

Archaeological Impact Assessment of the Redevelopment of the Mayfair Building, Abbey Quarter, Kilkenny



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

Executive Summary

This report is an archaeological impact assessment of the development of the Mayfair Building as a library, part of the Abbey Quarter Masterplan, a redevelopment of 8.25ha in the centre of Kilkenny City incorporating the former Smithwick's Brewery. The Mayfair building is located within the Kilkenny City Zone of Archaeological Potential (ZAP) and adjoins the precinct of St Francis Abbey, a National Monument. The Mayfair Building also lies immediately adjacent to, and in places abuts, Kilkenny's medieval wall on the south boundary of the Breagagh river. This town wall is also a National Monument under Irish government's National Policy on Town Defences.

The Abbey Quarter Masterplan was approved in July 2015 and provides for the retention and renovation of the Mayfair Building. The proposed redevelopment of the building for office use was approved by the elected members of Kilkenny County Council in July 2016. In 2018 Kilkenny County Council decided to redevelop the Mayfair as a new county library.

The redevelopment of the Mayfair Building will consist of largely retaining the existing building (approximately total floor area 801 sq. m); some additional demolition works (approximately 102 sq. m); construction of extensions to the east and west of the retained Mayfair Building (approximately 884 sq. m), and an increase in floor area within the existing structure of 189 sq.m including an internal mezzanine level; the renovated building will include external insulation, new roof and windows and a lift; a public urban square or plaza to the west of the new building on the site of an existing car park (approximately 163 sq. m); and additional services comprising 121 linear metres around the building. This report will describe the Mayfair Building, its archaeological and historical significance, and the results of archaeological investigations carried out on and around the site from 2014 to 2019. The report will detail the proposed development and its archaeological impacts and will conclude with recommended measures to mitigate these impacts.

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Acronyms and Definitions

Acronym	Definition
ACSU	Archaeological Consultancy Services Unit
AMS	Archaeological Management Solutions Ltd
DoEHLG	Department of Environment, Heritage and Local Government
IAI	Institute of Archaeologists of Ireland
ITM	Irish Transverse Mercator
KCC	Kilkenny County Council
KKAP	Kilkenny Archaeological Project (Ó Drisceoil et al. 2008) and https://heritagemaps.ie
MGL	Margaret Gowen & Co. Ltd
NIAH	National Inventory of Architectural Heritage
NMI	National Museum of Ireland
NMS	National Monuments Service
OD	Ordnance Datum
OPW	Office of Public Works
RMP	Record of Monuments and Places
SMR	Sites and Monuments Record
UAS	Urban Archaeological Survey
ZAP	Zone of Archaeological Potential

Key Stakeholders

- Kilkenny County Council
- National Monuments Service
- National Museum of Ireland

Introduction

Overview

Kilkenny County Council (KCC) are planning to redevelop the Mayfair Building on the former site of the Smithwicks' Brewery as a new Library. This site is part of the Abbey Quarter Masterplan (Reddy Architecture & Urbanism 2015), a planned redevelopment of 8.25ha in the centre of Kilkenny City (Figure 1).¹

The Abbey Quarter Masterplan area has been divided into fourteen Urban Blocks (1–14) and four Public Realm areas (A–D) (Figure 2 and Figure 3). The Mayfair Building is located in Urban Block 10. The Abbey Quarter Masterplan was subject to public consultation and was adopted in July 2015. The Masterplan provided for the Mayfair Building to be substantially retained, modified and repurposed as offices; the Part VIII application for the renovation of the Mayfair building for office use was approved in July 2016. However, in 2018 KCC decided that the remodelled Mayfair Building would become a new city library.

This report is an archaeological impact assessment of the redevelopment of the Mayfair Building as a new city library.

The Mayfair Building dating to the 1940s was built as a ballroom and contributed significantly to the social and cultural life of Kilkenny until the 1970s (Ó Drisceoil 2014). The Mayfair Building is located within the Zone of Archaeological Potential (ZAP) for Kilkenny City (RMP KK019-026), within the former precinct of St Francis' Abbey – a National Monument (No. 72), and immediately adjacent to Kilkenny City's medieval wall, also a National Monument as defined by the National Policy on Town Defences (DoEHLG 2008) (Figure 4).

Purpose and Scope of this Archaeological Impact Assessment

The purpose of this report is to inform an application for the development of the Mayfair Building as a public library. This archaeological assessment report incorporates the results of earlier archaeological reports on the Mayfair Building, including an archaeological and historical background report, survey of the adjacent town wall National Monument, archaeological test excavations and archaeological monitoring (Ó Drisceoil 2014; AMS 2017b, 2017a, 2018; ACSU and Stirland 2018b; AMS 2019; Flynn 2019). This report will describe the proposed development and its likely impacts on the identified archaeology. Finally, the report will contain recommendations for measures to mitigate impacts of the development on the archaeology.

¹ <https://www.kilkennycoco.ie/eng/Services/Planning/Abbey-Quarter-Brewery-site/>

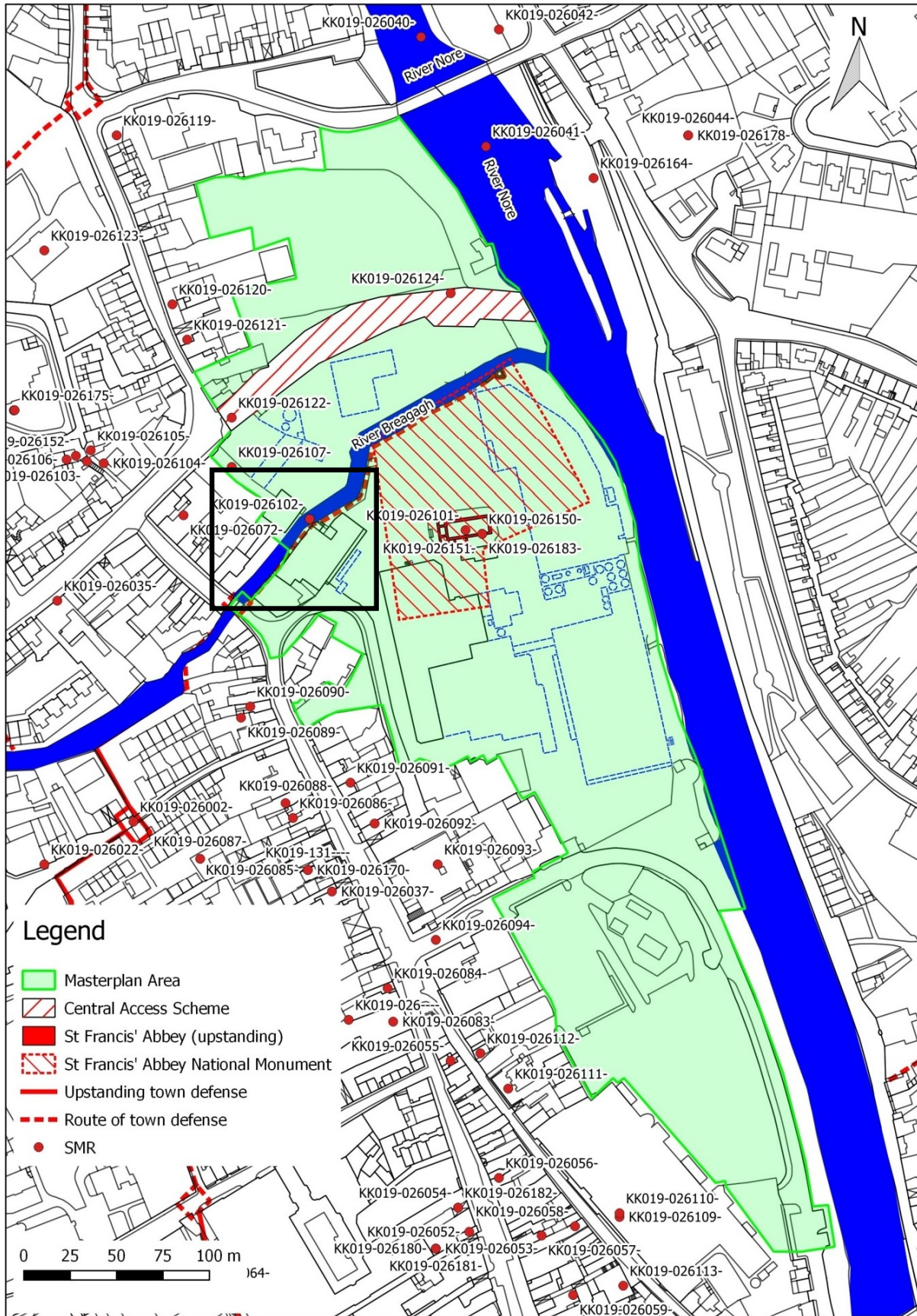


Figure 1: Masterplan location, Kilkenny City, with the location of the Mayfair Building outlined in black

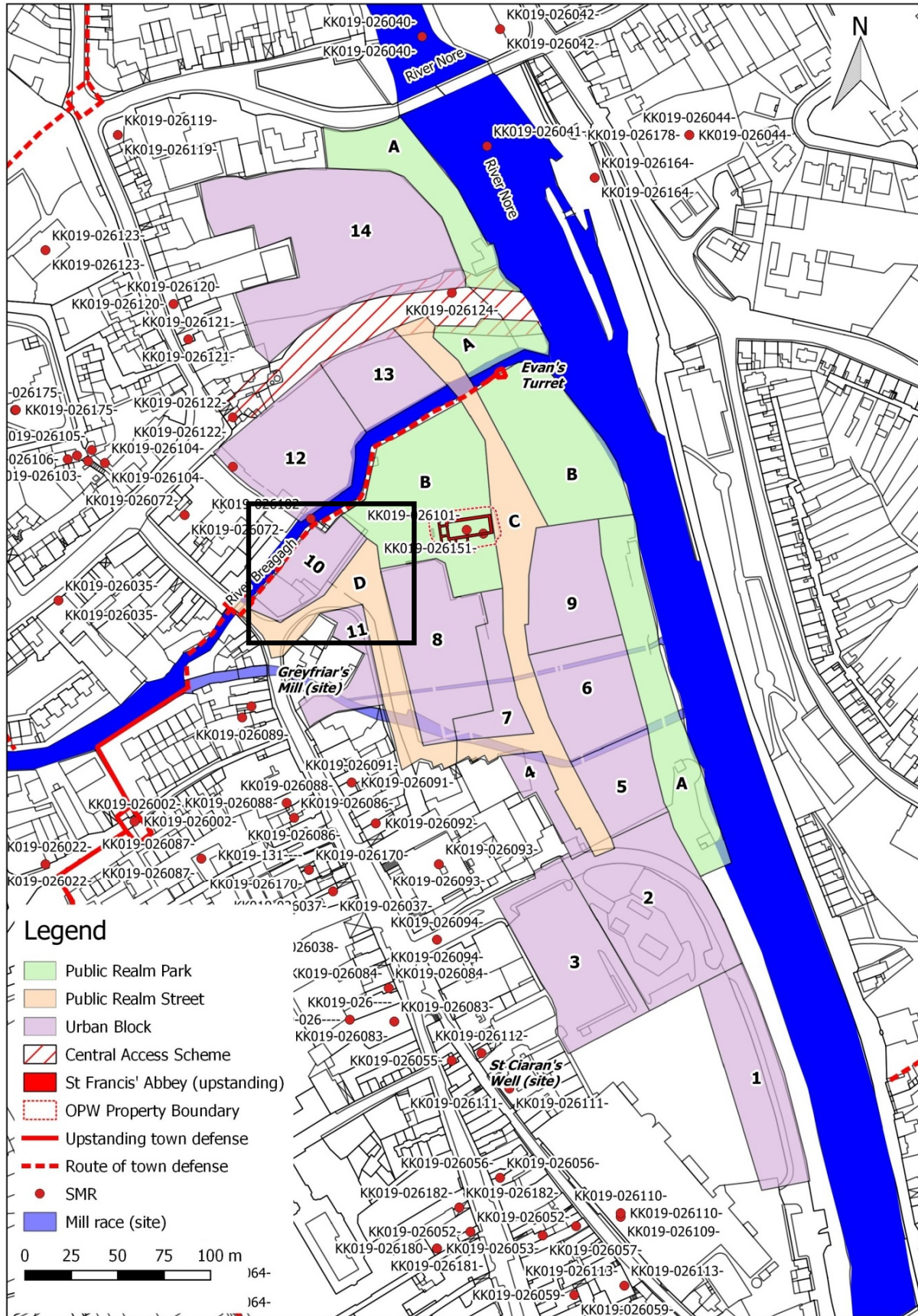


Figure 2: Abbey Quarter Masterplan area with the location of the Mayfair Building outlined in black

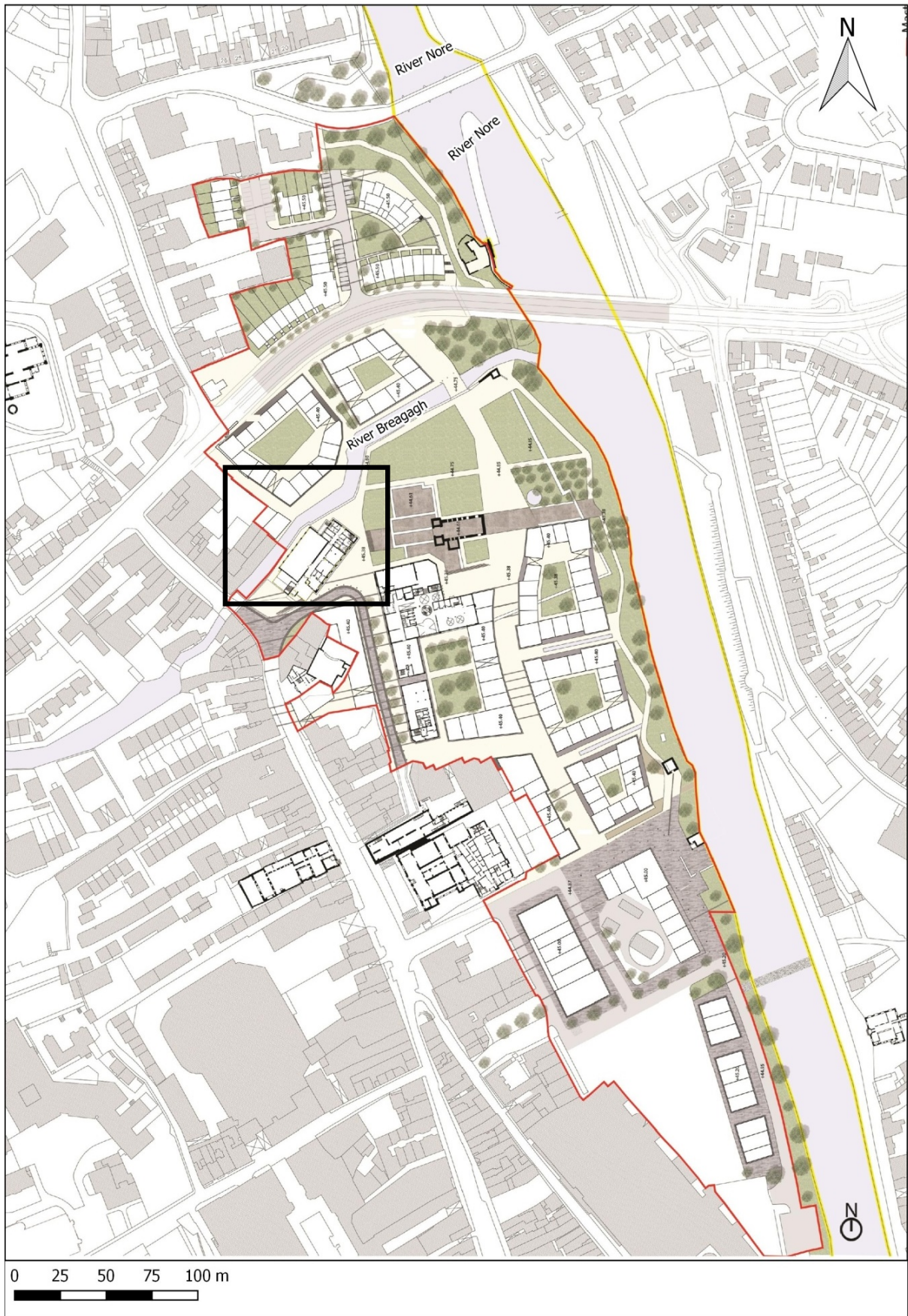


Figure 3: The Abbey Quarter Masterplan layout with the location of the Mayfair Building outlined in black

Site Location and Description

Site Location

The Mayfair Building area (Urban Block 10) consists of the footprint of the existing Mayfair Building and the adjoining Watergate car park (Figure 2). The area measures approximately 75m northeast–southwest by 30m northwest–southeast, a total area of c.0.225 hectares. It is defined on the north by the Breagh River, Watergate Street on the west and the former Diageo brewery (Public Realm B) to the south.

The Mayfair Building is located next to the city wall (a National Monument and part of the ‘Historic Town’/ZAP KK019-026), which separates the town from the River Breagh. The remains of the city walls have been substantially built over along this stretch of the wall circuit (Oxford Archaeology 2005, 53–54).

The Mayfair Building opened as a ballroom in 1943 and is constructed of rendered concrete walls. It has a double pitched roof, with corrugated asbestos sheeting (Plate 1). The ballroom is a large, high ceilinged room, with windows facing onto the River Breagh. The ballroom closed in 1973 and the structure was bought by the adjacent brewery. An internal wall was constructed, which divided the former ballroom; one half was used as canteen facilities and the other half was used for staff lockers (Ó Drisceoil 2014).

A two-storey concrete block extension at the rear of the building and a lean-to kitchen extension at the front are both later additions. These were added after the ballroom closed in 1973 and were demolished under archaeological supervision as part of this project in 2017 (AMS 2017c). The elements of the Mayfair building demolished (Figure 4) consisted of a:

- 64 sq. m single-storey extension to the east (Plate 2);
- 36 sq. m single-storey extension to the west;
- raised walkway to the southeast and associated canopy (Plate 2).

In the northeastern corner of the Mayfair Building, a twentieth century single-storey boiler room built of concrete blocks and measuring 16 sq. m abuts the city wall monument, along with contemporary concrete steps used to access a first-floor fire escape and air conditioning unit (Figure 4; Plate 3). As these structures abut the city wall National Monument, they have been retained in the short term to help stabilise the upstanding wall monument.

Proposed Development

The site owners, KCC, propose to renovate and extend the existing Mayfair Building for use as library (Figure 5). This proposal will be put to public consultations in May 2019.

The Gross Internal Floor area of the Mayfair Building will be 1,893 sq. m; the total area of the redeveloped Mayfair Building, including the public plaza, will be c. 1826 sq. m; (Figure 5).²

1. The existing walls and foundations of the Mayfair Building will be largely retained (c. 662 sq. m).
2. The eastern portions of the Mayfair Building have already been demolished under archaeological supervision in 2017 (Plate 2) (AMS 2017a).
3. An ESB substation and switching room have already been constructed, preserving archaeology *in situ* (47 sq. m)(AMS 2019; Flynn 2019).
4. Demolition of a boiler house and steps (c. 60 sq. m). adjoining the City Wall (a National Monument).
5. Demolition of portion of a two-storey flat-roofed and gabled section to north-east corner of the Mayfair Building (c. 58 sq. m).
6. Provision of a new two-storey extension to the gable ends of the existing building to be externally insulated with a render finish. A raft foundation to the east (c. 206 sq. m) and west (c. 307 sq. m) will be constructed with the base of construction at 44.40m OD.
7. Remodelling and extension of the existing two-storey flat-roofed section on the east façade to be externally insulated and clad with a "second-skin" louvred system.
8. Existing northern façade to be externally insulated with a render finish.
9. Replacement of the existing roof with a standing seam metal roof.
10. Replacement of the existing windows with new double-glazed windows in a powder coated aluminium frame.
11. Modifications to the internal layout of the building and provision of a new mezzanine level in the double-height space of the former ballroom. Six pad foundations for columns to support a mezzanine to be inserted within the existing Mayfair Building with their base of construction at 44.40m OD.
12. A lift shaft will be constructed within this western extension of the Mayfair Building, with its base of construction at 44.15m OD.
13. Construction of a public urban square and new access to the building on the site of the existing public car park to the south west of the building (163 sq. m).
14. Associated Services, including 106m of storm drains less than 1m deep, and 6 manholes, using an existing outfall to the River Breagagh, and 15m of 150mm diameter sewer connecting to an existing sewer.

² The numbers in Figure 5 correspond to the numbered elements of the proposed development 3-14)

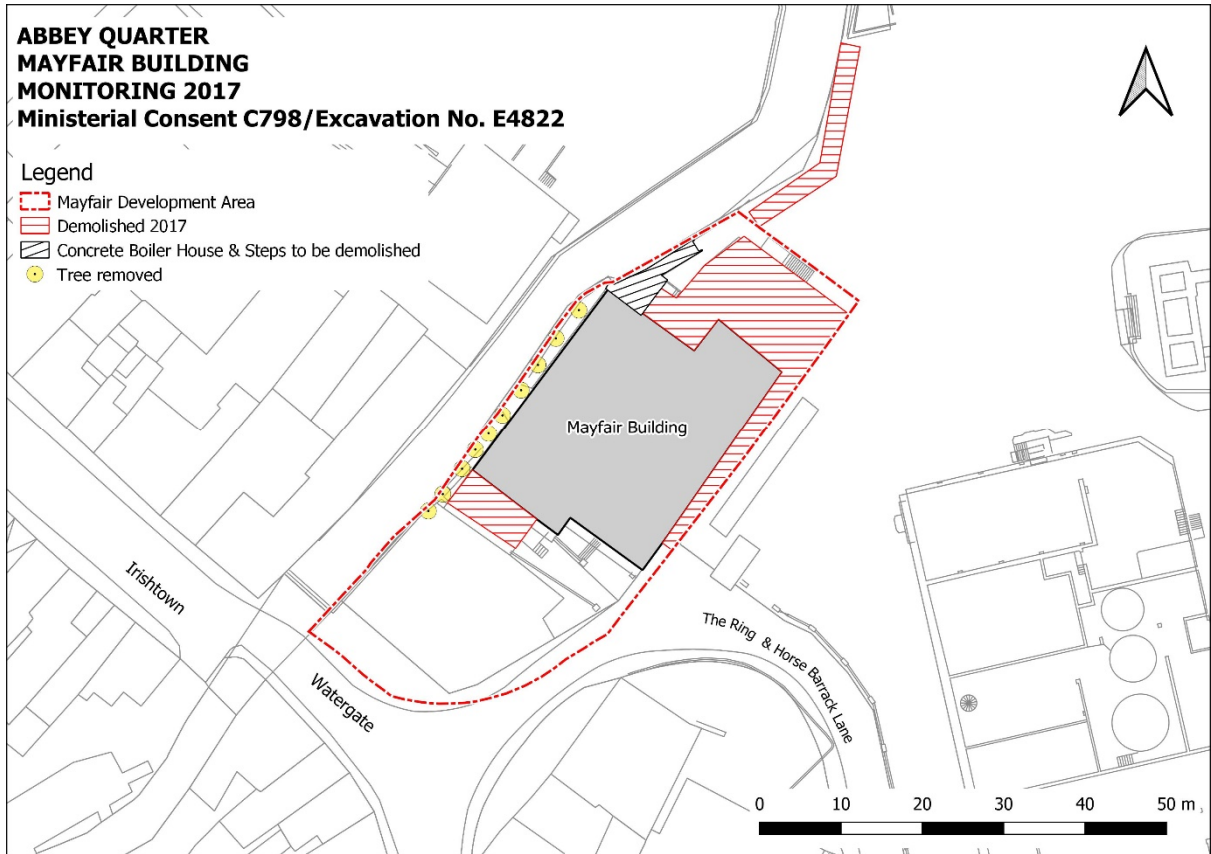


Figure 4: Study Area showing area of archaeological monitoring in 2017

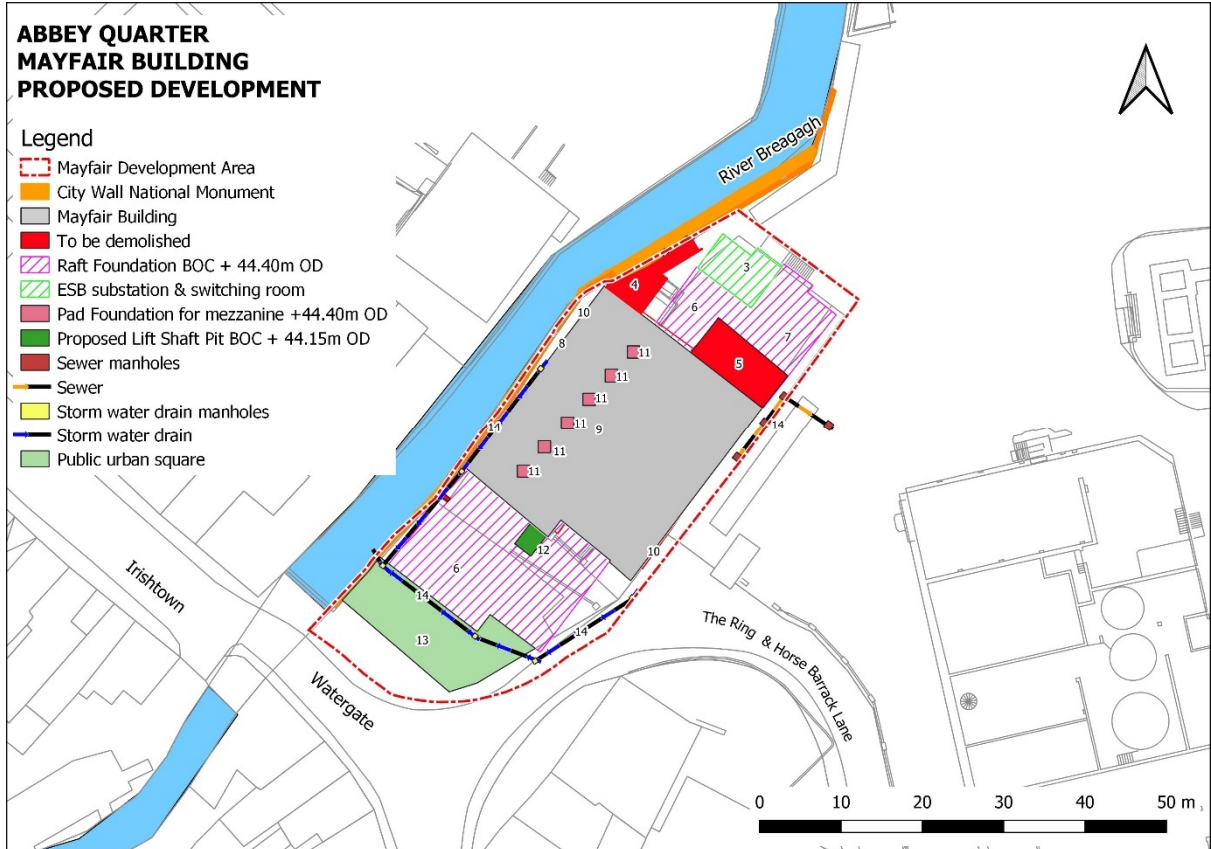


Figure 5: Proposed Mayfair redevelopment works



Plate 1: Mayfair Building in 2017, looking north before demolition works



Plate 2: Mayfair during demolition of modern portions at the east end of the building in 2017



Plate 3: Demolition of eastern portions of the Mayfair Building adjacent to the city wall, looking west in 2017. Note the boiler house and concrete steps remaining *in situ* (A), and the vibration monitor fixed to the wall (B).



Plate 4: Monitoring demolition works at the west end of the Mayfair Building, June 2017



Plate 5: Projecting section of wall (Feature 67 in Appendix 2 and Figure 26) to be removed (red outline)



Plate 6: ACSU Test Trench 10:2, looking west, along the narrow space between the Mayfair Building and the city wall National Monument



Plate 7: Cobble surfaces and walls of the Horse Barracks exposed by AMS in late 2018



Plate 8: Area of the ESB substation and switching room excavated by Colm Flynn, 2019



Plate 9 Laser scan of the city wall in progress

Archaeological and Historical Background

The proposed development is located adjacent to St Francis' Abbey National Monument, within the precinct of the medieval Franciscan monastic complex, and adjacent to the city wall.

Ó Drisceoil (2014, 2–16) described the archaeological and historical background of the Mayfair Building and adjacent areas in detail. This can be summarised as follows:

1. The site is located on the southern bank of the River Breaghagh, within the former floodplain of the river.
2. The floodplains of the Breaghagh and Nore rivers were reclaimed between the late twelfth and fourteenth centuries to provide for the expansion of the town and a functioning quayside. This resulted in up to four metres of waterlogged ground.
3. The circuit of the town walls was substantially completed in stone before 1300. The proposed development is 10m to the northeast of the site of a medieval gate variously called the 'Irishtown gate', 'Hightown gate' or 'Watergate' which connected the boroughs of Hightown and Irishtown. The gate was on the south side of the bridge, and may have incorporated a slipway to the River Breaghagh. The gate was demolished by 1759 when the bridge was widened.
4. The Horse Barracks was built around 1700, possibly to accommodate soldiers stationed in Ireland following the end of Europe's 'Nine Years War' (1688–97). William Colles built an extension to the barracks between 1753 and 1755. The Horse Barracks closed c.1800 when a new infantry barracks was opened in Kilkenny. It was bought by Kilkenny Corporation in 1829.

The Mayfair Ballroom opened on St Stephen's night 1943 and became established as a popular venue for the next thirty years, hosting acts such as Ray Charles, The Everly Brothers, Dusty Springfield, The Tremeloes, Engelbert Humperdink and Chubby Checker. The ballroom closed in 1973 following the decline of the showbands. Following this, the Mayfair Ballroom was purchased by Guinness-owned Smithwick's Brewery for use as a canteen and offices (Ó Drisceoil 2014).

The study area lies within the historic town of Kilkenny which is listed in the Record of Monuments and Places (RMP) (KK019-026---) and is protected under the *National Monuments Act 1930* as amended. Ó Drisceoil (2014, 6–10) identified 20 heritage sites in the vicinity of the Mayfair Building. Those sites within or adjacent to the Mayfair Building development area are listed in Table 1 (see also Figure 6).

Table 1: Heritage sites in the vicinity of the Mayfair Building

Reference Numbers	Site Class	Masterplan Area
Part of the Kilkenny City Wall Defences, National Monument, in ownership of Kilkenny County Council; KK019-026001-; UAS 4a-4d: 6	City Wall	Public Realm B & C; Urban Block 10
KK019-026102; UAS 4a: 102	Bridge site (Cotteral's Bridge)	Between Urban Blocks 10 & 12

Reference Numbers	Site Class	Masterplan Area
NIAH 12000007	Bridge (Irishtown Bridge)	Public Realm D
KK019-026101; NIAH 12000008; Nat. Mon. Ref. 72	Religious House - Franciscan Friars, St Francis' Abbey - National monument in State Care (National monument Ref:72)	Public Realm B & C

The circuit of the town wall for Kilkenny was c.2.9km in total. This consisted of 1.6km surrounding the 'Hightown' (54%), 0.7km surrounding Irishtown north of the River Breagagh (25%), and 0.6km (22%) surrounding the suburb of St John's on the east bank of the River Nore (Figure 2) (Bradley 2000, 200; Oxford Archaeology 2005). A 90m section of wall circuit, amounting to 3% of the total circuit length of the medieval wall, was surveyed and recorded by AMS in 2017 and 2018 (AMS 2018). The wall ranges in height from 2.73m to 5.96m over the river, and between 1.05m and 3.99m over the ground on the land side (see Archaeological Assessment Survey of the Town Wall below).

Ó Drisceoil noted that the city wall defences (SMR KK019-026001-) in the sector east of Irishtown Bridge "probably survives to c.0.60m above current ground [river bed] level at the northeast end (downstream from the slight turn [ITM 650419, 656342]); the northwest face was battered." Ó Drisceoil also noted two possible medieval opes located in the remnants of the Horse Barracks' wall. Ó Drisceoil proposed the possible line of a rampart and 'sconce' c.2m wide (Figure 6). This section of wall is described in the Kilkenny Town walls Conservation Plan (Oxford Archaeology 2005, 53–55). This report notes that the remains of the town wall on the south side of the River Breagagh between Evan's Turret and Irishtown Bridge has been extensively built over, with elements of the original medieval wall likely surviving in the lower masonry (2005, 53). There are historical references to a postern gate called Grey Freren Gate, leading from the precinct of St Francis' Abbey on the south side of the River Breagagh to Irishtown north of the river (Bradley 2000, 4; Oxford Archaeology 2005, 53). Although the location of this probable bridge is not definitively established, it is possibly in the position of a later stone bridge called Cotteral's Bridge (KK019-026102-).³

Cotteral's Bridge (KK019-026102-) consists of the springing for a single-arch stone bridge, providing access from the former precinct of St Francis' Abbey past the Horse Barracks, across the Breagagh to a path leading north past the site of the Bull Inn (SMR KK019-026107-) to Vicar Street. Although this bridge is not depicted on Rocque's map of 1758 (Figure 7), it does appear on the first-edition Ordnance Survey of Ireland six-inch map (1842; Figure 8), the town plan maps (1850 and 1872; Figure 9 and Figure 10) and the 25-inch map (1900; Figure 11). It is not visible on the 1948 six-inch

³ Note the position of the remains of Cotteral's Bridge are located some 6m SW of the location recorded in the SMR vector dataset, at ITM 650414, 656338.

Ordnance Survey map, suggesting it had been removed, most likely following the construction of the Mayfair Building by 1943.

The Watergate Bridge connected the boroughs of Irishtown and Hightown (Figure 6). A bridge was first recorded here in 1207 and was reconstructed in 1568 and widened in 1759 (Bradley 2000, 21). The current bridge consists of a two-arch rubble stone road bridge (NIAH 12000007). This bridge formerly carried a house on its east side until the twentieth century (see 'Valuation House Book Records' section on page 24 below). Works on the bridge were archaeologically monitored in 2004, revealing the original cut-waters and bridge fabric (see 'Previous Archaeological Excavations' section on page 26 below).

St Francis' Abbey Franciscan friary was founded in 1231 (O'Keeffe 2016). The precinct of St Francis' Abbey in the thirteenth century extended from the River Nore in the east to Parliament Street and Watergate in the west, and from the River Breagagh in the north to St Ciaran's well to the south, located behind what became Kytler's Inn of Kieran Street (Courtney Deery Heritage Consultancy 2014, 26) (Figure 2 and Figure 6). In 1544, the friary complex was described as follows:

Church Belfry Dormitory, Hall, Chapter House, three Chambers a Kitchen, a House called the Garnen with three cellars under same House, and an enclosure within the Site of said late monastery or House, and all Edifices Messuages Gardens Lands tenements Orchards and hereditaments whats occurs with this appertaining in or within the Site Bounds Circuit and precincts of said late Monastery or House (Courtney Deery Heritage Consultancy 2014, Appendix A).

The complex was described again c.1640:

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

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

The upstanding remains of St Francis' Abbey consist of a choir, crossing tower and sacristy (Courtney Deery Heritage Consultancy 2014, 23–28). These upstanding remains are located within an area c.0.6m lower than the surrounding concrete-covered yard, suggesting that the ground surrounding the abbey was built up during construction work on the brewery site after c.1963. The extent of the National Monument in State ownership is defined on the north, east and west sides by the sunken area and on the south side by the outside north wall of the Samples Room, and covers an area of c.765 sq. m (letter from Sean Kerwin, NMS, to Philip O'Neill, KCC, 30/7/2014) (Figure 2 and Figure 6). The National Monument in total covers an area c.0.95ha encompassing the areas excavated by Marcus Ó hEochaidhe and David Sweetman to the south, to the River Breagagh to the north and Evan's Turret to the northeast. It does not encompass the site of the Mayfair Building. As noted, the circuit of the medieval town wall itself constitutes a National Monument under the National Policy on Town Defences (DoEHLG 2008).

In addition, the remnants of the Horse Barracks building, built c.1700, with additions and alterations made in 1753–55 and 1800, survive for a distance of c.25m along the south side of the River Breagagh.

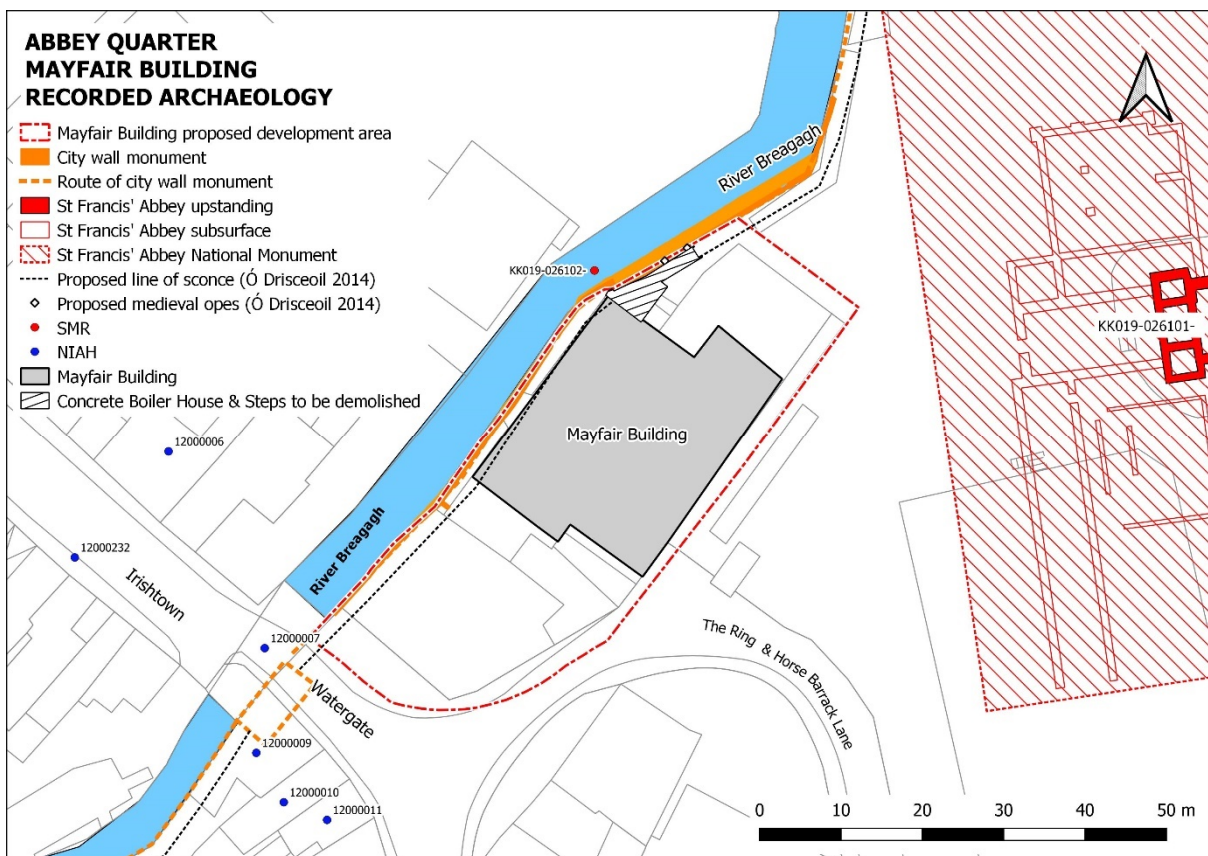


Figure 6: Archaeological monuments surrounding the Mayfair Building

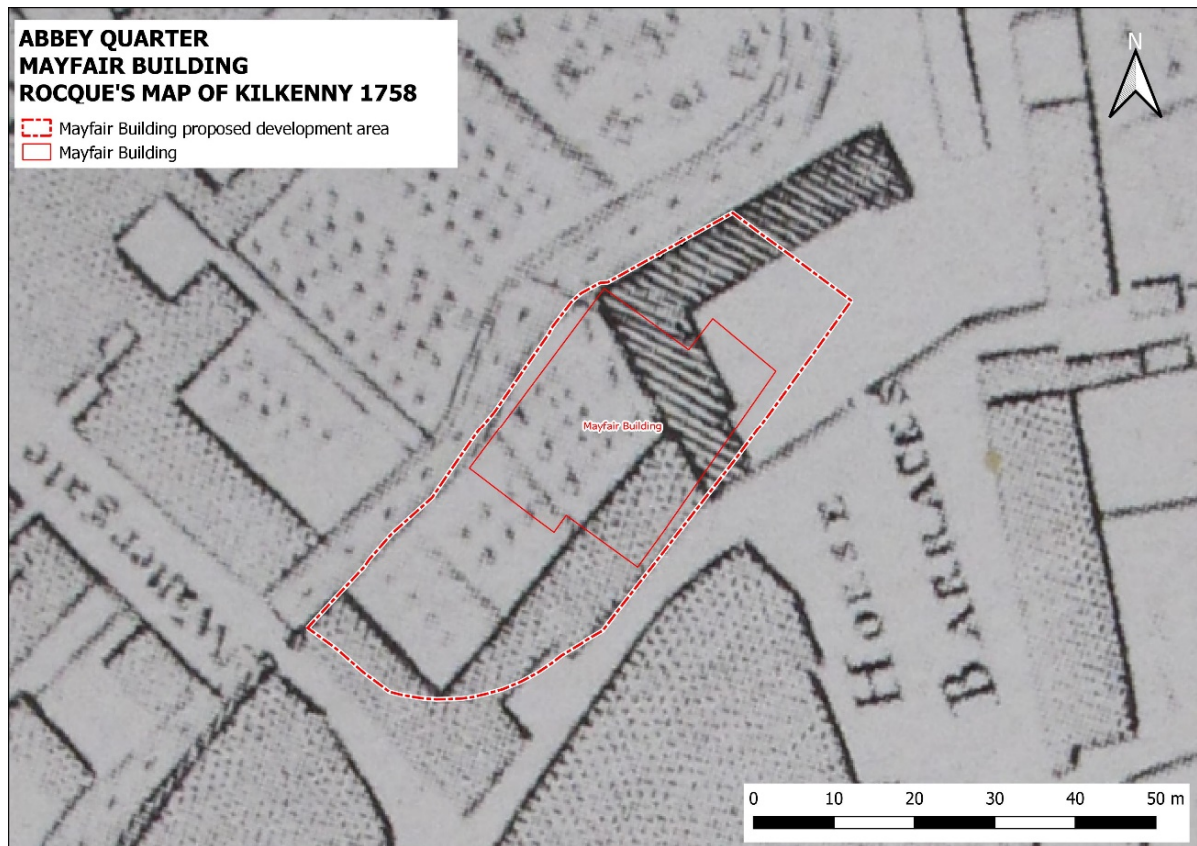


Figure 7: Rocque's Map of Kilkenny (1758) with the outline of the Mayfair Building before demolition works

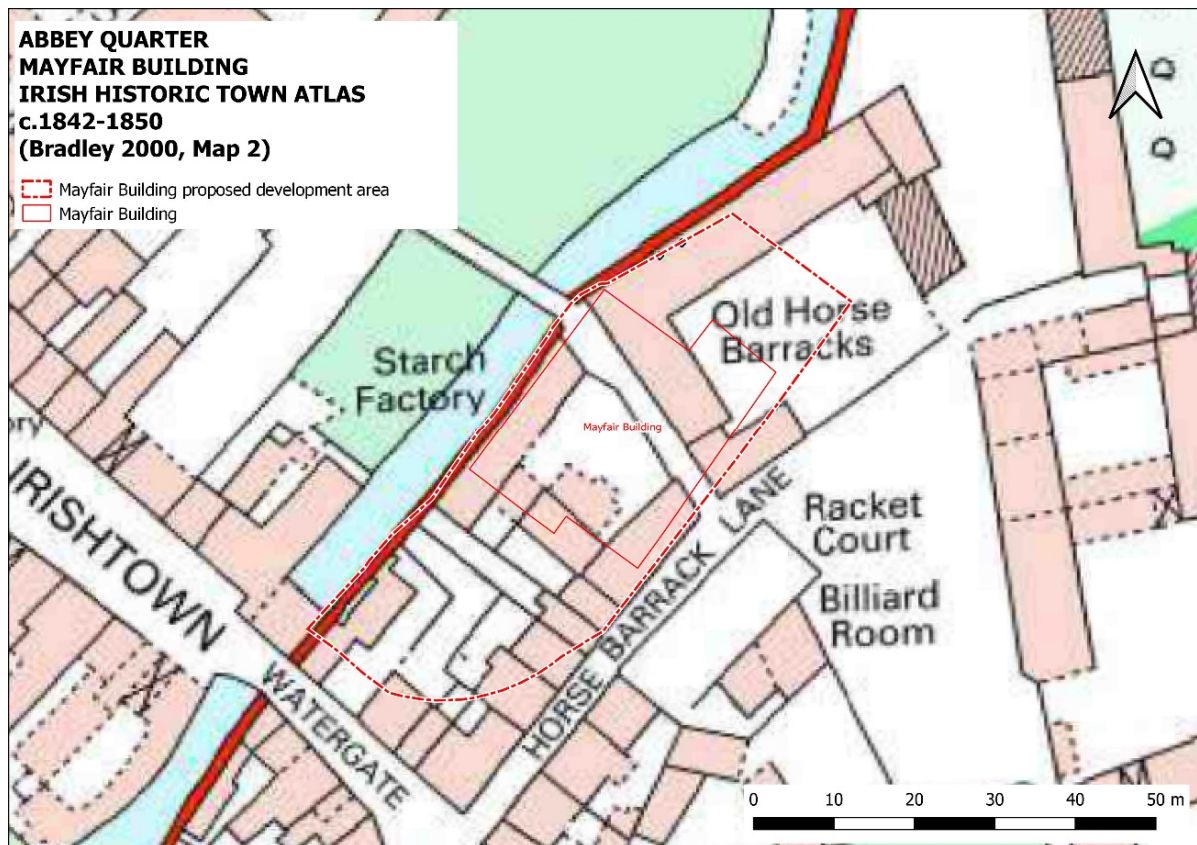


Figure 8: Irish Historic Town Atlas Map 2 (1842-50; Bradley 2000) with the outline of the Mayfair Building before demolition works

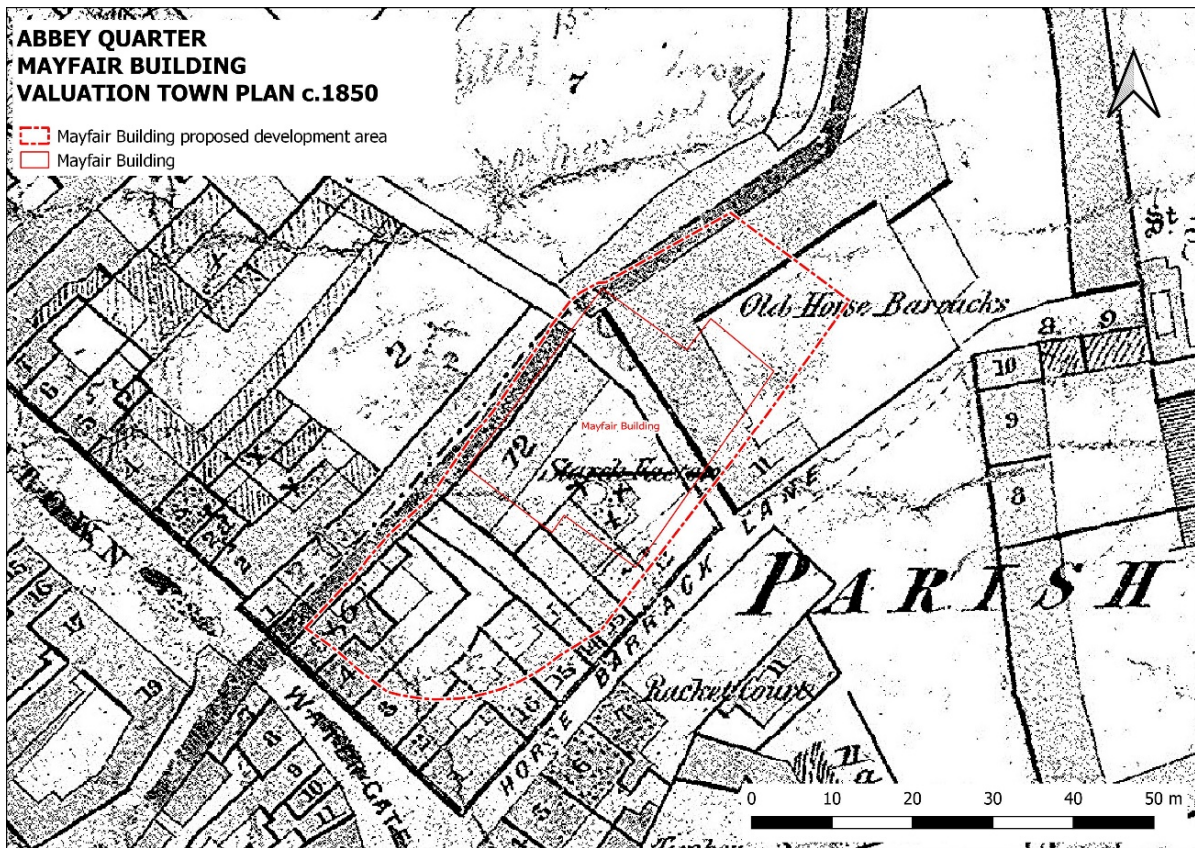


Figure 9: Valuation Town Plan 1:1056 (c.1850) with the outline of the Mayfair Building before demolition works

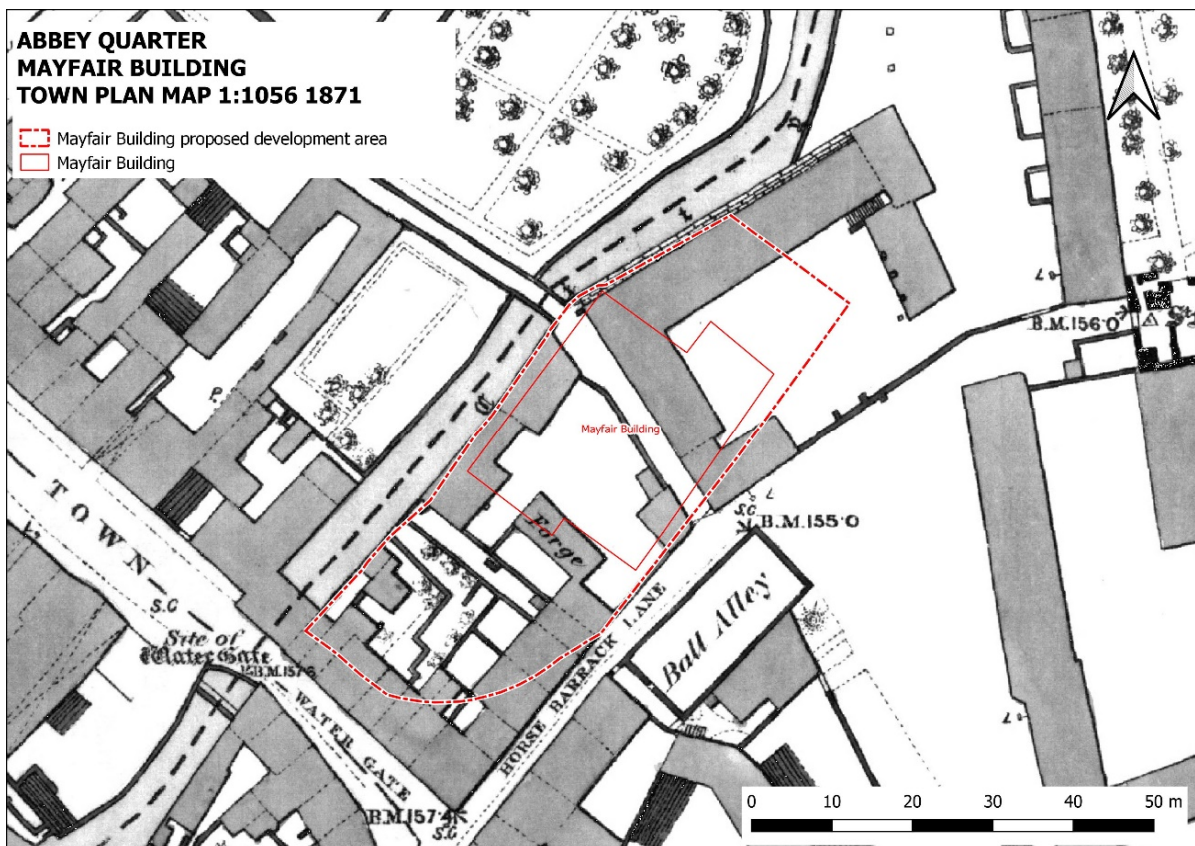


Figure 10: Town Plan 1:1056 (c.1871) with the outline of the Mayfair Building before demolition works

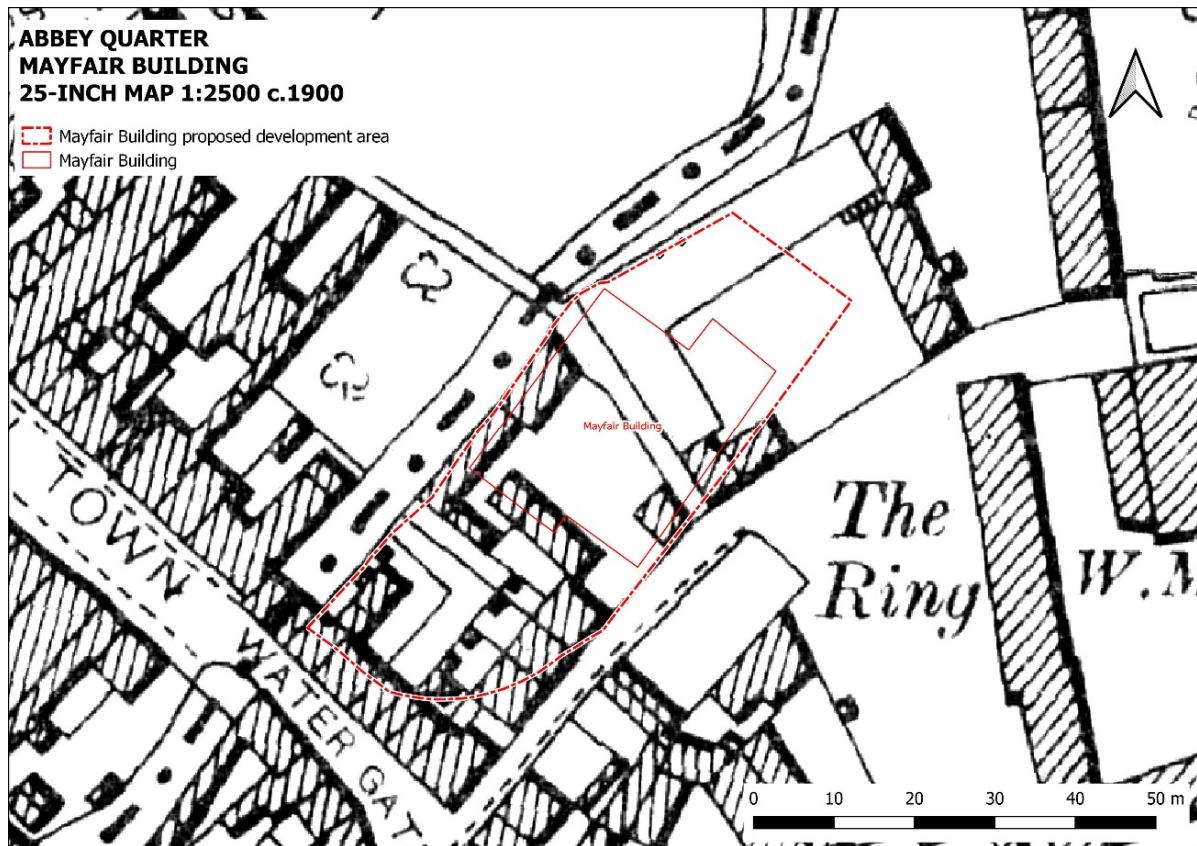


Figure 11: Ordnance Survey of Ireland 25-inch map (1900) with the outline of the Mayfair Building before demolition works

Valuation House Book Records

The Valuation of Ireland recorded the dimensions, material, roofing, ownership and occupancy of the buildings of Ireland in a series of manuscripts called the House Books, preparatory to the production of what is commonly called “Griffith’s Valuation” (Reilly 2000, 16–18). The National Archives of Ireland have made the surviving volumes of these manuscripts available to view online, including Kilkenny City, surveyed in 1847.⁴

For the purpose of this report, 31 House Book entries have been extracted for properties in Irishtown, Watergate and Horse Barracks Lane adjacent to or intersecting the line of the Breaghagh river wall. The dimensions for each building have been translated into the metric system, and codes are provided for building material, age, roofing material and quality. For comparative purposes, the footprint and volume of each building is also given (see Appendix 1). It was possible to identify 29 of these buildings on the Valuation Town Plan map from 1850 (Figure 9). Whilst this is a somewhat limited snapshot of just one year, it does provide useful information about the dimensions and use of certain buildings on site. In particular, six of these buildings flank the River Breaghagh survey area (Appendix 1, building nos. 1, 5, 6, 9, 30, 31; Figure 12).

⁴ http://census.nationalarchives.ie/search/vob/house_books.jsp

In 1847, the Horse Barracks buildings were leased by Richard Sullivan from the Corporation of Kilkenny (Appendix 1, building nos. 2, 3,⁵ 4, 5, 6 and 7). This complex of six buildings ranged from large (no. 5: 278 sq. m and 6.5m high) with slate roofs to small (no. 3: 28 sq. m, 1.2m high) and slightly decayed with a thatch roof. This former barracks was used by Mr Sullivan as offices and a meal store. The largest of these (no. 5) flanked the river.

Richard Sullivan also leased a complex of five buildings from Mrs Hartford used as a Starch Factory (Appendix 1, building nos. 9, 10, 11, 12 and 13). This included three kilns (nos. 10, 11, 12). These buildings ranged in height from 2.6m to 4.7m. The largest of these buildings (no. 9) was an office with a footprint 65 sq. m, 2.6m high, with a thatch roof.

James Wall leased a house, house return and small office shed from Henry Cole (Appendix 1, nos. 28, 29 and 30) beside the River Breagagh. The office shed (no. 30) backed onto the River Breagagh and measured 3 sq. m and just 1.5m high with a slated roof (Figure 12).

James Doyle occupied no. 1 Irishtown, located on the east side of Irishtown Bridge (Appendix 1, no. 1). This building had a footprint of 26 sq. m and stood 5.6m high, with a slated roof. It was described as old and out of repair.

Only elements of two buildings survive in the fabric of the surveyed wall: the sections of buildings nos. 5 and 6 from the Horse Barracks complex of buildings flanking the River Breagagh. The rest of the Horse Barracks was demolished to make open yards in the adjacent brewery (Appendix 1, buildings nos. 2, 4, 5 and 8), the construction of the Mayfair Building in c.1943 (nos. 5, 6, 7, 8, 9, 10, 11, 12, 13) and the Watergate car park (nos. 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31). The building on Irishtown Bridge was also demolished (no. 1).

⁵ Unlocated and not mapped.

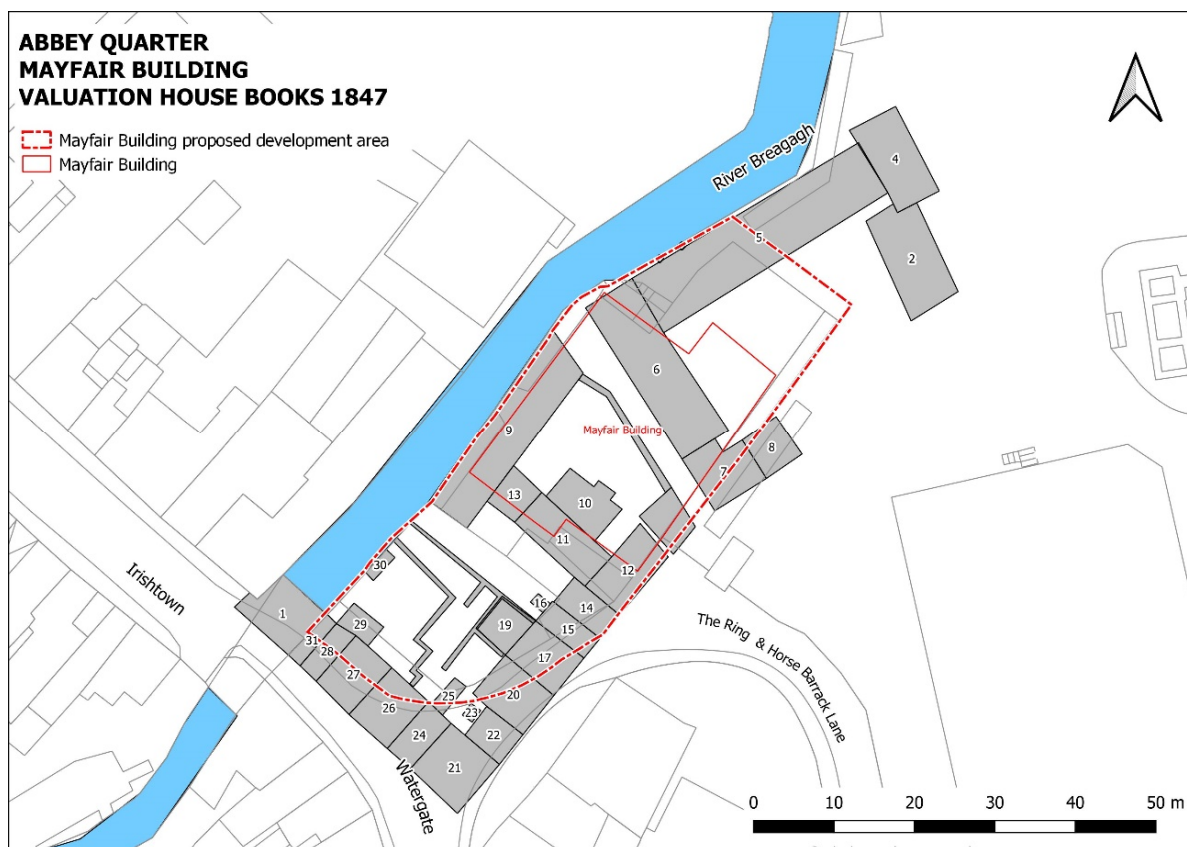


Figure 12: Valuation House Books (1847)

Previous Archaeological Excavations

Previous archaeological excavations in the area of the Mayfair Building are detailed in Ó Drisceoil's report (2014) and in the Kilkenny Archaeological Project (KKAP) (Ó Drisceoil et al. 2008) (Figure 13).⁶

More recently, Archaeological Consultancy Services Unit (ACSU) were retained by Kilkenny County Council to undertake archaeological test excavations as specified in the strategies prepared by AMS. Jon Stirland, ACSU, directed the test excavation of Urban Block 10 (C798/E4822) (ACSU and Stirland 2018b). This Ministerial Consent was extended for archaeological works to facilitate the construction of an ESB substation and switching room in Urban Block 10 in 2018 (AMS 2019), with further works by Colm Flynn in early 2019 (Flynn 2019).

Excavation 99E0385, directed by Margaret Gowen (www.excavations.ie; KKAP-190), recorded archaeological monitoring of geotechnical trial pits and test excavations along the eastern section of the River Breaghagh in advance of removal of contaminated riverbed. The investigation also examined the condition of the town wall in 1999. Relatively little of archaeological significance, other than some sherds of medieval pottery, was recovered from monitoring geotechnical investigations in the

⁶ The Kilkenny Archaeological Project (KKAP) is available to view on-line on the Heritage Council Web Viewer: <https://heritagemaps.ie/>

riverbed. The report identified significant structural issues with the town wall which were subsequently addressed during the River Nore Drainage Scheme (from 2001–2004).

Excavation 01E0632, directed by Ian Doyle (www.excavations.ie; KKAP-130), recorded the archaeological monitoring of the removal of c.1.7m of riverbed contaminated with PCB. Fragments of cut stone, dressed ashlar blocks from the medieval wall and the Horse Barracks, and an iron sword were recovered during monitoring. The medieval wall flanking the excavation was conserved as part of the works.

Excavation 04E0615, directed by Kevin Lohan (www.excavations.ie; KKAP-131), recorded the archaeological monitoring and excavations during construction work on Irishtown Bridge up to 2004. These works were predominantly on the west portion of the bridge, away from the area of survey detailed in this archaeological assessment report. Archaeological works at Irishtown Bridge identified the 1799 western face of the bridge and a cut-stone breakwater. Archaeological works also established that the bridge had supported structures in at least the post-medieval period. Whilst some medieval pottery was recovered, most finds were post-medieval in date.

In 2017 AMS monitored the removal of trees and demolition of part of the Mayfair Building under Ministerial Consent C798/Excavation No. E4822 (AMS 2017a) (Figure 13; Plate 2–Plate 5).

In 2018, archaeological test excavations directed by Jon Stirland were carried out by ACSU for KCC (ACSU and Stirland 2018b) within Urban Block 10 (Figure 14). Jon Stirland excavated two test trenches in the vicinity of the Mayfair Building (ACSU and Stirland 2018b). Trench 10:1, measuring approximately 5m by 5m (c.28 sq. m in area), was excavated to a depth of 1.8m, and was located 5.3m from the city wall in the footprint of a portion of the modern Mayfair Building demolished in 2017 under archaeological supervision (Figure 14). Test Trench 10:1 uncovered upper layers of demolition rubble and made ground over the remains of the walls and cobbled floors for the Horse Barracks building built c.1700 (at 44.31m OD or c.0.40m below the current ground level). Dark soils with disarticulated human remains were found beneath these cobbles, with intact inhumations found at c.0.9m below current surface levels (43.79m OD). This appears to be part of the cemetery for St Francis' Abbey extending as far as this area, and potentially up to the line of the city wall. This was, presumably, part of the 'Large Friary Cemetery for the Abbey' (O'Keefe 2016). Trench 10:2, measuring 1.6m by 3m, was excavated against the city wall behind the Mayfair Building (Figure 13; Plate 6). This trench was excavated to a depth of 0.80m below the modern ground (to 44.47m OD), through a layer of made ground and rubble to reveal a flagstone surface associated with the Starch House building (Appendix 1, No. 9). The trench also exposed an area of undermining in the city wall monument, and a substantial portion of wall repaired with shuttered concrete.

In 2018, ACSU were also engaged by KCC to undertake archaeological test excavations to inform an archaeological strategy for the Abbey Quarter Masterplan Public Realm around St Francis' Abbey. Test excavations were undertaken under the direction of Jon Stirland in Urban Block B (Ministerial Consent C853/Excavation No. E4950) (ACSU and Stirland 2018a). Test Trench B-2 was located c.13m north of the Brewhouse. This trench found the concrete surface (44.06m OD) to be 0.30m thick over a 0.50m thick layer of disturbed ground. Preliminary findings identified archaeology at a depth of 1.10m below current ground surface, where a masonry wall – probably the west wall of the St Francis' Abbey nave – was discovered. In addition, eight *in situ* burials were identified within the former excavation cutting of Marcus Ó hEochaidhe. The trench was excavated to a depth of 1.99m (42.07m OD) without reaching the base of archaeology.

Anecdotal evidence from retired workers of the Smithwicks brewery suggests that human remains were also present in the location of the weighbridge beside the security building, suggesting that the St Francis' Abbey graveyard may extend to the area of the Mayfair Building.

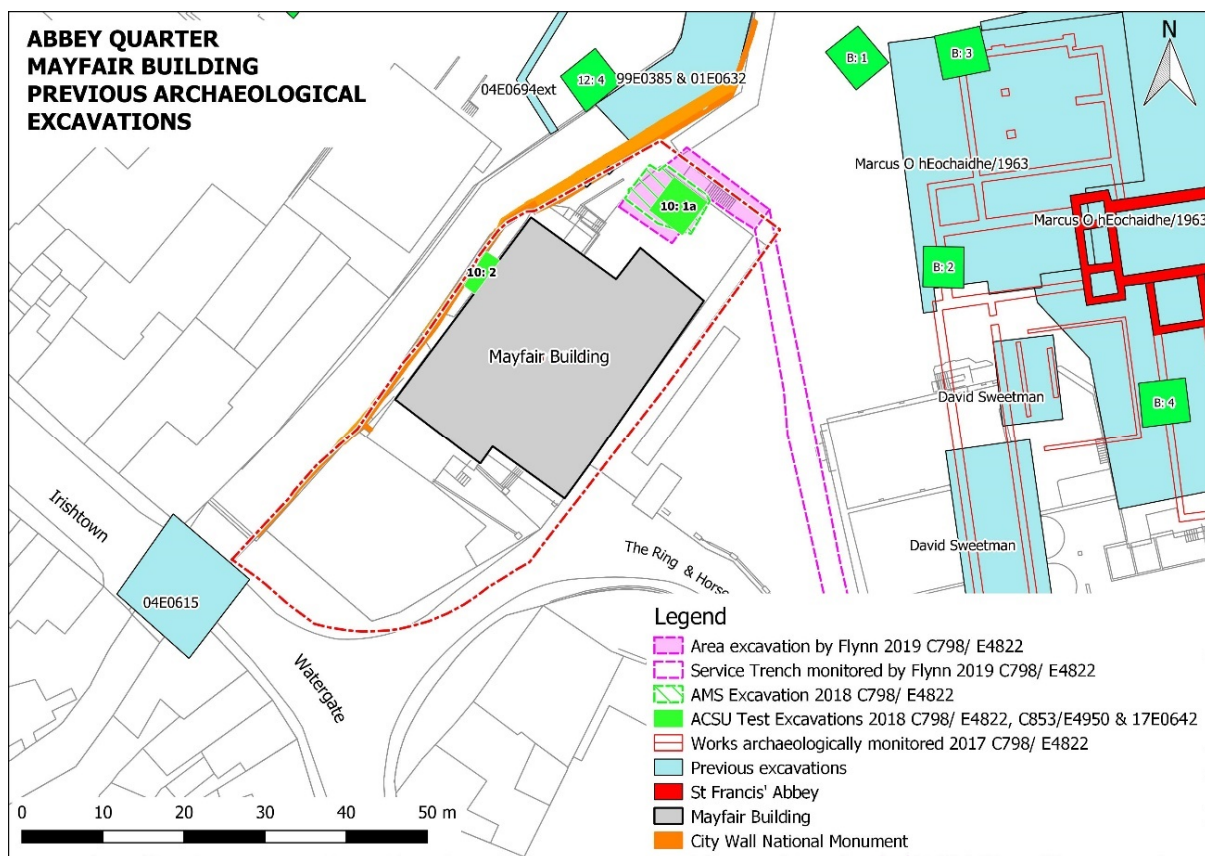


Figure 13: Previous archaeological excavations

Further works in December 2018, under another amendment to the Ministerial Consent (C789; E4822), were carried out by Richard Clutterbuck, AMS, to facilitate the preservation *in situ* of this archaeology beneath the proposed ESB substation and switching room (AMS 2018) (Figure 15 and Figure 17; Plate 7). The ESB substation and switching room is located in the footprint of a

recently demolished portion of the Mayfair Building. The modern demolition overburden (c.0.5m deep) was removed from the footprint of the ESB Substation: an area of 51.55 sq. m, including the backfilled ACSU test trench (28 sq. m), measuring 9.2m by 6.3m in maximum extents, to the level of the cobble surface and masonry walls of the Horse Barracks Building (44.31m OD).

The archaeology in the area of the ESB Substation can be characterised in four phases as follows:

Phase 1 corresponds with the medieval and early modern cemetery found during ACSU's test excavations, and most likely part of the cemetery attached to St Francis' Abbey. This cemetery will be preserved *in situ* and has not been excavated for this project.

Phase 2 consisted of the remains of the Horse Barracks building constructed c.1700. A large external wall of roughly coursed masonry running NE-SW, 0.60m wide and exposed for a length of 5.80m within the excavation area. ACSU confirmed that the foundation of this wall is c.1.55m deep. This wall represents the southern exterior wall of the Horse Barracks, making the Horse Barracks building c.8.5m wide. A perpendicular interior wall abuts the external wall and is narrower (0.45m wide). It is exposed for a length of c.2.82m and was also found by ACSU to be 1.55m deep. This wall divides the interior of the Horse Barracks into rooms or chambers. The interior ground-floor surface consisted of mortar layers, and in one interior, room cobbles. The immediate exterior of the Horse Barracks building also had a mortar and cobble stone surface in a band c.2.8m wide, with a rectangular motif in the cobbles opposite the building's threshold. These external cobbles were laid at a slight slope from the Horse Barracks' wall, sloping to a narrow rainwater gully in the cobbles, 0.36m wide and c.0.5m deep. Beyond the exterior cobbles, a metalled surface appears to have been a yard for the Horse Barracks. This archaeology will be preserved *in situ* and has not been excavated for this project.

Phase 3 consisted of the demolition and removal of the Horse Barracks building and its replacement with made ground sometime after c.1900 (the last time the building walls were depicted on an Ordnance Survey map). The remains of the former Horse Barracks building were removed except that portion of the building fronting onto the Breaghagh River, now part of the city wall National Monument (AMS 2018). Following this demolition, a layer of dark friable cinder material and slag waste was deposited over the former Horse Barracks site.

Phase 4, the final phase, consisted of the construction of a concrete extension to the Mayfair Building following the purchase of the Mayfair Ballroom site by Diageo in c.1970.

Further works involving the expansion of the area for the ESB substation,⁷ and excavation of a 100m service trench to the ESB substation were undertaken by Colm Flynn in 2019, under the further extension to Ministerial Consent (C789; E4822) (Flynn 2019) (Figure 13). In the area of the ESB substation Flynn's work further exposed the cobbling and several masonry walls identified by ACSU and AMS. In addition, the articulated remains of a bovine were discovered in a pit post-dating the Horse Barracks building (Figure 18). The cobbling and masonry walls were recorded and preserved *in situ* beneath the level of the ESB substation (Plate 8).

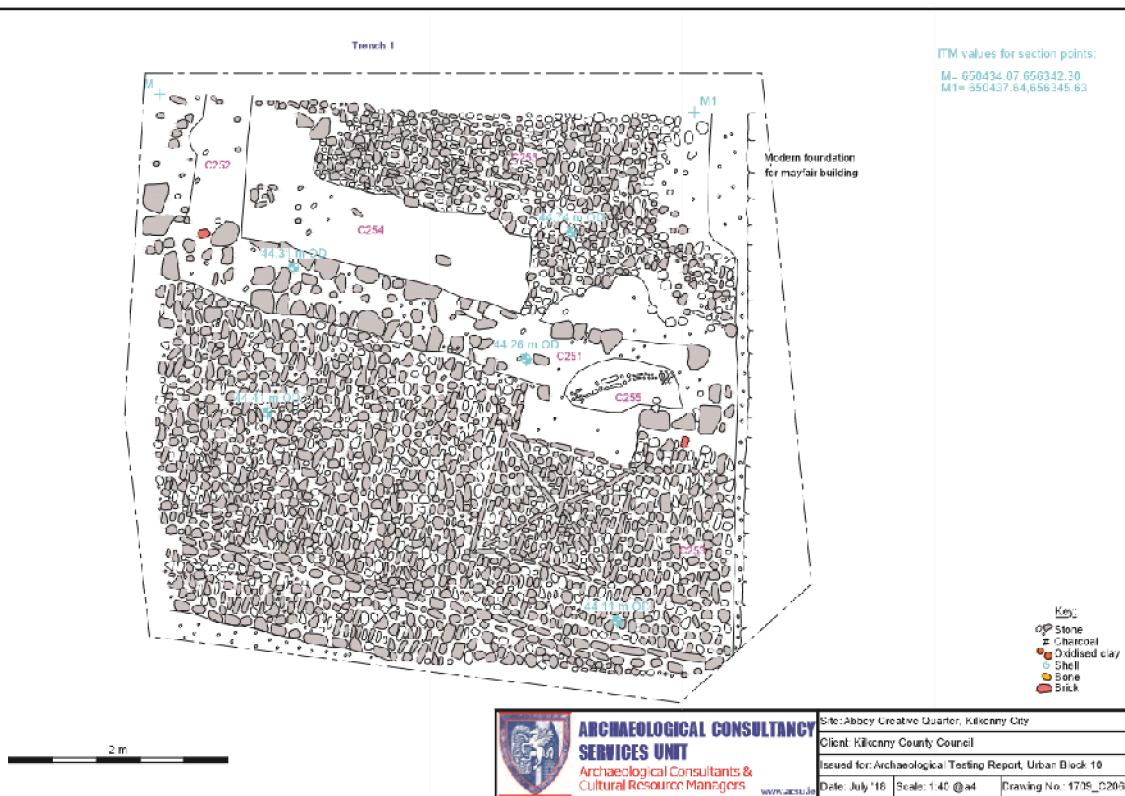


Figure 14: ACSU Test Trench 10:1, 2018 (ACSU and Stirland 2018b)

⁷ total area 105 sq. m, incorporating the 52 sq. m area already stripped by AMS and the 28 sq. m ACSU test trench

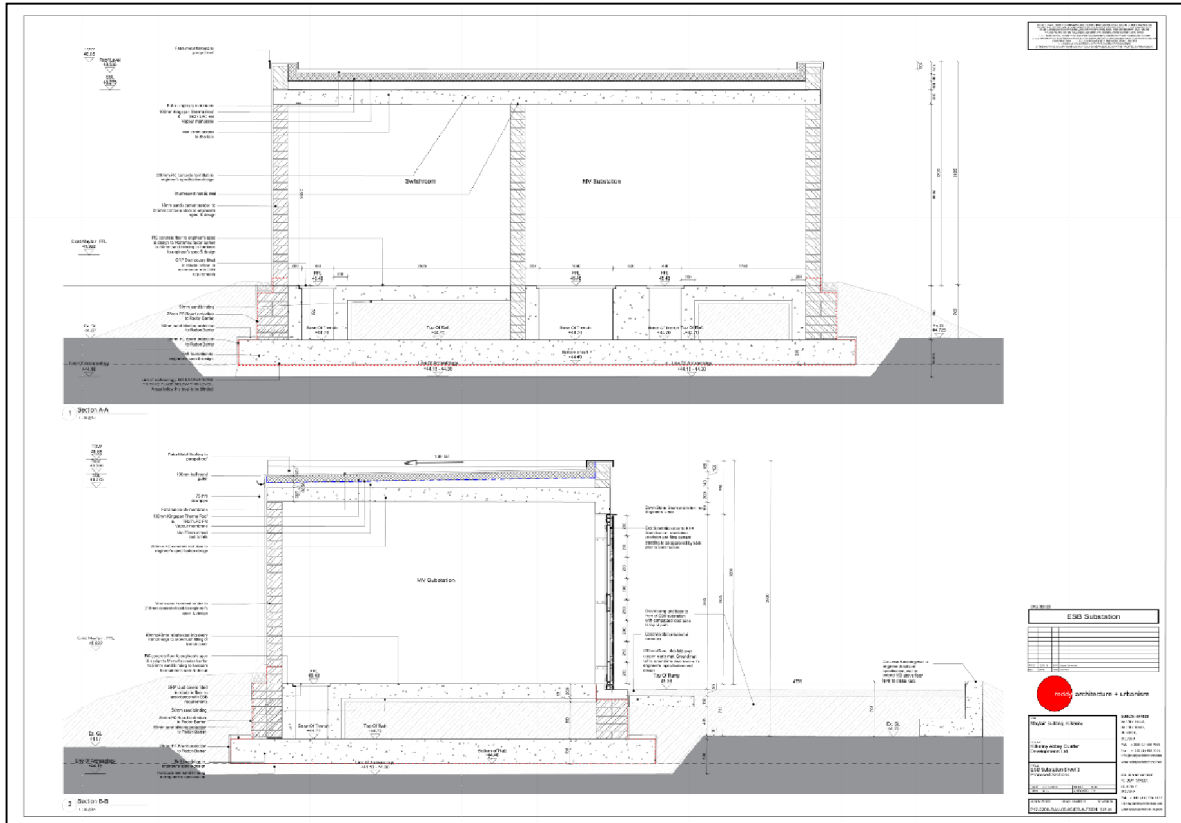


Figure 15: ESB Substation design in section (designed to preserve archaeology *in situ*)



Figure 16: AMS excavation of the footprint of the ESB substation, December 2018 (AMS 2019)

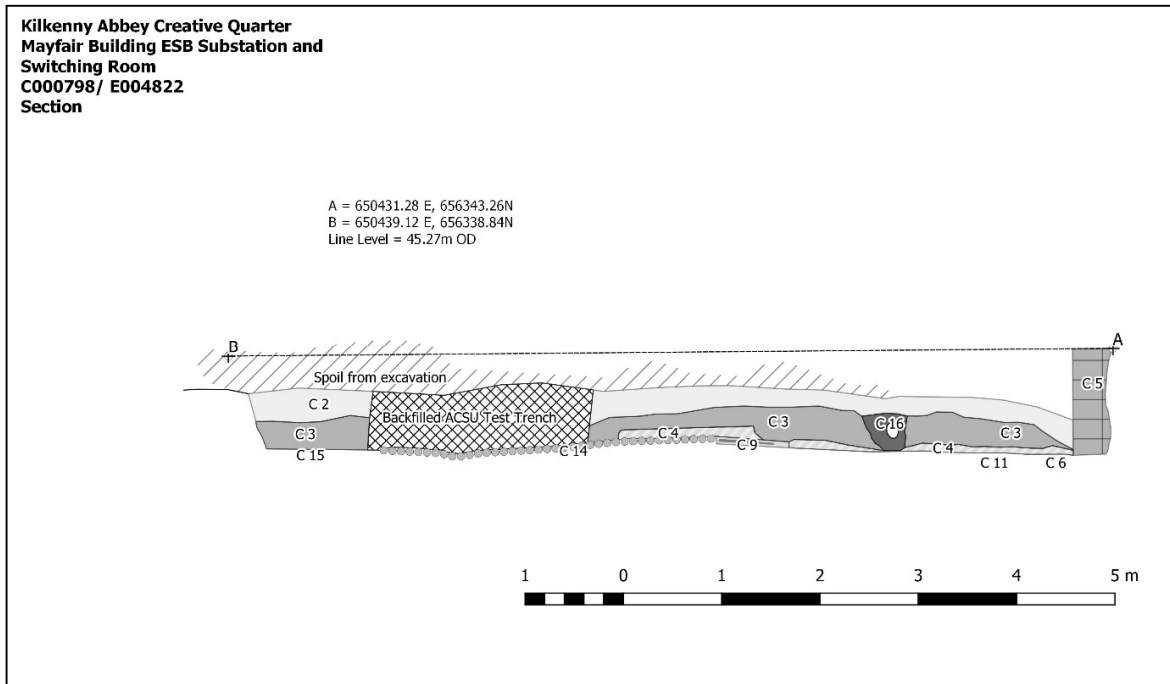


Figure 17: AMS ESB substation excavation section (AMS 2019)

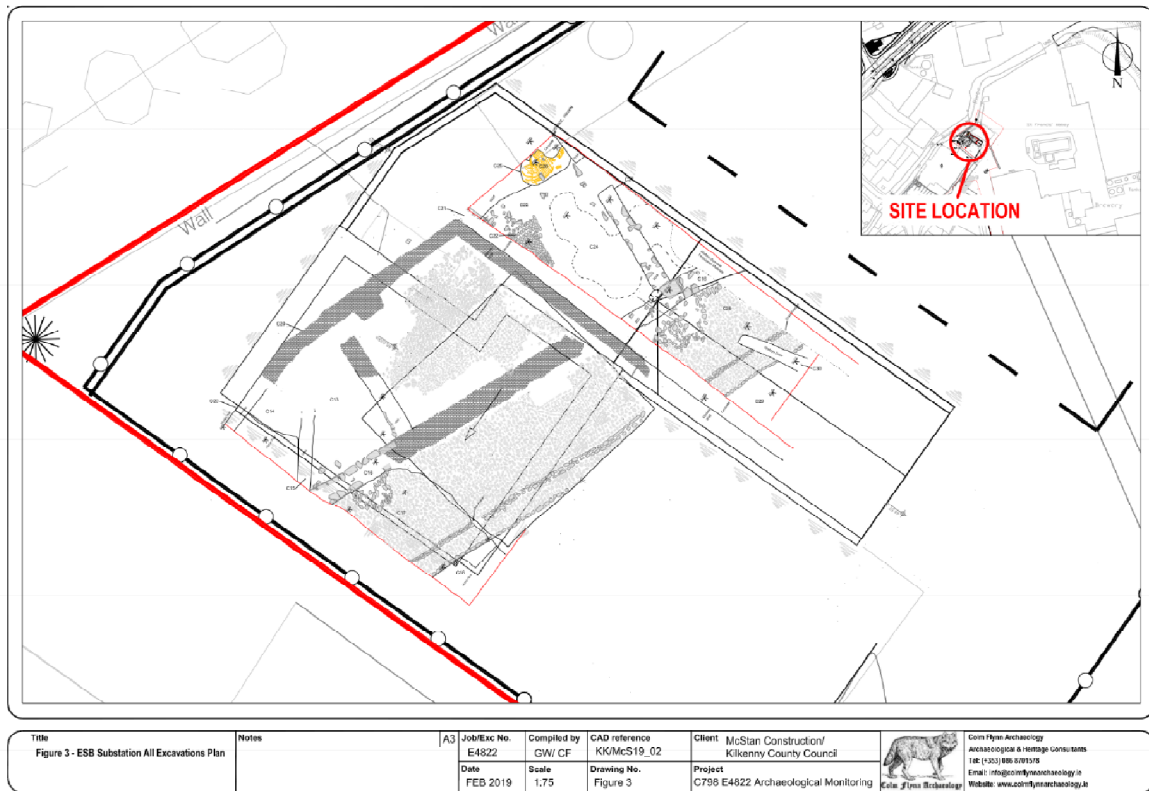


Figure 18: Colm Flynn's excavation of the footprint of the ESB substation, February 2019 (Flynn 2019)

Archaeological Assessment Survey of the Town Wall

In 2017 and 2018 AMS undertook an archaeological assessment of a 90m section of Kilkenny city wall adjacent to the Mayfair Building development (AMS 2018). This included a laser scan survey carried out by Kieran O'Shea of Laser Surveys, in December 2017 and January 2018 using a Leica P40 scanner and a Leica BLK 360 scanner, with a Trimble S6 Total Station and Trimble Dual Frequency GPS receivers used to insert ground control points (Plate 9 **Error! Reference source not found.**). The laser survey captured both the river side (A) and the land side (B) of the city wall. A photogrammetry survey of the city wall was also undertaken, which combined with the laser survey and CAD elevations, was used to produce interpreted elevations (Figure 19). The laser survey was also used to produce accurate sections through the city wall (Figure 20).

Description of the City Wall

Over the survey's 90m length from Irishtown Bridge east (Figure 20), the river wall ranges in height from 2.73m (Figure 21: profile 23.04) to 5.96m (Figure 21: profile 26.07) from the riverbed to the top of the wall on the river side (A) of the city wall; and from 1.05m (Figure 21: profile 23.04) and 3.99m (Figure 21: 26.07) over the ground on the land side (B) of the wall.

The wall is made up of multi-phase, predominantly roughly-coursed limestone masonry, extensively repointed and repaired for the 2001–04 Kilkenny Main Drainage project, with concrete coping over much of its length, and with rebuilt sections of modern concrete block and modern concrete insertions. The repointing, while necessary for the repair of the wall, has made it difficult to differentiate between different phases of the wall construction. However, subtle variations in the stone coursing, the presence of architectural features, blocked windows and dressed quoin (corner) stones from certain buildings identifiable from historical maps, and differences in the material used, has made it possible to identify 76 individual features of note in five phases (AMS 2018; Appendix 2; Figure 22 - Figure 29). Phases of activity, from most recent to earliest, have been summarised in Table 2 below.

Table 2: Phases of activity

PHASE	DESCRIPTION
5	Twenty-first century repairs
4	Twentieth century
3	Nineteenth century
2	Eighteenth to early-nineteenth century
1	Medieval to seventeenth century

Seven features on the river side of the wall were identified as dating to the medieval period Phase 1 (Appendix 2: 6, 22, 29, 30, 31, 32 and 38). These were located at the lowest visible portion of the wall. The upper phases of the wall were associated with the remains of Cotteral's Bridge and the Horse Barracks building, a nineteenth century starch factory and twentieth century repairs to the wall in concrete (Phases 2 to 4), as well as repairs to the town wall during the Kilkenny Main Drainage project (Phase 5) (AMS 2018). Even though only the lowest levels of the wall appear to be medieval in date, the whole of this surveyed portion of the wall is a National Monument under the National Policy on Town Defences (DoEHLG 2008).

KILKENNY MAYFAIR BUILDING: SURVEY OF CITY WALL SECTION 26 B

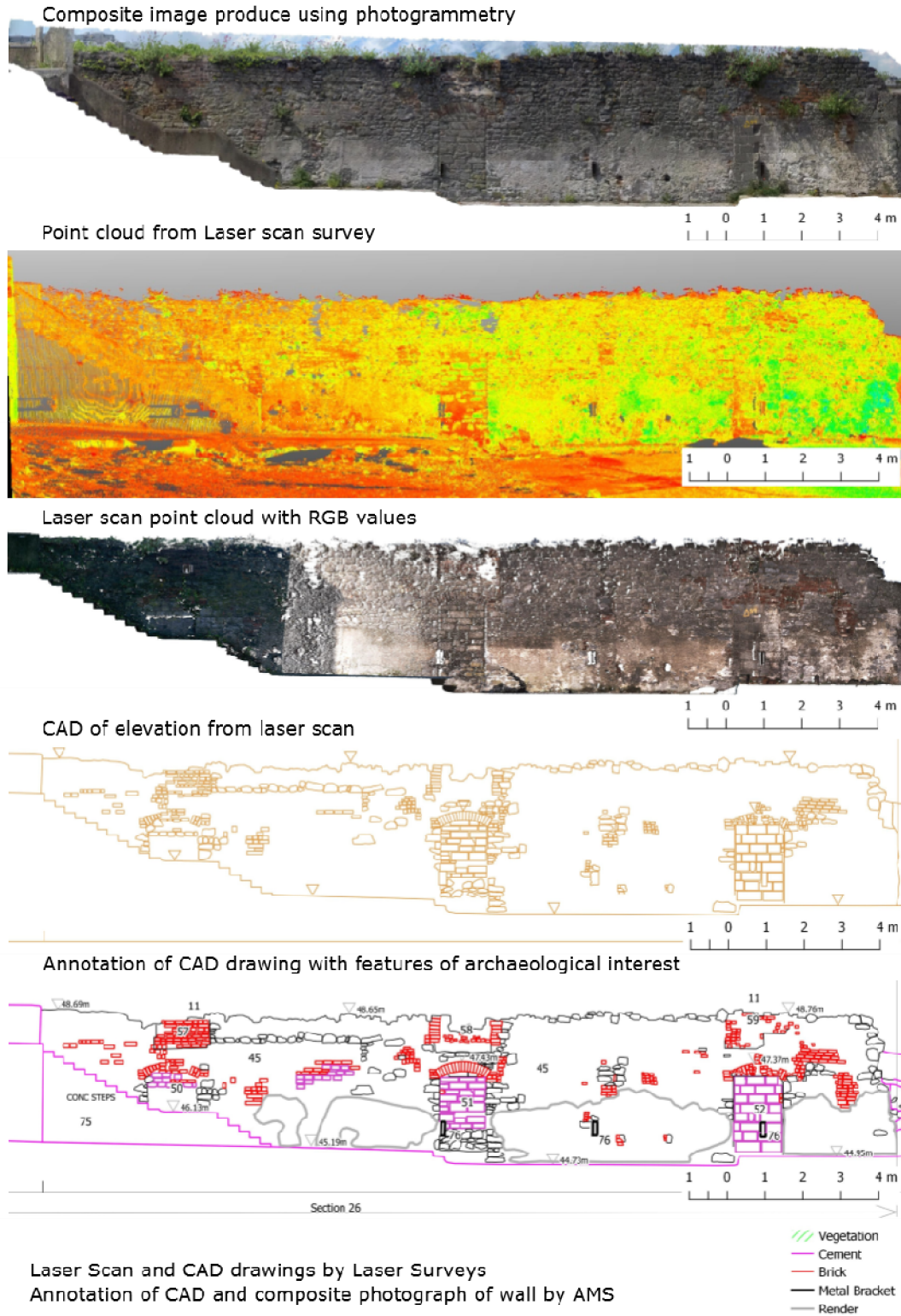


Figure 19 Techniques used for the survey of the city wall National Monument

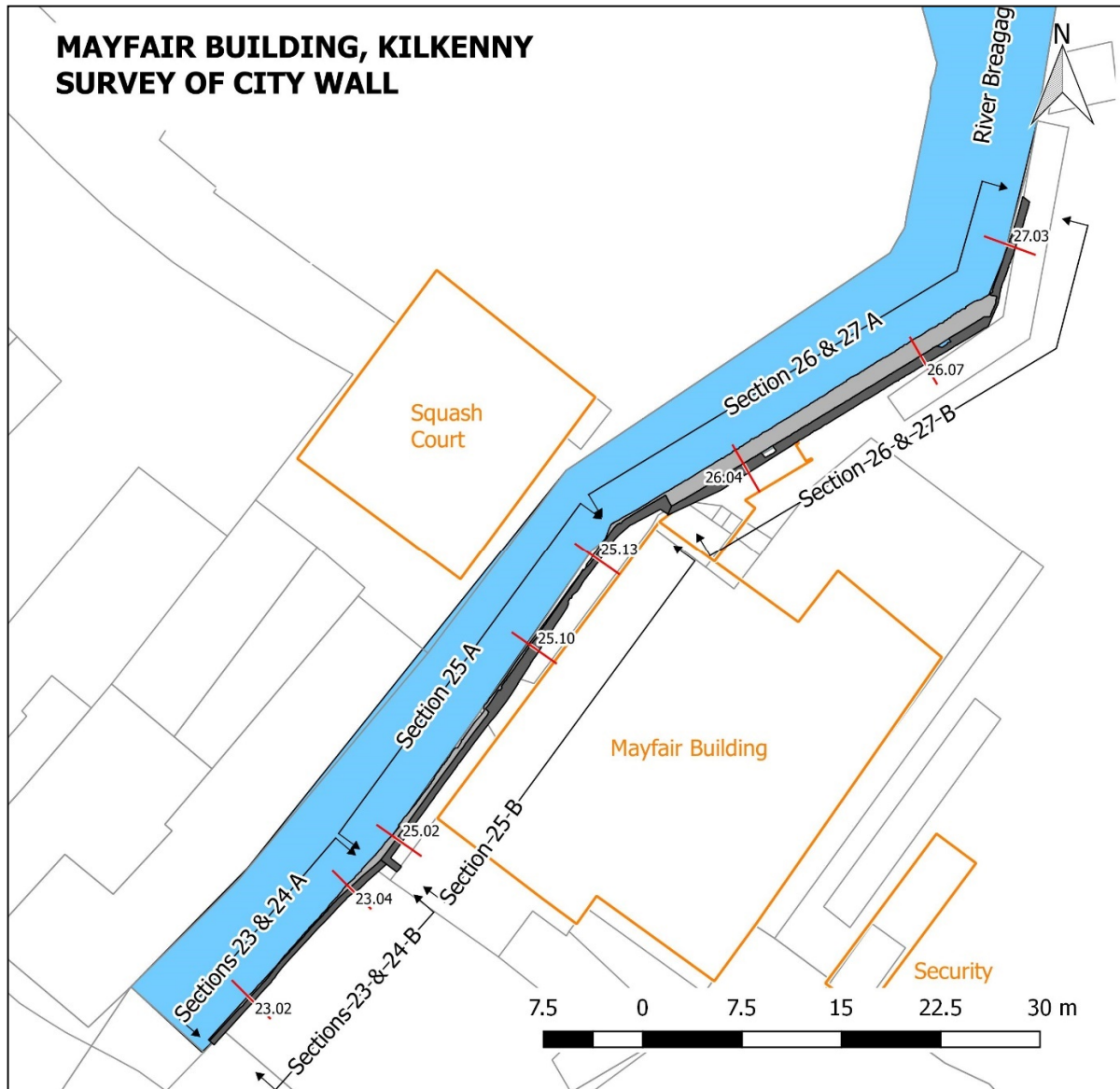


Figure 20: Location of the surveyed sections of the city wall (AMS 2018)

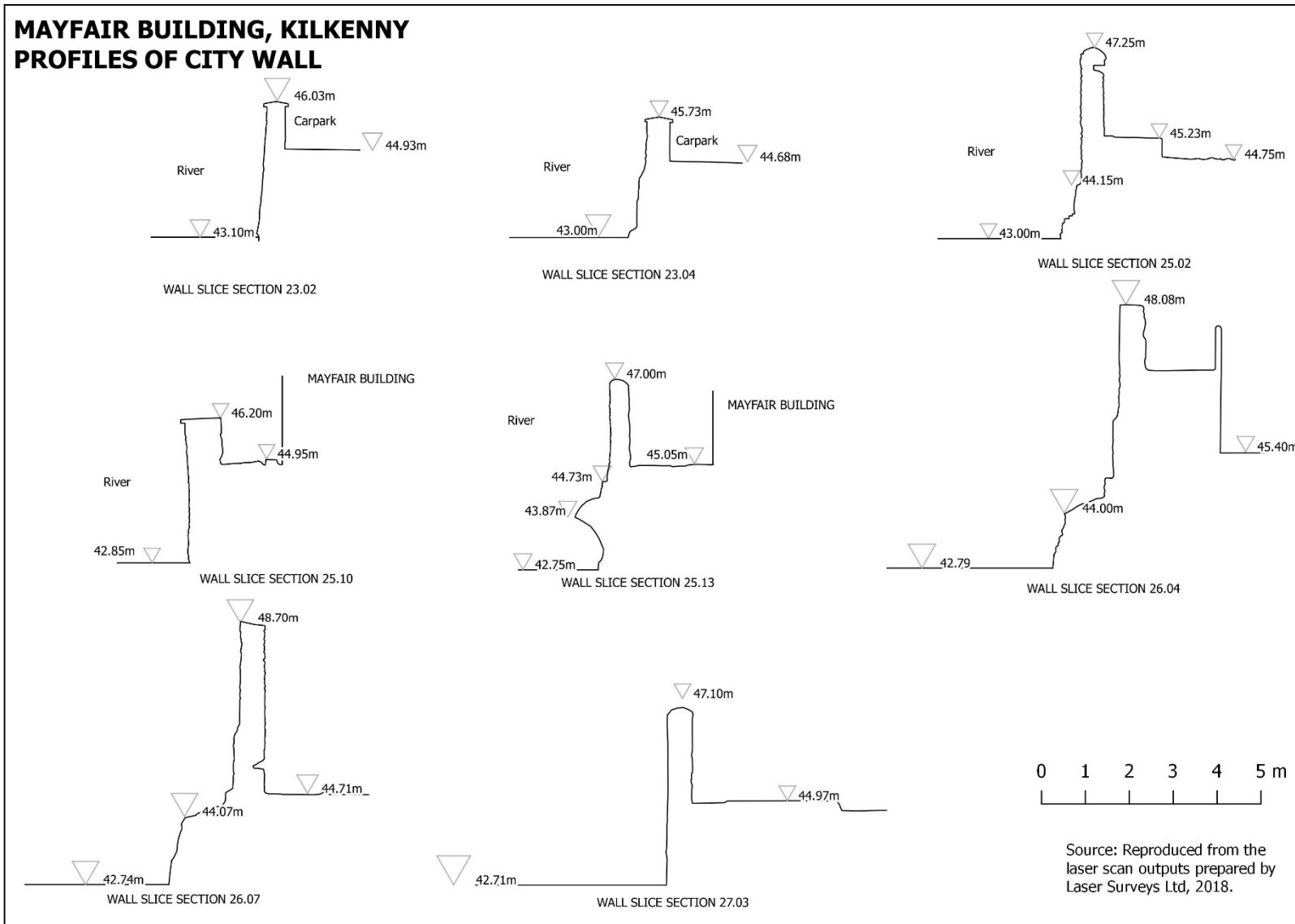


Figure 21: Profiles of the city wall generated from the laser scan survey (AMS 2018); see Figure 20 for locations of these profiles

Archaeological Impact Statement

The individual parts of the proposed development (numbered below) are shown in Figure 5. The development will have the following archaeological impacts:

1. The existing walls and foundations of the Mayfair Building will be largely retained (820 sq.m). This portion of the building was constructed in the twentieth century (Ó Drisceoil 2014); the proposed works on the remaining structure of the Mayfair Building will have no direct archaeological impacts.
2. The eastern portions of the Mayfair Building were demolished in 2017. This work was carried out under Ministerial Consent and was archaeologically monitored by AMS (AMS 2017a) and will require no further archaeological mitigations.
3. Archaeological works preparatory to the construction of an ESB substation and switching room were carried out under Ministerial Consent by AMS in late 2018 (AMS 2019) and Colm Flynn in early 2019 (Flynn 2019). The archaeology in this area is now preserved *in situ* beneath the structure of the ESB substation and switching room, and as such the proposed redevelopment of the Mayfair Building will have no further archaeological impacts here.
4. The demolition of a modern concrete boiler house and concrete steps (c.60 sq. m). will impact the upstanding remains of the city wall National Monument. Specifically the walls consist of portions of an eighteenth and nineteenth century Horse Barracks building (features 45 and 46 in **Error! Reference source not found.** and **Error! Reference source not found.**), which form part of the city wall National Monument, with demolition removing modern concrete elements (features 44, 74 and 75 in **Error! Reference source not found.** and **Error! Reference source not found.**), which also potentially act as support for the older masonry structure of city wall National Monument (AMS 2018).
5. The demolition of a portion of a two-storey section to north-east corner of the Mayfair Building (c.58 sq. m) is unlikely to impact archaeology as demolition work will be carried out to the existing ground level, c.0.7m–1m above the level of recorded archaeology. Vibration levels from demolition works may impact the city wall National Monument.
6. Provision of a new two-storey extension to the gable ends of the existing building to be externally insulated with a render finish. A raft foundation to the east (206 sq. m) and west (c. 307 sq. m) will be constructed with the base of construction at 44.40m OD. The base of construction is above the level of recorded archaeology at the east end of the proposed works. Raft foundations were chosen to preserve archaeology *in situ* beneath the newly constructed foundations. It is possible that previously unidentified archaeology may be encountered during the ground reduction to the construction level (44.40m OD) for the raft

foundations. In the narrow space between the Mayfair Building and the city wall the remaining tree stumps will be removed by small-scale hand-operated grinding tools, and the remaining soil will be removed by hand. A flag stone surface associated with the nineteenth century Starch Factory was found at 44.47m OD (ACSU and Stirland 2018b Test Trench 10:2)(Plate 6). Works will not penetrate beneath this flag stone floor level (44.47m OD); the ground will be built back up with gravel. In addition a c.1m long 0.50m wide section of masonry wall projecting from the boundary wall, the remains of a nineteenth century Starch Factory building (feature 67 in **Error! Reference source not found.** and in Appendix 2; Plate) will be removed. These works will impact the boundary wall with the River Breagagh, all of which in this area consists of nineteenth to twentieth century masonry but is nonetheless a part of the city wall National Monument (AMS 2018).

7. Remodelling and extension on the east façade will be externally insulated and clad with a “second-skin” louvred system; this will have no archaeological impacts.
8. The existing northern façade to be externally insulated with a render finish. This will have no additional archaeological impact to the reduction of the ground north of the Mayfair Building (see 6 above). Scaffolding and construction works will be carried out in close proximity to the boundary wall with the River Breagagh – part of the city wall and a National Monument (AMS 2018), which could result in accidental damage to the monument.
9. Replacement of the existing roof of the Mayfair Building with a standing seam metal roof will have no direct archaeological impact. Scaffolding and construction works will be carried out in close proximity to the boundary wall with the River Breagagh – part of the city wall and a National Monument (AMS 2018), which could result in accidental damage to the monument.
10. Replacement of the existing windows of the Mayfair Building with new double-glazed windows in a powder coated aluminium frame will have no direct archaeological impact. Scaffolding and construction works will be carried out in close proximity to the boundary wall with the River Breagagh – part of the city wall and a National Monument (AMS 2018) which could result in accidental damage to the wall.
11. Modifications to the internal layout of the Mayfair Building and provision of a new mezzanine level in the double-height space of the former ballroom. This will involve the insertion of six pad foundations, each c.1.5m by 1.5m, for columns to support a mezzanine within the existing the Mayfair Building, with their base of construction at 44.40m OD. The Mayfair Building itself was constructed c.1943; modifications of the interior of the Mayfair Building will have no archaeological impacts. The six pad foundations which will penetrate

through the existing Mayfair Building floor are unlikely to impact medieval archaeology. This area of the development site possibly overlies the subsurface remains of a medieval cemetery associated with St Francis' Abbey, identified at 43.79m OD (ACSU and Stirland 2018b Test Trench 10:1), 0.61m below the level of impact. Building floor levels associated with the post-medieval period, including parts of the Horse Barracks building at 44.30m OD, are c.0.10m below the level of impact, but the nineteenth century Starch Factory floor (buildings 6, 9 and 13 in Figure 12 and Appendix 1) was found at 44.47m OD (ACSU and Stirland 2018b Test Trench 10:2) and, if undisturbed, may be encountered during construction of the mezzanine pad foundations.

12. A lift shaft measuring c.3.2m by 2.5m will be constructed within the new western extension of the Mayfair, with its base of construction at 44.15m OD. The proposed lift shaft is located immediately outside the remains of the Mayfair Building. This area of the site will be reduced to 44.40m OD (see 6 above); the area of the lift shaft will be reduced by an additional 0.25m. It is unlikely that significant archaeological remains will be encountered. The full extent of the cemetery identified by ACSU in Test Trench 10:1 is not known (ACSU and Stirland 2018b Test Trench 10:1). If the cemetery extends into this area of the site, the proposed lift shaft works will be approximately 0.36m above the level of the burials as recorded by ACSU in Test Trench 10:2. The archaeological assessment identified the site of a kiln for drying starch in the nineteenth century in this area of the development site (building 11 in Figure 12 and Appendix 1). The remains of this 19th-century buildings may be encountered during the construction of the lift shaft.
13. The construction of a public urban square and new access to the building on the site of the existing public car park to the south west of the building (163 sq. m) will consist of building up the level of the ground above the level of the existing car park. As such, the new plaza will not impact subsurface archaeology. The raised plaza will be stepped back from the existing boundary wall with the River Breagagh, which is part of the city wall and a National Monument, which will allow the existing ground level to be retained in this area. As such the development of the new public urban square will have no direct impact on identified archaeology. Indirect impacts could include construction work being carried out in close proximity to the boundary wall with the River Breagagh – part of the city wall and a National Monument.
14. Associated Services will also be installed, including 106m of storm water drains less than 1m deep, and 6 manholes, using an existing outfall to the River Breagagh, and 15m of 150mm diameter sewer connecting to an existing sewer. These services will be inserted around the

exterior of the Mayfair Building. The storm water drain will use an existing outfall (43.87m OD) into the River Breagagh, and will not impact the boundary wall, part of the city wall National Monument. The proposed shallow storm water drain between the Mayfair Building and the city wall National Monument will be constructed at a very shallow level to avoid any archaeological impact in that area. Some services are extending through areas already disturbed, such as the former weigh bridge to the south of the Mayfair Building, so are unlikely to impact archaeologically significant features.

Recommended Mitigation Measures

The following mitigation measures are recommended:

1. All works on site will be carried out under Ministerial Consent under Section 14 of the National Monuments Act, due to the development's proximity to the city wall, which is a designated National Monument under National policy on Town Defences (DoEHLG 2008). This Ministerial Consent will be informed by a detailed archaeological methodology and measures to protect the city wall National Monument during the proposed development.
2. The project team should include a Conservation Engineer to advise on measures to protect the city wall National Monument during the redevelopment of the Mayfair Building, particularly when formulating a works methodology for the removal of the boiler house and concrete steps, and any associated repairs to the the city wall National Monument.
3. Measures should be agreed with the project's Conservation Engineer to mitigate the impact of vibrations from demolitions and construction on the city wall National Monument. This could include suitable measures for the demolition of the concrete boiler house and stairs, cutting the concrete slab connecting the wall to the area of works to limit the transmission of vibrations, the installation of temporary barriers between the works and the city wall, and the installation of vibration monitors before works begin. Typical specifications for vibration monitoring include:
 - The vibration monitors need to be paced on the National Monument preferably as near the ground as possible. There may be obvious ledges, otherwise the monitors should be directly fixed to the Monument, preferably on modern (concrete) portions of the Monument that are not archaeologically significant. Note the locations of the vibration monitors are to be approved by the NMS prior to installation. Note also that vibration monitors have been placed on the National Monuments on site during previous phases of work and these locations may be reused.
 - The vibration monitors should be fitted with an alarm consisting of a visual flashing light or an automatic text message system, to be received by the machine driver, the Archaeological Consultant, the PSCS, and the Project Archaeologist.
 - A vibration sensitivity zone will be set at a minimum 25m from the extremity of the National Monuments. Should ground works techniques used beyond the vibration sensitivity zone exceed the vibration control limit then the set procedures for mitigating the reason for the alarm will also be followed.
 - A trigger vibration control limit of 3mm/sec PPV (measured on the monument) is be set as the alarm level with 4mm/s PPV the absolute maximum for these works.

- Detailed monitoring shall be put in place to ensure that the control limit is not exceeded, thus avoiding adverse impacts on the National Monuments. Vibrations movements will be actively measured during the works with a pre-determined plan of action ready to be put in place should actual measurements vary from the expected levels. A nominated site representative will be present during the works to ensure the levels are as expected and to supervise any measures should the levels be exceeded. Review of the monitoring data will happen concurrently with the works to ensure that corrective action is undertaken if a limit is breached, or if the developing trend in measurements indicates a limit may be breached if works continue. This real time review and response of the monitoring details is critical to the success of the works. In the event that the control limit is approached the Archaeological Contractor will explore a revised approach for completion of the works that will reduce vibrations.
 - The results of the real time review are to be forwarded to the Project Archaeologist weekly at minimum but if the vibration alarm is activated the review results will be forwarded to the Project Archaeologist immediately along with proposed mitigation methods.
4. All ground works for the redevelopment will be monitored by a licence-eligible archaeologist, following a methodology agreed with the National Monuments Service, under Ministerial Consent. This will include monitoring the ground reduction for the raft foundations for the extensions, the removal of tree stumps and ground reduction next to the city wall National Monument, the excavation of the six pad foundations for the internal mezzanine, the new lift shaft, and the external services. If subsurface archaeological deposits are encountered works in this area will be stopped and the National Monuments Service will be informed. Measures to mitigate the impacts will be carried out under a methodology agreed with the National Monuments Service.
 5. No construction material, spoil, offices, stores, machinery, or any material associated with the redevelopment of the Mayfair Building will be placed within 3m of the upstanding city wall at the eastern end of the development area (Figure 29). A works methodology should be agreed with the main works contractor to protect the city wall National Monument during the site set up, installation and removal of scaffolding, construction works, and landscaping. This should include managing vibration levels on the city wall during demolition works and construction works for the redevelopment of the Mayfair Building, and tool box

talks with the construction workers explaining the significance of the archaeology on the site.

6. Measures also to be agreed, in consultation with the project's Conservation Engineer, to protect the existing boundary wall with the River Breagagh (Features 1, 2 & 63 in Appendix 2; Figure 23), part of the city wall National Monument, during the construction of the public plaza immediately west of the Mayfair Building.
7. The short 1m section of masonry wall projecting from the city wall (feature 67 in Appendix 2, and Figure 26) to be removed should be taken down by hand following a methodology agreed with the project's Conservation Engineer and under the supervision of the project's monitoring archaeologist, and the stone retained for use to repair the city wall National Monument.
8. Following the completion of archaeological monitoring works a report will be prepared detailing the results of archaeological works and treatment of the city wall National Monument and submitted to the National Monuments Service.

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Appendix 1: Valuation House Book Descriptions (1847)

Note: See section titled 'Valuation House Book Records' and Figure 12 above.

ID No.	Street	House Book No	Name	Immediate Lessor	Description	Length (m)	Breadth (m)	Height (m)	Quality	Material	Age	Area (sq. m)	Volume (m ³)	Yearly Rent (£ s d)	Amount (Value £)	Observation
1	Irishtown	1	James Doyle		House	4.27	6.1	5.64	1C	Slated house or office built with stone or brick and lime mortar	Old out of repair	26.01	146.68	5.0.0		This house built on Bridge on the mearing of the next parish. It and the next house in the adjoining parish were origin[ally] all one & held by Mr Hartford under one lease. No yard or return. Doyle has no lease from Mr Hartford.
2	Horse Barracks Lane off Coal Market	11	Richard Sullivan	Corporation of Kilkenny	Office Meal Store	24.38	8.08	8.23	1B	Slated house or office built with stone or brick and lime mortar	Slightly decayed but in good repair	196.95	1620.86		11.263	
3	Horse Barracks Lane off Coal Market	11	Richard Sullivan	Corporation of Kilkenny	Office torn down	6.1	4.57	1.22	2B	Thatched house or office built with stone of brick and lime mortar	Slightly decayed but in good repair	27.87	33.98		0.217	
4	Horse Barracks Lane off Coal Market	11	Richard Sullivan	Corporation of Kilkenny	Office roof almost stripped	11.58	5.49	8.23	1C+	Slated house or office built with stone or brick and lime mortar	Old but in repair	63.55	522.96		2.904	
5	Horse Barracks Lane off Coal Market	11	Richard Sullivan	Corporation of Kilkenny	Office	33.83	8.23	6.55	1B	Slated house or office built with stone or brick and lime mortar	Slightly decayed but in good repair	278.43	1824.61		13.392	
6	Horse Barracks Lane off Coal	11	Richard Sullivan	Corporation of Kilkenny	Office	22.56	6.71	6.55	1B	Slated house or office built with stone	Slightly decayed but in good repair	151.25	991.15		7.254	

ID No.	Street	House Book No	Name	Immediate Lessor	Description	Length (m)	Breadth (m)	Height (m)	Quality	Material	Age	Area (sq. m)	Volume (m ³)	Yearly Rent (£ s d)	Amount (Value £)	Observation
	Market									or brick and lime mortar						
7	Horse Barracks Lane off Coal Market	11	Richard Sullivan	Corporation of Kilkenny	Office	7.92	5.64	3.05	1B	Slated house or office built with stone or brick and lime mortar	Slightly decayed but in good repair	44.69	136.2		1.200	
8	Horse Barracks Lane off Coal Market	11	Richard Sullivan	Corporation of Kilkenny	Office	4.15	5.49	2.74	1B+	Slated house or office built with stone or brick and lime mortar	Not new but in sound order and good repair	22.74	62.39		0.600	
9	Horse Barracks Lane off Coal Market	12	Richard Sullivan	Mrs Hartford	Office Starch House	10.36	6.25	2.59	2B+	Thatched house or office built with stone of brick and lime mortar	Not new but in sound order and good repair	64.75	167.76		1.363	
10	Horse Barracks Lane off Coal Market	12	Richard Sullivan	Mrs Hartford	Office Kiln	4.57	5.64	3.05	1B+	Slated house or office built with stone or brick and lime mortar	Not new but in sound order and good repair	25.78	78.58		0.729	
11	Horse Barracks Lane off Coal Market	12	Richard Sullivan	Mrs Hartford	Office Kiln for drying starch	10.67	5.03	4.72	1B+	Slated house or office built with stone or brick and lime mortar	Not new but in sound order and good repair	53.65	253.47		2.196	
12	Horse Barracks Lane off Coal Market	12	Richard Sullivan	Mrs Hartford	Office Kiln Starch manufactory	9.45	7.01	3.2	2B	Thatched house or office built with stone of brick and lime mortar	Slightly decayed but in good repair	66.24	211.99		1.550	

ID No.	Street	House Book No	Name	Immediate Lessor	Description	Length (m)	Breadth (m)	Height (m)	Quality	Material	Age	Area (sq. m)	Volume (m ³)	Yearly Rent (£ s d)	Amount (Value £)	Observation
13	Horse Barracks Lane off Coal Market	12	Richard Sullivan	Mrs Hartford	Office Shed open 1/4	4.57	4.57	3.35	1B	Slated house or office built with stone or brick and lime mortar	Slightly decayed but in good repair	20.9	70.08		0.450	
14	Horse Barracks Lane off Coal Market	13	Nicholas Larkin	Michael Murphy	House	3.81	7.32	6.25	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	27.87	174.15		2.188	
15	Horse Barracks Lane off Coal Market	14	James Tracy	Michael Murphy	House	3.81	7.32	6.25	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	27.87	174.15		2.188	
16	Horse Barracks Lane off Coal Market	14	James Tracy	Michael Murphy	Office Shed	1.83	1.52	1.22	1B	Slated house or office built with stone or brick and lime mortar	Slightly decayed but in good repair	2.79	3.4		0.033	
17	Horse Barracks Lane off Coal Market	15	William Mulhall	Henry Cole Esq.	House	5.64	7.47	4.88	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	42.11	205.35		1.733	
18	Horse Barracks Lane off Coal Market	15	William Mulhall	Henry Cole Esq.	Deduct underp[?]	4.57	7.47	2.59	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	34.14	88.45		1.488	
19	Horse Barracks	15	William Mulhall	Henry Cole Esq.	Office	4.57	7.47	2.59	1B	Slated house or	Slightly decayed but in good	34.14	88.45		0.788	

ID No.	Street	House Book No	Name	Immediate Lessor	Description	Length (m)	Breadth (m)	Height (m)	Quality	Material	Age	Area (sq. m)	Volume (m ³)	Yearly Rent (£ s d)	Amount (Value £)	Observation
	Lane off Coal Market									office built with stone or brick and lime mortar	repair					
20	Horse Barracks Lane off Coal Market	16	John Brady	Henry Cole Esq.	House	6.25	8.08	7.16	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	50.47	361.5		4.329	
21	Watergate	1	Samuel Lawlor	Richard Handcock Esq.	House	7.92	7.5	5.94	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	59.42	353.17		4.463	
22	Watergate	1	Samuel Lawlor	Richard Handcock Esq.	Return	4.57	5.33	4.57	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	24.39	111.5		1.517	
23	Watergate	1	Samuel Lawlor	Richard Handcock Esq.	Office Shed	1.83	1.52	1.22	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	2.79	3.4		0.029	
24	Watergate	2	Dominick Hoyne	Samuel Lawlor	House	4.42	7.47	5.94	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	33	196.16		2.479	
25	Watergate	2	Dominick Hoyne	Samuel Lawlor	Office shed - 1/3	4.42	2.29	1.98	1B	Slated house or office built with stone or brick and	Slightly decayed but in good repair	10.1	20.02		0.113	

ID No.	Street	House Book No	Name	Immediate Lessor	Description	Length (m)	Breadth (m)	Height (m)	Quality	Material	Age	Area (sq. m)	Volume (m ³)	Yearly Rent (£ s d)	Amount (Value £)	Observation
										lime mortar						
26	Watergate	3	Samuel Lawlor	Samuel Lawlor	House - 1/6 (unoccupied)	6.1	7.77	5.79	1A-	Slated house or office built with stone or brick and lime mortar	Ordinary building and finish or either of the above when 20 years built	47.38	274.39		3.938	
27	Watergate	4	Samuel Lawlor	Samuel Lawlor	House - 1/3	6.1	7.77	5.79	1A-	Slated house or office built with stone or brick and lime mortar	Ordinary building and finish or either of the above when 20 years built	47.38	274.39		3.150	
28	Watergate	5	James Wall	Henry Cole Esq.	House - 1/3	5.33	6.86	3.81	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	36.58	139.37		1.950	
29	Watergate	5	James Wall	Henry Cole Esq.	House Return	4.42	3.35	3.96	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	14.82	58.71		0.833	
30	Watergate	5	James Wall	Henry Cole Esq.	Office Shed	1.83	1.68	1.52	1B	Slated house or office built with stone or brick and lime mortar	Slightly decayed but in good repair	3.07	4.67		0.038	
31	Watergate	6	John Ford	Mrs Anne Hartford	House	3.96	6.1	5.79	1B-	Slated house or office built with stone or brick and lime mortar	Deteriorated by age and not in good repair	24.15	139.89		1.813	

Appendix 2: Features identified during

This information is taken from the AMS survey of the city wall (AMS 2018). See Figure 22 to Figure 29 for elevation drawing with feature numbers

Feature No.	2001 Section Drawings	Phase	Description	Included in 2001 Survey?
1	23 A & B	5	Concrete wall coping; later 20th century.	y
2	23 A & B	4	Roughly-coursed stone wall, repointed in c.2004 using strap-pointing; upper section of river wall built in the later 20th century.	y
3	23 A	3	Roughly-coursed stone wall, repointed in c.2004; post-medieval in date.	y
4	23 A & B	1 to 4	Irishtown bridge, stone	y
5	23 A	4	Concrete repair to river wall, possibly to block an outfall to the river; later 20th century.	y
6	23 A	1	Slightly projecting (marked as 'ledge' on 2001 survey Section 23), roughly-coursed stone wall, repointed in c.2004, and merging into river wall [3]; probably medieval.	y
7	23 A	4	Waste water outfall pipe, recapped in c.2004	y
8	23 A	4	Waste water outfall pipe, recapped in c.2004	y
9	23 A	5	Iron ladder to base of river, inserted into the river wall c.2004	n
10	23 A	5	Concrete platform at the base of the ladder [9]	n
11	23 A	4	Vegetation (ivy) on the wall: expanded since 2001. Cut back in 2017.	y
12	24 A	n/a	Vegetation on the river wall: grown since 2001	n
13	24 A	5	Waste water outfall pipe, recapped in c.2004. Not shown on 2001 survey.	n
14	24 A	4	Waste water outfall pipe, recapped in c.2004	y
15	24 A	n/a	Not the base of the wall as indicated on the 2001 survey	y
16	25 A & B	4	Concrete block wall built on river wall, probably associated with the Diageo Brewery phase of the site.	y
17	25 A & B	3	Roughly-coursed stone wall with dressed quoins: remnants of an industrial building (Starch Factory) from at least the 19th century	y
18	25 A	3	Redundant number	NA
19	25 A	5	Rendered wall face: repair to an area indicated as 'Area of Collapse' on the 2001 survey.	n
20	25 A	2 to 3	Slightly battered roughly-coursed stone wall: 18th to 19th century in date, possibly associated with the Starch Factory building.	y

Feature No.	2001 Section Drawings	Phase	Description	Included in 2001 Survey?
21	25 A	n/a	Feature marked 'Line of Water Damage' on the 2001 survey; repaired in c.2004	y
22	25 A	1	Slightly projecting roughly-coursed stone wall, repointed in c.2004. 'Collapse stone / rubble' noted in the 2001 survey; repaired in c.2004. Probably medieval in date.	y
23	25 A	4	Waste water outfall pipe, recapped in c.2004	y
24	25 A	5	Concrete-covered sloping area marked 'Ledge' on the 2001 survey.	y
25	25 A	n/a	'Pipe' indicated on the 2001 survey; no indication of this feature in the wall face.	y
26	25 A & B	4	Concrete rendered section of wall face, where the wall was repaired in the 20th century.	y
27	25 A	4	Same as 26.	y
28	25 A	4	Waste water pipe, capped.	y
29	25 A	1	Relieving arch of stone: possibly part of the medieval wall.	y
30	25 A	1	Relieving arch of stone: possibly part of the medieval wall.	y
31	25 A	1	Relieving arch of stone: possibly part of the medieval wall.	y
32	25 A	1	Relieving arch of stone: possibly part of the medieval wall.	y
33	25 A	4	Waste water pipe, capped.	y
34	25 A	3	Redundant number	NA
35	25 A	2	Springing for a single-span stone bridge called Cotteral's Bridge; masonry bridge c.2.6m wide, built c. later 18th century, demolished c.1940. Remains of bridge also apparent on the north side of the river. Recorded archaeological monument (SMR KK019-026102-).	y
36	25, 26 A	2	Roughly-coursed stone wall with mortar bonding; part of the Horse Barracks building complex (Appendix 1, Building 5).	y
37	25 A	5	Area marked 'Void' on the 2001 survey, repaired with concrete in c.2004. Possibly the location for an earlier timber bridge spanning the River Breagagh.	y
38	25 A	1	Relieving arch of stone: possibly part of the medieval wall.	y
39	25 A	n/a	Annotation from 2001 survey 'Line of water damage'; repaired in c.2004.	y
40	25 A & B	3	Portion of wall obscured by vegetation in the 2001 survey; part of the Starch Factory building, constructed 19th century.	n

Feature No.	2001 Section Drawings	Phase	Description	Included in 2001 Survey?
41	25 A	n/a	Ivy, partly obscuring the wall. Most of this has grown since the 2001 survey. Cut back in 2017.	n
42	25A & B	4	Roughly-coursed stone wall built to block the former passage to Cotteral's Bridge after the bridge went out of use. Dates to mid-20th century.	y
43			Redundant Number	
44	26 A	4	Concrete block construction for late 20th century boiler house attached to east end of the Mayfair Building, with flat roof and guard rails. Note: Boiler house to be demolished for the redevelopment of the Mayfair Building.	y
45	26 A	3	Roughly-coursed stone wall with mortar bonding, occasional brick: part of the Horse Barracks complex (Building 4) at least partly rebuilt in the 19th century.	y
46	26 A	2	Roughly-coursed stone wall with mortar bonding, occasional brick: part of the Horse Barracks complex (Building 4) projecting slightly from the wall above [45]; built c.1700.	y
47	26 A	2	Roughly-coursed stone wall with mortar bonding, occasional brick: part of the Horse Barracks complex (Building 4).	y
48	26 A	5	Slightly battered roughly-coursed mortared stone constructed c.2004 to consolidate the wall surveyed in 2001, including sections recorded as 'Bank of Rubble and Earth' and 'Void'. This modern construction also obscures lower portions of the river wall that may contain part of the medieval city wall.	n
49	26 A	5	Battered slope of roughly-coursed mortared stone constructed c.2004 to consolidate the wall surveyed in 2001.	n
50	26 A	3	Arched window ope with brick and stone: window for the Horse Barracks building complex (Building 4) possibly inserted in the 19th century.	y
51	26 A	3	Arched window ope with brick and stone: window for the Horse Barracks building complex (Building 4) possibly inserted in the 19th century.	y
52	26 A	3	Arched window ope with brick and stone: window for the Horse Barracks building complex (Building 4) possibly inserted in the 19th century. Obscured by vegetation in the 2001 survey.	n
53	26 A	5	Area of collapse wall rebuilt c.2004 as part of the river wall consolidation [49]	y
54	27 A	4	Concrete wall infilling.	n

Feature No.	2001 Section Drawings	Phase	Description	Included in 2001 Survey?
55	27 A	3	Roughly-coursed stone mortared wall: part of the boundary wall for the old Smithwick's brewery. Not differentiated from [56] on the 2001 survey.	y
56	27 A	1 to 3	Roughly-coursed stone mortared wall: part of the boundary wall possibly pre-dating the old Smithwick's brewery, and may incorporate elements of the medieval city town wall. Not differentiated from [56] on the 2001 survey.	y
57	26 A	3	Bricked-up window for second floor of the Horse Barracks.	y
58	26 A	3	Bricked-up window for second floor of the Horse Barracks.	y
59	26 A	3	Bricked-up window for second floor of the Horse Barracks.	n
60	25 A	4	Modern repair to wall contemporary to concrete pipe [28]; later 20th century.	Y
61	27 A	4	Modern concrete repair of wall; later 20th century.	y
62	23 A & B	5	Masonry step on Irish Town Bridge next to the bridge parapet.	N
63	23 B	3	Step-out in the masonry wall facing Watergate Car Park, corresponding with the position of a rear property boundary wall of a house formerly fronting onto Horse Barracks Lane; 19th century in date, repointed in the 20th century.	N
64	25 A&B, 26B	4	Concrete coping on top of the masonry wall; late 20th century.	Y
65	25 A	2	Parapet walls to Cotteral's Bridge (35) c. 0.83m high; built c. later 18th century, demolished c.1940.	N
66	25 A&B, 26 A&B	4	Concrete block work and coping on parapet of wall, inserted after the demolition of Cotteral's Bridge (35).	N
67	25 B	3	End of truncated masonry wall joining the river wall; part of the Starch Factory complex, 19th century.	NA
68	25 B	4	Concrete wall repair uncovered in ACSU Test Trench 2 (Ministerial Consent C798 E4822), probably contemporary with the construction of the Mayfair Building c.1941	NA
69	25B	4	Clay drainage pipe contemporary with concrete wall repair (68). Note this does not penetrate to the river side of the wall	NA
70	25 B	3	Flag stone surface uncovered during archaeological test excavations by ACSU (Ministerial Consent C798 E4822 ACSU C263).	NA
71	25 B	4	Concrete wall abutting the river wall (20); mid-20th century.	NA

Feature No.	2001 Section Drawings	Phase	Description	Included in 2001 Survey?
72	25 B	4	Concrete blocks inserted to repair river wall; 20th century.	NA
73	25 B	3	Blocked aperture for Cottrel's Bridge (35), consisting of a masonry frame and brick segmental arch, dating to late 18th -19th century; filled in the mid-20th century (42).	NA
74	26 A&B	4	Concrete wall infill at the top concrete fire escape steps; late 20th century.	Y
75	26 B	4	Concrete steps leading to fire escape from the first floor of the Mayfair Building; mid- to late-20th century. Note: to be demolished for the redevelopment of the Mayfair Building.	NA
76	26 B	4	Metal brackets which supported lagged pipes running from the boiler room to the town wall. Brackets embedded in the wall. Pipes removed and metal supports cut back to the wall in 2017.	NA

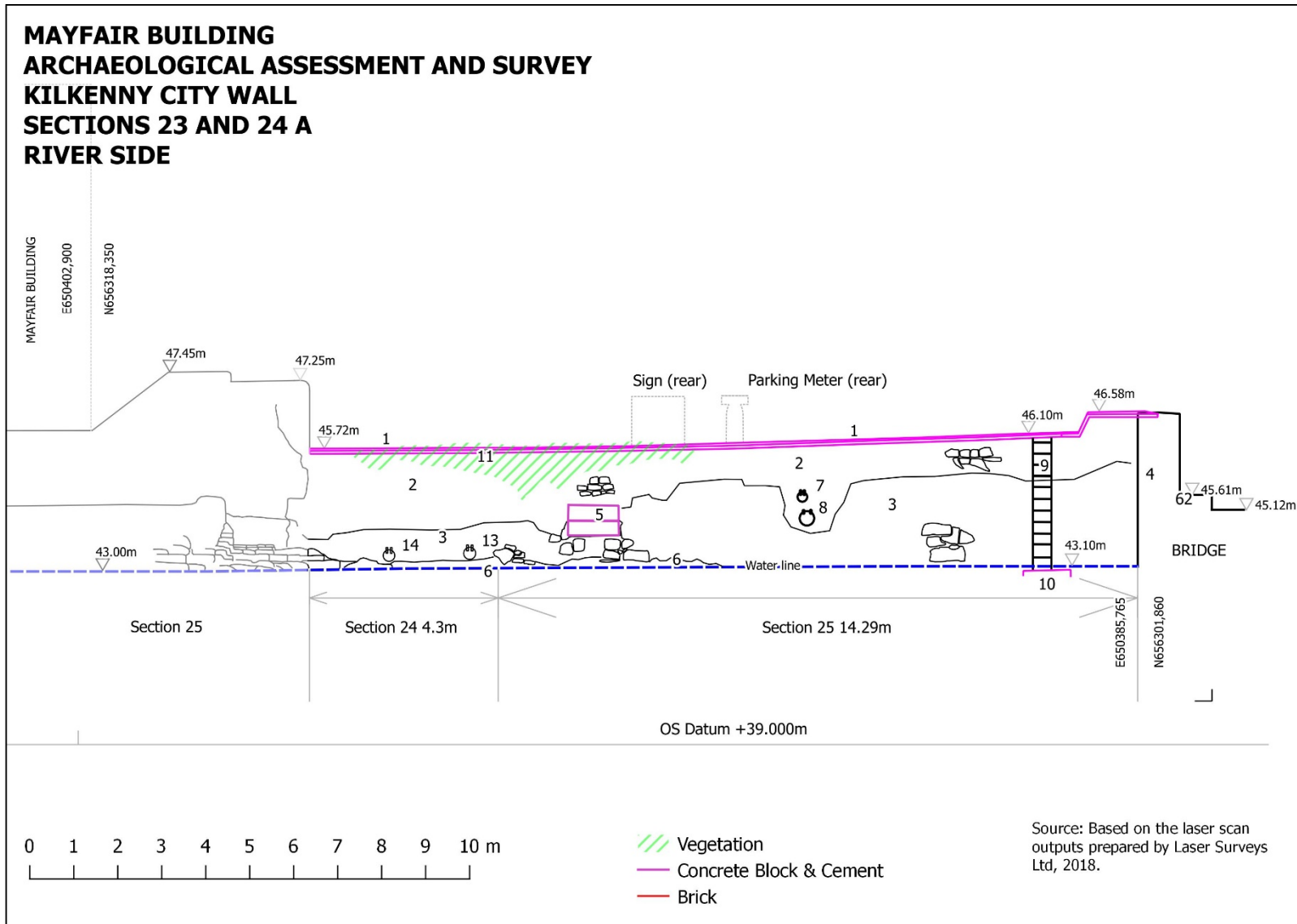


Figure 22: Elevation drawing of Kilkenny City Wall, Section 23 and 24 A, river side (AMS 2018)

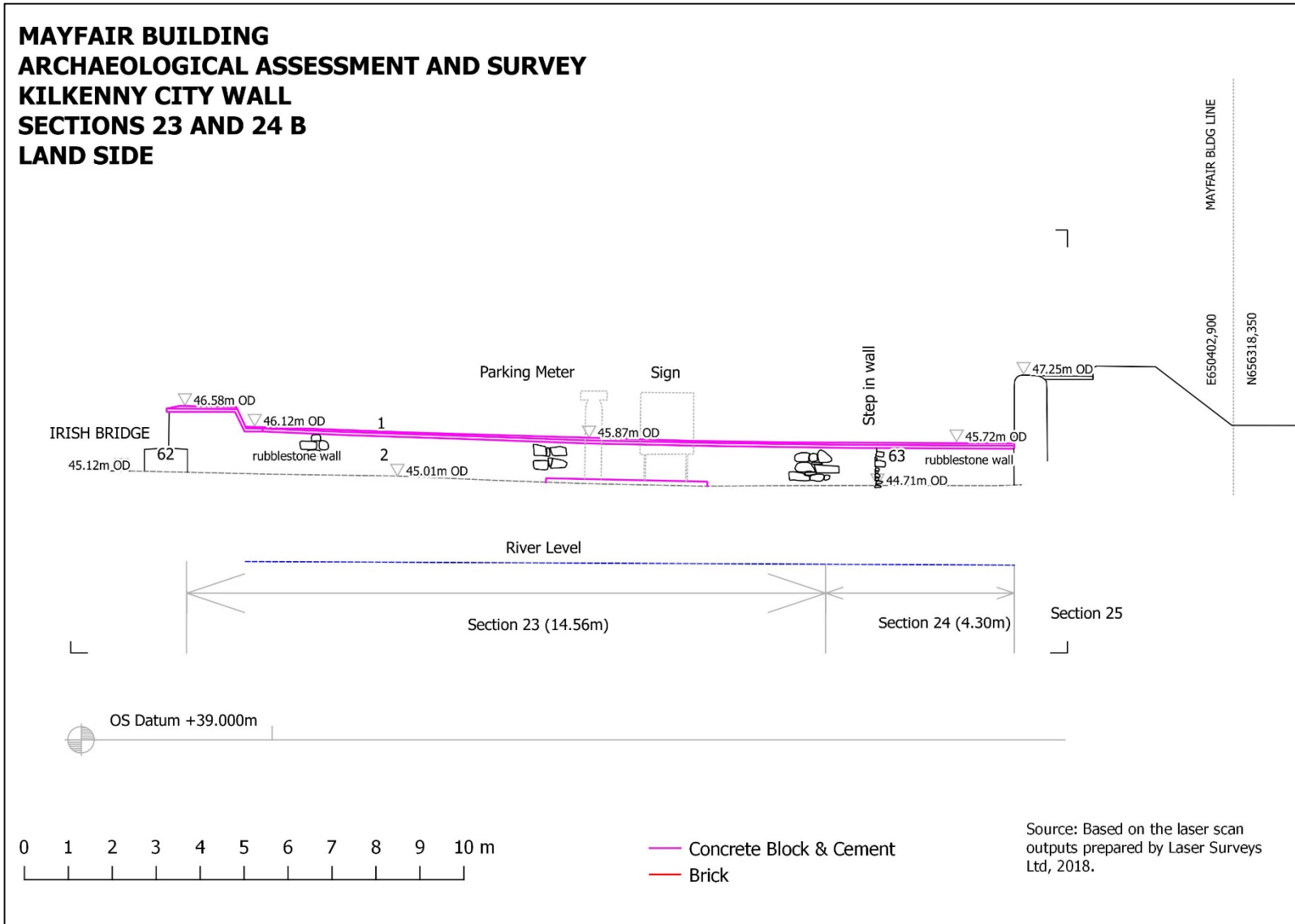


Figure 23: Elevation drawing of Kilkenny City Wall, Section 23 and 24 B, land side (AMS 2018)

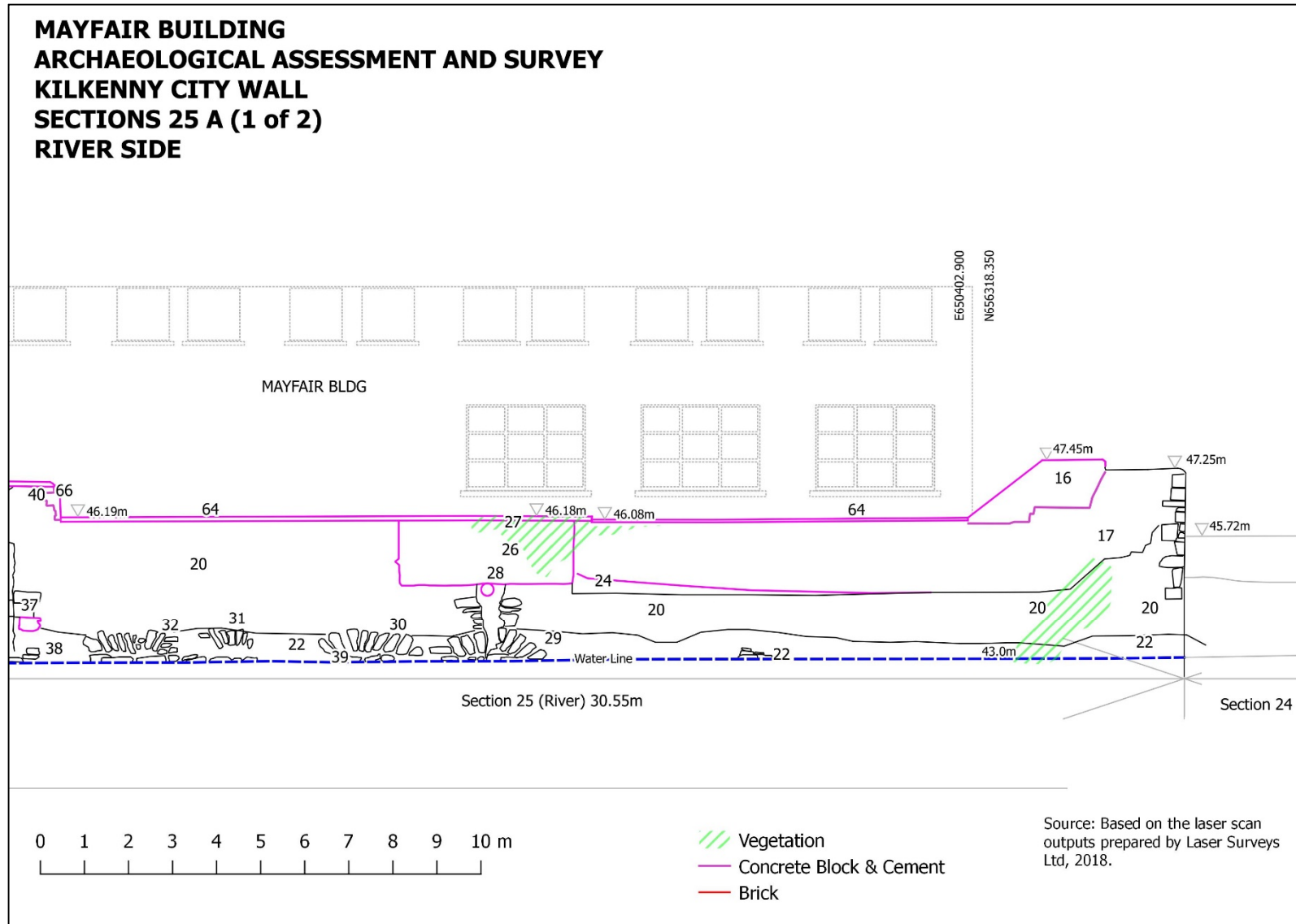


Figure 24: Elevation drawing of Kilkenny City Wall, Section 25 A (1 of 2), river side (AMS 2018)

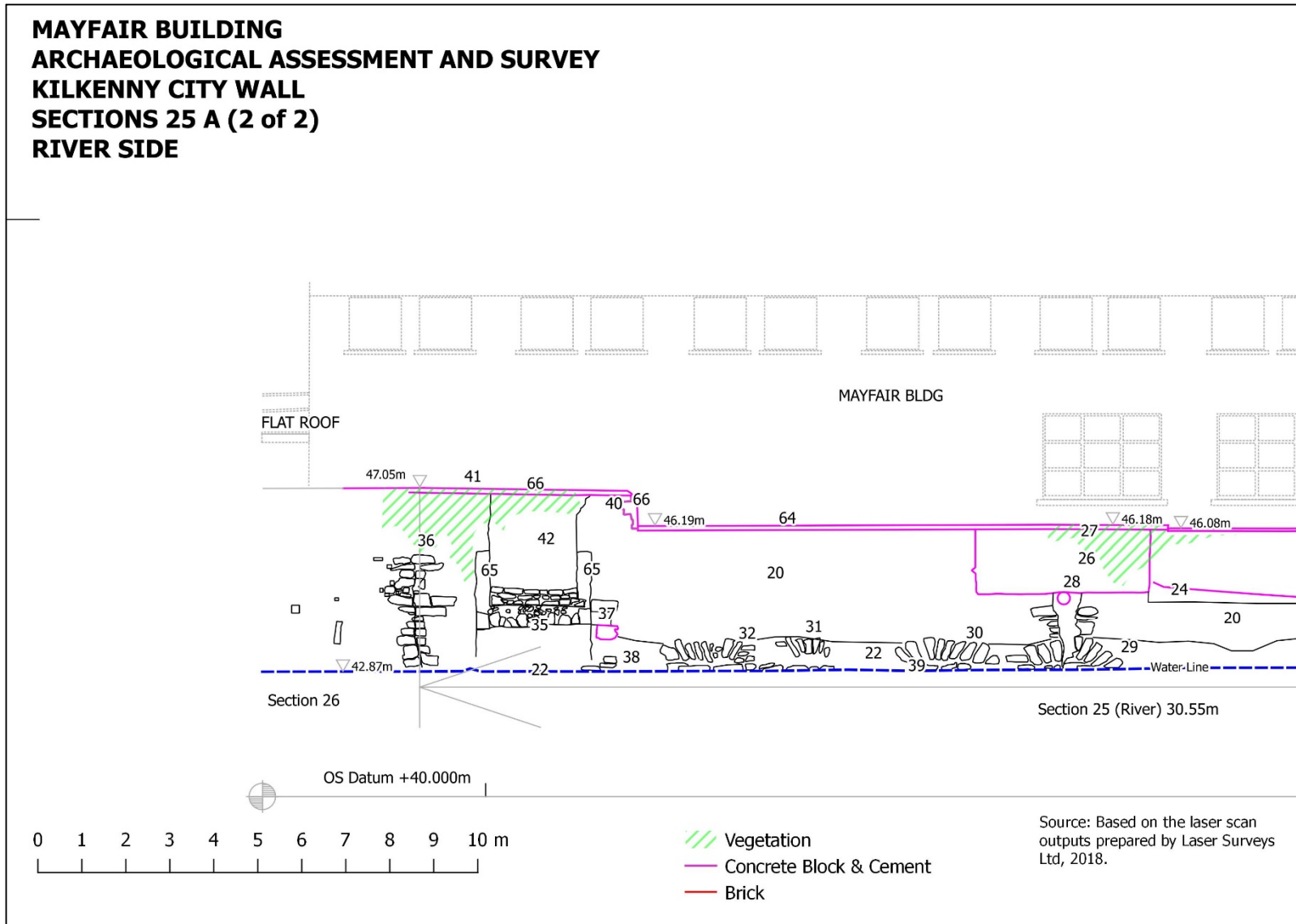


Figure 25: Elevation drawing of Kilkenny City Wall, Section 25A (2 of 2), river side (AMS 2018)

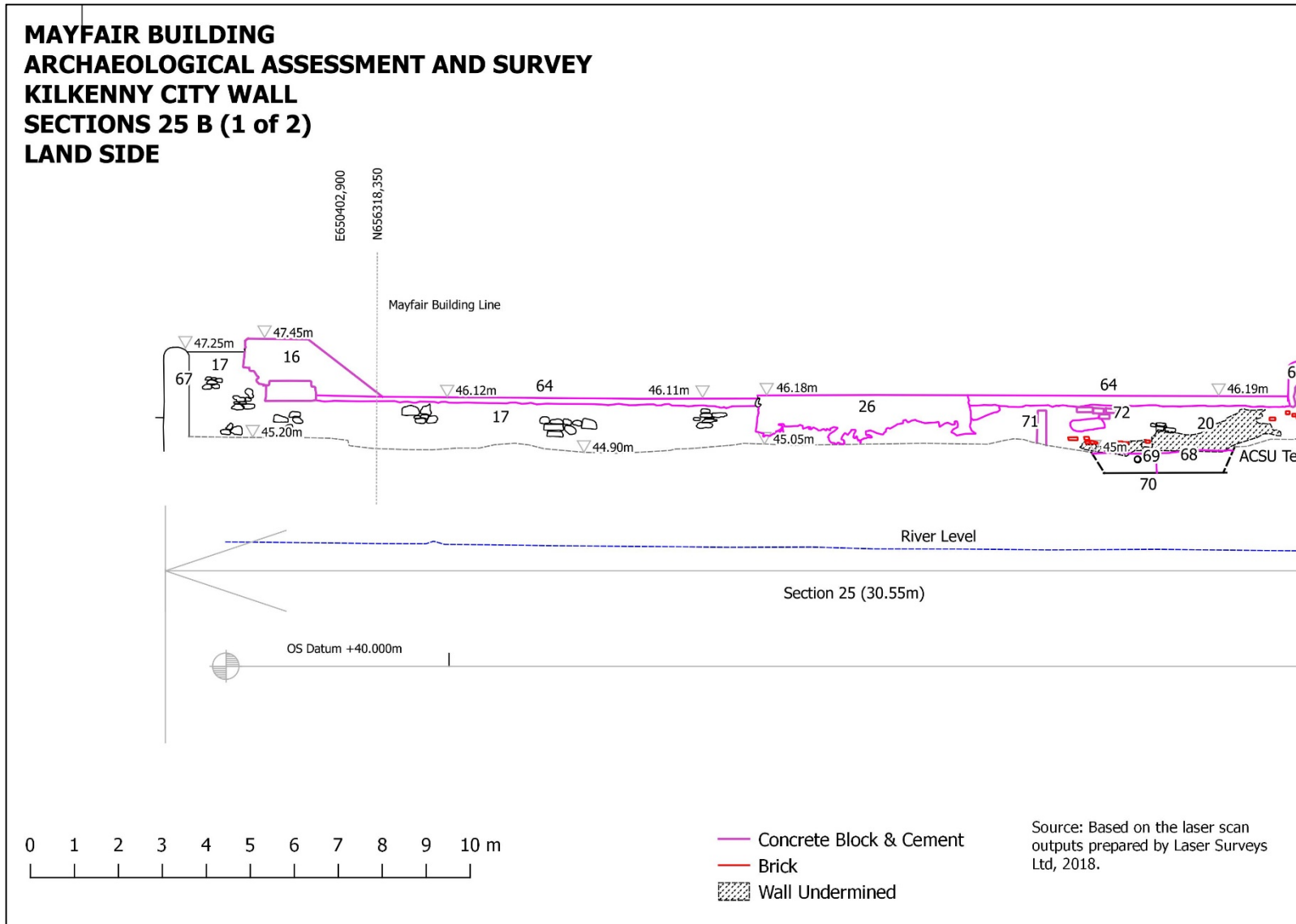


Figure 26: Elevation drawing of Kilkenny City Wall, Section 25B (1 of 2), land side (AMS 2018)

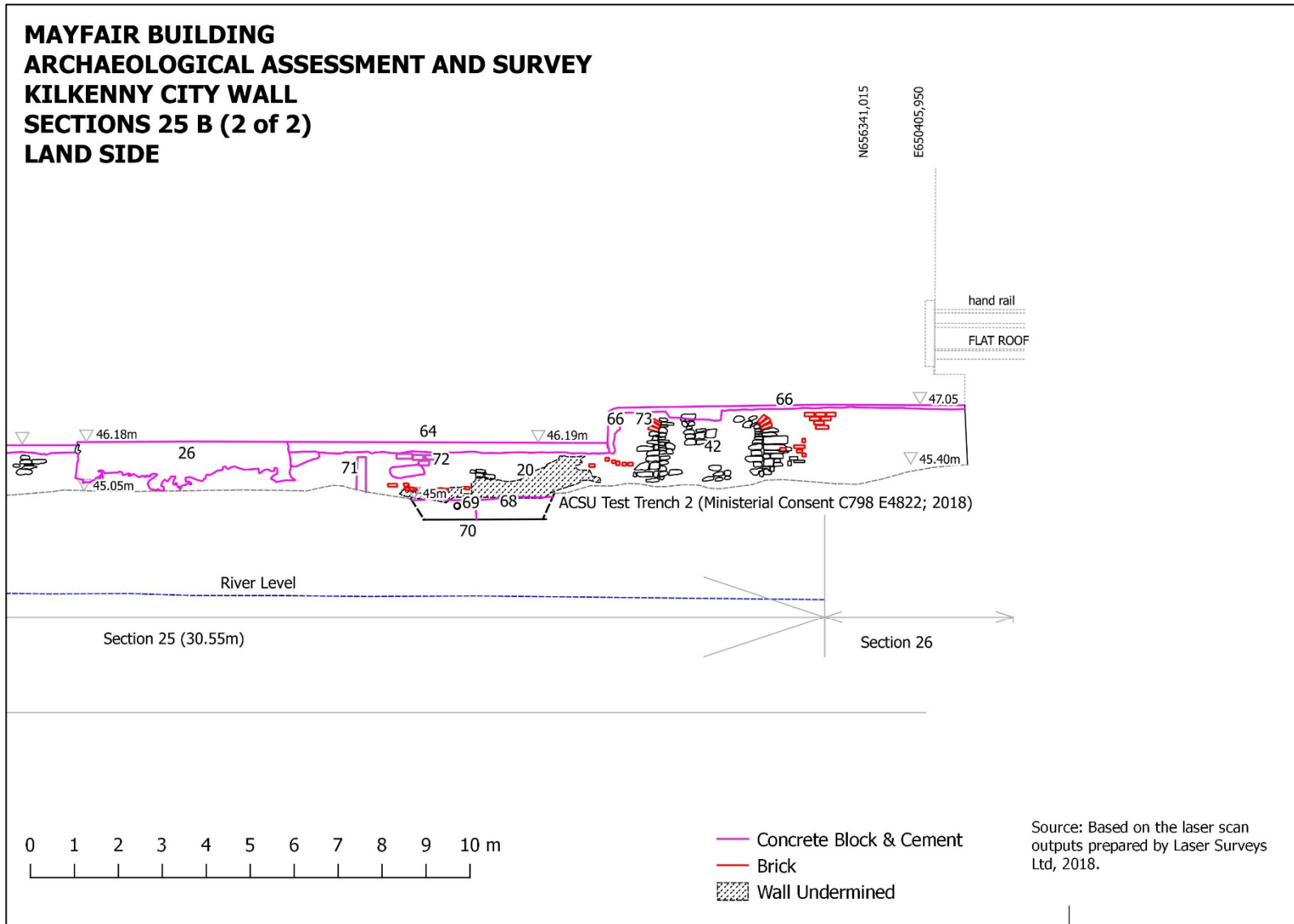


Figure 27: Elevation drawing of Kilkenny City Wall, Section 25B (2 of 2), land side (AMS 2018)

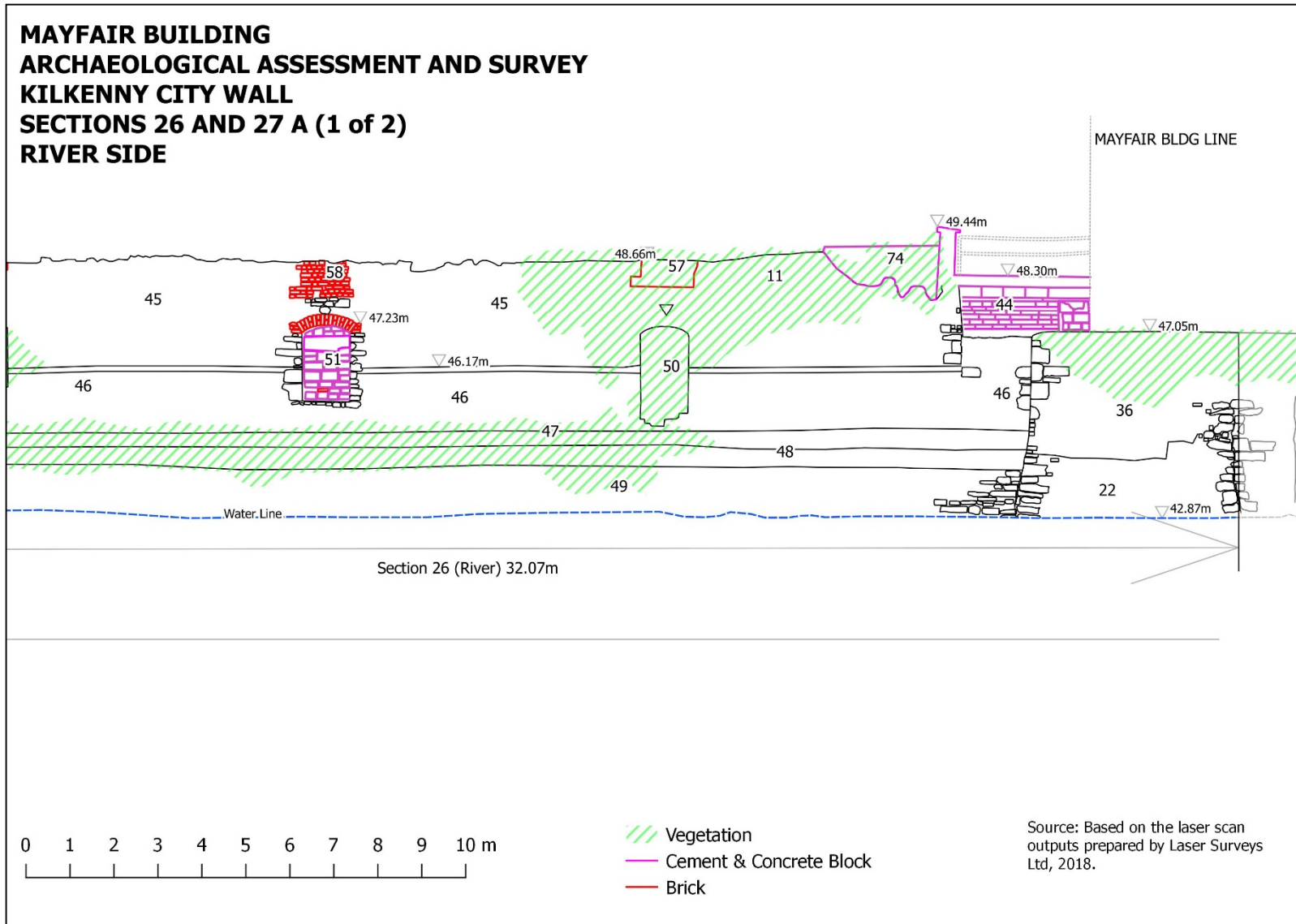


Figure 28: Elevation drawing of Kilkenny City Wall, Section 26 and 27A (1 of 2), river side (AMS 2018)

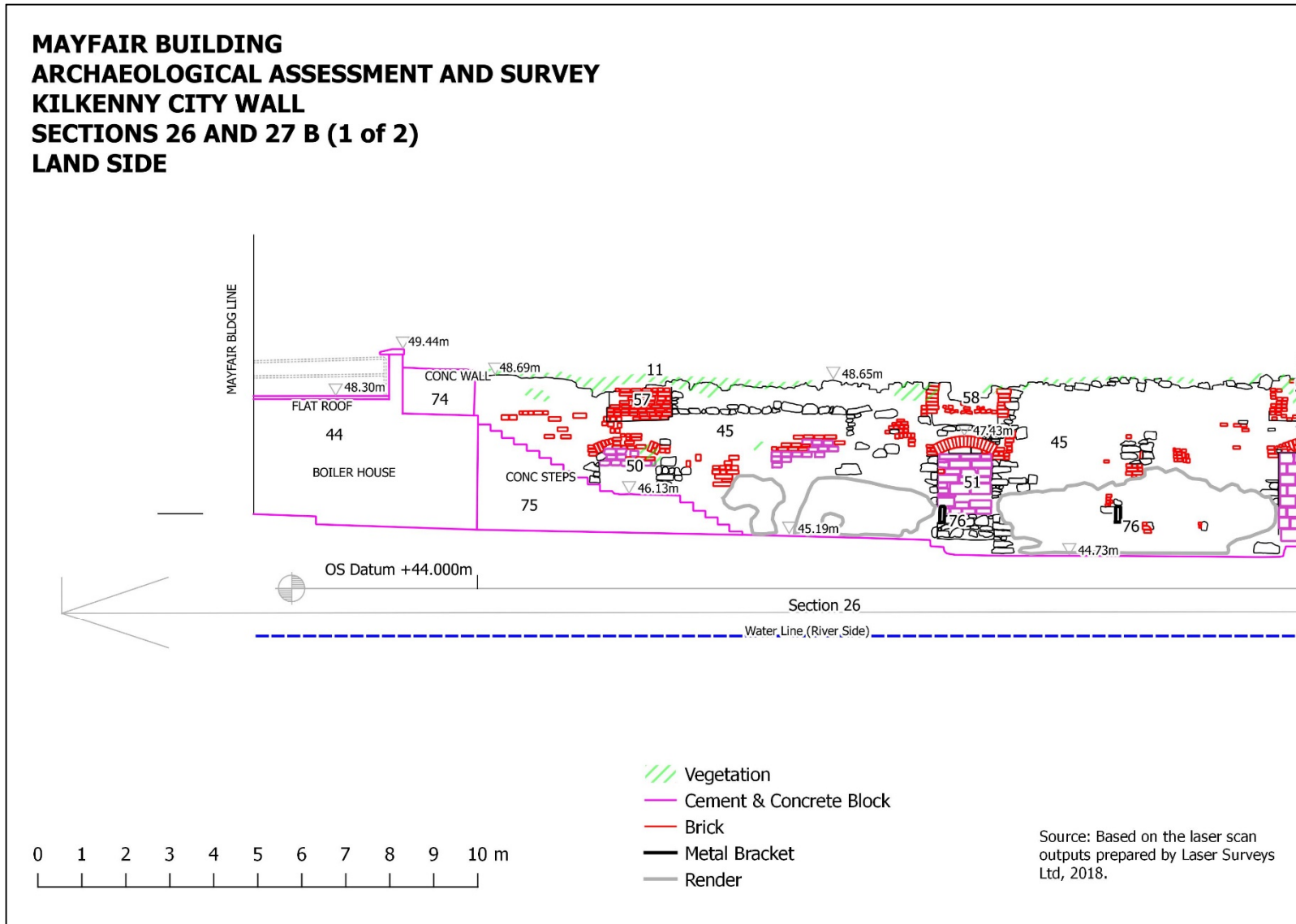


Figure 29: Elevation drawing of Kilkenny City Wall, Section 26 and 27B (1 of 2), land side (AMS 2018)