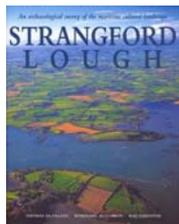




The Archaeology of Rivers and Estuaries, a fragile resource

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River basins and estuaries have been focal points for settlement and exchange since earliest times. The evidence of human activity is everywhere to be seen, but the resource is fragile, and our knowledge of its potential is very primitive. An understanding of hydrology is essential in helping to manage these cultural assets. This poster challenges the conference to consider the most appropriate ways to protect cultural heritage while also addressing the needs of today's world and its dynamic weather systems. We could ask one simple question: when is dredging really necessary?



Research in Strangford Lough and also in the Shannon estuary has shown the delicate nature of the archaeological resource. This work has highlighted a wide range of features associated with coastal exploitation. One of the primary site types are fish weirs, made from slim timbers, and generally located off the shoreline on what are today tidal mudflats. The use of fish traps goes back into prehistory, and in the medieval period we see the Church managing this resource on an industrial scale.

Erosion affects Archaeology as it does modern society, but the impacts of coastal and riverine processes on the the inherited landscape are not quantified. Archaeologists are beginning to study river systems to chart such matters, but there are also many individual sites where significant erosion and deposition are noted. North of Greystones, Co. Wicklow, the site of the Gaelic lordship of the MacGillamachulmog is currently disappearing at the rate of 1m/year, as the soft boulder clay cliffs are exposed fully to the sea.



Coastal erosion at the only Gaelic lordly centre to survive the Anglo-Norman Conquest in the Dublin area is having a dramatic impact.

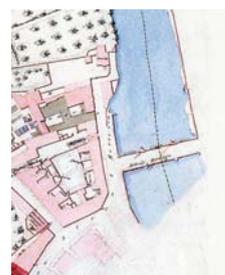


Archaeologists recording a 15th-century merchant's house that fronted onto the river Boyne in Drogheda and has since been absorbed into the modern quayside. The building retains a sea-door above the HWM for loading merchandise onto boats. It also has two latrine chutes placed at the LWM to ensure daily 'flushing'.

There remains much in our river courses and channels that is quite visible but has not yet been noticed or recorded. Archaeological survey work has traditionally not included the foreshore areas, but the situation has changed and such work is now contributing to a growing body of information. Detailed examination of the 19th and 20th-century south quays in Drogheda, Co. Louth, revealed that the modern stone and concrete work is knitted against much older construction, associated with the presence of medieval merchant's houses and portions of the town wall, which would have extended out into the active river channel in the 15th century, to facilitate ship-building and river traffic.



John's Bridge, Kilkenny, 2000



John's Bridge, 1841 OS map



Underwater image showing the exposure of one of the series of medieval bridge arches revealed

John's Bridge, Kilkenny City, was designed by Alexander Burden and built in 1910 as the longest reinforced concrete single-span bridge in Ireland and Britain, and the first such bridge in Ireland. Archaeological excavation in 2000-02 as part of the River Nore Flood Alleviation scheme discovered one reason behind this new design; the riverbed was so cluttered with the remains of former bridge piers there was no room left in which to found a new inwater pier sequence.

Extreme flood events record the destruction of Kilkenny's bridges in 1338, 1564 and 1763. Excavation revealed a sequence of collapsed piers and associated timberwork buried under the covering surface shingle.



The 'Monk's stone', a 14th century effigial tombstone recovered at John's Bridge

Rivers will always present surprises. 19 medieval tombstones were found under John's Bridge. In contrast with stones from St. Canice's Cathedral and other churches in the town, those in the Nore were not walked over for centuries and are in excellent condition. They represent an important addition to the burial record, and may have been thrown into the river as an act of iconoclasm during the Reformation.

Extreme weather events, increased surface run-off, and building on the floodplains exacerbate the call for new flood relief schemes throughout Ireland. The high level of archaeological risk within river channels that flow through our towns has surprised both engineers and archaeologists alike. The artefacts and features remain an important cultural asset. Is dredging the most suitable mitigation? It carries very significant and permanent negative impacts on existing cultural-environmental resources, and is ultimately only short-term as river sediments will eventually re-establish. Should we invest more in embanking river channels, and reducing settlement on the floodplains?