
5944	317247	234787	Spencer Bridge	Scherzer swing bridge
5948	317489	234458	North Wall Quay	Former British Rail Hotel
5945	317223	234454	North Wall Quay	Scherzer swing bridge
5949	317473	234464	North Wall Quay	Granite walls at former British Rail Hotel, railings, gates and adjoining sets in cul-de-sac
5947	317450	234483	North Wall Quay	The Wool Store, including hexagonal lantern
5951	317420	234476	North Wall Quay	CIE goods depot including curved wall and chimneys
5955	317763	234426	82 North Wall Quay	Business premises
5954	317752	234428	81 North Wall Quay	Business premises
5953	317706	234431	73 North Wall Quay	Facade
5950	318035	234451	North Wall Quay	Former goods depot (The Point)
5946	317921	234382	North Wall Quay	Granite ashlar quay walls, stone sets, mooring rings, steps, bollards, lamp standards and machinery

### Appendix 3: Recorded Archaeological finds in the vicinity

From the Topographical files of the National Museum of Ireland.

NMI Ref	Type	Description
1954: 168	Iron knife	An Iron knife, possibly Viking in date, found on a gravel bed (possible old foreshore, during foundation excavations for the construction of the church on Church road in East Wall.
1970: 190-197	Wreck material	During the dredging of Dublin Harbour, between the Bull Wall and the North Wall extension in 1970, a wooden boat was discovered. Although the workmen were not able to lift the boat, they did recover a rim sherd of red pottery, part of a thin copper vessel, clay pipe fragments (NMI ref. 1970:190–197) and a quantity of animal bones.

## **Appendix 4: Previous Excavations relevant to the current project**

From the Excavations Bulletin

### **2002:0577**

#### **Sir John Rogerson's Quay, Dublin**

Urban

#### **O171343**

#### **02E1625**

An assessment was undertaken of a proposed development site on Sir John Rogerson's Quay, Dublin 2. The site lies on land reclaimed from the River Liffey after the construction of the quay walls in the early 18th century. From then on the area has witnessed a considerable degree of industrialisation.

Phase 1 of the assessment was completed in November 2002. Two trenches were excavated, one north-south and the other east-west, across the open area of the development site.

Trench 1 was 37m long. An archaeological deposit was identified at c. 1.9m below the modern ground level. This was a green silty clay with some mortar and red-brick fragments, c. 0.4m deep. This deposit is a result of reclamation activity during the 18th century.

Trench 2 also revealed an archaeological deposit above the natural gravels. This brown silty clay layer, also a result of reclamation activity, was c. 1.7m below the modern ground level and c. 0.5m deep. The trench was abandoned owing to hydrocarbon contamination. The site is adjacent to an old gasworks, the probable source of the contamination.

Phase 2 of the assessment will be undertaken after the demolition of buildings on the site.

**Abi Cryerhall, Margaret Gowen & Co. Ltd, 2 Killiney View, Albert Road Lower, Glenageary, Co. Dublin.**

### **2003:0576**

#### **Spencer Dock, Sheriff Street, Dublin**

Post-medieval industrial

#### **317169 234711**

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**03E0654**

The excavation of environmental test-pits on the site of the Spencer Dock residential development was monitored between 19 June and 2 July 2003 and in October 2003. Monitoring of groundworks on this site commenced on 5 January 2004 and is ongoing. The results of this monitoring will be detailed in Excavations 2004. What follows is a summary of findings to date.

The ground uncovered in the environmental test-pits comprised post-medieval rubble and fill, overlying silts and river gravels. A series of subsurface structural remains of red-brick and limestone construction were uncovered. These are the remains of industrial structures, dating from the 19th and 20th centuries. A number of artefacts dating from the post-medieval period were recovered from the test-pits. During initial site clearance and shoring, cellars were uncovered in the south of the site, where they extend under the North Wall road. These are from the demolished structures Nos 46 and 47 North Wall, and may date from as early as the mid-18th century. It is anticipated that a record will be made of the structural remains exposed during bulk excavation works, which have yet to commence.

**Melanie McQuade, Margaret Gowen & Co. Ltd, 2 Killiney View, Albert Road Lower, Glenageary, Co. Dublin.**

**2004:0537**

**BERTH 50A, DUBLIN PORT**

No archaeological significance

**319840 234230**

**04E0560**

Monitoring of dredging for a new berth was undertaken in April-May 2004. The berth is at the south end of Breakwater Road South, adjacent to land reclaimed by the Dublin Port Authority/Company in the past 37 years, just east of the North Wall and the North Wall (Breakwater) lighthouse and just west of the car ferry terminal. While most of the site lay within the main modern Dublin Harbour channel, and has thus been dredged regularly in recent times, it was near the historical location of Brown's Patch sandbank and Clontarf Pool, in an area infamous for its tortuous, shifting sands, at the confluence of the Liffey and Tolka estuaries. No wrecks are recorded specifically for this area, but the eastern extremity of Brown's Point was sufficiently dangerous to have been successively marked by buoys to prevent breaching by vessels entering either Dublin Port or Clontarf Pool. No archaeology was revealed anywhere on the site, and no further mitigation was recommended.

**William O. Frazer, Margaret Gowen & Co. Ltd, 27 Merrion Square, Dublin 2.**

**2004:0565**

**BUILDING C, SPENCER DOCK, NORTH WALL QUAY, DUBLIN**

Late Mesolithic fish traps and post-medieval structures

**317169 234711**

**03E0654**

Monitoring and excavation were carried out on the site of Building C, Spencer Dock, North Wall Quay, Dublin 1, between January and September of 2004. Three principal phases of activity were uncovered. Monitoring on the site of a northern block (RSTUV) is ongoing. To date, 19<sup>th</sup> century foundation remains have been uncovered. The results of monitoring on this block will be reported in Excavations 2005.

*Late Mesolithic*

The earliest phase relates to fishing and other activity carried out when the Liffey estuary occupied the south of the site. The transition of silt and gravels uncovered between 13-16m north of the southern limit of excavation marked the old shoreline of the Liffey channel. The remains of wooden fish traps, stake rows and miscellaneous pieces of worked wood were preserved in the waterlogged silts. A semicircular wicker structure or fish trap comprised stakes and a series of smaller upright rods, around which rushes had been woven. A radiocarbon date of 6090-5840 cal. BC was returned for this feature. Along the shoreline to the south-west of the fish trap was a deposit of horizontally set roundwoods. These were truncated to the east by machine excavation, but the remains covered an area 3.4m by 1.28m and have been radiocarbon dated to 6070-5890 cal. BC. In the south of the site was a row of 36 stakes aligned northeast/south-west; a date of 5920-5720 cal BC was obtained for one of these stakes. Along the western shoreline, to the north of the western stakes, were the remains of a wicker-basket-type structure and a group of stakes. The structure, which survived up to 0.6m long and 0.3m wide, has been dated to 5990-5750 cal. BC. On the west of the site were two rows of rods and stakes, a horizontal panel of wicker (dated to 6100-5970 cal. BC) and a fragmentary wicker fence, which were probably part of a truncated fish trap.

The fish traps were constructed mainly but not exclusively of hazel and were in a good state of preservation. In addition, there were several other stakes and pieces of worked wood, which did not form any coherent structures.

Phase 2 was the reclamation of land from the estuary and its floodwaters. This was achieved by depositing a series of fills in order to build up the ground. Artefacts recovered from these reclamation deposits have been dated to the 18th and 19th centuries and corroborate with the documentary sources in indicating the date when this work was carried out.

The third phase was the development of the reclaimed land. From the later 18th up to the 20th century a series of structural remains were founded on the reclamation deposits and the site was drained by a series of brick culverts cut into these deposits. In the south of the site, c. 112m to the east of the canal and 45m north of where the canal opens into the Liffey, were the remains of a circular masonry structure. This had an internal diameter of 11.2m and its encircling wall was constructed of limestone blocks (0.35m by 0.22m by 0.16m), bonded with mortar. The wall was 1m wide and survived to a maximum of 1m in height. In the west was an entrance. Leading from the western entrance was a walkway, which comprised two rows of granite slabs on either side of which was a red-brick floor (6.1m by 5.1m) and to the west were four sandstone slabs. To the east of the floor and abutting the external wall was a north-south masonry wall with an eastern return at its north. This was probably an internal division within the circular structure. This was the earliest masonry structure uncovered on site. Its location roughly corresponds with the windmill at North Wall Quay, which was recorded as being 100m east of the mouth of the Royal Canal. The windmill had burned down in a spectacular fire late in 1810 but is shown on Taylor's map of 1816. The inclusion of the windmill on Taylor's map suggests that it was reconstructed after the fire of 1810. However, it is not shown on the first-edition OS map (1837), which shows a warehouse on the same location. The western wall of this warehouse was uncovered during site works, partly overlying, and therefore post-dating, the windmill wall. The archaeological evidence corroborates the cartographic evidence in indicating an early 19<sup>th</sup> century date for the windmill. It was larger in diameter (11.2m) than typical tower mills (4-6m). Its location on low-lying ground, which was prone to flooding, suggests that it may have served for pumping and draining water rather than milling corn.

To the north, west and south of the windmill structure were a series of 19th- and 20th-century walls and basement floors, which largely corresponded with the structures shown on the OS maps. A series of five arched vaults was uncovered along the street front and extending under the road, south of Nos 46 and 47 North Wall Quay. The vaults extended for c. 16m east-west and were accessed from the north through an arched corridor. The individual vaults measured c. 3m long and 3.2m wide and the corridor was c. 1.5m wide. The vaults were constructed of limestone blocks bonded with mortar.

Red and yellow brick used in the upper structure of the walls may represent modifications to the original structure. These vaults were filled in and remain *in*

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*situ.*

**Melanie McQuade, Margaret Gowen & Co. Ltd, 27 Merrion Square, Dublin 2.**

**2004:0519**

**U2 TOWER, BRITAIN QUAY, DUBLIN**

Urban

**O180345**

**04E0271**

Monitoring of engineer's test-pits was undertaken in 2004. The site is to be developed as a landmark tower, on the junction of the Grand Canal Locks with the Liffey at Britain Quay, Dublin 4. Eight test-trenches were excavated mechanically at sites chosen by the engineers. In addition, several geological bores were undertaken. The borehole results are summarised as follows: present ground level to 5m, fill with rubble, etc.; 5-11m, river silt; 11-20m, fine silty sand; 20-c. 29m, rock interface. This indicates a 5m depth of 18th-century dumped deposits. There is little chance of an archaeological horizon being present below 5m, which is river level.

**Claire Walsh, 27 Coulson Avenue, Rathgar, Dublin 6.**

**NATIONAL CONFERENCE CENTRE, SPENCER DOCK, NORTH WALL QUAY, DUBLIN 1**

Late Mesolithic to mid Neolithic

**317285E 234472N**

**06E0668**

(The following has been extracted from the final report for 06E0668 and not from the excavations bulletin. Thanks are due to Mellanie McQuade who kindly gave copies of the report to this author).

Monitoring of deep excavations for the construction of the National Conference Centre uncovered worked wood and the remains of fish trap structures were identified in the estuarine slit and where subsequently excavated. These had been sealed under 18<sup>th</sup> century reclamation deposits and structural remains which were recorded and removed under the same license: **06E0668** by Franc Myles. The licence was transferred to the author for the excavation of the Neolithic and Mesolithic deposits.

The excavation area was located approximately 3m west of the site at Spencer Dock Building C where the remains of up to five late Mesolithic fish traps (6100-5760 cal BC) were excavated in 2004 (McQuade and O'Donnell 2007). The discovery of those fish traps was of international significance since they were the earliest dated examples for the use of fish traps in either Ireland or the UK. They provided the first definitive evidence for the use of fish traps in Ireland during the Mesolithic period. The fish traps uncovered during the 2007 excavations further testify to the value of this part of the Liffey estuary as a fishing ground. Here the remains of another fish trap were recorded approximately 65m to the west of those uncovered on the site of Building C in 2004. Quite remarkably, the radiocarbon dates obtained for fish trap 2 indicate that it was in use during the same period of the Late Mesolithic (6000-5760- cal BC). This illustrates that the late Mesolithic population of the Dublin area were, over a period of up to 200 years, fishing along a 70m stretch of the Liffey intertidal zone in the area currently known as Spencer Dock.

**Appendix 5: Monitoring 07E167: Site Feature Register**

No.	Type	Date	NGR	Description	Interpretation	Length (m)	Width	Depth	OD (top)
1	Culvert or sewer	19thC.	316696E 234665N	Brick lined culvert located just east of George's Dock Bridge and adjacent to the North west corner of the CHQ building. Yellow bricks bonded with a coarse lime mortar. Only partially exposed. Semi circular simple arched roof sitting on brick side walls. Brick side walls 0.7m thick by 1.83m high.	Possible brick lined sewer. May also be the remains of drainage/filling culverts for George's Dock.	5.6m	2.7m	1.83m	1.62m OD
2	Wall foundations	19thC.	316726E 234656N	Shallow utilities trenches on the south side of Mayor St. Lower just in front of the CHQ building under the pavement exposed limestone wall foundations to the building. Not impacted on and reburied. Not fully exposed. North west corner of CHQ building.	Foundations to the north wall of the old tobacco store (as depicted on the 1843, 1875 and 1907 OS maps) - now the CHQ building.	20m (partial)	n/a	n/a	3.31m OD
3	Sand Layer	c.18thC.	316725E 234663N	Light to mid yellow brown fine grained sand, occurs 2m below ground level. Sterile. Located in various sections.	Possible 18thC. Reclamation material but more likely to be sand fill for previous utilities trenches.	20m (partial)	1m partial	1.5m	2.11m OD
4	Sand Layer	18thC.	317642E 234578N	Light orange brown fine grained sand containing moderate occurrences of marine shells, predominantly oysters but some mussels. Located in Utilities trenches along Mayor Street Upper between New Wapping and Castle Forbes Street.	18thC. Reclamation material.	200m	1.5m, partial	1.5m	1.22m OD
5	Culvert or sewer	19thC.	317600E 234583N	Culvert located along the southern side of Mayor St. Upper, from centre line of road to pavement, orientated east west, in line with the road. Made up of red and yellow bricks, located at base of trench. Width and length not fully exposed.	Sewerage or water drain.	At least 20m	At least 1.5m	n/a	0.38m OD
6	Wall foundations	19thC.	316764E 234653N	Shallow utilities trenches on the south side of Mayor St. Lower just in front of the CHQ building at North East corner under the pavement exposed limestone wall foundations to the building. Not impacted on and reburied. Not fully exposed, broken and disturbed by previous utilities works. A continuation of F2.	Foundations to the north wall of the old tobacco store (as depicted on the 1843, 1875 and 1907 OS maps) - now the CHQ building.	2m, partial	n/a	n/a	3m OD

No.	Type	Date	NGR	Description	Interpretation	Length (m)	Width	Depth	OD (top)
7	Culvert or sewer	19thC.	316861E 234642N	Sewer. Limestone wall foundations, c.0.75m high by 0.9m in width. Brick arch has been built on top of this wall foundation, adding 1.25m to internal height of sewer, total height: 2m. This sewer has been rebuilt in certain sections with concrete.	Sewerage or water drain.	10m, partial	0.9m	2m	n/a
8	Wall foundations	19thC.	316848E 234645N	Limestone wall foundation with internal red brick wall remnants running off at a right angle to the north (measuring c.0.32m in width by 0.8m in height, extends north less than 0.5m but has been broken through). The limestone wall is much broken through by modern utilities and has been rebuilt in sections with concrete (pre-Luas construction.).	Probably the foundations of the southern wall of the whiskey stores as depicted on the 1875 OS map. Not depicted on the 1837 OS map, therefore built between these two dates.	14m overall, but broken in sections	n/a	1.5m max - to .5m min	2.72m OD
9	Northern culvert in West Quay wall	Mid 19thC.	317218E 234624N	Tidal sewer, orientated east west and running under the alignment of Mayor street, Upper and Lower. Built sometime between the 1845 and 1873 (using dates from two plaques on Sherriff Street Bridge over Spencer Dock for construction of the bridge/canal). Comprised of a limestone arch built into the east wall of the canal and contemporary with the initial construction of this section of the canal, built with dressed ashlar limestone masonry blocks. All arches were subsequently walled in using rough hewn irregular shaped limestone and calp blocks of varying sizes. Possibly filled in shortly after construction of canal proper (i.e. when canal dropped out of use and when railways constructed on the site (c.early 1870s)).	Tidal sewer.	not excavated	5m	1.3m min, but not fully exposed	0m OD
10	Southern culvert in West Quay wall	Mid 19thC.	317218E 234617N	Tidal sewer, orientated east west and running under the alignment of Mayor street, Upper and Lower. Built sometime between the 1845 and 1873 (using dates from two plaques on Sherriff Street Bridge over Spencer Dock for construction of the bridge/canal). Comprised of a limestone arch built into the east wall of the canal and contemporary with the initial construction of this section of the canal, built with dressed ashlar limestone masonry blocks. All	Tidal sewer.	not excavated	5m	1.3m min, but not fully exposed	0m OD

No.	Type	Date	NGR	Description	Interpretation	Length (m)	Width	Depth	OD (top)
				arches were subsequently walled in using rough hewn irregular shaped limestone and calp blocks of varying sizes. Possibly filled in shortly after construction of canal proper (i.e. when canal dropped out of use and when railways constructed on the site (c.early 1870s)).					
11	Northern culvert in East Quay wall	Mid 19thC.	317252E 234620N	Tidal sewer, orientated east west and running under the alignment of Mayor street, Upper and Lower. Built sometime between the 1845 and 1873 (using dates from two plaques on Sherriff Street Bridge over Spencer Dock for construction of the bridge/canal). Comprised of a limestone arch built into the east wall of the canal and contemporary with the initial construction of this section of the canal, built with dressed ashlar limestone masonry blocks. All arches were subsequently walled in using rough hewn irregular shaped limestone and calp blocks of varying sizes. Possibly filled in shortly after construction of canal proper (i.e. when canal dropped out of use and when railways constructed on the site (c.early 1870s)).	Tidal sewer.	not excavated	5m	1.3m min, but not fully exposed	0m OD
12	Southern culvert in East Quay wall	Mid 19thC.	317199E 234619N	Tidal sewer, orientated east west and running under the alignment of Mayor street, Upper and Lower. Built sometime between the 1845 and 1873 (using dates from two plaques on Sherriff Street Bridge over Spencer Dock for construction of the bridge/canal). Comprised of a limestone arch built into the east wall of the canal and contemporary with the initial construction of this section of the canal, built with dressed ashlar limestone masonry blocks. All arches were subsequently walled in using rough hewn irregular shaped limestone and calp blocks of varying sizes. Possibly filled in shortly after construction of canal proper (i.e. when canal dropped out of use and when railways constructed on the site (c.early 1870s)).	Tidal sewer.	not excavated	5m	1.3m min, but not fully exposed	0m OD

No.	Type	Date	NGR	Description	Interpretation	Length (m)	Width	Depth	OD (top)
13	Wall foundations	19thC.	316825E 234647N	Limestone wall foundation with internal red brick wall remnants running off at a right angle to the north (measuring c.0.32m in width by 0.8m in height, extends north less than 0.5m but has been broken through). The limestone wall is much broken through by modern utilities and has been rebuilt in sections with concrete (pre-Luas construction.).	Probably the foundations of the southern wall of the whiskey stores as depicted on the 1875 OS map. Not depicted on the 1837 OS map, therefore built between these two dates.	14m	0.32m	0.8m	3m OD
14	Culvert or sewer	19thC.	317783E 234582N	Sewer. Limestone wall foundations. Brick arch has been built on top of this wall foundation. This sewer thought to be still in use. No plans at present to impact on this sewer.	Sewerage or water drain.	3m, partial	0.9m	2m	1.58m OD to top of arch
15	Layer	19th to 20thc.	317426E 234598N	Compacted hard core fill material with a lot of modern material (i.e. broken pvc pipes, plastic bags, metal fragments etc...)	Made ground	30m section	n/a	1.8m	2.42m OD
16	Layer	19th to 20thc.	317426E 234598N	Stiff brown, gravelly clay fill material.	Made ground	30m section	n/a	0.2m	0.62m OD
17	Layer	19th to 20thc.	317426E 234598N	Firm, yellow brown, silty fine sand	19thC construction fill material for backfilling sewer pipe trench. Cut by <b>F28</b> .	30m section	n/a	1.1m	0.42m OD
18	Layer	Pre-18thC.	317426E 234598N	Soft grey sandy silt/clay	Estuarine deposit, likely to be pre-18thC. (underlies reclamation phase). Cut by <b>F28</b> .	30m section	n/a	1.7m	-0.68m OD
19	Layer	Pre-18thC.	317426E 234598N	Firm, blue grey silt	Estuarine deposit, likely to be pre-18thC. (underlies reclamation phase). Cut by <b>F28</b> .	30m section	n/a	0.2m	-2.38m OD
20	Layer	Pre-18thC.	317426E 234598N	Stiff brown, gravelly clay fill material.	Estuarine deposit, likely to be pre-18thC. (underlies reclamation phase). Cut by <b>F28</b> .	30m section	n/a	0.5m	-2.58m OD
21	Layer	Unknown	317426E 234598N	Medium dense, grey/brown, fine to coarse sand with many cobbles	Estuarine deposit, likely to be prehistoric in date. (underlies reclamation phase).	30m section	n/a	0.7m	-3.08m OD

No.	Type	Date	NGR	Description	Interpretation	Length (m)	Width	Depth	OD (top)
22	Layer	Unknown	317426E 234598N	Dense, grey /brown, fine to medium, gravel with some cobbles and intermittent bands of fine grey sand.	Estuarine deposit, possible paleo shore?	30m section	n/a	2.3m	-3.78m OD
23	Layer	Unknown	317426E 234598N	Very stiff to locally hard, dark grey/black, slightly sandy, gravelly clay with some cobbles.	Glacial till?	30m section	n/a	4.1m	-6.08m OD
24	Layer	Unknown	317426E 234598N	Dense, grey /brown, fine to medium, gravel with some cobbles.	Glacial till?	30m section	n/a	0.6m	-10.18m OD
25	Layer	Unknown	317426E 234598N	Very stiff to locally hard, dark grey/black, slightly sandy, gravelly clay with some cobbles.	Glacial till.	30m section	n/a		
26	Timber	19th to 20thc.	317216E 234624N	At a depth of 1.5m below the top of the west wall on (1.24m OD) the western side a line of pine planking, driven in to the ground was encountered. This was 0.5m west of the face of the quay wall and similar timber shuttering has been observed during the demolition of the Spencer Dock Lock on the Pearse site, 140m due south of the west abutment site. Each plank was c.3cm thick, c.28cm wide and of an indeterminate length (being left in situ, not being impacted on).	Has been interpreted as being the remains of 19th century shuttering from the construction of the canal walls (may also be related to the construction of the culverts <b>F9</b> and <b>F10</b> , but it is likely these culverts were constructed contemporary with the canal. They may date to the filling in of the culverts which is likely to have occurred in the early 20thc.).	15.2m exposed, but likely to present along length of canal.	0.28m	n/a	1.24m OD
27	Metal feature	19th to 20thc.	317217E 234619N	2 cast iron mooring hooks attached to a ring which in turn is attached to a ring bolt driven into the top of the dock wall on the west side.	Mooring hooks, similar to hooks protected as RPSs and retained as features along the Liffey quays.	Ring bolt min of 0.5m	internal diameter of 0.24m	n/a	Enters top of quay wall at 2.74m OD
28	Culvert/sewer	19thC.	317434E 234600N	Brick lined culvert located within the substation at the Spencer Dock stop. Orientated east west. Yellow bricks bonded with a coarse lime mortar. Arched roof sitting on brick side walls. Associated with a modern concrete sewer c.01.m to the north and parallel with <b>F29</b> .	Brick lined sewer/culvert, almost identical to <b>F5</b> (and shares alignment - probably directly associated) and <b>F7</b> . NB: Due to health and safety concerns it was not possible to take accurate measurements due to the	At least 30m	c.0.9	c.2m	c.0m OD

No.	Type	Date	NGR	Description	Interpretation	Length (m)	Width	Depth	OD (top)
					confined working conditions and proximity to machines.				
29	Wooden Drain	19thC.	317412E 234595N	Plank lined drain located in the sw corner of the substation. 36 post medieval pottery fragments and 2 clay pipe stems found associated with this feature. Was cut into an estuarine deposit - frequent occurrences of oyster shell. Planks formed a box profile, originally made up of 4 planks (top in this section missing). Extends north west outside the area of the substation (feature cut by pile wall). Planks not fixed to each other, simply abutted.	Drain.	3.6m	0.23m	0.46m	-1.7m OD
30	Plank	19thC.	317412E 234595N	Forms part of F29. Pine plank, produced in saw mill, not hand made. Uniform smooth faces, no fastenings (looks very like modern scaffolding planks). Eroded along one edge.	Drain	3m	0.2m	0.04m	-1.7m OD
31	Plank	19thC.	317412E 234595N	Forms part of F29. Pine plank, produced in saw mill, not hand made. Uniform smooth faces, no fastenings (looks like modern scaffolding planks). Eroded along one edge broken at one end.	Drain	3.6m	0.22m	0.03m	-1.7m OD
32	Plank	19thC.	317412E 234595N	Forms part of F29. Pine plank, produced in saw mill, not hand made. Uniform smooth faces, no fastenings (looks very like modern scaffolding planks).	Drain	3.61m	0.23m	0.04m	-1.7m OD

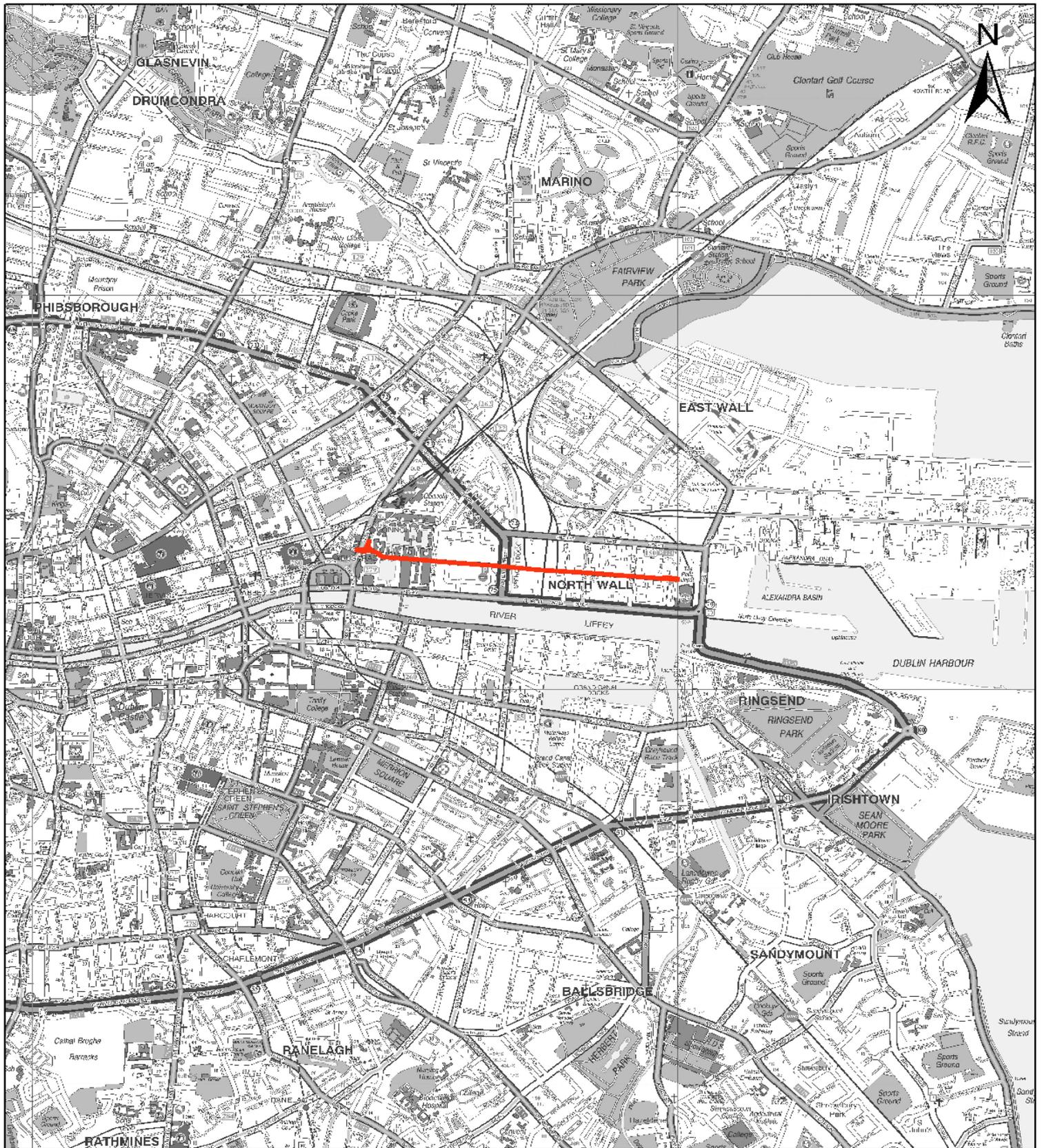
**Appendix 6: Monitoring 07E167: Archaeological Finds Register**

Find No.	Feature No.	Site Name	NGR	Find type	Period	Description
1	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Blue/white rim sherd and base of plate. White all over glaze on both sides with simple blue edging design on rim. Fabric is cream in colour and soft with no inclusions.
2	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Pale blue spout from small tea/coffee pot. Glazed on outside surface, fabric also pale blue, no inclusions, looks to be stone ware and is very hard.
3	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Cream base and body sherd from jar. Glazed on both sides, glaze has uniform cracking over entire surface, small square pattern. Fabric is cream in colour and soft with no inclusions.
4	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Cream rim sherd. Glazed on both sides. Fabric is cream in colour and soft with no inclusions.
5	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Blue/white rim sherd of plate. White all over glaze on both sides with simple blue edging design on rim. Fabric is cream in colour and soft with no inclusions. Similar to <b>Find # 1</b> .
6	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Blue/white body sherd. White all over glaze on both sides with blue transfer pattern on outside face. Fabric is cream in colour and soft with no inclusions.
7	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	White body sherd. White all over glaze with mottled grey stipple pattern on both sides. Uniform hard white fabric.
8	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Cream body sherd. Glazed on both sides. Fabric is cream in colour and soft with no inclusions, similar to <b>Find # 4</b> .
9	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	White/blue grey body sherd. Glazed on both sides, plain on interior with blue pattern on outside face.
10	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Yellow body sherd. Glazed on both sides, uniform cracking in glaze. Pale yellow/cream fabric, soft with no inclusions.
11	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black body sherd. Glazed on both sides – <b>Lusterware</b> type. Uniform cream/grey fabric with no inclusions.
12	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black body sherd. Glazed on both sides – <b>Lusterware</b> type. Uniform cream/grey fabric with no inclusions, similar to <b>Find #11</b> .
13	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Grey and orange body sherd. Glazed on outside face, grey, possibly salt glaze. Orange unglazed slip on inside face. Uniform grey fabric with occasional very small gravel

Find No.	Feature No.	Site Name	NGR	Find type	Period	Description
						inclusions with occasional very small flecks of either silica or mica fragments.
14	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Orange green and grey rim sherd. Glazed on inside face with orange and green glaze with spots of grey glaze. Plain orange outside face, no slip. Fabric uniform orange, hard, no inclusions.
15	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Yellow orange and brown brick fragment. Brown glaze on one face. Uniform yellow fabric, soft with occasional quartz fragments.
16	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black and orange body sherd. Black glaze and groves on inside, plain red/orange slip on outside: <b>Black ware</b> . Frequent gravel and quartz inclusions.
17	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black and orange body sherd. Black glaze and groves on inside, plain red/orange slip on outside: <b>Black ware</b> . Frequent gravel and quartz inclusions.
18	F29	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black and orange body sherd. Black glaze and groves on inside, plain red/orange slip on outside: <b>Black ware</b> . Frequent gravel and quartz inclusions.
19	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black rim sherd. Glazed on both sides – <b>Lusterware</b> type. Uniform cream/yellow soft fabric.
20	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Silver/grey and orange rim sherd. Silver grey internal glaze, possibly a type of <b>Lusterware</b> (almost looks like remnants of smelting – fabric shows signs of high temperatures from inside radiating to outside surface). External face unglazed orange surface with no slip. Fabric is friable with frequent occurrences of gravel, silica and quartz. Double raised groove on outside, 2cm from rim.
21	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Silver/grey and orange body sherd. Silver grey internal glaze, possibly a type of <b>Lusterware</b> . Unglazed orange external surface with no slip. Uniform hard orange red/brown fabric with frequent inclusions of small flecks of either silica/quartz/mica.
22	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black and orange body sherd. Black glaze and groves on inside
23	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black and orange body sherd. Black glaze and groves on inside
24	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black and orange body sherd. Black glaze and groves on inside
25	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Blue/white body sherd. White all over glaze on both sides with blue transfer pattern on internal face. Fabric is cream in colour and soft with no inclusions.

Find No.	Feature No.	Site Name	NGR	Find type	Period	Description
26	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Brown/white body sherd. White all over glaze on both sides with brown transfer print on internal face (two ladies on horseback). Makers mark on base, partial but looks like <i>Liusag...</i> )
27	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Blue/white body sherd. White all over glaze on both sides with blue transfer pattern on internal face. Fabric is cream in colour and soft with no inclusions.
28	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Brown and whit rim sherd from possible cup. Glazed on both sides, single brown ring just below the rim on the internal face, repeated on the external face with additional floral pattern.
29	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Brown and whit rim sherd from possible cup. Glazed on both sides, single brown ring just below the rim on the internal face, repeated on the external face with additional floral pattern. See <b>Find# 29</b> .
30	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Black and orange body sherd. Black glaze and groves on inside, plain red/orange slip on outside: <b>Black ware</b> . Frequent gravel and quartz inclusions.
31	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Yellow body sherd. Glazed on both sides, uniform cracking in glaze. Pale yellow/cream fabric, soft with occasional inclusions of small gravel flecks.
32	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Green and white rim sherd from plate. Glazed on both sides with simple green edging on internal face around the rim. Uniform white fabric, edges are smooth – this fragment has probably been water rolled (i.e. washed down the Liffey).
33	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Green brown and cream body sherd. Glazed on both sides with a very distinctive random mottle pattern in brown and green overlying a general cream background. Uniform white/cream fabric, soft to medium hardness.
34	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	White and blue rim sherd, possibly from a cup. Glazed on both sides, plain white on interior face with blue floral and geometric pattern on external face. Cream uniform soft fabric with no inclusions.
35	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	White body sherd. Plain white glaze on both sides with uniform hard white glaze with no inclusions.
36	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Brown/white body sherd. White all over glaze on both sides with brown transfer print on internal face, see <b>Find # 26</b>
37	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Yellow and brown rim and body sherd. Glazed both sides with yellow glaze, brown linear pattern with brown spots on external face. Uniform soft cream fabric with occasional

Find No.	Feature No.	Site Name	NGR	Find type	Period	Description
						occurrences of gravel inclusions.
38	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Orange and black rim sherd from large, thick walled plate. Glazed on internal face only, orange with cream spots. Black and orange on outside face (black may be from burning. Uniform hard orange fabric with occasional inclusions of small gravel flecks.
39	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Orange and black rim sherd from large, thick walled plate. Glazed on internal face only, orange with yellow line pattern near rim. Black and orange on outside face (black may be from burning. Uniform hard orange fabric with occasional inclusions of small gravel flecks.
40	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Grey brown base sherd from heavy jar. Glazed on external face only with grey/brown glaze. Pale orange fabric, hard, with occasional gravel inclusions.
41	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Orange and black rim sherd from large, thick walled plate. Glazed on internal face only, orange with yellow line pattern near rim. Black and orange on outside face (black may be from burning. Uniform hard orange fabric with occasional inclusions of small gravel flecks.
42	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1800-1900	Orange and black rim sherd from large, thick walled plate. Glazed on internal face only, orange with yellow line pattern near rim. Black and orange on outside face (black may be from burning. Uniform hard orange fabric with occasional inclusions of small gravel flecks.
43	F20 (under F29)	Spencer Dock Substation	317412E 234595N	Ceramic	Post Medieval: 1730-1900	Two clay pipe stems.



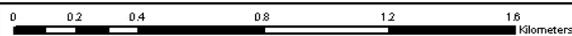
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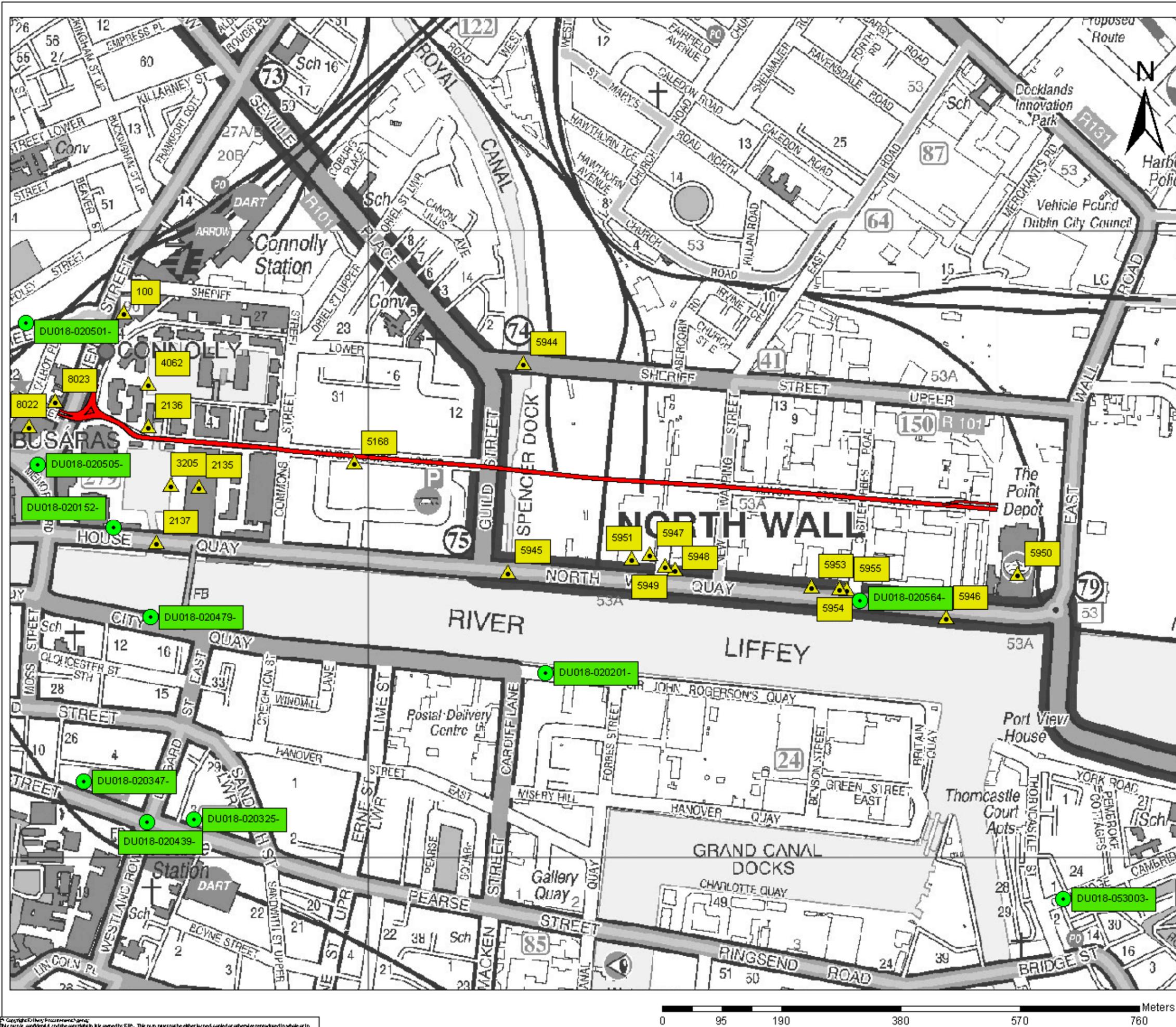
UIC ATÓ N Connolly Station to the Point

BRÁNDÁIL TÍTEL Figure 1: General site location plan

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**Registered Monuments and Places**

- DU018-020439: Brickworks
- DU018-020479: Quay
- DU018-020201: Quay
- DU018-020152: Glasshouse
- DU018-020564: Quay
- DU018-020347: Church
- DU018-020325: Glass works
- DU018-053003: 16th/17th House
- DU018-020505: Sea Wall
- DU018-020501: Tide mill and mill pond

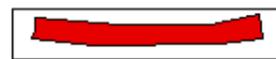
● RMP location

**Recorded Protected Structures**

- 8023: Coroner's Court
- 8022: Busaras
- 100: Connolly Station
- 4062: Inner Dock
- 3205: Georges Dock
- 2136: Harbourmaster pub
- 2135: CHQ building
- 5168: Former Excise building
- 2137: Scherzer swing bridge
- 5944: Scherzer swing bridge
- 5948: Former British Rail Hotel
- 5945: Scherzer swing bridge
- 5949: Walls, gates etc... to 5948
- 5947: The Wool Store
- 5951: CIE Goods Depot
- 5955: Business premises
- 5954: Business premises
- 5953: Facade
- 5950: The Point
- 5946: Quay walls and c.

▲ RPS location

**C1 route alignment**



Geographical Information Systems  
 Dublin City Council  
 Planning and Development Department  
 Planning and Development  
 11-12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Figure 2: Site location and RMP and RPS locations	
Connolly Station to the Point Depot	
Scale: 1:5,669	Date: 21/02/2023
Drawing No: 02E107	
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0 95 190 380 570 760 Meters





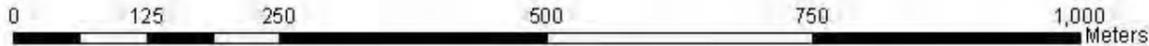
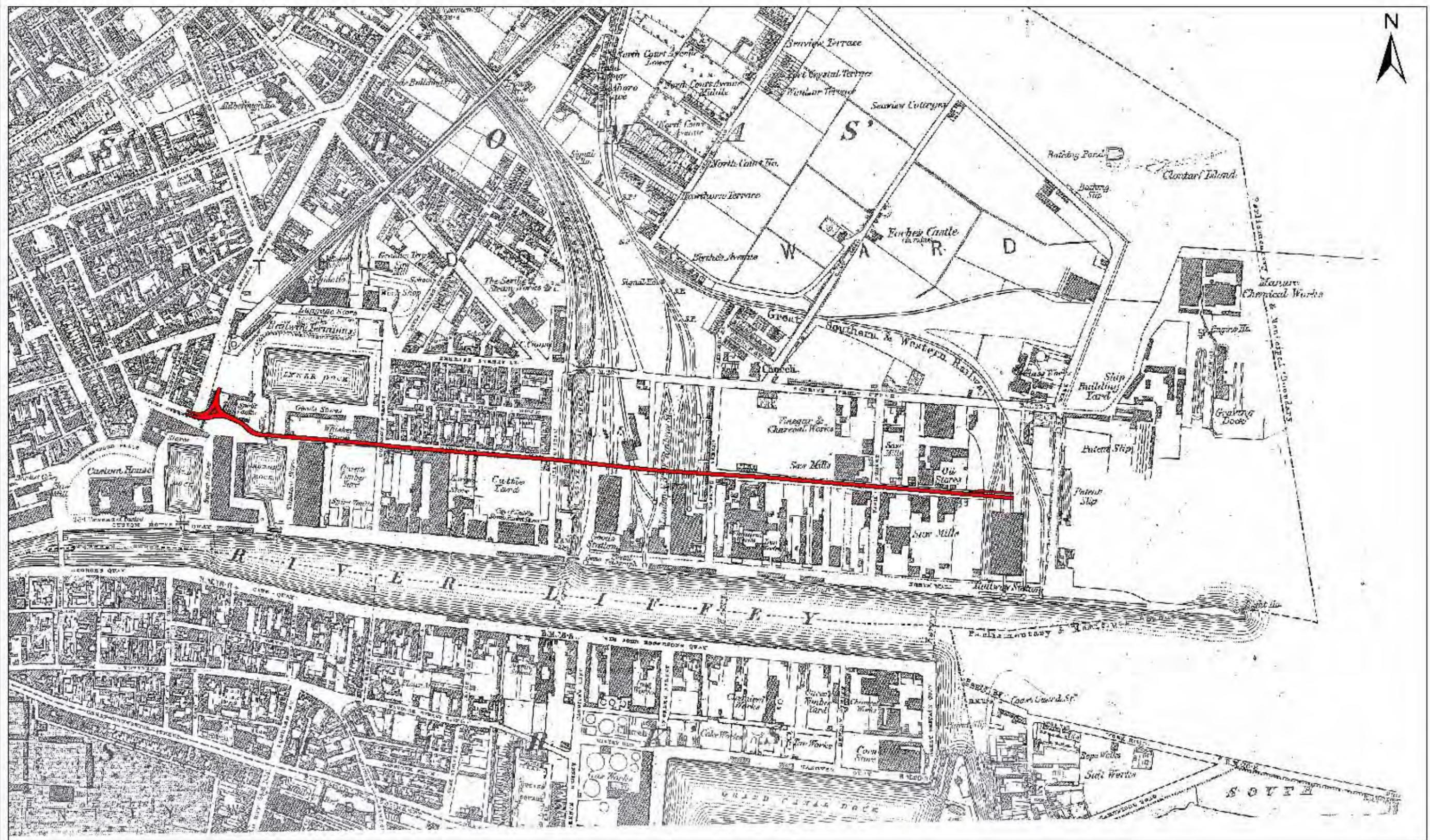
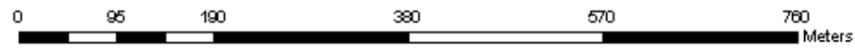
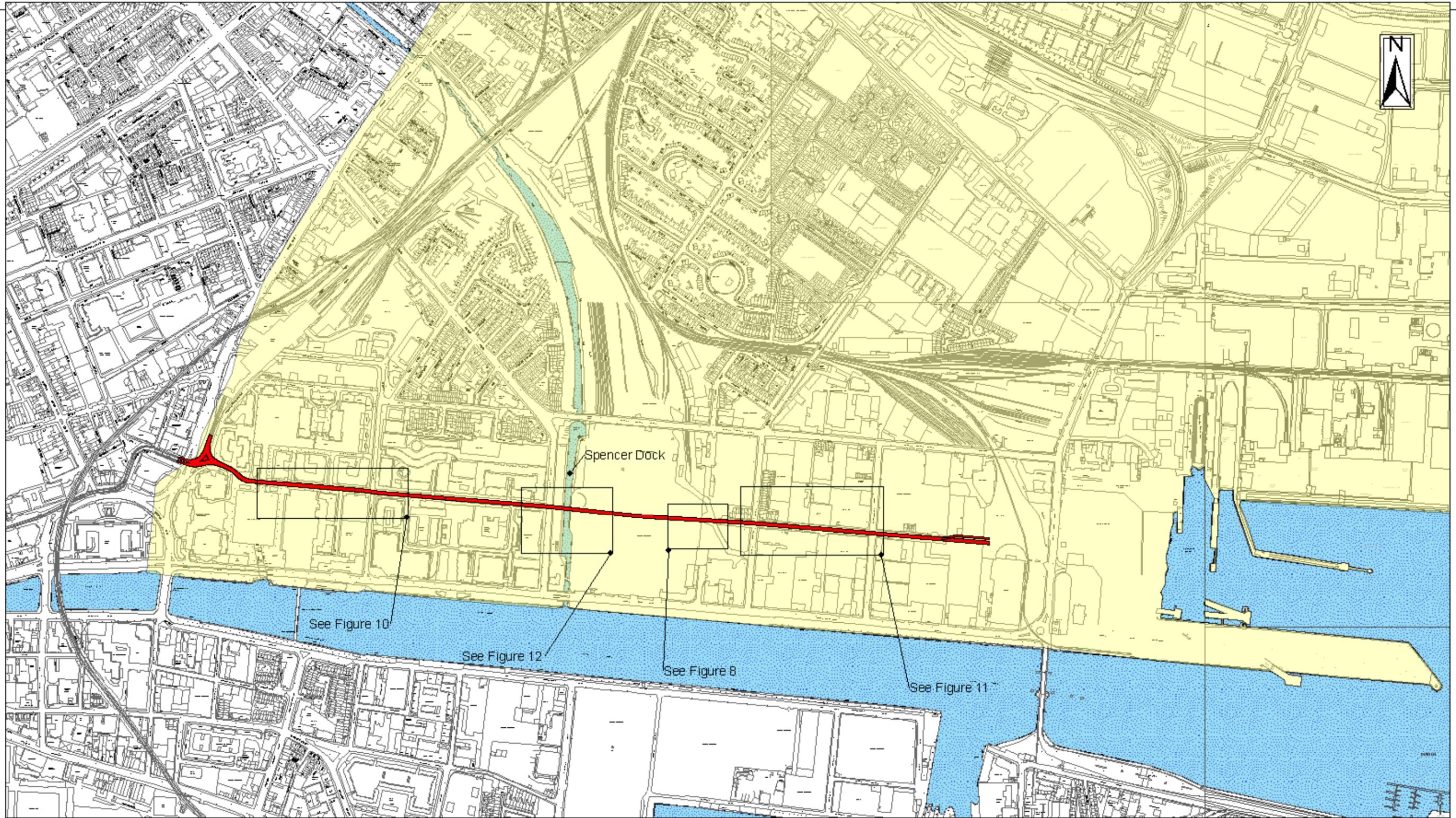


Figure 8. O1 route alignment shown on 1875 edition OS	
Canally Station to the Palm Depot	
EDN	2105.00
EDN	2105.00
SE 157	
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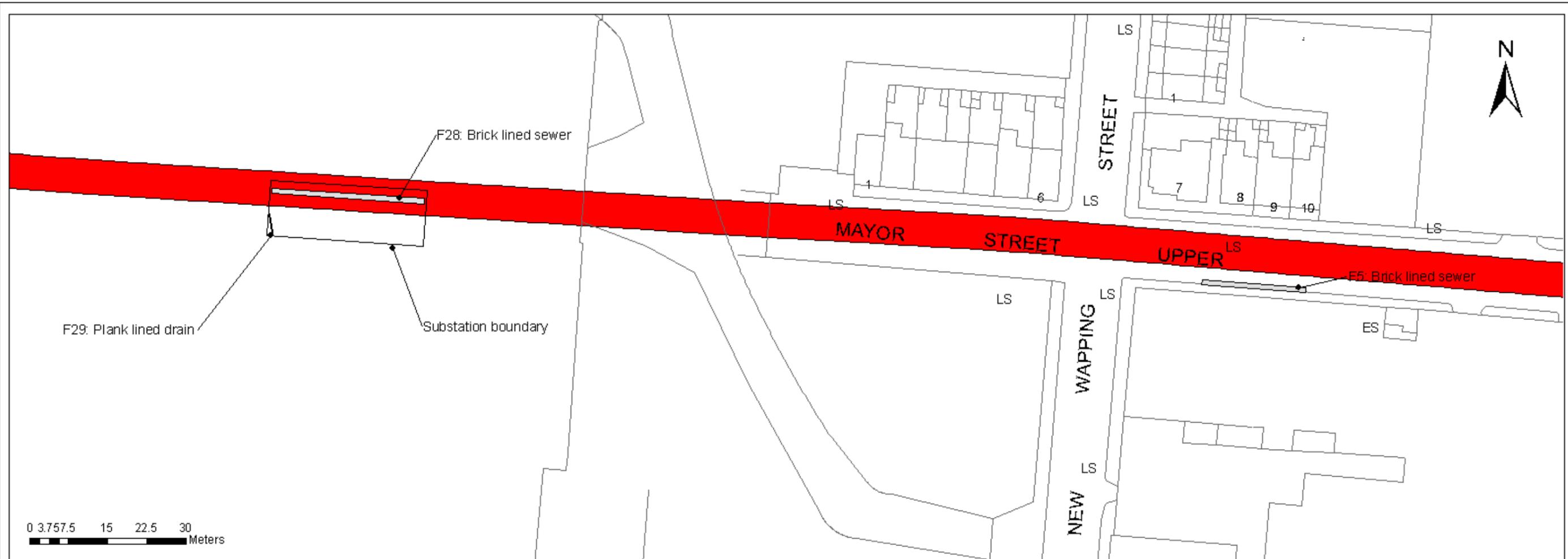
**Key**

Reclaimed land post 1730

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 100-100  
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 100-100  
 100-100

Figure 7: D1 route alignment overlain on OS 1:1000	
Canally Station to the Palm Depot	
10/03	21/03/05
D/E 157	
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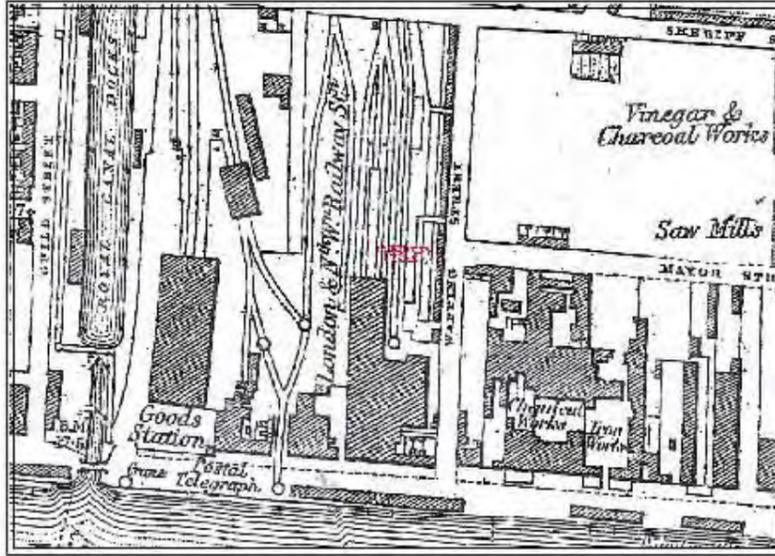
F29: Plank lined drain



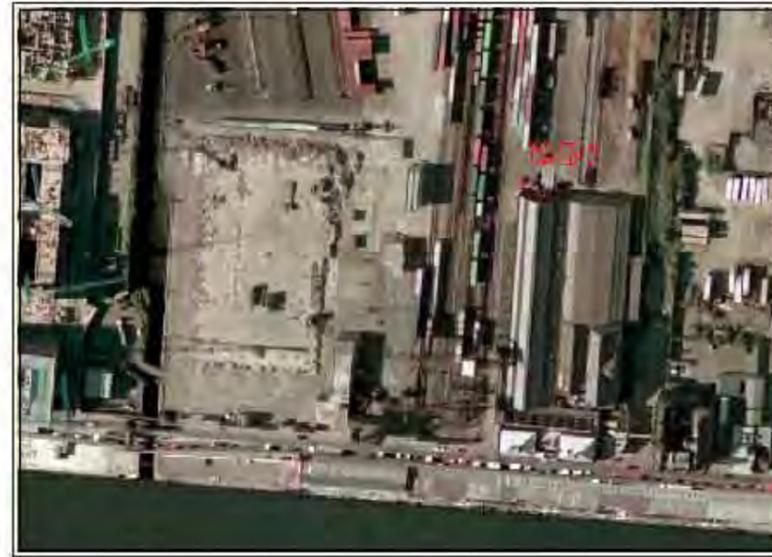
F28: Brick Lined sewer

Figure 8: Archaeological features uncovered at substation	
Canally Station to the Palm Depot Substation	
Scale	1:245
Date	21/05/08
Drawing No. 0/E157	
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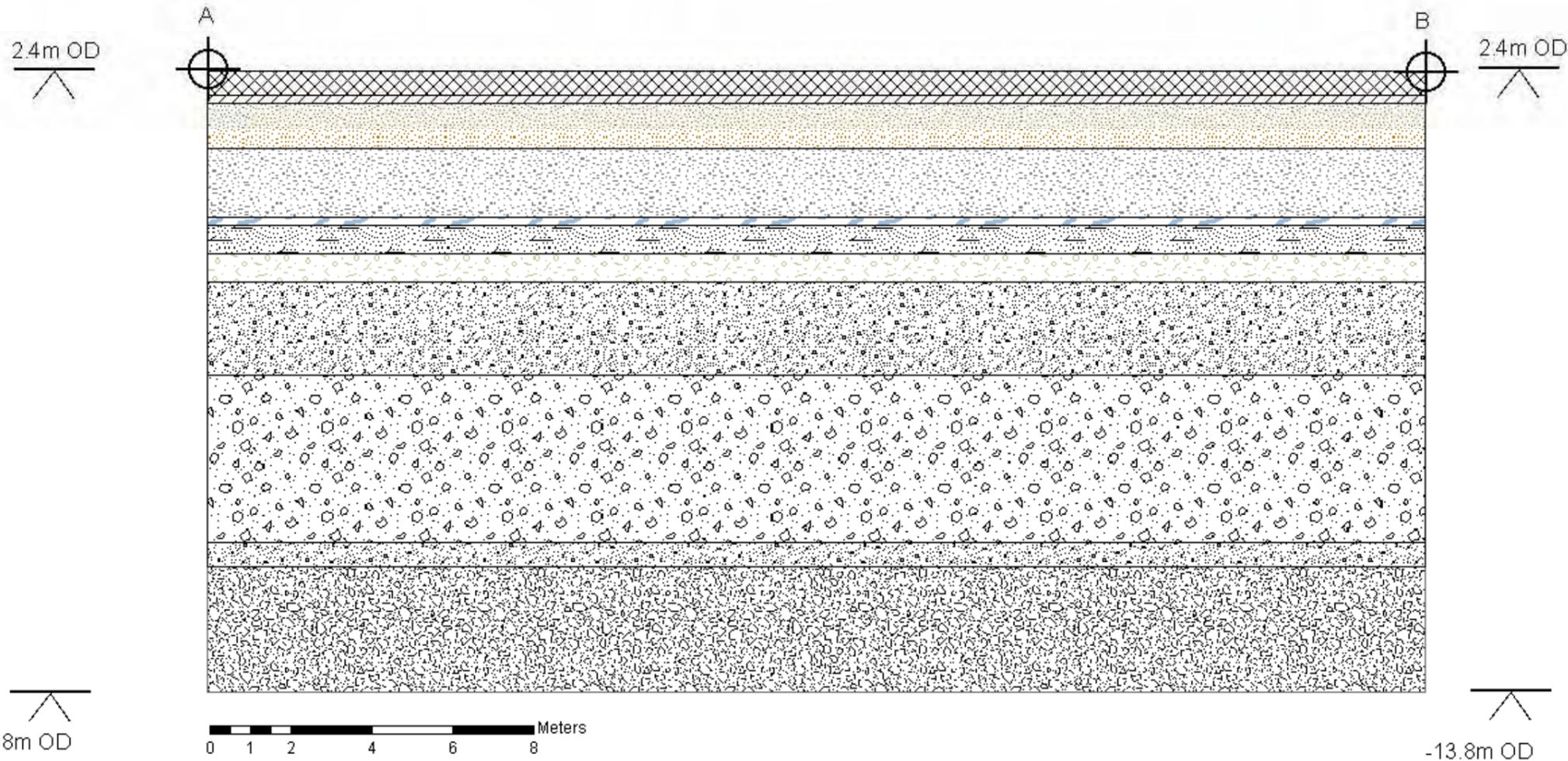
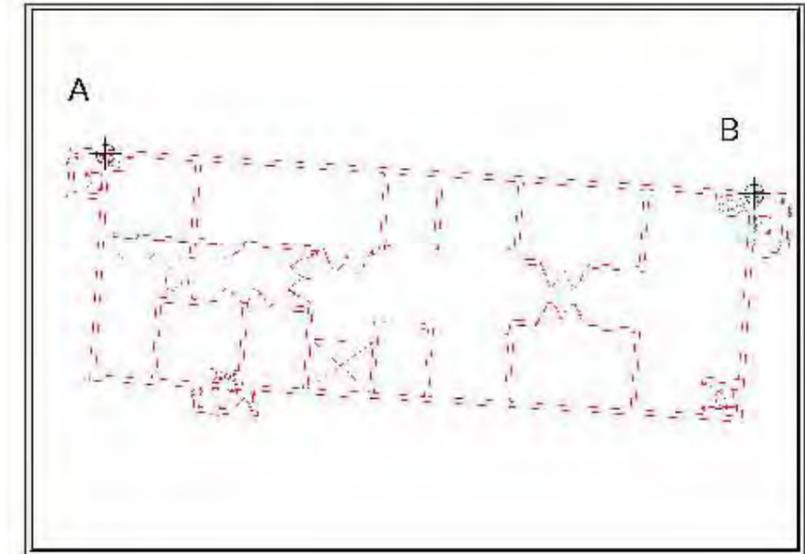
Substation location overlain on 1875 OS



Substation location on predevelopment aerial photograph



Section location on substation plan



**Stratigraphy at Substation**

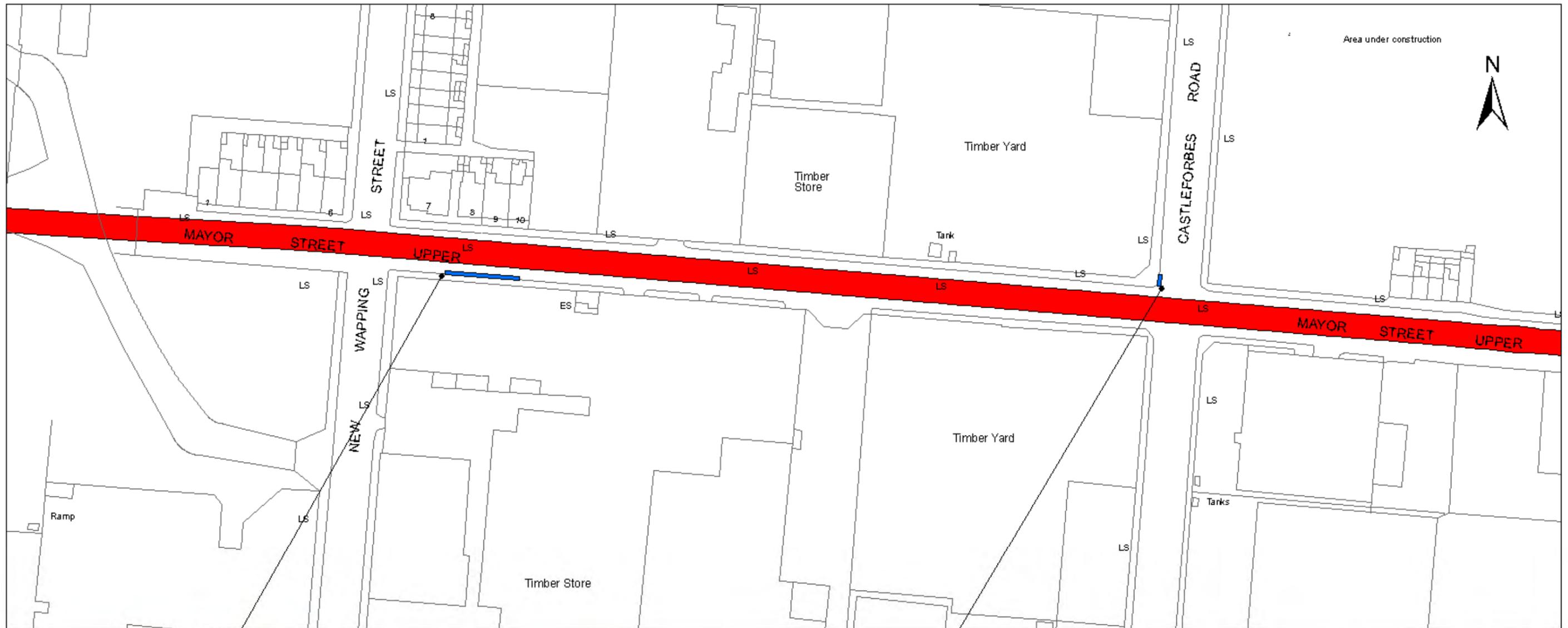
- F15 - Compacted hard core, made ground
- F16 - Brown gravelly clay, made ground
- F17 - Yellow fine sand, 18th C. reclamation material?
- F18 - Grey sandy silt/clay 18th C. reclamation material?
- F19 - Silt, easturine deposit
- F20 - Sandy silt, easturine deposit
- F21 - Coarse sand, easturine deposit
- F22 - Medium gravel, paleo-shore?
- F23 - Gravelly clay, glacial till?
- F24 - Medium gravel, glacial till?
- F25 - Gravelly clay, glacial till

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10/10/10

Figure 9: Stratigraphy of south facing section of substation	
Spencer Dock, Mayor Street Upper	
Scale:	1:131
Scale:	1:10000
Number of sheets:	07/167

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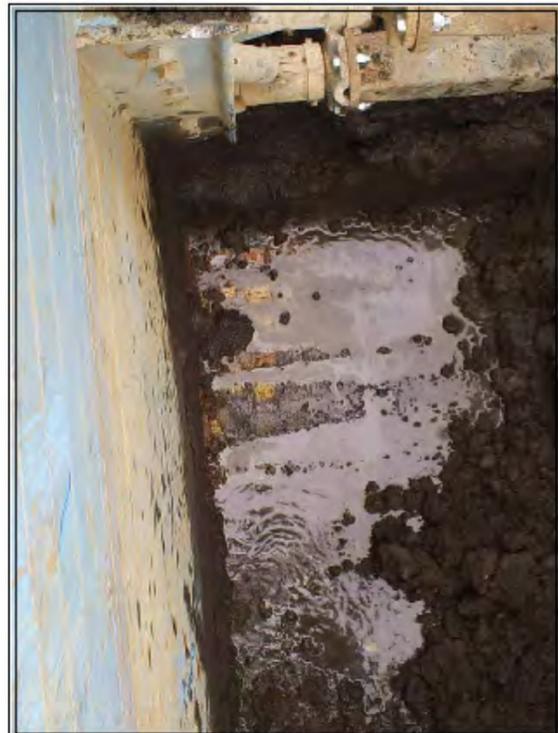


Area under construction



F5: Brick lined sewer

F14: Brick lined sewer



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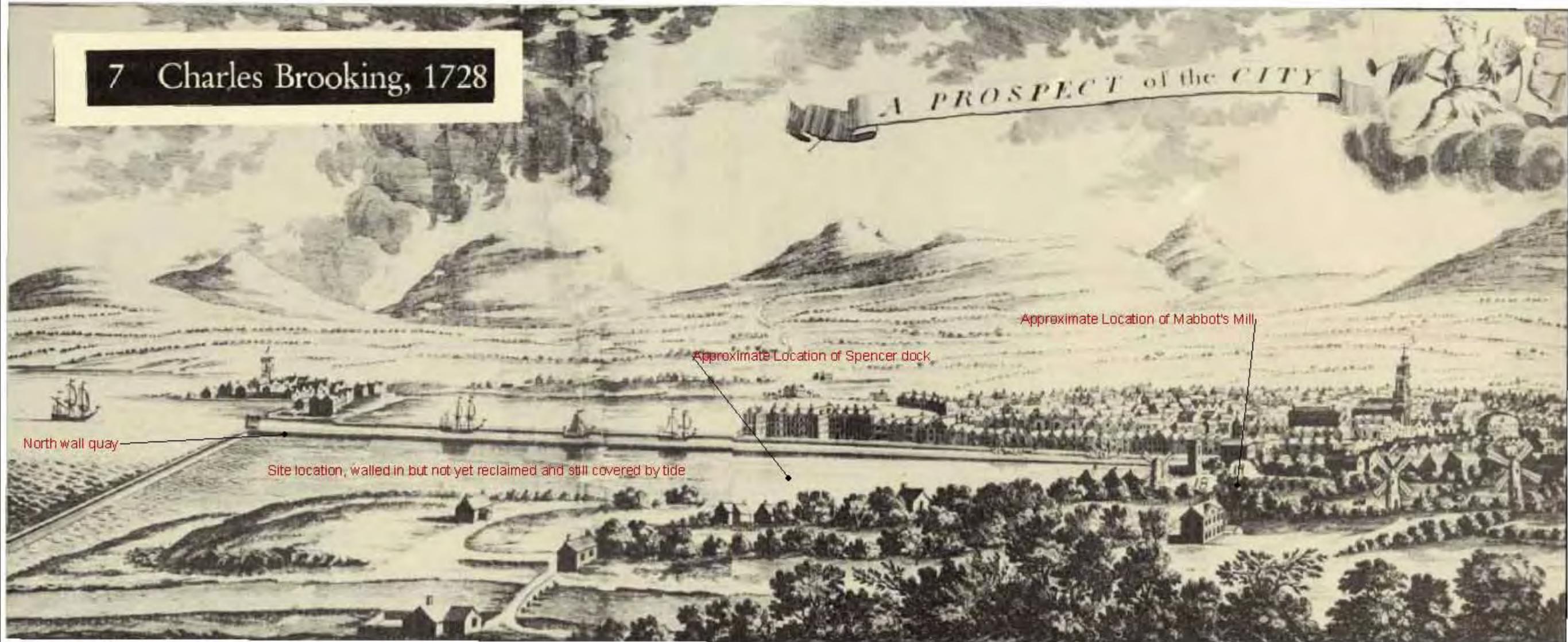
Figure 11: Archaeological features along Mayor Street Upper	
Connolly Station to the Point Depot	
Scale	1:1,025
Number	07E167

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7 Charles Brooking, 1728

A PROSPECT of the CITY



North wall quay

Site location, walled in but not yet reclaimed and still covered by tide

Approximate Location of Spencer dock

Approximate Location of Mabbot's Mill

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Geographic  
Information  
System  
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Standard  
Version 2.1  
Part 1  
Section 1

Plan: 1: Charles Brooking Map 1728	
Cannally S side to the Palm Depot S side on	
Scale	1:100,000
Projection	UTM
Datum: WGS 84	
Units: Meters	
Vertical Datum: Mean Sea Level	
Horizontal Accuracy: ± 1 meter	
Vertical Accuracy: ± 1 meter	
Date of Data Collection: 1728	
Date of Digitization: 2015	
Date of Publication: 2015	
Author: Environmental Protection Agency	
Reviewer: Environmental Protection Agency	
Editor: Environmental Protection Agency	
Publisher: Environmental Protection Agency	



Plate 3: Location of new Luas Bridge at Spencer Dock

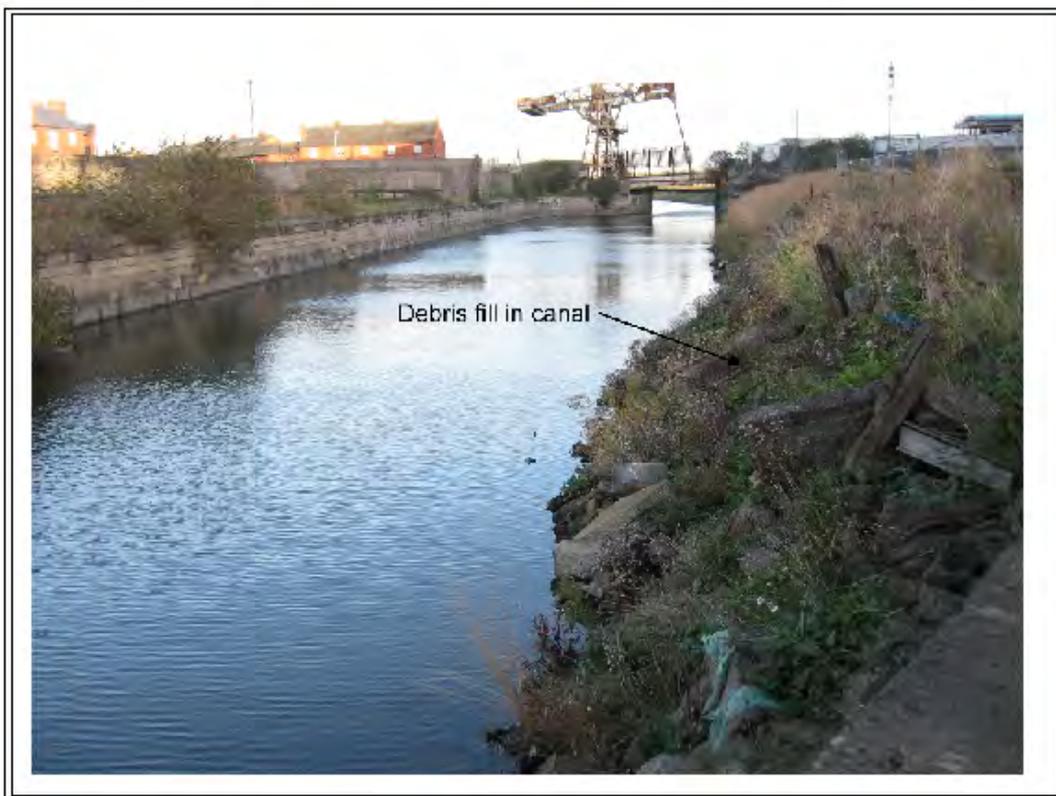
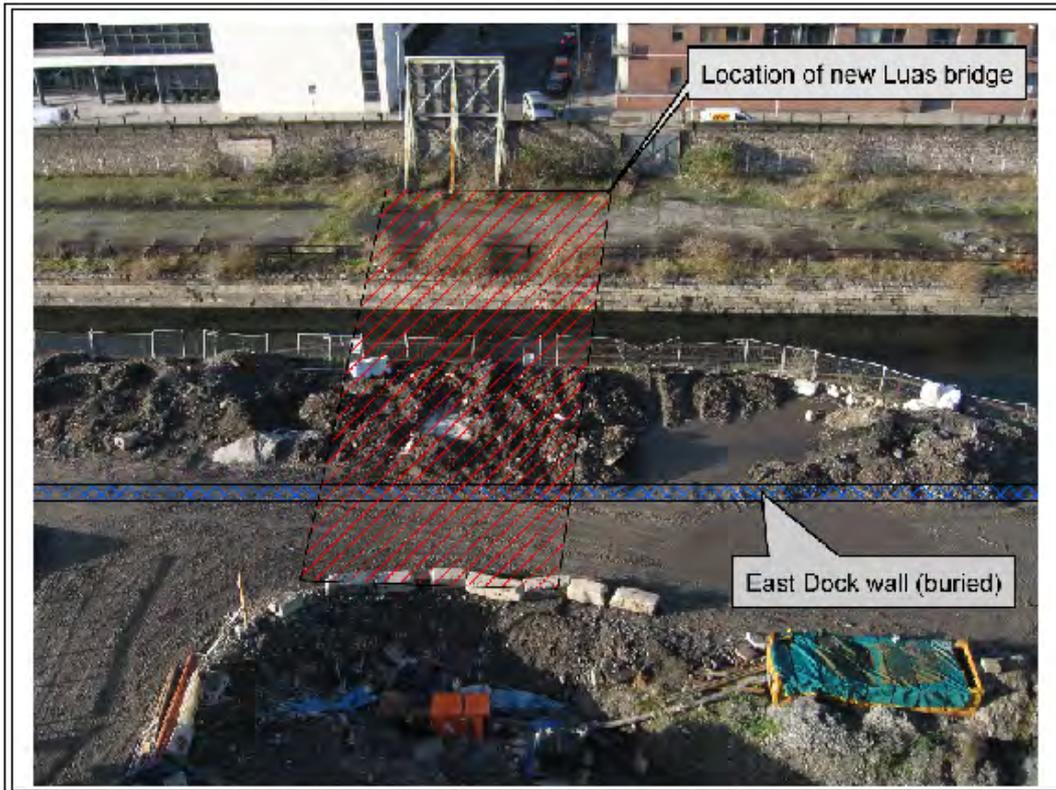


Plate 4: Example of material dumped in canal at Spencer Dock

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Explorer Licence No. 07E157
LOCATION: Connally Station to the Point
DRAWING TITLE: Plate 3: Spencer Dock, location of new Luas bridge Plate 4: Spencer Dock, example of material dumped in canal
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Plate 5



Plate 6

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<p><b>Excavation No.</b> 07E167</p>
<p><b>LOCATION</b> Connally Station to the Point</p>
<p><b>DRAWING TITLE</b>                  Plate 5: Spencer Dock ground penetrating radar survey for                  west bridge abutment                  Plate 6: Spencer Dock west abutment excavation</p>
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Plate 8: Detail of timber planking F26 at west abutment



Camera scale = 0.5m



Plate 9: Mooring hooks F27

<p>Geotechnical Archaeology Barrington Quay Dublin, Ireland Phone: +353 1 662 066 Fax: +353 1 662 068 www.gta.ie</p>
<p>Excavation No. <b>05E17</b></p>
<p>LOCATION <b>Cannally Station to the Point</b></p>
<p>Drawing Title <b>Plate 8: Detail of timber planking F26 at west abutment Plate 9: Mooring hooks F27</b></p>
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