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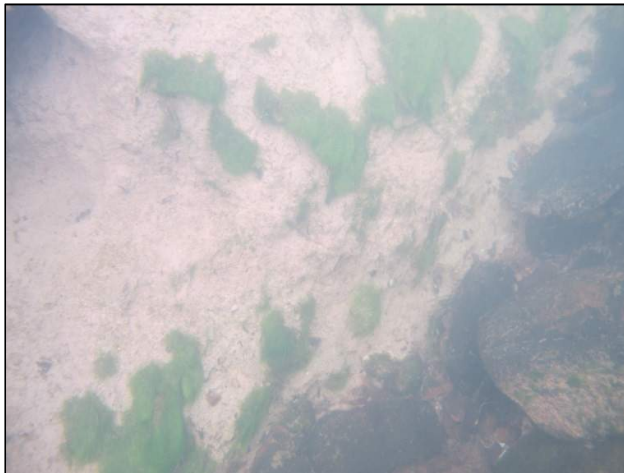


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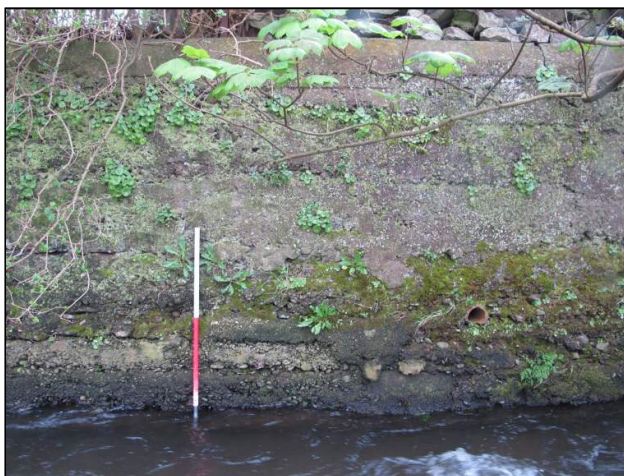


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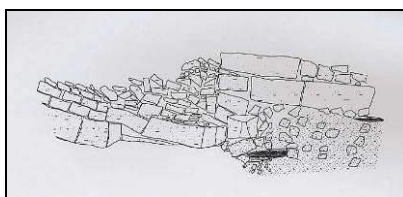
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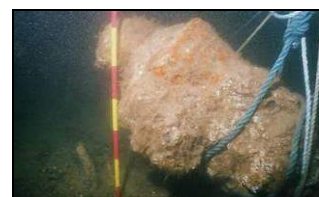
Recording prehistoric logboat at Gormanston, Co. Meath
GAS 2025 Irish Sea Interconnector



Underwater elevation of bridge pier collapsed in 1763. River Nore Flood Alleviation Scheme



Iron cannon on site of 17th-century timber wreck discovered during dredging programme Waterford Harbour



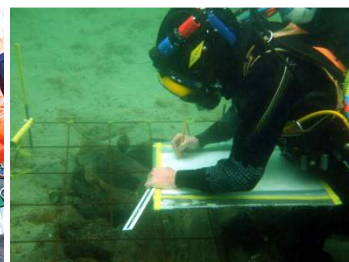
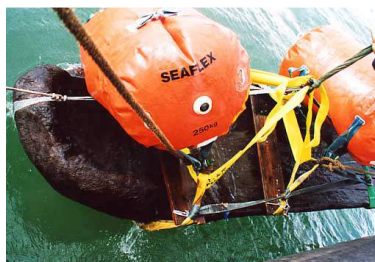
Appendix 10.3 – 2017 ADCO Report

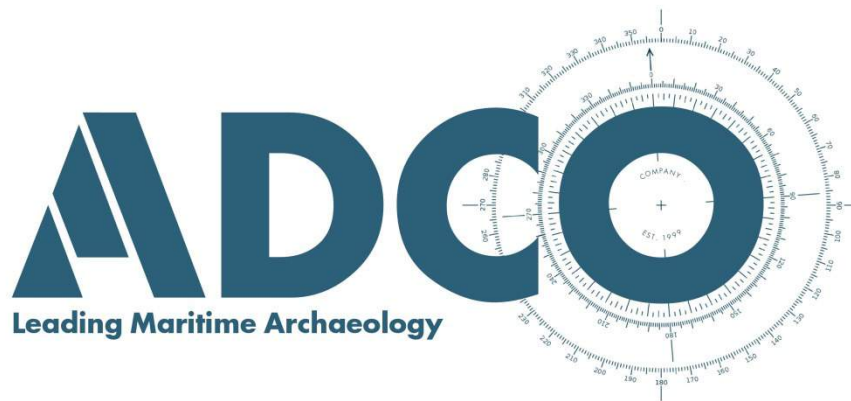


**Underwater Archaeological Impact Assessment (UAIA)
River Bride Certified Drainage Scheme
Addendum Report
Glennamought River
Kilnap, Kilabarry, Carhoo & Kilcurry Tds.
Blackpool, Cork**

17D0067, 17R0160

Draft for Review





**Underwater Archaeological Impact Assessment (UAIA)
River Bride Certified Drainage Scheme
Addendum Report
Glennamought River
Kilnap, Kilabarry, Carhoo & Kilcurry Tds.
Blackpool, Cork**

17D0067, 17R0160

Draft for Review

26 October 2017

Project Director

Rex Bangerter MA

ADCO, Beverley Studios, Church Terrace, Bray, Co. Wicklow

www.adco-ie.com

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EXECUTIVE SUMMARY

The Archaeological Diving Company Ltd (ADCO) was appointed by Ryan Hanley, Consulting Engineers for the Office of Public Works, to carry out an Underwater Archaeological Impact Assessment (UAIA) of a 940m section of the Glennamought River, an upstream tributary of the River Bride. This work is in addendum to the archaeological assessment previously undertaken by ADCO in 2016, as part of the EIS for the River Bride (Blackpool) Certified Drainage Scheme; the drainage scheme having been subsequently extended (June 2017) to include flood relief measures along the upstream section of the Glennamought River. The additional flood defence measures comprise: a continuation of channel maintenance works (C08_G01) upstream; the insertion of a roughing screen (C08_T01) upstream of Kilnap Bridge; insertion of an associated access trackway (C08_R02); construction of two sections of flooded defence wall (C08_L02, & L03), located adjacent to Glen Mills; and construction of a flood defence wall and embankment (C08_L01 and C08_E01) upstream of Glennamought Bridge.

The UAIA assessment covered a 1km section of the Glenamought River, extending from Kilnap Viaduct to a point 106m upstream of Glennamought Bridge. An overlap with the previous archaeological assessment was included as part of the current survey. This overlap comprised a 60m section of the river, running between Kilnap Viaduct and Kilnap Bridge.

The assessment recorded riverbed topography and provides a detailed account of the existing riverside environment. On-site work comprised systematic non-disturbance waded inspection of the river channel, its attendant bank structures, and any associated riverine features, including bridge structures (piers and foundations), weirs, culverts, river-walling, and any natural features encountered. On-site work was carried out between the 29th and 30th of August 2017, under licence from the DCHG; licence numbers 17D0067 and 17R0160.

The UAIA identified a series of thirteen known or previously unrecorded features of historic significance (Features F17-F29). These features include: five sections of river walling (F18, F21, F23, F26 and F28), the remains of a millpond (F17), a tailrace and associated culvert structure (F20), a mill boundary wall (F22), a section of masonry wall (F24), the remains of two weirs (F19 and F27), and two bridge structures (F25

and F29). An additional feature (F02A), not visible during the previous (2016) assessment, was also recorded upstream of Kilnap Bridge. This feature is thought to be the remains of a weir/sluice structure associated with a dam (F02) that once crossed the river at that location. Features F16-F28 and Feature F02A are catalogued in Appendix 1, with corresponding impact assessment and proposed mitigation measures presented in Sections 6.0 and 7.0 respectively.

This report recommends that further archaeological assessment in advance of construction is not required at the locations of Features F02A, F17-F22, and F26-F29. However, additional recording of Features F23 (river walling), F24 (masonry wall) and F25 (unnamed bridge) is required in advance of construction. These features are subject to impacts associated with the insertion of two sections of flood defence wall at the former Glen Mill/ Glen Distillery site; Interference Reference Items C08_L02 and C08_L03. Features F23 and F24 are both located on the south side of the river channel, adjacent to the Glen Distillery Business Park. The unnamed bridge, Feature F25, crosses the Glennamought River at NGR: 16700E, 75163N (centre-point), on the upstream boundary of the aforementioned business park.

In addition, it is recommended that archaeological monitoring of all ground disturbances during construction be undertaken, with the proviso to resolve fully any archaeological material observed at that point.

The recommendations of this report are subject to the approval of the National Monuments Service, at the Department of Culture, Heritage and the Gaeltacht.

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LIST OF ABBREVIATIONS

ADCO	The Archaeological Diving Company Ltd
ACA	Architectural Conservation Area
DAHG	Department of Arts, Heritage and the Gaeltacht
DAU	Development Applications Unit
E	Easting
N	Northing
NGR	National Grid Reference
NIAH	National Inventory of Architectural Heritage
DCHG	Dept. of Culture, Heritage and the Gaeltacht
NGR	National Grid Reference
OPW	Office of Public Works
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
UAU	The Underwater Archaeology Unit
UAIA	Underwater Archaeological Impact Assessment

1.0 INTRODUCTION

The Archaeological Diving Company Ltd. was appointed by Ryan Hanley, consulting engineers on behalf of the Office of Public Works (OPW), to undertake an Underwater Archaeological Impact Assessment (UAIA) along a 940m section of the Glennamought River as part of an addendum to flood defence works associated with the River Bride (Blackpool) Certified Drainage Scheme (Figures 1-2).

Onsite assessment comprised the systematic visual inspection of the in-water extent of the addendum flood defence works and included an overlap with ADCO's previous assessment of the watercourse, as it flows through Kilnap Glen; starting from a point immediately upstream of Kilnap Viaduct to a point 106m upstream of Glennamought Bridge (NGR: 166513E, 75025N to NGR: 167290E, 75352N) (Plate 1). The archaeological assessment sought to record riverbed and bankside topography, assess the potential of riverbed deposits to retain archaeological material, and identify any features/structures of archaeological or historic significance that are present. In addition, targeted metal-detection was employed to help assess the riverbed and highlight any metallic concentrations present within those deposits.

For a comprehensive outline of the archaeological and historical background of the area impacted by the proposed addendum drainage works, the reader is directed to the desktop study completed by John Cronin and Associates as part of the project EIS.¹

The UAIA was carried out in accordance with the terms of Section 5 of the National Monuments Act (2004 Amendment) by a team of two underwater archaeologists and a certified surveyor between 29th and 30th of August 2017, under licence from the DCHG; licence numbers 17D0067 and 17R0160.

The following report is designed to be read in conjunction with ADCO's previous UAIA report for the wider River Bride (Blackpool) Certified Drainage Scheme.² The current report presents the findings from the recent UAIA of the Glennamought River, and includes a catalogue that is a factual record of any known and newly-encountered features of archaeological or historic interest. The report assesses the potential level of impact arising from the development at the location of each of the in-water features, and provides a set of specific mitigation measures relating to each feature.

¹ Chapter 10, Archaeological and Cultural Heritage Assessment, River Bride (Blackpool) Certified Drainage Scheme, Environmental Impact Statement, prepared by Tony Cummins for John Cronin and Associates, November 2015. pp.10-1 to 10-22.

² Rex Bangerter MA, *Underwater Archaeological Impact Assessment, River Bride Certified Drainage Scheme, Blackpool, Cork, 16D0044, 16R0044*, ADCO Report, June 2016.

2.0 PROPOSED DRAINAGE SCHEME

The proposed additional drainage works will comprise a combination of flood mitigation measures, including channel maintenance, the insertion of flood walls, and the construction of a flood embankment (Figure 2). The following flood defence measures have been identified for the section of the Glennamought River currently under assessment:

- Channel maintenance works, Interference Reference Number C08_G01.
- Insertion of a roughing screen at a point c.13m upstream of Kilnap Bridge, Interference Reference Number C08_T01.
- Insertion of a trackway, on the south side of the channel, to facilitate maintenance access to the channel and proposed roughing screen, Interference Reference Number C08_R02.
- Construction of two sections of reinforced concrete flood defence wall (measuring 58m and 21m in length), located adjacent to the Glenn Distillery Business Park, Inference Reference Numbers C08_L02 and C08_L03. It is proposed to tie one of the flood defence walls (C08_L02) into the downstream side of an adjacent bridge structure that crosses the Glennamought River at that location.
- Construction of a 30m-long section of reinforced concrete flood defence wall, located upstream of Glennamought Bridge, Inference Reference Number C08_L01.
- Construction of a 62m long flood defence embankment, Interference Reference Number C08_E01. The embankment will measure 5.1m width x 1m height and will tie into the eastern terminus of flood defence wall C08_L01.

3.0 CARTOGRAPHIC INFORMATION

Examination of the Ordnance Survey (OS) 6-inch First Edition (1841) and later 25-inch Edition (1900) mapping provides insight to the extent of extractive industry along the Glennamought River in the nineteenth-century (Figures 3-4). It also allows useful comparison between the historic and present-day route of the Glennamought River.

The First Edition map depicts *Kilnap Glen House* (NIAH: 20858003) and its surrounding, landscaped, grounds occupying much of the land to the south of Kilnap Bridge (NIAH: 20858004). It is shown prior to the construction of the adjacent Kilnap Viaduct (NIAH: 20858005), which was built in 1845. A *Flour Mill* (RMP: CO0740-112) is also depicted, c. 26m to the southeast of Kilnap House. An associated *Millpond* (Map Item 1) is shown at a point c. 72m upstream of Kilnap Bridge; suitably positioned to provide a reliable flow of water to a headrace for the aforementioned flour mill, located c.170m downstream. The millpond is depicted measuring approximately 70m (east-west) x 50m (north-south) in extent.

Travelling upstream, a number of mill buildings (Map Item 2), annotated *Glen Mills*, are presented. These buildings occupy an area to the south of the river channel, located a short distance to the southwest (downstream) of an unmade bridge (Map Item 3). This bridge crosses the river channel at that point c. 228m downstream of Glennamought Bridge (NIAH:

20906320) and provides access to a *Summer House* (Map Item 4) situated on the north side of the river, roughly in line with the aforementioned mill complex. In contrast to other parts of the Glennamought River, the river channel, as it flows past the Glen Mills complex, is depicted as an artificially straightened section of watercourse; indicative of river channelling works associated with the establishment of the adjacent mill. Moreover, a large *Mill Pond* is depicted upstream of *Glen Mills* (Map Item 5), extending from the downstream side of Glennamought Bridge to a point c. 80m upstream of Map Item 3 (an unnamed bridge). This cartographic feature measures 142m in length (northeast-southwest) x 50m in width (northwest-southeast). The downstream extent of the millpond forms a straight line, most likely comprised of river walling, with the river-channel flowing to the north of the millpond area and a millrace to the south. The millrace (Map Item 6) is shown to accommodate flow from the millpond along the southern side of the mill complex, where it flows for a distance of c. 160m before turning northwards to disappear below ground. This feature re-appears a short distance (30m) to the north, where it continues for a further 21m to its confluence with the Glennamought River.

Another mill (CO063-067), annotated *Corn Mill*, is depicted upstream of Glennamought Bridge and comprises three detached, rectangular, buildings which are positioned a short distance to the south of the river channel. A millpond is also shown approximately 600m upstream of the mill site. A millrace (Map Item 7) extends eastward from this feature, to a point immediately west of the largest of the three mill buildings (westernmost building). At the corner of the mill building the race turns northward to flow past the gable-end of the structure; presumably at a point where the mill wheel was originally situated. Following on from this, the millrace turns eastward to form a tailrace that con-joints with the river channel at a point c. 50m upstream of Glennamought Bridge.

The 25-inch map shows the continued development of milling activity on the Glennamought River, combined with greater adaption of the watercourse. This includes the expansion of the millpond (Map Item 8) located upstream of Kilnap Bridge; this feature now extending from its previous western extent to encompass the river area upstream and downstream Kilnap Bridge. In addition, Kilnap Viaduct is now shown, crossing the river valley a short distance east of Kilnap Glen House and adjacent *Corn Mill* (RMP: C074-112). The millpond terminates at a point c.20m upstream of the viaduct, where a *Weir* is also depicted (Map Item 9). A *Sluice* and millrace extend from the southern side of the millpond, passing under one of the viaduct arches, to flow past the southern side of the aforementioned corn mill.

Development of the Glen Mills site, now annotated *Glen Distillery*, is also evident; the original mill buildings, as depicted on the First Edition map, having been expanded and a series of new buildings added (Map Items 10-11). The additional buildings form two large, rectangular,

structures that are positioned along the southern side of the river; presumably functioning as warehousing for the distillery enterprise. In addition, the millpond and millrace which serviced the earlier mill are now shown in greater detail. A *Weir* (Map Item 12) accommodates river-flow at the northern side of the millpond, while a headrace and associated *Sluice* structure are depicted to the south of the millpond. A tailrace (Map Item 13) is also shown, emerging from below ground, on the downstream (western) extent of the Glen Distillery complex; the proceeding c. 90m section of the millrace appearing to have been culverted.

The corn mill, located upstream of Glennamought Bridge, is now annotated *Corn Mill (Disused)*. The three detached buildings have been conjoined to form one larger, continuous structure and a millwheel is also depicted to its western (gable) end (Map Item 14). The tailrace is also shown in greater detail, although the headrace is less evident.

The present-day route of the Glennamought River conforms, in the most part, to that depicted on the two historic map editions. Notable differences are restricted to the two millpond areas, highlighted as Map Items 1 and 5 (Figure 3). These features no longer exist and their corresponding weir structures have undergone removal, Map Items 9 and 12 (Figure 4). A meandering watercourse now flows through the millpond area at Glen Mills; the present-day river channel extending between Glennamought Bridge and a point 80m upstream of the Glen Distillery Business Park. The same applies upstream of Kilnap Viaduct, where the millpond has been replaced by a narrow meandering river channel. It is also noteworthy, that with the exception of the river channel upstream of Glennamought Bridge, the remainder of the watercourse has been subject to historic intervention, harnessing the power of the river for industrial use. This, coupled with additional modern intervention measures, has meant that little of the pre-industrial character of the Glennamought River survives today. The in-water assessment supports this cartographic observation.

4.0 SURVEY METHODOLOGY

Visual inspection along the extent of the addendum works area for the River Bride Drainage Scheme was conducted across the riverbed and attendant back structures of the Glennamought River, as indicated in Figure 5.

The survey commenced on the upstream side of Kilnap Viaduct, NGR: 166513E, 75025N, and progressed upstream to a point 106m northeast of Glennamought Bridge, NGR: 167290E, 75352N. The survey included an overlap with ADCO's previous onsite assessment, comprising a 60m section of river channel running between Kilnap Viaduct and Kilnap Bridge. Uninterrupted inspection of the watercourse route was carried out along the entirety of the river area under assessment.

Detailed descriptions of riverbed topography and bottom composition were taken at regular intervals and comprehensive photographic record of the existing river environment was made. Where possible, metal-detector anomalies were inspected and mapped using a total station and/or DGPS Unit. In addition, a series of river profiles were taken to highlight changes in topography along the watercourse extent (Figures 6-8, Plate 2). ADCO also employed a drone to assist with the onsite assessment and provide aerial images of the watercourse and surrounding landscape.

Particular attention was paid to the recording any features of archaeological or historic interest encountered as part of the survey. The numbering of these features continues sequentially from those identified as part of ADCO previous (2016) assessment of the River Bride and Glennamought River; where a total of fifteen riverine features were recorded (F01-F016). The current assessment identified fourteen features of interest and these have been numbered F02A and F017-F029.

A Leica Total Station EDM and Topcon DGPS unit facilitated the gathering of profile data and the position-fixing any features encountered. A Fisher *Aquanaut* 1280U and Tesoro *Compardre* metal detectors were used for the Magnetometer survey (Plate 3). Metal detection was undertaken across a c. 240m section of the watercourse, starting at a point immediately upstream of Kilnap Bridge.

4.1 Terminology

When referring to the degree of compaction observed for the riverbed deposits under inspection, the terms loose, medium, and hard are relative and do not relate to the measured properties of these deposits. When referring to sediment grain size, the Wentworth scale was adopted, as detailed in Table 1.

Size (mm)	Grade
>256	Boulder
>64	Cobble
>4	Pebble
>2	Granule (gravel)
>1	Very coarse sand
>1/2	Coarse sand
>1/4	Medium sand
>1/8	Fine sand
>1/16	Very fine sand
>1/32	Coarse silt
>1/64	Medium silt
>1/128	Fine silt

Size (mm)	Grade
>1/256	Very fine silt
<1/256	Clay

Table 1: Sediment grain size categories as applied to the Riverbed deposits discussed.

The survey team comprised of two underwater archaeologists and a certified surveyor. The survey was carried out to HSE/HSA standards using all relevant safety equipment.

5.0 ARCHAEOLOGICAL ASSESSMENT

5.1 River Topography

The section of Glennamought River under assessment flows through a narrow, steep-sided, river valley (Plate 4). It is traversed by four historic bridge structures; Kilnap Viaduct (NIAH: 20858005), Kilnap Bridge (NIAH: 20858004), an unnamed bridge upstream of the Glen Mill/ Glen Distillery site, and Glennamought Bridge (NIAH: 20906320). Mature trees line the valley walls, while green-field sites occupy much of the adjoining land. Modern development is concentrated to the south of Kilnap Viaduct (Kilnap and Rathpeacon Tds.) and across land to the north of Glennamought Bridge (Kilbarry and Kilcurry Tds.). In contrast, historic development is focused along the valley floor with the establishment of mill sites along the Glennamought River in the nineteenth century: Kilnap House (NIAH: 20858003) and adjacent corn mill (RMP: CO074-112); the Glen Mill/ Glen Distillery site; and a corn mill (NIAH: 20906320), located upstream of Glennamought Bridge.

The section of river between Kilnap Bridge and the Kilnap Viaduct comprises deposits of gravel and sub-angular pebbles, interspersed with fragments of shale (>200mm), that overlie a base layer of compact silty-clay. In addition, large pieces of limestone masonry are present within the riverbed, measuring up to 600mm in length x 400mm in width. Exposed bank sections are composed of compact clay with shale inclusions forming a layer of glacial-till. Water depth increases to 300mm, with occasional deeper pockets being present. Rock armour has been placed on the outer side of the meander and includes the use of cut-stone masonry recovered from the riverbed. From a point c. 26m upstream of Kilnap Viaduct, both riverbanks have been subject to modern protection measures, including the placement of stone-filled gabions; extending 50m along the north side of the river and 127m on the south.

The remains of a weir or possible sluice structure (Feature F02A), though to be associated with a Dam Feature F02, was encountered within the riverbed at NGR: 166524E, 75025N (Figure 5; thumbnail, Plates 5-6). Feature F02A is located 3.5m to the south-southeast of Feature F02. The structure was not visible during the previous assessment, undertaken in 2016. However, it is likely that the feature became exposed as a result of subsequent flood-

water events; increased flow having stripped away the riverbed overburden across this section of the watercourse.

The structure comprises thirty-two (32) pieces of limestone masonry, twenty-seven (27) of which lie flush with the riverbed; extending across a 2.4m (north-south) x 2.50m (east-west) area of the riverbed (Figure 8; Profile 34, Plate 7). These constitute foundation stones form the structure. The remaining masonry protrudes from the base of the adjacent stone-filled gabion baskets that line this stretch of the channel. The upstream extent of this masonry is raised 440mm above the riverbed and slopes at a c. 30° angle to the west (downstream) (Figure 8; Profile 35). The angled masonry is thought to form part of the main body of the structure.

Moving upstream of Kilnap Bridge, the riverbed is composed of angular to sub-angular pebbles, interspersed with fragments of shale (>200mm) (Plates 8-9). Pockets of coarse-sand and gravel are also present. Water-rolled nodules of silty-clay were noted within the sand/gravel pockets. This section of river is fast-flowing and a water depth of 200mm was measured. The base of the riverbed is exposed in places and is composed of a compact silty-clay (sterile), light-brown in colour. The south bank is ill-defined and measures 300mm-400mm in height. In contrast, an almost vertical bank (subject to recent erosion) forms the north bank at this location. This structure is composed of compact-clay with frequent shale (boulder) inclusions (Plate 10). A degree of deposition is active along south side of the river, c. 7m upstream of Kilnap Bridge (Plate 11). Shale bedrock is exposed across the riverbed beneath Kilnap Bridge, providing a platform upon which the bridge's foundations have been constructed.

A small section of collapsed/displaced river walling is located on the south bank, lying at right angles to the channel (Plate 12). The structure measures 1.62m in length x 300mm in height x 240mm in width. It is composed of two courses of roughly-shaped shale or v varying size and shape, bonded using a coarse-grained mortar. Subsequent re-pointing using cement is also evident. The structure is thought to have originally extended from the adjacent bridge pier, on the south side of the channel, and perhaps formed part of a revetment wall at that location. The wall is of twentieth-century date, built sometime after the removal of the downstream dam structure.

Continuing upstream, riverbed composition remains unchanged, with the attendant bank structures retaining a similar profile to that previously observed; remaining low (< 500mm) in height along the south side of the channel, and ranging between 1.5m-2m in height along the north side. However, exposed sections of bedrock and associated boulder are now frequently encountered within riverbed, forming localised areas of rapids within the channel (Plate 13-

14). In addition, bankside areas become increasingly overgrown with trees (sycamore, ash, beech, lime, and hawthorn) and low-lying vegetation (brambles, nettles, and ferns) (Plate 15). A flat, grass-covered, area is located on the north side of the river, running between NGR: 166624E, 75089N and NGR: 166670E, 75125N (Plate 16). This area is situated at the downstream extent of the millpond (Map Item 1) depicted on the OS First Edition Map. The observed ground conditions at this location, coupled with the examination of exposed sections of the northern bank (containing frequent modern debris at depth), support the theory that this area represents an in-filled section of the millpond (Figures 3 & 5).

A tight meander in the river is present a short distance upstream, located at NGR: 166671E, 75112N (centre-point). This river feature defines the eastern limit of the aforementioned grassy area. Water depth increases rapidly at this location, reaching a maximum depth of 1.05m on the apex of the meander; where riverbed erosion is at its greatest (Figures 5-6; Profiles 30-31, Plates 17-18). Undercutting of the western bank structure is also evident across this section, undercut to a maximum of 690mm in depth. The west bank measures 1.70m in height and is composed of a light-brown silty-sand (approximately 70%/30% mix). The riverbed is composed of sub-angular shale cobbles and pebbles, overlying a substratum of compact clay which forms the underlying bed-level (Plate 19). The east bank forms a grass-covered structure that measures 1m in height and slopes at a 45° angle towards the river. The water column along this side of the river measures up to 500mm in depth.

An area of riverbed deposition is located immediately upstream of the aforementioned meander, extending across a 16.50m x 3m area (Figure 5, Plate 20). This deposition comprises river gravel (<5mm), interspersed with sub-angular pebbles (<40mm) and cobbles (<160mm). Occasional boulders (<400mm) were also noted. Moving upstream, the watercourse flows close to the north side of the valley; a steep-sided slope, rising at a c. 70° angle, forming the valley wall. Frequent sections of shelving bedrock were noted protruding from valley wall.

To the south, the valley floor stretches southward for a distance of approximately 100m. An oval-shaped pond, Feature F17, is located 4.29m to the south of the river channel, located at NGR: 166707E, 75126N (centre-point) (Figure 5, Plate 21). This feature measures approximately 27m in length x 6.5m in width. Feature F016 is thought to be the remnant of a millpond that once extended across this area, as depicted on the OS First Edition Map (Map Item 1).

A section of river walling (Feature F18) is located on southern side of the river, running parallel to the aforementioned millpond (Figure 5). Only the bottom course of this structure remains *in situ*, comprising a series of vertically-set stones that formed the base elements of a

revetment wall of drystone construction (Plate 22). The wall section measures 20m in length and survives to a maximum height of 450mm.

The remains of potential weir structure (Feature F19) are located at NGR: 166736E, 75135N, crossing the watercourse at a point 12m upstream of Feature F18 (Plate 23). This feature comprises disarticulated pieces of masonry and does not retain any bonded elements. Upstream of this feature, the riverbed is composed of sub-angular cobbles and pebbles, with pockets of sand and gravel (Plate 24). A clay sub-stratum is exposed in places, and exposed sections of bedrock are also evident. Both banks remain relatively low along this stretch of the watercourse, ranging between 650mm and 800mm in height, and form almost vertical structures composed of compact clay. Frequent bankside collapse is also evident along their extent. Mature trees line both sides of the riverbank. This topography continues unchanged for a distance of c. 80m, before reaching the western (downstream) extent of the former site of the Glen Mills/ Glen Distillery complex.

The partial remains a tailrace (Feature F20), associated with the Glen Mills/ Glen Distillery site, is located along the southwest limit of the mill complex. The structure comprises a 44m long x 2.5m wide tailrace, running between NGR: 166854E, 75094N and NGR: 166818E, 75119N. The tailrace emerges from a small culvert at its south-eastern extent; this culvert once accommodating flow from the upstream headrace. The culvert measures 1m in width x 700mm in height (Plate 25). A 7m section of side-wall survives on the north side of the tailrace, with a 5m section on the south. The structures side-walls are composed of roughly coursed and un-bonded rubble-stone. The best preserved section, retaining its original elevation, measures 2.5m in height. The first 1.5m of the structure is composed of masonry measuring up to 450mm length x 250mm width (Plate 26). In contrast, the upper part of the structure (1m height) is of lighter construction, comprising smaller stones that measure up to 200mm length x 70mm width (Plate 27). The base of the tailrace is not exposed, having silted up to a sediment depth of 500mm. However, it is likely that the base of the structure is also stone-lined and remains buried *in situ* beneath the sediment built-up.

Upstream of the tailrace discharge-point, the watercourse is composed of sub-angular cobbles, pebbles, and patches of gravel (Plate 28). The partial remains of river-walling (drystone construction) occupy either side of the river channel (Feature F21A-B), located along a c.40m section of the watercourse. Only the lower components of these two, opposing, structures survive and comprise up to four courses of roughly-shaped limestone (Plate 29); measuring up to 500m length x 270mm width. In addition, frequent collapse from these wall structures was observed, strewn across the adjacent riverbed areas.

A c. 9m long section of mill boundary wall (Feature F22) is located on the south side of the river, a short distance to the east of Feature F19 (Figure 5). The boundary wall is composed of random-coursed limestone of varying size and shape; ranging in size between 300mm length x 200mm width (smallest) and 600mm length x 300mm width (largest) (Plate 30).

The river, as it flows past the Glen Distillery Business Park (former Glen Mills site), forms an artificially straight channel (Plate 31-32). The riverbed is composed of a deposit of coarse sand (<2mm) and gravel (<5mm) interspersed with frequent sub-angular pebbles (<40mm), cobbles (<160mm), and boulders (<300mm) (Plate 33). Riverbed deposits are minimal in depth (<70mm) and overlie a bedrock sub-stratum. Exposed sections of shelving bedrock are frequently visible, both within the riverbed and protruding from the channel sides (Plates 34-35).

A large rectangular building (c.70m long x 10m wide), built as part of the conversion of Glen Mills to a distillery in the late nineteenth-century (1882), is located at NGR: 166919E, 75122N (centre-point). The structure lies parallel to the river channel, at a distance of 2.44m south of the watercourse (Plates 36-37). The building's northern façade (river-facing) is neatly presented and comprises a random-coursed, rubble stone, wall; bonded using a coarse lime mortar. Brick-work adorns the corners of the building and forms part of the original build. The adjacent strip of land, located between the mill building and watercourse, constitutes made-ground (Figure 7; Profile 32, Plate 38). This area measures 2m in height x 2.44 m in width. It comprises a mix of modern and historic components, both of which are visible along its channel-side façade (Plates 39-40). Sections of shelving bedrock and overlying boulders form the base components. Above this, four courses of rough-cut limestone (sub-rectangular in shape) are present (>400mm in length) and survive to a height of 640mm. These are thought to be the foundation stones from a section of river-walling (Feature F23), constructed to channel river-flow past the adjacent mill site. A single course of poured, mass-concrete has been placed above, after which four courses of breeze-block have been laid to form the topmost part of the channel side area.

Further upstream, the aforementioned river-walling (Feature F23) is found in a better state of preservation and survives in a number of places to its original height of c. 2.8m (Plate 41). As noted for the downstream section, the wall is built upon four courses of rough-cut limestone, the largest stones measuring up to 600mm in length. The main body of the structure comprises smaller, irregular-shaped, masonry with an average size of 350mm x 250mm (Plates 41-42). The wall is roughly-coursed and retains vertically-set capping stones, where the full extent of the structure remains intact. A small drain is positioned at the base of the wall, located at NGR: 166974E, 75148N (Figure 5, Plate 43). The drain is stone-lined and measures 590mm in width x 620mm in height. Immediately downstream of the drain feature,

NGR: 166973E, 75148N, three limestone blocks have been set-into the wall's façade; placed at right angles to the structure to form a set of river-access steps (Plate 44). The topmost step measures 1.3m in length and protrudes 660mm from the wall. The middle step measures 620mm in length and protrudes 500mm from the wall. The lowest step measures 110mm in length and protrudes 300mm from the wall.

Continuing upstream, the river-walling has suffered substantial collapse (c. 14m section) at a location approximately 10m east of the aforementioned river-access steps; collapse material from the wall extending across the adjacent riverbed, between NGR: 166973E, 75148N and NGR: 166992E, 75158N (Plate 45). Modern concrete block-work has been used to reconstitute the wall at this location (Plates 46).

The northern side of the river, as it flows past the Glen Mills/ Glen Distillery site, is heavily overgrown with mature trees that include Laurel, Beech and Ash. Foundation stones from river-walling are also evident in a number of places along this side of the channel as well (Plate 47). It is likely that a section of river wall also delineated the north side of the channel, forming an opposing structure of similar construction to that found on the southern side of watercourse. Active erosion of the north riverbank was noted and frequent undercutting of the riverbank area being observed.

A section of masonry wall (Feature F24) is located on the south side of the river channel; immediately downstream of an unnamed bridge, catalogued as Feature F24 (Plates 48-49). The wall structure does not extend to its original height and has been subject to partial collapse of on its downstream side. A modern block-work wall abuts the downstream side of structure. Feature F23 is constructed using randomly coursed, rubble-stone, and is bonded using coarse lime mortar (Plate 50). The structure measures c. 4.5m height (max.) x c. 5m length and has been tied/keyed into the southern side of the bridge structure; obscuring the lower part of the bridge's arch-ring and haunch at that location (Plate 51). The wall's foundations slope from its base at a 45°-50° angle for a distance of c. 1m. The foundations are composed of a heavily mortared rubble-stone core, covered with a mortar-wash to prevent the ingress of water. The upper parts of Feature F24 are very similar in build to that observed for the northern façade of the aforementioned mill building, located 50m downstream. It is thought that Feature 23 constitutes the remains of the northern façade of a mill building that once stood at this location. Two riverside buildings were constructed in the late nineteenth-century as part of the mill sites conversion to a distillery complex; as depicted on the OS 25-inch Edition map (Map Items 10-11). Only the downstream structure (Map Item 10) remains standing today.

Feature 25 comprises a single-arched masonry bridge that crosses the Glennamought River at NGR: 167000E, 75163N, on the upstream side of the Glen Mills/ Glen Distillery site (Plates 51-52). The structure is depicted on the OS First Edition Map (1841) and is thought to date to the latter part of the eighteenth- or early part of the nineteenth-century. The bridge is not currently listed in the NIAH or the RMP. The bridge arch measures 3.8m in height x 3.4m in width. Its arch-rings are segmental in form; comprising thirty-nine (39) visible arch-stones (*voussoirs*) on the downstream side, and thirty-eight (38) visible arch-stones on the upstream side of the bridge. The arch-stones are fairly uniform in size and shape, with a size range of between 460mm length x 83mm width and 510mm length x 120mm width.

The arch-walls are composed of roughly-coursed limestone blocks, varying in both size and shape across much of their extent; ranging from 200mm length x 60mm width to 290mm length x 200mm width (Plate 53). In contrast, the first 1m of each arch-wall is composed of rectangular masonry measuring up to 570mm in length and 100mm in width.

Two buttresses have been added to the upstream side of the bridge, designed to provide additional support to the structure. These features run the full length of the bridge façade and measure up to 1.2m in depth. The buttresses have been keyed into, rather than abutting, the bridge structure. The northern buttress has separated slightly from the main body of the bridge, while the southern buttress remains firmly in place (Plates 54-55).

A stone-lined apron has been placed beneath the bridge structure; covering the riverbed from a point c. 500mm upstream of the bridge to a point c. 12m downstream (Plates 56-57). The apron appears to be contemporary with the bridge-build; the arch-walls extending above the apron stones on either side of the river. Downstream of the bridge, the apron slopes at a slight angle (c. 20°) to accommodate river-flow for a distance for c. 10.5m (Plate 58). At its downstream limit the apron falls away, creating a vertical drop in the bed-level of 380mm. Downstream of the apron feature, the riverbed has been eroded to form a deep pool, up to 1m in depth at its centre (see Plate 48). The riverbed at this location is composed of deep deposits (>300mm) of coarse sand and gravel, overlying a dipping bedrock shelf in the substratum (Plate 59). Further downstream the underlying bedrock is located closer to the surface and, as a result, water depth decreases to 200mm.

A section of river-walling (Feature F26) abuts the downstream side of the bridge, on the north side of the river channel (Plate 60). This feature measures up to 1.3m in height and extends along a c. 11m section of the watercourse. The wall is of drystone construction, built using limestone of varying size and shape; ranging between 200mm length x 100mm width and 500mm length x 180mm width (Plate 61). This wall section is built upon the aforementioned

bridge apron and is likely to have been constructed as part of river-channelling works associated with the establishment of Glen Mills.

The riverbed upstream of Feature F25 is composed of sub-angular cobbles and pebbles, interspersed with gravel and coarse sand (Plate 62). The attendant bank structures are low-lying (<500mm in height) and formed of a light brown silty-clay. Approximately 50m upstream, the river channel broadens slightly and the riverbed changes composition to form a sand-covered bed with occasional cobble inclusions (Plate 63).

A short distance (23m) upstream, the river channel turns sharply, at right angles, to the south. The remains of a weir structure (Feature F27) were encountered immediately downstream of this change in river-course, located on the northern side of the channel at NGR: 167061E, 75210N. The structure measures 11m in length x c. 7m in width and comprises of a series of poured-mass concrete sections, now displaced, that once formed a sizable weir structure at this location (Plate 64). The structure is of relatively modern date, early- to mid-twentieth century, and is likely to have replaced an older weir structure at the same location; as depicted on the OS 25-Inch map (Map Item 12).

Upstream of the weir, the western side of the river channel is delineated by a 31m section of river-wall, Feature F28 (Plate 65). This structure is contemporary with the establishment of Glen Mill and originally formed the downstream extent of the millpond for that site; as depicted on the OS First Edition map (Map Item 5). The structure does not survive to its original height and is upstanding to a maximum height of 2.5m along its best preserved section. The wall is heavily bonded using lime mortar and is of rubble-stone construction.

At the southern end of the Feature F28, the watercourse turns sharply to the northeast and continues in that direction for a distance of 98m, before reaching a double meander in the watercourse. The channel is delineated by vertical bank structures, ranging in size between 500mm and 1.5m in height. These are composed of silty-clay and are subject to frequent collapse from flood-water erosion (Plate 66). The riverbed is composed of angular cobbles and pebbles with occasional boulders. In addition, shelving bedrock traverses the watercourse in several locations to form localised rapids (Plate 67-68). Upstream of the double meander, the watercourse extends a further 52m before reaching the downstream side of Glennamought Bridge (Feature F29).

Glennamought Bridge comprises a large single-arched bridge structure of rubble-stone (limestone) construction (Plates 69-70). The arch-rings are semi-circular in form and comprise a series of neatly cut arch-stones (*voussoirs*) that are roughly uniform in size and shape. Keystones adorn the apex of both arch-rings. The arch-ceiling (*intrados*) remains in a good

state or repair and retains much of the original lime mortar pointing. A deposit of angular cobbles is located beneath the bridge, extending from the north wall to cover the full (east-west) width of the bridge (Plate 71).

Upstream of Glennamought Bridge, the river channel is delineated by artificial bank structures measuring up to 1.60m in height. In addition, modern building material has been re-used as rock-armour protection along much of the southern bank (Figure 7; Profile 33, Plates 72-73). Water depth ranges between 200mm and 400mm along this upstream stretch of the Glennamought River. The riverbed is composed sub-angular cobbles (<150mm) and pebbles (<40mm) with frequent boulders (<300mm) and occasional pockets of coarse sand/gravel (Plates 74-75).

A modern, detached-house, is located a short distance to the south of the river channel, lying within the site of a former corn mill. Little remains of the mill buildings that once occupied the site, only the north façade of one of the mill building remaining *in situ* today (Plate 76). The site is listed in the RMP and includes a description of the site gathered in 1994, when much of the mill site survived to a greater extent:

A range of three buildings survive, built into a NW-facing slope with access on the SE side at upper floor level. Central two-story, rectangular structure (int.: 11.05m SW-NE; 6.2m NW-SE) appears to be the remains of earliest structure with later mill attached at NE end: roofless 4-storey mill (int.: 13.3m NE-SW; 8.14m NW-SE) of 4-bays; brick-arched opens to windows. Wheel-pit along NE wall which suggests power was transferred into the mill via pinion wheel. Support stones for machinery and two conglomerate millstones survive within. Millrace (dry) approaches from the SW. Residential structure attached to SW end of central structure; 2-storey, 3-bay. According to local information, the house abandoned in 1973.³

Conclusion

The Glennamought River has provided topographic conditions favourable to milling activity and has been subject to considerable nineteenth- and twentieth-century intervention as a result. The basal deposit that forms the natural riverbed is frequently exposed to reveal a compact silty-clay which is sterile in nature. Overlying deposits include sub-angular to sub-rounded pebbles, cobbles, and boulders, which form much of the visible riverbed. Pockets of gravel were also noted, although in general there is and little deposition taking place. Shelving bedrock is frequently exposed and attests to the relatively shallow nature of the riverbed deposits present. Given the compact nature of the riverbed, coupled with the fast flowing character of the watercourse, a poor holding content can be ascribed to the stretch of the Glenamought River under assessment.

³ RMP description, after the Archaeological Inventory of County Cork, Volume 2: East and South Cork, Dublin Stationary Office 1994.

5.2 Visual Survey and Assessment

A total of fourteen features of historic significance were encountered as part the assessment. This includes one recorded structure (Glennamought Bridge, NIAH: 20906320), while thirteen are previously un-recorded features (Figure 5). The identified features (F02A, F17-F29) have been catalogued in Appendix 1 of this report, and Table 3 presents locational details for each item. What follows is an overall discussion of the features identified.

The features all comprise riverine structures, such as bridges, river-walling, weirs and other mill related features (millponds, millraces, etc.). They largely date to the 1800s, although Feature F26 (unnamed bridge) may be of late eighteenth-century date. As previously noted, Glennamought Bridge is the only feature to have been recorded, as part of the National Inventory of Architectural Heritage. An unnamed bridge (Feature F25) located upstream of the former Glen Mills/ Glen distillery site is a known structure. However, it does not appear to have been subject to previous assessment/ recoding. The remaining features considered in this report have not been recorded previously.

The majority of the features are concentrated along the stretch of river as it flows past the Glen Mills/ Glen Distillery site, downstream of Feature F25. This section of the watercourse was intensively exploited as a resource for the adjacent milling activity that took place in the eighteenth- and nineteenth-centuries. It should also be noted that while the course of the Glennamought River has been adapted as part of the above, such events occurred prior to the modern period, and overall modern intervention along the channel has been minimal.

The features identified as part of the assessment (tabulated below) are of particular importance as they represent tangible remains of the once extensive eighteenth- and nineteenth-century management of the watercourse, as depicted on the historic mapping of the area (see Section 3.0, Figures 3-4).

Feature No.	National Grid Reference	Townland	Site Type
F02A	166524E, 75025N	Kilnap, Carhoo	Weir/ Sluice Structure
F17	166706E, 75126N	Kilnap	Millpond
F18	166703E, 75126N – 166723E, 75133N	Kilnap	River Walling/ Revetment
F19	166736E, 75135N	Kilnap, Carhoo	Weir
F20	166854E, 75094N – 166818E, 75119N	Kilnap	Tailrace (mill)
F21A	166832E, 75127N – 166868E, 75119N	Carhoo	River Walling (north side of channel)
F21B	166820E, 75121N – 166859E, 75110N	Kilnap	River Walling (south side of channel)
F22	166850E, 75108N – 166859E, 75110N	Kilnap	Mill Boundary Wall (masonry)

Feature No.	National Grid Reference	Townland	Site Type
F23	166859E, 75110N – 166984E, 75152N	Kilnap	River Walling/ Revetment
F24	166997E, 75157N - 167002E, 75159N	Kilnap	Masonry Wall (part of former mill building)
F25	167002E, 75163N	Kilnap, Carhoo, Kilcurry	Masonry Bridge
F26	166989E, 75189N – 166999E, 75164N	Carhoo	River Walling
F27	167060E, 75211N	Kilcurry	Weir (site of)
F28	167072E, 75205N – 167090E, 75179N	Kilbarry	River Walling/ Revetment
F29	167200E, 75287N	Kilcurry, Kilbarry	Masonry Bridge

Table 3: Location of features encountered as part of the UAIA assessment of the Glennamought River.

5.3 Metal-detection Survey

Metal-detection was undertaken across a c. 240m section of the watercourse, from NGR: 166578E, 75059N and NGR: 166811E, 75122N. Upstream of Kilnap Bridge a concerted target ratio of 10-15 hits per m² was encountered. These targets all related to modern debris discarded from the bridge. Travelling upstream the target ratio dropped significantly to 1-2 hits per m²; a more conventional ratio for the type riverbed area under assessment. The target ratio remained static for much of the metal detection survey area, only increasing slightly (2-3 hits per m²) as the survey neared the former Glen Mills/ Glen distillery site. Detection hits were predominately from ferrous metal (70% ferrous/ 30% non-ferrous) and inspected targets included a number of pieces of reinforcing bar, metal barrel fragments, aluminium drinks cans/ring pulls, fishing weights, corrugated sheet fragments, and other miscellaneous concerted modern objects. Reliable metal-detection was not achievable along the stretch of river lying adjacent to the Glen Mills/ glen Distillery Site due to the significant level of in-water metallic debris present.

6.0 PROPOSED IMPACTS⁴

The impact categories used have regard to those set out in the 'Guidelines on the information to be contained in Environmental Impact Statements', 2002, EPA, 'Advice notes on Current Practice (in preparation of Environmental Impact Statements)', 2003, EPA, and Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes, National Roads Authority.

⁴ This section does not purport to relate to precise engineering details but is rather an attempt to understand the nature of the impact on the potential archaeological environment, based on the supplied data.

Impacts associated with the proposed addendum works to the flood alleviation scheme are localised to specific areas within the surveyed extent of the Glennamought River. Of the fourteen features of historic interest identified in the present assessment, it is understood that direct impacts will only take place at the location of three (3) of these features and will constitute a Permanent Moderate Negative Impact: Features F32, F24 and F25. A list of the identified features (Features F02A, F17-F29) with proposed impacts and associated level of impact at each site has been provided below (Table 4).

Feature No.	Feature Type	Proposed Impact	Level of Impact
F02A	Weir/ Sluice Structure	None	Not applicable
F17	Millpond	None	Not applicable
F18	River Walling/ Revetment	None	Not applicable
F19	Weir	None	Not applicable
F20	Tailrace (mill)	None	Not applicable
F21A	River Walling (north side of channel)	None	Not applicable
F21B	River Walling (south side of channel)	None	Permanent Moderate Negative Impact
F22	Mill Boundary Wall (masonry)	None	Not applicable
F23	River Walling/ Revetment	C08_L03: proposed reinforced concrete wall to be constructed to flood defence level (varies from 35.15mOD to 36.44mOD). Flood wall to tie into existing ground level at both ends.	Permanent Moderate Negative Impact
F24	Masonry Wall (part of former mill building)	C08_L02: proposed reinforced concrete wall to be constructed to flood defence level (varies from 37.4mOD to 38.34mOD). Flood wall to tie into the existing bridge structure at the upstream end, and existing ground level at the downstream end.	Permanent Moderate Negative Impact
F25	Masonry Bridge	C08_L02: proposed reinforced concrete wall to be constructed to flood defence level (varies from 37.4mOD to 38.34mOD). Flood wall to tie into the existing bridge structure at the upstream end, and existing ground level at the downstream end.	Permanent Moderate Negative Impact
F26	River Walling	None	Not applicable
F27	Weir (site of)	None	Not applicable
F28	River Walling/ Revetment	None	Not applicable
F29	Masonry Bridge	None	Not applicable

Feature No.	Feature Type	Proposed Impact	Level of Impact
	(road)		

Table 4: Proposed impacts to identified features along the Glennamought River addendum survey area [sites where impacts are proposed are highlighted in blue].

7.0 MITIGATION

Archaeological mitigation measures proposed for the identified features from the Glennamought River assessment are tabulated in Table 5 below. No additional archaeological mitigation is required for the other features identified as part of the UAIA.

Archaeological monitoring is required where a Permanent Impact is to take place. This includes any impacts to Feature 23 (river-walling), Feature F24 (masonry wall), and Feature F25 (unnamed bridge). It is recommended that Features F23-F25 are subject to additional archaeological recording, in the form of photographic and drawn elevations, to provide a full recorded of the structures prior to any impacts taking place. Should the insertion of flood defence walls C08_L02 and C08_L03 necessitate the removal of Features F23 and F24, this should be undertaken in a systematic manner, under archaeological supervision; allowing the archaeologist to obtain additional information and undertake supplementary recording, as may be required during that process. In addition, any masonry pieces identified as being of interest by the monitoring archaeologist should be retained as part of that process.

Feature No.	Feature Type	Proposed Impact	Archaeological Mitigation
F02A	Weir/ Sluice Structure	None	No additional mitigation required
F17	Millpond	None	No additional mitigation required
F18	River Walling/ Revetment	None	No additional mitigation required
F19	Weir	None	No additional mitigation required
F20	Tailrace (mill)	None	No additional mitigation required
F21A	River Walling (north side of channel)	None	No additional mitigation required
F21B	River Walling (south side of channel)	None	No additional mitigation required
F22	Mill Boundary Wall (masonry)	None	No additional mitigation required
F23	River Walling/ Revetment	C08_L03: removal to facilitate new flood defence wall.	Additional archaeological recording and archaeological supervision of removal process.
F24	Masonry Wall (part of former mill building)	C08_L02: removal to facilitate new flood defence wall.	Additional archaeological recording and archaeological supervision of removal process.
F25	Masonry Bridge	C08_L02: bridge impacted by tie-in for flood defence wall.	No additional mitigation required
F26	River Walling	None	No additional mitigation required

Feature No.	Feature Type	Proposed Impact	Archaeological Mitigation
F27	Weir (site of)	None	No additional mitigation required
F28	River Walling/ Revetment	None	No additional mitigation required
F29	Masonry Bridge (road)	None	No additional mitigation required

Table 5: Archaeological mitigation measures proposed for the identified features from the addendum assessment of the Glennamought River [sites where impacts are proposed are highlighted in blue].

8.0 RECOMMENDATIONS

8.1 Pre-construction Measures

Detailed archaeological of Feature F23 (river-walling), F24 (masonry wall) and F25 (unnamed bridge) should be undertaken prior to the proposed flood defence works taking place at these feature locations. No further ameliorative measures are recommended in advance of construction commencing as part of addendum to the River Bride (Blackpool) Drainage Scheme.

8.2 Construction Phase Measures

ARCHAEOLOGICAL MONITORING. Archaeological monitoring in accordance with the terms of Section 5 of the National Monuments Act (2004 Amendment) is recommended during riverbed and bankside disturbances associated with the proposed flood relief scheme. These measures will ensure that any sub-surface remains of archaeological or historic value are dealt with in an appropriate archaeological manner.

It is understood that two (2) features of historic interest, as identified in the present report, will be removed as part of the proposed works. It is recommended that the removal of these features should be carried out archaeological supervision, allowing the archaeologist to obtain additional information and undertake supplementary recording, as may be required during that process. It is also recommended that any masonry, identified to be particular interest, is retained and removed to suitable storage as part of the removal process.

RETAINING AN ARCHAEOLOGIST/S. An archaeologist should be retained for the duration of the relevant works. The archaeologist should be familiar with and experienced in river/estuarine environments.

THE TIME SCALE for the construction phase should be made available to the archaeologist, with information on where and when ground disturbances and dredging will take place.

SUFFICIENT NOTICE. It is essential for the developer to give sufficient notice to the archaeologist/s in advance of the construction works commencing. This will allow for prompt arrival on site to monitor the ground disturbances. As often happens, intervals may occur during the construction phase. In this case, it is also necessary to inform the archaeologist/s as to when ground disturbance works will recommence.

DISCOVERY OF ARCHAEOLOGICAL MATERIAL. In the event of archaeological features or material being uncovered during the construction phase, it is crucial that any machine work cease in the immediate area to allow the archaeologist/s to inspect any such material.

ARCHAEOLOGICAL MATERIAL. Once the presence of archaeologically significant material is established, full archaeological recording of such material is recommended. If it is not possible for the construction works to avoid the material, full excavation would be recommended. The extent and duration of excavation would be a matter for discussion between the client and the statutory authorities.

ARCHAEOLOGICAL TEAM. It is recommended that the core of a suitable archaeological team be on standby to deal with any such rescue excavation. This would be complimented in the event of a full excavation.

SECURE SITE OFFICES and facilities should be provided on or near those sites where excavation is required.

FENCING of any such areas would be necessary once discovered and during excavation.

ADEQUATE FUNDS to cover excavation, post-excavation analysis, and any testing or conservation work required should be made available.

MACHINERY TRAFFIC during construction must be restricted as to avoid any of the selected sites and their environs.

SPOIL should not be dumped on any of the selected sites or their environs.

PLEASE NOTE: All of the above recommendations are based on the information supplied for the addendum to River Bride (Blackpool) Certified Drainage Scheme. Should any alteration occur, further assessment maybe required.

PLEASE NOTE: Recommendations are subject to the approval of The Department of the Heritage, Culture and the Gaeltacht, and of the National Museum of Ireland.

9.0 ACKNOWLEDGEMENTS

Thanks are extended to Johnathan Reid, Senior Project Engineer at Ryan Hanley, consulting engineers for the proposed scheme. Thanks are also extended to Tony Cummins, Archaeologist at John Cronin and Associates, for his assistance during the project. The Survey Team comprised Rex Bangerter, Daniel Lenehan (Archaeologist), and Derek Copeland (Surveyor). The report was written by Bangerter and edited by Brady.

APPENDIX 1:

Catalogue of Features encountered as part of the in-water survey [Features F02A, F17-F29].

Feature F02A

Name	unnamed
Site Type	Weir/Sluice type structure
Townland	Kilnap, Carhoo
NGR	166524E, 75025N (centre-point)
Dimensions	2.5m (north-south x 2.50m (east-west)
Figure(s)	5,8 (Profiles 34-35)
Plate(s)	3,5,7
Impact	None
Mitigation	No mitigation required

Feature F17

Name	unnamed
Site Type	Millpond (remains of)
Townland	Kilnap
NGR	166706E, 75126N (centre-point)
Dimensions	27m length x 6.5m width
Figure(s)	2,3,5
Plate(s)	21
Impact	None
Mitigation	No mitigation required

Feature F18

Name	unnamed
Site Type	River walling/ revetment (section of)
Townland	Kilnap
NGR	166703E, 75126N - 166723E, 75133N
Dimensions	20m length x 450mm height (maximum)
Figure(s)	5
Plate(s)	22
Impact	None
Mitigation	No mitigation required

Feature F19

Name	unnamed
Site Type	Weir (potential)
Townland	Kilnap, Carhoo
NGR	166736E, 75135N (centre-point)
Dimensions	4.2 length x 1.2 width
Figure(s)	5
Plate(s)	23
Impact	None
Mitigation	No mitigation required

Feature F20

Name	unnamed
Site Type	Tailrace (millrace)
Townland	Kilnap
NGR	166854E, 75094N - 166818E, 75119N
Dimensions	44m length x 2.5m width
Figure(s)	3,5
Plate(s)	25-27
Impact	None
Mitigation	No mitigation required

Feature F21A

Name	unnamed
Site Type	River walling/ revetment (north side of channel)
Townland	Carhoo
NGR	166832E, 75127N - 166868E, 75119N
Dimensions	37m length x 450mm height (maximum)
Figure(s)	5
Plate(s)	---
Impact	None
Mitigation	No mitigation required

Feature F21B

Name	unnamed
Site Type	River walling/ revetment (south side of channel)
Townland	Kilnap
NGR	166820E, 75121N - 166859E, 75110N
Dimensions	40m length x 500mm height (maximum)
Figure(s)	5
Plate(s)	29

Feature F22

Name	unnamed
Site Type	Mill boundary wall (masonry)
Townland	Kilnap
NGR	166850E, 75108N - 166859E, 75110N
Dimensions	9m length x c.2m height
Figure(s)	5
Plate(s)	30
Impact	None
Mitigation	No mitigation required

Feature F23

Name	unnamed
Site Type	River walling/ revetment (associated with mill)
Townland	Kilnap
NGR	166859E, 75110N - 166984E, 75152N
Dimensions	130m length x 2.8m height
Figure(s)	5,7 (Profile 32)
Plate(s)	38-36
Impact	C08_L03 (flood defence wall)
Mitigation	Archaeological recording/ monitoring required

Feature F24

Name	unnamed
Site Type	Masonry wall (mill building)
Townland	Kilnap
NGR	166997E, 75157N - 167002E, 75159N
Dimensions	5m length x c. 4.5m height (maximum)
Figure(s)	2,3,5
Plate(s)	48-51
Impact	C08_L02 (flood defence wall)
Mitigation	Archaeological recording/ monitoring required

Feature F25

Name	unnamed
Site Type	Masonry Road Bridge
Townland	Kilnap, Carhoo, Kilcurry
NGR	167002E, 75163N (centre-point)
Dimensions	6.2m length (north-south) x 4.2 width (east-west)
Figure(s)	2,3,5
Plate(s)	51-59
Impact	C08_L02 (flood defence wall)
Mitigation	Archaeological recording/ monitoring required

Feature F26

Name	unnamed
Site Type	River walling/ revetment
Townland	Carhoo
NGR	166989E, 75189N - 166999E, 75164N
Dimensions	11m length x 1.3m height (maximum)
Figure(s)	5
Plate(s)	60-61
Impact	None
Mitigation	No mitigation required

Feature F27

Name	unnamed
Site Type	Weir (site of)
Townland	Kilcurry
NGR	167060E, 75211N (centre-point)
Dimensions	11m length x c. 7m width
Figure(s)	3,5
Plate(s)	64
Impact	None
Mitigation	No mitigation required

Feature F28

Name	unnamed
Site Type	River walling/ revetment (associated with millpond)
Townland	Kilbarry
NGR	167072E, 75205N - 167090E, 75179N
Dimensions	31m length x 2.5m height (maximum)
Figure(s)	2,3,5
Plate(s)	65
Impact	None
Mitigation	No mitigation required

Feature F29

Name	Glennamought Bridge
Site Type	Masonry Road Bridge
Townland	Kilcurry, Kilbarry
NGR	167200E, 75287N (centre-point)
Dimensions	12m length (north-south) x 11m width (east-west)
Figure(s)	2,3,5
Plate(s)	69-71
Impact	None
Mitigation	No mitigation required