

Appendix 13.1

Wading and Metal Detection
Survey, June 2016

Wading and Metal Detection Survey
at
Ballybrack Stream, Ardarrig, Ballybrack & Douglas, Douglas;
Grange Stream, Grange & Castletreasure, Douglas;
Tramore River, Lehenagh More, Deanrock and Doughcloyne, Togher

Licence Number 16D0048 & 16R0065

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June 2016

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on behalf of
Cork County Council

1 Introduction

1.1 Cork County Council are undertaking the Douglas Flood Relief Scheme (including Togher Culvert). The scheme will include works at a number of locations along the Ballybrack Stream and Grange Stream in Douglas and the Tramore River in Douglas and Togher (Fig. 1). An Environmental Impact Assessment (EIA) is currently being prepared on the scheme. As part of this EIA, the Underwater Archaeological Unit at the Department of Arts Heritage and the Gaeltacht were consulted and they recommended archaeological wading and metal detector surveys at a number of locations where works are proposed for the scheme in order to assess the archaeological potential of the watercourses and their environs.

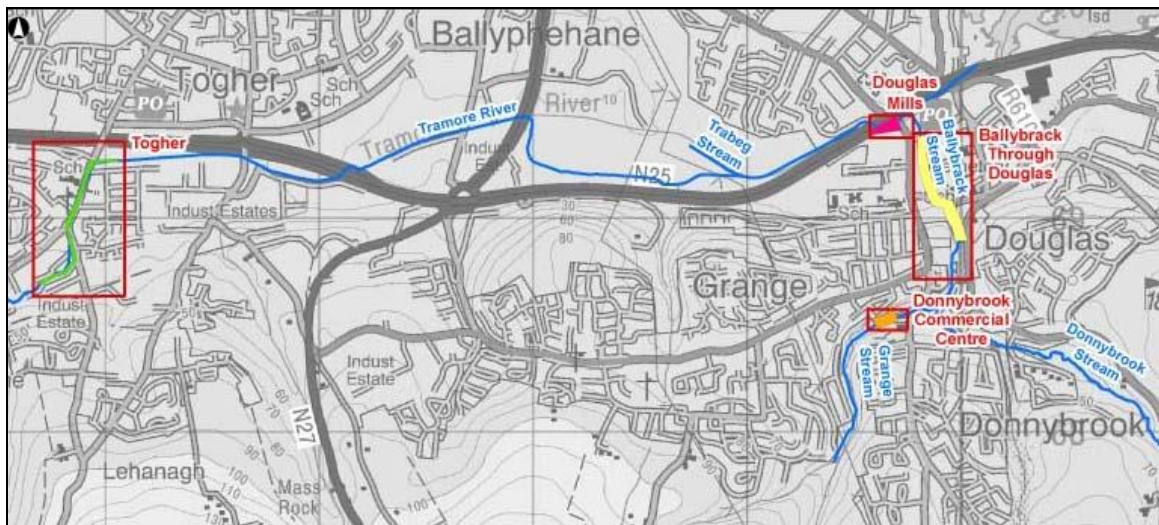


Figure 1: Proposed works areas for Douglas Flood Relief Scheme (including Togher Culvert)

1.2 The proposed scheme is designed to reduce the flood risk in the suburban villages of Douglas and Togher both on the southern side of Cork city (Fig. 2). Togher to the southwest of Cork city is on the Tramore River which flows east from Togher and discharges into the Douglas River in Cork harbour. A large portion of the river is culverted where it flows through Togher. Douglas is approximately 4km east of Togher on the southern bank of the Tramore River close to its confluence with the Douglas River where it enters Cork Harbour to form a wide estuarine mud flat. Two tributaries

- flow through Douglas village and suburbs joining the Tramore River in the village. The Grange Stream comes from high ground to the southwest to join the Ballybrack Stream at Donnybrook. The Ballybrack Stream flows south through the village in an open channel except for one culverted portion where it joins the Tramore River under Douglas Village Shopping Centre.
- 1.3 The intertidal and metal detection surveys were carried out by the author on the 17th May 2016 under licence numbers 16D48 and 16R65. There are no sites listed in the Record of Monuments and Places (RMP) for Co Cork on the watercourses. The nearest is a mill in Grange (CO086-100) which is almost 100m east of proposed works to the Grange Stream within Donnybrook Commercial Park.
- 1.4 This report was compiled by Avril Purcell, Lane Purcell Archaeology, 64 Fr Mathew Road, Turner's Cross, Cork on behalf of Arup, 15 Oliver Plunkett St, Cork.

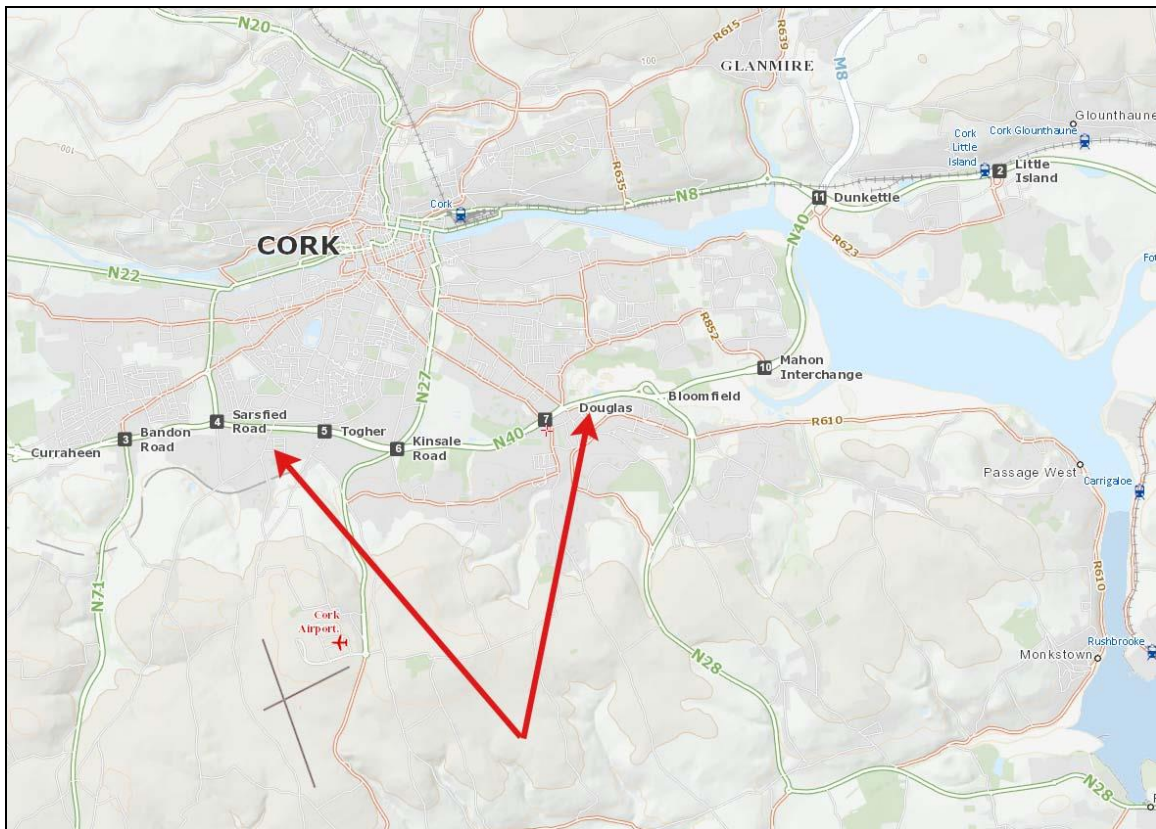


Figure 2: OSI map showing with arrows showing Toghber to west and Douglas to east

2 Existing Site and Proposed Development

2.1 Flood relief works are proposed at a number of locations along the existing watercourses in Douglas and Togher. There is evidence that the existing channel has been significantly modified or culverted in some areas and these were not included in the wading and metal detector assessments. These include sections of the Tramore River in Douglas adjoining the N40 South Ring Road and the culverted sections of the river in Togher. Channels which appeared to be largely undisturbed on which works are proposed as part of the scheme were included in the wading and metal detector surveys. These areas of proposed works are as follows:

- *Grange Stream: Donnybrook Commercial Park, in Grange and Castletreasure townlands (chainage 252m – 262m and 277m – 292m) (Fig. 3)*

Works will comprise the construction of a new 1.2m high flood defence wall at local low points to tie into higher ground.

- *Ballybrack Stream: Douglas Community Park, in Douglas townland (chainage 0 – 165) (Fig. 4)*

Works will include local regrading along the right (east) bank of the stream in the northern half of the park to a maximum height of 0.71m above existing levels.

- *Ballybrack Stream: Douglas Community Park, in Douglas townland (chainage 165 – 290) (Fig. 4)*

Works will comprise the widening and deepening of the channel in the southern half of the park. The widening will increase the width of the channel by approximately 2m and the deepening will increase the depth of the channel by 0.15m.

- *Ballybrack Stream: Ravensdale, Douglas, in in Ardarrig and Ballybrack townlands (chainage 310 – 467) (Fig. 5)*

Works will comprise widening the existing channel by 2m and construction of a 1.2m high flood defence walls along both banks. The existing bridge at the ICA hall at chainage 374m will be removed and the existing Ravensdale Lower Bridge at chainage 422m to be replaced by a bridge with soffit level 0.3m above the soffit level of the existing bridge.

- *Ballybrack Stream: Ravensdale, Douglas, in Ardarrig and Ballybrack townlands (chainage 467 – 530) (Fig. 5)*

Work will comprise the construction of a new 1.2m high flood defence wall along the left (west) bank.

- *Ballybrack Stream: Ballybrack Woods, Douglas in Ardarrig and Ballybrack townland (chainage 623) (Fig. 5)*

Works will comprise the replacement of the existing bridge and installation of a larger course trash screen.

- *Tramore River: Leheneghmore Industrial Estate, Togher at Doughcloyne and Lehenagh More townlands (chainage 5326) (Fig. 6)*

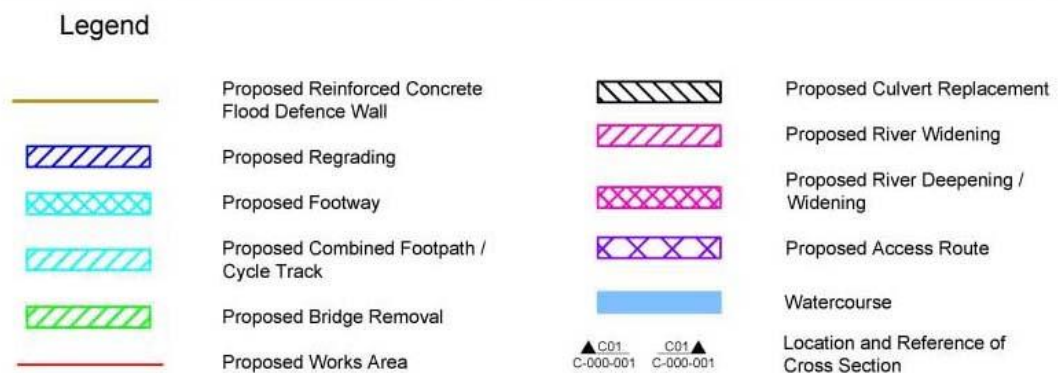
Works will comprise the removal of the existing trash screen, construction of a new trash screen and a slight realignment of the channel. Structure will be 6.6m wide x 12.4m long and 2.4m high above bed level and the trash screen 56.4m².

- *Tramore River: upstream of Togher Road Roundabout, Togher, in Doughcloyne and Lehenagh More townlands (chainage 5013 – 4962) (Fig. 7)*

Works will comprise the construction of a new 3m wide by 1.4m high concrete culvert to replace the existing 2.5m wide by 0.9m high open channel. In addition, Lehenaghmore Road will be regraded to fall to the west.

- *Tramore River: Togher Road, Togher, in Deanrock and Lehenagh More townlands (chainage 4653 – 4583) (Fig. 8)*

Works will involve widening the existing channel by 1m over this 70m stretch and the construction of a new concrete retaining wall with 1.2m high railing on the south bank.



Legend for Figs 3 - 8 (after Arup)

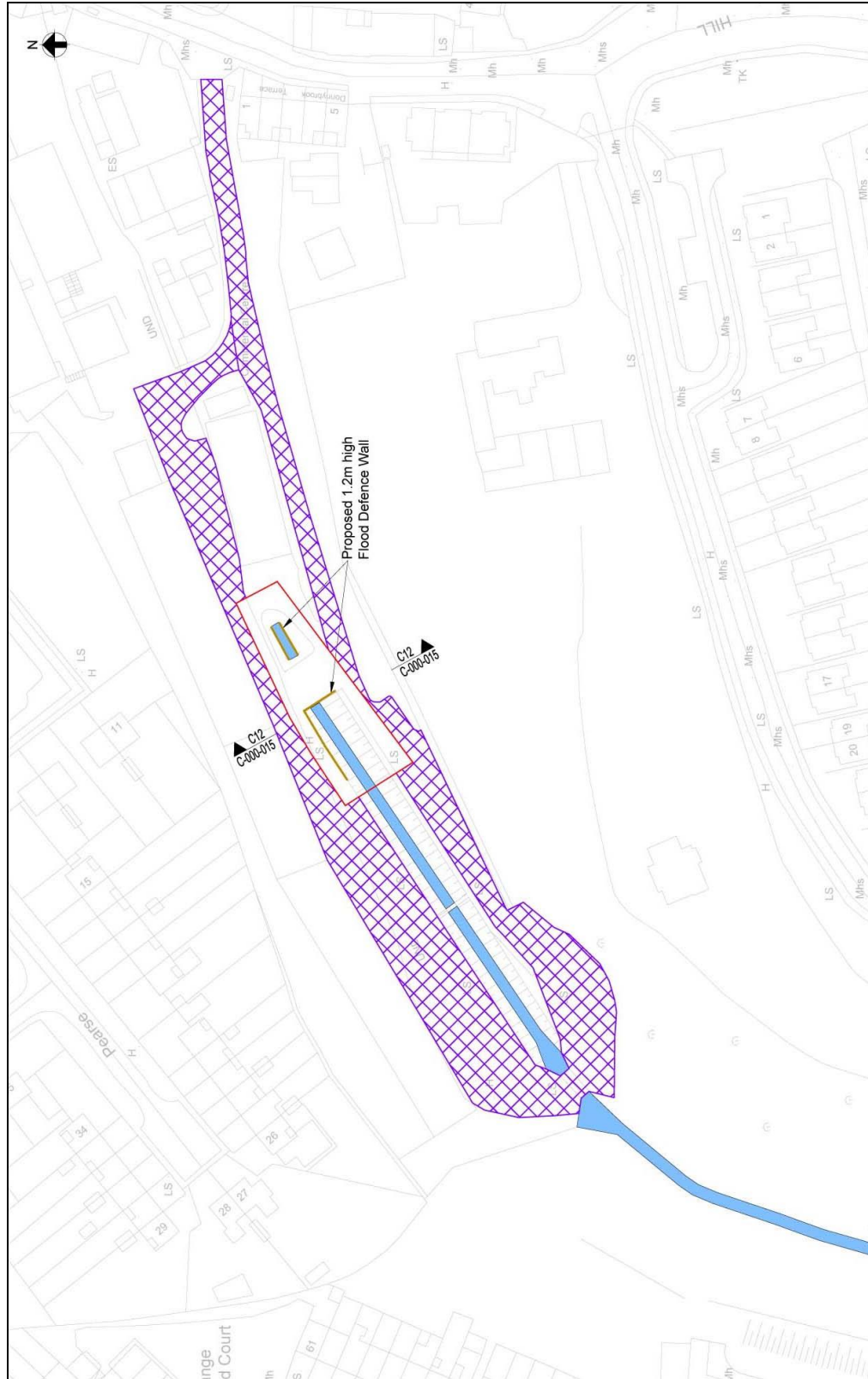


Figure 3: Proposed works to Grange Stream, Donnybrook Commercial Park (after Arup)

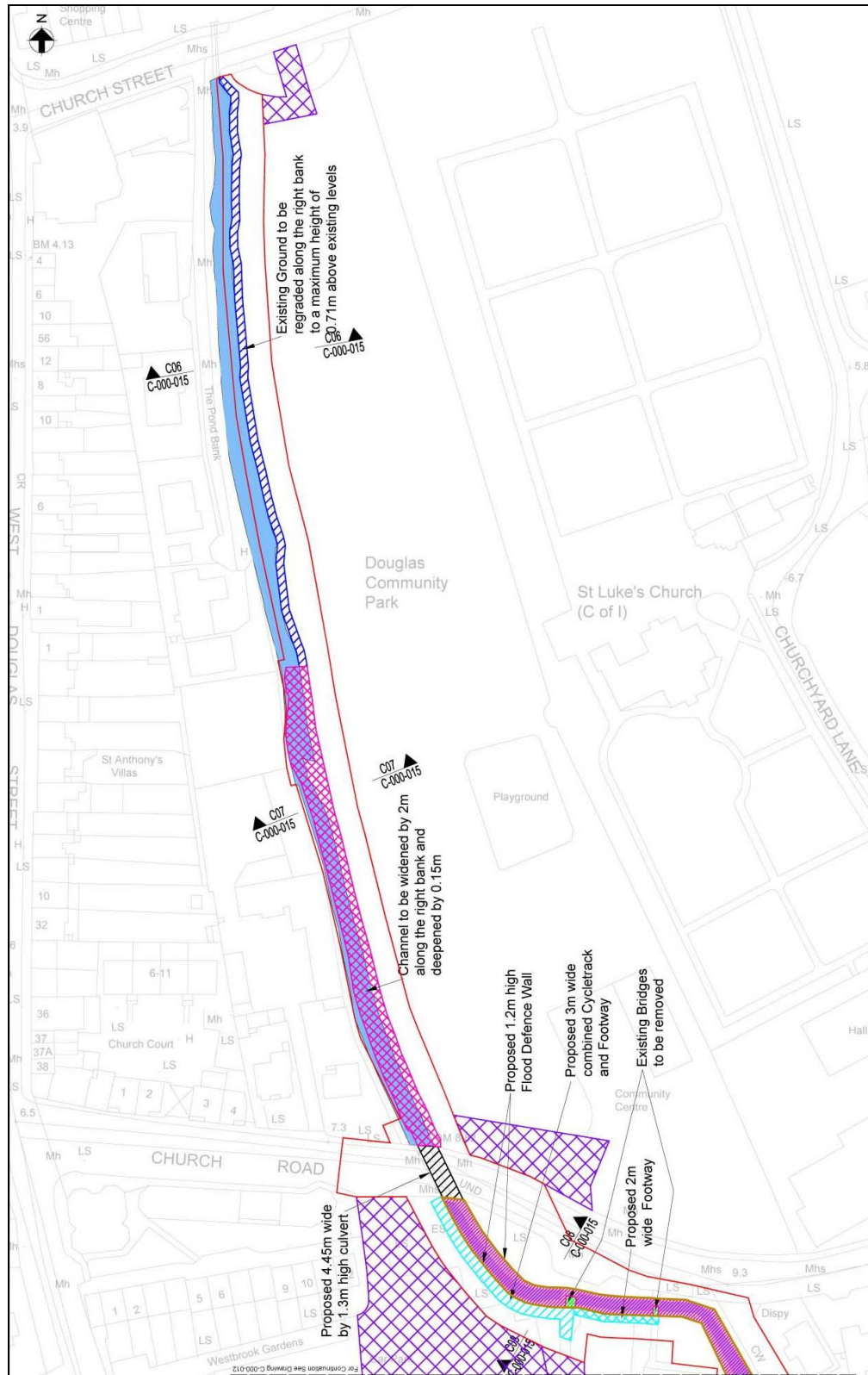


Figure 4: Proposed works to Ballybrack Stream, Douglas Community Park (after Arup)

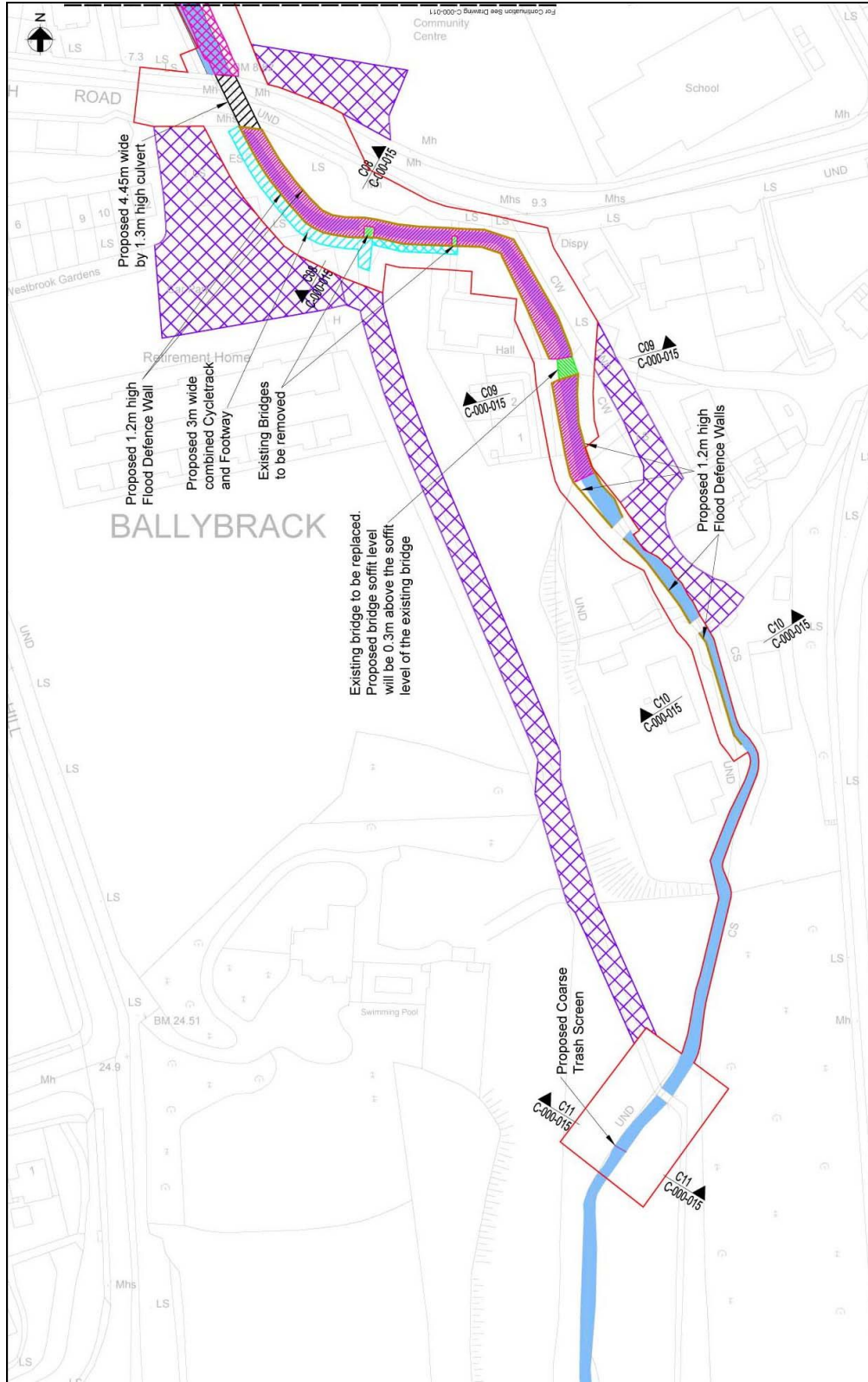


Figure 5: Proposed works to Ballybrack Stream, Ravensdale and Ballybrack Woods, Douglas (after Arup)

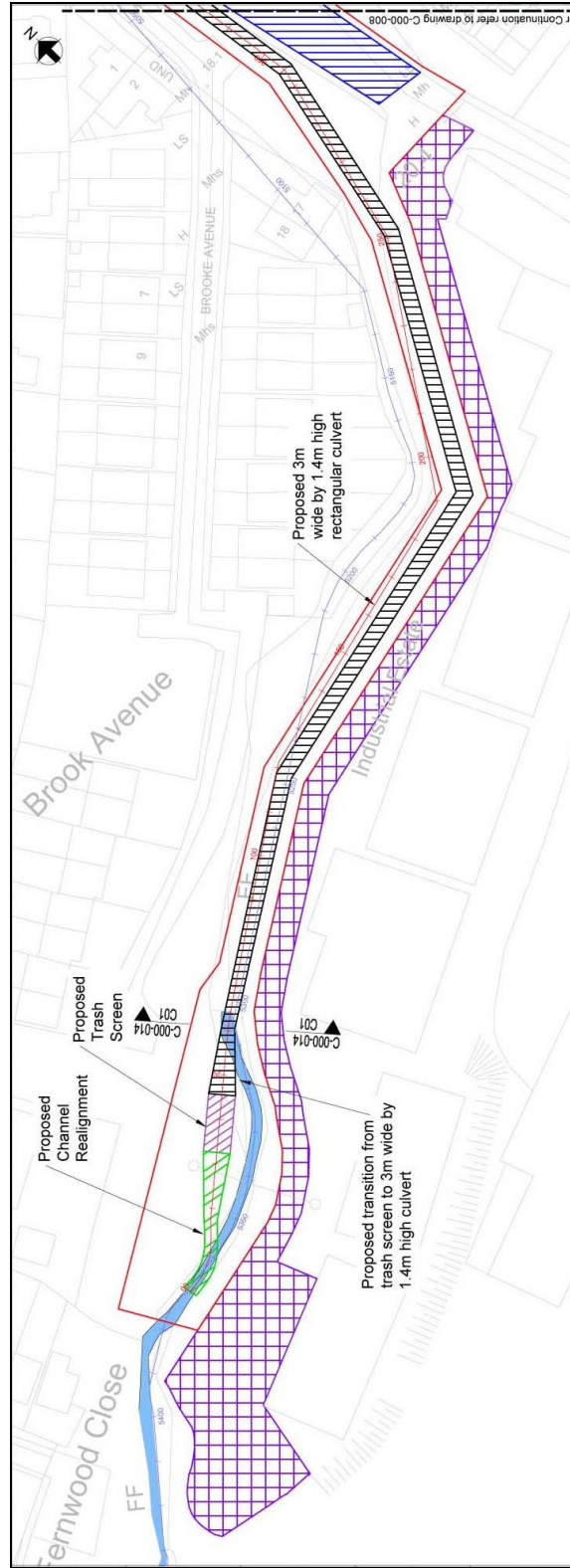


Figure 6: Proposed works to Tramore River, Lehenaghmore Industrial Estate, Togher (after Arup)



Figure 7: Proposed works to Tramore River, upstream of Togher Road Roundabout, Togher (after Arup)

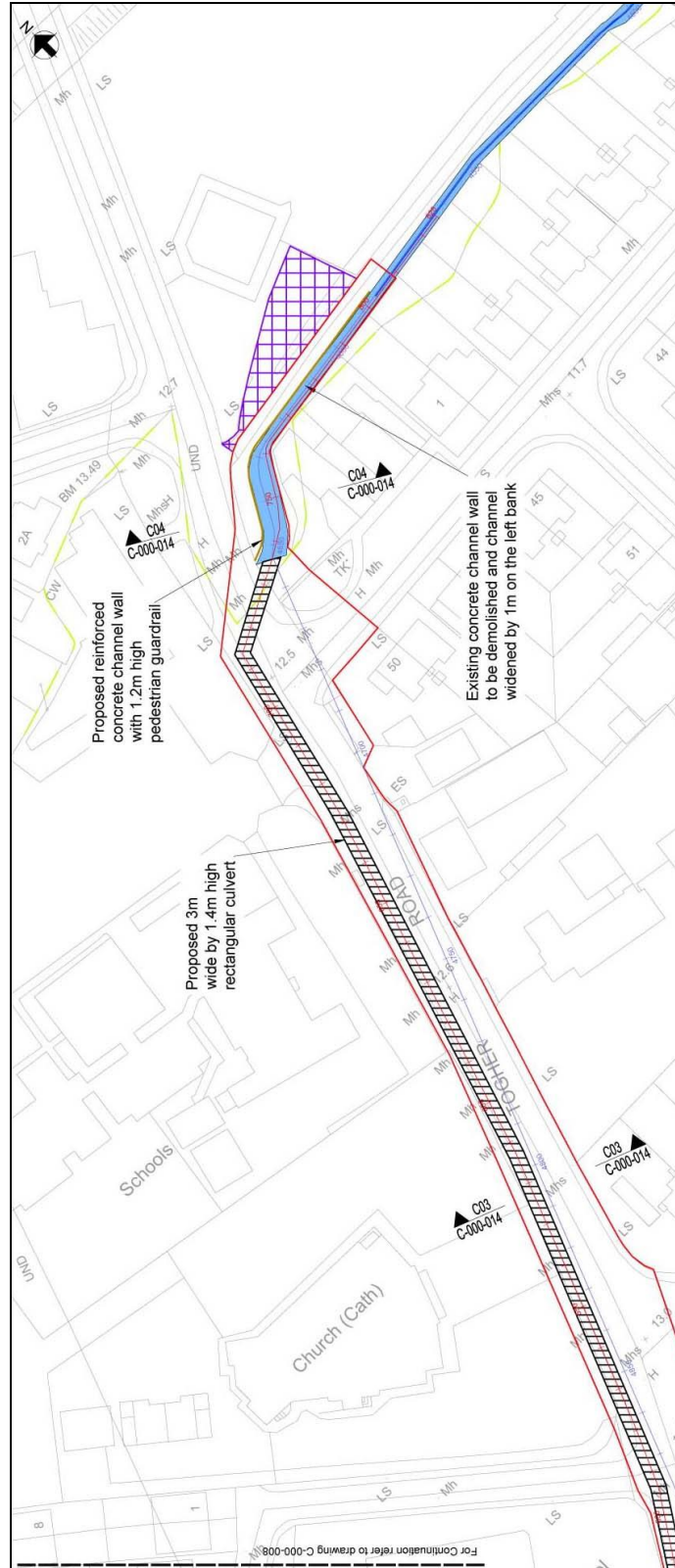


Figure 8: Proposed works to Tramore River, Togher Road, Togher (after Arup)

3 Historical Background

3.1 There are no recorded archaeological monuments listed in the RMP within the works area of the proposed Douglas Flood Relief Scheme (including Togher Culvert). There are a small number in the vicinity of the proposed works, all of which are late in date but which reflect the development of the area around the expansion of Cork city in the 18th and 19th centuries. There are two graveyards in Douglas (CO074-097 and CO074-098) to the east of Douglas Community Park (Fig. 9). The first, CO074-097---, is separated from the park by a random rubble wall and the second, CO074-098---, lies across the road from the first to the east. Both date from the mid 19th century onwards. Works to the stream which lies on the west side of the park will be at minimum 70m from the graveyard (CO074-097---) boundary wall.

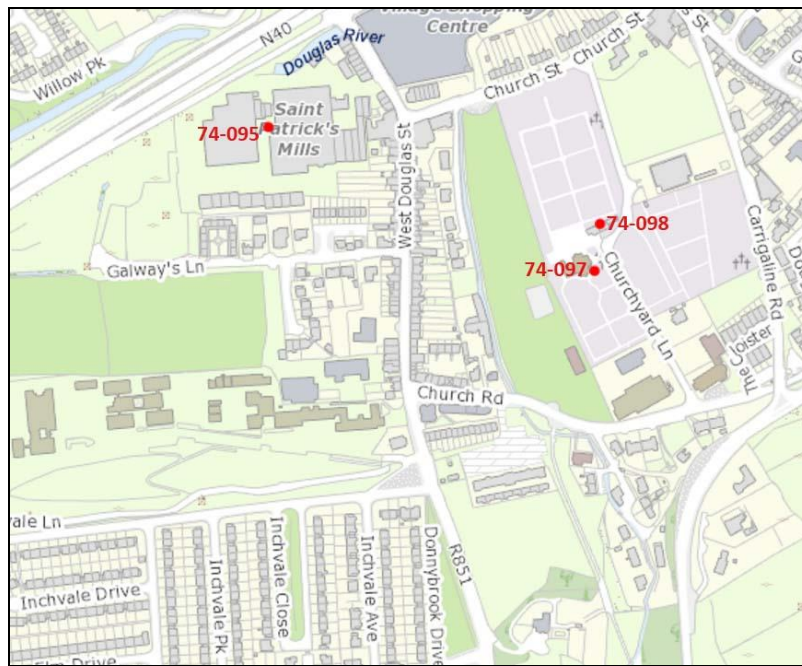


Figure 9: Extract from OSI map showing recorded archaeological sites in Douglas (www.archaeology.ie)

3.2 Donnybrook House is a mid 18th century country house (RMP No. CO086-102 and NIAH Reg. No.20908632), in Castletreasure approximately 75m south of the Grange Stream (Fig. 10). It is thought to have been the residence of The Rev. Boyle Davis, the dean of

Cloyne, in the mid 18th century and predates the Douglas Woollen Mills on the north side of the Grange Stream. Douglas was a thriving milling village from the 18th to the 20th century. The above mentioned Douglas Woollen Mills (now Donnybrook Commercial Centre) (CO086-100) was located in Donnybrook village (although in the townland of Grange) in the vicinity of an earlier sailcloth mill dating to 1726 and later associated with the Besnard family (Rynne 1999, 106). In 1863 this had been taken over by Wallis and Pollock and the largest ropeworks in the south of Ireland was established (ibid. 102). New buildings were erected in 1866 and when the mill was extended and this appears to have destroyed the earlier buildings on the site, of which nothing now remains (ibid. 102-3). In 1890 the mill was taken over by Morroghs and finally closed in 1971 (Foley 1991, 31). St Patrick's Woollen Mills (in Douglas village but also in Grange townland) (CO074-095) were located on the west side of Douglas village on the southern bank of the Tramore River and now form a large commercial centre in Douglas village. Works related to the flood relief scheme are proposed in this area but as extensive modifications were carried out in this area to the Tramore River during construction of the N40 South Ring Road it was not included in the wading and metal detector survey.

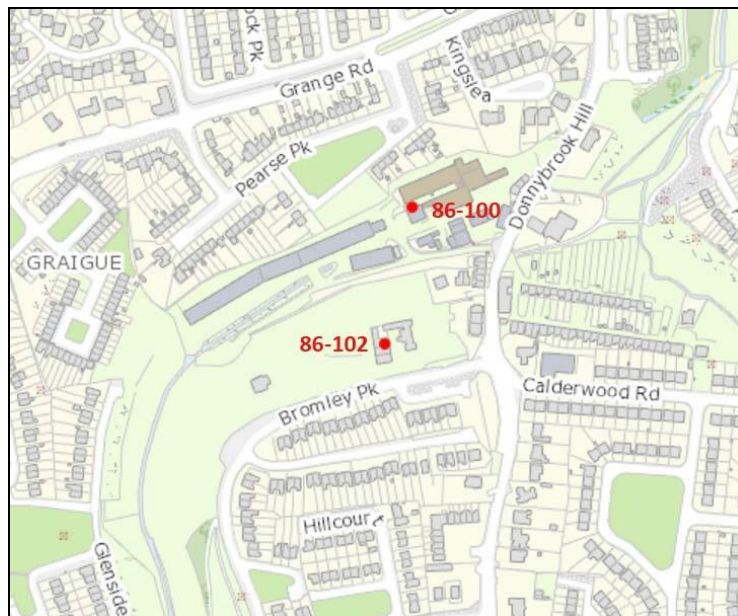


Figure 10: Extract from OSI map showing recorded archaeological sites in Donnybrook
(www.archaeology.ie)

- 3.3 A flour mill is named and depicted on the 1842 OS 6-inch map at the eastern edge of Ballybrack townland in an area known as Ravensdale. The flour mill is shown on the map as a large, irregular, L-shaped building with what appears to be a mill race running directly west of the Ballybrack Stream. Several smaller buildings are shown nearby which may also be associated with the flour mill. It is not shown or named on any of the later OS map editions and no above ground remains of it now survives. Foley (1991, 26) mentions a mill at Ravensdale, known as “the scutching mill”. It appears unlikely that two mills existed in the area of Ravensdale and it is possible the flour mill building shown on the 1842 OS map may have accommodated both industries at different times. There is a mill pond shown and named on the 1842 OS map with a mill race on its eastern side between Church Street, Church Road, West Douglas Street and St Luke’s Cemetery (CO074-087---), suggesting the location of another mill downstream of this location. The associated mill buildings are not named but may include a U-shaped building on the southeastern corner of Church Street and West Douglas Street. The Ballybrack Stream now runs mainly on the line of the tail race and works are proposed in this area.
- 3.4 The nearest recorded archaeological site to the proposed works in Togher is a holy well in Doughcloyne (CO086-006) approximately 500m away (Fig. 11). The OS maps give a picture of the Togher area and its development over the past 170 years or so. The village of Togher is depicted as a small settlement on the 1842 OS 6-inch map at a crossroads with a school, a smithy and a small cluster of houses. The entrance and lodge to Douglcloyne House (situated to the west) is depicted at this junction. The surrounding land is shown as largely agricultural, dotted with country houses and associated gardens. By the turn of the 20th century, the 25-inch OS map shows the cluster of houses, the lodge and the smithy remaining. The school, however, is now further to the north (along the Togher Road), houses are depicted along the road to the north of the school and the name Togher is now attached to a set of houses further north. The Cork & Macroom Direct Railway line is shown running east-west between the houses which is now the route of the N40 South Ring Road.

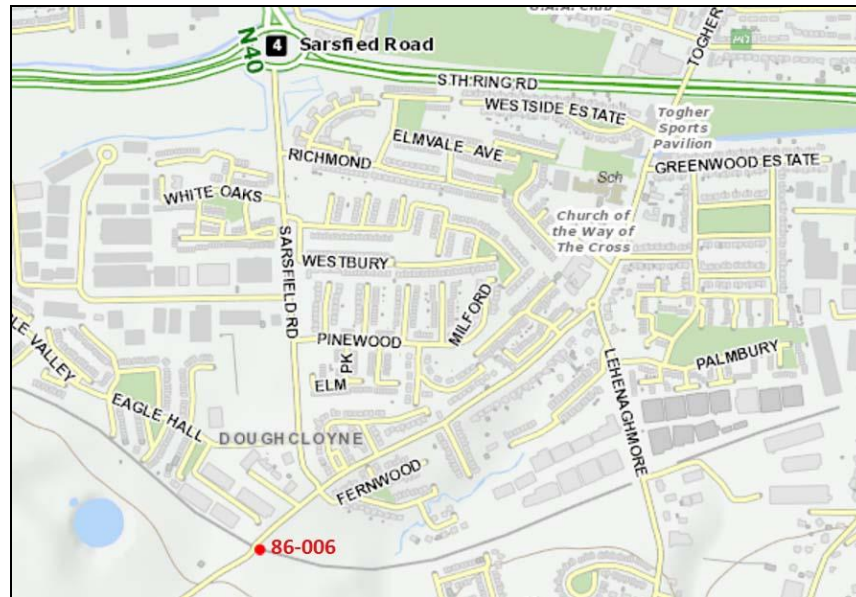


Figure 11: Extract from OSI map showing recorded archaeological sites in Togher
(www.archaeology.ie)

- 3.5 The Underwater Archaeology Unit of the National Monuments Service maintains files on the Ports Piers and Harbours of Ireland and the Shipwreck Inventory of Ireland. There are no references in the files to the watercourses or settlements in the flood relief scheme areas. The nearest recorded shipwreck is for the *Grand Master* which was lost on the 18 Feb 1890 at Rochestown, River Lee (Appendix 1).
- 3.6 The National Museum of Ireland maintains topographic files containing reports, including correspondence, present location and occasionally, illustrations of archaeological material recovered throughout the country. There are no records of finds from any of the townlands within the scheme. The British Museum, however, holds an Early Bronze Age gold disc which was recovered from Castletreasure (the northern extent of which is defined by the Grange Stream) in the mid 19th century (Cahill 2006). A roman coin, minted during the reign of Philip the Arab who was the Roman Emperor from AD 244 – 249, was found at Cork Airport in the townland of Lehenagh More. It is uncertain whether this coin is genuine or possibly a Victorian fake and it is not possible to determine when the coin arrived in Ireland (McNamee no date).

4 The Intertidal and Metal Detection Survey

4.1 The wading and metal detector surveys were carried out in the proposed flood relief works areas to assess their archaeological potential on the 17th May 2016. The surveys were undertaken by the author under licence numbers 16D48 and 16R65. Water levels were low at the time after a period of dry weather and conditions were favourable for inspecting the water channels. Each watercourse was waded and metal detected and the banks and bed visually inspected. Surrounding ground was inspected for any evidence of modifications to the channel or evidence of original channel.

4.2 *The Watercourses*

4.2.1 *Grange Stream: Donnybrook Commercial Park, in Grange and Castletreasure townlands (chainage 252m – 262m and 277m – 292m) (Plates 1 and 2)*

The stream at this location runs within a modified channel separated into two over-ground sections by a culverted portion approximately 12m long. The western open section runs within a sloping earth-cut channel with large boulders along both banks at water level and smaller stones along the stream bed. Above the banks the sides of the channel slope steeply and are grass-covered. The surrounding grounds are laid out as an access road and car parking for the commercial park and a range of modern buildings suggest significant amounts of ground disturbance have been undertaken in the recent past. The upstanding building of the milling complex lie approximately 100m to the east of the proposed works area. The eastern open section is a stepped concrete channel which was visually inspected but not accessed or metal detected. The channels were both very clean and no features were apparent. No metal objects were detected.



Plate 1: Grange Stream western open section in Donnybrook Commercial Park, looking west



Plate 2: Grange Stream eastern stepped section emerging from culvert in Donnybrook Commercial Park, looking west

4.2.2 *Ballybrack Stream: Douglas Community Park, Douglas townland (chainage 0 – 290)
(Plates 3 – 5)*

The stream runs along the western boundary of Douglas Community Park within a fenced area. The stream runs in an earth-cut channel with a stoney bed and occasional stones protrude above water level. Above the water level the banks are quite steep. The bank and the bed are heavily eroded in places with a narrow, deeper channel cut along

parts of the bed. The stream is quite fast flowing. At the southern end of the park the stream channel is lined in concrete which adjoins the culvert which carries the stream under Church Street. Stone gabions extend southwards along the western bank for a short distance from the concrete channel. A small number of pipes cross the stream and there are three outfall pipes discharging into it. Towards the southern end of the park a warehouse lies along the western bank of the stream and a concrete wall forms the western bank here. Elsewhere the bank is generally covered in low vegetation with some mature trees and tree stumps. At the southern end of the park the stream is again concrete-lined before entering a concrete culvert running under Church Road.

The channel was relatively clean with no large amounts of material present and according to local authority personnel it has been cleaned and maintained as such in recent times. No features associated with the nearby milling activity or other features of archaeological potential were noted. A number of metal objects were detected, all were modern in nature and of no archaeological significance. A number of individual properties lie on the eastern bank of the stream and there is no visible trace of the mill pond shown on the 1842 OS map in the area of these properties.



Plate 3: Ballybrack Stream, Douglas Community Park, looking south



Plate 4: Ballybrack Stream, Douglas Community Park, looking north



Plate 5: Ballybrack Stream, Douglas Community Park, looking north

4.2.3 *Ballybrack Stream: Ravensdale, Douglas in Ardarrig and Ballybrack (chainage 310 – 530 & 623) (Plates 6 – 12)*

On the southern side of the Church Road culvert the stream flows east within a stone and concrete lined channel for approximately 80m. Two modern bridges cross the stream, both opening from Church Road; the western one forms part of a recreational track south to Ballybrack Woods and the eastern one provides access to the ICA Hall. The stream was waded and visually inspected along this section but the concrete bed made the metal detector inoperable.

The stream turns south through Ravensdale where it appears to run in its original channel. The bed is stoney with some silty patches and the banks are generally earth-cut. There are, however, sections of wall along the banks and a small run of gabions supporting the western bank. A section of concrete path runs along the wall along the upper stretches of the eastern bank. The stream runs mainly along property boundaries with a public road along the eastern side, although at one point a warehouse/workshop lies along its eastern bank. The eastern bank is generally covered in low vegetation with some semi-mature trees where the concrete walls have not been constructed. The stream is crossed by three modern bridges (Lower, Middle and Upper Ravensdale Bridges) which provide access to the dwelling houses on the western bank and a large pipe crosses the stream bed between the middle and upper bridges.

The southern end of this section of stream, in Ballybrack Woods, is an earth cut channel crossed by a modern bridge with a trash screen below.

The stream is relatively clean along its course. No features associated with the nearby Ravensdale Mill shown on the 1842 OS map or other features of archaeological potential were noted. A number of metal objects, particularly pipes, were detected, none of which were considered to be of archaeological significance.



Plate 6: Ballybrack Stream, looking southeast with bridge to Ballybrack Woods in background



Plate 7: ICA Bridge on Ballybrack Stream eastern elevation



Plate 8: Lower Ravensdale Bridge on Ballybrack Stream, southern elevation



Plate 9: Middle Ravensdale Bridge on Ballybrack Stream, southern elevation



Plate 10: Upper Ravensdale Bridge on Ballybrack Stream, northern elevation



Plate 11: Ballybrack Stream in Ravensdale, looking south



Plate 12: Ballybrack Stream showing bridge and trash screen in Ballybrack Woods, looking south

4.2.4 *Tramore River: Leheneghmore Industrial Estate, Togher, Doughcloyne and Lehenagh More townlands, (chainage 5326 – 5311) (Plate 13 – 14)*

The river runs in a shallow, earth-cut channel with a stoney bed. The banks are overgrown with low vegetation and some mature trees. To the northeast the rivers runs into a concrete culvert closed by a large trash screen.

The river is quite clean with small amounts of rubbish caught in the trash screen. No features of archaeological potential were noted. A small number of modern metal objects were detected, none of which were considered to be of archaeological significance.



Plate 13: Tramore River at Lehenaghmore Industrial Estate, looking west



Plate 14: Existing trash screen Tramore River, Lehenaghmore Industrial Estate, looking east

4.2.5 *Tramore River: upstream of Togher Road Roundabout, Togher, Doughcloyne and Lehenagh More townlands (chainage 5013 – 4962) (Plates 15 – 17)*

The river emerges from a culvert under Brook Avenue and flows north in a relatively narrow channel along the western side of Lehenaghmore Road. A random rubble wall along the eastern bank of the river separates it from the road. The western bank is heavily overgrown and some occasional patches of random rubble wall were visible behind the undergrowth. Some erosion of the western bank is also apparent. The river bed is generally stoney with some silt. At the northern end of this stretch the river runs into a culvert, under the Togher Roundabout, which is closed with a large trash screen. The culvert runs along the western side of Togher Road.

This small open stretch of river is quite clean. No features of archaeological potential were noted. A small number of modern metal objects were detected, none of which were considered to be of archaeological significance.



Plate 15: Tramore River emerging from culvert under Brook Avenue, looking south



Plate 16: Tramore River beside Lehenaghmore Road, looking north



Plate 17: Tramore River beside Lehenaghmore Road, looking south

4.2.6 *Tramore River: Togher Road north of Greenwood Estate, Togher, Deanrock and Lehenagh More townlands (chainage 4653m – 4545m) (Plates 18 – 19)*

The river emerges from a culvert under the Togher Road and runs east in a concrete channel to the north (rear) of the houses in Greenwood Estate. Individual property boundaries line the southern river bank and there is a path and park along the northern bank.

The river is quite clean here. It was inspected and waded but the concrete bed made the metal detector inoperable. No features of archaeological potential were noted.



Plate 18: Tramore River emerging from culvert under Togher Road behind Greenwood Estate,
looking west



Plate 19: Tramore River, behind Greenwood Estate, looking west

5 Conclusion

- 5.1 A wading and metal detector survey on sections of 2 streams and a river was carried out in May 2016 as part of the Douglas Flood Relief Scheme (including the Togher Culvert). The Grange Stream in Donnybrook Commercial Park, the Ballybrack Stream in Douglas Community Park and Ravensdale, the Tramore River in Lehenaghmore Industrial Estate, upstream of Togher Road Roundabout and at Togher Road north of Greenwood Estate formed the basis for the survey. Each section was waded, visually inspected and where a concrete channel was not present, metal detected to assess its archaeological potential.
- 5.2 No features or finds of archaeological potential were revealed. A number of modern metal objects were detected none were of archaeological significance. No features were noted in/on the banks, edges or surrounding ground.
- 5.3 Ground disturbance associated with the proposed works for the flood relief scheme include widening and deepening of the channels, construction of flood defence walls, regrading ground adjoining existing channels and construction of new culverts. Archaeological monitoring of the construction works at a number of locations is recommended given the archaeological potential of such watercourses. These are:
- Ballybrack Stream, Douglas townland, in Douglas Community Park (chainage 0 – 292m).
 - Ballybrack Stream in Ardarrig and Ballybrack townlands, Ravensdale, Douglas (chainage 310 – 623).
 - Tramore River at Doughcloyne and Lehenagh More townlands, Lehenaghmore Industrial Estate (chainage 5326m – 5306m).
 - Tramore River at Doughcloyne and Lehenagh More townlands upstream of Togher Road Roundabout, Togher (chainage 5013m – 4962m).
- 5.4 Due to the disturbed nature of the channel in which the Grange Stream, (Grange and Castletreasure townlands in Donnybrook Commercial Park, Douglas (chainage 252m – 262m and 277m – 292m)) now runs and the likely disturbance to the adjoining ground

intermittent archaeological monitoring/inspections of subsurface disturbance is recommended based on the low archaeological potential of such ground.

- 5.5 In the event that archaeological features are identified during archaeological monitoring, consultation will be undertaken with the National Monuments Service and the features will be fully resolved to professional standards of archaeological practice. Such material will be preserved *in situ* or preserved by record, as appropriate, as outlined in Policy and Guidelines on Archaeological Excavation – Department of Arts, Heritage, Gaeltacht and the Islands.
- 5.6 All recommendations are subject to the approval of the National Monuments Service and the planning authority.

Bibliography

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Files Consulted

National Museum of Ireland topographic files

The Shipwreck Inventory of Ireland at the Archive Unit of the National Monuments Service, Department of Arts Heritage and the Gaeltacht

The Ports, Piers and Harbours Inventory of Ireland at the Archive Unit of the National Monuments Service, Department of Arts Heritage and the Gaeltacht

Appendix 1 - Shipwrecks Inventory of Ireland Database

Site Name: *Grand Master*

Date of Loss: 18 Feb 1890

Place of Loss: Rochestown, River Lee

This 132 ton wooden schooner of Cork was 37 years old. The master was A.M. McDonald and the owner was A. Donovan of Cork. She had been moored at Rochestown, Cork, in ballast when she became stranded in an easterly force 7 wind.

CSP, 1890-91. Vol LXXVI, Appendix C, 159.