

## Appendix E

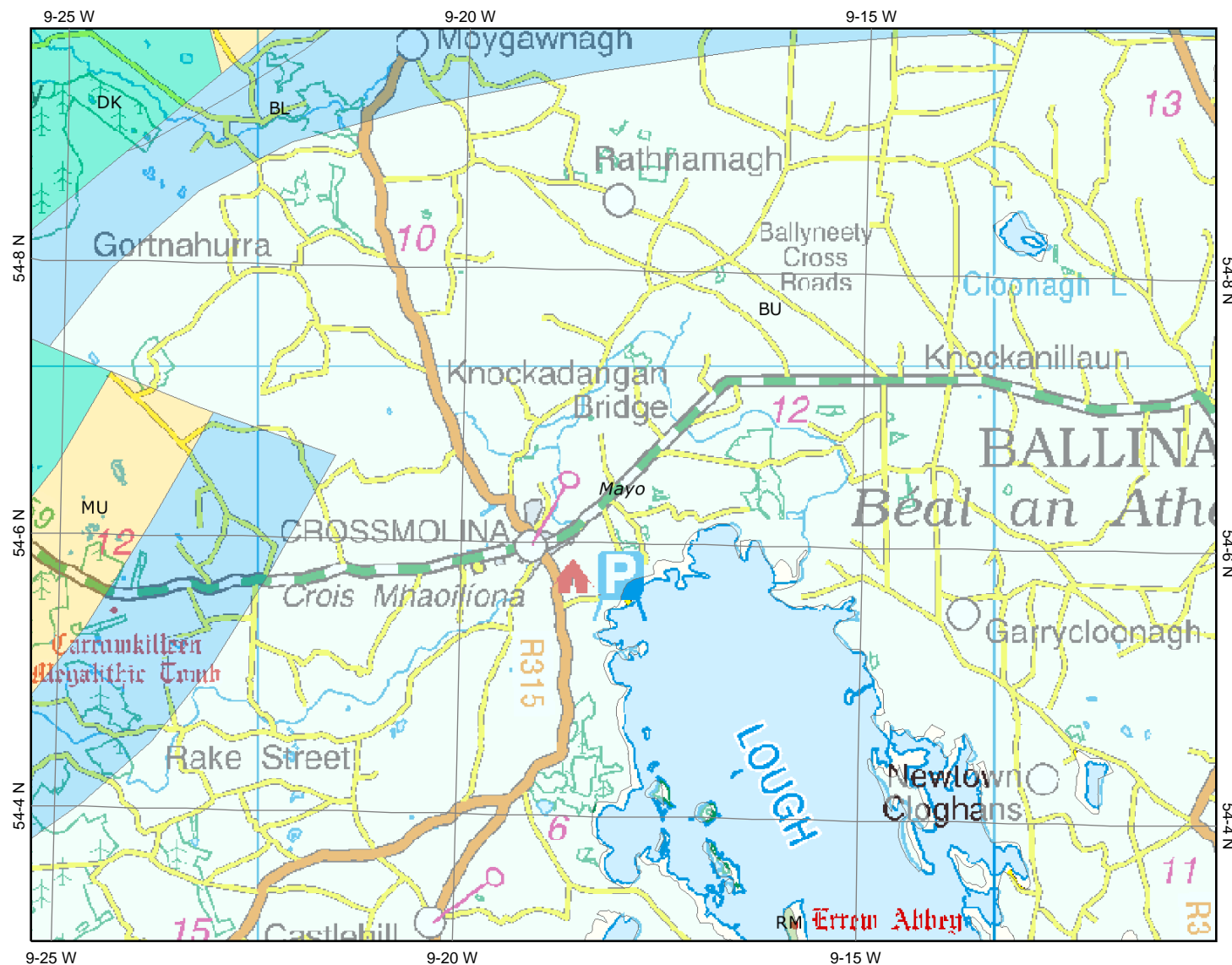
### Soils & Geology

#### E1

#### Figure 3.6.1 – Bedrock Geology in Study Area

Figure 3.6.1

# Bedrock Geology



Map center: 114997, 318356

## Legend

### Bedrock 100k Solid Geology

- AA - Aille and Barney Fms (undifferentiated)
- AA - Allen Andesite Formation
- AAwp - Westport Oolite
- AB - South Achillbeg Formation
- ABcg - Achillbeg Conglomerate Member
- ABps - Achillbeg Lighthouse Psammite Member
- ABsl - Achillbeg School Black Slate Member
- AD - Aghaward Formation
- AD - Ardagh Shale Formation
- AD - Ardenagh Formation
- AD - Ashleam Bridge Dolomitic Formation
- AE - Aghamore Formation
- AE - Ardane Formation
- AG - Addergoole River Formation
- AG - Aghfarrell Formation
- AG - Aghmacart Formation
- AGdh - Dowery Hill Member
- AGdo - Aghmacart Formation
- AH - Achill Head Formation
- AH - Arklow Head Formation
- AHfv - in Arklow Head Formation
- AI - Aille Limestone Formation
- AK - Askingarran Formation
- AL - Altan Limestone Formation
- AL - Annascoil Formation
- AL - Argillaceous Limestones (visean)
- ALmk - in Argillaceous Limest (Visean)
- AN - Anaffrin Formation
- AN - Annabella Formation
- ANgm - Glennamong Member
- ANrd - Old Road Member
- AP - Ards Pelite Formation
- AP - Achleam Head Formation

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## **Appendix F**

### **Archaeological Constraints Study Report**

# **1 ARCHAEOLOGICAL & ARCHITECTURAL HERITAGE**

## **1.1 INTRODUCTION**

John Cronin & Associates, commissioned by Ryan Hanley, Consulting Engineers, have prepared this constraint report outlining the features of archaeological, architectural and cultural heritage significance within the Study Area for the proposed Crossmolina Flood Relief Scheme. The Study Area is centred on the River Deel and incorporates the water channels, banks and lands extending along the main channel upstream and downstream of Crossmolina, Co. Mayo.

The purpose of this study is to inform the Design Team of the key cultural heritage issues that may impose constraints on the viability and/or design of elements of possible flood alleviation measures. The study also seeks to identify any heretofore unrecorded areas of heritage potential, such as the potential for underwater archaeological remains, which may impose constraints on the proposed scheme. It is envisioned that as the proposed scheme progresses into the Design Phase that more detailed background information and specific details on potential impacts and mitigation will be presented and assessed in the Environmental Assessment of preferred Option and Environmental Impact Assessment reports.

The main text of this chapter outlines the methodology followed for this constraints study and provides the legislative framework for both the archaeological and architectural heritage resource. The overall context for the archaeological and historical background to the Study Area is summarised and all protected cultural heritage features are listed in Table formats in Appendix 1.1. A number of riverine and lacustrine areas of archaeological potential were identified during the desktop study and are also listed in Appendix 1.1.

## **1.2 METHODOLOGY**

This study is based on a detailed desk study of the archaeological, architectural and cultural heritage resource within the Study Area (published & non-published datasets). This information has provided an insight into the development of the Study Area over time and an evaluation of both recorded and potential cultural heritage sites.

A list of published sources consulted in the preparation of this document is provided in Section 1.6. The principal sources reviewed for the archaeological resource were the Sites and Monuments Record (SMR) and the Record of Monuments and Places (RMP). The Record of Protected Structures (RPS), as published by Mayo County Council and was reviewed in order to assess the architectural heritage. The following sources were also consulted:

- Various editions of Ordnance Survey maps;
- Excavations Database ([www.excavations.ie](http://www.excavations.ie));
- County Mayo Heritage Plan 2011-2016
- Mayo County Development Plan 2008-2014;
- National Inventory of Architectural Heritage;
- Aerial imagery; and
- Various published sources.

### *Framework for the Protection of Cultural Heritage*

The management and protection of cultural heritage in Ireland is achieved through a framework of international conventions and national laws and policies (Department of Arts, Heritage, Gaeltacht and the Islands 1999, 35). This framework was established in accordance with the provisions of the 'European Convention on the Protection of the Archaeological

Heritage' (the Valletta Convention) and 'European Convention on the Protection of Architectural Heritage' (Grenada Convention). Cultural heritage can be divided loosely into the archaeological resource covering sites and monuments from the prehistoric period until the post-medieval period and the architectural heritage resource, encompassing standing structures and sites of cultural importance dating from the post-medieval and modern period. In addition, local place-names, folklore and traditions are considered part of our cultural heritage.

In summary, the national policy statements, guidelines and advice notes relevant to this assessment include:-

- National Monuments Act 1930 (and subsequent amendments in 1954, 1987, 1994 and 2004);
- Heritage Act (1995);
- National Cultural Institutions Act (1997);
- Policy for the Protection of the Archaeological Heritage (Department of Arts, Heritage, Gaeltacht and the Islands 1999);
- Architectural Heritage (National Inventory) and National Monuments Act (1999);
- Local Government (Planning and Development) Act (2000); and
- Department of Environment, Heritage, and Local Government's Architectural Heritage Protection: Guidelines for Planning Authorities (2004).

### *The Archaeological Resource*

The National Monuments Service (Department of Arts, Heritage and Gaeltacht) is responsible for the statutory functions and the administration of the national policy in relation to archaeological heritage management. The National Monuments Act 1930 (and subsequent amendments in 1954, 1987, 1994 and 2004), the Heritage Act 1995 and relevant provisions of the National Cultural Institutions Act 1997 are the primary means of ensuring the satisfactory protection of archaeological remains, which are held to include all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes. A national monument is described as 'a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto' (Section 2, National Monument Act, 1930).

There are a number of mechanisms under the National Monuments Act that are applied to secure the protection of archaeological monuments. These include the designation of National Monument status, the Register of Historic Monuments, the Record of Monuments and Places (formerly the Sites and Monuments Record), and the placing of Preservation Orders and Temporary Preservation Orders on endangered sites.

The term 'national monument' as defined in Section 2 of the National Monuments Act (1930) means a monument 'the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest'. The State or Local Authority may assume guardianship of any national monument (other than dwellings). The owners of national monuments may also appoint the Minister or the Local Authority as guardian of that monument if the State or Local Authority agrees. Once the site is in ownership or guardianship of the State it may not be interfered with without the written consent of the Minister. There are no National Monuments in state ownership/guardianship within the Study Area.

Section 12 (1) of the 1994 Act provides for the establishment of a Record of Monuments and Places (RMP). The record comprises a list of monuments and relevant places and a map or maps showing each monument and relevant place in respect of each county in the State. Archaeological sites recorded on the RMP receive statutory protection under the National Monuments Act 1994. Section 12 (3) of the 1994 Act provides that 'where the owner or occupier of a monument or place included in the Record, or any other person, proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such a monument or place, he or she shall give notice in writing to the National Monuments Service to carry out work and shall not, except in the case of urgent necessity and with the consent of the Minister, commence the work until two months after the giving of notice.'

### *Architectural Heritage*

Protection of architectural or built heritage is provided for through a range of legal instruments that include the Heritage Act, 1995, the Architectural Heritage (National Inventory) and National Monuments (Misc. Provisions) Act, 1999, and the Local Government (Planning and Development) Act 2000. Section 2.1 of the Heritage Act, 1995, describes architectural heritage as 'all structures, buildings, traditional and designed, and groups of buildings including streetscapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents, and, without prejudice to the generality of the foregoing, includes railways and related buildings and structures and any place comprising the remains or traces of any such railway, building or structure'.

Under the Local Government (Planning and Development) Act, 2000, all Planning Authorities are obliged to keep a 'Record of Protected Structures' of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. As of the 1st January 2000, all structures listed for protection in current Development Plans, have become 'protected structures'. Since the introduction of this legislation, planning permission is required for any works to a protected structure that would affect its character. If a protected structure is endangered, planning authorities may issue a notice to the owner or occupier requiring works to be carried out. The Act contains comprehensive powers for local authorities to require the owners and occupiers to do works on a protected structure if it is endangered, or a protected structure or a townscape of special character that ought to be restored.

Since 2000 planning authorities have the statutory power to define Architectural Conservation Areas. An Architectural Conservation Area is defined as "a place, area, group of structures, taking account of building lines and heights, that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or that contributes to the appreciation of a protected structure, and whose character it is an objective of a development plan to preserve" (Architectural Heritage Protection: Guidelines for Planning Authorities, p.41).

## 1.3 ARCHAEOLOGICAL & HISTORICAL CONTEXT

### *Early Prehistoric Period*

The earliest recorded evidence for human settlement in Ireland dates to the Mesolithic period (7000–4000 BC) when groups of hunter-gatherers arrived on the heavily forested island. While these Mesolithic settlers did not construct settlements or monuments that have left any above ground traces, their presence can often be identified by scatters of worked flint in ploughed fields. There are no recorded Mesolithic sites within the study area. The Neolithic period (4000–2400 BC) began with the arrival and establishment of agriculture as the principal form of economic subsistence, which resulted in more permanent settlement patterns. As a consequence of the more settled nature of the agricultural economy, new settlement and ritual monuments, such as substantial rectangular timber houses and megalithic tombs, begin to appear in the archaeological record during this period. The presence of one portal tomb within Enagh Beg townland (MA029-035) demonstrates the presence of early farming communities with the Study Area during the Neolithic period. The topographical files of the National Museum of Ireland record the discovery of a polished stone axe, of potential Neolithic date, from the shore of the River Deel during a 1960s drainage scheme (ref. 1961:169).

### *The Bronze Age*

Metalworking arrived in Ireland with the advent of the Bronze Age period (c. 2400–500 BC). This new technology introduced a new artefactual assemblage into the Irish archaeological record and this period was also associated with the construction of new monument types such as standing stones, stone rows, stone circles and *fulachta fiadh*. The development of new burial practices meant that the construction of funerary monuments such as cairns, barrows, boulder burials and tumuli or cists was fairly common during this period. There are five barrows within the Study Area (MA038-015, MA038-051, MA038-052, MA038-053001- and MA038-053002-), which also contains two mounds (MA038-050 & MA038-146) and one cairn (MA038-053003-) that may also be funerary monuments of Bronze Age date.

The name *fulachta fiadh* translates as ‘cooking places of the wild’ (or of deer) and they comprise the burnt spreads/mounds that form the most common site associated with the Bronze Age. They can occur individually or in groups of up to ten; sites in a group being perfectly inter-visible and within a few metres of each other and the majority of radiocarbon dates produced by excavated examples place these monuments in the Bronze Age. There are four recorded burnt spreads (MA038-172/173/174/175) within Mauteoge townland in the southwest quadrant of the Study Area.

The topographical files of the National Museum of Ireland record the discovery of two Bronze Age artefacts within the Study Area: a socketed bronze axehead in Lecarrow townland (ref. 1931: 111) and a flat bronze axehead of probable provenance in Lough Conn (1939: 134).

### *The Iron Age*

The later first millennium BC and the early centuries AD, which comprise the Iron Age, are amongst the most obscure in Irish prehistoric archaeology. There is general agreement that the development of an iron technology was a significant factor in the eventual demise of bronze working on a large scale, but how, why and when this came about in Ireland is far from clear. While the Study Area does contain examples of sites, such as enclosures and burnt spreads, which may conceivably date to this period, none can be definitely assigned an Iron Age date. Many of the settlement and burial sites of the period leave no above ground traces although they have often been detected in recent years during the course of archaeological investigations in advance and during development projects.

### *Early Medieval*

This period began with the introduction of Christianity in the 4<sup>th</sup>-century and continued up to the arrival of the Anglo-Normans in 1169 AD. The establishment of the Irish Church was to have profound implications for the political, social and economic spheres, in no small part due to the introduction of writing into the country. The origins and establishment of Christianity in Ireland is attested to in the archaeological record by the presence of church sites, associated places for burial and holy wells. While this period saw the emergence of the first phases of urbanisation around both the large monasteries and the Hiberno-Norse ports the dominant site types of the period are rural-based, such as ringforts, souterrains and monuments associated with early ecclesiastical activity. Generally enclosures are considered likely to be ringforts but insufficient evidence survives to classify them as such without recourse to archaeological excavation.

Ringforts are the most widespread archaeological field monument in the Irish countryside and are usually known by the names *dun* or *lios*, which form some of the most common place-name elements in the countryside. They are basically composed of a roughly circular area enclosed by an earthen bank formed of earth thrown up from a concentric external ditch. The evidence from the excavations at these sites indicates that they were enclosed farmsteads. Crannogs are early medieval lacustrine sites composed of wholly artificial (or partially enhanced) islands often connected to the shore by constructed causeways. The name derives from the Irish word for tree (*crann*), which refers to their main construction material, and they are typically interpreted as the defended high-status residences. Souterrains (underground chambers) are often found in association with ringforts, although isolated examples, perhaps associated with unenclosed settlements, are also recorded. The Study Area contains twenty three recorded ringforts and eleven enclosures. One of the ringforts (MA029-036001) contains a known souterrain (MA029-036002) while there is also one isolated souterrain within the Study Area (MA029-048). A crannog (MA038-158001) in the north end of Lough Conn is connected to the shoreline in Gortnaraby townland by a causeway (MA038-158001).

The early ecclesiastical sites were morphologically similar to ringforts and cashels but are often differentiated by the presence of features such as church buildings, graves, stone crosses and shrines. Many Irish churches continued to be developed into modern times and the various medieval and post-medieval churches within the Study Area (see below) may indicate the presence of early medieval ecclesiastical sites. ). The presence of early ecclesiastical activity in the Study Area is also indicated by the presence of two holy wells in Garraunard (MA029-040001-) and Knockfree (MA039-001) townlands.

### *Late Medieval*

The arrival and conquest of large parts of Ireland by the Anglo-Normans in the late 12th-century broadly marks the advent of the Irish late medieval period, which continued up until the beginning of the post-medieval period in c.1550. The initial phase of the Anglo-Norman colonisation saw the construction of timber castles, i.e. mottes and ringworks, which were later replaced by more substantial masonry castles. By the 15th-century the native Irish chieftains and lords began to establish tower houses and smaller castles as their own centres of territorial control. As the late medieval period continued many of the existing Irish towns became established as local and regional market centres. The Study Area contains one motte site (MA039-003) in Cloontally townland, the townlands of Crossmolina (MA029-039) and Deelcastle (MA030-064001) each contain a tower house, an unclassified castle is within Enagh More (MA029-037) and a fortified house in Deelcastle (MA030-064002).

### *Post-medieval (1550 AD+)*

The post-medieval period saw the development of high and low status housing and urban settlements throughout Ireland. In particular local landlords improved their estates and built residences for themselves. During this period any given settlement cluster is likely to have



consisted primarily of single-storey thatched cottages with associated farm buildings. From later Victorian times onwards, two-storey farm houses became more common. In the latter half of the twentieth-century, there was a radical change in the nature and character of Irish domestic architecture manifested by the replacement of older stone-built structures with modern bungalows of concrete blockwork construction. The wider Study Area contains a wide range of buildings and structures, while not listed or protected, may be of architectural heritage interest. These various structures include country houses, demesne lands and vernacular buildings such as farmhouses, outbuildings, cottages, bridges, field walls.

Crossmolina town forms the main post-medieval settlement within the Study Area, although its origins probably lie much earlier in the medieval period. The town was described in the 19<sup>th</sup>-century as follows, "It stands on the river Deel, over which is a large stone bridge, on the direct road to the barony of Erris from Castlebar, and consists of a good main street and two converging ones, containing 310 houses... About a mile from the town, on the bank of the river Deel, are quarries of very fine stone; and limestone and freestone abound" (Lewis 1837).

The RMP/SMR includes a number of the post-medieval structures situated within the Study Area. These include a number of church sites such as the example (MA039-114001) on Inishlee Island, which has a children's burial ground (MA039-114003) within the surrounding graveyard (MA039-114002). The RMP/SMR also lists a church in Crossmolina (MA029-051001), its graveyard (MA029-051002) and an associated architectural fragment (MA029-051003). The site of an unclassified religious house in Abbeytown townland is also listed (MA029-038) as are a country house in Deelcastle (MA030-063) and a demesne tree-ring feature in Knockglass townland (MA029-050).

As outlined below, a number of the vernacular, church and transport features from the post-medieval period that are located within the Study Area have also been listed in the Record of Protected Structures (Appendix 1.1; Table 1.2).

#### *Potential Riverine and Lacustrine archaeological features based on Cartographic review*

A review of the 1st edition 6" OS map (1842) and the 25" OS map (1888-1913) for the Study Area revealed a number of riverine features that, while not included in the Record of Monuments and Places or the Record of Protected Structures, may indicate potential location for archaeological features or artefacts. The cartographic sources are available for consultation on the Ordnance Survey (OS) website (<http://maps.osi.ie/publicviewer>). The Record of Monuments and Places does not include all underwater archaeological sites and as a result development could potentially impact negatively on unrecorded underwater cultural resources. A review of the cartographic sources has identified a number of features such as bridges, weirs, millraces, stepping stones in the River Deel and these are listed in Table 1.4 of this report. While many of these features may be of recent origin it is possible that some may have been sited at advantageous crossing points, fishing spots and landing areas that were also utilised in antiquity. As such they are presented as areas of heritage potential rather than constraints. These crossing points are likely to have been utilised in antiquity and, therefore, identified as areas that have a raised heritage potential. One example of their importance is the potential for the presence of artefacts that may have been accidentally lost during centuries of repeated use of localised crossing points.

#### *Excavation Database*

The Excavation Database contains summary accounts of all the archaeological excavations carried out in Ireland (North and South) from 1970 to 2008. It has been compiled from the published Excavations Bulletins from those years, with a similar format. The database gives access to almost 6000 reports and can be browsed or searched using multiple fields, including year, county, site type, grid reference, license number, Sites and Monuments Record number and author. The database contains summaries of fourteen archaeological excavations within the Study Area and these are provided in Appendix 1.2.

### *Architectural Heritage Context*

The proposed scheme extends through the Mayo County Council local authority area. This planning authority has published a development plan that provides a Records of Protected Structures (RPS) for features of architectural heritage interest within the areas under its aegis. The Mayo County Council Development Plan 2008-2014 lists a total of eight RPS sites in the Crossolina Area (Table 1.2). The Record of Protected Structures does not provide co-ordinates for the protected structures and mapping is not provided in the published Development Plan. The National Inventory of Architectural Inventory (NIAH) does not include any townlands within the Study Area. The architectural stock within the Study Area may also contain unrecorded features of architectural heritage significance, including bridges, vernacular and agricultural buildings and associated boundary features. These structures may not be considered as constraints during the design of the scheme but should be recorded and assessed during the compilation of the EIS for the project.

### *Placename Evidence*

The Study Area is within the parish of Crossmolina, which is within the barony of Tirawley, and it encompasses 46 townlands. The townland is the smallest unit of land division in the Irish landscape and many may preserve early Gaelic territorial boundaries that pre-date the Anglo-Norman conquest. The layout and nomenclature of the Irish townlands was recorded and standardised by the work of the Ordnance Survey in the 19th-century. The Irish roots of townland names often refer to natural topographical features but some name elements may also give an indication of the presence of past human activity within the townland. For instance, the placename elements dun, lios or rath indicate the presence of a ringfort within the townland while temple, kill, saggart suggest an association with a church site. The Irish root names for the townlands within the study area and their translations were published by [www.logainm.ie](http://www.logainm.ie) and are listed in Appendix 1.1 (Table 1.4).

## 1.4 HERITAGE CONSTRAINTS

The desktop survey of the Study Area for the proposed Crossmolina Flood Relief scheme was undertaken in order to identify all known protected heritage sites that may act as constraints in order to ensure that they are afforded full weighting during the design phase. All of the recorded/protected archaeological and architectural heritage sites listed in the available sources have been identified within the defined Study Area for the proposed scheme. These include recorded archaeological monuments based on **a)** the Record of Monuments and Places (RMP) maintained by the National Monuments Service and **b)** the Record of Protected Structures (RPS) as designated by Mayo County Council.

A review of the cartographic sources has also identified a number of riverine features, such as weirs, a millrace, stepping stones, fording points that, while not protected features, may indicate advantageous areas of the river channels that may have been utilised in antiquity. The cartographic sources have indicated the locations of a number of bridges, fords and stepping stones that formed crossing points on the River Deel in recent centuries. These crossing points are likely to have been utilised in antiquity and, therefore, identified as areas that have a raised heritage potential.

The tables presented in Appendix 1.1 provide lists of the various protected archaeological and architectural heritage sites within the Study Area. The key constraints that are protected by legislation comprise the recorded archaeological monuments (RMP Table 1.1) and protected structures (RPS Table 1.2). There may be some overlap between these two categories as built structures can be listed in both the RMP and RPS. In addition, a number of areas of cultural heritage potential identified through consultation of cartographical sources have also been included (Table 1.3). These are not protected structures or recorded archaeological monuments but may indicate the presence of potential unrecorded cultural heritage features.

## 1.5 RECOMMENDATIONS

As the proposed flood relief scheme has yet to be designed the recommendations outlined here are general in nature. It is envisioned that more detailed mitigation strategies will be formulated as the scheme progresses through the design phase and will be addressed in the Environmental Assessment of Options and EIS stages of assessment for the scheme.

It is recommended that, where possible, the scheme be designed to avoid any impacts on the 70 archaeological sites listed in Table 1.1. Given the provisions of the National Monuments Acts, no disturbance or interference to any archaeological sites listed in the RMP can take place without first consulting the National Monuments Service. In the event that any flood defense works, or increased potential for flooding, are required in the vicinity of any of recorded archaeological sites it is recommended that appropriate mitigation measures be designed in consultation with the National Monuments Service.

There is also the potential for the presence of unrecorded archaeological sites and artefacts within the Study Area. This is demonstrated by the recovery of a bronze axehead on the shores of the River Deel during 1960s drainage works and the discovery of a number of previous archaeological sites during previous site investigation works in the Study Area (Appendix 1.2). Any lands that may be impacted by ground disturbance works required by the proposed scheme (e.g. access tracks, compounds, site clearance works, trial-pits) may require archaeological investigations, such as test trenching or monitoring of works. The appropriate mitigation measures will be determined during the design phase in consultation with the National Monuments Service.

In the event that dredging, channel widening or embankment works along the river will be required as part of flood relief works then there will be the potential for impacts on both recorded and unrecorded heritage features within the river channel, such as bridges, weirs, fords, wrecks, landing features, etc. If such works are to be considered as part of the design it is recommended that the Underwater Archaeological Unit, National Monuments Service be consulted in order to agree the appropriate underwater archaeological assessment and mitigation strategies. The riverine assessments required may consist of river bank and underwater archaeological surveys, test trenching around the bridges and other potential heritage sites along the river course and full monitoring of all sediment extraction works.

All Record of Protected Structures sites have statutory protection and avoidance of these features is recommended. In the event that works are required that may have a negative impact on protected structures then prior consultation with Mayo County Council will be required.

Should works be required in the vicinity of recorded archaeological monuments and protected structures then the formulation of site specific mitigation strategies is recommended. This will be carried out in consultation with the National Monuments Service and Mayo County Council. It is advised that this takes place well in advance of main construction works in order to allocate adequate time and resources to implement the agreed mitigation measures. Depending on the nature and extent of the works the mitigation measures may take the form of pre-works assessment (including test trenching) and/or monitoring of construction works carried out during the scheme.

It is also recommended that consideration should be given to the avoidance of visual impacts on protected archaeological and architectural heritage sites as part of the design of the proposed scheme.

It should be noted that the above recommendations are subject to approval by the National Monuments Service and the Local Authority, who should be consulted at all stages of the scheme development.

## 1.6 PROJECT REFERENCES

Aalen, F.H.A. *et al* 1997 *Atlas of the Irish Rural Landscape*. Cork University Press

Lewis, S. (1837) *The Topographical Survey of Ireland*

Mayo County Council 2009 *Development Plan 2008-2014*

Mayo County Council 2011 *County Mayo Heritage Plan 2011-2016*

### Web resources

Mayo County Council website: [www.mayococo.ie](http://www.mayococo.ie)

National Monuments Service website: [www.archaeology.ie](http://www.archaeology.ie)

National Inventory of Architectural Heritage website: [www.buildingsofireland.ie](http://www.buildingsofireland.ie)

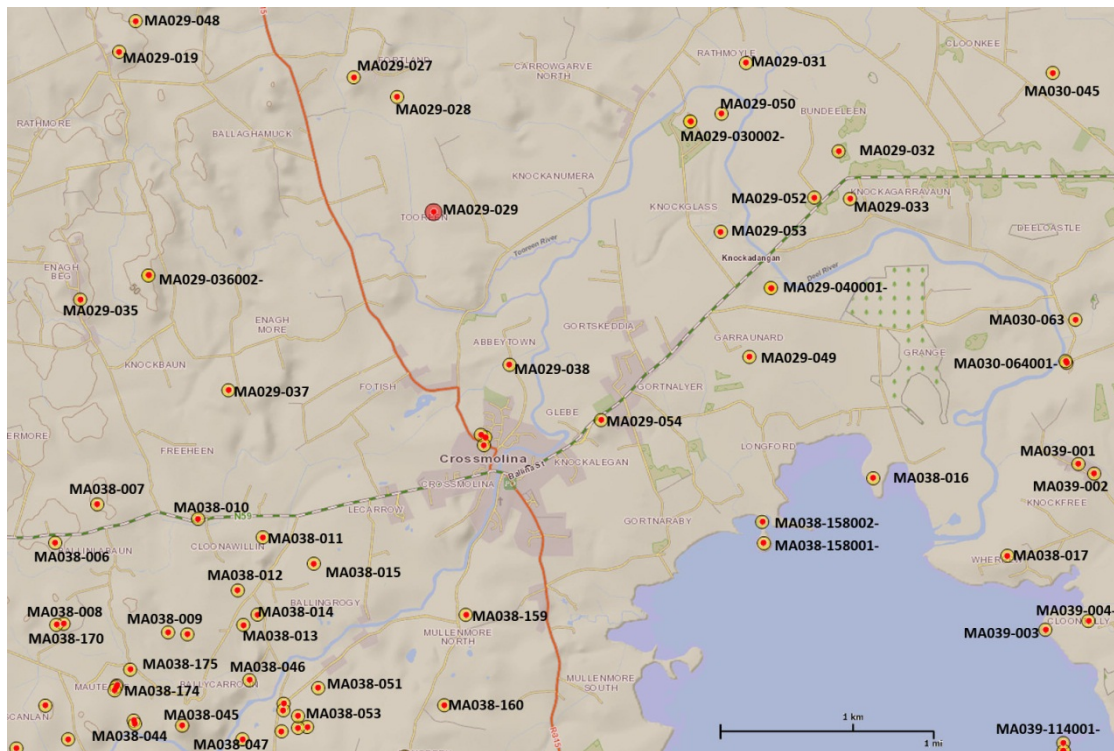
Excavations database: [www.excavations.ie](http://www.excavations.ie)

Placenames database of Ireland: [www.logainm.ie](http://www.logainm.ie)

Irish wrecks database (unofficial website): [irishwrecksonline@yahoo.co.uk](mailto:irishwrecksonline@yahoo.co.uk)

Ordnance Survey of Ireland: [www.osi.ie](http://www.osi.ie)

## APPENDIX 1.1: TABLES & FIGURES



**Figure 1.1:** Extract from RMP mapping with archaeological sites within the Study Area numbered

**Table 1.1: Archaeological sites within Study Area listed in RMP**

SMR No	Classification	Townland	ITM E	ITM N
MA029-019----	Ringfort - rath	RATHMORE	510856	820748
MA038-028----	Ringfort - rath	BALLYSCANLAN	510300	815816
MA038-029----	Redundant record	BALLYSCANLAN	510083	815494
MA038-030----	Ringfort - rath	BALLYSCANLAN	510472	815563
MA039-001----	Ritual site - holy well	KNOCKFREE	518095	817637
MA039-002----	Mill - unclassified	KNOCKFREE	518213	817564
MA039-003----	Castle - motte	CLOONTALLY	517845	816388
MA039-004----	Ringfort - rath	CLOONTALLY	518169	816454
MA038-053002-	Barrow - ring-barrow	CARROWCLOGHAGH	512276	815656
MA038-053003-	Cairn - unclassified	CARROWCLOGHAGH	512207	815649
MA038-059----	Ringfort - rath	BENGEERY	513013	815431
MA038-146----	Mound	CARROWCLOGHAGH	512098	815831
MA038-016----	Redundant record	GRANGE	516547	817530
MA038-017----	Enclosure	WHERREW	517558	816945
MA039-114002-	Burial ground	INISLEE ISLAND	517983	815473
MA039-114003-	Children's burial ground	INISLEE ISLAND	517981	815535
MA038-006----	Ringfort - rath	BALLINLABAUN	510376	817044
MA038-007----	Ringfort - rath	BALLINLABAUN	510692	817333
MA038-008----	Enclosure	BALLINLABAUN	510438	816433
MA038-009----	Ringfort - rath	BALLINLABAUN	511227	816369
MA038-010----	Ringfort - rath	FREEHEEN (Tirawley By.)	511453	817224

MA038-011----	Ringfort - rath	CLOONAWILLIN	511941	817084
MA038-012----	Ringfort - rath	BALLYCARROON	511752	816685
MA038-013----	Enclosure	BALLYCARROON	511794	816424
MA038-014----	Enclosure	BALLYCARROON	511901	816502
MA038-015----	Barrow - embanked	LECARROW	512326	816886
MA038-044001-	Enclosure	MAUTEOGE	510968	815704
MA038-044002-	Ringfort - rath	MAUTEOGE	510977	815679
MA038-045----	Ringfort - rath	BALLYCARROON	511332	815666
MA038-046----	Enclosure	BALLYCARROON	511841	816008
MA038-047----	Ringfort - rath	LECARROWCLOGHAGH	511788	815564
MA038-050----	Mound	CARROWCLOGHAGH	512096	815781
MA038-051----	Barrow - ring-barrow	CARROWCLOGHAGH	512360	815949
MA038-052----	Barrow - ring-barrow	CARROWCLOGHAGH	512083	815623
MA038-053001-	Barrow - ring-barrow	CARROWCLOGHAGH	512208	815737
MA038-158001-	Crannog	LOUGH CONN	515721	817040
MA038-158002-	Causeway	LOUGH CONN	515709	817200
MA038-159----	Enclosure	MULLENMORE NORTH	513473	816501
MA038-160----	Enclosure	BENGEEERY, MULLENMORE NORTH, MULLENMORE SOUTH	513311,	815819
MA039-114001-	Church	INISLEE ISLAND	517983	815474
MA029-040002-	Mound	GARRAUNARD	515772	818969
MA029-051002-	Graveyard	CROSSMOLINA	513620,	817839
MA029-051003-	Architectural fragment	CROSSMOLINA	513620	817839
MA029-048----	Ringfort - rath	RATHMORE	510980	820979
MA029-049----	Souterrain	GARRAUNARD	515609	818449
MA029-050----	Designed landscape - tree-ring	KNOCKGLASS (Tirawley By.)	515400	820282
MA029-051001-	Church	CROSSMOLINA	513586, 817857	817857
MA029-027----	Ringfort - rath	FORTLAND	512624	820555
MA029-028----	Enclosure	FORTLAND	512952, 820407	820407
MA029-029----	Ringfort - rath	TOOREEN (Tirawley By., Crossmolina Par.)	513227, 819540	819540
MA029-030001-	Castle - unclassified	KNOCKGLASS (Tirawley By.)	515163	820222
MA029-030002-	Redundant record	KNOCKGLASS (Tirawley By.)	515163	820223
MA029-031----	Ringfort - rath	RATHMOYLE	515585	820664
MA029-032----	Ringfort - rath	BUNDEELEN	516283	819998
MA029-033----	Enclosure	KNOCKAGARRAVAUN	516369	819639
MA029-035----	Megalithic tomb - portal tomb	ENAGH BEG	510561	818881
MA029-036001-	Ringfort - rath	KNOCKBAUN (Tirawley By.)	511076	819062
MA029-036002-	Souterrain	KNOCKBAUN (Tirawley By.)	511076	819062
MA029-037----	Castle - unclassified	ENAGH MORE	511682	818192
MA029-038----	Religious house - unclassified	ABBEYTOWN	513800	818389
MA029-039----	Castle - tower house	CROSSMOLINA	513610	817779
MA029-040001-	Ritual site - holy well	GARRAUNARD	515772	818969

MA030-045----	Ringfort - unclassified	CLOONKEE	517898	820589
MA030-064002-	House - fortified house	DEELCASTLE	518001	818405
MA030-063----	Country house	DEELCASTLE	518069	818729
MA030-064001-	Castle - tower house	DEELCASTLE	517994	818418
MA029-052----	Ringfort - rath	KNOCKADANGAN	516099	819650
MA029-053----	Redundant record	KNOCKGLASS (Tirawley By.)	515394	819391
MA029-054----	Redundant record	KNOCKALEGAN (Tirawley By.)	514493	817968
MA038-175----	Burnt mound	MAUTEUGE	510940	816088
MA038-170----	Ringfort - rath	BALLINLABAUN	510384	816425
MA038-171----	Enclosure	BALLINLABAUN	511372	816354
MA038-172----	Burnt mound	MAUTEUGE	510840	815969
MA038-173----	Burnt mound	MAUTEUGE	510835	815957
MA038-174----	Burnt mound	MAUTEUGE	510823	815932

**Table 1.2: Mayo County Council's Record of Protected Structures (Development Plan 2008-2014)**

RPS No.	Site Type	RPS Description
0014	Deel Castle	At the north end of Lough Carra is a medieval tower house with a 17th Century house added to the south.
0021	Castlegore Bridge	Beautifully sited, five arched bridge.
0151	Enniscoe House	Detached seven bay two storey over basement rendered house, c. 1780. To the rear is an extensive series of stone outbuildings with varying uses.
0152	St. Tiernan's RCC	Free-standing cruciform plan, double height Gothic Revival barn style rendered church, c.1860.
0153	Crossmolina C of I	Free-standing four bay single cell rendered church, c. 1810. On an east-west orientation having a square profile bell tower located to the west end
0154	Knockglass House	Detached five bay two storey rendered and painted house, c. 1820. Having a centrally located entrance.
0155	Owenmore House	Detached five bay two storey over raised basement rendered house, c. 1825. Having a centrally located Doric entrance porch accessed by a flight of stone steps.
0156	Glenmore House	Detached three bay two storey over concealed basement limestone rubble house, c.1840. To the rear there is a range of rubble stone out buildings arranged in an L-plan.

**Table 1.3: Potential Archaeological/Architectural Heritage Sites Based on Cartographic Review**

Townland	Site Type	1 <sup>st</sup> Ed	25"	ITM E	ITM N
<b>River Deel</b>					
Ballycarroon	Stepping stones	Yes	Yes	512098	816095
Crossmolina	Road bridge	Yes	Yes	513726	817591
Knockglass	Footbridge	No	Yes	515059	820322
Knockglass	Ford	Yes	Yes	515112	820380
Knockadangan	Road bridge	Yes	Yes	515732	819176
Deelcastle	Bridge	Yes	Yes	517845	818894
Deelcastle	Boat house	No	Yes	517960	818434
<b>Lough Conn</b>					
Longford	Boat Quay	No	Yes	515904	817389
Grange	Lakeside buildings ("Ranns")	Yes	Yes	516868	817563
Wherrew	Corn kiln	Yes	No	517751	816763



Cloontally	Corn kiln	Yes	No	518303	815935
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**Table 1.4: Translation of Townland Names within Study Area**

<b>Townland</b>	<b>Translation</b>
ABBEYTOWN	<i>Baile na mainistreach</i>
BALLAGHAMUCK	<i>Bealach a muc road of the pigs</i>
BALLINLABAUN	<i>Baile an lábain, town of the labourer, now Streamstown</i>
BALLINGROGY	<i>Baile an Ghruagaigh, town of the Gruagach, or long haired person</i>
BALLYCARROON	<i>Baile Carrún, 'town of the Carews'</i>
BALLYNAGRAN	<i>Baile na gcrann, 'town of the trees'</i>
BALLYSCANLAN	<i>Baile Uí Scanláin, 'O'Scanlan's town'</i>
BENGEEERY	<i>Binn gaoirigh, 'peak of the sheep'</i>
BRIGH	<i>Bríoch, 'a hill'</i>
BUNDEELEN	<i>Bun Daoilín, 'mouth of the stream called Deelin, or little Deel'</i>
CARROWCLOGHAGH	<i>Ceathramhadh clochach, 'stony quarter'</i>
CARROWGARVE NORTH	<i>Ceathramhadh gharbh, 'rough quarter'</i>
CLOONAWILLIN	<i>Cluain a' mhuillinn, 'lawn or meadow of the mill'</i>
CLOONKEE	<i>Cluain caoich, 'lawn or meadow of the blindman'</i>
CLOONTALLY	<i>Cluain Taichligh, 'Tahly's or Talty's lawn or meadow'</i>
CROSSMOLINA	<i>Crois Uí Mhaoilfíona, 'O'Molina's cross'</i>
DEELCASTLE	<i>Caisleán na Daoile, 'Castle of the [river] Deel'</i>
ENAGH BEG	<i>Aonach beag, 'small fair green, or cut-out bog'</i>
FORTLAND	-
FOTISH	<i>Fód-tais / fóta</i>
FREEHEEN (Tirawley By.)	<i>Fraoithin, 'small heath'</i>
GARRAUNARD	<i>Garrán árd, 'high copse'</i>
GORTNALYER	<i>Gort na ladhar, 'field of the forks,</i>
GORTNARABY	<i>Gort na ráibe, 'field of the rape or rape-field'</i>
GORTSKEDDIA	<i>Gort sceide, 'field of the fright'</i>
GRANGE	<i>Gráinseach, 'a grange'</i>
KNOCKADANGAN	<i>Cnoc a' daingin, 'hill of the fastness'</i>
KNOCKAGARRAUAUN	<i>Cnoc a' gheara bháin, 'hill of the white cut'</i>
KNOCKALEGAN (Tirawley By.)	<i>Cnoc a' liagáin, 'hill of the standing stone' ("The 'liagan' has been removed from this hill." OS notes</i>
KNOCKANUMERA	<i>Cnoc an iomaire, 'hill of the ridge'</i>
KNOCKBAUN (Tirawley By.)	<i>Cnoc bán, 'white hill'</i>
KNOCKFREE (39)	<i>Cnoc fraoigh, 'hill of the heath'</i>
KNOCKGLASS (Tirawley By.)	<i>An cnoc glas, 'the green hill'</i>
INISLEE ISLAND	<i>Inis Lao "island of the calves"</i>
LECARROW	<i>Leath-cheathramhadh, 'half quarter'</i>
LECARROWCLOGHAGH	<i>Leth-cheathramhadh cloch, 'half quarter of the stones'</i>
LONGFORD	<i>Long phort, 'an encampment, a fort'</i>
LOUGH CONN	<i>Loch Con, "lake of the hounds"</i>
MAUTEOGE	<i>Maiteóg, 'flooded land, land subject to inundations'</i>
MULLENMORE NORTH	<i>Muillenn mór, 'great mill'</i>
MULLENMORE SOUTH	<i>Muillenn mór, 'great mill'</i>

RATHGRAN	<i>Rath Ghráin: 'fort of the grain'</i>
RATHMORE	<i>Rath mór, 'great fort'</i>
RATHMOYLE	<i>Rath maol, 'flat fort'</i>
TOOREEN (Tirawley By., Crossmolina Par.)	<i>Tuairín, 'small bleach or green field'</i>
WHERREW	<i>Foirriú</i>

## **APPENDIX 1.2**

### **ARCHAEOLOGICAL EXCAVATIONS WITHIN THE STUDY AREA TOWNLANDS**

(source: Excavations Bulletin)

#### **1998:491**

LECARROW

No archaeological significance

98E0458

Pre-development testing was undertaken on the site of a proposed modern graveyard extension, west of Crossmolina, Co. Mayo. This writer had noted a previously unrecorded possible archaeological mound on top of a natural hill at the rear of the graveyard. Three test-trenches were excavated by machine adjacent to the mound. In Trenches 1 and 2 the sod/topsoil layer overlay boulder clay or bedrock. In the southern half of Trench 3 the sod/topsoil directly overlay the limestone bedrock. At a point 15m from the northern end of the trench the stratigraphy changed. It appears that in the recent past some gravel had been extracted from the hill and some small stones, possibly collected from field clearance, were backfilled into the gravel pit. For a distance of c. 10m a stone fill layer, 0.65m thick, directly underlay the sod. Underlying this stone fill layer was a layer of brown clay 0.5m thick, which in turn overlay another layer of stone fill, 0.4m thick. This lower layer of stone fill directly overlay the bedrock. The layers of fill were backfilled and graded to coincide with the contours of the hill. No archaeological features or small finds were recovered from any of the test-trenches.

*Gerry Walsh, Áras An Chondae, Mayo County Council, Castlebar, Co. Mayo.*

#### **2001:903**

Crossmolina

Monitoring

01E0347

Monitoring is ongoing of a sewerage scheme in the town of Crossmolina. To date a small number of stone culverts have been uncovered at various locations around the town. However, there is no dating evidence for these features. No other features have been uncovered. An excavation was conducted at the location of known archaeological sites before development (see No. 904 below, 01E0530).

*Christine Grant, Crossard, Kilnaboy, Co. Clare.*

#### **2001:904**

Crossmolina

Pits

RMP 29:39, 29:51

01E0530

Excavation took place on the Ballycastle Road of Crossmolina town in advance of pipe-laying for a sewerage scheme. The excavation took place within the public road corridor between the castle (29:39) and the church and graveyard (29:51). Several earlier road surfaces were uncovered. None of these surfaces contained definitive dating material. Below the level of the earliest road a small number of features were excavated, including a layer containing organic material and several small pits. A few fragments of badly corroded iron artefacts were recovered from one of the pits. A significant amount of animal bone was also recovered from the lower levels. Proper dating of this material will be dependent on radiocarbon determinations.

*Christine Grant, Crossard, Kilnaboy, Co. Clare.*

#### **2002:1404**

Moylaw/Crossmolina

Monitoring

G099172

02E0596

Monitoring of topsoil removal took place over 1.5km during the realignment of the N59 west of Crossmolina town. Three separate areas of heat-fractured stone consistent with the remains of levelled fulachta fiadh were uncovered. Further evidence of fulachta fiadh was found outside the road-take. A hollow-based flint arrowhead was found in a disturbed context close to an area of heat-fractured stone in Carrowkillean townland. The final phase of the monitoring is expected to take place in 2003.

*Sue Zajac, 1 Chapel Lane, Killala, Co. Mayo.*

#### **2004:1147**

ENAGH MORE

No archaeological significance

11171 31818

04E0758

Pre-development testing was carried out on 1 June 2004 at a site in advance of its development at Enagh More, Crossmolina, Co. Mayo. The proposed development was within the archaeological constraint for a castle site (SMR 29:37). There were no extant features within the proposed development site. The testing comprised the excavation (by machine) of four trenches, which measured 16.9m, 9.2m, 7m and 15m long respectively, 1.0-2.1m wide and 0.3-1.7m deep. The stratigraphy was the same in all trenches. Below the concrete and topsoil on the surface was grey loose gravel, backfill and grey/orange/brown firm-plastic clay. Two of the trenches were located in a farmyard close to a cottage dating from the first half of the 20th century. The concrete and backfill were associated with this period and activity. The backfill appeared to be a soakage pit associated with the cottage, which was located a few metres away. It contained a plastic bag near its base. The loose grey gravel and grey/orange/brown firm-plastic clay were sterile natural deposits.

*Richard Crumlish, 61 An Cladrach, Castlebar Road, Ballinrobe, Co. Mayo.*

#### **2003:1299**

Ballinlabaun

Fulacht fiadh

11041 31700

03E0381

Topsoil-stripping during realignment of the N59 west of Crossmolina uncovered a spread of burnt soil and heat-fractured stone. A rescue excavation was carried out and the base timbers of a wooden trough were found set in natural subsoil. The trough lay adjacent to a stream in low-lying reclaimed pasture. The burnt material was thinly distributed around the trough for a radius of c. 5m. No small finds were associated with the site. It was identified as the remains of a fulacht fiadh that had been levelled, probably during land reclamation.

*Suzanne Zajac, Mayo County Council, Civic Offices, Ballina, Co. Mayo.*

#### **2006:1444**

Crossmolina

Medieval cemetery and deposits

137176 to 188271

06E0764

Stage 4 of the Ballina regional water supply scheme involved the construction of c. 11km of pipeline between Crossmolina and Cloonfadda crossroads, c. 4km south-west of Kilalla. The vast majority of the proposed pipeline was inserted into wayleaves parallel to the existing road. These wayleaves ranged from 15 to 25m in width. Two small burnt spreads were exposed during monitoring of wayleaves. One was excavated in Raheens townland to the north of the scheme and a second was excavated at Treangarrow c. 5km to the south (see No. 1484 below, 06E0744). The route of this pipeline only impacted on one previously known archaeologically sensitive area, between MA029-039, a tower-house, and MA029-051, ecclesiastical remains (possible). Pipe trench was excavated along an existing road between these sites. A sewerage scheme had been excavated through this area in 2002. The water pipes were placed in the sewer trench throughout most of this sensitive area. There were several small sections where the pipe trench diverged from the line of the sewer and in these sections archaeological deposits were exposed. It was difficult to determine the precise nature of deposits under the road surface, due to the narrowness of the trench (0.8m in width). The evidence from testing and monitoring at this location would suggest at least three or more phases of stratigraphy. A possible burial was exposed at the west end of the pipe trench adjacent to the modern Anglican graveyard. Local information suggests 19th- and early 20th-century burials were left in situ when the boundary wall around the graveyard was moved by FÁS workers in the 1980s. The pipe trench was rerouted to avoid impacting on these possible burials. According to the present vicar in Crossmolina, the burials in this area are likely to be those of wealthy local Catholic families who would have been buried in the west portion of the graveyard up until 1870. The area close to the existing farmhouse adjacent to the castle has possible medieval organic-type deposits with animal bone and an old ground surface. Some human remains fragments were exposed at this location. These remains may be associated with the Anglican graveyard but could also be associated with the castle or perhaps with an earlier medieval foundation.

All human and animal bone fragments encountered are currently undergoing specialist analysis. A radiocarbon date for bones exposed at this location may prove useful in determining whether there was an early medieval (ad 400-800) settlement at this location pre-dating the construction of the castle (ad 1172).

*Angela Wallace, Sylane, Tuam, Co. Galway, for Mayo County Council.*

#### **2007:1214**

Ballina to Crossmolina

Monitoring

11364 31777 to 12299 31941

07E0796

Monitoring was conducted between the towns of Crossmolina, Co. Mayo (the town itself was a separate route), and Ballina, Co. Mayo (inclusive of the town), from 13 August 2007 and is ongoing. A single trench was dug to lay the pipe; it was 0.4–0.65m in width, 1–1.2m in depth and it was dug exclusively on public roads or on the verge at the side of the roads. A small section of stone wall was found during the excavation of a trench on Abbey Street (Ballina) c. 80m from the southern end of the trench. The trench was diverted around this wall so it could be preserved in situ. The wall stretched for c. 10m and had a maximum height of 1m. It was located c. 0.4–0.45m below the level of the current road. The wall consisted of regular and irregular limestones that appeared to be bound by a soft lime mortar. The southernmost 5m portion of the wall was missing its facing; this exposed a core of limestone rubble. The wall was abutted by modern road fill and in three different areas the wall was cut by modern service pipes. When the wall had been recorded and photographed the pipe was laid and surrounded by sand and backfilled with the wall preserved in situ. A culvert was located 72m south of the section of wall. This was mostly intact and was also preserved in situ. This was located c. 10m from the riverbank. The culvert retained some of its original flagstones; other parts of it were retouched with cement. No further archaeological remains have as yet been recorded on this route.

*Terry Connell, Archaeological Consultancy Services, Unit 21, Boyne Business Park, Greenhills, Drogheda, Co. Louth.*

#### **2007:1216**

BALLINLABAUN, CLOONAWILLIN and FREEHEEN

Fulacht fiadh

11148 31718

02E0596 ext.

Monitoring was carried out during Phase 2 of the realignment of the N59 west of Crossmolina, Co. Mayo. Phase 1 of the same scheme had been completed in 2004. Burnt soil, heat-fractured stone and charcoal came to light in Freeheen townland. The material was seen running under the existing road and in places it extended out from the road into a narrow valley beside a stream. The material under the road was left in situ but the remainder was recorded and removed. It appeared to have been in a disturbed location but was considered to be the debris from fulacht fiadh activity. The deposit of fulacht fiadh material under the road seems to have been used as road foundation possibly during the 19th century. No small finds or evidence for a trough were uncovered. Radiocarbon dating of the material revealed dates from two separate areas of 3780 bp and 4090 bp for the disturbed material.

*Sue Zajac, Ballina Civic Offices, Mayo County Council, Dillion Terrace, Ballina, Co. Mayo.*

#### **2007:1230**

CLOONAWILLIN

Fulachta fiadh

11148 31718

07E0987

Three unrecorded fulachta fiadh were excavated during Phase 2 of the realignment of the N59 west of Crossmolina, Co. Mayo. They were located in close proximity to each other, in a shallow valley beside a stream. The most westerly was seen to be a shallow spread of burnt soil and heat-fractured stone with a wood-lined trough. Two further wood-lined troughs and associated burnt spreads were located beside each other just east of this. One of these troughs had been cut into peat which had preserved the remains of an impressive wicker lining and a complex arrangement of over 50 stakes holding the arrangement of wicker in place. No small finds were associated with any of the areas of fulachta fiadh activity. Radiocarbon dating of wood from the three features revealed dates of 3870, 3530 and 3730 bp.

*Sue Zajac, Ballina Civic Offices, Mayo County Council, Dillion Terrace, Ballina, Co. Mayo.*

#### **2007:1233**

FREEHEEN AND BALLINLABAUN

No archaeological significance

11148 31718 and 11041 31700

07E0698

Testing took place beside two ringforts, MA03–010 and MA0038–006, during Phase 2 of the realignment of the N59 west of Crossmolina, Co. Mayo. Nothing of archaeological significance was uncovered in the test-trenches.

*Sue Zajac, Ballina Civic Offices, Mayo County Council, Dillion Terrace, Ballina, Co. Mayo.*

#### **2008:867**

Ballina–Crossmolina

No archaeological significance

11364 31777 to 12299 31941

07E0796

Monitoring of trenching associated with the installation of a gas pipeline by Bord Gáis Éireann was carried out from and including the town of Ballina to the south-western outskirts of the town of Crossmolina from August 2007 (Excavations 2007, No. 1214) and is ongoing. The pipeline extends through the townlands of Rahans, Commons, Ballina, Abbeyhalfquarter, Ardoughan, Laghtadawannagh, Gorteen, Coolcran, Cloonglasney, Knockanillaun, Ballymanagh, Fairgreen, Knockadangan, Garraunard and Gortnalyer. The pipeline is located within the zones of archaeological potential associated with several monuments. The trench ranges from 0.45–0.95m in width and has a maximum depth of 1.2m. All works to date were carried out along public roads within previously disturbed areas. Trench fills included sands and gravels and other construction fills. Undisturbed subsoil was also occasionally encountered. No archaeological features were exposed during monitoring of this section of pipeline.

*Terry Connell, Archaeological Consultancy Services, Unit 21, Boyne Business Park, Greenhills, Drogheda, Co. Louth.*

#### **2009:591**

##### **BENGEERY GROUP WATER SCHEME**

Monitoring

113045 315192

09E110

Bengeery group water scheme project involved pipe-laying in the townlands of Mullenmore North, Bengeery, Ballymalynagh and Ballybrinoge, c. 1km south of Crossmolina in north Co. Mayo. The scheme involved the laying of c. 3.2km of water pipe to service houses, farms and water troughs. The pipeline diameter varied from 20mm connections to a maximum of 90mm. Pipe-laying took place in road verge, within roads and in fields. No archaeological finds, features or deposits were encountered during monitoring.

*Bernard Guinan, Coosan, Athlone, Co. Westmeath.*

#### **2009:613**

##### **GURRAUNARD**

Enclosure (platform rath?) and possible souterrain

124829 296256

09E109

Monitoring was undertaken of the topsoil-stripping and excavation of a trench for the laying of new water pipes in Gurraunard as part of Straide group water scheme refurbishment contract (Phase 4) on behalf of Blue Hills Consulting Civil and Structural Engineers.

The pre-existing road in Gurraunard truncated MA070–11301, an enclosure, with MA070–11302, a souterrain, located within the enclosure. The excavation of a trench for a new section of water pipe was designed to be located immediately beside the road surface on the road verge. This resulted in exposure of a ditch section of the enclosure and of a damaged and heavily disturbed probable section of a possible souterrain. Works were immediately stopped and redesign of the route of the water main was implemented. Features uncovered included an enclosing ditch 2.4m in width and 0.92m in depth; however, the base of the depth was not uncovered. This ditch section was filled with one homogenous fill composed of mid-grey/brown sandy clay. A further 6–7.5m north, after the initial hand-cleaning of the trench, what appeared to be orthostats were revealed. Due to the width and depth of the trench little detail was gathered on these. However, they appeared to be limestone, 0.7m in depth and placed upright forming one side of a subterranean passage or souterrain. Above the souterrain and located in the interior of the enclosure was a deposit of grey/brown clay with pockets of sand. A maximum depth of 0.7m was recorded for this deposit. This appeared to constitute a deliberate attempt to increase the height of the surface in the interior of the enclosure, suggesting the enclosure may be an example of a platform rath.

*Niall O'Neill, Headland Archaeology (Ireland) Ltd, Unit 25, Liosbaun Industrial Estate, Tuam Road, Galway.*

## Appendix G











### Landscape Mapping

#### G1

#### Figure 3.8.2 CORINE Landscape Map



 Study Area

-  Board Leaved forest
-  Complex cultivation patterns
-  Continuous urban fabric
-  Inland marshes
-  Land principally occupied by agriculture with areas of natural vegetation
-  Non-irrigated arable land
-  Pastures
-  Peat bogs
-  Transitional woodland scrub
-  Water bodies

