



**RedArc
Consulting**

RedArc Consulting Limited
35 Brook Meadow, Avoca,
Co. Wicklow, Y14 R235

Mobile: **087 669 5365**
Email: red.tobin@gmail.com & red@redarc.ie

CULTURAL HERITAGE / ARCHAEOLOGY

ADVANCE WORKS CONTRACT

NFMHS, PORTRANE, CO. DUBLIN

The Temporary Asylum



LICENCE REF: 15E0396

PLANNING REF: 06F. PA0037

Director: Redmond Tobin

On behalf of: Health Service Executive (HSE) Estates

March 2019

ACKNOWLEDGMENTS

RedArc Consulting Ltd would like to acknowledge the assistance and support of the following;

- The NFMHS Design Team, HSE Estates and the contractor, Barnmore Demolition Ltd.

Particular thanks to:

- Mick Rimmington, Derek Horan, Peter Martin, Gerry Mulligan, Stephen McAleenan, Ben Doyle, Liam Doherty and Tommy Smith of Barnmore Demolition Ltd.
- James Kyle; Assistant Site Archaeologist (2016-2017)
- Tom Condit and Mark Keegan; National Monuments Service for their advice, support and cooperation
- The Irish Architectural Archive.
- The National Archive.
- The Glucksman Map Library, Trinity College, Dublin
- The Irish Military Archive for aerial images from 1937
- Mr Peadar Bates for local information and history
- Mr Jim Fitzgibbon, former nursing attendant at St Ita's for first hand information on 'The Temporaries'
- Mr John Callanan (Engineers Ireland - retired) for information on the history of concrete use in Ireland
- Dr Colin Rynne, Department of Archaeology, UCC
- Mr Franc Myles, for access to unpublished material on the former Richmond Lunatic Asylum in Grangegorman.
- Joanna Church for editing and formatting this report.

ABSTRACT

This report presents the results of the archaeological excavation (Licence ref:15E0396) and extensive historical research of the Temporary Asylum which was erected adjacent to the Portrane Lunatic Asylum (St.Ita's Hospital, Portrane Demesne, County Dublin) during the construction of the latter. The Temporary Asylum was built to accommodate 400 patients from the Richmond Lunatic Asylum in Grangegorman to alleviate, in part, the overcrowding in Grangegorman while its sister asylum was under construction at Portrane.

The National Forensic Mental Health Services (NFMHS) facility is being developed at Portrane to replace the Central Mental Hospital in Dundrum.

The archaeological excavation was carried out as part of the advance works contract by Red Tobin of RedArc Consulting Limited under licence ref:15E0396 during 2016. Access to specific parts of the site was only possible as the demolition and site clearance progressed. The excavation was deemed necessary to de-risk the site in advance of the main works contract.

The need for excavation arose from an Archaeological Impact Assessment (AIA) undertaken by Archaeological Projects Ltd in 2014. This AIA formed Appendix K of the Environmental Impact Statement (EIS) prepared for the NFMHS (National Forensic Mental Health Services) project. This report highlighted several areas of archaeological potential requiring mitigation prior to the development. As a part of this assessment archaeological test trenching was carried out over the footprint of the entire development by Archaeological Projects Ltd under licence ref. 14E0140. This program of test trenching identified potential archaeological remains including the partial remnants of Portrane House, the Georgian house formerly the home of the Evans family (Area 3). The trenches also revealed the buried remains of the coachyard, and outbuildings associated with Portrane House (Area 1). Area 1 also contained the partial foundations of the Temporary Asylum (Ashlin's¹ Building 2 – later designated as Block 8 and 8a). Area 2, to the north of Area 1 and 3 was also identified for mitigation as it contained the foundations of two further temporary buildings (Ashlin's Building 4 – later Block 9 and Ashlin's Block 3 – later Block 11).

A mitigation strategy to allow the site to be cleared in advance of construction was agreed in consultation with the Department of Culture, Heritage and the Gaeltacht (DoCHG), the Design Team and the HSE.

Works commenced on site in January 2016 and were fully completed in October 2016.

¹ G.C.Ashlin (1837-1921) The architect of the Portrane Lunatic Asylum and the Temporary Asylum buildings.

CONTENTS

ACKNOWLEDGMENTS.....	i
ABSTRACT.....	ii
1 Introduction	1
2 Archaeological and Historical Background.....	3
2.1 Mesolithic Period	3
2.2 Neolithic Period.....	4
2.3 Bronze Age.....	5
2.4 Lusk.....	7
2.5 Rush.....	7
2.6 Iron Age.....	7
2.7 Early Medieval Period	8
2.8 Norse Period.....	8
2.9 Anglo-Norman Period	9
2.10 Dissolution to the Twentieth Century.....	10
2.11 Mount Evans / Portrane House	11
3 The Temporary Asylum, Portrane.....	13
3.1 Mental Institutions; A Historical Background	13
3.2 The 18 th Century	14
3.3 The 19th Century	15
3.4 Portrane Lunatic Asylum	18
3.5 The Temporary Asylum (1898 – 1990).....	19
3.6 The National Forensic Mental Health Services Hospital	33
3.7 Background to 2016 excavation	34
4 The Temporary Asylum – Archaeological Works 2016	36
4.1 Area 2 - The Northern Range of the Temporary Asylum	37
4.2 Area 1 – Temporary Asylum – Coachyard, Stables & Outbuildings.....	43
4.3 Area 1 - Excavation.....	44

4.4	Portrane House (Mount Evans) – Area 3	46
4.5	Standing Walls.....	50
4.6	The Service Tunnels – Area 1 to Area 3	51
5	Discussion.....	57
5.1	Temporary Buildings	57
5.2	Portrane House.....	60
5.3	Concluding Remarks.....	63
6	Bibliography	64

APPENDICES

Appendix 1 Concrete Analysis

Appendix 2 Horse Driven Water Pump

FIGURES

Fig 1 General site location – indicated in red

Fig 2 Site location on St Ita’s Hospital Campus – indicated in red

Fig 3 Site (indicated) as shown on the OS 2nd edition, 25” plan (1888-1913)

Fig 4 Detail of layout of the Temporary Asylum from the OS 2nd edition, 25” plan (1888-1913)

Fig 5 Portrane House and Demesne – William Duncan’s Map (1821)

Fig 6 Portrane House and Demesne – OS 1st edition (1837-1843)

Fig 7 Portrane House, outbuildings and walled garden – OS (1865)

Fig 8 Portrane House and Temporary Asylum – OS (1937)

Fig 9 The ‘Temporaries’ – OS (1966)

Fig 10 The Temporary Asylum, detail from a sketch of Portrane Mental Asylum (1900)

Fig 11 The Temporary Asylum, detail from a plan of the Portrane Mental Asylum (C. 1896-1900)

Fig 12 Plan of the Richmond District Asylum (1900) showing Temporary Buildings

Fig 13 Area 2 – Excavation plan, Temporary No 4 / Block 9 (1:100 scale)

Fig 14 Area 2 – Excavation plan, Temporary No 3 / Block 11 (1:100 scale)

Fig 15 Area 3 – Excavation plan, Portrane House basement (1:100 scale)

Fig 16 Area 3 – Excavation plan, Service Tunnels (Not to scale)

Fig 17 Area 1 – Excavation plan, Temporary No 2 / Block 8/8a (West) (1:100)

Fig 18 Area 1 – Excavation plan, Temporary No 2 / Block 8/8a (East) (1:100)

Fig 19 Area 2 – Plan and elevations, cast iron footing to RSJ stanchions Temporary No 4 / Block 9

Fig 20 Temporary No 3 / Block 11 – service drawing, Engineer’s Dept, St. Ita’s (1950s)

Fig 21 Temporary No 2 / Block 8/8a (W) – service drawing, Engineer’s Dept, St. Ita’s (1950s)

Fig 22 Temporary No 2 / Block 8/8a (E) – service drawing, Engineer’s Dept, St. Ita’s (1950s)

Fig 23 Floor plan, St. Ita’s Hospital for functional comparison

Fig 24 Heating duct layout blueprint – 1950s

Fig 25 Survey data 2016 – Portrane House and service tunnels as excavated

Fig 26 Survey data 2016 – Portrane House basement and service tunnels overlaid on 1:2500 scale 1906 OS (revision)

PLATES Historic / documentary

Plate 1 Entrance front of Portrane House

Plate 2 1937 aerial photograph of Portrane Mental Asylum

Plate 3 Detail of Temporary Asylum and Portrane House from 1937 aerial

PLATES Excavation – Area 2 – Temporary No 4 / Block 9

Plate 4 Topsoil strip looking W

Plate 5 Topsoil strip looking E

Plate 6 Asphalt subfloor exposed in western dormitory block looking E

Plate 7 NW corner, extant foundation plinth, looking E

Plate 8 NW corner, foundation of Nurse’s station / bedroom, looking N

Plate 9 Basement, looking E

Plate 10 Basement, looking N

Plate 11 Basement, looking NW

Plate 12 Cast iron footing to RSJ uprights (broken out of foundations)

Plate 13 Detail of cast iron footing

PLATES Excavation – Area 2 – Temporary No 3 / Block 11

Plate 14 Topsoil strip, looking NW

PLATES Excavation – Area 2 – Temporary No 3 / Block 11

Plate 15 Topsoil strip, looking SW. Eastern WC / bathroom annex in foreground

Plate 16 Asphalt subfloor of eastern dormitory wing. Looking S

Plate 17 Asphalt subfloor removal to expose foundations. Looking S

Plate 18 Full vertical extent of foundation, looking NE

Plate 19 Basement, looking S

Plate 20 Basement, looking N

PLATES Excavation – Area 1 – Temporary No 2 / Block 8/8a

Plate 21 Yard surface looking N

Plate 22 Yard surface looking SE

Plate 23 Foundations looking E. Scullery and Dining Room of Block 8/8a

Plate 24 Foundations looking W. Sanitary annex (N), exterior wall (centre), dormitory (S)

Plate 25 19th C. curving wall of Portrane House yards, looking N

Plate 26 19th C. curving wall of Portrane House yards, looking S

Plate 27 18th-19th C. hand dug, stone lined well

Plate 28 18th-19th C. hand dug, stone lined well

Plate 29 Eastern dormitory block looking NE

Plate 30 Eastern dormitory block looking N

Plate 31 Eastern dormitory block, storage annex, looking S

Plate 32 Eastern dormitory block, east foundation, looking S

Plate 33 Eastern dormitory block, west foundation, looking S

PLATES Excavation – Area 3 – Portrane House

Plate 34 Testing on site of Portrane House, looking W

Plate 35 Testing on site of Portrane House, looking SW

- Plate 36 Testing on site of Portrane House, looking S
- Plate 37 East wall, basement level, Portrane House. Looking N
- Plate 38 Demolition rubble clearance basement floor level. Looking W
- Plate 39 Basement level, fireplace in the west wall, looking W
- PLATES Excavation – Area 3 – Portrane House**
- Plate 40 Exterior N wall face and drainage, basement level. Looking E
- Plate 41 Exterior N wall face, basement level. Looking S
- Plate 42 Basement level exterior. Retaining wall (C. 1930s). Looking E
- Plate 43 Exterior N basement wall, looking W
- Plate 44 Basement level exposed with room divisions. Looking SE
- Plate 45 Basement level exposed with room divisions. Looking SW
- Plate 46 Basement level, fireplace in eastern wall. Looking SE
- Plate 47 Architectural fragment – Attic base from original doorcase
- Plate 48 Architectural fragment – Attic base, side view
- Plate 49 Architectural fragment – Triglyph, regulus and guttae motif. Doorcase
- Plate 50 Architectural fragment – Segment of fanlight. Doorcase
- Plate 51 Architectural fragment – Upper section of Doric column. Doorcase
- PLATES Excavation – Area 1/Area 3 – Walls and gate-piers**
- Plate 52 Ashlar gate-pier abutting and terminating wall between Areas 1 and 3
- Plate 53 Basal plinth to gate-pier
- Plate 54 Main wall (Wall 2) – W facing elevation
- Plate 55 Main wall (Wall 3) – terminus / gate-pier
- PLATES Excavation – Area 3 – Service Tunnels / Cellars**
- Plate 56 Door sill between Wall 2 and service tunnel stairs, looking N
- Plate 57 Stone flagged floor at the top of the stairwell, looking E
- Plate 58 Staircase / stairwell access to service tunnels, looking N
- Plate 59 Staircase / stairwell access to service tunnels, looking S
- Plate 60 Service tunnel interior, looking E

Plate 61 Service tunnel interior, looking W to blocking debris

Plate 62 Brick vaulted roofs exposed, looking W

Plate 63 Detail of 'Skylight' for ventilation and illumination

Plate 64 Brick vaulted roofs exposed, looking E

PLATES Excavation – Area 3 – Service Tunnels / Cellars

Plate 65 Coal cellar / ice house looking W. Galleries 1 & 2 to the N

Plate 66 Delivery ope for access to coal cellar / ice house, looking S

Plate 67 Gallery 1 & 2 during demolition, looking E

Plate 68 Interface of Gallery 2 with Gallery 3, looking SW

PLATES General (2015)

Plate 69 House 100. Built on the site of Portrane House (1950s), looking SW

Plate 70 Area 1 under lawns, looking S towards the Nurse's Home (demolished 2016)

1 INTRODUCTION

This report presents the results of archaeological excavations and extensive research into the Temporary Asylum incorporating Portrane House, yards and service tunnels, located to the west of St. Ita's Hospital (Figs 1-4). The remains were located in the site of the National Forensic Mental Health Services Hospital (NFMHS)².

The National Forensic Mental Health Services (NFMHS) facility is being developed at Portrane to replace the Central Mental Hospital in Dundrum as the State's main centre providing psychiatric treatment in conditions of high and medium security, including acute, medium and longer term psychiatric care.

The excavations, recording and research took place as part of the Advance Works contract carried out at the NFMHS site by Barnmore Demolition Ltd.

Archaeological Fieldwork on site was carried out by RedArc Consulting Ltd, under licence (15E0396) issued by the National Monuments section of the Department of Culture, Heritage and the Gaeltacht in consultation with the National Museum of Ireland. The excavation was directed by Red Tobin.

This excavation, as a part of the advance works contract on site, follows on from an Archaeological Impact Assessment (AIA) undertaken by Archaeological Projects Ltd in 2014, which forms Appendix K of the Environmental Impact Statement (EIS) prepared for the NFMHS project. The assessment report highlighted several areas of archaeological potential requiring mitigation prior to the development. As a part of the AIA report archaeological test trenching was carried out under licence ref. 14E0140 by Archaeological Projects Ltd over the entire development site and identified possible archaeological features, which would require mitigation during topsoil removal.

The results of this test excavation can be read in their entirety in the Appendix K addendum to the Environmental Impact Statement for the NFMHS Development.

The Advance Works contract on site was tasked with the demolition of derelict and relict structures within the footprint of the NFMHS development. On completion a clear site would be available for the main works (construction) contract to be expedited unhindered. A mitigation strategy was agreed in consultation with the Department of Culture, Heritage and the Gaeltacht (DoCHG), the Design Team and the HSE.

The purpose of the 2016 archaeological excavation was to preserve-by-record the archaeological features or deposits in this location. Such action complies with

² Td: Portrane Demesne. By: Nethercross Ph: Donabate/Portrane. ITM: 724477 / 750518 OD: 15.552m

Condition 10 of the Grant of Planning Permission by An Bord Pleanála (Ref: 06F.PA0037).

The site of this excavation was located on the crest of an east west ridge which runs through the St Ita's Hospital campus to terminate on the coast overlooking Lambay Island to the east (Fig 1 & 2). This ridge offers a good settlement location with the village of Portrane nestled to the north east in its lee. The southern facing slope of the ridge offers extraordinary views over Dublin Bay from Ireland's Eye to Bray Head and with the Dublin and Wicklow mountains dominating the skyline. The views to the north along the coast include Clogher Head and the Mournes.

The ridge was one of the principal reasons for siting the Portrane Mental Asylum at this location in line with the policy of 'moral management' (diet, exercise, occupation and rational thought). Location was also paramount in the siting of Portrane House (Mount Evans) and Demesne (Figs 1-7)

The excavation and recording of The Temporary Asylum gave a clear insight into the design, planning and construction of the temporary structures and also facilitated a glimpse of the basement level of Portrane House which was demolished in the 1950s.

The Temporary Asylum cannot be examined without considering its function and its association with both Portrane Lunatic Asylum and The Richmond Lunatic Asylum. It was possible, through extensive research to piece together a historical timeline for the Temporary Asylum from their inception in 1898 to their final demolition in 1990 (Engineer's Department, St. Ita's Hospital).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Archaeological remains, in the form of field monuments and artefacts, point to occupation in this part of north Dublin from early prehistoric times.

Large numbers of flint artefacts have been collected along the coastal stretch from Howth to Balbriggan. This massive scatter along the north Dublin coastline shows that the area was exploited as a source for flint throughout prehistory beginning in the later Mesolithic and extending through to the later Bronze Age / Iron Age interface.

2.1 Mesolithic Period

Evidence for Ireland's earliest inhabitants in the Mesolithic was traditionally thought to have been confined to the coast. Archaeological research has shown that contrary to this traditional viewpoint, the hunter gatherers that personify the Mesolithic lifestyle moved throughout the country. In County Dublin the Mesolithic is easily identifiable through the stone technology, and collectors of worked flints and other stone tools have identified the coastal area of north County Dublin as particularly rich. The nature of the Mesolithic economy is defined by hunting and gathering and is considered to be transitory and seasonal, with small mobile groups exploiting richly available foodstuffs along the coast.

One of the earliest artefacts from north County Dublin dates from the Mesolithic (c. 7000–4000 BC), an early Mesolithic microlith found at Knocklea near Rush. Two later Mesolithic flint Bann flakes are also recorded from Kilcrea (NMI IA/52/62). In addition, quantities of Mesolithic material have been recovered through systematic fieldwork on Lambay Island (Dolan and Cooney, 2010). The results of the analysis of these artefacts show clear evidence of a presence in the later Mesolithic and also in the early Mesolithic.

The presence of Mesolithic groups on Lambay also demonstrates that, even at this early period of prehistory, vessels were being constructed to facilitate off-shore activities. In the 1930s, workers in Sutton, Co. Dublin unearthed the remains of a log boat formed out of oak. This vessel was never dated but its discovery indicates that boats capable of coastal activity were being built in prehistory.

Midden sites found at Sutton and Bremore suggest that hunter gatherer groups were staying along the coast for extended periods.

2.2 Neolithic Period

The Neolithic period is characterised by the advent of agricultural practice and with that a more sedentary lifestyle. The widespread development of long term settlement and housing occurred as the Neolithic progressed. The Neolithic is also defined by organised burial practices as demonstrated through the construction and use of megalithic tombs. Flint artefacts continue to represent this period although the style varies considerably from the Mesolithic forms. The artefact record also includes polished stone axes and various types of pottery vessels.

A cave in the cliffs at Portrane has yielded flint artefacts dating from the Neolithic period (c. 4000–2400BC). Other finds from this area include a flint flake from Newtown Haggard (NMI 1976:37)

The Rogerstown estuary is particularly rich in evidence for early human activity (Stout and Stout 1992).

In addition to the flint finds described above, evidence for prehistoric activity in the environs of the Rogerstown estuary and at Knocklea include a Neolithic passage tomb, and three cist burials, at least one of which was a secondary insertion into the passage tomb.

Thomas K Moylan (1947) in reference to the construction of Portrane Mental Asylum (St. Ita's Hospital), states that '*in making excavations for the foundations of the building, the workmen found a sepulchral chamber, lined with long stones. A long passage, also lined with stone, led to it and in the chamber was the skeleton of a man of large size. The whole was unfortunately cleared away without any expert examination and, according to Rev. Edmund Hogan S.J., the bones were thrown on the bank of rubbish*'. This anecdotal evidence is not supported by any other records but may indicate the existence of another Passage Tomb on the Portrane Peninsula.

When considering the archaeological and historical landscape in this part of north County Dublin, the island of Lambay must be considered. From 1993-2001, Professor Gabriel Cooney has identified a Neolithic axe factory where porphyritic andesite was quarried and formed into high quality axes. All stages of production have been recorded at this site. During this research project, large scatters of flint flakes and artefacts have been recovered on the island and the location of two burial mounds, possibly passage graves, recorded.

A collection of flint artefacts gathered in the 1950s and 60s by Miss Gwendoline Stacpoole, a member of the Royal Society of Antiquaries of Ireland, was examined and attributed to the 'Larnian Culture'. The collection which was gathered from a variety of

locations including Portrane is of particular interest. The 'Larnian Culture' was long held to be of Mesolithic date but the discovery of similar artefact types on late Neolithic / early Bronze Age sites would suggest a much later date for the collection. Similar flint artefact types are found in conjunction with Grooved Ware and suggest a possible interface between the Stone Age and the Bronze Age of later prehistory.

2.3 Bronze Age

The Bronze Age sees a consolidation of agricultural practices and the introduction of new, distinctive ritual and burial practices. While stone tools continue to be used, their forms change. Different pottery types also characterise the Bronze Age along with different house forms.

Bates (2001) notes the discovery of a possible Beaker vessel and cist graves at Burrow, but these finds could not be located in the files of the National Museum.

Excavations in the townland of Beaverstown south of the Rogerstown Estuary (02E1708) produced evidence of Neolithic, Bronze Age and Beaker material (4000-1500BC) (Hagen, 02E1708 and 03E1634).

Test excavation within the Donabate Local Area Action Plan identified the remains of two circular enclosures, a circular hut, several pits and two burnt mounds in the townland of Ballymastone.

A spread of burnt mound material and a *fulacht fíadh* with associated ditches and pits were identified in Corballis Lands, directly to the south of Turvey Avenue (Baker 2006; Frazer 2007).

Further evidence for prehistoric activity in this area comes in the form of a stone axehead (NMI 1932:5626) and two flint waste flakes (NMI1978:20-21).

Recorded prehistoric sites in the area include a possible prehistoric burial in Portrane (DU008-032), a ring barrow (DU012-060) in Kilcrea and an enclosure site in Turvey (DU012-025). An archaeological complex (DU012-00101-102) is recorded in Bellinstown and ring ditch in Lissenhall Little (DU012-003). Test excavation in 1999 revealed no archaeological deposits within the archaeological complex (DU012-001). An earthwork (DU0012-004) illustrated in Corballis townland on the 1837 edition OS map also indicated prehistoric activity in this area.

Several flint flakes and artefacts are also recorded from the townlands surrounding Donabate, such as from Balcarrick (NMI 1946:292), Ballymadrough (NMI 1978:69-72), Kilcrea (NMI 1965:56, 1967:180-184 and 1976:147), Lanestown (NMI 1978:27-42 and 1978:73-74) and Turvey (NMI 1978:80-116). Two hammer stones from Balcarrick

(NMI 1941:409) and Donabate (no NMI ref.) may also belong to this period. A flint scraper was found in the townland of Portrane (NMI 1978:8).

Bronze age material was identified during previous archaeological work. In advance of the construction of the Portrane, Donabate, Lusk and Rush Waste Water Treatment Scheme geophysical survey was carried out under licence ref: 08R0029 – David Harrison, MGL. Arising from this survey a programme of archaeological testing was carried out in 2010 by Melanie McQuade (Licence ref: 10E0121). The test excavation confirmed the findings of the geophysical survey and any features sustaining a direct impact during construction were preserved by record. A dense scatter of features identified as a Bronze Age habitation site/structure and ancillary features was preserved in situ as it could be avoided during the construction phase. This site, designated as 'Portrane 1', is now listed on the RMP for Co. Dublin as DU012 – 095001, 002 and 003. 'Portrane 2' lies to the north of the preserved site. It too proved to represent prehistoric settlement activity but dateable evidence was not retrieved. 'Portrane 3', a burnt mound/spread, was located to the east along the route of the wayleave for the outflow from the Waste Treatment Plant. It was excavated, returning an Early Bronze Age date of 2272 – 2037 cal. BC.

Further archaeological remains were found in the area to the north of Portrane and north of Rogerstown Estuary, in the townlands of Whitestown and Rogerstown. The scattered features identified at Whitestown Site 1 and Rogerstown Site 1 were the only surviving remains of what was probably a large area of settlement. Some structural remains and associated domestic features were excavated further west at Rogerstown Site 2. A number of flint artefacts (including a scraper) and several pieces of worked flint were recovered from the plough soil during monitoring at Whitestown and Portrane. Although these artefacts were not in their primary context, their presence does indicate that some level of prehistoric activity took place in the wider area surrounding the identified sites.

A test excavation was carried out over the footprint of the proposed NFMHS Hospital development in 2014 by Claire Walsh of Archaeological Projects Ltd (Licence reference 14E0140). Twenty test trenches were excavated which revealed surviving foundations on the site of Portrane House (Mount Evans) and foundations of the yards associated with Portrane House which were altered and used as part of the Temporary Asylum (Tobin, R. Forthcoming. Licence reference; 15E0396). The Temporary Asylum accommodated 400 individuals while the main Portrane Mental Asylum was under construction (1896-1903). This test excavation also identified prehistoric features in a greenfield site on the western extremity of the site. The area was subsequently

stripped and scattered prehistoric features excavated under licence ref 15E0396 (ext). An unstratified petit tranchet derivative arrowhead may give a late Neolithic / Early Bronze Age date to the features excavated.

2.4 Lusk

Evidence for prehistoric settlement around the area of the town of Lusk comes from a series of excavations that were undertaken. Prehistoric burial pits and kilns, dated by possible Groove Ware vessels (2800-2400 BC), were recorded to the south of Lusk (McCabe, 02E0871). A Ring-ditch of possible Bronze-Age date was also discovered (McCabe, 02E1029). Excavations north of Lusk found features of similar type and date (McCabe, 02E0794; 02E1031). A possible Bronze Age burnt mound / *fulachta fiadh* was also discovered west of Lusk (Wallace, 02E1719).

2.5 Rush

Prehistoric evidence for Rush and its surrounding environs comprises a passage grave and a cist burial (DU008-01301, RPS-259), which produced a food-vessel and skeletal remains (NMI 1934:432,433). Cist burials were also uncovered in the townland of Beau (DU008-035, RPS-285) and were found with several fragments of cremated bone (NMI 1977:1204) and worked flint (NMI 1977: 1198-1199). Probable burial mounds in Balleally West (DU008:019-01;02; 033) and Regles (DU008-008) all indicate activity from the Neolithic Period through to the Bronze Age. A polished stone axehead from the townland of Lusk, along with a flat bronze axehead and various finds of cinerary urns and human bone from Balleally West (NMI 1940: 81-a/c; 1958: 37-a/b) are noted from the National Museum files. In addition, bone fragments (NMI 2004:196) and pottery sherds (NMI 2004:195) were recovered from Rush Demesne.

2.6 Iron Age

Settlement in the Iron Age is well-attested on the east coast, with the notable promontory fort of Drumanagh at Loughshinny (DU008-006001), where Roman finds (including sherds of 1st century AD Samian ware) have been recovered from ploughsoil. Illegal metal detectorists have uncovered Roman coins and decorative metalwork from the site, now impounded and held by the National Museum. Warner promoted the idea that Drumanagh was a bridgehead of a planned Roman invasion of Ireland in 82 A.D. National Monuments files (Archaeology.ie) state that the site may have served as a distribution centre for Roman produce on the east coast. Burials with Roman brooches and other decorative metalwork have been uncovered at nearby Lambay Island, also indicating a Roman presence in the area. Lambay may be

identified as Limnos in Ptolemy's Geography, compiled in Alexandria (Stout and Stout 1992, 12).

2.7 Early Medieval Period

In the early medieval period, Portrane formed part of the southern Uí Neill kingdom of Brega. Ringforts and associated field systems are known from the area, identified from oblique aerial photography, but none are close to the site. It is probable that at this period, several settlements along the coast were not enclosed, thereby having little surface expression. Major ecclesiastic centres of Lusk and Swords lay inland of the site.

Localised and scattered ecclesiastic settlement is attested from numerous holy wells, DU008-00902 (St Kenny's well) DU008-007, and DU012-009), St Mochuda's Church, the 'Chapel Bank' (DU008-028), St Canice's church (DU008-03101) and a chapel site close to the cliff at Portrane Demesne (DU012-009001).

The 'Chapel (site of)' DU012-009001 and St Kenny's Well DU012-009002 are situated within the property boundary of the St Ita's (HSE Estates) Hospital Campus in land long used for agriculture. The cartographic location of the two sites has been considered erroneous and the geophysical surveying carried out in 2008 (Licence ref:08R0029 – Harrison) suggested a more likely location to be approximately 70m to the north. This chapel site may be earlier than St Canice's. Peadar Bates (2001, 67) states that approximately 40 years ago, what was left of this church was dismantled and the stones used to fill the adjoining St Kenny's well. Cartographic analysis carried out as part of this assessment would dispute the validity of these statements.

North east of the chapel site and St Kenny's well is Chink Well (DU012-007). This natural spring rises in a cave along the shoreline. Accessible only at low tide the well was supposed to cure Whooping cough or 'chin cough'. An offering of bread was placed in the well and if taken out with the tide demonstrated that a cure was forthcoming (Cordner 1946, 32).

2.8 Norse Period

No archaeological sites of the Norse period have been identified to date in the area of Portrane. However, place name evidence along the coast from Dublin, Howth to Skerries, indicates that lands along the coast were settled. Raids on the monasteries of the east coast are documented from 795A.D. (Courtney and Goucher 2007, 11).

More anecdotal evidence from local historian Peadar Bates mentions Knockaman in the Burrow as the site of a battle, possibly of the Norse period. The finds were

apparently placed in the National Museum in 1872, however Courtney and Goucher (2007, 12) could find no trace of their donation. The Black Book of Christ Church states that in 1040, King Sitric of Dublin granted Portrane to Bishop Donatus of Dublin, along with the lands of Baldoyle (Comerford, accessed 13/03/2013).

2.9 Anglo-Norman Period

Evidence from field work in north county Dublin indicates that patterns of settlement continued from the early medieval period into the Anglo-Norman period. Following the Anglo-Norman invasion, the rich lands of Portrane and Donabate were intensively settled and confirmed to the See of Dublin. When Archbishop John Comyn of Dublin asserted his claims to Portrane in 1197 the canons of Christ Church agreed to forgo their claims to Portrane on condition they received 100 rabbits a year from the 'warren of Portrahen' (Mc Neill 1950, 30). The church in Portrane was granted to the Prioress of Grace Dieu, an Augustinian convent at Ballyboghil founded in 1190 by Archbishop Comyn (Comerford, accessed 13/03/2013).

The tower house at Portrane, DU008-030, known as Stella's Castle due to the association with Jonathan Swift's correspondent Esther Johnston, is one of a distinctive type in Fingal, having a projecting turret. The first castle on this site was probably built in the thirteenth century as '*one of four castles stretching in a defensive line from the coast to Belinstown*' (Bates 2001, 207). It was held by Grace Dieu, and tenanted by the Cusack family, until the Reformation, when the lands and buildings were transferred to the Barnewalls of Turvey (Comerford, accessed 13/03/2013).

Some placenames in Portrane have gone out of use, with tenancies noted in 1326 A.D. at Englishtown, and Ballycaman. Rocque's map depicts a sizeable settlement on the headland at Oldtown, now gone.

There was probably a harbour at Portrane throughout the medieval period. Peadar Bates (2001, 220) states that the Corporation of Dublin obtained a grant for the ensuing 40 years from revenues on all merchandise imported into the harbours of, including others, Portrane. In 1529, a small fishing port was noted in 1529 at Portrairie (Griffith Inquisitions 77, cited by Courtney and Goucher 2007, 40). Portrairie is included in the list of harbours and havens in county Dublin mentioned in medieval sources by Niall Brady (2009, 309). The quay is prominent on Rocque's map of 1760. Shipping had its dangers, with the presence of numerous nationalities of pirates at Lambay Island noted in 1467-8 (O' Neill 1987, 125).

2.10 Dissolution to the Twentieth Century

The nuns of Grace Dieu may have moved to Portrane and were living there with their own chaplain until at least 1577, when they were finally dispersed. In 1576, the church and rectory of Portrane were granted to Francis Agard, when 18 acres of land were attached to Portrane Rectory, along with Portrane Castle, a close east of the castle, and a house in ruins north of the old hall, a range of stables, the slaughterhouse of the manor, the kitchen and *'a long stretch of houses called the New Hall in the south corner of which the chaplain to the said prioress had his chamber, and celebrated divine service in the parish church'*. Clearly there was a sizeable household in the castle at this time.

Tenancies of the rectory of Portrane changed throughout the following centuries. Lands and cottages in Portrane are also noted, although no locations are given (Bates 2001, 222- 223).

In 1654, Portrane was the property of Ralph Wallis, which lands included *'an old castle with a thatch hall adjoining'*, a diminution since the inventory of 1576 (Bates 2001, 223; Comerford, accessed 13/03/2013). The farm of Portrane, as indicated in Petty's survey, consisted of 156 acres, and contained one barn, one stable, four small cabins, and one old parish church. Several small holdings, consisting in total of five tenements and garden plots, were also listed by Petty.

The lands of Portrane, belonging to the archbishop, were auctioned in 1649 to Christopher Mapas to fund Trinity College, who sold them to Wallis. A small interest was retained by the Archbishop, entitling him to an annual rent until the lands were sold in the late 19th century.

Several large estates grew following the Dissolution, when the bulk of the lands of the Portrane-Donabate peninsula were conveyed to the Barnewall family. Turvey House was built in the 16th century, allegedly using much of the stone from the nunnery at Grace Dieu. Several houses of significance are indicated on the 1654-6 Down Survey map of the area, including a house at Beaverstown (DU008-044), another at Ballisk, Balliellis, and Balmastowne. No manor house is shown at Portrane, however Portrane Castle and the church (unroofed) are shown on the map. Two *'coney warrens'* are also depicted on the map, indicating the continuing importance of rabbits as a source of food and fur.

Portrane Castle appears to have been substantially rebuilt in the early 18th century and is known as *'Stella's castle'* because Swift's *'Stella'* spent some time there. It was the residence of the tenancy of the lands of Portrane.

2.11 Mount Evans / Portrane House

The castle was sold to Eyre Evans, MP for Limerick, in 1728 who built a new house (Mount Evans / Portrane House) on the estate soon after (Comerford, accessed 13/03/2013, also Bates 2001). In the dispute which arose between Cobbe of Donabate and Evans concerning the extent of the lands in legal ownership, it was noticed in 1744 that Evans had destroyed the boundary ditch which had separated the lands belonging to the nuns from those of the archbishop. The ditch began at the sea and ran by the castle to the recently built house.

In 1709, the tenant of Portrane estate is listed as Charles Wallis, with the tenancy of the estate being sold by Ralph Wallis to Eyre Evans MP. Mount Evans, the house constructed on the Portrane Estate, was either built by Eyre Evans or his son George Evans who was MP for Queen's County (Laois). George Evans was succeeded by his brother Hampden. Rocque's map of 1760 reveals the nature of the demesne prior to the development of the later landscape park. There are two houses shown in the area which later became the centre of the demesne, one of them likely to be the precursor of Portrane House. George Evans, MP and Sheriff for County Dublin, succeeded his father Hampden in 1820.

William Duncan's map of 1821 (Fig 5) shows a smaller demesne laid out, probably by Hampden Evans. The line of the avenue to the house from the northwest appears to follow the course shown on later maps. The walled garden is shown in its current location to the west of the house and outbuildings. The location of the house appears to correlate with that of Portrane House, though the plan is different. The outbuildings, as shown, appear to be in a different location and are of a different plan from those shown on later map editions.

By the 1837 edition of the Ordnance Survey (Fig 6), the landscaped park was fully laid out. The house is shown in a parkland setting, approached by an entrance drive through a wide swath of woodland which envelops the house, outbuildings and walled garden. A second service entrance leads directly to the outbuildings from the Portrane road in the north. Farmland is shown extending along the public road towards Portrane, while the parkland to the south front of the house opens out towards the coastline. A large deer park and rabbit warren are located on the eastern side of the demesne. Thomas K Moylan (1946, 28) stated that the northern boundary of this Deer Park, adjacent to the road was lined with the ruins of houses. This 'settlement' was known as Oldtown. Moylan goes on to say that '...there are various indications in the adjoining field that Oldtown must have been a fairly extensive place'.

Samuel Lewis describes Portrane House and Demesne in *A Topographical Dictionary of Ireland* (1837), as ‘a spacious brick building in the centre of a fine demesne of 420 acres, well stocked with deer, and commanding extensive and splendid views’.

When George Evans died in 1844, his wife Sophie erected a Celtic Revival round tower on the grounds of the demesne. A ‘pigeon house’ is annotated on Duncan’s map which may well have been removed to accommodate the new tower or integrated within the structure. Sophie Evans died in 1853 and bequeathed Mount Evans and its demesne to her nephew George. He was resident at Portrane until 1864, leaving Ireland due to health reasons. Portrane Demesne was rented for some years to St John Butler, Sheriff for Dublin County and son of James Butler 13th/23rd Baron Dunboyne.

In April 1884, 461 acres of the Evans’ lands including Mount Evans were put up for auction. A contemporary description of Mount Evans (Portrane House) was included in the prospectus for the sale as follows:

‘The Mansion House stands on an elevation in the central part of the Demesne, commanding magnificent views seawards of Lambay Island, Ireland’s Eye, Howth and the bay of Dublin, and the coast and mountains to Bray Head. It is reamarkably dry and in excellent repair. The Basement story, which is large and commodious, is sunk, so that the first floor is on a level with the ground. The house contains large dining and drawing rooms, library and large hall. Opening off the hall there is a large and lofty conservatory and well-shaped and lighted billiard room, both heated with hot water pipes. The second and third floors contain numerous bedrooms opening off corridors, water closets and bathroom attached. Also, principal and back stairs and servant’s apartments in wing attached to the house. There is a Turkish bath opening off the back hall.

The offices in connection with the house contain coach-house and stabling for several horses, stable-servant’s, steward’s and herd’s house, spacious lofts etc., and a pump and large water tank in an enclosed yard, which is connected with the Mansion House by an underground passage. There is a lodge at the entrance and a gamekeeper’s cottage within the Demesne.

The lands all in grass of a very superior quality, containing 470 acres, almost 355 of which has produced over £500 on grazing lettings for the past seasons when such lettings were exceptionally low.’

The sale took place in November 1885 and James Considine, a Clare landowner bought the house and lands for £9,000. Considine, in turn, sold it on some seven years later to the Governing Board of Lunatic Asylums in Ireland for £10,000.

3 THE TEMPORARY ASYLUM, PORTRANE

3.1 Mental Institutions; A Historical Background

‘There is nothing so shocking as madness in the cabin of the peasant, where the man is out labouring in the fields for his bread, and the care of the woman of the house is scarcely sufficient for the attendance on the children. When a strong young man or woman gets the complaint, the only way they have to manage is by making a hole in the floor of the cabin not high enough for the person to stand up in, with a crib over it to prevent his getting up, the hole is about five feet deep, and they give the wretched being his food there, and there he generally dies. Of all human calamities, I know of none equal to this, in the country parts of Ireland which I am acquainted with.

Right Honourable Denis Browne M.P. for Mayo reported thus to the Select Committee on the Lunatic Poor in Ireland. This body was set up in response to a demand by Robert Peel in March 1817. Peel, the Chief Secretary, urged the House of Commons of the United Kingdom of Great Britain and Ireland to make provision for the ‘lunatic poor in Ireland’.

The Select Committee on the Lunatic Poor in Ireland found that the existing network of public institutions was *‘totally inadequate for the reception of the lunatic poor’*. The committee recommended a properly governed and managed system of institutions similar to the Richmond Asylum in Grangegorman, Dublin which opened its doors to admissions in 1814. Such institutions were to be run on ‘moral management’ with an emphasis on diet, exercise, occupation and rational thought.

Mental illness was long acknowledged in Ireland. Supernatural and/or religious reasons were often used to explain behaviour patterns associated with mental illnesses. The druid Fullon of Leinster was the first recorded case of the use of a ‘madman’s wisp’. The ‘madman’s wisp’ is a ball of straw over which incantations are made, which is then thrown in the face of the individual thereby inducing madness. In the 7th century the son of Maelochtair, King of the Decies was the victim of the ‘madman’s wisp’ by a jilted lover. This resulted in the onset of madness with the additional bonuses of baldness and skin ulcerations.

The Madman’s Chair (Cathaoir Ana), a rock on the coast of Co. Louth was reputed to offer a cure for madness if the person so afflicted sat on it three times. The Táin Bó Cúalnge among other works of early Irish literature and folklore make reference to madness in various forms and altered states of mind.

Christianity brought with it the belief that insanity was the result of demonic possession or the judgement of God.

Early Irish law specified the obligation of families to care for the insane and the infirm. Distinction was drawn between various states of mental illness from the violently ill to those with intellectual disability. These laws were fair, designed to protect the mentally ill and intellectually disabled and ensure their welfare within their family units. Irrespective of these legal protections, the Irish social system was unsympathetic towards the mentally ill, preferring to see them as outcasts.

The Hospital of St John without the New Gate founded by Ailred the Palmer in Dublin offered some accommodation for the mentally ill in the 12th century. The Hospital of St Stephen (Site of Mercer's Hospital) may also have offered some assistance. With the Dissolution of the Monasteries even these few places of assistance were lost.

3.2 The 18th Century

At the end of the 17th century the situation was a cause of concern with the mentally ill being either homeless or accommodated in prisons. This heightened concern initiated reform in the early 18th century. One of the key movers in this reform was Sir William Fownes, Member of Parliament for the Wicklow Borough from 1704-1713 and Lord Mayor of Dublin in 1708. During his time as Lord Mayor he made provision for cells for destitute mentally ill persons in the workhouse at St James' Gate. In 1711 Lord Justice Ingoldsby convinced the governors of the Royal Hospital in Kilmainham to accommodate soldiers who had developed mental illness. This provision remained in place until 1849, after which they were accommodated in Yarmouth. 1729 saw the Dublin workhouse begin to refuse admission of mentally ill persons to Fownes cells.

In 1731 Jonathan Swift declared his intention to make provision within his will for a dedicated hospital for the mentally ill. Swift discussed his plan with Fownes, who suggested the site of the Hospital of St Stephen. When Fownes died in 1735, Swift was already planning his hospital, later known as St Patrick's Hospital. Swift left his entire estate for the provision of his hospital, the first bespoke asylum in Ireland. St Patrick's Hospital was granted a Royal Charter in 1746 by King George II and the first patients were admitted on the 26th September 1757.

A House of Industry was opened on North Brunswick Street in Dublin in 1773 which immediately was inundated with destitute people with mental disorders. By 1776, 10 cells had been specially allocated for the mentally ill and the numbers continued to rise requiring the addition of an extra house. By 1798, 32 additional cells were needed with a further 4 cells added by 1808. In a three year period from 1799 to 1802, 3,679 people

died in this Institution, many of them suffering from mental illness. The nationwide situation was not any better and by 1804 the Houses of Industry were accommodating disturbing numbers of the mentally ill. In 1758, William Battie published his 'Treatise on Madness' wherein he recognised the need for asylums both for the treatment of the mentally ill and for the training of physicians. His perspective on asylums was that they should offer treatment and not just confinement and should be hygienic, therapeutic and not prisons.

3.3 The 19th Century

In 1800 the Criminal Lunatics Act was passed following a failed assassination attempt on King George III by James Hadfield, a dragoon with a mental disorder and possibly a brain injury. This Act allowed for the long term incarceration of mentally ill offenders by funding accommodation for such people in Bethlem (Bedlam) in London.

In 1806, the Hospitals and Infirmaries (Ireland) Act afforded Grand Juries the ability to give money for wards for lunatics in the County Infirmaries and to maintain asylums associated with the Houses of Industry. In 1810, because of the pressure on the Dublin House of Industry, money was provided for the construction of a new public asylum. This asylum was named the Richmond Asylum, after the Duke of Richmond, Lord Lieutenant of Ireland. In 1830 it became known as the Richmond District Lunatic Asylum and in more recent times Grangegorman Mental Hospital and ultimately St Brendan's Hospital (1958). The architect for the asylum was Francis Johnston, who also designed the GPO in Dublin. He followed the design of Bethlem in London. The first patients were admitted in 1814 and the asylum was officially opened in 1815 after the passing of an act establishing its governors as a corporation. In the 1830s the Richmond Asylum and contents, valued at £80,000, was given to the District (Meath, Louth, Wicklow and Dublin). By 1846, Dr Francis White, the Inspector of Lunatic Asylums, recommended the addition of a new wing to accommodate 100 patients and an infirmary to increase the capacity of the asylum to 400 patients.

In 1815, 170 patients were transferred to the Richmond Asylum from the Dublin House of Industry. The Richmond was already full; having admitted patients from all over the country and the additional 170 was to create a situation of overcrowding that dogged the Institution from then on. The Select Committee formed in 1817 offered a solution to the problem, build more asylums. There appeared little choice as the conditions within the Houses of Industry 'for lunatic patients is so defective that upon the whole it is less evil to exclude them than to admit them' (John Leslie Foster, governor to the Richmond Asylum).

The humane and well-managed reputation of the Richmond Asylum led to the Asylums for the Lunatic Poor (Ireland) Act 1817. This Act was amended in 1820 by the Lunatic Asylums (Ireland) Act and ultimately both were repealed and superseded in 1821 by the Lunacy (Ireland) Act. This legislation was designed to 'make more effectual provision for the establishment of asylums for the lunatic poor' and to empower the Lord Lieutenant and Privy Council to order the erection of asylums throughout Ireland. By 1835, as a result of this legislation, 9 district asylums were built throughout the country with a total capacity of 1062 patients.

Admissions to the asylums continued to escalate necessitating the erection of more district asylums and maintenance of the Houses of Industry. By 1900 over 21,000 people (0.5% of the total population of Ireland) were accommodated in Institutions.

The Issue of overcrowding in the Richmond Asylum led to the acquisition of additional land in 1851 to establish a western annex. The first buildings, designed by Murray and Denny, consisted of a chapel with male and female infirmaries flanking on either side (1849-51). The Female House was added after 1866 (remodelled 1898). The Male House, which dominated the south eastern portion of the Asylum, was completed in 1854, although much of this building was destroyed by fire in 1878.

In 1891 temporary buildings were also erected at the Richmond to 'provide day-room accommodation for 506 and dormitory accommodation for 142 patients'. These temporary buildings, by providing day-room accommodation, created additional dormitory space in the main buildings.

'Objection has been made to these buildings being constructed of wood, and it has been stated that they are for this reason unsuitable and insanitary. I know, however, of no better material than seasoned timber for constructing such temporary buildings which in this case have been erected with the greatest care and with every precaution which sanitary science could suggest, as the following description of them will show.

All the vegetable soil was removed from the area occupied by the buildings, and the space under the floors was excavated where necessary to a depth of 18 inches under the floor level. The entire surface occupied by the buildings was covered with a layer of cement concrete six inches thick, laid on a bed of broken stones, the concrete was covered with a layer of asphalt one-quarter of an inch in thickness. The foundations of the buildings are formed of cement concrete. The external walls for one foot over the level of the ground are built of brickwork. The gable walls where there are chimney shafts, are also of brickwork. A damp course of fibrous asphalted felt is laid on all walls over ground level. The outer walls of the buildings, except those before mentioned, are

formed of upright timbers, seven inches by three inches, on which sheeting is nailed on the outside one inch thick and on the inside three-quarters of an inch thick. The space between is filled in with sawdust. Before the sheeting was put on the walls, they were all lined with inodorous felt. The roofs are sheeted with inch-sheeting, and covered with corrugated iron. A layer of inodorous felt was laid on the sheeting before the iron was put on. The large block of temporary buildings is ceiled with timber and the floors of day-rooms, dormitories, single rooms and passages are laid with 1¼ inch boarding, tongued and grooved with plenty of ventilation under them.

There is a sanitary annexe to each block of buildings, some of which are built of brickwork, the floors laid with cement concrete; the plumbing work and drainage is done in the best manner.

The rooms are all well ventilated by means of windows at each side, and Tobin tubes to admit the fresh air; the vitiated air is taken away through pipes fixed below the ceilings and brought out over roofs, with patent ventilators. The rooms are heated by low pressure water pipes. All the walls and ceilings have been painted with best paint, which can be washed from time to time. The boarded floors are all stained and polished.

It is of course, well known that the decaying timber of certain structures, when there is no free circulation of air, may become saturated with disease infection, but between such structures and the very excellent temporary buildings which, at considerable cost, have been provided at this asylum, no just comparison can, in my opinion, be for one moment admitted to lie.

The position of the Richmond Asylum as regards over-crowding owing to the rapid increase in the number of the insane during the last few years is, unfortunately, not unusual in other institutions throughout the United Kingdom, and it so happens that, owing to this cause, it has been found necessary during the past year to erect extensive temporary buildings in connection with some of the large London asylums. The architect of the London County Council designed wood structures covered externally with corrugated galvanised iron and finished inside with plaster. When the plans of these buildings were submitted to the English Lunacy Commissioners for their statutory approval they modified the arrangement, and insisted on wood being used in place of plaster in the interior. These London buildings, which correspond in almost every respect with those erected at Richmond Asylum, cost £48 per bed (Fig 12).

3.4 Portrane Lunatic Asylum

In 1892, due to the chronic overcrowding, it was decided that an auxiliary hospital was needed to supplement the Richmond District Asylum while also relieving the overcrowding in the District. Portrane Demesne, acquired by the Governing Body of Lunatic Asylums in Ireland in 1892 and containing 470 acres, was determined to be the most suitable location.

In August 1894 a competition was initiated amongst a number of architectural practices to design a new asylum for 1,200 patients. A book of *'Suggestions and Instruction'* was provided. This made recommendation that the public approach, principal entrance and the offices should be on the north side of the building complex as was favoured in contemporary English design practice. The Irish principle of allowing accommodation on a third floor remained, as did the preference for symmetrical separation of the sexes. Detached chapels were a new design principle. All entrants were reminded of the fact that *'as the building is intended for the accommodation of pauper patients, all superfluous decoration should be avoided, both on the exterior and interior of the building, there, however, should be rendered as cheerful and attractive as due consideration of economy will permit'*.

The winner of the competition was George Coppinger Ashlin (1837-1921), the noted church architect and former partner of E.W. Pugin. Ashlin's design was the most expensive but was selected because it offered the most space and could be realised with few modifications. Alfred J. McGloughlin (1863-1940s) was involved in the preparation of the designs and went on to oversee the work on site.

Portrane Mental Asylum was built between 1896 and 1903 with the building contract awarded to the Collen Brothers of Portadown in July 1896. At the time of construction this was the largest building contract ever granted to a single contractor in Ireland. The management of the works for the general contractors was entrusted to Mr H. N. Leask CE, and the clerk of works was Mr E. Twist, assisted by Mr J. Bennett. The value of the contract was £167,000, though The Building News reported in 1900 that the total cost would be about £250,000. Collen Brothers completed the permanent buildings, drainage work and paths for the new asylum by 1903; this appeared to bring Collen's involvement with the project to a close.

Collen disagreed with George Ashlin over the costs for the work. Their issue was in regard to the fact that the quantity surveyors were not taking account of extra works

on site and deviations from the original contract. Collen raised this matter with Ashlin in writing on the 17th October 1901. This complaint led to a drawn out legal dispute. Collen was paid for the original works contract without delay but their claim for extras was another matter. Collen's estimates for the works were countered by Ashlin's more conservative figures and with no settlement in the offing the dispute was referred for arbitration in November of 1903. The amount in question was £27,000, which corresponds with the amount allocated for the construction of what became known as the Temporary Asylum.

3.5 The Temporary Asylum (1898 – 1990)

The construction of the auxiliary asylum at Portrane was anything but a quick fix for the overcrowding problem at the Richmond District Lunatic Asylum. It would be 7 years before the Portrane Asylum would be fully operational. As a short to medium term solution the Governors of the Richmond had to manage the constant increase in admissions. This rise in cases of mental illness was noted across the whole of the United Kingdom of Great Britain and Ireland and the construction of new institutional buildings was struggling to keep up with the need for accommodation.

The use of temporary structures helped to manage the situation by offering a relatively cheap, cost per bed, solution. Such structures were already being used at the Richmond since 1891 (Fig 12). Temporary buildings had also become a feature of the large London asylums being built to a standard set by the architects of London County Council.

The Mount Evans demesne at Portrane offered an immediate accommodation solution for the Richmond in the form of the estate House itself. The yards, stabling and accommodation to the east of the House offered further possibilities (Figs 6 & 7). The first patients were moved to Portrane in 1898 and were housed in Portrane House. These were female patients and numbered at 64. In 1898 the overcrowding problem was still a major problem at the Richmond. E.M. Courtenay mentions, in his inspection report for that year, a petition to the Lord Lieutenant suggesting the annexation of the Grangegorman Female Prison to accommodate more patients. It would appear that this appeal was, at least partially, in response to a report from the Resident Medical Superintendent (August 10th) attributing an outbreak of beri-beri in the Richmond to the degree of overcrowding in the Asylum.

His Excellency was pleased to receive a deputation from the Governors on August 11, and then most graciously announced his beneficent intention of granting their request.

When the Prison had been acquired, it was decided to carry out such changes as were considered feasible and necessary to adapt it for its new use as an annex to the Richmond Asylum.

At the close of the year this annex contained 230 female patients. This gave immense relief to the female wards, but of course, as is pointed out in the Inspector's Report, such accommodation as can be afforded by an old prison, could not, under less pressing circumstances, be considered wholly commendable for the special requirements of the insane.

It was further decided to push forward the completion of temporary block No. 3 at Portrane, which was accordingly done (Fig 11).

At the conclusion of the year 300 patients were living at Portrane (236 male and 64 female.)

Another temporary block (No. 4) at Portrane, to hold 100 patients, was begun and is now almost ready (Fig 11).

It is earnestly to be hoped that the gracious action of the Lord Lieutenant in assisting the Governors, together with the steps which they themselves and the Board of Control have been able to take, may avail in checking the further development of the epidemic which has made the history of the institution for the last few years so painful'.

It would appear that the design and construction of a Temporary Asylum (Fig 11) was quite high on the list of the Board of Governors priorities for Portrane. E.M. Courtenay, Inspector of Lunatics, carried out his annual inspection at Portrane on the 21st December 1899 and reported as follows:

'There are at present 400 male patients resident at the Portrane estate the female patients who used to reside at the Manor House having been replaced in April last by 64 men. The remainder of the patients live in the wooden buildings. These buildings afford most excellent accommodation for this class of the insane, who are all more or less quiet and harmless. The number of exits would appear sufficient to minimise the danger of loss of life by fire, should one break out in these inflammable structures. The furniture is excellent, and in good condition. The buildings are heated by hot water, and lighted by acetylene gas.

I saw the patients at dinner. The food was good and well cooked. In one room the meal consisted of meat, potatoes and turnips; in the other bread and meat only were given. If the cooking arrangements would at all allow, the meal would be more acceptable if vegetables were given in both rooms every day, but in lesser quantity.

Of the 400 patients, 209 are engaged at farm work, 20 assist the artisans, and 17 work in the various indoor departments. The remainder are physically or mentally unfit to do any work. Six are at present confined to bed, and 34 are epileptics.

One patient has been secluded on three occasions, for a total period of 19 hours.

A great deal of work has been carried out by the aid of the staff and patients. The basement of the old Manor House has been drained, the old cattle shed has been converted into a workshop, a road has been made to the farm buildings, and a weigh-bridge has been erected.

Some other important works have been carried out by contract. A large acetylene gas generator has been erected, the lavatories in connection with No. 2 Block (Fig 11) have been supplied with hot and cold water and modern lavatory basins, the various offices have been connected by telephone, and fire mains and hydrants have been laid round the buildings. The house for the agricultural manager has been completed and furnished.

The contracts for the permanent buildings appear to be making fair progress. The roofing of the various blocks is now nearly completed.

There are at present in charge of the patients 27 attendants, of whom four do duty at night...'

Interesting to note from Courtenay's report is the fact that the basement of Portrane House needed to be drained. This may suggest that the House had fallen into disrepair prior to its occupancy in 1898 or that some unrecorded incident took place which caused the basement to flood.

Courtenay's annual inspection gives a contemporary and detailed description of the development of the Temporary Asylum and progress on the main contract for the Portrane Mental Asylum. His inspection in 1900 was carried out on the 10th of December which he details as follows:

'I visited and inspected Portrane Asylum on the 10th inst. There are at present 400 chronic patients from the Richmond resident there in the temporary wooden blocks and the mansion house. Of these 35 are returned as epileptic, 4 as destructive, and 7 as of unclean habits. Eight patients are confined to bed from various chronic ailments. These are treated in the Infirmary Ward, under the care of a nurse and 2 male attendants. The rest of the patients are in good health. There has been no serious casualty or outbreak of epidemic disease.

Some of the male patients of untidy habits might receive greater attention from the attendants, but it is almost impossible to properly attend to the insane who are in any way slovenly in their habits where there is no laundry. At present all the clothing has to be sent to the Richmond to be washed.

The returns show that 256 patients are employed. Of them 4 work as tailors, 2 as shoemakers, 1 as a mason, 6 as upholsterers, 2 as carpenters, and 6 at painting, while the remainder are employed on the farm. During the last year useful workshops have been fitted up. There are now tailors', shoemakers', and upholsterers' shops. All the clothing for the patients is now made on the premises, and it is expected that during the next twelve months the shoemakers' and upholsterers' shops will also be able to supply the requirements of the establishment.

There are three dining rooms for the different blocks. The Infirmary patients dine in their own ward. The dining rooms are very much overcrowded, so much so that it is difficult to understand how accidents are avoided. The dinner I saw served seemed sufficient in quantity, well cooked, and liked by the patients.

The wooden blocks provide very comfortable and bright accommodation. Adequate provision has been made for warming the rooms, with the exception of the dormitories at the end of the main block, where the apparatus is not quite sufficient to raise the temperature to the proper standard in very cold weather. The rooms are comfortably furnished; the bedding is of the newest description, and of excellent quality; and, apart from the temporary character of the buildings, the only objection arises from the combustible nature of the construction, of which timber forms so large a part.

The Committee have, I understand, had under consideration the precautions necessary to guard against an outbreak of fire. The important points in dealing with buildings such as these would appear to be to provide:-

- (1.) Constant supervision*
- (2.) Sufficient and ready means of exit from each sleeping room.*
- (3.) Efficient means of dealing with an outbreak of fire at its origin. Once a fire has taken hold of such a building there is little chance of saving it.*

Hand Fire Engines are provided in the wards, but the number of these might be increased, and the Committee might also take into consideration the provision of additional means of exit. This might be done either by putting in an additional door at the end of each room, or by having one or two of the window sashes to open by a key.

There are at present 4 attendants on duty at night. Three of these are stationery in the various blocks, whilst one patrols.

The day staff consists of a head attendant, a nurse in the hospital, a cook, messenger, farmyard and boiler man, 4 charge attendants, and 16 ordinary attendants.

The farm is said to prove a great success, both financially and as a means of occupation. A great deal of work has been done to reclaim the waste, swamp land, which will add materially to the value of the estate. The land is now drained and cultivated. A dairy and sheds for cattle have been erected by the aid of the staff and patients.

The provision for bathing would appear sufficient, but additional wooden stands are required in the lavatories.

The great want would, however, appear to be some means of washing the clothing from day to day. Steps should be taken to supply this want. A small washing machine and wringer, worked by hand, might meet the immediate requirements, until the laundry in the permanent building is ready for use, which must be soon now.

As regards the ministration of religion the returns show that on last Sunday 230 patients were present at Mass, which is celebrated in the Asylum, whilst 44 went to the Protestant Service. The chaplains attend regularly. As yet no burials have taken place directly from Portrane, as the bodies of deceased patients are sent to the Richmond, and interments take place from there.

The Case-books and Medical Journal are written up to date.

The permanent buildings are now, with the exception of some of the corridors, all roofed in. The female chronic block is completed, the laundry machinery is almost all in position, and the electric plant, the heating system, and the bathing arrangements are advancing towards completion. The arrangements for fitting up and furnishing the various wards, the furnishing of the apartments for officers and staff, the fitting up of the chapels, and also the supply of the necessary appliances for the kitchen, stores, and other executive departments, should now engage the attention of the Committee, so that no delay may take place in the occupation of the buildings when the contractors have handed them over.'

Courtenay carried out his inspection at Portrane on the 30th September 1901 and his report does not add much to the picture of the Temporary Asylum. It would appear to have reached full occupancy, remaining in good condition and serving its purpose (Figs 10 & 11).

'The detached wooden blocks continue to be occupied by 400 male patients -- all of the harmless class – from the Richmond Asylum, of whom 37 are epileptic, 2 are suicidal, 12 of unclean habits, and 7 are at present confined to bed.

Up to this, great difficulties have been experienced in dealing with so many helpless patients, as there has been no provision for washing clothes, and neither separate stores nor storekeeper, all dirty clothing having to be sent back to Richmond, and all new material having to be obtained from the stores there, necessitating great delay and trouble. However, within a short time the female chronic block of the new buildings will be occupied, and the laundry will be in working order. A Storekeeper is also about to be appointed, so that the goods can be delivered direct for the patients use.

It may, perhaps, be possible to send down a larger number of able-bodied men, when more suitable accommodation can be found, as at present exceptional opportunities exist for the employment of such patients.

At present, of the 400 inmates residing here, 275 are engaged at some sort of work; 145 work on the farm or at levelling the grounds, 24 assist the artisans, and 106 make themselves useful in the building.

The levelling of the ground around the new buildings affords most suitable work, in which all could take an interest, and which will prove a boon to the insane for many years to come. At present, this work is well commenced, and a tramway (kindly lent by Mr. James Talbot Power) greatly expedites the transport of the soil from place to place.

Very little change has taken place amongst the patients resident here. One has been discharged on recovery, 1 has been removed, and 14 have died.

The causes of death call for no remark. In all but one case the cause was verified by post mortem examination...

...The permanent buildings are now approaching completion; the machinery is all ready for testing; and the only works which are still much in arrear are the heating and the furnishing of the wards.'

Courtenay's writing style changes slightly on this visit and this seems to reflect the unchanging nature of life for the 400 patients within the Temporary Asylum and the unfinished status of the new asylum. Some optimism is expressed with the imminent access to the female chronic block which was nearing completion.

The Annual Report for the year 1902 of the Resident Medical Superintendent (RMS) to the Richmond District Asylum, Dr. Connolly Norman, presented to the Joint Committee of Management contained an interesting Appendix to the main report.

Appendix III concerned an application for a loan of £39,270 for Portrane Asylum. It outlines a lively debate on the allegations of the rising costs involved with the construction of the new Asylum and comparative studies on smaller institutions in Britain. During the course of this debate the issue of the Temporary Asylum and the use and relative cost effect of temporary structures was raised.

MR. DILLON (Mr. V. B. Dillon Solicitor, representing the Joint Committee of Management) – ‘*Kindly give us the total expenditure on the foot of those loans so far.*’

DR. NORMAN (RMS) – ‘*The total amount expended so far out of the loans actually sanctioned for Portrane Asylum is £270,260 17s. 5d., but there is a further probable expenditure of £18,799 5s. 9d. out of those loans also to be added, making a total of £289,060 3s. 2d. If we add to this last sum the amount required to be utilised out of this present application, as well as the sum of £15,000 which I believe is the estimated cost of the extension of the water supply, and the construction of water softening plant, it will bring the cost of the new Asylum up to £332,860. I would prefer, however, to take the sum as £335,000 to allow for contingencies. This total would be accounted for as follows:-*

<i>Site</i>	<i>10,380</i>
<i>Buildings and Works</i>	<i>274,620</i>
<i>Equipment</i>	<i>21,000</i>
<i>Broadmeadow Waterworks</i>	<i>14,000</i>
<i>New water supply extension and softening plant</i>	<i><u>15,000</u></i>
<i>Total</i>	<i>£335,000</i>

INSPECTOR (Mr. P.C. Cowan, M.Inst. C.E., Chief Engineering Inspector of the Local Government Board) – ‘*Does that total include the erection of the temporary buildings?*’

DR. NORMAN – ‘*No. The figures I have given you only deal with the permanent structure; I have not touched on the question of the temporary buildings. There were altogether four loans sanctioned for the erection of temporary buildings, in order to meet the overcrowding, while the permanent buildings were in the course of construction, amounting in all to over £28,000; the buildings, however, have only cost £21,000, so there is a balance of £7,000 on these loans.*’

INSPECTOR – ‘*Are these temporary buildings still being used?*’

DR. NORMAN – ‘*Some are, and I have no hesitation in saying they will be used in the future.*’

INSPECTOR – ‘*And for what time?*’

DR. NORMAN – ‘*As long as they last – Mr. Ashlin says fifty years.*’

INSPECTOR – ‘What accommodation have you in the permanent buildings when fully completed?’

DR. NORMAN – ‘Thee accommodation for patients in the permanent buildings in reckoned at 1,200, and in the temporary buildings at 400’.

MR. DILLON – ‘This includes the accommodation for attendants and all officials?’

DR. NORMAN – ‘Yes, the accommodation for all necessary officials is included, but in talking of the cost of an asylum it is calculated at per bed, and that means per patient’s bed’.

INSPECTOR – ‘On what scale is the 1,200 capacity ascertained? Is it 60 feet in the bedroom and 30 feet in the day room, or 50 and 25?’

DR. NORMAN – ‘I would prefer you would ask Mr. Ashlin’.

INSPECTOR – ‘Is it according to the most recent liberal rules?’

DR. NORMAN – ‘Yes’.

MR. ASHLIN (George Coppinger Ashlin, Architect of Portrane Mental Asylum) – ‘It is 60 feet for the bedrooms and 40 for the dayrooms.’

INSPECTOR – ‘40 seems to be very high. It used to be 25 and then it rose to 30, and now it is 40.’

MR. DILLON – ‘Taking the cost at £335,000 how much does that amount to per bed for the permanent buildings, allowing for 1,200 patients?’

DR. NORMAN – ‘The cost of the permanent buildings would be £279 per bed. Of that figure £24 per bed is chargeable to the water supply, leaving the cost per bed at £254 irrespective of water supply’.

INSPECTOR – ‘You have added that because in many cases the asylums find the water supply from the existing mains adjoining the buildings.’

MR. DILLON – ‘The permanent and temporary buildings taken together can accommodate how many patients?’

DR. NORMAN – ‘1600’.

MR. DILLON – ‘And taking the total cost at £356,000, that I believe would give a cost per bed of £222, and that still includes the cost of the water supply?’

DR. NORMAN – ‘Yes’.

INSPECTOR – ‘The permanent buildings provide for 1,200 patients at a total cost of £279 per bed. The temporary buildings which cost £21,000 provide for 400 patients, and that comes to about £52 per bed, and taking the two sets of buildings and the total number of patients you find the total cost of Portrane Asylum is £356,000, providing for a total of 1,600 patients, including water supply, which Dr. Conolly Norman estimates at £29,000’.

The enquiry proceeded to discuss the 'per bed' cost of Portrane Asylum as a comparison to similar asylums being erected in England and Scotland. In most cases the comparison demonstrated irrespective of the finished cost, that the 'per bed' cost of Portrane was favourably lower than England and Scotland. The enquiry refers to Hartwood Asylum in Lanark, where the finished cost was £445 per bed. An asylum in Gartloch had a 'per bed' cost of £421; Hawkhead at Govan the cost was £481 per bed. The costs from England were based on Chichester Asylum in Essex (£328 per bed); Cheddleton Asylum in Staffordshire (£428 per bed) and Claybury Asylum in London (£284 per bed).

Mr Dillon then proceeded to direct the enquiry to the cost of temporary buildings utilised to accommodate the overcrowding in the British asylums.

MR DILLON – 'What about the Manor Asylum? What was the cost of the temporary buildings erected there?'

DR. NORMAN – 'They were estimated to cost £112,000'.

INSPECTOR – 'For temporary buildings?'

DR. NORMAN – 'Yes. This is taken from the London County Council Committee's report. The temporary buildings to accommodate 700 patients were estimated to cost £112,000, that is over £160 per bed'.

INSPECTOR – 'And the cost for temporary buildings in the case of Portrane was?'

DR. NORMAN – '£52'.

INSPECTOR – 'And the cost of permanent buildings is only £254 for Portrane when you take off the water supply, so that the permanent buildings at Portrane don't seem much to exceed the sum for the temporary buildings at the Manor Asylum'.

MR. DILLON – 'I thought these figures would be interesting in view of the comments that have been made as to the cost of Portrane Asylum'.

INSPECTOR – 'I would like to have some more light about these temporary buildings. What description of buildings are they?'

DR. NORMAN – 'They are all wood and iron'.

INSPECTOR – 'This is a copy of the report of the London County Council Asylums Committee for the year 1898, and contains this statement: "£112,000 for the erection of temporary asylum designed to accommodate 700 female patients," but I don't know what "temporary asylum" there means'.

MR. SHANNON (Mr. W.J. Shannon, Solicitor on behalf of Dublin County Council) – 'I am sure they had to purchase the site in that case, and I think you could hardly take that as on the same footing as the asylum here, for they probably included the furniture and the site'.

MR. DILLON – ‘These figures show generally that the cost of asylums elsewhere is considerably larger than the cost of the asylum at Portrane. I see in a memorandum here from the Clerk of the London County Asylums Committee that the Manor Asylum, designed to accommodate 700 female patients, cost for site £3,683; for buildings, £104,836; furniture, etc., £11,027, and the total is over £120,000’.

MR. SHANNON – ‘But in your temporary buildings you had no cost for site. As you have mentioned the Manor Asylum, you can only take £104,000 for the buildings, and then the comparison is as £21,000 is to 400 so is £104,000 to 700’.

INSPECTOR – ‘They spent £21,000 to accommodate 400 patients at Portrane’.

MR. DILLON – ‘That includes furniture’.

INSPECTOR – ‘Excluding the cost of the site, the figures returned by the Clerk of the London Asylums Committee as the cost of what is called a temporary asylum at Manor, Horton, are £104,836 for buildings, and £11,027 for furniture, etc., making a total cost of £115,863 for 700 patients; and dividing one figure by the other it appears that the cost per bed is £165 against £52 10s. for Portrane, and that appears to show that your temporary buildings were much cheaper in Portrane than in England, but you cannot compare the buildings unless we know they are similar. We know your buildings are all wood. But even taking into account only the cost of the permanent buildings for 1,200 patients at £270 per bed, you think this a moderate sum compared with the English and Scotch asylums?’

DR. NORMAN – ‘Yes, certainly, and I think I would like to draw your attention to this statement. I daresay Mr Ashlin can give it in better form than newspaper form. At the yearly meeting of the Institute of British Architects, February, 1901, Mr. George T. Hine, who has designed most of the London County Council asylums, gave an address on asylum construction, and his conclusion is that a well built asylum, designed on liberal principles and fitted with all modern appliances could not be erected for much less than £300 per bed. Mr Hine is a well known asylum architect, and he has designed London Asylums, and he was addressing asylum architects’.

INSPECTOR – ‘Better read the next paragraph’.

DR. NORMAN – ‘The London County Council Asylums Committee have found it necessary to add temporary buildings to some of their asylums. These erections consisting chiefly of wood and iron, provide accommodation for 1,700 patients at a total cost of £173,000, averaging £100 per bed.’ Considering the limited life of these structures, I believe that the English Commissioners have only licensed these temporary buildings at Horton for a limited period – I heard they were only licensed to accommodate patients for a period of five years. I know the period has been extended, but what the extension is I do not know. The Commissioners have the power of

withdrawing a license from a building where the accommodation for patients is temporary, so that the temporary buildings attached to the London asylums are temporary in a different sense to ours, which we expect will last for a generation or two.'

INSPECTOR – 'What is the full number of patients you take at Portrane. Is it the design to take 1,200 and 400 together, and if so is it absolutely an asylum for 1,600 patients?'

DR. NORMAN – 'Well, yes, as long as what are called the temporary buildings last – which Mr. Ashlin thinks will be for 50 years to come – that will be the number.'

INSPECTOR – 'How many patients have you at Portrane at present, or is the asylum there in use to its whole extent?'

DR. NORMAN – 'Not yet. We have at present there between 800 and 900 patients.'

INSPECTOR – 'How many are in the new buildings and how many in the temporary?'

DR. NORMAN – 'They are all in the new buildings except 100.'

INSPECTOR – 'When do you expect to have the asylum fully filled with patients, for you are badly crowded here?'

DR. NORMAN – 'We expect to have the asylum fully filled in about three months more. I should fill the permanent buildings and use the temporary buildings as a lie by; I have no hesitation in saying they will soon be filled.'

At the time of the enquiry it was made clear that the overcrowding in the Richmond was in the region of between 300 and 400 patients. This showed the overcrowding issue in the Richmond as being chronic, when one considers that 100 women patients were being housed in the old prison and that the auxiliary asylum at Portrane was fast reaching capacity and was not officially opened for another two years. The discussion on the accommodation continued as follows:

DR. NORMAN – '...Before passing from the question of accommodation it is my opinion that the total number the Richmond Asylum, including Grangegorman prison, can fairly hold, according to modern ideas, is 1,600; and as 1,600 are provided for at Portrane, that would make a total of 3,200.'

INSPECTOR – 'How many patients have you got at present?'

DR. NORMAN – 'Nearly 2,600 at present, and at the rate at which they are increasing in a few years there won't be any room to spare.'

MR. DILLON – 'That is caused largely, I believe, by the transfer of pauper patients from the workhouses, who were being treated in the lunatic wards of the Unions?'

DR. NORMAN – 'Yes.'

The closing section of the enquiry discussed outstanding works for completion of the new asylum. In this section the Inspector, Mr. Cowan, addresses Mr. Ashlin as follows: *INSPECTOR – ‘You have advised the Committee to purchase from the contractors some temporary buildings – cottages for the artisans. What is their nature?’*

MR. ASHLIN – ‘Concrete foundations and chiefly wood covered with corrugated iron. I think two out of the four buildings have iron staunchions, and the idea was that if they wished to make them permanent they could substitute concrete for the wood, and so make them fire-proof. The great objection to them now is that they are combustible.’

INSPECTOR – ‘You consider that their life is considerable if well painted; and do you consider it a good purchase to make as a business man?’

MR. ASHLIN – ‘Yes, I think they are a good purchase. They are, I think, good for the next fifty years.’

INSPECTOR – ‘And you recommend the purchase of these buildings at a cost of £355?’

MR. ASHLIN – ‘Yes.’

This dialogue would suggest that an additional four temporary units were acquired from Collen when they demobilised from the site. The location of these temporary buildings on the site is not known. There is a clear distinction to be made between the Temporary Asylum which was planned, designed and executed under George Ashlin and these temporary artisan’s dwellings (Figs 10 & 11). Furthermore, while Ashlin recommended that the artisan’s dwellings were purchased for £335, there is no evidence to suggest that such a purchase ever took place.

The subsequent dispute and arbitration with Collen Brothers may well have changed the outcome of Ashlin’s recommendation of 1901.

It seems apparent, reading the testimony of Dr. Conolly Norman, that the overcrowding issue in the District asylums would remain a problem going forward. By 1900, approximately 21,000 people (0.5% of the population of the 32 counties of Ireland) were accommodated in the district asylums. A smaller number were still housed in the Workhouses. The census of 1901 shows that approximately one person in every 10,000, resident outside of an asylum or other institution, is a lunatic. The Conference of the Irish Asylums Committee held at the Richmond in 1903 again focused on the issue of overcrowding, exploring alternatives beyond the walls of the Institutions. But by 1907 the Richmond District Asylum Joint Committee was reporting on the ‘repellent’ conditions in the North Dublin Union Workhouse, while the overcrowding at the

Richmond and Portrane had become a 'grave and alarming crisis'. Once more the expansion of asylums was suggested as a solution.

The Temporary Asylum at Portrane continued to function, as stated by George Ashlin, at Portrane. Dr. Connolly Norman's idea of using it as a lie by became superseded quite quickly by the need for accommodation due to ongoing overcrowding at the Richmond.

The Inspector of Mental Asylums, Daniel L. Kelly, visited Portrane on Christmas Eve in 1924 (report published in 1926) and commented on the unsatisfactory condition of the temporary buildings occupied by the male patients.

In 1931, the temporary buildings at Portrane are described as overcrowded.

1949 saw the temporary buildings at both Grangegorman and Portrane once more the subject of scrutiny, being described as a fire hazard and unsatisfactory.

By 1956, 21,720 people were housed in Institutions with over 20,000 in public mental hospitals.

In 1978, the population of the mental hospitals had dropped to around 14,000.

In Portrane approximately 200 people were still housed in the temporary buildings, now 'temporary' for 80 years. A Visiting Committee from the St. Joseph's Association for the Mentally Handicapped, Portrane described the conditions in the temporary buildings as follows:

'Units 9A, 9B, 8A, 8B, 11 and 11A are what is known as temporary structures... They are wooden, barn-like structures and they would constitute a grave fire-hazard. We visited two of these and were assured by the staff that they were typical of the others. In 9A there are 35 male patients, most of whom are mentally handicapped. They sleep in a long bare dormitory. The beds are old, mattresses sagging and the bedclothes did not look clean. Next to the dormitory there is a day room, bare of furniture except for forms arranged along the walls. The floors were very dirty, particularly near the walls where we noticed that the floor boards were rotting. This room measured approximately 40' X 20'. The roof is not sound. We were told that it leaks. The dining hall was a similar room. Rat holes were clearly in evidence and in fact the charge nurse had just got rid of rats. He expects them back. Several birds were gathered in a corner

of the room. They were quite tame. The staff found them unhygienic, particularly at mealtimes when they hop onto the plates of the patients. The stench of ancient urine-soaked floors was palpable. Next to the dining hall were the toilets. We noticed no bath. There were four toilets and a urinal. The urinal regularly overflows and floods onto the floor.'

The conditions cited above were confirmed to the writer in 2018 by a former nurse/attendant who worked in Block 8/8a (Jim Fitzgibbon, pers. comm).

In 1978 the Association for the Rights of the Mentally Handicapped staged a hunger strike at Portrane as a protest for better conditions. The film footage shows structural details of Block 8/8a highlighting its deplorable condition and total lack of maintenance. (www.rte.ie/archives/2018/0720/979942-hunger-strike-for-portrane-patients).

Vincent J. Dolphin, the Inspector of Mental Hospitals, during the same period 1977-1979, comments:

'A feature of St. Ita's is the large number of mentally handicapped, including children, accommodated there; they make up roughly half of the patient population of the hospital. While accommodation in the newer buildings is good, physical conditions in the rest of the hospital have been the subject of much criticism. There has also been overcrowding caused by doubling-up while building works were in progress. In recent years a major programme of improvements has been undertaken involving the provision of a new 72 bed unit for mentally handicapped persons, and the upgrading of male and female blocks. After much delay the new 72 bed unit is now finally opened but is being used for elderly patients, although it was designed specifically for disturbed mentally handicapped patients. Because the Unions representing the psychiatric nurses at the hospital disagreed with the proposed staffing arrangements it was not possible to cater for mentally handicapped patients in the new unit. The old wooden buildings in which mentally handicapped patients are housed pose the biggest immediate problem in St. Ita's. These buildings are sub-standard and constitute a fire hazard. As a result of the opening of the new unit, however, it has been possible to close two of these old buildings.'

The two buildings referred to by Dolphin are likely refer to Temporary No 2 / Block 8/8a of the Temporary Asylum as Portrane House and outbuildings had been demolished in the 1950s. In 1980, Magill magazine published a scathing account of conditions in

the mental hospitals nationally. It is likely that the final closure of the Temporary Asylum buildings happened as related in Dolphin's 1977-79 report (printed 1981) but that their demolition was in response to the Magill article. 'Closure' of buildings at St. Ita's Hospital followed the construction of a new facility which could accommodate the patients from the 'closed' unit. The new unit would be opened fully finished and newly equipped. 'Closure' effectively implied closing the door of the old unit and turning the key, it did not imply immediate demolition (Jim Fitzgibbon, pers. comm). In the case of 'The Temporaries' (Blocks 11 and 9), they were 'closed' following the Magill article but were not demolished until 1990 (Engineer's Department, St. Ita's Hospital). Temporary No 2 / Block 8/8a was demolished following the construction of the Nurse's Home to allow for landscaping.

3.6 The National Forensic Mental Health Services Hospital

The Central Criminal Lunatic Asylum in Dundrum was legislated for in 1845 (Central Criminal Lunatic Asylum (Ireland) Act). The Act provided for the establishment of 'a central asylum for insane persons charged with offences in Ireland.'

It further stated that, *'Whenever and as soon as the said central asylum shall be erected, and fit for the reception of criminal lunatics, it shall be lawful for the lord lieutenant to order and direct that all criminal lunatics then in custody in any lunatic asylum or gaol, or who shall thereafter be in custody, shall be removed without delay to such central asylum, and shall be kept therein so long as such criminal lunatics respectively shall be detained in custody.'*

The Lord Lieutenant was empowered by the Act *'that any person who might be detained in custody in any gaol by virtue of any such warrant as aforesaid should be removed to the [local] lunatic asylum [and] remain under confinement...until it should be duly certified to the said lord lieutenant, by two physicians or surgeons, or a surgeon and a physician, that such person had become of sound mind.'*

The 1845 Act also established the role of Inspector of Lunatics, a role previously part of the remit of the Inspectors General of Prisons.

The Central Criminal Lunatic Asylum was built soon after in Dundrum at a cost of £19,547 and opened for admissions in 1850.

Currently, the Central Mental Hospital (CMH) in Dundrum is the base for the National Forensic Health Service in Ireland and the only centre to provide psychiatric treatment in conditions of maximum and medium security. Most of the CMH's admissions (90%)

come from the Prison Service, whether on remand, pending trial or serving a sentence. The CMH operates as a therapeutic institution and run with a hospital ethos.

The CMH has not undergone much in the way of structural change since it opened its doors in 1850 and is no longer an appropriate centre for treating and caring for people with mental health issues. In 2003, the Minister for Health & Children, Micheál Martin, established a Project Team to progress the redevelopment of the CMH including the consideration of the reuse of the Dundrum site as well as other alternative sites in the country.

In 2006, the Department of Health and Children issued a report '*A Vision of Change*' which recommended that the Central Mental Hospital in Dundrum should be '*replaced or remodelled to allow it to provide care and treatment in a modern, up-to-date humane setting, and the capacity of the CMH should be maximised.*'

The location of the new facility at Portrane was proposed as the St. Ita's Hospital campus is over 112 hectares in area with the proposed National Forensic Mental Health Services Hospital (NFMHSH) being located on a 13-hectare site to the north west of the St. Ita's Hospital (an Architectural Conservation area). The new hospital will not have any impact on the protected structures and will not be limited or constrained to fit into any existing buildings.

It will be the main centre in the state that will provide psychiatric treatment in conditions of high and medium security, including acute, medium and longer term psychiatric care. This 170 bedroom NFMHS Hospital will consist of a number of shared facilities including a 130 bedroom National Forensic Hospital as well as a 10 bedroom Forensic Child and Adolescent Mental Health Unit and a 30 bedroom Intensive Care Rehabilitation Unit. The NFMHS Hospital will be housed in eight single storey buildings and one two storey building. The finished Hospital with all ancillary structures and services, landscaping and lighting will total 25,324m² all co-located in a single campus.

3.7 Background to 2016 excavation

As part of the EIA for the proposed NFMHS Hospital development a test excavation was carried out (Archaeological Projects Ltd, 2014. Licence Ref: 14E0140). Twenty (20) test trenches were opened across the footprint of the proposed development revealing extant foundations of the basement level of Portrane House (Mount Evans) and foundations of the yards associated with Portrane House which were altered and used as part of the Temporary Asylum. No trenches were opened on the site of the detached blocks forming the northern part of the Temporary Asylum. The results of this test excavation concluded that the archaeological risk of the development was low

and formed the basis of the method statement written to cover further investigations under licence reference 15E0396. The methodology submitted to the National Monuments Service for approval and licencing divided the Temporary Asylum into three distinct 'Areas'.

- Area 1 (lawns to the north of the Nurses Block): was defined by Trenches 2 & 3 during the test excavation. Area 1 corresponds to the stables and coach yards of Portrane House and additional buildings added as accommodation during the use period as the Temporary Asylum. Area 1 was sited to the north of the Nurses Block (now demolished 2016).
- Area 2 (Reilly's Hill): was not tested. Area 2 corresponds to the space occupied by the two detached temporary blocks (Ashlin's No 3 and No 4 / Blocks 11 and 9) north of Portrane House and north west of Area 1.
- Area 3 (Portrane House): was tested where possible. Area 3 corresponds to the footprint of Portrane House. It was partially obscured by tree cover and overgrowth and by the existence of House 100. Portrane House was demolished in the 1950s up until it still served as accommodation.

Examination of these 'Areas' was considered imperative during the Advance Works Contract. The Advance Works Contract involved the clearance of the footprint of the proposed NFMHS Hospital prior to the Main Works Contract. The Advance Works Contract involved the demolition of any and all extant buildings within the footprint of the development. Demolition was required to remove the Nurse's Home, the hospital blocks at Willowbrook (Admission/Assessment Block) and Reilly's Hill (Block 2a and 10a), House 100 and ultimately the subterranean remains of the Service Tunnels. The Advance Works Contractor was Barnmore Demolition Ltd.

4 THE TEMPORARY ASYLUM – ARCHAEOLOGICAL WORKS 2016

RedArc Consulting Ltd commenced investigative works on-site on the 18th January 2016. It was decided to start archaeological works at a distance from the main demolition works to prevent potential delays due to archaeological excavation. On commencement (Area 2), the team consisted of one Archaeologist, a 14-ton excavator and operator and an 8-ton dumper and operator. A second site archaeologist was appointed to the team on the 21st January 2016. Structural investigations were completed on 1st April 2016.

Investigations of the service tunnel and coal cellar were carried out following the demolition of House 100 and the removal of the live gas main which crossed Areas 1 & 3. House 100 was a derelict dwelling on the site which had been used as accommodation for patients of St Ita's and which had served as the site office for Barnmore Demolition during the Advance Works contract. All archaeological investigative works covered by licence ref: 15E0396 and extension were completed by the end of October 2016. Preliminary reports on the archaeological works were issued in November of 2016.

All of the Areas (1-3 inclusive) were stripped and reduced by machine as Barnmore's works schedule and activity permitted. As the temporary buildings and Portrane House survived well into the 20th century it was decided to expose the building foundations using the 14 ton machine, then to reduce the soil cover further and follow foundation lines using an 8-ton mini digger.

Subsoil in Areas 1 and 2 was predominantly imported or natural boulder clay which was completely unmanageable for hand excavation. Area 3 (Portrane House) required the removal of 2.00m of overlying rubble and demolition debris to expose extant foundations. Hand excavation in all cases was not a possibility and in the case of Portrane House the Health and Safety implications were too extreme to consider working at the depth required.

The phases of demolition that marked the demise of the Temporary Asylum (including Portrane House) took place at three different times. Firstly, Portrane House was demolished in the 1950s. The temporary buildings (Ashlin's No 2 / Block 8 and 8a) on the Coachyard were demolished around 1979-80. The method of demolition in each case was also quite different. In the case of Portrane House, the basement offered a convenient repository for the debris from the upper floors and so the house was

demolished into itself. The site was then re-occupied by House 100. The yards and temporary buildings were almost completely levelled, covered with topsoil and seeded as lawns to the north of the Nurse's Home.

The northern structures remained in place until 1990 when they were effectively decapitated, with the wooden and iron superstructure removed, leaving the foundations and basements intact. The site of these buildings also served to accommodate much of the debris generated through their demolition. The site was not redeveloped.

Investigative works commenced in Area 2, the location of the northern detached structures. These buildings formed the northern part of the Temporary Asylum and were the last parts to be demolished. Work commenced here as the site was easy to access and at a distance from the main demolition work which was focussed on the admissions block, Willowbrook.

One of the main constraints on the demolition and clearance of the site was the fact that the development footprint is bisected from north to south by a wayleave that accommodates the rising main from Rush, Lusk and Donabate to the Waste Water Treatment Plant that lies to the south of the development. This wayleave was created in 2010 during the construction of the Rush, Lusk, Donabate Waste Water Scheme. It carries the high pressure rising main bringing solid and liquid waste from the northern catchment. The wayleave was archaeologically monitored but no reference is made to identifiable features or structures as it crosses the site of the Temporary Asylum and the outbuildings of Portrane House. The location of the wayleave required an engineered solution in the form of a reinforced concrete slab to support the weight of any plant needed in the western part of the site. The design and construction of the slab delayed all work apart from the decommissioning and demolition of Willowbrook. The wayleave passed closely to the western face of the Nurse's Home and this necessitated further delays to demolition.

4.1 Area 2 - The Northern Range of the Temporary Asylum

Work in Area 2 commenced with the excavation of long, linear test trenches from west to east. These trenches exposed foundations and floor surfaces directly under the sod. Very little topsoil has generated in this location. The topsoil strip was extended over the footprint of each building with the use of a smaller machine to expose walls, service shafts and basement boiler rooms. During the topsoil removal considerable quantities of demolition waste was excavated. The nature of this waste was very modern indicating a recent date for their demise.

It became apparent that the foundations of the western block (Fig 13) (Ashlin's No 4 / Block 9) were concrete and punctuated by vertically set rolled steel joists (RSJ). These joists displayed a H section and were placed to support a corrugated iron roof and wooden walls. During the removal of these foundations and preparation for crushing, the nature of the footings for these RSJ stanchions became apparent. They were formed by a horizontal steel plate with the RSJ fixed in place using triangular steel plates (Fig 19; Plates 12 & 13). These plates were hot riveted to the base plate using right angled steel angle irons. The RSJ is hot riveted between the triangular plates (Fig 19; Plates 12 & 13).

The eastern block (Fig 14) (Ashlin's No 3 / Block 11) had an identical foundation but, in this case, the stanchions were formed using wooden uprights embedded in the concrete.

The concrete foundations are very substantial for these two buildings. The buildings were erected on a north facing slope and as such the foundations had to be designed in such a fashion as to allow ease of access to the building from the paths/roads on the southern upslope. The foundations also serve as retaining walls as the void area within the foundations was backfilled with imported boulder clay. The boulder clay was likely to have originated from the construction site of the Portrane Mental Asylum buildings. Site clearance, preparation and construction on the new Asylum had already commenced two – three years before these buildings were raised. In contemporary reports it was noted that storage / disposal of the excavated material was an ongoing issue. Soil dumps from the construction of the Portrane Asylum are still evident throughout the site and of sufficient size to feature on the Ordnance Survey maps of the area. The boulder clay could also have originated from the preparation of the site for the erection of the Temporary buildings. Because of the sloped nature of the site and the need for a basement, site preparation is likely to have involved a cut and fill solution, where boulder clay from the southern part of the site was excavated and moved to fill the underfloor in the northern part of the building.

The foundations and basements were founded on a shallow layer of broken stone / aggregate. The foundations themselves were concrete, laid in successive courses with the stanchions set on the penultimate course and fixed with the final course of concrete. On the northern limits of the buildings the foundations reached a depth / height of 1.90m (Plate 18)

Both buildings had a basement level which in the 19th century would have contained a furnace for heating. The western block had a substantial basement accessed from the

north (Fig 13; Plates 9-11). The basement was accommodated under the central part of the buildings and extended under the kitchen and sanitary areas. In the eastern block the basement was accommodated under the northern part of the building, again accessed from the north (Fig 14; Plates 19 & 20). Both basements showed clearly where the furnace had been located and removed. Both basements also displayed modern electrical fixings. The basement under the western block still retained its wooden door and the remnants of a window. The furnaces in both buildings were replaced with a more modern heating system. This heating system drew heat from the main hospital boilers and supplied Blocks 2a, 10a, 8, 9 and 11 via a system of subterranean ducts (Fig 24). This system is probably contemporary with the construction of Block 2a/10a in the 1950s by John Sisk and Sons. (Fig 24; Plates 10 & 20)). Waste outflow in the case of both buildings was to the north.

The unused spaces under the buildings were filled with compacted boulder clay. This material proved impossible to remove by hand. An 8 ton mini digger was employed to expose the walls lines and determine depths of concrete and boulder clay.

The boulder clay was sealed by a layer of concrete. This concrete screed was, in turn, sealed by a layer of asphalt with wooden floor joists (Plates 6, 16 & 17). The joists were set into the asphalt and ran from north to south in the large dormitory rooms that flanked the central day room, dining area and kitchen. The flooring in these rooms would have been tongued and grooved floor planks. The dayroom was tiled with asbestos tiling with the remains of parquet flooring in the reception areas. The vestibule was floored with red tiles bordered with black tiles and concrete ramps allowed access to the paths / roads

Metalled parking areas and access roads were noted to the north, east and west of the foundations, although it is likely that these facilities continued to be used by visitors and attendants to the later Reilly's Hill building (Block 2a/10a) following the demolition of the 'Temporaries', as they were known to the staff at St. Ita's.

The excavation of the foundations of the two detached structures showed a similarity in design to the temporary buildings erected at the Richmond Asylum in 1891 (Fig 12). The foundation design, use of concrete, asphalt, wood and iron construction is identical to the structures at the Richmond and would suggest that the approved temporary building design by the London County Council Architect, Mr. G.T. Hines had gained widespread use in both Britain and Ireland.

A layout plan of the Portrane Mental Asylum, likely to have originated from or reflects a design of Ashlin (Fig 11) shows the layout of the full asylum in plan and also shows

the Temporary Asylum (Fig 11). While Portrane House is incorporated in the layout of the Temporary Asylum it is not numbered. The numbering of the buildings (1-4) is likely to define the order in which they were built. The northern range of detached buildings are numbered 3 and 4. No. 3 refers to the eastern block which was completed in 1898. The western block, No. 4 was nearing completion in 1898. In 1899 the buildings were occupied and functional.

Both buildings have an elongated H plan. It is likely that the use pattern in both buildings was quite similar. On a drawing (Engineers Department, St Ita's Hospital) of the eastern block (No.3) the layout of the building is clearly identified. The entrance to the building was from the south, giving direct access to the visitor's room. On either side of the visitor's room and accessed from it were the patient's day rooms. Immediately north of the visitor's room was the kitchen. The kitchen also had access to the patient's day rooms and access to the exterior and the boiler room via a flight of steps. The kitchen and visitor's room shared a chimney (Figs 14 & 20).

The day rooms contained an office for the nurse/attendant. Both offices were sited to allow clear visibility of the day room and via an observation panel of the adjacent dormitories. The day rooms were lighted by 7 (seven) windows in the southern external wall. An additional window gave light to the visitor's room. The kitchen would have been quite dark, lit only by a single window in the north facing wall.

The dormitories flanked the day rooms to the east and west. They were large rooms orientated north to south. They were 23.50m in length by 10.40m in width. The western dormitory had 6 (six) windows along the western side and a further three on the east. The nurse/attendant had a bedroom in the south west corner of the dormitory block. Along the south wall interior were four storage rooms. Two of these rooms were specifically identified as a linen store and a store for the patients clothing. The other two stores were not clearly allocated. The nurse's bedroom had a south facing window, as did the storage rooms, although the windows were in close set pairs.

Two doors from the dormitory gave access to the day room, while another door, in the north, accessed the toilet and bathroom facilities.

The eastern dormitory was similarly appointed, being a virtual mirror image of its western counterpart. Some slight variations are worthy of note. The storage room closest to the nurse/attendant's bedroom (south east corner) is a bathroom for the nurse/attendant. There is also a shared chimney between the dormitory and day room.

Each dormitory had the capacity for approximately 50 beds. In the 1970s each building was treated as two entities (in this case, 11 and 11a) each being almost fully

autonomous but for the shared kitchen and dining area. Later it would appear that the size of the eastern dormitory was reduced to 40 beds to allow for the creation of a smaller day room and a communal dining room. The drawings would suggest that prior to these alterations each building had two separate dining areas allocated to the patients. These dining areas were temporary additions to the block, and which extended north from the day rooms abutting the external wall of the toilet annexes.

It is difficult to determine from the drawings if these were actual or proposed alterations to the buildings. Archaeological investigations of the eastern building (No. 3 / Block 11) did not confirm any of the design alterations shown in the drawings.

The archaeological investigations did show that the northern annexes to the building had been partially demolished to facilitate access to a lower tier of parking immediately to the north of the building.

The western block (No. 4 / Block 9) displays a similar H layout consisting of two dormitory blocks flanking a central block (Fig 13). This appears to have accommodated all of the other functions of the building including visitor's room, day room, dining area, kitchen and toilet/washing facilities. Some of these ancillary functions may have extended into the passages linking the central block to the dormitories. Contemporary drawings (1959) of this building were viewed but were badly faded (Engineer's Department, St Ita's Hospital)

The dormitories measured 40.00m in length, north to south and 11.00m in width. The southern end of each dormitory was used as a day room. The northern ends of both dormitory blocks display protruding annexes to east and west. These rooms measured 4.60m by 3.00m and likely served as bedrooms/offices for the nursing staff. The contemporary drawing shows the whole northern end of the dormitory blocks partitioned into individual bedrooms, with each block having six in number. The eastern dormitory was divided into two by a wall reducing the dormitory size to 26.40m by 11.00m and creating another room at the southern end 13.00m in length by 11.00m wide. This space served as a day room or visitor's room. The drawing shows this arrangement duplicated to the west, but the archaeological evidence does not support this.

The central block was linked to the dormitories by a corridor 3.00m in width. From this access was possible to the kitchen, dining and toilet areas. The kitchen and larder were sited to the north of the corridor while the dining room was housed to the south. The corridor also allowed access to the exterior via the main entrance to the south and the northern exterior by way of doorways on either side of the central block. The

eastern doorway also accessed the basement sited under the corridor with a slight dogleg to the north. The southern side of the corridor housed 6 (six) storage rooms or small offices. As with the eastern block these storage spaces probably held linen and the patient's clothes. It is possible that the storage space/room abutting the dormitories may well have served as an office/station for the nurse/attendant.

The basement measured 8.50m (east-west) and 3.00m (north-south) with a 2.50m by 2.50m dogleg to the north at the western end (Plates 9-11). The basement survived quite well protected by the substantial foundations. In the case of the western building the foundation was extant above ground to a height of 1.50m (Plates 7 & 8) on the northern side. The foundation on the southern side of the building was flush with ground level to allow access from the paths/roads. A note on the service drawing stated that the basement was disused prior to 1959 (the date of the drawing). A concrete lined and lintelled box culvert extended from the northern wall of the basement (Figs 13 and 24). This contained heating pipes being part of the system in place to heat Block 2a /10a (Fig 24). It is likely that on completion of this system that the basements of the Temporaries (Blocks 9 and 11) fell into disuse.

The roof structure of both buildings was formed of wooden/iron trusses clad with corrugated iron. The roofs were pitched in all cases and gabled. The western block (No. 4/ Block 9) presented gables north and south on the dormitory blocks and on the central block (Plate 3). The corridor and storage rooms also had a pitched, corrugated iron roof tied into the flanking dormitory roofs.

The eastern block (No. 3/Block 11) presented gables north and south on the dormitory blocks and the complete roof structure was pitched corrugated iron on either wood or iron trusses (Plate 3). In this case, as the stanchions forming the frame of the building were wood, it is likely that the roof trusses were also wooden.

Archaeological investigations, as part of the Advance Works Contract, revealed the almost intact floor plan of the two buildings that formed the northern range of the Temporary Asylum. Some demolition works immediately to the north of the eastern block (No.3) caused the partial destruction of the toilet annexes. The floor plan of the western block (No.4) was complete.

The foundations in all cases correspond with the buildings as illustrated on the Ordnance Survey maps (Figs 8 & 9)

4.2 Area 1 – Temporary Asylum – Coachyard, Stables & Outbuildings

Following the commencement of construction works on the Portrane Lunatic Asylum the decision was taken to accommodate patients from the Richmond in Portrane House. The House accommodated 64 female patients while work proceeded on the erection of a temporary wooden structure (Ashlin's No.2 / Block 8) to augment the existing accommodation offered within the Coach and Stable yard (Fig 11; Figs 8 & 9).

This temporary building (No. 2) followed the style guide of the London County Council Architect (Mr. G.T. Hines) and was sited along the northern side of the estate outbuildings. A direct comparison between the Ordnance Survey map of 1865 (Fig 7) and the Ordnance Survey map of 1906 shows the impact of the 'new' temporary building on the existing outbuildings. It would appear that some of the outbuildings were demolished to create a clear site for the erection of the temporary wooden building. This temporary structure consisted of a long single storey building aligned from west southwest to east northeast with two small annexes to the north and a dogleg annex (a dormitory) at the eastern end of the building. There is another annex extending south from the main building. The internal layout of this building is known from service drawings (1950s – Engineers Department, St. Ita's Hospital) (Figs 21 & 22). Ashlin's No.2 (Block 8/8a) was planned to be accommodated within the footprint of the coach yard, stabling and farm buildings associated with Portrane House, effectively a 'brown field site'. As such the layout is completely different to the two detached buildings (No.3 and No.4), both of which were designed to be built on open, 'green field' sites. The layout of Ashlin's No.2 reflects the constraints placed upon it by its siting. The 1950s service drawings show an elongated building, orientated from west southwest to east northeast. This main block contained dining areas, dormitories and a large communal day room. Kitchen and food preparation were located at the extreme west southwest end and extended into an annex to the north. A further annex on the north side of the building housed patients' toilet and bathroom facilities and storage (Fig 21).

At the west southwest end of the building another annex is noted and is of particular interest. The service drawings show this annex as having considerably thicker walls and a second storey. The two floors of this annex were used for therapy (Fig 21).

The 'dogleg' annex at the east northeast end of the main block accommodated a single dormitory, storage and toilet facilities (Fig 22). The excavation demonstrated that this dormitory was 30m in length and 11m in width. A further annex, west of the dormitory annex was used for occupational therapy.

Archaeological investigations did little to clarify the internal layout and functionality of the building. It did however give a clearer understanding of the nature of construction. Close comparison of the excavated remains with the layout shown on the service drawings facilitated the identification of the floor plan in relation to the surviving foundations.

The building was severely impacted through its initial demolition, subsequent landscaping, the insertion of the waste water rising main and its ultimate excavation as part of the Advance Works contract. The landscaping almost totally obliterated the foundations, while the insertion of the wayleave and the rising main destroyed a whole section of the building. As we were not allowed to work within the wayleave the level of damage could not be fully assessed. It is likely that when the wayleave was cleared for the insertion of the rising main that any extant foundations were removed.

4.3 Area 1 - Excavation

Work on Area 1 was divided into two distinct parts because of the location of the fixed wayleave. This wayleave was constructed to accommodate the pressurised rising main carrying sewage from north County Dublin to the Waste Water Treatment Plant on the southern boundary of the St. Ita's campus. During its construction, the wayleave was monitored but no record of structural material exists for the section that passes through Area 1. The fixed wayleave was fenced before any work could commence on site and was deemed outside of any exploratory work. Work in Area 1 was further hampered by the location of a large subterranean water storage tank. This storage tank is clearly visible on the Irish Air Corps aerial photograph (1937 – Plates 2 & 3) and may well have been constructed to serve the needs of the Temporary Asylum. The proximity of this storage tank to the rising main was a concern during the Advance Works contract and access was restricted.

Investigative work commenced in the larger western portion (Fig 17). Area 1 was largely under lawn which was well maintained by the staff of St Ita's making access to the site amenable. The topsoil was stripped by machine and stockpiled in windrows. Subsoil and structural debris were stockpiled in separate bunds. As the site was to be fully reinstated following the excavation, recording and the removal of the foundations, management of the topsoil and subsoil bunds was an ongoing problem for the work on site.

The foundations of the Temporary Asylum block were clearly identifiable although in a very advanced state of decay (Figs 17 & 18). The foundations were of concrete with vertically set wooden stanchions set at regular intervals along the walls. The wooden

stanchions along the northern foundation were set at 3.5m centres. The siting of Ashlin's No.2 did not require the construction of such major foundations as were under No.3 and No.4, as the site was level and the natural subsoil was stiff boulder clay which offered a solid base for construction.

There was no evidence from the excavation of any basement level which implied that heating facilities were also contained within or adjacent to No.2. This building was also linked to the heating system which serviced all of these outlying units following the construction of Block 2a/10a on Reilly's Hill (Fig 24). Any evidence of this connection was destroyed by the rising main and wayleave.

Further excavation in Area 1 was carried out to the east of the wayleave which exposed the foundations of a large dormitory annex aligned north to south and forming a return to the northern range of buildings (Fig 18).

Unlike the two detached blocks (No.3 and No.4) which were built primarily to extend the accommodation potential of the Temporary Asylum, No.2 served a wider array of needs including office space, a chronic ward, adequate storage and dormitory space. It would be fair to state that Ashlin's No. 2 (Block 8/8a), being the first of the Temporary buildings, served as the central unit of the Temporary Asylum. It became the focus for the development of workshops and the area to the south was cleared of trees to serve as vegetable gardens. It also housed therapy facilities in its latter years.

The dormitory block on the east of No.2 is similar in size and layout to the dormitories in the detached blocks and probably accommodated 40-50 patients (Fig 18). Flanking the southern end of the dormitory block are two storage annexes, east and west (Plates 31-33). Each annex had three storage rooms. The dormitory measured 30m by 11m (Plates 29 & 30). It abuts the main east to west block but remains a separate room. Three other dormitory rooms were located in the main east to west block.

Each of the detached blocks could accommodate 100 persons while Portrane House had a capacity for 64. Ashlin's No.2 building had to accommodate the remainder while also providing a focus for the management of 400 patients. The Georgian outbuildings that formed the southern portion of No.2 clearly remained in use as part of the overall Asylum, serving a variety of functions.

Excavation showed that the Georgian stables and yards were in a particularly poor state of preservation having been reduced to a few courses of masonry during demolition (Fig 17; Plates 21-22). Subsequent landscaping and preparation of lawns may well have brought about the almost total destruction of the Georgian remains.

Some of the yards were exposed showing original cobbling in parts while other areas are defined by more recent concrete screeds (Fig 17; Plates 21-22 & 25-26).

Following the removal of one of the yard's surfaces the original 18th century well was exposed (Fig 17; Plates 27-28). The presence of the well was known as it was clearly shown on the first edition of the Ordnance Survey for the area (Fig 6). The well is hand dug to over 12.00m in depth and dry stone lined. Wooden joists are visible along its depth which would have served to secure pipes leading to a hand pump on the surface. The well had been capped by a cast iron plate which split when the machine was stripping the area. It does not feature on the OS maps after 1865.

4.4 Portrane House (Mount Evans) – Area 3

Archaeological investigations in Area 3 were specifically requested to assess the remains (if any) of Portrane House (Mount Evans) and to investigate if Portrane House was linked to a temporary building (No 1) as illustrated on the layout plan of the Portrane Mental Asylum and the Temporary Asylum (Fig 11).

Commencement of work in Area 3 was subject to a number of constraints. Tree growth to the north of the location posed a major problem for access. The continued presence of House 100 (Fig 9; Plate 69) constrained access to the site of Portrane House and this was further hampered by the presence of a live gas main which crossed the site from east to west. These ongoing constraints would delay completion of the works on Area 3 until October 2016.

Following the coppicing of the tree cover to the north of House 100, it became possible to investigate the area north of the location of Portrane House. Extensive trenching revealed little in the way of physical structural remains (Plates 34-36). No extant foundations were identified that would correspond with building No.1 as shown on the layout plan. This would raise some questions as to the accuracy of the drawing showing the Temporary Asylum (Figs 10 & 11). It poses the question as to whether this was a proposed design drawing and not an actual representation of what was actually constructed on the ground. The Ordnance Survey 25" mapping for the Asylum, immediately after its completion shows no structures immediately north of Portrane House until one reaches the detached blocks (No.3 and No.4). The trenching did encounter substantial quantities of debris from the demolition of the Georgian house.

4.4.1 Excavation

Test trenches dug by the Advance Work contractor verified the line of the live gas main making it possible to partially investigate the remains of Portrane House (Plates 34-36).

It was possible to define the outline of the main Georgian block by digging down until the floor of the basement level was reached (Fig 15; Plates 37-46). This was approximately 2.00m below present ground level. The basement measured 21m in length from east to west and the excavation was halted approximately 5m from the northern wall of the basement. The external wall was 1m in thickness and constructed of roughly coursed rubble rendered in plaster (Plate 37). Demolition of Portrane House was very thorough and extended to the level of the basement window sills (Plates 40, 41 & 43). That said, the excavation revealed a considerable amount of information about the original house, subsequent extensions and its later life as part of the Temporary Asylum and St. Ita's Hospital.

The first edition (1843) Ordnance Survey map shows the House set against a wooded setting with lawns to the north and to the south (Fig 6). A network of planned walks is laid through the woodlands and extends south to the cliffs. The ground plan of the House is basically a simple block with a projecting annex to the north west and a similar extension to the north east. The basement is likely to follow the footprint of the main, central block of the House.

The 1865 edition of the Ordnance Survey (Fig 7) shows the addition of a further annex to the south eastern corner of the House. The purpose of this annex is not known but it would have substantially altered the appearance of the entrance front of the building. The western side of Portrane House also shows a rectangular structure abutting the side of the main building. This corresponds to the location of a conservatory. There is no form of convention used to indicate that the structure is roofed (cross hatching) and this absence may indicate that the conservatory was being constructed at the time of the survey. The 1906 and later editions show the conservatory with a widely spaced cross hatching which suggests it was roofed and probably glazed (Plate 1-3; Fig 8).

Portrane House was always intended to become part of the Portrane Asylum and the Temporary Asylum but was designated to house the senior medical staff. The second edition OS map shows the areas immediately north and south of the House remain clear of trees and there is no evidence to suggest that any buildings were linked to and erected north of the House. The footpaths around the House have been augmented to allow ease of access between the main Asylum and the Temporary Asylum.

By 1937 (Fig 8) the landscape around the Temporary Asylum had matured with trees becoming established in the lawn area to the north of the House and around the detached buildings to the north. Gardens/allotments are in evidence to the vicinity of the old outbuildings and south of Temporary building No.2.

An interesting addition is noted in respect of Portrane House. There is a hachured slope immediately north of the House which corresponds to the area that was excavated in 2016 to expose the basement level of the House (Fig 8). It would appear that this was designed to either allow more daylight to the basement level of the House or to facilitate alterations to the House to improve its capacity for accommodation. Excavation on the exterior of the basement revealed a projecting plinth at the base of the wall with a gently sloping path abutting that carried water from the basement wall to a stone gutter (Plates 40-43). Also abutting the north wall of the basement was the foundation of a chimney that had been added to the House during its occupancy. Rubble removed from the basement included the remnants of this additional chimney.

Contemporary references from 1901 make mention of the basement of the House requiring drainage. This may have proved to be an ongoing problem. The projecting plinth and gutters may have served as a measure to relieve flooding to the basement. When excavated the basement floor was a concrete screed which was substantially higher than the original basement floor level. The basement was subdivided into four rooms with the dividing walls running from north to south (Fig 15; Plates 44-45). Fireplaces were recorded in the west and east walls (Plates 39 & 46) with another fireplace opening into the third room from the west. The concrete screed displayed a number of impact points which either occurred during the actual demolition or represent the presence of substantial timber props that were supporting the upper floors of the House.

Excavation in this area also revealed some complex services (water and waste) to the north west of the House. The evidence from the investigations would imply that the basement was sited directly beneath the central block of the original House. Only partial evidence for the annexes remained extant and, in all cases, had shallow foundations.

The demolition material excavated to reveal the basement level was made up of largely rubble from the basic fabric of the House, but also including fragments of decorative ceiling plaster and marble from fireplaces. Large numbers of cut and dressed granite quoins were commonplace within the demolition material.

Fragments of the original doorcase were recovered during the Advance Works contract but not on the site of Portrane House (Plates 47-51). Several decorative fragments were found during the clearance on Reilly's Hill and a fragment of an engaged column was recovered to the south of Reilly's Hill within the tree line. These pieces have been retained by the HSE.

Portrane House was demolished in the 1950s with the work likely to have corresponded temporally to the construction of Block 2a/10a on Reilly's Hill and the Admission/Assessment block, Willowbrook (John Sisk and Sons Ltd). At the time John Sisk and Sons Ltd was asked to supply a quote for the restoration of Portrane House. The amount quoted is reputed to have been in the region of £60,000. This amount was deemed excessive by the Eastern Health Board and the building was scheduled for demolition (Peadar Bates (2018), pers comm.).

The position of the entrance front of the House was not determined until after the demolition of House 100 and the decommissioning of the live gas main. Testing at that time located the front wall of Portrane House / Mount Evans. It also revealed the fragmentary remains/foundations of several other walls which were found in association with the service tunnel complex and coal cellar. (Fig 16, Fig 26)

Firstly, on top of the eastern end of the coal cellar, and running southwards was a 0.6m wide foundation. The orientation of this wall mirrored that of Mount Evans and its location and dimensions are suggestive of it either being the end wall of the east wing of the House or part of a structure associated with that wing (Fig 16).

The very partial remains of a stone wall, 0.6m in width, were located abutting the service tunnel and the western end of the coal cellar. This may have either been the eastern end wall of the east wing of the House or an internal division of the same (Fig 16).

Parallel to these walls but 4.5m further west, where the service tunnel ended in collapse, was the remains of the eastern foundation of Portrane house. The width of this wall was 1.2m. It is likely that the service tunnel was built into this wall, opening directly into the basement of Portrane House in the south eastern corner.

On completion, the basement excavation was backfilled using crushed material from the demolition works.

As this part of the development will be used for recreation it has been confirmed that the basement level of Portrane House can be preserved in situ.

4.5 Standing Walls

Three upstanding walls represent the last piece of the enclosing walling and gateway feature of stable yard complex to Portrane House and the Temporary Asylum (Figs 25 & 26)

4.5.1 Gatepost

The only remaining gatepost marks the southern terminus of this section of walling. It was constructed in granite ashlar, formed of alternating rectangular blocks (0.5m x 0.2m x 0.2m), 6 courses high over an ornate plinth (1m x 1m in plan and 0.4m in height). The Gatepost is surmounted by a granite capstone (1.2m by 1.2m and in two distinct blocks) (Plates 52-53). The ashlar is tightly fitted together but some mid grey lime mortar was discernible. The core of the gatepost was rubble filled. The arrangement of the plinth and the remaining cast iron hinge show that the gate, when present, would have swung inwards, opening into the yard area from the driveway.

The adjoining curved section of wall (Wall 1) abutted the gate pier but was not keyed into it (Fig 25).

4.5.2 Wall 1

Wall 1 was a partially curved 2.7m long stretch of walling leading from the gate pier (Fig 25). It was in a slightly damaged state, 2.1m in height and 0.5m in thickness, constructed of roughly coursed and faced limestone blocks, occasional red bricks and brick inclusions. Both wall faces were rendered with lime mortar. As with the gate pier, the core of the wall was rubble filled. The wall was topped with a concrete capping course. This partially curved section of wall linked the long North-South wall (Wall 2) to the gate pier. However, as with the gate pier, Wall 1 was an independent construction and not keyed into either Wall 2 or the gate pier. No foundation was evident.

4.5.3 Wall 2 / Main Wall

The Main Wall was 16.8m in length and ran from north to south (Fig 25; Plate 54). The method of construction employed was identical to Wall 1 and it was constructed to the same dimensions, 0.5m in width, 2.1m in height, but with a 0.9m deep, un-mortared foundation. 1.8m north of the southern terminal was the first of two redundant doorways within the wall (Door 1). The doorway was 0.9m in width and filled by faced concrete half-blocks with a rubble core. The concrete capping to the wall was also a later addition. 1.0m to the north of this doorway and keyed in at foundation level was the stone parapet enclosing the steps descending to the service tunnels.

A distance of 7.8m along the main wall (Wall 2) was a second blocked-up doorway (Door 2). Having the same dimensions as the first, this door was also blocked in an identical fashion (Plate 54). This doorway would have opened directly onto the landing at the top of the stairwell accessing the service tunnels. The parapet wall enclosing the tunnel steps formed a return enclosing the top landing and tied into Wall 2 at its foundation level. After the stairwell the main wall continued unbroken for a further 5.2m.

These walls were designed to create a barrier between the main house and the outbuildings (Fig 26). The household staff could access the yards via the service tunnels out of sight of Portrane House. All domestic works could be channelled through the tunnel without encroaching on the living space of the Evans Family. It is quite likely that Portrane House did not have many windows looking east as they would overlook the yards and outbuildings.

To the east of the main wall were the yards, the well and staff accommodation / offices. Although this side of the wall sustained considerable damage it was clear that parts of the concrete yard survived and a shallow gulley was evident 0.3m inside of the walling which would have acted as a drain. Furthermore, 7m north of the Wall 1-Wall 2 junction there was a small (1.2m n-s x 0.9m e-w) foundation on the yard surface. It is likely to have been either a pump house for the well or a fuse box / control panel for the electrical supply to Portrane House, whose connection to the electrical supply would appear to have been via the service tunnels.

4.5.4 Wall 3

This last section of upstanding walling was again independent to the main wall. Wall 3 ran east for 1.8m from the northern terminal of the main wall and was identical in construction, height and width, with no obvious foundation (Fig 25). Wall 3 terminated in a 1m square x 2.1m high probable gate pillar (Plate 55).

4.6 The Service Tunnels – Area 1 to Area 3

A series of subterranean passages and a coal cellar/ice house were located under the coach access road on the eastern side of Portrane House (Fig 16 & Figs 25-26). The service tunnels facilitated access from the basement level of the House to the coachyard, outbuildings and the well. The passage was constructed in an open cut trench and consisted of parallel stone walls with a red brick, vaulted, roof. The passage was lit and ventilated by a series of 5 'skylights' formed in the brickwork of the covering vault. The tunnel was accessed from the east by means of a flight of stone steps (Fig 16). The main tunnel terminated in the basement of the House close to its south eastern corner.

Leading from the main passage is a linking passage that accesses a coal cellar / ice house with an opening in the roof to allow for coal / ice deliveries. The junction of the coal cellar / ice house to the main passage is lit from above by the central 'skylight' opening. The service tunnel is completely blocked towards its western end as it was cut when the gas main was installed. Access to and from the outbuildings, Temporary building No.2 and the well was by means of a doorway in Wall 2 (see above, Plate 54).

Following the demolition of House 100 and the removal of stockpiled tree trunks over the service tunnel it became possible to record the passage and associated features prior to their demolition in October 2016.

4.6.1 Stairwell

The sill of Door 2 was a solid concrete block 1.5m in length N-S, 0.6m in width E-W and 0.25m in height with a square socket, centrally placed at either end to accommodate the door frame (metal) (Plate 56). The door would have opened directly onto the landing at the top of the stairs. The landing was originally protected by a wall and some brick facing was noted on the inner face of the northern (E-W) wall. The landing at the top of stairwell measured 1.5m N-S and 1.1m E-W, composed of a pavement of roughly mortared, flat rectangular cut granite blocks (Plate 57) (6 blocks in total). Descending southwards into the tunnel, was a flight of 12 cut granite steps (Plates 58 & 59). Each step was 0.15m in depth and 0.25m in width. At the foot of the stairwell the floor of the service tunnel is defined by a large flat piece of limestone. An arched doorway, 1.3m in width and 1.8m in height (Plate 59) was set over the foot of the stairwell opening directly into the 1st gallery of the service tunnel. The wall forming the sides of the stairwell was plaster rendered. This wall structure was tied into the main wall at foundation level and was likely to have been present above ground to secure the stairwell and prevent unfortunate accidents.

4.6.2 Service Tunnels - Gallery 1

The first gallery of the service tunnels ran in a westerly direction from the foot of the stairwell for a distance of 9.6m. The tunnel occupied the base of a linear construction trench measuring 2.5m in width and 2.1m in depth with the cut being backfilled post construction with a mixture of mid brown clay sand and natural stone with some contemporary inclusions of red brick. The base / floor of Gallery 1 (Plate 60) was compacted natural subsoil covering a central dry stone filled drain (0.3m in width x 0.3m in depth) running along its length. The walls of the tunnel (1.3m in height x 0.3m in width) were of roughly coursed flat, sub-rectangular limestone blocks, with the inner surface dressed and displaying a slight corbelled vertical profile. The walls were built

using a coarse cream limestone mortar and plastered on the inner face with a clean white plaster to reflect/maximise light within the tunnel. The E-W walls were set parallel to each other, 1.3m apart and founded directly on the compacted subsoil. Both walls were finished to a level final course on which the brick built round vault was founded (Plate 67). The interior vaulted ceiling of Gallery 1 was rendered in the same fashion as the side walls, giving the inner surfaces of the tunnel a smooth, almost seamless finish. The round vaulted roof (0.2m in thickness) was constructed of a double layer of red brick, with a maximum internal height of 1.8m above the tunnel floor level (Fig 16 – elevation detail, Plate 67).

The vault was built using clamp fired bricks in an ‘English’ bond and a light cream grey fine mortar. At 6.5m from the foot of the steps the tunnel was breached by a 4” cast iron watermain which had been installed at a later date (Fig 16; Plates 62 & 64).

At intervals along the roof of the tunnel were the ‘skylights’ ‘A’ to ‘E’. A and B were partially intact with only the holes remaining whilst C, D and E were intact (Plate 63). The skylights extended from the interior apex of the vault by 30cm through the brickwork to the surface. In profile the skylight splayed outwards from the 0.24m surface opening to the interior apex of the vault. This maximised the amount of light reaching the tunnel from above (Fig 16 – elevation detail).

These openings were likely to serve a dual purpose offering both light and ventilation for Gallery 1. It is possible that there was an additional ‘skylight’ between B and C which was destroyed when the watermain was installed. If this had been present a ‘skylight’ would have illuminated the tunnel every 7 feet / 2.1m along its length.

4.6.3 Service Tunnels - Gallery 2

Gallery 2 extends the service tunnel by 6.5m to the west (Fig 16; Plate 61). From its juncture to Gallery 1 it veers gently to the north giving the impression of a slight curve when viewed along its length. When viewed externally it was clear that Gallery 2 formed a diagonal line between Gallery 1 and Gallery 3. Although the floor in Gallery 2 was again compacted natural subsoil the drain present in Gallery 1 did not continue. The method of construction and dimensions of the parallel walls and barrel vaulted ceiling were the same. Viewed internally there was no obvious join in the masonry forming the side walls of both Galleries 1 & 2. Externally the slight deviation to the north caused the pattern of the brick work to give the effect of a spiralling / rolling construction. Other than this visual difference the exterior surface of the barrel vault at the junction to Gallery 1 showed a depression where the tie in between the two brick structures had been made and a soil filled depression was evident, with no damage or

alteration internally. As the exterior surface of the vault would not be viewed such slight irregularities in the brick work were acceptable.

A short Gallery 2(a) originated 1.8m from the junction to Gallery 1 and extending 2.1m to the south to connect centrally into the coal cellar / Ice house. The dimensions and structure of Gallery 2(a) were consistent with those of Galleries 1 & 2 (Fig 16; Plates 65-66).

4.6.4 Service Tunnels - Gallery 3

Gallery 3 would appear to be the stretch of service tunnel that linked into the basement of Portrane House. The western end of Gallery 3 was heavily damaged during the demolition of Portrane House. It is likely that further impacts were sustained on the remains of Gallery 3 during the construction of House 100, the insertion of domestic services for that dwelling and finally the installation of the gas main. However, the consistency of construction across all three of the Galleries and the presence of a possible wall foundation extending to the north suggest the Gallery 3 was 6m in length. Its method of construction is closely mirrored in the other Galleries, but the internal dimensions were 1.5m in width with a similar internal height at 1.8m. The vaulting to Gallery 3 is different to both Galleries 1 & 2. In the case of Gallery 3 the vault is formed as an elliptical arch designed to span the additional width of the tunnel without increasing the roof height. Despite the internal plastering, which would have once hidden the join between the galleries the damage had generated a crack in the plasterwork between Gallery 3 and Gallery 2 despite their similar alignment. Externally the difference in widths between the galleries was obvious (Plate 68).

4.6.5 Service Tunnels - Coal Cellar / Ice House

The Coal Cellar / Ice House (Plate 65) was 9m in length and 2.7m in width with a height of 1.8m above internal floor level. The Coal Cellar / Ice House brick vaulted roof sprung from parallel NNW-SSE aligned walls. These walls were 0.9m in height x 0.3m in width and were constructed of roughly coursed, inwardly faced and slightly corbelled, flat, sub-rectangular limestone masonry. The walls were raised to a level finishing course (0.9m) with the brick vault founded directly on this course. The vault reaches a maximum internal height of 1.8m, in keeping with all of the service tunnel galleries. To maintain an apex at 1.8m the vault was formed as an elliptical arch, to increase the span of the vault without increasing the height. The internal surface of the vault was rendered in smooth plaster in keeping with the walling. This gave the inner surfaces a smooth seamless finish. The plaster finish showed surface traces of coal dust verifying its function as a coal cellar. Structurally the Cellar could have served as an Ice House,

but the evidence demonstrates that prior to disuse and demolition it functioned to store coal for use in Portrane House.

The elliptically vaulted roof (0.2m in thickness) was constructed of a double thick layer of red brick, with the span of the arch at its base being 2.7m and the maximum internal height of the resulting arched interior reaching 1.8m above tunnel floor level. Externally once exposed and cleaned the brick bonding could be discerned as being mixed courses in the typical 'English' and 'Flemish' bonds with a light cream grey fine mortar surrounding and bonding the bricks. Located centrally to the vaulted roof was a single oval shaped ope. Ope 'F' (Plate 66) was 0.6m N-S x 0.3m E-W and it served as a delivery chute for coal off-loaded from a dray above. Ope 'F' would also have allowed coal dust to vent from the cellar while also offering some illumination. The cellar was originally accessed via the small doorway (0.9m x 0.9m) in the southwestern corner of the cellar's western wall. Access to the cellar from Gallery 2 via Gallery 2(a) might suggest that dual access was required. Alternatively, the change in access to the coal cellar may reflect some alteration or addition to the fabric of Portrane House which impacted or threatened to impact the structural integrity of the service tunnel. This may explain the presence of a much damaged gallery (Gallery 3(a) / 4) extending south and east to the doorway of the coal bunker and its similar alignment to the coal cellar / ice house. Gallery 3(a) / 4 led directly from the basement of Portrane House to the cellar. Due to the level of damage sustained by Gallery 3(a) / 4 (Fig 16) it was unsafe to investigate closely. Visually the extant remains suggested that the Gallery maintained similar, if not identical dimensions to the doorway in the southwestern corner of the coal cellar / ice house (0.9 wide x 0.9m high). Alterations and extensions to the eastern side of Portrane House between the 1st and 2nd editions of the Ordnance Survey (1837-1865) may have threatened or damaged the structural integrity of Gallery 3(a) / 4 which necessitated the construction of a new and safer access via Gallery 2 and 2(a).

The nature of construction used in the service tunnels is quite consistent throughout. Wall fabric, brick type, render and mortar type maintain a consistency that suggests localised, subtle structural variations but within a relatively short time span. The Galleries closer to Portrane House and the Coal Cellar / Ice House display certain structural differences which may indicate a clear difference in structural phasing. Gallery 3 and the Coal Cellar / Ice House both display broader internal dimensions (Gallery 3; 1.5m in width and the Cellar; 2.7m in width) and both are surmounted by an elliptical brick built vault. It is also possible that the Cellar was linked to Portrane House by a narrow Gallery (3(a) / 4) which maintained the dimensions of the doorway giving access to the cellar (0.9m wide and 0.9m high). The structural similarities

between the Coal Cellar / Ice House and Gallery 3 is indicative of a temporal association. Gallery 3 may well have started life as another cellar also accessed via Galleries 3(a) and 4. It is possible that Galleries 1 & 2 were slightly later additions that utilised Gallery 3 both to access the basement of Portrane House and to act as a starting point for Galleries 1 & 2. The southern side wall of Gallery 2 extends into Gallery 3 and under the elliptical vault (Plate 68). This structural 'overlap' would support the hypothesis that Galleries 1 & 2 were later additions to open a new access to the coal cellar / ice house. The consistency of the rendering throughout the service tunnels could be explained as a new finish on completion of the structural works and alterations or potentially, a later renovation phase.

4.6.6 Residual Walling of Portrane House / Mount Evans

During the course of the examination of the service tunnels and attempting to locate and plot the entrance front wall of Portrane House / Mount Evans, the often fragmentary remains/foundations of several other walls were noted (Fig 16; Fig 25 & 26).

Abutting the eastern end of the coal cellar / ice house and extending southwards was a 0.6m in width foundation line. This foundation abutted the south side of Gallery 1 and its orientation mirrored that of the basement level to the west. Its location and dimensions would suggest that it is the foundation of the east wing of Portrane House.

Abutting onto the western limits of Gallery 3 and 4 and abutted by the western end of the coal bunker was the very partial remains of a stone wall which may have been an internal division of the same the eastern wing of Portrane House. This wall was also 0.6m in width.

A distance of 4.5m further west and on a parallel alignment with these walls was a structural foundation 1.2m in width. This foundation is evident at the point where Gallery 3 ended in collapse. The bulk of this foundation suggests that it was carrying a substantial load, possibly the central core structure of Portrane House. This would suggest that the service tunnel opened directly into the southeast corner of the basement or into a small enclosed service yard on the eastern side of Portrane House.

The examination of the service tunnels produced enough structural information to form an interpretation of the subsurface remains and structural phasing of Portrane House. This will be presented as part of the discussion of the excavations of the Temporary Asylum of which Portrane House was a key component.

5 DISCUSSION

5.1 Temporary Buildings

The Temporary Asylum was designed and built to function for a short time, to satisfy a specific need, filling a gap for the duration of time needed to complete the new auxiliary Asylum at Portrane with its design capacity of 1200 patients. The new Asylum would double the capacity of the Richmond District Asylum. While the Portrane Asylum was under construction the Temporary Asylum would help to manage the overcrowding from the Richmond. At least that was the plan. By 1902 the overcrowding situation was still critical and projected to continue. Dr Conolly Norman reconsidered the role of the Temporary Asylum and decided to retain it as a 'lying-in' or isolation facility. He justified this retention to the Board of the Richmond stating that George Ashlin believed that the Temporary buildings were of such a high quality that they would be suitable for purpose for at least 50 years.

The temporary structures built at the Richmond Asylum in 1891 (Fig 12) remained in use until around 1949 and at Portrane, the temporary buildings (No.3 and No.4 / Block 11 and Block 9) were finally demolished in 1990, over 90 years after they were built.

In the British asylums of the 19th century, temporary structures were only licenced on the understanding that 'temporary' status was limited to a maximum use period of 5 years after which a more permanent solution was required.

In 1902, the Board of the Richmond District were adjusting their occupancy figures based on a full capacity that utilised not only the two sister asylums at Grangegorman and Portrane but also the additional capacity offered by the Temporary Asylum at Portrane. While they retained the appellation 'The Temporaries', it proved to be something of a misnomer.

The design of the Temporary buildings at Portrane was based on a generic design attributed to the architect of London County Council Mr. George T Hine (1842-1916). Hine was responsible for the design of many of the Asylums built in the London County Council catchment and had, at least, some input into the LCC design for temporary accommodation. The design was based on the layout of a functional asylum / hospital. Buildings styled on this design were erected at the Richmond District Asylum in 1891 in an attempt to stem the rising tide of overcrowding (Fig 12).

The Temporary buildings at Portrane were designed and built to serve the needs and functions of an Asylum for the care of the patients accommodated there. The Temporary Asylum at Portrane operated like a cottage hospital and was built to a high

standard when viewed as a temporary structure and to an exacting design. A comparison between the design and layout of the Temporary buildings and those erected as part of the new Portrane Lunatic Asylum shows marked similarities in function and layout (Fig 23). The design applied in the Portrane Mental Asylum was that each floor was completely self-sufficient, with all the resources necessary to function as a unit. The Temporary buildings were designed along the same lines and with a similar ethos with each building self-sufficient, apart from occupational therapy which for the most part involved either work on the construction of the new hospital, work on the farm or skilled labour in the workshops.

Using Portrane House and its yards and accommodation as a focus for the temporary buildings gave the Temporary Asylum a certain autonomous quality. It evolved over a very short time period developing as a focus for certain skills among the patient population and the establishment of workshops which served the needs of the new asylum under construction and also encouraged occupational therapy within the population. By the time the new Portrane Asylum was completed, the Temporary Asylum had become and was destined to remain an integral part of the overall campus.

Throughout its long life the Temporary Asylum came in for constant criticism about the nature of its wooden construction and how it posed a fire threat. The preferred design of the London County Council was for wood framed buildings with exterior cladding in corrugated iron sheets and with a plaster finish on the interior. The English Lunatic Commission would only approve the design when a wood finish was agreed for the interior wall cladding. This design was used for the temporary buildings erected at the Richmond. The buildings at Portrane followed a series of variations with buildings No.2, and No.3 (Block 8 / Block 11) being wooden framed and wood clad and No.4 (Block 9) being iron framed and wood clad. In the longer term, had the Portrane buildings had their timber cladding replaced with brickwork they would have been more satisfactory structures.

Before the temporary structures were erected at the Richmond District Asylum in 1891 concerns were voiced about the wooden construction being both unsuitable and not sanitary.

An attendant who worked in Block 8 / 8a (No.2) described the sanitary conditions within the building as appalling and that the facilities were not sufficient. The buildings constantly smelled of urine and faeces and the antiquated plumbing was constantly in need of repair / maintenance. (Jim Fitzgibbon (2018), pers. comm.)

In all cases the foundations were constructed using concrete, the quantities and design altered for each building depending on the topography. The Bills of Quantities for the materials employed in the construction of the Temporary Asylum buildings (Irish Architectural Archive) lists the use of 'Portland Cement' for the foundation course. In a catalogue of the Irish Industrial Exhibition of 1853 it is stated that "*we believe that no artificial cement is now made in Ireland...no place can now be said to be deficient in the means of making cement, and in Ireland they exist in great abundance.*"

By the 1890s use of concrete had become more widespread and the handling and use of it as a material had become highly skilled. Bindon Stoney is recognised as the engineer who established the use of Portland cement concrete as the preferred concrete in Ireland. He also devised a mixer, driven by a 3HP engine with the capacity to produce 10 cubic yards of concrete per hour. Stoney's work as the Chief Engineer of the Dublin Port and Docks Board (1860-1880) saw him use Portland Cement Concrete to construct the new quay walls. Stoney delivered a paper on these works to the Institute of Civil Engineers in February of 1874. This paper is viewed as firmly establishing the use of Portland cement Concrete in Ireland. The use of Portland Cement Concrete was initially limited to large scale engineering projects.

The 1870s saw Portland Cement Concrete being used in architectural projects when seen as a reliable fire proof medium. In the construction of Portrane Lunatic Asylum, Portland Cement Concrete was being pre-cast into sills and lintels and other decorative aspects of Ashlin's design. It is likely that the actual Portland Cement being used at Portrane was imported from Britain. Local Portland Cement was being manufactured in Drinagh, Co. Wexford from 1881, at The Irish Portland Cement and Brick Company at Ringsend in Dublin and the British Portland Cement Company at Magheramorne in Co. Antrim. But their combined output was insufficient to satisfy the needs of the building industry in Ireland at the time.

During the 2016 excavations of the Temporary Asylum, core samples were taken from the foundations exposed and subjected to compression tests at the Department of Civil, Structural and Environmental Engineering at Trinity College Dublin (Appendix 1). The results of the tests showed an average actual compressive core strength of 19.7MPa which is quite low (averaged from 13.7 to 30.9MPa). Compared to a similar foundation today characteristic strengths might be expected to reach 35MPa, or, at least average 30MPa for in-situ core strengths. The core strengths were more than adequate for the foundations as constructed having a structural lifespan in excess of 90 years.

Apart from the Air Corps aerial photograph (1937), no early photographs of the buildings could be sourced. This aerial shows the Portrane Mental Hospital and the Temporary Mental Asylum incorporating Portrane House and yards. The overall impression is favourable with the grounds well-appointed and maintained but it doesn't show any detail of the buildings or their condition after 40 years.

The later history of 'the Temporaries' is sketchy to say the least. They latterly became the buildings where long term patients and those with intellectual disabilities were housed. By the 1970s 'The Temporaries' were in extremely poor condition and had become the focus for national outrage as they were still being used as accommodation. In 1978 the Association for the Rights of the Mentally Handicapped staged a hunger strike at Portrane as a protest for better conditions. The film footage shows structural details of Block 8/8a highlighting its deplorable condition and total lack of maintenance. (www.rte.ie/archives/2018/0720/979942-hunger-strike-for-portrane-patients).

5.2 Portrane House

The excavations in 2016 while constrained by several factors did reveal enough structural detail to allow for a reasonable understanding of the House and its evolution. Any structural changes carried out to the House during its time as part of the Temporary Asylum and later as part of the St. Ita's complex are unknown. No records of Portrane House survive in the drawings of the Engineers Department at St. Ita's. The demolition of the House in the 1950s was extremely thorough. The only evidence for architectural salvage during and following the demolition was noted in the scattering of fragments from the doorcase along the avenue to the west along Reilly's Hill (Plates 47-51). The main block of the House was demolished into its own basement and basement area. Fortunately, the basement level partially survived although in very poor condition. The service tunnels and coal cellar / ice house also survived along with partial remnants of the walls of the House.

The 2016 excavation defined the basement level and location through the removal of the accumulated demolition debris in the area to the north of House 100 and the live gas main (Fig 25). This exercise defined an area that encompassed the basement of Portrane House, its external wall face, ground level drainage and a well-defined excavation carried out to expose the basement level of the House. The excavation was confined to the rear wall of the basement and is terminated on the east by a N-S running wall. (Fig 15 and Fig 8). The features exposed during the excavation works in 2016 are shown on the Ordnance Survey 1:2500 scale map of 1940 (surveyed in 1937) (Fig 8). This map shows Portrane House as part of the campus of Portrane Mental

Hospital. It also clearly defines the basement, as excavated in 2016 as being located under the north-western corner of the House as it was presented in 1937. The map also clearly shows the advanced front and doorcase on the south southeast face of the House. This advanced front and doorcase is central to the entrance front of the original Portrane House / Mount Evans (Plate 1) which corresponds to the width of the basement as excavated. Taking this into consideration it demonstrates that extensive additions were made to the eastern side of the House, the foundations of which were encountered during the excavation and recording of the service tunnels and coal cellar / ice house (Plates 1-3; Figs 3 & 4, 6-8).

The only known photograph of the façade of Portrane House (Plate 1) shows a 5 bay three storey structure with advanced front. This main block displays hipped roofs with chimneys on both east and west sides. A single storey extension with pitched roof is partially visible as an addition to the façade extending eastwards from the central block. A conservatory with a highly ornate gabled front extends the façade on the west side.

Not visible in the photograph but clearly depicted on the Ordnance Survey sheets are further extensions to east and west extending the rear façade of the House. These extensions are visible in the Air Corps aerial photograph (1937) (Plates 2-3). An examination of the visible roof layout shows at least three extensions to the east of the main block. Two of the extensions extend the entrance front façade and are single storey while there is one large two storey addition that extends the northern rear elevation to the east. All three extensions to the east display separate pitched roofs, gabled on the eastern elevation. None of these extensions have a basement level.

The basement as excavated in 2016, while sited in the north western corner of the footprint of Portrane House as shown on the Ordnance Survey sheets, defines the actual west to east dimension of the original main block of Portrane House / Mount Evans.

The first edition Ordnance Survey sheet (1843 – surveyed 1837-43) (Fig 6) shows the House displaying its original, unadulterated entrance front. Extensions are noted west and east, extending the rear elevation.

The single storey extensions to the eastern entrance front façade were built between 1843 and 1865 (Fig 7). The conservatory to the west (Plates 1-3) may have been under construction in 1865 as its location is defined but it was not roofed at the time. The finished conservatory is shown on the later Ordnance Survey maps (Figs 3,4 & 8). A description of Portrane House in 1884 outlines the state of the property at the time of its sale (see historical background pp12) lists the conservatory as complete and states

that the servant's quarters were housed in one of the 'wings', along with the main staircase.

The service tunnels originate from the level of the basement which would suggest that they are, at least in part, a feature of the original House. As stated in the summary of the excavation, Gallery 3 and the coal cellar / ice house are similar in construction with parallel masonry walls surmounted with an elliptical arched brick-built roof. The coal cellar was linked to the basement of the House via Gallery 3(a) / 4 which appears to have been a narrow passage displaying similar dimensions to those of the doorway giving access to the cellar. These vaulted galleries / cellars may have functioned as storage / cold rooms / wine cellar off the basement kitchens. It is likely that the narrow Gallery 3(a) / 4 lost the structural integrity of its vaulted roof during the construction of the extensions to the eastern entrance-front façade. This necessitated the creation of a new access to the coal cellar / ice house. To achieve this Gallery 3 was extended eastwards (Gallery 2) from which the new access was opened via a short vaulted passage, Gallery 2a. The service tunnels extend via Gallery 1 and the granite steps to give access to the yards, outbuildings and the well. While both Gallery 1 and 2 are of similar construction to Gallery 3 and the coal cellar / ice house, they are narrower and roofed by a brick-built round vault. These subtle variations may indicate structural phasing as described, however, the timespan during which these changes took place may have been very short, probably between 1840-1865.

The Evans family took possession of the Portrane estate in the 18th century. John Rocque's map of County Dublin (1760) shows two houses on the Demesne one of which is likely to be the predecessor of Portrane House. William Duncan's map of 1821 shows a House on Portrane Demesne. The House, in this case, shows a T shaped plan form which might suggest a main block with the stairwell accommodated in the annex to the north. This plan would be suggestive of a 17th to early 18th century house. It is also possible that this earlier House was sited slightly to the north west of the location of Portrane House. The archaeological excavations in 2016 did not find any trace of an earlier structure on the site and the woodland to the north and west is being retained although subject to long term habitat and woodland management.

5.3 Concluding Remarks

To complete the Advance Works contract it was necessary to fully remove all extant remains above and below ground. The foundations of the Temporary buildings in Areas 1 and 2 were removed and crushed. The service tunnels and standing walls were also demolished, and the material removed and crushed. The demolition debris over the site of Portrane House was similarly disposed of. The basement level of Portrane House was preserved in-situ, at least in part as this area would not be occupied by any buildings during the development. Any impacts on the remains of Portrane House were expected to be slight and localised.

6 BIBLIOGRAPHY

Annual Report of the Medical Superintendent to the Joint Committee of Management of the Richmond District Asylum, 1898-1902. (National Archives of Ireland, BishopStreet, Dublin)

Baker, C. 2006. *Archaeological Assessment. Donabate Local Area Plan, Ballymastone & Corballis Lands, Donabate, Co. Dublin* (Licence ref: 06E0027) Unpublished report submitted to DoEHLG, Margaret Gowen & Co.

Baker, C. 2010. *Antiquities of Old Fingal. The archaeology of north county Dublin.* Wordwell Ltd. Dublin.

Bates, P. 2001. *A History of Donabate and Portrane.* Published by Peadar Bates.

Carroll, J. (2001/2002) *Archaeological and Cultural Heritage section of an Environmental Impact Statement for Portrane/Donabate Waste Water Treatment Scheme.* Prepared by E.G. Pettit & Company in association with Mott MacDonald Ltd.

Cooney, G. 1993. Lambay: An Island on the Horizon. *Archaeology Ireland*, Vol. 7, No. 4, (Winter 1993) pp 24-28. Wordwell Ltd, Dublin.

Cordner, W.S. 1946. *The Cult of the Holy Well.* Ulster Journal of Archaeology, Third Series, Vol. 9, Pp. 24-36

Curl, J.S.1992. *Encyclopaedia of Architectural Terms.* Donhead Publishing Ltd, UK.

De Courcey, J.W. 1977. *History of Concrete in Ireland.* Irish Engineers, Vol. 31, No. 8

Dolan, B. and Cooney, G. 2010. *Lambay lithics: the analysis of two surface collections from Lambay, Co Dublin.* Proceedings of the Royal Irish Academy, Vol.110C, pp 1-33.

Frazer, W.O. and Ericksson, C. 2007. *Archaeological Assessment. Donabate Local Area Plan, Ballymastone & Corballis Lands, Donabate, Co. Dublin* (Licence ref: 06E0027ext.) Unpublished report submitted to DoEHLG, Margaret Gowen & Co.

Harrison, D. 2008. *Geophysical Survey* (Licence ref: 08R0029) Unpublished report submitted to DoEHLG, Margaret Gowen & Co.

Kelly, B. 2016. *Hearing Voices. The History of Psychiatry in Ireland.* Irish Academic Press, Ireland.

Kerins, P. 2007. *Monitoring Report, Geotechnical test pits, Waste Water Treatment Scheme, Portrane, Donabate, Rush and Lusk.* Unpublished report, Margaret Gowen & Co.

- Leigh, J.M. 2016. *Geophysical Survey Report, Portrane Co. Dublin* (Licence ref: 15R0113) Unpublished report submitted to DoAHG, J.M. Leigh Surveys.
- Leigh, J.M. 2016. *Geophysical Survey Report, Compartment 20 (East), Portrane, Co. Dublin* (Licence ref: 16R0093) Unpublished report submitted to DoAHG, J.M. Leigh Surveys.
- Liversage, G.D. 1961. *A note on the Occurrence of Larnian Flints on the Leinster Coast*. Journal of the Royal Society of Antiquaries of Ireland, Vol 91, No.1 (1961), pp 109-116
- McQuade, M. 2010. *Excavation and Monitoring Report. Portrane, Donabate, Rush & Lusk Waste Water Treatment Scheme*. Unpublished report submitted to DoEHLG, Margaret Gowen & Co.
- Moylan, T.K. 1947. *The Peninsula of Portrane (Part 1)*. Dublin Historical Record, Vol XVI, No. 1 (May 1960), pp 22-33.
- Moylan, T.K. 1948. *The Peninsula of Portrane (Part 2)*. Dublin Historical Record, Vol XVI, No. 2 (October 1960), pp 37-49.
- Myles, F. 2011. *Archaeological monitoring report for a development within the curtilage of St. Brendan's Hospital, Grangegorman, Dublin 7*. Unpublished report, Archaeology and Built Heritage.
- Ryan, A. 1999. *Walls of Silence*. Red Lion Press, Kilkenny.
- Rynne, C. 2006. *Industrial Ireland, 1750-1930*. The Collins Press, Cork.
- Stout, G. and Stout, M. 1992. 'Patterns in the past: county Dublin 5000BC – 1000AD' in Aalen F.H.A. and Wheelan, K. (ed.) *Dublin City and County: From Prehistory to Present*. Dublin
- Trehy, S. 2008. *Cultural Heritage Appraisal, Portrane, Donabate, Rush & Lusk, Waste Water Treatment Scheme*. Unpublished report, Margaret Gowen and Co.
- Waddell, J. 1991/92. The Irish Sea in Prehistory. Journal of Irish Archaeology, Vol.VI (1991/1992) pp 29-40
- Walsh, C. 2000. 'Turvey Avenue, Donabate', in Bennett, I. (ed.) *Excavations 1999*. Wordwell, Dublin.
- Walsh, J. 2010. *Collen. 200 Years of Building and Civil Engineering in Ireland. A History of the Collen Family Business 1810-2010*. Lilliput Press, Dublin.

General source material:

National Forensic Hospital, Portrane. Section 146B Application. *Planning and Environmental Report*. June 2016. (Doyle Kent Planning Partnership Ltd).

National Forensic Mental Health Service Hospital, St. Ita's, Portrane, Co. Dublin. Environmental Impact Statement (EIS) Vol II. (RPS Planning and Environmental, 2014)

Fingal Development Plan 2011 – 2017

Archival sources consulted

Irish Architectural Archive.

Military Archives.

National Archives of Ireland.

Websites consulted:

www.archaeology.ie National Monuments Service

www.excavations.ie Online archive of licenced excavations in Ireland

www.jstor.org Academic articles available online

www.lenus.ie Health Service Archive online

www.osi.ie Ordnance Survey of Ireland online

APPENDIX 1 CONCRETE ANALYSIS

Department of Civil, Structural and Environmental Engineering

Trinity College, Dublin

Compression Testing of Concrete Cores to EN 12504 – 1:2009

Client: Dr Roger West

Technical Officer: Michael Grimes

Storage Conditions: In water bath at 20° Celsius



Basic Information:						
Date Received	25 th July 2016					
Date Tested	29 th July 2016					
Visual Inspection	Uniform distribution of aggregates within samples. Significant voids present.					
Maximum Aggregate Size (mm)	45					
Sample Preparation:						
All cores were topped and tailed using a diamond-blade saw. The parallelity of the top surfaces, as well as the verticality of the sides, were then checked. Final preparation was by way of polishing of the top and bottom surfaces.						
Specimen Details, As Received:	A1-3	A1-1	T(E)2	T(W)	T(W)1	T(W)2
Average Length (mm)	146	159	165	155	170	128
Average Diameter (mm)	102.5					
Length to Diameter Ratio	1.42	1.55	1.61	1.51	1.48	1.32
Cross Sectional Area (mm ²)	8251					
Voids*	5%	13%	8%	5%	6%	4%
Specimen Details, After Cutting:						
Average Length (mm)	110	121	109	120	143	86
Diameter (mm)	102.5					
Length to Diameter Ratio	1.07	1.18	1.06	1.17	1.40	0.84
Cross Sectional Area (mm ²)	8251					
Mass in Air (kg)	2.132	2.363	2.012	2.175	2.714	1.635
Mass in Water (kg)	1.223	1.371	1.133	1.202	1.540	0.938
Saturated Density (kg/m ³)	2345	2383	2288	2235	2313	2347
Reinforcement Details:						
Bar Diameter (mm)	N/A	N/A	N/A	N/A	N/A	N/A
Direction	N/A	N/A	N/A	N/A	N/A	N/A
Top Cover (mm)	N/A	N/A	N/A	N/A	N/A	N/A
Test Details:						
Max Load (kN)	186	255	132	113	138	144
Compressive Strength (MPa)	22.5	30.9	16.0	13.7	16.8	17.5
Equipment Details:						
Testing Machine Used	ToniPACT 3000kN Concrete Compression Tester					
Ramp Rate (MPa/s)	0.5					

* = Extrapolated from NA.1 of EN 12504-1:2009

Department of Civil, Structural and Environmental Engineering

Trinity College, Dublin

Photos: Specimens As Received



A1-3



A1-1



T(E)2



T(W)



T(W)1



T(W)2

Department of Civil, Structural and Environmental Engineering

Trinity College, Dublin

Photos: Specimens After Cutting



A1-3



A1-1



T(E)2



T(W)



T(W)1



T(W)2

APPENDIX 2 HORSE DRIVEN WATER PUMP

Some notes on a horse whim operated pump on Portrane Demesne

During the programme of topsoil stripping as part of the Main Work contract (17E0210) a water pump was identified on the edge of the woodlands forming the northern boundary of the NFMHS development site. As this pump falls outside the remit of the Main Works Contractor, Rhatigan OHL Ltd, it was noted by RedArc Consulting Ltd and a photographic record made. The mechanism was reported to the NFMHS Design Team including the HSE Estates. Funding was requested to carry out an Royal Commission on the Historic Monuments of England, Level 4 inventory survey of the pump site but to date no funds have been allocated.



Location of horse whim operated water pump.

The pump mechanism is placed over a brick lined well. The surface opening of the well is raised above the natural ground surface and encased in an earthwork mound, designed to allow the boom extending from the whim to operate at a level that is comfortable for the horse. The mound, in this case is circular defining a walking track for the animal.

The pump mechanism itself was designed and manufactured in the foundries of John Warner and Son³, Brass and Bell founders of 8 Crescent, Cripplegate, London (1739-1949). Warner's operated from locations in Cheapside, Cripplegate (No 2 Jewin Crescent, commonly known as the Crescent Foundry, Spitalfields and Fleet Street. Other foundries were operated at Tendring in Essex and Stockton on Tees, where the original "Big Ben" was cast. (The bell was

³ Grace's Guide to British Industrial History

hung in New Palace Yard. It was tested each day until 17 October 1857 when a 1.2m crack appeared).

At the 1851 Great Exhibition, John Warner's catalogue included overshot water wheels, horse wheels (whims) and a variety of pumps including a hand operated fire engine. Warner's deep well pumps received an Honourable Mention by the Jury at the Great Exhibition (Class V, Section D).

It is likely that the Warner horse wheel pump at Portrane dates to the 1850s and was installed to furnish a water supply to the new farm buildings to the east.

Presently the pump mechanism is in good condition but is vulnerable to theft or vandalism. As a minimum requirement the pump should be surveyed and fully recorded. Its long term security should be considered by both the HSE Estates and Fingal County Council.



Warner Pump mechanism.



Warner Pump mechanism



Warner Pump mechanism



Brick lined well

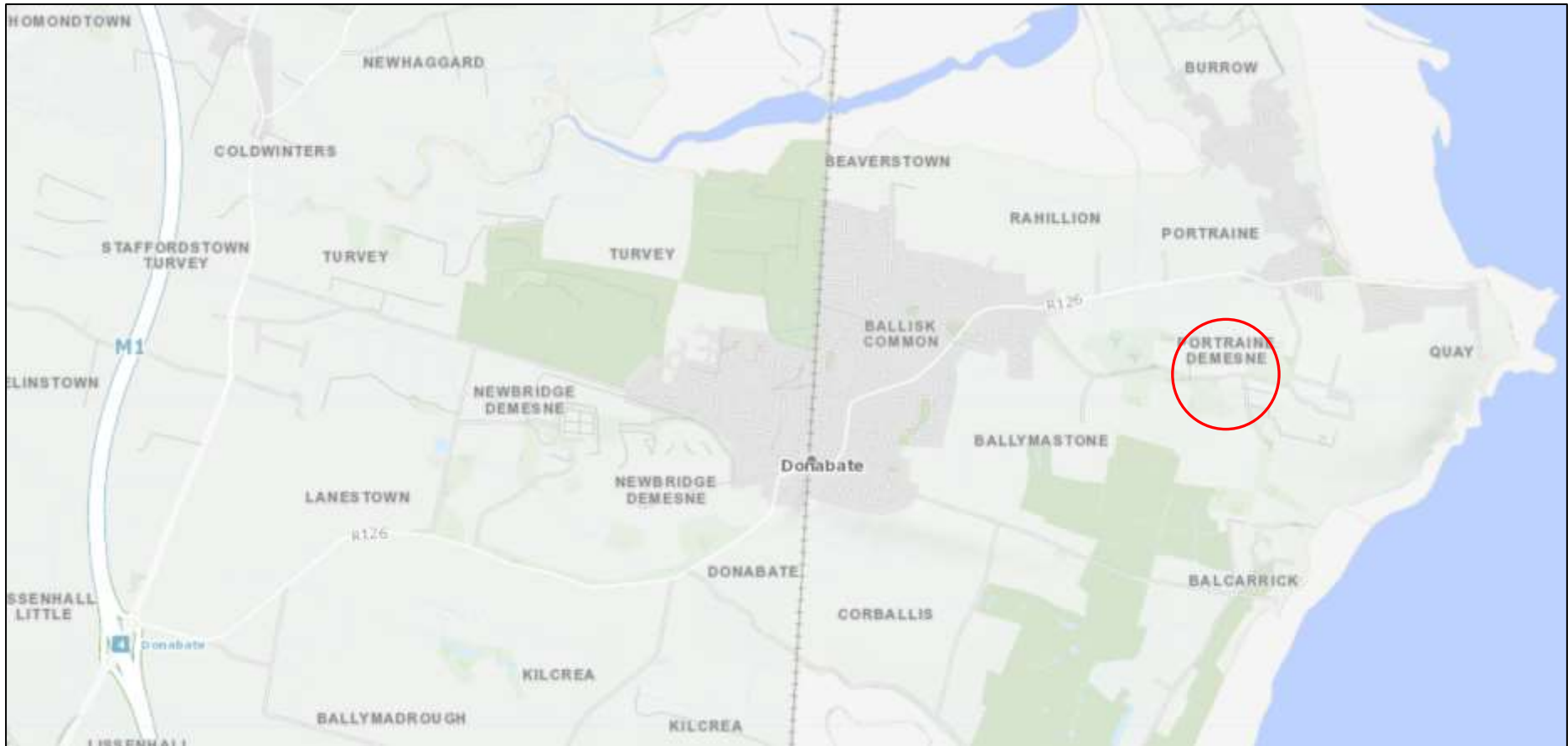


Fig 1. General site location – indicated in red

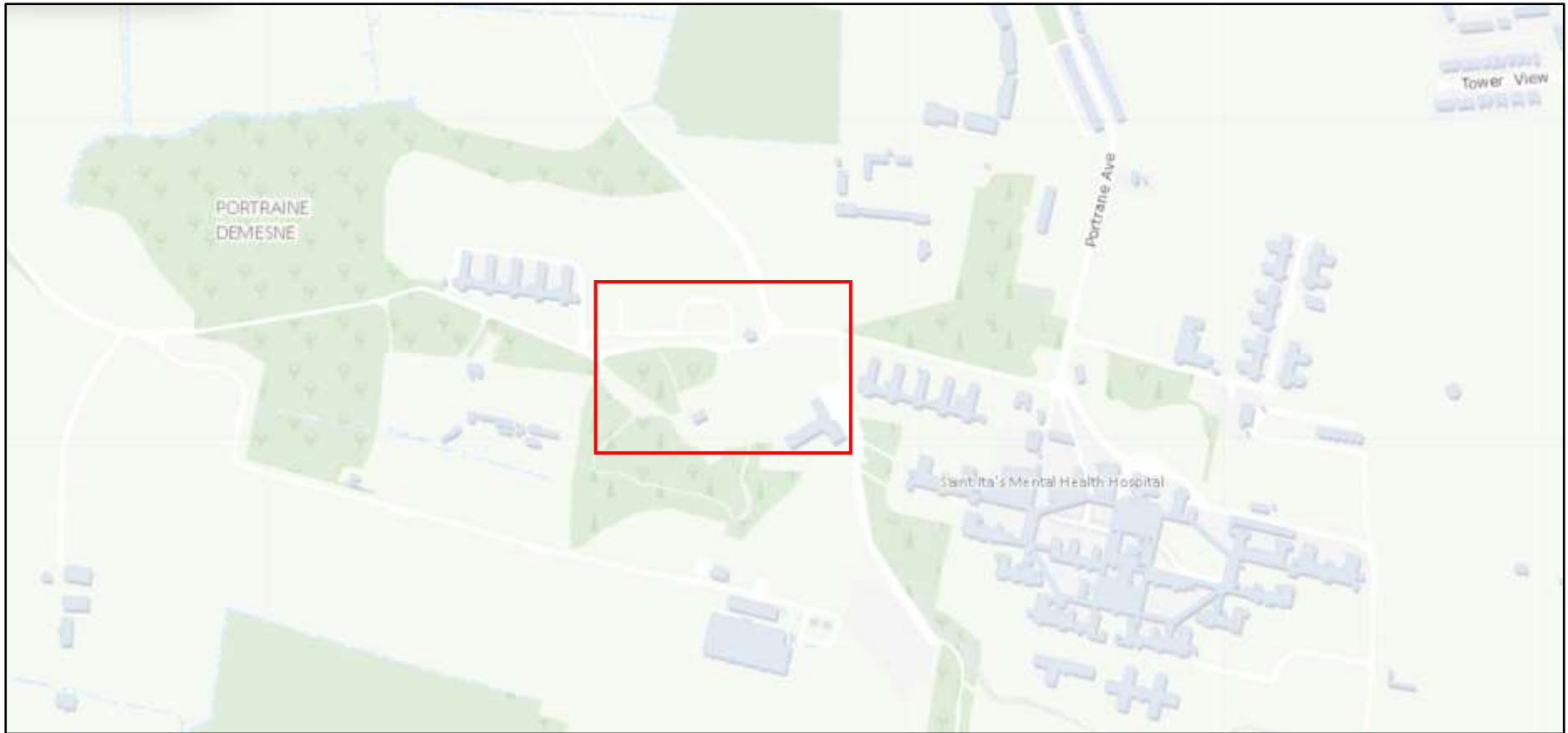


Fig 2. Site location, incorporating Area 1, Area 2 and Area 3 – indicated in red

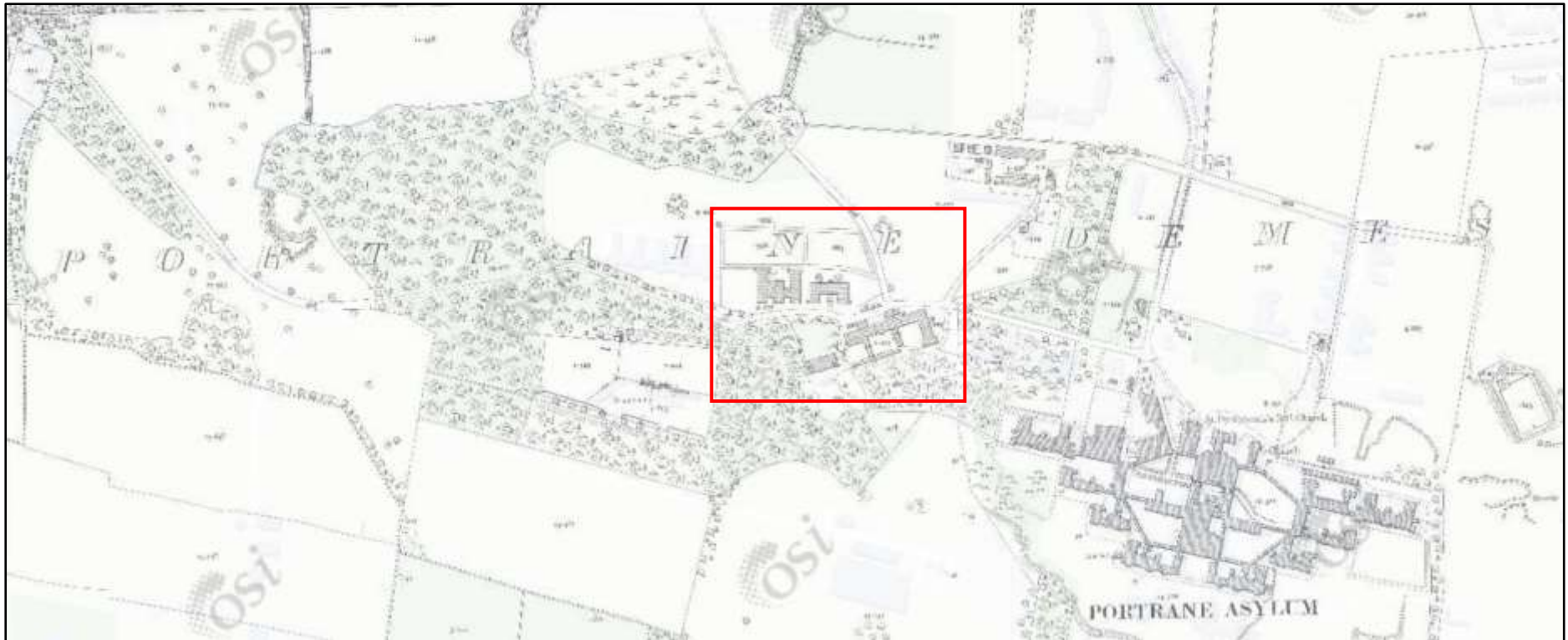


Fig 3. Extract from OS 25" plan (Historical 1888-1913) showing location and layout of The Temporary Asylum – indicated in red

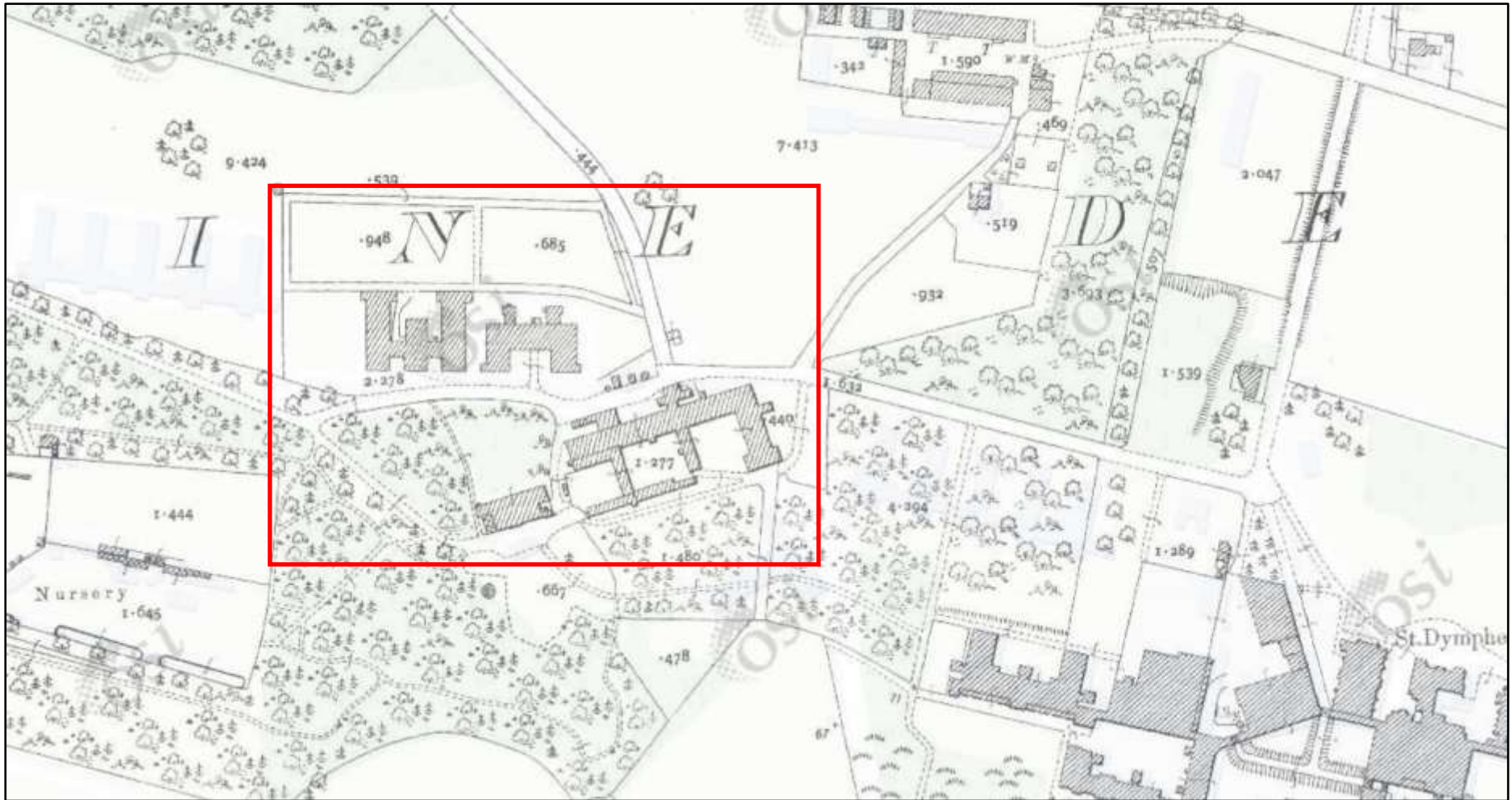


Fig 4. Detail from OS 25" plan (Historical 1888-1913) showing location and layout of The Temporary Asylum – indicated in red

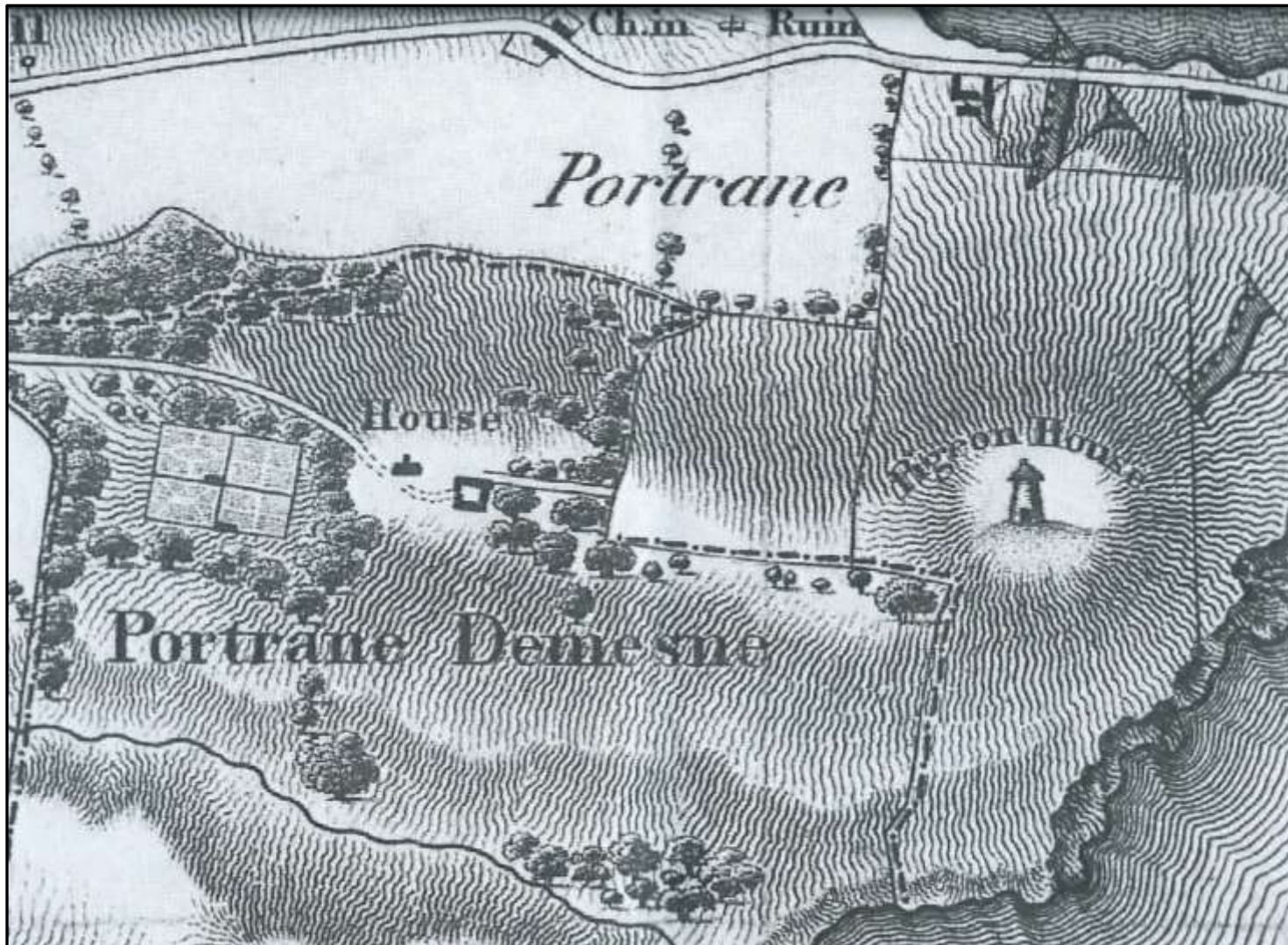


Fig 5. Portrane Demesne as shown on William Duncan's Map of 1821

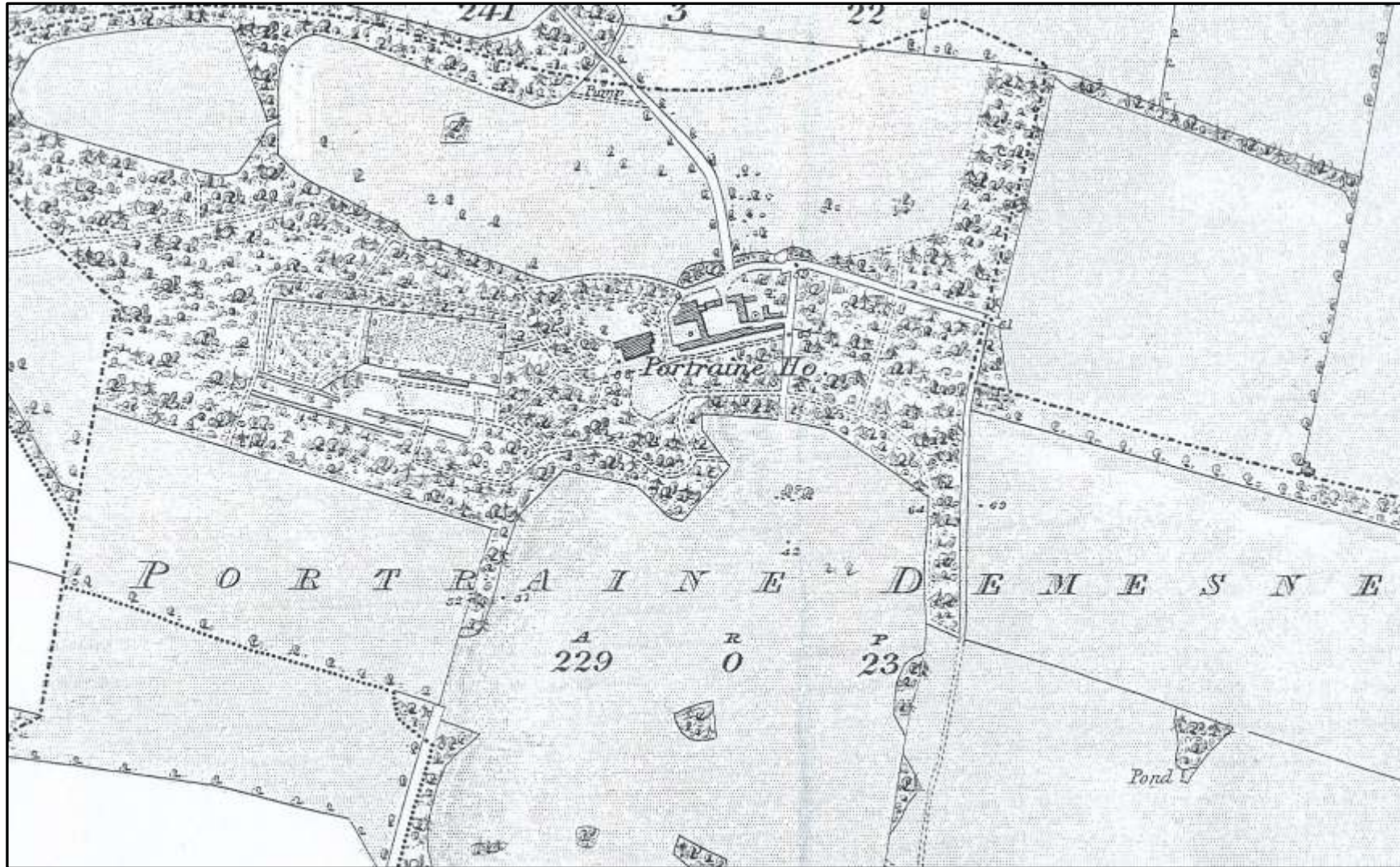


Fig 6. Portrane House and Demesne. 1st ed. OS map (1837-1843)

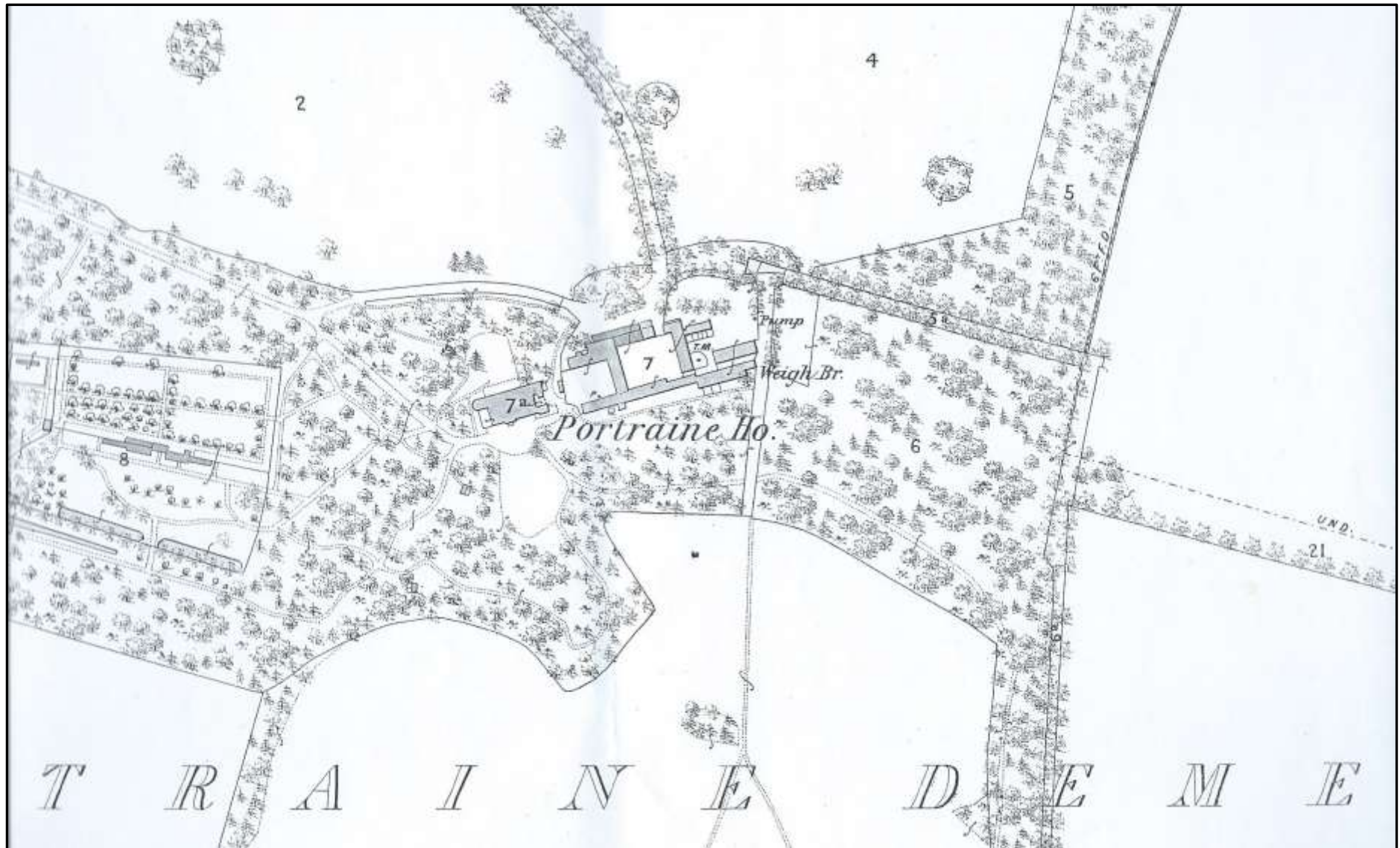


Fig 7. Portrane House and immediate environs. OS 1:2500 (1865)

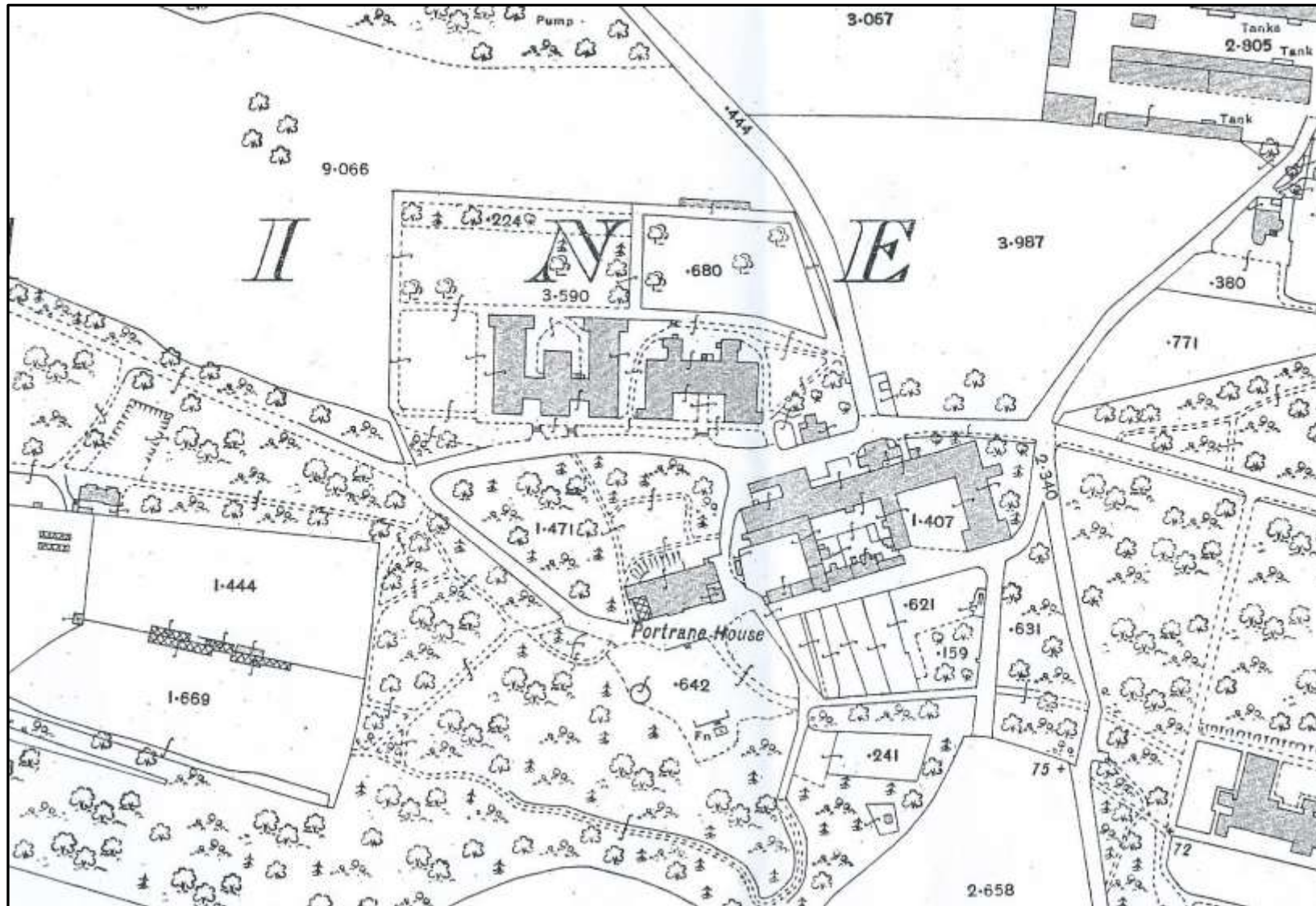


Fig 8. Portrane House as part of The Temporary Asylum (OS 1:2500 Map 1937)

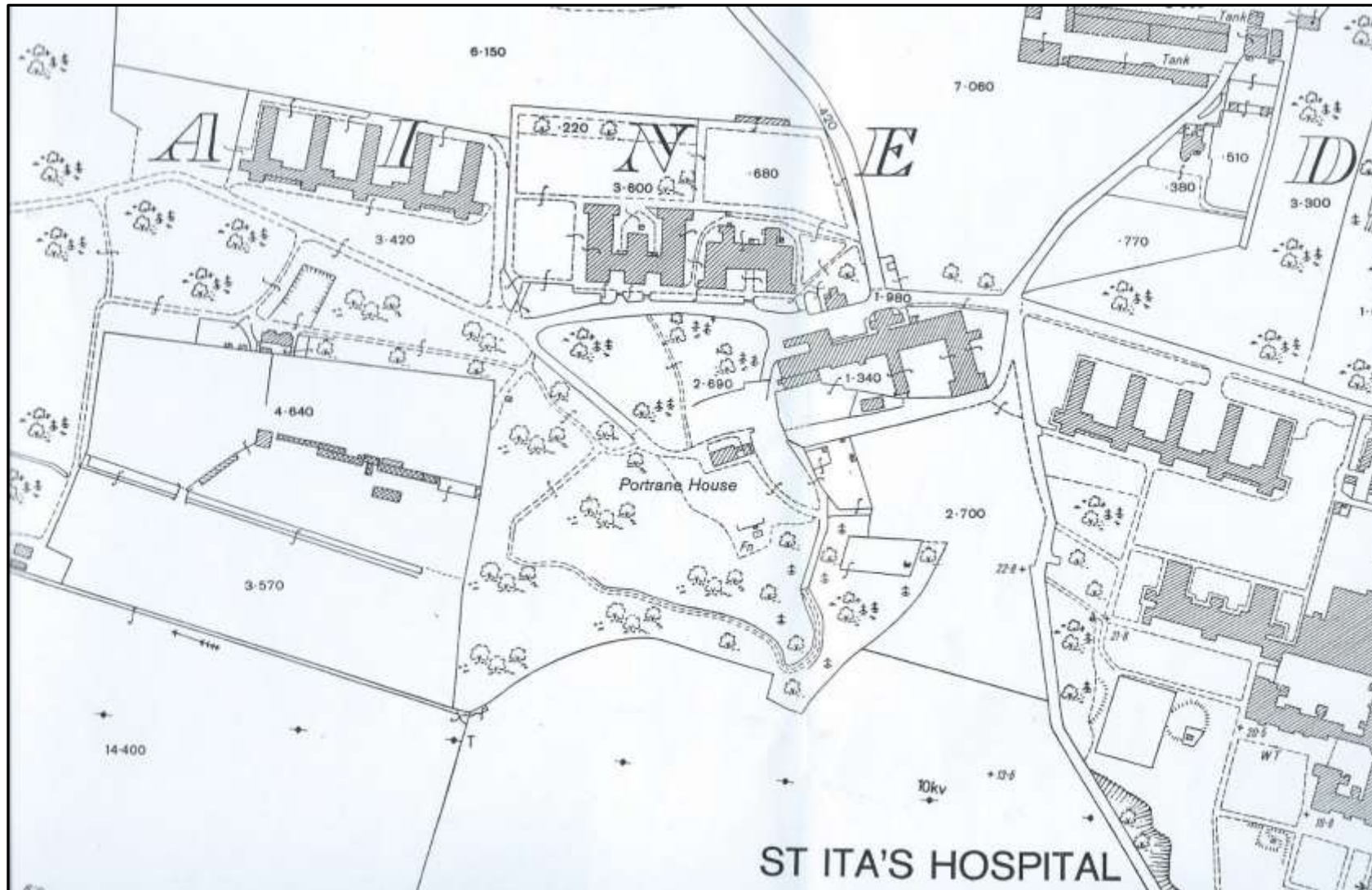


Fig 9. The Temporary Asylum (OS 1:2500 map 1966). Portrane House is demolished and replaced by House 100



Fig 10. The Temporary Asylum (1900) detail from a sketch of the Portrane Mental Asylum

(Source: *Building News and Engineering Journal* 78, 2364, 27 April 1900, pp. 572-73, Irish Architectural Archive)

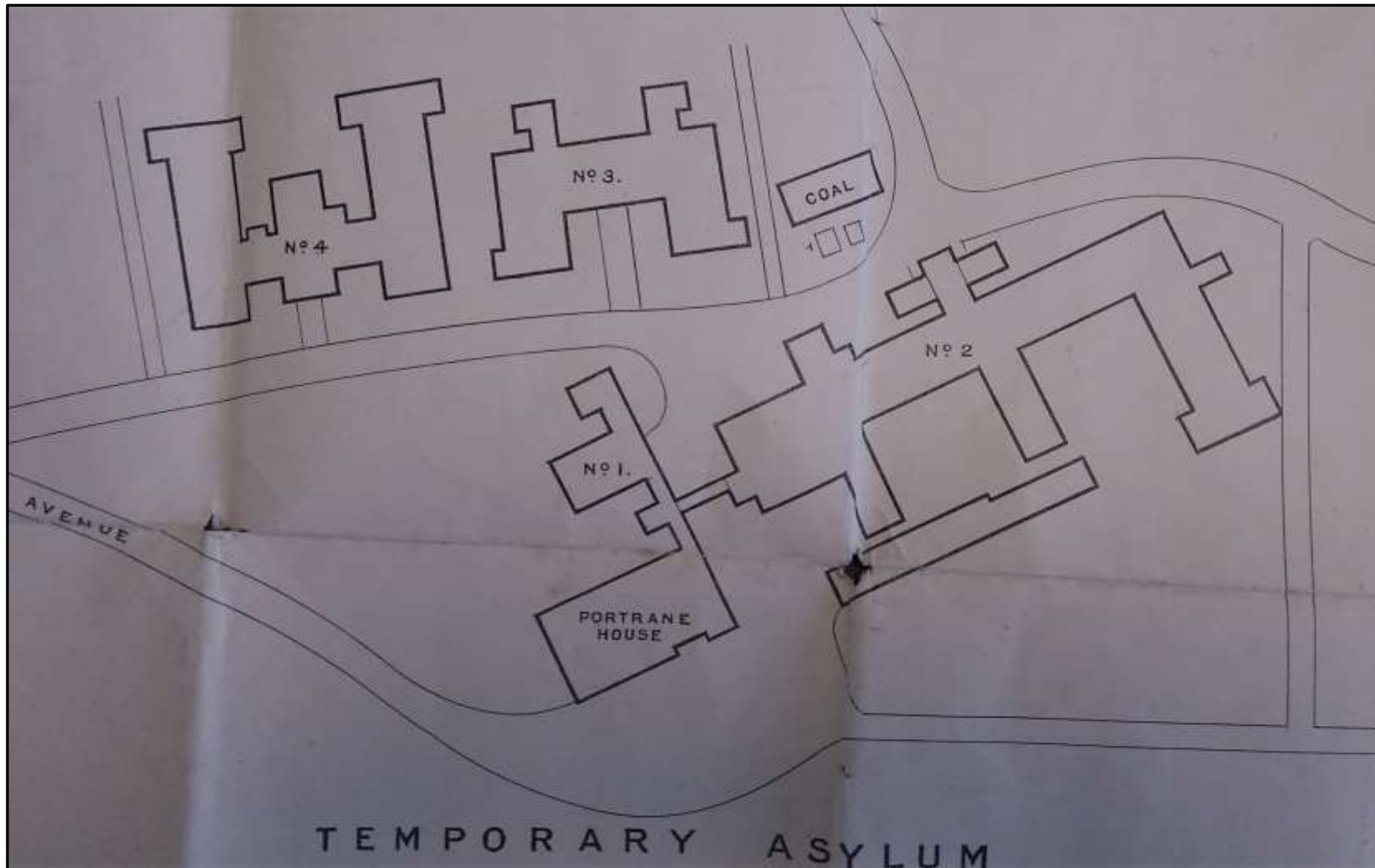


Fig 11. Detail of the Temporary Asylum as shown on an overall plan of the Portrane Mental Asylum (C.1900). OS mapping directly contradicts this plan which would suggest that this was, in fact, a design proposal.

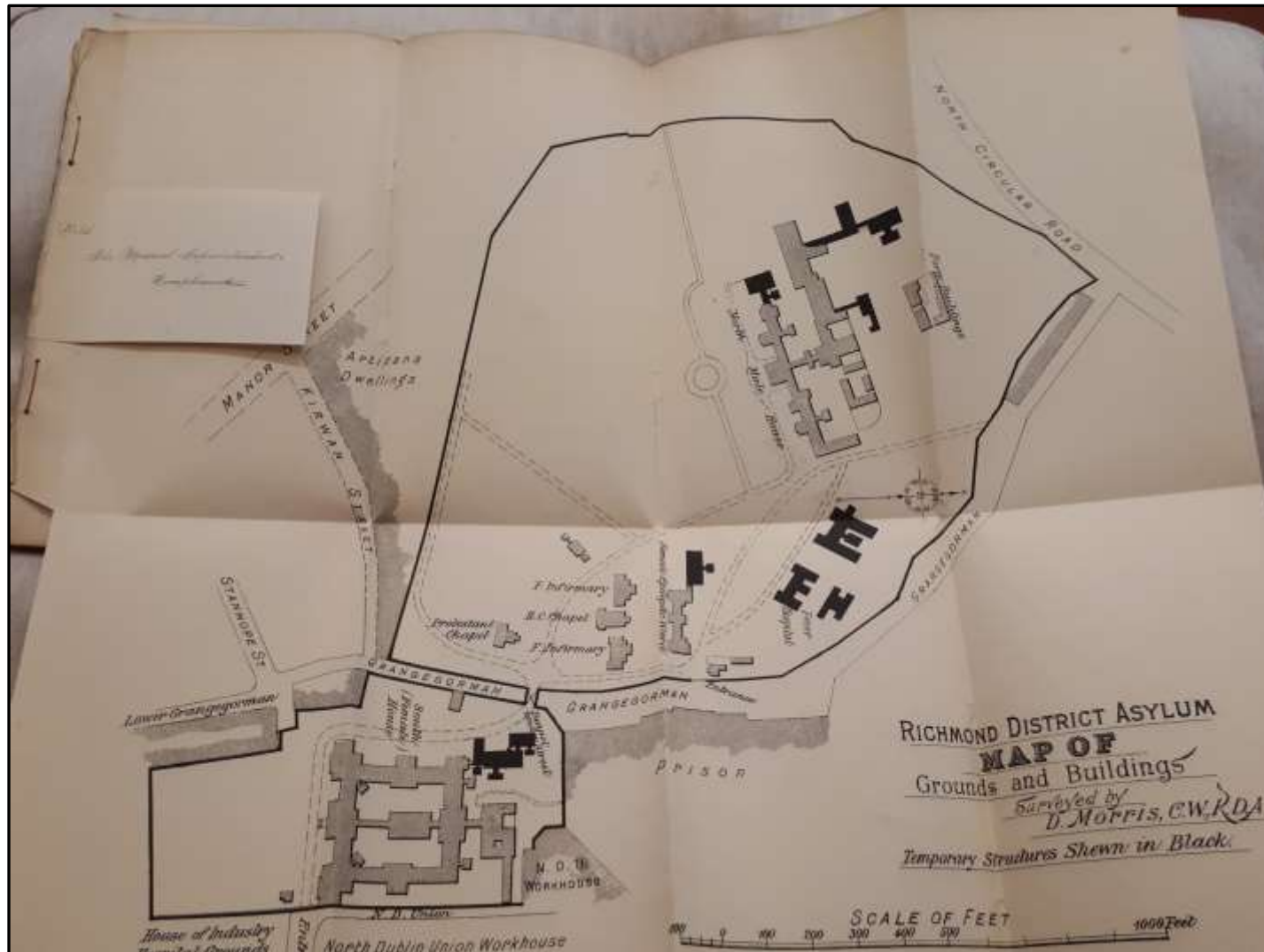


Fig 12. Layout plan of the Richmond District Asylum from an Annual Report of the Medical Superintendent. It shows the number of Temporary structures erected at the Richmond (in black).

The Temporary Asylum - Ashlin's Block No 4. Corresponds to St Ita's Block 9 (Male). The plan shows the foundation lines and ancillary services as excavated in 2016. Identification of rooms taken from service plans from the Engineer's Department, St Ita's Hospital, Portrane.

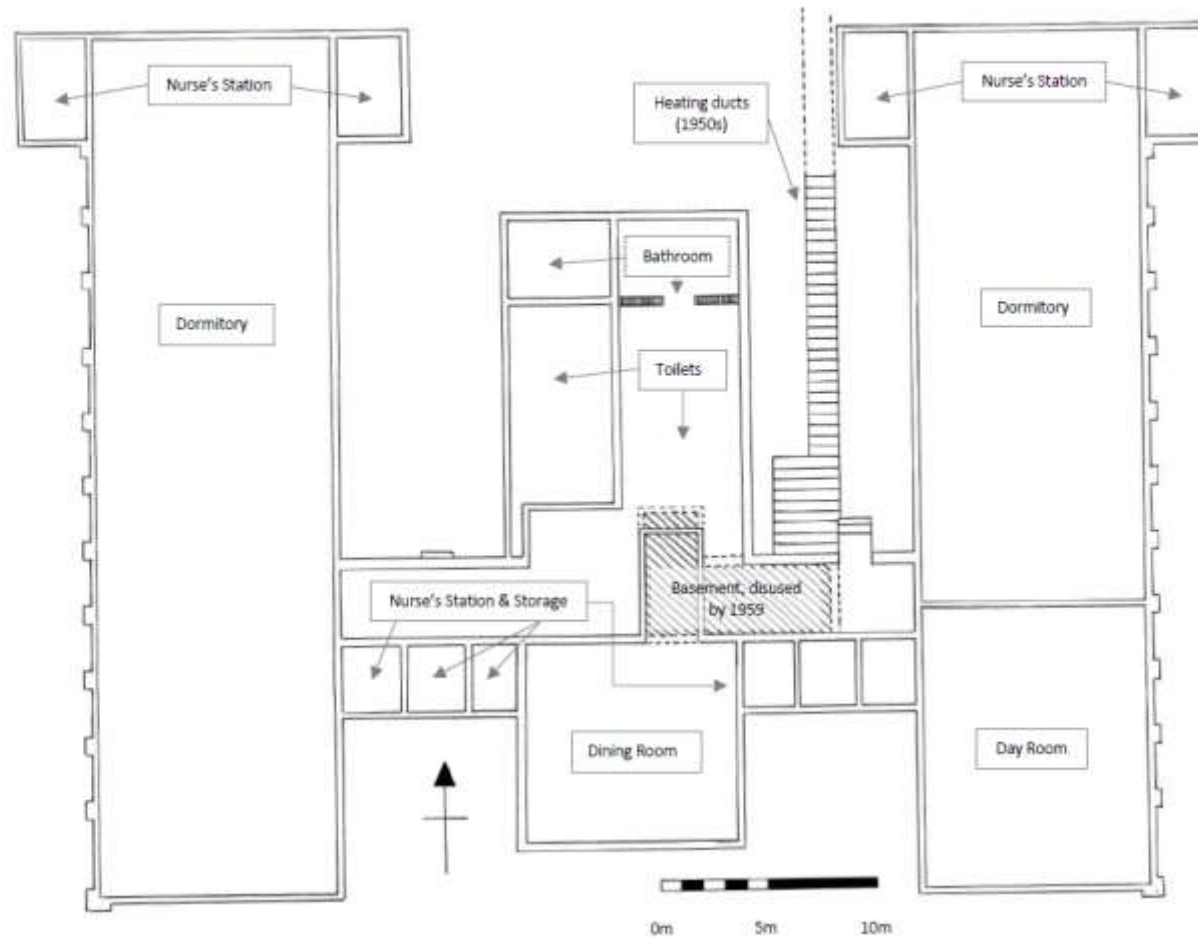


Fig 13. Area 2. Plan of Ashlin's building No 4 / Block 9 as excavated (2016)

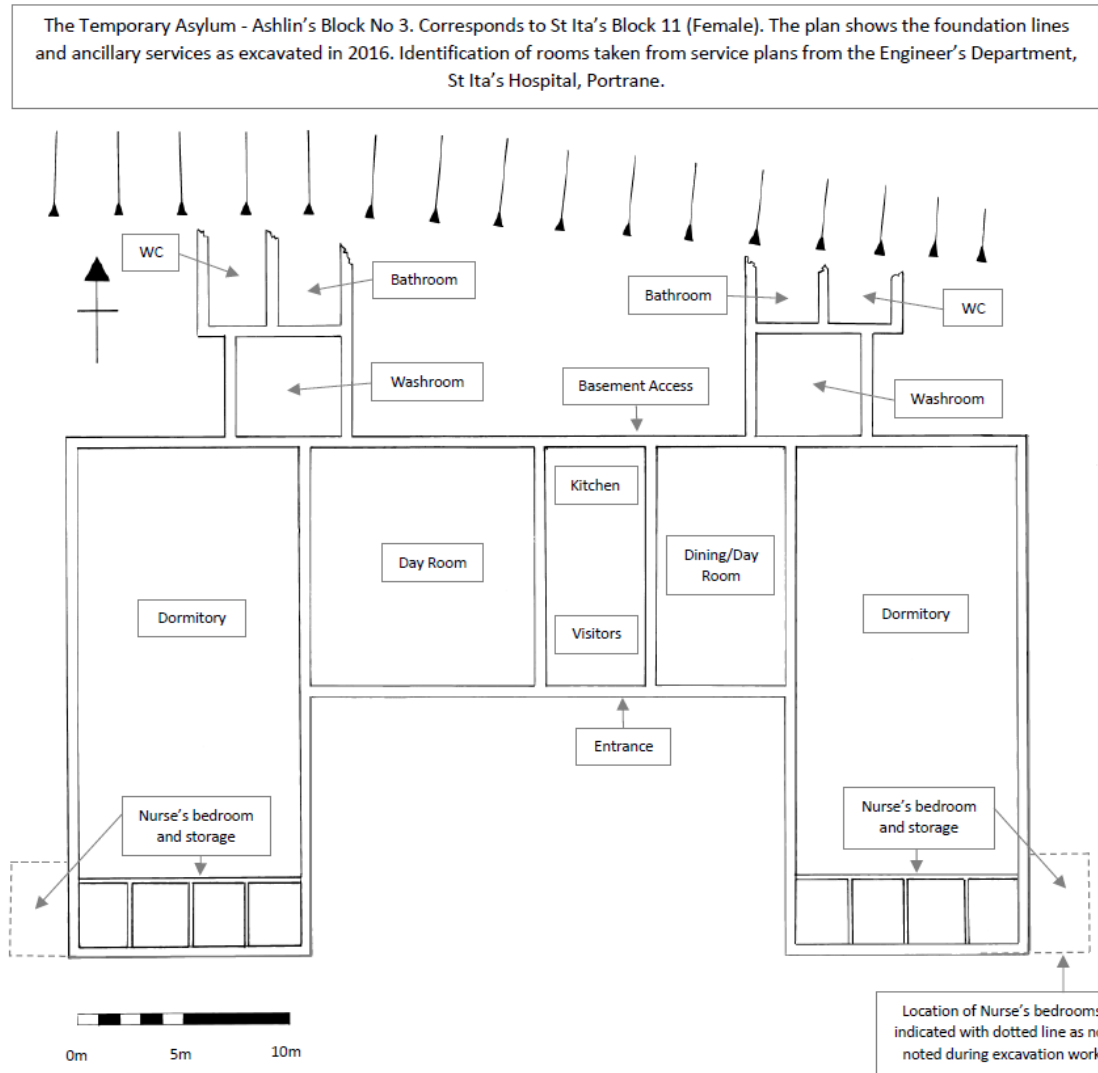


Fig 14. Area 2. Plan of Ashlin's building No 3 / Block 11 as excavated (2016)

The Temporary Asylum – Portrane House (Mount Evans).
The plan shows the basement level, ancillary services and structural alterations as excavated in 2016.

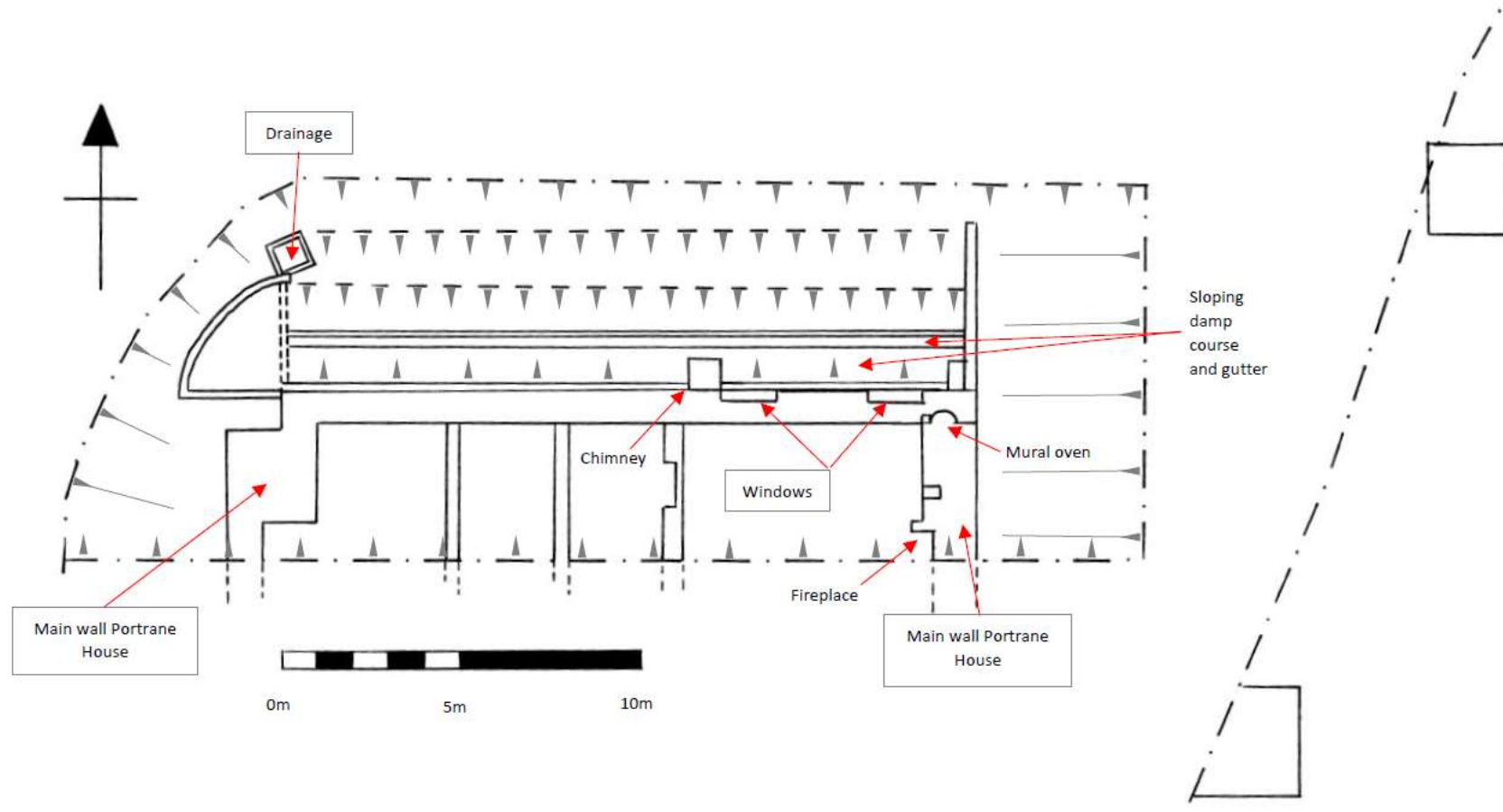


Fig 15. Area 3. Portrane House, basement level as excavated (2016)

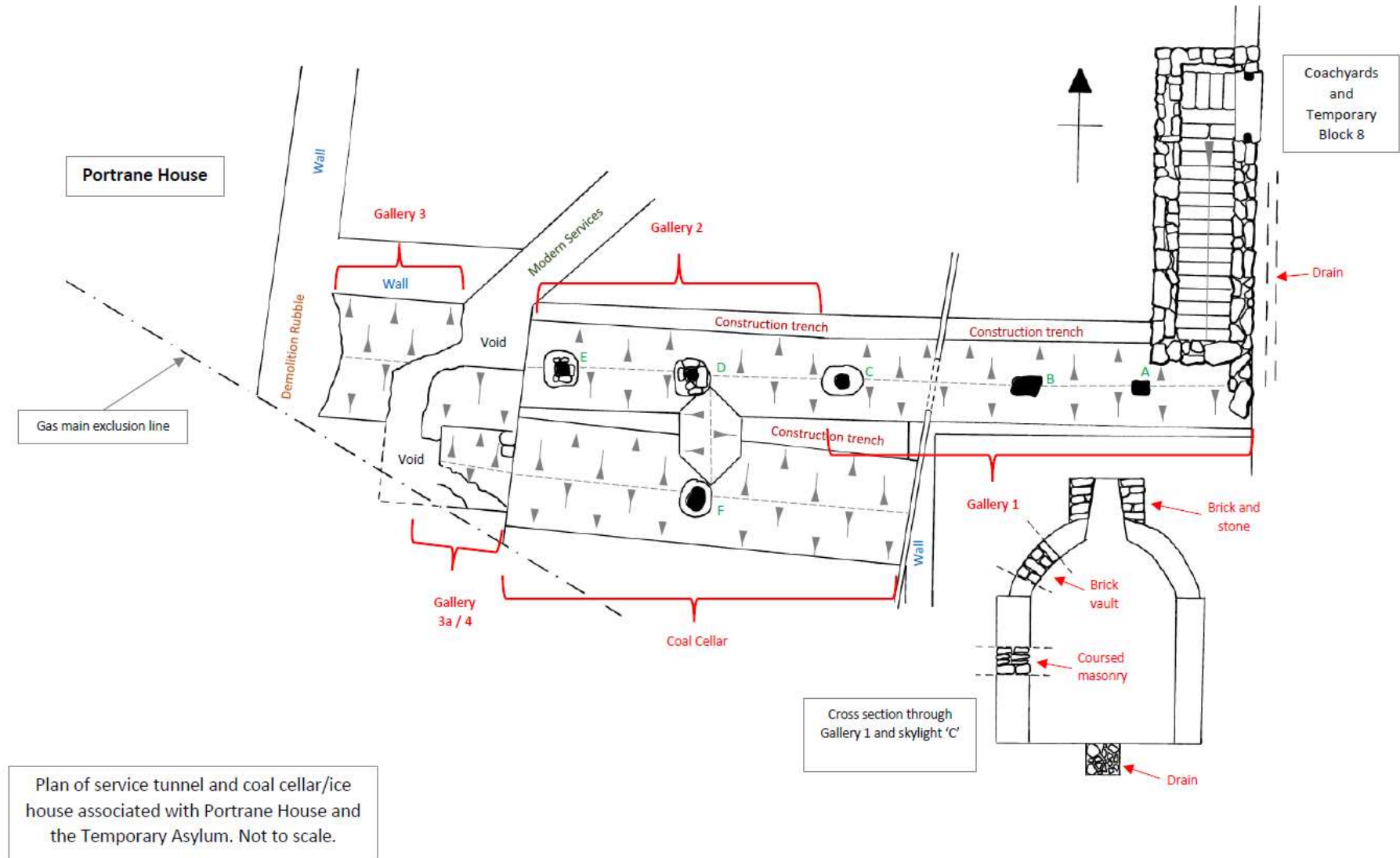


Fig 16. Area 3. Service tunnels to the east of Portrane House as excavated (2016)

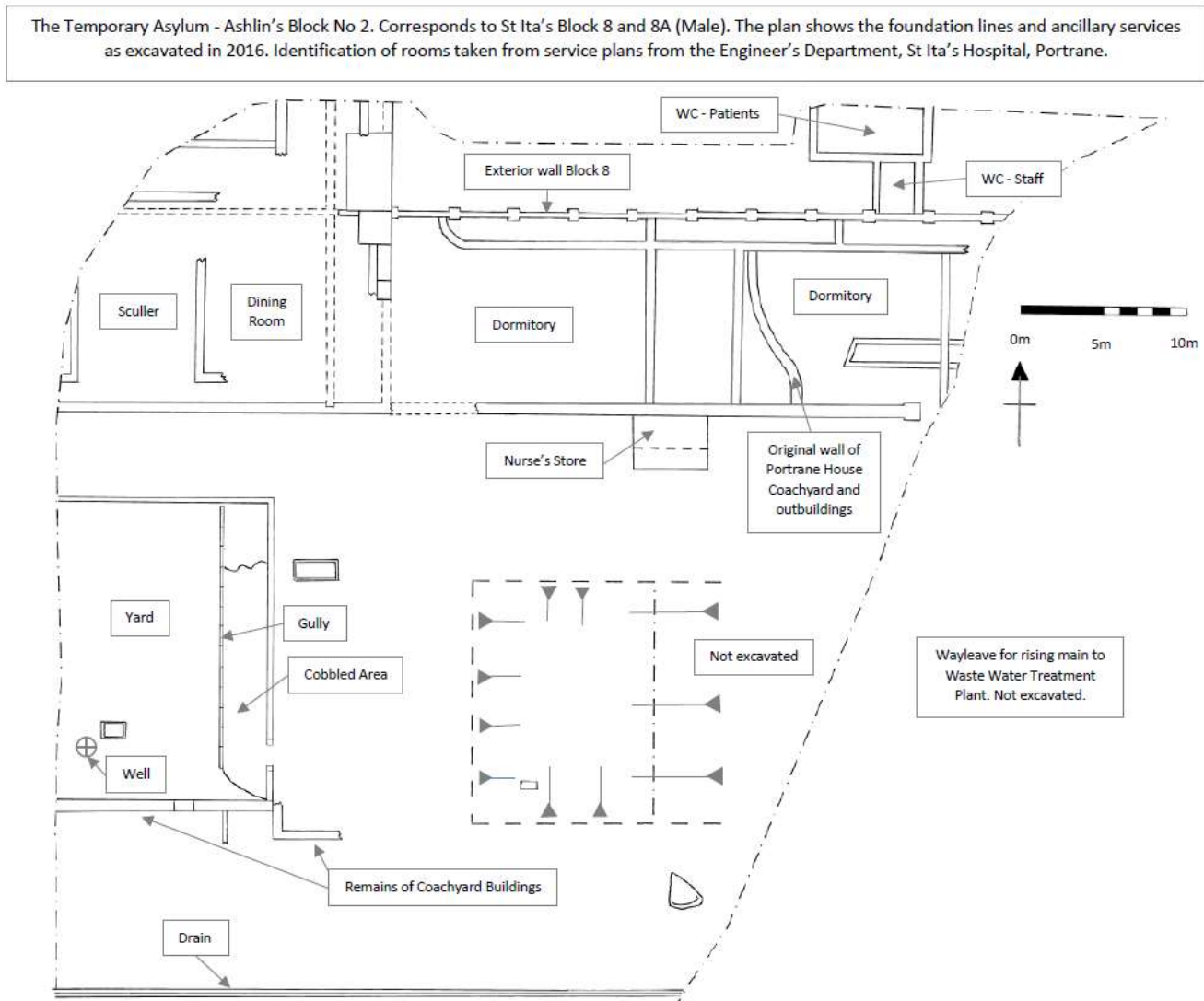


Fig 17. Area 1. Ashlin's building No 2 / Block 8/8a and the Portrane House yards as excavated (2016)

The Temporary Asylum - Ashlin's Block No 2. Corresponds to St Ita's Block 8 and 8A (Male). The plan shows the foundation lines and ancillary services as excavated in 2016. Identification of rooms taken from service plans from the Engineer's Department, St Ita's Hospital, Portrane.

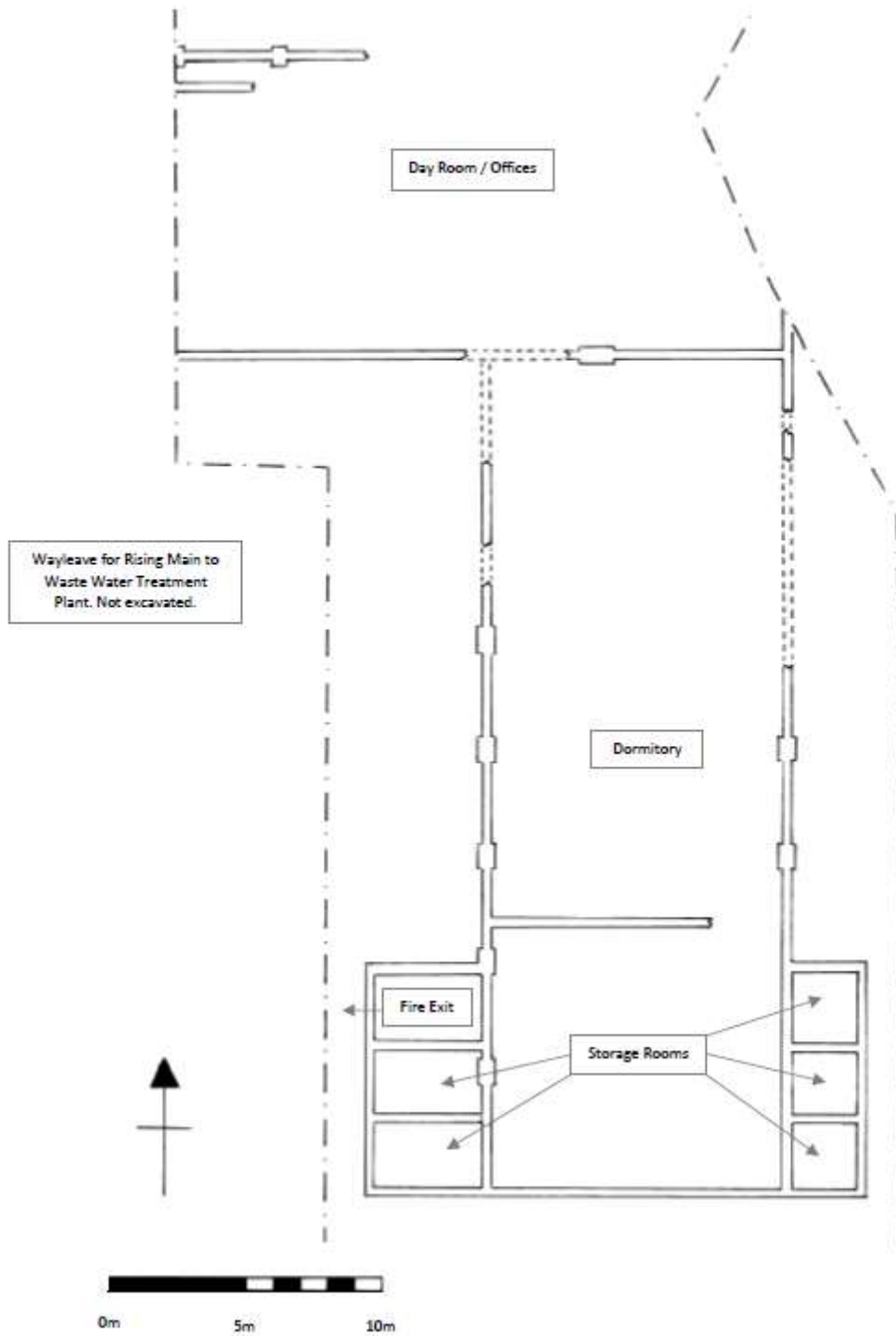
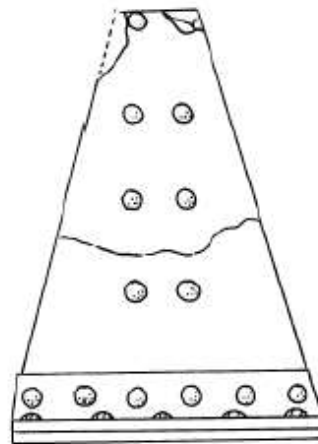
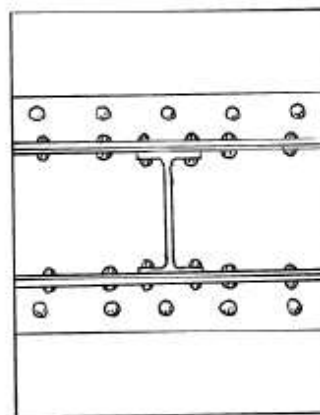


Fig 18. Area 1. Ashlin's building No 2 / Block 8/8a, Dormitory block on east side as excavated (2016)

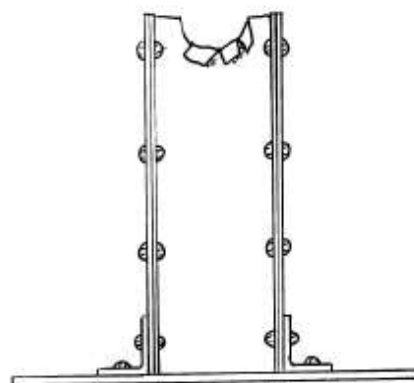
Cast iron and riveted stanchion footing recovered from the concrete foundations of Ashlin's Block 4 (Block 9). Scale 1:5



Side elevation



Plan view



Front elevation

Fig 19. Area 2. Cast iron and rivetted footing to RSJ framework of Ashlin's building No 4 / Block 9



Fig 20. Ashlin's building No 3 / Block 11 – service drawing (1950s – Engineer's Department, St Ita's Hospital)

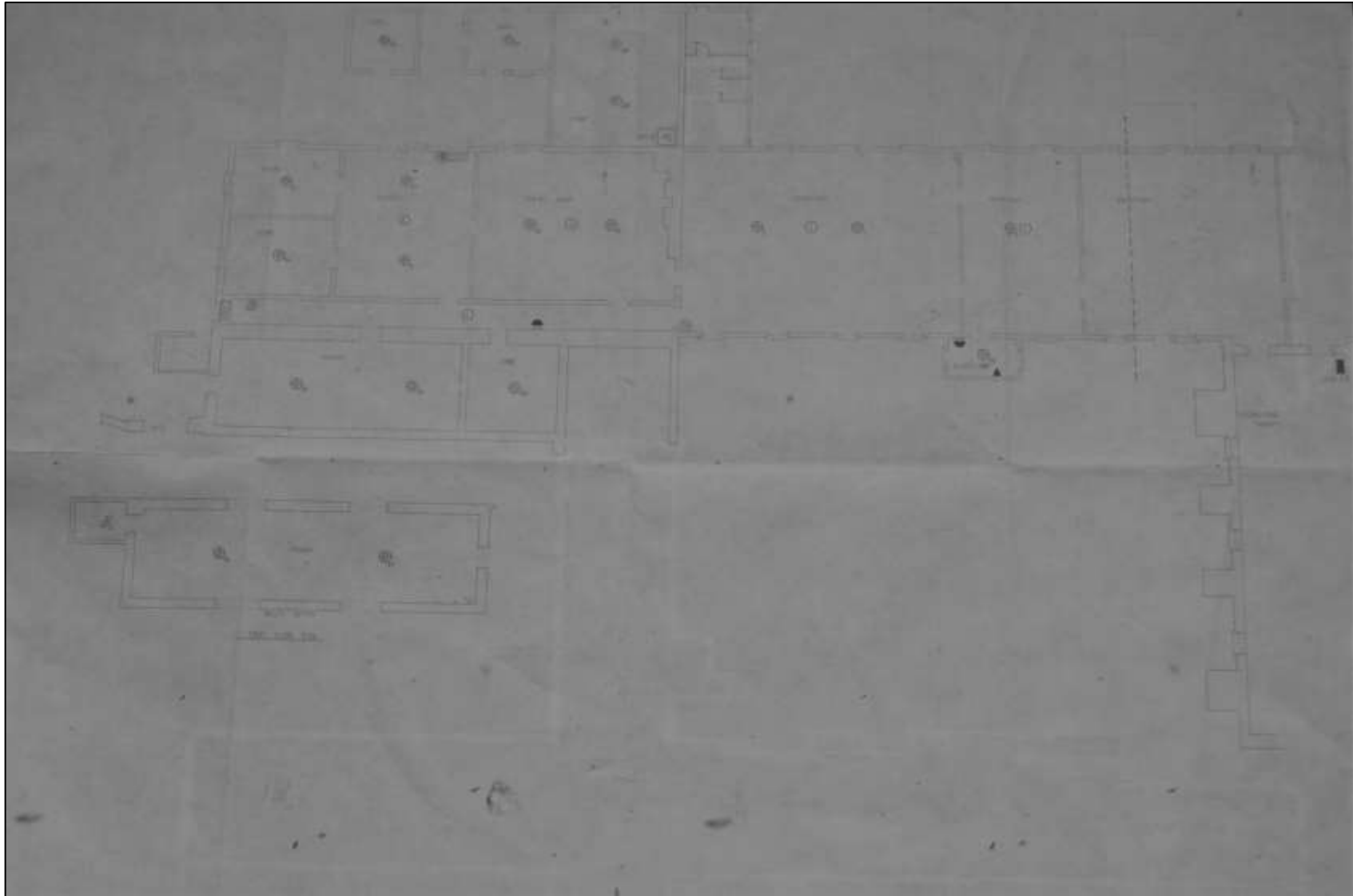


Fig 21. Ashlin's building No 2 / Block 8/8a (W) – service drawing (1950s – Engineer's Department, St Ita's Hospital)

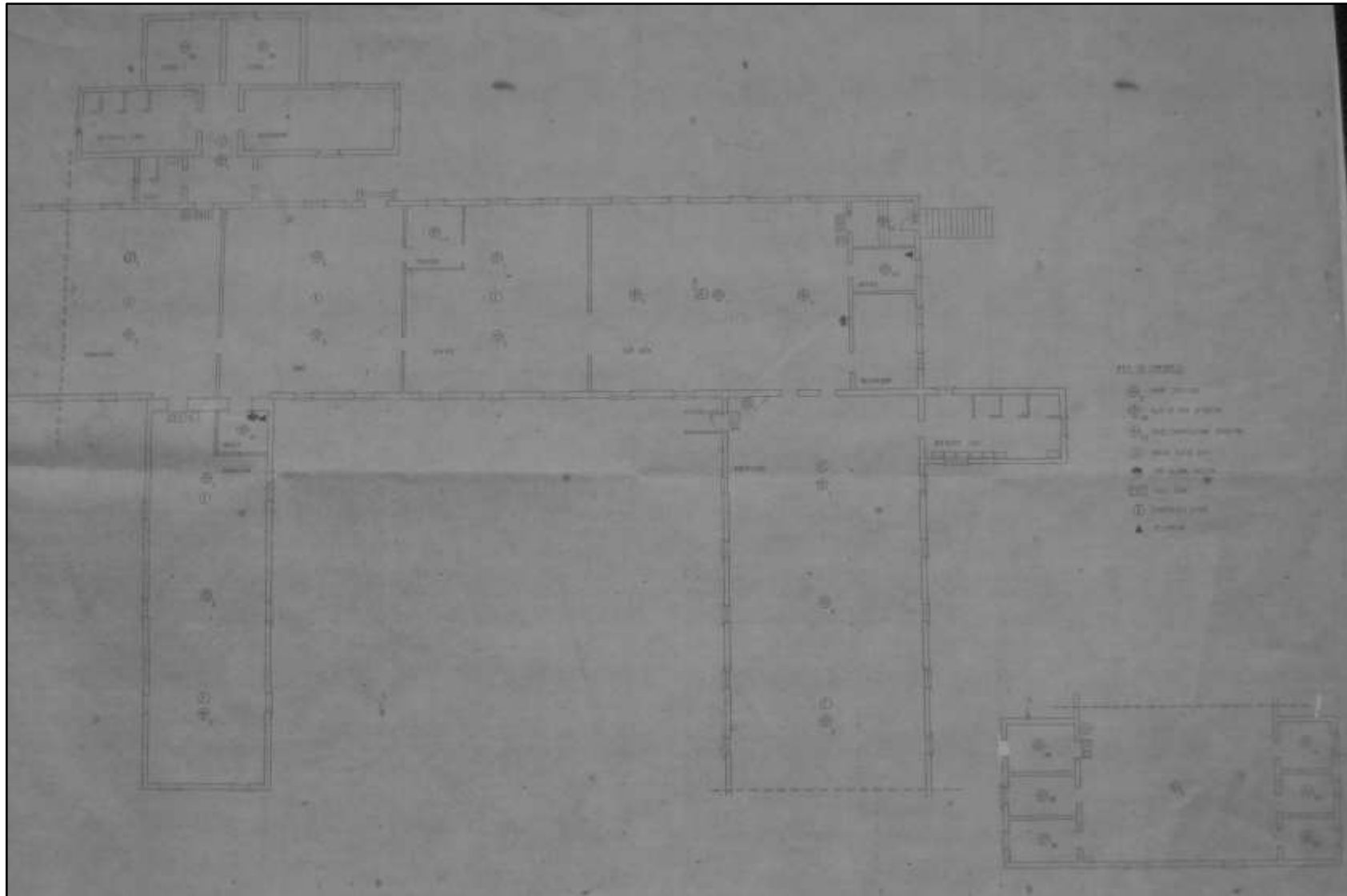


Fig 22. Ashlin's building No 2 / Block 8/8a (E) – service drawing (1950s – Engineer's Department, St. Ita's Hospital)

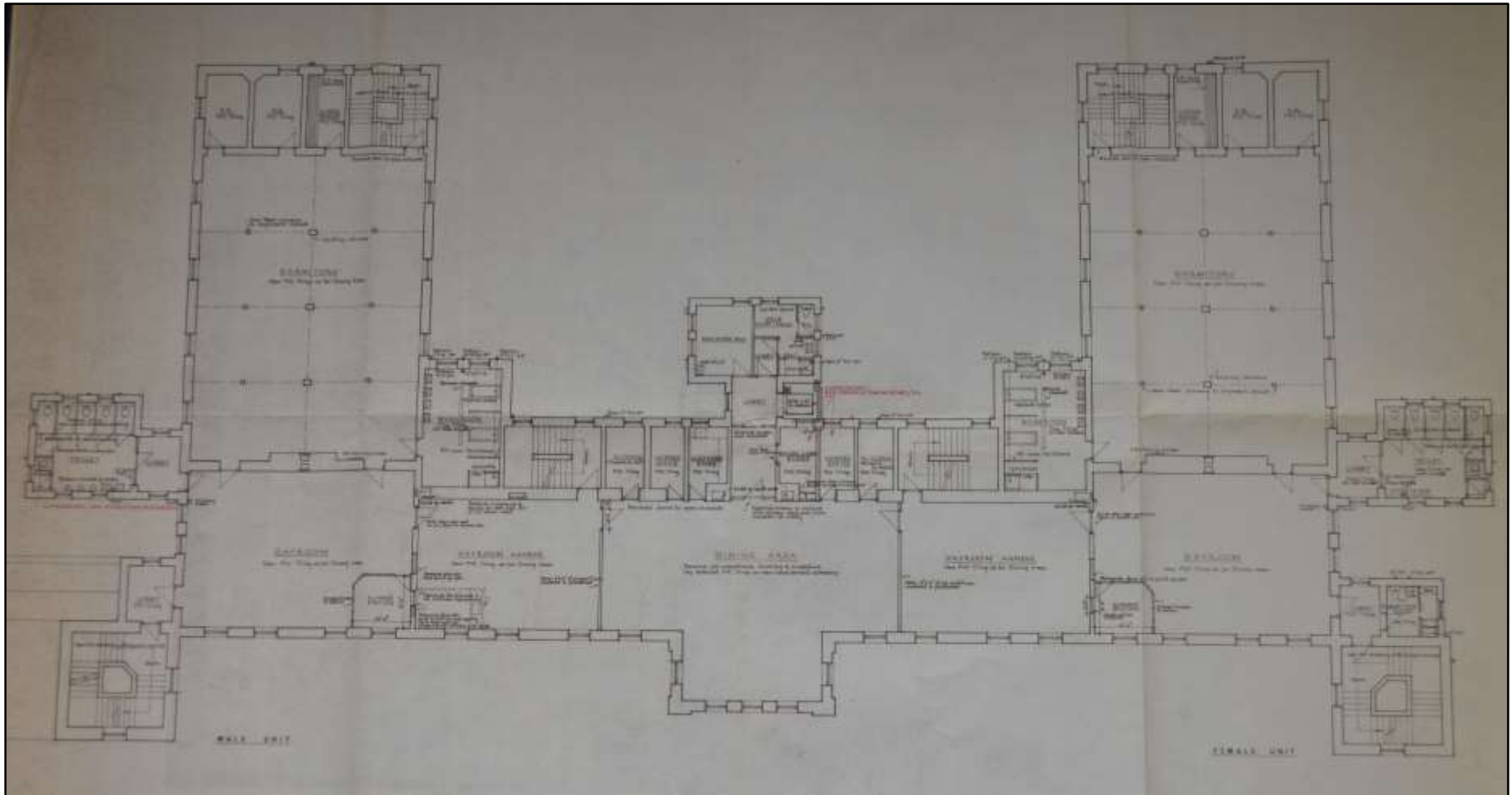


Fig 23. Floor plan of one block in St. Ita's Hospital showing similar functional layout comparative to The Temporary Asylum.

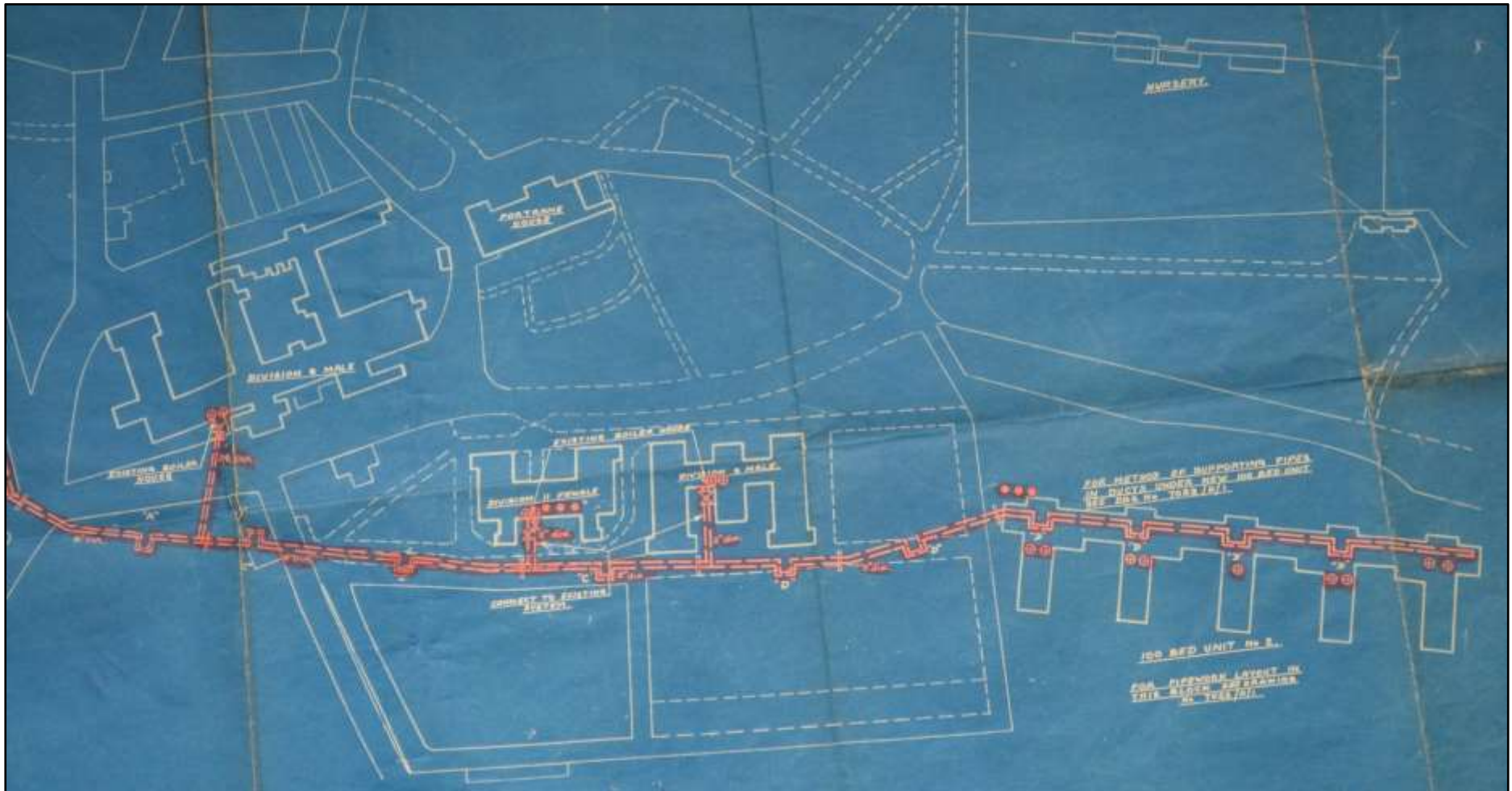


Fig 24. Heating blueprint showing connections to outlying buildings including the 'Temporaries'.

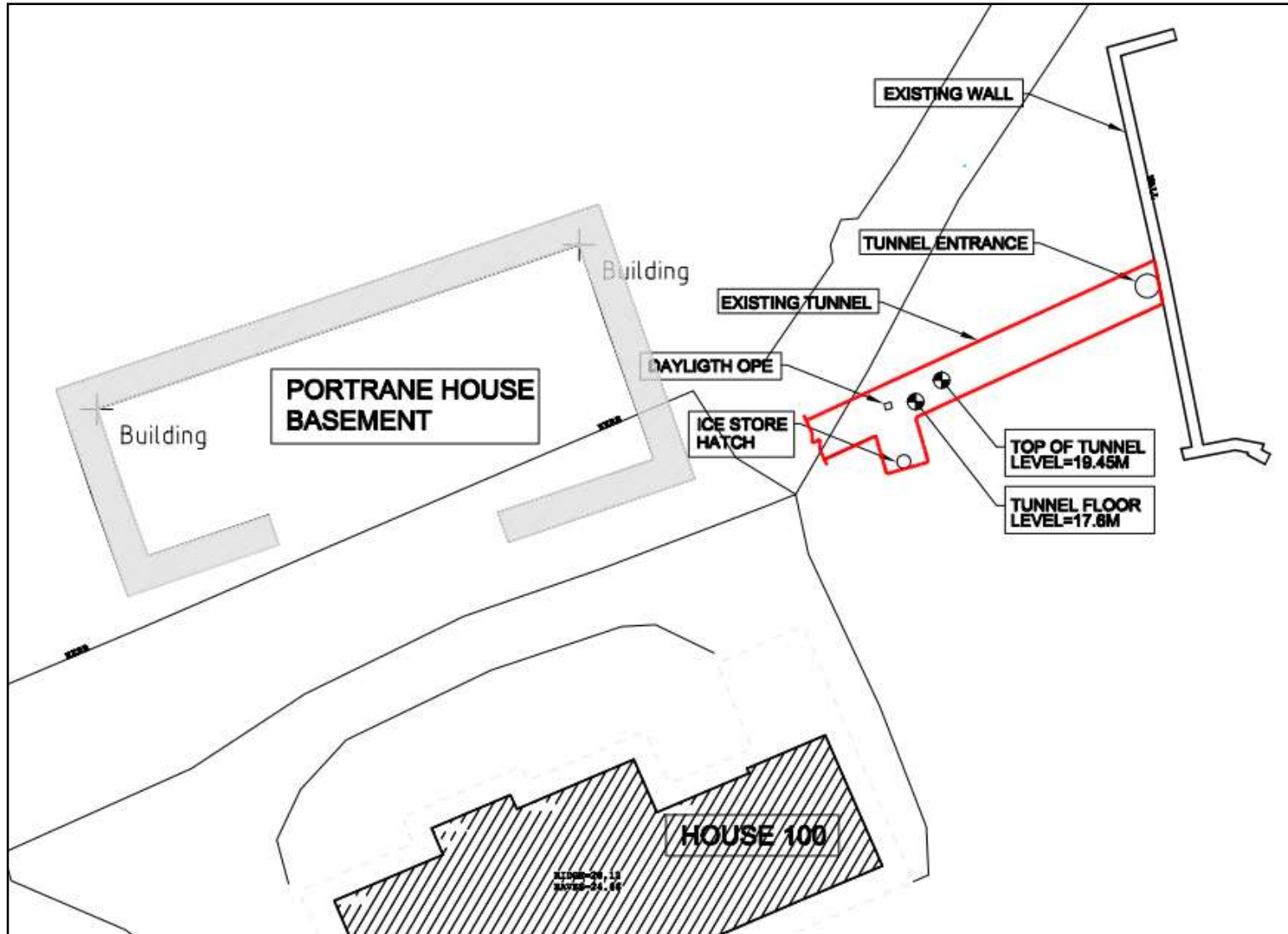


Fig 25. Survey data (Barnmore Demolition Ltd) showing location of basement and service tunnels as excavated

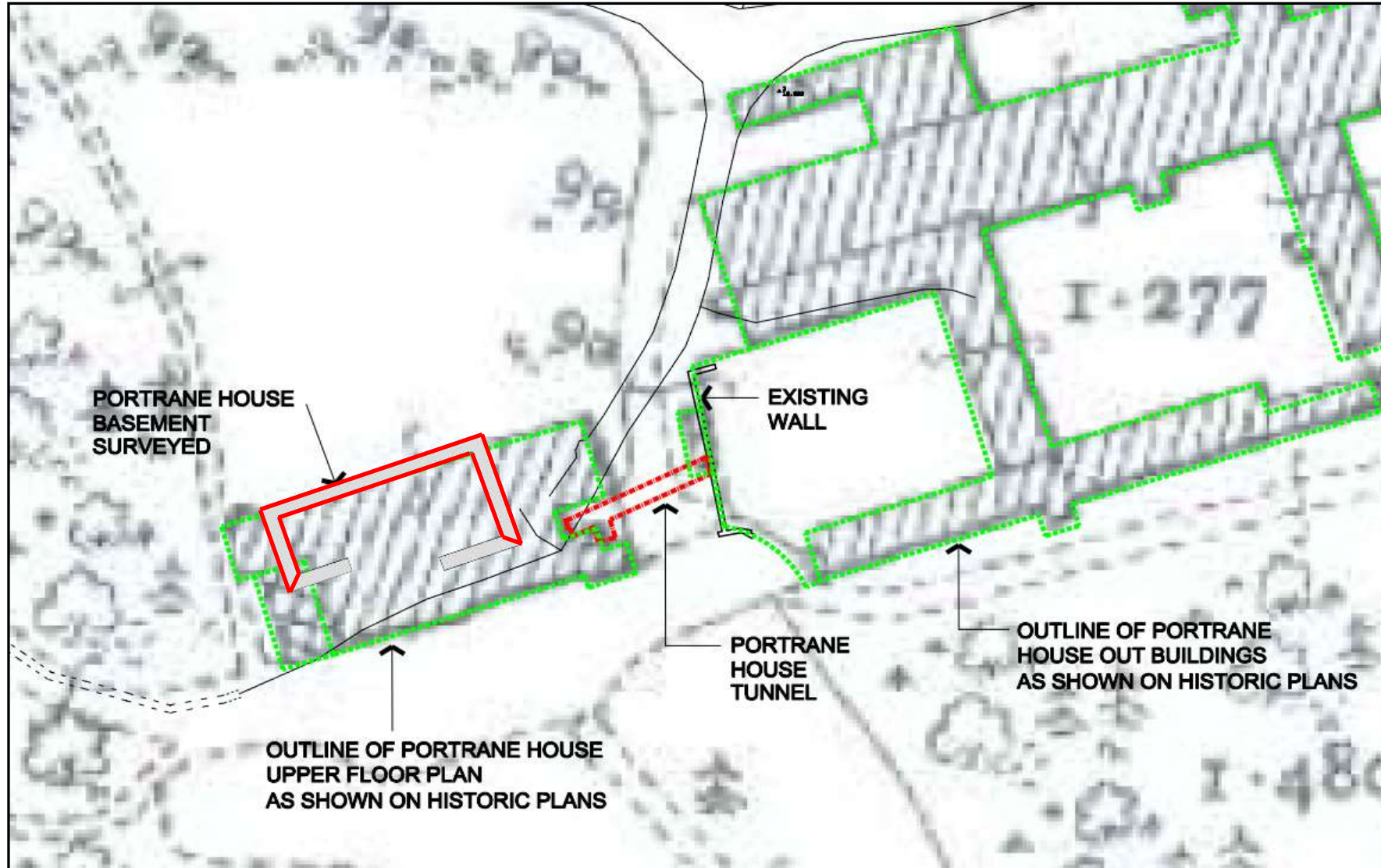


Fig 26. Survey data from excavation (Barnmore Demolition Ltd) overlaid on OS mapping.

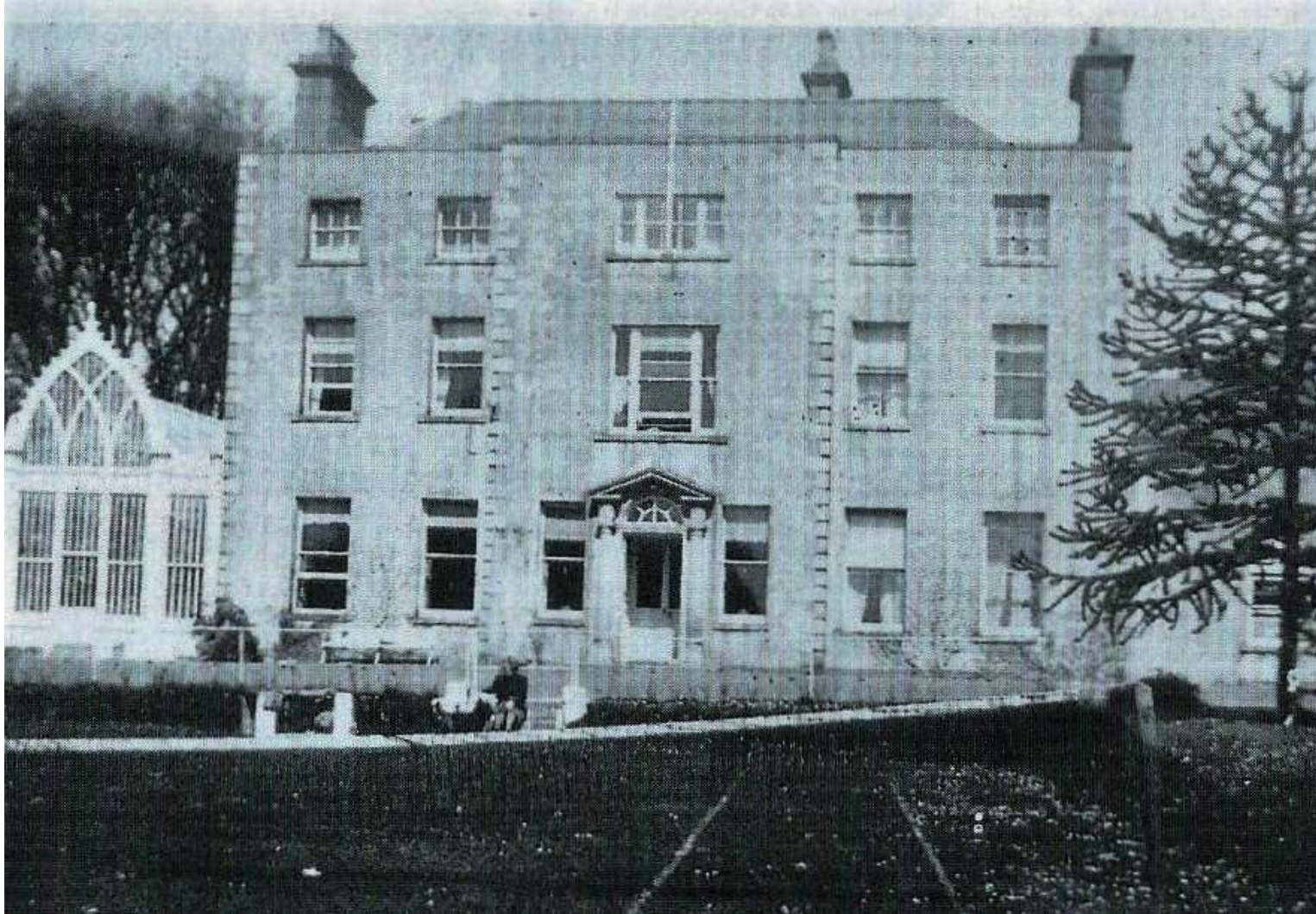


Plate 1. The Entrance Front of Portrane House, showing the original central block, the conservatory (W) and the east wing (partially obscured by trees) (picture courtesy of Peadar Bates)



Plate 2. Air Corps Aerial Photograph (1937) of Portrane Mental Asylum – the Temporary Asylum is clearly visible to the upper right.



Plate 3. Detail from Plate 2. The Temporary Asylum and Portrane House (1937)



Plate 4. Area 2 – Stripping topsoil from Temporary No 4 / Block 9 looking west



Plate 5. Area 2 - Stripping topsoil from Temporary No 4 / Block 9 looking east



Plate 6. Area 2 - Stripping topsoil from Temporary No 4 / Block 9 looking east. Topsoil strip exposed the asphalt layer on which the floor boards were placed.



Plate 7. Area 2 – Extant foundation of Temporary No 4 / Block 9. NW corner looking E



Plate 8. Area 2 – Extant foundation of Nurses Station/bedroom NW corner Block 9



Plate 9. Area 2 – Basement of Temporary No 4 / Block 9 looking east



Plate 10. Area 2 – Basement of Temporary No 4 / Block 9 looking north.



Plate 11. Area 2 – Basement of Temporary No 4 / Block 9 looking NW



Plate 12. Area 2 – Cast iron footings from the foundations of Temporary No 4 / Block 9



Plate 13. Detail of cast iron footing Temporary No 4 / Block 9



Plate 14. Area 2 – Temporary No 3 / Block 11 during topsoil strip looking NW



Plate 15. Area 2 – Temporary No 3 / Block 11, toilet annex and main block looking SW



Plate 16. Area 2 – Asphalt subfloor, eastern dormitory, Temporary No 3 / Block 11 looking S



Plate 17. Area 2 – removal of asphalt subfloor, Temporary No 3 / Block 11. Looking S



Plate 18. Area 2 – Temporary No 3 / Block 11, depth of foundation. Looking NE



Plate 19. Area 2 – Temporary No 3 / Block 11. Basement. Looking S



Plate 20. Area 2 – Temporary No 3 / Block 11. Basement. Looking N.



Plate 21. Area 1 – Yard surface looking N.



Plate 22. Area 1 – Yard surface looking SE. Nurses block to the S



Plate 23. Area 1 – Temporary No 2 / Block 8/8a looking E over Scullery and Dining Room



Plate 24. Area 1 – Temporary No 2 / Block 8/8a looking W over sanitary annex (N), exterior wall line (centre) and dormitories (S)



Plate 25. Area 1 – Curving wall, part of original gateway to Portrane House yards looking N



Plate 26. Area 1 – Gateway wall (Plate 25) preserved under floor of dormitory
Temporary No 2 / Block 8/8a, looking S



Plate 27. Area 1 – Stone lined well, capped and buried during use of Temporary Asylum



Plate 28. Area 1 – Hand dug, stone lined well 12-13m in depth



Plate 29. Area 1 – Temporary No 2 / Block 8/8a, eastern dormitory foundation looking NE



Plate 30. Area 1 – Temporary No 2 / Block 8/8a, eastern dormitory foundation looking N



Plate 31. Area 1 – Temporary No 2 / Block 8/8a, dormitory block, storage annex (E)



Plate 32. Area 1 – Temporary No 2 / Block 8/8a, dormitory, eastern foundation looking S to storage annex



Plate 33. Area 1 – Temporary No 2 / Block 8/8a, dormitory, western foundation looking S to storage annex



Plate 34. Area 3 – Testing on the site of Portrane House, N of House 100. Looking W



Plate 35. Area 3 - Testing on the site of Portrane House, N of House 100. Looking SW



Plate 36. Area 3 - Testing on the site of Portrane House, N of House 100. Looking S



Plate 37. Eastern wall of Portrane House (Basement) with mural oven. Looking N



Plate 38. Area 3 – Clearing basement floor level, Portrane House. Looking W



Plate 39. Area 3 – Basement of Portrane House, fireplace in west wall. Looking W



Plate 40. Area 3 – Excavation to reveal external wall face and drainage, Portrane House.
Looking E



Plate 41. Area 3 – Exterior wall face, basement level, Portrane House. Looking S



Plate 42. Area 3 – Portrane House, basement level exterior. Retaining wall, c. 1937.



Plate 43. Area 3 – Exterior basement wall Portrane House. Looking W



Plate 44. Area 3 – Portrane House, basement level. Looking SE



Plate 45. Area 3 - Portrane House, basement level. Looking SW



Plate 46. Area 3 – Portrane House, basement. Fireplace in east wall.



Plate 47. Portrane House. Attic base of an engaged column. Part of one of the pedestals flanking the main doorcase. Found during the clearance of Reilly's Hill.



Plate 48. Portrane House. Side view of Attic base.



Plate 49. Portrane House. Triglyph, regulus and guttae motif on dressed doorcase fragment. Probably surmounted the engaged column and supported the triangular pediment.



Plate 50. Portrane House. Fragment of dressed stone forming fanlight of doorcase.



Plate 51. Portrane House. Upper fragment of engaged column, recovered near Reilly's Hill



Plate 52. Gate-pier abutting wall between Portrane House and Yards



Plate 53. Gate-pier (Plate 52) showing basal plinth



Plate 54. Wall 2 (Main Wall) west facing elevation



Plate 55. Northern terminus / gate-pier of Wall 3 (Main Wall)



Plate 56. Door sill with frame sockets between Wall 2 and Stairwell to Service Tunnels.



Plate 57. Stone flagged floor at the top of the Stairwell. Looking E



Plate 58. Staircase and stairwell to the service tunnels. Looking N



Plate 59. Staircase and stairwell looking S into the service tunnels.



Plate 60. Service tunnels looking E



Plate 61. Debris closing western end of the service tunnel.



Plate 62. The service tunnel vaulted roof exposed during excavation. Looking W



Plate 63. Skylight for illumination and ventilation of tunnels



Plate 64. Vaulted roofs of service tunnels and coal cellar / ice house looking E



Plate 65. The coal cellar / ice house looking W. Galleries 1 & 2 and linking Gallery to N



Plate 66. Ope giving access to the coal cellar / ice house. Looking S.



Plate 67. Gallery 1 / 2 during demolition. Looking E.



Plate 68. Interface of Gallery 2 with Gallery 3, showing the southern side wall of Gallery 2 extending under the span of the elliptical vaulted roof of Gallery 3.



Plate 69. House 100 (1950s-1960s) raised on the site of Portrane House. Looking SW



Plate 70. View across Area 1 prior to commencement of site works (December 2015)