Howley
Hayes
Cooney

Abbey Quarter
Kilkenny City

ARCHITECTURE

Conservation Management Plan

January 2023

Kilkenny County Council
Comhairle Chontae Chill Chainnigh

An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

hhcarchitecture.ie

H
C H

ARCHITECTURE

This conservation management plan was commissioned by Kilkenny County Council and completed by Howley Hayes Cooney Architects, together with CORA Consulting Engineers, AMS Archaeology and Scott Cawley Ecologists. Co-funded by Kilkenny County Council and the Community Monuments Fund granted by the Department of Housing, Local Government and Heritage. It is a practical working document based on a distillation of existing expert reports and sources on the site. All photographs are by Howley Hayes Cooney unless otherwise stated. The acronym NMS refers to the National Monuments Service throughout the text.

H
C H

CONTENTS

ARCHITECTURE

1.0 Executive Summary

In 2021 a multi-disciplinary conservation team was appointed to prepare this conservation management plan for the built heritage within the Abbey Quarter site in Kilkenny City. The site is also known as the former Smithwicks Brewery, which was closed by DIAGEO in 2014. Kilkenny County Council decided to purchase the site in 2012 for the development of public amenities, and economic benefit. A masterplan for the site was subsequently completed, and approved by the Council in 2015, and since that time most of the former brewery buildings have been demolished, with the exception of the Brewhouse Building, Mayfair Building and the Tasting Rooms and works have commenced on the Brewhouse building, and the Mayfair building. The riverside park project was completed in 2021, and planning permission for the development of an urban public park and street, to provide a connection from Bateman Quay to St Francis Bridge, and within the environs of St Francis Abbey and Evan's Turret is now also in place.

The brief for this conservation plan was clearly defined as 'a heritage conservation plan for St. Francis Abbey, Evans' Turret and St. Francis' Well in the context of the existing City Wall conservation plan'. The Chancellors Inn and Tea-House do not form part of the study site. St Francis' Abbey is a ruin and a National Monument in State Care, in the ownership of the Minister for Housing, Local Government and Heritage and managed by the Office of Public Works. Though known as an abbey, it is in fact a friary of the Order of Friars Minor Conventual or simply the Franciscan Order, also known as Franciscans of the First Order or the Grey Friars, founded in Kilkenny following a grant from Richard Marshall, Lord of Kilkenny, in 1231–34. Evan's Turret, and the existing city wall which adjoins it, and continues along the River Breagagh to the Watergate, were once part of the friary precinct and were subsequently subsumed into the city defences. They are in the ownership and care of Kilkenny County Council, as protected structures, and are also protected as national monuments under the National Policy on Town Defences (2008). The site of St Francis' Well is now contained in an underground water-filled chamber east of the upstanding remains of St Francis' Abbey.
The conservation plan team includes a Howley Hayes Cooney Architecture (Grade I Conservation Architect), CORA Consulting Engineers (structural engineers), AMS Archaeology and Scott Cawley (ecologist) who have been brought together to assess and investigate different aspects of the site. The National Monuments Service were consulted in advance and throughout the preparation of the plan. The conservation plan follows a particular format which is summarised as follows -the history and evolution of the site has been thoroughly researched and established in previous detailed reports, of which this is a distillation, and this allows us to gain a greater understanding of the place. Following this assessment we have generated a Statement of Significance, which sets out why this is a place of cultural significance, assessed under the principles in the Burra Charter (2013). St Francis Abbey is considered to be of national significance, as one of the largest and best examples of a former Franciscan Abbey in Ireland, and the city walls, which include Evan's Turret are also considered to be of national significance as part of the wider Irish walled town defences, and indeed as they once formed part of the friary precinct.

A condition survey of the various structures follows, which includes structural and ecological appraisals, and this allowed us to establish the issues and threats, or immediate concerns for the structures. Due to their ruinous states all of the structures require on-going conservation and repair and if they are to be integrated into a future public park, a programme of conservation works must be carried out at each structure to safeguard and protect them within the public realm. These works are outlined in order of priority within the conservation plan.

The final chapter of the plan focuses on development strategies – and includes recommendations for appropriate future development at this site, and an assessment of the current park proposals and masterplan. The Abbey Quarter site was in private ownership for many years, and inaccessible to the public. Improving access to the structures should be balanced with

ensuring their preservation. One key aspect to be addressed is the future communication and coordination required between Kilkenny County Council, the OPW and the National Monuments Service to establish an acceptable and agreed interface between the abbey and the park. We have advised that a dedicated steering group should be appointed to manage this process.

The park proposals include legible landscaping which will echo the archaeological remains sub-surface, and these are welcome inclusions in the park. We have included other recommendations such as consideration for the reduction in size, or removal of, the tasting rooms in long-term development proposals due to its close proximity to the abbey. The development proposals of the future Block 9 building within the masterplan should take into consideration the views of the abbey from along the river-bank. The presentation of Evan's Turret should be considered further within the park proposals, and we have included recommendations for ways that this interesting prospect tower could be further presented within the public realm.

In conclusion the conservation management plan has set out the history and significance of the wonderful historic site, situated in the heart of Kilkenny City. An appraisal of the condition of the structures has defined a number of issues and threats to these important ruins, and the ecological assessment undertaken also includes AA screening. The conservation plan concludes with recommendations for the owners and caretakers of the site, including detailed conservation and development strategies for consideration by Kilkenny County Council, the National Monuments Service and the OPW. It is of utmost importance that this plan is utilised as a tool to set out future programmes of conservation and repair at the site, and as a basis for future development of the site.

Illustration and caption: Illustration of the Abbey by T.K. Cromwell from his Excursions through Ireland Vol.1, 1820 [Leinster]

2.0 Introduction

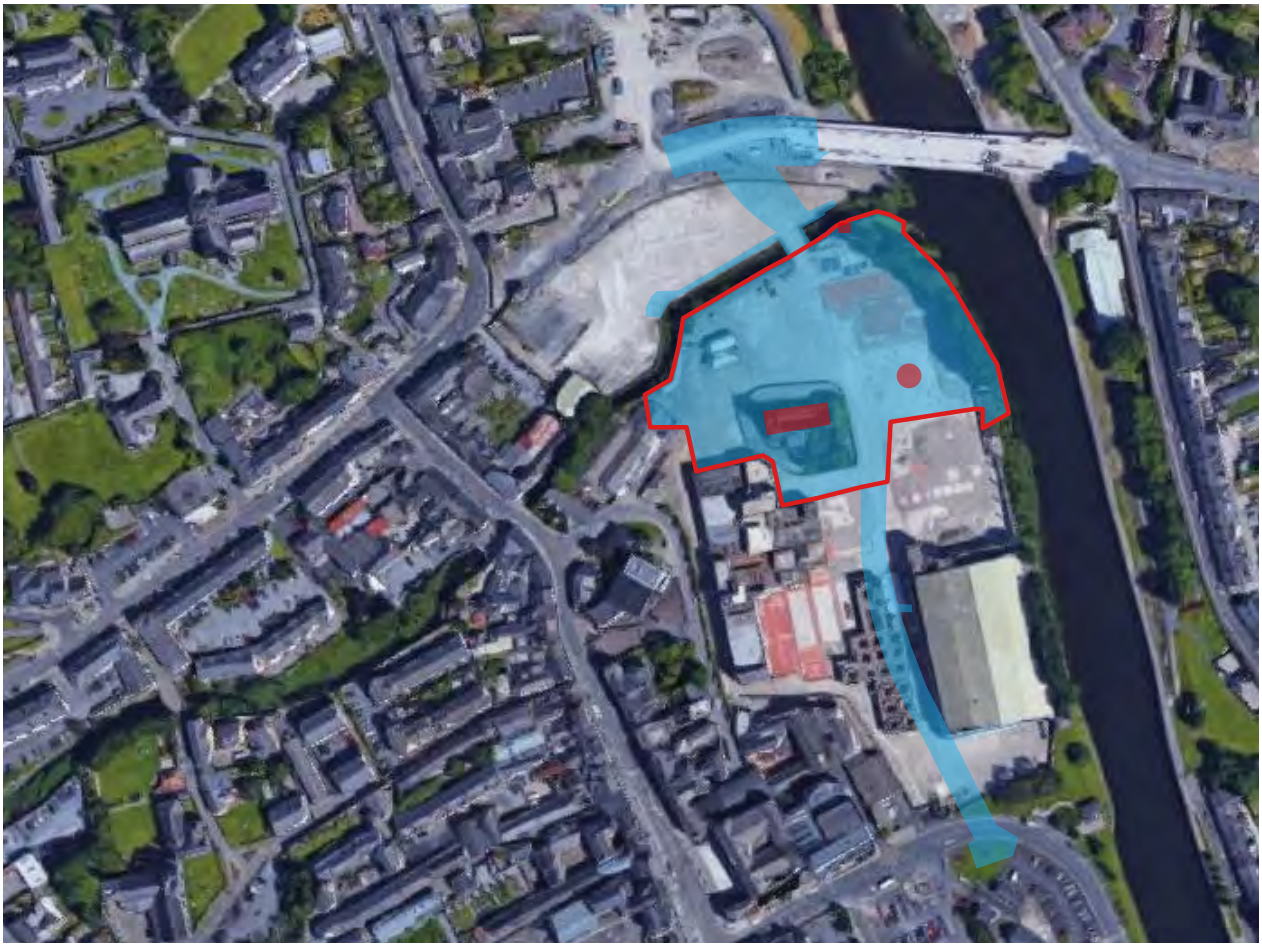


Fig 1. The Abbey Quarter site today , the Urban park phase 2 is shown in blue, the study area boundary outlined in red

The Abbey Quarter in the City of Kilkenny has a rich and varied history. It is the location of St. Francis Friary, also known as St. Francis Abbey, a thirteenth-century ecclesiastical foundation, bounded to the north by the city defences and the River Breagagh and to the east by the River Nore. In more recent times it was home to the Smithwicks Brewery, prior to relocation in 2014 to the St James Gate Brewery in Dublin. Now under the ownership of Kilkenny County Council, plans are in place to establish a city park at this area, which will bring the ruins of St Francis Abbey, a national monument in state care, in the ownership of the Minister for Housing, Local Government and Heritage and managed by the Office of Public Works, into the public realm.

The site also contains Evan's Turret, and historic walls once associated with the Friary, and now considered to be part of the walled town defences, which are national monuments in the care of Kilkenny County Council.

The purpose of this Conservation Management Plan for the site is to establish the history and significance of this place, and provide an overarching vision for this site, together with the various structures that survive within it, and to deliver clear objectives for maintenance and conservation, guidance or any future development of the site.

3.0 Understanding the Place

Fig 2. Remains of the Black Freren Gate on the western side of the old town walls

Walled Towns in Ireland

The Abbey Quarter site is located in Kilkenny City, one of Ireland's medieval walled towns. It is bounded to the east by the River Nore, the north by St Canice's Place, the west by Irishtown/Parliament Street and the south by Bateman Quay. To understand the Abbey Quarter site, it is important to acknowledge its history and context, which has been summarised below.

Writing over one hundred years ago, J.S. Fleming commenced his study *(The Town Wall Fortifications of Ireland. Paisley, 1914)* on nineteen of the walled towns of Ireland by commenting on the lack of knowledge and understanding of this important aspect of our cultural heritage, as follows:

The few existing remains of town-wall fortifications, which formerly enclosed and protected every important town in Ireland, and which yearly diminish in number, are, as a class, undeservedly overlooked by writers on the antiquities of such towns they describe.

[Though finite, the understanding and appreciation of such important elements of our history has, as outlined below, thankfully changed in more recent years]

In her extensive study, *The Walled Towns of Ireland II*, 1992, Avril Thomas described fifty-six towns where there exists certain proof of wall circuits, with thirty-five for which defensive walls were a possibility and twenty others for which only the most tentative claims could be made. They range in size from Dublin, and the larger cities and towns like Kilkenny, down to what now are small villages or long abandoned settlements. Defences were installed around settlements from the Neolithic period, and were also found around early-Christian monasteries and port towns established by Norse colonists.

Following the colonisation of parts of Ireland by the Anglo-Normans, stone-built defences started to replace less robust timber structures and earthworks. These towns formed outposts, as well as creating new trading networks and led to the economic development of the country as a whole. The walls vary in scale, detail and material, in each case responding to the topography, as well as the prevailing economic and political context. Over the centuries, they have played a key role in historical events and in the development of our towns and cities.

Ireland is located on the western periphery of Europe, and was relatively late in developing an urban culture. Nonetheless, Irish walled towns characterise political and economic developments on the island in relation to Britain and the continent. Starting with the port settlements founded by the Norse, the Anglo-Normans established a more lasting hold on the interior until falling away in the

Fig 3. Talbot's tower, on the south western edge of the city walls

early fifteenth century. Each brought construction methods and settlement patterns from their own homelands, but adapted these to local circumstances. The Tudor and Stuart plantations also relied on town defences. In the early modern era, following the Cromwellian and Jacobite/ Williamite conflicts, defensive walls and ditches quickly became redundant. This led to their gradual but widespread removal, starting in the eighteenth century, so that much of the evidence of the extent of Irish walled towns, and their position in the wider European context, has been lost.

The Heritage Council established the Irish Walled Towns Network (IWTN) in April, 2005, to unite and co-ordinate the strategic efforts of Local Authorities involved in the management and conservation of historic walled towns in Ireland, both north and south. The IWTN is formally linked to the International Walled Town Friendship Circle (WTFC), which is the International Association for the sustainable development of walled towns, walled cities and fortified towns.

The Piran Declaration which outlines the reasons for maintaining historic walled towns, was outlined at an Annual General Meeting of the Walled Town Friendship Circle in Piran, Slovenia in 1998.

In 2008, the National Policy on Town Defences was published by the DoEHLG (now the Department of Housing, Local Government & Heritage).

A Brief History of Kilkenny

Origins

In common with many Irish cities, Kilkenny, from the Irish, Cill Chainnigh, meaning 'church of Cainneach' or St. Canice, was first developed in the sixth century as an early-Christian foundation and pre-Norman settlement, with a church, now St. Canice's Cathedral, built in his honour during the seventh century (Bradley, 2000). Kilkenny is Ireland's largest inland city and was the second town of Leinster until the twentieth century. It is located 115 km south-west of Dublin and 48 km north of Waterford.

The city's evolution is inextricably linked to its favourable topography and setting, situated as it is on a major fording point on the River Nore, located to the east of Canice's Church, just north of the present Green's Bridge (Bradley 2000, 1; Ó Drisceoil et al. 2008 80), and its relative proximity to Dublin. Kilkenny became the ecclesiastical centre of the Kingdom of Ossory and, it appears that by the late-twelfth century, before the Normans arrived, a significant settlement had grown up around St Canice's Church, which included craftwork and enclosing banks and ditches (Ó Drisceoil 2013 19).

Fig 4. St. Canice's Cathedral

Fig 5. Garden front of Kilkenny Castle

The Anglo-Norman Period

In the late-twelfth century Kilkenny became part of the land of the lordship of Leinster, established by Richard Fitz Gilbert de Clare (Strongbow), earl of Pembroke. It is apparent that the Norman style stone castle was built by 1173. This castle became the principal seat of the Butler family after 1391. It was constructed on the site of a large earthen rampart overlooking a strategic crossing on the river Nore, south of the Breagagh, circa half a kilometre south of what was to become St. Francis' Friary. The castle, like the royal castles in Dublin and Limerick, was originally built with four corner towers and an encircling wall with a dry moat outside.

Following the castle's construction, two distinct walled, or mural, boroughs developed: High Town (English Town, c.1176, located on higher ground), close to the castle and, the older episcopal settlement, Irish Town, north of the River Breagagh in the vicinity of St. Canice's Cathedral. A third area evolved around the Augustinian priory of St John's, on the east bank of the river. Each area was in time enclosed by town walls. (Bradley 2000).

Fig 6. Source of image of William Marshall is Google (original Wikipedia image by Michael Wal and published 10 May, 2018)

Upon the Earl of Pembroke's death in 1176, the land reverted to the crown. There is a dearth of extant documentary evidence on Kilkenny until Isabella, the daughter and heiress of de Clare (Strongbow and Aoife), married William Marshal in 1189. Marshal was widely held to be the greatest knight of his era and owned extensive demesnes and estates across Ireland, England, Wales and France, and was noted for the effective management of his property. (Bradley 2000) Following Marshal's arrival in Ireland in 1207, a borough charter was drawn up that confirmed urban privileges of the sort common to feudal towns throughout Britain and Ireland. The formal arrangements for burgages, a town ('borough') rental property, was made by the Marshal's representative, Geoffrey Fitz Robert, around 1200, suggesting that the setting out of the regular arrangement of plots was already in train.

The initial Anglo-Norman settlement stretched from the castle in the south to James's Street on the north. This Hightown was also extended northwards by an exchange with the Bishop of Ossory, as evidenced by deed of c.1207, in which the bishop received a rent of an ounce of gold in exchange for giving Marshal land reaching from James's Street in the south to the River Breagagh in the north, specifically to enlarge the town (Bradley 2002).

Two strategically important bridges had also been built over the Nore by the early-thirteenth century, which were replaced at various points over the centuries as a result of flooding. The sites of these correspond roughly to the current day Green's Bridge, east of St Canice's Cathedral, and further south, John's Bridge. The Hightown developed as a network of streets lined with buildings linked by small alleys or 'slips', survive today: High Street, the Parade (formerly Castle Street), Parliament Street (formerly the northern end of High Street), St Kieran's Street, St James's Street and Rose Inn Street (formerly Crokerystret) in Hightown are all medieval in origin. Irishtown, Dean Street, St Canice's Place, Vicar Street and Green Street formed the principle thoroughfares around St Canice's Cathedral. John Street ran through a walled suburb of Kilkenny on the east side of the River Nore, whilst Patrick's Street was a thoroughfare through a medieval extramural suburb called Donaghmore.

Another extramural suburb called Flemingstown was located to the south of Kilkenny Castle, now beneath the Castle Park. Religious orders in medieval Kilkenny included the Franciscans at St Francis' Friary (founded 1231), the Dominicans at the Black Abbey (founded 1225), and the Augustinians

Fig 7. Map of the medieval town walls after Bradley (2000) from Courtney Deery's Kilkenny Masterplan Area Archaeological Framework (2014)

at St John's Abbey (founded 1211). Medieval Kilkenny also contained St Mary Magdalen's Hospital, a leper hospital on Maudlin Street founded in the early fourteenth century and residences and gardens of significant merchant families and religious orders, together with a number of inns, mills, breweries and tanneries close to the rivers Nore and Breagagh, (Bradley 2000).

This thriving town suffered in the fourteenth century, during a period of economic recession in Kilkenny, while the city's experience of the Black Death after 1348 was chronicled by Friar John Clynn (Williams 2007). Kilkenny Castle became the seat of the Butler family after 1391, later to be Earls and Dukes of Ormond and the city became the power centre for a lordship which extended over large parts of counties Kilkenny and Tipperary (Edwards 2003).

Prominent merchant families in Kilkenny included the Archers, Langtons, Rothes and Shees, who prospered under the protection of the Butler lordship and dominated secular and religious life in late medieval and early modern Kilkenny.

Even after the dissolution of the religious houses some time after 1540, these families who largely remained Catholic benefited from the subsequent distribution of property, as did the town corporation (Bradley 2005, 6). The merchant families built substantial renaissance-style town houses and gardens in Kilkenny; of the ten surviving examples in Kilkenny the finest is Rothe House and gardens on Parliament Street.

The Granting of City Status

Kilkenny was granted city status in 1609 under a charter from James I, encompassing the separate corporations of Irish Town and High Town (Bradley 2009), and thrived during the first half of the seventeenth century. It became the political centre of the Catholic Confederacy after 1642: an uneasy alliance of Catholic Gaelic Irish and descendants of the Anglo-Normans. However, the city was besieged by Cromwell in early 1650, surrendering on the March 27th. Under the Commonwealth regime the Ormond Lordship and the Catholic merchant families of Kilkenny lost their properties and their influence. Catholic worship was banned.

Fig 8. From Bradley's 'Kilkenny', Irish Historic Towns Atlas, No.10, Map 4, 2000

Fig 9. James Butler, 1st Duke of Ormonde (Google)

The Restoration of 1660

Following the restoration of Charles II in 1660, the architecturally enlightened James Butler, the First Duke of Ormonde and Lord Lieutenant of Ireland for the second time, set about elaborate improvements at the castle. With the exception of the hall and gallery built in the 1580s, it had remained a largely medieval fortress and the duke set about converting it into a French-style chateau, and later created the Castle Park gardens adjacent to the south (Bradley 2000, 6).

The Duke of Ormonde significantly influenced the development of this city, its architecture and public spaces. The former merchant families did not, however, recover their previous influence, and Catholic worship was still largely kept outside the city bounds, resulting in an extramural ribbon development common in many Irish towns after the late-seventeenth century.

The Eighteenth Century

The continuing tension between the new elite and the Catholic middle class was graphically expressed by the mayor when he complained in 1708 that

'the protestants of this city are but a handful faced with an inveterate and implacable enemy' (Neely, 1989, 50).

The construction in 1698, of an infantry barracks in the old St John's Priory in 1698, and of a cavalry barracks within the precinct of the Franciscan friary, increased the elite's sense of security. This is evident on Rocque's Plan of Kilkenny city of 1758. Though James, second Duke of Ormonde,

Fig 10. From Irish Historic Towns Atlas 'Kilkenny', No.10, 2000

Fig 11. Thomas Mitchell's 1760 Panorama of Kilkenny (National Gallery of Ireland, NGI.4467)

renovated the White tower of the castle and added new buildings, including to the site of the old great hall, the power and reach of the Ormondes in Kilkenny was on the wane and soon their agent began to sell off their holdings in the city. In 1716, the Duke was charged with treason and the fabric of the castle began to deteriorate (Loeber et al, 2015 465).

Henry Pratt's 1708 panorama of Kilkenny illustrates, albeit schematically, the major edifices in the city at that time. By contrast Thomas Mitchell's 1760 Panorama shows the city idyllically set either side of the banks of the river. Buildings are located in the centre foreground on the flood plain, the castle to the left of the view and the main body of the town at centre, and St. Canice's Cathedral located prominently to the centre left of the view. Severe flooding of the River Nore in 1763 prompted the rebuilding of the two bridges (referenced above) in the city by the Corporation, in an elegant classical style.

In common with Dublin and other Irish city's, Kilkenny enjoyed something of a building boom in the eighteenth century. The Tholsel, one of the city's main administrative buildings, was rebuilt on the site of the existing building, as was the courthouse (c.1792) on High Street, in the Georgian style. The rise of the professional classes also precipitated the building of many of the Georgian terraced houses so synonymous with the city today. The woollen industry, particularly blanket manufacturing, was the city's main source of employment throughout the eighteenth century and consequently many structures were built to house it (Loeber et al, 2015, 465).

Fig 12. The Tholsel, High Street Kilkenny, seen here in a photograph from 1880 (Google)

Nineteenth & Twentieth Centuries

By the time of the Act of Union in 1801, the city's population had burgeoned to almost 15,000, and many new institutional buildings - such as the gaol, workhouse, hospitals and barracks - and were built to reflect the changing political, social and economic conditions. Kilkenny was one of the most industrious places in the country in the early-nineteenth century (Dickson 1990, 342).

The agricultural slump that followed the end of the Napoleonic War in 1815 was exacerbated by the failure of the corn crop in 1816, causing a famine in 1817 (Neely, 1989,39). Nonetheless, Kilkenny's markets, mills and warehouses remained the busiest in the county and, between 1826 and 1835, 34% of all county wheat sales and 45% of oat sales were made within the city (ibid).

Over the course of the nineteenth century, four foundries worked both iron and brass, while a copper manufactory is referred to in James's Street in 1815. The census makes clear that 60% of the houses in the city were, at this point, little more than mud cabins, whereas houses of high value were concentrated on Parliament Street, High Street and Patrick Street. The first edition Ordnance Survey 6" map of 1839-40 clearly illustrates this urban morphological change. In 1846, just before the Great Famine (1845-50), at least nineteen forges and four foundries operated in the city, but by 1856 the numbers had dropped to six forges and two foundries (Neely, 1989,39).

Fig 13. St. Francis Abbey Brewery, 1866, by Meason ("The Official Illustrated Guide to the Great Southern & Western Railway, and an Account of Some of the Most Important Manufactories in the Towns on the Line")

In the early twentieth-century, on the cusp of independence, the principal industries remained the same as those of the 1830s, brewing, shoemaking, woollen manufacturing and iron-working, which were practised on a much smaller scale. The site of the Abbey Quarter is now directly linked to the Smithwick's brewery. The city remained relatively unscathed during both the War of Independence (1919-1921) and the subsequent Civil War though the decline of the neglected castle went unchecked for much of the century because of the turbulent political climate. It was not until 1967 that the castle was restored and presented, along with its gardens, to the city. The following decade witnessed the birth of both the now world famous Kilkenny Design Workshops and what became it hugely successful Arts Week events that imbued the city with new cultural and civic vigour.

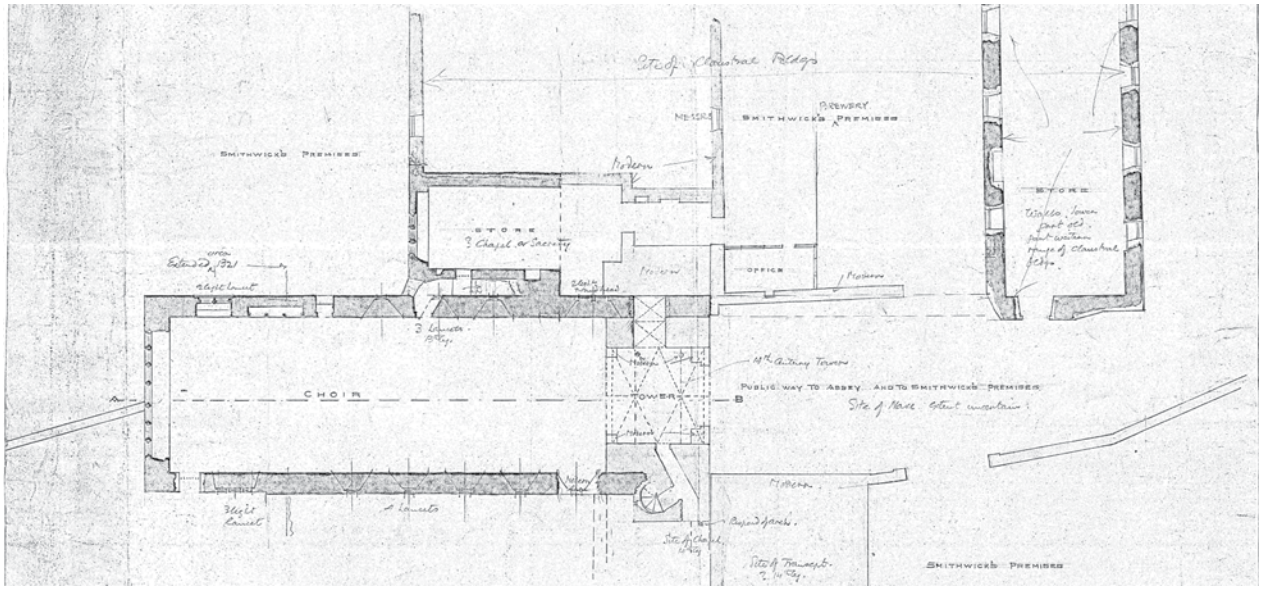


Fig 14. 1906 Survey of the Abbey and its environs (OPW Archive)

Chronology of Significant Events related to St Francis' Abbey
(based on Dr Richard Clutterbuck's research undertaken for the Abbey Quarter Public Realm EIAR, 2020)

1224	The Franciscans arrive in Ireland.
1231–34	St Francis' Friary (also known as St. Francis Abbey) founded on a grant from Richard Marshal, Lord of Kilkenny.
1245	Crown provides funds for St Francis' Abbey construction.
By 1250	Church of St Francis' Abbey finished.
1250-1460	Known murage grants for the construction of the town defences are documented around Hightown.
1274	Earl Gilbert de Clare grants St Francis' Abbey the right to grind corn.
1321	Lady Isabella Palmer, patron of St Francis' Abbey, buried in the choir.
1321	Fraternity of guilds founded to fund the construction of a crossing tower and repair the church of St Francis' Abbey
1324	Works to extend or rebuild the choir of St Francis' Abbey complete; this includes the seven-light window, funded by Lady Isabella Palmer.
c. 1400	Tower now known as Evan's Turret constructed, possibly replacing an earlier tower in this location.
Later 14th century	Completion of the crossing tower of St Francis' Abbey.
1541	Extent of St Francis' Abbey before its dissolution by Henry VIII.
1544	St Francis' Abbey granted to the sovereign and Corporation of Kilkenny.
1650	Cromwellian forces enter the city of Kilkenny through a breach in the city wall in the precinct of St Francis' Abbey (across the River Breagagh). City surrenders on 28th March.
1687	Last recorded burial in the cemetery of St Francis' Abbey: Mrs Agnes Banckes alias Smith.
1700	Portion of St Francis' Abbey granted by the Corporation to become the Horse Barracks.
1710	Brewery started by Richard Cole in partnership with John Smithwick in St Francis' Abbey.
1724	The defence tower becomes known as 'Evan's Turret' following leasing of this land from the Corporation by Alderman Evans.
1791	Daniel Gross publishes an engraving of St Francis' Abbey by George O'Brien.
c.1800	Depiction of St Francis' Abbey by J.G. Robertson (published 1851).
1800	Horse Barracks closes. Buildings acquired by the Corporation.
1810	Pencil drawing of St Francis' Abbey by R. Gibbs.

1815	George Miller's pencil drawing depicts 'Lady's bath at Evans Francis Abbey', St Francis' Well.
1827	Edmund Smithwick purchased the brewery at St Francis' Abbey.
1866	Measom's depiction of St Francis' Abbey Brewery.
1868	The Royal Society of Antiquaries of Ireland undertook works to prevent the crossing tower from collapsing.
1869	Metal pillars inserted to support St Francis' Abbey crossing tower.
1871	Windows of the choir of St Francis' Abbey re-opened.
1872	Buttress constructed to support the south side exterior of St Francis' Abbey crossing tower.
1880	St Francis' Abbey becomes a national monument.
1888	The Office of Public Works (OPW) starts conservation works on St Francis' Abbey.
1897	OPW insert timber centring to support St Francis' Abbey crossing tower.
1927	Timber centring in the Abbey crossing tower replaced with concrete.
1943	Mayfair Ballroom opens.
1963	Archaeological excavations by Marcus Ó hEochaidhe, OPW.
1963	Conservation works on the east window of St Francis' Abbey choir.
1964	Guinness buy Smithwick's Brewery, followed by the significant construction of modern brewery buildings.
Mid-1960s	St Francis' Well enclosed in a concrete chamber and covered over as the ground is built up next to the River Nore.
1970s	Brewery expands north of the River Breagagh.
1970s	Brewhouse expanded, archaeologically monitored by David Sweetman.
1973	Brewery buys the Mayfair Building, which becomes offices and a canteen.
1980	Tasting Room constructed immediately south of St Francis' Abbey following excavation by David Sweetman.
2013	Diageo move the brewery operations to Dublin.
2016	Works carried out at Evan's Turret, to repair and consolidate the structure.
2016	Kilkenny County Council buys the brewery site surrounding St Francis' Abbey.
2018	Archaeological test excavations commissioned by Kilkenny County Council

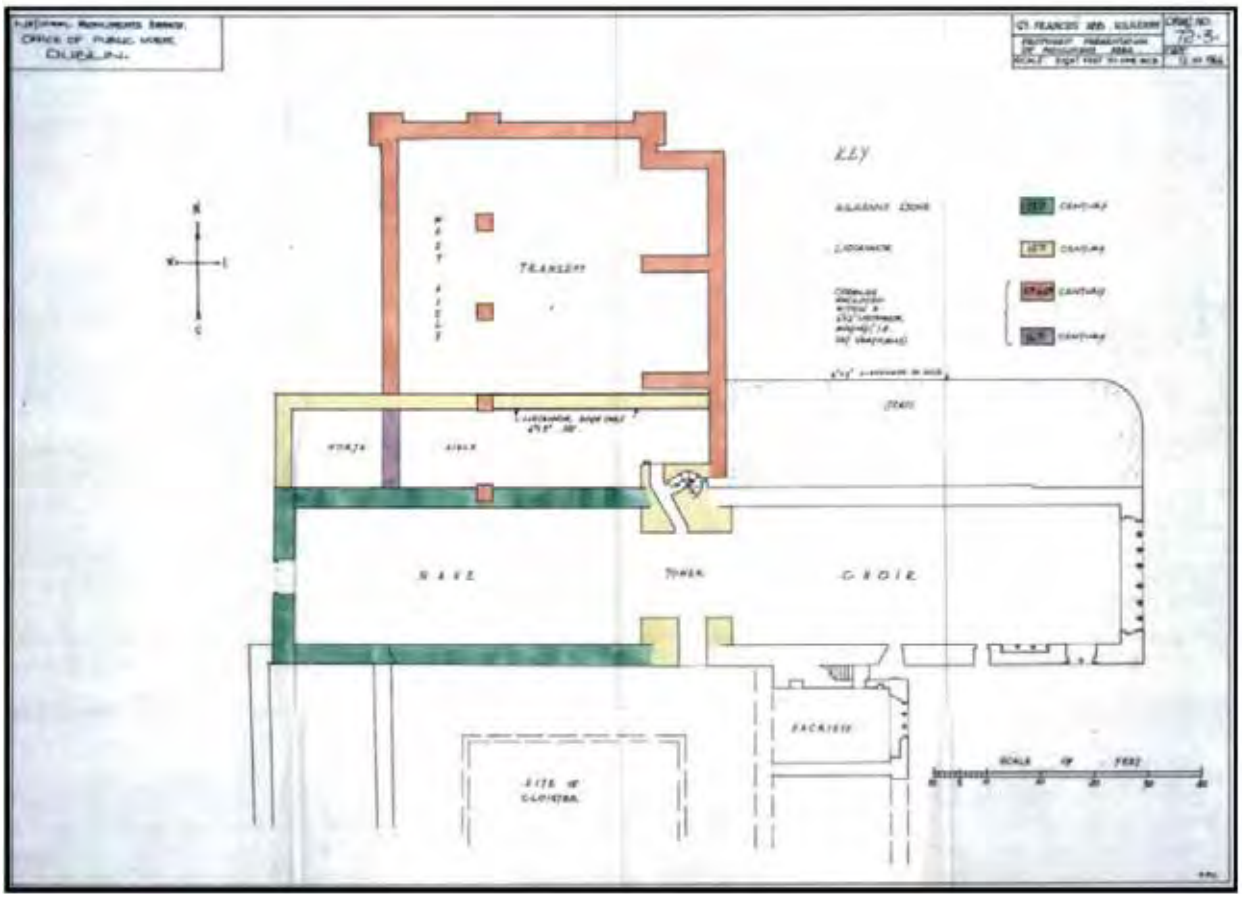


Fig 15. St. Francis Abbey Building Age drawing, OPW, 1966

St Francis's Abbey

The Franciscans arrived in Kilkenny in 1234 having crossed from England probably to Dublin in the late 1220 and advanced rapidly into the surrounding counties in the subsequent years (Lanigan, K. & Tyler, G.,1987, 36). As an Anglo-Norman stronghold and a prosperous town, Kilkenny would have been an attractive destination, with extensive trade, good economic links and wealthy patrons. These early Franciscan foundations were almost exclusively attached to urban settlements, where they became an integral part of the religious and social fabric.

The construction of the abbey appears to have started after Marshal's death, possibly as late as 1246, when it received a royal grant for building purposes. Located on a reclaimed flood plain, within a precinct occupying the north-eastern corner of the Hightown, the site is bounded on the north by the Breagagh River and on the east by the Nore.

The Friary began as a small church but expanded as funds permitted to include a cloistral range, and to cover a three hectare precinct, including a section of historic wall along the Nore (Carrigan 1905, 104; Bradley 2000, 3–4; O'Keeffe 2016, 10-11).

It has been suggested that by 1274, the whole area of the precinct was defined following a grant from Earl Gilbert de Clare, along with a right to grind corn toll-free in his mill (O'Keeffe 2016, 12–13). The fact that the Franciscan Provincial Chapters were hosted on the site in 1267, 1308 and 1332 respectively, would suggest that the buildings then within the complex were sufficiently complete, and have been likened in plan to those of Castledermot friary (Conlon 1975, 84).

Typical Monastic Church Layout

Though each religious order might have had slight variations in plan to reflect their particular needs, the constituent parts of these medieval buildings

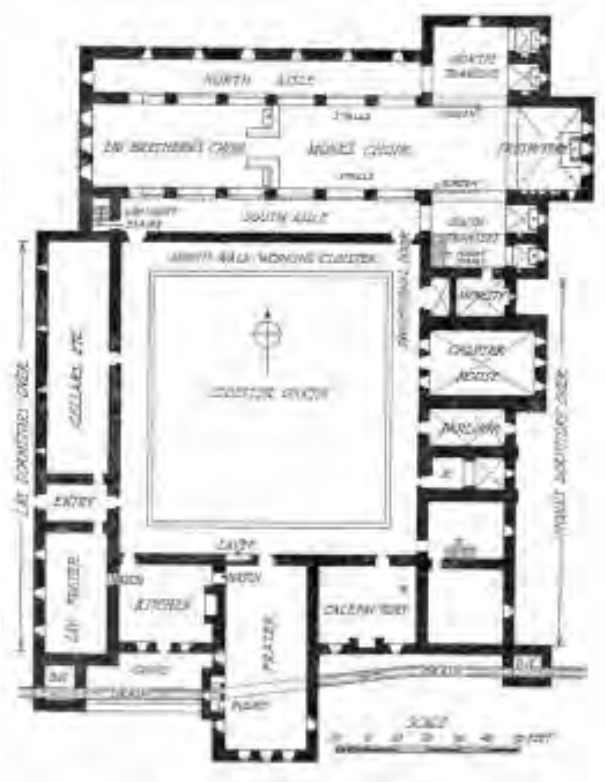


Fig 16. Typical plan of a Franciscan Abbey (From Kilkenny Council's website)

remained remarkably uniform (Greene 1994). In the main, the choir and chancel at the east end of such monastic churches was the most important part of the complex and the first part to be constructed. This was where the religious community celebrated the mass, separated from the attendants by a rood screen, which separated the chancel from the nave. Transepts with small chapels were built on one or both sides of the choir, with a sacristy off the south transept, whereas the nave and aisles to the west accommodated the lay community.

The cloister was generally located on the south side of a church, as at St Francis's Abbey, and consisted of an open space or garth surrounded by an ambulatory, which also provided access to the adjoining ranges. A chapter house usually occupied the ground floor of the east range, where a chapter of the Order's rule was read every day, in a warm space with a fireplace. Dormitories, chambers and lavatories occupied the first floor.

The south range generally consisted of kitchens and the refectory, where meals were prepared and eaten, and the west range generally contained the cellars on the ground floor and dormitories and chambers on the first floor.

Certain areas of monasteries were favoured for burials and reflected religious and social status, with the choir and chancel and then transepts being most favoured by benefactors. The chapter house, ambulatory and cloister garth were frequently used to inter monks, while townspeople were often buried in the nave and the exterior cemetery (Greene 1994, 4-11).

Medieval monasteries were generally set within a precinct often with enclosed or walled gardens (Hortus Conclusus), which provided food for the religious community and herbs for medicinal purposes. In some they included orchards, mills, infirmaries and cemeteries. Kilkenny's friary of St Francis was little different. An account by Friar Clyn, a member of the community who died in 1349, helpfully charts the additions to the abbey during his lifetime. Clyn states that the choir was finished in 1321; a new high altar was consecrated in 1323; and the cemetery was completed in 1331.

In November 1338 a flood carried away bridges and mills and flooded St Francis's Abbey up to the level of the high altar, causing significant damage to the fabric (Carrigan 1905, 104). In 1351, the 'Liber Primus Kilkenniensis', or the 'First Book of Kilkenny', one of the most important sources for Kilkenny city at that time records that the City Corporation awarded a perpetual endowment to the abbey for the celebration of masses (Smithwick, 1988, 521-25).

Fig 17. Black Abbey, Kilkenny (Google)

The Dissolution of The Monasteries in 1539-40
Sometimes referred to as the 'suppression of the monasteries', the dissolution of the monasteries, was the set of administrative and legal processes between 1536 and 1541 by which Henry VIII disbanded friaries, monasteries, convents and priories in Ireland and Britain. The Act of Suppression of 1536 resulted in monasteries with an income of less than £200 a year being closed and their buildings, land and money taken by the Crown and then sold off to families allied to Henry. The Second Suppression Act of 1539 allowed for the dissolution of the larger monasteries and religious houses, including St. Francis's Abbey.

The most detailed early description of the Abbey and its precinct comes from shortly after its dissolution. A survey of the extent of the complex was undertaken in January 1541 and described it as then comprising:

- a church with the cemetery;
- four old 'tecture' (the exact meaning of this term has yet to be determined but possibly relates to roofed structures);
- a small orchard with two small closes, containing 2 acres

Fig 18. 18th Century engraving of the Abbey, by James George Oben, reproduced in Francis Grose's 'Antiquities of Ireland', Vol. 1, pg 37

Fig 19. Henry VIII by Hans Holbein the Younger c.1537 (Google)

In addition the Franciscans owned properties in Kilkenny city (White 1943, 199).

When St Francis' Abbey was granted to the sovereign and corporation of Kilkenny in 1544, it was described as containing a:

'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 heredutaments whats occurs with this appertaining in or within the Site Bounds Circuit and precincts of said late Monastery or House.' (Archdall 1873, 342).

The Franciscans attempted to return to their former friary after the dissolution, briefly during the reign of Queen Mary (1542-1587), and again at the start of King James' I reign (1603-1625), when it appears the friary, possibly in the north transept, was rededicated. However, the rest of the friary complex appears to have been divided and rented out by the Corporation (O'Keeffe 2016, 41–42). The area in and around the abbey precinct became synonymous in the early-seventeenth century with industry and

Fig 20. Down Survey c.1656 from Courtney Deery's 2014 report

manufacture, particularly wool manufacture, milling, malting and brewing, and quite probably used the buildings and facilities of the dissolved monasteries, including cellars, kilns, barns, mils and millraces and gardens (Bradley 2000, 6).

It appears that in 1628, sections of the surviving upstanding remains of the former friary proper – including the chapter house, steeple and body of the abbey - were leased to prominent Kilkenny families, and that by 1640, the church was again rededicated (Carrigan 1905, 108).

Following the surrender of Kilkenny city to Parliamentary forces in 1650, the Franciscans were again forced to leave the friary. The Civil Survey of around the same time records the complex as then comprising:

- 'One great Abby of a small distance from ye said houses Called ffrancises (Francis)
- with two small buildings on the side thereof',
- a 'vault Joyning to ye said Abbey used for a stable',
- a 'house Joyning and belonging to ye said Abbey fitt to be made for a Mault house
- and Granaryes walls stone and ye Roofe slates,' indicating beer brewing on site.

A substantial area of the former precinct also appears to have been used as gardens:

- 'Gard[en] on the East side of the said house Joyning to the said Abbey Conteyning 44 perches small measure …
- In the East side of which yard stands a house convenient for a small family ye walls stone and the Roofe slate.' (Simington, 1942, 512-519).

The friary precinct bounded to the north by an historic stone wall and turret, which were connected to the citys defensive walls.

Though scant on detail, and subject to a large degree of artistic licence, William Petty's Down Survey map c. 1656 is nonetheless one of the earliest cartographic depictions of Kilkenny City. It shows the 'Liberties of Kilkenny' and indicates the old town walls on both the east and west side of the River Nore, with two bridges crossing it, possibly corresponding with John's Bridge and Green's Bridge. St Francis' Abbey is not named, but it is plausible that the Abbey is represented by the structure shown to the southeast of Irishtown Gate and an expanse of wall extending westwards, which is indicated but not named on the map. A structure depicted on the western banks of the River Nore, to the north of Irishtown Gate, could relate to mill structures on the south side of the northernmost bridge, but are not named as such.

Fig 21. Friary precinct wall, or city wall, at Cotteral's Bridge, behind the Mayfair Building (HHC)

Kilkenny's City Wall (KK019-026001)
Between 1250 and 1460 as Kilkenny developed, its existing fosse and rampart defences were considered inadequate for its frontier situation and eleven known murage grants for the construction of the walls around 'Hightown' were made (Oxford Archaeology 2005, 16) and was c.2.9km in extent. The basic justification for enclosing the city was for defence against attacks from the Gaelic Irish inter-baronial strife, but there were more mercenary reasons for wanting a surrounding wall, such as the collection of tolls and easier surveillance of those visiting and leaving the city via its gates (Bradley, 1975, 89).

The area of wall around 'Hightown' was the longest at 1.6km and it was between 1.2m and 1.4m thick and up to 4.5m high in places and St Francis' Abbey site today includes 125m of the City Wall (BH-01 in Malone O'Regan 2020), which runs along the south side of the River Breagagh, and terminates at a mural tower called Evan's Turret (see below). As mentioned in the last chapter, the wall and turret north of St. Francis' Abbey also defined the friary precinct or boundary within the medieval town.

Documentary evidence for the walls is found mainly in references to the keeping of the gates in the fourteenth and fifteenth centuries and recorded in the Liber Primus Kilkenniensis (namely, Irishtown or Hightoune Gate, Black Friars Gate, St James's Gate, Walkyn's Gate, St Patrick's Gate, Castle Gate, St John's Gate). Rocque's 1758 map, shows the walls of Hightown making three sides of a rectangle, with the River Nore to the east of the city acting as the fourth side. The walls possess four mural towers, all facing to the west, and seven gateways: Castle Gate, St Patrick's Gate, Walkin's Gate, St James' Gate, Black Freren Gate, Irishtown Gate and Bridge Gate. Although there is no wall to the east of the city, there is a suggestion that the north wall may have turned east, close to St Francis' Abbey, terminating in Evans Tower (see below).

During the siege of Kilkenny by Cromwellian forces in 1650, the City Wall separating the precinct of St Francis' Abbey from the River Breagagh was breached, although the Cromwellians were unsuccessful in forcing entry at this point. It seems that this breach was located close to Evan's Turret, with an area of repaired wall now occupied by a modern concrete bridge across the River Breagagh (D. M. 1875; Carrigan 1905, 110).

Fig 22. Evan's Turret looking east, from the far side of the River Breagagh (HHC)

Evan's Turret (KK019-026001)
An integral part of the City Wall, Evan's Turret is a mural tower located at the junction of the River Breagagh and the River Nore, at the north-eastern end of the Hightown wall. Though its form is suggestive of a fourteenth-century date, it was originally built in the thirteenth- century on the north corner of the precinct St. Francis' Abbey. The friary passed to the Corporation in 1543; in 1598, the payment for carriage of cartloads of stone 'for making up the tower at Francis Well' is likely to refer to this tower (Corporation Archives, CR/J/28).

In 1650, the Civil Survey describes it as 'a little castle in the garden' of the friary (Simington 1942, 519) (CS 6, 519). The tower became known as Evan's Turret, when the land on which it stands was leased by the Corporation to an Alderman Evans in 1724, and remained in his family for over a century (Ask About Ireland 2003).

It was subsequently adapted, extended and a roof added for use as a prospect tower in the eighteenth century, and occupied until the middle-nineteenth century. The tower and the stretch of adjoining city wall are marked on 1839-40 OS map as being 'in ruins', and the tower was illustrated in 1851

when still roofed ('Evans Turret' from Robinson's Antiquities and Scenery of Co. Kilkenny). By 1872 the Ordnance Survey map the tower has a rectangular shape and the northern stretch of the city wall runs adjacent to it. There is little change to the plan form of the tower evident on maps between this date and the 1946 map.

The Well

St Francis' Well was a large spring or pool apparently surrounded by a wall located some 34m east northeast of St Francis' Abbey. The water from the well was piped and channelled into the workshops of the friary and then by a different channel, carried off all the sewage to the river. Edward Ledwich wrote in 1781 his History of Irishtown and Kilkenny (p.439) that this enclosed well was famous for its miraculous cures, a view that was supported by Brendan Jennings, who wrote that 'the miraculous water from the well of St Francis' was known to return people to good health. Hogan, writing c. 1860 states that it 'is now frequently used for bathing (Hogan 1934 12-138:83). Smithwick's Brewery also used water from the well for brewing purposes, until c. 1900, when public water supply became available.

According to Courtney Deery's 2015 Archaeological Strategy for the masterplan area, the significance of the well divides scholarly opinion:

Fig 23. Detail of the well from the 1842 Ordnance Survey map (Courtney Deery)

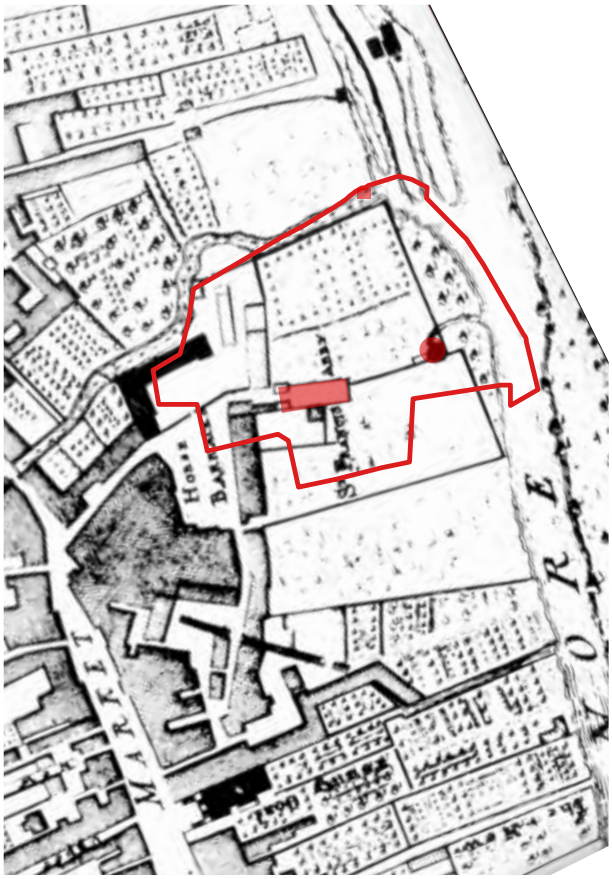


Fig 24. Detail from Rocque's map of 1758 (Irish Historic Towns Atlas)

…with Hogan observing that the fine spring or pond of water was generally used for bathing purposes and was never regarded as a holy well except by Ledwich whom 'knew almost nothing of either the topography or ecclesiology of Kilkenny'.

The 1839-40 Ordnance Survey map clearly shows the circular form of the well standing to the east of the Abbey, whereas the 1872, 1902 and 1927 maps clearly show a channel of water running from the well into the River Nore. Today, the site of the well is located under a concrete slab of the former kegging store in the brewery and has presumably been blocked up. A modern well chamber sourced by a natural spring is located in roughly the same area as this historic well and may occupy a similar area. According to the Urban Park and Street EIAR: The site of St Francis' Well [AR-04] is encased in a deep, water-filled, underground concrete chamber. This chamber was inaccessible for inspection during the EIAR; a GPR survey in 2017 identified the extent of the concrete chamber (Nicholls, 2017); test excavations, which had included a trench across the site of the well, found the chamber to be filled with at least 3m depth of water, after which the trench was not excavated (Stirland, 2018).

The Eighteenth & Nineteenth Centuries

On the 5th April 1700 the former abbey was given for the building of a 'cavalry' or 'Horse Barracks' (Carrigan 1905, 108). This barracks, as depicted on Rocque's map of 1758, appears to have occupied two buildings: an L-shaped building in the west, and a range of stables with overhead accommodation in the east, occupying the former site of the north transept.

Though subject to a degree of artistic licence, Rocque's map shows the remains of St Francis' Abbey standing within a large area of predominantly open land extending west to east towards the River Nore. A range of structures extend north-south at the western end of the abbey. The area to the north, adjacent to the River Breagagh (depicted but not named), and near the city wall, appears to be formally laid out as an orchard or garden, while a perimeter wall appears to enclose and separate sections of the former abbey lands at this point. It runs straight across the northern end of the site, by the Breagagh, is slightly kinked along its western extent, straight by the banks of the Nore and extends to the south from the eastern elevation of the abbey itself all the way across to the associated circular well. The open area around the abbey, which is subdivided into four large plots of land, is in contrast to the built-up, tight grain of the surrounding urban blocks.

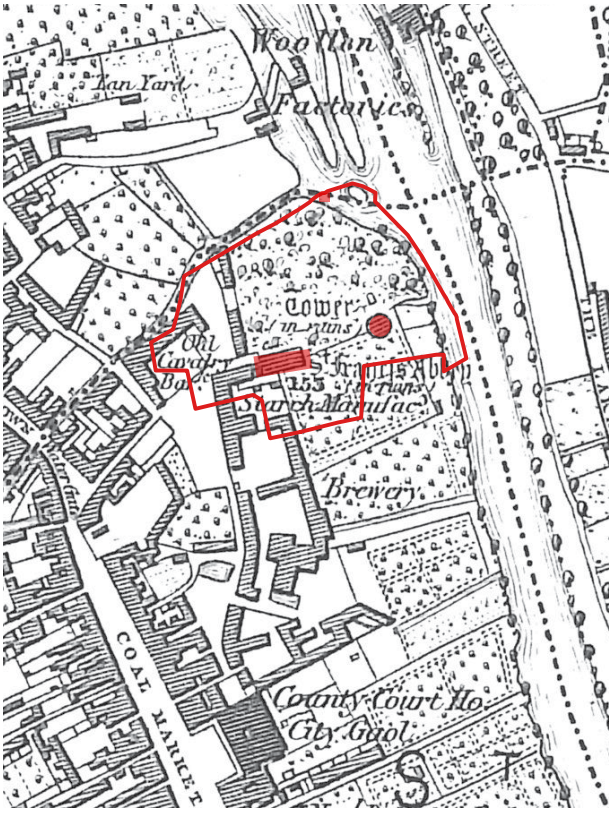


Fig 25. Extract from the first ordnance survey map of 1838-1842

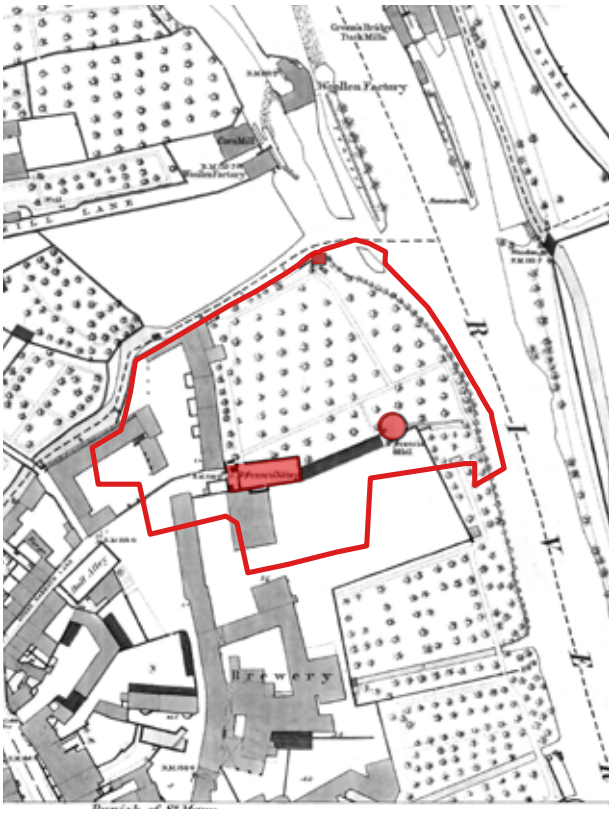


Fig 26. Surveyed 1871 and published in 1872 by Ordnance Survey of Ireland (Courtney Deery)

The cavalry barracks closed in 1800 following the construction of a replaced by a new building in the city, and the former buildings were acquired by the Corporation. At this point the area around the Breagagh became the epicentre of industrial and trade activity in Kilkenny city, with woollen mills, workshops, tanneries, starch manufactories and breweries.

Brewing on The Site

St Francis' Abbey became one of seven breweries established in County Kilkenny during the eighteenth and nineteenth centuries (Hammond 1990, 43). Whilst brewing may have been carried out on the site from the medieval period, the first recorded brewery was started by Richard Cole in partnership with John Smithwick, who came to Kilkenny in 1710 (Courtney Deery 2014, 32). As with Dublin, brewing grew exponentially in Kilkenny throughout the eighteenth century, so much so that by the nineteenth century, the St Francis' Abbey brewery was exporting to Britain.

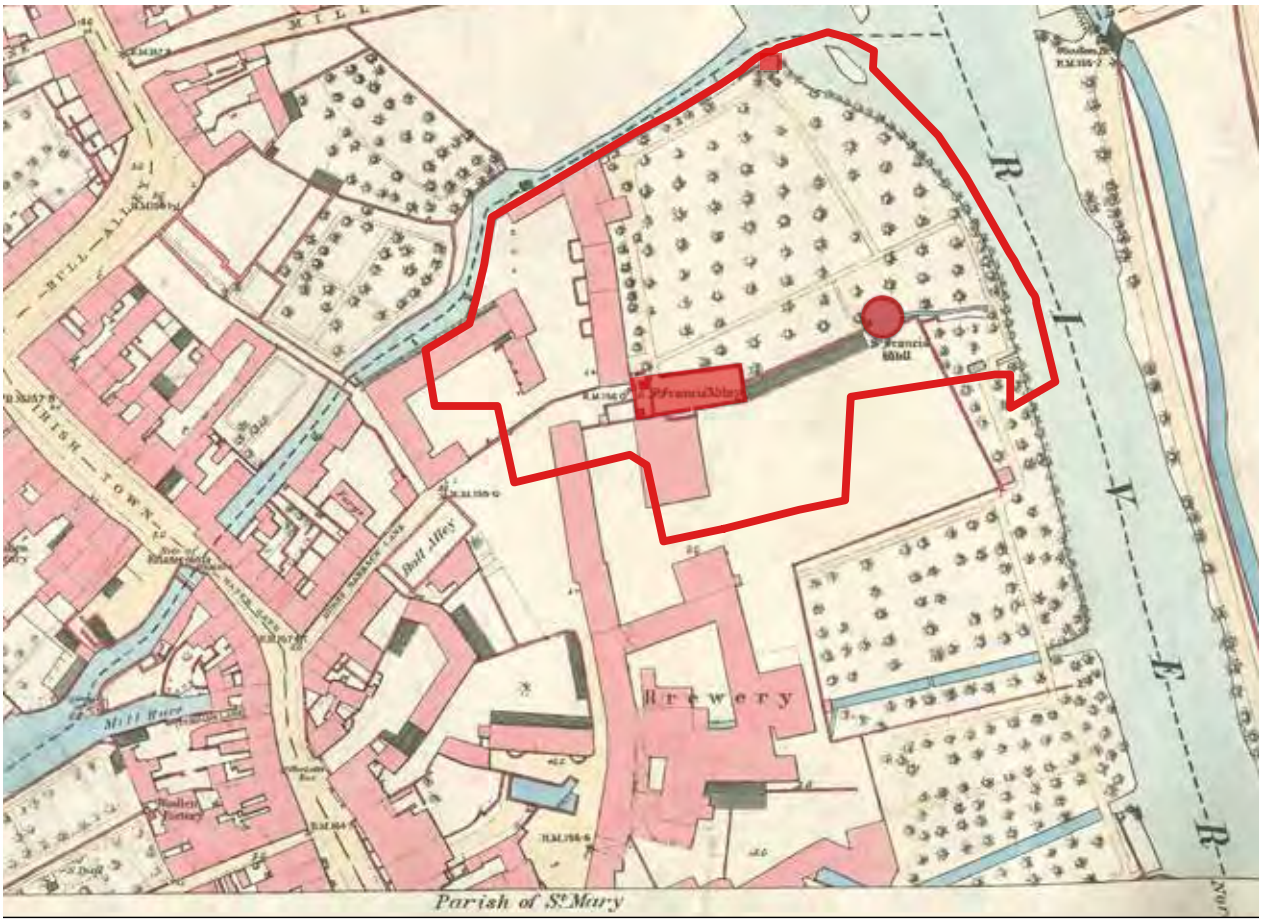


Fig 27. Extract from Ordnance Survey map of 1872

By 1827 Edmund Smithwick had acquired Brennan's distillery and established St Francis' Abbey Brewery (Halpin 1989). At the time of the Primary Valuation in 1850 Edmund Smithwick occupied a substantial property on Jenkins' Lane (lots 1 to 5), including the brewery, offices, store and yards, gardens and mill. The 1st edition Ordnance Survey map of 1839-40 shows the formerly open site as having been considerably developed since Rocque's map, with extensive brewery buildings and a starch manufacturing plant joining the Horse Barracks ('Old Cavalry Bar'), while the remaining abbey buildings are indicated as being 'in ruins'.

The map shows that all of the development has taken place within the western half of the site, with gardens or orchards occupying the fields in the eastern half, along the banks of the River Nore. The brewery buildings and yards extend as far south as the long building plot with the dog-leg return that was shown on Rocque's map.

An illuminating source for the brewery and brewing process were described in detail in a Guide to the Great Southern & Western Railway from 1866 (Measom 1866, 32–36). It makes clear that at this point the brewery had a north gate, beside St Francis' Abbey, and a south gate where the main offices were located. Within the brewery complex there were ale cellars, corn and barley lofts, vat houses, a water mill, a steam engine, cooler rooms, furnaces. There was also steam washing and drying facilities for casks, an engineer's shop, a substantial maltings and a cooperage which was located beside St Francis' Abbey choir.

The coloured Ordnance Survey map of 1872 shows the site in remarkably clear detail and illustrates how the brewery had expanded since 1840. At this point in time the brewery appears to form part of an enclosed space defined by boundary walls and distinct from the former barracks. The brewery appears to be concentrated in a long

range that runs to the south of the River Breagagh, to the northwest of St Francis' Abbey, and is then concentrated to the south-west, with easy access to a watercourse to the east. Planted with trees and bordered by a series of pathways around the perimeter, the garden area extends from the south of the Breagagh and along the bank of the River Nore and to the east of the main brewery complex.

Both St Francis' Abbey and St Francis' Well are named and clearly shown on the map. Part of the former abbey west claustral range is visible to its south, where it immediately abuts a large rectangular brewery structure. Between the eastern elevation of the abbey and the Well there appears to be a long narrow lean-to like structure. This single-storey structure is visible in the 1862 RSAI photograph, which also shows pitched older single-storey structure to the southern side of the abbey structure as subsumed by more recent brewery structures.

The Well appears at this point as a defined circular walled structure with access steps located to the west, and is connected to the River Nore by a channel on its eastern side. To the north-east of the site, at the confluence of the River Breagagh and the River Nore, there is small square structure not marked on the earlier maps. This appears to be the remains of Evans' Turret, a bastion on the old city wall and part of the old precinct wall of the Abbey (further described below). The wall walk associated with this tower and the city wall is clearly shown to the west of the tower, along the course of the River Breagagh.

The Twentieth & Twenty-First Century

By the time of the Ordnance Survey map, surveyed in 1900 and published in 1902, the St Francis' Abbey Brewery was one of just two breweries in Kilkenny city, the other being Sullivan's on St James' Street, and was at this point owned by Messrs. E. Smithwick and Sons Ltd. The two large, separate buildings marked on the 1872 map have been connected and in the brewery grounds, two structures have been added against the boundary wall, just south/south-east of St Francis' Well, presumably for further storage.

Mill streams are evident in the gardens along the banks of the river the north of 'St Francis' Abbey (in ruins)' and 'St Francis' Well', which are both shown, the site of a tower is marked. An open area at the north east end of Horse Barrack Lane is named for the first time on maps as 'The Ring', and the bridge over the River Breagagh is still in place at this point.

Fig 28. The river Nore looking south from Green's Bridge by E.J. Brennan 1882 (Kilkenny County Council)

Fig 29. Extract from Ordnance Survey map of 1902

Though not named, Evans Tower is shown with the wall walk of the city wall located to the west. There is little change evident to the site between the 1902 and 1927 Ordnance Survey maps. Of note, however, is that there appears to have been a more recent small structure added or revealed to the southern side of the abbey (enveloped by a larger brewery structure).

There is very little change between the 1902 and later edition 1946 Ordnance Survey maps in the area of St Francis' Abbey Brewery. The abbey, the well and the tower (site of) are again marked and no change to the brewery buildings can be noted. The garden area along the banks of the River Nore has been split in two with the northern half retaining its original character while the southern half has reverted to waste land. Cotteral's bridge is shown across the small northern mill stream within the Brewery. A second bridge across the river Breagagh which was first noted on the 1839 OS map and which opened out on to the area called, 'The Ring', is no longer. The 'Mayfair Ballroom', which was constructed in 1943 and operated until 1973, is named and shown on the map.

Smithwick's continued to extend the brewery around St Francis' Abbey, expanding the operations to the River Nore in the 1950s and 1960s with the construction of bottling stores, and the demolition of some of their older nineteenth-century brewery buildings south of St Francis' Abbey, and the stables to the north. Marcus Ó hEochaidhe of the OPW, undertook an extensive excavation of the areas to the north and west of St Francis' Abbey in advance of these expansions (Conlon 1975; Courtney Deery 2014, 60–62). The brewery's 'sample rooms' was constructed in 1980 is a pastiche gothic style, immediately to the south of the abbey following excavations by David Sweetman (Conlon 1975; Courtney Deery Heritage Consultancy 2014, 62–64). Various archaeological excavations were undertaken by Diageo in the 1990s and 2000s to facilitate construction works on the site (O'Meara 2007; Gowen 1998; O'Donovan 1998a; O'Donovan 1998b; Courtney Deery 2014, 73).

Diageo ceased production of beer in Kilkenny in 2013, and in 2016 Kilkenny County Council acquired the site. Prior to departure from the site, a number of structures associated with the brewing process

were demolished by Tinnelly & Sons (Condition Survey St Francis Abbey, Diageo Site, Kilkenny 20 Feb 2015). A condition survey was undertaken at the time, to record the historic structures prior to this undertaking. The main areas for demolition works were outlined as follows:

1. The site area to the South of the River Breagagh. This comprises the main production area of the site and requires the demolition of 4 no. buildings;
2. The site area to the North of the River Breagagh excluding an enclosed car parking area;
3. The enclosed car parking area located in the site area to the North of the River Breagagh and accessed directly from Vicar Street.

The extent of demolitions undertaken on the site are shown on the demolitions drawing prepared by ARUP and included the fermentation block, brewing material store, old racking plant and kegging plant. The Brewhouse and Mayfair buildings were retained. Permission for the demolition of the Maturation Building was sought in which is located further south-east of the Abbey. This structure was demolished in 2021.

All of the demolition works carried out were above ground only, and the existing concrete slab throughout the site was kept intact, to ensure no disturbance to archaeology below ground.

Since 2014 archaeological investigations have been undertaken to verify the previous findings around the Abbey and to determine the position and condition of subsurface archaeology associated with St Francis' Abbey. There were also investigations in and around Evan's Turret and along the River Breagagh (cf. Appendix 12.5 in the Abbey Quarter Urban Park and Street EIAR for a summary of Dr. Richard Clutterbuck's investigations).

Fig 30. Aerial view of the site from the 1950's

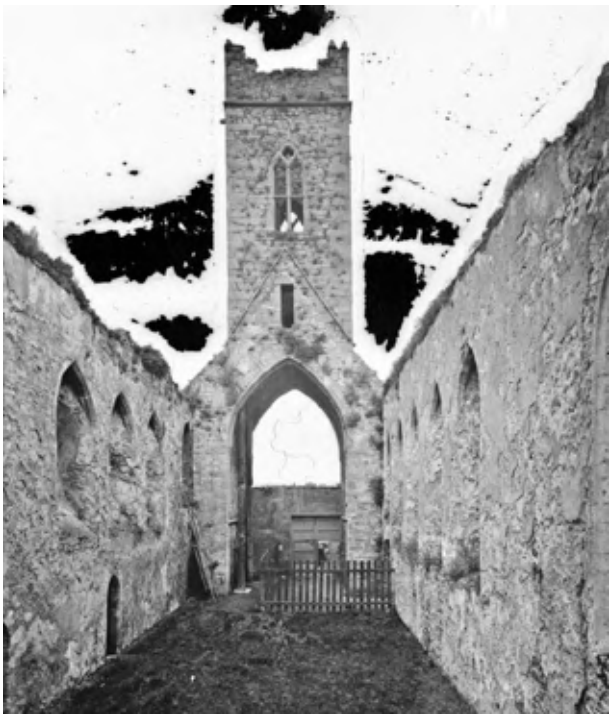


Fig 31. Looking west through the nave, 1880, prior to any stabilisation works (Royal Society of Antiquaries of Ireland)

Mid-Late Nineteenth Century Conservation Works on St Francis' Abbey

As noted in the Preliminary Archaeological Survey of St Francis' Abbey, Kilkenny (National Monuments Service 2021, 5–17), in 1868, prior to the monument being vested to the State, the Kilkenny and South-East of Ireland Archaeological Society (later the Royal Society of Antiquaries of Ireland) undertook works to prevent the crossing tower from collapsing. The condition of the tower was initially raised at a meeting of the RSAI in April 1867 (Anon 1867, 70–71). The Society subsequently commissioned the noted architect, sometime President of the RIAI and editor of The Irish Builder, Thomas Drew (1838-1910), to report on the condition of the tower (DIA).

His report stated:

… the present condition of the Tower is most critical, and urgently requiring steps to be taken for its preservation – the immediate danger the immediate danger to be apprehended being on the south side, where a slight deflection from a plumb line is manifest, and where the point of support on which its safety wholly depends has become to a certain, and increasing degree, disintegrated and disturbed by the action of rain and frost… The work should, in my opinion, be first undertaken on the north side, where the exposed masonry of the haunch should be cleaned and raked out, and thoroughly grouted with Portland cement, the masonry raised to its original level indicated by the dotted line on the rough sketch accompanying this, and then covered with flags, jointed in cement, with a sufficient cover or lap. This completed and properly 'set', the great arch should be accurately 'centred' and 'braced', and the openings in the east and west faces also braced. The south wall should then be strongly 'shored' …to accomplish which it will be necessary to partially unroof a portion of the low building on the south side on Messrs Smithwick and Son's premises. When this is carefully and efficiently done, the exposed masonry of the southern haunch may then be examined, and raked out; and, if found practicable or desirable, some long stones inserted in the haunch under the line of the face of the Tower, where the most dangerous lone of pressure is exerted: the loose masonry, as little disturbed as possible, should be grouted, raised, and covered in a similar manner as will prevent the percolation of any water into the masonry.' (Anon 1868a, 7–8).

The Society agreed to establish a public subscription to pay for the works recommended by Drew (Anon 1868b, 83). By October 21st, 1868, it was reported that:

Fig 32. West end of the Abbey, 1880, prior to any stabilisation works (Royal Society of Antiquities of Ireland).

Fig 33. 1926, original timber formwork to the Abbey (Courtesy of the Photographic Archive, National Monuments Service)

…as winter was coming on, and there was the greatest danger in further delay, the Committee thought it advisable, at least, to prop the tower at once. With this view they had got two strong metal pillars cast at Waterford, at the expense of £24, and these were now in course of being erected under the south side of the tower arch, where the masonry was giving way… (Anon 1868c, 141).

On 13th January, 1869 it was reported that the metal pillars were in place, but that no further work had been done (Anon 1869, 213). In April 1871, work had begun to open the east window (Anon 1871, 451). At a meeting of the Society in October 1872 it was recorded that:

The haunches of the tower had been supported and secured against percolation of water, by a facing of hammered stone, and all the previously open joints had been carefully filled with cement; the sedilia had been repaired, and all the windows of the choir had been opened, after having been walled up for perhaps a century, to adapt the ancient building to the purposes of a racquet-court (Anon 1872, 192).

It was also noted that Mr Smithwick had promised to 'remove portion of the coopers' shed, in his brewery premises, which had been erected against the centre mullions of the great east window, while it was built up' (ibid.).

The friary was vested to the State by the Church Temporalities Commission in October 1880 but no works were undertaken to secure the building by the OPW until 1888, though no record of these apparently survive but it is possible they were limited. Photographs (Figs 31-33) of the period make clear, however, the very pronounced settlement evident to the western arch beneath the crossing tower.

Twentieth Century Conservation Works

A 1905 report notes that the tower of St Francis' Abbey:

…was supported on metal columns erected by local effort before it was vested and since then timber centring has been placed under the arches where the stone work showed symptoms of yielding. The east window of seven lights divided by slender mullions also required attention, as the ivy was spreading over it and into the joints. Both tower and east window have had necessary repairs executed…

(Office of Public Works in Ireland, 1905-06, 52-3). An undated photograph (Fig 35) illustrates this timber centring under the western arch, and another

Fig 34. Cast iron columns on the south side of the crossing tower

photograph from 1926 shows this timber centring under the eastern arch. Over the coming years, the OPW reports mention, but do not specify the nature of, works carried-out at the site. Around 1927, the timber centring was replaced by a similar reinforced concrete centring. In the OPW archives there are two drawings, one dated September 1927, that show the proposed centring as it survives today. This reinforced concrete centring is inside the line of the earlier timber centring, which was most

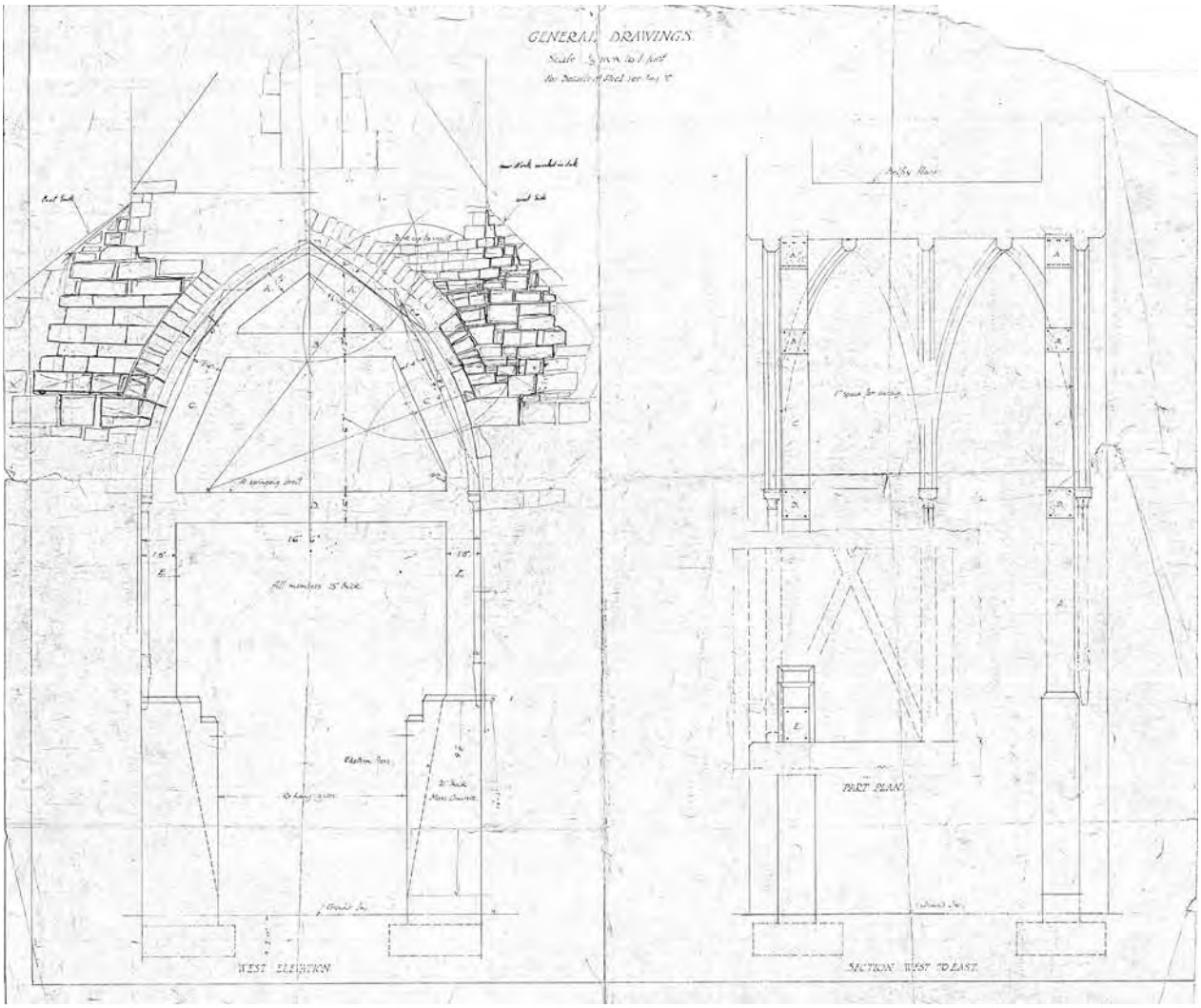


Fig 35. General drawings from 1927 showing the proposed concrete structure to the underside of the Tower (OPW Archive)

likely kept in place, perhaps acting somewhat like shuttering, during this operation.

Over the past fifty years an extensive number of archaeological investigations, excavations, testing, monitoring, and recording has taken place in the site area. Marcus hEochaidhe's excavations in the area of St Franics' Abbey, 1963, immediately to the north and west of the standing abbey ruins, the results of which were never fully published, combined with monitoring through the 1970s by David Sweetman of St. Francis' Abbey began to show the extent of the medieval ecclesiastical remains. They revealed that the standing tower and unroofed choir were once flanked by a transept, nave, sacristy, cloister, and cloister walk. Conservation works were undertaken by to OPW to the abbey in 1963, including to the east window.

Recent Academic Research

A recent article, St. Francis Abbey 1230-1630: A History and Archaeology of Kilkenny's Conventual Franciscan's, explores the extent and composition of its buildings and precinct in some detail, and has greatly assisted in determining its medieval characteristics (O'Keeffe 2016, 28–39, fig.5) Key findings include:

- the precinct was enclosed by a wall and was accessed from Grey Freren Lane by the 'grey freren gate' ;
- the church and its associated buildings occupied the north part of the precinct, and included the chancel, crossing tower and nave ;
- the fifteenth-century transept to the north contained three chapels. This transept partly replaced an earlier aisle on the north side of the nave;
- the claustral ranges extended south of the nave, with a cloister garth 18m by 17m

Fig 36. The concrete supports in-situ today

and an ambulatory 1.8m wide.

- the east range was called the 'greate sclate house' and contained a vestry and the chapter house on the ground floor and dormitories on the first floor.

The only extant upstanding elements of St Francis' Abbey are the choir and belfry which also contain an inscribed slab (KK019-026151-), wall monument commemorating Mrs Agnes Bankes (d. 1687; KK019-026183-), a grave slab reused as a lintel (KK019-026150-), and a font (KK019-026190-) with flutes in Romanesque pairs and fleur-de-lis in relief on its surface, said to be from Kytler's Inn.

However, significant subsurface remains of the monastery, including the nave, cloister and surrounding ranges, and an extensive north transept, survive and are preserved in-situ beneath the concrete, as are the remains of the friary's cemetery and St Francis' Well.

4.0 Physical Evidence - St. Francis Abbey

This chapter describes the existing upstanding and sub-surface archaeology at St Francis Abbey – the most complex structure on the site. The site of the medieval abbey has been the subject of several studies and a number of exploratory investigations in order to determine its age, phasing of construction and the extent of the below ground archaeology. St Francis' Abbey was recently the subject of a comprehensive archaeological survey by Chris Corlett, National Monuments Service (National Monuments Service 2021), which was used as a reference for this plan.

The upstanding elements of St Francis' Abbey consist of the chancel and choir, a bell tower and a vaulted chamber to the south of the church generally interpreted as a sacristy. An archaeological assessment was carried out on site which determined that the Abbey was constructed in approximately eight phases, ranging from the late thirteenth century to the twentieth century. The summary below should be viewed alongside the phasing plans in Appendix C;

Phase 1, the mid-to-late thirteenth century.
This is the earliest surviving phase of construction of the Abbey, when the chancel and choir were constructed. The National Monuments Service (NMS) Preliminary Survey of St Francis' Abbey identified the tall lancet windows on the north and south walls as mid-thirteenth century in date (NMS 2021, 20–21, 24–25). A font located in the crossing tower (SMR KK019-026150-) is also thought to date from the thirteenth century, and is believed to be have brought to St Francis from another location. It is similar to the font in St Canice's Cathedral, Kilkenny.

Phase 2, the early fourteenth century.
During this period the Chancel is thought to have been extended further east, by approximately six or seven metres. It is historically recorded as completed in 1324, funded by Lady Isabella Palmer, who is herself interred in the chancel in 1321. The most striking feature of this phase of construction is the seven-light window on the east wall. This extension also includes twin lancet windows on the south wall, and a large three-light window on

Fig 37. The font located in the corridor within the tower

Fig 38. The seven light window in the east wall

the north wall (National Monuments Service 2021, 21, 23). A sedilia was built into the south wall of the extension. Relieving arches are visible at the base exterior of the north, east and south walls which indicate that the extension may have been built on relatively soft ground, possibly reclaimed from the flood plain of the Rivers Nore and Breagagh.

Fig 39. The sedilia in the south wall, repaired in the mid-twentieth century

Phase 3, later fourteenth century.

This phase consisted of the substantial construction of the crossing tower, which is approximately 24m high and constructed during the mid to late fourteenth century. In 1321 a fraternity of guilds in Kilkenny was founded to fund the construction of the tower. However, the Black Death appears to have delayed construction until the latter half of the fourteenth century. The tower includes significant decorative elements dating to the fourteenth century, including rib vaulting, figure sculpture for the imposts, and the ogee window forms. It contains three floors, and would have served as a belfry (National Monuments Service 2021, 25–31). During this period adjustments were also made to the window and door arrangements along the south wall – a thirteenth century window embrasure was blocked up, and a door inserted to provide access to the night-stairs, which led to the first floor accommodation for the friars. A twin-light window and a possible circular stairs, as evidenced by a niche in the wall, were also inserted in the upper levels of the south wall next to the tower.

Fig 40. Rib vaulting to the underside of the passage from the tower

Phase 4, the fifteenth century

This period appears to correspond with the construction of a north transept, which now only survives as subsurface archaeology. A stair turret was built onto the north side of the tower, and a door and elements of a stone vault, possibly for a transeptal chapel, survive on the north face of the stair turret. Mouldings for an engaged column probably associated with the north transept also survive on the exterior of the stair turret (National Monuments Service 2021, 29). The vaulted chamber on the south side of the church probably served as a sacristy for the church, and was likely constructed

Fig 41. 1862, view of the Abbey site across the river, note the east window is blocked up (Royal Society of Antiquities of Ireland c.1872)

in the fifteenth century, although this chamber was substantially altered in the twentieth century. A door from the choir accesses a narrow passage between the church and this chamber; a blocked door would have provided access to the chamber from the passage.

Phase 5, the sixteenth and seventeenth centuries

This period appears to have left little mark on the upstanding elements of St Francis' Abbey. It is possible a door in the south wall of the chancel was inserted after the Dissolution of the monastery as it sits in a very unusual location for the church. An inscription on the south wall of the chancel (SMR KK019-026183-) commemorates Agnes Banks (d.1687), possibly the last person buried at St Francis' Abbey.

Phase 6, the eighteenth century

This also appears to have left a relatively little mark on St Francis' Abbey, although all of the openings of the choir and chancel were closed up during the eighteenth century when St Francis' Abbey was converted into a ball alley. It is possible a roughly cut door at the east end of the north wall also dates from this period.

Phase 7, the nineteenth century,

This was a significant phase of change for St Francis Abbey arising from conservation and repairs to the church and crossing tower carried out by the

Fig 42. 1946, the Abbey following restoration works, horizontal bars are still visible supporting the east window.

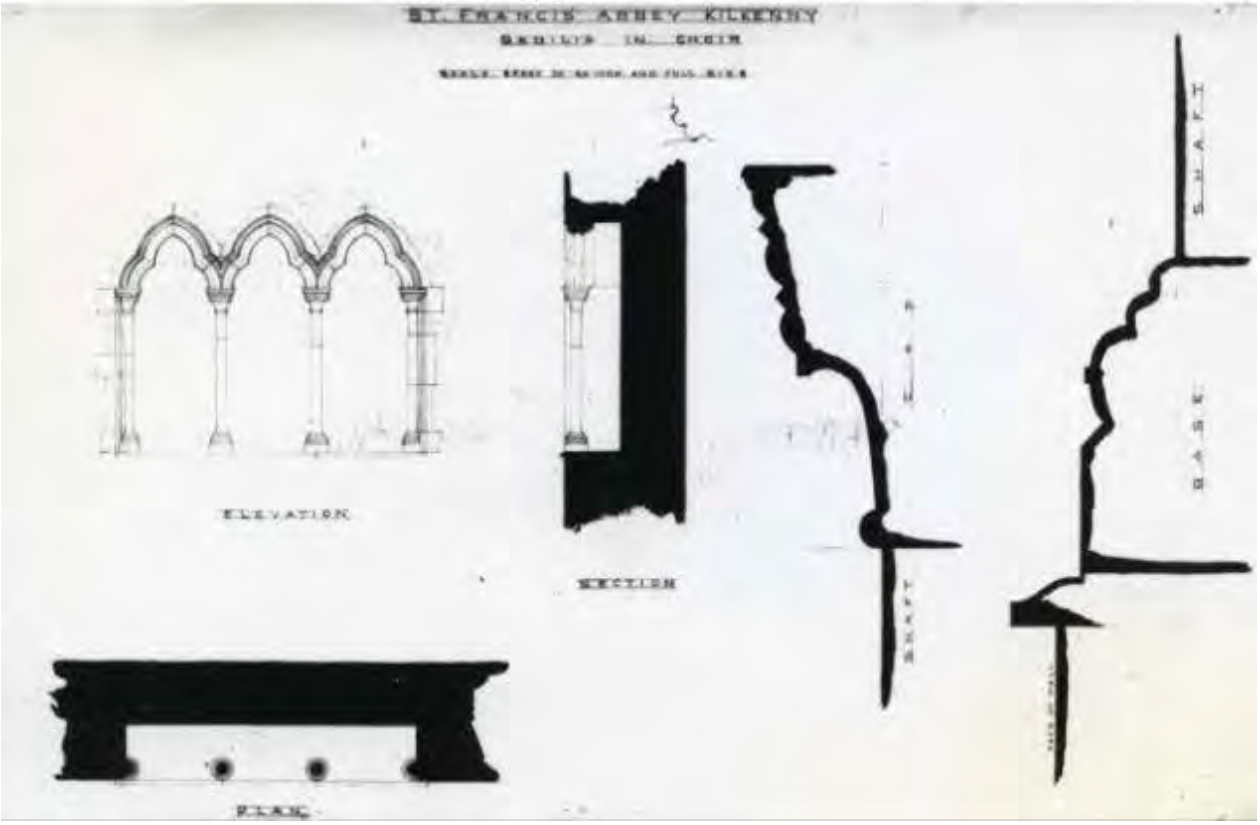


Fig 43. Drawings of the Sedilia window undertaken during its repair by the RSAI (OPW Archive)

Royal Society of Antiquities. In 1869 two cast-iron columns were inserted to stabilise the tower, one of the first conservation interventions of its kind in Ireland. In 1872 repairs to the tower included the sloping shoulders to the north and south of the tower, and a substantial buttress to the south of the tower. Also in 1872 the window and door opes in the church, which had previously been infilled with masonry when the church was used as a ball court, were opened.

Phase 8, twentieth century,

Substantial alterations to the surrounding Smithwick's Brewery and repairs and conservation of St Francis' Abbey church, crossing tower and sacristy were carried out during this period. In 1927 reinforced concrete centring was inserted to support the crossing tower, replacing earlier timber centring. The Smithwicks brewery expanded, resulting in significant changes to the site, including demolition of buildings to the immediate north, west and south of the Abbey. The Sacristy walls were substantially rebuilt with a flat concrete roof and a framed glazing screen as it was converted into an oratory for the brewery staff. The buttress to the south of the crossing tower was repaired and a door in the north wall of the choir was infilled. A large number of architectural fragments and medieval grave slabs were recovered from the Abbey during archaeological investigations, including fragments of the cloister ambulatory, a column most likely from the north transept, and the Delahunty Grave Slab fixed to the north choir wall (National Monuments Service 2021, 20).

Sub-surface Archaeology

The following section has been summarised from Appendix 13.5 of the EIAR for the Abbey Quarter Urban Park and Street, volume 2 (Malone O'Regan 2020). Extensive remains of the nave, north transept, ranges, cloister and a cemetery survive below the concrete surfaces surrounding St Francis' Abbey. These have been investigated in a number of archaeological excavations over the past 60 years.

In 1963 Marcus Ó hEochaidhe for the OPW carried out archaeological excavations to the north and west of St Francis' Abbey over the area of the nave, north aisle and north transept. The results of the excavations are unpublished, so final reports and certain archival material was not available to consult for this assessment (Conlon 1975; Courtney Deery Heritage Consultancy 2014, 60–62). However, several photographs and a plan of the buildings excavated are available and have been consulted; a brief summary of the excavations were published (Conlon 1975; Lanigan et al. 1987); and the available archives from the excavation are summarised in Courtney Deery's 2014 report for the Abbey Creative Quarter Masterplan (Courtney Deery Heritage Consultancy 2014). The excavation appears to have been concentrated within the immediate north and west areas of the upstanding remains of St Francis' Abbey, and revealed the large fifteenth-century transept measuring 20m by 18m, with internal burials. This transept partly replaced an earlier aisle on the north side of the nave. The Delahunty grave slab was recovered during the excavation within the north transept, with text in a Gothic style and a date of 1624; it is now located inside St Francis' Abbey (KK019-026151-) on the north wall. Other architectural fragments stored inside the abbey also came from this excavation. Subsequent archaeological excavations in 2018 (summary below) confirmed that the archaeology uncovered by Ó hEochaidhe is preserved beneath the concrete yard surrounding St Francis' Abbey (ACSU & Stirland et al. 2018).

David Sweetman monitored the construction of the Brewhouse Building (1970 and 1971) and the Tasting Room (1980) (Conlon 1975; Courtney Deery Heritage Consultancy 2014, 62–64). Monitoring for the Brewhouse uncovered remains of the west claustral range extended south of the nave, with a cloister garth 18m by 17m and an ambulatory 1.8m wide, with frequent in-situ burials in the cloister ambulatory. Pottery discovered was predominantly seventeenth-century English and German imports, with a few sherds of thirteenth-century English and French wares. The northwest corner of the cloister was disturbed during nineteenth-century construction works. Sweetman also investigated the site of the Tasting Room in advance of construction, discovering cobbling over brick and ash-rich soils within one metre deep trenches. Another trench south of the Sacristy uncovered a 4.5m length of the east range chapter room to a depth of 1.6m, with in-situ burials (Courtney Deery Heritage Consultancy 2014, 64). Finds from the archaeological excavations are now with the National Museum of Ireland.

In 2018 Kilkenny County Council commissioned a comprehensive program of archaeological investigations to establish the extent, condition and significance of subsurface archaeological in the Abbey Quarter, were carried out under both Section 14 Ministerial Consent and Section 26 Archaeological licence. These test excavations were specifically designed to investigate the archaeological potential of the Abbey Quarter development area, as set out in Courtney Deery's 2014 archaeological report (Courtney Deery Heritage Consultancy 2014) and specified in a number strategy documents prepared by AMS for Kilkenny County Council (2016). The excavations were carried out by ACSU with Jon Stirland as the excavation director. Separate reports were prepared for each area of the Abbey Quarter Masterplan areas. In addition Kilkenny County Council commissioned a preliminary ground penetrating radar (GPR) survey in the Abbey Quarter (Nicholls 2017), which demonstrated that the site was not suitable for a detailed GPR survey because of significant interference from modern services and building foundations.

A total of fifty-three archaeological test trenches were excavated over an extensive area of the Abbey Quarter Masterplan; eighteen of these test trenches closest to St Francis' Abbey are described below.

Archaeological test excavations were carried out in the vicinity of St Francis' Abbey (Public Realm B) the area surrounding the upstanding remains of St Francis' Abbey within the National Monument, and including the subsurface remains of the friary excavated by Marcus Ó hEochaidhe and David Sweetman (ACSU& Stirland et al. 2018) . The levels have been updated to correspond with the most recent topographical survey of the Abbey Quarter in 2020.

Trench B-1:

- Top of Trench 44.72m
- Top of Archaeology 43.93m
- Base of Archaeology not reached
- Base of Trench 42.84m
- Depth to Top of Archaeology 0.79m
- Thickness of Archaeology -

Archaeology was found beneath 0.3m of concrete and 0.58m of hardcore fill. The 1.09m of archaeology investigated in this trench consisted of mixed deposits with seventeenth to nineteenth century ceramics and animal bones over a cobble surface and the substantial walls of a building associated with the Horse Barracks, 0.9m wide and 1m high, with an associated stone and brick drain. Finds from the lower layers included sixteenth to eighteenth-century pottery and iron nails, tile and brick fragments and animal bone. In-situ human remains from St Francis' Abbey cemetery were found and, following advice from the osteoarchaeologist, the trench was stopped before the base of archaeology was reached. These deposits, walls and cemetery have high archaeological significance.

Trench B-2:

- Top of Trench 44.82m
- Top of Archaeology 43.96m
- Base of Archaeology not reached
- Base of Trench 43.25m
- Depth to Top of Archaeology 0.86m
- Thickness of Archaeology -

This area was archaeologically excavated by Marcus Ó hEochaidhe in 1963 and is located in the area of St Francis' Abbey's nave. Archaeology was found

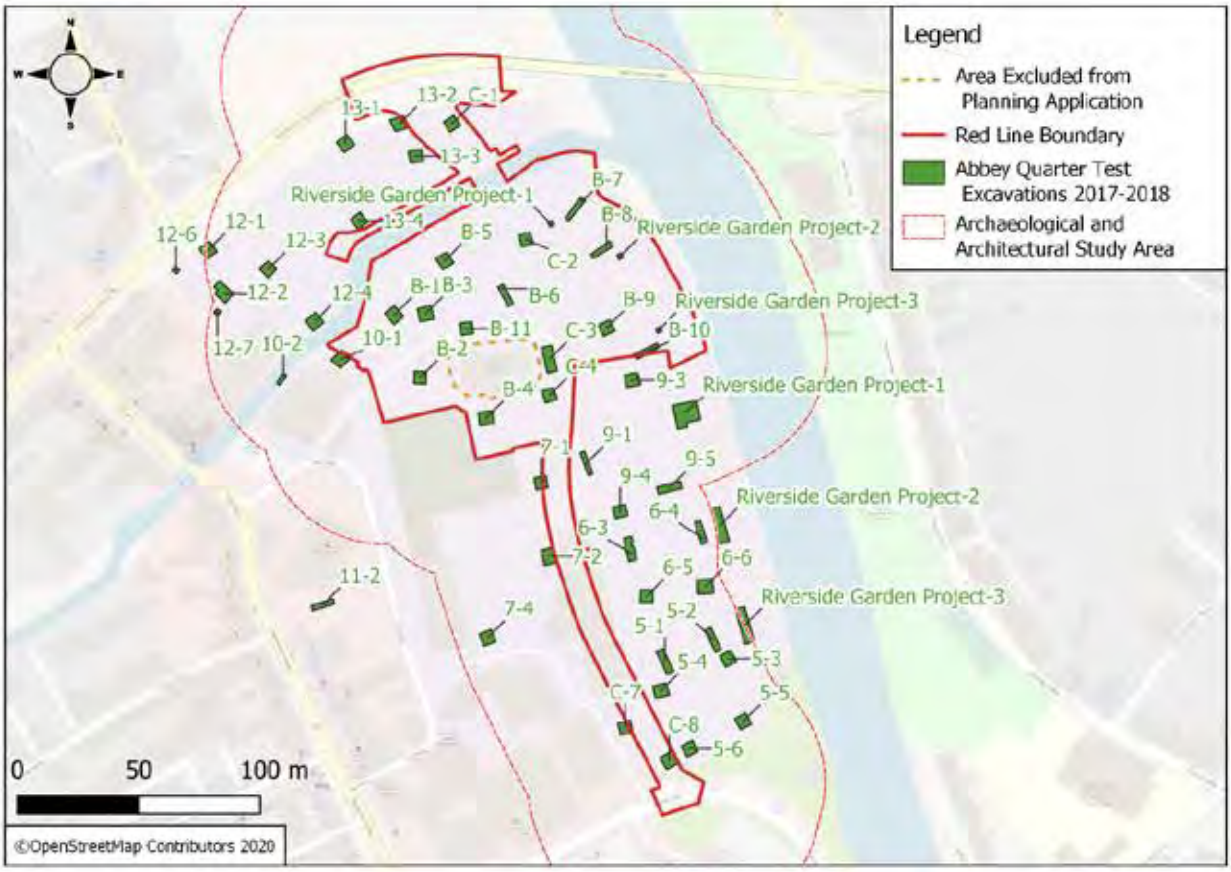


Fig 44. Archaeological test trenches in 2018, commissioned by Kilkenny County Council, designed by AMS, and excavated by ACSU

beneath 0.30m of reinforced concrete, 0.50m of modern hardcore and c.0.55m of mixed soils backfilled on the site. The outline of Ó hEochaidhe's excavation trenches were identified. The interior edge of the west wall of the friary nave were identified (extending outside the excavation area), as were four in-situ burials. The overlying deposits were mixed with medieval and post-medieval ceramics and tiles, indicating that Ó hEochaidhe's excavations were backfilled with the spoil from his excavation. The in-situ human remains were located inside the nave; following advice from the osteoarchaeologist, the trench was stopped before the base of archaeology was reached. These deposits, walls and cemetery have high archaeological significance.

Trench B-3:

- Top of Trench 44.63m
- Top of Archaeology 43.51m
- Base of Archaeology not reached
- Base of Trench 43.14m
- Depth to Top of Archaeology 1.12m
- Thickness of Archaeology -

This area was archaeologically excavated by Marcus Ó hEochaidhe in 1963 and is located in the area of St Francis' Abbey's fifteenth-century transept. Archaeology was found beneath 0.28m of concrete, 0.6m of modern hardcore and 0.58m of mixed backfilled deposits, all containing a mixture of medieval and post-medieval ceramics, tile, glass, clay pipes, iron, brick and animal bones, all very mixed. The archaeology consisted of the 1.3m wide north wall of the fifteenth-century transept uncovered by Ó hEochaidhe in 1963, with interior in-situ burials, including a slab-lined grave with two in-situ burials. Following advice from the osteoarchaeologist, the trench was stopped before the base of archaeology was reached. These deposits, walls and cemetery have high archaeological significance.

Trench B-4:

- Top of Trench 44.78m
- Top of Archaeology -
- Base of Archaeology -
- Base of Trench 41.91m
- Depth to Top of Archaeology -
- Thickness of Archaeology -

This trench was excavated in the area of St Francis' Abbey's cloister. The test trench revealed that the area was substantially disturbed with backfilled cellars from the nineteenth- and twentieth-century brewery cut into natural subsoil; no significant archaeology was identified.

Trench B-5:

- Top of Trench 44.59m
- Top of Archaeology 43.52m
- Base of Archaeology not reached
- Base of Trench 42.66m
- Depth to Top of Archaeology 1.07m
- Thickness of Archaeology -

This test trench was excavated on the site of post-medieval buildings to the north of St Francis' Abbey, associated with the stables of the Horse Barracks and, later, St Francis' Abbey Brewery. Test excavations found archaeology beneath 0.24m of concrete, 0.44m of hardcore and 0.36m of demolition rubble. The archaeology consisted of c.0.6m wide walls of a post-medieval building in garden soils with finds of seventeenth- to nineteenth-century post-medieval pottery, mortar, glass, clay pipe fragments, oyster shells and animal bone, disarticulated human bone and one sherd of medieval pottery. Further excavation found in-situ human burials beneath the levels of the post-medieval buildings and garden soils, most likely part of the cemetery of St Francis' Abbey. Following advice from the osteoarchaeologist, the trench was stopped before the base of archaeology was reached. These deposits, walls and cemetery have high archaeological significance.

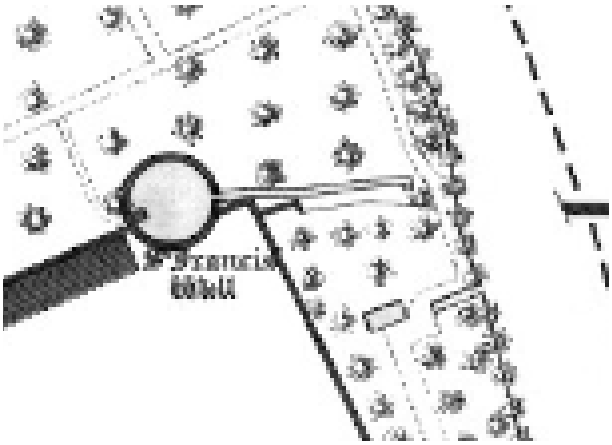


Fig 45. Detail of the well from the 1872 Ordnance Survey map of the city

Trench B-6:

- Top of Trench 44.59m
- Top of Archaeology 42.54m
- Base of Archaeology 41.61m
- Base of Trench 41.61m
- Depth to Top of Archaeology 2.05m
- Thickness of Archaeology 0.93m

The 0.93m of archaeology consisted of waterlogged garden soils with no finds. The deposits are archaeologically significant because of their potential to preserve archaeological material.

Trench B-7:

- Top of Trench 44.69m
- Top of Archaeology 42.87m
- Base of Archaeology not reached
- Base of Trench 42.87m
- Depth to Top of Archaeology 1.82m
- Thickness of Archaeology -

The trench encountered waterlogged loose rubble and hardcore deposits which collapsed into the trench. Excavations were stopped for health and safety reasons at the top of gardens soils because the edges of the trench were collapsing. The garden soils are archaeologically significant because of their potential to preserve archaeological material.

Trench B-8:

- Top of Trench 44.94m
- Top of Archaeology 43.21m
- Base of Archaeology not reached
- Base of Trench 43.21m
- Depth to Top of Archaeology 1.73m
- Thickness of Archaeology -

The trench encountered waterlogged loose rubble and hardcore deposits which collapsed into the trench. Excavations were stopped for health and safety reasons at the top of gardens soils because the edges of the trench were collapsing. The garden soils are archaeologically significant because of their potential to preserve archaeological material. Trench B-9 was not excavated because of the water-filled chamber below the concrete surface.

Trench B-10:

- Top of Trench 44.78m
- Top of Archaeology 42.97m
- Base of Archaeology 41.5m
- Base of Trench 41.5m
- Depth to Top of Archaeology 1.81m
- Thickness of Archaeology 1.47m

The 1.47m of archaeological deposits consisted of waterlogged garden soils, a possible stone revetment, and a possible timber revetment of hazel round woods and worked split oak stakes, one with a mortice slot. No finds were made in association with these, but they may represent medieval revetments to reclaim the friary's precinct from the River Nore floodplain after the thirteenth-century foundation of St Francis' Abbey. The garden soils are archaeologically significant because of the revetment, the preservation of timbers, and their potential to preserve archaeological material.

Trench B-11:

- Top of Trench 44.75m
- Top of Archaeology 43.18m
- Base of Archaeology 41.48m
- Base of Trench 41.46m
- Depth to Top of Archaeology 1.57m
- Thickness of Archaeology 1.7m

Trench B-11 was excavated on the site of the east wall of the north transept, in an area excavated by Marcus Ó hEochaidhe in 1963. The archaeology was found beneath 0.26m of reinforced concrete, 0.54m of modern hardcore and 0.77m of mixed modern deposits backfilled onto the area of Ó hEochaidhe's excavation, mixed with plastic, brick and aluminium. Ó hEochaidhe's excavation cuttings were apparent. The excavation identified a number of in-situ burials in what would have been the interior of the transept. Further investigations did not discover the north transept's east wall as anticipated, indicating that it has been robbed out. Disturbed deposits in its anticipated location contained mixed soils with medieval pottery, tile and kiln waste. The archaeology in this trench is highly significant because of the presence of in-situ burials and the probable line of the fifteenth-century transept.

Trench C-2

- Top of Trench 44.94m
- Top of Archaeology 43.28m
- Base of Archaeology 42.14m
- Base of Trench 42.14m

- Depth to Top of Archaeology 1.66m
- Thickness of Archaeology 1.14m

The 1.14m of archaeology consisted of waterlogged garden soils over alluvial soils, but no finds. The deposits are archaeologically significant because of their potential to preserve archaeological material.

Trench C-3:
- Top of Trench 44.8m
- Top of Archaeology 44.38m
- Base of Archaeology 43.62m
- Base of Trench 43.4m
- Depth to Top of Archaeology 0.42m
- Thickness of Archaeology 0.76m

This trench was excavated immediately east of St Francis' Abbey choir. A modern large-diameter service pipe ran north to south through this trench and the archaeological deposits. A post-medieval boundary wall (0.6m wide, 1m high) apparent in historical maps was identified in post-medieval garden deposits. No finds or evidence for burials or medieval features was identified. The garden deposits are archaeologically significant because of their potential to preserve archaeological material.

Trench C-4:
- Top of Trench 44.62m
- Top of Archaeology 42.99m
- Base of Archaeology 41.81m
- Base of Trench 41.81m
- Depth to Top of Archaeology 1.63m
- Thickness of Archaeology 1.18m

This trench was excavated immediately east of the Tasting Room. The 1.18m of archaeological deposits consisted of mixed garden deposits over alluvial soils. Finds included seventeenth-, eighteenth- and nineteenth-century pottery and animal bone fragments. No medieval archaeology was identified. The deposits are archaeologically significant because of their potential to preserve archaeological material.

Trench 10-1:
- Top of Trench 44.7m
- Top of Archaeology 44.06m
- Base of Archaeology -
- Base of Trench 42.9m
- Depth to Top of Archaeology 0.64m
- Thickness of Archaeology 1.26m

Trench 10-1 was excavated in the area of the Horse Barracks, where part of the Mayfair Building had been demolished under archaeological supervision in 2017 (AMS 2019). Archaeological excavations uncovered the stone walls and cobble surfaces associated with the Horse Barracks 0.64m beneath the surface. The walls were 0.6m thick and included a threshold for a door and internal divisions. Further investigations encountered in-situ human remains 1.9m below the ground level, most likely part of St Francis' Abbey cemetery. Following advice from the osteoarchaeologist, the trench was stopped before the base of archaeology was reached. These deposits, the Horse Barracks walls and cobbled surfaces, and the cemetery are of high archaeological significance. They have been preserved in-situ during the redevelopment of the Mayfair Building (Flynn 2019b; AMS 2021).

Archaeological monitoring during the redevelopment of the Brewhouse Building in Kilkenny identified several features of archaeological significance probably associated with St Francis' Abbey preserved in-situ beneath the Brewhouse, including walls likely associated with the west range of the abbey, and later part of Smithwick's Brewery (Flynn 2015; Flynn 2017; Flynn 2018; Flynn 2019a).

Subsurface archaeology associated with St Francis' Abbey will be preserved in-situ.

Fig 46. Manhole entrance to St Francis Well

5.0 Statement of Significance

The guidelines to the Burra Charter state that:

'Cultural Significance is a concept, which helps in estimating the value of places. The places that are likely to be of significance are those which help an understanding of the past, or enrich the present, and which will be of value to future generations.'

The guidelines go on to state that what is significant about a place should help determine how to look after it and what changes are appropriate. Whenever changes are made, including new interventions or development, these should be designed so as not to detract from the significance of the place. Cultural significance is assessed through a number of different categories including - aesthetic, historic, scientific, social or spiritual value for past, present and future generations, many of which overlap or are interdependent. Of the various categories used to ascribe the cultural significance of a place: social and spiritual, historical, architectural and archaeological are the relevant categories that will be used to assess the significance of St Francis' Abbey. The extant section of the City Wall and Evan's Tower will be assessed under historical and social, architectural and archaeological categories, whereas St Francis' well will be assessed under historical and archaeological.

Kilkenny City

As a result of its long and diverse history, not least its importance as a Norman stronghold and religious centre, its significant extant historic fabric, such as the cathedral, the castle, the city walls, St Francis' Abbey, houses and bridges, and the survival of its extensive and regular street plan, Kilkenny is one of the foremost surviving towns of medieval Ireland. It is also significant for its continuing importance in the post-medieval period, exemplified by the quality of its surviving Georgian and Victorian architecture, both domestic and institutional. This rich social and cultural history is still evident today in its architecture and archaeology, and Kilkenny is a vibrant city synonymous with art, craft, music and comedy, often staged in its fine historic edifices.

Fig 47. Aerial view of Kilkenny City (Courtesy of the Photographic Archive, National Monuments Service 2020)

Fig 48. Interior of the abbey looking east from the 1880's

St. Francis' Abbey

Social & Spiritual Significance

Defined originally by its proximity to the city, town defences, St Canice's Cathedral and its location on the western flood plain of the River Nore, St Francis' Abbey is an integral part of the social fabric and subsequent evolution of Kilkenny, particularly within the historic area of Hightown. From its thirteenth-century ecclesiastical origins, through to its function as an important centre for rite and ritual, milling, the military and, later, brewing it has evolved alongside the societal changes and development of Kilkenny. Though initially not integral to the urban defensive network, the mendicant precincts, such as St Francis' Abbey, nonetheless promoted a sense of socio-cultural and topographical homogeneity between the older and newer sections of the developing Hightown.

From its foundation shortly after the Anglo-Norman settlement, the abbey grew to become a highly regarded centre of learning and enlightenment, and was celebrated throughout the Franciscan community, obtaining the rare status of a 'studium' for both philosophy and theology and was the only house to achieve this dual status in Ireland.

That it was permitted to teach both disciplines demonstrates that it was considered to be a significant foundation, which is unsurprising given Kilkenny's political importance during this period. In the introduction to his article St Francis Abbey 1230 – 1630: A History & Archaeology of Kilkenny's Conventual Franciscans, Gerry O'Keefe neatly encapsulates some of the social import and reach of the those that ran the Abbey, as follows:

…The friars mined a rich vein of urban and rural benefaction throughout their 400 year history in Kilkenny and members of their community rose to the highest echelons of the medieval Irish hierarchy. They were priests and confessors, intellectuals and chroniclers, civil engineers and medical practitioners, who were deeply interested in the world around them…

The Abbey was been the final resting place for several citizens of high standing within Kilkenny such as the renowned scholar, Friar John Clyn, who provided valuable insights into medieval society documenting, for example, the spread of the Black Death in 1348.

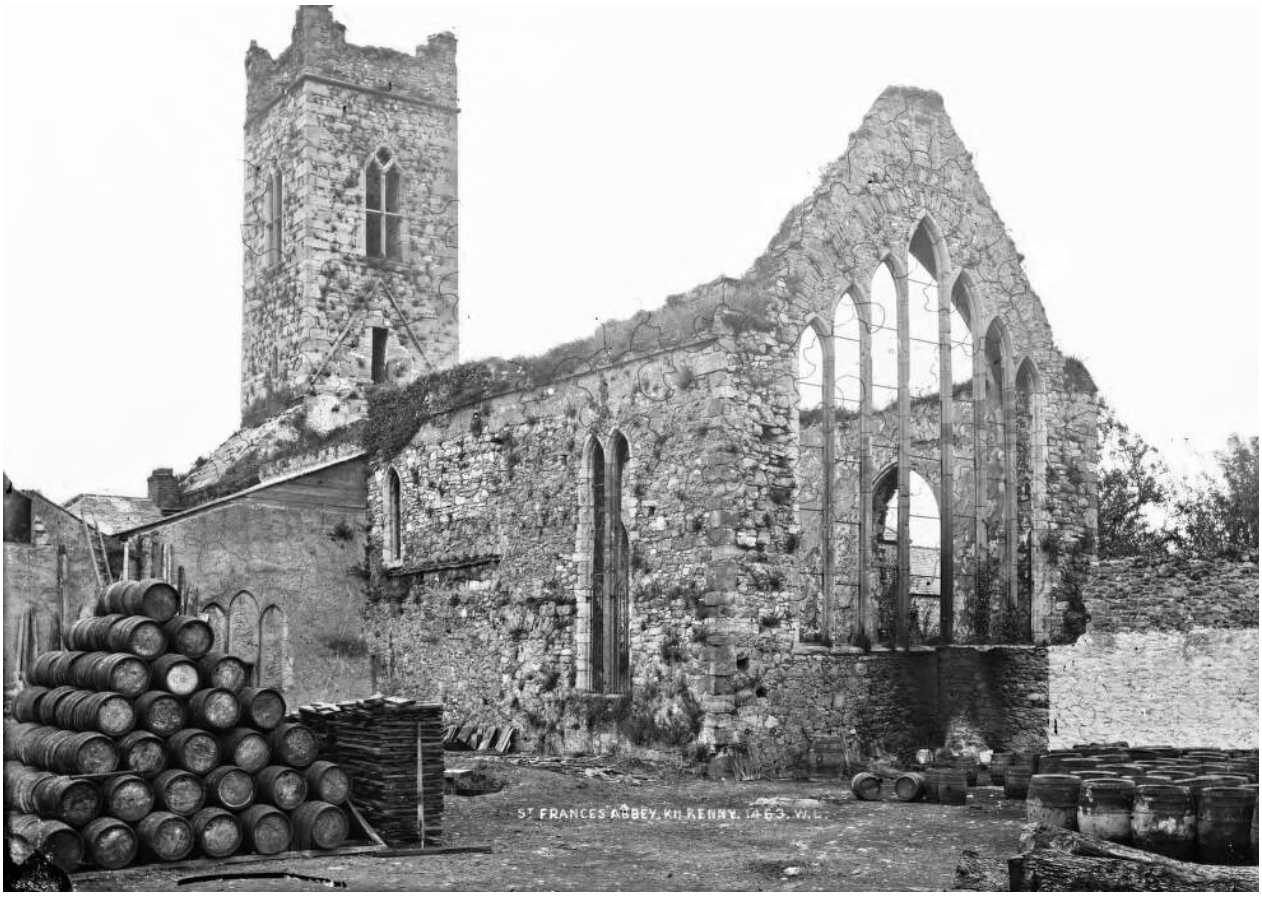


Fig 49. A view of the east window in the 1880's when the building was used as part of the brewery. Notice the iron rods supporting the mullions

The area in and around the abbey precinct became synonymous in the early-seventeenth century with industry and manufacture, particularly wool manufacture, milling, malting and brewing. As such, this activity was a source of employment in the town, as was the location of the cavalry barracks there from 1700-1800. That the area around the site became the epicentre of industrial and trade activity in the city in the nineteenth century is highly significant.

The use of the site as the location for the brewing of what became one of Ireland's best known and loved brands of ale, Smithwick's, a brand that is bound up with the character identity of the site and the city more broadly, makes it socially significant.

Located to the north-east of the Abbey, St Francis' well is marked on historic maps and is the subject of scholarly debate as to whether or not it is a holy well. Today it is covered and encased in concrete, and further investigations are to be undertaken to more conclusively establish its nature and extent and therefore its significance. It is, however, included as part of the overall Urban Archaeology Survey for Kilkenny City (Farrelly, O'Reilly & Loughran 1993 UAS-101).

St Francis' Abbey is a national monument in state care (Monument number 72), whilst the remains of the town wall and Evan's Turret are considered national monuments under the National Policy on Town Defences (DoEHLG 2008). The whole site is part of the RMP constraints area /Zone of Archaeological Potential for Kilkenny City (RMP KK019 026).

Fig 50. The only evidence of the well, the manhole leading down into the concrete chamber below.

Fig 51. Oliver Cromwell, 1656, by Samuel Cooper.

Historic

The development off the abbey coincided with a highly significant period of expansion of the city under the Anglo-Norman's. Its foundation was the direct result of a land swap between the two most powerful people in the city at the time, Earl William Marshal, and the Bishop of Ossory. This transaction was integral to the subsequent evolution of Hightown and is significant to the historical development of the city.

As a site of such ecclesiastical importance, the abbey has borne witness to some of the most notable events in the history of Kilkenny. Important events that have had a crucial role in shaping and moulding the religious, political and civic character of the place. In common with most religious houses in Ireland and Britain, the second phase of Henry VIII's dissolution of the monasteries, saw the dismantling of St Francis' Abbey from around 1540.

Oliver Cromwell's Siege of Kilkenny in 1650, concentrated on the stretch of the city wall separating the abbey precinct from the River Breagagh, close to Evan's Turret, was of considerable strategic and economic importance within the Pale. Similarly, the later use of the abbey as the home of a cavalry barracks for 100 years, tells of its strategic importance to the English military presence within the city.

The use of the site for industrial purposes, as a brewery and starch factory, is also historically important and the most notable of these was arguably the tenure of the Smithwick's brewery, which formally dominated the western banks of the river Nore from 1827 until 2014. It is important in its own right for the economic, social, industrial and technological contributions that it made to the city historically.

Significance of the Abbey as a Place

Over the course of its history the abbey has seen many changes, interventions, adaptation and demolitions, some more sympathetic to the historic character of the place than others. Consequently the precinct has experienced piecemeal loss of fabric and meaning and with it some of the qualifies that displayed its medieval past. The erection of poor-quality structures, together with the loss of historic planting and concrete ground coverings, within the former precinct in more recent times, detracts from the character and appearance of the place. Despite this, the abbey remains a highly significant historic place and an important part of the wider medieval city.

Architectural Significance of St. Francis' Abbey

Although there are no structures included on Kilkenny City Council's Record of Protected (RPS), the architectural significance of the extant structures in and around St Francis' Abbey and its importance as a historic place is recognised by its inclusion

Fig 52. 1946, a view of the Abbey showing the now demolished buildings adjoining it to the south

within the City Centre Architectural Conservation Areas (ACA). It also borders the St Canice's ACA, which stands directly to the north.
The only upstanding structure recorded by the National Inventory of Architectural Heritage (NIAH) is the poor quality 1980s pastiche gothic 'sample rooms' (Reg. No. 12000008) that stand to the south of the abbey that is erroneously given a nineteenth century date and a 'regional' rating for its architectural interest including:

…contributing to the group and setting values of the Saint Francis's Abbey complex which has undergone extensive redevelopment over the course of the twentieth century to accommodate an expanding brewery.

It can, however, be said to detract from the setting of the surviving upstanding choir and belfry of the abbey proper because of its scale and the poor quality of its design.

The abbey is highly significant as one of the largest and best examples of a former Franciscan Abbey in Ireland, and the subject of early antiquarian and conservation interest, together with its late-nineteenth-century designation as a national monument. More specifically, the importance of the impressive and well-preserved choir and belfry are today recognised by its designation as a National Monument in State Care. (ref.72) These are considered to be of national importance for its 'architectural, archaeological and historical' special interest.

Fig 53. The Tasting Rooms to the south of the Abbey.

Archaeological Significance

St Francis' Abbey is archaeologically significant for the following reasons:

- This is a well-documented archaeological site, located within the RMP for Kilkenny City (KK019-026----), and recorded in the Urban Archaeological Survey for Kilkenny (Farrelly et al.1993, UAS-101), and in the Sites and Monuments Record (KK019-026101-, KK019-026150-, KK019-026151-, KK019- 026183-, KK019-026189-, & KK019 -026190-).
- The upstanding remains of St Francis' Abbey are a national monument in State care (monument ref. 72), whilst the area of the national monument extends north to the River Breagagh and east to the River Nore, covering the core of the former monastic precinct.
- St Francis' Abbey is one of three medieval monasteries in Kilkenny City. Originally consisting of substantial church, crossing tower, claustral ranges, graveyard, accommodation, milling and associated structures, together with gardens and enclosed spaces, and a section of the town wall. The surviving fragments including the crossing tower and chancel, are significant historic and archaeological landmarks in the city with interesting architectural elements and decoration from the thirteenth and fourteenth centuries.
- Previous archaeological excavations confirmed the survival of substantial subsurface archaeology associated with St Francis' Abbey, including the monastic buildings, the cemetery, along with waterlogged deposits, which have a high potential for archaeologically significant artefacts and other finds.
- Significant post-dissolution archaeological remains are also present on site, including the Horse Barracks (1700 to 1800) and the industrial archaeology associated with the Smithwick's Brewery.

City Wall & Evan's Turret

Social & Historical Significance

Although fragmentary in nature, the surviving sections of wall to the north, east and west of the Abbey site, together with Evan's Turret are part of what was the city's defensive system (Farrelly, O'Reilly & Loughran 1993, UAS 6, UAS 7). The portion to the north of the Abbey, including the tower, also served as the friary precinct boundary within the medieval town, defining the extent of the friary lands.

The wall not only defended the medieval settlement but was also a profitable source of toll revenue. It is at this location, that Cromwell's forces attempted to breach the wall during the Siege of Kilkenny, which is an incedent of social and historical significance. That Evan's Turret was later used as a picturesque belvedere from which to appreciate views the city and its hinterland during the eighteenth century, is also of significance.

Architectural & Archaeological Significance

This section of the city wall has been the subject of much repair and rebuilding over the years, most notably with the insertion of the Horse barracks during the eighteenth century and the development of the Smithwick's Brewery throughout the late-nineteenth and twentieth centuries. Poor workmanship in the section of wall to the north-west of the site, where arched brick window surrounds are still visible, detracts from the character and appearance of the wall and its significance.

Fig 54. Evan's Turret from the north.

Fig 55. City Wall with the remains of the Horse barracks building built on top.

The principal architectural significance of Evan's Turret and adjoining walls lies in their being part of an important linear monument, part standing, which once enclosed the city. Considered holistically the standing monument, together with buried and missing sections define the outer limits of the medieval town. The later aesthetic use of the river-side turret as a belvedere, adds another layer to the architectural, historical and social significance of the place, which contributes much to the historic character of this ancient walled town.

This significance is reflected in the fact that the whole City Wall, together with Evan's Turret, is designated as a national monument, of national importance, under the 'National Policy on Town Defences' (DoEHLG 2008), and in the care of Kilkenny County Council.

6.0 Condition Survey

Fig 56. Aerial view of St Francis Friday (Courtesy of the Photographic Archive, National Monuments Service 2020)

Introduction

The conservation management plan team, which consists of Howley Hayes Cooney Architects, CORA Consulting Engineers, AMS Archaeology and Scott Cawley Ecology met on site in August 2021 to assess the site and historic structures. HHC and CORA also carried out a site visit in the early summer. The focus of the site visits was to assess the site, and to appraise the condition of the historic structures, namely St Francis Abbey, Evan's Turret, the city wall and St Francis' well. As the well is not accessible, it could not be inspected. A recent Archaeological survey of the Abbey, completed by the OPW in July 2021, provides an excellent basis for the assessment of this structure, while recent works to Evan's Turret, carried out in 2016, also provide a good basis for the condition appraisal of the tower. Works were also carried out to the city wall, alongside the Mayfair building in 2019 and 2020.

The City Walls / Defences

Overview

A portion of the Kilkenny city wall or defences, bounds the northern part of the site. It stretches from the south east at the Water Gate bridge, heading north west, and terminating at Evan's Turret where the River Breagagh meets the River Nore. It served to enclose the friary precinct in medieval times. For the purposes of this condition survey the wall will be described in three sections, the North Boundary Section, Horse Barracks Section, and the Mayfair Section. Evan's Turret and the portion of wall immediately to the west of it are described separately below. Conservation and repair works have already taken place at the Horse Barracks and Mayfair sections, n in 2001-2003 under the direction of Consarc on behalf of Mott McDonald. A digital survey of the walls was carried out by Margaret McGowen in 1999 indicating portions of modern construction and rebuilt areas (Courtney Deery Heritage Consultancy 2014).

North Boundary Section

The north wall is located west of Evan's Turret and the brewery bridge. Like the city wall at Evan's Turret, the base is submerged in the river on the north side. From this location, the lower section of the wall appears to be of older construction, and about two fifths of the way up the wall the masonry changes slightly. This aligns roughly with the ground level of the Abbey Quarter site, behind the wall. While the upper section of the wall is of more recent

Fig 57. This wall was built on the precinct wall for St Francis' Abbey which effectively formed part of the defences for the city

construction it is difficult to discern exactly when it might have been built. This section of the wall is capped with a cement render with metal trunking for pipework and cables fixed to the top of the capping. The pointing in this whole upper section is mostly cementitious. Along the northside of the wall rushes grow at the base of the wall on the river side, obscuring the condition of the masonry in this location. There are areas of extensive vegetation growth along the wall, and as the wall rounds the sharp bend in the river, older masonry is visible on the north side at the corner of the wall. Overall this section of the wall is in reasonable condition, and has been subject to rebuilding and repair. The cement render should be removed and a more appropriate capping provided.

Horse Barracks Section

At a bend in the river the north wall meets a taller section of wall of older construction. This would originally have been the gable wall of the Horse Barracks Building, which appears on John Rocque's Map of Kilkenny from 1758. Rising to almost two stories in height, this section of the medieval wall, has been demolished down to a lower level, on which a thinner eighteenth-century wall built later constructed. Eighteenth-century window openings not only exist at first floor level but have been cut into the thicker section of the lower medieval wall. These openings are formed with gauged brick arches and brick quoins at the window reveals. Currently they are now blocked up with masonry and concrete blocks at ground level, and brick at first floor level.

During recent demolition works to the Mayfair Building and new ESB substation, the south side of the wall facing the site was cleaned of vegetation and repointed with lime mortar. There are also still some remnants of lime plaster clinging to the walls at low level on this side of the building. However, the north side of the wall facing the river is in a worse state, with large amounts of thick vegetation having taken root in the wall, and severely eroded brickwork in the eighteenth-century wall.

Fig 58. Bend in the river where the remains of the Horse Barracks Building was built on top of the city wall

Fig 59. Remains of the Horse Barracks Building from the south

Immediately to the east of the new substation is an area that was to have been repaired along with the Mayfair works but was subsequently omitted.

Mayfair Section

The western edge of what would have been the Horse Barracks, ends just short of the corner of the Mayfair building. At this point the Horse Barracks wall ends and the former city wall juts out approximately one metre into the Breagagh before running behind the Mayfair building until it reaches the Watergate Bridge. Up until recently this area was inaccessible due to the proximity of the Mayfair building to the wall, and was overgrown with large trees. As part of the preparatory works to the Mayfair building the trees were cut down and the area cleaned up.

In 2017 and 2018 AMS undertook an archaeological assessment of a ninety metre section of Kilkenny city wall adjacent to the Mayfair Building development (AMS 2018). This included a laser scan survey, visual assessment, historical research and phased drawings of the city wall. Both faces of this length of wall on the south side of the River Breagagh were surveyed from Irishtown Bridge (the bridge at the Watergate), to the east side of the former Horse Barracks building. The wall ranges in height from 2.73m to 5.96m from the riverbed to the top of the wall on the river side of the city wall; and from 1.05m and 3.99m over the ground on the land side. It was found that this wall included up of five phases of construction dating from the medieval period at the very lowest levels of the wall, to post-medieval buildings constructed against or on top of the wall, including the eighteenth-century Horse Barracks building. Comprehensive recommendations for the conservation of the city wall were adopted for the development of the Mayfair Building as a new library for Kilkenny City.

Works were undertaken to repair this portion of the city wall, which was cleaned and repointed using lime mortars and capped with a lime and sand flaunching. The north side of the wall is in a poorer condition, with a vegetative growth and open joints, and works to the side of the wall were excluded from the recent Mayfair contract. Notably on the north side of the wall there remains a remnant of an arch from Cotteral's Bridge (SMR KK019-026102-) that once crossed the river at this point. The abutments of the arch are visible on both sides of the River Breagagh.

Fig 60. The Mayfair section of the city wall, showing the narrow passage-way between the May fair building and the city wall bounding the River Breagagh'

Fig 61. Evan's Turret & Wall-walk

Evan's Turret & Wall-walk

Overview

The extant city wall-walk and tower, now named Evan's Turret, is located along the north-eastern edge of the site known as Abbey Quarter, which was also once part of the city defences. It is currently separated from a temporary public pathway by metal fencing. The turret is a rough parallelogram measuring approximately 4.5m x 4.8m, with a wall thickness of 450 - 550mm. From the turret the city wall extends for roughly fifteen metres until it meets the existing concrete bridge that leads into the site. The city wall alignment and early medieval fabric is thought to survive below the concrete bridge. Constructed of un-coursed rubble stone, the wall walk is predominantly limestone, while the turret shows evidence of coursing from different phases of construction.

The turret was altered to create a prospect tower in the eighteenth century and evidence of this alteration can be seen within the tower. Surviving masonry includes the wall-walk, which contains an outer parapet facing the river, and a small portion of the internal parapet which was repaired and rebuilt in 2016.

The Wall Walk

The wall walk straddles the south side of the River Breagagh and the river side wall remains relatively intact, although there is a considerable amount of vegetation embedded in the joints of the wall. On the river side wall, the capping that slopes up to the turret was repaired with rough racking as part of the works during 2016, while the remaining portion of wall leading up to the bridge has a cement render capping. The wall facing the abbey consists of a partially collapsed 'wall-walk' sitting on a series of masonry arches leading to the turret. Only a small portion of the inner parapet wall remains, and this was partially deconstructed and rebuilt during the 2016 works, with rough racking along its top. There are two broken steps projecting from the wall leading up to the turret, and historic structural pockets in the turret walls indicate the former internal floor level when it was used as a guard tower.

Of the blind arches that once existed on the inner face of the city wall, only one remains intact and visible just above ground. A new timber relieving beam was inserted below this arch during the 2016 works to stabilise the structure. This was

Fig 62. New timber supporting relieving arch in city wall

determined to be an original detail, which helped to avoid more extensive rebuilding. Two adjacent blind arches are now partially buried by the build-up of earth on the south side of the structure, and have not been repaired. These were excavated during the 2016 conservation works and this excavation also confirmed that the city wall continues at least two metres below the current ground level.

The Turret

Fig 63. Facade facing the Abbey quarter site

The turret or tower itself is an irregular shaped rectangle, and sits on a partially collapsed stone vault at lower level. An arched entrance to this vault remains intact with the top of the arch visible on the south side, which would have provided access to the vaulted chamber.

The external ground level now sits just above the springing point of the arch. This pleasing arch consists of stone voussoirs and a keystone sitting within the un-coursed limestone wall of the tower. Cement pointing is still evident on the lower level of the tower, one part of which includes the date of 18th June 1979, when it was carried out. A number of small window embrasures, in what would have been the ground floor of the tower, are now partially buried in the ground.

This external stonework is divided by a course of

Fig 64. Detail of the facade of Evan's turret showing the different layers of construction

slate or possibly sandstone on the south wall at the level where the original guard tower's floor would have been originally situated. The stone above this course is slightly darker and was possibly built at a later stage than the lower level.

We know the tower was largely altered during the early eighteenth century, to create a prospect tower, which could explain this change in coursework. This stonework continues up to the sill level of the window opening, where there is another apparent break or change in the pattern of the stone indicating a possible rebuilding at this level. The window openings at this upper level are quite large and more suited to viewing prospects than defence. Internally the tower is in a worse state than appears

Fig 65. Arch below Evan's Turret

Fig 66. Large tree growing in the interior of Evan's Turret

from the outside. The inner skin and wall core has partially collapsed in the south western corner, leaving a stepped wall up to the upper floors. On the inner side of the north wall there are numerous areas of loose masonry with pockets where stones have fallen out of the wall core. There is still evidence of joist sockets in the wall where the original level of the guard tower would have been, and there is further evidence then of the higher floor level and associated drainage which were inserted when the tower was used as a prospect tower in later centuries. Partially buried embrasures in the northern and eastern walls with arrow slit windows looking out onto the river are now filled with earth.

Fig 67. Evan's Turret from the north

A substantial tree is growing out of the eastern wall with thick roots embedded in the masonry. This is undoubtedly a cause for structural concern and should be removed and the masonry repaired as soon as possible.

Vegetation in general is a problem for much of the surviving masonry on the site, particularly to the turret and the city wall. Though a substantial amount was removed during the 2016 conservation works it has now returned and is beginning to engulf the structure once again.

Fig 68. Interior of the turret showing locations where floor timbers may originally have been

Flowers and plants are now growing from the wall on the north hand side facing the river, and while attractive, if left to grow and flourish they will destabilize the structural integrity of the wall. On removal a certain amount of vegetative growth could be maintained on this wall, possibly through soft topping to encourage pollinators. To the south, thorn bushes, nettles and weeds are now growing prolifically adjacent to the recently repaired wall. This is most likely as a result of this area being fenced off combined with a lack of regular, on-going maintenance.

Fig 69. Evan's turret following restoration works. Vegetation has been allowed grow back over the site

Stitching of Evan's Turret with Cintec anchors was undertaken 2001-2003 as part of the Consarc / MGowen works for stabilisation of the city wall along the Breagagh prior to the River Nore flood alleviation works. Conservation and repair works were undertaken again at Evan's turret in 2016, as part of the change of ownership agreement between Diageo and Kilkenny County Council, at which time loose masonry was consolidated, walls were partially rebuilt and vegetation removed. The area to the front of Evan's Turret was also excavated to facilitate repairs to two of the three masonry arches now partially buried by the raised ground level. This area was backfilled upon completion of the repairs.

St. Francis Abbey

According to the NMS Survey undertaken in 2021, St Francis Abbey measures 22.2m in length, 7.9m across at the east end and 7.97m wide at the western end. This archaeological survey, together with our recent site inspections, have contributed to this condition survey of the structure. It should be noted that the conservation management plan team did not have access to the high level areas of the Abbey, and could only carry out visual inspection from ground level. Drone photography was also provided by the NMS, which has helped the team to understand the condition of the structure at higher levels.

North Wall of the Choir

The north wall of the choir dates from the twelfth and thirteenth century and contains five delicate Gothic lancet windows with chamfered stone reveals and one larger window, at the east end which once contained two vertical mullions. Later interventions include two door openings, one now infilled, at the east and west end of the walls, which were likely inserted to provide links to subsidiary abbey or brewery buildings during more recent times. This wall averages one metre in thickness, and is approximately 8.5m high, with a buttressed portion which might denote the old line of the plinth for the chancel. The archaeological survey of the structure (National Monuments Service 2021) also posits that the end line of the buttress on the east end denotes the original termination of the older church, before it was extended. A vertical crack on the inside face of the wall in this location, possibly confirms a stitched masonry extension was added here in the past. The opening at the west end, by the tower, (Fig 72) contains a badly rusted beam with a gate post hinge, while the internal sill to the lancet window above this opening has been altered and no longer matches the adjoining windows. A vertical DPC was installed on both sides of the infilled opening, and a large seventeenth-century gravestone, known as the Delahunty grave slab, now hangs on this wall (Fig 71).

Fig 70. Interior view of the north wall of the choir

Fig 71. Opening made in the nineteenth century to allow access through to land behind it

The impacts of the brewing industry are evident in the black sulphate deposits within the window heads, and cement pointing and repairs, which are also visible on the walls.

A rusting metal gate, pocketed into the side walls and fixed shut at the base, has been inserted in an opening at the east end (Appendix C, feature 31). The stone threshold to this doorway has been badly damaged and until this is repaired, should not be used as a safe access point. Directly west of this opening there is a low level relieving rubble arch, which is now almost completely concealed below ground.

Fig 72. Corroded metal beam where a new opening was made in the wall

This was probably installed to help spread the load on the walls from the window opening above.

Layers of previous coatings including lime render and limewash survive on the interior side of the north wall and the composition of these should be assessed to help determine the coatings and colours previously visible on the internal church walls.

Ferramenta pockets within the window reveals provide evidence of the previous leaded glass insertions, while the larger window to the east end has two deeper and large pockets, indicative of a timber frame to support an upper light within the window.

Fig 73. Large lancet in the east end of the choir

South Wall of the Choir

The southern external wall of the abbey is approximately 960mm thick at the western end, 1.1m thick at the eastern end and circa 12m in height. Abutting this wall is a surviving part of the sacristy, or south chapel as it is also known. This structure was later repurposed as an oratory for workers of the brewery.

A masonry buttress to support the tower was possibly built as part of the conservations works to the tower carried out during the late twentieth century. There is evidence of mortar loss and

Fig 74. Newer buttress to the south of the tower

washed out joints to the lower portion of the buttress, and vegetation has begun to encroach into these open joints.

Photographs from the nineteen sixties show what would have then been a new cement rendered capping to the angled top portion of the buttress. While still intact, movement in the wall and buttress has resulted in several large cracks opening up in the cement, some along lines which are evident in these earlier photographs. A large amount of plant growth now lies along the fault line where the buttress meets the original wall of the abbey, and also where the angled wall meets the base of the tower. Rainfall down the eastern side of the buttress is causing staining to the stone and wash-outed masonry joints. These open cracks are also allowing water access into the buttress core which will destabilise the buttress.

Fig 75. View of the altered windows in the south wall from inside the Abbey

Directly east of the tower buttress is a double arched lancet window located at high level, though unusually the two arches are of unequal size, indicating a modification to this window. The west arch is mis-shaped and smaller than its neighbour, and sits in close proximity to a semi-circular recess in the wall which may have once accommodated a spiral staircase (Fig 74). Below this recess there is a large amount of vegetation, which should be removed in order to prevent further damage to the window. The stonework below the window is in fair condition, most likely due to its location, protected by the oratory. Evidence remains of what appears to be lime render on lower eastern parts of the wall below the window, and this should be tested to determine its age and composition.

Fig 76. Lancet windows on the south wall

Further east of the double arched window is a door opening at high level with a flat stone lintel, sitting within the remnants of a gothic arch. This was most likely an upper storey doorway leading to the dormitories above the south chapel or oratory. It was accessed internally from the choir through a ground floor doorway and staircase. Single lancet windows are positioned at high level within the three arches, above the now lost cloister. Internally these Gothic arches are of similar size and shape to those along the north wall, albeit they not sitting directly opposite each other.

Fig 77. Sedilia window and opening into the south corridor

East of the south chapel (sacristry) or oratory extension, the south wall is punctuated by a larger double lancet. A relieving arch is visible in the wall, partially obscured below ground level, with some notable damage to the voussoirs near the keystone, and vegetation growing from pockets between the individual stones. The tall double lancet window was previously repaired during the nineteenth century and the crispness of the replacement stone mullions is still evident.

A blind triple sedilia (fig 77), with trefoil arches, is visible on the inside face of the wall. This ornate arrangement is believed to date to the thirteenth century, but was also heavily repaired during the RSAI works carried out during the nineteenth century.

Fig 78. Large trees growing between the south wall and the tasting rooms

Five trees are growing in close proximity to the base of the south wall on the external side, which are a cause for concern as their root structures are probably undermining the structural integrity of the wall.

A thick, rough coating of lime render still clings to the south walls at the west end, although this lessens moving towards the eastern end of the choir. Render is also still evident around the sedilia and second double lancet window on the eastern wall.

Fig 79. In-filled glazing system into the Sacristry'

The Southern Chapel / Sacristry / Oratory

The southern chapel, or sacristy as it is also referred to on some plans, is located against the south wall of the nave. In the late twentieth century it was repurposed for use as an oratory by the brewery. It abuts the south wall of the choir, on the eastern side of the now-lost cloister. Consisting of a stone barrel-vaulted space, it is entered from the west through a glazed aluminium screen (Fig 79), which sits within a large gothic arch. A similarly sized Gothic arch sits opposite on the east wall, but this has been infilled and now contains three lancet windows together with a square-headed door opening. There is evidence of previous repairs and alterations which include the removal of a mono-pitched roof, which can be seen in photographs from the latter

Fig 80. North wall of sacristy

half of the nineteenth century. The parapet was entirely rebuilt during the repair works carried out in the nineteen sixties. Below the rebuilt parapet at the springing point of the west arch is an area of smooth river-like stones, very different from the larger irregular rectangular masonry work of the rest of the building. On the opposite side the springing point of the arch sits on brickwork, which is acting as the abutment. There is evidence of possible instability and previous attempts to support this structure, and the south wall has been buttressed and bulges visibly, while leaning away from the abbey. There are also large lines of cracking above both haunches, which have been infilled with a cement mortar. Lines of inserted DPC are visible on the south wall of the oratory and these most likely date from mid twentieth century repair works.

Fig 81. Relieving arch in north wall of the sacristy

The east wall of the sacristry, like its western counterpart, contains a high level relieving arch with masonry infill below, into which sits a three-bay lancet window. Photographs from 1888 show this facade was previously rendered and the windows were filled in, with a mono pitch roof over top.

A considerable amount of mortar has been lost from the wall surrounding the arch, while the infilled section has been repointed using a thick heavy cement. The cement is cracking and falling away at certain junctions resulting in likely water ingress. A square-headed opening at ground level in the eastern wall of the oratory and adjacent to the south wall of the choir, contains a metal railing and a raised stone threshold. This opening leads into the old dormitory corridor between the oratory and the choir which is a narrow unroofed space.

Fig 82. External view of the sacristy east wall , showing the infilled arch and window

Internally the oratory is damp with poor internal air quality likely due to lack of adequate ventilation and there is evidence of biological growth and damp on the stone lintel of an infilled opening in the north wall. This opening indicates a previous connection between the oratory and the dormitory corridor behind. A relieving arch at low level in this wall may have served a structural purpose, redistributing weight. A display niche has also been inserted in this wall.

Fig 83. Sacristry

Fig 84. View of the great east window in St Francis Friary.

The East Wall of the Choir

The spectacular, seven-light east window appears completely infilled in a late eighteenth century engraving and a photograph of the Abbey from around 1862, which is held in the Royal Society of Antiquaries in Ireland. As noted previously the space was used as a racquetball court, before being reopened in 1872, along with the sedilia on the south wall. Substantial works were also carried out to the east window in 1963, with photographic evidence of the windows being reconstructed using original material. This would explain the relatively crisp nature of some of the tracery, and the consistent alignment of the stones. The surrounding masonry forming the relieving Gothic arch above, is much older and considerably more weathered.

The tracery was once supported by horizontal iron ties, which connected the narrow mullions, as shown in previous photographs, although these are now gone. A large willow tree has grown to a considerable size in very close proximity to the eastern gable wall and its branches are now touching the windows. It is advised that this tree be removed in the long-term and that a strict maintenance and management plan be established in the short-term to ensure that it does not cause damage to the slender mullions of this important window. Its removal is the only long-term means of ensuring the protection of the east window. A cutting or seedling could be established in a nearby desirable location to replace this beautiful tree, and while this is becoming established, the existing tree adjacent to the east window could be managed carefully before it is finally removed.

Towards the northern end of the wall is an infilled doorway, with a pointed arch that is most likely a later addition. It is not known when the door was

Fig 85. Decorative stones used below the east window.

infilled. Below the window is another relieving arch which spans the length of the window above. The stonework throughout the wall is in fair condition, with little cement pointing evident at the east end of the building.

On the internal face of the east wall a number of decorative cut stones, several of which contain stone carvings, have been used within the wall beneath the east window. The sill also appears to have been rebuilt and is coated in cement which is now cracking and allowing water to penetrate into the wall core.

Fig 86. Aerial View of the great Franciscan Friary.

From the drone photography received of the structure, it is clear that the wall tops have vegetation growing along them, and this will also contribute to the loosening and upending of masonry along the pitched gable walls. Vegetation growth on monuments or masonry structures is not necessarily detrimental to the structure but must be managed and monitored to ensure that the roots of woody plants are not starting to loosen or open up joints excessively.

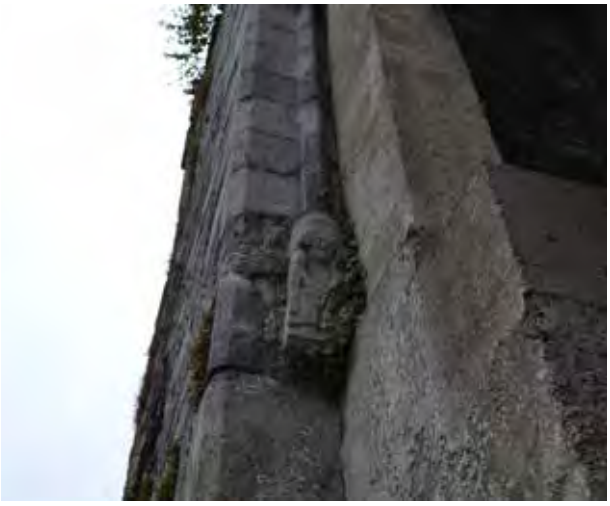


Fig 87. Detail of a carved impost at the base of the concrete relieving structure.

Fig 88. Lower part of west wall and buttress.

Fig 89. View of the concrete structure supporting the crossing tower

The West Wall of the Choir

The west elevation of the abbey is dominated by the large crossing tower, with stone walls on either side. On the south wall the buttress wraps around the west face to provide additional support to the corner. Scars from the pitched nave roof are still visible on the west face of the tower with a simple projecting stone corbel arrangement above a small window, however, this pitch does not align with the angle of the buttress to the south wall. Some loss of stone is evident to the base of the wall on the south side, but this does not appear structurally unstable. It is likely that mortar will continue to wash out in this location due to increased exposure of the wall core and so the masonry in this area should be repaired. The joints across this wall are generally washed out, and there are portions of cement pointing throughout.

Fig 90. Drone footage showing the top of the tower. (Courtesy of the Photographic Archive, National Monuments Service)

The Crossing Tower

The tower contains an early twentieth-century conservation intervention in the form of a double concrete frame, inserted to stabilise the structure (Fig 36, 89). Matching concrete frames sit within the west and east tower arches for a similar purpose, as cracks were observed at the haunches of the pointed arch below the tower. Two iron columns were installed within the south side of the tower in the late nineteenth century to support the groin vaulting above. These are fixed into the masonry with iron ties, while some of the rib vaulting has been removed to the underside of the vault to accommodate the column tops. It is unclear what these structural interventions are doing today, in terms of support to the tower structure, but the tower is notably leaning towards the south, and this lean is visible on the survey drawings recently obtained by the OPW. Removal of the concrete frame may result in de-stabilisation of the tower, and damage to the masonry, in particular to the four carved figures directly abutting the concrete frame on both sides of the tower.

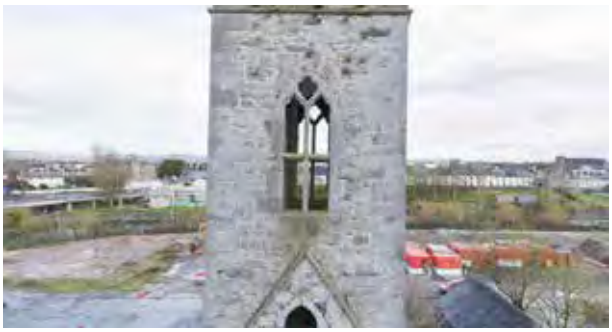


Fig 91. The west wall of the tower.

The crack on the northern side of the arch, which is referenced in older communications on the site and was the reason for the main repairs to the tower, has been repaired but can still be traced with the eye due to the cement render used in the repair.

There is heavy black encrustation build up on the internal walls of the tower, most likely due to the industrial burning processes undertaken around the turn of the twentieth century, when brewing was facilitated on site. The OPW are currently undertaking trials to explore removal of this encrustation using poultices and other methods. This work should to be undertaken with extreme care to minimise damage to carved details such as the ribbed vaulting and the six carved heads which form the vaulting bosses and the decorative door surrounds.

It should be noted that there is a vast photographic record of the Abbey, wall and turret from 2015, undertaken by Harmon McCarthy Project Ltd, prior to the demolition works and handover of the site to Kilkenny County Council.

St Francis Well

As noted above St Francis well is not currently accessible so it was not possible to inspect this structure on site. However since our last site visit to the Abbey Quarter, AMS have carried out a CCTV survey of the well, with below ground footage now being processed. Part of the historic well structure are visible though damaged with the insertion of modern concrete and other pipework in later years.

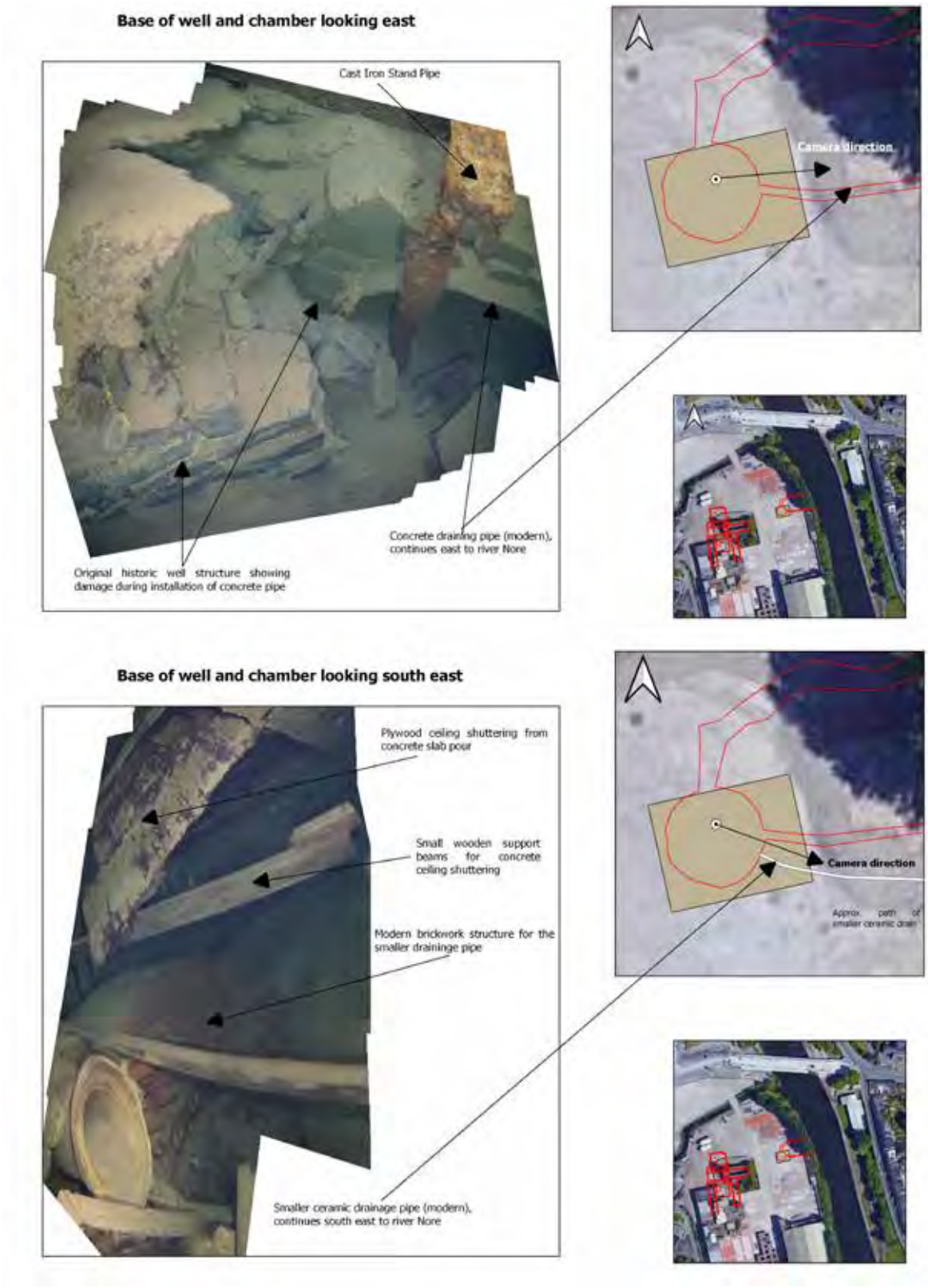


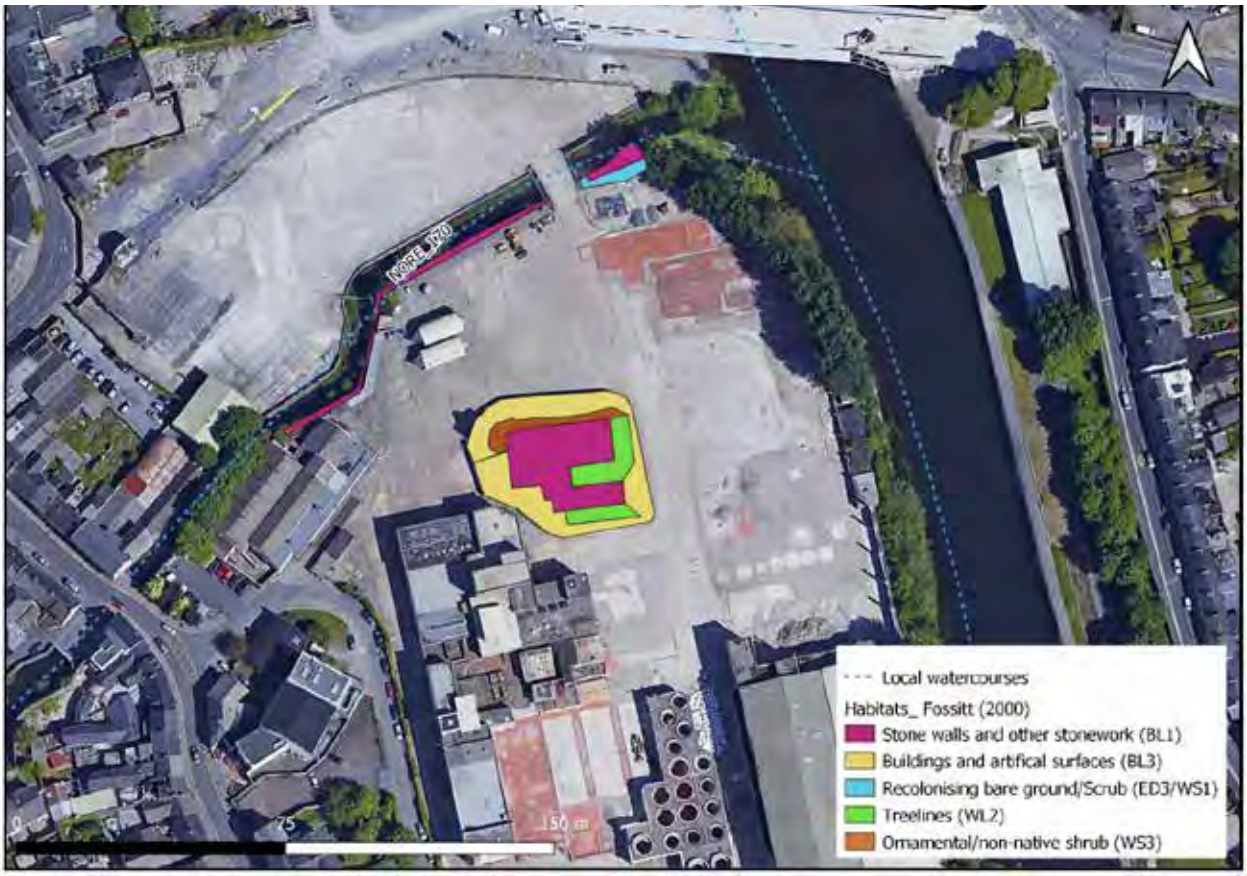
Fig 92. Extracts from the AMS survey of St Francis Well (January 2022)

7.0 Ecology Summary

Scott Cawley Ecologists have prepared an initial assessment of the site, a baseline report, which is included in Appendix A of the plan. A desk study was undertaken on the 10th September 2021 to collate available information on the local ecological environment, and ecological field studies were carried out in August and September 2021. Habitat and flora surveys, terrestrial fauna surveys, ground-level assessment of buildings and trees, and breeding bird habitat suitability were undertaken on the 17th August 2021 by Síofra Quigley BSc (Hons) MSc., and bat activity surveys of the buildings within the study area were undertaken by Caroline Shiel, an independent bat specialist, on the 5th August, 12th August, 9th, 27th and 28th of September 2021, with detailed findings outlined in the appended report.

There are two European sites within the vicinity of the study area but the study area does not overlap with any European sites. The nearest European site is the River Nore SPA, c. 10m from the study area, adjacent to Evans Turret. The River Barrow and River Nore SAC is also adjacent to the study area, c. 30m from Evans Turret. There are no other European sites within 15km of the study areas. There are 12 national sites within the vicinity of the proposed works, all of which are pNHAs. The study area does not overlap with any national sites.

The habitats in and around St. Francis Abbey, the City Walls, and Evans Turret were assessed and found to be of low ecological value due to their predominantly urban composition. The habitat on the east and south eastern side of the Abbey consists of a large mature weeping willow tree Salix babylonica adjacent to the eastern aspect of the structure, five Prunus avium trees between the Abbey and the Tasting rooms building, and three Acer platanoides, to the south of the Abbey and Tasting rooms. These trees were likely planted as feature trees when the area was being developed for the brewery. The weeping willow tree is a known tree in Kilkenny City, however, is starting to grow into the Abbey building and compromise the integrity of the structure. This habitat provides more



Habitat Study Area

natural scenery to the artificial surroundings, and would likely be an important habitat for birds, bats, invertebrates, and mammals who may feed off the fruit from the cherry trees. This habitat is valued as being of local importance (higher value), due to the mature and well-established nature of the trees, and the variance this habitat type provides.

No protected and/or rare species listed in the Flora Protection Order or in Red Lists, nor invasive non-native species listed on Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) were found to be present within the study area at the time of the survey. Himalayan balsam was however identified in multiple areas along the riverbanks of the Nore and the Breagagh to the north of the study area during field surveys'. No badger, otter or other small mammal evidence was found within the study area at the time of the site visit. But an otter spraint was identified at the Breagagh and the Nore merging point, adjacent to the study area, with high habitat suitability for the species in the wider landscape within the nearby watercourses.

A swift survey of Kilkenny City, which included the Abbey Quarter, was carried out by Birdwatch Ireland, in conjunction with the Heritage Office of Kilkenny County Council in the summer of 2021. No swifts were identified during the roosting site surveys of the Abbey, though some were noted flying overhead on the site visit in August 2021.

The four buildings/structures within the study area, i.e. Evans Turret, City Walls, St. Francis Abbey, and the Tasting Rooms, were all deemed to have bat roosting potential. The City Walls had some small cracks and crevices present, however on close inspection, the majority would not be suitable roosting features, and therefore was identified as having low bat roost potential. Evans Turret and the Tasting Rooms were deemed to have moderate bat roosting potential. St. Francis Abbey was identified as having high bat roosting potential, with one roost was identified in the south-west corner of the structure during the bat survey. The surrounding lands have high suitability for bats. The River Nore and Breagagh River are ideal linear foraging and commuting routes, with the treeline, scrub, and hedgerows along the riparian habitat of the river also providing additional roosting opportunities.

A detailed summary of recommendations are included in the appendix, with specific regard to the protection of sensitive species, and the enhancement of the study area for biodiversity. These recommendations relate to;

- terrestrial mammals: to mitigate the loss of feeding habitat for small mammal populations, and to mitigate disturbance to otters using the rivers for foraging / commuting;
- Bats: to avoid disturbance to roosting/foraging bats, to increase roosting opportunities and to avoid mortalities of bat populations;
- breeding birds: to avoid mortalities of breeding birds; and
- invertebrates/fungi/lichen: to create a more diverse landscape habitat to increase biodiversity across the study area.

These recommendations include consideration of the lighting design for the site, with respect to impact on the biodiversity, and engagement of an ecologist for any works on site. A preconstruction otter survey is recommended for any works along, or adjacent to, the River Nore. Inland Fisheries should be consulted during this process. Replacement or alternate bat roosts should also be put in place if any future works are likely to cause disturbance to roosting bats, and a bat derogation licence may be required if works will impact upon any existing bat roosts. A number of measures are also included to create a more diverse habitat on site, including retention of fallen trees, the introduction of dead wood, and the inclusion of earth banks/ exposure of bare ground to encourage habitation by solitary bee species. Retention of some of the cavities and holes within the stonework of the historic structures should also be considered, to facilitate bee nesting. This latter point is not in contravention with conservation repair practice and could be accommodated within future repair proposals.

Fig 93. A view of the entire choir.

Redundancy and Neglect

Redundancy and neglect present the greatest single threats to the significance of an important historic structure or place, even a ruined one. When a structure no longer serves its intended purpose maintenance is often neglected and deterioration sets in, eventually leading to further dereliction and loss of historic fabric. St Francis Abbey and Evan's turret have been in a ruinous state for a long period of time, and gradual decay of fabric is inevitable.

The serious challenges now faced by the Kilkenny County Council and the OPW should ensure that a planned programme of maintenance and conservation works are carried out to these structures to preserve them for future generations.

Interpretation

In places such as Kilkenny, where only one quarter of the medieval city walls remain above ground; cohesive public interpretation can be challenging. Kilkenny has a very rich medieval history, of which the upstanding town defences are a significant component, but it can be difficult to interpret them as a continuous or coherent component.

The history of the Franciscan Friary, or Abbey, is significant, and the extent of this precinct within the city is no longer physically evident at this site, aside from the upstanding ruined sections we still see today. Archaeological digs in the past have revealed a substantial amount of below ground features such as further remains of the abbey, and the extant St Francis well, which is hidden below ground within a concrete chamber. The historic city wall to the north and the turret, once formed the boundary line to the friary precinct, which would have been an enclosed ecclesiastical site. The early Franciscans foundations were generally close to urban settlements, and despite the fact that during the medieval period the precinct would not have been open to the public, the Friary would have been an integral part of the social and religious fabric of the town.

Means of interpreting these remaining above ground, and below ground elements should be considered, to bring awareness to the public and to ensure that the full extent of these below ground elements are fully understood in the context of the friary precinct and its extent. With the development of a new park, there is an opportunity here to interpret this history in innovative ways, and an interpretation plan should be developed, involving all key stakeholders across the site, to ensure a cohesive and harmonious interpretation strategy

Fig 94. The sedilia in context with loose stones in the abbey strewn about.

is put in place. This is particularly relevant to the intepretation of the friary precinct, which includes St Francis Abbey, now in state care, managed by the OPW but in the ownership of the Department of Housing, Local Government and Heritage, and Evan's Turret and the walls, in the care of Kilkenny County Council.

In the short term, online interpretation can be very effective, allowing visitors to the area to scan a QR code to access information. The benefit of online interpretation is that it allows users to see historic maps, or overlays, and historic photos of the site, without cluttering the areas with permanent installations. It is also economical in the short term.

Intangible values can be revealed to the general public for interpretation in many ways that include transient activities such as research, education programmes and public events. Or through permanent initiatives that provide up-to-date information and analysis to improve understanding and access to the place for the enjoyment of all. Appreciation of the medieval layers in this part of Kilkenny has been inhibited by the former closed nature of the site, and the compromised settings of the structures. Over time, with an enhancement of their settings, the level of access and quality of presentation will be gradually refined and improved. By increasing understanding and appreciation of the monument, historic structures and their context, a virtuous circle can be created where the local community can become more active stakeholders in the preservation of the walls, which will in turn become more attractive to visitors resulting in benefits for all.

These medieval structures are a significant teaching & research resource. Above ground physical interpretation of St Francis well should be undertaken to bring greater understanding of this element to the public.

Condition & Use

None of the historic structures on the Abbey Quarter site are in use, although as a whole, they are in a fair condition due to various conservation works undertaken over the years. The impact of the brewing industry is seen throughout, as the settings of the structures have been greatly compromised, and interventions into the surviving abbey buildings

Fig 95. View of the wall walk at Evan's turret prior to works being undertaken.

are still visible from the brewing period. While the period of use as a brewery is now an integral part of the history of the site, it was an inappropriate use for the abbey, resulting in the insertion of irregular openings, and pollutant build-ups within the structure. The ground level was also raised above the historic level, an intervention which facilitated the building of numerous other buildings on the site.

Access & Settings

As the Abbey Quarter site was in private ownership for many years, much of this portion of the city wall, the turret and the abbey were hidden from view and inaccessible. The redevelopment of the site during the last twenty years has revealed substantial potential for the incorporation of these historic structures into the public realm, which is now underway. Access to each of these structures can be improved and their settings enhanced.

Improving access to the structures should be balanced with ensuring their preservation. Access to the abbey for people with disabilities, or those with buggies can be provided in a number of ways involving both sensitive interventions and management practices. It will not be possible to lower the ground level across the site, to the original level of the Abbey, as this would mean wholesale removal of the concrete slab, which is currently protecting the shallow layer of archaeology below. Removal would also require remediation of a former industrial site, therefore proposals to address this level change in a subtle and understated manner should be explored. Design proposals for the proposed new park should also seek to improve the setting of the abbey and Evan's Turret, both of which are currently compromised.

Visitor Facilities

The opening up of these historic structures to the general public is a great opportunity and should be curated to achieve a legible and attractive presentation of each element within its context. As one of Ireland's most important historic cities with a rich architectural and cultural heritage, Kilkenny is of both national and international significance. The presentation of the Abbey Quarter structures should therefore be seen within the wider city context. Visitors should be accommodated at various points throughout the park with high-quality interpretative material paresented, as this is an essential key to a greater public understanding of the place.

Vulnerabilities

In relation to the issues outlined above, the vulnerability of the archaeological heritage can be summarised as set out below:

Preservation

- Interventions may be necessary to provide improved access, or to repair or stabilise a structure. This work should be informed by current best practice and should be reversible where possible, to avoid detracting from the setting of the monuments.

- The complex ownership of the structures can make it difficult to assign responsibilities for their maintenance, as well as obtaining access for inspection and public presentation. Care takers of each structure must work together to ensure continued maintenance.

- While the structures are robust and designed to weather the elements, they can be vulnerable to decay at the edges due to vibrations, impact, plant growth and erosion.

- Defects when left unchecked can bring about rapid deterioration, resulting in costly repairs that can be avoided by a regime of regular on-going maintenance.

Understanding

At present it is difficult for the general public to understand the structures as they have been hidden from view for many years, and missing from the general chronology of the city's development, and the relationship with other structures and monuments. This is due to their isolation in recent times during which their settings have been much altered, particularly during recent decades.

- The buried remains of the Abbey are not visible in any way above ground. There is a lack of awareness of the value and extent of the hidden archaeological heritage of the city. The general ground level is much higher than that which would have originally surrounded the abbey and Evan's Turret. This impedes that immediate understanding of the structures.

- Despite an enormous increase in scholarship about medieval Kilkenny over the past quarter of a century, many aspects are not yet fully understood and many more discoveries are yet to be made.

- The lack of knowledge about the precise remains and location of the St Francis well – a greater understanding of this structure is required.

9.0 Conservation Strategies

International Charters & Conventions

This plan has been informed by policies and guidance included in a number of international charters and conventions on the protection of archaeological, architectural and cultural heritage including:

- United Nations Educational, Scientific and Cultural Organisation (UNESCO) 'International Charter for the Conservation of Monuments and Sites', 1964 (commonly known as the Venice Charter),
- United Nations Educational, Scientific and Cultural Organisation (UNESCO) 'Convention Concerning the Protection of the World Cultural and Natural Heritage', 1972,
- Council of Europe 'Convention for the Protection of the Architectural Heritage of Europe', 1985 (commonly known as the Granada Convention),
- International Council on Monuments and Sites (ICOMOS) 'Charter for the Conservation of Places of Cultural Significance', 1988 (commonly known as the Burra Charter),
- International Council on Monuments and Sites (ICOMOS) 'Charter for the Protection and Management of the Archaeological Heritage' 1990,
- Council of Europe 'European Convention for the Protection of the Archaeological Heritage' 1992 (commonly known as the Valetta Treaty),
- International Council on Monuments and Sites (ICOMOS) 'Charter for the Interpretation and Presentation of Cultural Heritage Sites' 2008 (commonly known as the Ename Charter).

National Monuments Legislation

In 1999 the State published two significant documents titled Framework and Principles for the Protection of the Archaeological Heritage and Policy and Guidelines on Archaeological Excavations. These documents outline the Government's policy in relation to the protection of the archaeological heritage, the conduct of archaeological excavations and reflect the obligations on the State under the European Convention on the Protection of the Archaeological Heritage (Valetta Convention 1992).

Fig 96. The east window showing the large willow tree encroaching on it.

Monuments, such as St Francis Abbey, included in the statutory Record of Monuments and Places (RMP) are referred to as national or recorded monuments and are protected under the provisions of the National Monuments Acts 1930-2004. A monument is defined in Section 2 of the Act as:

…any artificial or partly artificial building, structure, or erection whether above or below the surface of the ground and whether affixed or not affixed to the ground and any cave, stone, or other natural product whether forming part of or attached to or not attached to the ground which has been artificially carved, sculptured or worked upon or which (where it does not form part of the ground) appears to have been purposely put or arranged in position and any prehistoric or ancient tomb, grave or burial deposit, but does not include any building which is for the time being habitually used for ecclesiastical purposes

A national monument is defined in the Act as:

"the expression "national monument" means a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic, or archaeological interest attaching thereto and also includes (but not so as to limit, extend or otherwise influence the construction of the foregoing general definition) every monument in Saorstát Eireann to which the Ancient Monuments Protection Act, 1882, applied immediately before the passing of this Act, and the said expression shall be construed as including, in addition to the monument itself, the site of the monument and the means of access thereto and also such portion of land adjoining such site as may be required to fence, cover in, or otherwise preserve from injury the monument or to preserve the amenities thereof'

Statutory Protection

Statutory protection of the site is governed by legislation contained within the National Monuments Acts, 1930-2014. St Francis Abbey is a National Monument in State Care (Ref. no. 72), in the ownership of the Minister for Housing, Local Government and Heritage, and managed by the Office of Public Works. Evan's Turret and the city wall have been surveyed under the UAS Survey and are also included under the area of archaeological potential for Kilkenny City (KK019-026---) and the National Inventory for Architectural Heritage. They are afforded protection under the National Monuments Act 1930–2014, and the National Policy on Town Defences (DoEHLG 2008).

Fig 97. Grave-stones incorporated into the east wall below the large window.

Fig 98. Engaged column on the north wall.

A number of other elements such as the font (KK019-026150), the inscribed grave-slab (KK019-026151), a wall monument (KK019-026183) and St Francis Well (KK019-026189-) all sit within the Abbey and site and are scheduled monuments for inclusion on the next RMP.

St Francis Well (UASa:101), Evan's Turret (UAS 4a:7) and the City Wall (UAS 4a-4d:6) are all included on the Kilkenny Urban Archaeological Survey

Ministerial Consent

Where national monuments are in the ownership or guardianship of the Minister of Housing, Local Government and Heritage or a local authority or have been the subject of a preservation order, Ministerial Consent, under Section 14 of the Act, is required in order:

(a) to demolish or remove it wholly or in part or to disfigure, deface, alter, or in any manner injure or interfere with it, or

Fig 99. Large lancet window in the south wall.

(b) to excavate, dig, plough or otherwise disturb the ground within, around, or in proximity to it, or
(c) to renovate or restore it, or
(d) to sell it or any part of it for exportation or to export it or any part of it.

Works requiring notification or Ministerial Consent includes preparatory work, enabling works and the carrying out of ground works in proximity to archaeological remains.

Planning & Development Act 2000

Where historic structures are listed as Protected Structures or located within Architectural Conservation Areas they are also protected under the Planning and Development Acts 2000-2010. The Acts require that Local Authority Development Plans include objectives for 'the conservation and protection of the environment including, in particular, the archaeological and natural heritage'. In addition, development plans are to include a Record of Protected Structures, which comprises a list of structures or parts of structures that are of 'special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest' within the Authorities boundaries.

Local Plans & Policy

Kilkenny County Council is the relevant planning control authority for the Abbey Quarter site. The site is located within a Zone of Archaeological Potential designated for the town. It is a policy of the Kilkenny Council Development Plan, 2021 - 2027 to:

- Archaeological heritage is a resource that can help us to understand the past. It also is of importance in terms of heritage tourism, and as an educational resource. The Council will promote awareness of, and facilitate access to, the archaeological inheritance of County Kilkenny and will provide guidance to developers and property owners regarding the archaeological implications of proposed developments.

The Kilkenny County & City Development Plan also states that 'The Council will facilitate and support the implementation of existing (and any further) conservation plans, as resources allow,' noting that a 'Development Management Requirement' will be 'To adhere to recommendations in Conservation plans when assessing development proposals for these sites'.

All conservation works should be guided by the principle of minimum intervention as set out in the Burra Charter - as little as possible, but as much as is necessary.

The conservation objectives for the Abbey Quarter site can be summarised as follows:

- to provide for the effective use, enjoyment and maintenance of the abbey, the turret and the city walls

- to provide guidance on best conservation practice for their repair
- to provide guidance on the long-term strategies for the provision of new facilities on the site of the abbey and along the northern boundary of the site

Policy 6.1: Protection of Archaeological Heritage (Buried)
Ensure that sub-surface archaeology is disturbed as little as possible so that it can be preserved intact.

Policy 6.2: Protection of Archaeological Heritage (Standing)
Ensure the protection of the standing remains through the preservation of their settings. The Abbey, Evan's Turret and the city wall should all be protected, including associated historic fabric.

Policy 6.3: Repair & Maintenance
Provide regular on-going maintenance as the most effective way to preserve historic structures. Repairs are to be carried using conservation methodologies that conform to the guiding principles as set out in the ICOMOS charters, using appropriate details and materials of matching quality. Repair works are to be prioritised in terms of urgency, and informed by regular inspection and expert advice. A maintenance plan should be agreed and implemented by all relevant parties.

Policy 6.4: Intervention
Where interventions are found to be necessary to improve access, amenities, or to repair or stabilise a structure or place, these are to be designed to the highest standards of best conservation practice and should not detract from the interpretation of the cultural heritage.

Policy 6.5: Reversibility
All interventions should follow the principle of the reversibility, so that a structure can be returned to its former state if so desired. Developments proposed above or beside archaeological remains should be designed so that they can removed without causing disturbance.

Policy 6.6: Visitor Facilities
The development of the abbey site as the publicly accessible place should be supported, and its proposed use as a park is appropriate. The walks and routes through the park should be considered in terms of the setting of the structures, and should provide excellent views of the abbey and Evan's Turret in particular. Proposals to expand the range of facilities would make the site more accessible to users, and broaden their appeal.

Policy 6.7: Expert Advice & Skills
Ensure that all conservation works are carried out under the direction of suitably qualified professionals (architects and structural engineers) and undertaken only by suitably skilled and experienced tradesmen.

Policy 6.8: Continued Liaison
Liaise with the National Monuments Service, Dept. of Housing, Heritage and Local Government, OPW and Kilkenny County Council in relation to proposed development works adjacent to the monument or along the historic route to share knowledge and ensure that best practice is adhered to in relation to any future archaeological investigations.

Policy 6.9: Settings & Key Views
Protect and enhance the settings of the monument and key views towards the site and outwards from the site to the surrounding landscape and river. Key views and settings within the park proposals should be identified and preserved, and opportunities to enhance existing views also explored.

Policy 6.10: Inspections
Set in place procedures for on-going monitoring of the condition of the structures in order to ensure their long-term preservation. Works involving ground disturbance close to the monument are to be carried out only under archaeological supervision.

Policy 6.11: Monitoring
Review this Plan at agreed intervals to benchmark progress in implementation, reassess priorities, assimilate new information or changes in legislation or methodologies.

Policy 6.12: Ecology
While the ecology of the abbey quarter site is modest, it is adjacent to the River Breagagh and River Nore. Biodiversity should be nurtured and enhanced within the site through good maintenance and regeneration of the existing plantations that are found around the site. See the ecological report in Appendix A. The use of archeobotanical date from previous excavations could inform the choice of planting in areas of the park.

Fig 100. View along the north wall to the tower.

Conservation and Repair Strategies

Summary of recommended conservation and repair works outlined below:

St Francis Abbey

North wall:

- Removal of the rusted beam in the north wall
- Repair of the threshold stones to the opening in the east end of the north wall
- Repair and resetting of the sill stone on the western most lancet window in the north wall – this was modified when an opening was created below it.
- Demounting and rehanging of the stone plaque (the Delahunty Grave Slab) below the western most lancet window in the north wall.
- Stone repairs to the decorative column on the north wall of the tower (image 20210817_100750).
- Lime render and limewash samples from the interior side of the wall
- Removal of black sulphate deposits to assess damage to stonework behind and prevent further damage.
- Vegetation control to the wall top and assessment of condition

South Wall:

- Removal of vegetation from the buttress to the tower
- Removal of cracked cement haunching to the top of the buttress and repair of the buttress masonry below.
- Testing of lime mortars to the exterior side of the wall
- Vegetation control to the wall top and assessment of condition

East Wall:

- Removal of vegetation to the gable walls and rough racking to be introduced to conservation architect / masons specifications.
- Structural laser survey of the east gable window to understand movement in window
- Short term management, longer term removal of the willow tree
- Removal of the cement render from the sill and repointing of masonry below, with insertion of new lime sill or cap stone to the sill, as required.

Fig 101. Stones poorly pointed with cement pointing in the east wall.

Fig 102. Decorative stone column base and mullions sitting within the choir.

Tower:

- Removal of black sulphate deposits to assess damage to stonework behind and prevent further damage.
- Full assessment of current condition and necessity of the two RC frames and the columns.
- Removal of columns.
- Repair of Concrete frames.

Choir:

- A full inventory should be drawn up of the existing stones sitting within the choir and chancel.

Evan's Turret:

- Vegetation management
- Rebuilding of the arch within the turret and repair of the north wall at arch spring
- Repair of inner faces of north and east walls in particular
- Repointing where required
- Vegetation management

St Francis Well

- Confined Space Access Survey
- Further excavation and survey to establish the extent of the remains of the well below ground. This should include a CCTV survey in the first instance.

City Wall

- Repair of eastern end of horse barracks wall.
- Repair programme for river Breagagh side of wall.
- Better presentation of the north section where cable trays etc.
- Removal of vegetation from wall to west of Evan's turret
- Better presentation of the wall immediately west of Evan's turrets to show off wall walk
- Design of Wall walk to access area to the north of Mayfair localised re-configuring of the wall at the pinch point required

Fig 103. Vegetation growing on the wall walk within Evan's turret.

Replacement and Intervention Strategies

Under future programmes of works certain replacement and intervention strategies might be appropriate following further investigation and interrogation. These are outlined below

- Reinstatement of the two mullions to the large window in the north wall, to the east end, to re-establish this tripartite arrangement. In the first instance the existing loose stones on site should be inspected to determine if the mullions are still on site. Where replacement is required, new stone should be new cut limestone, locally sourced and expertly cut and crafted.

- Replacement of the wall tops to the north and south walls with appropriate capping, or renewed wall top with lime mortar. The wall tops require further inspection and have only been viewed from drone photos.

- Removal of the cast iron columns to the tower, and iron grills to the windows should be explored further. These rusting elements are unlikely to be providing any structural support to the vaulting above, and are now a visual intrusion on the space. A good record of this intervention is already in place. As the repair is now considered redundant it should be removed.

Fig 104. Willow tree to the east to be either strictly monitored or removed.

Fig 105. Tower stability to be investigated and monitored (Courtesy of the Photographic Archive, National Monuments Service)

- There are also iron grills on the windows and doors which are corroding as well as iron bars in the ceiling of the south passage. These should be treated and repaired.

- The stability of the tower needs full investigation and analysis. This analysis will firstly require a detailed dimensional survey such as a laser scan of the Tower and the frames and interpretations of the scan in the form of a Revit model. There should then be a detailed structural condition survey. The tower can then be structurally modelled, and its vulnerabilities understood with and without the two RC frames. At that point budget estimates for repairing the tower sufficiently to allow it to self-support and the cost of dismantling the frames can be compared to a lesser extent of repairs to the Tower and repairing the RC frames.

The route to the tower is via an enclosed spiral stone stair, to the top of the north buttress, with external steps up to

the door of the tower. These external steps are not currently safe to use, as there is no protection or barrier along their edge. An access strategy to the interior of the tower should be devised, which could involve the installation of skyline type wires that could be clipped onto with a harness.

- Removal of the willow tree or strict maintenance of the tree including monitoring of its root growth.

A structural report on the condition of St Francis Abbey has been prepared by CORA consulting engineers and is included in Appendix B. A summary of the works required to all structures, established in order of priority is included below.

	ST FRANCIS ABBEY	EVAN'S TURRET	THE CITY WALL	ST FRANCIS WELL
URGENT (within 12 months)	Management of the willow tree, with regular trimming and monitoring of roots Selection of new site for propogated willow tree Implementation of secure access to the tower to facilitate inspection Installation of crack monitoring to the tower	Vegetation removals and general inspection Removal of fallen vault and debris from within tower to area without tower for sorting and recording Assesment of inside of turret	Vegetation removals and general inspection Stablisation of the wall tops	
SHORT TERM (within 3 years)	Assessment and repair of the wall tops to ensure no loose masonry or debris could fall from the structure	Repair of the inner skin in the south western corner, and consolidation of the wall core.	Repair eastern end of the horse barracks wall	Further excavation and survey to establish the extent of the remain of the wall below ground
	Removal of vegetation and cement flaunching to the butresses of the tower	Rebuilding of the vault within the turret, and repair of the north wall at the spring arch	Repair programme for the River Breagagh side of the wall	
	Structural assessment and investigations to determine if the concrete frame can be removed.	Repointing works and general maintenance	Vegetation Management - ongoing	
	Remove the cherry trees from the south wall of the choir	Vegetation Management - ongoing	Assessment of bat activity	
	Removal of the weeping willow tree	Design repairs of vault and inner face of masonry		
	First laser scan of the structure	Assessment of bat activity		
	On-going assessment of bat activity			
MEDIUM TERM (within 5 years)	Repair of the concrete support system to the tower or removal of this support structure	Excavation and repair of the remaining arch		
	Regular removal of vegetation and general repointing works and repairs should be undertaken every five years.	Vegetation Management - ongoing		
	Regular laser scanning of the structure, every five years, to determine ongoing movement.			
LONG TERM (within 10 - 15 years)	Regular inspections and maintenance	Vegetation Management - ongoing		
	Repointing repairs			
	Post flood inspections of all wall bases			

10.0 Development Strategies

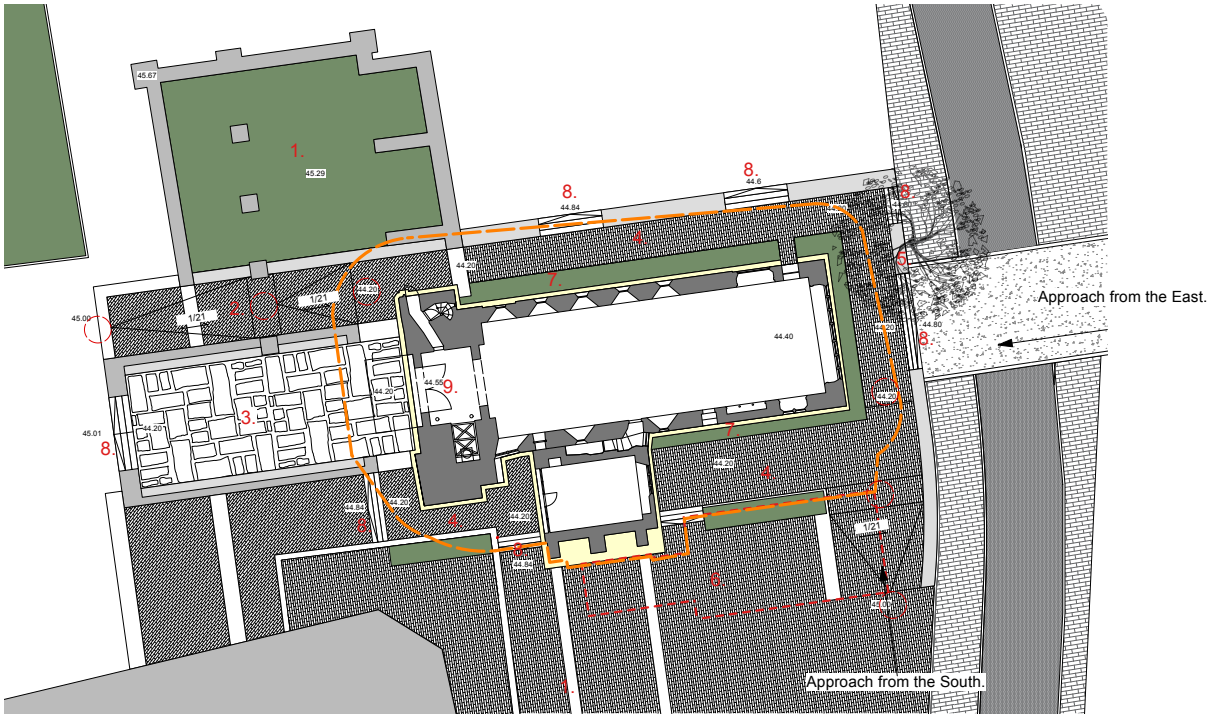
St Francis Abbey

Access and interpretation should be developed alongside the park design proposals, to ensure that the abbey becomes a significant feature within this new landscape. As the ground level around the abbey is lower than the park level, the approaches to and from the Abbey must be carefully considered. The abbey is a national monument, under the care of the Office of Public Works, and protected by the National Monuments Act. The site surrounding it is owned, and currently under development by Kilkenny County Council. The extent of the abbey site has been determined as shown in the extracted planning permission drawing, denoted by a red dashed line, to the edge of the existing kerb around the abbey. Beyond this the park development will proceed, under Kilkenny County Council's supervision.

There is an opportunity here to instigate communication and coordination between Kilkenny County Council, the OPW and the National Monuments Service to establish an acceptable and agreed interface between the abbey and the park. The abbey is a beautiful and highly prominent feature, and visitors will be keen to explore its environs and walk around it. As a means of commencing this process we have devised an initial sketch proposal to demonstrate how this might be achieved. It is anticipated that access would be managed, perhaps as guided tours, rather than the abbey being fully open to the public.

The abbey will be approached from the west, via Parliament Street, and from the east, via the river edge walk. The north and east walls will overlook the proposed park, with direct views to Evan's Turret. Accessibility to the monument is important to ensure that all visitors to this OPW site can enjoy the site, and as noted in our initial sketch a sloped approach from the west will bring visitors down to the surviving ruins. This will address the level change currently existing on site, and a sloped route on the south-east side will provide an accessible route back up to park level.

Fig 106. Plan of the park as submitted by Mitchell & Associates.



1. Outline of the historic transept brough above ground with a raised planter. Tracing based on historic maps and investigative trenches.
2. Sloped surface to provide access down to Abbey level.
3. Nave to be represented as a sunken forecourt to the Abbey.
4. Lower level to surround Abbey perimeter allowing visitors full access to all sides.
5. Existing willow tree to be removed, new tree to be replanted from sapling nearby.
6. Tasting rooms to be demolished to open up the approach from the south east and provide views of the east window.
7. French drain and planting to perimeter of Abbey walls for protection and permeable surfaces adjacent to the masonry.
8. Stepped access from park level to the monument.
9. OPW to provide temporary ramp at step to facilitate wheelchair access as and when required.

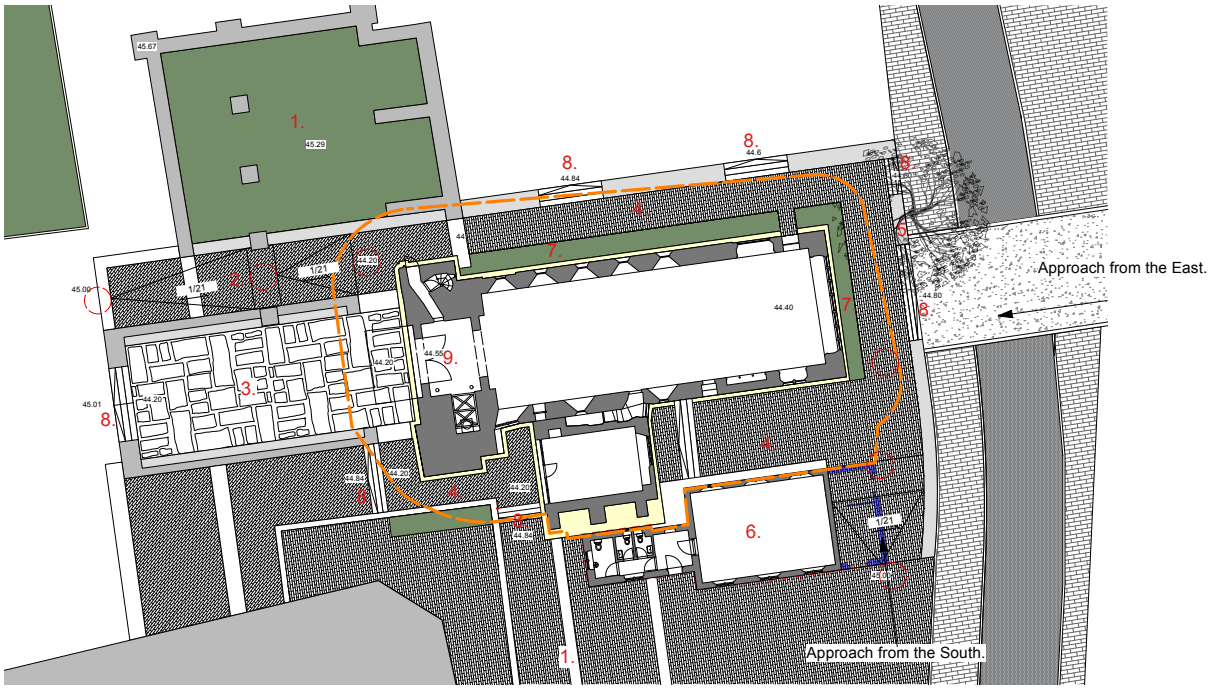
Boundary line around the Abbey, as indicated on the planning permission application for the park.

Fig 107. Proposed development for the park at the Abbey, Option 1.

The park proposals include legible landscaping which will echo the archaeological remains sub-surface, such as the nave and transept. These will be welcome inclusions in the park and will demonstrate clearly the extent of the archaeological remains of the former abbey. The nave will provide an attractive forecourt area for visitors to gather with clear views the tower. Approaches to and from the abbey have been assessed, in particular the approach from the river-edge and from the south. These will be the primary routes through the park that will provide fine views to the great east window. Suggested locations for steps are shown, to provide welcome connectivity with the wider site and park, with particular emphasis on the axial route from the east.

A soft or grass edge is proposed to the perimeter of the abbey which could also be a loose gravel bed. This should contain a French drain, to keep water away from the masonry, particularly important considering the abbeys proximity to the River Nore.

Built in the 1970s/80s the tasting or sample room does little to enhance the setting of the abbey and takes no account of below ground archaeology. It is noted that Courtney Deery recommended removal of this building in their report Abbey Quarter Masterplan Area Archaeological Strategy (2015). The NIAH (12000008) document it as being a late-nineteenth-century structure but was actually built during the latter half of the twentieth century and is not listed on the record of protected structures. Ideally this structure should be removed as it detracts from the views of the abbey and is positioned too close to the structure, while also sitting proud of the east gable window. However wholesale removal may not be feasible, particularly in the short-term, as there is an intention to use this building for the duration of the park and masterplan development works on site. No other structures or buildings should be built within the environs of the abbey, and for this reason the tasting rooms may need to be retained to serve as a functional park building. If this is a case, another approach would be to retain the building, but to foreshorten and set



1. Outline of the historic transept brough above ground with a raised planter. Tracing based on historic maps and investigative trenches.
2. Sloped surface to provide access down to Abbey level.
3. Nave to be represented as a sunken forecourt to the Abbey.
4. Lower level to surround Abbey perimeter allowing visitors full access to all sides.
5. Existing willow tree to be removed, new tree to be replanted from sapling nearby.
6. One bay of the Tasting rooms to be demolished to open up the approach from the south east and provide some view of the east window.
7. French drain and planting to perimeter of Abbey walls for protection and permeable surfaces adjacent to the masonry.
8. Stepped access from park level to the monument.
9. OPW to provide temporary ramp at step to facilitate wheelchair access as and when required.

Boundary line around the Abbey, as indicated on the planning permission application for the park.

Fig 108. Proposed development for the park at the Abbey, Option 2.

back the east end of the tasting room, to open up views of the east window of the abbey on approach from the south, and reduce its encroachment.

A new use should be established for the former sacristy to the south wall of the choir. This space is currently empty, and the entry arch contains a modern screen with door. This room would ideally be used as an interpretation and information point for the Abbey, to provide visitors with a background and history of the structure and site.

The masterplan – Block 9 which is proposed to be four stories in height and is in close proximity to the abbey will obscure views of the east window when approaching from the river park. The design of this block must be carefully considered in the future, and views of the abbey from along the river-bank should be considered within the developing design of this block. Opportunities to glimpse the abbey on approach could be achieved by creating openings through this proposed city block, and exploring the height and scale of this element so that the abbey still retains prominence in the backdrop, along this approach.

St Francis Well

St Francis Well is a relatively unknown entity below ground, which is currently inaccessible. Proposals to reflect the location of the well above ground within the park design are welcomed, though a greater understanding and interpretation of the well should also be developed in time. Below ground CCTV survey was carried out as recently as January 2022 to explore what remains below ground.

Evan's Turret

Evan's Turret has benefited from previous repair programmes of work and is in general in fair condition. This interesting defence tower requires interpretation, and a greater degree of managed access would be one way to achieve this aim. It would be beneficial to the public, allowing them to learn more about its history and affording visitors

views over the River Breagagh and the River Nore. At present the structure cannot be assessed safely, as the remnants of the old wall walk are uneven and too narrow. The incorporation of a raised platform, using sympathetic materials, to echo the wall-walk could be a light touch intervention which will allow occasional managed access along the old wall-walk. Installation of a raised platform should also be considered within the structure, set at the level of the historic floor. This would allow for occasional access to revive the eighteenth-century purpose of the turret as a prospect tower from which to enjoy views over the River Nore and surrounding landscape. Structures such as these could be opened on certain days, or during Heritage Week.

Removal of one metre or more of earth to the south side of Evan's Turret to reveal more of the historic detail should also be considered. The arches to the underside of the historic wall-walk and the tower are not readily visible, and the reduction in ground level to this side of the tower would reveal these important elements and give the tower more deserved prominence within the park. The impact of occasional flooding should be considered within this proposal, due to its proximity to the river edge, so excavation should be undertaken with caution. A team should be appointed to assess the depth which might be appropriate taking account of the flood concerns, but allowing for a great degree of the arches to be revealed.

Fig 109. Stainless steel spiral stair inserted in the north west tower in Athenry (by HHC Architecture)

The barrier or railing required along the edge of the path, to prevent the public from accessing the structure, should be carefully designed to ensure that views of the structure are not impeded or obscured, and a soft sloping bank should be incorporated beyond the railing falling down towards the revealed arches.

Vegetation and planting to the east of the turret are being considered within the park plans, with would do much to improve this area of the site, with the addition of timber fencing along the river bank edge.

The City Walls

The park proposals include for a new pedestrian path along the south edge of the city wall which will allow for visitors to appreciate this historic feature to a much greater degree. Due to the presence of the existing concrete slab, which cannot be removed, there is a proposed to build a planted edge adjacent to the wall, to a height of 570mm, which will unfortunately obscure the lower portion of the wall. This area of wall needs to be fully protected with appropriate separation between the existing wall and this planted edge in the form of a geotextile membrane.

Conclusion

The potential for development across this site should be limited to the park proposals presented to date, and any further interventions should be restrained in approach. The addition of more buildings or structures within the site should not be considered.

There are various key stakeholders involved with this site, with responsibility for different aspects of these historic structures. Ahead of any further development proposals a steering group or committee should be established, comprising of representatives from the Department of Housing, Local Government and Heritage, the Office of Public Works, Kilkenny County Council and the Heritage Council, and others, to devise a detailed implementation strategy for the conservation management plan site. For development of the wider site, consultation and engagement with various should be undertaken, including pre planning consultation with Kilkenny County Council.

11.0 Summary of Conclusions

The Abbey Quarter in the City of Kilkenny is the location of St. Francis Friary, also known as St. Francis Abbey, a thirteenth-century ecclesiastical foundation, bounded to the north by the city defences and the River Breagagh and to the east by the River Nore and in more recent times it was home to the Smithwicks Brewery, prior to relocation in 2014 to the St James Gate Brewery in Dublin.

Now under the ownership of Kilkenny City Council, plans are in place to establish a city park at this area, which will bring the ruins of St Francis Abbey, a national monument in state care, in the ownership of the Minister for Housing, Local Government and Heritage, and managed by the Office of Public Works into the public realm. The site also contains Evan's Turret, and historic walls once associated with the Friary, and now considered to be part of the walled town defences, which are national monuments in the care of Kilkenny County Council.

The purpose of this Conservation Management Plan for the site is to establish the history and significance of this place, and provide an overarching vision for this site, together with the various structures that survive within it, and to deliver clear objectives for maintenance and conservation, guidance or any future development of the site.

History

The Franciscans arrived in Kilkenny in 1234 having crossed from England probably to Dublin in the late 1220 and advanced rapidly into the surrounding counties in the subsequent years.

The Friary began as a small church but expanded as funds permitted to include a cloistral range, and to cover a three hectare precinct, including a section of historic wall along the Nore.

Sometimes referred to as the 'suppression of the monasteries', the dissolution of the monasteries, was the set of administrative and legal processes between 1536 and 1541 by which Henry VIII disbanded friaries, monasteries, convents and priories in Ireland and Britain.

The area in and around the abbey precinct became synonymous in the early-seventeenth century with industry and manufacture, particularly wool manufacture, milling, malting and brewing, and quite probably used the buildings and facilities of the dissolved monasteries, including cellars, kilns, barns, mils and millraces and gardens.

An integral part of the City Wall, Evan's Turret is a mural tower located at the junction of the River Breagagh and the River Nore, at the north-eastern end of the Hightown wall. It was subsequently adapted, extended and a roof added for use as a prospect tower in the eighteenth century, and occupied until the middle-nineteenth century.

The area of wall around 'Hightown' was the longest at 1.6km and it was between 1.2m and 1.4m thick and up to 4.5m high in places and St Francis' Abbey site today includes 125m of the City Wall (BH-01 in Malone O'Regan 2020), which runs along the south side of the River Breagagh, and terminates at a mural tower called Evan's Turret. The wall and turret also defined the friary precinct or boundary within the medieval town.

St Francis' Well was a large spring or pool apparently surrounded by a wall located some 34m east northeast of St Francis' Abbey.

As with Dublin, brewing grew exponentially in Kilkenny throughout the eighteenth century, so much so that by the nineteenth century, the St Francis' Abbey brewery was exporting to Britain.
Since 2018 archaeological investigations have been undertaken to verify the previous findings around the Abbey and to determine the position and condition of subsurface archaeology associated with St Francis' Abbey. Prior to this archaeological and antiquarian interest in the site dates from the late nineteeth century, and includes a period of investigations during the mid twentieth century.

The only extant upstanding elements of St Francis' Abbey are the choir and crossing tower (belfry) which also contain an inscribed slab (KK019-026151-), wall monument commemorating Mrs Agnes Bankes (d. 1687; KK019-026183-), a grave slab reused as a lintel (KK019-026150-), and a font (KK019-026190-) with flutes in Romanesque pairs and fleur-de-lis in relief on its surface, said to be from Kytler's Inn.

However, significant subsurface remains of the monastery, including the nave, cloister and surrounding ranges, and an extensive north transept, survive and are preserved in-situ beneath the concrete, as are the remains of the friary's cemetery and St Francis' Well.

Significance

The abbey is highly significant as one of the largest and best examples of a former Franciscan Abbey in Ireland, and the subject of early antiquarian and conservation interest, together with its late-nineteenth-century designation as a national monument.

The principal architectural significance of Evan's Turret and adjoining walls lies in their being part of an important linear monument, part standing, which once enclosed the city. This significance is reflected in the fact that the whole City Wall, together with Evan's Turret, is designated as a national monument, of national importance, under the 'National Policy on Town Defences' (DoEHLG 2008).

Threats

Redundancy and neglect present the greatest single threats to the significance of an important historic structure or place, even a ruined one. The serious challenges now faced by the Kilkenny County Council and the OPW should ensure that regular maintenance and repair works are carried out to these structures to preserve them for future generations.

Ecology

There are two European sites within the vicinity of the study area but the study area does not overlap with any European sites. The nearest European site is the River Nore SPA, adjacent to Evans Turret. The River Barrow and River Nore SAC is also adjacent to the study area, adjacent to Evans Turret.

Consideration of the lighting design for the site, with respect to impact on the biodiversity should be considered in future proposals, along with engagement of an ecologist for any works on site. A preconstruction otter survey is recommended for any works along, or adjacent to, the River Nore. Replacement or alternate bat roosts should also be put in place if any future works are likely to cause disturbance to roosting bats, and a bat derogation licence may be required if works will impact upon any existing bat roosts.

Conservation Strategies

None of the historic structures on the Abbey Quarter site are in use, although as a whole, they are in a fair condition due to various conservation works undertaken over the years. The impact of the brewing industry

is seen throughout, as the settings of the structures have been greatly compromised, and interventions into the surviving abbey buildings are still visible from the brewing period.
As the Abbey Quarter site was in private ownership for many years, much of this portion of the city wall, the turret and the abbey were hidden from view and inaccessible. Improving access to the structures should be balanced with ensuring their preservation.

The buried remains of the Abbey are not visible in any way above ground. There is a lack of awareness of the value and extent of the hidden archaeological heritage of the city. The general ground level is much higher than that which would have originally surrounded the abbey and Evan's Turret. This impedes that immediate understanding of the structures.

Development Strategies

There is an opportunity here to instigate communication and coordination between Kilkenny County Council, the OPW and the National Monuments Service to establish an acceptable and agreed interface between the abbey and the park.

The park proposals include legible landscaping which will echo the archaeological remains sub-surface, such as the nave and transept. These will be welcome inclusions in the park and will demonstrate clearly the extent of the archaeological remains of the former abbey.

Ideally this structure [the tasting / sample rooms] should be removed as it detracts from the views of the abbey and is positioned too close to the structure, while also sitting proud of the east gable window. However wholesale removal may not be feasible, particularly in the short-term, as there is an intention to use this building for the duration of the park and masterplan development works on site. No other structures or buildings should be built within the environs of the abbey, and for this reason the tasting rooms may need to be retained to serve as a functional park building.

The design of this block [Block 9] must be carefully considered in the future, and views of the abbey from along the river-bank should be considered within the developing design of this block. Opportunities to glimpse the abbey on approach could be achieved by creating openings through this proposed city block, and exploring the height and scale of this element so that the abbey still retains prominence in the backdrop, along this approach.

The incorporation of a platform within Evan's Turret should be considered. This would allow for occasional access to revive the eighteenth-century purpose of the turret as a prospect tower from which to enjoy views over the River Nore and surrounding landscape.

Removal of one metre or more of earth to the south side of Evan's Turret to reveal more of the historic detail might also be considered. The impact of occasional flooding should be considered within this proposal.

The park proposals include for a new pedestrian path along the south edge of the city wall which will allow for visitors to appreciate this historic feature to a much greater degree.

There are various key stakeholders involved with this site, with responsibility for different aspects of these historic structures. Ahead of any further development proposals a steering group or committee should be established, comprising of representatives from the Department of Housing, Local Government and Heritage, the Office of Public Works, Kilkenny County Council and the Heritage Council, and others, to devise a detailed implementation strategy for the conservation management plan site.

Bibliography

ACSU, & Stirland, J. 2018. Archaeological Test Trenching of the Abbey Creative Quarter, Co. Kilkenny: Public Realm B: Consent C853/E4950. Unpublished report for Kilkenny County Council. ACSU.

AMS. 2016a. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Public Realm B. Unpublished Report for Kilkenny County Council.

AMS. 2016b. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Public Realm C. Unpublished Report for Kilkenny County Council.

AMS. 2016c. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 1. Unpublished Report for Kilkenny County Council.

AMS. 2016d. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 2. Unpublished Report for Kilkenny County Council.

AMS. 2016e. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 3. Unpublished Report for Kilkenny County Council.

AMS. 2016f. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 4. Unpublished Report for Kilkenny County Council.

AMS. 2016g. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 5. Unpublished Report for Kilkenny County Council.

AMS. 2016h. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 6. Unpublished Report for Kilkenny County Council.

AMS. 2016i. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 7. Unpublished Report for Kilkenny County Council.

AMS. 2016j. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 9. Unpublished Report for Kilkenny County Council.

AMS. 2016k. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 11. Unpublished Report for Kilkenny County Council.

AMS. 2016l. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 12. Unpublished report for Kilkenny County Council.

AMS. 2016m. Archaeological Assessment Strategy for the Implementation of the Abbey Creative Quarter Masterplan: Urban Block 13. Unpublished report for Kilkenny County Council.

AMS. 2018. Final Report on the Archaeological Assessment of Kilkenny City Wall: Mayfair Boundary Wall with the River Breagagh. Unpublished report for Kilkenny County Council.

AMS. 2019. Archaeological Impact Assessment of the Redevelopment of the Mayfair Building, Abbey Quarter, Kilkenny. Report prepared for Kilkenny County Council May 2019. Kilrush: AMS. [Accessed January 25, 2023].

AMS. 2021. Mayfair Building Site, Kilkenny City: Archaeological Monitoring of Geotechnical Investigations, Demolition Works, and Ground Reduction in 2020. Consent Number C000798, E04822. Unpublished report for Kilkenny County Council. Kilrush: AMS.

Anon. 1867. Proceedings and Papers. The Journal of the Kilkenny and South-East of Ireland Archaeological Society 6(1): p.69–73.

Anon. 1868a. Proceedings. The Journal of the Historical and Archaeological Association of Ireland 1(1): p.3–35.

Anon. 1868b. Proceedings and Papers. The Journal of the Historical and Archaeological Association of Ireland 1(1): p.81–92.

Anon. 1868c. Proceedings and Papers. The Journal of the Historical and Archaeological Association of Ireland 1(1): p.139–163.

Anon. 1869. Proceedings. The Journal of the Historical and Archaeological Association of Ireland 1(2): p.209–243.

Anon. 1871. Proceedings, April Meeting. The Journal of the Royal Historical and Archaeological Association of Ireland 1(2): p.449–470.

Anon. 1872. Proceedings and Papers. The Journal of the Royal Historical and Archaeological Association of Ireland 2(1): p.191–205.

Appendix E to the Seventy-fourth report of the Commissioners of Public Works in Ireland, 1905-06, 52-3

Archdall, M. (P. F. Moran editor). 1873. Monasticon Hibernicum P. F. Moran (ed). Dublin, W. B. Kelly. Available at: https://archive.org/details/monasticonhiber00archgoog [Accessed 25 January, 2023].

J.G.A. Butler, 'The attack on Kilkenny Castle', in Butler Soc. Jn., i , no. 4, 1972-3

Bradley, J. 1975. The town wall of Kilkenny. Old Kilkenny Review, 1 (2), pp.85–103.

Bradley, J. 2000. Irish Historic Towns Atlas No. 10, Kilkenny. Dublin: Royal Irish Academy. Available at: https://www.ria.ie/irish-historic-towns-atlas-online-kilkenny [Accessed January 25, 2023].

Bradley, J. 2009. The Kilkenny City Charter of 1609. Kilkenny City.

Carrigan, W. 1905. The History And Antiquities of the Diocese of Ossory, Volume 3. Dublin: Sealy, Bryers & Walker. Available at: http://www.askaboutireland.ie/reading-room/digital-book-collection/digital-books-by-subject/church-history/carrigan-history-and-anti/index.xml [Accessed January 25, 2023].

Conlon, P. 1975. Notes on St Francis' Abbey. Old Kilkenny Review 1(2): p.80–84.

Courtney Deery Heritage Consultancy. 2014. Abbey Quarter Masterplan Area Archaeological Strategy for Kilkenny City Council (Appendix C Abbey Quarter Masterplan). Unpublished report. Available at: https://www.kilkennycoco.ie/eng/Services/Planning/Abbey-Quarter-Brewery-site/Appendix-C-ACQ-Masterplan-Archaeological-strategy.pdf [AccessedJanuary 25, 2023].

D. M. 1875. Cromwell in Ireland. VII. The Siege of Kilkenny. The Irish Monthly 3: p.446–452.

Dickson, D. 1990. Inland city: reflections on eighteen century Kilkenny. In W. Nolan & K. Whelan (eds) Kilkenny: History and Society, 333–344. Dublin: Geography Publications

DoEHLG. 2008. National Policy on Town Defences. Dublin: Department of Environment, Heritage and Local Government. Available at: https://www.archaeology.ie/sites/default/files/media/publications/national-policy-on-town-defences.pdf [Accessed January 25, 2023].

Edwards, D. 2003. The Ormond Lordship in County Kilkenny, 1515-1642: The Rise and Fall of Butler Feudal Power. Four Courts Press.

Farrelly, J., O'Reilly, B., & Loughran, A. 1993. The Urban Archaeological Survey County Kilkenny. Dublin (unpublished): Archaeological Survey of Ireland.

Fleming, J. S. 1914. The Town-wall Fortifications of Ireland. Paisley: Alexander Gardner.

Flynn, C. 2015. Archaeological Impact Assessment Report Brewhouse Redevelopment Diageo Complex Kilkenny City. Report date Oct 2015. Unpublished report for Reddy Architecture and Urbanism & Kilkenny County Council. Colm Flynn. Available at: https://consult.kilkenny.ie/en/system/files/materials/1363/Brewhouse%20Redevelopment%20Archaeological%20Assessment%20Report%20Oct%202015.pdf [Accessed January 25, 2023].

Flynn, C. 2017. Archaeological Impact Assessment Report: Brewhouse Redevelopment, Kilkenny City. Report date Oct 2017. Unpublished report for Reddy Architecture and Urbanism/ Kilkenny County Council. Colm Flynn. Available at: https://consult.kilkenny.ie/en/system/files/materials/2005/Colm%20Flynn%20Archaeology_Brewhouse%20Redevelopment%20Archaeological%20Assessment%20Report%20Oct%202017.pdf [Accessed January 25, 2023].

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. 2019a. Preliminary Report on Archaeological Excavation and Preservation in situ of Archaeology, at Brewhouse Redevelopment, Kilkenny City. Ministerial Consent No. C773; Archaeological Registration E4766. Report date Nov 2019. Unpublished Report for Kilkenny County Council. Colm Flynn.

Flynn, C. 2019b. 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. 1998. Archaeological Assessment Report of a Proposed Development at Smithwick's Brewery, Kilkenny. Excavation No. 98E0069. Unpublished Report [KKAP-206].

Greene, J.Patrick. 1994. Medieval Monasteries. Leicester: Leicester University Press.

Grose, Francis, 1792. 'Antiquities of Ireland', London: Samuel Hooper. Vol. 1, 37.

Halpin, T.B. 1989. A history of brewing in Kilkenny. Old Kilkenny Review 4(1): p.583–591.

Hogan, J. 1884. Kilkenny; the Ancient City of Ossory, the Seat of Its Kings, the See of Its Bishops and the Site of Its Cathedral. Kilkenny: P. M. Egan.

(Jennings (ed.),1934, Brussels MS.3947: Donatus Moneysus, De Provincia Hiberniae S. Francisci Analecta Hiberniae, VI (12-138:83).

Lanigan, K.M., & Tyler, G. eds. 1987. Kilkenny: its Architecture & History 2nd ed. BelfastAppletree Press.

Ledwich, E. 1781. History and antiquities of the Irishtown and Kilkenny from original records and authentic documents. In: Vallancey, C. (Ed). Collectanea de rebus Hibernicis ii. Dublin: L. White. pp.349–562.

Loeber, R, Campbell, H, Hurley, Montague, J, Rowley, E (eds) 2015. Architecture 1600-200: Art & Architecture of Ireland Vol. IV. 2015.

Malone O'Regan. 2020. Environmental Impact Assessment Report (EIAR) Volume 2, Abbey Quarter – Urban Park and Street, Kilkenny County Council, County Hall, Kilkenny. Unpublished. Available at: https://consult.kilkenny.ie/en/consultation/abbey-quarter-urban-park-and-street [Accessed 25 January, 2023].

Measom, G.S. 1866. The Official Illustrated Guide to the Great Southern & Western Railway, and an Account of Some of the Most Important Manufactories in the Towns on the Line. C. Griffin and Company. Available at: https://books.google.ie/books?id=_ksB59lcIe0C&pg [Accessed 25 January, 2023].

National Gallery of Ireland Thomas Mitchell's 1760 Panorama of Kilkenny (NGI.4467).

National Monuments Service. 2021. Preliminary Archaeological Survey of St Francis' Abbey, Kilkenny. National Monument No. 72, KK019-026101-, St Mary's Parish, July 2021. Unpublished report. Dublin: National Monuments Service.

Neely. W. 1989 Kilkenny, An Urban History, 1391-1843. Belfast: Institute of Irish Studies, Queen's University of Belfast.

Nicholls, J. 2017. Abbey Creative Quarter Masterplan, Kilkenny Ground Penetrating Radar Survey: Licence No. 16R0143. Target Archaeological Geophysics Report: TAG IE16014 (9 December 2016). Unpublished report for Kilkenny County Council.

Ó Drisceoil, C. 2013. Excavation and monitoring in Saint Canice's Cathedral Graveyard 2013. Unpublished report by Kilkenny Archaeology. Available at: https://www.academia.edu/9622546/C._O_Drisceoil_2013_Excavation_and_monitoring_in_Saint_Canices_Cathedral_Graveyard_2013_Kilkenny_Archaeology_ [Accessed 25 January, 2023].

Ó Drisceoil, C., Bradley, J., Jennings, R., McCullough, L., & Healy, J. 2008. The Kilkenny Archaeological Project (KKAP) Report for the Irish National Strategic Archaeological Research (INSTAR) Programme 2008. Kilkenny.

O'Donovan, E. 1998a. Archaeological Report on Test Excavation and Monitoring at St Francis Abbey Brewery, Kilkenny, Stage 2, Phase VIII. Licence 99E0148. Unpublished Report [KKAP-207].

O'Donovan, E. 1998b. Archaeological Report on Test Excavation at St Francis Abbey Brewery, Kilkenny. Stage 1, Phase VIII. Excavation No. 99E0148. Unpublished Report [KKAP-207].

Office of Public Works. 1906. Seventy-fourth report of the Commissioners of Public Works in Ireland, with Appendices, 1905-06. HMSO: Dublin

O'Keeffe, G. 2016. St Francis Abbey 1230 – 1630: a history and archaeology of Kilkenny's Conventual Franciscans. Old Kilkenny Review 68: p.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 for Diageo Global. Available at: http://heritagemaps.ie/documents/KK_Archaeology/LicencedExcavations/04E0694_1.pdf [Accessed October 7, 2021].

Oxford Archaeology. (2005). Kilkenny City Walls: Conservation Plan, Heritage Council of Ireland series. Kilkenny : Heritage Council. [Online]. Available at: https://www.heritagecouncil.ie/content/files/kilkenny_city_walls_conservation_plan_2003_6kb.pdf [Accessed 25 January, 2023].

Paisley, Alexander Gardner, The Town Wall Fortifications of Ireland., 1914

Simington, R.C. 1942. The Civil Survey, A.D. 1654-1656: County of Waterford Vol. Vi With Appendices: Muskerry Barony, Co. Cork; Kilkenny City and Liberties (Part), also Valuations , c.1663-64, for Waterford and Cork Cities. Dublin: Stationery Office.

Smithwick, Peter, 1988, 'St Francis' Abbey' in The Old Kilkenny Review Vol.3, No.5 (521-25), 523)

Thomas, A. 1992. The Walled Towns of Ireland (2 volumes). Dublin: Irish Academic Press.

White, N.B. ed. 1943. Extents of Irish Monastic Possessions, 1540-1541. Dublin: Stationery Office.

Williams, B. ed. 2007. The Annals of Ireland by Friar John Clyn. Dublin ; Portland, OR: Four Courts Press Ltd.

Appendix A

Ecological Report

Natura Impact Statement

For the Abbey Quarter Kilkenny City Draft Conservation Management Plan

prepared for Howley Hayes Cooney Architecture

on behalf of Kilkenny County Council

Scott Cawley, College House, 71 – 73 Rock Road, Blackrock, Co. Dublin, A94 F9X9, Ireland

Tel+353(1)676-9815 Fax +353(1) 676-9816

Document Control

Project Title	Abbey Quarter Kilkenny Draft Conservation Management Plan		**Project No.**	210006
Document Title	Natura Impact Statement		**Status**	Draft
Revision	**Issue Date**	**Author**	**Reviewed By**	**Approved By**
I3	07/06/2022	SQ	NB	TR

Table of Contents

1 Introduction

1 This Natura Impact Statement (NIS) has been prepared by Scott Cawley Ltd. for the applicant, who is seeking permission for the Abbey Quarter Kilkenny City Draft Conservation Management Plan (hereafter referred to as "the draft CMP". The purpose of the draft CMP is to establish the history and significance of the Abbey Quarter, with a particular focus on three protected structures; St. Francis Abbey, Evans Turret, and the City Walls, and to deliver clear objectives for maintenance and conservation, guidance or any future development of the site.

2 This NIS has been prepared in accordance with the provisions of Part XAB of the Planning and Development Act, 2000 (as amended) and in accordance with the requirements of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive).

3 It considers the implications of the draft CMP, on its own and in combination with other plans or projects, for European sites[1] in view of the conservation objectives of those sites. It includes a scientific examination of evidence and data to identify and assess the implications of the draft CMP for any European sites in view of the conservation objectives of those sites. It considers whether the draft CMP, by itself and in combination with other plans or projects, would adversely affect the integrity of any European sites. In reaching a conclusion in this regard consideration is given to any mitigation measures necessary to avoid or reduce any potential negative impacts.

4 The purpose of this NIS is to provide an examination, analysis and evaluation of the potential impacts of the draft CMP on European sites and to present findings and conclusions with respect to the draft CMP in light of the best scientific knowledge in the field. This NIS will inform and assist the competent authority, Kilkenny County Council , in carrying out its Appropriate Assessment as to whether or not the draft CMP will adversely affect the integrity of any European sites, either alone or in combination with other plans and projects, taking into account their conservation objectives.

5 The draft CMP is neither connected with nor necessary to the management of any European sites.

6 It is the considered view of the authors of this NIS (Scott Cawley Ltd) that following the implementation of the mitigation measures proposed in Section 7, that the draft CMP will not individually or in combination with other plans or projects, have any adverse effect on the integrity of any European sites in view of their conservation objectives.

2 Legislative Context

7 The Birds and Habitats Directives - Council Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (the Birds Directive) and Council Directive 92 /43 /EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive) – require Ireland to establish protected sites as part of a European wide network of sites (the Natura 2000 network which are known in Ireland as European sites) for habitats and species that are of international importance for conservation. In Ireland, European sites include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). SACs are selected for habitats listed on Annex I of the Habitats Directive (including priority Annex I habitat types which are in danger of disappearance) and species listed on Annex II. SPAs are selected for bird species (listed on Annex I of the Birds Directive), regularly-occurring

[1] The Natura 2000 network of sites are defined under the Habitats Directive (Article 3) as a European ecological network of special areas of conservation, composed of sites hosting the natural habitat types listed in Annex I and species listed in Annex II, and special protection areas classified pursuant to the Birds Directive (2009/147/EC). The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats. In Ireland, these sites are designed as *European sites* – as defined under the Planning and Development Acts and/or Birds and Habitats Regulations as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. They are commonly referred to in Ireland as candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs).

populations of migratory bird species (such as ducks, geese and waders), and areas of international importance for migratory birds. The specified habitats and species for which each SAC and SPA is selected, correspond to the qualifying interests (in the case of SACs) or special conservation interest species (in the case of SPAs) for the sites, for which conservation objectives are prepared.

8 Article 6(3) of the Habitats Directive states that:

> 'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.'

9 This provision is transposed into Irish law by Part XAB of the Planning and Development Acts 2000 as amended. Section 177U(4) of the said Acts provides for screening for Appropriate Assessment as follows:

> *'The competent authority shall determine that an appropriate assessment of [...] a proposed development [...] is required if it cannot be excluded, on the basis of objective information, that the [...] proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.'*

10 Section 177U(5) provides as follows:

> *'The competent authority shall determine that an appropriate assessment of a […] proposed development, […], is not required if it can be excluded, on the basis of objective information, that the […] proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.'*

11 Section 177T(1) and (2) provide that a NIS is '*a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites*' *and specifies that it 'shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites*'.

12 The Court of Justice of the European Union (CJEU) has made a number of rulings in relation to Appropriate Assessment, regarding when it is required, its purpose and the standards it should meet. Two of the key rulings include, Case C-127/02 Waddenzee where the CJEU found that '*Any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects*' and that the plan or project may only be authorised '*where no reasonable scientific doubt remains as to the absence of such effects*', and Case C-258/11 where the CJEU found that *'[The Appropriate Assessment] cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned*'.

13 Consideration has been given in the preparation of this report, to the evolution in interpretation and application of directives and national legislation arising from jurisprudence of the European and Irish courts, in respect of Article 6 of the Habitats Directive.

3 Methodology

3.1 Scientific and Technical Competence Relied Upon

14 This NIS was authored by Síofra Quigley and reviewed by Niamh Burke of Coiscéim Consulting and Tim Ryle of Scott Cawley Ltd. The background and experience of the author and contributors to this report are set out below.

15 Síofra Quigley is a Consultant Ecologist with Scott Cawley Ltd.. She obtained an honours degree in Zoology, from National University of Ireland Galway, and a Masters degree in Wildlife Biology and Conservation from Edinburgh Napier University. She has four years' professional experience working in the UK and Ireland on large to small scale infrastructure projects, with governmental and private clients. Síofra is experienced in carrying out field surveys in several protected species , including bat, otter, badger, red squirrel, reptile, pine marten and mountain hare. She has also been involved in radio tracking mountain hares and bats, bat call analysis, badger bait marking, acting as an Ecological Clerk of Works, undertaken Phase 1 habitat surveys and reports (Joint Nature Conservation Committee, 2010), habitat surveys to Fossitt (2000) and desk top studies. Since joining Scott Cawley Ltd, Síofra's work involves project management, and the preparation of reports, including Ecological Impact Assessment and Appropriate Assessment reports for residential, commercial, and infrastructural projects across Ireland.

16 Niamh Burke is Principal Ecologist with Coiscéim Consulting Ltd. She holds a BSc in Natural Sciences with Environmental Science and a PhD in salmonid ecology. She is a Chartered Environmentalist (CEnv) with the Society for the Environment (Soc Env) and a Full Member of the CIEEM. Niamh is a senior scientist with academic research and consulting experience in terrestrial ecology, aquatic ecology and fluvial geomorphology. She is an experienced project manager with a full working knowledge of EIA, the planning process and relevant environmental legislation, both national and European. With a specialism in aquatic habitats, she also has experience of terrestrial species' surveys and mitigation approaches. In her extensive consultancy roles she has acted as reviewer for all ecological reporting and ensured consistency of standards and approach.

17 Tim Ryle is a Principal Ecologist with Scott Cawley Ltd. He holds an honours degree in Botany from University College Dublin and was later awarded a Ph.D. from the same institution. He is a full Member of the Institute of Environmental Scientists. Tim is an experienced ecological consultant with twenty years' experience in in private consultancy in designing, undertaking and managing a wide range of ecological survey and in assessing impacts and designing mitigation measures and biodiversity enhancements, in particular for protected species including badgers, otters, bats, birds, amphibians as well as habitats of conservation importance. He is also experienced in undertaking appropriate Assessment for small-scale development projects and larger infrastructural projects, land plans as well as national/government plans.

3.2 Guidance and Approach

18 This NIS has been prepared having regard to the following documents.

<u>European Commission Guidance</u>

- *Assessment of Plans and Projects in Relation to Natura 2000 sites: Methodological Guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021)
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019)

- *Communication from the Commission on the Precautionary Principle* (European Commission 2000)[2]
- *Nature and Biodiversity Cases – Ruling of the European Court of Justice* (European Commission 2006)
- *Article 6 of the Habitats Directive – Rulings of the European Court of Justice* (European Commission Final Draft September 2014)

Irish Guidance

- *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities* (Department of Environment, Heritage and Local Government 2010 revision)
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. *Circular NPW 1/10 & PSSP 2/10* (NPWS, 2010)
- *OPR Practice Note PN01. Appropriate Assessment Screening for Development Management* (Office of the Planning Regulator, 2021)

19 In addition, regard has been had to the following guidance in characterising impacts, including determining magnitude and significance of impacts, as relevant in the application to Appropriate Assessment and European sites:

- *Guidelines for Ecological Impact Assessment in the UK and Ireland* (Chartered Institute of Ecology and Environmental Assessment, 2018)

3.3 Assessment Methodology

20 The draft CMP (including the proposed design, repointing/repair methodologies and operational effects) was analysed and assessed to identify the potential impacts associated with the draft CMP that could affect the ecological environment.

21 From this, the zone of influence of the draft CMP was defined. Based on the identified impacts, and their zone of influence, the European sites potentially at risk of any direct or indirect impacts were identified.

22 In establishing which European sites are potentially at risk (in the absence of mitigation) from the draft CMP, a source-pathway-receptor approach was applied. In order for an impact to occur, there must be a risk enabled by having a source (e.g. water abstraction or repointing/repair works), a receptor (e.g. a European site or its Qualifying Interest(s) (QIs) or Special Conservation Interest(s) (SCIs) species/habitat), and a pathway between the source and the receptor (e.g. pathway by air for air borne pollution, or a pathway by a watercourse for mobilisation of pollution). For an impact to occur, all three elements must exist; the absence or removal of one of the elements means there is no possibility for the impact to occur.

23 The identification of source-pathway-receptor connection(s) between the draft CMP and European sites essentially is the process of identifying which European sites are within the zone of influence of the draft CMP, and therefore potentially at risk of significant effects. The zone of influence is defined as the area

[2] The precautionary principle is a guiding principle that derives from Article 191 of the Treaty on the Functioning of the European Union and has been developed in the case law of the European Court of Justice (e.g. ECJ case C-127/02 – Waddenzee, Netherlands).

This guidance document notes that the precautionary principle "*covers those specific circumstances where scientific evidence is insufficient, inconclusive or uncertain and there are indications through preliminary objective scientific evaluation that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the chosen level of protection*".

Applying the precautionary principle in the context of screening for appropriate assessment requires that where there is uncertainty or doubt about the risk of significant effects on a European site(s), it should be assumed that significant effects are likely and AA must be carried out.

within which the draft CMP could affect the receiving environment such that it could potentially have significant effects on the QI habitats or QI/SCI species of a European site, or on the achievement of their conservation objectives (as defined in CIEEM, 2018).

24 The identification of a source-pathway-receptor risk does not automatically mean that significant effects will arise. The likelihood of significant effects will depend upon the characteristics of the source (e.g. extent and duration of repointing/repair works), the characteristics of the pathway (e.g. direction and strength of prevailing winds for air borne pollution) and the characteristics of the receptor (e.g. the sensitivities of the European site and its QIs/SCIs). However, identification of the risk does mean that there is a possibility of ecological or environmental damage occurring, with the significance of the effect depending upon the nature and exposure to the risk and the characteristics of the receptor. In this case, where there is uncertainty, the precautionary principle has been applied.

25 This assessment has been undertaken in consideration of all potential impact sources and pathways connecting the draft CMP to European sites, in view of the conservation objectives supporting the conservation condition of the sites' QIs/SCIs.

26 The conservation objectives relating to each European site and its QIs/SCIs are expressed generally for SACs as "to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the cSAC has been selected", and for SPAs "to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA".

27 Following on from this, and as defined in the Habitats Directive, favourable conservation status (or condition, at a site level) of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable

28 The favourable conservation status (or condition, at a site level) of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis

29 Where site-specific conservation objectives have been prepared for a given European site, these include a series of specific attributes and targets against which effects on conservation condition, or integrity, can be measured, i.e. an impact which affects the achievement of favourable conservation condition, as measured by the attributes and targets, is an impact on site integrity.

30 In the case of some QIs/SCIs in certain European sites, the conservation objective is to restore rather than maintain conservation condition and this distinction is taken into account in the assessment; as is any legacy damage to European sites that has occurred since their designation, insofar as possible.

3.4 Desktop Study

31 The desktop data sources used to inform the assessment presented in this report are as follows (accessed on the May 2022):

- Online data available on European sites and protected habitats/species as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie[3], including conservation objectives documents
- Online data available on protected species as held by the National Biodiversity Data Centre (NBDC) from www.biodiversityireland.ie
- Information on the surface water network and surface water quality in the area available from www.epa.ie
- Information on groundwater resources and groundwater quality in the area available from www.epa.ie and www.gsi.ie
- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- Information on the location, nature and design of the draft CMP supplied by the applicant's design team
- *Stage 2: Appropriate Assessment – Natura Impact Statement, Abbey Quarter – Urban Park and Street*. Malone O' Regan Environmental, July 2020.
- Kilkenny County Council (2021) *Kilkenny City and County Development Plan 2021-2027*

3.5 Baseline Surveys

32 This section describes the methodologies followed for the ecological surveys undertaken to inform the assessment presented in this NIS.

33 This section describes the ecological surveys carried out to inform the assessment of likely significant effects on European sites.

34 Ecological field surveys were carried out following the best practice professional guidelines in August and September 2021. The surveys and their dates are presented in Table 1.

35 Habitat and flora surveys, terrestrial fauna surveys, ground-level assessment of buildings and trees, and breeding bird habitat suitability were undertaken on the 17th August 2021 by Síofra Quigley BSc (Hons) MSc. Bat activity surveys of the buildings within the boundary of the draft CMP area were undertaken by Dr. Caroline Shiel, an independent bat specialist, on the 5th August, 12th August, 9th, 27th and 28th of September 2021.

Table 1 Ecological surveys and survey dates

Survey	Survey Date(s)	Surveyor(s)
Multidisciplinary survey	17th August 2021	Scott Cawley Ltd.
External Building inspections	17th August 2021	Scott Cawley Ltd.
Bat activity surveys	4th, 11th & 12th August, 9th, 10th , 27th and 28th September 2021	Dr Caroline Shiel, independent Licenced bat specialist

[3] The following SAC and SPA GIS boundary datasets are the most recently available at the time of writing: SAC_ITM_2022_04 and SPA_ITM_2021_10.

3.5.1 Habitats and Flora

36 A habitat survey was undertaken of the lands on the 17th August 2021 by Síofra Quigley following the methodology described in Best Practice Guidance for Habitat Survey and Mapping[4]. All habitat types were classified using the Guide to Habitats in Ireland[5], recording the indicator species and abundance using the DAFOR scale[6] and recording any species of conservation interest. Vascular and bryophyte plant nomenclature generally follow that of The National Vegetation Database[7], having regard to more recent taxonomic changes to species names after the New Flora of the British Isles[8] and the British Bryological Society's Mosses and Liverworts of Britain and Ireland: A Field Guide[9]. Invasive species as listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011-2015, were also surveyed for within the lands of the draft CMP[10].

3.5.1 Fauna Surveys

3.5.1.1 Terrestrial Mammals (excluding Bats)

37 A terrestrial fauna survey (excluding bats) was undertaken on the 17th August 2021 by Síofra Quigley. The presence/absence of terrestrial fauna species were surveyed through the detection of field signs such as tracks, markings, feeding signs, and droppings, as well as by direct observation. The habitats on site were assessed for signs of usage by protected/red-listed fauna species, and their potential to support these species.

38 Bat surveys are not relevant for the purpose of AA, as the draft CMP is located outside the range of lesser horseshoe bat *Rhinolophus hipposideros* (only found in the west and southwest of Ireland[11]), the only Annex II species native to Ireland.

3.5.2 Birds

39 Due to the time of year of the survey season for breeding birds (April – June), breeding bird surveys could not be undertaken. Therefore, breeding bird habitat suitability checks of the habitats within the subject lands and the surrounding environs were undertaken on the 17th of August 2021 by Siofra Quigley. Anecdotal signs of birds in the area were identified by sight and song, and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes. The banks of the Breagagh River and the River Nore were also surveyed for kingfisher nesting suitability.

---

[4] Smith, G.F., O'Donoghue, P., O'Hora, K. & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council Church Lane, Kilkenny, Ireland.

[5] Fossitt, J.A. (2000) *A Guide to Habitats in Ireland*. Heritage Council, Kilkenny.

[6] The DAFOR scale is an ordinal or semi-quantitative scale for recording the relative abundance of plant species. The name DAFOR is an acronym for the abundance levels recorded: Dominant, Abundant, Frequent, Occasional and Rare.

[7] Weekes, L.C. & FitzPatrick, Ú. (2010) The National Vegetation Database: Guidelines and Standards for the Collection and Storage of Vegetation Data in Ireland. Version 1.0. Irish Wildlife Manuals, No. 49. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

[8] Stace, C. (2019) *New Flora of the British Isles*. *4th Edition*. C&M Floristics.

[9] Atherton, I., Bosanquet, S. & Lawley, M. (2010) *Mosses and Liverworts of Britain and Ireland: A Field Guide*. Latimer Trend & Co., Plymouth.

[10] *The Management of Invasive Alien Plant Species on National Roads – Technical Guidance*. Transport Infrastructure Ireland, GE-ENV-01105, December 2020.

[11] Species Profile: Lesser horseshoe bat (Vincent Wildlife Trust, Ireland). Access here: https://www.vincentwildlife.ie/species/lesser-horseshoe-bat

4 Description of the draft CMP

40 The Abbey Quarter in the City of Kilkenny is the location of St. Francis Abbey, a twelfth-century ecclesiastical foundation, bounded to the north by the city defences and the River Breagagh and to the east by the River Nore and in more recent times it was home to the Smithwicks Brewery, prior to relocation in 2014 to the St James Gate Brewery in Dublin. Now under the ownership of Kilkenny County Council, plans (C2A and C2B) are in place to establish a city park at this area, which will bring the ruins of St Francis Abbey, now managed by the OPW, into the public realm.

41 The purpose of the Conservation Management Plan for the site is to document the history and significance of this place, and provide an overarching vision for this site, together with the various structures that survive within it, and to deliver clear objectives for maintenance and conservation, guidance or any future development of the site.

42 An integral part of the City Wall, Evan's Turret is a mural tower located at the junction of the River Breagagh and the River Nore, at the north-eastern end of the Hightown wall. It was subsequently adapted, extended and a roof added for use as a prospect tower in the eighteenth century, and occupied until the middle-nineteenth century. St Francis' Well was a large spring or pool apparently surrounded by a wall located some 34m east northeast of St Francis' Abbey. St Francis' Well was a large spring or pool apparently surrounded by a wall located some 34m east northeast of St Francis' Abbey.

43 The principal architectural significance of Evan's Turret and adjoining walls lies in their being part of an important linear monument, part standing, which once enclosed the city. This significance is reflected in the fact that the whole City Wall, together with Evan's Turret, is designated as a national monument, of national importance, under the 'National Policy on Town Defences' (DoEHLG 2008). Redundancy and neglect present the greatest single threats to the significance of an important historic structure or place, even a ruined one. The serious challenges now faced by the Kilkenny County Council and the OPW should ensure that regular maintenance and repair works are carried out to these structures to preserve them for future generations.

44 None of the historic structures on the Abbey Quarter site are in use, although as a whole, they are considered to be in a fair condition due to various conservation works undertaken over the years. The impact of the former brewing industry is seen throughout the site, as the settings of the structures have been greatly compromised, and interventions into the surviving abbey buildings are still visible from the brewing period. As the Abbey Quarter site was in private ownership for many years, much of this portion of the city wall, the turret and the abbey were hidden from view and inaccessible. Improving public access to the structures will be balanced with ensuring their preservation.

45 The buried remains of the Abbey are not currently visible above ground. The general ground level is much higher than that which would have originally surrounded the abbey and Evan's Turret. This impedes an immediate understanding of the structures. There is a lack of knowledge about the precise remains and location of the St Francis well and a greater understanding of this structure is required.

46 The proposal for the new city park include legible landscaping which will echo the archaeological remains sub-surface, such as the nave and transept. These will be welcome inclusions in the park and will demonstrate clearly the extent of the archaeological remains of the former abbey. It is recommended that the tasting or sample rooms building is removed as it detracts from the views of the abbey and is positioned too close to the structure, while also sitting proud of the east gable window. The draft CMP – Block 9 which is proposed to be four stories in height and is in close proximity to the abbey will obscure views of the east window when approaching from the river park. It is proposed that this block is set back further south, to open up this important view. The incorporation of a steel platform within Evan's Turret should be considered. This would allow for occasional access to revive the eighteenth-century purpose of the turret as a prospect tower from which to enjoy views over the River Nore and surrounding landscape. Removal of one metre or more of earth to the south side of Evan's Turret to reveal more of the historic detail is being proposed.

4.1 Conservation and Repair Strategies

47 The proposed conservation and repair works are outlined below in Table 2, with more detail described in Section 8.0 of the Conservation Management Plan.

Table 2 Recommendations for conservation and repair works

	St Francis Abbey	Evan's Turret	The City Wall	St Francis Well
Urgent (within 12 months)	Management of the willow tree, with regular trimmings and monitoring of roots, and selection of new site for propagated willow tree	Vegetation removals and general inspection	Vegetation removals and general inspection	
	Implementation of secure access to the tower to facilitate inspection, and installation of crack monitoring to the tower	Removal of fallen vault and debris from within tower to area without tower for sorting and recording, and assessment of inside of Turret	Stabilisation of the wall tops	
Short term (within 3 years)	Assessment and repair of the wall tops to ensure no loose masonry or debris could fall form the structure	Repair of the inner skin in the south western corner, and consolidation of the wall core.	Repair eastern end of the horse barracks wall	Further excavation and survey to establish the extent of the remain of the wall below ground
	Removal of vegetation and cement flaunching to the buttresses of the tower	Rebuilding of the vault within the turret, and repair of the north wall at the spring arch	Repair programme for the River Breagagh side of the wall with scaffolding in place	
	Structural assessment and investigations to determine if the concrete frame can be removed	Repointing works and general maintenance	Vegetation Management - ongoing	
	Remove the cherry trees from the south wall of the choir	Vegetation Management - ongoing	Assessment of bat activity	
	Removal of the weeping willow tree	Design repairs of vault and inner face of masonry		

	St Francis Abbey	Evan's Turret	The City Wall	St Francis Well
	First laser scan of the structure	Assessment of bat activity		
	On-going assessment of bat activity			
Medium Term (within 5 years)	Repair of concrete support system to the tower or removal of this support structure	Excavation and repair of the remaining arch		
	Regular removal of vegetation and general repointing works and repairs should be undertaken every five years	Vegetation management - ongoing		
	Regular laser scanning of the structure, every five years to determine ongoing movement			
Long term (within 10-15 years)	Regular inspections and maintenance	Vegetation management – ongoing		
	Repointing repairs			
	Post flood inspections of all wall bases			

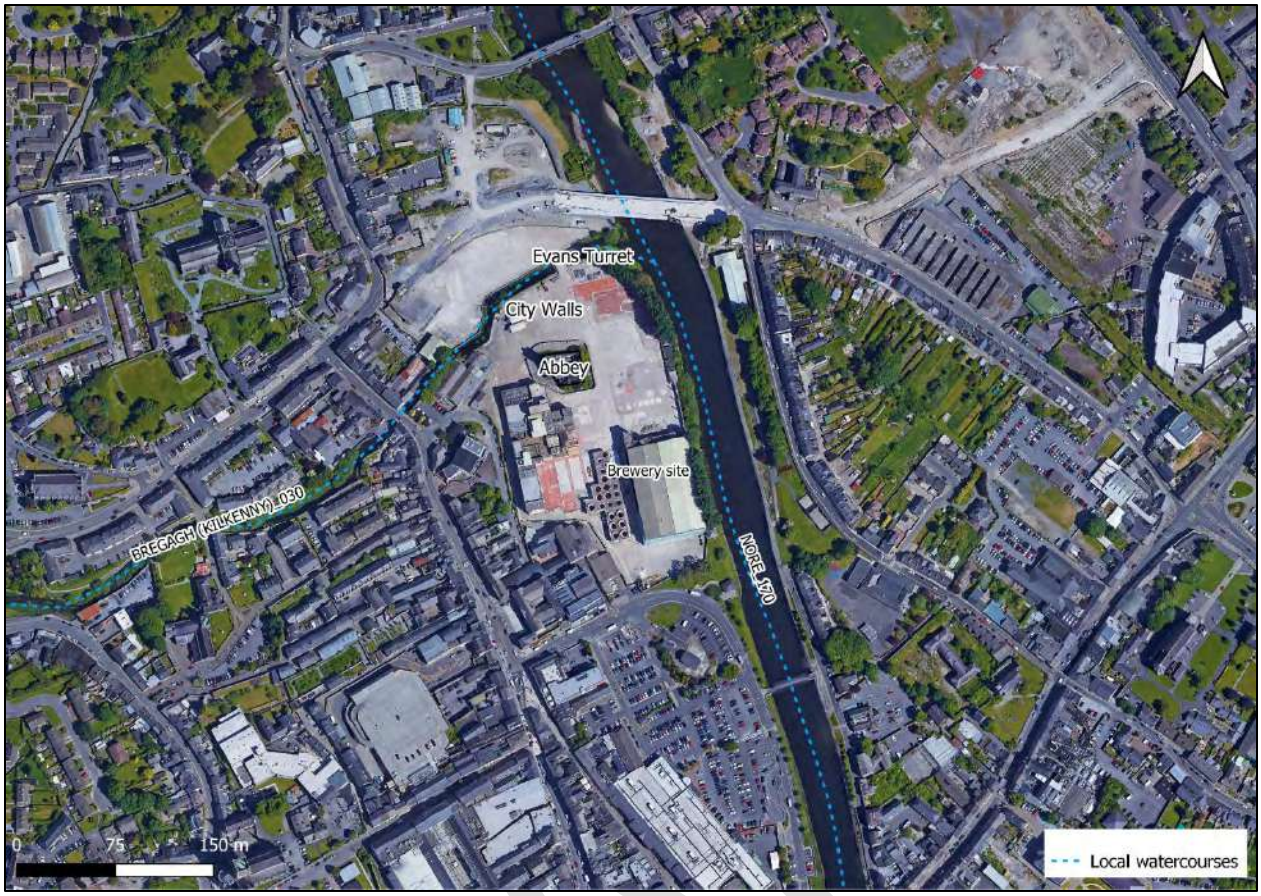


Figure 1 Draft CMP

5 Overview of the Receiving Environment

5.1 European Sites

48 There are two European sites within the vicinity of the draft CMP area. The draft CMP partially overlaps with the River Nore SPA, along the banks of the River Nore, located *c.* 10m from Evans Turret. The River Barrow and River Nore SAC is also adjacent to the draft CMP, *c.* 30m from Evans Turret. There are no other European sites within 15km of the draft CMP area, and based on the nature of the proposed works, no other pathways to European sites are predicted. The Breagagh River borders the north of the draft CMP area and the City Walls, and then discharges into the River Nore which flows in a southerly direction along the eastern aspect of the site.

49 All of the European sites present in the vicinity of the draft CMP are shown on Figure 3 below, with a more detailed image shown in Figure 1. The QIs/SCIs of the European sites in the vicinity of the draft CMP are provided in Appendix I.

50 The European sites present in the vicinity of the draft CMP are listed in Table 3, along with their qualifying interests and proximity to the draft CMP, and shown on Figure 2.

Table 3 European sites in the vicinity of the draft CMP

Site name and code	Distance from Proposed Development	Reasons for designation[12] (*=priority Annex I Habitat)
Special Areas of Conservation (SACs)		
River Barrow and River Nore SAC [002162]	*c.* 2-3m from the draft CMP	1016 Desmoulin's whorl snail *Vertigo moulinsiana* 1029 Freshwater pearl mussel *Margaritifera margaritifera* 1092 White-clawed crayfish *Austropotamobius pallipes* 1095 Sea lamprey *Petromyzon marinus* 1096 Brook lamprey *Lampetra planeri* 1099 River lamprey *Lampetra fluviatilis* 1103 Twaite shad *Alosa fallax* 1106 Atlantic salmon (*Salmo salar*) (only in fresh water) 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonizing mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1355 Otter *Lutra lutra* 1410 Mediterranean salt meadows (Juncetalia maritimi) 1421 Killarney fern *Trichomanes speciosum* 1990 Nore freshwater pearl mussel *Margaritifera durrovensis* 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 4030 European dry heaths 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels 7220 * Petrifying springs with tufa formation (Cratoneurion) 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles 91E0 * Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) NPWS (2011) Conservation objectives: River Barrow and River Nore SAC [002126]. Version1.0. NPWS, Department of Arts, Heritage and the Gaeltacht
Special Protections Areas (SPAs)		
River Nore SPA [004233]	Overlaps with the boundary of the draft CMP	[A229] Kingfisher *Alcedo atthis* *S.I. No. 193/2012 - European Union Habitats (River Nore Special Protection Area 004233) Regulations 2021*

[12] "Qualifying Interests" for SACs and "Special Conservation Interests" for SPAs based on relevant Statutory Instruments for each SAC and SPA, or NPWS Conservation Objectives downloaded from www.npws.ie in April 2022. Data on NHA/pNHA sites from the site synopsis documents published by the NPWS (where available).

Priority Annex I habitat types are denoted with an "*" and are habitat types which are in danger of disappearance at a European level – from the definition of "priority natural habitat types" in Article 1(d) of the Habitats Directive

Site name and code	Distance from Proposed Development	Reasons for designation[12] (*=priority Annex I Habitat)
		NPWS (2022) Conservation objectives for River Nore SPA [004233]. Generic Version 9.0. Department of Housing, Local Government and Heritage.

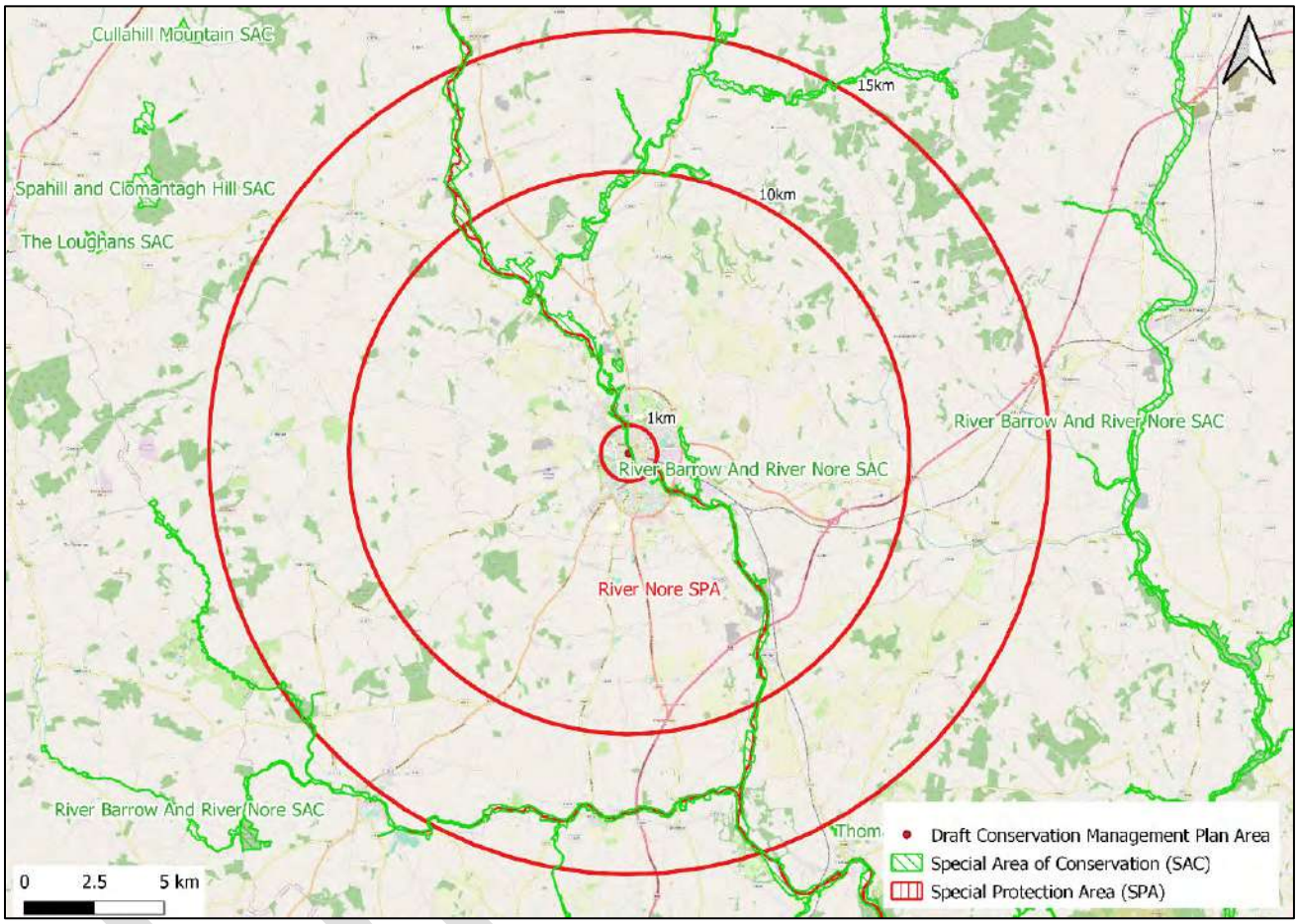


Figure 2 European sites within the vicinity of the draft CMP site

Figure 3 Close-up of European Sites in the vicinity of the draft CMP

5.1.1 Habitats

51 The draft CMP area is located in the 10km Grid Square S55, at S 50580 56335 (at its central point) in the Abbey Creative Quarter in the centre of Kilkenny City.

52 The draft CMP area is characterised by largely artificial and man-made habitats, with Evans Turret, St. Francis Abbey, and the City Walls, all comprising of stone walls and other stonework (BL1). Adjacent to Evans Turret is a small area with a mosaic of scrub (WS1) and recolonising bare ground (ED1). Treeline (WL2) habitat occurs along the eastern and southern aspect of St. Francis Abbey, with ornamental/non-native shrub (WS3) also bordering the northern aspect. The area surrounding the Abbey is predominately comprised of buildings and artificial surfaces (BL3), and consists of concrete and hard-standing, previously in use as the Smithwick's Brewery, which was mostly demolished and removed in 2021. Depositing/lowland rivers habitat (FW2) which are largely manmade, comprising of the Breagagh River borders the north of the draft CMP area, and the River Nore which borders the east of the draft CMP area. A mosaic of treeline habitat (WL2), and scrub (WS1) border the River Nore banks, also in the east, linking the draft CMP area to the Riverside Gardens along the River Nore.

53 None of the habitats within the draft CMP area correspond to Annex I Habitats, and do not provide a supporting role to any Annex I habitats connected with any European site. The nearest known location for Annex I habitats within the River Barrow and River Nore SAC is Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] a priority Annex I habitat, located *c.* 2.9km downstream from the draft CMP (NPWS, 2011). Overall, the habitats located within the draft CMP have limited ecological value and none correspond to Annex I habitats.

5.1.2 Flora and Fauna Species

54 The NBDC did not return any records for protected and/or rare plant species within 2km of the draft CMP area. Due to the artificial and managed nature of the habitats within the draft CMP, there is little habitat for rare/protected flora species to colonise.

55 With regards to non-native invasive species, the NBDC database search returned records of six species listed on Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011-2015 within *c.* 2km of the draft CMP; Japanese knotweed *Reynoutria japonica,* Giant hogweed *Heracleum mantegazzianum,* Himalayan balsam *Impatiens glandulifera,* Nuttalls waterweed *Elodea nuttallii,* Canadian pondweed *Elodea canadensis*[13]*,* and three cornered leek *Allium triquetrum.*

56 No protected and/or rare species listed in the Flora Protection Order or in Red Lists, nor invasive non-native species listed on Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) were found to be present within the draft CMP area at the time of the survey. However, Himalayan balsam and Japanese knotweed were identified in multiple areas along the river banks of the Nore and the Breagagh to the north and east of the draft CMP during field surveys, and as also noted in earlier surveys associated with the Natura Impact Statement for the Abbey Quarter Masterplan (Malone O'Regan, 2020). The protected structures (i.e. St. Francis Abbey, Evans Turret, and the City Walls) are not suitable habitat for the aforementioned species due to the artificial nature of their structure. However these species may grow in close proximity of the structures as they are opportunistic species and readily colonise a range of habitats.

57 Otter *Lutra lutra,* and their breeding and resting places, are protected under the Wildlife Acts. Otter are also listed on Annex II and Annex IV of the EU Habitats Directive and are afforded strict protection under the Habitats Directive and the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). The NBDC data search returned 13 records of otter within *c.* 2km of the draft CMP, with the latest from 2018. There are numerous records of otters along the River Nore, with otter being one of the Qualifying Interest species of this the River Barrow and River Nore SAC.

58 The draft CMP area provides little habitat for otter. However, the River Nore and the Breagagh River run adjacent to the draft CMP provide ample suitable foraging, commuting and resting/breeding habitat for this species. An otter spraint was identified on a rock adjacent to the Breagagh and Nore confluence, within *c.* 20m of Evans Turret. Otter spraints and prints were also noted in the Abbey Quarter Masterplan NIS (Malone O'Regan 2020) during surveys carried out along the watercourse. The watercourse has abundant prey species for otters, as other QI species for the Nore include Salmon Salmo salar, white-clawed crayfish *Austropotamobius pallipes*, twaite shad *Alosa fallax fallax*, and lamprey species.

59 The River Nore SPA is designated for kingfisher *Alcedo atthis*, and this species was previously confirmed as commuting along the Breagagh River, which backs onto the draft CMP and the City Walls, by Malone O' Regan Environmental (2020). The Breagagh River is heavily vegetated and overgrown along the fringes, which is unsuitable for kingfisher nest burrows. The City Walls have cracks and crevices along the River side which have the potential to be used by nesting kingfishers, however a detailed inspection was carried out by Malone O'Regan Environmental for the NIS Abbey Quarter – Urban Park and Street planning proposal (Planning ref 307796-20), and these burrows were deemed to not be sufficiently big enough or long enough for the use of kingfishers. There are no banks suitable for kingfisher nests in the vicinity of the draft CMP. The Breagagh is suitable for foraging and commuting along to the adjoining River Nore, and the NBDC database search returned 14 records within *c.* 2km for kingfisher. The closest record to the draft CMP is from 2014, and located *c.* 260m south along the River Nore.

60 There are five Annex II fish species listed as Qualifying Interests within the River Barrow and River Nore SAC, i.e. sea lamprey *Petromyzon marinus*, brook lamprey *Lampetra planeri,* river lamprey *Lampetra*

[13] Canadian pondweed *E. canadensis* was delisted as a Third Schedule species. However, as it often occurs mixed with *E. nuttallii*, it is included here for completeness.

fluviatilis, Atlantic salmon *Salmo salar* and twaite shad *Alosa fallax*. There were no records of any of the above species within *c.* 2km of the draft CMP and sea lamprey would not be expected this far upstream. Aquatic surveys were not carried out as part of this assessment; however, habitat suitability assessment surveys were undertaken on the 17th August 2021, with particular regard for the aforementioned species. Instream vegetation was present in the Breagagh and the Nore, with soft, silty substrate evident in the riverbed itself. Instream vegetation is important for rivers/streams used by salmonid species, as it provides protection from predators . Lamprey species tend to live in soft substrate, where they can hide from predators . As this habitat is present in the watercourses adjacent to the draft CMP, there is the potential for these species to occur here. Twaite shad typically use gravel substrate to spawn near estuaries, and with the nearest record of this species over 30km downstream of the draft CMP, therefore it is unlikely this species is present in the watercourses adjacent to the draft CMP due to the lack of habitat and records. Aquatic surveys were also carried out for the Abbey Quarter – Urban Park and Street (Malone O'Regan, 2020) planning application by Sweeney Consultancy, within the sections of the Breagagh River and River Nore adjacent to the draft CMP area, and also downstream within the River Nore in 2019. Salmon parr were identified in the Breagagh, and juvenile lamprey were identified downstream of the draft CMP area in the River Nore.

61 The desk study search from NBDC returned one record for white-clawed crayfish within *c*. 2km of the draft CMP area, from 1995. The surrounding aquatic environment is considered suitable for this species (i.e. high habitat heterogeneity), and white-clawed crayfish is a Qualifying Interest of the River Barrow and River Nore SAC. A single crayfish was identified during surveys carried out by Sweeney Consultancy for the Abbey Quarter planning application (Malone O'Regan Environmental, 2020).

62 The desk study returned no records of freshwater pearl mussel *Margaritifera margaritifera* or Nore pearl mussel *Margaritifera durrovensis* within *c*. 2km of the draft CMP area, although they are Qualifying Interest species of the River Barrow and River Nore SAC. This species is only known to occur in a 10km stretch of the main channel of the River Nore, approximately 22km upstream in Co. Laois (NPWS 2011). No pearl mussels were found in any of the adjacent watercourses to the draft CMP in surveys carried out by Sweeney Consultancy (subcontracted by Malone O'Regan Environmental, 2020).

63 Desmoulin's Whorl Snail *Vertigo moulinsiana* is also a Qualifying Interest species for the River Barrow and River Nore SAC. No records were identified within *c.* 2km of the draft CMP area, with the closest record from 1997, *c.* 20km north west of the draft CMP.

5.1.3 Hydrology

64 There are no surface water features within the draft CMP area. However, the draft CMP area is immediately adjacent to two waterbodies, the Breagagh (Kilkenny)_030 to the north, which discharges into the Nore_070 to the east, and flows in a southerly direction. The site is located in the Nore_SC_090 Sub Catchment, within the Nore Catchment, and also located within the Nore_170 Sub Basin.

65 According to the EPA online Map Viewer, the Breagagh has a Q-Value of "Q3-4" which is of "Poor" water quality status. EPA gather this information from the monitoring station at Brewery Bridge, located *c.* 73m upstream of the City Walls. The Breagagh is considered "at risk" of not achieving good status under the Water Framework Directive (WFD). This river is a tributary of the River Nore, which has a Q-value of "4", which is of "good" water quality status, and considered to be "not at risk" of achieving good status under the WFD.

5.1.4 Hydrogeology

66 Geological Survey of Ireland (GSI) data indicates that the draft CMP area is underlain by the "Ballyadams Formation" which is described as "Crinoidal wackestone/packstone limestone". GSI data also indicates that the draft CMP area is underlain by a "Regionally Important Aquifer" that is "Karstified (diffuse)". The site is located in an area of 'High' vulnerability in relation to the underlying aquifer.

67 The Groundwater Body (GWB) underlying the draft CMP is the "Kilkenny-Ballynakill Gravels", which is currently classified by the EPA as having "Good" groundwater status, with the groundwater risk classed as

"at risk". The adjacent River Barrow and River Nore SAC and the River Nore SPA which partially overlaps with the draft CMP area, are the only European sites located within this GWB, of which the former contains QI groundwater dependent terrestrial habitats.

6 Potential Impacts, Zone of Influence and Identifying European Sites at Risk of Effects

68 Based on the baseline and receiving ecological environment and the nature and characteristics of the draft CMP the following potential impacts have been identified:

- Habitat loss and fragmentation
- Habitat degradation as a result of hydrological impacts
- Habitat degradation as a result of hydrogeological impacts
- Habitat degradation as a result of introducing/spreading non-native invasive species
- Disturbance and displacement impacts

6.1 Habitat loss and fragmentation

69 The draft CMP area overlaps with the boundary of the River Nore SPA, and is within 3 metres of the River Barrow and River Nore SAC at its closest. The nearest known location for an Annex I habitat within the River Barrow and River Nore SAC is Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0], located *c.* 2.9km downstream from the draft CMP (NPWS, 2011). No works are proposed within the River Nore or its banks, and therefore, the River Barrow and River Nore SAC is not at risk of direct habitat loss impacts.

70 As confirmed from studies in support of the Abbey Quarter Masterplan NIS (Malone O'Regan 2020), Kingfisher use the Breagagh River for commuting and foraging and are present along the River Nore, and there is no viable habitat for kingfisher burrows within the draft CMP area. However there will be placement of a scaffolding structure within the Breagagh for the repair and repointing works, which may interfere with commuting/foraging routes, albeit on a temporary basis. Habitat loss may also occur indirectly as a consequence of severe habitat degradation in water quality and/or changes to the hydrological regime, and therefore, could affect the conservation status of this SCI species from the River Nore SPA.

71 The River Barrow and River Nore SAC is designated for a number of QI species, including; otter, Desmoulin's whorl snail, freshwater pearl mussel, white-clawed crayfish, sea lamprey, brook lamprey, river lamprey, twaite Shad, salmon, Killarney fern, and Nore pearl mussel. The draft CMP proposes conservation works on Evans Turret, the City Walls, and St. Francis Abbey, as detailed in the Abbey Quarter Kilkenny City Conservation Management Plan (Howley Hayes Cooney, 2022). These are recommended measures focused on the maintenance and conservation of these structures, in order to preserve them for future generations. No major works are recommended on the water side of Evans Turrett or City Walls (other than minor repointing works), with masonry repairs carried out by hand and under supervision of an archaeologist to ensure there is no damage to the structures. No works will be carried out within the River Nore, however scaffolding will be in place for carrying out repointing works within the Breagagh. Otters likely use the River Breagagh for commuting and foraging, and suitable habitat is present for all three lamprey species, and salmon within the watercourses adjacent to the draft CMP. Habitat loss may occur indirectly as a consequence of severe habitat degradation arising from a reduction in water quality and/or a change to the hydrological regime, as described in the hydrological impacts below. Therefore, indirect habitat loss as a result of habitat degradation in water quality and/or change to the hydrological regime, could affect the conservation status of these QI species from the River Barrow and River Nore SAC.

6.2 Habitat degradation/effects on QI/SCI species as a result of hydrological impacts

72 Surface water run-off and discharges from the site drain to the existing local surface water drainage network. No changes are proposed to the surface water drainage. However the site is immediately adjacent to the River Breagagh and River Nore. Therefore, the Zone of Influence (ZoI) of potential effects on water

quality from the draft CMP could extend to the River Nore and European sites within *i.e*. the River Blackwater and River Nore SAC and the River Nore SPA.

73 The potential release of contaminated surface water runoff and/or an accidental spillage or pollution event, or additional silt and interstitial sediment into any surface water features during any repair or repointing works to the City Walls and Evans Turret, has the potential to affect water quality in the receiving aquatic environment. Material from the wall itself and any cementitious materials from repointing could impact the sensitive QI species in the River Breagagh and the River Nore. In the absence of mitigation, the associated effects of a reduction of surface water quality could potentially extend downstream of the discharge point or location of the accidental pollution event. Such an occurrence, of a sufficient magnitude, either alone or in combination with other pressures on water quality, and in the absence of mitigation could undermine the conservation objectives of the European sites in the River Nore (*i.e.* the River Barrow and River Nore SAC and River Nore SPA).

74 The draft CMP area is adjacent to the River Breagagh and the River Nore which flow along the northern and eastern boundaries of the draft CMP. Otter territories are within the range of *c.* 7.5km for females and *c*. 7-19km for males (O'Neill *et al.*, 2008), and evidence was identified adjacent to the draft CMP on the banks of the River Nore. Therefore, there is potential for otter associated with the River Barrow and River Nore SAC to be present within the zone of influence of the draft CMP. A reduction in water quality as a result of an accidental pollution event or additional sediment load (either alone or in combination with other pressures on water quality) however, could result in the degradation of the local aquatic environment, which could in turn negatively affect the otter population through direct contact with pollutants or a decline in fish prey. Sea lamprey *Petromyzon marinus*, brook lamprey *Lampetra planeri* river lamprey *Lampetra fluviatilis*, Atlantic salmon *Salmo salar,* white-clawed crayfish *Austropotamobius pallipes* , twaite Shad *Alosa Fallax Fallax*, and freshwater pearl mussel *Margaritifera margaritifera*, all QI species of River Narrow and River Nore SAC, could also be negatively impacted from a reduction in water quality as the finest grained portion of sedimentary run-off (fine silts- to mud sized grains) are the most deleterious fraction for these species. Desmoulin's Whorl Snail *Vertigo moulinsiana,* Nore pearl mussel *Margaritefera durrovensis,* are also QI species of the River Barrow and River Nore SAC and would be sensitive to changes to water quality. However; both of these species are located a significant distance upstream of the draft CMP area and Kilkenny City (> 30km), and therefore are not at risk of hydrological impacts from the draft CMP.

75 The Killarney Fern *Trichomanes speciosum* is also a QI species of the River Barrow and River Nore SAC. This fern grows in deeply shaded, humid areas such as dripping caves, crevices and overhangs of cliffs, within stream gullies, by waterfalls and on the floor of damp woodlands (NPWS, 2013a). The draft CMP area is located outside the current known distribution and favourable reference range of this qualifying interest (NPWS, 2019). According to the SAC Conservation Objectives report, the nearest record of Killarney fern to the proposed site is located a considerable distance, approximately 33km, downstream of the draft CMP site. There are no records on the NBDC for Killarney Fern within 20km of the draft CMP site. It is therefore not anticipated that the draft CMP would have direct or indirect negative impacts upon this qualifying interest.

76 Kingfisher are an SCI species for the River Nore SPA, and would also be sensitive to changes to the hydrological regime that may affect the availability of fish prey. In a worst-case scenario potential impacts could occur to such a degree that the conservation objectives of the River Nore SPA (and River Barrow and River Nore SAC) are compromised.

77 There are also a number of QI habitats that are also sensitive to changes in the hydrological regime and are located downstream of the draft CMP area (NPWS, 2011). However; with the exception of the priority Annex I habitat Alluvial woodland [91E0], all of the QI habitats are located over 30km downstream of the draft CMP. As the works are very minor, localised, and due to the distance between the repair/repointing works and these QI habitats, the draft CMP is not likely to result in habitat degradation as a result of hydrological impacts.

78 As the draft CMP has the potential to result in habitat degradation and effects on of the qualifying/special conservation interest species of European sites as the result of hydrological impacts, there is the potential for in combination effects to occur.

6.3 Habitat degradation as a result of hydrogeological impacts

79 The draft CMP area lies within the Kilkenny-Ballynakill Gravels GWB. The only European site within the Kilkenny-Ballynakill GWB that is designated for groundwater dependant habitats and/or species is the River Barrow and River Nore SAC. The qualifying interests of the River Barrow and River Nore SAC, two priority Annex I habitats, namely; Petrifying springs and Alluvial woodland, and the whorl snail species, are dependent upon the existing condition and functioning of the groundwater regime. As the measures of the draft CMP will not interact with the underlying groundwater body, directly or indirectly, and as Policy 6.1 of the Kilkenny City and County Development Plan 2017 – 2027 states the sub-surface archaeology is to be preserved and undisturbed, it cannot influence groundwater conditions in the European site.

80 Therefore, there is no possibility of the draft CMP undermining the conservation objectives of any of the qualifying interests or special conservation interests of any European sites, either alone or in combination with any other pans or projects, as a result of hydrogeological effects.

6.4 Habitat degradation as a result of introducing/spreading non-native invasive species

81 Himalayan balsam and Japanese knotweed were identified along the banks of the River Nore and the Breagagh River. An invasive plant species management plan was included within the NIS (Malone O'Regan Environmental, 2020) for the Abbey Quarter – Urban Park and Street planning proposal (Planning ref 307796-20), which will manage, remove and contain any invasive species within the site. No conservation works are proposed within the watercourse or on banks of the River Nore and Breagagh River within the draft CMP.

82 Therefore, there is no possibility of the draft CMP undermining the conservation objectives of any of the qualifying interests or special conservation interests of any European sites, either alone or in combination with any other pans or projects, from habitat degradation as a result of introducing/spreading non-native invasive species.

6.5 Disturbance and displacement impacts

83 Repointing/repair-related disturbance and displacement of fauna species could potentially occur within the vicinity of the draft CMP. For mammal species such as otter, disturbance effects would not be expected to extend beyond 150m . For birds including Kingfisher, disturbance effects would not be expected to extend beyond a distance of *c.*300m, as noise levels associated with general repointing/repair activities would attenuate to close to background levels at that distance. There are two European sites within the disturbance ZoI; River Nore SPA and the River Barrow and River Nore SAC, located adjacent to the draft CMP. Otter is a QI species of the River Barrow and River Nore SAC, and kingfisher are a SCI of the River Nore SPA. These species are both likely using the habitats within the watercourses adjacent to the draft CMP area, and associated habitats for foraging and/or commuting. The draft CMP proposes the conservation, repair and maintenance of protected structures within the site. The scale of these works is such that they will not result in disturbance or displacement of any qualifying/special conservation interest species of any European site. Both otters and kingfishers are generally shy species and will avoid human presence, as the works are so short in nature, it is unlikely to cause any kind of disturbance or displacement to these species. A scaffolding structure will be in place within the Breagagh River for the repointing works, this will be temporary in nature (*i.e*. 2-3 weeks), and will not obstruct the overall flow of the River. However this has the potential to cause a short term disturbance to aquatic species (*i.e.* brook lamprey, river lamprey, Atlantic salmon and white clawed-crayfish), by the potential creation of sediment when the scaffolding is installed and removed. Therefore there is potential for the draft CMP to cause displacement or disturbance effects that could affect the conservation objectives of these aquatic QI species.

6.6 Summary

84 The potential impacts associated with the draft CMP have the potential to affect the receiving environment and, as a result, the conservation objectives supporting the qualifying interest/special conservation interests of two European sites: River Barrow and River Nore SAC and the River Nore SPA.

85 The potential impacts of the draft CMP on the receiving environment, their zone of influence, and the European sites at risk of likely significant effects are summarised in Table 4 below.

Table 4 Summary of the potential impacts of the draft CMP on the receiving environment, their potential zone of influence, and the European sites within the zone of influence

Potential Direct or Indirect Impacts and zone of influence of the Potential Effects	Are there any European sites within the zone of influence?
Habitat loss Habitat loss will be confined to the lands within the draft CMP boundary.	Yes There are no European sites at risk of direct habitat loss. As the draft CMP includes some works involve a scaffolding structure within the Breagagh River, there is potential for indirect effects of habitat loss on the following European sites: River Barrow and River Nore SAC, and River Nore SPA
Habitat degradation as a result of hydrological impacts Habitats and species downstream of the draft CMP site and the associated surface water drainage discharge points.	Yes There are European sites at risk of hydrological effects associated with the draft CMP, namely; River Barrow and River Nore SAC and River Nore SPA
Habitat degradation as a result of hydrogeological impacts Groundwater dependant habitats, and the species those habitats support, in the local area that lie downgradient of the draft CMP site.	No There are no European sites at risk of hydrogeological effects associated with the draft CMP
Habitat degradation as a result of introducing/spreading non-native invasive species Habitat areas within, adjacent to, and potentially downstream of the draft CMP site.	No There are no third schedule non-native invasive species present on the draft CMP site and, therefore, no risk associated with the draft CMP to any European sites from the spread/introduction of non-native invasive species
Disturbance and displacement impacts Potentially up to several hundred metres from the draft CMP boundary, dependent upon the predicted levels of noise, vibration and visual disturbance associated with the draft CMP, in conjunction with the sensitivity of the qualifying interest species to disturbance effects	Yes There is potential for disturbance and/or displacement impacts on QI species of the River Barrow and River Nore SAC,

7 Assessment of Effects on European Sites

86 This section of the NIS assesses the direct and indirect impacts of the draft CMP on the European sites which fall within its zone of influence. For each of these European sites, the assessment below sets out the relevant ecological baseline information, the analysis of the potential impacts, the qualifying interests/special conservation interests at risk of these potential impacts, in view of the sites' conservation objectives, and the mitigation measures (if required) to avoid/reduce the effects of any potential impacts.

87 The assessment of the draft CMP in combination with any other plans or projects on European sites is presented in Section 8.

7.1 River Barrow and River Nore SAC [002162]

7.1.1 Ecological Baseline Description for River Barrow and River Nore SAC

88 The Natura 2000 Standard Data Form (NPWS, 2020) lists the site as supporting many Annexed habitats including the priority habitats of alluvial woodland and petrifying springs. The quality of habitat is generally good. The site also supports a number of Annex II animal species - *Salmo salar, Margaritifera margaritifera, M.m. durrovensis, Alosa fallax fallax, Austropotamobius pallipes, Petromyzon marinus, Lutra lutra, Lampetra fluviatilis* and *L. planeri*. Annex I Bird species include *Anser albifrons flavirostris*, *Falco peregrinus, Cygnus cygnus, Cygnus columbianus bewickii, Limosa lapponica, Pluvialis apricaria* and *Alcedo atthis*. A range of rare plants and invertebrates are found in the woods along these rivers and rare plants are also associated with the saltmarsh near Waterford.

7.1.2 Qualifying Interests and Conservation Objectives of River Barrow and River Nore SAC

89 The qualifying interests of Dundalk Bay SAC, and the overall conservation objective, are listed below in Table 5.

Table 5 Qualifying Interests and Conservation Objectives of River Barrow and River Nore SAC

Qualifying Interest(s)	Conservation Objective(s)
1016 Desmoulin's whorl snail *Vertigo moulinsiana* 1029 Freshwater pearl mussel *Margaritifera margaritifera*[14] 1092 White-clawed crayfish *Austropotamobius pallipes* 1095 Sea lamprey *Petromyzon marinus* 1096 Brook lamprey *Lampetra planeri* 1099 River lamprey *Lampetra fluviatilis* 1103 Twaite shad *Alosa fallax* 1106 Atlantic salmon (*Salmo salar*) (only in fresh water) 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonizing mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1355 Otter *Lutra lutra* 1410 Mediterranean salt meadows (Juncetalia maritimi) 1421 Killarney fern *Trichomanes speciosum* 1990 Nore freshwater pearl mussel *Margaritifera durrovensis* 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected

[14] The status of the freshwater pearl mussel (*Margaritifera margaritifera*) as a qualifying Annex II species for the River Barrow and River Nore SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this species.

Qualifying Interest(s)	Conservation Objective(s)
4030 European dry heaths 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels 7220 * Petrifying springs with tufa formation (Cratoneurion) 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles 91E0 * Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) NPWS (2011) Conservation objectives: River Barrow and River Nore SAC [002126]. Version 1.0. NPWS, Department of Arts, Heritage and the Gaeltacht	

90 In conjunction with considering the generic conservation objective for this SAC "To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected", the site specific conservation objectives document for River Barrow and River Nore SAC also informed this assessment.

91 The site specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the qualifying interests within the European site. Affecting the conservation condition of the qualifying interests/special conservation interests is deemed to constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the qualifying interests of River Barrow and River Nore SAC are presented in Section 7.1.2, Table 5.

7.1.3 Examination and Analysis of Potential Direct and Indirect Impacts

92 The direct and/or indirect impacts by which the draft CMP could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of River Barrow and River Nore SAC, are:

- Habitat loss and fragmentation
- Habitat degradation as a result of hydrological impacts
- Disturbance and displacement impacts

7.1.3.1 Habitat loss and fragmentation

93 The River Barrow and River Nore SAC is designated for a number of QI species, including; otter, Desmoulin's whorl snail, freshwater pearl mussel, white-clawed crayfish, sea lamprey, brook lamprey, river lamprey, twaite Shad, salmon, Killarney fern, and Nore pearl mussel. The draft CMP proposes conservation works on Evans Turret, the City Walls, and St. Francis Abbey, as detailed in the Abbey Quarter Kilkenny City draft Conservation Management Plan (Howley Hayes Cooney, 2022). These are recommended measures focused on the maintenance and conservation of these structures, in order to preserve them for future generations. No major works are recommended on the water side of Evans Turrett or City Walls (other than minor repointing works), with masonry repairs carried out by hand and under supervision of an archaeologist to ensure there is no damage to the structures. No works will be carried out within the River Nore, however scaffolding will be in place for carrying out repointing works within the Breagagh. Otters likely use the River Breagagh for commuting and foraging, and suitable habitat is present for all three lamprey species, and salmon within the watercourses adjacent to the draft CMP. Habitat loss may occur indirectly as a consequence of severe habitat degradation arising from a reduction in water quality and/or a change to the hydrological regime, as described in the hydrological impacts below. Therefore, indirect habitat loss as a result of habitat degradation in water quality and/or change to the hydrological regime, could affect the conservation status of these QI species from the River Barrow and River Nore SAC.

7.1.3.2 Habitat degradation as a result of hydrological impacts

94 The release of contaminated surface water runoff and/or an accidental spillage or pollution event, or additional silt and interstitial sediment into any surface water features during any repair or repointing works to the City Walls and Evans Turret, has the potential to affect water quality in the receiving aquatic environment. Material from the wall itself and any cementitious materials from repointing could impact the sensitive QI species in the River Breagagh and the River Nore. In the absence of mitigation, the associated effects of a reduction of surface water quality could potentially extend distance downstream of the discharge point or location of the accidental pollution event. Such an occurrence, of a sufficient magnitude, either alone or in combination with other pressures on water quality, and in the absence of mitigation could undermine the conservation objectives of the European sites in the River Nore.

95 The draft CMP area is adjacent to the River Breagagh and the River Nore which flow along the northern and eastern boundaries of the draft CMP. Otter territories are within the range of *c.* 7.5km for females and c. 7-19km for males (o'Neill *et al.,* 2008), and evidence was identified adjacent to the draft CMP on the banks of the River Nore. Therefore, there is potential for otter associated with the River Barrow and River Nore SAC to be present within the zone of influence of the draft CMP. A reduction in water quality as a result of an accidental pollution event (either alone or in combination with other pressures on water quality) however, could result in the degradation of the local aquatic environment, which could in turn negatively affect the otter population through direct contact with pollutants or a decline in fish prey. Sea lamprey *Petromyzon marinus*, brook lamprey *Lampetra planeri* river lamprey *Lampetra fluviatilis*, Atlantic salmon *Salmo salar*, white-clawed crayfish *Austropotamobius pallipes* , twaite Shad *Alosa Fallax Fallax*, and freshwater pearl mussel *Margaritifera margaritifera*, all QI species of River Barrow and River Nore SAC, could also be negatively impacted from a reduction in water quality as the finest grained portion of sedimentary run-off (fine silts- to mud sized grains) are the most deleterious fraction for these species.

96 As the draft CMP has the potential to result in habitat degradation and effects on of the qualifying/special conservation interest species of European sites as the result of hydrological impacts, there is the potential for in combination effects to occur.

7.1.3.3 Disturbance and displacement impacts

97 Repointing/repair-related disturbance and displacement of fauna species could potentially occur within the vicinity of the draft CMP. For mammal species such as otter, disturbance effects would not be expected to extend beyond 150m. Otter, lamprey species, white clawed-crayfish, and Atlantic salmon are QI species of the River Barrow and River Nore SAC. Otters likely use the habitats within the watercourses adjacent to the draft CMP area, and associated habitats for foraging and/or commuting, and suitable habitat exists for aquatic species adjacent to the draft CMP. The draft CMP proposes the conservation, repair and maintenance of protected structures within the site. The scale of these works is such that they will not result in disturbance or displacement of any qualifying/special conservation interest species of any European site. Otters are generally shy species and will avoid human presence, as the works are so short in nature, it is unlikely to cause any kind of disturbance or displacement to these species. A scaffolding structure will be in place within the Breagagh River for the repointing works, this will be temporary in nature (i.e. 2-3 weeks), and will not obstruct the overall flow of the River. However this has the potential to cause a short term disturbance to aquatic species (i.e. brook lamprey, river lamprey, Atlantic salmon and white clawed-crayfish), by the potential creation of sediment when the scaffolding is installed and removed. Therefore there is potential for the draft CMP to cause displacement or disturbance effects that could affect the conservation objectives of these aquatic QI species.

7.1.3.4 Summary

98 Table 6 below presents a summary of the potential impacts of the draft CMP on the qualifying interests of River Barrow and River Nore SAC, and how these impacts relate to affecting the site's conservation objectives.

Table 6 Potential Impacts/Effects on the Conservation Objectives of River Barrow and River Nore SAC

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
River Barrow and River Nore SAC			
Desmoulin's whorl snail *Vertigo moulinsiana* [1016] To maintain the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution: occupied sites / Number / No decline. Two known sites: Borris Bridge, Co. Carlow S711503; Boston Bridge, Kilnaseer S338774, Co. Laois.	No This species is found a significant distance upstream of the draft CMP (NPWS, 2011), therefore there is no potential for impacts on Desmoulin's whorl snail arising from the draft CMP.	No	No
Population size: adults / Number per positive sample / At least 5 adults snails in at least 50% of samples			
Population density / Percentage positive samples / Adult snails present in at least 60% of samples per site			
Area of occupancy / Hectares / Minimum of 1ha of suitable habitat per site			
Habitat quality: vegetation / Percentage of samples with suitable vegetation / 90% of samples in habitat classes I and II as defined in Moorkens & Killeen (2011)			
Habitat quality: soil moisture levels / Percentage of samples with appropriate soil moisture levels / 90% of samples in moisture class 3-4 as defined in Moorkens & Killeen (2011)			
White-clawed crayfish *Austropotamobius pallipes* [1092] To maintain the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution / Occurrence / No reduction from baseline	Yes	Yes	No

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Population structure: recruitment / Percentage occurrence of juveniles and females with eggs / Juveniles and/or females with eggs in at least 50% of positive samples	An accidental pollution event or additional sediment load during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	
Negative indicator species / Occurrence / No alien crayfish species			
Disease / Occurrence / No instances of disease			
Water quality / EPA Q value / At least Q3-4 at all sites sampled by EPA			
Habitat quality: heterogeneity / Occurrence of positive habitat features / No decline in heterogeneity or habitat quality			
Sea Lamprey *Petromyzon marinus* [1095] To restore the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution: extent of anadromy / % of river accessible / Greater than 75% of main stem length of rivers accessible from estuary	Yes An accidental pollution event during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Population structure of juveniles / Number of age/size groups / At least three age/size groups present			
Juvenile density in fine sediment / Juveniles/m² / Juvenile density at least 1/m² J			
Extent and distribution of spawning habitat / m² and occurrence / No decline in extent and distribution of spawning beds			
Availability of juvenile habitat / Number of positive sites in 3rd order channels (and greater), downstream of spawning areas / More than 50% of sample sites positive			
Brook lamprey *Lampetra planeri* [1096] To restore the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution / % of river accessible / Access to all watercourses down to first order streams	Yes	Yes	No

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Population structure of juveniles / Number of age/size groups / At least three age/size groups of brook/river lamprey present	An accidental pollution event or additional sediment load during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	
Juvenile density in fine sediment / Juveniles/m² / Mean catchment juvenile density of brook/river lamprey at least 2/m²			
Extent and distribution of spawning habitat / m² and occurrence / No decline in extent and distribution of spawning beds			
Availability of juvenile habitat / Number of positive sites in 2nd order channels (and greater), downstream of spawning areas / More than 50% of sample sites positive			
River lamprey *Lampetra fluviatilis* [1099] To restore the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution: extent of anadromy / % of river accessible / Greater than 75% of main stem and major tributaries down to second order accessible from estuary	Yes An accidental pollution event or additional sediment load during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Population structure of juveniles / Number of age/size groups / At least three age/size groups of brook/river lamprey present			
Juvenile density in fine sediment / Juveniles/m² / Mean catchment juvenile density of brook/river lamprey at least 2/m²			
Extent and distribution of spawning habitat / m² and occurrence / No decline in extent and distribution of spawning beds			
Availability of juvenile habitat / Number of positive sites in 2nd order channels (and greater), downstream of spawning areas / More than 50% of sample sites positive			
Twaite Shad *Alosa fallax* [1103] To restore the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution: extent of anadromy / % of river accessible / Greater than 75% of main stem length of rivers accessible from estuary	Yes	Yes	No

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Population structure: age classes / Number of age classes / More than one age class present	An accidental pollution event load during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	
Extent and distribution of spawning habitat / m² and occurrence / No decline in extent and distribution of spawning habitats			
Water quality: oxygen levels / Milligrammes per litre / No lower than 5mg/l			
Spawning habitat quality: Filamentous algae; macrophytes; sediment / Occurrence / Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth			
Atlantic Salmon (*Salmo salar*) (only in fresh water) To restore the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution: extent of anadromy / % of river accessible / 100% of river channels down to second order accessible from estuary	Yes An accidental pollution event or additional sediment load during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Adult spawning fish / Number / Conservation Limit (CL) for each system consistently exceeded			
Salmon fry abundance / Number of fry/5 minutes electrofishing / Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling			
Out-migrating smolt abundance / Number / No significant decline			
Number and distribution of redds / Number and occurrence / No decline in number and distribution of spawning redds due to anthropogenic causes			
Water quality / EPA Q value / At least Q4 at all sites sampled by EPA			
Estuaries [1130] To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / The permanent habitat area is stable or increasing, subject to natural processes.	No	No	No

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Community distribution / Hectares / The following sediment communities should be maintained in a natural condition: Muddy estuarine community complex; Sand to muddy fine sand community complex; Fine sand with *Fabulina fabula* community.	Works are not taking place within or adjacent to this habitat therefore there will be no impact on its area, distribution, hydrological regimes or physical structure. The nearest known example of this habitat located within the SAC is *c.* 30km downstream of the propose development site on in the River Nore (NPWS, 2011).		
Community extent / Hectares / Maintain the natural extent of the *Sabellaria alveolata* reef, subject to natural process.			
Mudflats and sandflats not covered by seawater at low tide [1140] To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / The permanent habitat area is stable or increasing, subject to natural processes	No Works are not taking place within or adjacent to this habitat therefore there will be no impact on its area, distribution, hydrological regimes or physical structure. The nearest known example of this habitat located within the SAC is *c.* 50km downstream of the propose development site on the River Shannon (NPWS, 2011).	No	No
Community distribution / Hectares / The following sediment communities should be maintained in a natural condition: Muddy estuarine community complex; Sand to muddy fine sand community complex.			
***Salicornia* and other annuals colonising mud and sand [1310]** To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	No Works are not taking place within or adjacent to this habitat therefore there will be no impact on its area, distribution, hydrological regimes or physical structure. The nearest known example of this habitat located within	No	No
Habitat distribution / Occurrence / No decline, subject to natural processes			
Physical structure: sediment supply / Presence/ absence of physical barriers Maintain, or where necessary restore, natural circulation of sediments and organic matter, without any physical obstructions			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Physical structure: creeks and pans / Occurrence / Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	the SAC is over 50km downstream of the propose development site on the River Shannon (NPWS, 2011).		
Physical structure: flooding regime / Hectares flooded; frequency / Maintain natural tidal regime			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within sward			
Vegetation structure: vegetation cover / Percentage cover at a representative number of monitoring stops / Maintain more than 90% of area outside creeks vegetated			
Vegetation composition: typical species and subcommunities / Percentage cover at a representative sample of monitoring stops / Maintain the range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009)			
Vegetation structure: negative indicator species - *Spartina anglica* / Hectares / No significant expansion of common cordgrass (*Spartina anglica*). No new sites for this species and an annual spread of less than 1% where it is already known to occur			
Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	No Works are not taking place within or adjacent to this habitat therefore there will be no impact on its area, distribution, hydrological regimes or physical structure. The nearest known example of this habitat located within	No	No
Habitat distribution / Occurrence / No decline, subject to natural processes			
Physical structure: sediment supply Presence/ absence of physical barriers / Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Physical structure: creeks and pans / Occurrence / Maintain creek and pan structure, subject to natural processes, including erosion and succession	the SAC is over 50km downstream of the propose development site on the River Shannon (NPWS, 2011).		
Physical structure: flooding regime / Hectares flooded; frequency / Maintain natural tidal regime			
Vegetation structure: zonation / Occurrence / Maintain the range of saltmarsh habitat zonation including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within sward			
Vegetation structure: vegetation cover / Percentage cover at a representative number of monitoring stops / Maintain more than 90% of area outside creeks vegetated			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain the range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009)			
Vegetation structure: negative indicator species - *Spartina anglica* / Hectares / No significant expansion of common cordgrass (*Spartina anglica*), No new sites for this species and an annual spread of less than 1% where it is already known to occur			
Otter *Lutra lutra* [1355] To restore the favourable conservation condition of the species in the SAC, which is defined as follows:			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Distribution / Percentage positive survey sites / No significant decline	Yes An accidental pollution event during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Extent of terrestrial habitat / Hectares / No significant decline. Area mapped and calculated as 122.8ha above high water mark (HWM); 1136.0ha along river banks / around ponds	No Works are not taking place within the SAC therefore there will be no impact on its extent of terrestrial, marine or freshwater habitat or couching sites and holts	No	No
Extent of marine habitat / Hectares / No significant decline. Area mapped and calculated as 857.7ha			
Extent of freshwater (river) habitat / Kilometres / No significant decline. Length mapped and calculated as 616.6km			
Extent of freshwater (lake) habitat / Hectares / No significant decline. Area mapped and calculated as 2.6ha			
Couching sites and holts / Number / No significant decline			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Fish biomass available / Kilograms / No significant decline	Yes An accidental pollution event during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Mediterranean salt meadows (Juncetalia maritimi) [1410] To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	No Works are not taking place within or adjacent to this habitat therefore there will be no impact on its area, distribution, hydrological regimes or physical structure. The nearest known example of this habitat located within the SAC is over 50km downstream of the propose development site on the River Shannon (NPWS, 2011).	No	No
Habitat distribution / Occurrence / No decline, subject to natural processes			
Physical structure: sediment supply / Presence/ absence of physical barriers / Maintain or where necessary restore natural circulation of sediments and organic matter, without any physical obstructions			
Physical structure: creeks and pans / Occurrence / Maintain creek and pan structure, subject to natural processes, including erosion and succession			
Physical structure: flooding regime / Hectares flooded; frequency / Maintain natural tidal regime			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within sward			
Vegetation structure: vegetation cover / Percentage cover at a representative number of monitoring stops / Maintain more than 90% of area outside creeks vegetated			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009)			
Vegetation structure: negative indicator species - *Spartina anglica* / Hectares / No significant expansion of common cordgrass (*Spartina anglica*), No new sites for this species and an annual spread of less than 1% where it is already known to occur			
Killarney fern *Trichomanes speciosum* [1421] To maintain the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution / Location / No decline. Three locations known, with three colonies of gametophyte and one sporophyte colony.	No According to the SAC Conservation Objectives report, the nearest record of Killarney fern to the proposed site is located a considerable distance, approximately 33km, downstream of the draft CMP area, and the draft CMP area is located outside the current known distribution and favourable reference range of this species (NPWS, 2013)	No	No
Population size / Number / Maintain at least three colonies of gametophyte, and at least one sporophyte colony of over 35 fronds			
Population structure: juvenile fronds / Occurrence / At least one of the locations to have a population structure comprising sporophyte, unfurling fronds, 'juvenile' sporophyte and gametophyte generations			
Habitat extent / m² / No loss of suitable habitat, such as shaded rock crevices, caves or gullies in or near to, known colonies. No loss of woodland canopy at or near to known locations			
Hydrological conditions: visible water / Occurrence / Maintain hydrological conditions at the locations so that all colonies are in dripping or damp seeping habitats, and water is visible at all locations			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Hydrological conditions: humidity / Number of dessicated fronds / No increase. Presence of dessicated sporophyte fronds or gametophyte mats indicates conditions are unsuitable			
Light levels: shading / Percentage / No changes due to anthropogenic impacts			
Invasive species / Occurrence / Absent or under control			
Nore freshwater pearl mussel *Margaritifera durrovensis* [1990] To restore the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution / Kilometres / Maintain at 15.5km.	Yes An accidental pollution event during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Population size: adult mussels / Number / Restore to 5,000 adult mussels			
Population structure: recruitment / Percentage per size class / Restore to at least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length			
Population structure: adult mortality / Percentage / No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution			
Habitat extent / Kilometres / Restore suitable habitat in length of river corresponding to distribution target (15.5km) and any additional stretches necessary for salmonid spawning			
Water quality: Macroinvertebrates and phytobenthos (diatoms) / Ecological quality ratio (EQR) / Restore water quality- macroinvertebrates: EQR greater than 0.90; phytobenthos: EQR greater than 0.93			
Substratum quality: Filamentous algae (macroalgae), macrophytes (rooted higher plants) / Percentage / Restore substratum quality- filamentous algae: absent or trace (			
Substratum quality: sediment / Occurrence / Restore substratum quality- stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Substratum quality: oxygen availability / Redox potential / Restore to no more than 20% decline from water column to 5cm depth in substrate			
Hydrological regime: flow variability / Metres per second / Restore appropriate hydrological regimes			
Host fish / Number / Maintain sufficient juvenile salmonids to host glochidial larvae			
Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat distribution / Occurrence / No decline, subject to natural processes	Yes An accidental pollution event during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Habitat area / Kilometres / Area stable or increasing, subject to natural processes			
Hydrological regime: river flow / Metres per second / Maintain appropriate hydrological regimes			
Hydrological regime: groundwater discharge / Metres per second / The groundwater flow to the habitat should be permanent and sufficient to maintain tufa formation			
Substratum composition: particle size range / Millimetres / The substratum should be dominated by large particles and free from fine sediments			
Water chemistry: minerals / Milligrammes per litre / The groundwater and surface water should have sufficient concentrations of minerals to allow deposition and persistence of tufa deposits			
Water quality: suspended sediment / Milligrammes per litre / The concentration of suspended solids in the water column should be sufficiently low to prevent excessive deposition of fine sediments			
Water quality: nutrients / Milligrammes per litre / The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation composition: typical species / Occurrence / Typical species of the relevant habitat sub-type should be present and in good condition			
Floodplain connectivity / Area / The area of active floodplain at and upstream of the habitat should be maintained			
European dry heaths [4030] To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows			
Habitat distribution / Occurrence / No decline from current habitat distribution, subject to natural processes	No European dry heaths is a terrestrial habitat, therefore a potential deterioration in water quality would not be anticipated to have a significant adverse impact upon this qualifying interest should it be present adjacent the River Nore downstream of the draft CMP.	No	No
Habitat area / Hectares / Area stable or increasing, subject to natural processes. Habitat area is not known but estimated as less than 400ha of the area of the SAC, occurring in dispersed locations			
Physical structure: free-draining, acid, low nutrient soil; rock outcrops / Occurrence / No significant change in soil nutrient status, subject to natural processes. No increase or decrease in area of natural rock outcrop			
Vegetation structure: sub- shrub indicator species / Percentage cover / Cover of characteristic sub- shrub indicator species at least 25%: gorse (*Ulex europaeus*) and where rocky outcrops occur bilberry (*Vaccinium myrtillus*) and woodrush (*Luzula sylvatica*). Some rock outcrops support English stonecrop (*Sedum anglicum*), sheep's bit (*Jasione montana*) and wild madder (*Rubia peregrina*) as well as important moss and lichen assemblages			
Vegetation structure: senescent gorse / Percentage cover / Cover of senescent gorse less than 50%			
Vegetation structure: browsing / Percentage cover / Long shoots of bilberry with signs of browsing collectively less than 33%			
Vegetation structure: native trees and shrubs / Percentage cover / Cover of scattered native trees and shrub less than 20%			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation composition: positive indicator species / Number / Number of positive indicator species at least 2 e.g. gorse and associated dry heath/ acid grassland flora			
Vegetation structure: positive indicator species / Percentage cover / Cover of positive indicator species at least 60%. This should include plant species characteristic of dry heath in this SAC including gorse, bilberry and associated acid grassland flora			
Vegetation composition: bryophyte and non-crustose lichen species / Number / Number of bryophyte or non- crustose lichen species present at least 2			
Vegetation composition: bracken (*Pteridium aquilinum*) / Percentage cover / Cover of bracken less than 10% - however see 'Notes'			
Vegetation structure: weedy negative indicator species / Percentage cover / Cover of agricultural weed species (negative indicator species) less than 1%			
Vegetation composition: non- native species / Percentage cover / Cover of non-native species less than 1%.			
Vegetation composition: rare/scarce heath species / Location, area and number / No decline in distribution or population sizes of rare, threatened or scarce species, including Greater Broomrape (*Orobanche rapum-genistae*) and the legally protected clustered clover (*Trifolium glomeratum*)			
Vegetation structure: disturbed bare ground / Percentage cover / Cover of disturbed bare ground less than 10% (but if peat soil less than 5%)			
Vegetation structure: burning / Occurrence / No signs of burning within sensitive areas			
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows			
Habitat distribution / Occurrence / No decline, subject to natural processes	Yes	Yes	No
Habitat area / Hectares / Area stable or increasing, subject to natural processes			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Hydrological regime: Flooding depth/height of water table / Metres / Maintain appropriate hydrological regimes	An accidental pollution event during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	
Vegetation structure:sward height / Centimetres / 30-70% of sward is between 40 and 150cm in height			
Vegetation composition: broadleaf herb: grass ratio / Percentage / Broadleaf herb component of vegetation between 40 and 90%			
Vegetation composition: typical species / Number / At least 5 positive indicator species present			
Vegetation composition: negative indicator species / Occurrence / Negative indicator species, particularly non-native invasive species, absent or under control- NB Indian balsam (*Impatiens glandulifera*), monkeyflower (*Mimulus guttatus*), Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*)			
*** Petrifying springs with tufa formation (Cratoneurion)** To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows			
Habitat area / Square metres / Area stable or increasing, subject to natural processes	Yes An accidental pollution event during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Habitat distribution / Occurrence / No decline.			
Hydrological regime: height of water table; water flow / Metres; metres per second / Maintain appropriate hydrological regimes			
Water quality / Water chemistry measures / Maintain oligotrophic and calcareous conditions			
Vegetation composition: typical species / Occurrence / Maintain typical species			
Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Habitat area / Hectares / Area stable or increasing, subject to natural processes, at least 85.08ha for sub-sites surveyed:	No The draft CMP area is located outside the current known distribution and favourable reference range of this qualifying interest (NPWS, 2019). According to the SAC Conservation Objectives report, old oak woodlands are located approximately 30km downstream of the draft CMP area. However, the report notes that further unsurveyed areas may be present within the SAC. Old oak woodlands is a terrestrial habitat, therefore a potential deterioration in water quality would not be anticipated to have a significant adverse impact upon this qualifying interest should it be present adjacent the River Nore downstream of the draft CMP.	No	No
Habitat distribution / Occurrence / No decline.			
Woodland size / Hectares / Area stable of increasing. Where topographically possible, "large" woods at least 25ha in size and “small” woods at least 3ha in size			
Woodland structure: cover and height / Percentage and metres / Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer			
Woodland structure: community diversity and extent / Hectares / Maintain diversity and extent of community types			
Woodland structure: natural regeneration / Seedling:sapling:pole ratio / Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy			
Woodland structure: dead wood / m³ per hectare; number per hectare / At least 30m³/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter			
Woodland structure: veteran trees / Number per hectare / No decline			
Woodland structure: indicators of local distinctiveness / Occurrence / No decline			
Vegetation composition: native tree cover / Percentage / No decline. Native tree cover not less than 95%			
Vegetation composition: typical species / Occurrence / A variety of typical native species present, depending on woodland type, including oak (*Quercus petraea*) and birch (*Betula pubescens*)			
Vegetation composition: negative indicator species / Occurrence / Negative indicator species, particularly non-native invasive species, absent or under control			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
*** Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]** To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, at least 181.54ha for sites surveyed: see map 6	Yes An accidental pollution event during the repointing/repair works could affect surface water in the River Breagagh, and subsequently in the River Nore. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of habitats.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	No
Habitat distribution / Occurrence / No decline. Surveyed locations shown on map 6			
Woodland size / Hectares / Area stable of increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size			
Woodland structure: cover and height / Percentage and metres / Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer			
Woodland structure: community diversity and extent / Hectares / Maintain diversity and extent of community types			
Woodland structure: natural regeneration / Seedling:sapling:pole ratio / Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy			
Hydrological regime: Flooding depth/height of water table / Metres / Appropriate hydrological regime necessary for maintenance of alluvial vegetation			
Woodland structure: dead wood / m^3 per hectare; number per hectare / At least $30m^3$/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder)			
Woodland structure: veteran trees / Number per hectare / No decline			
Woodland structure: indicators of local distinctiveness / Occurrence / No decline			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation composition: native tree cover / Percentage / No decline. Native tree cover not less than 95%			
Vegetation composition: typical species / Occurrence / A variety of typical native species present, depending on woodland type, including ash (*Fraxinus excelsior*) alder (*Alnus glutinosa*), willows (*Salix* spp) and locally, oak (*Quercus robur*)			
Vegetation composition: negative indicator species/ Occurrence / Negative indicator species, particularly non-native invasive species, absent or under control			

7.1.4 Mitigation Measures

99 This section presents the mitigation measures that will be implemented during repointing/repair and operation to avoid or reduce the potential impacts of the draft CMP works on the River Barrow and River Nore SAC. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

100 It is recognised that there is a potential pathway to downstream European sites, therefore an NIS is required for the Conservation Plan and the policies and objectives that are included in the Conservation Plan. The implementation of the Conservation Plan will result in projects. The specific details of the works, including any specific mitigation measures, will be determined in due course and will be subject to their own AA screening/NIS as appropriate.

<u>Measures to Protect Surface Water Quality during Repointing/Repair Works</u>

101 Specific details on the location of repair/repointing works are yet to be decided, and therefore specific mitigation measures will be included in their own AA Screening and NIS (if appropriate). Therefore, generic measures for the protection of surface water quality and good site practice are included below. The repointing/repair contractor will be required to implement the following mitigation measures as a condition if granted by Kilkenny Council all of which will be incorporated in full into the Construction Environmental Management Plan (CEMP) or similar, for release of hydrocarbons, polluting chemicals, sediment/silt and contaminated waters control:

- Measures to prevent the release of sediment over baseline conditions in the downstream receiving water environment, in particular for during the repair/repointing work. These measures include, but are not limited to, the use of silt fences, silt curtains, settlement lagoons and filter materials underneath the area of repointing works, and adjacent to the River Breagagh to prevent any runoff reaching the receiving watercourses.
- Provision of exclusion zones and barriers (e.g. silt fences) between earthworks, stockpiles and temporary surfaces to prevent sediment washing into the existing drainage systems and hence the downstream receiving water environment.
- On the scaffolding structure, kickboards are required, and cementitious material should only be brought onto scaffold as needed with no stockpiling, with no refuelling near watercourses.
- Provision of temporary repointing/repair surface drainage and sediment control measures to be in place before works commence.
- Weather conditions will be considered when planning repointing/repair activities to minimise risk of run-off from the site.
- Prevailing weather and environmental conditions will be considered prior to the pouring of cementitious materials for the works adjacent to any surface water drainage features, or drainage features connected to same. Pumped concrete will be monitored to ensure no accidental discharge. Mixer washings and excess concrete will not be discharged to existing surface water drainage systems. Concrete washout areas will be located remote any surface water drainage features, where feasible, to avoid accidental discharge to watercourses. Washing out of any concrete trucks on site will be avoided.
- Any fuels or chemicals (including hydrocarbons or any polluting chemicals) will be stored in a designated, secure bunded area(s) to prevent any seepage of potential pollutants into the local surface water network (drainage network or watercourses. These designated areas will be clearly sign-posted and all personnel on site will be made aware of their locations and associated risks.
- All mobile fuel bowsers shall carry a spill kit and operatives must have spill response training. All fuel containing equipment such as portable generators shall be placed on drip trays. All fuels and chemicals required to be stored on-site will be clearly marked. Care and attention will be taken

during refuelling and maintenance operations. Particular attention will be paid to gradient and ground conditions, which could increase risk of discharge to waters.

- A register of all hazardous substances, which will either be used on site or expected to be present (in the form of soil and/or groundwater contamination) will be established and maintained. This register will be available at all times and shall include as a minimum:
    - Valid Safety Data Sheets;
    - Health & Safety, Environmental controls to be implemented when storing, handling, using and in the event of spillage of materials;
    - Emergency response procedures/precautions for each material; and,
    - The Personal Protective Equipment (PPE) required when using the material.
- Implementation of response measures to potential pollution incidents.
- Robust and appropriate Spill Response Plan and Environmental Emergency Plan will be prepared prior to works commencing and they will be communicated, resourced and implemented for the duration of the works. Emergency procedures/precautions and spillage kits will be available and repointing/repair staff will be trained and experienced in emergency procedures in the event of accidental fuel spillages.
- All trucks will have a built-on tarpaulin that will cover excavated material as it is being hauled off-site and wheel wash facilities will be provided at all site egress points.
- All waters from excavations etc. shall be drained through appropriate filter material prior to discharge from the repointing/repair sites.
- The removal of any made ground material, which may be contaminated, from the repointing/repair site and transportation to an appropriate licenced facility shall be carried out in accordance with the Waste Management Act, best practice and guidelines for same.
- A discovery procedure for contaminated material will be prepared and adopted by the appointed contractor prior to excavation works commencing on site. These documents will detail how potentially contaminated material will be dealt with during the excavation phase.
- Implementation of measures to minimise waste and ensure correct handling, storage and disposal of waste (most notably wet concrete, pile arisings and asphalt).

102 All of the above measures implemented on site will be monitored throughout the duration of repointing/repair to ensure that they are working effectively, to implement maintenance measures if required/applicable and to address any potential issues that may arise.

Measures to Protect Otter from habitat loss/fragmentation and Disturbance/Displacement impacts

103 Whilst no otter holts were identified within 150m of the draft CMP, this section presents the mitigation measures that will be implemented during construction to avoid the potential impacts of the draft CMP on QI otter populations associated with the River Barrow and the River Nore SAC. All of the mitigation measures will be implemented in full. They are in accordance with best practice, and tried and tested, effective control measures to protect otter.

Pre-Construction Survey

104 Prior to construction works commencing, the appointed contractor will engage the services of a suitably qualified ecologist to conduct a pre-construction otter survey of the draft CMP area and its ZOI up and downstream (as far as is practical) of watercourses. The survey will be undertaken within 10 months in advance of construction and supplemented by a further inspection of the draft CMP area immediately prior to any works alongside watercourses to ensure that no new holts have been established in the intervening period. These surveys will be carried out in accordance with Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes (NRA, 2006).

105 Where any new active holts/couches are recorded within 150m of the draft CMP area the appointed ecologist will ensure that adequate mitigation is provided in accordance with Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes (NRA, 2006), and a derogation licence is sought from the NPWS where necessary.

Mitigation measures for new active holts/couches recorded within 150m of the development

106 Until such time as otters have been successfully evacuated from active holts, where required and approved by NPWS, the following provisions should apply to all construction works:

107 No works should be undertaken within 150m of any holts at which breeding females or cubs are present. Following consultation with NPWS, works closer to such breeding holts may take place - provided appropriate mitigation measures are in place, e.g. screening and/or restricted working hours on site.

108 No wheeled or tracked vehicles (of any kind) should be used within 20m of active, but non-breeding, otter holts. Light work, such as digging by hand or scrub clearance (if required) should also not take place within 15m of such holts, except under licence.

109 The prohibited working area associated with otter holts should, where appropriate, be fenced with temporary fencing prior to any possibly invasive works. Fencing should be in accordance with Clause 303 of the NRA's Specification for Roadworks (National Roads Authority). Appropriate awareness of the purpose of the enclosure should be conveyed through notification to site staff and sufficient signage should be placed on each exclusion fence. All contractors or operators on site should be made fully aware of the procedures pertaining to each affected holt.

110 Where holts are present in close proximity to invasive construction works but are determined not to require destruction, construction works may commence once recommended alternative mitigation measures to address otters have been complied with.

Ecological Clerk of Works/Retained Ecologist

111 Where a new holt to be encountered, within 150 metres (up and downstream) of watercourse crossing, and NPWs consultation sought, the services of an Ecological Clerk of works or retained Ecologist (both with experience with otter survey/mitigation) would be required.

112 The appointed contractor shall employ the services of an Ecological Clerk of Works (EcOW) with experience in otter, to oversee and advise works at watercourse crossings for the draft CMP (they may also undertake the preconstruction survey). The EcOW will have the authority to:

- Review method statements;
- Oversee works;
- Provide instruction to the appointed contractor(s); and,
- Require the temporary cessation of works, where necessary.

113 The EcOW will deliver a toolbox talk on biodiversity including otter to the appointed contractor(s). This talk will include instructions on identifying otter and details on the protections afforded to otter under Irish and EU legislation. The EcOW will outline the actions which will be taken by the contractor(s) if otter are noted on or near the draft CMP during construction works.

Measures to Prevent/Reduce Disturbance and Displacement

- Night working within/directly adjacent to watercourses where otter are known to commute should be avoided and will only be permitted with the prior approval of the planning authority.
- Where night-working adjacent to watercourses known to support otter, is required, owing to practical considerations of traffic restrictions etc., the advice of a suitably qualified ecologist must be sought and a derogation licence, if necessary, may be sought from the NPWS permitting such works.

Lighting

114 The appointed contractor in liaison with the suitably qualified licensed ecologist(s) will ensure that any lighting (Security (temporary) required in proximity to watercourses, will be designed to minimise light spill and be cognisant of light-spill onto these areas. Where permenant lighting might be required as part of the draft CMP, an assessment by lighting expert will be undertaken taking cognizance of the Biodiversity potential of the site, in particular along the watercourses, but also in respect of retained buildings where bat activity has been noted.

115 Mitigation measures to reduce light spill may include the following:

- the use of sensor / timer triggered lighting;
- LED luminaires to be used where practicable;
- column heights to be considered to minimise light spill; and,
- accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only where needed.
- Where night time works are required the appointed contractor will liaise with the engaged suitably experienced and qualified ecologist(s) and implement measures to mitigate the impact of such works (especially works carried adjacent to watercourses).

7.1.5 Residual Impacts

116 The draft CMP poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the qualifying interest habitats of River Barrow and River Nore SAC, and there are therefore, no residual direct or indirect impacts associated with the draft CMP that could adversely affect the integrity of River Barrow and River Nore SAC.

7.1.6 Conclusion of Assessment for River Barrow and River Nore SAC

117 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the qualifying interests of River Barrow and River Nore SAC, the potential impacts, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the qualifying interests, it has been concluded that the measures of the draft CMP does not pose a risk of adversely affecting (either directly or indirectly) the integrity of River Barrow and River Nore SAC.

7.2 River Nore SPA [004233]

7.2.1 Ecological Baseline Description for River Nore SPA

118 The Natura 2000 Standard Data Form (NPWS, 2020) the River Nore as supporting nationally important numbers of *Alcedo atthis*. Other species which occur within the site include *Cygnus olor, Anas platyrhynchos, Phalacrocorax carbo, Ardea cinerea, Gallinula chloropus, Gallinago gallinago* and *Riparia riparia.*

7.2.2 Qualifying Interests and Conservation Objectives of River Nore SPA

119 The special conservation interests of River Nore SPA, and the overall conservation objective, are listed below in Table 7.

Table 7 Qualifying Interests and Conservation Objectives of River Nore SPA

Qualifying Interest(s)	Conservation Objective(s)
A229 Kingfisher *Alcedo atthis* S.I. No. 193/2012 - European Communities (Conservation of Wild Birds (River Nore Special Protection Area 004233)) Regulations 2012	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA

Qualifying Interest(s)	Conservation Objective(s)
NPWS (2022) Conservation objectives for River Nore SPA [004233]. Generic Version 9.0. Department of Housing, Local Government and Heritage.	

120 In conjunction with considering the generic conservation objective for this SPA "To maintain or restore the favourable conservation condition of the bird species for which the SPA has been selected", the site specific conservation objectives document for River Nore SPA also informed this assessment.

121 The generic conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the special conservation interests within the European site. Affecting the conservation condition of the special conservation interests is deemed to constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the qualifying interests of River Nore SPA are presented in Section 6.1.3, Table 8.

7.2.3 Examination and Analysis of Potential Direct and Indirect Impacts

122 The direct and/or indirect impacts by which the draft CMP could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of River Nore SPA, are:

- Habitat loss and fragmentation
- Habitat degradation as a result of hydrological impacts

7.2.4 Habitat loss and fragmentation

123 There are no works required within the River Nore, of which the Kingfisher is a designated SCI species for. However; Kingfisher likely use the Breagagh River for commuting and foraging, and are present along the River Nore. There is no viable habitat for kingfisher burrows within the draft CMP area, however there will be placement of a scaffolding structure within the Breagagh for the repair and repointing works, which may interfere with commuting/foraging routes, albeit on a temporary basis. Habitat loss may also occur indirectly as a consequence of severe habitat degradation in water quality and/or changes to the hydrological regime, and therefore, could affect the conservation statis of this SCI species from the River Nore SPA.

7.2.5 Habitat degradation as a result of hydrological impacts

124 The release of contaminated surface water runoff and/or an accidental spillage or pollution event into any surface water features during any repair or repointing works to the City Walls and Evans Turret, has the potential to affect water quality in the receiving aquatic environment. In the absence of mitigation, the associated effects of a reduction of surface water quality could potentially extend distance downstream of the discharge point or location of the accidental pollution event. Such an occurrence, of a sufficient magnitude, either alone or in combination with other pressures on water quality, and in the absence of mitigation could undermine the conservation objectives of the European sites in the River Nore.

125 The draft CMP is adjacent to the River Breagagh and the River Nore which flow along the northern and eastern boundaries of the draft CMP area. A reduction in water quality as a result of an accidental pollution event (either alone or in combination with other pressures on water quality) however, could result in the degradation of the local aquatic environment, which could in turn negatively affect the otter population through direct contact with pollutants or a decline in fish prey. Kingfishers use the River Nore and the River Breagagh for foraging and commuting, and would therefore be sensitive to changes in the hydrological regime that may affect the availability of fish prey.

126 As the draft CMP has the potential to result in habitat degradation and effects on of the special conservation interest species of European site as the result of hydrological impacts, there is the potential for in combination effects to occur.

7.2.5.1 Summary

127 Table 8 below presents a summary of the potential impacts of the draft CMP on the special conservation interests of the River Nore SPA, and how these impacts relate to affecting the site's conservation objectives.

Table 8 Potential Impacts/Effects on the Conservation Objectives of River Nore SPA

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
River Nore SPA			
Kingfisher *Alcedo atthis* There is no site-specific conservation objectives document available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the generic conservation objectives available for the River Nore SPA:			
Population trend / Percentage change / Long term population trend stable or increasing	Yes An accidental pollution event during repointing/repair works could affect surface water in the River Breagagh and the River Nore, of which SCI species from this European site forage within. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality of habitats that support the special conservation interest bird species of this SPA. This could potentially affect the use of habitat areas by birds, including foraging resources, and have long-term effects on the SPA population.	Yes The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in the River Nore and River Breagagh is protected during any repair/repointing works.	**No**
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation			

7.2.6 Mitigation Measures

128 This section presents the mitigation measures that will be implemented during repointing/repair and operation to avoid or reduce the potential impacts of the draft CMP on the River Nore SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

Measures to Protect Surface Water Quality during Repointing/Repair Works

129 The mitigation measures presented above in Section 7.1.4 will protect surface water qualify during repointing/repair of the draft CMP.

7.2.7 Residual Impacts

130 The draft CMP poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the special conservation interest species of the River Nore SPA and there are therefore, no residual direct or indirect impacts associated with the draft CMP that could adversely affect the integrity of the River Nore SPA.

7.2.8 Conclusion of Assessment for the River Nore SPA

131 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the special conservation interest species of the River Nore SPA, the potential impacts, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the qualifying interests, it has been concluded that the draft CMP does not pose a risk of adversely affecting (either directly or indirectly) the integrity of the River Nore SPA.

8 In Combination Assessment

8.1 Analysis of Potential In Combination Effects

132 This section of the report presents the assessment carried out to examine whether any other plans or projects have the potential to act in combination with the draft CMP to adversely affect the integrity of the River Barrow and River Nore SAC and the River Nore SPA. All other European sites fall beyond the zone of influence of the draft CMP. Therefore, there is no potential for any other plans or projects to act in combination with the draft CMP to adversely affect the integrity of any other European sites.

133 Projects arising from the draft CMP which require construction shall be subject to their own individual Appropriate Assessment, as per statutory obligations, and reinforced in the current Kilkenny City and County Development Plan.

134 As assessed in Section 6, none of the potential impacts associated with the draft CMP will result in any perceptible residual effect on the receiving environment or on the qualifying interests/special conservation interests of River Barrow and River Nore SAC and the River Nore SPA. Therefore, there will not be any residual impacts associated with the draft CMP that will adversely affect the conservation objectives supporting the conservation condition of the qualifying interests/special conservation interests of those European sites, and the draft CMP in isolation will not adversely affect the integrity of those European site.

135 There is the potential for other pollution sources within the Nore WFD catchment and any other catchments that also drain to the River Nore to cumulatively affect water quality in the receiving aquatic environments. There are a number of plans and projects in the vicinity of the draft CMP, and along the River Nore, and therefore there is potential for in-combination adverse effects to the QI and SCI habitats and species of the River Barrow and River Nore SAC and the River Nore SPA. This includes the Abbey Quarter Masterplan, within which the draft CMP is located, as well as a number of other projects, namely; the Abbey Quarter Urban Park and Street, The Riverside Garden Project, the redevelopment of the Mayfair Ballroom into the City Library, and the redevelopment of the former Smithwick's Brewery Brewhouse, all

Appropriate Assessment Screening Report

For the Abbey Quarter Kilkenny City Draft Conservation Management Plan

prepared for Howley Hayes Cooney Architecture

on behalf of Kilkenny County Council

Scott Cawley, College House, 71 – 73 Rock Road, Blackrock, Co. Dublin, A94 F9X9, Ireland

Tel+353(1)676-9815 Fax +353(1) 676-9816

Document Control

Project Title	Abbey Quarter Kilkenny Conservation Plan		**Project No.**	210006
Document Title	Appropriate Assessment Screening Report		**Status**	Final
Revision	**Issue Date**	**Author**	**Reviewed By**	**Approved By**
I1	06/05/2022	SQ	NB	CC/TR

Table of Contents

1 Introduction

1 This report, which contains information required for the competent authority (in this instance Kilkenny Co. Council) to undertake a screening for Appropriate Assessment (AA), has been prepared by Scott Cawley Ltd. on behalf of the applicant. It provides information on, and assesses the potential for the Abbey Quarter Kilkenny City Draft Conservation Management Plan (hereafter referred to as "the draft CMP") to impact on the Natura 2000 network (hereafter referred to as European sites)[1]. The purpose of the draft CMP is to establish the history and significance of the Abbey Quarter, with a particular focus on three protected structures; St. Francis Abbey, Evans Turret, and the City Walls, and to deliver clear objectives for maintenance and conservation, guidance or any future development of the site (Appendix II).

2 An AA is required if significant effects on European sites arising from a plan or project cannot be ruled out at the screening stage, either alone or in combination with other plans or projects. It is the responsibility of the competent authority to make a decision as to whether or not the plan or project is likely to have significant effects on European sites, either individually or in combination with other plans or projects.

For the reasons set out in detail in this AA Screening Report, an **Appropriate Assessment of the draft CMP is required in this instance** as it cannot be concluded, on the basis of objective information, that the draft CMP, either individually or in combination with other plans or projects, will not have a significant effect on the following European sites: **The River Barrow and River Nore SAC [002162] and the River Nore SPA [004233]**

2 Methodology

2.1 Guidance

3 This Appropriate Assessment Screening Report has been prepared with regard to the following guidance documents, as relevant:

- *OPR Practice Note PN01. Appropriate Assessment Screening for Development Management* (Office of the Planning Regulator, 2021)
- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision)
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPW 1/10 & PSSP 2/10
- *Assessment of Plans and Projects in Relation to Natura 2000 sites: Methodological Guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021)
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European

[1] The Natura 2000 network is a European network of important ecological sites, as defined under Article 3 of the Habitats Directive 92/43/EEC, which comprises both special areas of conservation and special protection areas. Special conservation areas are sites hosting the natural habitat types listed in Annex I, and habitats of the species listed in Annex II, of the Habitats Directive, and are established under the Habitats Directive itself. Special protection areas are established under Article 4 of the Birds Directive 2009/147/EC for the protection of endangered species of wild birds. The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats.

In Ireland these sites are designed as European sites - defined under the Planning Acts and/or the Birds and Habitats Regulations as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. They are commonly referred to in Ireland as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Commission, 2001)*Communication from the Commission on the precautionary principle* (European Commission, 2000), and

- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019)

2.2 Assessment Methodology

4 The above referenced guidance sets out a staged process for carrying out Appropriate Assessment. To determine if an Appropriate Assessment is required, documented screening is required. Screening identifies the potential for effects on the conservation objectives of European sites, if any, which would arise from a proposed plan or project, either alone or in combination with other plans and projects (i.e. likely significant effects).

5 Significant effects on a European site are those that would undermine the conservation objectives supporting the favourable conservation condition of the Qualifying Interest (QI) habitats and/or the QI/Special Conservation Interest (SCI) species of a European site(s).

6 Screening for Appropriate Assessment involves the following steps:

Determining whether the draft CMP is directly connected with, or necessary to the conservation management of, any European site(s)

↓

Describing the details of the draft CMP

↓

Describing the receiving environment

↓

Assessment of effects on European sites

↓

Identifying all the potential impacts of the draft CMP on the receiving environment

↓

Defining the zone of influence of the draft CMP on the receiving environment

↓

Identifying the European site(s) within the zone of influence of the draft CMP

↓

Assessing whether the potential impacts associated with the draft CMP will undermine the conservation objectives of any European site(s), either alone or in combination with other plans or projects

↓

Conclusions of screening assessment process

7 If the conclusions at the end of screening are that there is no likelihood of significant effects occurring on any European sites as a result of the proposed plan or project, either alone or in combination with other plans and projects, then there is no requirement to undertake an Appropriate Assessment.

8 In establishing which European sites are potentially at risk (in the absence of mitigation) from the draft CMP, a source-pathway-receptor approach was applied. In order for an impact to occur, there must be a risk enabled by having a source (e.g. water abstraction or construction works), a receptor (e.g. a European site or its QI(s) or SCI(s)[2]), and a pathway between the source and the receptor (e.g. pathway by air for airborne pollution, or a pathway by a watercourse for mobilisation of pollution). For an impact to occur, all three elements must exist; the absence or removal of one of the elements means there is no possibility for the impact to occur.

9 The identification of source-pathway-receptor connection(s) between the draft CMP and European sites essentially is the process of identifying which European sites are within the Zone of Influence (ZoI) of the draft CMP, and therefore potentially at risk of significant effects. The ZoI is the area over which the draft CMP could affect the receiving environment such that it could potentially have significant effects on the QI habitats or QI/SCI species of a European site, or on the achievement of their conservation objectives[3].

10 The identification of a source-pathway-receptor link does not automatically mean that significant effects will arise. The likelihood for significant effects will depend upon the characteristics of the source (e.g. extent and duration of construction works), the characteristics of the pathway (e.g. direction and strength of prevailing winds for airborne pollution) and the characteristics of the receptor (e.g. the sensitivities of the European site and its QIs/SCIs).

11 The 'likely significant effects' test is based on the precautionary principle[4]. The precautionary principle means that, based on the most reliable available information, where there is uncertainty or doubt as to the absence of significant effects, the project cannot be screened out and an appropriate assessment must be carried out.

2.3 Desktop Data Review

12 The desktop data sources used to inform the assessment presented in this report are as follows (accessed in May 2022):

[2] The term qualifying interest is used when referring to the habitats or species for which an SAC is designated; the term special conservation interest is used when referring to the bird species (or wetland habitats) for which an SPA is designated.

[3] As defined in the *Guidelines for Ecological Impact Assessment in the UK and Ireland* (CIEEM, 2018)

[4] The precautionary principle is a guiding principle that derives from Article 191 of the Treaty on the Functioning of the European Union and has been developed in the case law of the European Court of Justice (e.g. ECJ case C-127/02 – Waddenzee, Netherlands).

The guidance document *Communication from the Commission on the Precautionary Principle* (European Commission, 2000) notes that the precautionary principle "*covers those specific circumstances where scientific evidence is insufficient, inconclusive or uncertain and there are indications through preliminary objective scientific evaluation that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the chosen level of protection*"..

- Online data available on European sites and protected habitats/species as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie[5], including conservation objectives documents
- Online data available on protected species as held by the National Biodiversity Data Centre (NBDC) from www.biodiversityireland.ie
- Information on the surface water network and surface water quality in the area available from www.epa.ie
- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- Information on the location, nature and design of the draft CMP supplied by the applicant's design team
- Information on soils, geology and hydrogeology in the area available from the Geological Survey Ireland (GSI) online Spatial Resources service. Available from https://www.gsi.ie/en-ie/data-and-maps/Pages/Groundwater.aspx
- Information on the conservation status of birds in Ireland from *Birds of Conservation Concern in Ireland* (Gilbert *et al.*, 2021)
- Information on the location, nature and design of the draft CMP supplied by the applicant's design team.
- *Stage 2: Appropriate Assessment – Natura Impact Statement, Abbey Quarter – Urban Park and Street*. Malone O' Regan Environmental, July 2020.

2.4 Baseline Surveys

13 This section describes the ecological surveys carried out to inform the assessment of likely significant effects on European sites.

14 Ecological field surveys were carried out following the best practice professional guidelines in August and September 2021. The surveys and their dates are presented in Table 1.

15 Habitat and flora surveys, terrestrial fauna surveys, ground-level assessment of buildings and trees, and breeding bird habitat suitability were undertaken on the 17th August 2021 by Síofra Quigley BSc (Hons) MSc. Bat activity surveys of the buildings within the draft CMP were undertaken by Caroline Shiel, an independent bat specialist, on the 5th August, 12th August, 9th, 27th and 28th of September 2021.

Table 1 Ecological surveys and survey dates

Survey	Survey Date(s)	Surveyor(s)
Multidisciplinary survey	17th August 2021	Scott Cawley Ltd.
External Building inspections	17th August 2021	Scott Cawley Ltd.
Bat activity surveys	4th, 11th & 12th August, 9th, 10th , 27th and 28th September 2021	Dr Caroline Shiel, independent Licenced bat specialist

[5] The following SAC and SPA GIS boundary datasets are the most recently available at the time of writing: SAC_ITM_2022_04 and SPA_ITM_2021_10.

2.4.1 Habitats and Flora Survey

16 A habitat survey was undertaken of the lands on the 17th August 2021 by Síofra Quigley following the methodology described in *Best Practice Guidance for Habitat Survey and Mapping*[6]. All habitat types were classified using the *Guide to Habitats in Ireland*[7], recording the indicator species and abundance using the DAFOR scale[8] and recording any species of conservation interest. Vascular and bryophyte plant nomenclature generally follow that of The National Vegetation Database[9], having regard to more recent taxonomic changes to species names after the New Flora of the British Isles[10] and the British Bryological Society's *Mosses and Liverworts of Britain and Ireland: A Field Guide*[11]. Invasive species as listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011-2015, were also surveyed for within the lands of the draft CMP[12].

2.4.2 Fauna Surveys

2.4.2.1 Terrestrial Mammals (excl. Bats)

17 A terrestrial fauna survey (excluding bats) was undertaken on the 17th August 2021 by Síofra Quigley. The presence/absence of terrestrial fauna species were surveyed through the detection of field signs such as tracks, markings, feeding signs, and droppings, as well as by direct observation. The habitats on site were assessed for signs of usage by protected/red-listed fauna species, and their potential to support these species.

18 Bat surveys are not relevant for the purpose of AA, as the draft CMP is located outside the range of lesser horseshoe bat *Rhinolophus hipposideros* (only found in the west and southwest of Ireland[13]), the only Annex II species native to Ireland.

2.4.3 Birds

19 Due to the time of year of the survey season for breeding birds (April – June), breeding bird surveys could not be undertaken. Therefore, breeding bird habitat suitability checks of the habitats within the subject lands and the surrounding environs were undertaken on the 17th of August 2021 by Siofra Quigley. Anecdotal signs of birds in the area were identified by sight and song, and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes. The banks of the Breagagh River and the River Nore were also surveyed for kingfisher nesting suitability.

---

[6] Smith, G.F., O'Donoghue, P., O'Hora, K. & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council Church Lane, Kilkenny, Ireland.

[7] Fossitt, J.A. (2000) *A Guide to Habitats in Ireland*. Heritage Council, Kilkenny.

[8] The DAFOR scale is an ordinal or semi-quantitative scale for recording the relative abundance of plant species. The name DAFOR is an acronym for the abundance levels recorded: Dominant, Abundant, Frequent, Occasional and Rare.

[9] Weekes, L.C. & FitzPatrick, Ú. (2010) The National Vegetation Database: Guidelines and Standards for the Collection and Storage of Vegetation Data in Ireland. Version 1.0. Irish Wildlife Manuals, No. 49. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

[10] Stace, C. (2019) *New Flora of the British Isles*. *4th Edition*. C&M Floristics.

[11] Atherton, I., Bosanquet, S. & Lawley, M. (2010) *Mosses and Liverworts of Britain and Ireland: A Field Guide*. Latimer Trend & Co., Plymouth.

[12] *The Management of Invasive Alien Plant Species on National Roads – Technical Guidance*. Transport Infrastructure Ireland, GE-ENV-01105, December 2020.

[13] Species Profile: Lesser horseshoe bat (Vincent Wildlife Trust, Ireland). Access here: https://www.vincentwildlife.ie/species/lesser-horseshoe-bat

3 Provision of Information for Screening for Appropriate Assessment

20 The following sections provide information to facilitate the Appropriate Assessment screening of the draft CMP to be undertaken by the competent authority.

21 A description of the draft CMP and the receiving environment is provided to identify the potential ecological impacts. The environmental baseline conditions are discussed, as relevant to the assessment of ecological impacts where they may highlight potential pathways for impacts associated with the draft CMP to affect the receiving ecological environment (e.g. hydrogeological and hydrological data).

22 The potential impacts are examined in order to define the potential zone of influence of the draft CMP on the receiving environment. This then informs the assessment of whether the draft CMP will result in significant effects on any European sites; i.e. affect the conservation objectives supporting the favourable conservation condition of the European site's QIs or SCIs.

3.1 Description of the draft CMP

23 The Abbey Quarter in the City of Kilkenny is the location of St. Francis Abbey, a twelfth-century ecclesiastical foundation, bounded to the north by the city defences and the River Breagagh and to the east by the River Nore and in more recent times it was home to the Smithwicks Brewery, prior to relocation in 2014 to the St James Gate Brewery in Dublin. Now under the ownership of Kilkenny County Council, plans are in place to establish a city park at this area, which will bring the ruins of St Francis Abbey, now managed by the OPW, into the public realm.

24 The purpose of the Conservation Management Plan for the site is to establish the history and significance of this place, and provide an overarching vision for this site, together with the various structures that survive within it, and to deliver clear objectives for maintenance and conservation, guidance or any future development of the site.

25 An integral part of the City Wall, Evan's Turret is a mural tower located at the junction of the River Breagagh and the River Nore, at the north-eastern end of the Hightown wall. It was subsequently adapted, extended and a roof added for use as a prospect tower in the eighteenth century, and occupied until the middle-nineteenth century. St Francis' Well was a large spring or pool apparently surrounded by a wall located some 34m east northeast of St Francis' Abbey. St Francis' Well was a large spring or pool apparently surrounded by a wall located some 34m east northeast of St Francis' Abbey.

26 The principal architectural significance of Evan's Turret and adjoining walls lies in their being part of an important linear monument, part standing, which once enclosed the city. This significance is reflected in the fact that the whole City Wall, together with Evan's Turret, is designated as a national monument, of national importance, under the 'National Policy on Town Defences' (DoEHLG 2008). Redundancy and neglect present the greatest single threats to the significance of an important historic structure or place, even a ruined one. The serious challenges now faced by the Kilkenny County Council and the OPW should ensure that regular maintenance and repair works are carried out to these structures to preserve them for future generations.

27 None of the historic structures on the Abbey Quarter site are in use, although as a whole, they are in a fair condition due to various conservation works undertaken over the years. The impact of the brewing industry is seen throughout, as the settings of the structures have been greatly compromised, and interventions into the surviving abbey buildings are still visible from the brewing period. As the Abbey Quarter site was in private ownership for many years, much of this portion of the city wall, the turret and the abbey were hidden from view and inaccessible. Improving access to the structures should be balanced with ensuring their preservation.

28 The buried remains of the Abbey are not visible in any way above ground. The general ground level is much higher than that which would have originally surrounded the abbey and Evan's Turret. This impedes an immediate understanding of the structures. There is a lack of knowledge about the precise remains and location of the St Francis well and a greater understanding of this structure is required.

29 The park proposals include legible landscaping which will echo the archaeological remains sub-surface, such as the nave and transept. These will be welcome inclusions in the park and will demonstrate clearly the extent of the archaeological remains of the former abbey. It is recommended that the tasting or sample rooms building is removed as it detracts from the views of the abbey and is positioned too close to the structure, while also sitting proud of the east gable window. The draft CMP – Block 9 which is proposed to be four stories in height and is in close proximity to the abbey will obscure views of the east window when approaching from the river park. It is advised that this block is set back further south, to open up this important view. The incorporation of a steel platform within Evan's Turret should be considered. This would allow for occasional access to revive the eighteenth-century purpose of the turret as a prospect tower from which to enjoy views over the River Nore and surrounding landscape. Removal of one metre or more of earth to the south side of Evan's Turret to reveal more of the historic detail might also be considered. The impact of occasional flooding should be considered within this proposal.

3.1.1 Conservation and Repair Strategies

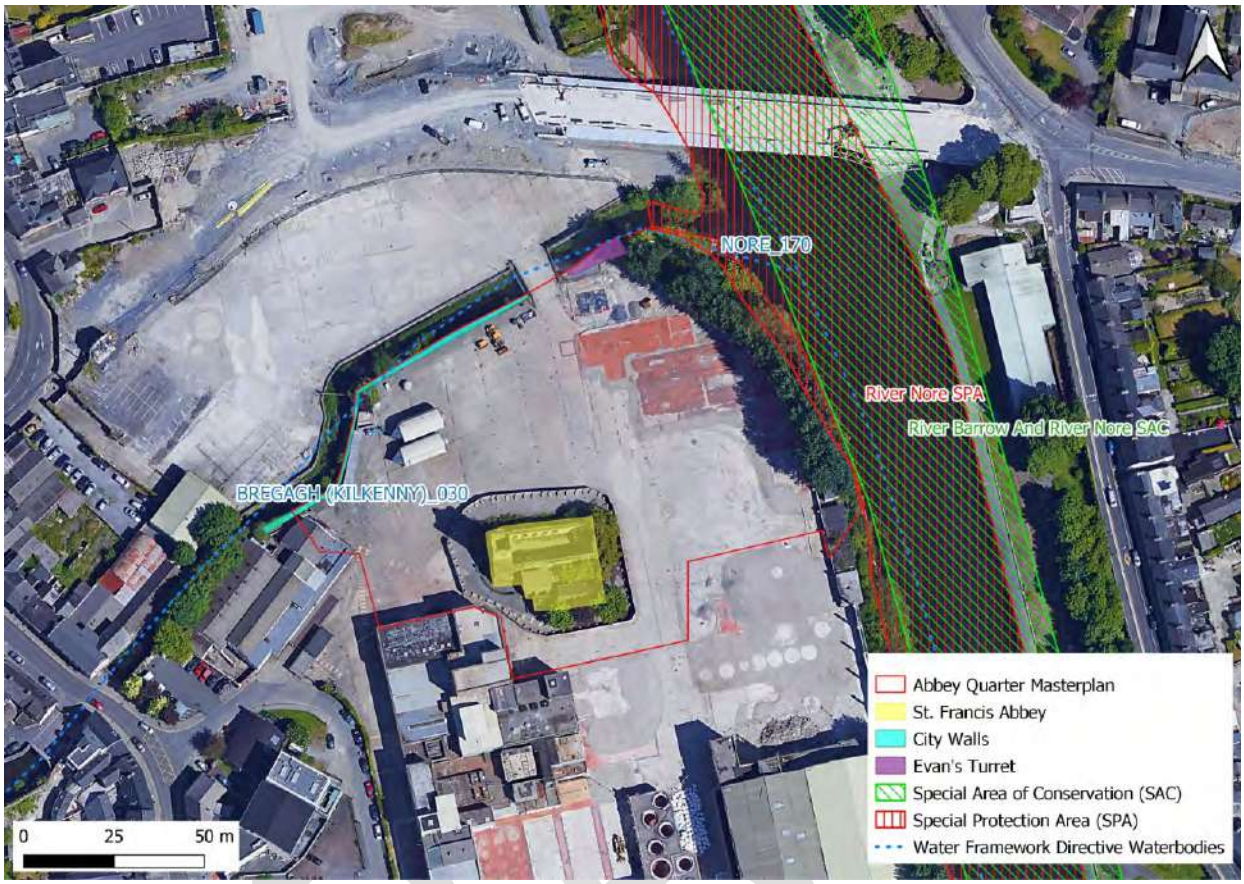
30 The recommended conservation and repair works are outlined below in Table 2, with more detail described in Section 8.0 of the Conservation Management Plan.

Table 2 Recommendations for conservation and repair works

	St Francis Abbey	Evan's Turret	The City Wall	St Francis Well
Urgent (within 12 months)	Management of the willow tree, with regular trimmings and monitoring of roots, and selection of new site for propagated willow tree	Vegetation removals and general inspection	Vegetation removals and general inspection	
	Implementation of secure access to the tower to facilitate inspection, and installation of crack monitoring to the tower	Removal of fallen vault and debris from within tower to area without tower for sorting and recording, and assessment of inside of Turret	Stabilisation of the wall tops	
Short term (within 3 years)	Assessment and repair of the wall tops to ensure no loose masonry or debris could fall form the structure	Repair of the inner skin in the south western corner, and consolidation of the wall core.	Repair eastern end of the horse barracks wall	Further excavation and survey to establish the extent of the remain of the wall below ground
	Removal of vegetation and cement flaunching to the buttresses of the tower	Rebuilding of the vault within the turret, and repair of the north wall at the spring arch	Repair programme for the River Breagagh side of the wall	
	Structural assessment and investigations to determine if	Repointing works and general maintenance	Vegetation Management - ongoing	

	St Francis Abbey	Evan's Turret	The City Wall	St Francis Well
	the concrete frame can be removed			
	Remove the cherry trees from the south wall of the choir	Vegetation Management - ongoing	Assessment of bat activity	
	Removal of the weeping willow tree	Design repairs of vault and inner face of masonry		
	First laser scan of the structure	Assessment of bat activity		
	On-going assessment of bat activity			
Medium Term (within 5 years)	Repair of concrete support system to the tower or removal of this support structure	Excavation and repair of the remaining arch		
	Regular removal of vegetation and general repointing works and repairs should be undertaken every five years	Vegetation management - ongoing		
	Regular laser scanning of the structure, every five years to determine ongoing movement			
Long term (within 10-15 years)	Regular inspections and maintenance	Vegetation management – ongoing		
	Repointing repairs			
	Post flood inspections of all wall bases			

Figure 1 Draft CMP



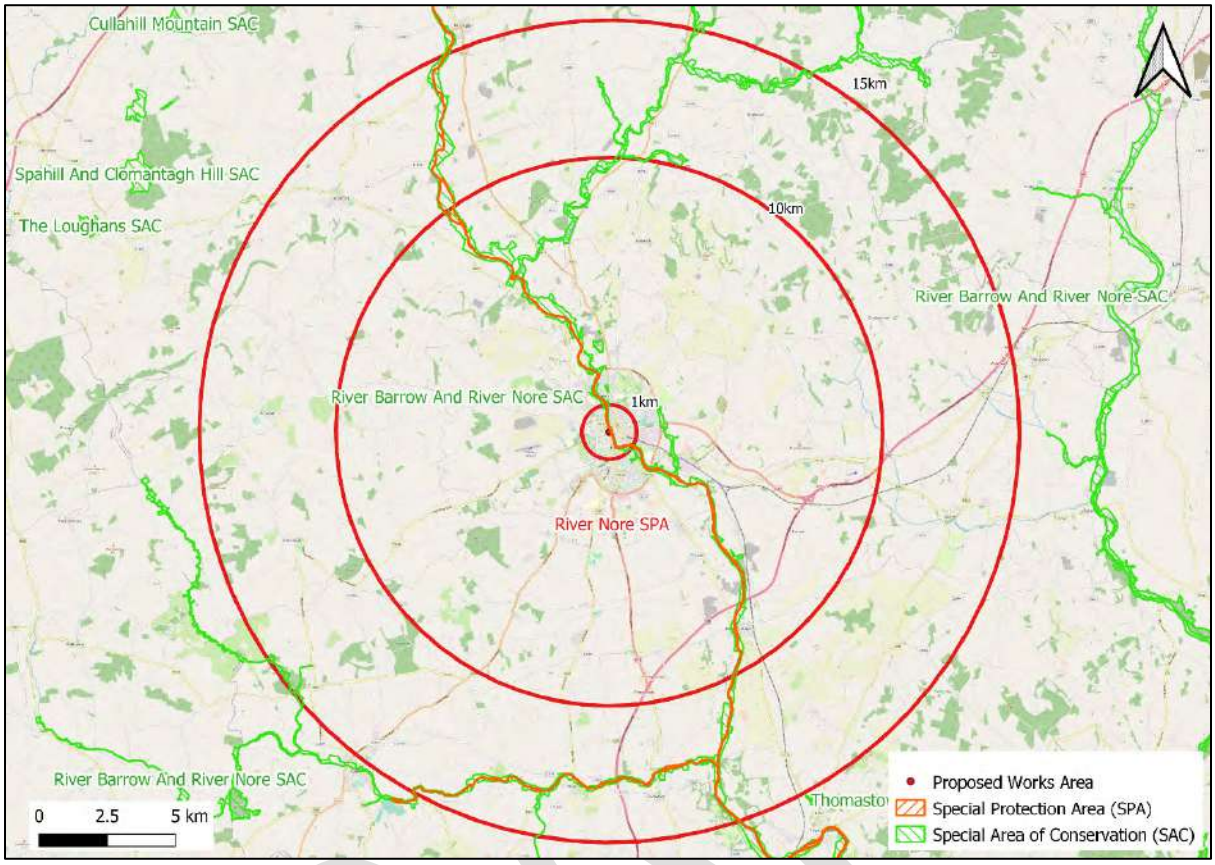
3.2 Overview of the Receiving Environment

3.2.1 European sites

31 There are two European sites within the vicinity of the draft CMP area. The draft CMP partially overlaps with the River Nore SPA, along the banks of the River Nore, located *c.* 10m from Evans Turret. The River Barrow and River Nore SAC is also adjacent to the draft CMP, c. 30m from Evans Turret. There are no other European sites within 15km of the draft CMP area, and based on the nature of the proposed works, no other pathways to European sites are predicted. The Breagagh River borders the north of the draft CMP area and the City Walls, and then discharges into the River Nore which flows in a southerly direction along the eastern aspect of the site.

32 All of the European sites present in the vicinity of the draft CMP are shown on Figure 2 below, with a more detailed image shown in Figure 1. The QIs/SCIs of the European sites in the vicinity of the draft CMP are provided in Appendix I.

Figure 2 European sites in the vicinity of the draft CMP



3.2.2 Habitats

33 The draft CMP area is located in the 10km Grid Square S55, at S 50580 56335 in the Abbey Creative Quarter in the centre of Kilkenny City.

34 The draft CMP area is characterised by largely artificial and man-made habitats, with Evans Turret, St. Francis Abbey, and the City Walls, all comprising of stone walls and other stonework (BL1). Adjacent to Evans Turret is a small area with a mosaic of scrub (WS1) and recolonising bare ground (ED1). Treeline (WL2) habitat occurs along the eastern and southern aspect of St. Francis Abbey, with ornamental/non-native shrub (WS3) also bordering the northern aspect. The area surrounding the Abbey is predominately comprised of buildings and artificial surfaces (BL3), and consists of concrete and hard-standing, previously in use as the Smithwick's Brewery which was mostly demolished and removed in 2021. Depositing/lowland rivers habitat (FW2), which are largely manmade, comprising of the Breagagh River borders the north of the draft CMP, and the River Nore which borders the east of the draft CMP area. A mosaic of treeline habitat (WL2), and scrub (WS1) border the River Nore banks, also in the east, linking the draft CMP to the Riverside Gardens along the River Nore.

35 None of the habitats within the draft CMP area correspond to Annex I Habitats, and do not provide a supporting role to any Annex I habitats connected with any European site. The nearest known location for Annex I habitats within the River Barrow and River Nore SAC is Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] a priority Annex I habitat, located c. 2.9km downstream from the draft CMP (NPWS, 2011). Overall, the habitats located within the draft CMP have limited ecological value and none correspond to Annex I habitats.

3.2.3 Flora and Fauna Species

36 The NBDC did not return any records for protected and/or rare plant species within 2km of the draft CMP. Due to the artificial and managed nature of the habitats within the draft CMP, there is little habitat for rare/protected flora species to colonise.

37 With regards to non-native invasive species, the NBDC database search returned records of six species listed on Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011-2015 within c. 2km of the draft CMP; *Reynoutria japonica, Heracleum mantegazzianum, Impatiens glandulifera*, *Elodea nuttallii*, *Elodea canadensis*[14], and *Allium triquetrum*.

38 No protected and/or rare species listed in the Flora Protection Order or in Red Lists, nor invasive non-native species listed on Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended)were found to be present within the draft CMP at the time of the survey. However, Himalayan balsam and Japanese knotweed were identified in multiple areas along the river banks of the Nore and the Breagagh to the north and east of the draft CMP during field surveys, and as also noted within the Natura Impact Statement for the Abbey Quarter Masterplan (Malone O'Regan, 2020). The protected structures (i.e. St. Francis Abbey, Evans Turret, and the City Walls) are not suitable habitat for the aforementioned species due to the artificial nature of their structure. However these species may grow in close proximity of the structures as they are opportunistic species and readily colonise a range of habitats.

39 Otter *Lutra lutra*, and their breeding and resting places, are protected under the Wildlife Acts. Otter are also listed on Annex II and Annex IV of the EU Habitats Directive and are afforded strict protection under the Habitats Directive and the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). The NBDC data search returned 13 records of otter within c. 2km of the draft CMP, with the latest from 2018. There are numerous records of otters along the River Nore, with otter being one of the Qualifying Interest species of this the River Barrow and River Nore SAC.

40 The draft CMP provides little habitat for this species. However, the River Nore and the Breagagh River adjacent to the draft CMP provide ample suitable foraging, commuting and resting/breeding habitat for this species. An otter spraint was identified on a rock adjacent to the Breagagh and Nore confluence, within c. 20m of Evans Turret. Otter spraints and prints were also noted by Malone O'Regan (2020) during surveys carried out along the watercourse. The watercourse has abundant prey species for otters, as other QI species for the Nore include Salmon *Salmo salar*, white-clawed crayfish *Austropotamobius pallipes*, twaite shad *Alosa fallax fallax*, and lamprey species.

41 The River Nore SPA is designated for kingfisher *Alcedo atthis*, and this species was previously confirmed as occurring along the Breagagh River, which backs onto the draft CMP and the City Walls, by Malone O' Regan Environmental (2020). The Breagagh River is heavily vegetated and overgrown along the fringes, which is unsuitable for kingfisher nest burrows. The City Walls have cracks and crevices along the River side which have the potential to be used by nesting kingfishers, however a detailed inspection was carried out by Malone O'Regan Environmental for the NIS Abbey Quarter – Urban Park and Street planning proposal (Planning ref 307796-20), and these burrows were deemed to not be sufficiently big enough or long enough for the use of kingfishers. There are no banks suitable for kingfisher nests in the vicinity of the draft CMP. The Breagagh is suitable for foraging and commuting along to the adjoining River Nore, and the NBDC database search returned 14 records within *c*. 2km for kingfisher. The closest record to the draft CMP is from 2014, and located *c.* 260m south along the River Nore.

42 There are five Annex II fish species listed as Qualifying Interests within the River Barrow and River Nore SAC, i.e. sea lamprey *Petromyzon marinus*, brook lamprey *Lampetra planeri*, river lamprey *Lampetra fluviatilis*, Atlantic salmon *Salmo salar* and twaite shad *Alosa fallax*. There were no records of any of the above species within *c*. 2km of the draft CMP. Aquatic surveys were not carried out as part of this

[14] Canadian pondweed *E. canadensis* was delisted as a Third Schedule species. However, as it often occurs mixed with *E. nuttallii*, it is included here for completeness.

assessment; however, habitat suitability assessment surveys were undertaken on the 17th August 2021, with particular regard for the aforementioned species. Instream vegetation was present in the Breagagh and the Nore, with soft, silty substrate evident in the riverbed itself. Instream vegetation is important for rivers/streams used by salmonid species, as it provides protection from predators . Lamprey species tend to live in soft substrate, where they can hide from predators . As this habitat is present in the watercourses adjacent to the draft CMP, there is the potential for these species to occur here. Twaite shad typically use gravel substrate to spawn near estuaries, and with the nearest record of this species over 30km downstream of the draft CMP, therefore it is unlikely this species is present in the watercourses adjacent to the draft CMP due to the lack of habitat and records. Aquatic surveys were also carried out for the Abbey Quarter – Urban Park and Street (Malone O'Regan, 2020) planning application by Sweeney Consultancy, within the sections of the Breagagh River and River Nore adjacent to the draft CMP, and also downstream within the River Nore in 2019. Salmon parr were identified in the Breagagh, and juvenile lamprey were identified downstream of the draft CMP in the River Nore.

43 The desk study search from NBDC returned one record for white-clawed crayfish within *c*. 2km of the draft CMP, from 1995. The surrounding aquatic environment is suitable for this species (i.e. high habitat heterogeneity), and white-clawed crayfish are Qualifying Interests of the River Barrow and River Nore SAC. A single crayfish was identified during surveys carried out by Sweeney Consultancy for the Abbey Quarter planning application (Malone O'Regan Environmental, 2020).

44 The desk study returned no records of freshwater pearl mussel *Margaritifera margaritifera* or Nore pearl mussel *Margaritifera durrovensis* within *c.* 2km of the draft CMP, although they are Qualifying Interest species of the River Barrow and River Nore SAC. This species is only known to occur in a 10km stretch of the main channel of the River Nore, approximately 22km upstream in Co. Laois (NPWS 2011). No mussels were found in any of the adjacent watercourses to the draft CMP in surveys carried out by Sweeney Consultancy (subcontracted by Malone O'Regan Environmental, 2020).

45 Desmoulin's Whorl Snail *Vertigo moulinsiana* is also a Qualifying Interest species for the River Barrow and River Nore SAC. No records were identified within *c.* 2km of the draft CMP, with the closest record from 1997, *c.* 20km north west of the draft CMP.

3.2.4 Hydrology

46 There are no surface water features within the draft CMP area. However, the draft CMP is immediately adjacent to two waterbodies, the Breagagh (Kilkenny)_030 to the north, which discharges into the Nore_070 to the east, and flows in a southerly direction. The site is located in the Nore_SC_090 Sub Catchment, within the Nore Catchment, and also located within the Nore_170 Sub Basin.

47 According to the EPA online Map Viewer, the Breagagh has a Q-Value of "Q3-4" which is of "Poor" water quality status. EPA gather this information from the monitoring station at Brewery Bridge, located c. 73m upstream of the City Walls. The Breagagh is considered "at risk" of not achieving good status under the Water Framework Directive (WFD). This river is a tributary of the River Nore, which has a Q-value of "4", which is of "good" water quality status, and considered to be "not at risk" of achieving good status under the WFD.

3.2.5 Hydrogeology

48 Geological Survey of Ireland (GSI) data indicates that the draft CMP is underlain by "Ballyadams Formation" which is described as "Crinoidal wackestone/packstone limestone". GSI data also indicates that the draft CMP is underlain by a "Regionally Important Aquifer" that is "Karstified (diffuse)". The site is located in an area of 'High' vulnerability in relation to the underlying aquifer.

49 The Groundwater Body (GWB) underlying the draft CMP is the "Kilkenny-Ballynakill Gravels", which is currently classified by the EPA as having "Good" groundwater status, with the groundwater risk classed as "at risk". The River Barrow and River Nore SAC adjacent and the River Nore SPA partially within the draft CMP, are the only European sites located within this GWB, of which the former contains QI groundwater dependent terrestrial habitats.

3.3 Assessment of Effects on European Sites

50 This section identifies all the potential impacts associated with the draft CMP, examines whether there are any European sites within the ZoI of effects from the draft CMP, and assesses whether there is any risk of the draft CMP resulting in a significant effect on any European site, either alone or in combination with other plans or projects.

51 In assessing the potential for the draft CMP to result in a significant effect on any European sites, any measures intended to avoid or reduce the harmful effects of the project on European sites are not taken into account.

3.3.1 Habitat loss and fragmentation

52 The draft CMP area overlaps with the boundary of the River Nore SPA, and is within 3 metres of the River Barrow and River Nore SAC at its closest. The nearest known location for an Annex I habitat within the River Barrow and River Nore SAC is Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0], located *c.* 2.9km downstream from the draft CMP (NPWS, 2011). No works are proposed within the River Nore or its banks, and therefore, the River Barrow and River Nore SAC is not at risk of direct habitat loss impacts.

53 As confirmed from studies in support of the Abbey Quarter Masterplan NIS (Malone O'Regan 2020), Kingfisher use the Breagagh River for commuting and foraging and are present along the River Nore, and there is no viable habitat for kingfisher burrows within the draft CMP area. However there will be placement of a scaffolding structure within the Breagagh for the repair and repointing works, which may interfere with commuting/foraging routes, albeit on a temporary basis. Habitat loss may also occur indirectly as a consequence of severe habitat degradation in water quality and/or changes to the hydrological regime, and therefore, could affect the conservation status of this SCI species from the River Nore SPA.

54 The River Barrow and River Nore SAC is designated for a number of QI species, including; otter, Desmoulin's whorl snail, freshwater pearl mussel, white-clawed crayfish, sea lamprey, brook lamprey, river lamprey, twaite Shad, salmon, Killarney fern, and Nore pearl mussel. The draft CMP proposes conservation works on Evans Turret, the City Walls, and St. Francis Abbey, as detailed in the Abbey Quarter Kilkenny City Conservation Management Plan (Howley Hayes Cooney, 2022). These are recommended measures focused on the maintenance and conservation of these structures, in order to preserve them for future generations. No major works are recommended on the water side of Evans Turrett or City Walls (other than minor repointing works), with masonry repairs carried out by hand and under supervision of an archaeologist to ensure there is no damage to the structures. No works will be carried out within the River Nore, however scaffolding will be in place for carrying out repointing works within the Breagagh. Otters likely use the River Breagagh for commuting and foraging, and suitable habitat is present for all three lamprey species, and salmon within the watercourses adjacent to the draft CMP. Habitat loss may occur indirectly as a consequence of severe habitat degradation arising from a reduction in water quality and/or a change to the hydrological regime, as described in the hydrological impacts below. Therefore, indirect habitat loss as a result of habitat degradation in water quality and/or change to the hydrological regime, could affect the conservation status of these QI species from the River Barrow and River Nore SAC.

3.3.2 Habitat degradation as a result of hydrological impacts

55 Surface water run-off and discharges from the site drain to the existing local surface water drainage network. No changes are proposed to the surface water drainage. However the site is immediately adjacent to the River Breagagh and River Nore. Therefore, the Zone of Influence (ZoI) of potential effects on water quality from the draft CMP could extend to the River Nore and European sites within *i.e*. the River Blackwater and River Nore SAC and the River Nore SPA.

56 The potential release of contaminated surface water runoff and/or an accidental spillage or pollution event, or additional silt and interstitial sediment into any surface water features during any repair or repointing works to the City Walls and Evans Turret, has the potential to affect water quality in the receiving aquatic

environment. Material from the wall itself and any cementitious materials from repointing could impact the sensitive QI species in the River Breagagh and the River Nore. In the absence of mitigation, the associated effects of a reduction of surface water quality could potentially extend downstream of the discharge point or location of the accidental pollution event. Such an occurrence, of a sufficient magnitude, either alone or in combination with other pressures on water quality, and in the absence of mitigation could undermine the conservation objectives of the European sites in the River Nore (*i.e.* the River Barrow and River Nore SAC and River Nore SPA).

57 The draft CMP area is adjacent to the River Breagagh and the River Nore which flow along the northern and eastern boundaries of the draft CMP. Otter territories are within the range of *c.* 7.5km for females and *c*. 7-19km for males (O'Neill *et al*., 2008), and evidence was identified adjacent to the draft CMP on the banks of the River Nore. Therefore, there is potential for otter associated with the River Barrow and River Nore SAC to be present within the zone of influence of the draft CMP. A reduction in water quality as a result of an accidental pollution event or additional sediment load (either alone or in combination with other pressures on water quality) however, could result in the degradation of the local aquatic environment, which could in turn negatively affect the otter population through direct contact with pollutants or a decline in fish prey. Sea lamprey *Petromyzon marinus*, brook lamprey *Lampetra planeri* river lamprey *Lampetra fluviatilis*, Atlantic salmon *Salmo salar,* white-clawed crayfish *Austropotamobius pallipes* , twaite Shad *Alosa Fallax Fallax*, and freshwater pearl mussel *Margaritifera margaritifera*, all QI species of River Narrow and River Nore SAC, could also be negatively impacted from a reduction in water quality as the finest grained portion of sedimentary run-off (fine silts- to mud sized grains) are the most deleterious fraction for these species. Desmoulin's Whorl Snail *Vertigo moulinsiana,* Nore pearl mussel *Margaritefera durrovensis,* are also QI species of the River Barrow and River Nore SAC and would be sensitive to changes to water quality. However; both of these species are located a significant distance upstream of the draft CMP area and Kilkenny City (> 30km), and therefore are not at risk of hydrological impacts from the draft CMP.

58 The Killarney Fern *Trichomanes speciosum* is also a QI species of the River Barrow and River Nore SAC. This fern grows in deeply shaded, humid areas such as dripping caves, crevices and overhangs of cliffs, within stream gullies, by waterfalls and on the floor of damp woodlands (NPWS, 2013a). The draft CMP area is located outside the current known distribution and favourable reference range of this qualifying interest (NPWS, 2019). According to the SAC Conservation Objectives report, the nearest record of Killarney fern to the proposed site is located a considerable distance, approximately 33km, downstream of the draft CMP site. There are no records on the NBDC for Killarney Fern within 20km of the draft CMP site. It is therefore not anticipated that the draft CMP would have direct or indirect negative impacts upon this qualifying interest.

59 Kingfisher are an SCI species for the River Nore SPA, and would also be sensitive to changes to the hydrological regime that may affect the availability of fish prey. In a worst-case scenario potential impacts could occur to such a degree that the conservation objectives of the River Nore SPA (and River Barrow and River Nore SAC) are compromised.

60 There are also a number of QI habitats that are also sensitive to changes in the hydrological regime and are located downstream of the draft CMP area (NPWS, 2011). However; with the exception of the priority Annex I habitat Alluvial woodland [91E0], all of the QI habitats are located over 30km downstream of the draft CMP. As the works are very minor, localised, and due to the distance between the repair/repointing works and these QI habitats, the draft CMP is not likely to result in habitat degradation as a result of hydrological impacts.

61 As the draft CMP has the potential to result in habitat degradation and effects on of the qualifying/special conservation interest species of European sites as the result of hydrological impacts, there is the potential for in combination effects to occur.

3.3.3 Habitat degradation as a result of hydrogeological impacts

62 The draft CMP area lies within the Kilkenny-Ballynakill Gravels GWB. The only European site within the Kilkenny-Ballynakill GWB that is designated for groundwater dependant habitats and/or species is the River

Barrow and River Nore SAC. The qualifying interests of the River Barrow and River Nore SAC, two priority Annex I habitats, namely; Petrifying springs and Alluvial woodland, and the whorl snail species, are dependent upon the existing condition and functioning of the groundwater regime. As the draft CMP will not interact with the underlying groundwater body, directly or indirectly, and as Policy 6.1 of the Kilkenny City and County Development Plan 2017 – 2027 states the sub-surface archaeology is to be preserved and undisturbed, it cannot influence groundwater conditions in the European site.

63 Therefore, there is no possibility of the draft CMP undermining the conservation objectives of any of the qualifying interests or special conservation interests of any European sites, either alone or in combination with any other pans or projects, as a result of hydrogeological effects.

3.3.4 Habitat degradation as a result of introducing/spreading non-native invasive species

64 Himalayan balsam and Japanese knotweed were identified along the banks of the River Nore and the Breagagh River. An invasive plant species management plan was proposed within the NIS (Malone O'Regan Environmental, 2020) for the Abbey Quarter – Urban Park and Street planning proposal (Planning ref 307796-20), which will manage, remove and contain any invasive species within the site. No conservation works are proposed within the watercourse or on banks of the River Nore and Breagagh River within the draft CMP.

65 Therefore, there is no possibility of the draft CMP undermining the conservation objectives of any of the qualifying interests or special conservation interests of any European sites, either alone or in combination with any other pans or projects, from habitat degradation as a result of introducing/spreading non-native invasive species.

3.3.5 Disturbance and displacement impacts

66 Repointing/repair-related disturbance and displacement of fauna species could potentially occur within the vicinity of the draft CMP. For mammal species such as otter, disturbance effects would not be expected to extend beyond 150m . For birds including Kingfisher, disturbance effects would not be expected to extend beyond a distance of *c.*300m, as noise levels associated with general repointing/repair activities would attenuate to close to background levels at that distance. There are two European sites within the disturbance ZoI; River Nore SPA and the River Barrow and River Nore SAC, located adjacent to the draft CMP. Otter is a QI species of the River Barrow and River Nore SAC, and kingfisher are a SCI of the River Nore SPA. These species are both likely using the habitats within the watercourses adjacent to the draft CMP area, and associated habitats for foraging and/or commuting. The draft CMP proposes the conservation, repair and maintenance of protected structures within the site. The scale of these works is such that they will not result in disturbance or displacement of any qualifying/special conservation interest species of any European site. Both otters and kingfishers are generally shy species and will avoid human presence, as the works are so short in nature, it is unlikely to cause any kind of disturbance or displacement to these species. A scaffolding structure will be in place within the Breagagh River for the repointing works, this will be temporary in nature (*i.e*. 2-3 weeks), and will not obstruct the overall flow of the River. However this has the potential to cause a short term disturbance to aquatic species (*i.e.* brook lamprey, river lamprey, Atlantic salmon and white clawed-crayfish), by the potential creation of sediment when the scaffolding is installed and removed. Therefore there is potential for the draft CMP to cause displacement or disturbance effects that could affect the conservation objectives of these aquatic QI species.

3.3.6 Summary

67 The habitat loss and fragmentation impacts, habitat degradation as a result of hydrological impacts, and disturbance and displacement impacts associated with the draft CMP have the potential to affect the receiving environment and, consequently, have the potential to affect the conservation objectives supporting the qualifying interest/special conservation interests of any European sites. Therefore, the draft CMP is likely to have significant effects on European sites.

68 As the draft CMP itself is likely to affect the QIs/SCIs or conservation objectives of European sites, there is also the potential for other plans or projects to act in combination with it to result in likely significant effects on European sites.

69 The potential impacts of the draft CMP on the receiving environment, their ZoI, and the European sites at risk of likely significant effects are summarised in Table 3 below. In assessing the potential for the draft CMP to result in a significant effect on any European sites, any measures intended to avoid or reduce the harmful effects of the project on European sites are not taken into account.

Table 3 Summary of Analysis of Likely Significant Effects on European sites

Potential Direct, Indirect In Combination Effects and the ZoI of the Potential Effects	Are there any European sites within the ZoI of the draft CMP?
Habitat loss Habitat loss will be confined to the lands within the draft CMP boundary.	Yes There are no European sites at risk of direct habitat loss. As the draft CMP includes some works involve a scaffolding structure within the Breagagh River, there is potential for indirect effects of habitat loss on the following European sites: River Barrow and River Nore SAC, and River Nore SPA
Habitat degradation as a result of hydrological impacts Habitats and species downstream of the draft CMP site and the associated surface water drainage discharge points, and downstream of offsite wastewater treatment plants.	Yes There are European sites at risk of hydrological effects associated with the draft CMP, namely; River Barrow and River Nore SAC and River Nore SPA
Habitat degradation as a result of hydrogeological impacts Groundwater-dependant habitats, and the species those habitats support, in the local area that lie downgradient of the draft CMP site.	No There are no European sites at risk of hydrogeological effects associated with the draft CMP
Habitat degradation as a result of introducing/spreading non-native invasive species Habitat areas within, adjacent to, and potentially downstream of the draft CMP site.	No There are no non-native invasive species present on the draft CMP site and, therefore, no risk associated with the draft CMP to any European sites from the spread/introduction of non-native invasive species
Disturbance and displacement impacts Potentially up to several hundred metres from the draft CMP boundary, dependent upon the predicted levels of noise, vibration and visual disturbance associated with the draft CMP, taking into account the sensitivity of the qualifying interest species to disturbance effects	Yes There is potential for disturbance and/or displacement impacts on QI species of the River Barrow and River Nore SAC,

4 Conclusions of Screening Assessment Process

70 Following an examination, analysis and evaluation of the best available information, and applying the precautionary principle, it can be concluded that there is the possibility for significant effects on the following European sites, either arising from the project alone or in combination with other plans and projects, as a result of Habitat loss and fragmentation, habitat degradation as a result of hydrological impacts, and disturbance and displacement impacts: River Barrow and River Nore SAC, and River Nore SPA.

71 In reaching this conclusion, the nature of the project and its potential relationship with all European sites within the zone of influence, and their conservation objectives, have been fully considered.

72 Therefore, it is the professional opinion of the authors of this report that the application for consent for the draft CMP does require an Appropriate Assessment and the preparation of a Natura Impact Statement (NIS).

Appendix I

The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the vicinity of the draft CMP site (see Figure 1)

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the draft CMP Site
Special Area of Conservation (SAC)	
River Barrow and River Nore SAC [002162] 1016 Desmoulin's whorl snail *Vertigo moulinsiana* 1029 Freshwater pearl mussel *Margaritifera margaritifera* 1092 White-clawed crayfish *Austropotamobius pallipes* 1095 Sea lamprey *Petromyzon marinus* 1096 Brook lamprey *Lampetra planeri* 1099 River lamprey *Lampetra fluviatilis* 1103 Twaite shad *Alosa fallax* 1106 Atlantic salmon (*Salmo salar*) (only in fresh water) 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonizing mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1355 Otter *Lutra lutra* 1410 Mediterranean salt meadows (Juncetalia maritimi) 1421 Killarney fern *Trichomanes speciosum* 1990 Nore freshwater pearl mussel *Margaritifera durrovensis* 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 4030 European dry heaths 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels 7220 * Petrifying springs with tufa formation (Cratoneurion) 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles 91E0 * Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) NPWS (2011) Conservation objectives: River Barrow and River Nore SAC [002126]. Version1.0. NPWS, Department of Arts, Heritage and the Gaeltacht	*c.* 2-3m from the draft CMP
Special Protection Area (SPA)	
River Nore SPA [004233[[A229] Kingfisher *Alcedo atthis* *S.I. No. 193/2012 - European Union Habitats (River Nore Special Protection Area 004233) Regulations 2021* NPWS (2022) Conservation objectives for River Nore SPA [004233]. Generic Version 9.0. Department of Housing, Local Government and Heritage.	Overlaps with the boundary of the draft CMP

Appendix II

Planning polices/objectives relating to the Abbey Quarter site

Kilkenny Council Development Plan 2021 - 2027
Policy 6.1: Protection of Archaeological Heritage (Buried) Ensure that sub-surface archaeology is disturbed as little as possible so that its can be preserved intact. ***Policy 6.2: Protection of Archaeological Heritage (Standing)*** Ensure the protection of the standing remains and the restored church and chapter house through the preservation of their settings. The monuments along the pilgrim route should also be protected, along with the protection of the pathway and associated fabric including pavings, walls and earthworks. ***Policy 6.3: Repair & Maintenance*** Provide regular on-going maintenance as the most effective way to preserve historic structures. Repairs are to be carried using conservation methodologies that conform to the guiding principles as set out in the ICOMOS charters, using appropriate details and materials of matching quality. Repair works are to be prioritised in terms of urgency, and informed by regular inspection and expert advice. ***Policy 6.4: Intervention*** Where interventions are found to be necessary to improve access, amenities, or to repair or stabilise a structure or place, these are to be designed to the highest standards of best conservation practice and should not detract from the interpretation of the cultural heritage. ***Policy 6.5: Reversibility*** All interventions should follow the principle of the reversibility, so that a structure can be returned to its former state if so desired. Developments proposed above or beside archaeological remains should be designed so that they can removed without causing disturbance. ***Policy 6.6: Visitor Facilities*** The development of the abbey site as the focus of the pilgrimage pathway should be supported. The pilgrim walk links into the most important Christian pilgrim site in the country, Croagh Patrick. Proposals to expand the range of facilities would make the route, church and chapter house more accessible to users, and broaden their appeal. ***Policy 6.7: Expert Advice & Skills*** Ensure that all conservation works are carried out under the direction of suitably qualified professionals (architects and structural engineers) and undertaken only by suitably skilled and experienced tradesmen. ***Policy 6.8: Continued Liaison*** Liaise with the National Monuments Service, Dept. of the Environment, and Mayo County Council in relation to masterplan works adjacent to the monument or along the historic route to share knowledge and ensure that best practice is adhered to in relation to any future archaeological investigations. ***Policy 6.9: Settings & Key Views*** Protect and enhance the settings of the monument and key views towards the site and outwards from the site to the surrounding landscape. Key views and settings along the historic route should also be identified and preserved. ***Policy 6.10: Inspections***

Set in place procedures for on-going monitoring of the condition of the monument and historic route in order to ensure their long-term preservation. Works involving ground disturbance close to the monument are to be carried out only under archaeological supervision.

Policy 6.11: Monitoring

Review this Plan at agreed intervals to benchmark progress in implementation, reassess priorities, assimilate new information or changes in legislation or methodologies.

Policy 6.12: Further Research & Investigation

Multi-disciplinary research into the archaeological heritage of the site and the tóchar should be supported with the assistance, where possible, of third-level institutions to further our understanding and interpretation of the place and its myriad historical associations.

Policy 6.13: Ecology

While the ecology of the abbey site is modest, the historic route passes through a range of different habitats and is of national significance. Biodiversity should be nurtured and enhanced along the route and the site through good maintenance and regeneration of the existing hedgerows and plantations that are found around the site and encountered along the walk. A biodiversity survey of the route should be undertaken.

Appendix B

Structural Report

CORA
Consulting Engineers
Behan House
10 Lower Mount Street
Dublin
D02 HT71

+353 1 6611100
www.cora.ie
info@cora.ie

CORA
CONSULTING ENGINEERS

St Francis' Abbey, Abbey Quarter, Kilkenny

Structural Condition Survey

West elevation of upstanding walls of St Francis' Abbey

28th January 2022 **Project 21714** **Issue DRAFT**

DATE:	REVISION:	ISSUE DESCRIPTION:	ISSUED BY:	REVIEWED BY:
28.01.2022	DRAFT	For comment by HHCA & AMS	LE	

CORA
CONSULTING ENGINEERS

Table of Contents

North Elevation of Chancel and tower

Prepared by;

Lisa Edden BEng CEng MIStructE MIEI

for CORA Consulting Engineers

1 Introduction

1.1 Outline of brief and report

CORA Consulting Engineers were asked by Howley Hayes Cooney Architects to assist in providing supporting documentation for a Conservation Management Plan for the Abbey Quarter in Kilkenny as part of the Community Monuments Fund grant stream 2 2021.

There are 3 areas of upstanding historic buildings of interest: the Abbey; Evans Turret and the City Wall, also below ground there is the remains of the Franciscan well.
This report looks at St Francis's Abbey alone, that being in the owner ship of the Office of Public Works. The other structures are dealt with separately being the remit of Kilkenny Council.

The requirements from CORA were to provide commentary on the condition of the structures and identify priorities for maintenance and or stabilisation to safeguard these monuments. Lisa Edden of CORA consulting Engineers also has extensive knowledge of the site from as far back as the demolition contract for the brewery immediately before handover from Diageo to Kilkenny County Council.

This report is limited to the Structural Engineering appraisal of the upstanding walls of St Francis Abbey.
For historical reference and Archaeological matters please refer to reports by others.

1.2 Description of the Structures

The Tower, Chancel and Sacristy to the south side are all that remain upstanding of the Abbey. The thick limestone masonry walls form less than half of the original footprint. It is understood that there are significant remains of the base of the walls to the other parts, but these lie below and beside many burials. The underground archaeology is capped with an over site slab that formed the base to the brewery operations previously.

The chancel including the footprint of the tower is approximately 29m long by 10m wide. The long walls rise 10m and the east gable up to 14.5m. The Belfry tower is approximately 5m by 5m and rises an additional 12.5m above the chancel bringing the top of the tower to 23.5m above ground level. The Sacristy to the south is of a single vault spanning a footprint of approximately 6 by 7.5m.

St Francis' Abbey is a national monument in state care (Monument number 72). The whole site is part of the RMP constraints / Zone of Archaeological Potential for Kilkenny City RMP KK019 026

It should the noted that the site is prone to flooding albeit the works to the River Nore in the last two decades have resolved some of the immediate issues. However the wall bases will have been regularly inundated.

1.3 Method of Appraisal and limitations of report

The site was visited 17th August 2021 and 19th January 2022 by Lisa Edden of CORA Consulting Engineers. Lucy O'Connor of Howley Hayes Cooney Architects and Dr Richard Clutterbuck were also at both site visits along with a number of representatives form both OPW and Kilkenny CoCo.

All of the walls of the abbey could be inspected from ground level. On the second visit access was obtained up the spiral stairs. Neither visit permitted access to the high-level tower belfry floor for safety reasons nor inside the south Sacristy – albeit much of this space can be viewed through the large west facing glazed panels

The visit involved discussion of phasing, previous tower interventions including the wish to remove those interventions.

No invasive works were carried out at the time of that visit or samples taken or tested.

Survey drawings have been made available from the OPW and a series of drone [photographs were also made available. Chris Corlet of the OPW and Richard Clutterbuck of AMS have also forwarded their photographs of the inside of the belfry.

St Francis' Abbey east elevation photo c/o 2015 demolition contract

2 Observations

2.1 The Chancel

The chancel has two long north and south walls with fine lancet windows and a tall very elegant thin mullioned east window.
It is noted form both site inspection and also the phasing diagrams developed by Dr R Clutterbuck of AMS that the walls were extended eastwards, and with that the east gable as we see it today was constructed.

Chancel from drone footage early 2021 looking west

The walls appear to be in reasonable condition overall with no concerning signs of distress. There are different periods construction, repairs and intriguing alterations to be seen particularly to the south side.
There are however some particular items of concern which affect local areas of the chancel:

- A number of trees planted very close to the walls.
- Vegetation growth and cracked pointing / flaunching to the walls tops
- Inbuilt corroding iron work to north elevation
- Very slender mullions to the elegant east window

Four cherry trees growing close to the base of the south wall

Large weeping willow in close proximity to the east window

The wall top appears to be reasonably well protected with original gulley and cover stones in places and in other areas later large slabs. All are set to an incline to throw the water outwards.
The wall tops were only seen from the drone footage and would benefit from closer inspection.
Some vegetation was noted particularly against the inside face of the outer parapet wall where debris is likely collecting where drainage is slowed by having to pass through the small outlets through the parapet masonry.

North wall top to Chancel as seen from the tower. Photo c/o Richard Clutterbuck

The top of the east gable has much vegetation growing from it and the mortar flaunching can be seen to be cracked.

Top of east gable drone footage early 2021

The inbuild corroding steel appears to have been a lintol inserted during the time of the brewery. The door has since been blocked up making the lintel obsolete but also trapping it between masonry. Corroding ferrous metal has the ability to exert significant forces on adjoining structures was it corrodes.

Steel lintel to previous doorway west end of north wall

The east window is divided into 7 by 6 very slender stone mullions which serve to help support the arch over. The care of this stonework is perhaps the most critical of all the masonry to this abbey.

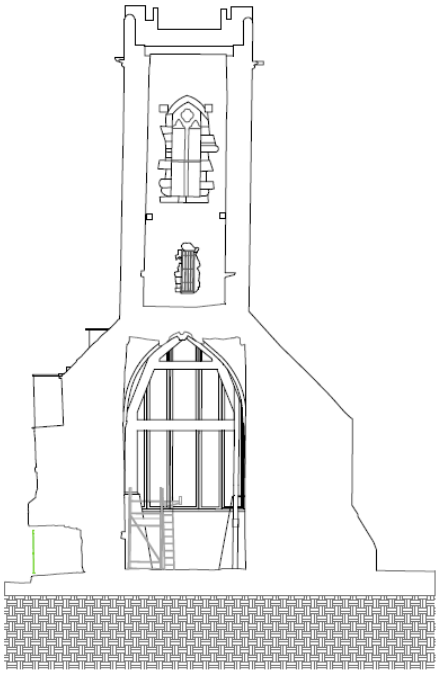
East gable window viewed from inside the chancel

2.2 The Tower

The tower was built as a crossing tower dividing the nave (now dismantled) from the chancel. It is just over 5m by 5m in plan and stands 12.5m above the arches to the west end of the chancel.

From the phasing diagrams developed by AMS it is believed the tower was inserted in the late C14th into the earlier C13th nave and chancel.
It is clear from viewing the tower from a distance that there has been substantial movement particularly settlement at the southwest corner.

The insertion of a very heavy element, into an existing structure, results in additional compression of the ground immediately below and thus settlement of the structures. The extent of settlement is dependent on the ground conditions and also the original foundation layout and any additional foundations inserted at the time of the intervention.



Section through Tower looking east, from OPW survey drawings

The abbey site is located at the confluence of two rivers. It is very likely that the ground here is formed of alluvial deposits which may vary considerably within short distances. These variations in the type of deposits can result in differential settlements as seen here at St Francis' Abbey Tower. In addition it is thought, but not proven, that the abbey may be supported on timber piles. This type of foundation can be affected by changing ground water levels particularly reduction in ground water.

The extent of movement has generated concerns over the last two centuries resulting in a number of interventions to support the arches under the tower.
The first intervention was the insertion of two cast iron columns under the south side of the tower vault in 1869.
In 1872 the buttress to the south side was constructed.
Timber centering under the two arches then followed in 1897, replaced 30 years later with the concrete frames we see today.

Reinforced Concrete frames under both arches supporting the tower

The concrete frames are now 95 years old, the concrete has deteriorated through carbonation allowing moisture to the reinforcement which is causing the concrete to spall from the surface.
This concrete urgently required repair or else a more holistic look at what it is being asked to do.

From photographs of the tell tails within the tower it is evident that there is ongoing movement. However this movement does not appear to be alarming and may be as a result of seasonal fluctuations repeating previous cracking at the thinner spandrel points of the tower. The cracking is evident in the south and north faces in the areas where there is less masonry between the sills and heads of the doorways and windows.

View inside the tower looking north
Photo c/o Chris Corlet

Cement mortar ties were installed in 1949 and 1987 and all but one have cracked but the extent of opening up at the point of cracking appears to be less than 10mm

There are some other items noted to the tower that require remediation / investigation:

- It is very difficult to access the tower safely.
- There is significant build-up of debris to the belfry floor.
- It is not clear how the belfry floor drains

View thro doorway into tower looking north
Note debris build-up. Photo c/o Chris

Detail of 1949 and 1987 cement mortar tell tails. Photo c/o Chris Corlet

2.3 Sacristy to the south

The Sacristy to the south side of the Abbey is the only roof room of the abbey. It is a half vault leaning against the much large wall of the chancel. The vault appears to have flattened over time resulting in a push southward of the south wall. This has subsequentially been buttressed but possibly ineffectively,

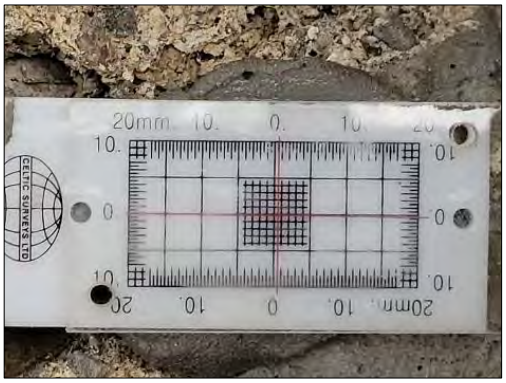
Sacristy – note little overburden to arch and lean of right-hand side supporting wall.

3 Recommendations

3.1 Immediate emergency works – as soon as possible

3.1.1 Arrange for secure access to tower. Consider skyline type wires that allow access with rachet type harness.

3.1.2 Install new crack monitoring devices that allow actual readings to be taken.
The specification for the tell-tales is as follows:
Avongard or similar tell tales fixed to masonry either side of crack with suitable two part resin and plugs.
https://www.avongard.com/product/corner-tell-tale/
These are distributed in Ireland by NVM Ltd, Unit 13, Boyne Business Park, Drogheda. www.nvm.ie
These monitors should be inspected at minimum twice yearly such as February / August. This may also pick up seasonal variations over a few years.



Typical tell tail that can show twist/ rotation as well as widening of a crack

3.1.3 Propagate from the weeping willow tree and trim tree back from east gable of abbey.

3.1.4 Remove the cherry trees from the south elevation

3.2 Short term works - within 2 years

3.2.1 Instigate a detailed, repeatable laser scan with photogrammetry survey of all the upstanding walls. This should be repeated annually until further strengthening is carried out and will assist in informing the structural repairs. Thereafter the survey may after discussion be reduced to five yearly intervals.

3.2.2 Commission a detailed structural survey and assessment of the tower geometry such that the tower and its loadings / stresses can be properly modelled.

3.2.3 Remove weeping willow tree

3.2.4 Arrange access to the chancel wall tops to assess and repair. This will entail a scaffold to one side of the walls at least and possibly both sides. Vegetaion removal and significant repointing will be required at minimum. Thereafter physical access to wall tops can possibly be reduced to every 5 years

3.2.5 Arrange access to top of both north and south buttressing walls to tower to repair wall sloping wall top detail

3.3 Medium Term repairs - within 5 years

3.3.1 The concrete frame requires repair within max 5 years. Therefore depending on results of Structural model / analysis instigate repairs of the two concrete frames.

3.3.2 It may be possible to remove the concrete frames if an alternative strapping detail is instigated. If the detailed analysis suggests that there may be another method of securing the supporting arches and tower then stitching of the tower and tops of the supporting arches should be instigated allowing removal of the cast iron posts and reinforced concrete frames.
A possible form of stitching might be to form ties through the structure using a sock anchor type solution that can be drilled from one side of the tower to the other. This process would involve coring through the masonry, inserting sock with a stainless steel reinforcement bar within the sock and then pumping a cementitious grout into the sock. The grout is contained in the flexible sock, thus ensuring no grout loss into the wall or vault fabric. A completely hydraulic set grout as opposed to an air set lime grout is required for this process to be of benefit.
The bar can be recessed behind the surface and plugged with a section of the core material removed from the drill holes to ensure minimum visibility on completion of the works.

Cintec anchor installation to a barbican tower. These ties extended up to 9m thro the tower.
The outer metal sleeve that forms part of the coring procedure is withdrawn before grouting.

3.3.3 The chancel and tower buttress wall tops should be physically reached at least every 5 years to remove debris build up and vegetation and replace any loose / weathered mortar.

3.3.4 A repeatable laser scan survey of all of the abbey should be instigated very 5 years and be compared back to previous surveys to pick up any deterioration and movements.

3.4 Long term - 10 years and beyond

3.4.1 The regular removal of any vegetation, inspection of all horizontal / sloping faces and the repair of jointing in coping stones and flaunching of any shelves to the masonry is the minimum recommend maintenance for historic masonry walls.

3.4.2 This should be supplemented with general repointing as and when areas show pointing missing or recessed back from face of stones, this is because lime mortars protect masonry by being sacrificial. All such works will require the attendances by Specifiers with the correct Conservation experience to work on National Monuments.

3.4.3 There should also be immediate post flood event inspection of all wall bases for scour, along with assessment of the surrounding paving and drainage to look for any potential major below ground disruption.

3.5 Design of and Works within the immediate area of the Abbey

3.5.1 Design of surface water drainage in the area should be carefully considered to make sure that the designed landscape is not causing additional water into the lower area around the base of the abbey walls.

3.5.2 Any lower area around the walls of the cathedral should be designed to facilitate full height scaffold for maintenance of the abbey walls.

3.5.3 Part of any work in the vicinity of the abbey such as cutting and breaking out of the over-site concrete slab to facilitate landscape design around the cathedral requires vibration monitoring. A typical range of acceptable values at the face of the upstanding walls of the cathedral is as below.

Structure Type	Allowable Vibration (in terms of PPV) at the Closest Part of Sensitive Property to the Source of Vibration, at a Frequency of less than 10 Hz:	
	Transient Vibration	***Continuous Vibration***
Reinforced or framed structures. Industrial and heavy commercial buildings	*50mm/s*	*25mm/s*
Unreinforced or light framed structures. Residential or light commercial-type buildings	*12mm/s*	*6mm/s*
Protected & Historic Buildings	*6mm/s*	*3mm/s*
Identified unstable & vulnerable structures & buildings with low vibration threshold	*3mm/s*	

3.5.4 As part of any works in the area that generate water such as concrete cutting the water produced during that cutting must be managed.

Appendix C

AMS Drawings

Figure	No	Phase	Period	Note	View
1	9	8	20th century	Tasting Room, constructed by Diageo c.1980.	Ground Floor Plan
1	10	2	Early 14th century	Chancel and choir extension completed by 1324.	Ground Floor Plan
1	12	1	Mid-13th century	North chancel and choir wall with five lancet windows.	Ground Floor Plan
1	13	3	Late 14th century	Inserted twin light in the upper section of the south choir wall.	Ground Floor Plan
1	41	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Ground Floor Plan
1	42	7	19th century	Buttress on the south side of the crossing tower constructed in the 19th century.	Ground Floor Plan
1	43	4	15th century	Vaulted chamber described as a sacristy; altered in 19th century, reroofed in 20th century; converted to an oratory for the brewery staff.	Ground Floor Plan
1	44	4	15th century	Vaulted chamber described as a sacristy; altered in 19th century, reroofed in 20th century; converted to an oratory for the brewery staff.	Ground Floor Plan
1	45	8	20th century	Buttress built against the sacristy following the demolition of Smithwicks Brewery buildings in the 1960s.	Ground Floor Plan
1	46	8	20th century	Buttress built against the sacristy following the demolition of Smithwicks Brewery buildings in the 1960s.	Ground Floor Plan
1	47	8	20th century	Buttress built against the sacristy following the demolition of Smithwicks Brewery buildings in the 1960s.	Ground Floor Plan
1	56	4	15th century	Vaulted chamber described as a sacristy; altered in 19th century, reroofed in 20th century; converted to an oratory for the brewery staff.	Ground Floor Plan
1	57	8	20th century	Glass wall enclosing sacristy chamber; converted to an oratory in the 20th century.	Ground Floor Plan
1	58	1	Mid-13th century	South chancel and choir wall with five lancet windows.	Ground Floor Plan
1	102	8	20th century	Modern facing to a 19th-century buttress on the south side of the crossing tower.	Ground Floor Plan
1	103	3	Late 14th century	Crossing tower: ground floor.	Ground Floor Plan
1	104	3	Late 14th century	Crossing tower: ground floor.	Ground Floor Plan
1	105	7	19th century	Cast iron pillar inserted by the RSAI in 1869.	Ground Floor Plan
1	106	7	19th century	Cast iron pillar inserted by the RSAI in 1869.	Ground Floor Plan
1	107	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Ground Floor Plan
1	108	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Ground Floor Plan

Figure	No	Phase	Period	Note	View
1	109	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Ground Floor Plan
1	110	4	Late 15th century	Stair turret.	Ground Floor Plan
1	111	3	Late 14th century	Crossing tower.	Ground Floor Plan
1	112	4	Late 15th century	Stair turret.	Ground Floor Plan
1	113	3	Late 14th century	Crossing tower.	Ground Floor Plan
1	116	4	Late 15th century	Stair turret.	Ground Floor Plan
1	117	3	Late 14th century	Crossing tower.	Ground Floor Plan
2	60	3	Late 14th century	Crossing tower.	Tower plan
3	30	2	Early 14th century	North wall of chancel and choir extension completed by 1324.	Elevation 1: North Exterior
3	31	6	18th century	Inserted door at the east end of the chancel's north wall, probably giving access from the former post-medieval gardens to the north of St Francis' Abbey into the chancel when it was used as a ball alley.	Elevation 1: North Exterior
3	32	7	19th century	Door inserted in choir wall to give access to post-medieval gardens to the north of St Francis' Abbey; blocked up in the 20th century.	Elevation 1: North Exterior
3	33	8	20th century	Infilled door from choir to post-medieval gardens to the north of St Francis' Abbey.	Elevation 1: North Exterior
3	34	1	Mid-13th century	North chancel and choir wall with five lancet windows.	Elevation 1: North Exterior
3	35	8	20th century	Top of stair turret rebuilt by the OPW in the early 20th century.	Elevation 1: North Exterior
3	37	7	19th century	Sloping shoulder on north side of the crossing tower inserted by the RSAI in 1872.	Elevation 1: North Exterior
3	38	3	Late 14th century	Crossing tower.	Elevation 1: North Exterior
3	118	3	Late 14th century	Crossing tower.	Elevation 1: North Exterior
3	119	4	15th century	Stair turret.	Elevation 1: North Exterior
4	14	2	Early 14th century	East gable of chancel and choir extension completed by 1324.	Elevation 2: East Exterior Elevation

Figure	No	Phase	Period	Note	View
4	15	3	Late 14th century	Crossing tower.	Elevation 2: East Exterior Elevation
4	16	8	20th century	Top of stair turret rebuilt by the OPW in the early 20th century.	Elevation 2: East Exterior Elevation
4	17	7	19th century	Sloping shoulder on south side of the crossing tower inserted by the RSAI in 1872.	Elevation 2: East Exterior Elevation
4	18	7	19th century	Sloping shoulder on south side of the crossing tower inserted by the RSAI in 1872.	Elevation 2: East Exterior Elevation
4	19	7	19th century	Sloping shoulder on north side of the crossing tower inserted by the RSAI in 1872.	Elevation 2: East Exterior Elevation
4	20	8	20th century	20th century repairs to projecting stairs tower carried out by the OPW.	Elevation 2: East Exterior Elevation
4	21	7	19th century	Inserted door frame reusing medieval masonry; blocked by repairs to the east chancel wall beneath the seven-light window.	Elevation 2: East Exterior Elevation
4	22	4	15th century	Section of wall for former north transept attached to stair turret.	Elevation 2: East Exterior Elevation
4	23	4	15th century	Section of wall for former north transept attached to stair turret.	Elevation 2: East Exterior Elevation
4	24	4	15th century	Stair turret.	Elevation 2: East Exterior Elevation
4	25	4	15th century	Decorative arch moulding for north transept attached to stair turret.	Elevation 2: East Exterior Elevation
4	26	4	15th century	Decorative arch moulding for north transept attached to stair turret.	Elevation 2: East Exterior Elevation
4	27	4	15th century	Vaulted chamber described as a sacristy with three-light window; altered in 19th century, reroofed in 20th century; converted to an oratory for the brewery staff.	Elevation 2: East Exterior Elevation
4	28	4	15th century	Vaulted chamber described as a sacristy; altered in 19th century, reroofed in 20th century; converted to an oratory for the brewery staff.	Elevation 2: East Exterior Elevation
4	29	8	20th century	Flat concrete roof for sacristy made after brewery buildings were demolished in the 1960s.	Elevation 2: East Exterior Elevation
4	39	2	Early 14th century	South parapet of chancel and choir extension completed by 1324.	Elevation 2: East Exterior Elevation
5	61	3	Late 14th century	Crossing tower.	Elevation 3: South Exterior Elevation

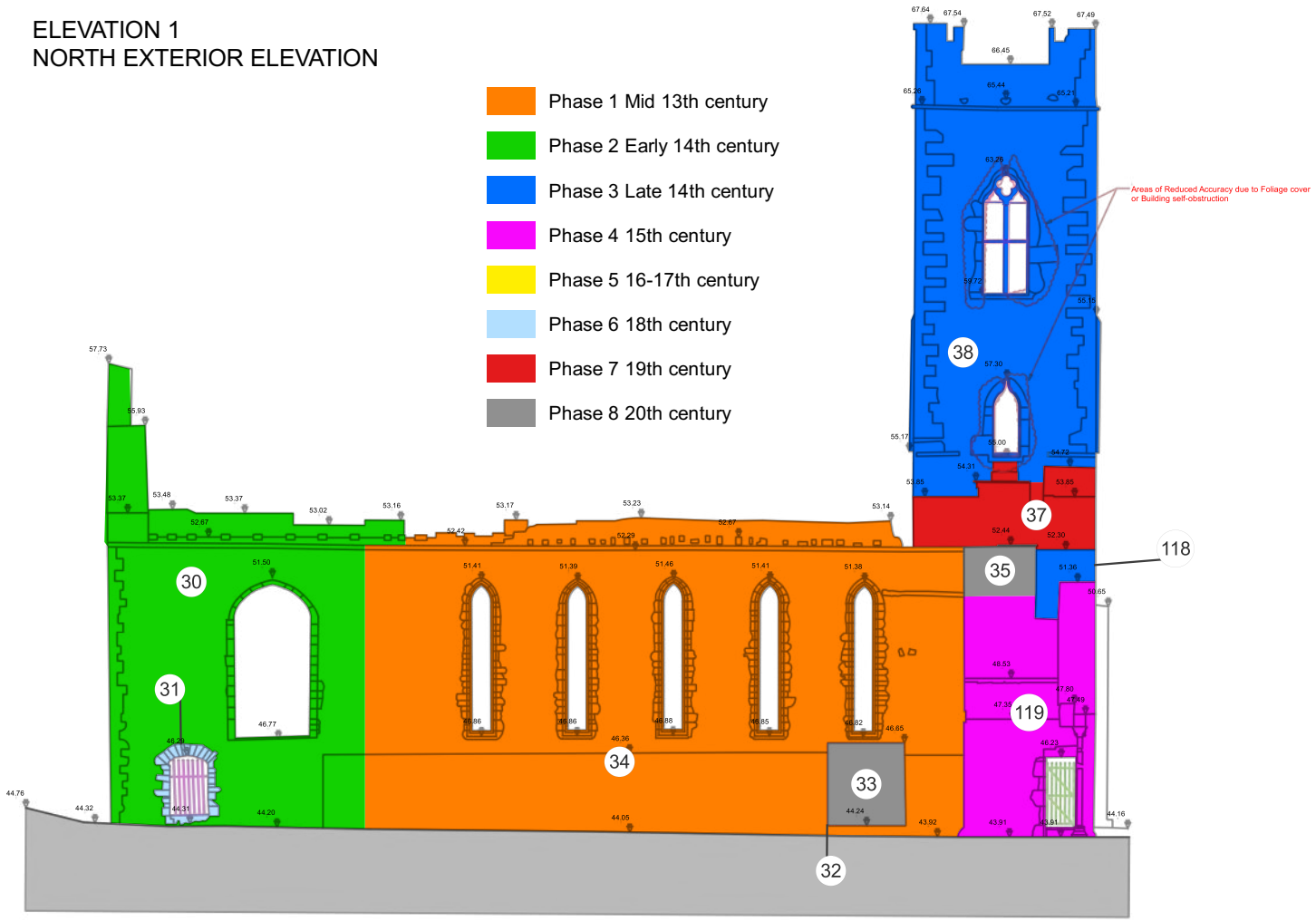
Figure	No	Phase	Period	Note	View
5	62	8	20th century	Tasting Rooms, constructed by Diageo c.1980.	Elevation 3: South Exterior Elevation
5	63	8	20th century	Modern facing to a 19th-century buttress on the south side of the crossing tower.	Elevation 3: South Exterior Elevation
5	64	2	Early 14th century	South wall of chancel and choir extension completed by 1324.	Elevation 3: South Exterior Elevation
5	65	1	Mid-13th century	South chancel and choir wall with three lancet windows.	Elevation 3: South Exterior Elevation
5	66	8	20th century	Modern facing to a 19th-century buttress on the south side of the crossing tower.	Elevation 3: South Exterior Elevation
5	67	4	15th century	Vaulted chamber described as a sacristy; altered in 19th century, reroofed in 20th century; converted to an oratory for the brewery staff.	Elevation 3: South Exterior Elevation
5	68	8	20th century	Flat concrete roof for sacristy made after brewery buildings were demolished in the 1960s.	Elevation 3: South Exterior Elevation
5	69	3	Late 14th century	Infilled window ope in the south choir wall.	Elevation 3: South Exterior Elevation
5	70	3	Late 14th century	South wall elevated door inserted into infilled window embrasure; probably a night stair to the choir/chancel from the upper floor accommodation on the east range.	Elevation 3: South Exterior Elevation
5	71	3	Late 14th century	Window inserted into the west end of the choir and slightly misaligned to accommodate the adjacent crossing tower.	Elevation 3: South Exterior Elevation
5	72	3	Late 14th century	South wall of the chancel choir, a face of wall where a new twin-light window was inserted.	Elevation 3: South Exterior Elevation
5	73	3	Late 14th century	Circular stairs or vice elevated on the south wall exterior of the choir; probably a stair to a second floor over the site of the north ambulatory and east range, partially overlapping a closed ope.	Elevation 3: South Exterior Elevation
5	74	1	Mid-13th century	North wall of the original cloister garth.	Elevation 3: South Exterior Elevation

Figure	No	Phase	Period	Note	View
5	114	7	19th century	Sloping shoulder on south side of the crossing tower inserted by the RSAI in 1872.	Elevation 3: South Exterior Elevation
5	115	7	19th century	Buttress on the south side of the crossing tower.	Elevation 3: South Exterior Elevation
6	75	8	20th century	Modern facing to a 19th-century buttress on the south side of the crossing tower.	Elevation 4: West Exterior Elevation
6	76	4	15th century	Vaulted chamber described as a sacristy; altered in 19th century, reroofed in 20th century; converted to an oratory for the brewery staff.	Elevation 4: West Exterior Elevation
6	77	8	20th century	New flat concrete roof for sacristy made after brewery buildings were demolished in the 1960s.	Elevation 4: West Exterior Elevation
6	78	8	20th century	Buttress built against the sacristy following the demolition of Smithwicks Brewery buildings in the 1960s.	Elevation 4: West Exterior Elevation
6	79	8	20th century	Tasting Room, constructed by Diageo c.1980.	Elevation 4: West Exterior Elevation
6	80	7	19th century	Sloping shoulder on south side of the crossing tower inserted by the RSAI in 1872.	Elevation 4: West Exterior Elevation
6	81	7	19th century	Sloping shoulder on north side of the crossing tower inserted by the RSAI in 1872.	Elevation 4: West Exterior Elevation
6	82	3	Late 14th century	Crossing tower.	Elevation 4: West Exterior Elevation
6	83	3	Late 14th Century	Crossing tower exterior scar of former nave wall.	Elevation 4: West Exterior Elevation
6	84	8	20th century	Top of stair turret rebuilt by the OPW in the early 20th century.	Elevation 4: West Exterior Elevation
6	85	4	15th century	Decorative arch moulding for north transept attached to stair turret.	Elevation 4: West Exterior Elevation
6	86	4	15th century	Decorative arch moulding for north transept attached to stair turret.	Elevation 4: West Exterior Elevation
6	87	4	15th century	Stair turret.	Elevation 4: West Exterior Elevation
6	88	7	19th century	Modern steps to the crossing tower inserted when conservation work was carried out on the tower.	Elevation 4: West Exterior Elevation
6	89	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Elevation 4: West Exterior Elevation

Figure	No	Phase	Period	Note	View
7	52	3	Late 14th century	Infilled embrasure for ope in the south wall of the choir.	Section A: Interior Facing South
7	90	2	Early 14th century	South wall of chancel and choir extension completed by 1324.	Section A: Interior Facing South
7	91	3	Late 14th century	South wall elevated door inserted into infilled window embrasure; probably a night stair to the choir/chancel from the upper floor accommodation on the east range.	Section A: Interior Facing South
7	92	3	Late 14th century	South wall inserted twin-light window.	Section A: Interior Facing South
7	93	3	Late 14th century	Crossing tower section and elevation.	Section A: Interior Facing South
7	94	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Section A: Interior Facing South
7	95	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Section A: Interior Facing South
7	96	7	19th century	Cast iron support column inserted by the RSAI in 1869.	Section A: Interior Facing South
7	97	7	19th century	Cast iron support column inserted by the RSAI in 1869.	Section A: Interior Facing South
7	98	5	16th-17th century	Inserted door to the south wall of the chancel; date unclear but probably post-Dissolution.	Section A: Interior Facing South
7	99	1	Mid-13th century	South chancel and choir wall with three lancet windows.	Section A: Interior Facing South
7	100	7	19th century	Infilled internal face beneath the east window incorporating medieval tomb slabs.	Section A: Interior Facing South
8	48	1	Mid-13th century	North chancel and choir wall with five lancet windows.	Section B: Interior Facing North
8	49	8	20th century	Infilled door from choir to post-medieval gardens to the north of St Francis' Abbey.	Section B: Interior Facing North
8	50	2	Early 14th century	North wall of chancel and choir extension completed by 1324.	Section B: Interior Facing North
8	51	6	18th century	Inserted door at the east end of the chancel's north wall, probably giving access from the former post-medieval gardens to the north of St Francis' Abbey into the chancel when it was used as a ball alley.	Section B: Interior Facing North
8	53	3	Late 14th century	Crossing tower.	Section B: Interior Facing North

Figure	No	Phase	Period	Note	View
8	54	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Section B: Interior Facing North
8	55	8	20th century	Reinforced concrete support constructed c.1927 by the OPW beneath the vault of the crossing tower.	Section B: Interior Facing North
8	101	7	19th century	Infilled internal face beneath the east window incorporating medieval tomb slabs.	Section B: Interior Facing North

ELEVATION 1
NORTH EXTERIOR ELEVATION



0 5 10 15 20 m

FIGURE 3

Title: St Francis' Abbey Elevation 1: North Exterior Elevation

Project: Abbey Quarter Conservation Management Plan,
St Francis' Abbey, Kilkenny City.

Client: Howley Hayes

Job No: J1011.5

Scale: 1:200 @ A4

Date:13/10/2019

Drawn by: RC

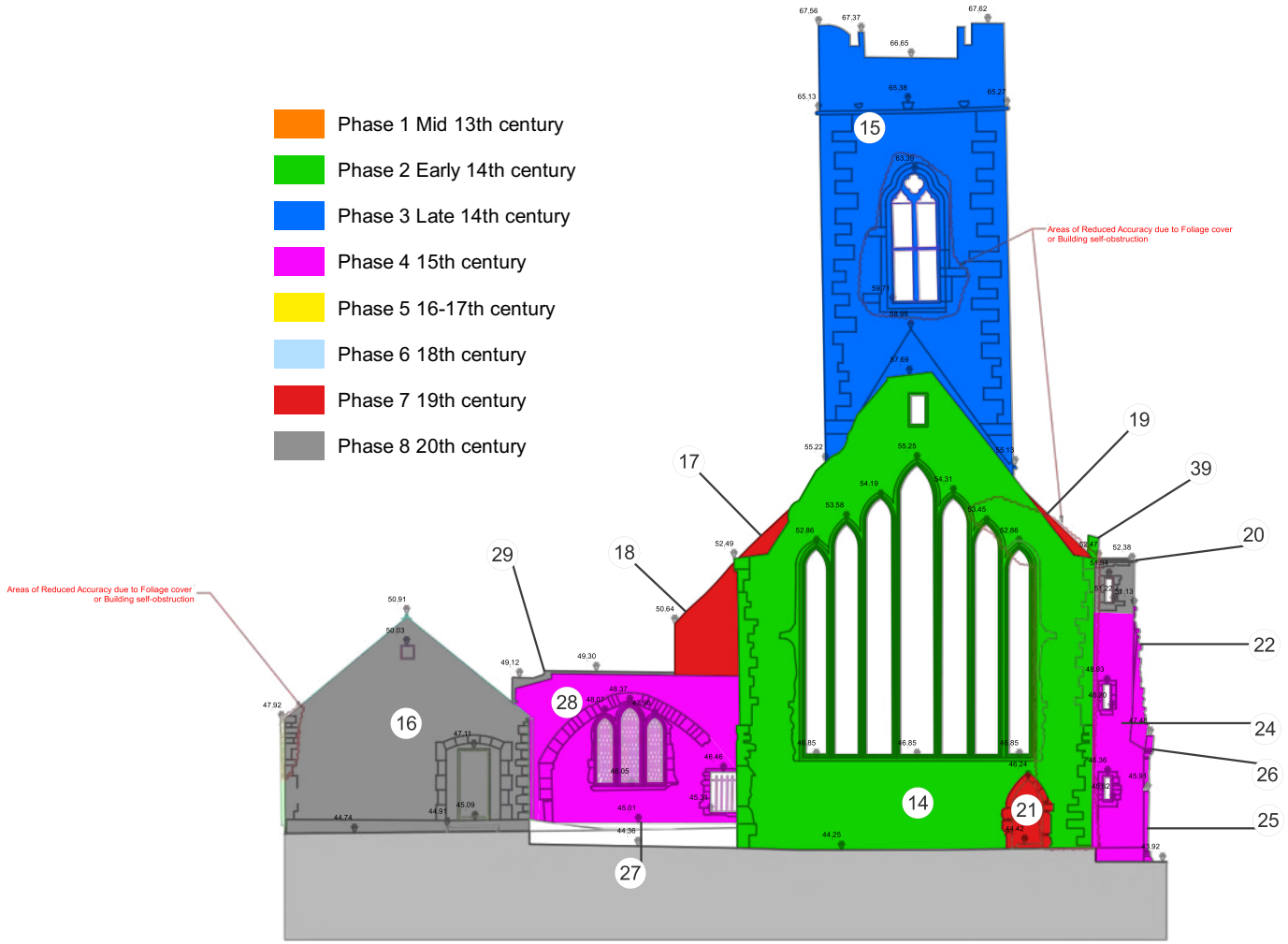
Revision: 1.0

Notes:

Measured survey by Erkina Surveys for the OPW, Drawing 210202, 30/6/2021

Phases by AMS October 2021.

ELEVATION 2
EAST EXTERIOR ELEVATION



0 5 10 15 20 m

FIGURE 4

Title: St Francis' Abbey Elevation 2: East Exterior Elevation

Project: Abbey Quarter Conservation Management Plan,
St Francis' Abbey, Kilkenny City.

Client: Howley Hayes

Job No: J1011.5

Scale: 1:200 @ A4

Date:13/10/2019

Drawn by: RC

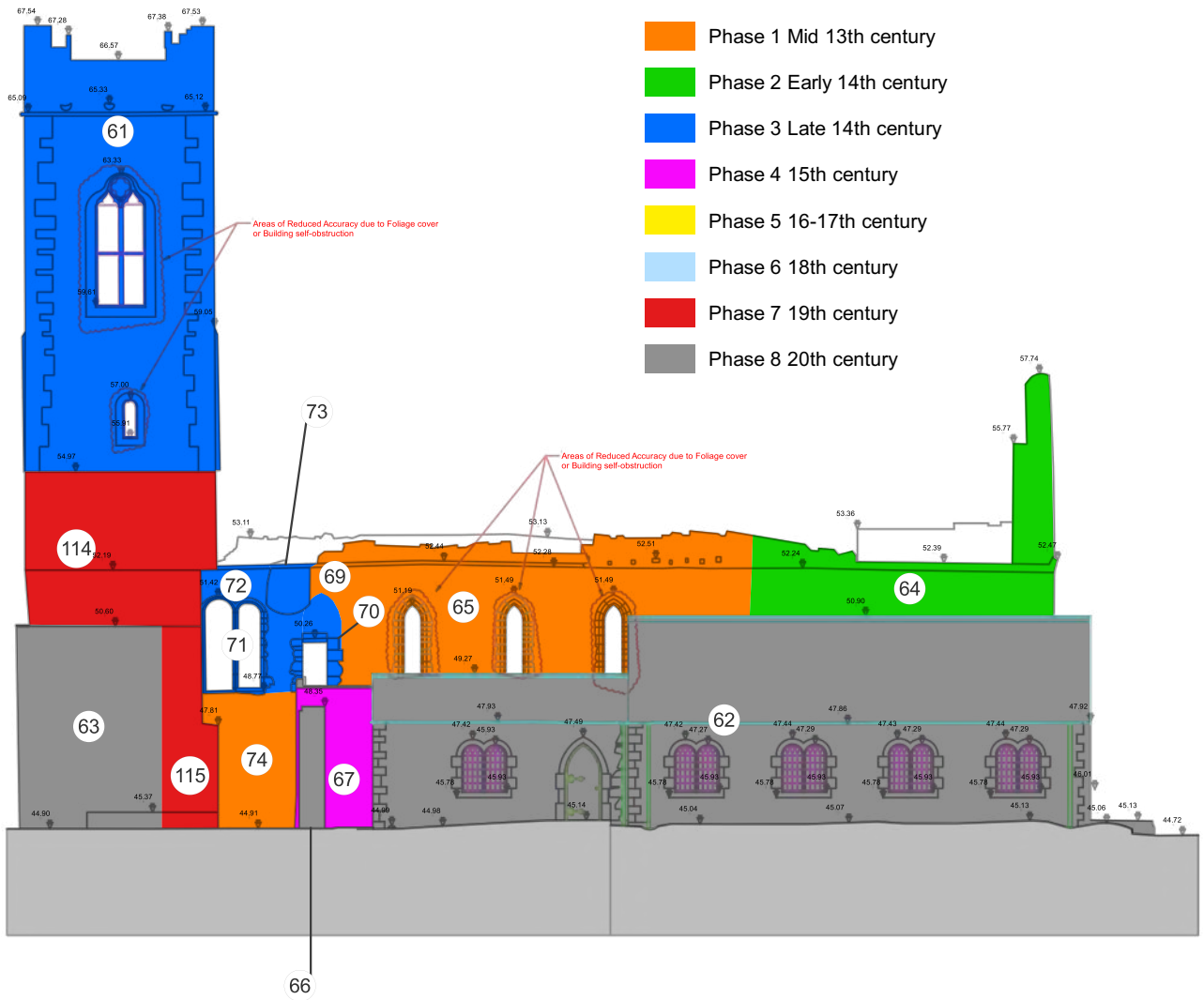
Revision: 1.0

Notes:

Measured survey by Erkina Surveys for the OPW, Drawing 210202, 30/6/2021

Phases by AMS October 2021.

ELEVATION 3
SOUTH EXTERIOR ELEVATION



0 5 10 15 20 m

FIGURE 5

Title: St Francis' Abbey Elevation 3: South Exterior Elevation

Project: Abbey Quarter Conservation Management Plan,
St Francis' Abbey, Kilkenny City.

Client: Howley Hayes

Job No: J1011.5

Scale: 1:200 @ A4

Date:13/10/2019

Drawn by: RC

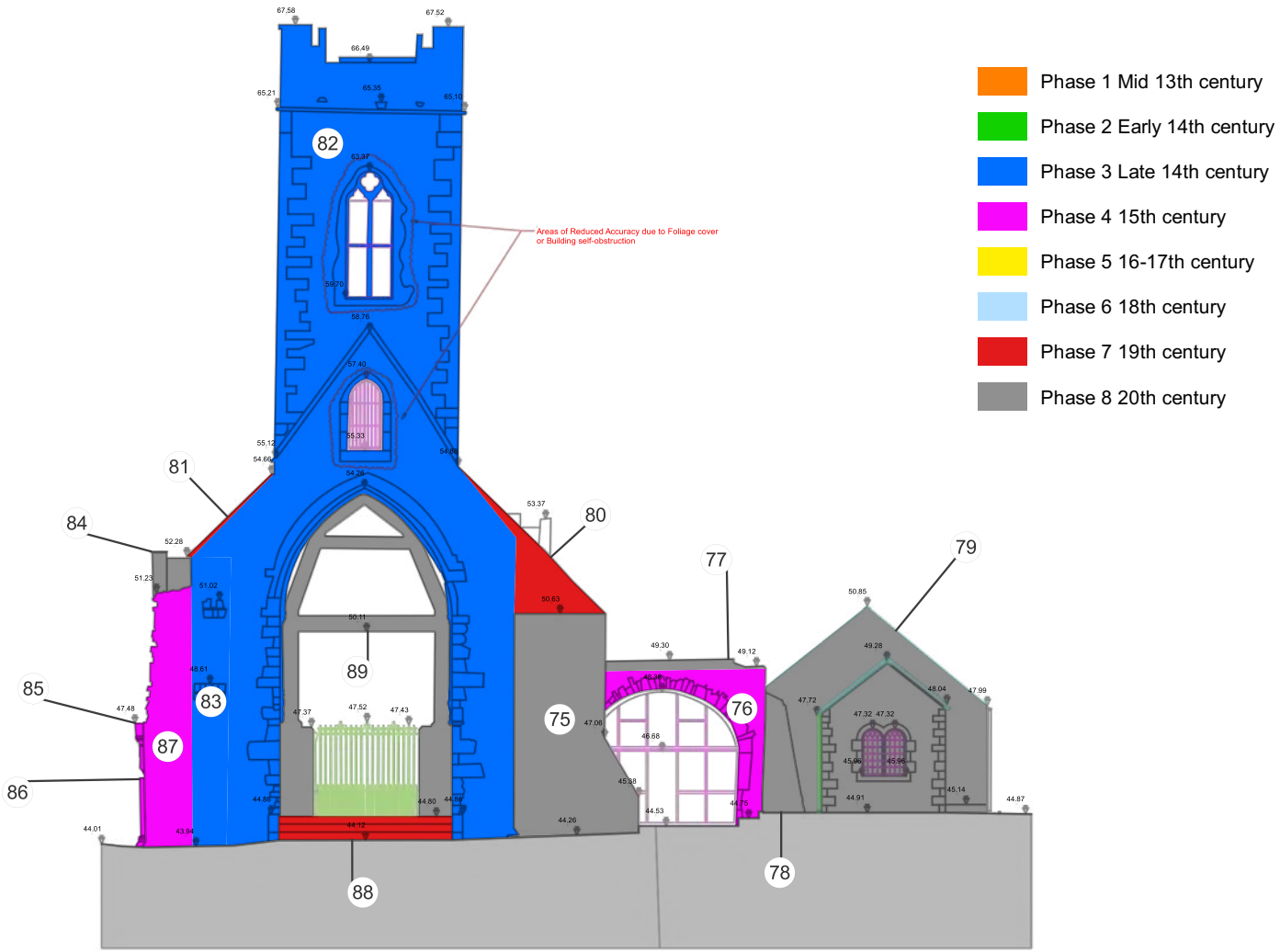
Revision: 1.0

Notes:

Measured survey by Erkina Surveys for the OPW, Drawing 210202, 30/6/2021

Phases by AMS October 2021.

ELEVATION 4
WEST EXTERIOR ELEVATION



0 5 10 15 20 m

FIGURE 6

Title: St Francis' Abbey Elevation 2: West Exterior Elevation

Project: Abbey Quarter Conservation Management Plan,
St Francis' Abbey, Kilkenny City.

Client: Howley Hayes

Job No: J1011.5

Scale: 1:200 @ A4

Date:13/10/2019

Drawn by: RC

Revision: 1.0

Notes:

Measured survey by Erkina Surveys for the OPW, Drawing 210202, 30/6/2021

Phases by AMS October 2021.

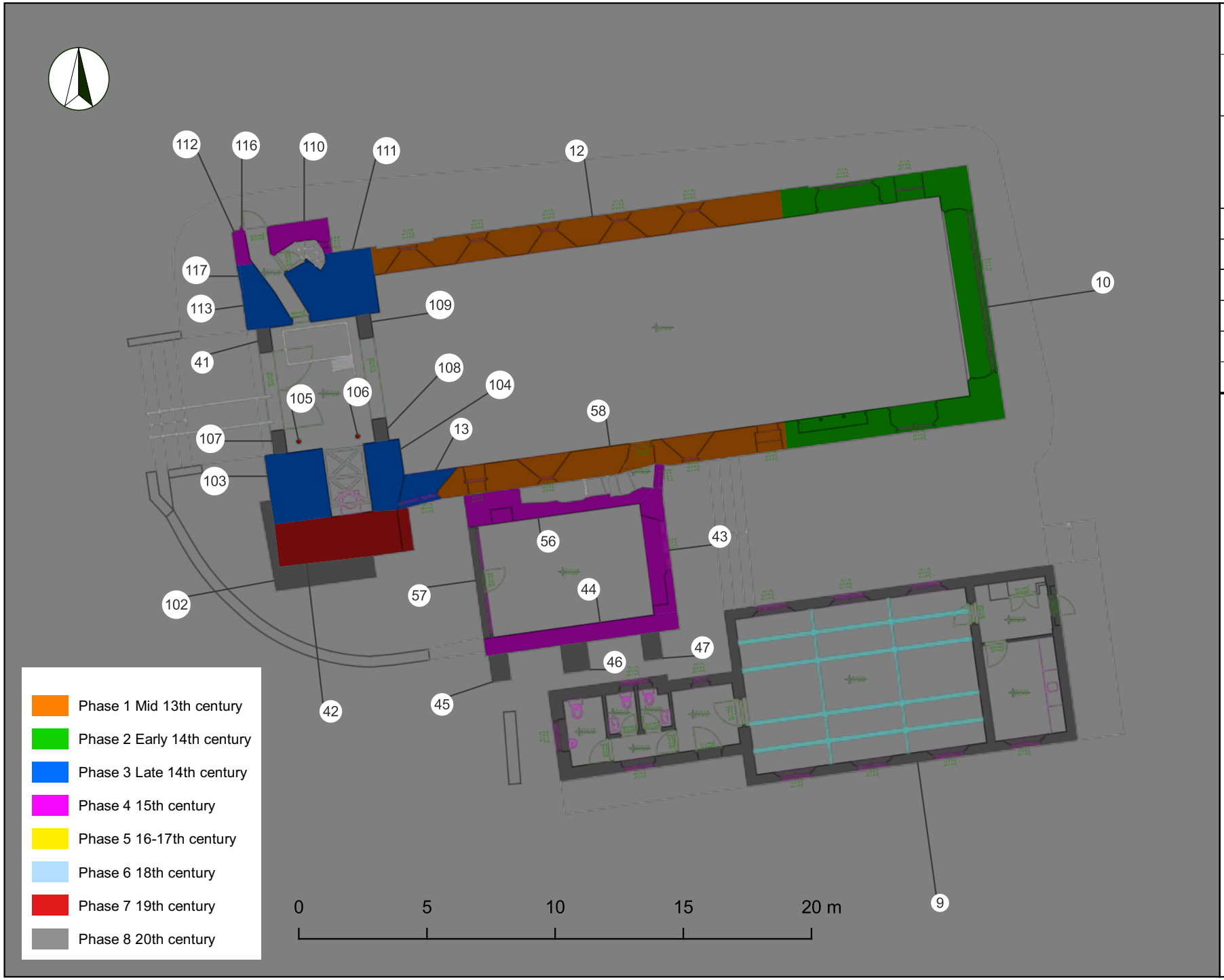


FIGURE 1

Title: St Francis' Abbey Ground Floor Plan
Phasing

Project: Abbey Quarter Conservation Management Plan,
St Francis' Abbey, Kilkenny City.

Client: Howley Hayes

Job No: J1011.5

Scale: 1:200 @ A4

Date:13/10/2019

Drawn by: RC

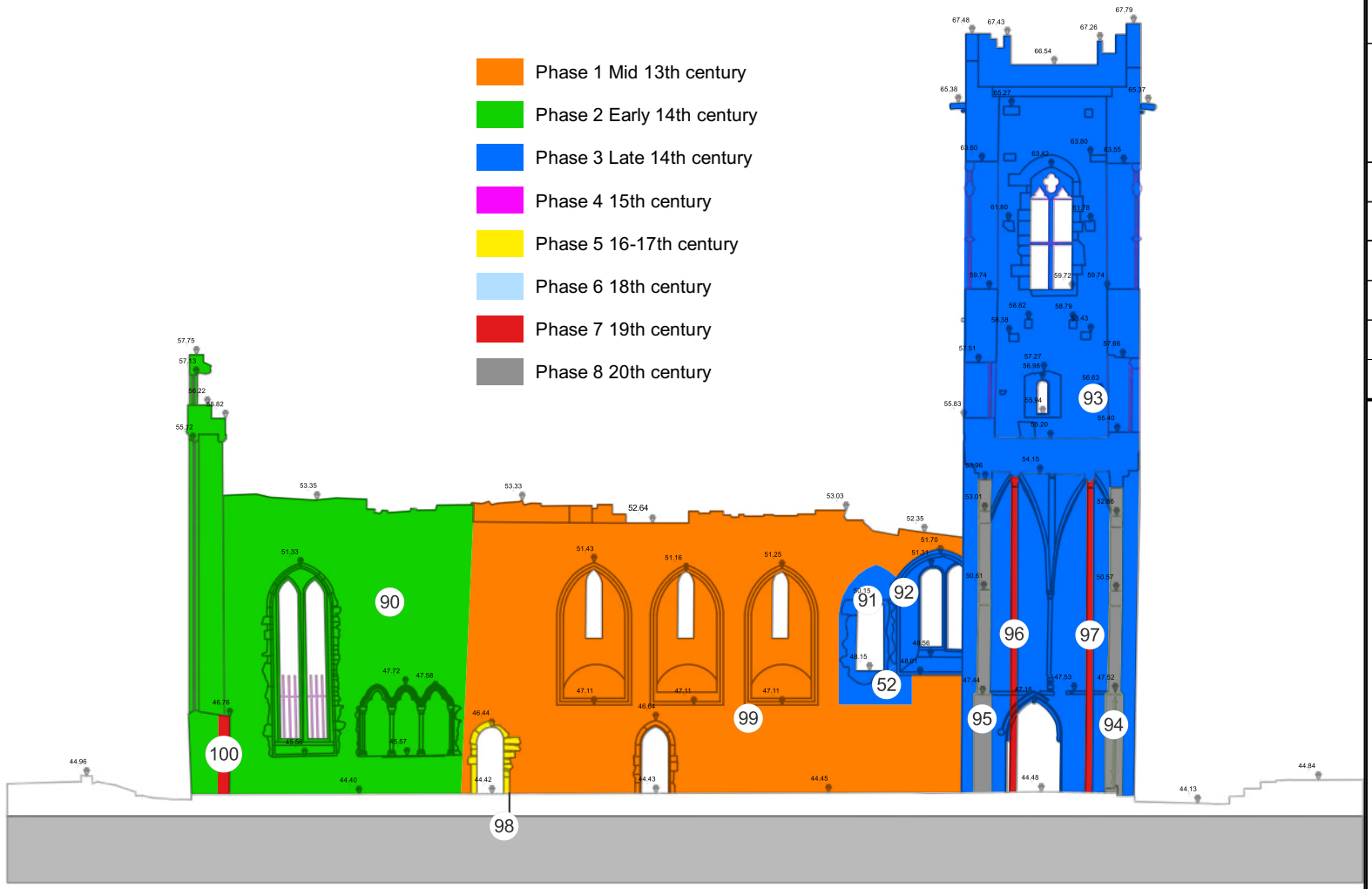
Revision: 1.0

Notes:

Measured survey by Erkina Surveys for the OPW, Drawing 210202, 30/6/2021

Phases by AMS October 2021.

SECTION A
INTERIOR FACING SOUTH



0 5 10 15 20 m

FIGURE 7

Title: St Francis' Abbey Section A: Interior Facing South

Project: Abbey Quarter Conservation Management Plan,
St Francis' Abbey, Kilkenny City.

Client: Howley Hayes

Job No: J1011.5

Scale: 1:200 @ A4

Date:13/10/2019

Drawn by: RC

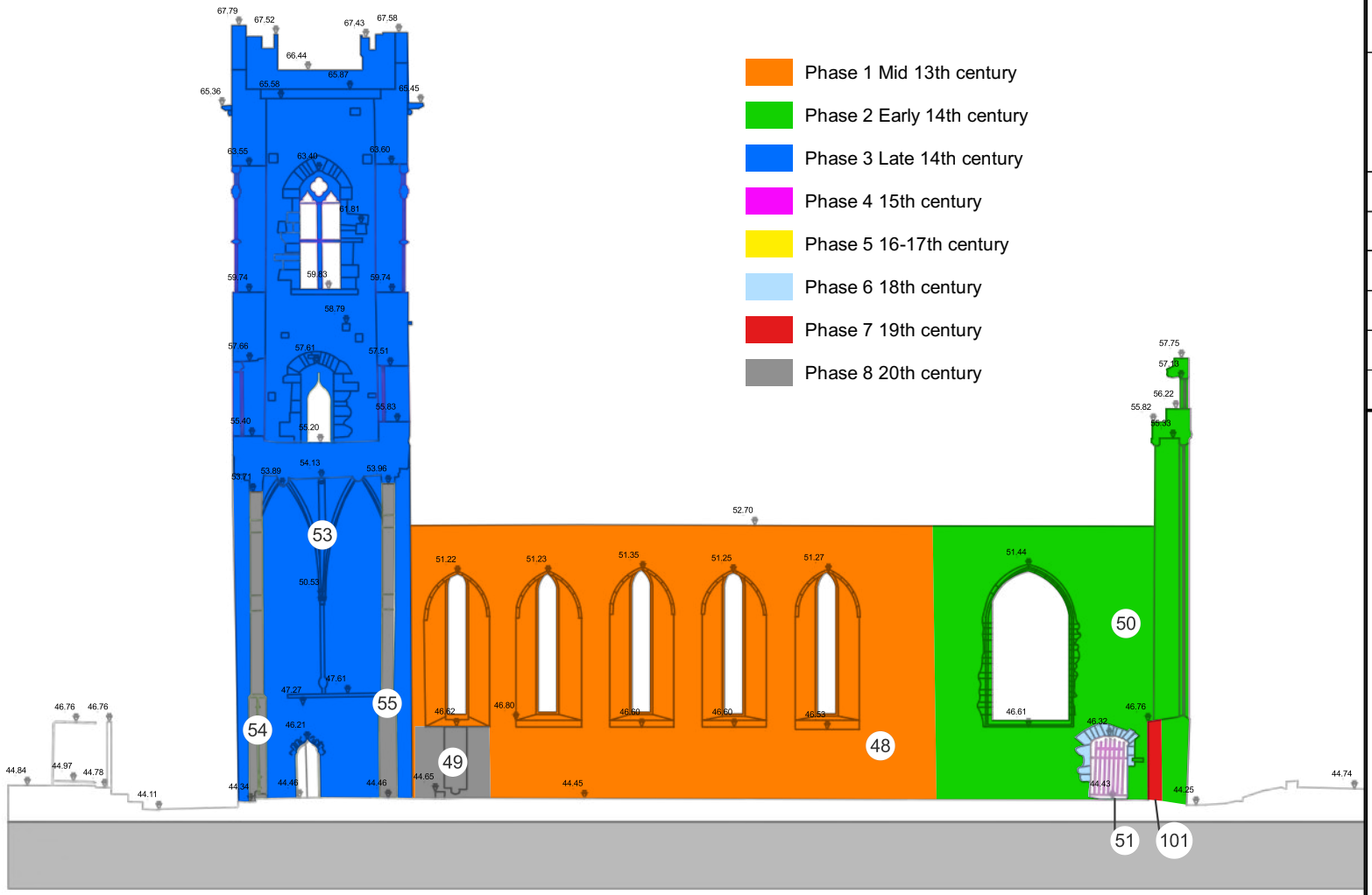
Revision: 1.0

Notes:

Measured survey by Erkina Surveys for the OPW, Drawing 210202, 30/6/2021

Phases by AMS October 2021.

SECTION B
INTERIOR FACING NORTH



0 5 10 15 20 m

FIGURE 8

Title: St Francis' Abbey Section B: Interior Facing North

Project: Abbey Quarter Conservation Management Plan,
St Francis' Abbey, Kilkenny City.

Client: Howley Hayes

Job No: J1011.5

Scale: 1:200 @ A4

Date:13/10/2019

Drawn by: RC

Revision: 1.0

Notes:

Measured survey by Erkina Surveys for the OPW, Drawing 210202, 30/6/2021

Phases by AMS October 2021.

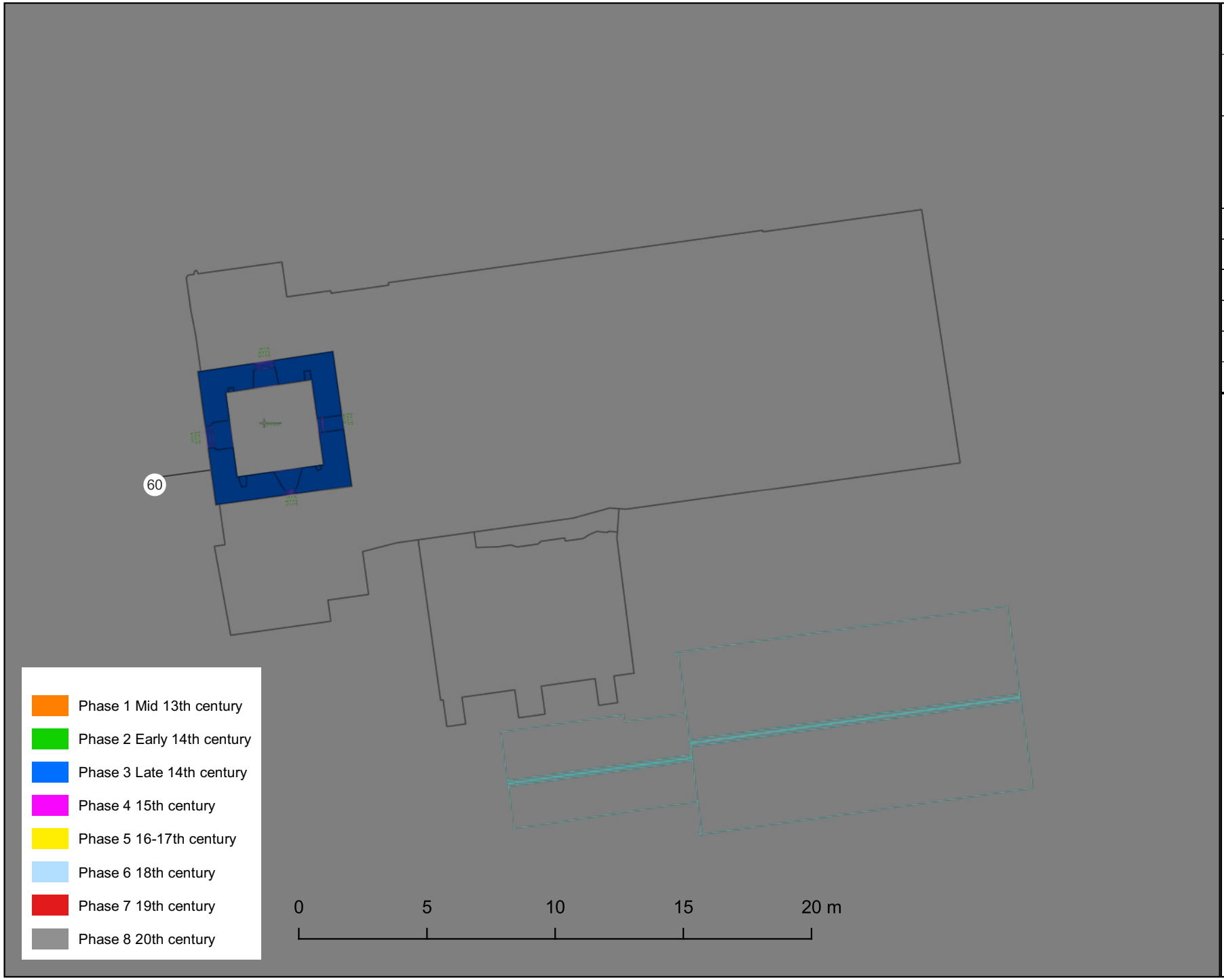


FIGURE 2

Title: St Francis' Abbey Ground Tower Plan
Phasing

Project: Abbey Quarter Conservation Management Plan,
St Francis' Abbey, Kilkenny City.

Client: Howley Hayes

Job No: J1011.5

Scale: 1:200 @ A4

Date:13/10/2019

Drawn by: RC

Revision: 1.0

Notes:

Measured survey by Erkina Surveys for the OPW, Drawing 210202, 30/6/2021

Phases by AMS October 2021.

H
C H

ARCHITECTURE

Howley Hayes Cooney Architecture are recognised for their work in both contemporary design and for the sensitive conservation of historic buildings, structures and places. Over a thirty year period, the practice has been responsible for the conservation and reuse of numerous buildings of national and international cultural significance, many of which have received RIAI, RIBA, Irish Georgian Society, Opus or Europa Nostra Awards. These include – Russborough, Lambay, Charleville Forest, Buncrana Castle, Hotel Ard na Sidhe, the former Blue Coats School (now headquarters of the Law Society of Ireland), St Catherine's, Meath Street, and Marsh's Library both in Dublin and the People's Park Dun Laoghaire. Under the Conservation Accreditation System, implemented by the Royal Institute of Architects of Ireland, Howley Hayes Cooney Architecture is accredited as a Conservation Practice Grade 1 and director James Howley a Conservation Architects Grade 1. Howley Hayes Cooney Architecture have, to date, been responsible for over two hundred conservation plans, reports and feasibility studies for clients such as the Heritage Council, the World Monument Fund, the Office of Public Works, the Department of Arts Heritage and the Gaeltacht, the Law Society of Ireland, the Alfred Beit Foundation, Diageo Ireland, and Liebherr International, together with numerous local authorities and private clients.