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KING'S ISLAND
FLOOD RELIEF SCHEME

**EIAR Addendum Report
Volume 2**

**King's Island Flood Relief
Scheme**

October 2020



Comhairle Cathrach
& Contae **Luimnigh**

Limerick City
& County Council



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works

Appendices

Appendix D Supplemental information to Section 8: Cultural Heritage

Appendix D1a

King's Island Flood Relief Scheme Preliminary Stratigraphic Report on Archaeological Testing
(Volume 1)

Archaeological Testing for the proposed King's Island Flood Relief Scheme, Limerick

Ministerial Consent C000980, Excavation Registration
Number E005120, R000528

Volume 1

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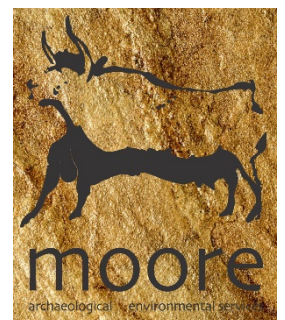
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Introduction

Archaeological testing under Ministerial Consent (Consent no. C000980, Excavation Registration Number E005120) was undertaken during May and September 2020 for the King's Island Flood Relief Scheme (KIFRS), Kings Island, Limerick. The project involved the targeted testing of nine areas, all of which will be impacted by the proposal. The following report outlines the findings of these investigations containing information on each of the areas and trenches, historic and cartographic background, interpretive conclusions, as well as photographs, plans and measured profile drawings. Details on each trench are summarised in tables with the location (ITM coordinates taken with the DGPS), dimensions, elevation (height above sea level or ASL of the ground level using the Irish national grid vertical datum), and identified contexts.

The definition cited below is that published by then Department Of Arts, Heritage, Gaeltacht and the Islands (now the Department of Housing, Local Government and Heritage) in 1999.

'Test excavation is that form of archaeological excavation where the purpose is to establish the nature and extent of archaeological deposits and features present in a location which it is proposed to develop (though not normally to fully investigate those deposits or features) and allow an assessment to be made of the archaeological impact of the proposed development. It may also be referred to as archaeological testing' (DAHGI 1999a, 27).

The trenches were mechanically excavated using an 8.4 tonne backhoe excavator fitted with a grading bucket, which removed soil to the maximum proposed depths or to natural subsoil or the top of archaeological levels where encountered. Archaeological deposits and features were cleaned by hand, often requiring the use of a trench box or bracing as a measure to safely access the trenches. In line with best practice, full photographic and written records were completed. On site recording used a single context recording system. Identified cuts and fills were recorded using context sheets and notes, photographs and plans were made. Levels were taken on trenches and identified archaeological features as well as services using DGPS. Artefacts were collected from identified archaeological contexts and spoil was metal detected where suspected archaeological deposits were encountered. At the completion of excavations at each trench, or where levels were reached that deserved plan recording, rounds of photographs were taken and processed for photogrammetry, generating georeferenced trench plans. Scale profile drawings were made by hand of at least one wall of each excavation trench.

Project Description

The KIFRS involves the construction of flood defences to protect Kings Island.

There are extensive works proposed in the north of King's Island relating to the construction of an embankment and associated drainage channels. The construction site compound is also to be in this area. There is only one recorded monument in the north of King's Island (SMR No. LI005-018), a bastioned fort dating from c. 1650. The remains of this fort lie beneath what is now St. Mary's Park estate. Notwithstanding this the area is of moderate archaeological sensitivity with potential to discover previously unrecorded sites in the riparian zone. Following consultation with Sarah McCutcheon (Executive Archaeologist Limerick City and County Council), it was agreed that archaeological mitigation in this area will take the form of archaeological monitoring of topsoil stripping of all greenfield areas that are to be affected by the proposal.

Flood defences for the southern half of the Island are more varied, including new concrete flood defence walls, flood defence glass panelling, and new surface water drainage. It is also proposed to lay a new gravity foul sewer pipe from an existing foul sewer pumping station at the rear (north) of Civic Offices to Limerick's Main Drainage manhole on George's Quay. There

are two existing foul sewer-pumping stations at the Courthouse and the Civic Offices. It is proposed to decommission these pumping stations and connect directly to this new gravity foul sewer.

There are also two floodwater storage tanks proposed at the rear of the Civic Offices and between the Courthouse and the Potato Market at Merchant's Quay. These tanks are designed to cater for 1 in 30-year rainfall event during a high tide event. It is proposed to provide overflows from these water storage tanks to the gravity foul sewer as an emergency overflow, in the event that a high tide and rainfall event greater than the storage volume in the tanks coincide, to prevent surface water ponding at Merchant's Quay.

All these works are proposed to take place within the historic town (SMR LI005-017) and in within the zones of notification for two Mills, a castle (SMR's LI005-074, LI005-075, LI005-017101) and the old quay (SMR LI005-017072-). The quay was part of the towns defences and was guarded by gates and towers (SMR LI005-017010-). A river wall ran from rom the dock northwards to the nearest tower of King John's Castle (SMR LI005-017014-) passing the castellated mill/s as on featured on Thomas Phillips' 1685 view of the city (Plate 2, IHTA).

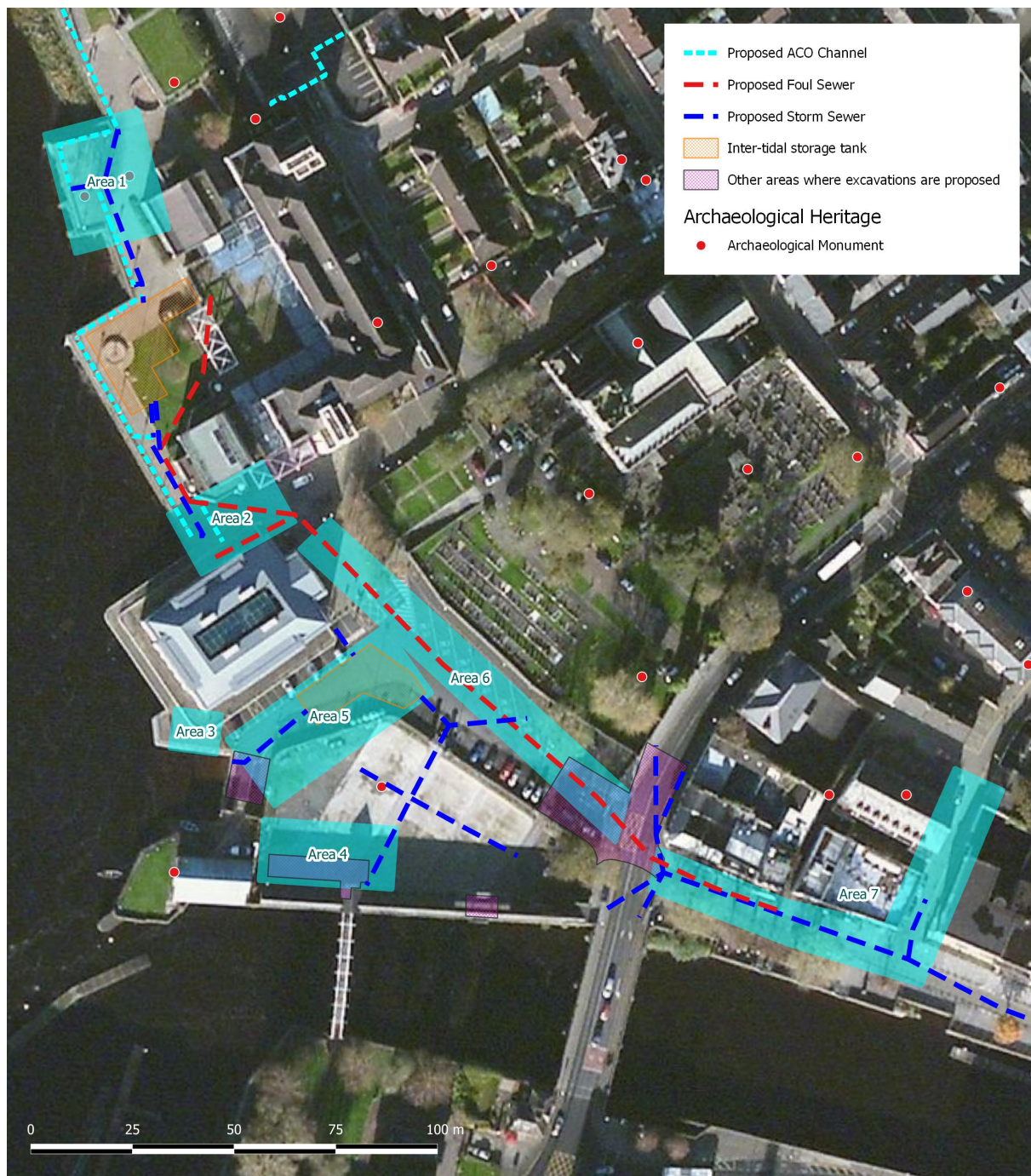


Figure 1 Map of archaeological testing Areas 1-7.



Figure 2 Map of archaeological testing Area 8.



Figure 3 Map of archaeological testing Area 9.

Archaeological Testing Areas

Nine areas were identified for archaeological testing, these areas are as follows:

Table 1 Location of Test Trenches Areas 1-9

Area No.	Location	Trench No's	SMR zones of notification
Area 1	Mill and Brewery site to the rear of the Civic offices along river front	TT1-1 Along north wall, (ENE/SSW)	LI005-017074-Mill LI005-017075-Mill LI005-017101-Castle LI005-017 historic town LI005-017010-Town Defences
		TT1-2 Along West wall (NNE/SSW)	
		TT1-3 Centre of Area (ENE/SSW)	
		TT1-4 Near bridge to mill (NNE/SSW)	
		TT1-5 Mill/Brewery site (NNE/SSW)	
Area 2	Between Civic offices and Courthouse, former site of prison	TT2-1 Between Courthouse and Civic offices (WNW/ESE)	LI005-017 historic town LI005-017010-Town Defences
Area 3	SW corner of Courthouse, near former north pier and tower	TT3-1 SW corner of courthouse (WNW/ESE)	LI005-017072-Quay LI005-017 historic town LI005-017010-Town Defences
Area 4	Potato Market, former site of medieval Quay and New Quay (1760's)	TT4-1 Along West wall rear of Curragower Boat Club (NNE/SSW)	LI005-017072-Quay LI005-017 historic town LI005-017010-Town Defences
		TT4-2 Along building to south (E/W)	
		TT4-3 Near access to O'Halloran Bridge (N/S)	
		TT4-4 Extending from near O'Halloran Bridge entrench to interior of car park (NNE/SSW)	
Area 5	Courthouse carpark extending to Merchants Quay, former site of medieval Quay	TT5-1 Centre of car park (NNW/SSE)	LI005-017072-Quay LI005-017 historic town LI005-017010-Town Defences
		TT5-2 Carpark into Merchants Quay (NE/SW)	
		TT5-3 Merchants Quay west (NE/SW)	
		TT5-4 Merchants Quay west (NE/SW)	
		TT5-5 Carpark, access to Curragower Boat Club (NE/SW)	

Area No.	Location	Trench No's	SMR zones of notification
Area 6	Merchants Quay extending from Bridge Street towards plaza outside Courthouse	TT6-1 Corner of Bridge Street Merchants Quay (NNE/SSW)	LI005-017072-Quay
		TT6-2 Merchants Quay, near entrance to Potato Market (NE/SW)	LI005-017 historic town
		TT6-3 Merchants Quay near bus bays (NE/SW)	LI005-017010-Town Defences
		TT6-4 northern end of Merchants Quay (NE/SW)	
		TT6-5 Courthouse Plaza (NE/SW)	
Area 7	Georges Quay and Creagh Lane	TT7-1 George's Quay near Locke bar (NNE/SSW)	LI005-017 historic town
		TT7-2 George's Quay (NNE/SSW)	LI005-017010-Town Defences
		TT7-3 George's Quay Creagh lane Corner (NNE/SSW)	LI005-017069-Mill
		TT7-4 Creagh Lane (NNE/SSW)	LI005-017004-Castle - tower house
Area 8	Greenfield sites opposite Abbeview Estate and at Athlunkard Boat Club	TT8-1 Greenspace east of Abbeyview House estate (NNW/SSE)	None
		TT8-2 Greenspace east of Abbeyview House estate (ENE/WSW)	
		TT8-3 (E/W) Along north boundary wall in grounds of Athlunkard Boat Club	
Area 9	NW of Kings Island, greenspace near St. Mary's Park	TT9-1(E/W) Greenspace north west of St. Marys Park	Vicinity of LI005-018—Bastioned fort
		TT9-2 Greenspace west of St. Marys Park (N/S)	
		TT9-3 Greenspace west of St. Marys Park (NW/SE)	

Area 1

Area 1 is located south of King John's Castle and north of the Limerick Council Civic Buildings on a paved projecting bay bounded by parapet walls and a riverside railing. The area has high archaeological potential and is the site of three recorded monuments: a castle (LI005-017101) and two mills (LI005-017074 and LI005-017075). The castle was described in the Limerick urban archaeological survey (Bradley et al. 1989) as Curragower Castle: 'In 1657 this was located near the Curragower weir parish of St. Nicholas (Westropp 1906-7, 81)'. The mills were respectively known as Thomas Arthur's Mill (Upper Mill) and Queen's Mill, and are described by Leask (1941, 101) as; 'at or near the foot of Newgate Lane—the "Rue des Moulins" of the French map (Lenihan 1866, 258)'. The mills stood out from the town walls below the Curragower falls and according to the Civil Survey had two stone houses (36ft. by

30ft. (10.8m x 9.1m) and 45ft. by 27ft. (13.7m x 8.2m) 'with two mills (wheels?) therein seated and a thatched house'.

In the winter of 1988/89, in advance of construction work for the City and Council offices, under what was formerly the grounds of the old Gaol and Nolan's Cottages, Celie O'Rahilly led a series of archaeological investigations in the area (Elliot 2011: 98-100, after O'Rahilly and Hodkinson 1989). Photographs and site notes of these works are housed in the Limerick City Museum and referenced in the Limerick City Walls Conservation Plan (Collins et al. 2008: 101). Of particular relevance to the KIFRS testing was a cutting that exposed several masonry components: the City Wall (163), running east of Area 1 on a NNW/SSE alignment, a postern/gate leading to a bridge (170) extending into the river, a tunnel (171) and a retaining wall (172), west of the City Wall, possibly designed to channel water. Relevant excerpts from the unpublished report are reproduced at the end of this section.

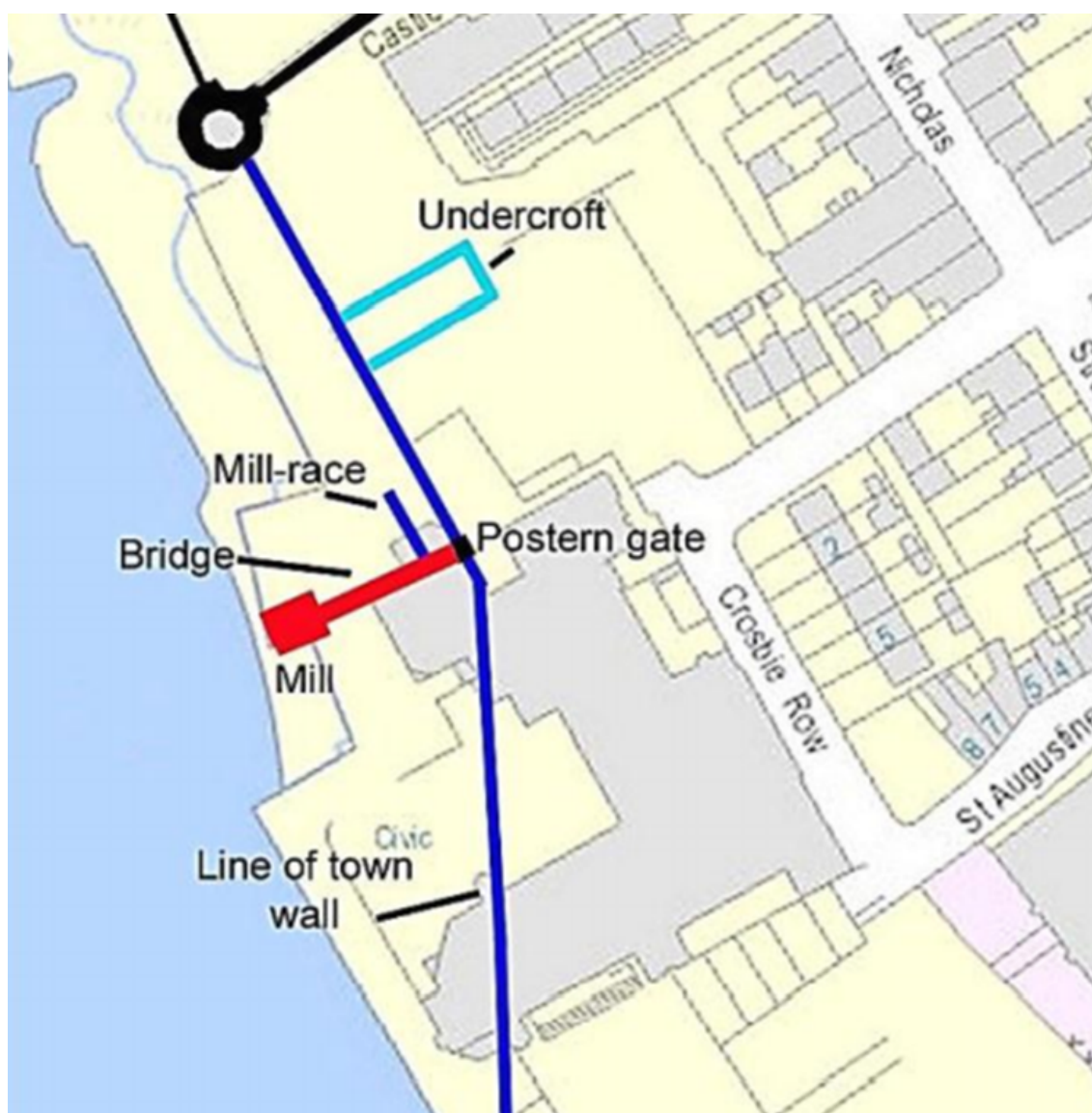


Figure 4 Bridge and mill extending from city wall towards (Elliot 2011)

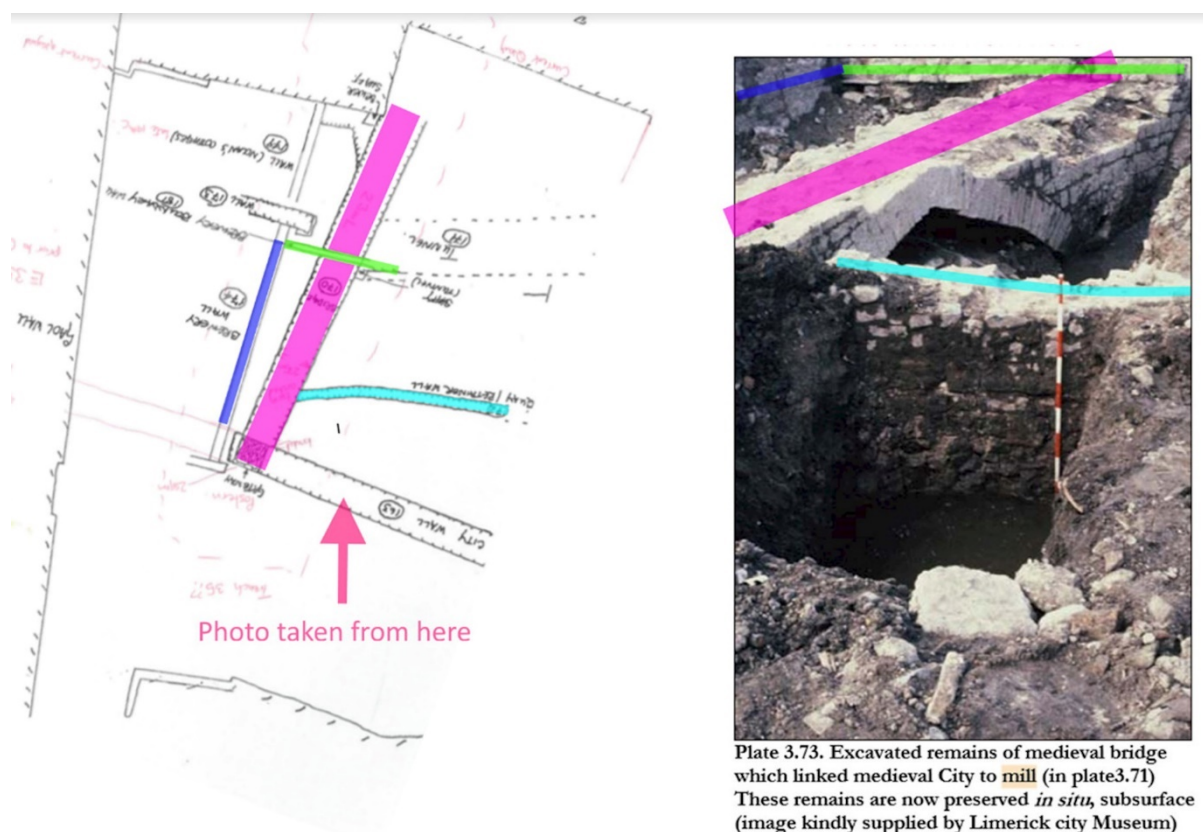


Plate 3.73. Excavated remains of medieval bridge which linked medieval City to mill (in plate3.71) These remains are now preserved *in situ*, subsurface (image kindly supplied by Limerick city Museum)

Figure 5 Plan and image of O'Rahilly's excavations showing exposed masonry features from top of City wall looking west to bridge, retaining wall in middleground, and footing of brewery wall in the background 1988

The summary report by O'Rahilly and Hodkinson (Elliot, 2011: 99) has an accompanying map, plan and photograph, reproduced in figure 5, with the following description:

'Exposed top of wall worn smoothed at break in town wall at end of Newgate Lane, paved area 2m², spud stone on north-west corner of threshold, gate could be closed flush with town wall, interpreted as postern gate. The postern gate lead to a twin arched bridge 23.0m in length and 2.75m in width and bonded to the masonry of the town wall, at the terminus of the bridge a series of walls was investigated which turned out to be the remains of a mill, the wheel house still extant. The arches showed evidence of wicker centering, probable late medieval remodelling of the bridge'.

From a review of cartographic sources in the Irish Historic Towns Atlas (O'Flaherty 2010, map 5), a mill is depicted on the 1587 map, as a tower, north of the harbour accessed via a parapet bridge with four spans. John Speed's map of 1610 shows a freestanding tower in the river, in the same general location, with an external vertical waterwheel. The Pacta Hibernia map, dated 1633, shows two 'Myls'. The southernmost is an elaborate turreted tower connected to the town via a triple arched bridge and archway, the northernmost is more modest in scale accessed via an opening near a tower along the line of the town wall.

Thomas Phillips' plan of 1685 shows two mills on either side of the river both strategically located to take advantage of the fast-flowing tidal water breaking on the Curragower dam. The mill on the Kings Island side is shown as two structures, an 'L' shaped structure protruding from the line of the town wall connecting to a free-standing square building by a wheel in a central channel. Phillip's pen drawing of the same date entitled 'Limerick, looking north east' depicts a square building with a hipped roof joined to the town wall by a multi spanned bridge.

From the 17th to 18th century, the mills changed hands on numerous occasions and were renamed accordingly. In the 1654 the Civil Survey, records show they were in the ownership

of Thomas Bently, Maurice Joy, held the property in 1715; by 1770 the mill was known as Goldings or Golden Mills.

William Eyres's 1752 Coloured Map of Limerick indicates the site as 'Mills and Breweries'. The building is shown, in plan, as a bulky projection into the river, the most westerly side decreasing in size with an external vertical wheel. This plan of the mill and brewery has much in common with the 1840 Ordnance Survey first edition map. The site is accessed from the west leading to a seven-sided structure, representing the western extent of three buildings projecting into the river. Eyres's plan shows the building with two rows of dotted lined running roughly north-south through its centre, possibly indicative of tunnels or arches.

James White's map of 1760 is more akin to Eyres's earlier map and gives the impression of the mill as consisting of two buildings connected by an arch. White annotates the site as the 'City Brewery' at the western end of Newgate Lane.

Christopher Colles's map of 1769 references the complex as both the City Brewery and Golden Mill and shows a tapering seven-sided structure extending into the river. Additionally, Colles's map has an accompanying ink drawing entitled 'A north west view of the City of Limerick (Figure 6). It shows a river view of the town from verdant place to Merchants Quay showing Thomond Bridge, the Castle, the Bell tower of St. Marys (Figure 6) and the ship sails in the harbour. Also, visible beyond the bridge is Golden Mill, with a riverside vertical wheel. In the foreground of the mill is a long building with a louvered roof and multiple windows along its elevation. This building appears in a glass plate photograph taken approximately one hundred years later (figures 10 & 11).



Figure 6 Illustration from Colles's Map of Limerick 1769 showing mill with wheel and brewery.

The City Brewery was established in 1739 by Alderman Henry Long who became Town Mayor in 1744 (see Whites Map c. 1760, Map 11, O'Flaherty 2010). A date stone for the founding of the brewery was for many years built into the gable wall of one of the cottages in Nolan's terrace. Based on trade directories the City Brewery operated until the late 18th century; a final reference to its operation appeared in 1798. In 1807, Long's widow posted an advertisement in the Limerick Chronicle offering both the City Brewery and Golden Mills for lease, evidence for the joint ownership of the properties (7).

**LIMERICK CITY BREWERY,
AND GOLDEN MILLS.**

THE Proprietors of the City Brewery and Golden Mills, inform the Public, that those valuable Concerns will very shortly be out of Lease, and that they are ready to agree to Let the said Premises to any solvent Tenant or Tenants, who wish to embark in the most profitable Branches. It is needless to say any thing respecting its superior situation for the Milling, Brewing, or Distilling Business; and as the Concerns are different takes, they will be either Let together or separately.

There are more than 100 years to run of the Golden Mills, and it is to be particularly attended to, that the Proprietors can empower the Tenant to erect a Fishery on the Premises, which if well constructed, must be a valuable consideration. There are 950 years to run of the City Brewery and extensive Premises.— Application to Captain LONG, and MICHAEL ROCHFORD, Esq. The Widow Long appoints Captain Long to act for her. Limerick, Sept. 4, 1807.

Figure 7 Advertisement for interest in Lease for Limerick City Brewery and Golden Mills dated 1807.

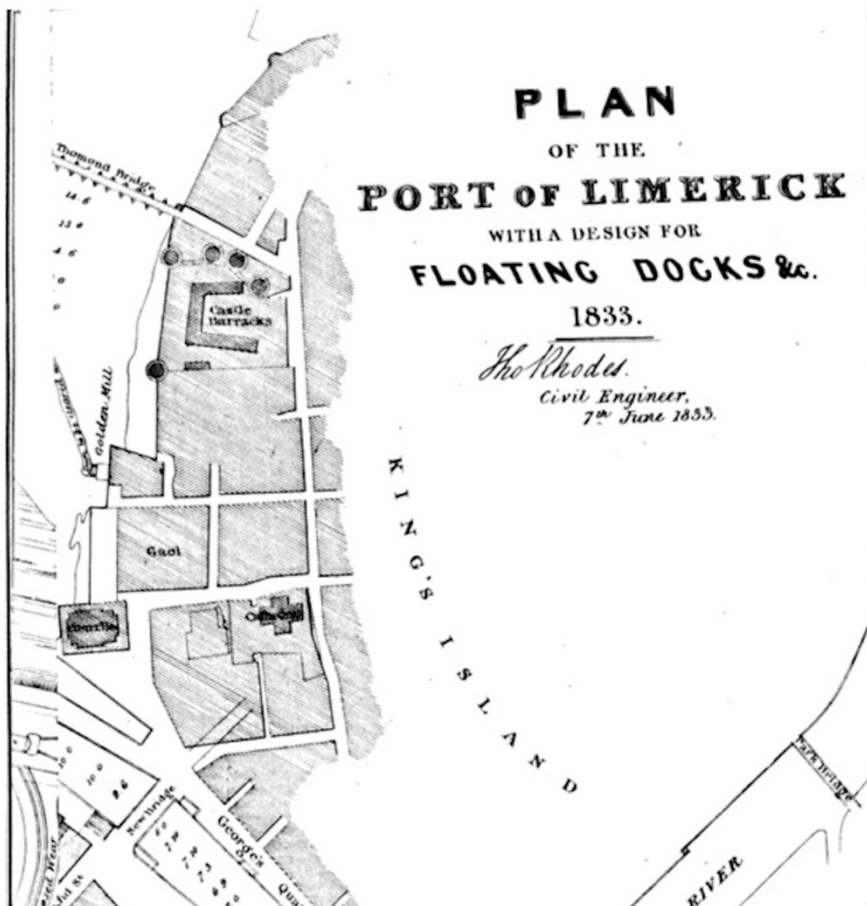


Figure 8 Port of Limerick by Thomas Rhodes, Parliamentary Paper, 1833

In 1814, after a period of inactivity, Michael Rochford took over the mill, now in ruin and installed a new wheel and machinery (Curtin 2009.11-12). In 1830 Matthew Fitt, an industrious Quaker acquired a site to the north of the old City Brewery and established the Newgate Brewery producing ale and porter for both the domestic and English market. Throughout the mid-19th century, the brewery grew to become one of the largest in the west of Ireland, its name and brand appearing in trade directories and newspapers of the period. During this period of expansion, the City Brewery was subsumed into the Newgate complex.

In 1833 Golden Mill is featured in Parliamentary Papers (Vol. 45. 5) in a report to the Royal Commission on Tidal Harbours entitled 'The Port Of Limerick' in relation to the development of a proposed weir and mills which 'if constructed, would be of great value, and would be much more of a substitute for the two mills of Curragower and Golden' An accompanying figure shows Golden Mill, with a riverside wheel, noting 'Dam to be cleared' (Figure 8). An additional report in 1843 to The Limerick Bridge Commissioners describes Golden mill as operating one water wheel and 'in a dilapidated state, worth little beyond the value of waterpower' (Rhodes.1833, 135-144). A sketch entitled 'Thomond Bridge and Harbour, Looking north-east' by William Stokes (O'Flaherty 2010) , shows the mill in the background as a three storied building, the water in front of the mill is churned up, suggesting a mill wheel at work.

The first edition OS map of 1840 for Limerick shows significant alterations and development along the river front from the south west corner of King John's Castle south towards the Mill resulting in the development of reclaimed land, west of the city wall (figure 13). Two 'breweries' are indicated on the map: The City Brewery and Newgate brewery, with the business yet to be amalgamated. By the 1870s, Newgate Brewery consisted of a beer and malt house with mash tuns and a hop jack, store cellars, dwelling house, offices, pumps, stables and operated two steam engines and water pumps (O'Flaherty 2010, figure 14).

The brewery and its operations are described vividly by George S. Meason (1866) in *The Official Illustrated Guide to the Great Southern and Western Railway*. This guide also features an illustration reproduced in the IHTA that shows a view of Newgate Brewery including the mill building projecting into the river (Figure 12, Meason 1866, 121). The mill is depicted as a two-story structure with a louvred roof over two vaulted segmental arches. The accuracy of this image is confirmed by a photograph taken in the 1860s of the Treaty Stone at the corner of Thomond Bridge with Newgate Brewery and Golden Mills in the background. Almost from the same viewpoint as the illustration the photograph shows the mill with the arches on its northern elevation. Also of note are the broken remains of two walls visible along the west elevation mentioned by Hodkinson (2009: 23) who recorded that 'half of the mill building still exists within the grounds of City Hall, where two stubs of walls can be seen projecting out into the river'.

In May 1871, Newgate Brewery was put up for auction (Dublin Daily Express). The property was described as a compact concern that includes an excellent dwelling house, beer and malt houses, large cellarage, offices, extensive stabling yards. The equipment included two steam engines, pumps, boilers, mash tuns, casks and office fittings.

In 1890, following the passing of the Housing of the Working Classes Act, the mill site was acquired by Limerick Corporation in 1895 and the site cleared for the development of 13 terraced dwellings known as Nolan's Cottages (Potter and Byrne 2013. 472-474). These were amongst the first social houses developed in the city. To accommodate this new development the site was extended to the north developing the parapet wall with external steps that exists today. Nolan's Cottages, called after W. M. Nolan, Mayor of Limerick in 1895, consisted of two rows of terraced houses accessed via Newgate Lane the southern side of the road bounded by the wall of Geary's Biscuit factory formerly the old Female Gaol. The two-storey terraces, seven facing north and six facing south were connected by connecting back gardens with separate outhouses. The cottages were demolished in over the winter of 1987/88 to make way for the new City Hall.



Figure 9 Thomond Bridge and Harbour, looking north-east, by William Stokes (O'Flaherty 2010)



Figure 10 Glass plate of Treaty Stone, Limerick City, Co. Limerick note double arches on Mill building (Lawrence Collection, French, Robert, 1841-1917 photographer, National Library of Ireland L_CAB_02695).

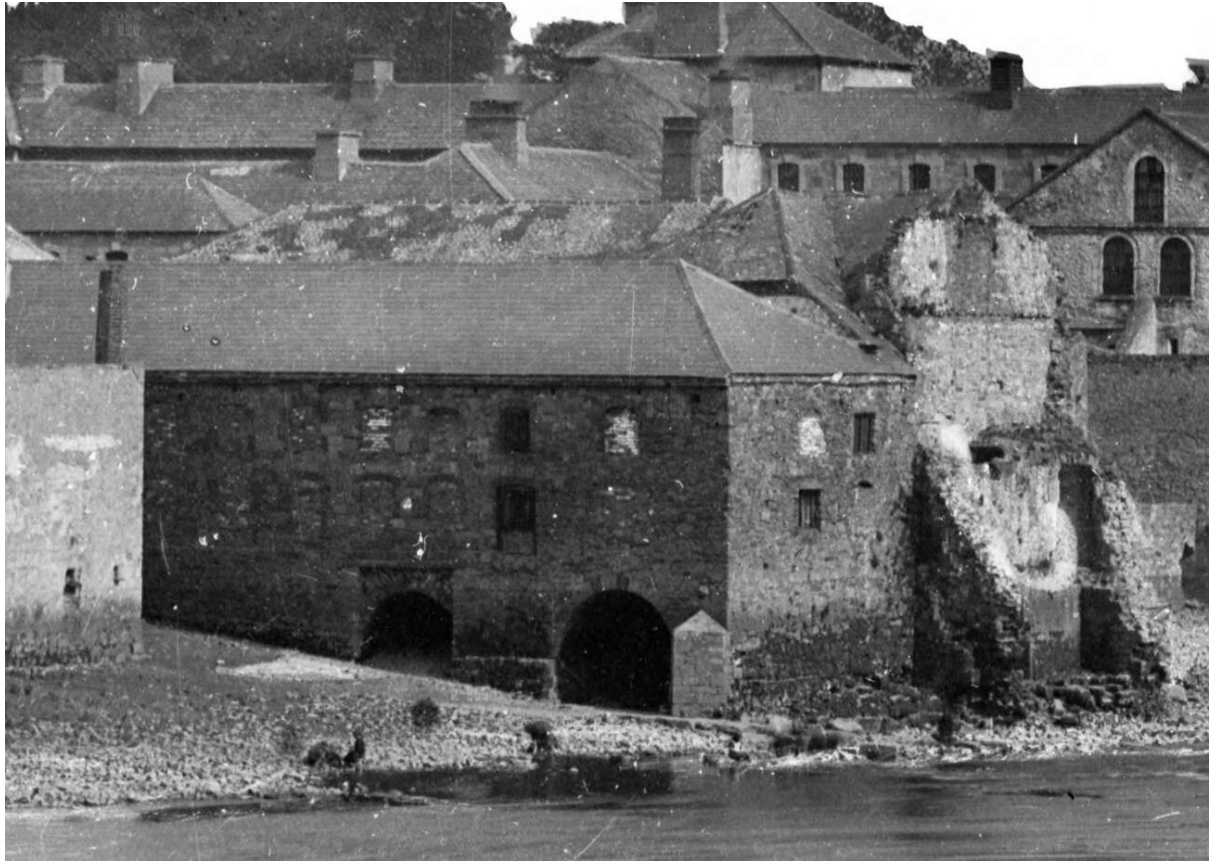


Figure 11 Detail of glass plate showing brewery buildings with arch and demolished part of Golden Mill.

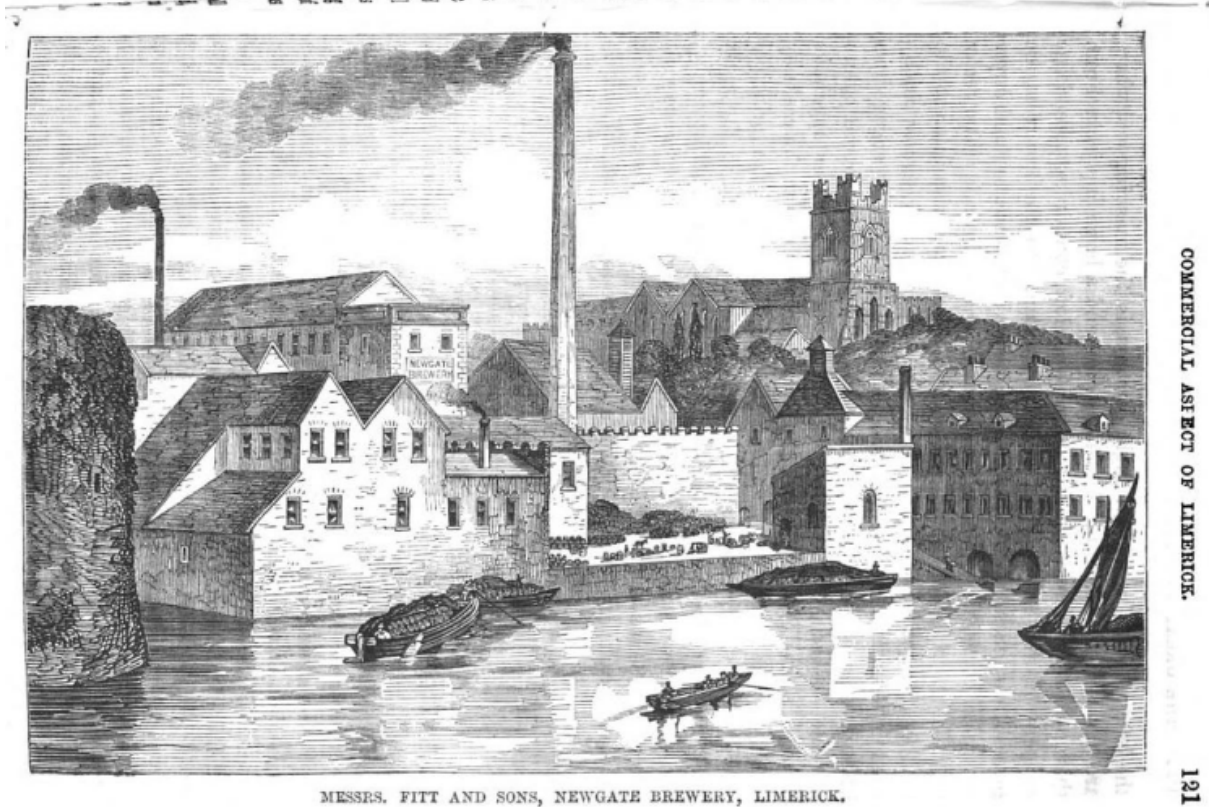


Figure 12 Illustration from Meason's 1866 guide showing Newgate Brewery, Limerick.



Figure 13 Extract from OS map 1840, note linear feature in front of mill, this may have supported the mill wheel.

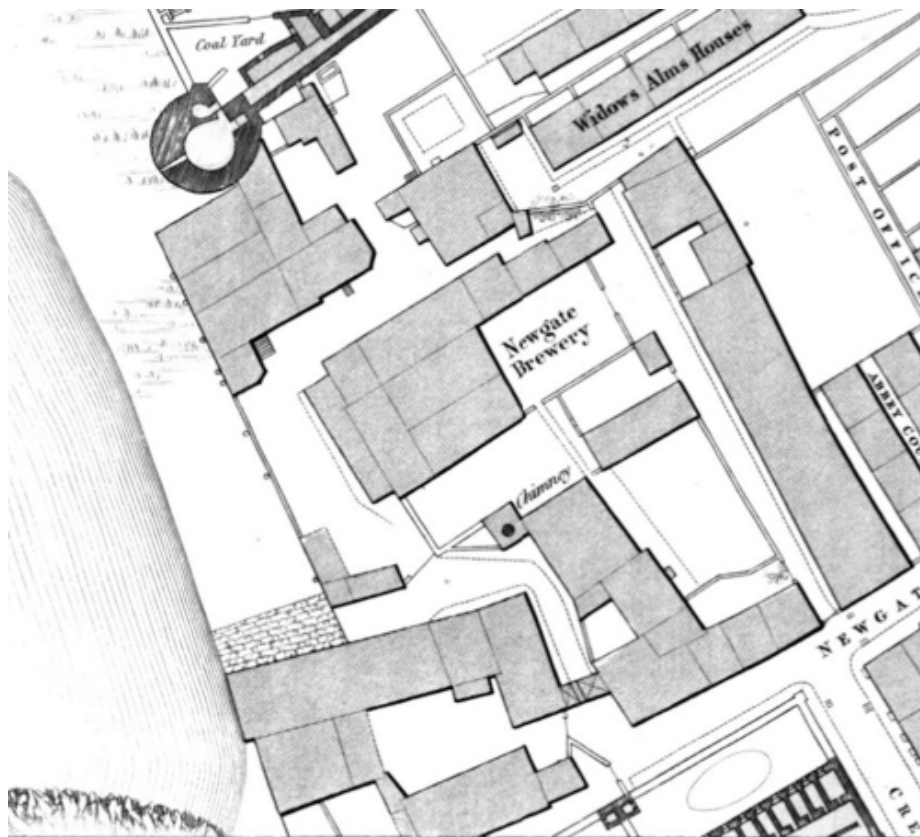


Figure 14 Extract from OS map 1870 showing reduced footprint of mill to west.



Figure 15 Area 1 location, facing north up the River Shannon showing King John's Castle and Thomond Bridge



Figure 16 Excavations in Area 1, facing southwest down the River Shannon