

Appendix D – Cultural Heritage Report

**HIGH LEVEL ARCHAEOLOGICAL ASSESSMENT
OF LANDS AT
KILBRIDE, SHELTON ABBEY & FERRYBANK
ARKLOW, CO. WICKLOW**

**PART OF THE PROPOSED
ARKLOW SEWERAGE SCHEME**

**ON BEHALF OF
BYRNE LOOBY CONSULTING ENGINEERS**

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DATE: 2 APRIL 2015

ABSTRACT

Irish Archaeological Consultancy Ltd has prepared this report on behalf of Byrne Looby Consulting Engineers. This document is a high level study of the impact, if any, on the archaeological and historical resource of three potential Waste Water Treatment Works sites at Kilbride, Shelton Abbey and Ferrybank as part of the Arklow Sewerage Scheme (OS Sheet 40). This study is not a detailed desk-top assessment of the proposed development nor has a field inspection been carried out. This assessment has been carried out by Maeve Tobin of IAC Ltd.

None of the proposed WWTW sites directly impact on any known RMPs/ SMRs. A review of the historic mapping and aerial photography for each site has failed to identify any sites of potential archaeological significance.

The proposed WWTW site at Ferrybank is located within a previously developed parcel of land within the reclaimed and built up estuarine area. Recent programs of monitoring in the vicinity of the north quay have failed to identify any deposits or features of archaeological significance.

The sites at Kilbride and Shelton Abbey are located within a rich archaeological landscape to the north of the Avoca River. The nearest RMP site, a church, graveyard and mausoleum (WI040-021) is located c. 60m north of the Kilbride option and c. 320m east of the Shelton Abbey option. Excavations in advance of the Arklow Bypass in 1997 revealed a prehistoric settlement and furnace immediately adjacent to both parcels of land. While these features have been completely removed through excavation it is possible that previously unidentified features associated with these sites may exist beyond the footprint of the existing road within the current land parcels.

Development at the Ferrybank site or within the northern half of the Shelton Abbey site poses the least potential impact to the archaeological resource; although all three areas are located within an archaeologically sensitive landscape, given the proximity to the coast and River Avoca.

Should the proposed WWTW be constructed within the northern half of the Shelton Abbey site there would be no recommendations for archaeological mitigation.

Should the proposed WWTW be constructed within the Ferrybank site it is recommended that all ground disturbances, including site investigations, be subject to archaeological monitoring. This should be carried out by a suitably qualified archaeologist with full provision made available for the resolution of any archaeological features and/or deposits that may be discovered, should that be deemed the most appropriate manner in which to proceed.

Should the proposed WWTW be located within the southern half of the Shelton Abbey site, or anywhere within the Kilbride option, it is recommended that a program

of archaeological assessment, including test trenches, be undertaken within the footprint of the WWTW once design is finalised, prior to development going ahead.

This should be undertaken by an archaeologist under licence from the Department of Arts, Heritage and Gaeltacht. Full provision should be made for the resolution of any archaeological features and/or deposits that may be discovered, should that be deemed the most appropriate manner in which to proceed.

In addition, it is recommended that any topsoil stripping, including site investigations, within these greenfield areas, are subject to archaeological monitoring. This should be carried out by a suitably qualified archaeologist with full provision made available for the resolution of any archaeological features and/or deposits that may be discovered, should that be deemed the most appropriate manner in which to proceed.

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1. INTRODUCTION

1.1 GENERAL

The following document details the results of a high level study undertaken at three potential Waste Water Treatment Plant (WWTP) sites at Kilbride, Shelton Abbey and Ferrybank as part of the Arklow Sewerage Scheme. This high level study has been carried out to ascertain the potential impact of the proposed development on the archaeological and historical resource that may exist within the area. This study is not a detailed desk-top assessment of the proposed development nor has a field inspection been carried out. The assessment was undertaken by Maeve Tobin of Irish Archaeological Consultancy Ltd, on behalf of Byrne Looby Consulting Engineers.

The high level archaeological assessment involved a detailed study of the archaeological and historical background of the proposed development site and the surrounding area. This included information from the Record of Monuments and Places of County Wicklow, the topographical files within the National Museum and all available cartographic and documentary sources for the area.

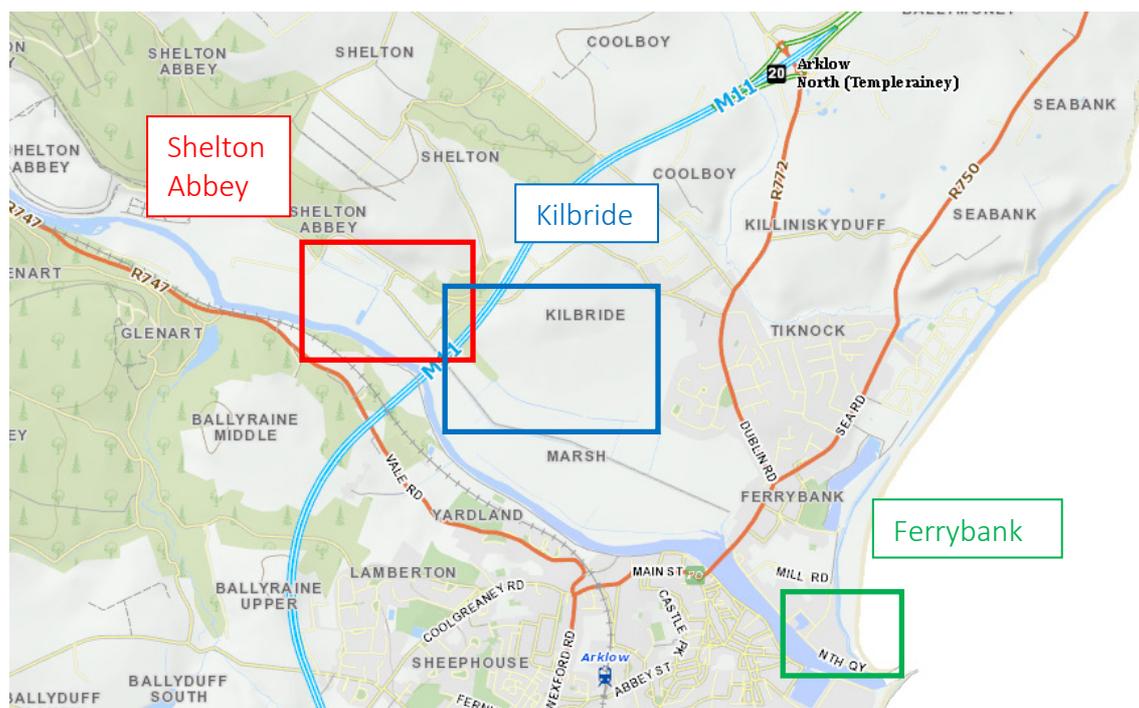


Figure 1: Proposed options for WWTP site

1.2 THE DEVELOPMENT

The proposed development will consist of the construction of a Waste Water Treatment Works at one of three locations in Kilbride, Shelton Abbey or Ferrybank townlands. Land parcels have been proposed for the WWTP measuring c. 43 hectares in Kilbride and c. 29.6 hectares in Shelton Abbey should a river outfall option be approved for the project. A third land option was proposed at Ferrybank measuring c. 7 acres. This assessment was undertaken in advance of any detailed design plans however the proposed WWTP will be confined within a 2 hectare

footprint. Other elements of the scheme have been previously assessed in 2012 (Bailey 2012).

2 RESULTS OF DESKTOP STUDY

2.1 KILBRIDE

The Kilbride site option is located within the townland and Parish of Kilbride and Barony of Arklow. The site is situated c. 870m north of Arklow town centre to the north of the Avoca River. It is comprised of all or part of approximately five undeveloped greenfields surrounding Kilbride House, to the immediate south of the M11 (Figure 2).

The receiving environment is considered to possess archaeological potential due to its proximity to the River Avoca and the coast c. 1.2km to the east. Settlement from the prehistoric periods onwards found coastal and riverine landscapes attractive due to the relatively easy access to a food resource, as well as being able to travel and trade.

There are nine previously recorded archaeological sites located within c. 500m of the proposed WWTW option in Kilbride (Figure 3). The nearest of which comprise of a two sites (WI040-048 and WI040-050) excavated in advance of the Arklow Bypass Road in 1997 to the immediate north of the northwest corner of the proposed land parcel. Site WI040-048 comprised the remains of a Bronze Age settlement site – indicated by evidence for an oval structure and postholes associated with lithic artefacts and Bronze Age pottery. Near to this site the remains of an undated isolated furnace (WI040-050) were excavated. Further to the north, a burnt spread and flints (WI040-051) and a burnt mound (WI040-052) were also excavated in advance of the scheme c. 140–450m north of the proposed WWTW land parcel. The find spot of a font (WI040-044) is also recorded c. 80m to the northeast however it is no longer *in situ*.

The only nearby recorded sites designated as Recorded Monuments, comprise the church, graveyard, enclosure and mausoleum (WI040-021001-4) recorded c. 60m north of the proposed Kilbride WWTW land parcel. These sites are located within a modern enclosure.

A review of the Excavations Bulletins (1970–2014) revealed that no archaeological investigations have been carried out within the footprint of the Kilbride land parcel. Monitoring was carried out for topsoil stripping during the construction of the Arklow Bypass to the immediate north of the site and several sites identified at this time were subject to excavation. The sites located in greatest proximity to the proposed WWTW land parcel are located to immediate north within the footprint of the existing road, including the Bronze Age settlement site (WI040-048, Breen 1997; Licence 97E0324) and furnace site (WI040-050, Ó Ríordáin; Licence 97E0083).

Analysis of the available aerial photographic coverage of the site (Google Earth 2010 and OSI 2000) failed to reveal any features of archaeological potential within the footprint of the WWTW land option.

Conclusions

The proposed development will not impact on any recorded archaeological sites, which are listed within the RMP/SMR. No sites or features of previously unidentified archaeological significance were identified on the historic mapping or in the aerial photographs within the area of proposed development.

Two previous archaeological excavations have been carried out to the immediate north of the proposed development area which revealed a prehistoric settlement (WI040-048) site and a furnace (WI040-050). While both of these sites have been subject to full archaeological resolution, and as such have no remaining elements *in situ*, it is possible that associated features associated may be located within their proximity, outside of the M11 footprint and within the current land parcel.

The proposed development is located within a rich archaeological landscape adjacent to the estuary of the River Avoca and the coast. As such the receiving environment is considered to possess high archaeological potential. Settlement from the prehistoric periods onwards found coastal regions attractive due to the relatively easy access to a food resource, as well as being able to travel and trade.



Figure 2: Approximate location of proposed WWTW option at Kilbride -

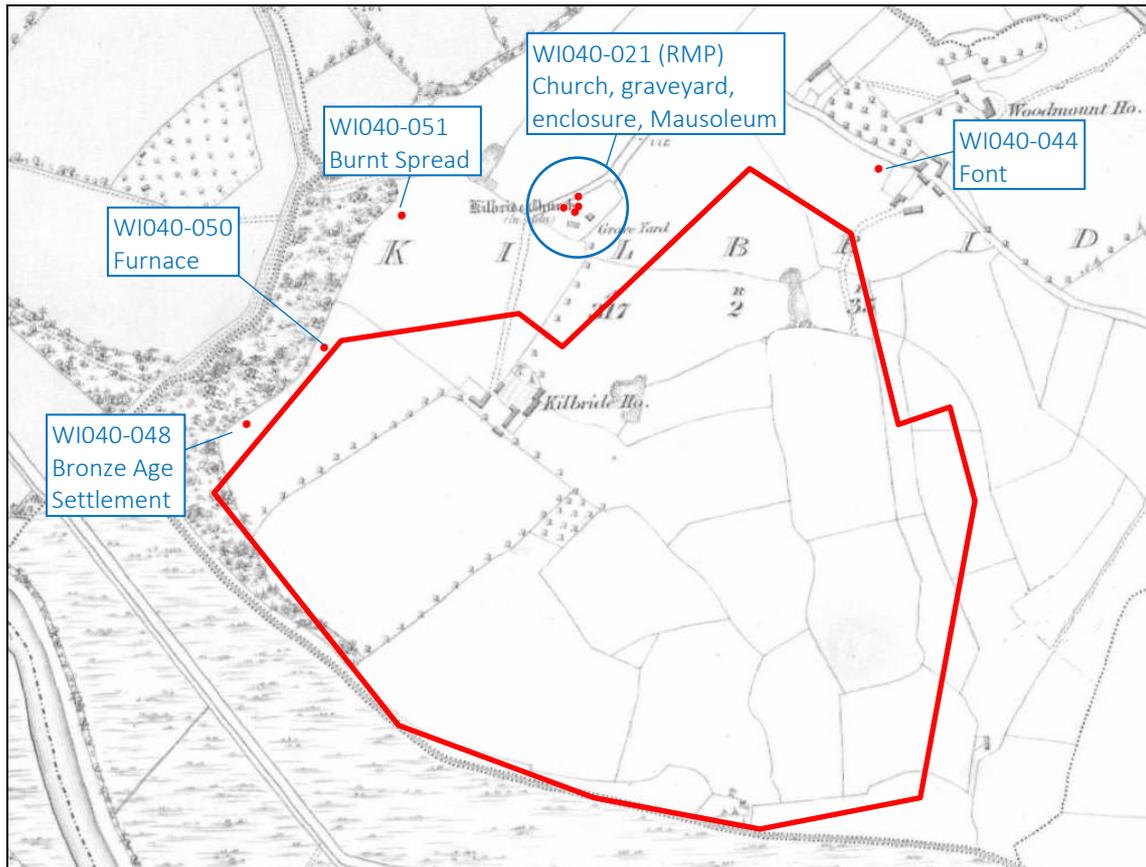


Figure 3: Extract from the First Edition 6-inch OS map showing approximate location -
of proposed WWTW option at Kilbride -

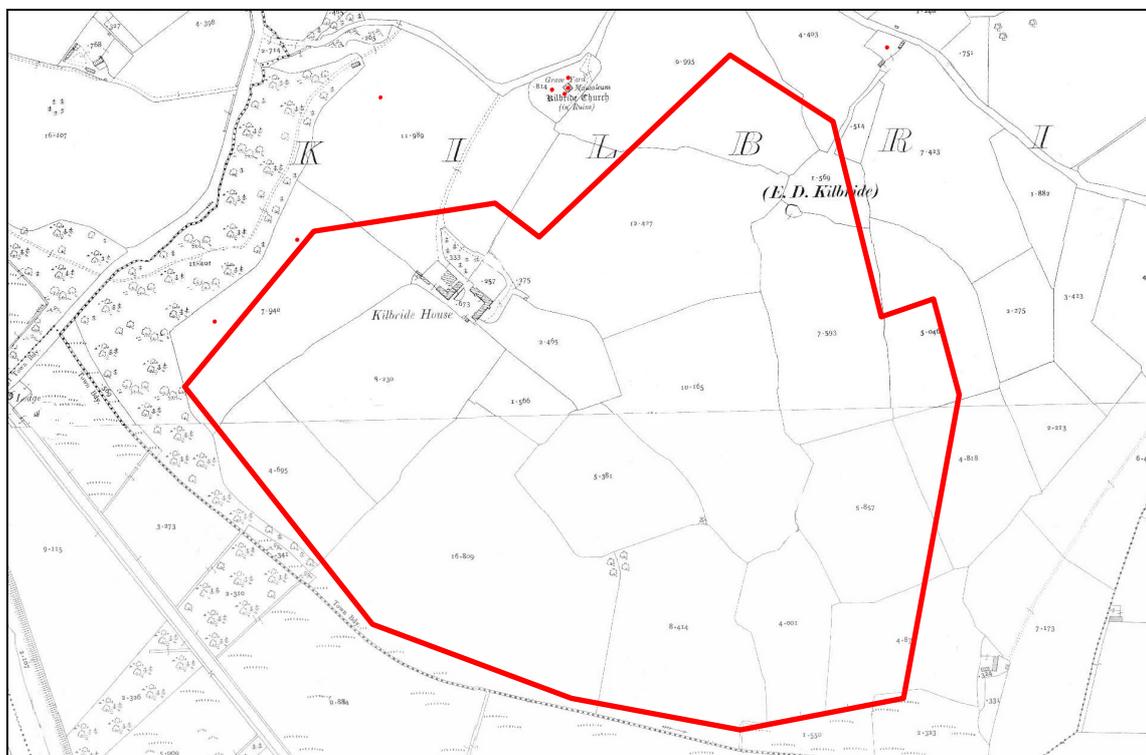


Figure 4: Extract from the 25-inch OS map showing approximate location of proposed -
WWTW option at Kilbride -

2.2 SHELTON ABBEY

The Shelton Abbey site option is located within the townlands of Shelton Abbey and Kilbride, Parish of Kilbride and Barony of Arklow. The site is situated c. 1.4km north-northwest of Arklow town centre on the northern banks of the Avoca River. It is comprised of all or part of three undeveloped greenfields and two previously developed plots on the northern banks of the River Avoca, to the immediate north of the M11.

The receiving environment is considered to possess archaeological potential due to its immediate proximity to the River Avoca and the coast c. 2.1km further to the east. Settlement from the prehistoric periods onwards found coastal and riverine landscapes attractive due to the relatively easy access to a food resource, as well as being able to travel and trade.

There are seven previously recorded archaeological sites located within c. 500m of the proposed WWTW option in Shelton Abbey. The nearest of which comprise of a two sites (WI040-048 and WI040-050) excavated in advance of the Arklow Bypass Road in 1997 to the immediate south of the proposed land parcel (Figure 6). Site WI040-048 comprised the remains of a Bronze Age settlement site – indicated by evidence for an oval structure and postholes associated with lithic artefacts and Bronze Age pottery. Near to this site the remains of an undated isolated furnace (WI040-050) were excavated. Further to the north, a burnt spread and flints (WI040-051) was also excavated in advance of the scheme c. 190m north of the proposed WWTW land parcel.

The only nearby recorded sites designated as Recorded Monuments, comprise the church, graveyard, enclosure and mausoleum (WI040-021001-4) recorded c. 320m east of the proposed Shelton Abbey WWTW land parcel. These sites are located within a modern enclosure.

A review of the Excavations Bulletins (1970–2014) revealed that no archaeological investigations have been carried out within the footprint of the Shelton Abbey land parcel. Monitoring was carried out for topsoil stripping during the construction of the Arklow Bypass to the immediate south of the site and several sites identified at this time were subject to excavation. The sites located in greatest proximity to the proposed WWTW land parcel are located to immediate south within the footprint of the existing road, including the Bronze Age settlement site (WI040-048, Breen 1997; Licence 97E0324) and furnace site (WI040-050, Ó Ríordáin; Licence 97E0083).

Cartographic analysis of the historic maps failed to identify any previously unidentified sites of archaeological potential. The proposed land parcel is shown as being located within the southern portion of the extensive demesne landscape that was associated with Shelton Abbey on the first edition OS map (Figure 6). As such the area would have been subject to a certain level of landscaping and ground works. The line of an old east–west running access road, which also formed the townland boundary between Kilbride, is shown on the mapping and this is preserved within the southern

limit of the current land parcel. A gate lodge is shown on the later 25-inch OS maps (Figure 7) which is no longer extant.

Analysis of the available aerial photographic coverage of the site (Google Earth 2010 and OSI 2000) failed to reveal any features of archaeological potential within the footprint of the WWTW land option. The southeast quadrant of the proposed WWTW land parcel is currently covered in rough scrub vegetation which would hamper the identification of archaeological features.

The northern half of the proposed development has been subject to a large amount of disturbance during the construction of the existing industrial facility (since at least 1995). Any archaeological features that may have existed in this area are likely to have been removed.

Conclusions

The proposed development will not impact on any recorded archaeological sites, which are listed within the RMP/SMR. No sites or features of previously unidentified archaeological significance were identified on the historic mapping or in the aerial photographs within the area of proposed development.

Aerial photography has indicated that the northern half of the land parcel has been subject to significant disturbance associated with the construction of the existing industrial complex, since at least 1995. Any archaeological features that may have existed in this area are likely to have been removed.

Two previous archaeological excavations have been carried out to the immediate south of the proposed development area which revealed a prehistoric settlement site (W1040-048) and a furnace (W1040-050). While both of these sites have been subject to full archaeological resolution, and as such have no remaining elements *in situ*, it is possible that associated features associated may be located within their proximity, outside of the M11 footprint and within the current land parcel.

The proposed development is located within a rich archaeological landscape adjacent to the estuary of the River Avoca. As such the receiving environment is considered to possess archaeological potential. Settlement from the prehistoric periods onwards found coastal regions attractive due to the relatively easy access to a food resource, as well as being able to travel and trade.



Figure 5: Approximate location of proposed WWTW option at Shelton Abbey -

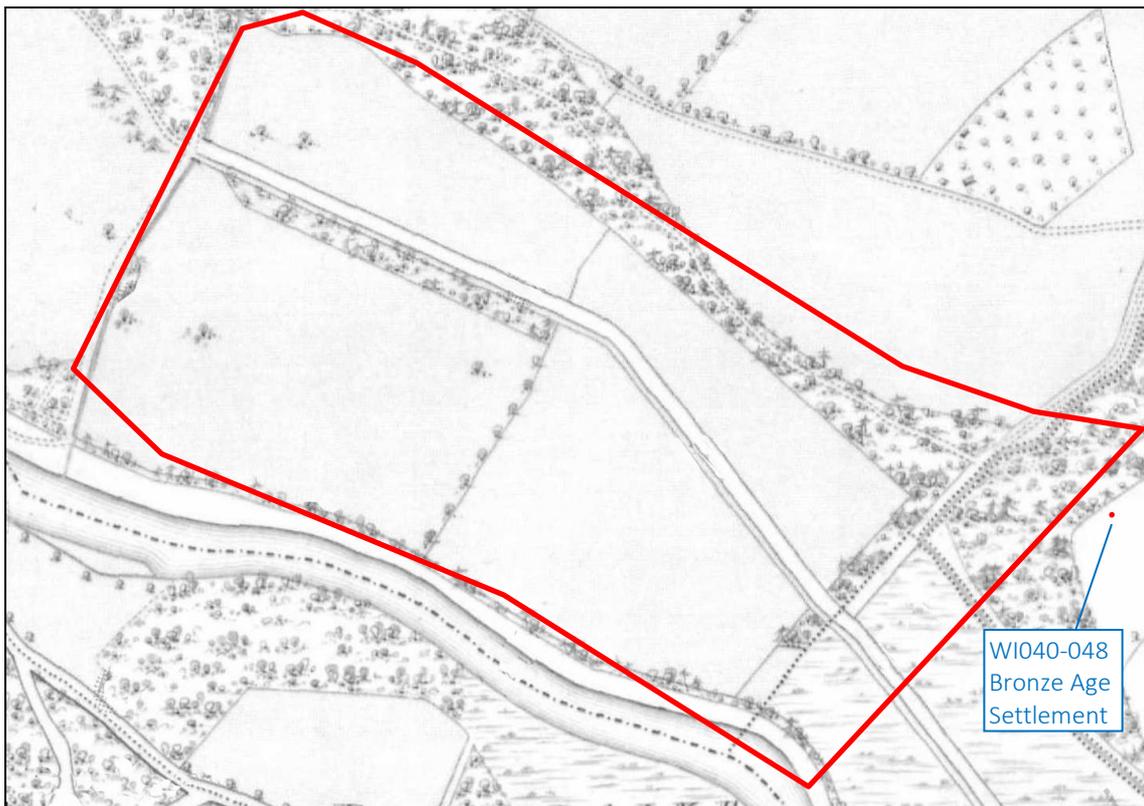


Figure 6: Extract from the First Edition 6-inch OS map showing approximate location -
of proposed WWTW option at Shelton Abbey -

2.3 FERRYBANK

The Ferrybank site option is located within the townland of Ferrybank in the Parish and Barony of Arklow to the east of Arklow town. The site is bound to the south by the north quay and the Avoca River, the seashore to the east and the Mill Road to the west. The area is currently comprised of an abandoned factory building and associated tanks and outbuildings (Figure 8) and the site is partially overgrown. The proposed parcel of land currently comprises c. 7 acres.

There are no RMP sites located within c. 500m of the proposed WWTW site. The boundary of the zone of archaeological potential for the historic town of Arklow (WI040-029) is located c. 420m to the northwest. The nearest recorded site with an accurate location comprises of the Cistercian monastery and graveyard (WI040-029004, 8) c. 620m to the north-northwest. The receiving environment is considered to possess archaeological potential due to its proximity to the coast. Settlement from the prehistoric periods onwards found coastal regions attractive due to the relatively easy access to a food resource, as well as being able to travel and trade.

The historical mapping (Figure 9) indicates that this area was located within the estuarine mud flats in the early 19th century. The area had been partially reclaimed by the late 19th century and was shown as undeveloped marsh land. By the first decade in the 20th century the north quay had been constructed and a chemical works had been developed within the area of proposed development (Figure 10). Tramlines are shown running north linking the quayside with the munitions works located along the coast.

Inspection of the aerial photographic coverage of the proposed development area held by the Ordnance Survey (1995, 2000 and 2005) and Google Earth (2010) revealed no previously unrecorded features of archaeological potential in or within the immediate vicinity of the proposed scheme.

A review of the Excavations Bulletin (1970–2014) has indicated that two programs of archaeological investigation have been undertaken within proximity to the proposed development area. Monitoring of ground works was undertaken at the site of a shopping centre on the North Quay, Ferrybank (Sullivan, 2005; licence ref.: 05E0686) and for the laying of ESB cables between Arklow Harbour and Brittas Road (Campbell, 2003; licence ref.: 03E0737). Whilst reclamation deposits were identified, no features of archaeological significance were identified. Monitoring of site investigations was undertaken along the north and south quays of Arklow Town in May 2013 as part of the current development (Bailey, 2013; licence ref.: 12E309). Nothing of archaeological significance was identified at this time.

Conclusions

The proposed development will not impact on any recorded terrestrial archaeological sites, which are listed within the RMP/SMR. No sites or features of previously unidentified archaeological significance were identified on the historic mapping or in the aerial photographs within the area of proposed development. The site was

located within estuarine mud flats until reclamation in the later 19th century and early 20th century. The area was built up in order to construct the north quay and has been subject to redevelopment since the early 20th century.

Three previous programs of archaeological monitoring were undertaken within the vicinity of the proposed development area however only reclamation deposits were noted. No features of archaeological significance were identified in these areas.

This site poses the least potential impact to the archaeological resource.



Figure 8: Approximate location of proposed WWTW at Ferrybank (Google Earth, 2010)

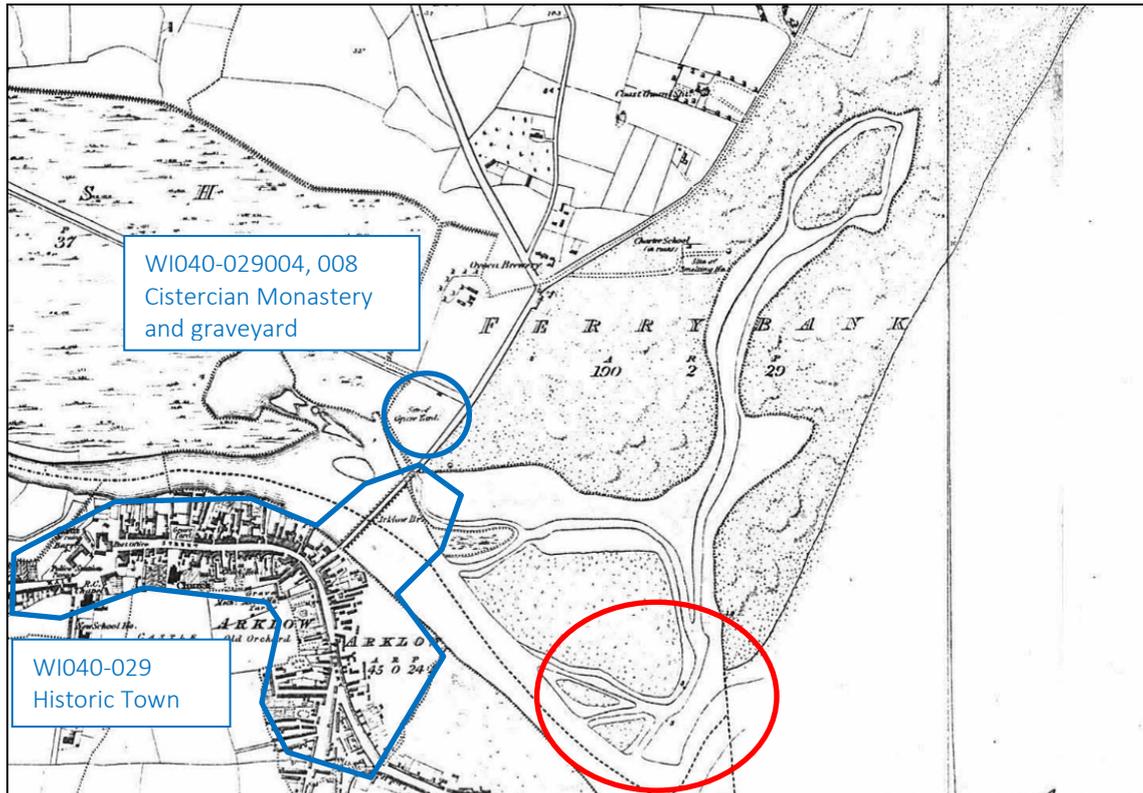


Figure 9: Extract from the First Edition 6-inch OS map showing approximate location - of proposed WWTW at Ferrybank -

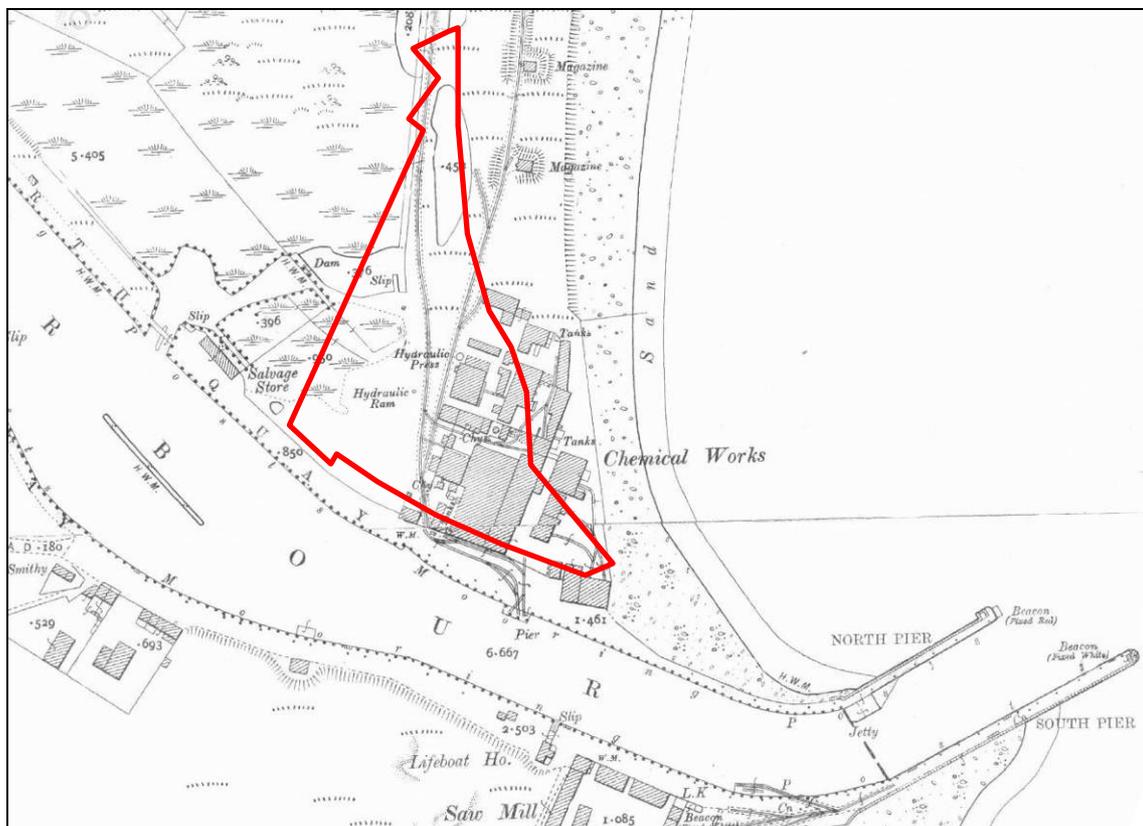


Figure 10: Extract from the 25-inch OS map showing approximate location of - proposed WWTW at Ferrybank -

3 APPRAISAL, IMPACT ASSESSMENT AND MITIGATION

Impacts can be identified from detailed information about a project, the nature of the area affected and the range of archaeological resources potentially affected. Archaeological sites can be affected adversely in a number of ways: disturbance by excavation, topsoil stripping; disturbance by vehicles working in unsuitable conditions; and burial of sites, limiting access for future archaeological investigation.

3.1 IMPACT ASSESSMENT

Based on this assessment the Ferrybank WWTW site option or the northern half of the Shelton Abbey site option would be more preferable than the remaining Shelton Abbey and Kilbride options in terms of archaeological impact.

Proposed Shelton Abbey WWTW site option

- The northern half of the site has already been subject to large-scale disturbance and as such it is unlikely that potential archaeological features are preserved *in situ*.
- The southern half of this option is located within demesne lands associated with Shelton Abbey. There is evidence for minor disturbance and landscaping in the post-medieval period (including a gate lodge) within the southeast quadrant. The site is however an area of archaeological potential due to the proximity of the river and the excavated prehistoric settlement to the immediate south within the footprint of the M11. It is possible that the proposed WWTW would impact on previously unidentified archaeological features, associated with this settlement activity, that have the potential to survive beneath the current ground surface.

Proposed Kilbride WWTW site option

- The proposed WWTW site option at Kilbride comprises of undeveloped greenfield and is located within an area of high archaeological potential. The remains of a prehistoric settlement were excavated in 1997 to the immediate north of the site within the footprint of the M11. As such it is possible that ground disturbances associated with the proposed development will have a direct negative impact on archaeological features and/or deposits that have the potential to survive beneath the current ground level.

Proposed Ferrybank WWTW site option

- The proposed WWTW site at Ferrybank is located within an area of reclaimed mudflats which has been subject to redevelopment throughout the 20th century. There is a low potential for the ground disturbances associated with the proposed development to have a direct negative impact on previously unknown archaeological features and/or deposits that have the potential to survive within the original estuarine levels.

3.2 MITIGATION

We recommend the following actions in mitigation of the impacts above.

Proposed Shelton Abbey WWTW site option

- Should the proposed WWTW be constructed in the northern half of the proposed Shelton Abbey site there would be no recommendations for archaeological mitigation.
- Should the proposed WWTW be constructed in the southern half of the proposed Shelton Abbey site it is recommended that a full archaeological assessment including a programme of archaeological testing be carried out within the finalised footprint of the WWTW prior to development going ahead. This should be undertaken by an archaeologist under licence from the Department of Arts, Heritage and Gaeltacht. Full provision should be made for the resolution of any archaeological features and/or deposits that may be discovered, should that be deemed the most appropriate manner in which to proceed.

In addition, it is recommended that any topsoil stripping, including site investigations are subject to archaeological monitoring. This should be carried out by a suitably qualified archaeologist with full provision made available for the resolution of any archaeological features and/or deposits that may be discovered, should that be deemed the most appropriate manner in which to proceed.

Proposed Kilbride WWTW site option

- Should the proposed WWTW be constructed within any area of the Kilbride option it is recommended that a full archaeological assessment including a programme of archaeological testing be carried out within the finalised footprint of the WWTW prior to development going ahead. This should be undertaken by an archaeologist under licence from the Department of Arts, Heritage and Gaeltacht. Full provision should be made for the resolution of any archaeological features and/or deposits that may be discovered, should that be deemed the most appropriate manner in which to proceed.

In addition, it is recommended that any topsoil stripping, including site investigations are subject to archaeological monitoring. This should be carried out by a suitably qualified archaeologist with full provision made available for the resolution of any archaeological features and/or deposits that may be discovered, should that be deemed the most appropriate manner in which to proceed.

Proposed Ferrybank WWTW site

- Should the proposed WWTW be constructed at Ferrybank it is recommended that all ground disturbances associated with the proposed development be subject to archaeological monitoring. This should be carried out by a suitably qualified archaeologist with full provision made available for the resolution of

any archaeological features and/or deposits that may be discovered, should that be deemed the most appropriate manner in which to proceed.

Please note that all recommendations are subject to approval by the National Monument Section of the Heritage and Planning Division, Department of Arts, Heritage and The Gaeltacht.

4 REFERENCES

Arklow Town and Environs Plan (2011–2017)

Bailey, F. 2012 Archaeological Assessment at Seabank & Ferrybank, Arklow part of the Proposed Arklow Sewerage Scheme. Unpublished report prepared by IAC Ltd for WYG Group.

Bennett, I. (ed.) 1987–2010 *Excavations: Summary Accounts of Archaeological Excavations in Ireland*. Bray. Wordwell.

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Department of Arts, Heritage, Gaeltacht and the Islands. 1999a *Framework and Principles for the Protection of the Archaeological Heritage*. Dublin. Government Publications Office.

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Institute of Field Archaeologists. 2001b *Standards and Guidance for Archaeological Monitoring*. Manchester. IFA.

Institute of Field Archaeologists. 2001c *Standards and Guidance for Archaeological Test Trenching*. Manchester. IFA.

National Monument Section, Department of Arts, Heritage and The Gaeltacht. *Sites and Monuments Record*, County Wicklow.

National Museum of Ireland. *Topographical Files*, County Wicklow.

CARTOGRAPHIC SOURCES

Sir William Petty, Down Survey Map of the Barony of Arklow 1654-56

Ordnance Survey 6-inch & 25-inch maps of County Wicklow (1839, 1887, 1910, 1913)

ELECTRONIC SOURCES

www.excavations.ie – Summary of archaeological excavation from 1970–2014

Breen, T. 1997 'Kilbride, 97E0324', *Excavations.ie database of Irish excavation reports*, 1997:616

<https://excavations.ie/>

www.archaeology.ie – DoAHG website listing all SMR sites with aerial photographs

www.osiemaps.ie – Ordnance Survey aerial photographs dating to 1995, 2000 & 2005 and 6"/25" OS maps.

<https://www.google.com/earth/> – Aerial photographs of the proposed development area

<http://www.booksulster.com/> - Contains the text from *Irish*

Local Names Explained by P.W Joyce (1870)

APPENDIX 1: SMR/RMP SITES WITHIN THE SURROUNDING AREA

SMR NO.	WI040-048
RMP	No
TOWNLAND	Kilbride
PARISH	Kilbride
BARONY	Arklow
I.T.M.	723440, 674772
CLASSIFICATION	Habitation site
DIST. TO DEVELOPMENT	Immediate north of Kilbride site and south of Shelton Abbey Site (in footprint of Arklow Bypass)
DESCRIPTION	This is the record for the Bronze Age settlement site excavated by Thaddeus Breen (97E0324) on the Arklow bypass road scheme. The site consisted postholes representing an oval structure (diam. 7.5m) and an assortment of other postholes forming no discernible pattern. No hearth was found but the site had been heavily truncated. Associated with these postholes were struck flakes of poor-quality flint and pottery sherds from Beaker, Cordoned Urn and Vast vessels, dating the site to the Bronze Age.
REFERENCE	www.archaeology.ie

SMR NO.	WI040-050
RMP	No
TOWNLAND	Kilbride
PARISH	Kilbride
BARONY	Arklow
I.T.M.	723531, 674863
CLASSIFICATION	Furnace
DIST. TO DEVELOPMENT	Immediate north of Kilbride site and south of Shelton Abbey Site (in footprint of Arklow Bypass)
DESCRIPTION	This is the record for the furnace excavated by Breandán Ó Ríordáin (97E0083) on the Arklow bypass road scheme. The remains occupied a space of 1.1m x 0.85m with a max. depth of 0.5m. The furnace had a lining of two stones, one on either side, and a crescent wall of solid iron slag. No finds other than fragments of slag and waste iron were recovered.
REFERENCE	www.archaeology.ie

SMR NO.	WI040-051
RMP	No
TOWNLAND	Kilbride
PARISH	Kilbride

BARONY	Arklow
I.T.M.	723623, 675021
CLASSIFICATION	Burnt spread
DIST. TO DEVELOPMENT	140m north of Kilbride site and 190m east of Shelton Abbey Site (in footprint of Arklow Bypass)
DESCRIPTION	This is the record for three adjacent spreads of burnt mound material excavated by Brendan Ó Riordáin (97E0083) on the Arklow bypass road scheme. The burnt material was present in shallow pits/depressions and the only finds recovered were some pieces of unworked flint and fragments of burnt bone.
REFERENCE	www.archaeology.ie

SMR NO.	WI040-021001-4
RMP	Yes
TOWNLAND	Kilbride
PARISH	Kilbride
BARONY	Arklow
I.T.M.	(1, 2) 723813, 675030; (2) (4) 723831, 675032
CLASSIFICATION	Church, Graveyard, Enclosure and Mausoleum
DIST. TO DEVELOPMENT	60m north of Kilbride option and 320m east of Shelton Abbey option
DESCRIPTION	<p>1, 2 - Situated on a level area on a very gentle SW-facing slope overlooking the Avoca River. No trace of the church remains described in the OS Letters (O'Flanagan 1928, 133) nor of any other early features other than some eighteenth-century headstones in the heavily overgrown graveyard.</p> <p>3 - This record was previously classed as a possible ecclesiastical enclosure, however there is currently no evidence for its existence.</p> <p>4 - At the centre of a graveyard (WI040-021002-). A rectangular structure with a colonnaded façade on its N face and built into a low hillside at S. A partially legible inscription records its dedication, 'To the memory of Frances Parnell'. A second mausoleum, erected in 1785 by Ralph, Viscount of Wicklow, (according to the inscription it bears) stands to the NE of the former and is in the form of a low, rectangular structure supporting a pyramid.</p>
REFERENCE	www.archaeology.ie

SMR NO.	WI040-044
RMP	No
TOWNLAND	Kilbride
PARISH	Kilbride
BARONY	Arklow
I.T.M.	724183, 675076

CLASSIFICATION	Font
DIST. TO DEVELOPMENT	80m northeast of Kilbride option
DESCRIPTION	A red sandstone block (33.5cm x 15.5cm; H 15.5cm-16.5cm) which an oval basin (13cm x 25cm; D 0.08m-0.09m) in the top centre and a small heavily weathered stone head carving on one corner. Located in the E transept of St. Patrick's church when inspected by ASI in 1999 (see WI035-058---- for present location record) but had previously been located here.
REFERENCE	www.archaeology.ie

SMR NO.	WI040-052
RMP	No
TOWNLAND	Kilbride
PARISH	Kilbride
BARONY	Arklow
I.T.M.	724042, 675515
CLASSIFICATION	Burnt Mount
DIST. TO DEVELOPMENT	450m north of the Kilbride option
DESCRIPTION	This is the record for a burnt spread excavated by Brendán Ó Riordáin (97E0083) on the Arklow bypass road scheme. It consisted of an area c. 4m x c. 4m which contained burnt stone and charcoal and patches of grey and yellow marl. (Ó Riordáin 1999)
REFERENCE	www.archaeology.ie

APPENDIX 2: STRAY FINDS WITHIN THE SURROUNDING AREA

Information on artefact finds from the study area in County Wicklow has been recorded by the National Museum of Ireland since the late 18th century. Location information relating to these finds is important in establishing prehistoric and historic activity in the study area.

The following townlands were reviewed within the NMI: Abbeylands, Arklow, Ballinaheese, Ballyduff North, Ballyraine Middle, Ballyraine Upper, Ballyraine Lower, Cooladangan, Coolboy, Glenart, Kilbride, Kilcarra East, Kilcarra West, Knockanrahan Lower, Knockanrahan Upper, Lamberton, Marsh, Pollahoney, Raheen, Sheepwalk, Shelton Abbey and Yardland.

No stray finds have been recorded in or within the receiving environment of the proposed WWTW site options.

APPENDIX 3: LEGISLATION PROTECTING THE ARCHAEOLOGICAL RESOURCE

PROTECTION OF CULTURAL HERITAGE

The cultural heritage in Ireland is safeguarded through national and international policy designed to secure the protection of the cultural heritage resource to the fullest possible extent (Department of Arts, Heritage, Gaeltacht and the Islands 1999, 35). This is undertaken in accordance with the provisions of the *European Convention on the Protection of the Archaeological Heritage* (Valletta Convention), ratified by Ireland in 1997.

THE ARCHAEOLOGICAL RESOURCE

The *National Monuments Act 1930 to 2004* and relevant provisions of the *National Cultural Institutions Act 1997* are the primary means of ensuring the satisfactory protection of archaeological remains, which includes 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’ (National Monuments Act 1930 Section 2).

A number of mechanisms under the National Monuments Act are applied to secure the protection of archaeological monuments. These include the Register of Historic Monuments, the Record of Monuments and Places, and the placing of Preservation Orders and Temporary Preservation Orders on endangered sites.

OWNERSHIP AND GUARDIANSHIP OF NATIONAL MONUMENTS

The Minister may acquire national monuments by agreement or by compulsory order. The state or local authority may assume guardianship of any national monument (other than dwellings). The owners of national monuments (other than dwellings) 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.

REGISTER OF HISTORIC MONUMENTS

Section 5 of the 1987 Act requires the Minister to establish and maintain a Register of Historic Monuments. Historic monuments and archaeological areas present on the register are afforded statutory protection under the 1987 Act. Any interference with sites recorded on the register is illegal without the permission of the Minister. Two months notice in writing is required prior to any work being undertaken on or in the vicinity of a registered monument. The register also includes sites under Preservation Orders and Temporary Preservation Orders. All registered monuments are included in the Record of Monuments and Places.

PRESERVATION ORDERS AND TEMPORARY PRESERVATION ORDERS

Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference with the site

illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders with the written consent, and at the discretion, of the Minister.

RECORD OF MONUMENTS AND PLACES

Section 12(1) of the 1994 Act requires the Minister for Arts, Heritage, Gaeltacht and the Islands (now the Minister for the Environment, Heritage and Local Government) to establish and maintain a record of monuments and places where the Minister believes that such monuments exist. The record comprises a list of monuments and relevant places and a map/s showing each monument and relevant place in respect of each county in the state. All sites recorded on the Record of Monuments and Places receive statutory protection under the National Monuments Act 1994. All recorded monuments on the proposed development site are represented on the accompanying maps.

Section 12(3) of the 1994 Act provides that 'where the owner or occupier (other than the Minister for Arts, Heritage, Gaeltacht and the Islands) 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 Minister of Arts, Heritage, Gaeltacht and the Islands 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'.

Under the National Monuments (Amendment) Act 2004, anyone who demolishes or in any way interferes with a recorded site is liable to a fine not exceeding €3,000 or imprisonment for up to 6 months. On summary conviction and on conviction of indictment, a fine not exceeding €10,000 or imprisonment for up to 5 years is the penalty. In addition they are liable for costs for the repair of the damage caused.

In addition to this, under the *European Communities (Environmental Impact Assessment) Regulations 1989*, Environmental Impact Statements (EIS) are required for various classes and sizes of development project to assess the impact the proposed development will have on the existing environment, which includes the cultural, archaeological and built heritage resources. These document's recommendations are typically incorporated into the conditions under which the proposed development must proceed, and thus offer an additional layer of protection for monuments which have not been listed on the RMP.

THE PLANNING AND DEVELOPMENT ACT 2000

Under planning legislation, each local authority is obliged to draw up a Development Plan setting out their aims and policies with regard to the growth of the area over a five-year period. They cover a range of issues including archaeology and built heritage, setting out their policies and objectives with regard to the protection and enhancement of both. These policies can vary from county to county. The Planning

and Development Act 2000 recognises that proper planning and sustainable development includes the protection of the archaeological heritage. Conditions relating to archaeology may be attached to individual planning permissions.

COUNTY WICKLOW DEVELOPMENT PLAN 2010–2016

Objectives

AR1 No development in the vicinity of a feature included in the Record of Monuments & Places (RMP) will be permitted where it seriously detracts from the setting of the feature or which is seriously injurious to its cultural or educational value.

AR2 Any development that may due to its size, location or nature have implications for archaeological heritage (including both sites and areas of archaeological potential / significance as identified in Schedule 16.1 and Map 16.01 (Volume 2) of this plan shall be subject to an archaeological assessment. When dealing with proposals for development that would impact upon archaeological sites and/or features, there will be presumption in favour of the ‘preservation in situ’ of archaeological remains and settings, in accordance with Government policy. Where permission for such proposals is granted, the Council will require the developer to have the site works supervised by a competent archaeologist.

AR3 To ensure that provision is made through the development control process for the protection of previously unknown archaeological sites and features where they are discovered during development works.

AR4 To facilitate public access to National Monuments in State or Local Authority care, as identified in Schedule 16.2 (Volume 2) of this plan.

AR5 That Wicklow recognise the important of Hillforts in south west Wicklow and that the Council request central Government to conduct a detailed study of their importance.

AR6 To promote and campaign for the designation of the Glendalough Monastic Settlement as a UNESCO World Heritage Site.

Wicklow has a wealth of structures, items and places of historical and cultural heritage that do not fall neatly into the categories of ‘architectural’ or ‘archaeological’ heritage. A number of examples would be:

- Structures and items associated with Wicklow’s industrial heritage;
- Historical mining works;
- Wicklow’s Military Road;
- Places and items associated with local history and folklore such as mass rocks and holy wells.

Industrial heritage refers to such structures as mills, watermills, windmills, roads, bridges, railways, canals, harbours, dams and features associated with utility industries such as water, gas and electricity. It is important part of Wicklow's socio economic history and contributes greatly to the interest of the Wicklow landscape.

Objectives

HC1 To protect and facilitate the conservation of structures, sites and objects which are part of the County’s industrial heritage, in particular features which relate to

former mining, transport or utilities activities, whether or not such structures, sites and objects are included on the RPS.

HC2 To facilitate access to and appreciation of areas of mining heritage, through the development of appropriate trails and heritage interpretation, in association with local stakeholders.

HC3 To facilitate future community initiatives to increase access to and appreciation of railway heritage, through preserving the routes of former lines free from development.

HC4 Any road or bridge improvement works along the Military Road shall be designed and constructed with due regard to the history and notable features of the road (in particular its original support structures, route and alignment), insofar as is possible and reasonable given the existing transport function of the road.

HC5 Through the development management process, to endeavour to identify and suitably protect items and places of local historical or cultural significance.

ARKLOW TOWN AND ENVIRONS DEVELOPMENT PLAN 2011–2017

Architectural Objectives -

AH1 To consolidate and safeguard the historical and architectural character of Arklow - Town Centre through the protection of individual buildings, structures, shopfronts - and elements of the public realm that contribute greatly to this character. -

AH 2 To conserve buildings and features of historical and vernacular interest through - ensuring that adequate consideration is given to their protection as part of - development proposals and that mitigation measures are put in place as required. -

Protected Structures Objectives -

RPS 1 To safeguard the character of Protected Structures and encourage appropriate - alterations to these buildings to render them viable for modern use, subject to best - conservation practice (in accordance with Architectural Heritage Protection guidelines - produced by the DoEHLG). (Arklow RPS are set out in Appendix 1 of the Plan) -

Archaeological Heritage Objectives -

AR1 To safeguard archaeological heritage by ensuring that development in the vicinity - of a recorded monument which are listed in table 7.1 below shall be permitted only - where it can be demonstrated that there will be no damage to the monument itself, - its setting or its cultural and educational value. -

AR2 Any development that may due to its size, location or nature have implications - for archaeological heritage shall be subject to an archaeological assessment. -

AR3 To ensure that provision is made through the development control process for - the protection of previously unknown archaeological sites and features where they - are discovered during development works. -

Maritime Heritage Objectives -

MH1 To support facilities such as the Arklow Maritime Museum which increase public - awareness and appreciation of the town's maritime heritage. -

MH2 To support initiatives to highlight Arklow's Maritime heritage in the public realm. -

MH3 To ensure that any development projects in and around the Arklow quays - respect any valuable structures or items of Arklow's maritime heritage. -

APPENDIX 4: IMPACT ASSESSMENT AND THE CULTURAL HERITAGE RESOURCE

POTENTIAL IMPACTS ON ARCHAEOLOGICAL AND HISTORICAL REMAINS

Impacts are defined as ‘the degree of change in an environment resulting from a development’ (Environmental Protection Agency 2003: 31). They are described as profound, significant or slight impacts on archaeological remains. They may be negative, positive or neutral, direct, indirect or cumulative, temporary or permanent.

Impacts can be identified from detailed information about a project, the nature of the area affected and the range of archaeological and historical resources potentially affected. Development can affect the archaeological and historical resource of a given landscape in a number of ways.

- Permanent and temporary land-take, associated structures, landscape mounding, and their construction may result in damage to or loss of archaeological remains and deposits, or physical loss to the setting of historic monuments and to the physical coherence of the landscape.
- Archaeological sites can be affected adversely in a number of ways: disturbance by excavation, topsoil stripping and the passage of heavy machinery; disturbance by vehicles working in unsuitable conditions; or burial of sites, limiting accessibility for future archaeological investigation.
- Hydrological changes in groundwater or surface water levels can result from construction activities such as de-watering and spoil disposal, or longer-term changes in drainage patterns. These may desiccate archaeological remains and associated deposits.
- Visual impacts on the historic landscape sometimes arise from construction traffic and facilities, built earthworks and structures, landscape mounding and planting, noise, fences and associated works. These features can impinge directly on historic monuments and historic landscape elements as well as their visual amenity value.
- Landscape measures such as tree planting can damage sub-surface archaeological features, due to topsoil stripping and through the root action of trees and shrubs as they grow.
- Ground consolidation by construction activities or the weight of permanent embankments can cause damage to buried archaeological remains, especially in colluviums or peat deposits.
- Disruption due to construction also offers in general the potential for adversely affecting archaeological remains. This can include machinery, site offices, and service trenches.

Although not widely appreciated, positive impacts can accrue from developments. These can include positive resource management policies, improved maintenance and access to archaeological monuments, and the increased level of knowledge of a site or historic landscape as a result of archaeological assessment and fieldwork.

PREDICTED IMPACTS

The severity of a given level of land-take or visual intrusion varies with the type of monument, site or landscape features and its existing environment. Severity of impact can be judged taking the following into account:

- The proportion of the feature affected and how far physical characteristics fundamental to the understanding of the feature would be lost;
- Consideration of the type, date, survival/condition, fragility/vulnerability, rarity, potential and amenity value of the feature affected;
- Assessment of the levels of noise, visual and hydrological impacts, either in general or site specific terms, as may be provided by other specialists.

APPENDIX 5: MITIGATION MEASURES AND THE CULTURAL HERITAGE RESOURCE

POTENTIAL MITIGATION STRATEGIES FOR CULTURAL HERITAGE REMAINS

Mitigation is defined as features of the design or other measures of the proposed development that can be adopted to avoid, prevent, reduce or offset negative effects.

The best opportunities for avoiding damage to archaeological remains or intrusion on their setting and amenity arise when the site options for the development are being considered. Damage to the archaeological resource immediately adjacent to developments may be prevented by the selection of appropriate construction methods. Reducing adverse effects can be achieved by good design, for example by screening historic buildings or upstanding archaeological monuments or by burying archaeological sites undisturbed rather than destroying them. Offsetting adverse effects is probably best illustrated by the full investigation and recording of archaeological sites that cannot be preserved *in situ*.

DEFINITION OF MITIGATION STRATEGIES

ARCHAEOLOGICAL RESOURCE

The ideal mitigation for all archaeological sites is preservation *in situ*. This is not always a practical solution, however. Therefore a series of recommendations are offered to provide ameliorative measures where avoidance and preservation *in situ* are not possible.

Full Archaeological Excavation involves the scientific removal and recording of all archaeological features, deposits and objects to the level of geological strata or the base level of any given development. Full archaeological excavation is recommended where initial investigation has uncovered evidence of archaeologically significant material or structures and where avoidance of the site is not possible.

Archaeological Test Trenching can be defined as ‘a limited programme... of intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land or underwater. If such archaeological remains are present test trenching defines their character and extent and relative quality.’ (IFA 2001c, 1)

Archaeological Monitoring can be defined as a ‘formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons within a specified area or site on land or underwater, where there is possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.’ (IFA 2001b, 1)

Underwater Archaeological Assessment consists of a programme of works carried out by a specialist underwater archaeologist, which can involve wade surveys, metal

detection surveys and the excavation of test pits within the sea or riverbed. These assessments are able to access and assess the potential of an underwater environment to a much higher degree than terrestrial based assessments.

ARCHITECTURAL RESOURCE

The architectural resource is generally subject to a greater degree of change than archaeological sites, as structures may survive for many years but their usage may change continually. This can be reflected in the fabric of the building, with the addition and removal of doors, windows and extensions. Due to their often more visible presence within the landscape than archaeological sites, the removal of such structures can sometimes leave a discernable 'gap' with the cultural identity of a population. However, a number of mitigation measures are available to ensure a record is made of any structure that is deemed to be of special interest, which may be removed or altered as part of a proposed development.

Conservation Assessment consists of a detailed study of the history of a building and can include the surveying of elevations to define the exact condition of the structure. These assessments are carried out by Conservation Architects and would commonly be carried out in association with proposed alterations or renovations on a Recorded Structure.

Building Survey may involve making an accurate record of elevations (internal and external), internal floor plans and external sections. This is carried out using a EDM (Electronic Distance Measurer) and GPS technology to create scaled drawings that provide a full record of the appearance of a building at the time of the survey.

Historic Building Assessment is generally specific to one building, which may have historic significance, but is not a Protected Structure or listed within the NIAH. A full historical background for the structure is researched and the site is visited to assess the standing remains and make a record of any architectural features of special interest. These assessments can also be carried out in conjunction with a building survey.

Written and Photographic record provides a basic record of features such as stone walls, which may have a small amount of cultural heritage importance and are recorded for prosperity. Dimensions of the feature are recorded with a written description and photographs as well as some cartographic reference, which may help to date a feature.