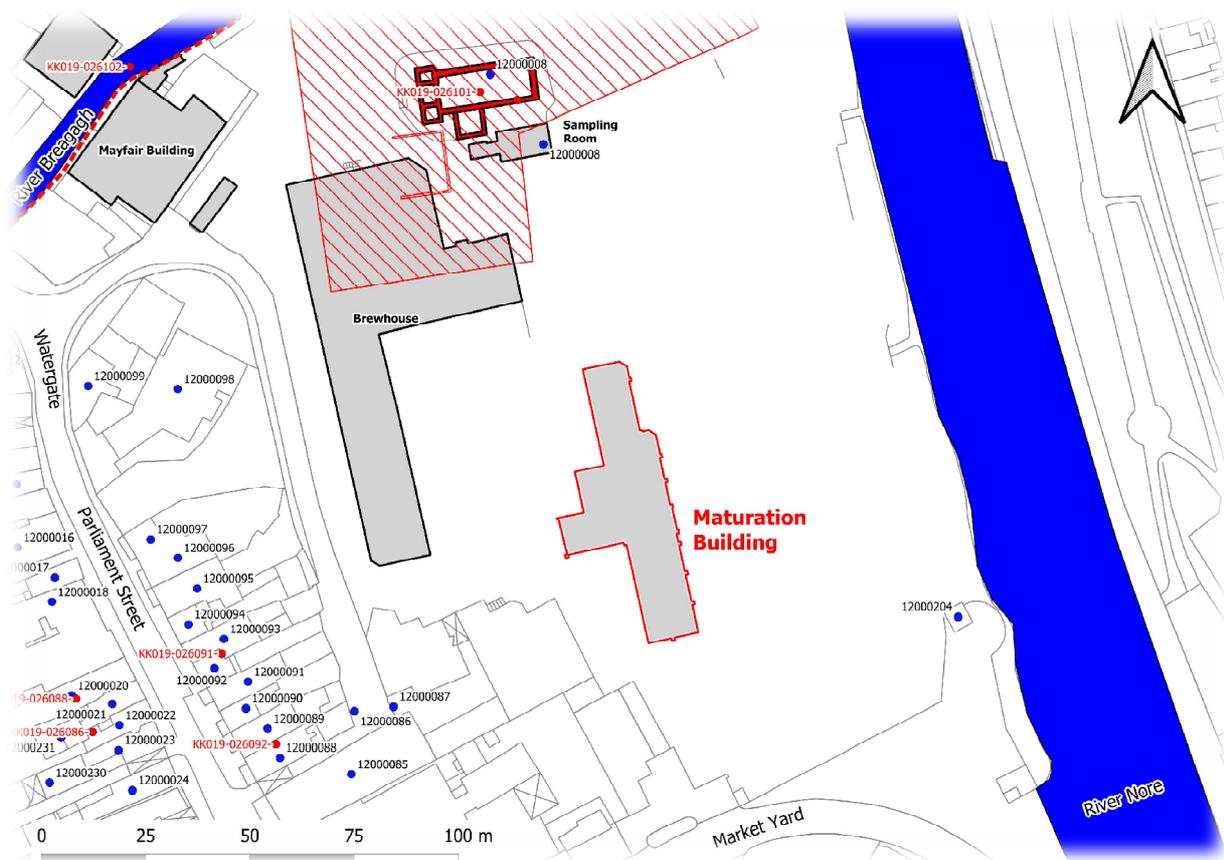


# Archaeological Impact Assessment of the Demolition of the Maturation Building, Abbey Quarter, Kilkenny



Prepared for Kilkenny County Council  
By Dr Richard Clutterbuck

June 2019

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### Disclaimer

The results, conclusions and recommendations contained within this report are based on information available at the time of its preparation. Whilst every effort has been made to ensure that all relevant data has been collated, the author and AMS accept no responsibility for omissions and/or inconsistencies that may result from information becoming available subsequent to the report's completion.

## Executive Summary

This report is an archaeological impact assessment of the demolition of the Maturation Building, part of the Abbey Quarter Masterplan, a redevelopment of 8.25ha in the centre of Kilkenny City incorporating the former Smithwick's Brewery. The Maturation Building is located within the Kilkenny City Zone of Archaeological Potential (ZAP) 67m south of the upstanding remains of St Francis Abbey, a National Monument.

The Abbey Quarter Masterplan was approved in July 2015 and provides for the demolition of the Maturation Building preparatory to the development of a public realm space and adjoining development areas. The Maturation Building is a modern single-storey building built by Diageo in the late 1990s/early 2000s, consisting of reinforced concrete designed to support maturation vessels for the brewing process. The internal machinery and maturation vessels have been removed, leaving a reinforced concrete shell.

The demolition of the Maturation Building will consist of the removal of the upstanding single-storey concrete and brick structure to the level of the adjoining concrete slab (approximately total floor area 1000 sq. m). This report will describe the archaeological and historical significance of the site and surroundings of the Maturation Building, including the results of previous archaeological investigations carried out in the surrounding site. The report finds that the proposed demolition works will not have an impact on archaeology on the site of the Maturation Building. The report will detail recommended measures to avoid any potential impacts on St Francis' Abbey National Monument.

## Table of Contents

<b>Disclaimer</b> .....	<b>1</b>
<b>Executive Summary</b> .....	<b>2</b>
<b>Abbreviations and Definitions</b> .....	<b>5</b>
<b>Introduction</b> .....	<b>6</b>
Overview .....	6
Purpose and Scope of this Archaeological Impact Assessment .....	6
<b>Site Location and Description</b> .....	<b>10</b>
Site Location.....	10
Proposed Development .....	10
<b>Archaeological and Historical Background</b> .....	<b>11</b>
Previous Archaeological Excavations.....	20
<b>Archaeological Impact Statement</b> .....	<b>27</b>
<b>Recommended Mitigation Measures</b> .....	<b>28</b>
<b>References</b> .....	<b>30</b>

## List of Tables

Table 1: Heritage sites in the vicinity of the Maturation Building .....	11
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## List of Figures

Figure 1: Abbey Quarter Masterplan, Kilkenny City, with the location of the Maturation Building highlighted in red .....	7
Figure 2: Abbey Quarter Masterplan design with the location of the Maturation Building highlighted in pink .....	8
Figure 3: Recorded archaeology and architecture in the vicinity of the Maturation Building .....	14
Figure 4: Rocque's Map of Kilkenny (1758) with the outline of the Maturation Building.....	15
Figure 5: Irish Historic Town Atlas Map 2 (1842–50; Bradley 2000) with the outline of the Maturation Building .....	16
Figure 6: Valuation Town Plan 1:1056 (c.1850) with the outline of the Maturation Building.....	17
Figure 7: Town Plan 1:1056 (c.1871) with the outline of the Maturation Building .....	18
Figure 8: Ordnance Survey of Ireland 25-inch map (1900) with the outline of the Maturation Building .....	19
Figure 9: Previous archaeological excavations.....	26

## List of Plates

Plate 1 Maturation Building looking northwest, with St Francis' Abbey National Monument and the Brewhouse Building in the background.....	9
Plate 2 Maturation Building looking southwest.....	9

## Abbreviations and Definitions

Abbreviation	Definition
<b>ACSU</b>	Archaeological Consultancy Services Unit
<b>AMS</b>	Archaeological Management Solutions Ltd
<b>DoEHLG</b>	Department of Environment, Heritage and Local Government
<b>ITM</b>	Irish Transverse Mercator
<b>KCC</b>	Kilkenny County Council
<b>KKAP</b>	Kilkenny Archaeological Project (Ó Drisceoil et al. 2008) and <a href="https://heritagemaps.ie">https://heritagemaps.ie</a>
<b>NIAH</b>	National Inventory of Architectural Heritage
<b>NMS</b>	National Monuments Service
<b>OD</b>	Ordnance Datum
<b>OPW</b>	Office of Public Works
<b>RMP</b>	Record of Monuments and Places
<b>SMR</b>	Sites and Monuments Record
<b>UAS</b>	Urban Archaeological Survey
<b>ZAP</b>	Zone of Archaeological Potential

## Key Stakeholders

- Kilkenny County Council
- National Monuments Service
- National Museum of Ireland
- Office of Public Works

## Introduction

### Overview

Kilkenny County Council (KCC) are planning to demolish the Maturation Building on the former site of the Smithwicks (Diageo) Brewery. This site is part of the Abbey Quarter Masterplan (Reddy Architecture & Urbanism 2015), a planned redevelopment of 8.25ha in the centre of Kilkenny City (Figure 1).<sup>1</sup>

The Abbey Quarter Masterplan area has been divided into fourteen Urban Blocks (1–14) and four Public Realm areas (A–D) (Figure 2). The Maturation Building is located across Urban Blocks 4, 6, 7, and Public Realm C. The Abbey Quarter Masterplan was subject to public consultation and was adopted in July 2015. Kilkenny County Council are applying for planning permission to demolish the remains of the Maturation Building. This report is an archaeological impact assessment for the proposed demolition works.

The Maturation Building, dating to the late 1990s/early 2000s, was built as part of Diageo's Smithwicks Brewery. It is a single-storey *in-situ* concrete structure consisting of concrete walls, columns, roof slab and glazed curtain walling (Plate 1 & Plate 2). Permission was previously granted (P.A. Reg. Ref: 13990045) for demolition/removal of extensive plant and structures on this site including the removal of 22 no. maturation vessels whilst retaining the single-storey structure that supported them (i.e., the Maturation Building). Planning consent is now being sought for the demolition of the single-storey structure.

### Purpose and Scope of this Archaeological Impact Assessment

The purpose of this report is to inform an application for permission to demolish the remains of the Maturation Building. This building is c.20 years old and not archaeologically or architecturally significant. However, it is located in an area of archaeological significance, in proximity to a National Monument (St Francis' Abbey). This Archaeological Impact Assessment report includes an archaeological and historical background to the site, and incorporates the results of earlier archaeological investigations in and around the Maturation Building. This report will describe the proposed demolition works and its likely impacts on the identified archaeology. Finally, the report will contain recommendations for measures to mitigate impacts of the development on the archaeology.

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<sup>1</sup> <https://www.kilkennycoco.ie/eng/Services/Planning/Abbey-Quarter-Brewery-site/> [Accessed 17 June 2019]

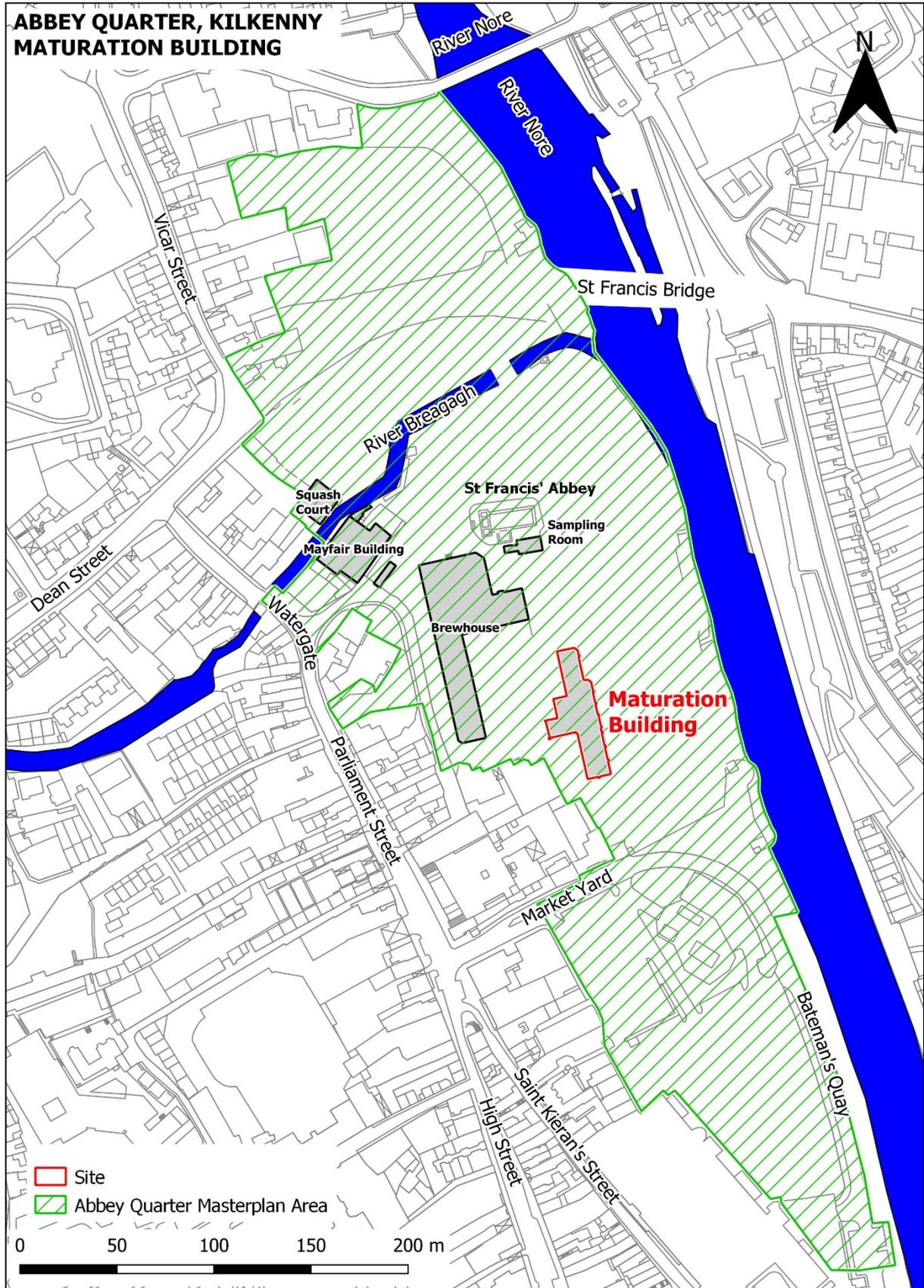


Figure 1: Abbey Quarter Masterplan, Kilkenny City, with the location of the Maturation Building highlighted in red

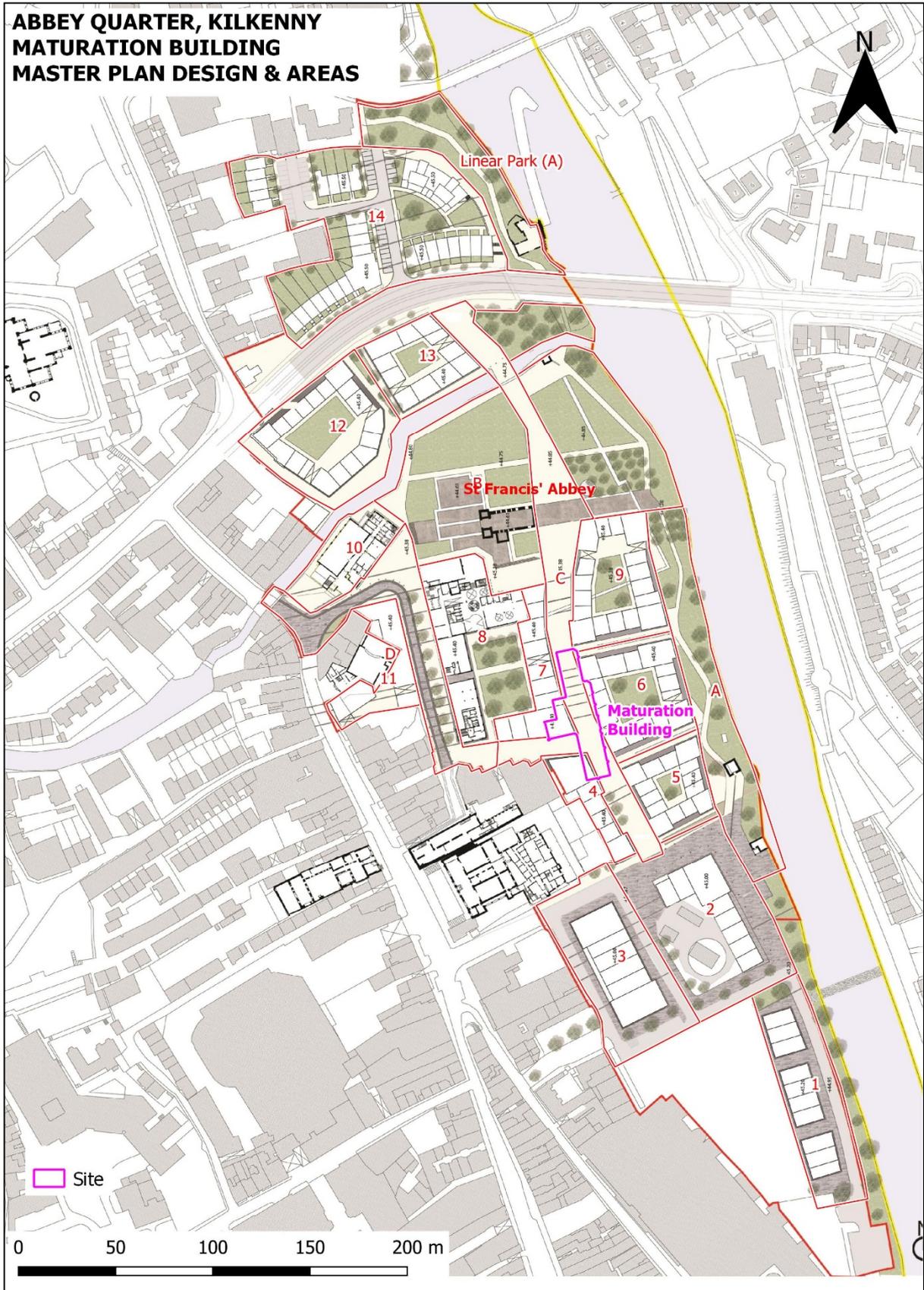


Figure 2: Abbey Quarter Masterplan design with the location of the Maturation Building highlighted in pink



Plate 1 Maturation Building looking northwest, with St Francis' Abbey National Monument and the Brewhouse Building in the background.



Plate 2 Maturation Building looking southwest.

## Site Location and Description

### Site Location

The Maturation Building consists of the remains of a single-storey modern concrete structure in the former Diageo brewery site (centre point ITM 650536, 656241; Figure 2 ;Plate 1 & Plate 2).).

The Maturation Building is located 67m south of the upstanding remains of St Francis' Abbey, and 29m outside the boundary for the St Francis' Abbey National Monument (National Monument No. 72). It is also located some 150m south of Evan's Turret, part of the city wall of Kilkenny, also a National Monument under the National Policy on Town Defences (DoEHLG 2008).

### Proposed Development

The site owners, KCC, propose to demolish the Maturation Building. The works will involve the demolition of the building to the level of the adjoining concrete slab. The demolition of the maturation building will be carried out sequentially as follows:

- The strip out and removal of non-structural elements will be undertaken using small plant;
- The materials will be removed from site using small to medium sized trucks;
- Demolition of structures using larger plant and equipment. The roof slab will be demolished by cutting or breaking, whilst the concrete walls/columns will be mechanically demolished (munched). The building will be demolished to the level of the adjoining concrete slab.

This work is consistent with that required for the reuse of most urban sites and will be conducted within secured areas.

## Archaeological and Historical Background

The proposed development is located south of St Francis' Abbey National Monument, within the precinct of the medieval Franciscan monastic complex, and within the walled city of Kilkenny.

The development area lies within the historic town of Kilkenny which is listed in the Record of Monuments and Places (RMP) (KK019-026----) and is protected under the *National Monuments Act 1930* as amended.

**Table 1: Heritage sites in the vicinity of the Maturation Building**

Reference Numbers	Site Class	Masterplan Area
<b>Part of the Kilkenny City Wall Defences, National Monument, in ownership of Kilkenny County Council; KK019-026001-; UAS 4a-4d: 6</b>	Evan's Tower and wall walk City Wall	Public Realm B & C; Urban Block 10
<b>KK019-026101; NIAH 12000008; Nat. Mon. Ref. 72</b>	Religious House - Franciscan Friars, St Francis' Abbey - National Monument in State Care (National monument Ref:72)	Public Realm B & C
<b>UAS 4a: 101</b>	St Francis' Well	Public Realm B
<b>KK019-026093-; NIAH 12000084; RPS B133</b>	The Courthouse/ Grace's Castle	Outside the Masterplan Area, on Parliament Street.
<b>KK019-026----</b>	Historic town of Kilkenny	Urban Blocks 4 – 11; Public Realms A, B, and C (part)

St Francis' Abbey Franciscan friary was founded in 1231 (O'Keeffe 2016). The precinct of St Francis' Abbey in the thirteenth century extended from the River Nore in the east to Parliament Street and Watergate in the west, and from the River Breaghagh in the north to St Ciaran's well to the south, located behind what became Kytler's Inn of Kieran Street (Courtney Deery Heritage Consultancy 2014, 26) (Figure 2 and Figure 3). In 1544, the friary complex was described as follows:

*Church Belfry Dormitory, Hall, Chapter House, three Chambers a Kitchen, a House called the Garnen with three cellars under same House, and an enclosure within the Site of said late monastery or House, and all Edifices Messuages Gardens Lands tenements Orchards and*

*hereditaments whats occurs with this appertaining in or within the Site Bounds Circuit and precincts of said late Monastery or House (Courtney Deery Heritage Consultancy 2014, Appendix A).*

The complex was described again c.1640:

*... all the houses scite [sic] ambit and precincts of the late Monastery or house of Franciscan Friars of Kilkenny aforesaid commonly called the Grey Friars of Kilkenny Late in the saie County and now in the County of the City of Kilkenny and all the churches belfries Domitories halls the Chapter House three bedrooms one kitchen a house called the garner with three cellars under said house and an enclosure within the said Scite [sic] of said Monastery or house of Grey Friars and also all the house edifices gardens orchards lands tenements and hereditaments with their appurtenances within the said Scite [sic] ambit and precincts of the said late monastery or house of Grey Friars and all the castles messuages lands tenements mills weirs (Courtney Deery Heritage Consultancy 2014, Appendix A).*

The precinct would have contained the friary buildings laid out in a typical arrangement of church with cloister and surrounding ranges to the south, transept and aisle to the north, as well as ancillary buildings, gardens and orchards, a cemetery and St Francis' Well, located some 30m to the east of the upstanding remains of St Francis' Abbey. O'Keeffe's recent article on St Francis' Abbey explored the historical and topographical evidence for buildings associated with the friary, including the sites of buildings, gardens, cemeteries and the precinct for the friary. O'Keeffe's analysis suggests that the Maturation Building is located within the former precinct of St Francis' Abbey (O'Keeffe 2016).

The upstanding remains of St Francis' Abbey consist of a choir, crossing tower and sacristy (Courtney Deery Heritage Consultancy 2014, 23–28). These upstanding remains are located within an area c.0.6m lower than the surrounding concrete-covered yard, suggesting that the ground surrounding the abbey was built up during construction work on the brewery site after c.1963. The extent of the National Monument in State ownership is defined on the north, east and west sides by the sunken area and on the south side by the outside north wall of the Samples Room, and covers an area of c.765 sq. m (letter from Sean Kirwan, NMS, to Philip O'Neill, KCC, 30/7/2014) (Figure 2 and Figure 3). The National Monument in total covers an area of c.0.95ha encompassing the areas excavated by Marcus Ó hEochaidhe and David Sweetman to the south, to the River Breagagh to the north and Evan's Turret to the northeast. It does not encompass the site of the Maturation Building.

The Maturation Building is located 58m east-northeast of Grace's Castle (SMR KK019-026093-; Figure 5). Grace's Castle, later becoming the gaol and then the Courthouse on Parliament Street, lies outside the Masterplan area. However, the property associated with the castle is thought to have extended from Parliament Street to the River Nore, immediately south of the site occupied by the Maturation Building. Courtney Deery wrote of Grace's Castle:

*Grace's Castle built c.1210 remained as a family residence in the ownership of the Grace's until 1566 when it was transferred into the ownership of the Crown to be used as a gaol by the Kilkenny authorities and by 1691 it had become the County Gaol. A County Courthouse also occupied the site by the mid-eighteenth century when the Black Abbey ceased to have a role as a house of justice for County Kilkenny. Since 1790 the County Courthouse, County Gaol and City Gaol were located at the same site. Occasionally the building also functioned as a theatre and public meetings were held there for elections. .... In 1824-5 the courthouse street front elevation was substantially remodelled when William Robertson carried out alterations to the building. The building served as a Bridewell from 1871-1946 (Courtney Deery Heritage Consultancy 2014, 35).*

Historical maps indicate that two millraces crossed the site of the Maturation Building (Figure 3). Archaeological investigations confirm this (see below). The earliest reliable historical map, Rocque's map of Kilkenny City from 1758, depicts one of these millraces with a building flanking it at the southern end of the modern Maturation Building site, and depicted the rest of the area of the building as consisting of enclosed gardens (Figure 4). This remains much the same in 1842 when the Ordnance Survey of Ireland mapped Kilkenny, although St Francis' Brewery was expanding, and the second millrace and one new building appear at the north end of the site for the Maturation Building (Figure 5). In maps from 1850 and 1871, the brewery is shown to have expanded slightly into the area now occupied by the north end of the Maturation Building, with some expansion of the buildings beside the millrace at the south end (Figure 6; Figure 7). This arrangement remains much the same in 1900, although the millrace at the north end of the site now occupied by the Maturation Building appears to have been closed in, probably culverted (Figure 8).

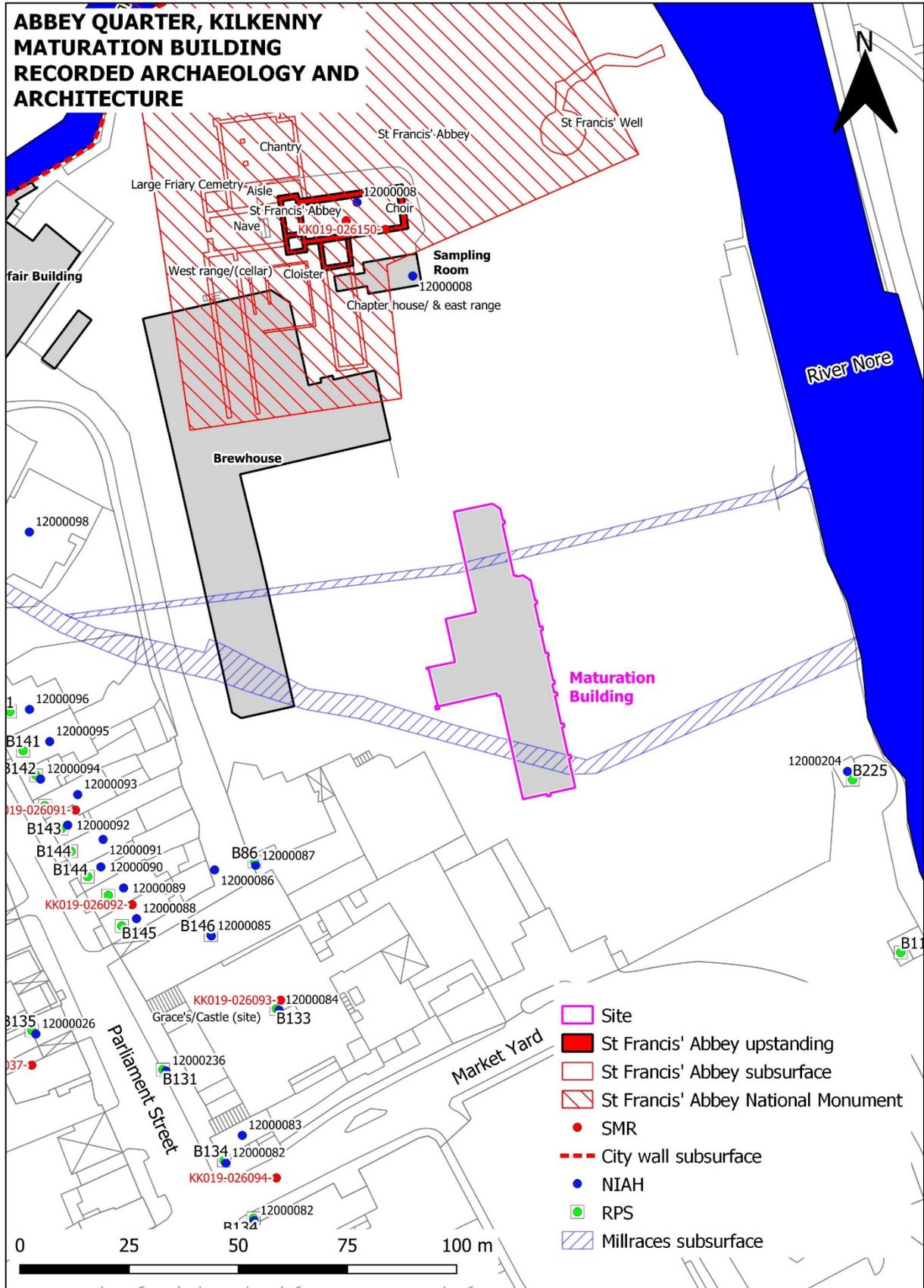


Figure 3: Recorded archaeology and architecture in the vicinity of the Maturation Building



Figure 4: Rocque's Map of Kilkenny (1758) with the outline of the Maturation Building

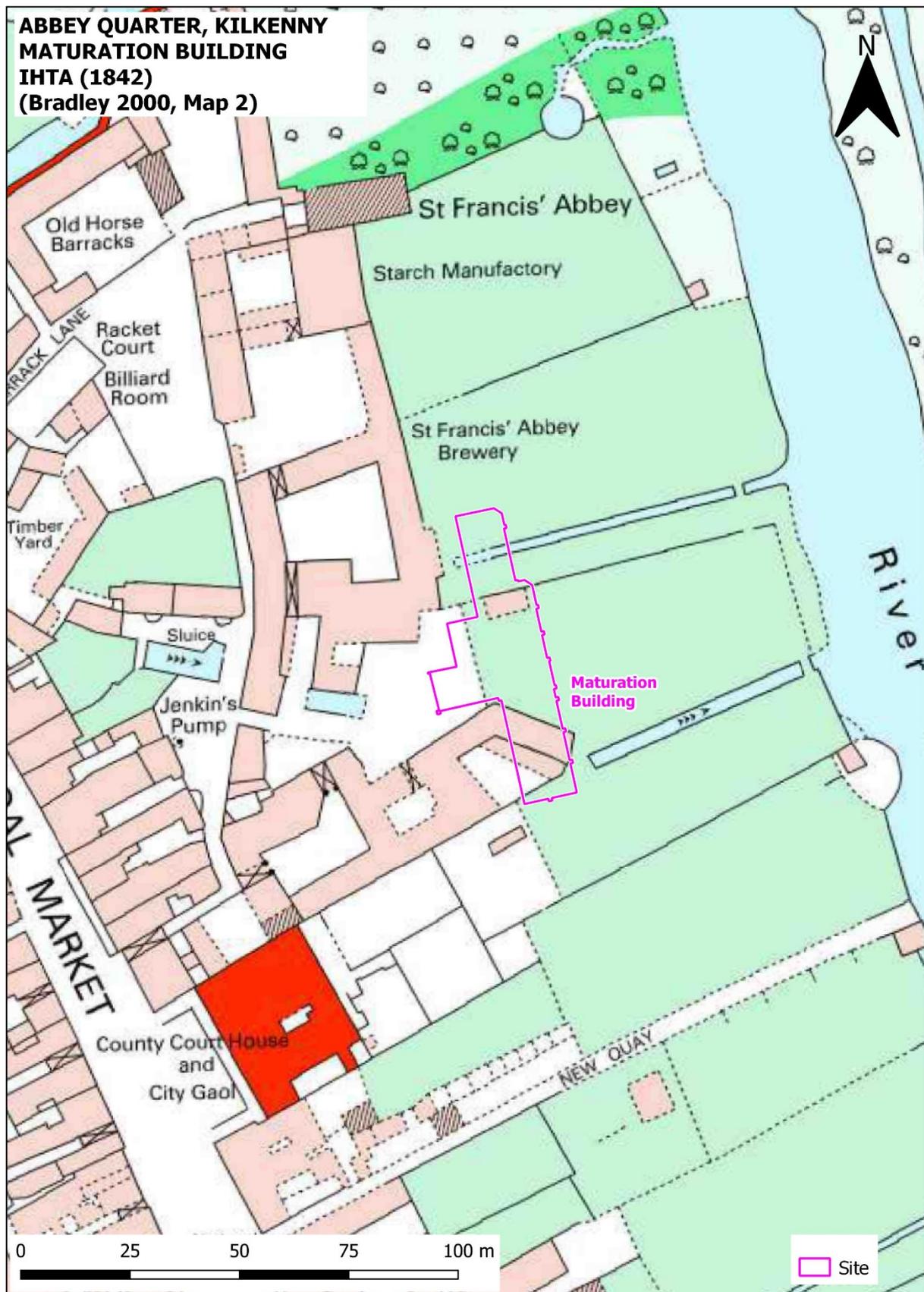


Figure 5: Irish Historic Town Atlas Map 2 (1842–50; Bradley 2000) with the outline of the Maturation Building

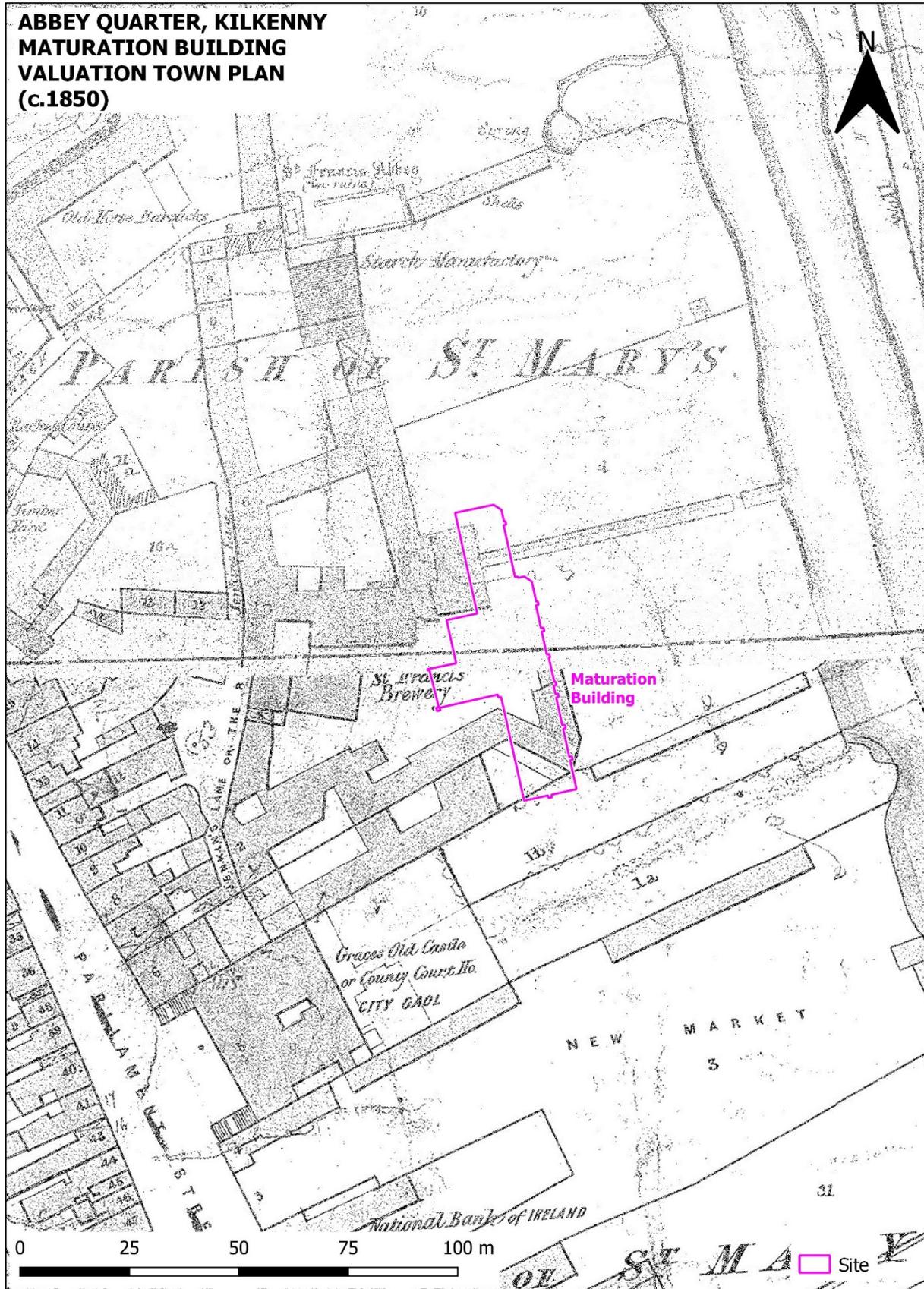


Figure 6: Valuation Town Plan 1:1056 (c.1850) with the outline of the Maturation Building

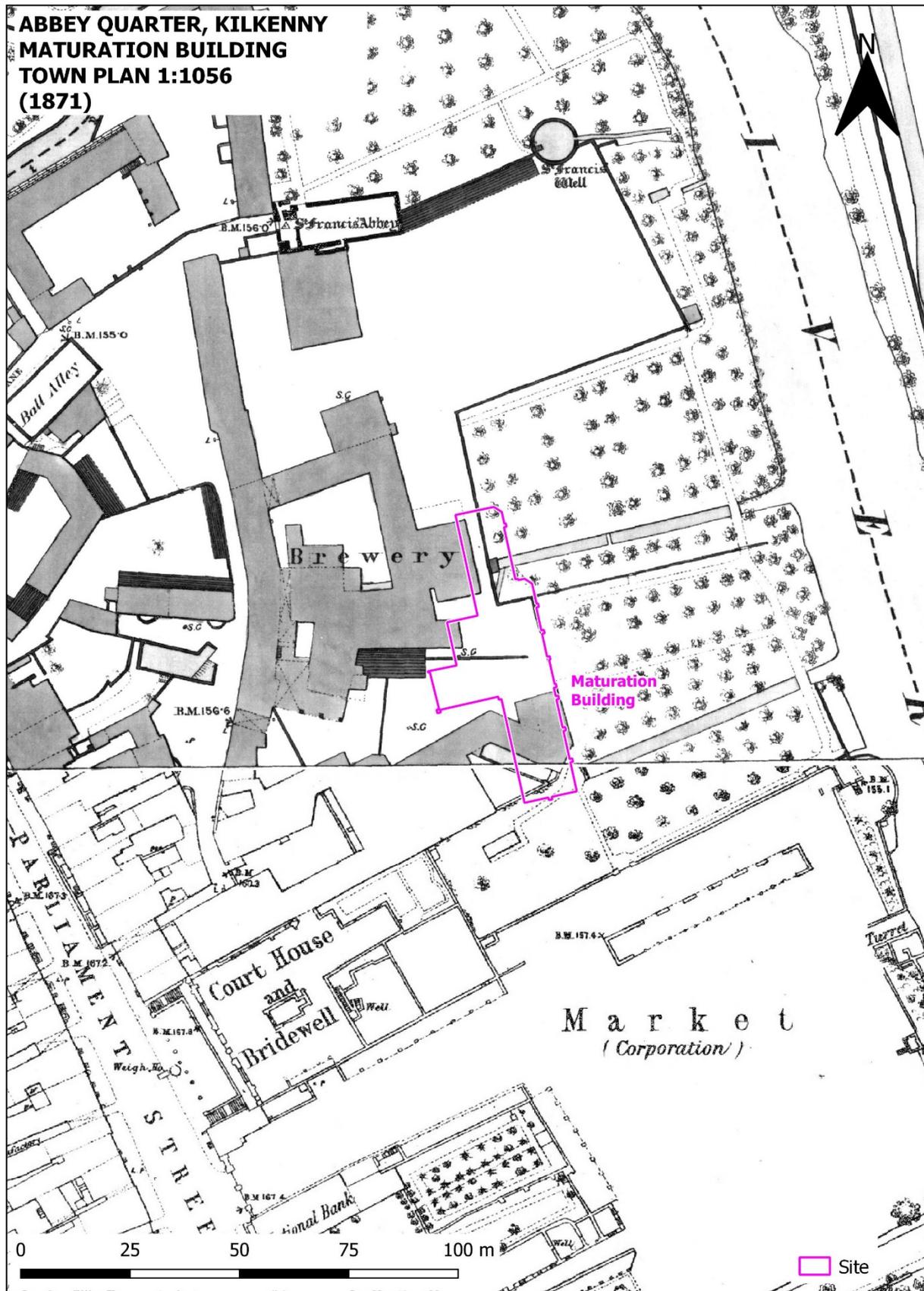


Figure 7: Town Plan 1:1056 (c.1871) with the outline of the Maturation Building

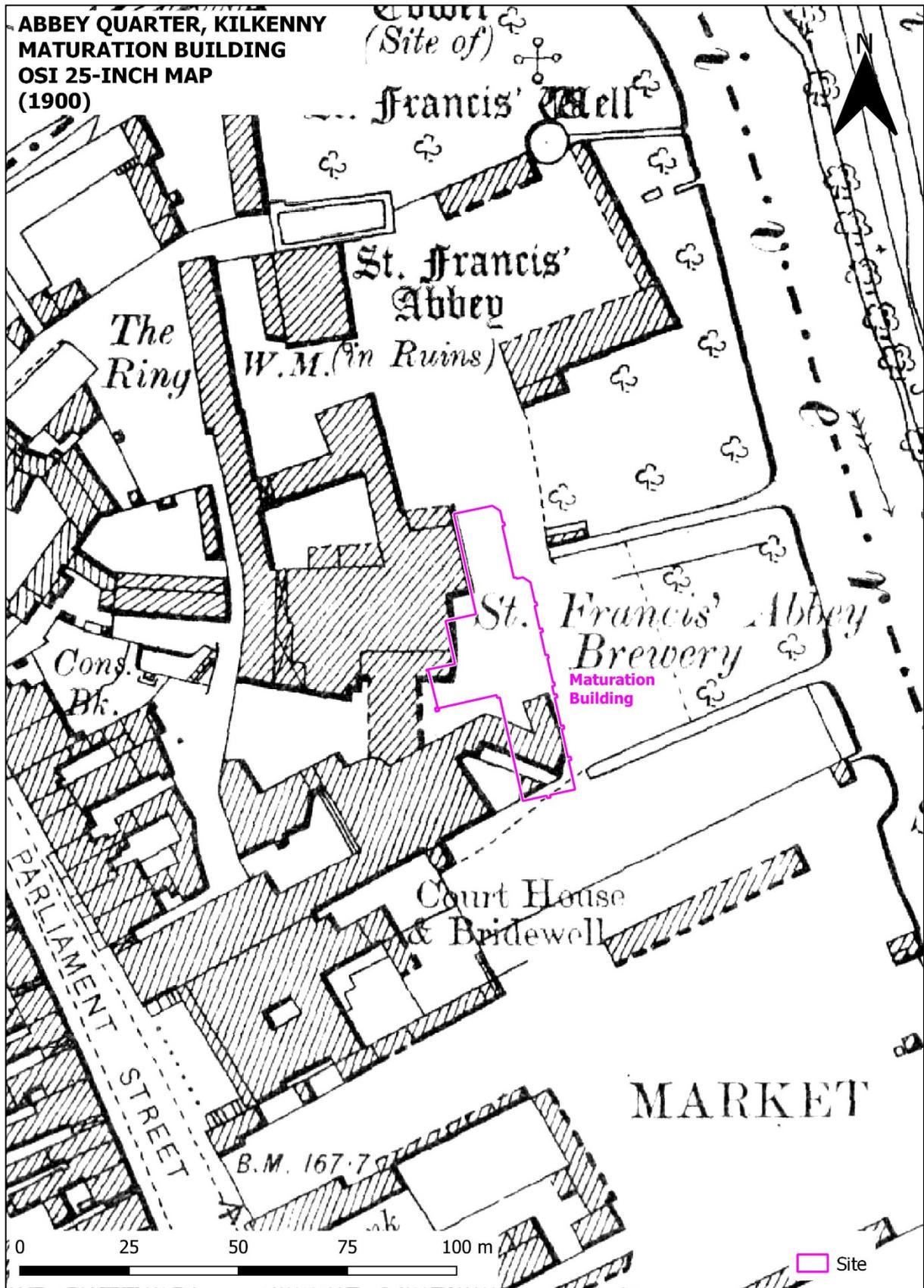


Figure 8: Ordnance Survey of Ireland 25-inch map (1900) with the outline of the Maturation Building

## Previous Archaeological Excavations

Previous archaeological excavations in the area of the Mayfair Building are detailed in the Kilkenny Archaeological Project (KKAP) (Ó Drisceoil et al. 2008) and in Courtney Deery's archaeological assessment for the Abbey Quarter's Masterplan (Courtney Deery Heritage Consultancy 2014) (Figure 9).<sup>2</sup>

More recently, Archaeological Consultancy Services Unit (ACSU) were retained by Kilkenny County Council to undertake archaeological test excavations as specified in the strategies prepared by AMS. Jon Stirland of ACSU directed the test excavations in the Abbey Quarter, including surrounding the Maturation Building (ACSU and Stirland 2018b, 2018d, 2018e). Further works by Colm Flynn in 2018 and 2019 investigated the area around the Brewhouse (Flynn 2018, 2019).

Five previous archaeological excavations were carried out on the site of the Maturation Building to facilitate its construction (Figure 9).

In 1995, Margaret Gowen carried out a small test excavation in advance of the construction of the Maturation Building (Gowen 1996; KKAP-198; Licence 95E0242) (Figure 9). The trench was 4.4m long and 2.2m deep. She identified the following stratigraphy:

- 0.0–0.15m: Hardcore
- 0.15–0.30m: Crushed mortar
- 0.30–0.56m: Compacted red-brick rubble
- 0.56–1.04m: Crushed lime-mortar and rubble
- 1.04–1.16m: Black organic mortar, rubble and clay
- 1.16–1.31m: Pale grey stony clay
- 1.31–1.43m: Mortar
- 1.43–1.58m: Peaty organic soil containing post-medieval pottery
- 1.58–1.70m: Greenish, charcoal-flecked clay
- 1.70–2.00m: Grey-green clay (sterile)

Gowen also observed the following sequence on the south face of the test trench:

- 1.32–1.44m: Mortar
- 1.44–1.59m: Peaty organic soil interpreted as the old ground level
- 1.59–1.70m (approx.): Decayed horizontal timber approx. 1.20m long and 200mm thick *in situ* in a greenish grey clay
- 1.70–1.80m (approx.): Grey-green clay (apparently sterile)

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<sup>2</sup> The Kilkenny Archaeological Project (KKAP) is available to view on-line on the Heritage Council Web Viewer: <https://heritagemaps.ie/>

- 1.80–2.20m: Gravelly sand

Gowen interpreted this sequence as being a sequence of land reclamation overlying wet organic-rich archaeological layers with timbers.

Further investigations were carried out in advance of the construction of the Maturation Building (Licences 97E099, 98E0069 and 99E0148) (Figure 9). The excavation 97E099 (Gowen 1998) identified the following stratigraphic sequence:

- 0–0.30m: Concrete slab
- 0.30–0.80m: Hardcore
- 0.80–1.25m: Demolition rubble, red brick, stone, mortar, etc. A small stone wall 0.30m wide was located running north–south through the trench
- 1.25–2.57m: Black organic silty clay, occasional small stones, few inclusions
- 2.57m+: Hard compact yellow boulder clay

In 2004, archaeological monitoring was carried out for the construction of an effluent drainage system immediately east of the Maturation Building (04E0694 Area C; O'Meara 2007). This involved the excavation of a series of interconnected trenches. The predevelopment ground level was 44.45m OD. Archaeological works identified the following sequence:

- 44.45–44.20m: Steel reinforced concrete
- 44.20–43.60m: Mixed rubble and imported clay land fill
- 43.60–43.10m: Brown black sandy silt with inclusions of limestone and gravel. Mixed river gravels and bank material
- 43.10–42.60m: Mixed brown sand and gravel. River deposits

An arched culvert for a millrace was exposed 0.8m below modern ground surface (43.65m OD). The arch appears to have been constructed in the nineteenth century and was 2.4m wide. The millrace was fully culverted to the river in the late twentieth century (O'Meara 2007).

To the north of the Maturation Building, excavations by Marcus Ó hEochaidhe and David Sweetman discovered the subsurface remains of St Francis' Abbey. Excavations by Ó hEochaidhe in 1963 exposed the north transept, north aisle, nave, part of the southwest range and cloister, and a number of burials. The depth of archaeology was c.0.4–1m. The results of this excavation have not been published (Courtney Deery Heritage Consultancy 2014, 60–62).

Monitoring by David Sweetman in 1970 of construction work to the south of St Francis' Abbey on the site of the Brewhouse building exposed more of the southeast range of the cloistral buildings, including a possible cellar (Courtney Deery Heritage Consultancy 2014, 62–64) (Figure 3; Figure 9).

Test excavations by David Sweetman to the south of St Francis' Abbey in advance of the construction of the Samples Room in 1980, exposed part of the chapter house and a burial, with archaeology at a depth of c.1.6m (Courtney Deery Heritage Consultancy 2014, 64). The remains of the east range of St Francis' Abbey extends south, but do not appear to extend as far as the Maturation Building (Figure 3; Figure 9).

Test excavations were carried out in 2007 in the grounds of the Kilkenny Courthouse, Parliament Street, directed by Maedbh Saunderson (Courtney Deery Heritage Consultancy 2014, 79–80; Licence 07E0549) (Figure 9). The Courthouse itself is a Protected Structure and incorporates the site of Grace's Castle and the later County Gaol (KK019-026093-). The property associated with Grace's Castle stretched from Parliament Street east to the River Nore (Figure 3). Five test trenches with a total length of 50m were excavated in June of 2007 and uncovered a burial, a number of medieval deposits, a well, and some post-medieval walls. Saunderson returned in 2008 to excavate the site (Licence 08E0462). The site proved to be a rich archaeological area producing over 1,000 contexts, 4,000 sherds of medieval pottery, 2,000 sherds of post-medieval pottery, almost 500 pieces of extremely well preserved wooden stakes and timbers from the wood-lined cesspits, as well as eight wooden artefacts, eleven coins, three brass artefacts, over 200 iron artefacts, thirty bone artefacts, two copper-alloy objects with gold and thirty bone artefacts. Pottery provisionally dated from the late fourteenth to twentieth centuries was recovered from the site. The site consisted of remnants of medieval domestic activity typical of an urban property or burgage, albeit a relatively wealthy household. The burgage plots/property divisions were evident on the site as shallow, long ditches orientated both north–south and east–west. The site also contained evidence for the later phases of activity when Grace's Castle became a gaol and courthouse. Twenty-three inhumations were recorded to the rear of the site. The burials excavated were probably inmates executed within the confines of the prison environment. This excavation report has not been fully published (Courtney Deery Heritage Consultancy 2014, 79–80).

The most recent excavations around the Maturation Building were carried out by Jon Stirland, ACSU, across the area of the former Diageo Brewery within the Abbey Quarter for Kilkenny County Council (ACSU and Stirland 2018a, 2018b, 2018c, 2018d, 2018e). Nine test trenches surrounded the Maturation Building (Figure 9). All of these excavations were carried out under the same excavation licence number (17E0642).

In Urban Blocks 5 and 6, to the east of the Maturation Building, nine test trenches were excavated, four in close proximity to the Maturation Building.

Test Trench 1 shared between Urban Block 5 and 6, measured 10.2m by 2.74m (centre at ITM 650571, 656218), and was excavated to a maximum depth of 4.16m (Figure 9). The following stratigraphy was recorded:

- Concrete surface 0.15–0.25m thick; surface level 44.79m OD
- Hardcore 0.38–0.50m thick
- Concrete culverted millrace (nineteenth-century furnace waste material used to make ground, 1.28m thick)
- Dark silty waterlogged garden soils, possibly medieval, 1.87m thick;
- Glacial sand and gravel tills at base, level 40.63m OD

Test Trench 4, Urban Block 5, measured 5.95m by 5.67m (centre at ITM 650569, 656206), and was excavated to a depth of 2.56m. The following stratigraphy was recorded:

- Concrete surface, 0.15m thick; surface level 44.83m OD
- Hardcore material, 0.50m thick
- Concrete foundations of modern buildings associated with the former Diageo Brewery
- Concrete drain associated with the former Diageo Brewery
- Layer of ash-rich soil, 0.20m thick
- Demolition rubble, 0.20m thick
- Demolition rubble with lime plaster and red brick used to build the level of the ground up, 0.26m thick
- Garden soils, possibly medieval, 1.8m thick
- Base of trench at 42.27m OD.

Test Trench 3, Urban Block 6 measured 9.92m by 3.4m (centre ITM 650557, 656264), and was excavated to a depth of 3m. The following stratigraphy was recorded:

- Modern concrete surface 0.20m thick; surface level 43.85m
- Hardcore material, 0.22m thick
- Sand and gravel layer with inclusions of red brick, 0.69m thick
- Nineteenth-century furnace waste material, 0.20m thick
- Waterlogged garden soils, 0.50m thick
- Waterlogged silty clays alluvial deposits 0.94–1.00m thick
- Boulder clay, base level 41.66m OD

Test Trench 5, Urban Block 6, measured 5.26m by 5.10m (centre ITM 650563, 656245), and was excavated to a depth of 3.43m. The following stratigraphy was recorded:

- Concrete surface 0.44m thick; surface level 42.83m OD

- Hardcore, 0.77m thick
- Possible garden soil, 0.09m thick
- Ash-rich deposit with red brick inclusions, 0.10m thick
- Nineteenth-century furnace waste material, 0.32m thick
- Garden soils, 0.43m thick
- Green silty alluvial deposits 0.48m thick
- Boulder clay, base level 41.20m OD

Test trenches in Urban Block 7 were located to the north and west of the Maturation Building (Figure 9). Three test trenches were excavated.

Test Trench 1, Urban Block 7, measured 5.05m by 3.78m (centre ITM 650520, 656291.5), and was excavated to a depth of 3.30m. The following stratigraphy was identified:

- Modern concrete surface, 0.60m thick; surface level 45.02m OD
- Hardcore, 0.6m thick
- Wall associated with the brewery, corresponding with a boundary wall on Rocque's map of Kilkenny (Figure 4), running the length of the trench, 3.78m wide and 0.92m deep
- Cobbled surface 0.15m thick and charcoal lens 0.08m thick beside the wall
- Garden soils with medieval and post-medieval pottery finds, maximum 0.50m thick
- Silty clays with clay pipe and animal bone inclusions, 0.82m thick
- Yellow marly clay, 0.82m thick
- Light brown sandy clay 0.22m thick

Test Trench 2, Urban Block 7, measured 6.52m by 4.80m (centre ITM 650523, 656262) and was 4.38m deep. The following stratigraphy was identified:

- Concrete base of a silo, 0.90m thick; surface level 45.13m OD
- Hardcore, 0.30m thick
- Hardcore and rubble, 0.30m thick
- Demolition rubble, 0.22m thick
- Masonry wall north-south through the trench, three courses, corresponding with the location of nineteenth-century brewery buildings, 0.80m thick, 1.30m deep
- Drain beside and contemporary with the masonry wall, 0.40m wide and 0.36m deep
- Garden soils with animal bone, 1.26m deep
- Base of trench at natural gravels, at 40.75m OD

Test Trench 4, Urban Block 7, measured 5.41m by 5.36m (centre ITM 650498, 656227) and was excavated to a depth of 0.99m before stopping.

Starting at the level 44.75m OD, the trench cut through concrete surface 0.50m thick and hardcore 0.15m thick before encountering the concrete-encased culvert for the millrace (2.4m wide), with large-faced stones possibly the remnants of the original millrace. The trench was stopped at this level.

South of the Maturation Building, in Public Realm C, Test Trench 7 measured 5.12m by 5.3m (centre ITM 650555, 656190) and was excavated to a depth of 3.20m. The stratigraphy recorded in this trench consisted of the following:

- Concrete surface, 0.18m thick; surface level 44.93m OD
- Hardcore, 0.60m thick
- Possible garden soil, 0.13m thick
- Demolition rubble layers with red brick and lime mortar inclusions, 0.22m to 0.24m thick
- Possible garden soil, 0.09m thick
- Nineteenth-century demolition rubble with red brick and lime mortar inclusions, 0.54m thick
- Waterlogged silty clays with eighteenth- to nineteenth-century pottery, iron nails, slate fragments and animal bone, 0.48m thick
- Garden soils with animal bone fragments, 0.63m thick
- Natural boulder clays at level 41.73m OD



## Archaeological Impact Statement

The proposed works will consist of the demolition of a modern building, which will be reduced to the level of the adjoining concrete slab. As such, the proposed demolition works will not have a direct impact on the subsurface archaeological deposits.

The proposed demolition works are located c.67m from the upstanding remains of St Francis' Abbey, and outside of the area of the National Monument. Distance from the proposed works significantly reduces the risk of an impact on these upstanding archaeological remains. Similarly, the remains of Evan's Turret, part of the City Wall, also a National Monument, are located c.150m north of the Maturation Building and will not be impacted.

The only possible identified impacts of the proposed demolition works are:

1. Impact to St Francis' Abbey and the City Wall National Monuments by machinery and heavy loads trafficking in proximity to the monuments during demolition works. This includes trucks entering and leaving the demolition works area with rubble from the demolition, to be brought to landfill.
2. Impacts to St Francis' Abbey and the City Wall National Monuments by dumping of demolition material or parking of machinery near the Monuments.
3. Vibrations from the demolition works and traffic to and from the works area on St Francis' Abbey.

## Recommended Mitigation Measures

The following mitigation measures are recommended:

1. All works on site will be carried out under licence under Section 26 of the *National Monuments Act*. Archaeological monitoring will be informed by a methodology and measures to mitigate the potential impacts on St Francis' Abbey and the city wall National Monuments during the proposed development.
2. Measures should be taken to mitigate the potential impact of vibrations from demolitions and construction on St Francis' Abbey National Monument. This should include suitable measures such as cutting the concrete slab around the area of works to limit the transmission of vibrations, the installation of temporary barriers between the works and St Francis' Abbey and the city wall National Monuments, and the installation of vibration monitors on St Francis' Abbey before works begin. Typical specifications for vibration monitoring include:
  - a) The vibration monitors need to be placed on St Francis' Abbey National Monument preferably as near the ground as possible. There may be obvious ledges, otherwise the monitors should be directly fixed to the monument, preferably on modern (concrete) portions of the monument that are not archaeologically significant. Note that the locations of the vibration monitors are to be approved by the OPW (the owners of St Francis' Abbey) and the NMS prior to installation. Note also that vibration monitors have been placed on the National Monuments on site during previous phases of work and these locations may be reused.
  - b) The vibration monitors should be fitted with an alarm consisting of a visual flashing light or an automatic text message system, to be received by the machine driver, the monitoring archaeologist, the Project Supervisor Construction Stage, and the Project Archaeologist.
  - c) A vibration sensitivity zone will be set at a minimum 25m from the extremity of St Francis' Abbey. Should ground works techniques used beyond the vibration sensitivity zone exceed the vibration control limit then the set procedures for mitigating the reason for the alarm will also be followed.
  - d) A trigger vibration control limit of 3mm/sec PPV (measured on the National Monuments) is to be set as the alarm level with 4mm/s PPV the absolute maximum for these works.
  - e) Detailed monitoring shall be put in place to ensure that the control limit is not exceeded, thus avoiding adverse impacts on the National Monuments. Vibration movements will be actively measured during the works with a pre-determined plan of action ready to be put in place should actual measurements vary from the expected levels. A nominated site representative will be present during the works to ensure the levels are as expected and to supervise any measures should the levels be exceeded. Review of the monitoring data will happen concurrently with the works to ensure that corrective action is undertaken if a limit is breached, or if the developing trend in measurements indicates a limit may be breached if works continue. This real time review and response of the monitoring details is critical to the success of the works. In the event that the control limit is approached the Archaeological Contractor will explore a revised approach for completion of the works that will reduce vibrations.

- f) The results of the real time review are to be forwarded to the Project Archaeologist weekly at minimum but if the vibration alarm is activated the review results will be forwarded to the Project Archaeologist immediately along with proposed mitigation methods.
3. The demolition works where the Maturation Building will be demolished to the level of the adjoining concrete slab will not directly impact archaeology. A methodology should be agreed with the National Monuments Service, for attendance to ensure that the mitigation measures to avoid impacting the St Francis' Abbey and city wall National Monuments is being implemented. The proposed demolition works are for a modern building only and will not extend beneath the level of the concrete slab ground; therefore, the monitoring archaeologist will not be required to attend full-time during demolition works. Rather, the licensed archaeologist shall advise the demolition crew on the protection of the upstanding archaeology, attend site on a regular basis to inspect and ensure that the measures to protect the recorded archaeology set out in this report are followed, under a methodology agreed with the National Monuments Service, and be on standby to attend site should vibration monitors be triggered.
4. No construction material, spoil, offices, stores, machinery, or any material associated with the demolition of the Maturation Building will be placed within 25m of St Francis' Abbey or the city wall National Monuments. A works methodology should be agreed with the main works contractor to protect St Francis' Abbey and the city wall National Monuments during the site set up, demolition works, removal of rubble off-site, and decommissioning of works. This should include managing vibration levels on the National Monuments during demolition works, demarcating agreed areas in advance of works for access and egress from the works area, for the workers' site accommodation, for parking and for temporary storage of demolished material, such that they are kept away from St Francis' Abbey and the city wall National Monuments. In addition, a tool-box talk should be held with the demolition workers at the outset of the project explaining the significance of the archaeology on site to help ensure that they are protected during the works.
5. Following the completion of archaeological monitoring works, a report will be prepared detailing the results of archaeological works and treatment of the National Monuments and submitted to the National Monuments Service.

## References

- ACSU and Stirland, J. 2018a. *Archaeological Test Trenching of the Abbey Creative Quarter, Co. Kilkenny: Public Realm B: Consent C853/E4950. Unpublished report for Kilkenny County Council.* ACSU.
- ACSU and Stirland, J. 2018b. *Archaeological Test Trenching of the Abbey Creative Quarter, Co. Kilkenny: Public Realm C: Consent C853/E4950. Unpublished report for Kilkenny County Council.* ACSU.
- ACSU and Stirland, J. 2018c. *Archaeological Test Trenching of the Abbey Creative Quarter, Co. Kilkenny: Urban Block 5: Excavation Licence No. 17E0642. Unpublished report for Kilkenny County Council.* ACSU.
- ACSU and Stirland, J. 2018d. *Archaeological Test Trenching of the Abbey Creative Quarter, Co. Kilkenny: Urban Block 6: Excavation Licence No. 17E0642. Unpublished report for Kilkenny County Council.* ACSU.
- ACSU and Stirland, J. 2018e. *Archaeological Test Trenching of the Abbey Creative Quarter, Co. Kilkenny: Urban Block 7: Excavation Licence No. 17E0642. Unpublished report for Kilkenny County Council.* ACSU.
- Courtney Deery Heritage Consultancy. 2014. *Abbey Quarter Masterplan Area Archaeological Strategy for Kilkenny City Council (Appendix C Abbey Quarter Masterplan). Unpublished report.* [Online]. Available at: <https://www.kilkennycoco.ie/eng/Services/Planning/Abbey-Quarter-Brewery-site/Appendix-C-ACQ-Masterplan-Archaeological-strategy.pdf> [Accessed 14 November 2018].
- DoEHLG. 2008. *National Policy on Town Defences.* Dublin : Department of Environment, Heritage and Local Government. [Online]. Available at: <https://www.archaeology.ie/sites/default/files/media/publications/national-policy-on-town-defences.pdf> [Accessed 7 January 2017].
- Flynn, C. 2018. *Archaeological Test Trenching Report: Brewhouse Redevelopment Abbey Creative Quarter, Kilkenny City. Ministerial Consent No. C773/ E4766. Report date Feb 2018. Unpublished Report for Kilkenny County Council.* Colm Flynn.
- Flynn, C. 2019. *Report on Archaeological Monitoring of Construction of the ESB Substation and Switching Room, Mayfair Building, Abbey Creative Quarter, Kilkenny City. Consent C789/ Excavation E4822. Unpublished report for Kilkenny County Council, March 2019.*
- Gowen, M. 1996. *Archaeological Report. A proposed fermentor bloc, Smithwick's Brewery, Kilkenny. Excavation No. 95E00242. Unpublished Report [KKAP-198].*
- Gowen, M. 1998. *Archaeological Assessment Report of a Proposed Development at Smithwick's Brewery, Kilkenny. Excavation No. 97E099. Unpublished Report [KKAP-206].*
- Ó Drisceoil, C. et al. 2008. *The Kilkenny Archaeological Project (KKAP) Report for the Irish National Strategic Archaeological Research (INSTAR) Programme 2008.* Final Report, Kilkenny .
- O'Keeffe, G. 2016. St Francis Abbey 1230 – 1630: a history and archaeology of Kilkenny's Conventual Franciscans. *Old Kilkenny Review*, 68, pp.5–56.

O'Meara, B. 2007. *Final Report Archaeological Monitoring at St. Francis Abbey Brewery Kilkenny City County Kilkenny Licence No. 04E0694 ext. Unpublished report.*

Reddy Architecture & Urbanism. 2015. *Urban Design Framework/Masterplan for Abbey Creative Quarter, Kilkenny.* [Online]. Available at: <https://www.kilkennycoco.ie/eng/Services/Planning/Abbey-Quarter-Brewery-site/> [Accessed 10 May 2019].