
Chapter 14: Archaeological & Cultural Heritage

Chapter 14

Archaeological & Cultural Heritage

14.1 Introduction

The following chapter was prepared by Aislinn Collins of CRDS Ltd to assess the impact that the Proposed Development will have on the archaeological and cultural heritage sites within the existing site and within the surrounding study area. It is supplemented by a stage 1 Underwater Archaeological Impact Assessment of the site by the Archaeological Dive Company (ADCO).

14.2 Methodology

14.2.1 Record of Monuments and Places

The Record of Monuments and Places (RMP), comprising the results of the Archaeological Survey of Ireland, is a statutory list of all recorded archaeological monuments known to the National Monuments Service. The relevant files for these sites contain details of documentary sources and aerial photographs, early maps, OS memoirs, the field notes of the Archaeological Survey of Ireland and other relevant publications. Sites recorded on the Record of Monuments and Places all receive statutory protection under the National Monuments Act 1994. The information contained within the RMP is derived from the earlier non-statutory Sites and Monuments Record (SMR); some entries, however, were not transferred to the statutory record as they refer to features that on inspection by the Archaeological Survey were found not to merit inclusion in that record or could not be located with sufficient accuracy to be included. Such sites however remain part of the SMR. The record is a dynamic one and is updated to take account of on-going research. The Record of Monuments and Places was consulted in the Archives of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. The Recorded Monuments and Places within c. 500m of the proposed development are listed in Appendix 14.1 at the end of this chapter and identified in Plate 14.1 (See also Figure 14.1 in Volume 3 of this EIAR).

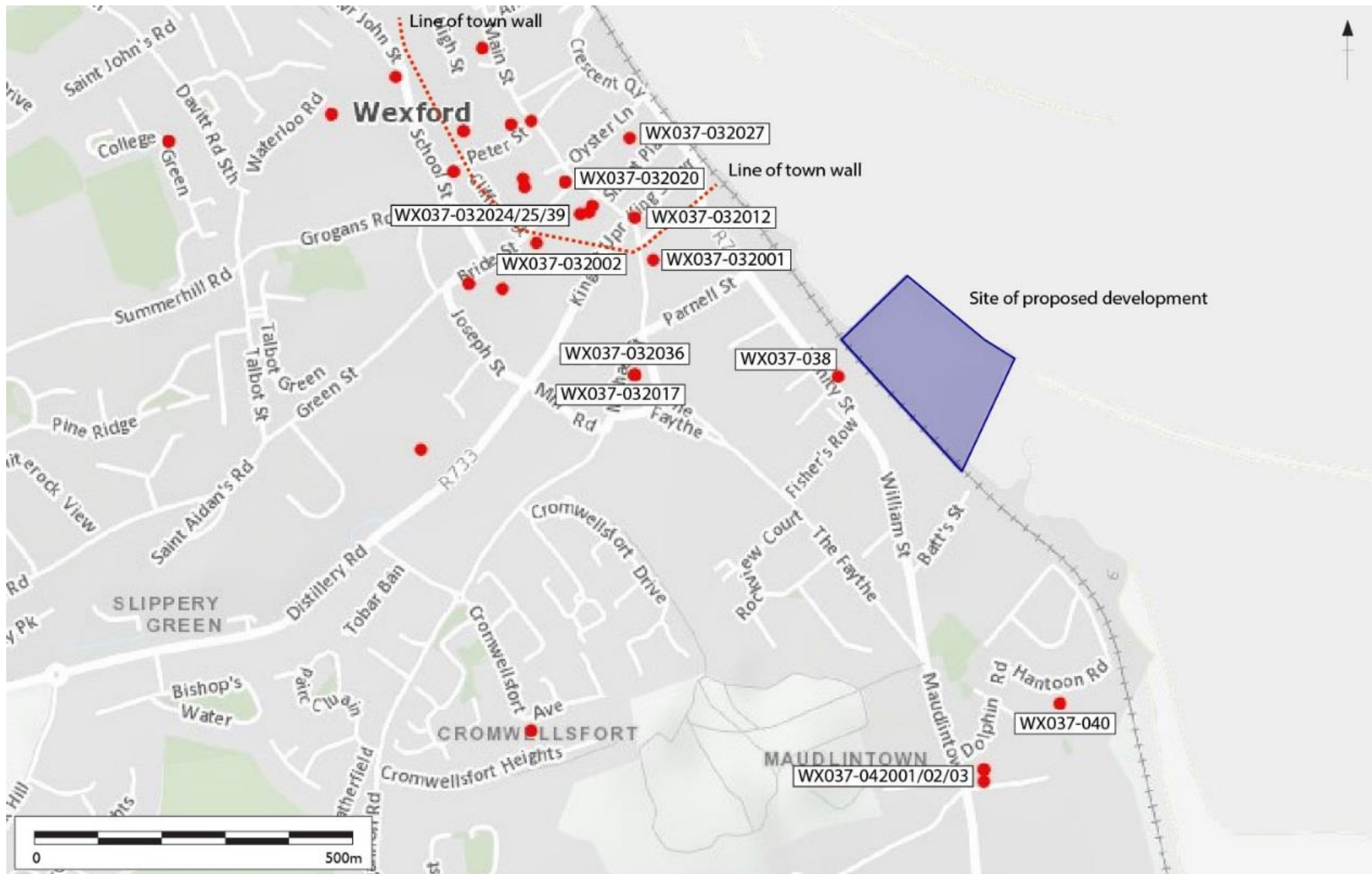


Plate 14.1 Recorded archaeological monuments and places within c. 500m of the proposed development (source www.archaeology.ie; Alastair Coey Architects, 2008).

14.2.2 Topographic Finds

The National Museum of Ireland's (NMI) topographical files are a national archive of all known archaeological finds from Ireland. They relate primarily to artefacts but also include references to monuments and contain a unique archive of records of previous excavations. The topographical files were consulted to determine if any archaeological artefacts had been recorded from the site. Other published catalogues of prehistoric material were also studied: Bradley and King (Urban Archaeological Survey 1990), Raftery (1983 - Iron Age antiquities), Eogan (1965; 1983; 1994 - bronze swords, Bronze Age hoards and goldwork), Harbison (1968; 1969a; 1969b - bronze axes, halberds and daggers). No topographical finds are recorded from the site of the proposed development.

14.2.3 Cartographic Sources

Cartographic sources were used to identify additional potential archaeological and cultural heritage constraints. Primary cartographic sources consulted consisted of the Ordnance Survey 6" (see Plate 14.2) and 25" maps, and large-scale town plans (T.C.D. Map Library, www.osi.ie, Colfer 2008). Manuscript map sources included the Down Survey map of 'The Barony of Forth in ye County of Wexford, 1654-56 (<http://downsurvey.tcd.ie/down-survey-maps.php#bm=Forth&c=Wexford>).



Plate 14.2 Extract from First Edition Ordnance Survey 6" map of Wexford, showing site of Wexford Dockyard (source www.osi.ie).

14.2.4 Previous Excavations

The excavation bulletin website (www.excavations.ie) was consulted to identify previous excavations that have been carried out within the study area. This database contains summary accounts of excavations carried out in Ireland from 1970 to 2017 (see Appendix 14.2).

14.2.5 Local Authority Development Plan

The Wexford County Development Plan 2013 - 2019 and the Wexford Town and Environs Development Plan 2009 – 2015 (extended to 2019) were consulted. The

plans include policy objectives for the protection of the town and county's archaeological and cultural heritage. The proposed development is located outside the Zone of Archaeological Potential identified for Wexford Town.

14.2.6 Historical Research

Sources consulted included A History of the Town and County of Wexford (Hore 1900-11), the Journal of the Old Wexford Society, the Urban Archaeological Survey of Wexford Town (Bradley and King 1990) and Wexford: A Town and Its Landscape (Colfer 2008) (see Bibliography for full list of references).

14.2.7 Underwater Archaeological Impact Assessment

A stage 1 underwater archaeological impact assessment of the site was undertaken by ADCO Ltd. The assessment comprised a walkover inspection of the development area undertaken at Low Water. A second stage of the assessment will be undertaken in 2019, including licensed underwater inspection and survey of the sub-tidal areas (see Appendix 14.3 for full report text). An underwater archaeology impact assessment which was carried out by ADCO Ltd in 2008 for a previous development has also been reviewed and is included as Appendix 4.4.

14.3 Description of Receiving Environment

14.3.1 Prehistoric

While the first definitive evidence for settlement at Wexford comes from the Viking or Norse period it is likely that prehistoric peoples would have been attracted to the shores of Wexford Harbour for its plentiful food supplies, its importance as a routeway and as a strategic access point (Colfer 2008, 20). Although reclamation along the foreshore and urban expansion have changed the character of the archaeological landscape within the town, prehistoric sites are known from its hinterland e.g. the Neolithic occupation site at Kerlogue and Bronze Age burnt mounds at Hayestown and Johnstown indicating that prehistoric people were settled in the vicinity.

14.3.2 Early Medieval

The earliest references to Viking activity in Wexford Harbour dates to the early part of the ninth century when the island monastery of Begerin, located to the north of Wexford town, was attacked. From the late ninth century, there are references in the Annals to the 'foreigners' of Loch Garman and it is likely that a longphort or temporary base had been established there by this time (Hore 1900-11 Vol. V. 12, Annals of the Four Masters, Annals of Ulster). The placename Wexford is derived from the Old Norse '*Ueigsfiord*' '*the inlet of the waterlogged island*' or '*Waesfiord*' a '*broad shallow bay*'. A substantial settlement grew up at Wexford, comprising a town bounded by defences (RMP WX037-032002) with extra-mural suburbs to the south and south-west. It is speculated that the Hiberno-Norse town was surrounded by an earthen embankment faced with a stone wall or revetment surmounted by a wooden palisade, the whole surrounded by a significant fosse or ditch (Alastair Coey Architects 2008, 3). Archaeological excavations on Mary Street revealed evidence of a substantial ditch some 20m in width which has been interpreted as part of the Hiberno-Norse defences. The internal layout of the town has changed little since this period with Main Street acting as the principal thoroughfare and minor lanes running west to the town wall and east towards the sea. During the Hiberno-Norse period the seafront was significantly closer to Main Street than it is at present. The seafront was not defended and a series of laneways led to jetties or quays projecting out into the harbour (Colfer 1990-1, 18).

The proposed development is located to the south-east of the Hiberno-Norse town. One of the pre-Norman churches, the Church of the Holy Trinity (RMP WX037-032014) was located in this area. Its exact location is not known but was described in the seventeenth century as being 'near the castle'. The church was demolished during the Cromwellian period and its stone used to repair the adjacent castle (RMP WX037-032001-). Its location is remembered in Trinity Street and the location of a holy well (RMP WX037-038) of the same name indicated on the foreshore on the Ordnance Survey maps and now within reclaimed land to the immediate west of the proposed development.

The proposed development is located on reclaimed land to the east of the area known as '*Faythe*' or '*Feagh*', derived from the term '*Faiche*' which corresponds to an open area or green used for fairs. A fair was held annually on the 24th August and the Ordnance Survey indicates a widening at the northwest end of The Feagh that would have functioned as the site of a market (see Plate 14.3 and Plate 14.4).



Plate 14.3 The Faythe in the late nineteenth century (Lawrence Collection Photograph, copyright National Library of Ireland).

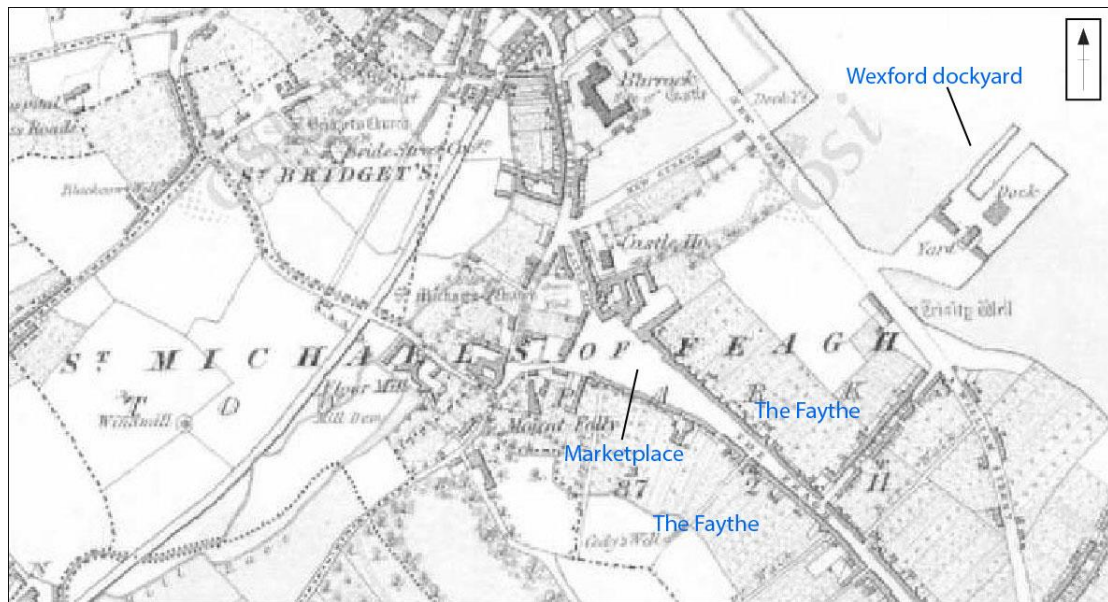


Plate 14.4 Extract from First Edition Ordnance Survey 6" map of Wexford, showing site the Faythe (source www.osi.ie).

Giraldus Cambrensis records the burning of the suburbs of Wexford following the arrival of the Anglo-Normans and it is possible that this includes the area of the Faythe. St. Michael's Church (RMP WX037-032017) was the parish church. The rectory of St. Michael's was in the ownership of the Hospitallers of Kilmainham at the time of the Dissolution. Burgesses are recorded in the suburb at that time and it is possible that it functioned as a separate borough. The church was demolished during the Cromwellian period and the stone was used to repair the castle (RMP WX037-032001). No above ground remains now exist of the site but its location is marked by a raised sub-rectangular graveyard defined by masonry walls (RMP WX037-032036).

14.3.3 Later Medieval

Following the Anglo-Norman landing at Bannow Island on the east side of Bannow Bay, the combined forces of Robert Fitz Stephen and Diarmait Mac Murchadha marched on Wexford town. At the outset of hostilities, the Hiberno-Norse inhabitants were confident of their ability to do battle with the Normans but on realising the strength of the opposing force they burnt the suburbs and withdrew within the town defences. The Normans proceeded to set fire to the fleet within the harbour and the towns people surrendered the following day (Colfer 2008, 39). The town was subsequently granted by Mac Murchadha to Fitz Stephen and Maurice Fitz Gerald (Bradley and King 1990, 148).

Giraldus Cambrensis' account of the Anglo-Norman attack on Wexford indicates that town defences existed by this time. He uses the word '*murus*' to describe the defences which may simply mean an earthen rampart. Archaeological excavations at Waterford and Dublin, which are similarly described, indicate that stone walls were already in existence and it is possible that this was also the case in Wexford. It is suggested that following the arrival of the Anglo-Normans at Wexford that the town defences were rebuilt though there is no definitive archaeological evidence to support this. The line of parochial boundaries, and the architectural design of surviving mural towers indicates that the Hiberno-Norse defences were extended to enclose the market place, ferry landing and possible monastic site creating the parish of Selskar (Colfer 2008, 64). Murage grants were collected at various points in the fourteenth century and the parliament enacted that monies should be spent on the maintenance

of the wall in the mid-fifteenth century (Hore 1900-11, Vol. V., 60, 107, 122). During the Rebellion of 1641 Wexford was one of the chief ports of the Confederate forces and a contemporary account indicates that the citizens of the town attempted to strengthen the town and entrench the town wall and clear houses that had been built along its line (Hore 1900-11 Vol. V., 254). Cromwellian accounts of this period indicated that the town wall *'pleasantly seated and strong, having a rampart of earth within the wall nearly 15 feet thick'* (Thomas 1992, 210). While development has impacted on the town walls, gates and mural towers, substantial stretches are still standing to the present day. The closest gate to the proposed development was Castle Gate, due to its proximity to the site of Wexford Castle, it was also known as South Gate or Barrack Gate.

When Henry II visited Ireland in 1171-2 he took Wexford into his own hands. He stayed for a prolonged period in the town while awaiting favourable weather conditions to return to Wales (Colfer 2002, 158-9). His stay may have added impetus to the town's development. Following his departure, he granted the town to Strongbow and for a short period it became the principal town of the Lordship of Leinster. Records indicate that the town's economy was centred around overseas trade from the port comprising agricultural products including wheat, wine and cloth and fish, particularly herring. The port lost some of its significance following the foundation of the town of New Ross in the early thirteenth century but its fortunes revived somewhat in the seventeenth century when it overtook New Ross as the principal port in the county. The town's growth during the middle ages is reflected in a series of successive charters which expanded the privileges of the townspeople including Aymer de Valence in 1317, Henry IV in 1410, Henry VIII in 1538, and James I in 1609.

Accounts indicate that port moorings were some distance from the town centre as the Anglo-Norman attackers were able to set fire to the ships there before capturing the town. The core of the later medieval port is described by Hadden (1968, 11) as a pool c. 50m west or inland of the present Crescent Quay. Early seventeenth century documentary records include a list of the towns quays and wharfs including *'the quay of the Pale (Paul's Quay), Richard Hay's Quay, Nicholas Frenche's Quay, Turner's Quay, Morne's Quay, Bollane's Quay, Staple's Quay and Hassane's Quay'* (O'Leary 1994, 55-6).

The site of the Norman castle (RMP WX037-032001), is located c. 300m to the northwest of the proposed development on a site now occupied by the former military barracks. The site was located on a rock outcrop overlooking the town and port immediately outside the southern town defences. It is first recorded in 1231 and may have occupied the site of an earlier Norse or Norman defensive position. An inquisition of 1323-4 describes the castle as a *'stone castle in which there are four towers roofed with shingles...but it needs much repair. There is also one hall roofed with shingles and two other houses thatched'*. In the first half of the seventeenth century it was described in documentary sources as *'a small square regularly enough fortified and washed by the sea'* indicating that land reclamation had not yet progressed east of this point. Subsequent descriptions indicate it was out of repair. After the Restoration it was granted to a Mr. Borr and later sold to the government in the early eighteenth century. It was converted into a barracks in 1725. Mid-nineteenth century excavations revealed the substantial foundations of the castles tower and walls.

Due to pressure on space within the town defences, reclamation of land from the harbour was an ongoing process from at least the late thirteenth century. This was necessary to provide additional land for building and to formalise the waterfront and

quay system (Colfer 2002, 168). Wexford's medieval shoreline coincided with the lower lying portions of Main Street. Pipelaying at the Bullring in the 1990s exposed sea sand with an embedded oak timber several metres below the present road surface. Above the sand was a layer of material containing medieval pottery, bones and shells. Work at South Main Street provided evidence for extensive land reclamation and consolidation. Post-and-wattle fences sometimes reinforced with timber planks were used to form revetments. Domestic rubbish was used to reclaim the area behind the revetment and paved surfaces were subsequently provided over. Archaeological testing (RMP WX037-032027; Licence no. 03E1729) on a site fronting onto Paul Quay uncovered sections of walls running northeast to southwest. One of the walls was encountered at a depth of 1.3m in association with organic material and Leinster ware pottery and is interpreted as a possible quay wall and reclamation material. Approximately one third of the walled town was constructed on reclaimed land.

According to the census of 1659 Wexford had a population of 902. In 1682 it was described by Colonel Solomon Richards as 'A walled town on all sides except to the sea-poole or Harbour, which washeth the north-east side thereof. It's of the form of an half oval divided the long way; it hath five gates for entrance...but now about two-thirds of it lies in ruins through the decay of the Herring fishing, which was so great that about the year 1654.....The greatest number of the inhabitants are Irish but the magistracy are all English or Protestants.....It hath a well frequented market on Saturdays, and another on Wednesdays' (Hore 1900-11 Vol. V., 363-4). The Down Survey map of the Barony of Forth, 1654-56 shows the 'citty' at this time, the walls are clearly evident along with five jetties projecting into the harbour (see Plate 14.5).

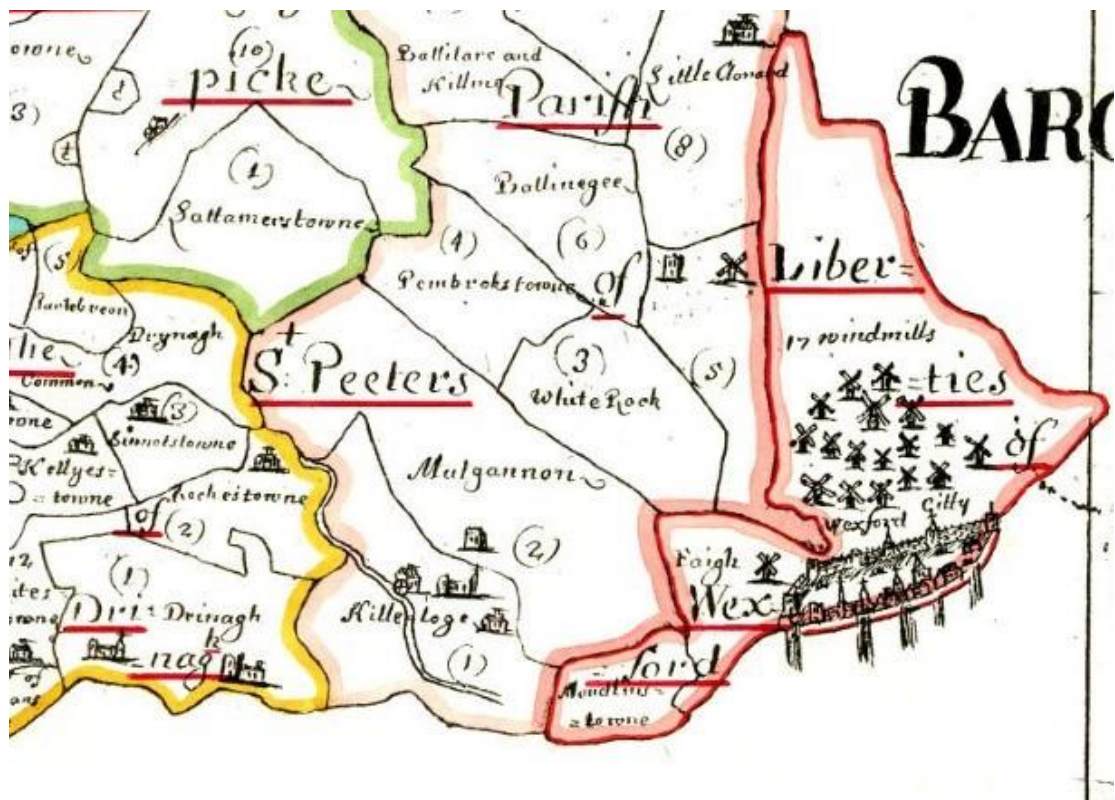


Plate 14.5: Down Survey map of the 'Barony of Forth in ye County of Wexford, 1654-56' (source <http://downsurvey.tcd.ie/down-survey-maps.php#bm=Forth&c=Wexford>).

14.3.4 Modern Period

Nineteenth century land reclamation projects further changed the face of the harbour (see Chapter 15 for further details). One of the key instigators was John Edward Redmond. Redmond reclaimed the northern portion of the Trinity Wharf site from the harbour in the early 1830s (see Plate 14.2). The newly reclaimed land was developed as the Wexford Dockyard which opened in 1832 (O'Leary 2014). The northern corner of the dockyard comprised a patent slip, indicated on Ordnance Survey maps of the site. While the site of the slip and dock has been infilled the structure may survive below the current ground surface.

The National Monuments Service Wreck Viewer indicates the location of a shipwreck cluster located to the immediate west (Ref. W11596, W11606, W11586) and individual shipwrecks to the north (Ref. W10637) and east (Ref. W10641) of the proposed development (see Plate 14.6). No further information on the name of these wrecks or their date of loss is available. A shipwreck identified in the mudflats to the north-west of the former dockyard in 2001 (see Plate 14.6). The site was assessed by the ADCO as part of a licenced underwater archaeological assessment undertaken for a previously proposed development at Trinity Wharf (Licence No. 08D005/08R001). This development was not undertaken. The wreck survived as a stem post rising over 2m above the mudflats. In addition to the stem the ribs and stern of the vessel were exposed above the mud. The timber-built vessel measured 19.69m in length and 4.62m in width. The position of the wreck was 20m west of the location of the shipwreck cluster (Ref. W11596, W11606, W11586) noted above. No indications of any wreckage were noted above the location of this cluster (ADCO 2008, 17-4 – 17-9). A loose ship's plank was also identified during the assessment. The plank retains holes for wooden pegs, c. 2cm-3cm in diameter and is 2m long, 14cm wide and c. 10cm thick. It was un-associated with any other features and lay loose on the seabed. Please note that the potential for shipwrecks, individual ship timbers and other archaeological features exists in pre-reclamation levels across the site.



Plate 14.6 Locations of wrecks identified near the proposed development (source National Monuments Service Wreck Viewer and ADCO 2008).

A mid-nineteenth century Ordnance Survey map of the site indicates a stone built breakwater located to the south of Trinity Wharf. The breakwater forms a small enclosed harbour known as Goodtide Harbour and formally as the Cot Safe. Cots are traditional timber-built, flat-bottomed boats which continue to be built in Co. Wexford particularly in Rosslare and Wexford Harbours. The Wexford Cots were traditionally used for herring fishing and the shallow draught allowed them to negotiate the shoals, sandbanks and mudflats of the estuarine waters. Basset's Guide of 1885 records that the town's fisheries provided employment to many townspeople with twenty-five craft 'smacks, luggers and cots' engaged in fishing off the harbour.

14.3.5 Site Survey

The site of the proposed development comprises an area of land reclaimed from the harbour between the early nineteenth and mid-twentieth centuries. The ground is relatively flat and raised above the level of the harbour. The Dublin-Rosslare rail line runs along the southern boundary of the site. Most of the buildings that stood on the site have been cleared. The remains of one concrete structure stands but is unroofed. There are significant piles of concrete rubble located throughout the site. The concrete floor slabs of several the former factory buildings survive particularly in the southern portion of the site.

A wall of squared rubble red sandstone runs in a north-east to south-west direction through the site and survives to a height of c. 2m (see Plate 14.7). This marks the boundary between the north-western portion of the site which was reclaimed in the early nineteenth century and the south-eastern portion of the site which was reclaimed in the later nineteenth and twentieth centuries.



Plate 14.7 Boundary wall marking the edge of former dockyard.

Elements of the infrastructure of the nineteenth century dockyard survives in the north-western portion of the site. A set of rubble red sandstone gate piers stands along the southern boundary of the former dockyard. In an area of collapsed material at the northern corner of the site, three large roughly dressed red sandstone blocks were noted (see Plate 14.8). These appeared to be aligned and may

represent the western face of the former dock. It is possible that the dock walls were left in situ when it was infilled and survives bellow the ground surface.



Plate 14.8 **Possible face of nineteenth century dock.**

The north-western edge of the site is an early nineteenth century wall of red sandstone which has a slight batter at the base which extended below water level at the time of the survey (see Plate 14.9). The wall was heightened by shuttered concrete in the mid-twentieth century. The wall is highest, surviving to a height of over 3m, at south-western corner which corresponds with a building indicated on the 1st edition Ordnance Survey Map and contemporary illustration of the site.

The remains of a timber and cast-iron wharf run along the north-eastern edge of the site. This does not appear on the 1st edition Ordnance Survey map and is likely associated with the Star Iron Works or subsequent uses of the site. There is a large masonry beacon marking the eastern corner of the site. The beacon is indicated on the 25" Ordnance Survey map of the site and marked the eastern termination of a masonry breakwater, it is possible that the remains of the breakwater survive below the reclaimed ground surface. The stem post of the wreck investigated by ADCO was visible in shallow water to the north-west of the site (see Plate 14.10). No indications of any wreckage associated with the other possible wreck sites (Ref. W11596, W11606, W11586, W10637 and W10641) was noted during the site survey.



Plate 14.9 Wall along north-western edge of site.



Plate 14.10 Stem post of wreck off south-western corner of site.

The stone breakwater to the south of the site provides a small sheltered harbour known as Goodtide Harbour (see Plate 14.11).



Plate 14.11 Goodtide Harbour with traditional timber cots pulled ashore.

14.4 Description of Potential Impacts

This section assesses the predicted impacts associated with the proposed development in the absence of mitigation measures.

The proposed development is located at the south-east end of Wexford town and at the southern end of the town's quays. The scheme will encompass a total of 5.47 ha; 3.6 ha of this will comprise existing land reclaimed from the harbour during the nineteenth and twentieth centuries, while the additional area required outside of the existing reclaimed land will accommodate the marina and boardwalk developments within the foreshore area and the roadworks required along Trinity Street to provide a junction and access road to the Trinity Wharf site.

Because the site is on reclaimed land, it is considered that all buildings will require piled foundations. There is the potential for archaeological impacts, on both pre-reclamation archaeological features and elements of the former dockyard, associated with any sub-surface excavation works or piling required

The existing sea wall along the north-east edge of the site, which comprises a reinforced concrete structure, will be replaced as part of the proposed development. It is proposed to construct a steel sheet piled structure around the perimeter of the site and no excavation of these structures below ground will be required. The structure will be embedded into the stiff clay layers on the site identified at -10.5m D. There is the potential for archaeological impacts associated with any piling required.

A marina development is proposed off the northern edge of the site. It will comprise 64 berths and will comprise industry standard modular pontoons and finger units. A floating breakwater comprising pre-fabricated units will be tethered to the seabed to protect the marina. The proposed marina is located in an area of underwater archaeological potential to the south of the medieval quays, associated with the nineteenth century dockyard and the sites of three recorded shipwrecks. There is the

potential for underwater archaeological impacts associated with the development of the marina.

A boardwalk connection will be provided between the northern corner of the site and Paul Quay. The boardwalk will carry pedestrians and cyclists and will be supported on a steel pile structure comprising single piles. The proposed boardwalk is located in an area of underwater archaeological potential to the south of the medieval quays, associated with the nineteenth century dockyard and the sites of three recorded shipwrecks. There is the potential for underwater archaeological impacts associated with the development of the boardwalk. The proposed landing point at Paul Quay is identified as one of the town's historic quays and there is the potential for archaeological impacts associated with its construction, below ground.

An access road leading from the site to Trinity Street runs immediately to the south of the site of a holy well (RMP WX037-038). While the vicinity of the well has previously been developed and there are no longer any archaeological features evident at ground level, it is possible that features associated with the well survive below ground.

The town walls of Wexford are designated as a National Monument. There are no direct impacts on the town walls associated with the proposed development. The visual impact of the proposed development has been considered in the Landscape and Visual Impact Assessment (see Chapter 11). The closest stretch of the town wall to the proposed development is located on Barrack Street c. 350m north-west of the site and this area does not have views to the site.

14.5 Mitigation and Monitoring Measures

The avoidance of direct or indirect impacts on archaeological heritage is the preferred mitigation measure. Where this is not possible the following archaeological mitigation measures are proposed:

14.5.1 Pre-Construction Measures

Archaeological Testing or Monitoring

Dependent on the nature of foundations proposed for individual structures within the proposed development archaeological testing or archaeological monitoring may be required where sub-surface development works are to be undertaken. This is particularly important in the northern corner of the site where it is possible that the remains of the nineteenth century dock infrastructure still exist below the current ground surface and at the site of the holy well (RMP WX037-038) where it is possible that features survive below ground.

Underwater Archaeological Impact Assessment

An underwater archaeology walkover inspection was undertaken by ADCO on the 11th December 2018 at Low Water. The mitigation measures included in their report are reproduced here while their full report is included in Appendix 14.3.

Underwater Archaeology Impact Assessment

An Underwater Archaeology Impact Assessment (UAIA) of the area to be impacted by the proposed marina and boardwalk will be carried out prior to any construction works. Such work is licensed by the National Monuments Service. The work will be carried out as part of the required UAIA, which will inspect the known underwater archaeological elements adjacent to the development area.

In the event that the underwater assessment identifies features that will be impacted by the construction phase, further archaeological mitigation will be required and may include investigation and excavation.

Archaeological Topographic Survey

An Archaeological Topographic Survey of the reclaimed land area and associated intertidal elements is required to capture a detailed pre-disturbance record of the existing land surfaces. The work will prepare detailed topographic mapping that enables metrically accurate 1:20 plan, elevation and section drawings. It will be necessary to capture an above ground stone-by-stone record of the dockyard walls and fabric. The record will serve as the permanent record of this element that will be destroyed or otherwise permanently buried by the development.

14.5.2 Construction Phase Measures

A review of the site investigation logs to assess the nature of the buried strata will be undertaken.

Archaeological Monitoring of Ground and Seabed Disturbance

Archaeological Monitoring of Ground and Seabed Disturbance activities during the construction phase and associated elements, with the proviso to fully resolve any archaeological features identified. Such work is licensed by the National Monuments Service.

Archaeological Excavation and Preservation In Situ

Archaeological excavation is the preservation by record of archaeological remains and is recommended only where archaeological features cannot be preserved *in situ*.

Should the results of the mitigations outlined above indicate the requirement for archaeological excavation and/or preservation *in situ*; this will be undertaken as per best practice and in consultation with the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht.

14.5.3 Project Management Measures

AN ARCHAEOLOGICAL CONSULTANT experienced in and specialising in maritime archaeology should be appointed to the project to advise the design team on archaeological matters, liaise with the state regulators, prepare archaeological licence applications and complete archaeological site work.

ARCHAEOLOGICAL MONITORING is licensed by the National Monuments Service at the Department of Culture, Heritage and the Gaeltacht. The application for such a licence requires a detailed method statement, outlining the procedures to be adopted to monitor, record and recover material of archaeological interest during such work. Licence applications take four (4) working weeks to be processed and must be granted before archaeological-related work can commence.

THE TIME SCALE for the project should be made available to the archaeologist, with information on where and when the various elements and ground disturbances will take place.

SUFFICIENT NOTICE. It is essential for the developer to give sufficient notice to the archaeologist/s in advance of works commencing. This will allow for prompt arrival on site to undertake additional surveys and to monitor ground disturbances. As often happens, intervals may occur during the construction phase. In this case, it is also

necessary to inform the archaeologist/s as to when ground disturbance works will recommence.

DISCOVERY OF ARCHAEOLOGICAL MATERIAL. In the event of archaeological features or material being uncovered during the construction phase, it is crucial that any machine work cease in the immediate area to allow the archaeologist/s to inspect any such material.

ARCHAEOLOGICAL MATERIAL. Once the presence of archaeologically significant material is established, full archaeological recording of such material is recommended. If it is not possible for the construction works to avoid the material, full excavation would be recommended. The extent and duration of excavation would be a matter for discussion between the client and the licensing authorities.

ARCHAEOLOGICAL TEAM. It is recommended that the core of a suitable archaeological team, including an archaeological dive team, be on standby to deal with any such rescue excavation. This would be complimented in the event of a full excavation.

SECURE SITE OFFICES and facilities should be provided on or near those sites where excavation is required.

SECURE WET AND DRY STORAGE for artefacts recovered during the course of the monitoring and related work should be provided on or near those sites where excavation is required.

ADEQUATE FUNDS to cover excavation, post-excavation analysis, and any testing or conservation work required should be made available.

MACHINERY TRAFFIC during construction must be restricted as to avoid any of the selected sites and their environs.

SPOIL should not be dumped on any of the selected sites or their environs.

POST-CONSTRUCTION PROJECT REPORT AND ARCHIVE. It is a condition of archaeological licensing that a detailed project report is lodged with the DCHG within twelve months of the completion of site works. The report should be to publication standard and should include a full account, suitably illustrated, of all archaeological features, finds and stratigraphy, along with a discussion and specialist reports. Artefacts recovered during the works need to meet the requirements of the National Museum of Ireland.

The recommendations listed above are subject to the approval of the National Monuments Service at the Department of Culture, Heritage and the Gaeltacht.

14.6 Residual Impacts

Subject to the implementation of appropriate archaeological mitigation measures, no significant residual impacts on archaeological and cultural heritage are predicted.

14.7 Difficulties Encountered

No difficulties were encountered during the completion of this assessment.

14.8 References

- ADCO 2008. Trinity Wharf Development, Underwater Assessment at Townparks, Wexford 08D005, 08R011.
- Alastair Coey Architects 2008. Wexford Town Walls Conservation Plan. Wexford County Council.
- Bassett, G. H. 1885. 'Bassett's Wexford County Guide and Directory'.
- Bourke, E. 1995. Life in the Sunny South-East: Housing and Domestic Economy in Viking and Medieval Wexford in *Archaeology Ireland* Vol. 9, No. 3, pp. 33-36.
- Bradley, J. and King, H. A. 1990. Urban Archaeological Survey, County Wexford.
- Colfer, B. 1990-91 Medieval Wexford. *Journal of the Wexford Historical Society* Vol. 13, pp. 5-29.
- Colfer, B. 2002. *Arrogant Trespass: Anglo-Norman Wexford 1169-1400*.
- Colfer, B. 2008. *Wexford: A Town and It's Landscape*.
- Eogan, G. 1965 *A catalogue of Irish Bronze swords*. Dublin.
- Eogan, G. 1983. *Hoards of the Irish Later Bronze Age*. Dublin.
- Eogan, G. 1994 The Accomplished Art, Gold and Gold working in Britain and Ireland during the Bronze Age (c. 2300 -650 BC). *Oxbow Monograph 42*, Oxford
- Gwynn, A. & Hadcock, N. D. 1970. *Medieval Religious Houses: Ireland*. London.
- Hadden, G. 1968 The origin and development of Wexford town. Part 1, *Journal of the Wexford Historical Society*, vol. 1, 5-19.
- Harbison, P. 1968. Catalogue of Irish Early Bronze Age associated finds containing copper or bronze. *Proceedings of the Royal Irish Academy* **67C**, 35-91.
- Harbison, P. 1969a. The daggers and halberds of the Early Bronze Age in Ireland. *Prahistorische Bronzefunde, Abteilung VI*, Band 1. C.H Beck, Munich.
- Harbison, P. 1969b. The axes of the Early Bronze Age in Ireland. *Prahistorische Bronzefunde, Abteilung IX*, Band 1. C.H. Beck, Munich.
- Hore, H. F. 1900-11. *History of the town and county of Wexford*, six volumes. London.
- Kerrigan, P. 1995a. *Castles & Fortifications of Ireland 1485-1945*, Cork.
- Lewis, S. 1837. *A Topographical Dictionary of Ireland*, Vol. 1. S. Lewis, London.
- Moore, M. 1996. *The Archaeological Inventory of County Wexford*.
- O'Leary, J. 2014. *Maritime Wexford: The life of an Irish Port Town*. The History Press, Ireland, Dublin.
- Orpen, G. 1911-20. *Ireland Under the Normans*, four volumes.

Raftery, B., 1983. *A Catalogue of Irish Iron Age Antiquities*. Marburg.

Thomas, A. 1992. *The Walled Towns of Ireland*, Vol 1 & 2. Irish Academic Press, Dublin.

Roberts, O. T. P. 1985. The Cots of Rosslare Harbour and Wexford in the Mariner's Mirror, Vol. 71, Issue 1.

Wexford County Council 2009. Wexford Town and Environs Development Plan 2009 – 2015 (as extended).

Wexford County Council 2013. Wexford County Development Plan 2013 – 2019.

Appendix 14.1 Recorded Archaeological Monuments and Places

Recorded Archaeological Monuments and Places

Recorded Archaeological Monuments and Places Within c. 500m of the Proposed Development (source www.archaeology.ie).

RMP No.	WX037-032001-
Site Type	Castle - Anglo-Norman masonry castle
Townland	Townparks (St. Michael's of Feagh Par.)
ITM	705098, 621473
Description	<p>The castle at Wexford is located on a slight rise at the S end of the town, and it may have been built on the site of a Viking strongpoint (Hadden 1968, 13). It is traditionally thought to have been built by King John, but it was certainly in existence by 1221, although a door-keeper of the castle is mentioned in 1185. A list of its constables from 1311 to 1590 survives (Hore 1900-11, vol. 5, 65). The castle was bombarded by Cromwell's forces in October 1649 and quickly surrendered, which led to the capture of the town (ibid. 293-304). The castle is described (ibid. 63-70) as having been a rectangular keep with four towers attached. It was converted to a military barracks in the 1720s (Colfer 1990-1, 18-21), and these buildings still occupy the site, but no features of a medieval castle are evident.</p> <p>The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances the entries have been revised and updated in the light of recent research.</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload/revision: 19 December, 2012.</p> <p>References:</p> <p>Colfer, B. 1990-91 Medieval Wexford. Journal of the Wexford Historical Society (formerly known as Journal of the Old Wexford Society) 13, 5-29.</p> <p>Hadden, G. 1968 The origin and development of Wexford town. Parts 1 and Journal of the Wexford Historical Society, vol. 1, 5-19.</p>

RMP No.	WX037-032002-
Site Type	Town defences
Townland	Wexford
ITM	704917, 621501
Description	<p>The Anglo-Norman walls of Wexford town followed the likely line of much of the earthen ramparts of the Vikings, but the Viking defences have not yet been recognised in any excavation. The defences began at the harbour on the N side of the site of the castle (WX037-032001-), crossed Barrack St., King St. and Bride St. at the junction with Clifford St. From this point it progressed NNW to the top of Mary St., continued N to the W side of High St., Mallon St. and Abbey St., crossed Georges St. to the West Gate and turned NE back towards the harbour. Considerable portions survive.</p> <p>The town wall at the SW corner of the town off Bride St. rises from flat ground around the valley of the Bishops Water River (ext. H c. 4m) but deposits against the interior reduce the height (int. H to c. 2m). The curved corner (total L c. 42m) is interrupted by inserted windows and partly rebuilt. However, it has evidence of 5 gun loops and a benched wall walk. A length of town wall (total L c. 100m; Wth c. 1m; ext. H c. 4m) runs N from St Patrick's church (WX037-032010-) to Mary St. An earthen rampart (Wth 3m) within the wall at St Patrick's graveyard (WX037-032032-) dates from the Cromwellian siege in 1649. A section of town wall between Mary St. and Rowe St. was inaccessible. An accessible section of town wall survives between Rowe St. and John's Gate Street (total L 47m; H c. 2 3m), including an open backed rectangular tower, entered at the first storey. There is a section of wall running between John's Gate St. and George's St. (total L 25m; H 4</p>

	<p>6m) with a circular protruding tower entered from the wall walk. The foundation trench for part of this wall was found in excavation (E0797), but there was no evidence of an outer fosse (Ryan and Cahill 1980 1). The line of the wall is continued N and S of the original section by later walling.</p> <p>The longest surviving section of town wall is at the NW corner of the town running from George's St. to West Gate tower (WX037-032008-) and on to Westgate St. (total L c. 190m; wall H c 3-4m). There is some evidence of an external fosse (Wth c. 10m) towards the N end and there is evidence of some gun-loops. There is also a projecting circular tower, entered from the wall walk towards the George St. end. The Westgate entrance is the only surviving gateway into the town. Essentially it is a four-storey tower house, with a vaulted passage (NE-SW) at the ground floor. A mural stairs rises to the first and second floors. There is a fireplace, garderobe and two plain windows at each upper floor. There is also access from the second floor to the wall-walk of the town wall to the N. There is a newel stairs to the third floor and the destroyed parapet, which has lookout platforms on the W and S angles. The Westgate has been restored by Wexford County Council for use as visitor centre.</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload; 19 December, 2012.</p> <p>References:</p> <p>Ryan, M. and Cahill, M. 1980-81 An investigation of the town wall at Abbey Street, Wexford. Journal of the Wexford Historical Society, vol. 8, 56-64.</p> <p>Notes</p> <p>Originally records WX037-0322002- to WX037-032008-, clockwise from south.</p>
--	---

RMP No.	WX037-032012-
Site Type	Church
Townland	Wexford
ITM	705070, 621540
Description	<p>The parish church of St Doologe's, which is a corruption of St Olave's, is at the extreme S end of the town. It is the smallest parish in the town, and perhaps in the country, occupying a little more than 1 ha. According to a Visitation by Thomas Ram, the Protestant bishop of Ferns, in 1615 David Browne was the curate of St. Towlocks, and the church and chancel were in repair (Hore 1900-11, vol. 6, 267). The church is mentioned in a survey of 1662 (ibid. vol. 5, 76, 338) but its location has never been recorded on a map. However, it is thought to have been located near the junction of Lower King St. and Barrack St. (Hadden 1968, 13).</p> <p>The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances, the entries have been revised and updated in the light of recent research.</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload/revision: 19 December, 2012.</p> <p>Amended: 2 Sep. 2013.</p> <p>References:</p> <p>Hadden, G. 1968 The origin and development of Wexford town. Parts 1 and 2. Journal of the Wexford Historical Society, vol. 1, 5-19.</p> <p>Notes:</p> <p>Parish church of St. Duloges, which is a corruption of St. Olaves. St. Dulogues is the smallest parish church in the town. The church is reputedly located at the junction of Lower King Street and Barrack Street (Hore 1906, JOWS 1986, 13).</p>

RMP No.	WX037-032017-
Site Type	Church
Townland	Townparks (St. Michael's of Feagh Par.)

ITM	705070, 621295
Description	<p>The site of the parish church of St Michael of Feagh is within a raised sub-rectangular graveyard (dims c. 50m WNW-ESE; c. 30m NNE-SSW) defined by masonry walls. It is located towards the N end of a low NW-SE ridge. This parish is thought to be an Ostman or Viking suburb of Wexford (Colfer 1991-2, 22), and Hore (1900-11, vol. 4, 262) suggests that this is the church of St. Alloc, described in 1172 as being near Wexford when it was granted to the Knights Templar. The rectory of St. Michael's was owned by the Hospitallers of Kilmainham at the Dissolution in 1541 (White 1943, 103). According to a Visitation by Thomas Ram, the Protestant bishop of Ferns, in 1615 Thomas Gallamore was the curate and the church and chancel were in repair (Hore 1900-11, vol. 6, 268). The church is described as dedicated to St. Michael the Archangel c. 1680 when its material was used to repair the castle (WX037-032001-) (Hore 1862, 66). There are no visible remains of the church at ground level. Archaeological testing (94E0198) and (94E0202) on the E wall of the graveyard produced evidence of post-medieval burials (Sally 1995), but testing (04E1257) at Faythe Lane c. 60m to the S failed to produce any related material (Stafford 2008).</p> <p>The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances, the entries have been revised and updated in the light of recent research.</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload/revision: 20 December, 2012.</p> <p>Amended: 2 Sep. 2013.</p> <p>References:</p> <p>Colfer, B. 1990-91 Medieval Wexford. Journal of the Wexford Historical Society (formerly known as Journal of the Old Wexford Society) 13, 5-29.</p> <p>Hore, H. F. 1862 An account of the barony of Forth, in the county of Wexford, written at the close of the seventeenth century. Journal of the Royal Society of Antiquaries of Ireland, vol. 7, 53-84.</p> <p>Sally, G. 1995 St. Michael's graveyard, Kevin Barry St., Wexford. Burial Site. In I. Bennett (ed.), Excavations 1995: summary accounts of archaeological excavations in Ireland, 84, No. 226. Bray. Wordwell.</p> <p>Stafford, E. 2008 Faythe Lane., Wexford. No archaeological significance. In I. Bennett (ed.), Excavations 2005: summary accounts of archaeological excavations in Ireland, 411, No. 1679. Dublin, Wordwell.</p> <p>White, N.B. 1943 Extents of Irish monastic possessions, 1540-1541. Dublin. Irish Manuscripts Commission.</p>

RMP No.	WX037-032020-
Site Type	House(s) - medieval
Townland	Wexford
ITM	704961, 621596
Description	<p>Excavations during 1988 (E000438) on a small site at the junction of Bride St. and South Main St. revealed the foundations of fifteen post and wattle houses in two plots dating from the 11th to the early 14th centuries. This is the most extensive evidence of the pre-Anglo-Norman settlement of Wexford town. (Bourke 1988; 1988-9).</p> <p>The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances, the entries have been revised and updated in the light of recent research.</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload/revision: 20 December 2012.</p> <p>References:</p> <p>Bourke, E. 1988-9 Two early eleventh century Viking houses from Bride Street, Wexford, and the layout of the properties on the site. Journal of the Wexford</p>

	<p>Historical Society, No. 12, 50-61.</p> <p>Bourke, E. 1988 Bride St./South Main St., Townparks. In I. Bennett (ed.), Excavations 1988: summary accounts of archaeological excavations in Ireland, 38-9. Bray. Wordwell.</p>
--	---

RMP No.	WX037-032024-
Site Type	Midden
Townland	Wexford
ITM	705003, 621559
Description	<p>Archaeological testing (96E0141) at the rear of No. 121 South Main St., on the W side of the street and just S of Stonebridge Lane, uncovered a layer of midden material (L 5m plus; max. T 0.6m) that included bands of organic material but which produced no ceramic or other artefacts. It was immediately beneath a layer that produced 17th century pottery but overlay a sterile grey/black sandy layer that in turn overlay a row of three posts. A SW-NE stone-lined culvert that holds the Bishops Water Pill was adjacent to the SE. Midden (WX037-032025-) is c. 10m to the SW. (Moran 1996, 3; Moran 1997).</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload: 20 December 2012.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Moran, J. 1996 Archaeological site assessment at 112 South Main Street, Wexford. Licence: 96E0141. Unpublished report, Archaeografix. 2. Moran, J. 1997 South Main Street, Wexford. Medieval/post-medieval. In I. Bennett (Ed.) Excavations 1996: summary accounts of archaeological excavations in Ireland, 115, No. 406. Bray, Wordwell

RMP No.	WX037-032025-
Site Type	Midden
Townland	Wexford
ITM	704998, 621549
Description	<p>Archaeological testing (96E0141) at the rear of No. 112 South Main St., on the W side of the street and just S of Stonebridge Lane, uncovered the top of a layer of midden material which produced no ceramic or other artefacts. It was immediately beneath a layer that produced 17th century pottery but overlay a sterile grey/black sandy layer that in turn overlay a number of stakes which support a plank (Wth 0.2m; T 3cm), probably one of a line of planks. A SW-NE stone-lined culvert that holds the Bishops Water Pill was adjacent to the SE. Midden (WX037-032024-) is c. 10m to the NE. (Moran 1996, 3; Moran 1997).</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload: 20 December 2012.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Moran, J. 1996 Archaeological site assessment at 112 South Main Street, Wexford. Licence: 96E0141. Unpublished report, Archaeografix. 2. Moran, J. 1997 South Main Street, Wexford. Medieval/post-medieval. In I. Bennett (Ed.) Excavations 1996: summary accounts of archaeological excavations in Ireland, 115, No. 406. Bray, Wordwell

RMP No.	WX037-032027-
Site Type	Quay
Townland	Wexford
ITM	705061, 621663
Description	Archaeological testing (03E1729) on a site fronting onto Paul Quay and bordered

	<p>by Oyster Lane on the NW and which is c. 50m S of the Crescent uncovered sections of a number of walls running NE-SW. One wall (Wth 1.6m), encountered at a depth of 1.3m had organic layers containing Leinster ware to its NW and is interpreted as a possible quay-wall with a lagoon on the NW and perhaps infill material to the SE. (McLoughlin 2004; 2006). Compiled by: Michael Moore.</p> <p>Date of upload: 20 December 2012.</p> <p>References:</p> <ol style="list-style-type: none"> 1. McLoughlin, C. 2004 Archaeological monitoring and testing, Paul Quay/Oyster Lane, Wexford. Unpublished report, Stafford McLoughlin Archaeology. 2. McLoughlin, C. 2006 Paul Quay/Oyster Lane, Wexford. Urban medieval. In I. Bennett (ed.), Excavations 2003: summary accounts of archaeological excavations in Ireland, 539-40, No. 2053. Bray, Wordwell
--	---

RMP No.	WX037-032036-
Site Type	Graveyard
Townland	Townparks (St. Michael's of Feagh Par.)
ITM	705070, 621295
Description	<p>The site of the parish church of St Michael of Feagh (WX037-032017-) is within a raised sub-rectangular graveyard (dims c. 50m WNW-ESE; c. 30m NNE-SSW) defined by masonry walls. It is located towards the N end of a low NW-SE ridge. There are no visible remains of the church at ground level. Archaeological testing (94E0198) and (94E0202) on the E wall of the graveyard produced evidence of post-medieval burials (Sally 1995), but testing (04E1257) at Faythe Lane c. 60m to the S failed to produce any related material (Stafford 2008).</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload: 19 December 2012.</p> <p>References:</p> <p>Sally, G. 1995 St. Michael's graveyard, Kevin Barry St., Wexford. Burial Site. In I. Bennett (ed.), Excavations 1995: summary accounts of archaeological excavations in Ireland, 84, No. 226. Bray. Wordwell.</p> <p>Stafford, E. 2008 Faythe Lane., Wexford. No archaeological significance. In I. Bennett (ed.), Excavations 2005: summary accounts of archaeological excavations in Ireland, 411, No. 1679. Dublin, Wordwell.</p>

RMP No.	WX037-032039-
Site Type	Structure (sea wall, possible)
Townland	Wexford
ITM	704984, 621545
Description	<p>Archaeological testing (02E0205) on the W side of Stonebridge Lane uncovered stratigraphy that was more than 2m deep throughout. Most of the material at the upper levels was post-medieval redeposit, probably in an effort to raise ground levels. The lower deposits were estuarine in character, and a short section of the top of a wall (Wth 0.35m; L 2.2m) that was bonded with lime mortar was recorded in the silts. The silts relate to the estuary of the Bishop's Pill, a culverted section of which had been identified on another site c. 30m to the NE associated with midden material (WX037-032024-). (Stafford 2002; McLoughlin 2004).</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload: 20 December 2012.</p> <p>References:</p> <ol style="list-style-type: none"> 1. Stafford, E. 2002 Archaeological assessment report. Stonebridge Lane, South Main St., Wexford. Licence No. 02E0205. Unpublished report, Stafford McLoughlin Archaeology. 2. Stafford, E. 2004 Stonebridge Lane, Main St. South, Wexford: urban. In I.

	Bennett (ed.), Excavations 2002: summary accounts of archaeological excavations in Ireland, 524, No. 1937. Bray. Wordwell.
--	--

RMP No.	WX037-038----
Site Type	Ritual site - holy well
Townland	Townparks (St. Michael's of Feagh Par.)
ITM	705388, 621290
Description	<p>Marked on the 1839 and 1941 eds of the OS 6-inch map and described in gothic lettering as Trinity Well on both, and additionally as 'Site of' on the later map. It is located on a N-facing slope adjacent to Wexford Harbour and was associated with the unlocated Trinity church (WX037-032014-), which is probably in the vicinity. The well site is in a small paved area on the NE side of Trinity St. surrounded by warehouses, but it is not visible at ground level. There is no evidence of, or record of veneration.</p> <p>Compiled by: Michael Moore. Date of upload: 19 December 2012 Notes: Hore JRSAI Vol. 7, p.66.</p>

RMP No.	WX037-040----
Site Type	Ritual site - holy well
Townland	Maudlintown (Forth By.)
ITM	705733, 620780
Description	<p>Marked on the 1839 and 1941 eds of the OS 6-inch map and described in gothic script as St. Mary Magdalene's Well on both, with the additional information 'Site of' on the later map. According to John O'Donovan writing c. 1840 the pattern was held at the well on July 22nd until c. 1790 (O'Flanagan 1933, vol. 1, 376). It is situated on a slight NE-facing slope and is located in the garden of a house, but it is not visible at ground level. Maudlintown church (WX037-041001-) is c. 150m to the SW.</p> <p>St. Mary Magdalene, the penitent, is recorded in the Gospels. Her repentance at the feet of Christ led to her becoming an ardent disciple. She was with Mary at the Crucifixion, and was the first to encounter the risen Christ. (Butler, 1883, 102).</p> <p>Compiled by: Michael Moore. Date of upload: 14 December 2012. Amended: 14 January 2014. References: Butler, Rev. A. 1883 Lives of the Saints. J. S. Virtue London and Dublin, Reprint (1990) London. Studio Editions (Abridged). O'Donovan, J. 1840. Letters containing information relative to the antiquities of the county of Wexford Vol. 1, p. 376. 'In the northeast part of the townland of Maudlintown is the holy well called after Mary Magdelene, at which a patter was held on the 22nd of July annually till about 45 years ago, when it was abolished for 'weighty reasons'. Hore, P. H. (1925) The barony of Forth, Part III in The Past, Vol. 3, p. 10-40.</p>

RMP No.	WX037-042001-
Site Type	Church
Townland	Maudlintown (Forth By.)
ITM	705614, 620676
Description	The parish church of Maudlintown is situated on a low-lying landscape within a rectangular graveyard (dims. c. 50-55m E-W; c. 35m N-S) defined by masonry

	<p>walls. It was attached to the Leper Hospital (WX037-041----) and was granted to the Knights Hospitaller of St John at Kilmainham, Co. Dublin in the 15th century. Portion of the W gable (L 7m; max. H 2.5m) with a break at the centre survives with part of the adjacent S wall. The lower end of a medieval graveslab (Wth 0.41-0.51m; T 0.13m; H 0.67m) with a raised fleur-de-lis terminal is used as a grave-marker at the N edge of the church. The site of St Mary Magdalene's Well (WX037-040----), at which patterns were celebrated on the 22nd of July until c. 1790 (O'Flanagan 1933, vol. 1, 376) is c. 150m to the NE.</p> <p>The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances, the entries have been revised and updated in the light of recent research.</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload/revision: 14 December 2012.</p>
--	---

RMP No.	WX037-042002-
Site Type	Graveyard
Townland	Maudlintown (Forth By.)
ITM	705615, 620660
Description	<p>The parish church of Maudlintown (WX037-041001-) is situated on a low-lying landscape within a rectangular graveyard (dims. c. 50-55m E-W; c. 35m N-S) defined by masonry walls. The graveslab (WX037-042003-) is in the vicinity of the N side of the church, and the site of St Mary Magdalene's Well (WX037-040----) is c. 150m to the NE.</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload: 14 December 2012.</p>

RMP No.	WX037-042003-
Site Type	Graveslab
Townland	Maudlintown (Forth By.)
ITM	705614, 620676
Description	<p>The lower end of a medieval graveslab (Wth 0.41-0.51m; T 0.13m; H 0.67m) with a raised fleur-de-lis terminal is used as grave-marker in the graveyard (WX037-042002-), in the vicinity of the N side of the church (WX037-032001-).</p> <p>Compiled by: Michael Moore.</p> <p>Date of upload: 14 December 2012.</p>

Appendix 14.2 Previously Published Archaeological Excavations

Previously Published Archaeological Excavations

Previously published archaeological excavations in the area from 1970 to 2017 (www.excavations.ie) are summarised below.

Excavation Ref. 1988:67

Bride St./South Main St., Townparks, Wexford

Sites and Monuments Record No.: N/A

Licence number: —

Author: Edward Bourke, Wexford Corporation, Municipal Buildings, Wexford.

Site type: Medieval urban settlement

ITM: E 704828m, N 621351m

The excavation at Bride St. was carried out between April 1988 and January 1989 and was funded by Wexford Corporation and the Office of Public Works. Post-excavation work, funded by the National Heritage Council and the friends of Viking Wexford, commenced on 30 January and will be finished during 1989.

The site is located on the west side of South Main St. at the corner of Bride St. in the parish of St Mary's. Excavations by Dr P.F. Wallace at Oyster Lane, and foundation digging at other sites on the eastern side of South Main St., indicate that the site would originally have faced onto the medieval waterfront of Wexford.

The 19th-century buildings which existed on the site were built on shallow stone wall footings and did very little damage to medieval stratigraphy. Excavation uncovered the foundations of fifteen post and wattle houses dating from the early 11th century to the late 13th/early 14th century. The site was waterlogged and organic preservation was excellent. The houses appear to be a local variant of the most common Dublin type house plan (Wallace, Type 1). Other structures including pits, footpaths and animal pens were also uncovered.

The site was divided into two properties in the early 12th century and this division remained static until the present day. During the 11th century the houses were laid out with no regard to the alignment of any previous houses.

Evidence for iron working, carpentry, shoemaking, comb making, bone working, spinning and weaving and the making of querns was uncovered. Finds of pottery included 13th-century sherds from South Leinster, Bristol and Bordeaux; 12th-century sherds from South West England; and unidentified stamped lead glazed pottery from 11th-century contexts.

Excavation Ref. 1988:68 - 89

North Main St., Townparks, Wexford

Sites and Monuments Record No.: N/A

Licence number: —

Author: Helen Roche, Dept. of Archaeology, University College, Dublin

Site type: Urban site

ITM: E 704428m, N 621751m

The site investigated consisted of the property at 89 North Main Street, Wexford and the owner funded the work. The street frontage had been occupied by a 19th-century two-storied shop. On demolition, this building was found to have been built directly upon a layer of builders' rubble and was without foundations or cellars. The site, which runs east-west fronts onto the west side of the street. The site measures 9m across the street front and 44m from front to rear.

Three test pits were dug during one day with the aid of a machine, all measuring 3m by 1m and oriented east-west. Each pit was excavated to a depth of c.8m or to approximately twice the depth that the foundations are expected to reach. The purpose of these pits was to

determine the archaeological potential, if any, of the site and whether the development was likely to interfere with archaeological deposits.

The stratigraphy uncovered in all of these pits was remarkably similar. The lowest layer was sterile black estuarine mud of the type normally deposited naturally in broad shallow estuaries. Above this in all cases are layers of redeposited estuarine mud and builders' rubble. These layers are consistent with land reclamation and represent material brought onto the site to raise the level of the ground and to provide a firm surface for building.

Only one artefact was found during the excavation of these pits: the base of a black-glazed flat-based pottery jar found in Pit C, Layer 3. This find indicates that the reclamation may have taken place as late as the 18th or 19th century.

Neither the layers nor the pottery jar are of archaeological significance except that they indicate a late date the reclamation of this area of the town. The uniformity of the layers from the street to the rear of the plot indicate that the whole area may have been reclaimed at the same time.

Excavation Ref. 1988:69

Townparks, Wexford

Sites and Monuments Record No.: N/A

Licence number: —

Author: Edward Bourke, Wexford Corporation, Municipal Buildings, Wexford.

Site type: Urban Site

ITM: E 704528m, N 621951m

Test excavations took place on six sites within the three designated areas for urban renewal in Wexford town.

Cornmarket

Only one test pit was excavated on this site as only one small yard was available for excavation, the rest of the site being covered by derelict buildings in a dangerous condition. This site produced dumped 19th-century material to a depth of 1.5m

Redmond Place (Meyler's Garage)

Ten test pits were excavated with the aid of a machine on this site. The stratigraphy in all of these pits was similar. In each case the upper 0.3m-0.5m consisted of 19th-20th-century builders' rubble. Below this, on the western side of the site, a deep deposit of black estuarine silt was encountered. On the eastern side, nearer the river, a deposit consisting of 18th-19th-century dump material 1.5m deep overlay the estuarine silt.

Wilson's Yard/Imperial Bar

Three test pits were excavated and here again 19th-20th-century builders' rubble directly overlay sterile estuarine mud on the western or landward side of the site. On the eastern side, closer to the river, a deposit of 19th-century dump material 1.3m in depth lay between the rubble and the estuarine silt.

These sites lie on land reclaimed from the River Slaney in the 18th and 19th centuries and stratigraphy encountered is consistent with the historical evidence for the reclamation.

West Gate/John Street (West Gate yard)

Seven test trenches were excavated on this site. In all of them the stratigraphy was similar. Beneath the 20th-century floors and road surfaces, deposits of early 20th-century dump material, consisting mainly of waste from industrial iron working, was encountered. In some of the cuttings disturbed boulder clay and 19th-20th-century material was encountered beneath this deposit. These layers directly overlay bedrock and from the surface profile of the bedrock it is likely that this area was used as a quarry in the 19th century.

The site is bounded on the west by the town wall and on the south by the precinct of St Selskar's Abbey. It is clear that whatever medieval deposits existed inside the yard were subsequently removed by the 19th-century activity on site. Prior to the excavation, it was

noted that the town wall stood directly on a deposit of boulder clay, 25m thick, standing proud of the ground level in the yard.

Temperance Row

Three pits were excavated and in all of them a deposit of 19th and 20th-century brick rubble and organic material 0.3m—0.5m thick was encountered, lying directly on marl or estuarine mud. On the western or landward side the marl lay directly on bedrock. On the eastern side the estuarine mud was not bottomed.

John's Street

Four pits were excavated, in these the upper layer of humus contained early 20th-century pottery and bone, which overlay orange boulder clay, decayed shale and ultimately bedrock.

Excavation Ref. 1990:121

Westgate/Slaney Street/Temperance Row/Redmond Place, Townparks, Wexford, Wexford

Sites and Monuments Record No.: N/A

Licence number: —

Author: Edward C. Bourke, 62 Rockville Drive, Blackrock, Co. Dublin.

Site type: Urban

ITM: E 704828m, N 621951m

Westgate A limited excavation was carried out where the Wexford Main Drainage crossed the line of the town wall in the spawell Road opposite Westgate. The base of the town wall as uncovered sitting directly on rock outcrop. A small deposit of 13th-century material and a larger deposit of 14/15th-century material was found outside the town wall. The rock outcrop directly underlay the road surface inside the wall.

Slaney Street/Redmond Place

Rock outcrop reached the surface at the west end of Slaney street and monitoring of the digging of the sewer trench revealed the rock to be steeply sloping towards the line of natural shore. No datable deposits were uncovered. However, a thin organic deposit overlay the boulder clay, and above this lay a deposit of post-medieval landfill and box drains which increased in thickness as it came closer to the line of the natural shore. The natural shoreline occurred at the junction of Slaney Street and Selskar Street. All material uncovered east of this in Redmond Place consisted of 18th- and 19th-century land reclamation.

Temperance Row

The natural rock lay within c. 300mm of the surface in Temperance Row, thus no stratigraphy was uncovered.

Excavation Ref. 2001:1318

The Faythe, Townparks, Wexford, Wexford

Sites and Monuments Record No.: RMP 37:32

Licence number: 01E0103

Author: Mary G. O'Donnell, Archaeological Services Unit, Department of Archaeology, University College, Cork.

Site type: No archaeological significance

ITM: E 705286m, N 621122m

The site of a single house development at the Faythe, Townparks, Wexford, lay outside the walled town of Wexford, but within an area likely to have contained some suburban medieval settlement. The area known as 'the Faythe' is part of the zone of archaeological potential. Records dating from the 16th century indicate that at least 24 burgages existed in the street called Fayght Street (Colfer 1990–1, 22).

An archaeological assessment, including testing, was required by the planning authorities prior to the start of any work on the site. The test excavation was undertaken in February

2001. As there was no apparent archaeological content, no further archaeological requirement was recommended.

Reference

Colfer, B. 1990–1 Medieval Wexford. *Journal of the Wexford Historical Society* 13, 5–29.

Excavation Ref. 2003:2051

Newtown Road, Townparks, Wexford, Wexford

Sites and Monuments Record No.: N/A Licence number: 03E0268

Author: Anne Marie Lennon, for Mary Henry Archaeological Services Ltd, 17 Staunton Row, Clonmel, Co. Tipperary.

Site type: No archaeological significance

ITM: E 703487m, N 622158m

Monitoring was undertaken of all ground disturbance associated with a housing development. Nothing of archaeological interest was uncovered.

Excavation Ref. 2003:2061

Townparks, Waterloo Road, Wexford, Wexford

Sites and Monuments Record No.: N/A

Licence number: 02E1806

Author: Emmet Stafford, Stafford McLoughlin Archaeology, Unit 4, Enniscorthy Enterprise Centre, Milehouse Road, Enniscorthy, Co. Wexford.

Site type: Ditch

Monitoring of geotechnical test-pit excavation was undertaken at the site of a proposed development at Waterloo Road, Wexford, in December 2002 (Excavations 2002, No. 1941). The site is within Wexford town's zone of archaeological potential immediately to the south and west of a proposed development site that was tested and subsequently monitored under licence (Excavations 2002, 1940, 02E1684).

Little of archaeological significance was uncovered in the majority of the test-pits excavated. The fill of one large subsoil-cut feature was, however, uncovered towards the northern limit of the site. It is possible that the brown humic material uncovered represents the fill of a linear feature uncovered during the testing of the adjacent site (C11, 02E1684). The feature, which appears to run in a south-east to north-west direction, may represent an enclosing ditch, possibly associated with the site of a Franciscan priory (SMR 37:32(19)) located immediately north-east of the proposed development site. The priory was established in 1230 and was described at the suppression as consisting of a house, chapter house, belfry, dormitory, hall and kitchen with other buildings.

Further monitoring undertaken at the site in 2003 revealed no further features of archaeological significance. The utilisation of a pad and ground-beam substructure beneath the apartment block constructed on the site ensured the preservation in situ of the ditch feature uncovered towards the northern boundary of the site.

Excavation Ref. 2013:506

Townparks, Joseph Street, Wexford, Wexford

County: Wexford Site name: Townparks, Joseph Street, Wexford

Sites and Monuments Record No.: WX037-050

Licence number: 13E0462

Author: Rob O'Hara

Site type: No archaeological significance

ITM: E 704710m, N 621309m

Testing took place of a proposed school at Joseph Street and Green Street, Wexford at the site of WX037-050 (windmill). Four test trenches totalling 155m were excavated across the site. A significant quantity of rubble and soil has been used to raise ground level within the

site, up to 1.1m deep to the west and south, and greater than 2m to the east. Further testing is planned prior to construction. No features, structures or objects of archaeological significance were recorded.

8 Beat Centre, Stephenstown, Balbriggan, Co. Dublin.

Excavation Ref. 2014:459

Townparks, Joseph St Wexford, Wexford

Sites and Monuments Record No.: WX037-050----

Licence number: 13E0462

Author: Rob O'Hara

Site type: No archaeology found

ITM: E 704710m, N 621309m

A second phase of test trenching was undertaken at Wexford CBS in advance of an extension to the existing school. The first phase of testing (undertaken in December 2013 and described under a separate entry) was confined to areas outside of the sports pitches. This phase of testing involved the excavation of a further 150m of test trenches across the playing pitch, including the location of WX037-050— (windmill). No finds or features of archaeological potential were recorded.

Archer Heritage Planning, 8 Beat Centre, Stephenstown, Balbriggan, Co. Dublin

Excavation Ref. 2015:340

St John's Graveyard, Townparks, Wexford, Wexford

Sites and Monuments Record No.: WX037-032015

Licence number: E004583

Author: Catherine McLoughlin

Site type: Medieval graveyard

ITM: E 704574m, N 621945m

Monitoring under ministerial consent was undertaken during conservation works at St John's Graveyard in Wexford. The works involved the importation of topsoil to counteract erosion problems in the graveyard. No artefacts were removed from the graveyard prior to the spreading of the new soil, which was then seeded with grass. A medieval window fragment was recovered from the surface of the graveyard and placed in a safe position. The church and graveyard of St John's date to the early 13th century and was a Knights Hospitaller foundation. There is a sarcophagus in the graveyard and the church does not survive.

Stafford McLoughlin Archaeology, Moonrise Farmhouse, Coolballow, Drinagh, Wexford.

Excavation Ref. 2015:467

Coolcotts Lane, Newtown/Townparks, Wexford, Wexford

Sites and Monuments Record No.: N/A

Licence number: 15E0504

Author: Niall Colfer

Site type: Rural

ITM: E 703052m, N 621339m

An assessment was undertaken at Coolcotts Lane, Newtown/Townparks, Wexford on behalf of Minetta Ltd. who have applied for planning permission from Wexford Co. Council to build a substantial residential development on the site. The proposed development site is a greenfield area consisting of 5.13ha.

Test trenching was undertaken on 28 and 29 October 2015. This involved the excavation of a single centreline trench and staggered offset trenches excavated using a tracked machine with a 2m wide ditching bucket. It revealed 0.3-0.5m of soil overlying orange/grey stony natural boulder clay. Occasional stone-filled land drains were uncovered. No features of

archaeological significance were recorded. No further archaeological mitigation is recommended.

5 Ashdale Park, Terenure, Dublin 6w

Excavation Ref. 2016:063

'Old Gardens', Clifford Terrace, Townparks, Wexford, Wexford

Sites and Monuments Record No.: WX037-032

Licence number: 16E0051

Author: Catherine McLoughlin

Site type: Urban medieval

ITM: E 704856m, N 621589m

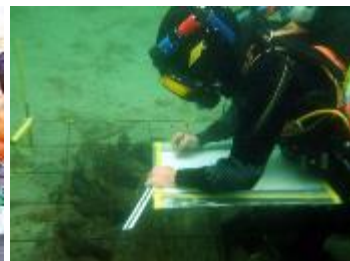
Testing and assessment was undertaken at a site bounded by St Mary's graveyard and a section of the town wall. A series of test trenches was excavated which showed a high build-up of post-medieval deposits, down to a depth of 1.8m. Excavation below this level did not occur as it was beyond the reach of the mini-digger.

Stafford McLoughlin Archaeology, Moonrise Farmhouse, Coolballow, Drinagh, Wexford.

Appendix 14.3 Maritime Archaeological Assessment 2018



Maritime Archaeological Assessment Trinity Wharf, Wexford





Maritime Archaeological Assessment Trinity Wharf, Wexford

15/01/2019

Project Director

Niall Brady

CONTENTS

EXECUTIVE SUMMARY	1
LIST OF FIGURES	3
LIST OF PLATES	3
1.0 INTRODUCTION	4
2.0 THE RECEIVING ENVIRONMENT	4
3.0 SITE INSPECTION	7
4.0 IMPACT ASSESSMENT	8
5.0 MITIGATION	13

EXECUTIVE SUMMARY

Wexford County Council proposes to develop Trinity Wharf, Wexford, to create a mixed-use area on reclaimed land that formerly served as a dockyard and ironworks site. A marina and boardwalk will extend the development footprint into the active seabed to the north of the site. Underwater Archaeological Impact Assessment (UAIA) was carried out of this area in 2008 by ADCO for an earlier development proposal, and fresh assessment of the terrestrial element has been conducted by CRDS for the present proposal. The National Monuments Service has requested a revised UAIA, allowing for the passage of time since 2008. The present report is a first stage in the UAIA and is based on a walkover inspection of the development area. A second stage will be conducted in 2019, based on licensed underwater inspection and survey of the sub-tidal area.

The walkover inspection was conducted at Low Water on 11/12/2018. Elements of the former dockyard and the ironworks site are visible within the reclaimed land area. A stone-built navigation beacon stands at the south end of the reclaimed land, and the stem post of a known shipwreck extends above Low Water in the marine sector to the north.

The ground and seabed impacts will comprise:

- Site preparation, earthworks, drainage and utilities.
- Sea wall construction.
- Boardwalk construction.
- Marina.

The location of an apparently unassociated ship's timber identified in 2008 lies within the proposed marina development.

This report finds no archaeological reason why the proposed works should not proceed.

Further archaeological mitigation is recommended:

- Underwater assessment of the proposed marina and boardwalk. Such work is licensed by the National Monuments Service.
- Archaeological topographic survey of the reclaimed land area and associated intertidal elements, to capture a detailed pre-disturbance record of the existing land surfaces.
- Review of Site Investigations logs to assess the nature of the buried strata.
- Archaeological monitoring of ground and seabed disturbance activities during the construction phase and associated elements, with the proviso to resolve fully any archaeological features identified. Such work is licensed by the National Monuments Service.

Recommendations are subject to the approval of the National Monuments Service at the Department of Culture, Heritage and the Gaeltacht.

LIST OF FIGURES

- Figure 1: Extract from OS 1:50000 map, showing location of proposed development at Trinity Wharf.
- Figure 2: Extracts from historic OS maps with extent of proposed development superimposed.
- Figure 3: Extract from OS map (1882) of Wexford Harbour showing extent of nineteenth-century Dockyard and associated patent slip.
- Figure 4: Extract from project drawing showing extent of proposed development at Trinity Wharf, Wexford harbour.
- Figure 5: Extract from project drawing showing proposed pedestrian link bridge.

LIST OF PLATES

- Plate 1: View looking north from south side of Trinity Wharf, showing the abandoned and overgrown nature of the site.
- Plate 2: North-facing boundary wall of Trinity Wharf, that served originally to define the edge of the nineteenth-century dockyard. The concrete additions are later.
- Plate 3: View showing the northeast corner of the Trinity Wharf boundary. The stonework below later concrete relates to the line to the older dockyard wall.
- Plate 4: View looking west at river-frontage of Trinity Wharf. The stonework relates to former elements of the dockyard while the later concrete additions either side may mark where infill of the patent and related slipways has taken place.
- Plate 5: View showing tiled surface that represents a former working area within one of the buildings at the north end of Trinity Wharf.
- Plate 6: View looking east across the north end of the site showing various works surfaces that served as part of the buildings on Trinity Wharf.
- Plate 7: View of molten material that has flowed between concrete copings on the east edge of Trinity Wharf, indicating the intensity of the ironworks activity.
- Plate 8: Spread of molten metal debris at the south end of Trinity Wharf, another tell-tale sign of the metalworking activity and an indication of its presence at the most southern extremes of the site.
- Plate 9: View looking south at the remains of a timber jetty that is integrated into the concrete copings of Trinity Wharf associated with the ironworking.
- Plate 10: View looking east at a set of nine timber posts that formed a short extruded feature associated with the timber jetty.
- Plate 11: View looking southeast from Trinity Wharf at the stone-built navigation beacon that predates the wharf and served as part of the aids to safe passage into and out of Wexford Harbour.
- Plate 12: View looking north from the railway embankment at the prow or stem post of the timber vessel identified in 2001 and provisionally recorded in 2008.

1.0 INTRODUCTION

Wexford County Council proposes to develop Trinity Wharf, Wexford, to create a mixed-use area on reclaimed land that formerly served as a dockyard and ironworks site (Figure 1). A marina and pedestrian link bridge/boardwalk will extend the development footprint into the active seabed to the north of the site. Underwater Archaeological Impact Assessment (UAIA) was carried out of this area in 2008 by the Archaeological Diving Company (ADCO) for an earlier development proposal, and fresh assessment of the terrestrial element has been conducted by CRDS for the present proposal that forms part of the Trinity Wharf Development Environmental Impact Assessment Report (EIAR).¹ The National Monuments Service (NMS) has requested a revised UAIA, allowing for the passage of time since 2008 that is to dovetail into the EIAR.² ADCO has been appointed by Roughan O'Donovan, consulting engineers on behalf of Wexford County Council to do so. The present report is a first stage in the UAIA and is based on a walkover inspection of the development area. A second stage will be conducted in 2019, based on licensed underwater inspection and survey of the sub-tidal area.

The walkover inspection was conducted by the author at Low Water on 11/12/2018 in the company of Wexford County Council engineer Fintan Ryan. Full access to the reclaimed area was possible. Elements of the former dockyard and the ironworks site are visible within the reclaimed land area. A stone-built navigation beacon stands at the south end of the reclaimed land, and the stem post of a known shipwreck extends above Low Water in the marine sector to the north.

2.0 THE RECEIVING ENVIRONMENT

The baseline data is set out in the previous archaeological assessment and chapters 14 and 15 of the current EIAR.³ Trinity Wharf lies south of the historic town. There is one recorded terrestrial archaeological site within the development area, and that is the site of a Holy Well or sacred well (RMP reference WX037-038), which is located within the proposed entrance area to the new development (Table 1, Figure 2). The

¹ Niall Brady, 'Trinity Wharf development, underwater assessment, at Townparks, Wexford. 08D005, 08R011', unpublished report of the Archaeological Diving Company Ltd, 2008; Aislinn Collins, 'Archaeological and cultural heritage', chapter 14 of Trinity Wharf Development EIAR, 2018; 'Architectural heritage', chapter 15 of Trinity Wharf Development EIAR, 2018.

² Correspondence from Department of Culture, Heritage and the Gaeltacht, reference G Pre00257/2018, dated 20/11/2018.

³ See footnote 1.

well is marked on the 1839 and 1941 editions of the OS 6-inch map and described in gothic lettering as Trinity Well on both, and additionally as 'Site of' on the later map. It was most probably associated with the site of Trinity church (WX037-032014), whose location is not known but may be in the same general area. The well site is not visible at ground level.⁴

The active sea area retains a sequence of archaeological features. There are seven features associated with shipwreck close to the wharf: five lie to the north; one lies to the east; and a final element is located within the reclaimed area (Table 1).

Reference	ITM E	ITM N	Description	Proximity
WX037-038	705388	621290	Holy Well, site of	Within entrance area
W11596	705405	621441	Wreck. A sequence of three possible wrecksites recorded the UKHO database.	Adjacent to marina
W10637	705567	621405	Wreck. Frames of a wreck lying NE/SW standing proud of seabed; small part of forward section clearly visible, taken from 1955 aerial photograph (AP), entered onto UKHO database 1975.	Adjacent to east side of Wharf
W10641	705684	621262	Wreck. Identified on 1955 AP and entered onto UKHO database in 1975: frames of a large wreck lying NE/SW proud of the seabed, with bow hard against northern beacons marking entrance to boat park and training wall.	South of Wharf
08D005	705371 and 705384	621430 and 621445	Wreck. Coordinates taken at stem post and stern post. Originally identified in 2001, it survives as a stem post that rises 2.39m above the mudflat. Beneath the mudflat the ground is very flat and hard, suggesting that the vessel was dragged up onto the hard. The ribs and stern of the vessel are exposed. The timber is eroded but more perfectly preserved at depth where they are buried in mud. The vessel measures 19.69m long stem to stern, and is 4.62m in maximum width. This equates to a vessel that was 66½ feet long and over 15 feet wide. The vessel appears to survive with its keel in place and the ribs are in various states of eroded disrepair. Thirty-two ribs were detected on the port side. Fewer ribs are evident on the starboard side. On average the ribs are 11cm, 13cm and 14cm wide and squared in shape. The ribs are closely spaced together and appear to lie c. 25cm apart on average. In greatest dimensions the vessel is 4.62m wide. The stem post is formed from three pieces of timber. The outer timber also has a steel eye-bolt attached, onto which is tied a polypropylene rope and a short anchor	Adjacent to boardwalk

⁴ <http://webgis.archaeology.ie/historicenvironment/>

Reference	ITM E	ITM N	Description	Proximity
			has no real antiquity. There is otherwise an absence of metal on this wreck. The vessel was a sailing vessel.	
08D005	705422	621479	Timber. A loose ship's plank was identified. The plank retains holes for wooden pegs, c. 2cm–3cm in diameter, and is 2m long, 14cm wide and c. 10cm thick. It was unassociated and lay loose and on the seabed.	Within marina footprint

Table 1: Registered archaeological features at and in proximity to Trinity Wharf, Wexford.

The wharf itself is a block of reclaimed land that is integrally related to the later development of Wexford. Although none of its features are registered archaeological sites or sites of architectural heritage interest, they are *de facto* cultural heritage sites related to Industrial Archaeology and Contemporary Archaeology (Table 2). Reclamation works carried out in the 1830s are associated with John Edward Redmond, who reclaimed the northern portion of the Trinity Wharf site from the harbour and it was developed as the Wexford Dockyard, opening in 1832. The north corner of the dockyard comprised a patent slip, indicated on Ordnance Survey maps of the site (Figure 2a, Figure 3). The Wexford–Rosslare railway line opened in 1882 and part of its route ran alongside the western edge of Trinity Wharf, resulting in the embankment today that forms the shoreline north and south of the wharf (Figure 2b). Further reclamation at the end of the nineteenth century to the south of the Dockyard extended the wharf and created an area for the development of Wexford Engineering Company, which in turn became Star Iron Works. The extended facility allowed for the discharge of coke and scrap iron and a railway siding for loading and unloading of company waggons. It operated in this capacity until 1964. The northern part of the site was subsequently used as the Clover Meats Packing Yard, before being abandoned in the late 1980s.

Adjacent to the wharf and extending from its southeast corner are the remains of navigation aids. These comprise remnants of a breakwater that still functions to provide an enclosed inlet for light craft inside the breakwater, and presumably the same feature assists the natural scouring action within the navigation channel to help maintain access to the town's quayside. The wharf is built out to the breakwater. The very southeast corner of the wharf retains a stone-built navigation buoy, which is recorded on the historic OS maps as a 'pillar' (Figure 2B).

Reference	ITM E	ITM N	Description	Proximity
Dockyard	705456	621391	As recorded on the OS maps, the dockyard extended across much of the north end of Trinity Wharf and included a patent slip as well as a lesser slipway	Within development area

Reference	ITM E	ITM N	Description	Proximity
			to the south (Figure 3). An historic drawing depicts the yard in use in the mid-1900s (see EIAR Plate 15.2).	
Ironworks	705510	621332	The core area of the former ironworks lies within the northern half of Trinity Wharf and works extended to the southern section as reclamation continued in the late 1800s.	Within development area
Breakwater	705619	621329	The eastern limit of Trinity Wharf echoes that of the former breakwater, which may survive beneath the later reclamation works. A portion of the breakwater is recorded on the historic OS 25-inch map (Figure 2B).	Within development area
Beacon	705658	621317	A stone-built beacon that is circular in plan and conical in shape remains upstanding and occupies the very southeast corner to the wharf today.	Within development area

Table 2: Unregistered archaeological features at and in proximity to Trinity Wharf, Wexford.

3.0 SITE INSPECTION

The walkover inspection was conducted at Low Water on 11/12/2018. The author was accompanied by Fintan Ryan, Wexford County Council engineer. Full access to the wharf was possible, and no constraints were encountered. Inspection was based on non-intrusive walkover only, no dive work / sub-tidal was included.

The site is derelict, with all its former standing buildings demolished and the ground surface overgrown (Plate 1). Boundary walls survive, and various elements of former buildings are embedded in the walls, as described in chapters 14 and 15 of the EIAR. Remains of the former dockyard are evident. The most obvious element is the north-facing boundary wall that defines the northern limit of the wharf (Plate 2). The wall is referred to in EIAR chapter 15 as BH11 (Built Heritage feature 11). The wall is built of roughly-shaped squared red sandstone blocks and it retains a base batter. It has a series of red brick-lined drainage ports, some of which retain pipes. The wall was heightened on its landward side by shuttered concrete in the mid-twentieth century. The seaward corner of the wall is more derelict but it continues around as indicated on the nineteenth-century map, and elements of the wall return are evident along the east-facing perimeter (Plates 3–4). This permits the observation that the structure of the dock remains relatively intact, albeit buried beneath later concrete surfaces. A length of similar wall survives within the interior of the wharf, and this is identified as the former south wall of the dockyard. It is referred to in the EIAR as BH10.

Although derelict and overgrown, it is clear that the surface area of the wharf retains floors of the various buildings that were constructed on it, as evident in the spreads of floor tiles that occur (Plates 5–6). The site also retains evidence of the ironworks activities, in the form of extensive spreads of metal and vitrified ground (Plates 7–8). The archaeological mapping of same would inform the historical development of the site.

The remains of a wooden jetty survive on the east side of the site (Plates 9–10). It is not clearly identified on historic mapping and is probably related to the ironworks.

The navigation beacon stands at the southeast corner of the site (Plate 11). It predates the reclamation of Trinity Wharf and is associated with pre-existing efforts to assist navigation into and out of the harbour.

There was no sub-tidal inspection as part of the present report, and so no opportunity to inspect the seabed for the remains of shipwreck, both in relation to those sites recorded in the Historic Shipwreck Inventory, and in relation to those elements recorded in 2008. Nevertheless, the prow of the vessel described in 2008 remains visible at Low Water (Plate 12).

4.0 IMPACT ASSESSMENT

A summary plan of the development area is presented in Figure 4. The ground and seabed impacts from the works are set out in Chapter 4 of the EIAR, and will comprise:

- Site preparation, earthworks, drainage and utilities.
- Sea wall construction.
- Boardwalk construction.
- Marina.

Table 3 summarises the impact assessment.

Impact Stage	Known Site	Impacts	Mitigation
Site preparation, earthworks, drainage and utilities	WX037-038 Dockyard Ironworking site	Raising ground level Piling for foundations Localised excavations	Avoid known locations of archaeological sensitivity SI logs review Investigation Monitoring
Sea wall construction	Dockyard Ironworking site/timber jetty W10637	Removal of dockyard boundary wall. Removal of Ironworking site boundary and timber jetty. Impact on W10637 unknown.	Archaeological recording of boundary walls and timber jetty. Re-use of dockyard stonework and related elements where possible. Underwater inspection to confirm location of W10637 in relation to proposed works.
Boardwalk construction	W11596 08D005	Pile driven foundations	Avoid known locations of archaeological sensitivity Investigation/resolution if avoidance is not possible.
Marina	W11596 08D005	Pile driven foundations	Pre-development archaeological dive inspection of design footprint. Avoid known locations of archaeological sensitivity Investigation/resolution if avoidance is not possible.

Table 3: Impact assessment and proposed archaeological mitigations at Trinity Wharf, Wexford.

4.1 Site preparation, earthworks, drainage and utilities

The existing levels across the site vary but are on average around 2.0m OD. The proposal is for the development to be constructed above existing site levels in order to raise the entire site to a level of 3.5m OD, to safeguard against storm surge and wave action. Rather than large-scale excavation of existing ground level, it is intended to import good quality granular material. The proposal is to leave the contaminated made-ground in place and build up the level of the site to the desired finish floor level. The foundations for the buildings are intended to be piled and will be driven through the made-ground material.

Some soil stripping or excavation can be expected, particularly relating to the construction of the drainage proposals and the construction of the foul water pumping station. It is anticipated that pumping of the foul water will be required from the development site to the existing foul/combined sewer network due to the site's distance from public wastewater infrastructure and topographical constraints. The anticipated depth of this pumping station will approximately 4.5m below finished ground level and will therefore require approximately 2m depth of excavation into the existing made ground.

The construction of the buildings across the site will commence upon completion of the earthworks. The level of the whole development will be raised to the required finished floor level across the site. Following compaction of the imported fill material, a piling rig will be set-up at the locations of the required piles and steel piles will be driven from the finish floor level. The use of driven piles will mean that no arisings will be generated from the piling operations.

Upon completion of the pile driving operations, local excavations will be carried out around the driven piles to the extents and level required for constructing the reinforced concrete pile caps. The pile caps, columns, beams and slabs for the buildings' structures will be carried out using traditional reinforced concrete construction techniques.

Such works will reduce the impacts on existing ground levels and buried strata. It is however likely that there will be some direct impact on the former working levels of the dockyard and iron-working site. Archaeological input to the design process will mitigate this risk by advising avoidance of such areas. Consideration will include the location of the Holy Well site, WX037-038. Where avoidance is not possible, archaeological investigation and monitoring will be required.

4.2 Sea wall

A 2.4m-high revetment/sea wall with a 1m parapet wall along the sea adjacent perimeter of the site is to be constructed to protect the development against storm surge and wave action.

The existing sea wall bounding the site comprises a combination of shallow rock armour along the southeast edge; reinforced concrete wall along the northeast edge; and old stone masonry wall along part of the northeast edge and all of the northwest edge of the site.

The structural wall associated with the former dockyard on the northeast and northwest edges show signs of deterioration throughout and has been assessed to be inadequate to be maintained or rehabilitated for the proposed development.

In addition, due to the flooding requirements, the level of the development is required to be raised by approximately 1.5 to 2.0m above its current level. Utilising and modifying the existing sea wall for the purposes of this development is therefore considered to be unfeasible. As such, a new sea wall must be constructed around the perimeter of the site.

The proposed sea wall consists of a combination of a vertical sheet pile wall along the northeast and northwest edges of the site and a rock armour revetment along the southeast (EIAR Figures 4.17–4.18). The sheet piled wall comprises steel sheet piles to be installed around the coastal perimeter of the site to create a coastal defence level of approximately 3.5m OD in order to retain the levels of the development site. The sheet piles will be embedded into the stiff gravelly clay layer at approximately – 10.5m OD. The sea wall design will consist of ground anchors or tie bars connected to a row of sheet piles driven into the made ground and located approximately 12m behind the retaining wall. A reinforced concrete capping beam will be constructed along the top of the wall within which the anchor head will be located, and a 1.4m high hand rail will be installed along the top of the capping beams.

Along the south-east edge of the site, rock armour will be placed on the seabed immediately in front of the sheet pile wall to form a 1:1.5 sloped revetment. The purpose of this is to reduce the possibility of wave reflection to the moored vessels in the harbour to the south.

The proposed works represent a direct and permanent negative impact on the sea-facing boundary walls of the former dockyard and the timber jetty to the south, and will remove them. Full archaeological recording of the walls and the jetty is required in advance of construction, and archaeological monitoring of the construction phase works is required, to record the detail of wall construction and the jetty as they are being exposed and removed. Consideration should be given to re-use of the stonework and any quayside furniture from the dockyard walls within a heritage context within the wider development or developments elsewhere along the waterfront.

The proposed works will also extend seawards the footprint for the development boundary. The location of recorded wrecksite W10637 lies adjacent to Trinity Wharf on this eastern side. The UAIA will seek to confirm the location and extent of W10637. The detailed design will seek to avoid impacting with the site. If avoidance is

not possible, full archaeological recording, investigation and resolution of the impacted portion of the wrecksite will be required.

4.3 Boardwalk

The total length of the boardwalk is 180m between end supports and will have an internal width of 6m between handrails to accommodate both pedestrians and cyclists. The northern end of the boardwalk will tie-in to the existing promenade of Paul Quay and the southern end will tie-in to the public space immediately adjacent to the proposed hotel at Trinity Wharf (Figure 5).

The foundations for the boardwalk structure are proposed to be driven steel tubular sections which will be installed to immediately beneath the soffit level of the boardwalk deck where an integral connection will be made. These supports will be placed at 15.0m centres, and inserted with a marine piling rig into the seabed to rock level at approximately 8–10 below ground level. The north and south landings for the boardwalk will consist of reinforced concrete abutments where bearings will be provided for the deck.

The boardwalk is proposed to be connected into Paul Quay Promenade to the existing footpath and a reinforced concrete channel is proposed to form the approach ramp to the superstructure. The construction of this ramp will mean that the existing car park will be excavated to the required formation level at which point piled foundations for the approach ramp will be constructed. No construction in the sea is proposed for the construction of the boardwalk abutment or approach ramp.

The known and charted locations of shipwreck debris, as indicated in Table 1, are to be avoided. In addition, the UAIA to take place will inspect the seabed along the proposed route of the board, to assess whether additional features are present exposed on the seabed, and these findings will inform the detailed design stage in advance of construction commencing. Impact avoidance is the preferred mitigation. Where avoidance is not possible, additional archaeological mitigation will be necessary that might include underwater investigation.

4.4 Marina

The design of the marina includes creating a sheltered marina area with 61 berths by constructing a series of high-end pre-fabricated 5m-wide floating breakwaters with skirts that will be tethered to the seabed. This design means that no dredging is required to achieve the desired minimum operating depth of –2.5m CD.

It is proposed that the floating pontoons of the marina will be constructed using industry standard modular pontoon and finer units. Pontoon berths and walkways will be restrained using tubular piles driven into the seabed. An alternative method to this the use of helical anchors being drilled into the seabed which will connect and secure the pontoon berths and walkways. A single gangway that will be pivoted on the reclaimed deck and rested on the main walkway will provide access to the proposed marina area.

The location of the proposed marina has been selected to minimise navigational restrictions within the existing approach channel to Wexford Harbour, and minimise sedimentation and impacts on the shellfishery industry.

Pile sockets will be pile-driven for the breakwater units and the pontoon walkways. Vertical steel piles will then be grouted into the pile sockets. Alternatively, helical anchors can be drilled into the seabed via a barge at the location for the lower terminal of anchor chains that will connect and secure the breakwater units and pontoon walkways and finger berths.

The known and charted locations of shipwreck debris, as indicated in Table 1, should be avoided. However, the location of a loose ship's plank was identified in 2008 at approximately 305495E 121428N, which is now within the development footprint for the marina. The plank retains holes for wooden pegs, c. 2cm-3cm in diameter, and is 2m long, 14cm wide and c. 10cm thick. It was unassociated and loose and on the seabed; it may have washed in with the tide or become dislodged from the wrecksite to the southwest. The UAIA that is to take place in advance of the marina, will inspect the location of the loose timber and confirm its presence/absence where possible. The inspection will also consider the seabed along the proposed route of the marina and the boardwalk, to assess whether additional features are present exposed on the seabed. These findings will inform the detailed design stage in advance of construction commencing. Impact avoidance is the preferred mitigation. Where avoidance is not possible, additional archaeological mitigation will be necessary that might include underwater investigation.

5.0 MITIGATION

This report finds no archaeological reason why the proposed development should not proceed.

5.1 Pre-construction Measures

UNDERWATER ASSESSMENT of the proposed marina and boardwalk. Such work is licensed by the National Monuments Service. This work will be carried out as part of the required UAIA, which will also inspect the known underwater archaeological elements adjacent to the development area.

In the event that the underwater assessment identifies features that will be impacted by the construction phase, further archaeological mitigation will be required and may include investigation and excavation.

ARCHAEOLOGICAL TOPOGRAPHIC SURVEY of the reclaimed land area and associated intertidal elements is required to capture a detailed pre-disturbance record of the existing land surfaces. This work will prepare detailed topographic mapping that enables metrically accurate 1:20 plan, elevation and section drawing. It will be necessary to capture a stone-by-stone record of the dockyard walls and fabric. The record will serve as the permanent record of this element that will be destroyed or otherwise permanently buried by the development.

5.2 Construction Phase Measures

REVIEW OF SITE INVESTIGATIONS LOGS to assess the nature of the buried strata.

ARCHAEOLOGICAL MONITORING OF GROUND AND SEABED DISTURBANCE ACTIVITIES during the construction phase and associated elements, with the proviso to resolve fully any archaeological features identified. Such work is licensed by the National Monuments Service.

5.3 Project Management Measures

An ARCHAEOLOGICAL CONSULTANT experienced in and specialising in maritime archaeology should be appointed to the project to advise the design team on archaeological matters, liaise with the state regulators, prepare archaeological licence applications and complete archaeological site work.

ARCHAEOLOGICAL MONITORING is licensed by the National Monuments Service at the Department of Culture, Heritage and the Gaeltacht. The application for such a licence requires a detailed method statement, outlining the procedures to be adopted to monitor, record and recover material of archaeological interest during such work. Licence applications take four (4) working weeks to be processed and must be granted before archaeological-related work can commence.

THE TIME SCALE for the project should be made available to the archaeologist, with information on where and when the various elements and ground disturbances will take place.

SUFFICIENT NOTICE. It is essential for the developer to give sufficient notice to the archaeologist/s in advance of works commencing. This will allow for prompt arrival on site to undertake additional surveys and to monitor ground disturbances. As often happens, intervals may occur during the construction phase. In this case, it is also necessary to inform the archaeologist/s as to when ground disturbance works will recommence.

DISCOVERY OF ARCHAEOLOGICAL MATERIAL. In the event of archaeological features or material being uncovered during the construction phase, it is crucial that any machine work cease in the immediate area to allow the archaeologist/s to inspect any such material.

ARCHAEOLOGICAL MATERIAL. Once the presence of archaeologically significant material is established, full archaeological recording of such material is recommended. If it is not possible for the construction works to avoid the material, full excavation would be recommended. The extent and duration of excavation would be a matter for discussion between the client and the licensing authorities.

ARCHAEOLOGICAL TEAM. It is recommended that the core of a suitable archaeological team, including an archaeological dive team, be on standby to deal with any such rescue excavation. This would be complimented in the event of a full excavation.

SECURE SITE OFFICES and facilities should be provided on or near those sites where excavation is required.

SECURE WET AND DRY STORAGE for artefacts recovered during the course of the monitoring and related work should be provided on or near those sites where excavation is required.

ADEQUATE FUNDS to cover excavation, post-excavation analysis, and any testing or conservation work required should be made available.

MACHINERY TRAFFIC during construction must be restricted as to avoid any of the selected sites and their environs.

SPOIL should not be dumped on any of the selected sites or their environs.

POST-CONSTRUCTION PROJECT REPORT AND ARCHIVE. It is a condition of archaeological licensing that a detailed project report is lodged with the DCHG within twelve (12) months of the completion of site works. The report should be to publication standard and should include a full account, suitably illustrated, of all archaeological features, finds and stratigraphy, along with a discussion and specialist reports. Artefacts recovered during the works need to meet the requirements of the National Museum of Ireland.

PLEASE NOTE: All of the above observations and conclusions are based on the archaeological information and information supplied for the Trinity Wharf development project. Should any alteration occur, further assessment may be required.

PLEASE NOTE: the above recommendations are subject to the approval of the National Monuments Service at the Department of Culture, Heritage and the Gaeltacht.



Plate 1: View looking north from south side of Trinity Wharf, showing the abandoned and overgrown nature of the site.



Plate 2: North-facing boundary wall of Trinity Wharf, that served originally to define the edge of the nineteenth-century dockyard. The concrete additions are later.

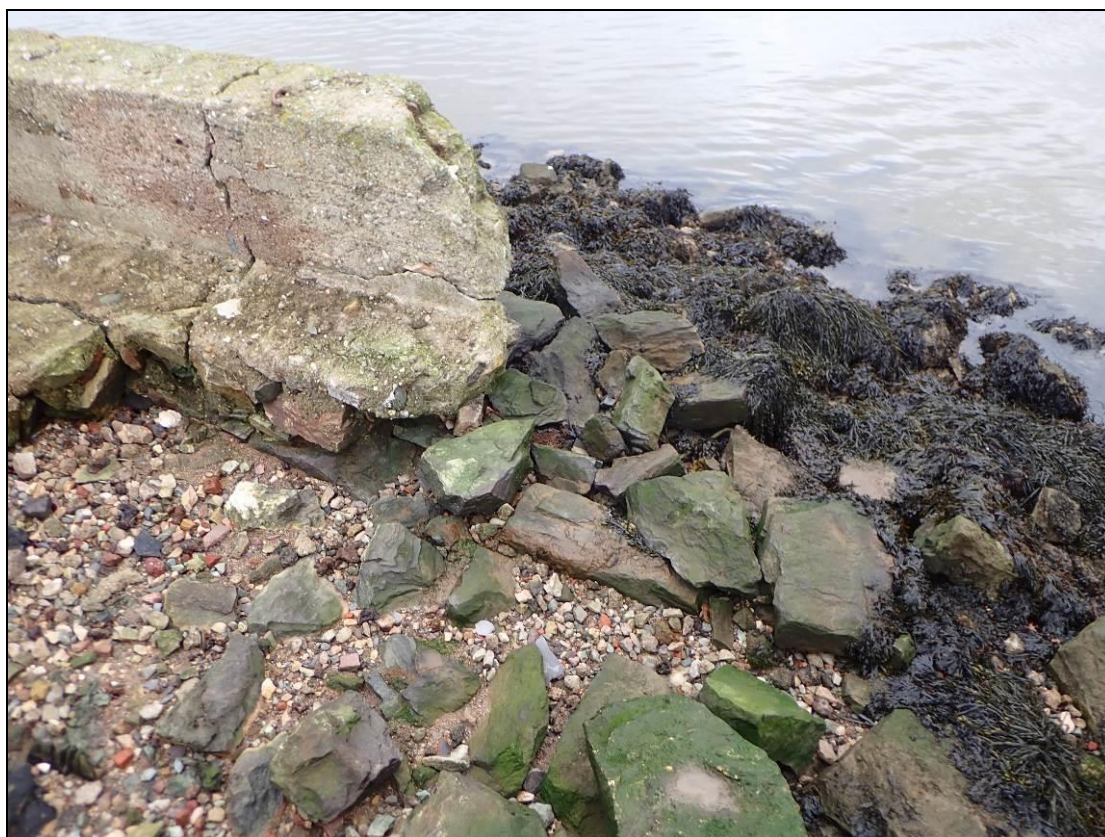


Plate 3: View showing the northeast corner of the Trinity Wharf boundary. The stonework below later concrete relates to the line to the older dockyard wall.



Plate 4: View looking west at river-frontage of Trinity Wharf. The stonework relates to former elements of the dockyard while the later concrete additions either side may mark where infill of the patent and related slipways has taken place.



Plate 5: View showing tiled surface that represents a former working area within one of the buildings at the north end of Trinity Wharf.



Plate 6: View looking east across the north end of the site showing various works surfaces that served as part of the buildings on Trinity Wharf.



Figure 7: View of molten material that has flowed between concrete copings on the east edge of Trinity Wharf, indicating the intensity of the ironworks activity.



Figure 8: Spread of molten metal debris at the south end of Trinity Wharf, another tell-tale sign of the metalworking activity and an indication of its presence at the most southern extremes of the site.



Plate 9: View looking south at the remains of a timber jetty that is integrated into the concrete copings of Trinity Wharf associated with the ironworking.

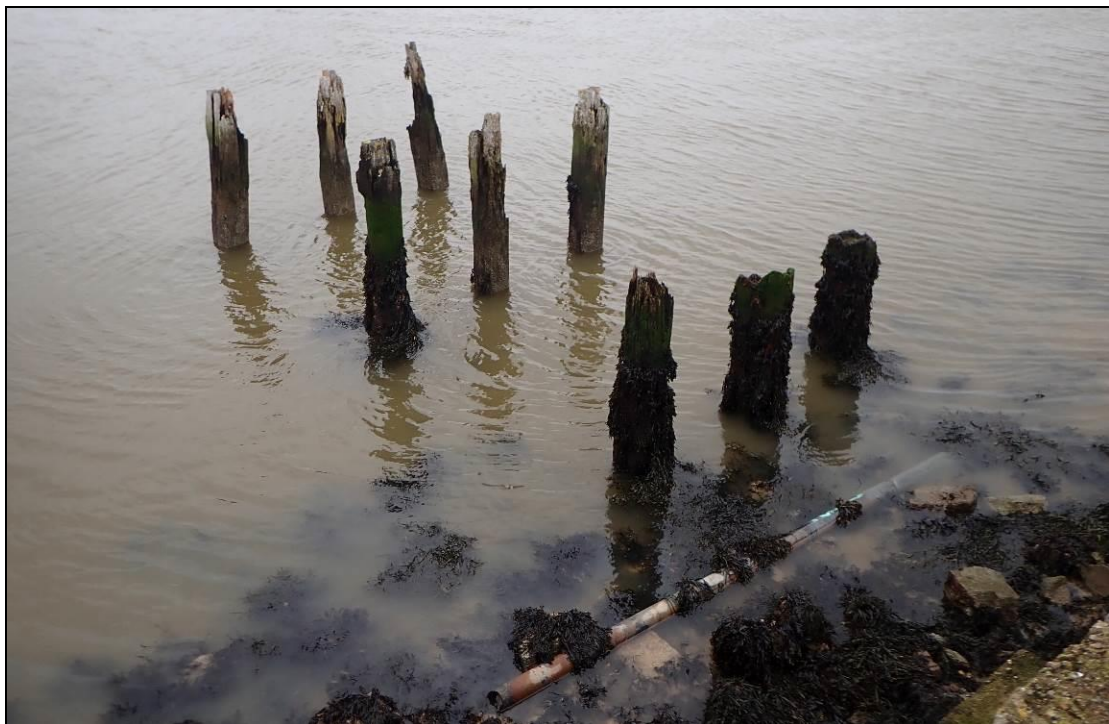


Plate 10: View looking east at a set of nine timber posts that formed a short extruded feature associated with the timber jetty.



Plate 11: View looking southeast from Trinity Wharf at the stone-built navigation beacon that predates the wharf and served as part of the aids to safe passage into and out of Wexford Harbour. The breakwater is also visible.

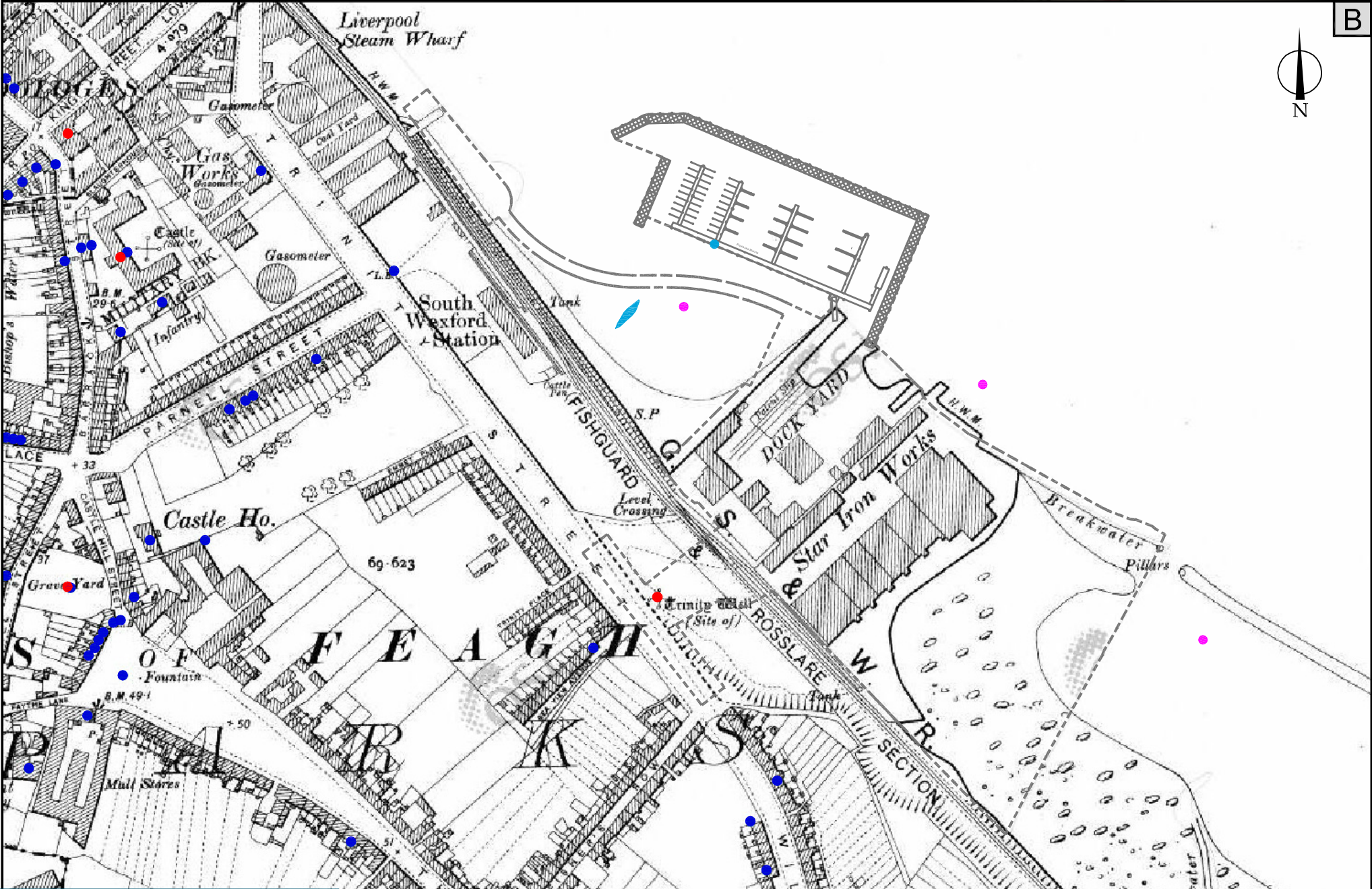
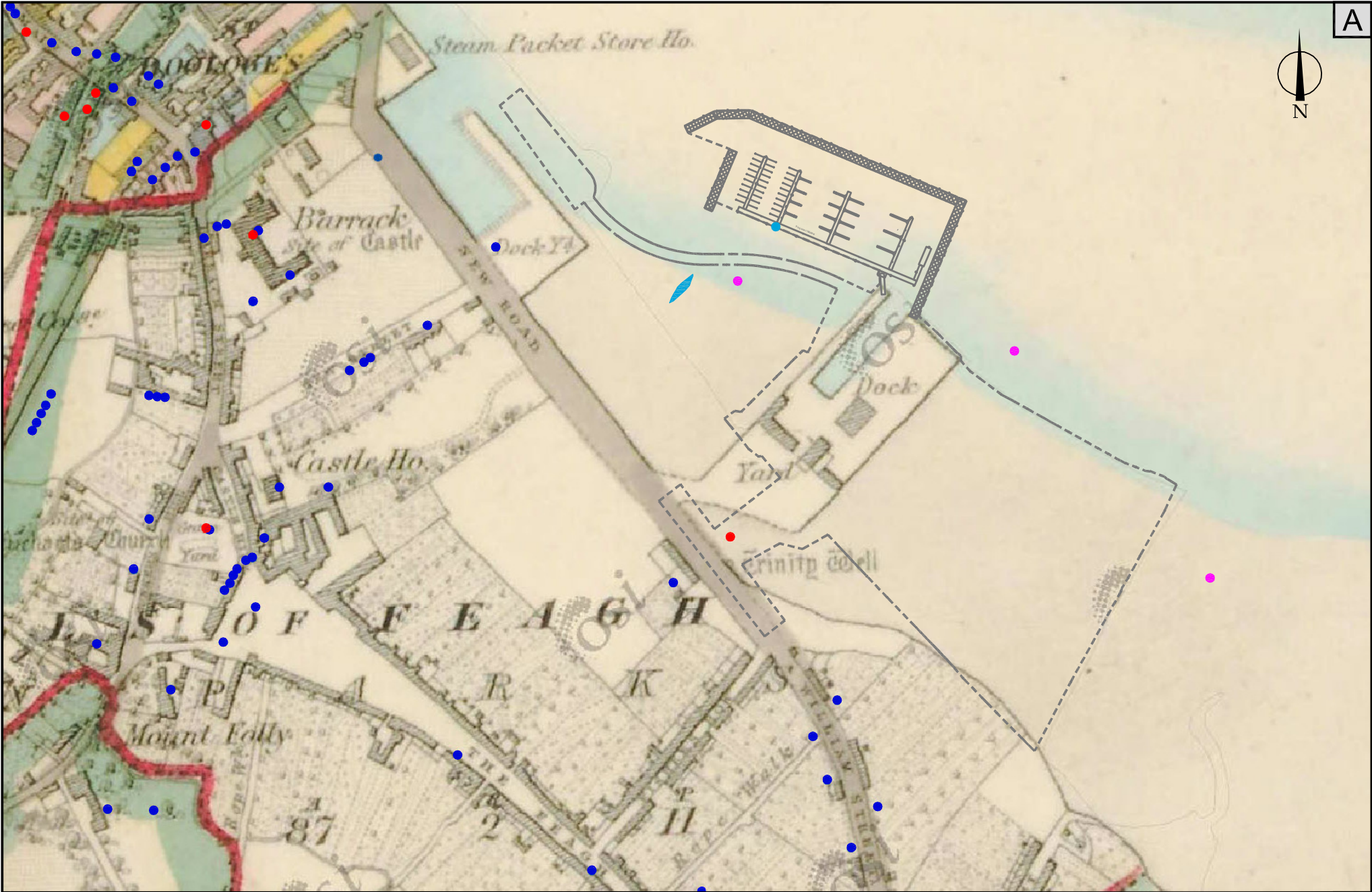



Plate 12: View looking north from the railway embankment at the prow or stem post of the timber vessel identified in 2001 and provisionally recorded in 2008.

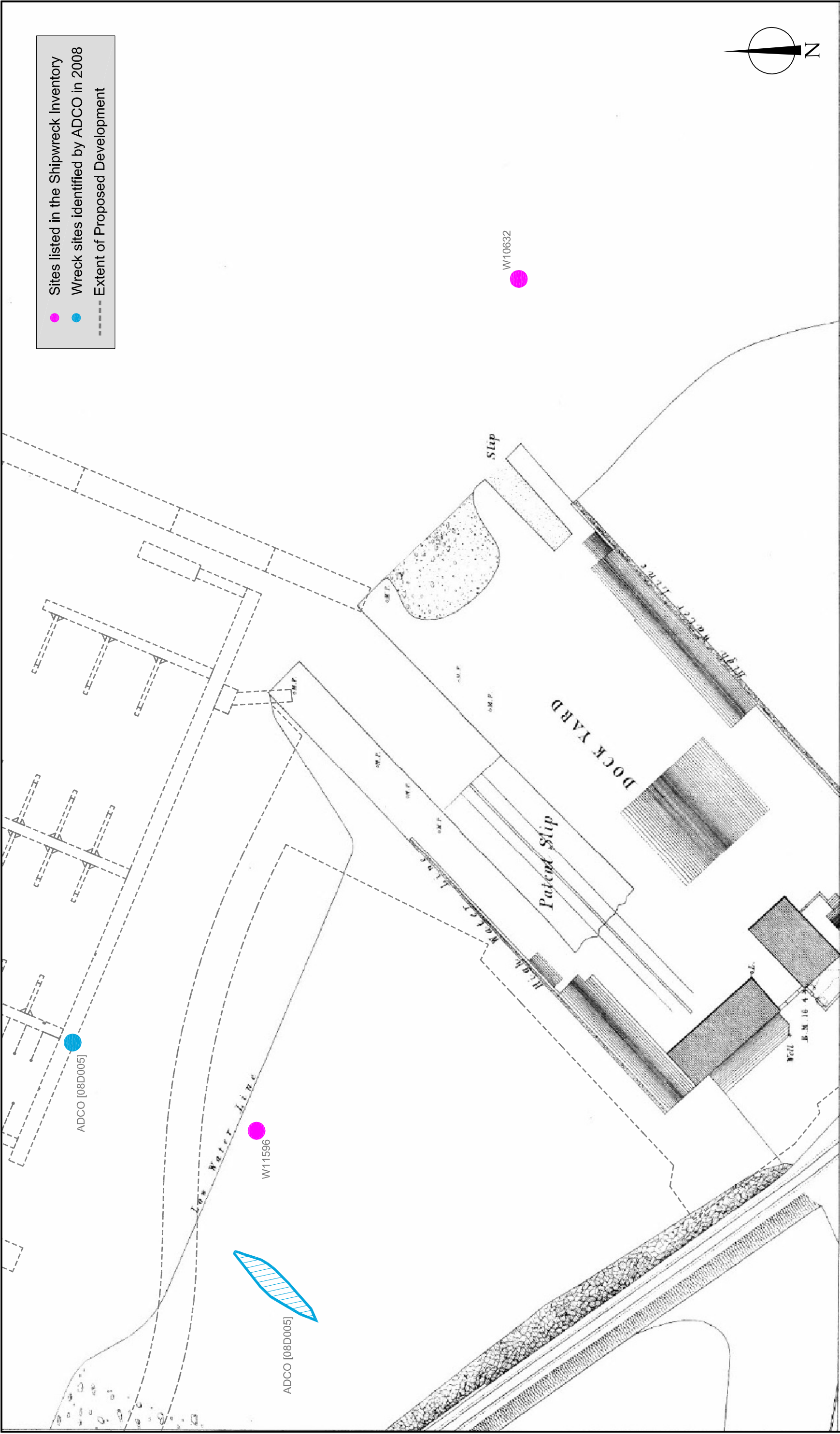


Notes Source: Main- OSI Discovery Series Mapping. Inset- Google Satellite Image.	A4	Job/Exc No. -----	Compiled by R.Bangerter	CAD reference Trinity_Wharf	Client ROD/ Wexford County Council	Title Figure 1- Extract from OS Map showing location of proposed development at Trinity wharf, Wexford Harbour. Thumbnail: Satellite image with development superimposed.
				Drawing No. Figure 1	Project AIA, Trinity Wharf Development	





		Notes Source: OSi Historic Map Archive. ----- Extent of Proposed Development ● Sites listed in the RMP ● Sites listed in the NIAH ● Sites listed in the Shipwreck Inventory ● Wreck sites identified as part of 2008 ADCO Assessment [licence Number: 08D005]			Title Figure 2- A). Extract from OS First Edition (1839) Map with extent of proposed development superimposed. B). Extract from OS 25-inch Edition (c.1890) Map with extent of proposed development superimposed.	
Client ROD/ Wexford County Council	Project AIA, Trinity Wharf Development		Job/Exc No. -----	Compiled by R.Bangerter	CAD reference Trinity_Wharf	Date 12.12.18
				Scale 1:4000	Drawing No. Figure 2	



Sites listed in the Shipwreck Inventory

Wreck sites identified by ADCO in 2008

Extent of Proposed Development

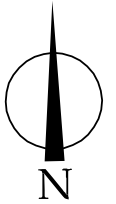
ST MICHAEL'S OF FEAGH PH

XXXVII.16.15

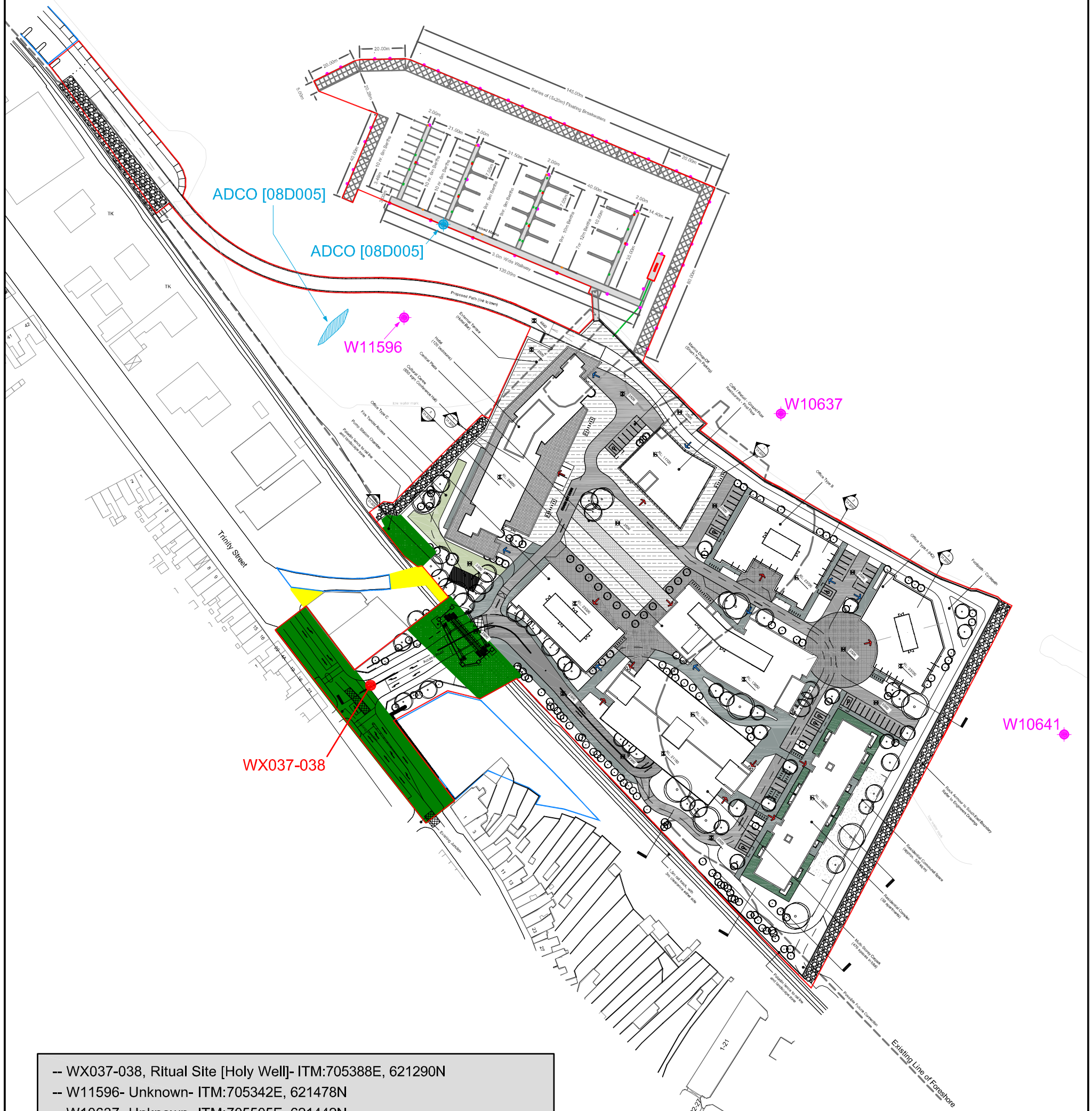
Scale 1:1000 or 10"=160 Feet to One Statute Mile. Surveyed in 1882, and Engraved in 1883, under the direction of Colonel Stubbs, M.E., at the Ordnance Survey Office, Dublin.

<div> <div>Notes</div> <div>Source: UCD Map Archives, Sheet XXXVII.16_10</div> </div>	A4	Job/Exc No. -----	Completed by R.Bangerter	CAD reference Trinity_Wharf	Client ROD/ Wexford County Council	<div> <div>Title</div> <div>Figure 3- Extract from OS Map (1882) of Wexford Harbour showing extent of nineteenth-century Dock Yard and associated Patent Slip.</div> </div>
		Date 12.12.18	Scale 1:1000	Drawing No. Figure 3	Project AIA, Trinity Wharf Development	





WEXFORD HARBOUR



- WX037-038, Ritual Site [Holy Well]- ITM:705388E, 621290N
- W11596- Unknown- ITM:705342E, 621478N
- W10637- Unknown- ITM:705505E, 621442N
- W10641- Unknown- ITM:705622E, 621299N
- 08D005- Timber Wreck- ITM:705371E, 621430N - ITM: 705384E, 621445N
- 08D005- Ship's Timber- ITM:705422E, 621419N



Client
ROD/ Wexford County council

Notes

Source: Roughan & O'Donovan (ROD) Consulting Engineers
[RMP & Shipwreck Inventory sites superimposed by ADCO].

- Sites listed in the RMP ● Sites listed in the Shipwreck Inventory
- Wreck sites identified as part of 2008 ADCO Assessment [08D005]
- Development Boundary

Title

Figure 4- Extract from Project Drawing Showing
extent of proposed development at Trinity Wharf,
Wexford Harbour.

A4

Project
AIA, Trinity Wharf Development

Job/Exc No.

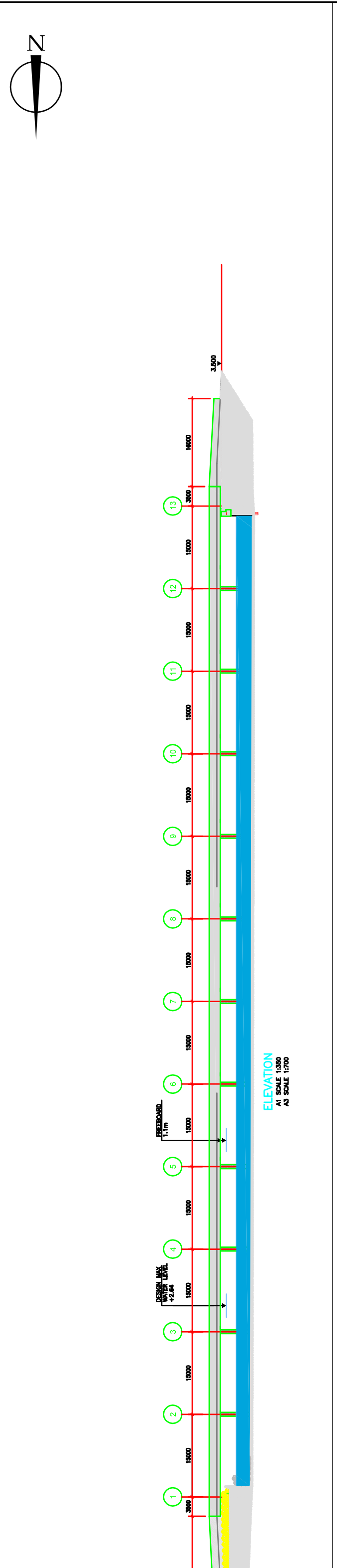
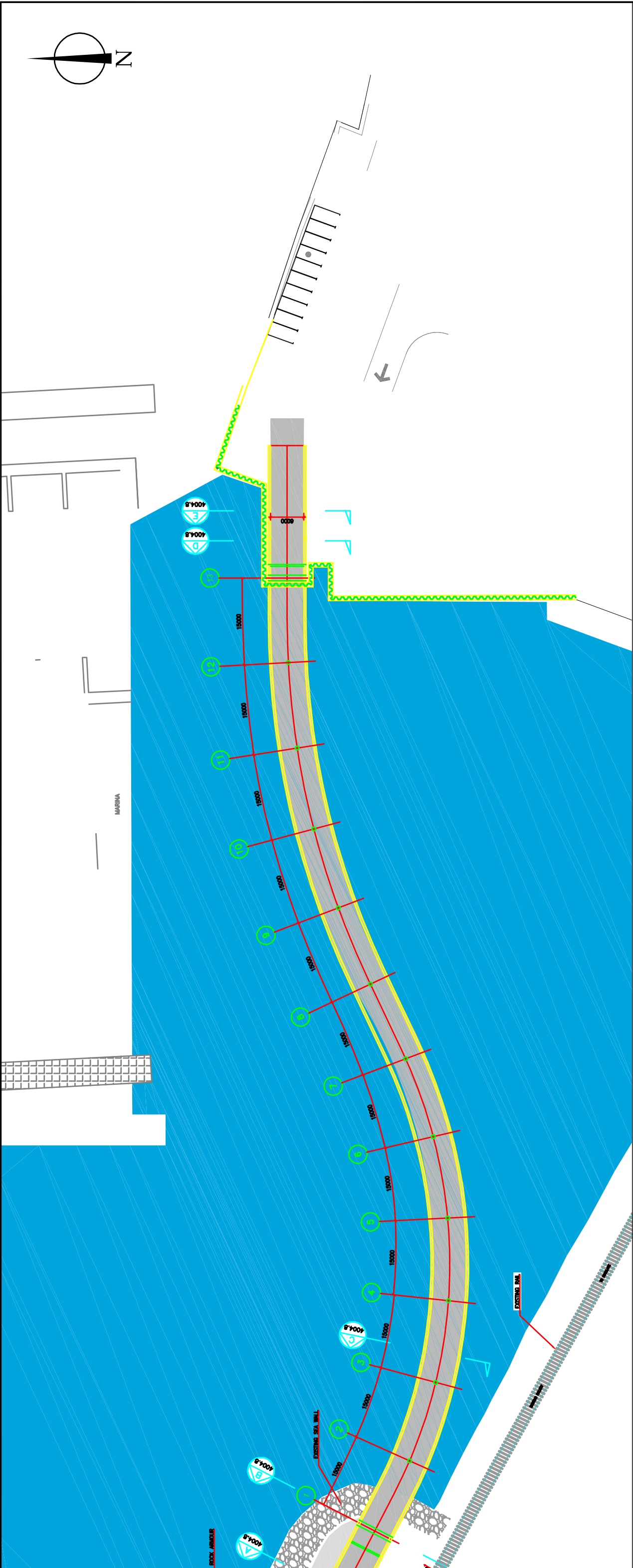
Compiled by
R.Bangerter

CAD reference
Trinity_Wharf

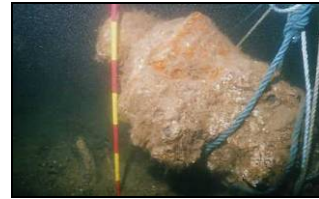
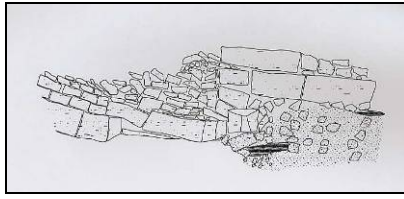
Date
12.12.18

Scale
1:2500

Drawing No.
Figure 4



Appendix 14.4 Trinity Wharf Development Underwater Assessment 2008



**TRINITY WHARF DEVELOPMENT
UNDERWATER ASSESSMENT, AT TOWNPARKS,
WEXFORD
08D005, 08R011**

THE ARCHAEOLOGICAL DIVING COMPANY LTD.

**TRINITY WHARF DEVELOPMENT
UNDERWATER ASSESSMENT, AT TOWNPARKS,
WEXFORD
08D005, 08R011**

10 March 2008

Project Director

Dr. Niall Brady

Brehon House, Kilkenny Road, Castlecomer, Co. Kilkenny

info@adco-ie.com

THE ARCHAEOLOGICAL DIVING COMPANY LTD.

CONTENTS

EXECUTIVE SUMMARY	1
List of Figures	4
List of Plates	4
1.0 INTRODUCTION	5
2.0 PROPOSED DEVELOPMENT	5
3.0 RECEIVING ENVIRONMENT	5
4.0 ARCHAEOLOGICAL ASSESSMENT	7
5.0 DISCUSSION	10
6.0 PROPOSED IMPACTS	10
7.0 RECOMMENDATIONS	10
8.0 ACKNOWLEDGEMENTS	12
FIGURES AND PLATES	13

EXECUTIVE SUMMARY

Archaeological intertidal and underwater assessment was conducted over a c. 310m NW/SE by 180m NE/SW area off Trinity Wharf, Wexford town, as part of pre-development requirements for a proposed hotel and marina development, Wexford Borough Council Reg. Ref. 6042 and W/2007/065.

Existing desktop survey undertaken for the present scheme identified a previous survey conducted in 2001 that indicated a wrecksite on the intertidal foreshore. Additional data supplied by the Department of the Environment, Heritage and Local Government (DoEHLG) indicated that a series of three wrecks were located in the same area. The present work sought to further assess the nature of the information, and to pinpoint the location and extent of any exposed wreckage for design purposes.

The intertidal and underwater assessment was conducted on 4 March 2008 under licence for non-disturbance survey from the DoEHLG, 08D005, 08R011. The assessment worked systematically across the intertidal and sub-surface mudflats. Data was logged and position-fixed using a hand-held GPS unit.

No archaeologically significant material was observed on the seabed of the proposed marina.

The site of the proposed hotel complex retains the north-facing wall of a nineteenth-century dock yard. This defines the southern side of the development. The seabed area retains a considerable amount of modern debris, in terms of discarded junk and some anchors, perhaps

stored securely over winter under the protective walls of the former meat factory at the south end of the site. The wrecksite identified in 2001 is still clearly visible. It 19.69m long, stem to stern, and is 4.62m in maximum width. The vessel appears to survive with its keel in place but with diminished ribs due to erosion. No side planking was evident but it remains possible that the lowest planks survive in the portion that remains buried by the mobile mudflat. While the vessel is not obviously ancient in origin, the absence of metal in its fabric, apart from a recent steel eye-bolt applied to its stempost, and a series of two earlier iron bolts also attached to its stempost, perhaps as a repair, suggests that the vessel retains interest as a craft of local and historic origin. Its stempost is located at 305444E 121379N; its stern at 305457E 121394N. This position places the wrecksite 20m west of the location for the three wrecks noted in the DoEHLG files.

The development proposes to extend along most of the dockyard wall. It also proposes the construction of a car park area over the location of the wrecksite. Direct impacts therefore appear to be inevitable.

A programme of further archaeological mitigation is recommended, both to record in detail the dock yard wall fabric, and to resolve the details of the wrecksite/s in this area in advance of development works proceeding. In order for the further information to be gained from the exposed wrecksite, it is recommended that the enveloping sands be removed to more fully survey the site; to ascertain the survival of outer planking and related internal details; to seek a suitable sample for dating; and to verify whether the site represents a single wreck in isolation or is part of the complex of three sites identified previously in the DoEHLG files. If the wreck is more than 100 years old it would be treated as an archaeological site, and its resolution would require the full mitigation strategy expected of such. In this instance, such work may require the excavation in total of the wreck and any associated features,

to the requirements of the DoEHLG and the National Museum of Ireland.

Similarly, test trench investigation of the mudflats at the site location of the DoEHLG records may clarify whether the archaeological impact area extends beyond the exposed wrecksite.

Recommendations are subject to the approval of the Department of the Environment, Heritage and Local Government.

List of Figures

- Figure 1: Location of development highlighted in blue, and showing the known seaward archaeological indicators, based on OS six-inch series.
- Figure 2: Detail from Ordnance Survey First Edition mapping (1842), showing the present development area (highlighted in red) as a green field site. Source: Sheila Lane and Associates
- Figure 3: Project design plan summarizing the primary features proposed for the Trinity Wharf development.
- Figure 4: Location of archaeological wreckage components based on OS six-inch series.

List of Plates

- Plate 1: Intertidal mudflat sand that covers most of the development footprint
- Plate 2: The natural harder stony/gritty substrate showing through beneath the more fluid intertidal mudflat.
- Plate 3: North-facing battered stone wall of former dock yard, at south end of proposed development site, with one example of the red-bricked drainage outflows indicated.
- Plate 4: Foot of the railway embankment that defines the SW side of the development, where it is built onto by the newly reclaimed car park and quayside that runs north from here. The timber post in the foreground is an isolated instance and perhaps an old mooring post.
- Plate 5: View looking North at the recently reclaimed foreshore that has masked the second dock yard indicated on the OS First Edition map (see Figure 2).
- Plate 6: View from South of stempost at wrecksite identified in 2001
- Plate 7: View from SE looking at extent of wreck as tape measure is being pulled over its length
- Plate 8: View from West of port side ribs protruding
- Plate 9: View from West of starboard side ribs protruding**
- Plate 10: View of anchor, temporarily removed from its resting place to show its form

1.0 INTRODUCTION

The Archaeological Diving Company Ltd (ADCO) was appointed by Tom Philips and Associates, Town planning Consultants, to conduct an intertidal and underwater survey of the seabed off Trinity Wharf, Wexford town, as part of the pre-development assessments associated with a hotel and marina development project, Wexford Borough Council Reg. Ref. 6042 and W/2007/065. The work was conducted under licence from the Department of the Environment, Heritage and Local Government (DoEHLG) as a non-disturbance dive inspection and metal detection survey, on 4 March 2008, licences 08D005 and 08R011. The site is located immediately north of the former Clover Meats Packing Yard, and off the present quayside (see Figure 1).

2.0 PROPOSED DEVELOPMENT

The permitted development reclaims the portion of the seabed adjacent to the former meat packing yard for use as a hotel complex, while the current proposal covers a second area to its north as an associated pontoon marina (Figure 1).

3.0 RECEIVING ENVIRONMENT

The archaeological potential of this scheme has been addressed by Maurice Hurley for this scheme, which is appended to this report as the report must issue separately to the DoEHLG to fulfil licensing requirements.¹ The Ordnance Survey First Edition map indicates that the site used most recently as the Clover Meats Packing Yard served as a Dock Yard in the nineteenth century (Figure 2). Figure 2 also shows the extent of the tidal mudflats in the nineteenth century, and the degree to which the dock yards exploited access to the narrow navigation channel by building right up to it.

It is therefore perhaps of no surprise that this location was known to shipping. A survey conducted in 2001 identified the stem of a timber vessel standing proud of the mudflat, with remnants of its profile and ribs surviving.² That observation has occasioned the present report, in an attempt to locate the vessel more accurately and assess its character.

¹ Maurice Hurley, 'Archaeological and Cultural Heritage'-Chapter 17 (i).

² Detailed in Hurley and based on Licence 01D0137, reported by Máire Ní Loingsigh.

The DoEHLG made available some new data in its Historic Shipwreck Inventory that was not available at the time of Hurley's assessment, which indicates the presence of several shipwreck sites and one shipwreck cluster in the immediate environs (Figure 1, Wrecks 1-3, 4 and 6), Table 1:

Wreck	Original (UKHO)		OSi Conversion			
	Latitude	Longitude	Latitude	Longitude	Easting	Northing
1-3	52 20 04N	06 27 12W	52 20 04.000 N	06 27 12.000 W	305478.999	121390.106
4	52 20 02.75N	06 27 03.5W	52 20 02.750 N	06 27 03.500 W	305640.763	121354.914
6	52 19.967N	06 26.958W	52 19 58.020 N	06 26 57.480 W	305757.878	121211.161

Table 1: Coordinates of Wreck Data in DoEHLG Historic Shipwreck Inventory, in the immediate environment of the Trinity Wharf development. Based on data acquired from United Kingdom Home Office (UKHO) files.

The entries are detailed as follows:

- Wrecks 1-3: three wrecks noted in UKHO database.
- Wreck 4: frames of wreck lying NE/SW standing proud of seabed; small part of forward section clearly visible, taken from 1955 aerial photograph (AP), entered onto UKHO database 1975.
- Wreck 6: located today in what may be the brownfield reclamation, but identified on 1955 AP, and entered onto UKHO database in 1975: frames of a large wreck lying NE/SW proud of the seabed, with bows hard against northern beacons marking entrance to boat park and training wall.

This data is based on observations made from aerial photographs studied and annotated in 1975 by the UKHO.³

The site, Wrecks 1-3, is the only location noted within the survey area; the other two sites being located outside the proposed development area. The details provided for site Wrecks 1-3 are minimal but suggest that three wrecks were noted abandoned in this location.

In addition to the assessment of the known wrecksite, the present survey aimed to correlate that information with the UKHO data. It further sought to conduct a general intertidal and underwater assessment and metal-detector survey of the larger development footprint, to further assess the archaeological potential over the proposed development.

³ Information courtesy of the DoEHLG Historic Shipwreck Inventory.

4.0 ARCHAEOLOGICAL ASSESSMENT

Methodology

Site assessment of the proposed hotel and marina footprint was conducted during Low Water, which permitted more than 70% of the site area to be walked over in the 'dry'. The remaining assessment was conducted as a diving operation, which took place during the same incoming tide.

The intertidal survey was conducted by walking the shoreline systematically, recording details along the existing quaysides, and continuing out onto the sand and mudflats. The wrecksite itself was subject to its own more detailed survey, using a tape measure to elicit the specific measurements.

The dive work was conducted by tending the diver from the shore, with pendulum searches proceeding from three primary locations, ensuring full coverage of the diver environment:

- Shoreline location on the existing quayside, to cover the extension of the marina below the present-day rock armour.
- Beach location beside surface water outfall, to cover marine/hotel footprint.
- Dockyard/Meat factory location at most seaward extent, to cover the seaward/navigation channel area and landwards section of the hotel footprint that remains under the permanent waterline.

Site conditions were very good. Clear skies, a slowly filling tide, and 3-4m underwater visibility proved to make the job expeditious and complete.

Seabed Topography

The bulk of the seabed is covered with an intertidal mudflat that is highly mobile and dynamic. A wet, slimey sand covers the natural substrate of hard gritty sand, which is apparent along the shoreline and at the navigation channel (Plates 1-2). The topography is otherwise relatively featureless until the deeper water is reached below Low Water, where a steep fall is noticeable and the bed drops away by 3-4m.

Observations

Dock Yard

The old north-facing quay wall of the former dock yard and later meat factory is well preserved at the south end of the site. It is made of a schist/metamorphic rock that is roughly shaped. It includes a base batter, and retains a series of red brick-lined

drainage ports, some of which retain pipes (Plate 3). The seaward corner of this wall is much more derelict but it continues around as indicated on the nineteenth century map, and therefore it may be concluded that the structure of the dock remains relatively intact. The landward side of this element has been infilled but it is clear from the surviving stonework that the basal structure of the dockyard remains intact.

Railway Embankment

The southwest side of the foreshore is defined by the current embankment for the railway, which postdates the First Edition map but is itself an example of the good stone masonry of that era (Plate 4). To the north of the embankment, modern reclamation has added a car park and quayside that masks the second dock yard which is recorded in this location on the nineteenth century maps (Plate 5).

Seabed

Metal detection registered countless hits but in all cases these were due to recent dumping of debris and related junk material, while in some instances along the base of the Dock Yard wall the hits relate to modern iron anchors which seem to be placed here for safe-keeping, perhaps over winter. In the area of the proposed marina, beside the recently reclaimed land, angular boulders relating to the rock armouring event litter the seabed, while at the very north end of the site a slight rise of the seabed level was associated with an array of rope and iron encrustations, which was associated with shellfish remains, and seem to suggest the remnants of mussel farming. Deep mud covers most of the seabed area below the Low Water mark, with occasional boulders or cobbles sticking out. A loose ship's plank was identified at approximately 305495E 121428N. The plank retains holes for wooden pegs, c. 2cm-3cm in diameter, and is 2m long, 14cm wide and c. 10cm thick. It was unassociated and loose and on the seabed; it may have washed in with the tide or become dislodged from the wrecksite. It was replaced at its findspot.

Wrecksite (Figure 3, Plates 6-10)

The wreck identified in 2001 was revisited. It survives as a stem post that rises 2.39m above the mudflat, which in turn is up to 40cm deep at this point. The wreck is located 24.4m from the High Water Mark on shore. Beneath the mudflat the ground is very flat and hard, suggesting that the vessel is not buried in ancient estuarine mud but was dragged up onto the hard and left to allow the tidal mudflats develop around it. In addition to the stem, the ribs and stern of the vessel are exposed at the top of the mudflat. The timber is in an eroded state and it is clear that exposed timbers are thicker and more perfectly preserved at depth where the muds have helped to preserve them from constant exposure during Low Water. The vessel is effectively

timber-built. It measures 19.69m long, stem to stern, and is 4.62m in maximum width. This equates to a vessel that was 66 and a half feet long by more than 15 feet wide (allowing for the fact that the ribs are not surviving fully and therefore cannot reflect the original width of the vessel). The vessel appears to survive with its keel in place and the ribs are in various states of eroded disrepair. There is no indication of side-planking but since the very base of the vessel is buried in mud it is possible that remnants survive *in situ* there. A total of thirty-two ribs were detected on the port side, commencing 3.3m from the stern, and ending 4.98m from the bow. Fewer ribs are evident on the starboard side, commencing 10.50m from the stern and ending 7.63m from the bow. On average the ribs are 11cm, 13cm and 14cm wide and squared in shape, but thicknesses as much as 17cm and as little as 8cm were also observed. The full widths of the ribs are masked by the muds which cover the central area of the wreck. The ribs are closely spaced together and appear to be separated by c. 25cm on average. In greatest dimensions the vessel is 4.62m wide. The stem post is formed from three pieces of timber, 2.39m long (exposed) and 24cm wide; the middle timber is the thickest at 28cm, while the inner timber is 20cm thick and the outer timber is 12cm thick. The outer timber has had two iron bolts driven through to tie it to the middle timber. It may represent a repair to the bow section. The outer timber also has a steel eye-bolt attached, onto which is tied a polypropylene rope and a short anchor has no real antiquity. The steel eye, rope and anchor are presumably recent attachments, perhaps added to secure the vessel to the site when it was abandoned.

Apart from the steel eye-bolt and the two iron bolts, there is an absence of metal on this wreck. Metal-detection located several anomalies towards the stern port side, but in all instances these turned out to be recent wash-ins of junk and debris. Had the vessel accommodated an engine, it would be expected that a large metallic signature would be identified in the midships stern section, but this is not the case. It may be concluded therefore that this served without an engine and was therefore a sailing vessel. The absence of metal suggests that the vessel retains interest as a craft of local and historic origin.

The stempost is located at 305444E 121379N; the stern at 305457E 121394N. The position places the wrecksite 20m west of the location for the three wrecks noted in the DoEHLG files. There are no indications of any wreckage material protruding above the location of Wrecks 1-3, as defined by the UKHO records.

5.0 DISCUSSION

The details arising from the present survey highlight the seabed off Trinity Wharf as preserving aspects of Wexford's maritime past, both in terms of the dock yard walls structure, and the abandoned timber vessel. The proposed development will impact both these locations and consequently it is may be anticipated that further archaeological mitigation will be required as part of the development requirements.

6.0 PROPOSED IMPACTS

The development proposes to extend along the dockyard wall, where a car park facility to serve the hotel and associated features will be built against the shoreward half of the wall (Figure 4). In accordance with Condition 30 of the permission granted under 6042, an archaeological survey will be conducted of the dockyard wall in advance of the development, to more fully record the nature, extent and fabric of this piece of Wexford's maritime and industrial history.

The development also proposes to extend the carpark over the location of the identified wrecksite, and that of the UKHO Wrecks 1-3 charted location. While it is possible that the latter refers in fact to the former, and that the c. 20m variation in distance is a feature of mapping discrepancy from aerial photographs, the suggestion remains to be proven. Given the timber nature of the known wrecksite, it appears to represent a remnant of local ship-building craft and therefore will be further explored/recorded prior to development works proceeding.

The proposal to construct a pontoon marina does not appear to represent any direct impact with features of known archaeological significance.

7.0 RECOMMENDATIONS

Pre-construction Measures

The dock yard wall will be archaeologically surveyed in detail, to record the fabric and extent to the wall, to provided scaled 1:20 drawings, in plan, elevation and sectional drawings that will more fully establish a clear record of what is a feature of the town's industrial maritime heritage.

Archaeological investigation of the UKHO Wrecks 1-3 site will be conducted to clarify the presence/absence of wreckage in this location.

Archaeological investigation and survey will be conducted on the known wrecksite, to more fully record the detail of this timber vessel, to ascertain a sample for dating, and to inform more clearly the maritime history that it belongs to.

If the wreck is more than 100 years old it would be treated as an archaeological site, and its resolution would require the full mitigation strategy expected of such. In this instance, such work may require the excavation in total of the wreck and any associated features, to the requirements of the DoEHLG and the National Museum of Ireland.

All the above work is subject to licensing by the DoEHLG.

Construction Phase Measures

ARCHAEOLOGICAL MONITORING. Archaeological monitoring licensed to the Department of the Environment, Heritage and Local Government will be conducted for ground and seabed disturbance works associated with this scheme. A suitably qualified archaeologist will undertake the archaeological monitoring under licence from the Department of the Environment, Heritage and Local Government. The archaeological monitoring will be undertaken with the proviso for full excavation of any archaeologically significant material uncovered as part of the operation.

RETAINING AN ARCHAEOLOGIST/S. An archaeologist will be retained for the duration of the relevant works.

THE TIME SCALE for the construction phase will be made available to the archaeologist, with information on where and when ground disturbances and dredging will take place.

SUFFICIENT NOTICE. It is essential for the developer to give sufficient notice to the archaeologist/s in advance of the construction works commencing. This will allow for prompt arrival on site to monitor the ground disturbances. As often happens, intervals may occur during the construction phase. In this case, it is also necessary to inform the archaeologist/s as to when ground disturbance works will recommence.

DISCOVERY OF ARCHAEOLOGICAL MATERIAL. In the event of archaeological features or material being uncovered during the construction phase, it is crucial that any machine work cease in the immediate area to allow the archaeologist/s to inspect any such material.

ARCHAEOLOGICAL MATERIAL. Once the presence of archaeologically significant material is established, full archaeological recording of such material is recommended. If it is not possible for the construction works to avoid the material, full excavation would be recommended. The extent and duration of excavation would be a matter for discussion between the client and the licensing authorities.

ARCHAEOLOGICAL TEAM. The core of a suitable archaeological team will be on call to deal with any such rescue excavation. This would be complimented in the event of a full excavation.

SECURE SITE OFFICES and facilities should be provided on or near those sites where excavation is required.

FENCING/BUOYING of any such areas would be necessary once discovered and during excavation.

ADEQUATE FUNDS to cover excavation, post-excavation analysis, and any testing or conservation work required should be made available.

MACHINERY TRAFFIC during construction must be restricted as to avoid any of the selected sites and their environs.

SPOIL should not be dumped on any of the selected sites or their environs.

PLEASE NOTE: All of the above recommendations are based on the information supplied for the Trinity Wharf development project. Should any alteration occur, further assessment maybe required.

PLEASE NOTE: Recommendations are subject to the approval of The Department of the Environment, Heritage and Local Government.

8.0 ACKNOWLEDGEMENTS

Thanks are extended to Julie Costello for Tom Cronin and Associates. The additional UKHO data was supplied by the Underwater Archaeology Unit, DoEHLG. The dive team constituted Dr. Niall Brady, Brian MacAllister (Dive Supervisor), and Dr. Edward Pollard.

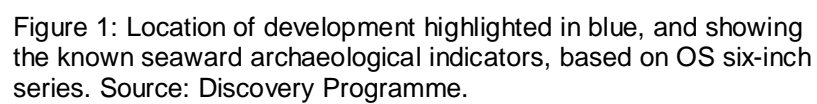




Figure 2: Detail from Ordnance Survey First Edition mapping (1842), showing the present development area (highlighted in red) as a green field site. Source: Sheila Lane and Associates

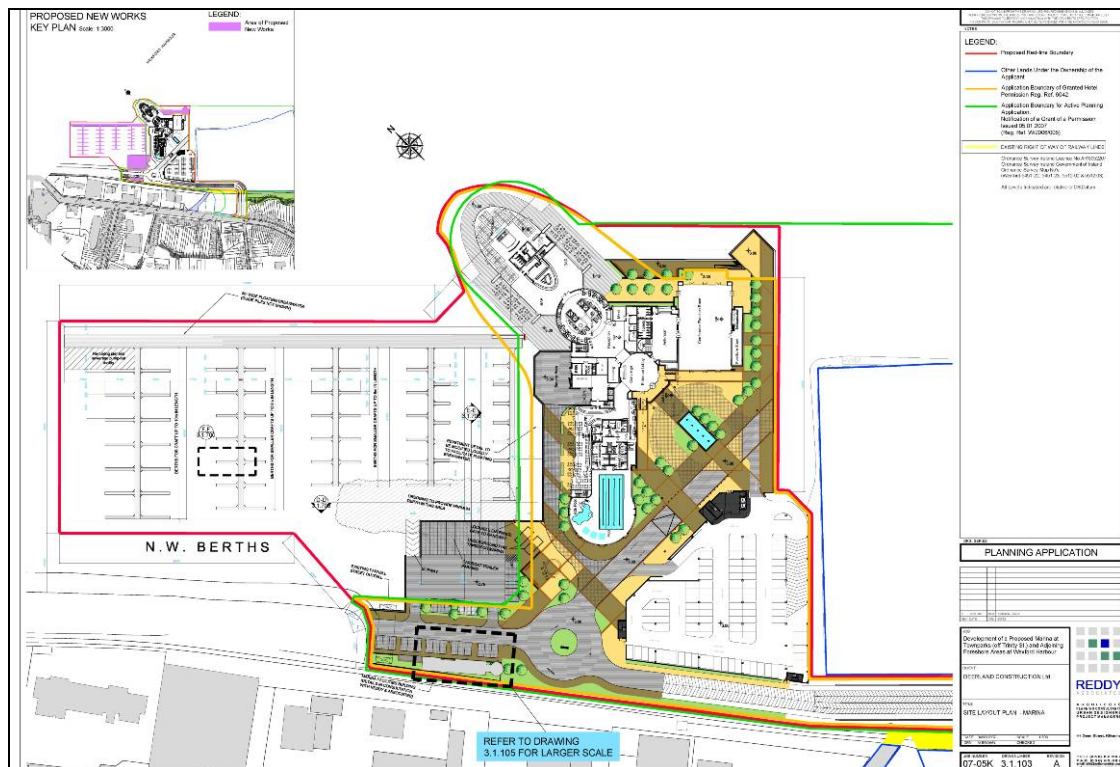


Figure 3: Project design plan summarizing the primary features proposed for the Trinity Wharf development.

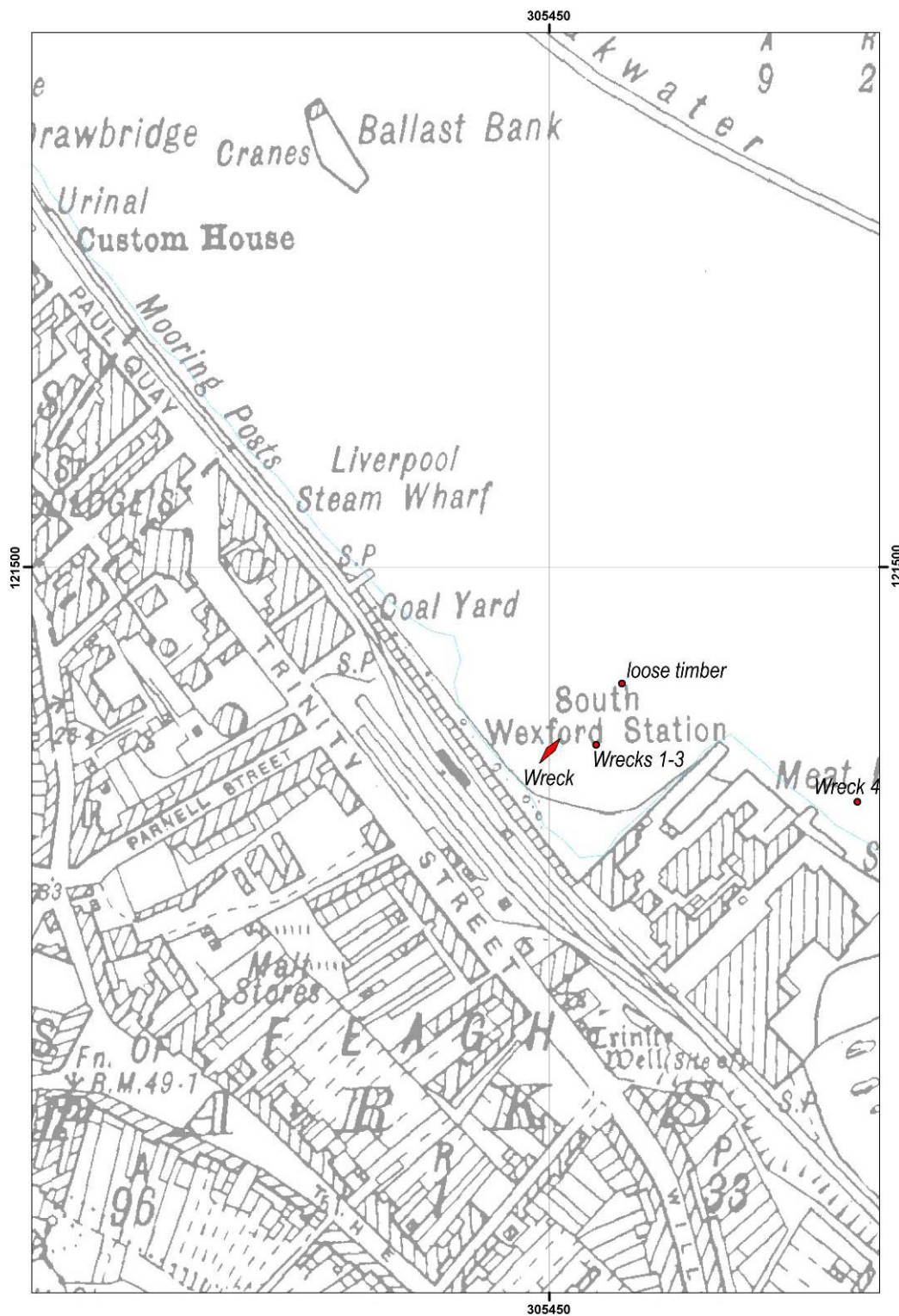


Figure 4: Location of archaeological wreckage components based on OS six-inch series. Source: Discovery Programme.



Plate 1: Intertidal mudflat sand that covers most of the development footprint



Plate 2: The natural harder stony/gritty substrate showing through beneath the more fluid intertidal mudflat.



Plate 3: North-facing battered stone wall of former dock yard, at south end of proposed development site, with one example of the red-bricked drainage outflows indicated.



Plate 4: Foot of the railway embankment that defines the SW side of the development, where it is built onto by the newly reclaimed car park and quayside that runs north from here. The timber post in the foreground is an isolated instance and perhaps an old mooring post.



Plate 5: View looking North at the recently reclaimed foreshore that has masked the second dock yard indicated on the OS First Edition map (see Figure 2).



Plate 6: View from South of stempost at wrecksite identified in 2001



Plate 7: View from SE looking at extent of wreck as tape measure is being pulled over its length



Plate 8: View from West of port side ribs protruding



Plate 9: View from West of starbaord side ribs protruding



Plate 10: View of anchor, temporarily removed from its resting place to show its form

A D C O

THE ARCHAEOLOGICAL DIVING COMPANY LTD

- Environmental Impact Assessment
- Riverine, Intertidal, Underwater Assessment
- Underwater Investigation and Excavation
- Monitoring of Dredging and Marine Construction projects
- Maritime Heritage Consultancy
- Accords to HSA/HSE Diving at Work Regulations

Brehon House
Kilkenny Road
Castlecomer
Co. Kilkenny

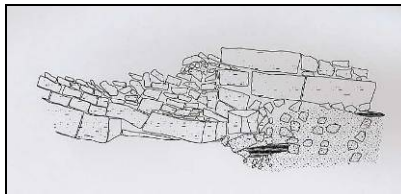
Phone +353 (0)56 444 0236
Fax +353 (0)56 444 0237
Internet www.adco-ie.com
E-mail info@adco-ie.com

in association with Valerie J. Keeley Ltd.
Archaeological Consultancy

Recording prehistoric logboat at
Gormanston, Co. Meath
GAS 2025 Irish Sea
Interconnector



Underwater elevation of bridge pier collapsed in
1763. River Nore Flood Alleviation Scheme



Iron cannon on site of 17th-century
timber wreck discovered during
dredging programme, Waterford
Harbour

