

St Teresa's Gardens Donore Avenue Dublin 8 Archaeological Monitoring



GIACOMETTI

16/09/2019

19E0035

AP1824

DCC LAW 2475/18

archaeology plan
HERITAGE SOLUTIONS

SITE NAME

Phase A, St Teresa's Gardens Redevelopment, Donore Avenue, Dublin 8

CLIENT

Dublin City Council, Housing & Community Services, Civic Offices Wood Quay, Dublin 8

PLANNING

DCC LAW 2475/18

LICENCE

19E0035

PROJECT REF

AP1824

REPORT AUTHOR

Antoine Giacometti MA MIAI

DATE

16th September 2019

ARCHAEOLOGICAL TEAM and ACKNOWLEDGEMENTS

Antoine Giacometti	Director
Mark Kelly	Senior Supervisor
Philip Quilty	Assistant Supervisor
Ian Dunne	Site Assistant
Maggie Kobik	Site Assistant
Niall Garaghy	Initial monitoring
Mark Kelly	Stratigraphic report
Ian Dunne	Artefact report
Maggie Kobik	Timber report
Frank Myles	Archival research
Dervla Cotter & DCC	Funding for work and assistance

Table of Contents

1	Introduction	1
	Report summary	
	Site location	
	Development proposals	
	Archaeological background	
	Monitoring programme 14E0245	
	Archaeological potential	
2	Archaeological Results	5
	Abbey Stream	
	Tenter Water	
	The Oxmore Fields	
	Bernard Brown's Unusual Building	
	Hydraulic Ram	
	References	24
	Appendix 1 - stratigraphic report by Mark Kelly	
	Appendix 2 - artefact analysis by Ian Dunne	
	Appendix 3 - timber sheets by Maggie Kobik	

Section 1 Introduction

Report summary

A programme of archaeological monitoring was carried out for a residential development at St Teresa's Gardens, Donore Avenue, Dublin 8 in Summer 2019. The work is now complete and no further archaeological work is required for the Phase A development.

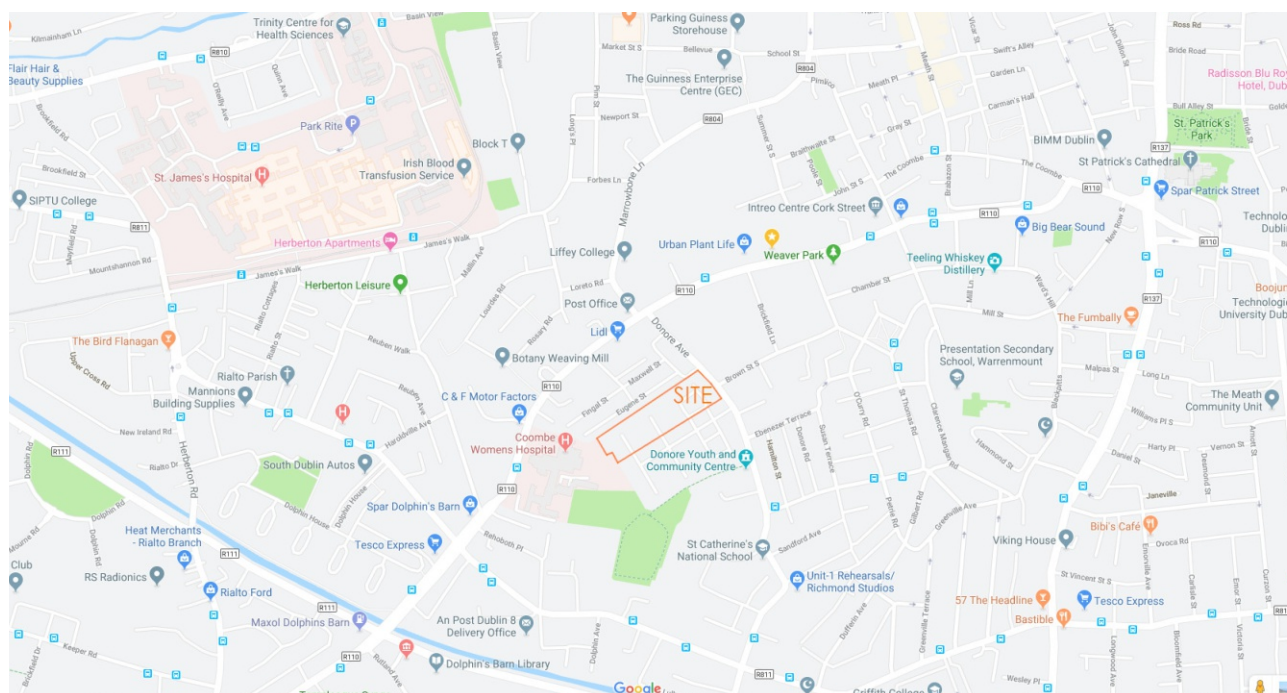
The primary archaeological interest of the site relates to the Poddle watercourses and branches, many of which historically ran through the site. One of the oldest branches, called the Abbey Stream (later 'Earl of Meath's Watercourse'), was not present in its expected location and must have been relocated to the site boundary in the mid-20th century. It certainly still exists at the edge of the site as it has been documented by Alan Hayden during the Cork Street realignment works.

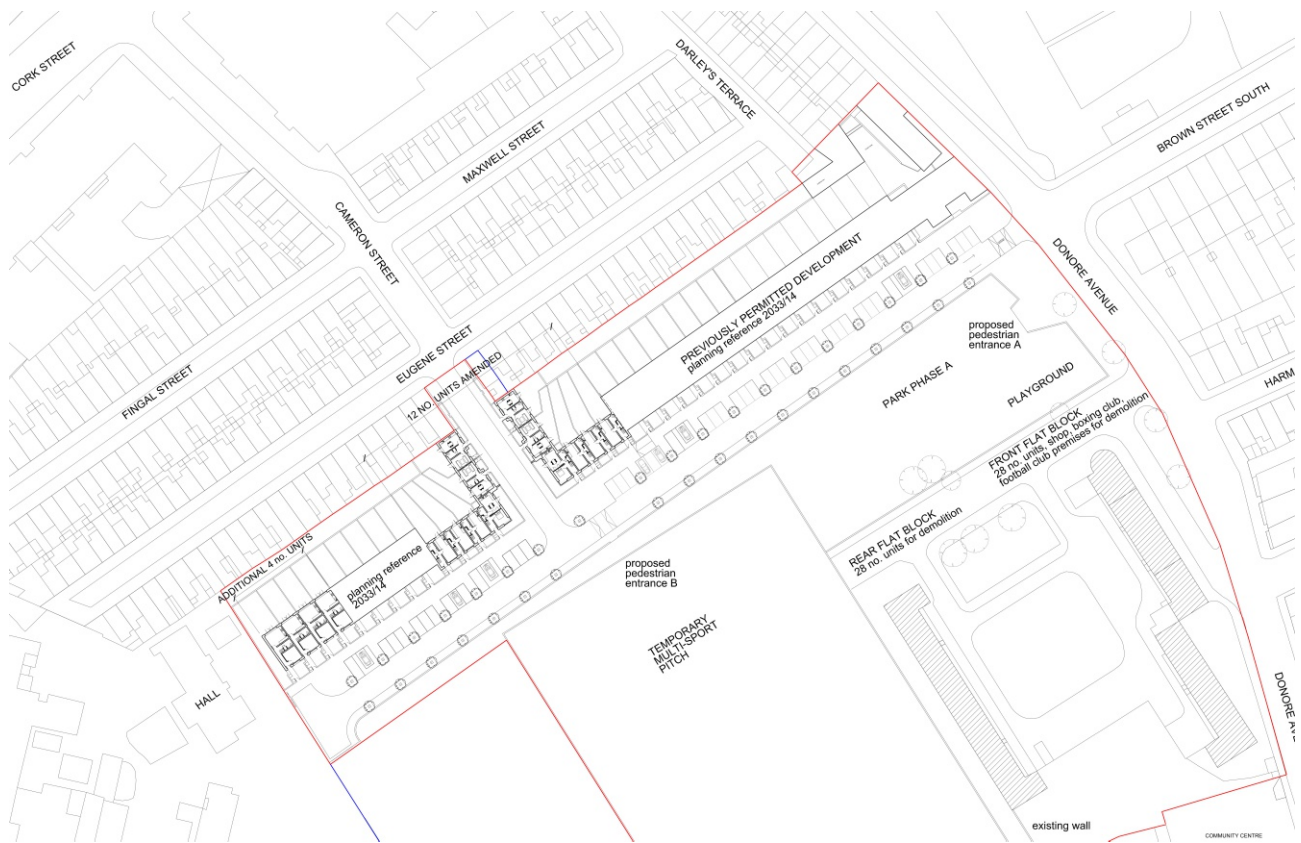
An unusual 18th century building, constructed

on lands that had previously been owned by Bernard Brown, was exposed during the works. Bernard Brown was a local property developer, and Brown Street opposite the site is probably named after him. Brown took a lease from the Earl of Meath in 1724 of the 'Oxmore Fields' (as Teresa's Gardens was then known). This building is marked on Wilson's 1798 map, and although the cartographic representation appears to indicate a watermill, the building was certainly a house by the 19th century. A domestic water system associated with the house, which may have included a 19th century hydraulic ram, was fully excavated.

As well as revealing material culture from the 18th and 19th centuries, early remains were also found relating to the previous use of the site for tanning and glue-making. The latter, described as 'Glewboiling', is documented on the site in 1708, prior to Mr. Brown taking possession.

Site location





Development proposals

Site location

The development site (called 'Phase A') is located within the northwestern part of the former St Teresa's Gardens complex on Donore Avenue, Dublin 8 and behind existing housing on Eugene Street, Dublin 8. Access to the site is from Donore Avenue. The site forms part of Dublin City Council's Regeneration Programme, and is included in lands identified by the Council as Strategic Development and Regeneration Area (SDRA) 12.

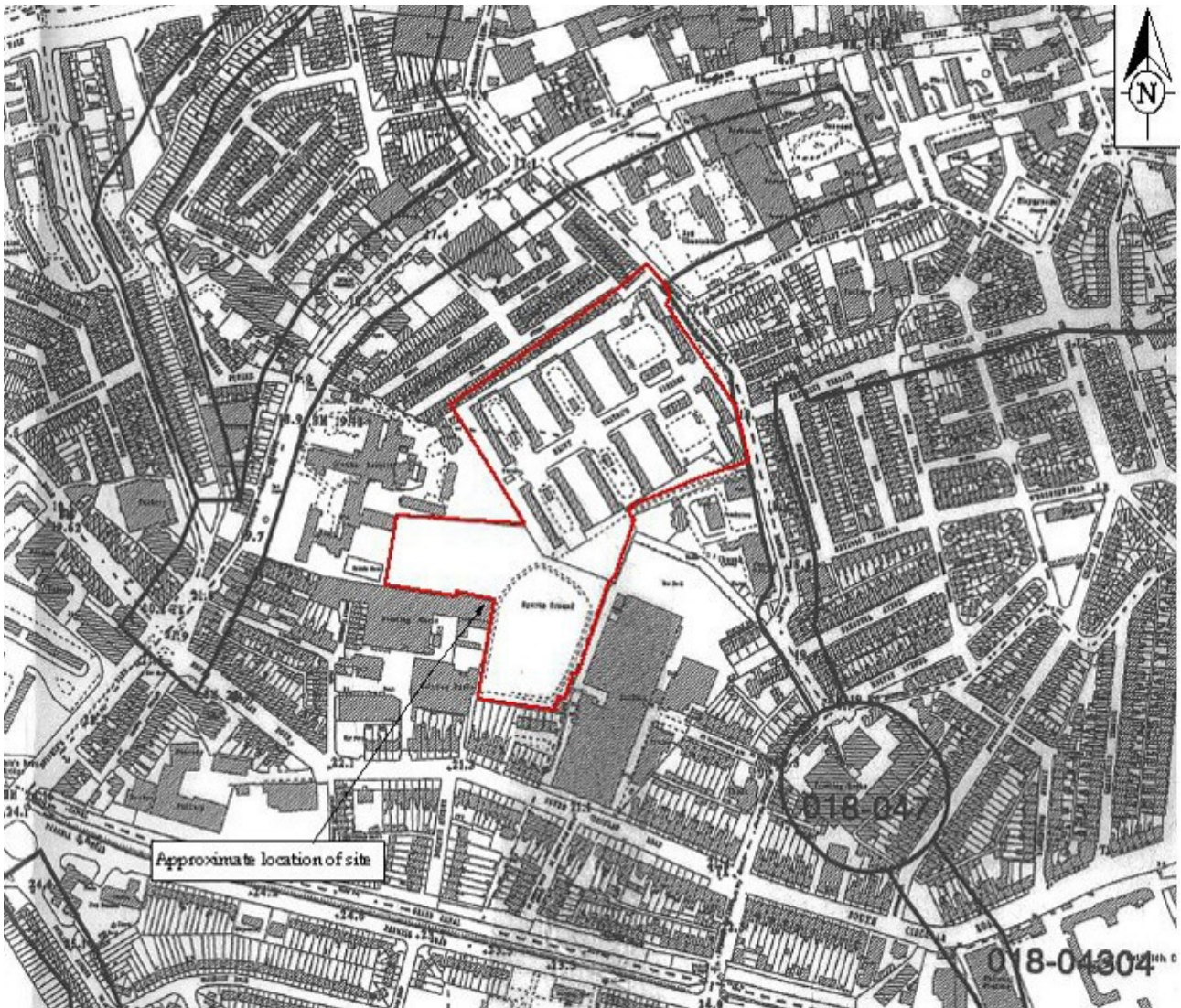
Development proposals

The development ('Phase A') of the development is for the construction of fifty-four residential units, comprising fifty apartments and four terraced houses, and a temporary grass multi-sport pitch, a park development and a new access road from Eugene Street.

Archaeological background

The present study area lies immediately outside the Zone of Archaeological Interest for Dublin City (DU018-020), although this zone includes Donore Avenue itself and abuts the northeastern edge of the site. Nine Recorded Monuments lie within 250m of the site, and one lies within it.

RMP DU018-04304 ('City Watercourse') runs through the site, although it is not marked as doing so on the RMP maps. This designation represents the part of the course of the twelfth/thirteenth century Abbey Stream, from the diversion of the Poddle near Mount Jerome Cemetery in Harold's Cross to Donore Avenue, although the paper archive for the RMP designates it the 'City Watercourse'. The lower part of the watercourse designated DU018-04304 (Donore Avenue, Ebenezer Terrace to O'Carolan Road) actually follows the course of the Tenter Water - a later canalisation of the lower



RMP Map

course of the Hangman's Stream (Sweeney 1991, 37) and the artificial channel along the western side of Donore Avenue which connected the Abbey Stream to the Tenter Water. It is uncertain why both the Abbey Stream and the Tenter Water are in the RMP files, considered the same watercourse, deriving as they do from very different episodes historically, and why both are considered under the umbrella of the City Watercourse. RMP DU018-020576 describes a surviving medieval section of the same City Watercourse/Abbey Stream at Dolphin's Barn identified by Hayden in 1993.

The files of the National Monuments Services regarding Dublin's medieval watercourses could do with a re-work. Nevertheless, the entire de-

velopment site was criss-crossed with medieval and post-medieval watercourses, including the Abbey Stream and Tenter Water, and various minor branches of these, and the entire complex of watercourses should be considered as Recorded Monuments.

The archaeological desktop assessment (Duffy & Giacometti 2013) set out the historical development of the site from the medieval period to modern times, and reconstructed the route of the medieval and post-medieval watercourses through the site. It also drew attention to an 18th century structure on the Tenter Water within the site, and suggested it may have originally been a watermill.

Monitoring programme 14E0245

Prior to the demolition of the St. Teresa's Gardens flats, monitoring of trial holes at the Phase A development site was undertaken by Giacometti under licence number 14E0245.

A pre-industrial layer of clay and organic material was identified at varying depths between 1.1m and 1.6m, over a sterile, compact grey layer of silt at varying depths between 1.2m and 2.05m, in two of the three trial pits. These were Trial Pit 1 in the western part of the site and Trial Pit 2 near the northern corner of the site. Trial Pit 3, directly behind the new access road to Eugene Street, uncovered a modern fill to a depth of 1.9m that acted as a foundation to the recently removed boundary wall. The organic clay and sterile silt deposits were thought to represent a medieval water channel (Giacometti 2014), presumably the earlier route of the Abbey Stream. This may be the case, however the route of the former medieval Abbey Stream was found to be heavily disturbed and infilled with 20th century rubble in 2019, and in light of the findings detailed in this report the water

channel identified in 2014 is probably a diversion of the Tenter Water.

This is the only previous archaeological work undertaken on the development site.

Archaeological potential

From the results of the desktop survey, the previous monitoring of trial holes and the field inspection, the area of the Phase A development was considered to have a moderate potential for the presence of archaeological features and deposits. Areas of higher potential were identified along the northwestern and northeastern boundaries owing to historic watercourse routes. The potential for the survival of sub-surface remains was considered to be greatly lessened by the degree of groundworks and development associated with the construction of St Teresa's Gardens flat complex in the 1950s.

Rocque's 1756 map of Dublin showing site location in orange



Section 2 Archaeological Results

Monitoring programme

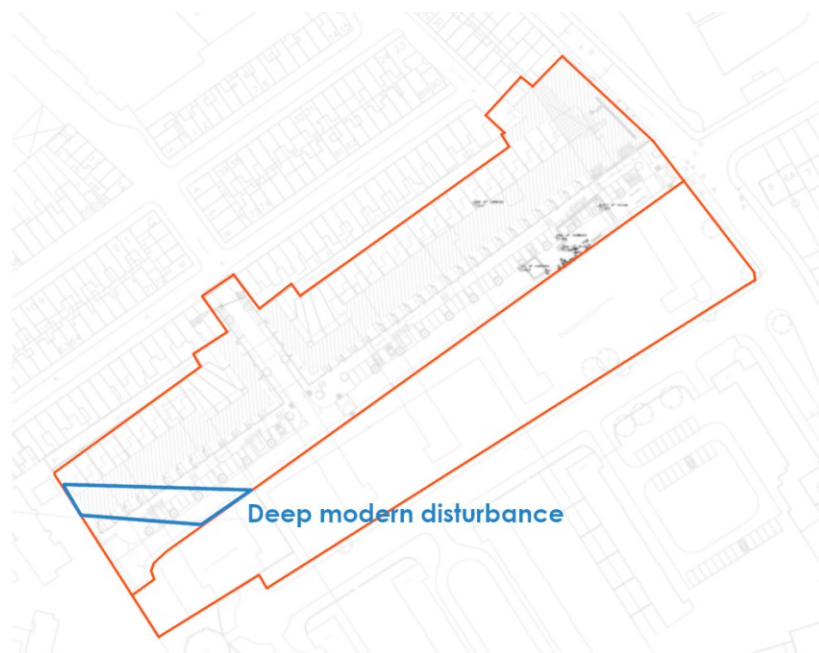
Following the recent demolition of the St Teresa Gardens flats, the entire development site was flat and covered in a loose layer of soil and occasional rubble with an extremely high frequency of modern, 20th century pottery sherds, plastic toys, chopped animal bone, glass bottles and other rubbish that remains from the flats. This ground level was at 19m OD.

A series of engineering test-holes were archaeologically monitored in December 2018 prior to the main phase of groundworks. These identified a layer of 19th century cinder waste used to build up the site, which was contaminated and needed to be removed separately from the rest of the soil on the site. The test-trenches identified 18th, 19th and 20th century material to a depth of 1.1m to 1.6m below existing ground level. Below this was subsoil comprising a beige-yellow natural clay overlain with water-deposited fine blue-grey silt.

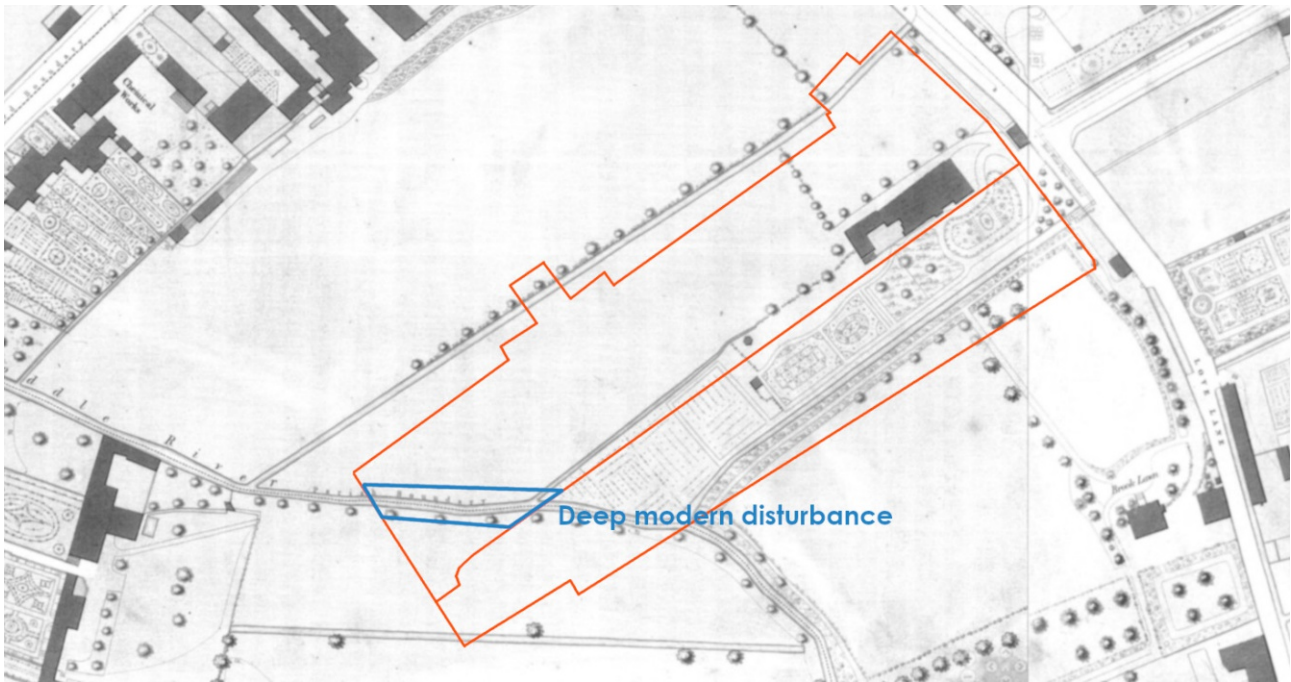
The main phase of groundworks started in February 2019, and comprised the general reduction of the entire area of the site down to 1.5m in depth. This was approximately the level of the natural subsoil. The ground reduction was archaeologically monitored. In the south-west of the site archaeological material (of 18th and 19th century date) was encountered at c. 1m in depth and groundworks were halted to allow for archaeological hand excavation by a team of archaeologists.

Abbey Stream

The route of the medieval Abbey Stream was identified at the northern end of the site. This is a Recorded Monument (RMP DU018-04304 & DU018-020576). It was represented on the site by a deep trench c. 4m wide and 1.9m deep running east-west with irregular sides and an irregular base. The trench was filled with mid-20th century demolition rubble, modern brick and large blocks of concrete. Below the



Site location showing area of deep modern disturbance, corresponding with the route of the historic Abbey Stream (see previous page and next page)



Ordnance Survey map 1847 showing location of deep modern disturbance in relation to Abbey Stream (here marked Poddle River)

modern fill were the disturbed remains of water-deposited silts mixed with small unsorted stones and redeposited natural subsoil. This modern feature matched the historic route of the Abbey Stream as shown on the 19th century Ordnance Survey and earlier maps, and must represent the destruction and backfilling of the Abbey Stream in the mid-20th century, and its re-routing to the edges of the St Teresa's Gardens site during the construction of the flats.

The Abbey Stream was also identified directly to the west and southeast of St Teresa's Gardens. To the west, it was identified at Cork Street/Emerald Terrace in 1993, and excavated in 2001 (Hayden 2001, 2; 2002, 25-6). Here it was marked by a mid-20th century concrete culvert which truncated the remains of earlier watercourses of medieval and early post-medieval date, one with timber revetment and one with stone lining. Less conclusive evidence was also identified to the south east at the former Player Wills factory on the South Circular Road (Walsh 2006). In both cases, the evidence for the Abbey Stream was situated exactly where the cartographic sources indicated it should be,

and in both cases there was a mid-20th century phase of the watercourse was suggested.

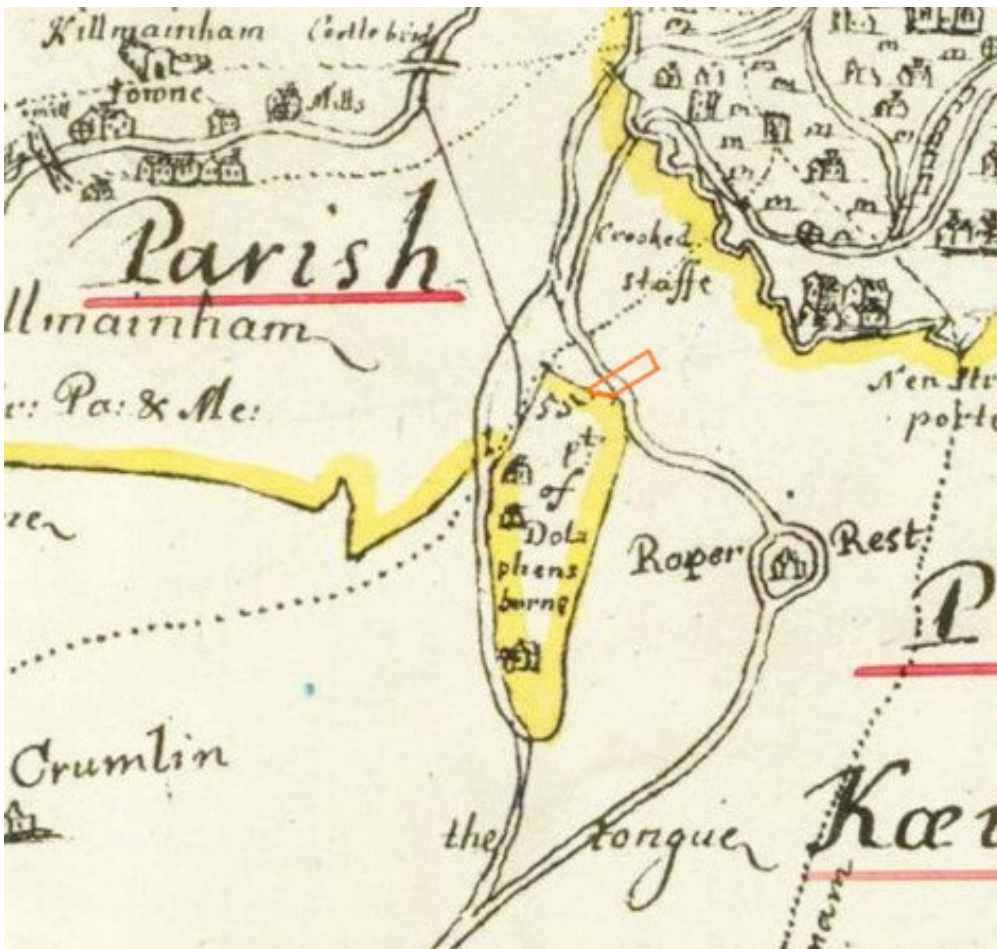
The archaeological evidence from the current site, combined with evidence from the two adjacent sites outlined above, suggests that in all likelihood the Abbey Stream was re-routed within the St. Teresa's Gardens site in the 1940s or 1950s during the construction of the flats. The course of the rerouting is not clear, but it is likely to take the form of a concrete pipe and be located at the boundaries of the St Teresa's Gardens lands, and connect to the medieval course of the Abbey Stream at the west and southeast site boundaries. Sweeney (1991, 37) notes that at some point, perhaps in the mid-20th century, the Abbey Stream water was diverted into the Tenter Water in the vicinity of St. Teresa's Church. Sweeney says this left the Hangman's Stream as the sole water source for the remainder of the Abbey Stream course. Sweeney's reference to a mid-20th century re-routing of the Abbey Stream is likely to refer to the archaeological findings described herein.

The City Watercourse and Abbey Stream water-

courses were constructed in the late 12th and/or middle of the thirteenth century to augment the water needs of the growing medieval city of Dublin (Berry 1902, 39; Jackson 1959, 34). The first stage of this project combined the Dodder and the Poddle (Jackson 1959, 33). The second stage involved the division of the combined Dodder/Poddle at Mount Argus (ibid., 34). From here the westerly course (which is called here the City Watercourse) carried one-third of the combined volume northwards through Dolphin's Barn at the point known as 'the Back of the Pipes' to the City Basin (Ronan 1927, 39). This branch does not pass through the St Teresa's Gardens site.

The remaining two-thirds of the river followed an easterly course from The Tongue, along the original course of the Poddle to Harold's Cross, where it was again divided at Mount Jerome (Ronan 1927, 39-40). Here the course of the Poddle was diverted westwards, through the

Liberty of Donore - and directly through the St Teresa's Gardens site - in a circular loop that closely followed the boundary of the Liberty, before rejoining the original course of the Poddle at New Row (Jackson 1959, 34). This is the branch referred to in this report as the Abbey Stream. Although originally considered to be the natural course of the Poddle, this looping course was identified as an artificial channel by the historian Myles Ronan (Ronan 1927, 40). Throughout medieval times this watercourse was not identified as the Poddle but was known as the Abbey Millstream (Simpson 1997, 23). Following the Dissolution, however, it was referred to by the more secular 'Earl of Meath's Watercourse', after the new proprietors (Ronan 1927, 44). It is only in more recent times that this watercourse was once again referred to as the Poddle, notably on the Ordnance Survey map of 1876. Franc Myles surmises that the original route of the Poddle probably dried up following the medieval works (Myles 2005, 21),



Down Survey, Barony of Newcastle & Uppercross, Co. Dublin, c. 1656, showing approximate location of site in orange. The Abbey Stream is depicted running through the site. The other branch of the Poddle - the City Watercourse - is depicted to the west, branching off the Abbey Stream at 'the tongue'. Cork Street/Dolphin's Barn is shown as a dotted line.



Map of watercourses surrounding the site, from Giacometti & Duffy 2013

although its appearance on the eighteenth century maps suggests the course still carried some water at that time. It may have dried up in the earlier nineteenth century, however, as it appears to have been unknown by the early twentieth century when Ronan rediscovered it as ‘an ancient stream’ on an older estate map (Ronan 1927, 40).

It is generally considered that the initial works were those carried out by the city for the provision of water, with the Abbey works being a later intervention following the success of the city’s venture (Ronan 1927, 42). However, Jackson (1959) and Simpson (1997) provide a

convincing argument for the converse: that the Abbey works preceded those of the city. This is primarily based on examination of an Inquisition that occurred in 1259, when The Abbey of St Thomas the Martyr took a case against the city that was largely concerned with the watercourses. The inquisition clearly refers to the Abbey as owners of the Dodder water contained in the amalgamated Dodder/Poddle - a situation that could only exist if the original works to transfer water from the Dodder to the Poddle had been exclusively the undertaking of the Abbey (Jackson 1959, 36). Moreover, Jackson queried the division of the water at The Tongue with just one-third going to the city,

suggesting the Abbey had the greater rights to the water (one of the complaints by the Abbey in 1259 was that the city had altered this to draw more than their agreed share), even though the original inquiry had stipulated the city would be carrying the full cost of the venture (Jackson 1959, 35).

The alternative scenario put forth by Jackson, puts the construction of the Balrothery works and the Abbey Millstream as being of early thirteenth century date, undertaken to create greater power for the Abbey's mills and to allow them full control of such mills. Up to this, their mills on the Poddle at Blackpitts were subject to tithes to St. Patrick's (Jackson 1959, 39), a situation undesirable to St. Thomas's. Simpson, however, places the diversion of the Abbey Stream even earlier as pre-dating 1185, when there is a reference to the Abbey's Woodenmill, located on the Abbey Stream (Simpson 1997, 24). If this was the case, works on the diverted course at Mt. Jerome must have begun soon after the Abbey acquired the Donore lands in 1178.

By diverting part of the Poddle at Mount Jerome, the new millstream was entirely within the boundary of the Abbey lands, although it followed the line of this boundary: this would have allowed it to take in the greatest route available, providing water for the entire liberty, while also acting as a visible sign of the limits of the liberty (Jackson 1959, 38; Ronan 1927, 43). Following this the transfer of water from the Dodder was necessary to counter the decreased flow of the Poddle from its splitting at Mount Jerome (Jackson 1959, 39).

Although initially under the control of the Abbey, the works on the Dodder and primary control of the watercourses passed to the city at some point in the fifteenth century (Jackson 1959, 40). During the seventeenth century, much of the course of the Abbey Stream was culverted, as it had become increasingly polluted in built-up areas (Simpson 1997, 32) and remnants of brick, stone and timber culverts were uncovered during excavations at Cork Street/Emerald Square (Hayden 2002). It seems likely that such culverting was confined to the more urban districts, and map evidence suggests that the watercourse remained open in other areas.

In the nineteenth century portions of the culvert collapsed during flood conditions and in the twentieth century it was eventually encased in a concrete pipe over much of its course (Simpson 1997, 33; Hayden 2002).

The Tenter Water

The historic route of the Tenter Water skirted the southern edge of the site, but was not identified as the groundworks did not excavate deep enough in this location (it was not in the upper 500mm). Although (Ronan 1927, 44) identified this as an artificial watercourse drawn off the Abbey Stream, Sweeney (1991, 37) identifies it as the continuation of a natural stream that rises in the higher ground close to Hangman's Lane/Dark Lane (now Sundrive Road). From here the Hangman's Stream flows northeastwards to meet the original Poddle at New Row. The natural course of the Hangman's Stream was interrupted by the course of the Abbey Stream at the southeastern limits of St Teresa's Gardens.

To counteract this, and possibly to increase water supply to the Double Mills near Warrenmount, a channel was diverted northeastwards off the Abbey Stream just downstream of the confluence with the Hangman's Stream, operated by a sluice known locally in more recent times as 'Roaring Meg' (ibid). The diverted channel continued northeastwards to Donore Avenue, where it turned southwards before turning eastwards and continuing along the original streamcourse to Warrenmount, albeit in a canalised channel.

This latter part of the watercourse was known at the Tenter Water, as its course carried it through the Tenter Fields to the south of Brown Street and Chamber Street (ibid). Although a natural stream, the depiction of the Hangman's Stream on Wilson's map of 1798 suggests some straightening of the course may have occurred upstream of its convergence with the Abbey Stream, although this cannot be certain. In any case, no evidence for the likely date of this stretch of the Tenter Water was identified during the excavation, and its earliest cartographic depiction is on Rocque's map of 1756.

The Oxmore Fields

In the 18th and 19th century the site formed part of a land parcel known as the Oxmore Fields. These lay between the Abbey Stream and Donor Avenue, and their 19th century extent is depicted on Armstrong's map of 1835.

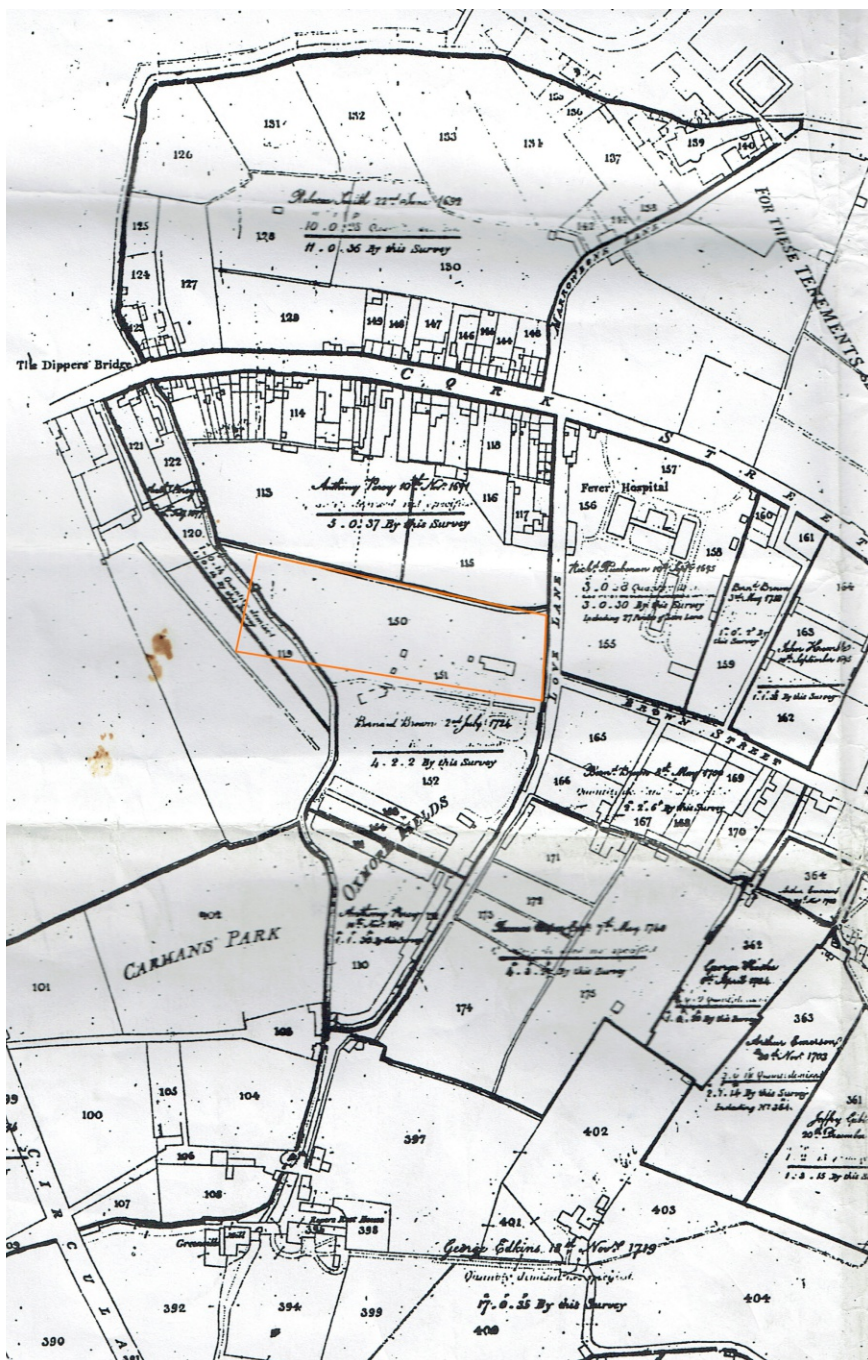
Dublin's Deed Registry holds two leases mentioning the Oxmore Fields. The first is from 2nd April 1708 (Book 1, page 193, deed 118) 'James Rickson of Ballyntier Co. Dublin &

Thomas Barton of Marrowbone Lane, City of Dublin, Glewboiler. Piece of field called Oxmore leading from Dublin to Dolphins Barn Situate Lying and Being in the Manor and Liberty of Thomas Court and Donore. For lives of Henry Percy Esq., Robert Percyhis brother & William Ward, Brewer. Rent of one peppercorn for dwelling on property.'

The second is dated 3rd August 1708 (Book 1, page 190, deed 116) 'Thomas Barton of Marrowbone Lane, City of Dublin, Glewboiler of

the one part & James Rickson of Ballyntier Co. Dublin of the other. Mtg pmt 162 pounds. For lives (unmentioned) by virtue of a lease from Henry PERCY Esq. Piece of field called Oxmore leading from Dublin to Dolphins Barn Situate Lying and Being in the Manor and Liberty of Thomas Court and Donore.'

'Glewboiling' seems to have been the primary trade at the Oxmore fields. This refers to the boiling up of animal remains, usually the by-products of tanning, to produce glue. The excavation identified a number of horn cores in the fill of an 18th century drain (see below) which are likely to be residual remains of 'Glewboiling'. It is likely that glewboiling ceased on the archaeological site once Brown moved in from the 1720s, but it may have continued to the south.



Armstrong's map of 1835, showing the Oxmore Fields and Bernard Brown's lease of the norther end of the fields from 1724.

Bernard Brown's Unusual Building

Bernard Brown is documented as leasing the northern two-thirds of 'Oxmore Fields' from the Earl of Meath on 2 July 1724, renewable for ever for £7.0.0 per annum. The location of this lease is depicted on Armstrong's map of 1835, and the land Brown leased corresponds approximately to the site boundary.

Bernard Brown appears to have been successful property owner at the turn of the 18th century and, based to his associations with Quaker businessmen and tenants, he may have been a Quaker. In 1686-8 he is recorded as entering claims in the houses of Parliament in Chichester House, seeking penalties on a number of estates (*A List of the Claims as They are Entred with the*

Trustees at Chichester House, Vol. 3). In 1706 he and the Earl of Meath co-leased twenty-three houses on Meath Street, Cole's Alley, Elboy Lane and Marrowbone Lane to prominent Quaker wool merchant Anthony Sharp (*Quaker Records, Dublin: Abstracts of Wills*, Will 1706). He leased land for life to Thomas Bell 'in Meath Street and Duncombes Lane alias Garden Lane, in liberty of Thomas Court, Co. Dublin', on which four houses were built (*ibid*, Will 1710). He also leased land to Samuel Braithwaite 'in Cloathworkers Square (Weaver's Close), Summers Lane in Liberty of Thomas Court and Donore, held by lives renewable for ever' (*ibid*, Will 1727). Brown also owned three houses in Cook Street, one plot of land in Hanover Square for which he was to be paid £6, and a house in Skinner Row. (*ibid*). He had business

1798 Map of Dublin by Wilson, showing unusual building, initially interpreted as a watermill prior to excavation





Wall foundations of the 18th century building

associations with with prominent Quaker linen draper and property owner James Fade, and for a time he owned the Pellican on Winetavern Street, which was notable for the announcement of Queen Anne's War against France in 1702 being 'Printed by F. Dickson, over against the Pellican in Wine-tavern-street' (*The Dublin Intelligence*).

A building is depicted on Brown's land on Wilson's 1798 map of Dublin. On this map the building is not labelled, however its large size and location next to the Tenter Water strongly suggested - prior to the excavation - that it might have been a watermill. Later maps from 1847 and 1864 show the building as a residence called Brookfield. Since the building is not marked on Rocque's map it is unlikely that Bernard Brown was involved in its construction

- he is likely to have died before it was built in the late 18th century.

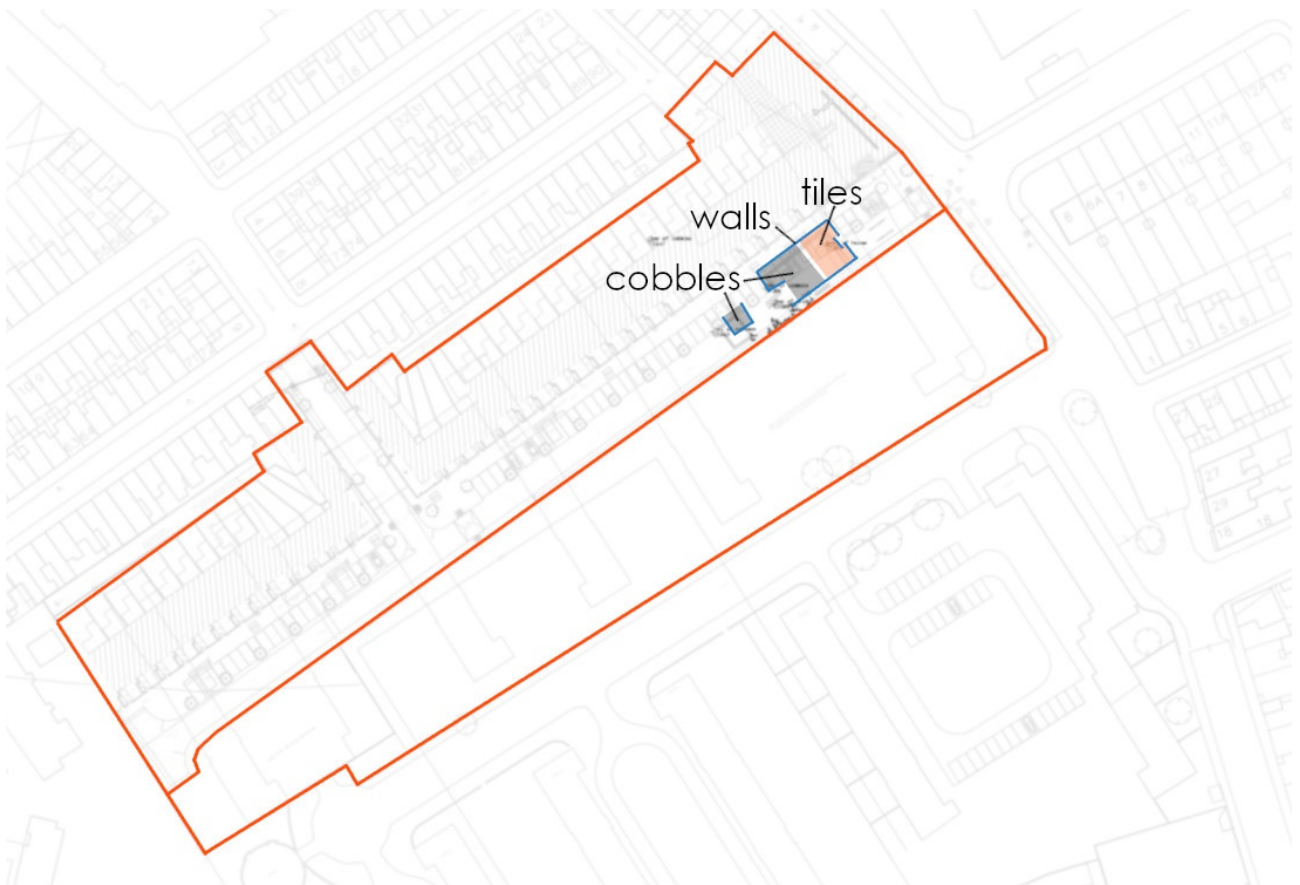
The archaeological remains of this building (F025) comprised the remains of 500mm wide masonry wall foundations, demolished to half-basement floor level (at a level of 17.377m) with occasional use of red brick particularly in upper courses where these survived, constructed using a lime mortar. This extended over an area measuring c. 9m wide and 17m long. A tiled floor (of 220mm-230mm square unglazed red earthenware tiles, laid on a thick bedding layer of lime mortar and roof slate) surfaced the front of the half-basement. A door and threshold opening to the west provided access to the half-basement level, presumably from a stairs running down from the front of the house, of which only the lowest masonry step



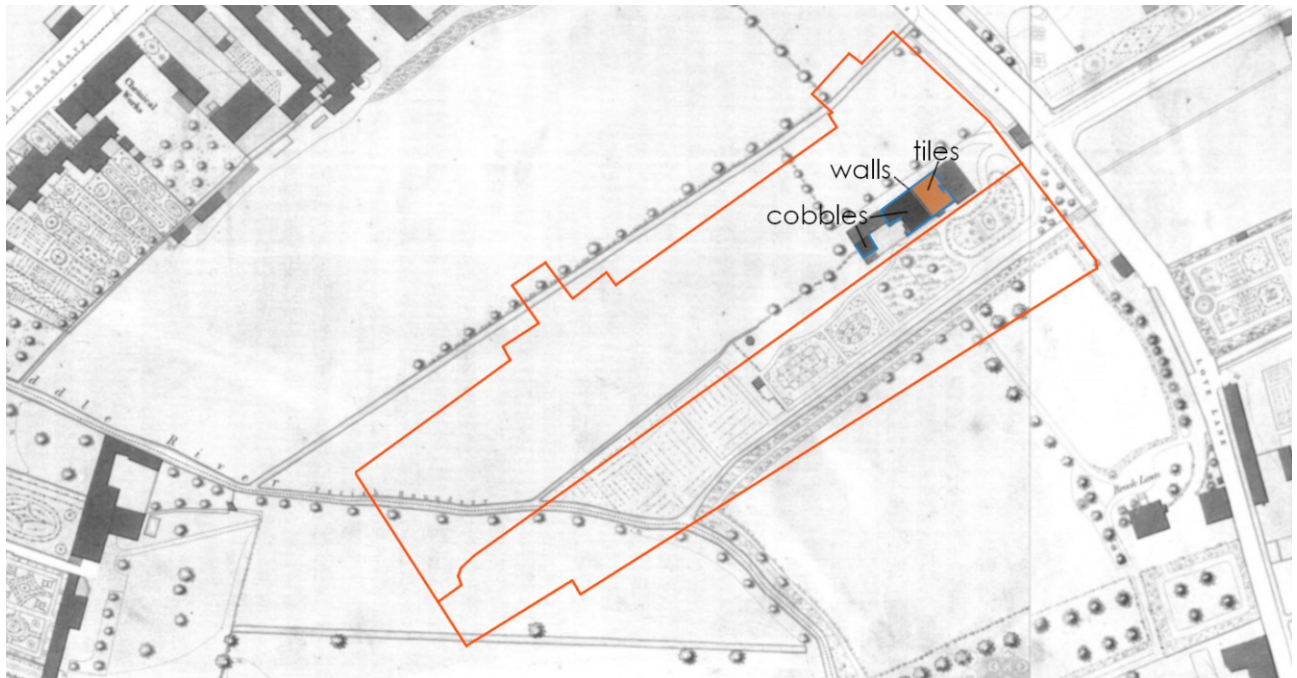
Cobbled floor of half-basement and walls of 18th century building

Tiled floor of half-basement of 18th century building





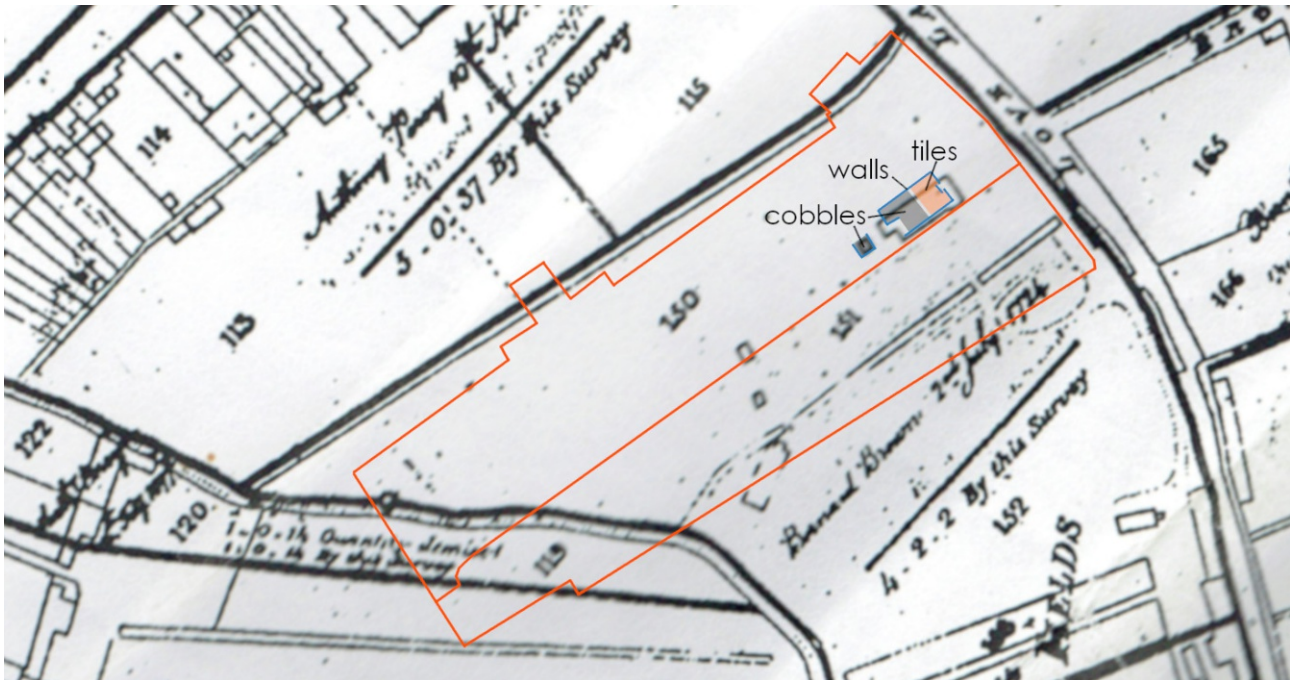
Plan of archaeological remains of 18th century building, above, and below superimposed on 1847 OS Map



survived. The wall foundations continued c. 300mm below half-basement floor level and sat on a bed of crumbly lime mortar, and they were characterised by being of extremely low quality construction. The doorway opening into the

basement measured 1.2m in width.

The rear part of the basement, to the east, was surfaced in cobbles (F022) at a level of 17.447m OD to 17.516m OD. It is possible that these



Archaeological remains of 18th century building superimposed on 1835 Armstrong map, showing close correlation

cobbles post-date the building and that they belong to an early 20th century yard marked on the 1910 OS map, however they are at the same level as the tiled floor. Further wall foundations were identified to the southwest, where they formed a 5m by 5m rear return, through the basement seems only to have extended in the central wide section of the house and the narrower L-shaped rear was probably single story.

A series of east-west running drains (F020, F023, F024) ran below the basement. A centrally located drain (F023) ran E-W beneath the cobbled surface (F022) and the western end of the house (F025) before turning north for a distance of 6.36m under the northern external wall. A diagonal drain (F024) running 6m NE-SW was discovered towards the eastern end of the house, and was filled with deposits containing a large number of cow horns. As noted above, these may be residual waste from 'glew-boiling' which took place on the site prior to the 1720s.

A stone-lined well (F021) was located in the basement. The well was of dry stone construction with an external diameter of 1.7m and sealed by several large timbers.

The front of the building did not survive in any

way. The current street level of Donore Avenue is 17.75-18m OD, which is only slightly lower (c. 500mm) than the half-basement, so the foundations to the front of the building must have been extremely shallow.

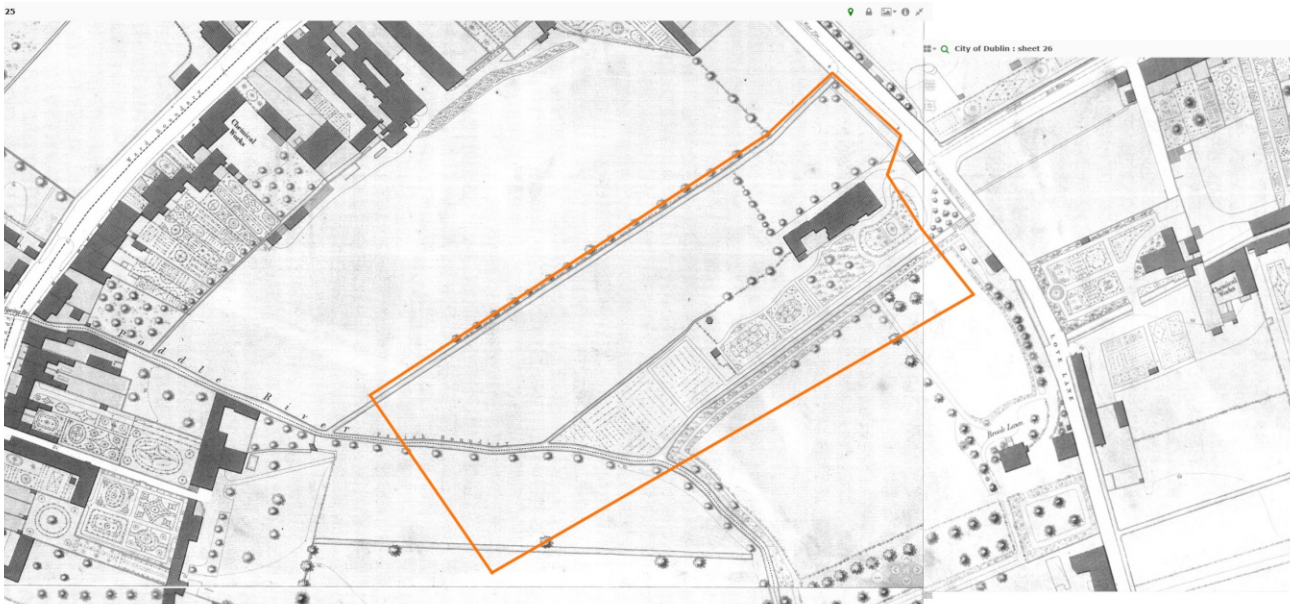
There is no archaeological indication that this late 18th century building - which was in existence from at least 1798 but is not depicted on Rocque's 1756 map - ever functioned as a watermill. There is a possible watercourse running alongside fed by the Abbey Stream (see following section) but it is not a millrace or milltail, and no mill-related features were identified. On its earliest cartographic depiction (Wilson's 1798 map) the building is shown straddling a diverted course of the Tenter Water running alongside Donore Avenue which strongly implies a water mill function, however the entire front part of the structure was not encountered during the excavation, meaning this could not be verified.

The architecture of the building would be exceptional for a purpose-built residence. It measured c. 12m wide and 40m long (based on the 1847 OS map). Despite its very large size, the building's wall foundations are relatively flimsy (albeit only the basement level survived) and there are no foundations for chimneys as one would expect in a domestic residence of

this scale. Furthermore, the cobbled basement level (assuming it is contemporary with the tiles) is anomalous in an 18th century high-status residential building, which would usually have been paved or tiled at this time except in coal cellars, unlike earlier periods where cobbling was more prevalent in service quarters (e.g. Rathfarnham Castle, where the 17th century cobbled basement was retiled and repaved in the early 18th century). The irregular basement is also unusual, as it only extends below half the structure, either indicating a large non-basemented later extension to the front or a specialised non-standard design. The most likely interpretation of this building is as a specialised non-domestic

building relating to some industry taking place in the Oxmore Fields - either a water mill, or for textile production, 'glew boiling', tanning, or similar, which also fulfilled some administrative or office role. An institutional function is also possible.

In any case, the building was certainly used as a residence by the 1860s, as it is depicted as a large house called 'Brookfield' with landscaped gardens. The gardens also appear on the 1847 OS map so it was probably a residence at that date too. It was probably converted to a residence in the 19th century, or perhaps the front part of the building was always quasi-residential.



1847 OS map above, and 1864 OS map below



The hydraulic ram

The late 18th century building was serviced with a relatively sophisticated water supply system from an outdoor yard. Water was channelled along a ditched watercourse from the Abbey Stream, some 100m to the southeast, and then pumped upwards by means of a pump. Two pumps are marked here on the 1864 OS map.

The earliest phase of the feature comprised the water-channel from the Abbey Stream (F014) which terminated in a rectangular stone-lined pit (F003, F009). This was associated with large timber pipes. Finds from the fills of the stone structure included sherds of debased Scratch Blue stoneware, North Devon gravel-tempered and gravel free ware and a rim sherd from a boot-style glass demijohn, suggesting a date of late 18th century. The top of the cistern was truncated at 16.90m OD but its base was at 16.35m, which is 1.5m below current street level



Phase 1 cistern: Mid ex. facing east. Section face (Section # 1). Showing F003, F009, F005

Phase 1 cistern: Mid ex. facing south. Showing the extent of stone structure (F012), and the upper fill (F003) and basal fill (F009)





Above, Phase 2 pump or hydraulic ram: Mid ex. Facing South. Both barrels and pipe (F008). Fills: F003 to the east & F004 to the west. Below, excavating the phase 2 pump

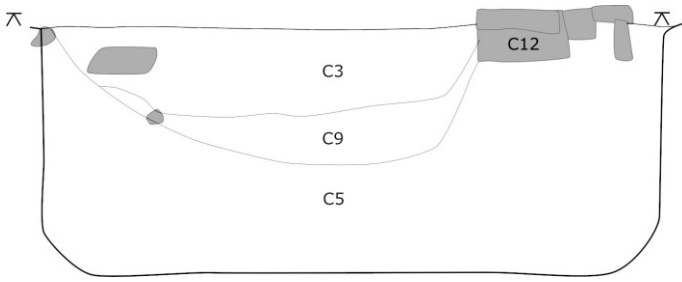
- which can be presumed to be approximately ground level in the late 18th century. It also lay 500mm below the half basement-floor level of the adjacent building (though the top of the stone lining of the cistern sat at the same level as the half-basement). This feature was probably a simple cistern to hold water. The timber pipes (none of which were in situ from this phase) are likely to have formed a manual water-pump system similar to the timber pumps from 18th century contexts identified at Newmarket Square (Frazer 02E1692) and the Timberyard Cork Street (Giacometti 06E710) nearby, designed to bring the water up from the sunken cistern to the level of the yard above.

The second phase of the water pump and cistern was very different. The stone-lined cistern appears to have been partially demolished and the wooden pipes were removed and reused as supports. A new set of timber pipes (or reused older pipes) were laid along the watercourse towards the Abbey Stream, where



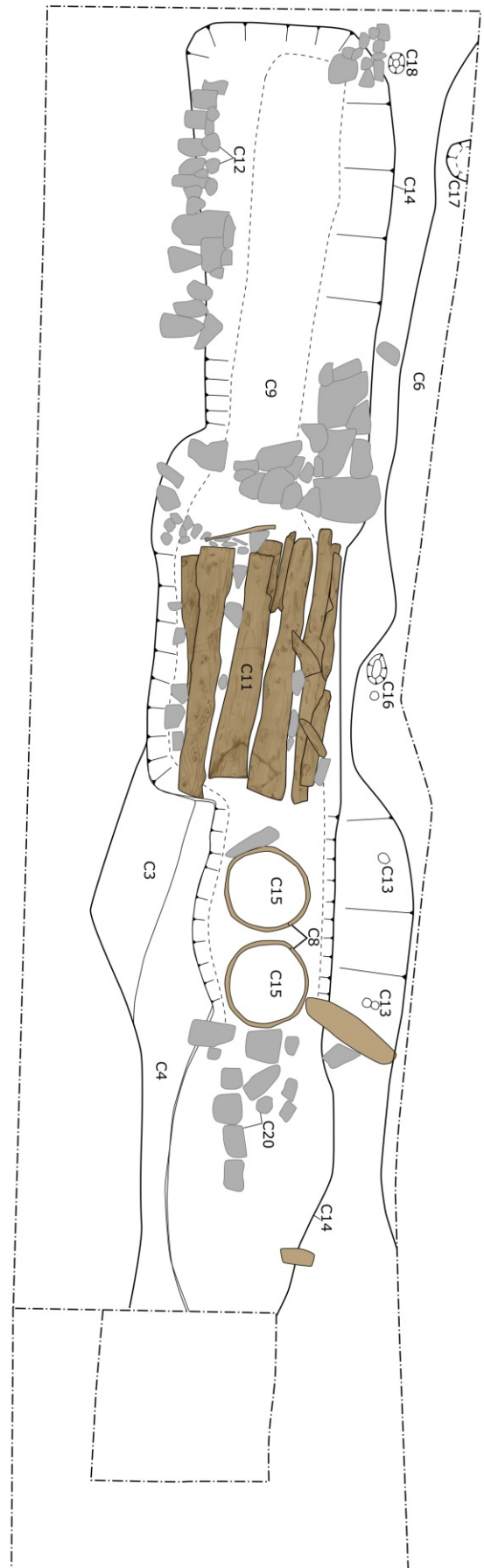


Overview of excavations, with Phase 1 cistern in foreground and Phase 2 pump or hydraulic ram in background

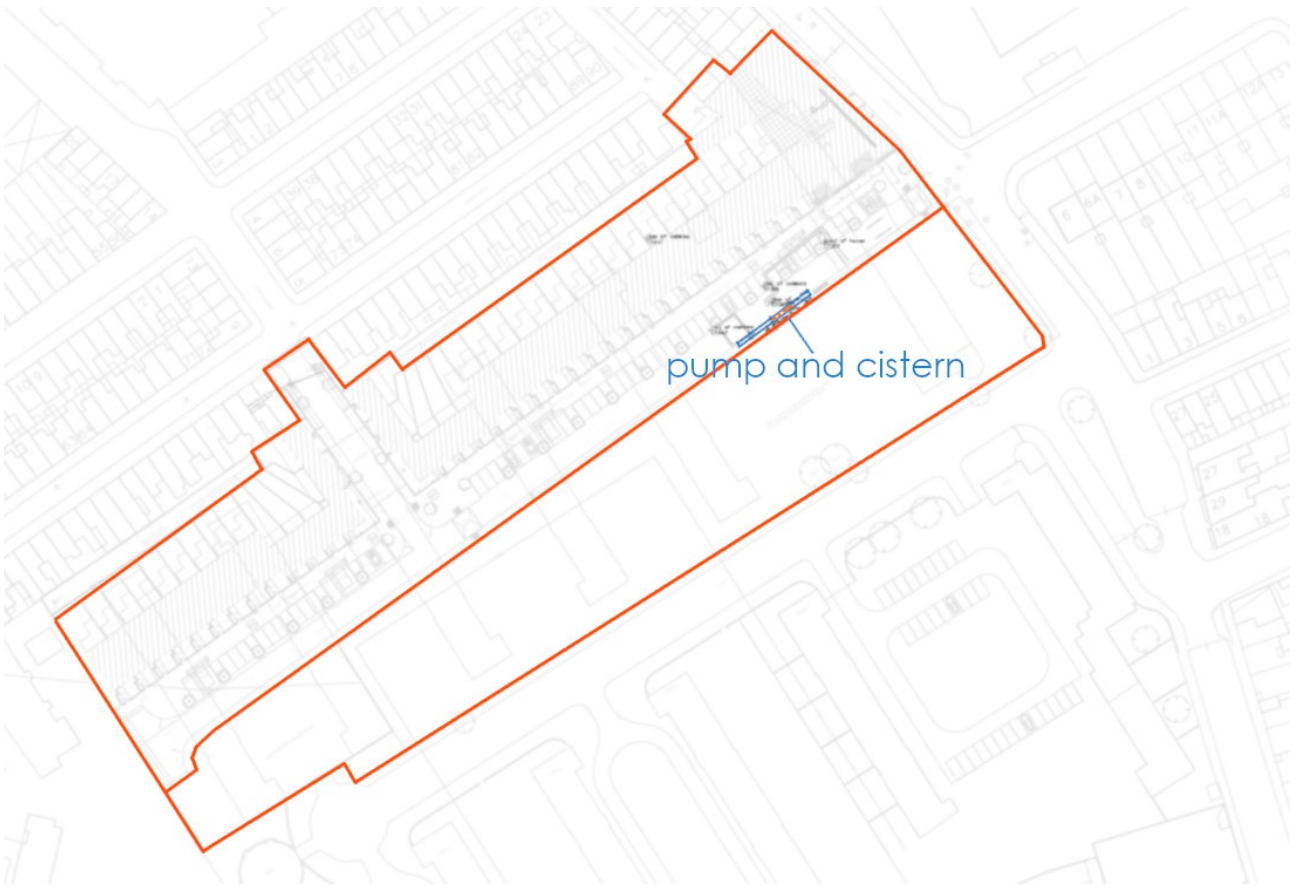


Above: section through watercourse terminus and phase 1 water cistern. Section faces southwest.

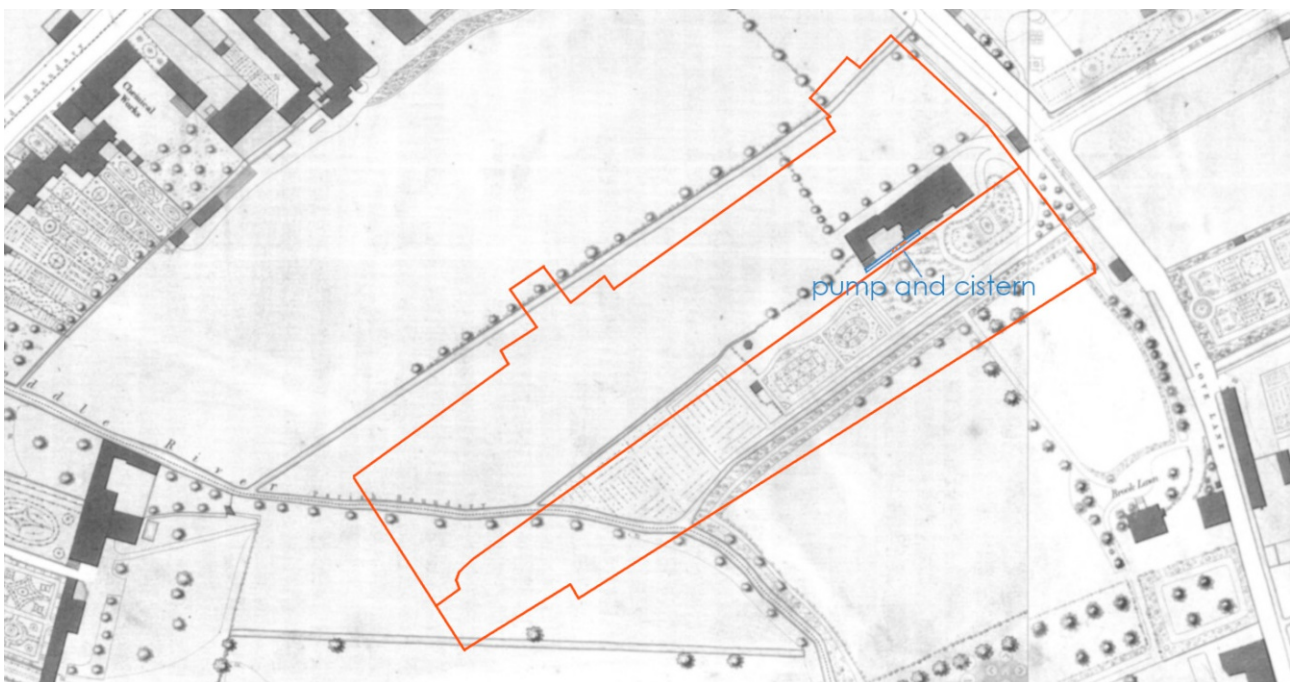
Right: post-excavation plan of watercourse, phase 1 cistern and phase 2 pump or hydraulic ram. Top of plan is northeast.



sluice gates and a pump house are marked on 19th century maps. The timber pipe connected to a pair of wooden barrels sunken into the watercourse (bases at 16.39m). Postholes and the re-sued timber pipes indicated that some sort of timber structure had continued up above the barrels. Finds from the fills associated with the barrels included a sherd of blue feather-edged pearlware which can be dated to the earlier half of the 19th Century.



Location of Phase 1 cistern and Phase 2 pump or hydraulic ram on development plan (top) and 1847 OS map (bottom)





This 19th century complicated reworking of the former manual pump may represent its replacement with a hydraulic ram, or a similarly sophisticated pumping mechanism. Hydraulic rams were ingenious devices powered entirely by the water they pumped. They worked by forcing water into pressured constricted passages and using the pressure to force it upwards (Rynne 2006, 50). They were invented by Joseph de Montgolfier in 1797, and used in Ireland to the larger estate houses, reflecting the adoption of rich landowners of new technological advances that provided pumped water before the



Artefacts from the excavation of cistern and pump. Of particular interest is the debased 'Scratch Blue' English stoneware chamber pot (1765-1795) with a moulded medallion of the cipher of King George III 'GR', from the Phase 1 cistern (to left). Also a rim of a 'boof'-style glass demijohn (very large glass bottle), possibly 18th century (bottom left).

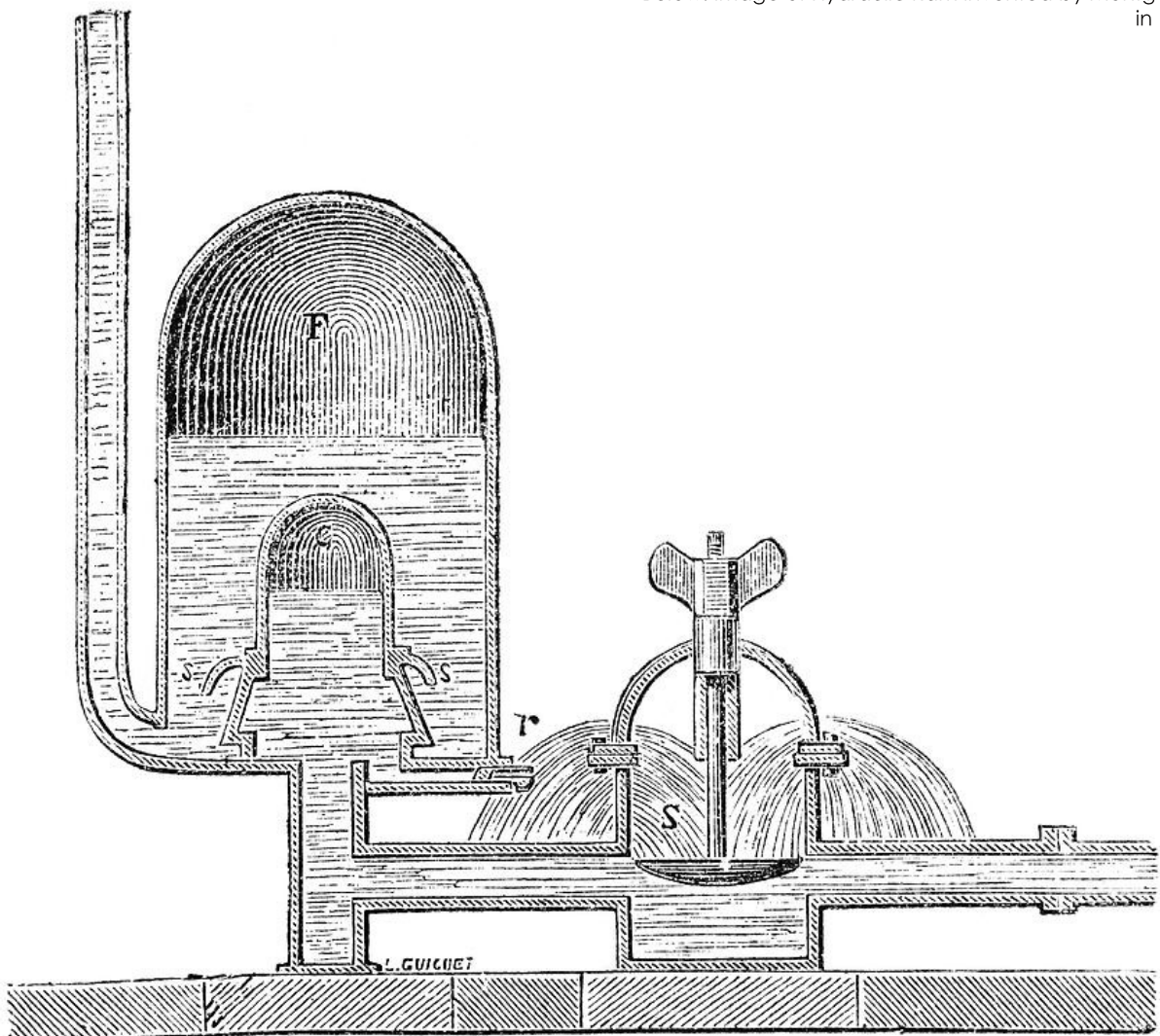


rural electrification schemes (Giacometti 2009, Meath Industrial Heritage Survey).

The full stratigraphic report for this section is included in Appendix A.



Below: Image of Hydraulic Ram invented by Montgolfier in 1797



References

Bennett, I. (ed.) 1990-2019 Excavations Bulletins 1989-2019: Summary accounts of archaeological excavations in Ireland. Bray; Wordwell. And online.

Berry, H.F. 1902 Notes on an Unpublished Ms. Inquisition (A.D. 1258), Relating to the Dublin City Watercourse. From the Muniments of the Earl of Meath Proceedings of the Royal Irish Academy. Section C: Archaeology, Celtic Studies, History, Linguistics, Literature Vol. 24 (1902-1904) 39-46.

Hayden, A. 2002 Rivers and Industry: Archaeology on the Coombe By-pass and Cork Street Realignment Roadworks, Dublin 8. Licenses 93E066 & 01E0614. Unpublished archaeological report by Archaeology Projects, dated February 2002.

Hayden, A. 2001 Archaeological Assessment, Coombe Relief Road, Dublin 8 (South Side of Cork Street). Licence 93E066 ext. Unpublished archaeological report by Archaeology Projects, dated March 2001.

Jackson, V. 1959 The Inception of the Dodder Water Supply. Dublin Historical Record, Vol. 15 (2) 55-68.

Myles, F. 2005 24-26 Ardee Street, Dublin 8: Stratigraphical Report. Unpublished Report for Margaret Gowan & Co. Ltd.

Ní Cheallaigh, M. 2006 Archaeological Desktop Assessment: Proposed regeneration programme, St. Teresa's Gardens, Dublin 8 Unpublished Report for Arch-Tech Ltd.

Ronan, M.V. 1927 The Poddle River and its Branches. The Journal of the Royal Society of Antiquaries of Ireland Sixth Series, Vol. 17 (1) 39-44.

Rynne, C. 2006 Industrial Ireland 1750-1930: An Archaeology. Collins Press, Cork.

Simpson, L. 1997 Historical Background to the Patrick Street Excavation in C. Walsh Archaeological Excavations at Patrick, Nicholas & Winetavern Streets, Dublin. Dingle; Brandon 17-33.

Sweeney, C.L. 1991 The Rivers of Dublin Dublin; Dublin Corporation.

Walsh, C. 2006 Archaeological Test Excavation of the former Player Wills Factory, South Circular Road, Dublin 8. License 16E0994. Unpublished archaeological report by Archaeology Projects, dated October 2006.

