

Appendix 11.9

Proposed Flood Relief

Works, Arklow, Co. Wicklow.

Arklow Test Excavations,

Licence Reference 20E0675



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**PROPOSED FLOOD RELIEF WORKS
ARKLOW, CO. WICKLOW**

ARCHAEOLOGICAL TEST EXCAVATIONS

For: Wicklow County Council

Licence reference: 20E0675

January 2021

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1 Introduction

The Avoca River (Arklow) Flood Relief Scheme (FRS) is being implemented by the Office of Public Works (OPW) in collaboration with Wicklow County Council. The Environmental Impact Assessment Report (EIAR) is currently being prepared for submission as part of the overall planning application to An Bord Pleanála (ABP).

The Flood Relief Scheme (FRS) comprises dredging work along 850m of the Avoca River channel, underpinning and strengthening the Avoca River Bridge, construction of flood protection walls and embankments and related works. A civil engineering project of this magnitude will require ancillary areas to facilitate aspects of the construction works. Six areas have been suggested and three of these have been identified for archaeological testing.

To fully inform the EIAR, archaeological investigation of some of these ancillary areas is required. The nature of archaeological investigation is through the excavation of test trenches at three of the locations. These locations were selected to answer questions posed by stakeholders during the design meetings and specific to the particular site.

The individual sites were inspected by Redmond Tobin of RedArc Consulting Ltd in advance of a licence application which was submitted for approval on the 4th November 2020. Each location presented its own particular constraints in respect of access and location. This required that each site be excavated, recorded and backfilled on the same day. Archaeological test trenching was carried out on the various sites over a four-day period, 8th to 11th December under licence from the National Monuments Service and the National Museum of Ireland (Reference: 20E0675). The assessment involved the excavation of 8 trenches at three distinct locations. This report presents the results of the test trenching exercise.

2 Site Locations

The 6 ancillary sites are spread throughout the urban area of Arklow. They are designated as 'site compounds' (SC) and numbered one to six.

- **SC1** is located on the townland of Ferrybank although this site was partially located on the townland of Tiknock in the early 19th century. By the early 20th century, the townland boundary had been moved placing this site wholly in the townland of Ferrybank. The site to be tested is partially in the area immediately to the rear of the Circle K Service Station and partially in the private land due south of the Service Station and north west of the houses fronting onto Ferrybank and separated from them by a narrow lane. This site has been suggested as being the location of the Ovoca Brewery as shown on the 1st edition OS map.
- **SC2** is the former site of a municipal landfill site and now lies adjacent to the public amenity area. This site lies due east of the Bridgewater Shopping Centre but not within the former precincts of the Kynoch Explosives Factory.
- **SC3** is the site of Ferrybank House and located on the townland of Marsh. The house was listed on the National Inventory of Architectural Heritage (Ref: 16322077) but was demolished in 2012. Testing was required to clarify the nature and extent of any surviving remnants of this house.
- **SC4** is used as a public car park sloping north to the riverbank from St Mary's Cemetery.
- **SC5** is on the North Pier to the east of the site of the Kynoch Explosives Factory.
- **SC6** is located on the townland of Tinahask Lower. This area has historically been reclaimed during the creation and subsequent enlargement of Arklow Harbour. It now serves as a public amenity area with car parking to the north and south.

The sites selected for testing are SC1, SC3 and SC6. The remaining sites are unlikely to sustain any direct impacts on material of archaeological origin as their locations will not be affected or altered during the construction of the Flood Relief Scheme.

3 Archaeological & Historical Background

3.1 *Pre-Viking Arklow*

Arklow is generally considered as being a town of Viking origin, however a fishing community had settled on the estuary of the river Avoca long before the Vikings arrived there.

Topographical files housed in the National Museum of Ireland (NMI) refer to a mound/tumulus in Ferrybank on the northern bank of the Avoca River where a cist containing urn and human remains was unearthed. The discovery does not have a NMI register number and therefore the artefacts listed appear lost. The discovery was made in 1839 and would appear consistent with a later Bronze Age burial (Price 1934, 51).

In the second century BC the Greek cartographer Ptolemy on his Map of the World indicated on the Irish coast a settlement called *Manapii* which historians now agree is Arklow. The town also has associations with St Kevin in the fifth century, where it is said that he blessed the fishermen and their boats, that year we are told that the sea yielded a rich crop and the community was free from sickness.

3.2 *Viking Arklow*

The name Arklow is of Scandinavian origin, with “lo” meaning river meadow and “Ark” being derived from the Viking name Arknell, i.e. Arknell’s Meadow. The presence of a harbour can be inferred from Viking times, when the location of the river estuary would have been an attractive feature.

There is evidence of an early Viking raiding base on the Wicklow coast, probably at Arklow, in the mid-830’s. Heathens from “Inber Dee”, which may well refer to Arklow, are mentioned in the annals as having raided the ecclesiastical establishment at Glendalough, and other monastic settlements. The annals give no indication as to whether the “Inber Dee” base marks the beginning of a long-term Viking settlement on the Wicklow coast.

Viking burials from Murrough Strand and Threemilewater, south of Wicklow town and due east of Kilboy Bridge, further attest to a Viking presence in the area. An Iron Viking sword was recovered from peaty earth about 1888 on the Murrough and it is possible that the Murrough find represents a pagan Viking burial of the ninth or early tenth century date. The presence of Viking burials would imply more regular inhabitation of the Wicklow region before the second half of the tenth century.

3.3 **Medieval development of Arklow Town**

The medieval town of Arklow was situated at the foot of a hill, on the south bank of the river Avoca and its estuary. Prince John granted Theobald Fitzwalter the manor of Arklow, in 1185. The property remained in the hands of Theobald's descendants, the Butler's, throughout the middle Ages. This grant marks the beginnings of Arklow as an Anglo-Norman town (Bradley and King, 1989).

A Cistercian abbey (RMP WI040:029(04)) was founded on the island of Arklow. The settlement here was short lived; Theobald Fitzwalter granted the "Island of Arklow" to the Cistercians of Furness for the foundation of an abbey in 1204, he transferred the monks in 1205 to a new monastery in Abington, Co. Limerick (Gwynn & Hadcock, 1970, 126). Presumably they had established some form of temporary church, but it is not clear what happened to it after 1205. O'Curry (O.S. Letters: Wicklow) noted that:

"...an ancient graveyard with the site of a church was founded on the north side of the Bridge of Arklow in a sandbank in Ferrybank townland in this [Kilbride] parish. Several skeletons were found here, which were covered in flags, the sides being built with stones of various sizes and forms. The surface of the place is still covered with human bones..." (Ronan, 1927, 103-4, note 9).

The medieval parish church, the Church of St Mary (RMP Ref. WI040:029 (03)) was located on the north side of Main Street. No remains survive above ground and the area has been turned into a public park. This development lies immediately to the east of this location.

Thomas Fitzwalter also founded the Dominican Friary (RMP WI040:029 (01)) in 1264; and he was buried there in 1285. The Dominican Friary was located in the rectangular site marked "graveyard" on the south side of Main Street. The friary was suppressed in 1539 but parts of the church and claustral buildings survived until the mid-eighteenth century (Gwynn and Hadcock, 1970). No buildings survive today and like the parish church of St Mary, the site has been turned into a public park.

Price (1934) also suggested that there was a passage (RMP WI040:029 (05)) leading north from the Dominican Friary towards the south bank of the river Avoca. The passage at one time contained a small stream but has now been filled in and covered over.

The 1571 covenant between the earl of Ormond and the burgesses of Arklow mentions that the burgesses shall "at their own charge make strong gates, ditches and pales for the better defence said town" (Curtis, 1932-43, v, p.211).

There is no conclusive evidence that these defences were ever built. The alignment and length of the long boundary, however, that delimits the plots on the south side of Main Street suggests that some form of defence probably existed, possibly an earthen rampart and fosse.

Monitoring adjacent to Abbey Lane in 2003, by the writer, uncovered a number of burials outside the bounds of the Dominican Abbey and therefore likely to postdate the suppression of the Abbey. These burials were also cut into a major linear disturbance which follows the line of the rear boundary of the burgrave plots. This feature may represent a section of the 16th century town defences.

The repair of the “haven” is mentioned in this 1571 covenant between the earl of Ormond and the burgesses of Arklow. The original harbour was probably located to the east of the town, where there are still quays today. The topographical files of the National Museum of Ireland (Ref: IA321010) refers to the discovery of the remains of a dugout boat, 2.92m in length and 0.365m in maximum width¹. Upstream of Arklow bridge in Yardland Td, Professor Sean P. O’Riordain recorded a second dugout boat², parallel sided and displaying a duckbilled projection (1966). Both dugout boats are ferry boats of medieval date (Dr Niall Gregory, pers. comm.).

The thirteenth-century castle (RMP WI040:029 (02)) whose remains sit on high ground at the west end of the town, overlooking the river, possibly replaced a pre-Norman structure (Bradley and King, 1989). The remains of randomly coursed rubble stone consist of a stretch of curtain wall and a circular corner tower built on a rock outcrop. The tower is now three floored; there is no access to the first floor and the walls of the second floor are largely missing. There is basal batter approximately 2.5m high on the north side. The curtain wall, some 8m high at its western end, runs southeast from the angle tower before turning almost due south, where it reduces in height from 6m to 4m.

In the fourteenth century, Arklow came under pressure from the native Irish, and the castle (RMP WI040:029 (02)) was captured in 1331. The town, however, survived the Gaelic resurgence and managed to remain a bastion of the Pale. The sixteenth century saw the Butlers reasserting their interests in the manor. An important document from 1571 states that the town was in a state of dilapidation, and the castle, harbour and defences are specifically mentioned as being in poor condition. The town remained loyal to the crown during the nine years’ war, and it was a supporter of the confederate cause between 1641 and 1649. The town surrendered to Cromwell in September 1649, as his army passed through, on route to Wexford.

During monitoring for the insertion of a Bórd Gáis Feeder Main along the Main Street of Arklow (Tobin 2003) it was demonstrated that the existing main street corresponds exactly to that of the medieval and post medieval town. Archaeological deposits were unearthed along the route of the pipe, with the majority being sealed under the existing footpaths. The Main Street is regularly cut by post medieval box culverts placed to carry storm and wastewater to the River. These drains continue to function to this day. Samuel Lewis, in his Topographical Dictionary of Ireland (1837), makes

¹ Gregory, N. ‘Arklow Dugout Boat, Co. Wicklow: Assessment of Dugout Boat – Report.’ 2010, pp 1-22

² Gregory, N. ‘A Comparative Study of Irish and Scottish Logboats.’ Unpublished PhD Thesis for University of Edinburgh. 1997, Vol 3, p.558

direct reference to *'the Macadamising of the principal street, and the laying down of foot pavements'*.

The later development of the town has destroyed much of the original medieval and post medieval street frontage and in cases where monitoring has been carried out along Main Street nothing has been identified as the remains of any structure facing onto the Main Street. Nonetheless it is possible that house foundations, refuse pits and property boundaries survive within the Zone of Archaeological Potential around the town centre of Arklow.

Development on the north side of the bridge in Ferrybank did not take place until the latter half of the 19th century. The 1st edition of the Ordnance Survey shows Arklow as lacking in a harbour. By the 2nd edition 25" map not only was there an extensive harbour but the growth of industry. The development of the harbour necessitated changing the mouth of the Avoca River by dredging a new channel. This dredged material appears to have been used to start the reclamation of the estuarine marshlands both north and south of the river. The second edition shows the Kynoch Explosives Factory extending north along the coastline from the riverside Chemical Works. Private houses also developed along the Ferrybank Road and onto the Sea Road. There also appears to have been an attempt at reclaiming the Marsh on the north bank of the river with the construction of embankments along the riverbank and drainage channels crossing the marsh from the northeast feeding into a main channel following the line of the riverside embankment. This channel terminates at a sluice gate which opens into a water course that runs eastward to join the main river downstream of the bridge. The watercourse was accommodated by a segmental arched culvert which channelled the water under the main road and ultimately into the estuary.

Reclamation may also account for alterations to the townland boundary alignment between Tiknock and Ferrybank townlands during the 19th century.

4 Archaeological Testing (Licence ref: 20E0675)

The test excavation was carried out over a period of 4 days commencing on the 8th of December and concluding on the 11th of December. The work was carried out under licence from the National Monuments Service and the National Museum of Ireland (licence ref: 20E0675) in cold but fair weather with light winds. All trenches were excavated using an 8-ton, 360° tracked excavator with a 1.50m grading bucket. The trench locations were set out in advance by GPS using ITM coordinates and Ordnance Datum was established for each location with a temporary bench mark (TBM). To facilitate the excavation and recording of the test excavation, an experienced site assistant was present on site for three days.

4.1 Location 1 – SC6 – Tinahask Lower (08.12.2020)

Site Compound 6 (SC6) is located in the townland of Tinahask Lower (117 acres, Arklow Barony, Arklow Parish, Rathdrum Poor Law Union) immediately west of South Beach and flanked to the west by the access road to the Roadstone Quarry.

This site presents as an amenity area to the west of the South Beach and is a level grassed area with picnic tables. Cartographic analysis would suggest that this area was reclaimed during the 19th century when the harbour was extended to accommodate increased maritime traffic and industrial activities. The site is also located close to the former Arklow Pottery factory and testing was requested to assess if this site had been used as a dump for ceramic waste from this factory. A search of the NMI topographical files specific to the townland of Tinahask Lower (30.11.2020) produced no results. Two trenches were excavated at this location to assess the site totalling 131.60m in length.

SC6 - Trench 1 – SC6-1 (Appendix 1)

SC6-1, the northernmost trench, was excavated on a bearing of 22° (NNE-SSW). The NNE coordinates (ITM) were 725320.00/672671.00 (3.87m OD). SC6-1 was 68.3m in length with its SSW coordinates at (ITM) 7252281.00/672615.00 (3.93m OD).

At the SSW the topsoil and sod layer (C1) were 0.30m in depth. C1 overlay a grey, sandy clay reclamation deposit, laid down on a stiff clay deposit with frequent stones and domestic and demolition waste. From the results of SC6-2 it is likely that at the SSW terminus of SC6-1 the original beach level is 1.50m below present ground level (2.40m OD).

6.00m from the SSW terminus the form of the reclamation deposit changed to brown clay with frequent inclusions of grey decayed stone. Ceramic tile fragments and polystyrene packaging was frequent if the upper 0.30m.

25.00m from the SSW terminus the compaction of the reclaimed material changed to water bearing, loose clay containing demolition rubble. The frequency of ceramic tile fragments and polystyrene packaging is visibly greater.

The water bearing reclamation material continued and at 36.00m from the SSW terminus the depth of Trench 1 reached 0.70m. Throughout its depth modern debris was noted inclusive of plastic membrane, drainage pipes and ceramic tile fragments.

At 50.00m from the SSW terminus the clay material, demolition and household waste, ceramic fragments and packaging gave way to sandy clay devoid of waste of any kind. Depth at this location was 0.30m and continued as such until the NNE terminus was reached.

SC6 – Trench 2 – SC6-2 (Appendix 1)

SC6-2, the southernmost trench, was excavated on a bearing from SSE to NNW. The NNW coordinates (ITM) were 725271/672575 (4.25m OD). Trench 2 was 63.3m in length with its SSE coordinates at (ITM) 725265/672512 (4.43m OD).

As with SC6-1, the SC6-2 sod and topsoil (C1) was between 0.20m and 0.30m in depth. The C1 layer overlay dense grey/orange mottled clay material with stone inclusions and intermittent pockets of modern domestic and structural waste. The depth of Trench 2 at the SSE terminus was 0.20m. The depth of the trench was graded to a depth of 0.80m without any noticeable change in the material.

Dry stone filled gullies designed to provide drainage were noted at 24.00m, 46.00 and 51.00m from the SSE terminus. These drains are modern features inserted to provide drainage to this amenity area (SC6).

A consistent spread of domestic pottery (Arklow Pottery) fragments is noticeable throughout the C1 deposit. The spread is quite random and at no time was any particular density noted.

At the NNW terminus the excavation was extended to a depth of 1.50m to confirm the original level of the beach sand prior to the reclamation. At this location the original sand level was confirmed at 2.75m OD.

Summary of Test Excavation at SC6 – Tinahask Lower Townland

The test trenches at this location confirm that the area was reclaimed using imported material or material dredged from the river during the construction of the harbour in the 19th century. In more recent times it was used as a landfill site for waste material from the Vitra tile factory. This material was in turn spread by Arklow Municipal Council to create the amenity area.

While some fragments of Arklow Pottery were identified in the C1 deposit of Trench 2, these could only be described as random and not indicative of any major deposit of discarded pottery. The reclamation deposits were extremely varied and contained waste of modern date throughout their depth.

SC6 will not suffer any major impacts as it will be clad with stone and used for site accommodation and for drying out dredged material from the river for reuse. SC6 will offer an ideal location for finds retrieval and metal detection of the dredged material during the course of construction.

SC6-1 and SC6-2 were backfilled and fully reinstated on the 8th December 2020.

4.2 Location 2 – SC3 – Marsh (09.12.2020)

Site Compound 3 (SC3) is located in the townland of Marsh (199 acres, Arklow Barony, Kilbride Parish, Rathdrum Poor Law Union) on the eastern bank of the river immediately west of the northern bridge abutment. SC3 is a single property.

This location will be used for site accommodation, construction access (W) and access to the river (S). This site was formerly the site of Ferrybank House, a two storey, four bay structure dating to the mid-19th century. The structure was listed on the National Inventory of Architectural Heritage (NIAH Reg. No. 16322077) and was demolished in 2012.

Testing at this time was specified to assess the site for any sub-surface, extant remains of the structure. The location is covered with compacted gravels and slopes to the riverbank. The ground also slopes down to the NW into the marshlands.

Topographical files housed in the National Museum of Ireland (NMI) refer to a mound/tumulus in Ferrybank on the northern bank of the Avoca River where a cist containing urn and human remains was unearthed. The discovery does not have a NMI register number and therefore the artefacts listed appear lost. The discovery was made in 1839 and would appear consistent with a later Bronze Age burial (Price 1934, 51). The topographical files also make refer to the discovery of fragmentary remains of a dugout boat. A second boat was found upstream on the townland of Yardland. Both boats appear to be medieval river ferries (Dr Niall Gregory, pers comm). A search of the topographical files specific to the townland of Marsh (30.11.2020) produced no results.

The riverbed was subject to an archaeological assessment by ADCO (The Archaeological Dive Company) in 2018. Some horizontal timbers noted on the riverbed adjacent to the eastern riverbank have been suggested as the possible extant remains of an earlier wooden bridge structure upstream of the present bridge.

It must be emphasised that this proposed test excavation is limited to the former site of Ferrybank House and will not encroach on the riverbank or the NW part of the site due to pipe works and overhead electricity cables. The archaeological issues arising from the ADCO assessment will be addressed fully in the EIAR documentation (Lisa Courtney (*Courtney Deery Heritage Consultancy*), pers. comm.)

Test excavation at SC3 involved the excavation of 1 trench at the SE extremity of the site.

SC3 – Trench 1 – SC3-1(Appendix 2)

SC3-1 was excavated from SW to NE and designed solely to test for any extant remains of the demolished structure. The NE coordinates (ITM) were 724731/673654.

SC3-1 was 15.00m in length as set out, with its SW coordinates at (ITM) 724718/673640. Ordnance Datum was established with a temporary benchmark on the footpath to the SE at 3.35m OD. All levels mentioned are corrected to ordnance datum (Malin Head).

SC3-1 was excavated from the SW terminus and it quickly became apparent that the nature of the excavated material resulted from the demolition of the house that occupied the site. Structural stonework, in the form of extant walls, showed that a substantial basement level survived, albeit filled with the demolished remains of the upper floors. To fully assess the nature and extent of the basement the trench was abandoned in favour of exposing as much of the basement level as possible.

The NIAH (National Inventory of Architectural Heritage. Ref: 16322077) records the house as originally being a detached three bay two storey house c.1845 and extended to the north by an additional bay c.1865. The basement unearthed during the test excavation corresponds with the original 1845 structure and does not extend to encompass the 1865 extension.

The test excavation demonstrated that the basement was 9.00m in length SW to NE and 3.80m in width NW to SE. The external walls of roughly coursed rubble are generally 0.65m in thickness but more substantial at the gables.

The room in the SW of the basement displayed a fireplace central to the SW gable. The fireplace occupied central position in a slightly advance chimney breast 2.80m in width flanked by two 1.00m wide alcoves. Access to the room was by way of a doorway in the NE corner of the room. The room was lit from the NW by a single splayed window ope 1.40m in width. The actual window light was not exposed during this test excavation. The NE wall of the room displayed a central advanced section corresponding in dimensions to the chimney breast in the SW wall. In this case it was flanked by the door to the SE and a shallow alcove to the NW. The room displayed the remnants of extensive wainscoting throughout. The floor displayed a border of red (oxide?) paint that may have framed a linoleum floor cladding. The floor level of the basement was finished in concrete at 1.185m OD, although it may originally have been stone flagged and this level may survive under the concrete. The function of this room is not known.

The room in the NE part of the basement was not fully exposed as the movement of the excavator was being obstructed by the spoil from the excavation. This room appears to have functioned as a kitchen. The walls were rendered in plaster and painted a rather hideous mint green. This room was also lit from the NW by a similarly splayed window ope 1.40m in width. The remains of the window frame were partially extant. There were no obvious traces of a fireplace in this room. A ceramic 'Belfast' sink was set into the sill of the window embrasure.

The area between the two rooms was not cleared during the test excavation. It is likely that access to the basement from the ground floor was by way of a staircase in this central area.

The existence of the basement and the window lights on the NW side clearly demonstrated how much the exterior ground level around the house was altered. The change in ground level is most noticeable on the N where the ground level was artificially raised to accommodate the 1865 extension. This extension consisted of a ground and first floor. The ground floor level was at 2.76m OD. Evidence for a fireplace in the form of glazed white ceramic brick was noted central to the southern wall. It was noted that the walls defining the outline of the 1865 extension were considerably thinner than those defining the basement of the 1845 structure. No evidence of the ground floor of the 1845 house was noted during testing. It is possible that the basement walls were thicker than the upper floors as they were built to form part of the foundations for the two-storey house above.

North of the 1865 extension are the remains of the watercourse leading to and under a well-defined segmental arch formed with cut granite voussoirs. This arch is mistakenly referred to locally as the '19th Arch' of the Bridge. This arch was placed to allow the Ferrybank Road to cross the watercourse that flowed along the N boundary of SC3. As such it may well be contemporary with the construction of the Bridge. A level was taken on the capping of the wall forming the southern side of the watercourse at 1.37m OD. This is within 200mm of the floor level of the basement and may offer some insight as to the original ground level. The function of this watercourse is not clear, but a 'sluice' is referenced on the 2nd edition OS 25" plan (1888-1913), placed to control the flow of water into this watercourse from the NW and to obstruct any ingress by the rising tide. No visible evidence of this sluice remains. It is likely that the sluice was part of a water management system designed as part of the drainage and reclamation of the Marsh.

A curious feature of the 1845 house was the large quantity of clamp-fired brick in its fabric and in the demolished rubble filling the basement. The presence of clamp-fired bricks might usually be viewed as evidence of a 17th to 18th century date for the construction of the house but in this case, it is clearly a mid-19th century structure as the structure is not present on the 1st edition OS map (1838). The brick may well have been conveniently fired in a clamp kiln adjacent to the site using locally sourced clay. Examination of other houses in the Ferrybank area might identify further use of clamp-fired brick during the 19th century development of Arklow to the north of the river along the Ferrybank/Dublin Road.

Summary of Test Excavation at SC3 – Marsh Townland

While the test excavation at this location was constrained by a number of issues, it succeeded in answering questions as to the survival of remains of the 19th century building (NIAH, Ref: 16322077). The SC3 location contains the extant remains of the basement of the 1845 structure and the ground floor remains of the 1865 extension.

The SC3 location also contains the remains of the watercourse bounding the site to the north. This watercourse is well-defined as a stone-faced channel spanned by the segmental arch to the north of the main bridge. The watercourse can be followed to the NW in the form of a linear depression indicative of the extant remains of a silted up or deliberately infilled channel. No visible evidence of the sluice gate (2nd edition Ordnance Survey, 25" plan – 1888-1913) could be identified on the site. The levels taken on the SC3 site during this test excavation demonstrate that the area has been subjected to considerable infilling, firstly in the 19th century to accommodate the 1865 extension to the three bay two storey over basement structure (1845). Extensive infilling of the western portion of the SC3 location is likely to have taken place around the time that the house was demolished (2012) and during the construction of the roundabout at the northern end of the bridge.

It is inevitable that this location will sustain direct impacts during the construction of the FRS and the planned wastewater treatment scheme. A recent underwater archaeological assessment (ADCO, 2018) noted surviving timbers on and in the riverbed upstream of the bridge. These timbers have been suggested as being the possible remains of an earlier bridge structure that may have had its northern abutment within the precincts of the SC3 location. Any potential impacts on such a structure will require archaeological mitigation well in advance of any development work starting on the SC3 location or in the river adjacent to this site.

4.3 Location 3 – SC1 – Ferrybank

4.3.1 10.12.2020

On the 1st edition of the Ordnance Survey mapping the location of Site Compound 1 (SC1) was within in the townland of Tiknock (*168 acres, Arklow Barony, Kilbride Parish, Rathdrum Poor Law Union*) in the northern part of Arklow Town. The site lies to the rear (S) of the Circle K premises and spans two properties. However, by the 2nd edition of the Ordnance Survey (25" plan, 1888-1913) the townland boundary had been re-aligned placing SC1 within the townland of Ferrybank (*190 acres, Arklow Barony, Kilbride Parish, Rathdrum Poor Law Union*).

This location has been suggested as the possible site of the Ovoca Brewery as illustrated on the 1st edition OS map. This site is also crossed by the townland boundary between Tiknock and Ferrybank townlands (1st ed. OS). Testing at this location was designed to assess the level of archaeological potential while also reviewing the extent of recent disturbance.

The test excavation at SC1 will involve opening 5 test trenches (approximately 154m in combined total length) between the two properties. Trenches 1-2 will be located to the immediate rear of the Circle K premises. Trenches 3-5 will be located in the green field area to the south and corresponding to the possible site of the Ovoca Brewery. A search of the topographical files specific to the townland of Tiknock (30.11.2020) produced no results.

This location will be used for site accommodation and construction works access (W).

The reference to a mound/tumulus in Ferrybank on the northern bank of the Avoca River with a cist containing urn and human remains being discovered in 1839 consistent with a later Bronze Age burial (Price 1934, 51) would suggest the risk for prehistoric activity in the environs of Ferrybank.

The short-lived foundation of a Cistercian abbey (RMP WI040:029(04)) on the island of Arklow also raises the potential of Ferrybank for medieval activity. O'Curry (O.S. Letters: Wicklow) noted:

"...an ancient graveyard with the site of a church was founded on the north side of the Bridge of Arklow in a sandbank in Ferrybank townland in this [Kilbride] parish. Several skeletons were found here, which were covered in flags, the sides being built with stones of various sizes and forms. The surface of the place is still covered with human bones..." (Ronan, 1927, 103-4, note 9).

The site of this graveyard lies 300m from the location of SC1. SC1 should be highlighted for prehistoric and/or medieval remains or artefacts.

SC1 – Trench 2 – (SC1-2) (Appendix 3)

SC1-2 was excavated on an ESE to WNW alignment. The ESE coordinates (ITM) were 724865.27/674011.83. SC1-2 was set out as 21.07m in length with its WNW

coordinates at (ITM) 724844.03/674016.06. Ordnance Datum was established with a temporary benchmark to the N at 2.20m OD. All levels mentioned are corrected to ordnance datum (Malin Head).

SC1-2 was excavated from the ESE terminus ranging in depth from 0.90m at the ESE (0.796m OD) to a maximum depth of 1.60m at the WNW (0.311m OD). The width of the trench was defined by the width of the grading bucket, 1.50m.

Four distinct layers were identified, remaining constant over the full length of SC1-2 (21.60m excavated).

Uppermost was a layer of crushed concrete, clay and 804 hardcore – **C1**.

C1 varied in thickness (depth) from 1.00m (WNW) to 1.30m (ESE). C1 produced some finds, all of which were contemporary discards including plastics, metals and glass. C1 rested directly on a layer of organic material, consisting largely of matted brushwood – C2.

C2 had a consistent thickness (depth) of 0.10m. C2 sealed an organic layer of mixed sandy loam – C3. C2 produced no finds.

C3 had a consistent depth of 0.50m. C3 produced a single sherd of post medieval red earthenware and one fragment of modern bottle glass. C3 rested on a layer of fine quartz rich sand – C4.

C4 extends to an undetermined depth. Excavation in the C4 layer was carried out to a depth of 0.30m due to the visible presence of charcoal flecking in the C4 material. C4 produced one sherd of Leinster Cooking Ware. The sherd is notable for the coarseness of its fabric and the particularly high quantity of mica flakes and quartzite grains in the temper. The unusual high content of mica and quartzite might suggest that the pottery was tempered with locally sourced sands which are high in content for both minerals. The sherd measures 60 X 50 X 8mm. C4 also produced two poor quality flint flakes. One flake was clearly struck, exhibiting a clear bulb of percussion, two facets and a striking platform. While the second flake did not exhibit any clear evidence of working, its proximity to the struck flake along with an identical petrology would suggest that they originated from the same core or as debitage from a single knapping event.

SC1 – Trench 1 – (SC1-1) (Appendix 3)

SC1-1 was excavated on a NNE to SSW alignment. The NNE coordinates (ITM) were 724853.50/674045.08. SC1-1 was set out as 28.00m in length with its SSW coordinates at (ITM) 724843.05/674019.09. Ordnance Datum was established with a temporary benchmark to the NE at 2.20m OD. All levels mentioned are corrected to ordnance datum (Malin Head).

SC1-1 was excavated from the SSW terminus ranging in depth from 1.37m at the SSW (0.525m OD) to a maximum depth of 1.53m at the NNE (0.51m OD). The width of the trench was defined by the width of the grading bucket, 1.50m.

The excavation was halted at this level due to the influx of water and only one layer was recorded – C1.

C1 in SC1-1 showed an extension of the 804 material at the SSW terminus, but this gave way to highly contaminated material consisting of construction waste, car chassis, plastic and metal waste mixed through with loose soil and hydrocarbon effluent.

4.3.2 11.12.2020

The final three trenches were excavated on private land. This area is currently used by the owner as a paddock for his horses. The site can be accessed from the E by way of a road serving the rear of some of the northernmost Ferrybank properties. The main access is by way of an access road leading from the Ferrybank Road and running WNW to these fields and the ruins of an old house. The land slopes from the southern part of the paddock gently in all directions. The grassland is quite mature and does not appear to have been cultivated in the recent past. This particular site was selected for testing as the ruined building was considered as a possible candidate for the 'Ovoca Brewery' which is indicated in this vicinity on the 1st edition OS map. This site was also crossed by the townland boundary on the 1st edition OS map, placing this site in the townland of Tiknock. By the 2nd edition OS map (1888-1913) the townland boundary had been relocated to run along the centre of the Dublin Road placing this site in the townland of Ferrybank.

SC1 – Trench 3 – (SC1-3) (Appendix 3)

SC1-3 was excavated on a NNE to SSW alignment. The NNE coordinates (ITM) were 724890.96/673977.97. SC1-3 was set out as 44.80m in length with its SSW coordinates at (ITM) 724868.89/673939.01. Ordnance Datum was established with a temporary benchmark to the N at 1.78m OD. All levels mentioned are corrected to ordnance datum (Malin Head).

SC1-3 was excavated from the NNE terminus rising with the gradual slope and ranging in depth from 0.50m at the NNE (1.24m OD) to 0.30m at the SSW (1.97m OD). The width of the trench was defined by the width of the grading bucket, 1.50m.

Three (3) distinct layers were identified, which remained constant over the full length of SC1-3 (44.00m excavated).

The uppermost layer (C1) was the sod layer. **C1** had a relatively uniform thickness of 0.10m with some slight variation caused by animal activity on the surface. C1 rested directly on a layer of organic topsoil – C2.

C2 was deeper towards the NNE terminus extending to a depth of 0.35m. C2 was a dark brown, almost black layer of light friable soil. C2 produced some interesting finds. To the NNE end of SC1-3 two sherds of Dublin type fine ware were recovered. The sherds were lead glazed and pin impressed on the exterior surface and would be indicative of a 13th -14th century date. Towards the centre of SC1-3 a single rim sherd of *Frechen* or late *Bartmann* salt-glazed ceramic. Such pottery would indicate a late 17th to early 18th century date. While the presence of such pottery is of interest, it was not recovered in association with any distinct archaeological stratum rather being contained within the topsoil, which may have been imported to this location to improve the quality of the soil. It should be noted that the C2 layer also produced fragments of glass, modern domestic pottery, and some iron fragments. C2 rests directly on a light brown sandy clay subsoil – C3.

C3 had the distinction of being a well compacted stratum which appeared to represent a good natural for this part of the site. C3 did not produce any finds but was crossed from ENE-WSW by evenly spaced linear bands of discolouration, indicative of a ridge and furrow system of cultivation on the SSE portion of the site adjacent to the road/lane servicing the houses on Ferrybank.

SC1 – Trench 4 – (SC1-4) (Appendix 3)

SC1-4 was excavated on a NW to SE alignment. The NW coordinates (ITM) were 724848.15/673954.01. SC1-4 was set out as 19.10m in length with its SE coordinates at (ITM) 724864.98/673945.04. Ordnance Datum was established with a temporary benchmark to the N at 1.78m OD. All levels mentioned are corrected to Ordnance datum (Malin Head).

SC1-4 was excavated from the NW terminus rising with the gradual slope and ranging in depth from 0.40m at the NW (2.62m OD) to 0.59m at the SE (2.17m OD). The width of the trench was defined by the width of the grading bucket, 1.50m.

Three (3) distinct layers were identified, which remained constant over the full length of SC1-4 (20.00m excavated).

The uppermost layer (C1) was the sod layer. **C1** had a relatively uniform thickness of 0.10m with some slight variation caused by animal activity on the surface. C1 rested directly on a layer of organic topsoil – C2.

C2 was uniform in depth over the full length of SC1-4. C2 was a dark brown, almost black layer of light friable soil. A clay pipe stem was recovered from C2 at the SE terminus of the trench.

C3 was a well compacted stratum which appeared to represent a good natural for this site. C3 did not produce any finds but displayed a number of cut features. The NW end of SC1-4 appeared quite sterile with the first of the features noted over 6.00m from the NW terminus. All measurements quoted are referenced from the NNW terminus and relative to the baulks of SC1-4.

C4 was an irregular area of soil discolouration, greyish brown with frequent charcoal flecking. It extended 3.50m along the SW baulk of SC1-4 and tapered inwards to 1.00m on the NE baulk. A spread of flat stones predominated in the E side of C4. This spread of stones may have been the remains of a collapsed dry-stone wall or the remnants of a stone clad yard. The stone spread was noted at 8.00m from the NW terminus at 2.48m OD.

At 10.75m from the NW terminus of SC1-4 and 0.30m from the SE baulk, C5 was identified. **C5** was a posthole, circular in plan and 0.30m in diameter. The surface evidence of the C5 was identified at 2.45m OD. C5 was not tested but its surface nature would suggest that the fill was similar to the material visible in C4, a greyish brown fill with charcoal flecks.

At 12.00m from the NW terminus of SC1-4 and 1.00m E of C5 was another posthole C6. **C6** was defined by a post pit, 0.30m in diameter with a central post pipe, 0.17m in diameter. C6 was identified cutting into C3 at 2.39m OD. The fill of the post pit was the greyish brown fill associated with the other cut features, but the post pipe was defined by an almost black fill. The fill did not appear charcoal rich which would imply that the post rotted in-situ whereas the post in C5 was removed.

A linear feature, **C7**, crossed SC1-4 from 11.60m along the SW baulk to 13.50m along the NE baulk. C7 narrowed from 0.40m on the SW to 0.30m on the NE and again displayed the greyish brown fill associated with C4, C5 and C6. The surface level of C7 was 2.39m OD.

A further posthole **C8**, was identified at 14.10m along the NE baulk of SC1-4. C8 was sub circular in plan, 0.35m by 0.40m in diameter. This feature C8 displayed the greyish brown fill and was recorded at 2.39m OD.

A linear band of greyish brown, **C9**, crossed SC1-4 from 16.20m along the SW baulk to 15.90m along the NE baulk. C9 was recorded at 2.32m OD. C9 was approximately 1.30m in width.

No further features were noted, and the excavation was halted at 20.00m. The ridge and furrow system noted in SC1-3 did not extend into SC1-4.

SC1 – Trench 5 – (SC1-5) (Appendix 3)

SC1-5 was excavated on a NNW to SSE alignment. The NNW coordinates (ITM) were 724863.97/673978.96. SC1-5 was set out as 25.00m in length with its SSE

coordinates at (ITM) 724865.02/673953.98. Ordnance Datum was established with a temporary benchmark to the NNE at 1.78m OD. All levels mentioned are corrected to ordnance datum (Malin Head).

SC1-5 was excavated from the NNW terminus rising with the gradual slope and ranging in depth from 0.40m at the NNW (1.48m OD) to 0.16m at the SSE (2.51m OD). The width of the trench was defined by the width of the grading bucket, 1.50m.

Three (3) distinct layers were identified, which remained constant over the full length of SC1-5 (29.80m excavated).

The uppermost layer (C1) was the sod layer. **C1** had a relatively uniform thickness of 0.10m with some slight variation caused by animal activity on the surface. C1 rested directly on a layer of organic topsoil – C2.

C2 was uniform in depth over the full length of SC1-5. C2 was a dark brown, almost black layer of light friable soil. Some fragments of modern pottery were noted in the C2 layer.

C3 was a well compacted stratum of light brown sandy clay which appeared to represent a good natural for this site. C3 did not produce any finds but displayed a number of cut features. The NNW end of SC1-5 appeared quite sterile with the first of the features noted over 3.00m from the NNW terminus. All measurements quoted were referenced from the NNW terminus and relative to the lateral baulks of SC1-5.

C4 was defined by a spread of grey silty clay. This spread was delimited by a line extending from 4.50m along the WSW baulk to 3.20m along the ENE baulk.

C5 was a linear spread of 9 well defined postholes (a-i). They originated at 3.20m along the ENE baulk and extended to 15.90m towards the SSE terminus of SC1-5 roughly parallel to the ENE baulk. The fill in all cases was greyish brown and similar to the fill of the features cutting the C3 stratum in SC1-4. The nature of this fill would suggest that the posts were removed deliberately, and the holes allowed to silt up over time.

C5 (a) was located at 3.2m (ENE), circular in plan, with diameters of 0.40m. Level: 1.51m OD.

C5 (b) was located at 4.5m (ENE), circular in plan, with diameters of 0.55m X 0.50m. Level: 1.56m OD.

C5 (c) was located at 6.10m (ENE), circular in plan, with diameters of 0.49m X 0.50m. Level: 1.65m OD.

C5 (d) was located at 7.8m (ENE), circular in plan, with diameters of 0.48m X 0.46m. Level: 1.68m OD.

C5 (e) was located at 9.40m (ENE), circular in plan, with diameters of 0.60m X 0.58m. Level: 1.72m OD.

C5 (f) was located at 11.00m (ENE), circular in plan, with diameters of 0.59m X 0.57m. Level: 1.74m OD.

C5 (g) was located at 12.70m (ENE), circular in plan, with a diameter of 0.40m. Level: 1.77m OD.

C5 (h) was located at 14.30m (ENE), circular in plan, with a diameter of 0.46m. Level: 1.81m OD.

C5 (i) was located at 15.90m (ENE), circular in plan, with diameters of 0.42m X 0.44m. Level: 1.87m OD.

No further features were noted between the location of **C5 (i)** and the SSE terminus of SC1-5 as set out. However, as features had been noted at the SE terminus of SC1-4, it was decided to extend SC1-5 to assess the area between SC1-5 and SC1-4. SC1-5 was halted at 24.80m and recommenced on the same line from 25.30m to 29.80m. A group of three (3) postholes was identified in this extension – **C6**.

C6 consists of three (3) postholes (a-c) arrayed on an almost N to S alignment across SC1-5. The fill in all cases was greyish brown and similar to the fill of the features cutting the C3 stratum in SC1-4 and the C5 features in SC1-5. The nature of this fill would suggest that the posts were removed deliberately, and the holes allowed to silt up over time.

C6 (a) was located at 27.70m close to the ENE baulk. The posthole was circular in plan and measured 0.50m X 0.40m in diameter. Level: 2.40m OD.

C6 (b) was located roughly central to SC1-5 at 28.50m. This posthole was circular in plan and measured 0.30m X 0.33m in diameter. Level: 2.44m OD.

C6 (c) was located adjacent to the WSW baulk at 29.10m. This posthole was sub-circular in plan and measured 0.30m X 0.37m in diameter. Level: 2.51m OD.

An irregular shaped patch of greyish brown material was identified between 7.80m and 9.40m – **C7**. **C7** extended into SC1-5 from the WSW baulk by 0.60m. Exposed within the fill of C7 and visible on the surface was a single clamp-fired brick. It is difficult to suggest a date for this brick as similar bricks were found at the SC3 location from a 19th century context.

Summary of Test Excavation at SC1 – Ferrybank

The results of the test trench excavation at SC1 while not conclusive certainly indicate that caution should be exercised in planning for its use. The recovery of prehistoric flint artefacts (SC1-2) would suggest that the Ferrybank and Tiknock areas have played host to prehistoric people and would add further evidence to the tumulus, cist burial and funerary vessels fragments referenced in the topographical files of the NMI. The recovery of a sherd of Leinster Cooking Ware (SC1-2) also raises the possibility of medieval activity in the area. The possibility of medieval activity is also supported by the sherds of Dublin type fine ware (SC1-3). The SC1 location lies approximately 300m to the north of the location of what is purported to be the site of an early medieval graveyard tentatively associated with the short-lived 13th century Cistercian

foundation. While these artefacts may also be intrusive to this area, it is important to mitigate for the possibility of both prehistoric and medieval activity.

The features recorded in SC1-4 and SC1-5 will also require careful mitigation. When viewed in conjunction with the other features in SC1-4 and SC1-5, the SC1 location must be viewed as being of high-risk potential for extant archaeological remains. The absence of artefacts from any of these features only accentuates the need for careful mitigation.

One thing is clear from the results of the test excavation at SC1, this is unlikely to be the location of the Ovoca Brewery as illustrated on the 1st edition OS map. A focus for industrial activity on the scale of a brewery, albeit a small one, would leave substantial remains buried on the site. Nothing of an industrial nature was identified or recovered on this site. It is more likely that the site of the Ovoca Brewery was to the NE of this location in the area between Briggs Lane and Sea Road. This location would be supported by a convention used on the 1st edition OS map where the name of the building/feature is indicated to the left of the structure in question. This convention is reflected in a large percentage of buildings in this area. The convention also holds good for the 2nd edition OS map (25" plan, 1888-1913).

On completion of the test excavation at this location the archaeological horizon was marked with red and white hazard tape prior to being backfilled and reinstated.

5 Conclusions & Recommendations

This test excavation over all three locations has served to address the questions raised. The Tinahask Lower location (SC6) is clearly reclaimed ground and has been subjected to modern remedial works to turn the space into an amenity area. The area did produce quantities of waste from both the Arklow Pottery works (SC6-2) and the Vitra tile factory (SC6-1), but in neither case was there a particular focus for the disposal of the waste. In the case of SC6 there is no need for further archaeological work.

The Marsh location (SC3) produced evidence for the complete basement of the three bay two storey structure (1845) and the ground floor of the northern extension (1865). These structural remains are likely to sustain direct impacts and should be fully recorded prior to their either partial or full removal. The disused watercourse along the northern boundary of SC3 should be closely examined and recorded as far as and including the sluice gate at the north western limit of the site. Mitigation for SC3 will also need to reflect the possibility that remains of the possible bridge reported by ADCO (2018) may be present within the precincts of this site. The reference to a tumulus, cist burial and fragments of funerary vessels (NMI, 1839) in Ferrybank is quite vague relative to the location of the discovery. As such the SC3 location may also produce prehistoric material.

The Ferrybank location (SC1) produced evidence of archaeological activity in the form of cut features and postholes (SC1-4 and SC1-5). The excavation also produced prehistoric lithics (SC1-2), medieval pottery (SC1-2 and SC1-3) and post medieval pottery (SC1-3). While the artefacts cannot be linked directly to any activity on SC1 they should be viewed as potentially indicative of both prehistoric and medieval activity.

The results from SC3 and SC1 would suggest that the level of risk in Ferrybank is high and that the results of this test excavation be used to inform the preparation of archaeological mitigation for any potential impacts at these locations.

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APPENDIX 1

LOCATION 1 – SC6 TINAHASK LOWER

FIGURES & PLATES

- Fig 1.1: General site location of SC6
- Fig 1.2: Trench layout SC6
- Plate 1.1: General view SC6-2 looking NNE
- Plate 1.2: SC6-2 looking SE
- Plate 1.3: SC6-1 looking NE



Fig 1.1: General site location of SC6



Fig 1.2: Trench layout SC6 (right)



Plate 1.1: General view SC6-2 looking NNE



Plate 1.2: SC6-2 looking SE



Plate 1.3: SC6-1 looking NE

APPENDIX 2
LOCATION 2 – SC3 MARSH
FIGURES & PLATES

- Fig 2.1: General site location of SC3
- Fig 2.2: Trench layout SC3
- Fig 2.3: 1845 Basement and 1865 extension ground floor plan and elevation
- Plate 2.1: General view of basement level SC3-1 looking SW
- Plate 2.2: Detail of basement SW room
- Plate 2.3: SC3-1 basement looking NE
- Plate 2.4: SC3-1, detail of NE room of basement – window and Belfast sink insert
- Plate 2.5: SC3-1, Ground floor of 1865 extension. Arched culvert visible to left.
- Plate 2.6: Arched culvert & watercourse
- Plate 2.7: Aerial view of basement
- Plate 2.8: Aerial view of SC3

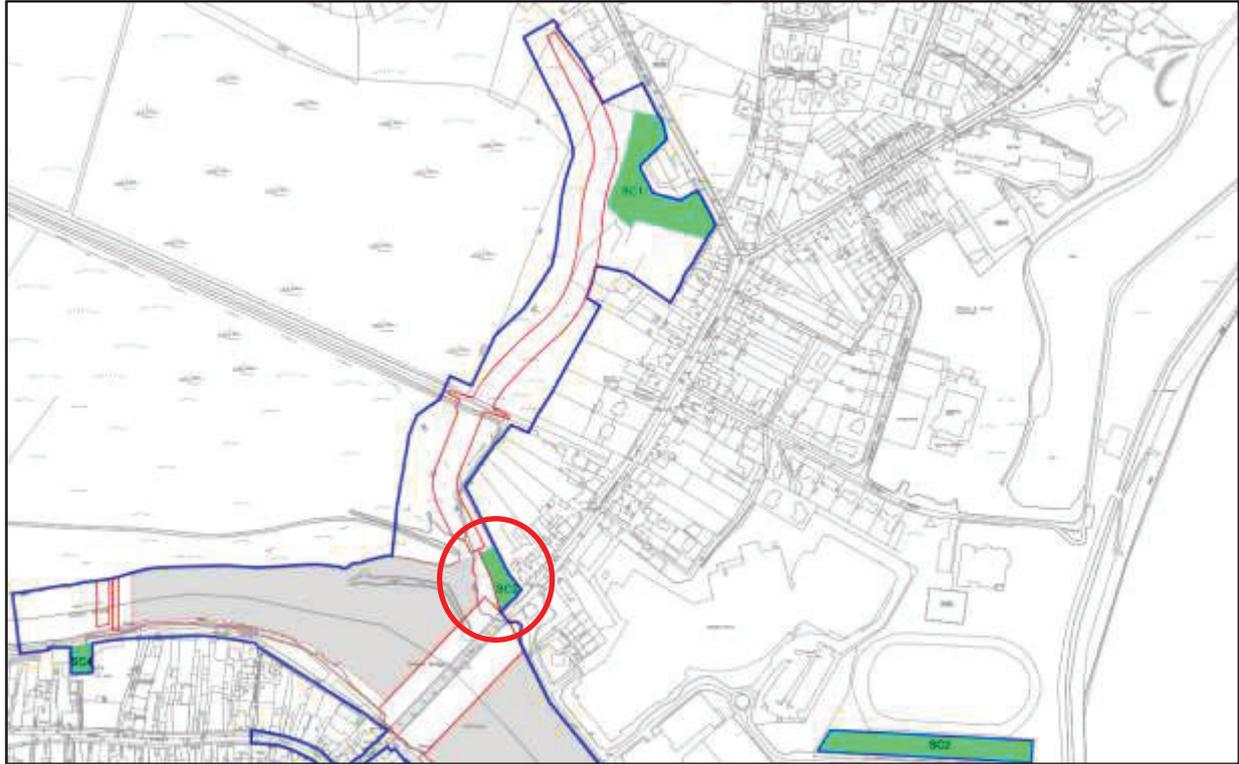


Fig 2.1: General site location of SC3 – indicated in red



Fig 2.2: Trench layout SC3 (bottom left)

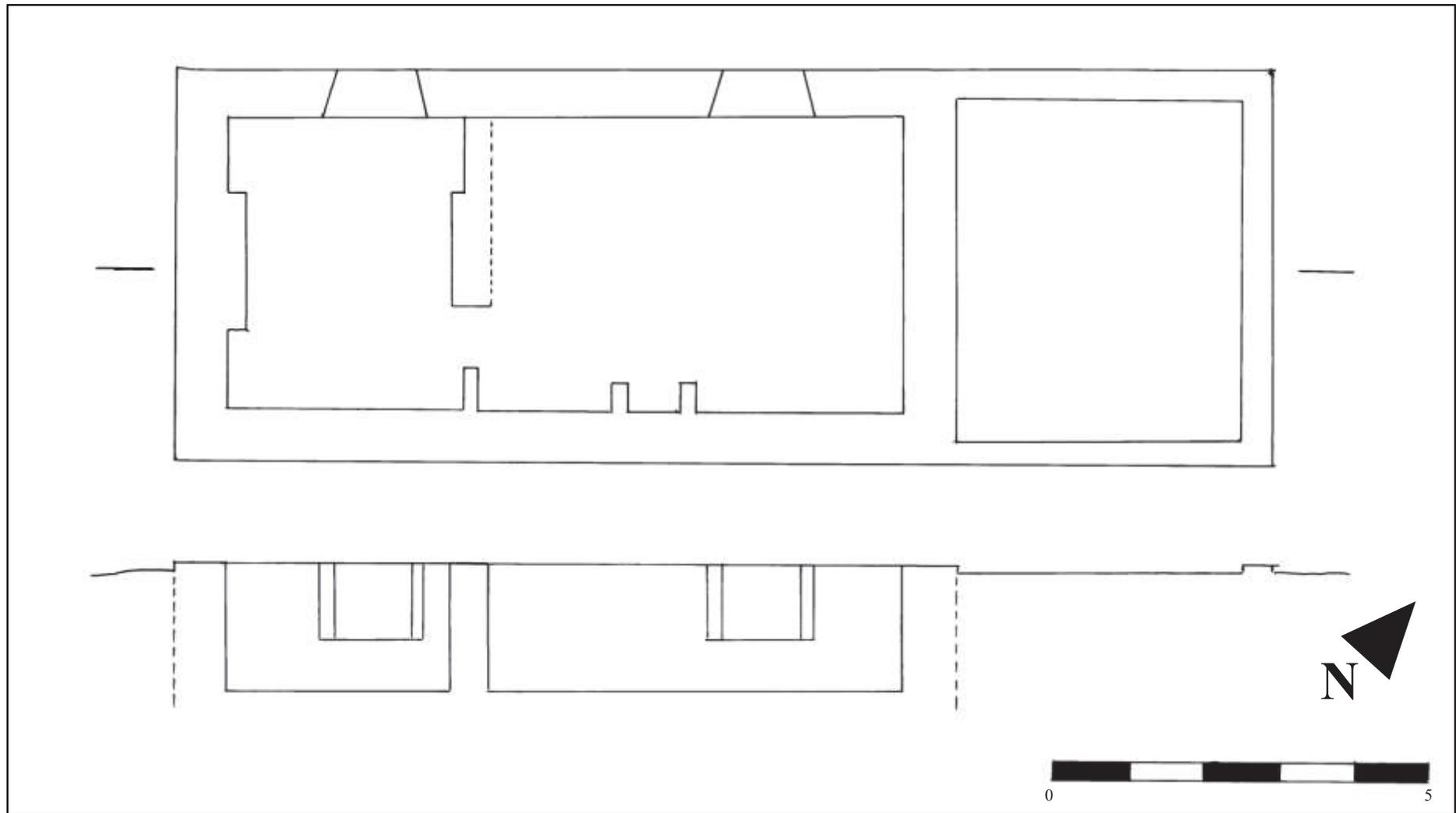


Fig 2.3: 1845 Basement and 1865 extension ground floor plan and elevation (SC3-1) 1:50



Plate 2.1: General view of basement level SC3-1 looking SW



Plate 2.2: Detail of basement SW room



Plate 2.3: SC3-1 basement looking NE



Plate 2.4: SC3-1, detail of NE room of basement – window and Belfast sink insert



Plate 2.5: SC3-1, Ground floor of 1865 extension. Arched culvert visible to left



Plate 2.6: Arched culvert and watercourse with foundation level of gable of the 1865 extension to the right



Plate 2.7: Aerial view of basement from the W



**Plate 2.8: Aerial view of SC3 from E.
Old watercourse visible to the right of excavation and extending to the NW**

APPENDIX 3

LOCATION 3 – SC1 FERRYBANK

FIGURES & PLATES

- Fig 3.1: General site location of SC1
- Fig 3.2: Trench layout SC1 (top left)
- Fig 3.3: Feature plans of SC1-4 (top) and SC1-5 (bottom). Scale 1:50
- Plate 3.1: SC1-2 looking WNW
- Plate 3.2: SC1-1 looking NNE
- Plate 3.3: SC1-4 looking E
- Plate 3.4: SC1-4 looking W
- Plate 3.5: SC1-5 looking SSE
- Plate 3.6: SC1-5 Detail at NNW terminus
- Plate 3.7: SC1-5 looking NNW
- Plate 3.8: SC1-3 looking NE
- Plate 3.9: Finds from SC1



Fig 3.1: General site location of SC1 – indicated in red



Fig 3.2: Trench layout SC1 (top left)

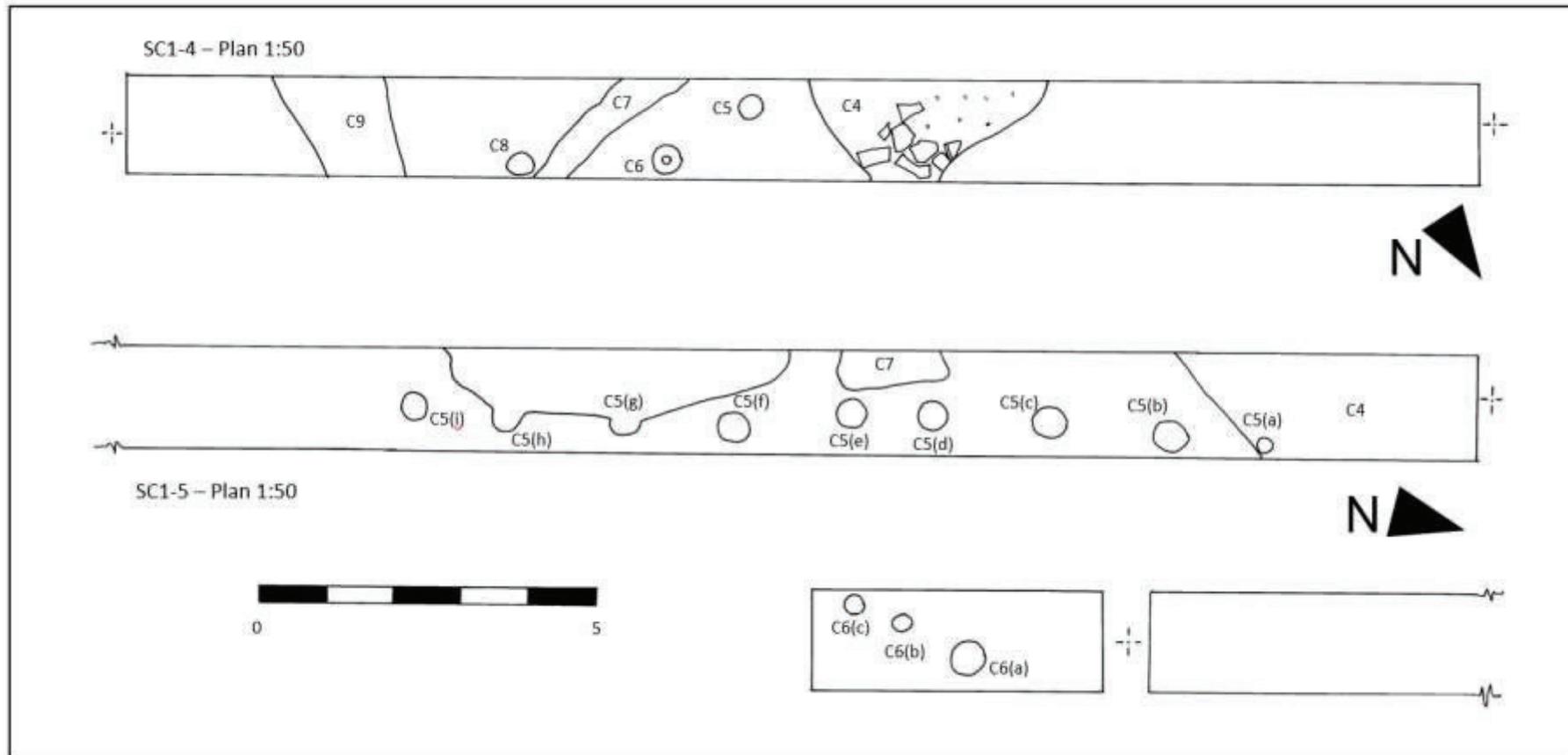


Fig 3.3: Feature plans of SC1-4 (top) and SC1-5 (bottom). Scale 1:50



Plate 3.1: SC1-2 looking WNW



Plate 3.2: SC1-1 looking NNE



Plate 3.3: SC1-4 looking E



Plate 3.4: SC1-4 looking W



Plate 3.5: SC1-5 looking SSE



Plate 3.6: SC1-5 Detail at NNW terminus



Plate 3.7: SC1-5 looking NNW



Plate 3.8: SC1-3 looking NE



Plate 3.9: Finds from SC1.

SC1-3: Top left, two sherds of Dublin type fine ware. Top right, a single rim sherd of Bartmann / Belarmine ware

SC1-2: Bottom left, flint debitage. Bottom right, a single sherd of Leinster Cooking Ware