#### Survey Area 2

ITM Co-ordinates: 572650, 576448 to 572663, 576430 Townland: Riverstown Figures: 5 Plate: 23

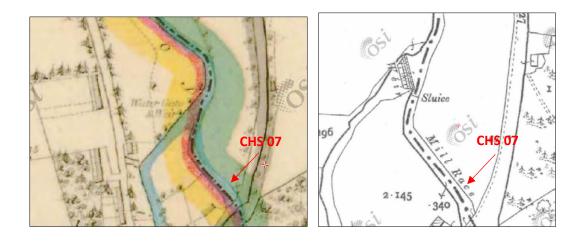
## CHS 07 Headrace of Glansillagh Mills

This survey area comprised a short section of a headrace within the grounds of Grandon's Garage beside the R639 roadway. Water was channelled through this race from a weir on the Glashaboy River (CHS No. 06) to the mill pond associated with Pike Mill (CO063-094). The headrace is indicated on both the 1st and 2nd editions of the OS maps, sheet 63.

The banks/ side walls of the mill race have been significantly modified (Fig. 4,7 & 8; Plate 23). It now consists of gabion walls with boulders at the SE end. The original banks appear to have been removed or may be concealed behind the gabion walls.

Impact No impact.

Mitigation No mitigation required.



**Above left Figure 7:** Extract from 1<sup>st</sup> edition Ordnance Survey map, showing survey area 2, CHS 7 **Above right Figure 8**: Extract from 2<sup>nd</sup> edition Ordnance Survey map, showing survey area 2, CHS 7



Plate 23: View of CHS 07 head race Pike Mill, taken from northwest.

## Survey Area 3

ITM Co-ordinates: 572681, 575580 to 572942, 575205 Townland: Riverstown, Ballincrossig and Poulacurry North Figures: 9-11 Plates: 24-39

Survey Area 3 is located within the townlands of Riverstown, Ballincrossig and Poulacurry North. It extended from just north of the L2966 roadway beside Hazelwood Avenue to Riverstown Bridge (Fig. 9-11).

## CHS 08 Revetment wall on east river bank

A riverbank revetment wall extends along most of Survey Area 3 (Fig. 9) albeit with sections missing in places exposing an earthen bank. In other sections it is replaced in an *ad hoc* fashion with various modern wall types including gabion walls, concrete walls or simply revetted with railway sleepers. It is of random rubble construction. An average height of 1.7m was recorded. At the northern limits of the survey a section of stone paving measuring 7.4m x 1.0m is present at the base of the wall (Plate 24 & 25).

## Impact

There will be no impact by the proposed works on the revetment wall at the northern limits of Survey Area 3. However, there may be impacts by the construction of the flood wall on the surviving sections of revetment wall adjacent to Riverstown Bridge at the southernmost limits of Survey Area 3 (See CHS 12 below & Fig. 9).

#### Mitigation

- No mitigation required at the northern limits of CHS 8.
- Licensed archaeological monitoring should be undertaken by an experienced underwater archaeologist.

## CHS 09 Revetment wall on west bank

Three sections of the revetment wall on the western bank survive within the study area. The wall is constructed of uncoursed rubble sandstone (Plate 29). It has a max. height of 1.5m. It is in a poor state of preservation with outward bulging and a scour of up to 0.4m noted beneath the wall.

#### Impact

No impact.

## Mitigation

No mitigation required.

## CHS 10 Tailrace

A tailrace issuing from a flour/corn mill at Spring Hill is visible on the western riverbank at ITM E572744 N575380. The mill race which is indicated on the 1st and 2nd edition OS Map also marks the townland boundary between Ballincrossig and Poulacurry North. At the time of the survey there

was no water flowing from the mill race. The race is c.4m wide. Its sides consist of overgrown earthen banks and no stone walling was recorded.

#### Impact

The proposed construction works including the embankment and relief wall COS\_L01 on the west bank of the Glashaboy may affect potential discrete subsurface remains or features of the tailrace at Spring Hill.

## Mitigation

Licensed archaeological monitoring should be undertaken by an experienced underwater archaeologist.

## CHS 11 Weir & Headrace for Riverstown Mill

An east-west Weir is denoted on the 1<sup>st</sup> edition OS map of 1842 extending across a bend of the Glashaboy (Fig.9). Abutting the east terminus of the Weir is the remains of a headrace that fed into the Riverstown Flour Mill to the SE. The upstream approach section of the headrace consists of a substantial 3.0m high revetment wall (Plate 30) that runs in a NW-SE direction into the mill race, while the river sweeps around to the southwest. The millrace itself was not accessible as a large quantity of tree cuttings have been deposited on top of the structure in recent times.

A coherent section of intra-riverine feature comprising well set and matched stones set on edge was recorded immediately south of the Headrace (Fig. & Plates 31 & 32). The feature, possibly a river access slip or revetment, projects from the eastern bank into the river in a WSW- ENE direction and slopes from a maximum height of 1.0 m beside the race down to the level of the riverbed. The Weir is not denoted on the 2<sup>nd</sup> Edition OS map and it is likely that this feature is possibly the remains of the weir indicated on the 1<sup>st</sup> edition OS map.

## Impacts

- The proposed flood defence wall (C01\_L06) may impact on the approach section of the existing river revetment wall to the 19<sup>th</sup> century Headrace / Sluice.
- It is also possible that the proposed construction works may impact on the potential relict remains of the pre-famine Weir.

## Mitigation

- Mitigation by avoidance. Where possible impact by the construction works on the existing approach Headrace / Sluice wall and pre-famine Weir should be avoided. If unavoidable the proposed construction works should be faced with sympathetic material to minimise potential negative aesthetic visual impacts.
- Licensed archaeological monitoring should be undertaken by an experienced underwater archaeologist.

## CHS 12 Riverstown Bridge

Riverstown Bridge is a recorded archaeological monument (RMP No. CO064-111) and a protected recorded structure (RPS No. 2096415). It is a hump-backed road bridge built of rubble sandstone. The bridge has five arches; measuring from west-to-east 2.50m, 3.70 m, 4.25 m, 4.25m, and 3.70m. The westernmost and smallest arch is blocked up and contains a cast iron outfall pipe. All five arches display arch rings of undecorated voussoirs.

No foundations were visible at the base of the piers. The piers are protected on both elevations by rubble-stone pointed cutwaters projecting outwards by 0.9m, and 1.15m in height. The cutwaters are damaged as a result of erosion and vegetation. The modern concrete extension to facilitate a footpath has damaged the bridge and conceals much of the northern elevation. The parapet has vertically set copping.

## Impacts

- The proposed flood defence wall and their drainage outfalls (C01-L05 & C01\_L06) may impact on the existing sections of the river revetment wall on both sides of the river in close proximity to the upstream side of Riverstown Bridge.
- The proposed flood defence wall may impact on the eastern upstream limits of Riverstown Bridge.
- The proposed regrading works (C01\_R02); and proposed concrete reinforced wall (C01\_L07); and proposed pumping station C01\_P01) also extend into the zone of notification (ZON) on the western side of the bridge.
- The proposed removal of the existing build-up of silt and vegetation from under the arch of the bridge (C01\_C03 & C01\_C04) may impact on the recorded structure.

## Mitigation

- Licensed archaeological monitoring should be undertaken by an experienced underwater archaeologist with regard to the proposed construction works C01-L05 & C01\_L06.
- Mitigation by licensed archaeological testing in advance of construction should be undertaken with regard to all proposed works within the ZON associated with Riverstown Bridge a recorded monument and a recorded protected structure, including: - C0\_L06; C01-L07; C01\_P01; C01\_R02; C01\_C03 & C01\_C04.
- The recorded protected structure Riverstown Bridge should be fully surveyed archaeologically in advance of construction works.

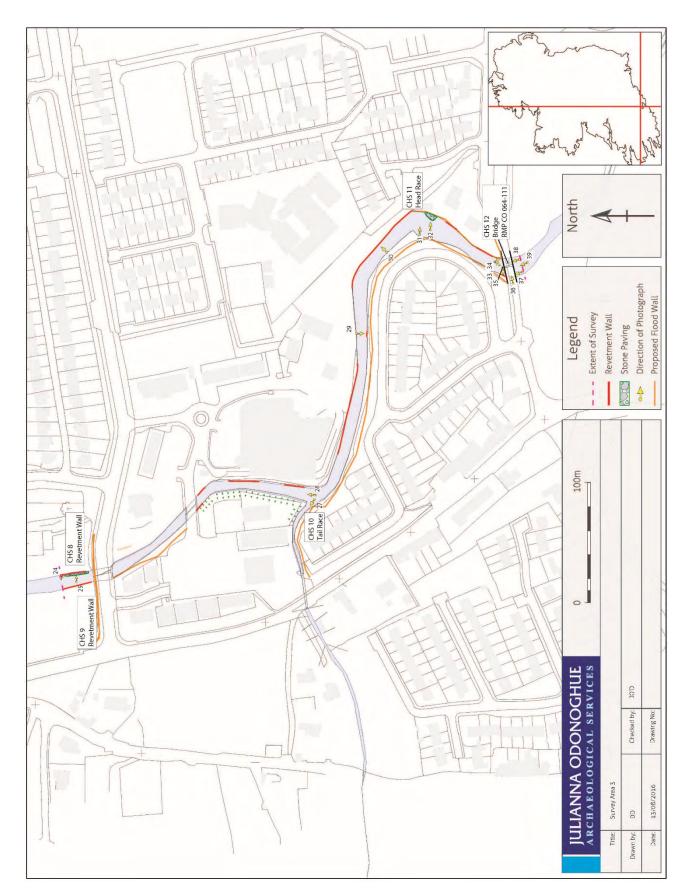


Figure 9: Site location Map, showing survey area 3, CHS 8-12 and proposed flood relief measures.

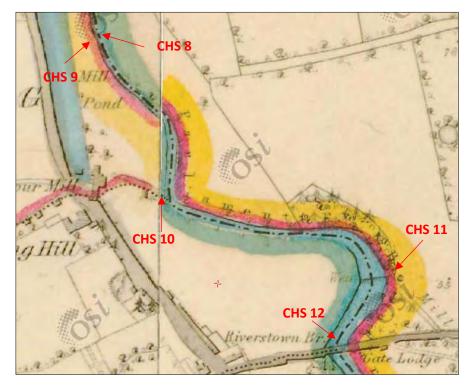
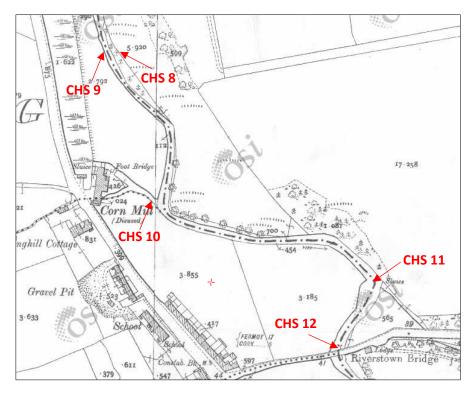


Figure 10: Extract from 1st edition Ordnance Survey map, showing survey area 3, CHS 8-12



**Figure 11**: Extract from 2<sup>nd</sup> edition Ordnance Survey map, showing survey area 3, CHS 8-12



Plate 24: View of CHS 08, revetment wall taken from north.



Plate 25: View of CHS 08, revetment wall taken from west.



Plate 26: View of CHS 09, revetment wall taken from east.



Plate 27: View of CHS 10, tailrace, Spring Hill Mill, taken southeast.



Plate 28: View of Glashaboy River, looking upstream, taken from CHS10



Plate 29: View of CHS 09, taken from north.



Plate 30: View of revetment wall approaching headrace CHS 11.



Plate 31: View of headrace CHS 11, taken from west.



Plate 32: View of stone feature, possible remains of weir, taken from west



Plate 33: View of CHS 12, bridge taken from northeast



**Plate 34:** View of CHS 12, bridge with pedestrian bridge extension and recent earthen embankment to northeast..



Plate 35: View of CHS 12, bridge, blocked up arch on northwest.

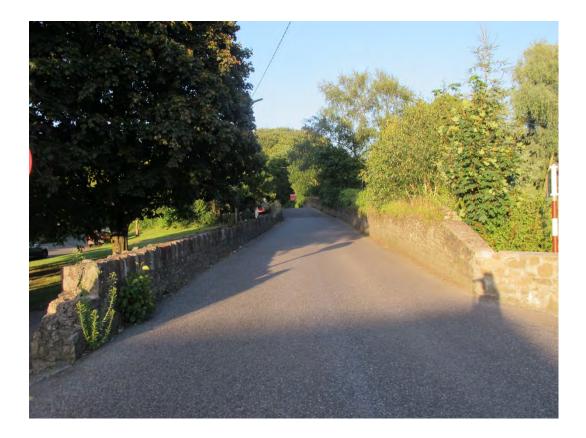
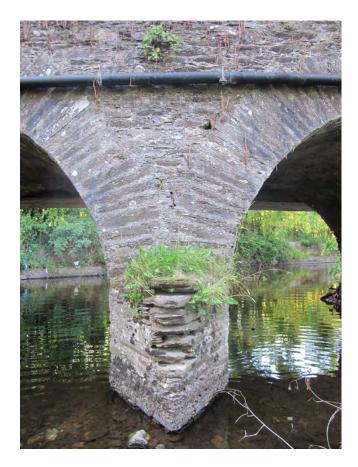


Plate 36: View of CHS 12, bridge, carriageway.



Plate 37: View of CHS 12, bridge, western side of downstream elevation.



**Plate 38:** View of CHS 12, bridge, cutwater on downstream elevation.



Plate 39: View of CHS 12, bridge, downstream elevation.

## Survey Area 4, St. Patrick's Mill

ITM Co-ordinates: E572838, N574634 Townland: Poulacurry South Figures: 12-14 Plates: 40-43

Survey Area 4 is located at St. Patrick's Mill in the townland of Poulacurry South (*Poll an Churraigh*-pool of the marsh). The mill is denoted on the 1<sup>st</sup> and 2<sup>nd</sup> edition OS maps (fig 13-14).

The mill was established in the 18<sup>th</sup> century by a Cork merchant named Sadlier. In 1837 Lewis notes that St. Patrick's beetling-mills was operated by Messrs. Thorley & Son and employed over one hundred people. The site is a recorded monument (CO075-001), however there is no ZON encompassing it on the National Monuments Service on-line database. The mill complex is also a recorded protected structure (RPS), Reg. No. 20907504 constructed c. 1795-1800.

## CHS 13 Tailrace of St. Patrick's Mill

The Tailrace was inspected but the enclosed section of the race running underground and into the mill complex was not investigated for Health & Safety considerations. Furthermore, the building itself was outside the remit of this survey. Two separate races exit the mill and converge into a single race which flows in a southerly direction for *c*.100m before crossing under the R639 roadway and into the Glashaboy River. The eastern race issues from the mill through a 2.5m wide semi-circular

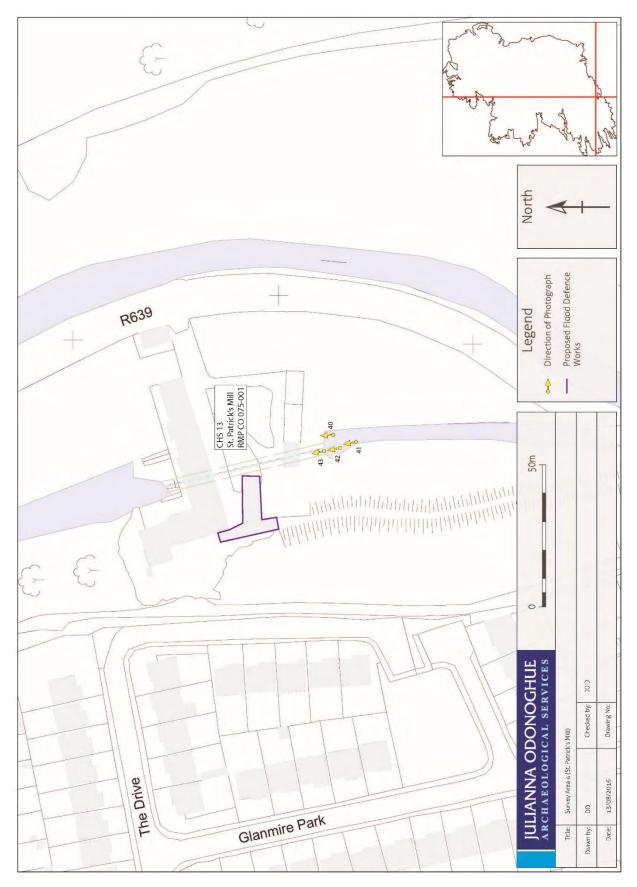
arch of twenty-six voussoirs (Plate 40). To the west of this is a crudely constructed wooden bridge spanning the second race (Plate 41). This is a twin culvert constructed of random rubble stone capped with large stone lintels (plates 42 & 43). Modern repairs comprising concrete support propping have been inserted at the exit, and the eastern channel of the twin culvert has collapsed.

#### Impacts

There will be no impact by the proposed works CO3\_LO1 on the Tailrace CHS 13.

#### Mitigation

No mitigation required.



**Figure 12**: Site location Map, showing survey area 4, St Patricks Mill and proposed flood relief measures.

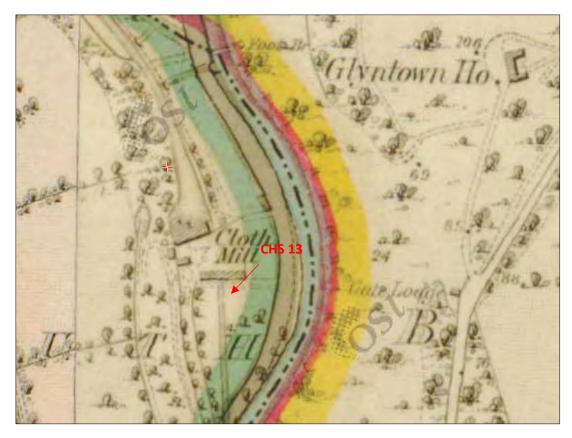


Figure 13: Extract from 1st edition Ordnance Survey map, showing survey area 4, CHS 13

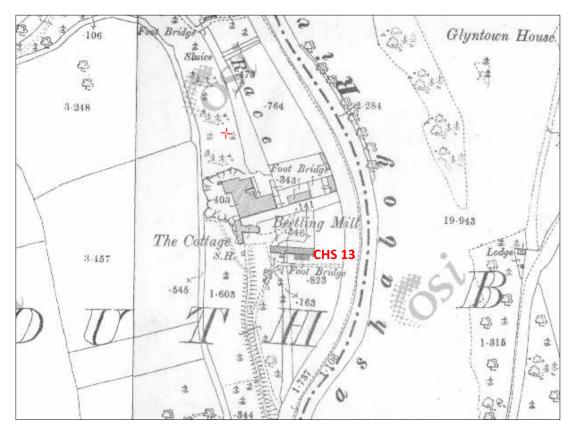


Figure 14: Extract from 2nd edition Ordnance Survey map, showing survey area 4, CHS 13



Plate 40: View of CHS 13, from south.



Plate 41: View of CHS 13, from south.



Plate 42: View of CHS 13, from south.



Plate 43: View of CHS 13, from south.

## Survey Area 5, The Grove

ITM Co-ordinates: -E572759, N574321 to E572735, N574278 Townland: Poulacurry South Figures: 16-17 Plates: 44

Survey Area 5 comprises of a short stretch of the Glashaboy River annotated *The Grove* on the Works Overview Map provided by Lane Purcell Archaeology. It is located downstream of a Mill Weir that denoted on the 1<sup>st</sup> Edition OS map of 1842 crossing the Glashaboy River in a NE-SW direction and connected to a headrace at its southern end that extended underneath the eastern side of Glanmire Bridge. The three-arch bridge which was built between 1770-1810 is a recorded monument (RMP C0075-048) and a recorded protected structure (RPS 00483).

The Mill Weir was outside the scope of this survey. It is situated at the maximum point of the tidal flow and serviced the Fountains (CO075-002001), a Flour Mill, situated 290m to the south in Ballinglanna. By the end of the 19<sup>th</sup> century the weir had been re-built in a NW-SE direction while the headrace had also been widened and re-aligned. From beneath Glanmire Bridge a Sluice controlled the flow to the mill complex that is also denoted on the 2<sup>nd</sup> Edition map and annotated as *The Fountains Flour Mill (Disused)*, (See Survey Area 6 below). The headrace for the mill runs to the east of this stretch of river and was not included in this survey.

## CHS 14 Revetment wall on east bank

The intra-riverine survey noted a revetment wall manifest on the east bank of the river at the northern limits of Survey Area 5 (Fig.15). It is constructed of generally small uncoursed rubble sandstone that vary in size between 0.2m x 0.2m to 0.3m x 0.4. The revetment wall survives to a height of 1.3m and appears to have originally extended along the entire length of the survey area but has collapsed towards the southern limits.

#### Impacts

There will be no impact by the proposed works on the revetment wall CHS 14.

#### Mitigation

No mitigation required.

#### CHS 15 Revetment wall on west bank

A second 2.5m high random rubble stone revetment wall with mortar bonding extends beyond the limit of Survey Area 5 in each direction. The wall is collapsed in sections and damaged by tree root action and erosion. The gable end of a relict extant structure abuts the western riverbank (Fig. 15, Plate 44). It is denoted on all editions of the OS maps. Concrete repairs and underpinning works are visible along this section of the revetment wall which is adjacent to the R639 roadway.

#### Impact

The proposed works C01\_L08 and possibly the pumping station C01-P02 may impact on the revetment wall feature CHS 15.

## Mitigation

Licensed archaeological monitoring should be undertaken by an experienced underwater archaeologist with regard to the proposed construction works C01\_L08 & C01-P02.

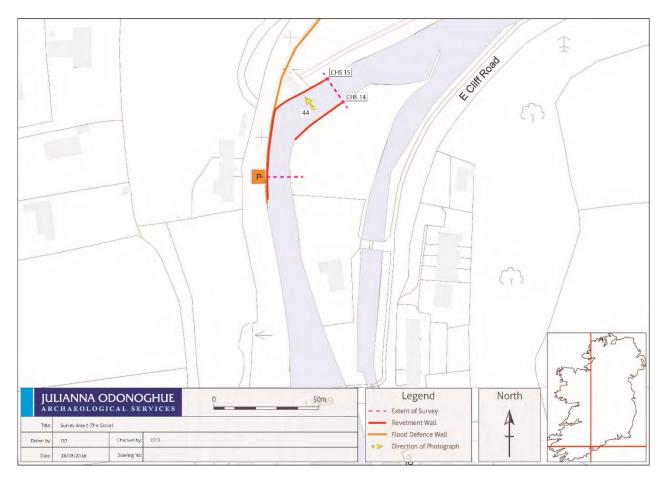


Figure 15: Site location Map, showing survey area 5; The Grove, and proposed flood relief measures.

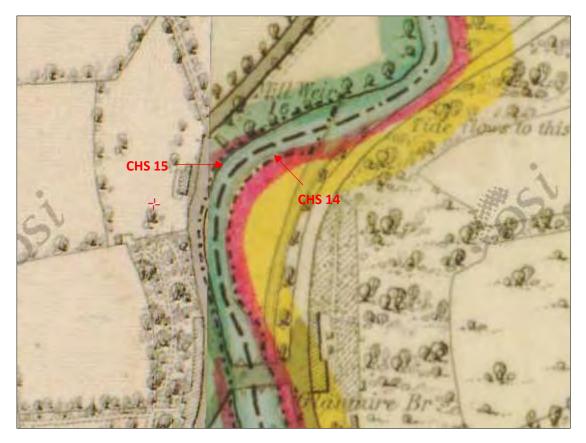
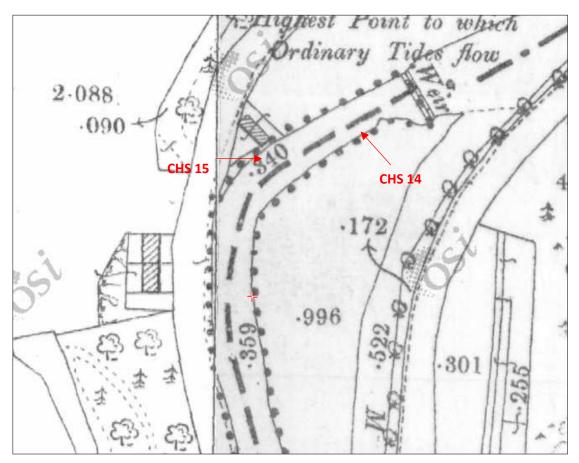


Figure 16: Extract from 1st edition Ordnance Survey map, showing survey area 5, CHS 14 & 15



**Figure 17**: Extract from 2<sup>nd</sup> edition Ordnance Survey map, showing survey area 5, CHS 14 & 15



Plate 44: View of CHS 15, revetment wall, taken from southeast.

## Survey Area 6, The Fountains (CO075-002001)

ITM Co-ordinates: -E572776, N574086 to E572721, N573970 Townland: Ballinglanna Figures: 18-20 Plates: 44

Survey area 6 is located in the townland of Ballinglanna on the Glashaboy River adjacent to a large disused flour mill complex which is a recorded monument (CO075-002001). The NIAH have also a record entry for the protected structure, Reg. No. 20907510, who note that the flour bolting mill was founded in the mid-18<sup>th</sup> century by Samuel Pike. In the 1830's it was owned by the Shaw family who installed a steam engine and produced 25,000 barrels of flour per annum. The mill passed to the Punch family around 1920 and became disused following a fire in 1964 (www.askaboutireland.ie). The mill building was originally 5-storeys high but after the fire in 1964 it was rebuilt as a single storey structure (www.archaeology.ie).

The Fountains is denoted on the 1<sup>st</sup> Edition OS Map of 1842 as a large flour mill complex on the east bank of the river. The 2<sup>nd</sup> Edition OS Map illustrates an expanded mill complex and the addition of a boat house on the river bank at the exit point of the tail race. A lime-kiln (CO075-002002) is located to the south of the mill site. In 1922 George Punch established a shoe-polish factory in the building.

A shoal was noted on the riverbed directly opposite the mill building measuring, 20m NE-SW in length by 5.9m in width. The main channel flows to the east of the shoal.

## CHS 16 Revetment wall on the west bank

A revetment wall extends along the western bank for the majority of Survey Area 6 (Fig. 18, Plate 45). It a roughly coursed sandstone wall, measuring up to 2.0m in height (Plate 45). The wall is constructed of large stones, the basal courses of which measure on average 0.5m x 0.3m. The mortar has been largely washed out.

#### Impacts

There will be no impact by the proposed works on the revetment wall CHS 16.

#### Mitigation

No mitigation required.

## CHS 17 Revetment wall on east bank

A revetment wall is visible on the east bank between the mill building and the tail race (Fig. 18, Plate 46). Due to an accumulation of sediment and dense vegetation it was not possible to examine the northern limits of this wall. It is possible that the wall continues further upstream concealed behind collapsed bank material. The wall is a substantial structure measuring up to 3.0m in height. It is constructed of dressed limestone blocks measuring from 0.30m x 0.30m up to 1m x 0.6m. Mortar bonding is visible in places. Tree root damage is particularly noticeable resulting in portions of the wall having completely collapsed as a result (plate 47 & 48). Three sections of the wall, measuring between 3.8 and 4.5m in width have been repaired with concrete.

#### Impacts

There will be no impact by the proposed works on the revetment wall CHS 17.

#### Mitigation

No mitigation required.

#### CHS 18 Tailrace east bank

The tailrace for the Fountains Mill discharges into the river on a bend at the end of revetment wall CHS 17 (plate 49). The original exit point for the tailrace has been modified. A concrete slip supports /abuts the end of the revetment wall. The current concrete slip structure is most likely a replacement of an earlier 19<sup>th</sup> century slip. A Boat House shown on the 2<sup>nd</sup> Edition OS map, may have served the mill and indeed a nearby recorded Limekiln, CO075-002002. The south-eastern bank of the race has collapsed and now consists of mud with a large quantity of tumbled stone of which some are dressed limestone (Plate 50).

#### Impacts

There will be no impact by the proposed works on the revetment wall CHS 17.

#### Mitigation

No mitigation required.

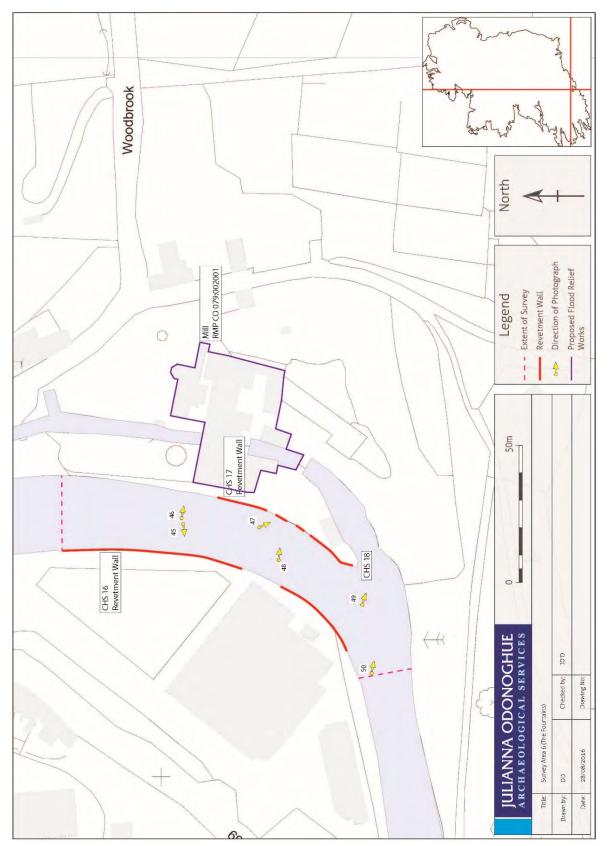


Figure 18: Site location Map, showing survey area 6, and proposed flood relief measures.

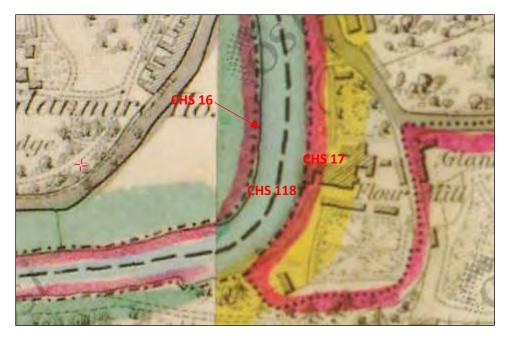
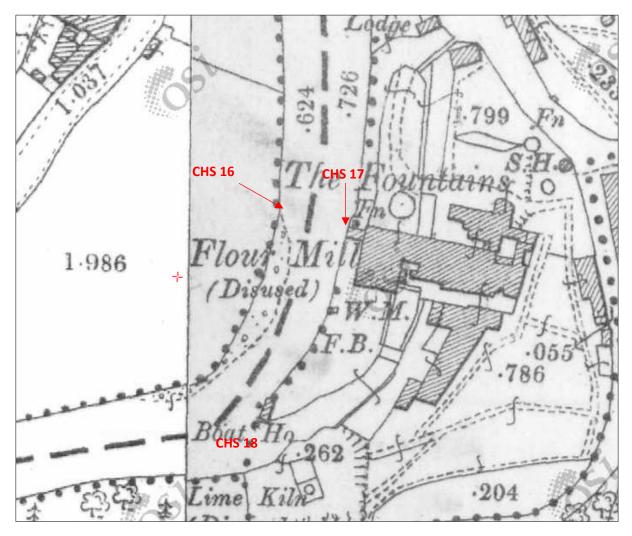


Figure 19: Extract from 1st edition Ordnance Survey map, showing survey area 6, CHS 16-18



**Figure 20**: Extract from 2<sup>nd</sup> edition Ordnance Survey map, showing survey area 6, CHS 16-18



Plate 45: View of CHS 16, revetment wall, taken from east.



Plate 46: View of CHS 17, revetment wall, taken from west.



Plate 47: View of CHS 17, revetment wall, taken from northwest.



Plate 48: View of CHS 17, revetment wall, taken from west.



Plate 49: View of CHS 18, tailrace, taken from west.



Plate 50: View of CHS 18, tailrace taken from southwest.

## Survey Area 7

ITM Co-ordinates: E572688, N573965 to E572379, N573667 Townland: Poulacurry South and Lotamore Figures: 21-23 Plates: 51-54

Survey Area 7 comprises a narrow east-west section of the Glashaboy River that opens substantially into a large expansive river bend forming the northernmost limits of the Glashaboy Estuary beside Glanmire Village.

## CHS 19 Revetment wall on eastern bank

CHS 19 comprises a revetment wall extending along the east bank (Figure 21, Plate 52). The wall is constructed of roughly coursed stone with the larger stones (0.5m x 0.30m) at the base and smaller stones forming the upper courses. The revetment wall survives to a reduced height of I.3m at the northern end and up to 4.0m in height in the southern end. Mature woodland extends along the eastern bank.

## Impacts

There will be no impact by the proposed works on the revetment wall CHS 17.

## Mitigation

No mitigation required.

## CHS 20 Revetment wall on west bank.

The heavily vegetated revetment wall on the west bank survives intermittently exposing the earthen bank (Figure 21,). Some sections have been replaced with boulders and concrete walling. The original stone revetment wall survives to a height of 1.8m. However, the basal courses are concealed beneath estuarine mud / silts (Plate 51). The west side of riverbed is also strewn by large quantities of debris and branches or trees deposited on the mud, largely by tidal action.

Locally this section of the western riverbank is known as the Sand Quay. However, no features of a formal quay wall were recorded here. Apparently, vessels up to 40-tons burden transported goods to this quay which was also referred to as the Dock and the Arch near the old Post Office (NIAH Reg. No. 20860015) built *c.* 1820 (www.askaboutireland.ie). The 1<sup>st</sup> Edition OS map shows a linear narrow strip of ground that may reflect the original quay area. However, it is not annotated. Today there is a narrow strip of grassy verge, 3.0m wide between Barry's Terrace and the river *c.* 5.0m above the riverbed. Furthermore, a short section of stone wall, 1.6m in height is also visible at the northern end of Barry's Terrace. These features may possibly reflect the remains of an earlier quay but only speculatively.

It 1845 it was reported to the commissioners of that the Glanmire River was 'in a shockingly neglected state'. It was also noted that 'the Glanmire river would be very useful, if properly cleared; there was still very important traffic in sand carried on in that country, and vessels of 100 tons used to sail up there' (2nd report to the commissioners 1845). The Mayor also reported to the Commissioners that landed proprietors, from whom the grand jury was selected, neglected to do anything.

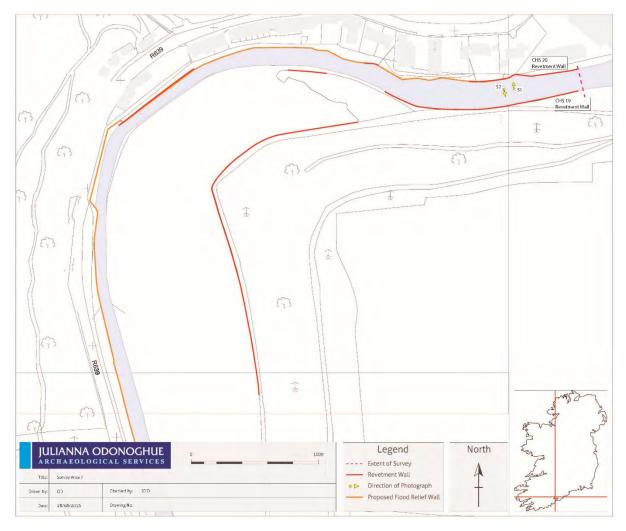
#### Impacts

- The proposed flood defence wall C01-L09 may impact on the existing sections of the river revetment wall CHS20 (Fig).
- The proposed flood defence wall C01-L09 may impact on the potential subsurface remains of the Sand Quay that existed in the vicinity of Barry's Terrace.

#### Mitigation

Licensed archaeological monitoring should be undertaken by an experienced underwater archaeologist with regard to the proposed construction works C01\_L09.

Licensed archaeological testing should be undertaken at Sand Quay. Further mitigation may be required based on the results of this archaeological testing.



**Figure 21** Site location Map, showing survey area 7, CHS 19, 20 &21, and proposed flood relief measures.

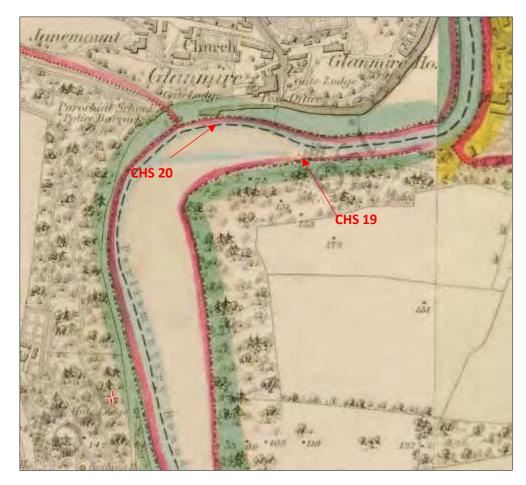
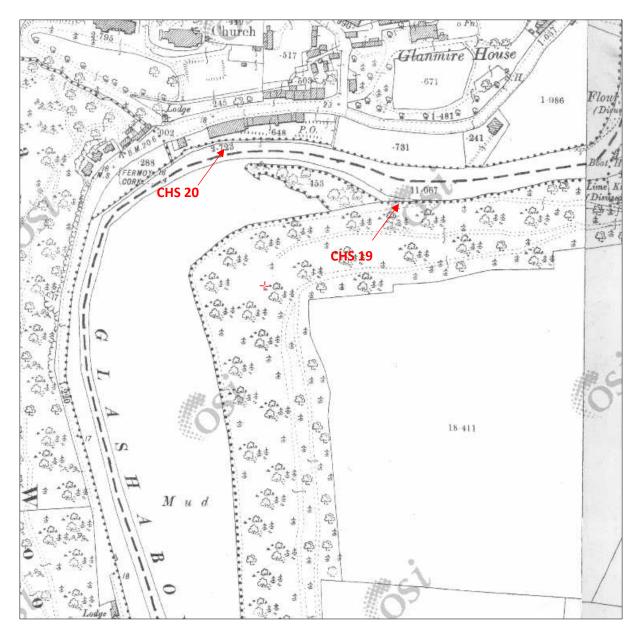


Figure 22: Extract from 1st edition Ordnance Survey map, showing survey area 7, CHS 19-21



**Figure 23**: Extract from 2<sup>nd</sup> edition Ordnance Survey map, showing survey area 7, CHS 19-21



Plate 51: View of CHS 20, revetment wall, taken from south.



Plate 52: View of CHS 19, revetment wall, taken from north.



Plate 53: View of CHS 20 , Sand Quay.



Plate 54: View of Glashaboy Estuary.

# Metal Detection Survey

All sections of the survey areas were subjected to metal detection also. Copious pieces of modern debris were recorded. However, nothing of archaeological interest was found.

## 7. Wider Impacts

The proposed channel maintenance that is to extend for over a distance of 4759m from the downstream end of the proposed defence wall at Barry's Terrace (C01-1056) to the confluence of the Bleach Hill Stream and Glashaboy River (C01-5815), may impact on existing cultural features as identified in this survey as well as potential unknown subsurface features and artefacts along its almost 5km extent.

## 8. Mitigation

Licensed archaeological monitoring should be undertaken by an experienced underwater archaeologist with regard to the proposed maintenance work.

# 9. References

Barry, T.B. 1987. The archaeology of Medieval Ireland. London

Cooney, G and Mandal, S 1998 The Irish Stone Axe Project; Monograph 1 Wordwell: Bray

Empey, C. A. 1982. Medieval Knocktopher: a study in manorial settlement – part 1. Old Kilkenny Review 2, No. 4, 329-342

Flanagan, L.N.W. 1988. Irish annals as a source for maritime history, 1400-1600 AD. In G. Mac Niocaill and P.F. Wallace (eds), *Keimelia: studies in medieval archaeology and history in honour of Tom Delaney*, 500-3. Galway.

Grogan, E. 1996 'Neolithic houses in Ireland' in Darvill, T. and Thomas, J (eds.), *Neolithic houses in northwest Europe and beyond*, 41-62. Oxford. Short Run Press.

Hanley, K.F. & Hurley, M. F. (eds). 2013. *Generations: The archaeology of five national Road Schemes in County Cork*. NRA Scheme Monograph 13, National Roads Authority Dublin.

Hawkes, A. 2014. The beginnings and evolution of the *fulacht fia* tradition in early prehistoric Ireland. *Proceedings of the Royal Irish Academy* 114C, 89–139.

Ó Brien, A F 1993 'Politics, economy and society: the development of Cork and the Irish southcoast region c. 1170 to c. 1583', *in* P Ó Flanagan & C G Buttimer (eds), *Cork History and Society*, 83–156. Geography Publications, Dublin.

O'Flanagan, P (1993) 'Three Hundred Years of Urban Life: Villages and Towns in County Cork' in *Cork History & Society,* Patrick O'Flanagan & Corneilus G. Buttimer (eds.). Geography Publications, Dublin.

Power, D. & Lane, S. et al (eds.) 2000, *Archaeological Inventory of County Cork, Vol. 4: North Cork.* The Stationery Office. Dublin.

Smyth, W J 1993 'Social, economic and landscape transformations in County Cork from the mid eighteenth to the mid-nineteenth century', *in* P Ó Flanagan & C G Buttimer (eds), *Cork History and Society*, 655–98. Geography Publications, Dublin.