

Archaeological Impact Assessment, Main Street, Borris, Co. Carlow

Licence Number: 19E0612

Client: Carlow County Council
Licensee: Seán Shanahan MSc MIAI MISAP
Issue date: November 2019
Prepared by: Marion Sutton and Seán Shanahan



Copies of this report have been presented to:	The client - Carlow County Council; the National Museum of Ireland; and the Department of Culture, Heritage and the Gaeltacht.
Please Note:	<p>The International and European conventions on the protection of cultural heritage ratified in Ireland have been taken into consideration for the purposes of this report. The National Monuments Acts 1930-2014, the Heritage Act 1995, Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999, The Planning and Development Act 2000 (as amended), and the most recent EPA guidelines as well as those guidelines issued by the statutory bodies have been consulted in the assembly of this report.</p> <p>All of the recommendations made within this assessment are based on design plans and information provided by the client at the time of writing. Should any alterations be made to design plans or development proposals, further assessment may be necessary.</p> <p>Recommendations are subject to approval by the National Monuments Service at the Department of Culture, Heritage, and the Gaeltacht.</p>
Ordnance Survey of Ireland Licence	Where Ordnance Survey of Ireland (OSI) material has been reproduced in this report it has been done so under licence EN 0077919 © Ordnance Survey of Ireland/Government of Ireland.
Acknowledgements	Shanarc Archaeology acknowledges the information supplied by the client, information gathered from the SMR and RMP, and from the Topographical files at the National Museum.
Copyright	The contents of this report, including any original drawings and photographs, are the property of the author(s) and Shanarc Archaeology. Any reproduction of said report requires the written permission of Shanarc Archaeology. Images and drawings supplied by third parties are acknowledged individually.
Report Design and Template	Shanarc Archaeology 2019.

Contents

Non-Technical Summary	1
1. Introduction.....	2
1.1 Site Description	2
1.2 Proposed Development	4
2. Assessment Methodology	5
2.1 Legislative Protection for Archaeological, Architectural and Cultural Heritage.	5
2.2 Assessment Criteria.....	7
2.3 Desktop Study	9
2.3.1 National Monuments.....	9
2.3.2 Record of Monuments & Places and Sites & Monuments Record.....	9
2.3.3 Topographical Files of the National Museum of Ireland.....	10
2.3.4 Excavations Bulletin and Excavations Database	10
2.3.5 Carlow County Development Plan 2015-2021 & Borris Local Area Plan 2010-2016	10
2.3.6 National Inventory of Architectural Heritage	11
2.3.7 Cartographic Sources	11
2.3.8 Toponymy Sources	11
2.3.9 Documentary Sources	11
2.4 On-Site Inspection.....	12
3. Receiving Environment	13
3.1 Archaeological and Historical Background	13
3.2 Cartographic Analysis	16
3.3 Toponymy	22
3.4 Archaeological Heritage.....	23
3.4.1 National Monuments.....	23
3.4.2 Sites and Monuments Record and Record of Monuments and Places.....	23
3.4.3 Previous Archaeological Investigations.....	24
3.4.4 Previous Archaeological Finds recorded in Topographical Files	25
3.5 Architectural Heritage	25
3.5.1 Record of Protected Structures	25
3.5.2 National Inventory of Architectural Heritage	29
3.5.3 Architectural Conservation Areas.....	30
4. Archaeological Test Excavation	31

4.1	Results of Test Excavation.....	31
4.1.1	Review of Finds Recovered During Test Excavation.....	33
4.2	Plates	34
5.	Conclusion and Recommendations.....	42
5.1	Mitigation Measures.....	42
5.1.1	Avoidance of Impact	42
5.1.2	Pre-Construction Mitigation.....	43
6.	Bibliography	44
7.	Appendix.....	46

Figures

Figure 1 - Proposed development site, Main Street, Borris, Co. Carlow (<i>red arrow</i>) in wider context (OSi Licence No. EN 0077919).....	3
Figure 2 - Proposed development site, Main Street, Borris, Co. Carlow (<i>red outline</i>) in local context (OSi Licence No. EN 0077919).	3
Figure 3 - Existing site layout plan.	4
Figure 4 - Proposed site layout plan.	5
Figure 5 - Reconstruction plan of RIC Barracks for An Garda Síochana, dated 1925 (Source: Carlow County Council).	15
Figure 6 - Extract from Speed's 1610 Map of Leinster (Source: www.swilson.info).	16
Figure 7 - Down Survey map of County Carlow, 1656-58 (Source: www.downsurvey.tcd.ie).	17
Figure 8 - Down Survey Barony map of Idronie, 1656-58 (Source: www.downsurvey.tcd.ie).	18
Figure 9 - Down Survey Parish map of Clonosh and Balliellin, 1656-58 (Source: www.downsurvey.tcd.ie).	18
Figure 10 - Extract from Taylor & Skinner's Map 153, 1777 (Source: digitalcollections.tcd.ie).....	19
Figure 11 - Proposed development site boundary (<i>red outline</i>) on the first edition OS map, 1837-42 (OSi Licence No. EN 0077919).....	20
Figure 12 - Proposed development site boundary (<i>red outline</i>) on the revised 25-inch edition Ordnance Survey map 1888-1913 (OSi Licence EN 0077919).	21
Figure 13 - Proposed development site boundary (<i>red outline</i>) on a 1908 town plan of Borris (scale 1:1056) (https://digital.ucd.ie/view/ucdlib:40766).	21
Figure 14 - Proposed development site boundary (<i>red outline</i>) on the Cassini 6-inch edition Ordnance Survey map, c. 1940 (OSi Licence EN 0077919).	22
Figure 15 - Distribution map of sites listed in the Record of Monuments and Places (<i>red dots</i>) and the National Inventory of Architectural Heritage (<i>blue dots</i>) at Borris, as they relate to the proposed development site (<i>outlined in red</i>) (OSi Licence No. EN0077919).	24
Figure 16 - Post-excavation plan of test trenches.	46

Plates

Plate 1 - Proposed development site, Main Street, Borris, with Borris Garda Station to right (looking NE, 01.11.2019).....	34
Plate 2 - Rear of proposed development site (looking S, 01.11.2019).	34
Plate 3 - Test trench 1 from S-N (01.11.2019).	35
Plate 4 - Concrete storm water pipe in Test trench 1 (01.11.2019).	35
Plate 5 - Test trench 2 from N-S (01.11.2019).	36
Plate 6 - Test trench 3 from S-N (01.11.2019).	36
Plate 7 - Test trench 4 from W-E (01.11.2019).	37
Plate 8 - Test trench from W-E showing surface of walls delineating underground cell/passage (01.11.2019).....	37
Plate 9 - Test trench 5 from E-W with square or box opening in foreground (01.11.2019).	38
Plate 10 - Test trench 5 from S-N across underground cell/passage structure (01.11.2019).	38
Plate 11 - Underground cell/passage as viewed E-W from box opening (02.09.2019)....	39
Plate 12 - Vertical drone image of the proposed development site showing location of underground structure relative to Borris Garda Station on the adjoining property (01.11.2019).	39
Plate 13 - Test trench 6 from W-E (01.11.2019).	40
Plate 14 - Finds recovered from backfill of underground structure in Test Trench 5.	40
Plate 15 - Concrete mortar on granite boundary wall at location of underground structure (02.09.2019).	41

Tables

Table 1: Type of Impact.....	7
Table 2: Quality of Impact.....	8
Table 3: Significance of Impact.....	8
Table 4: Recorded monuments within a 1km radius of the proposed development site. .	23
Table 5: Previous excavations in proximity of the development site.	25
Table 6: RPS structures in Borris.....	26
Table 7: Results of test excavation.	31

Non-Technical Summary

An archaeological impact assessment was undertaken by Shanarc Archaeology Ltd. in relation to a proposal by Carlow County Council to develop Council owned land on Main Street, Borris with 2no. social houses. The assessment includes the excavation of archaeological test trenches carried out in accordance with Excavation Licence No. 19E0612, issued by the Department of Culture, Heritage and the Gaeltacht to licensee Seán Shanahan.

The proposed development site contains an underground linear stone and brick structure, which was exposed extending over 3m westward from the boundary wall adjoining Borris Garda Station. The structure will be directly impacted by the proposal to develop the site. It is probable that the structure is associated with the operation of the adjoining Garda Station site, when it functioned as a Constabulary Barracks in the 19th and early 20th century.

Archaeological excavation and recording of the underground structure, to full resolution, is recommended in the event the structure cannot be preserved *in-situ* by avoidance or through re-design.

1. Introduction

This archaeological impact assessment report was prepared by Shanarc Archaeology Ltd on behalf of Carlow County Council. The assessment relates to a proposal to develop Council owned property on Main Street, Borris for the provision of social houses (Figures 1 and 2).

The assessment includes the excavation of archaeological test trenches carried out in accordance with Excavation Licence No. 19E0612, issued by the Department of Culture, Heritage, and the Gaeltacht to licensee Seán Shanahan.

The purpose of the archaeological impact assessment is to:

- (i) evaluate the nature and extent of known archaeological, built heritage or other cultural heritage assets at the site, in particular, the nature and extent of a known underground stone and brick structure on the site;
- (ii) address potential impacts on archaeological, built heritage or other cultural heritage assets, including on the underground structure and on potential sub-surface remains elsewhere on the site; and
- (iii) provide mitigation recommendations to address potential impacts on archaeological, built heritage or other cultural heritage assets.

1.1 Site Description

The proposed development site is a long, thin, rectangular section on the north side of Main Street, Borris, positioned between the town's Post Office to the west and the Garda Station to the east (Figure 3). The centre of the site is occupied by a single rectangular structure, a 20th century shed/garage reportedly once used to house a town fire engine. It is currently used by FÁS as a tool and equipment storage shed. The site to the fore of the shed is laid out with a sealed entrance and maintained lawn containing a mature lime tree. The rear of the site is covered with a layer of building debris, and contains a mound of building spoil deposited in the northeast corner, likely to have originated during recent development on the Post Office site to the west. A low, granite stone wall bounds the site on the street frontage and on the east boundary with the Garda Station; on the east boundary the wall stands at two heights, a low wall to the front half and a 2m high wall to the rear half. There is only a partial concrete post and wire mesh fence on the west boundary.



Figure 1 - Proposed development site, Main Street, Borris, Co. Carlow (red arrow) in wider context (OSi Licence No. EN 0077919).



Figure 2 - Proposed development site, Main Street, Borris, Co. Carlow (red outline) in local context (OSi Licence No. EN 0077919).

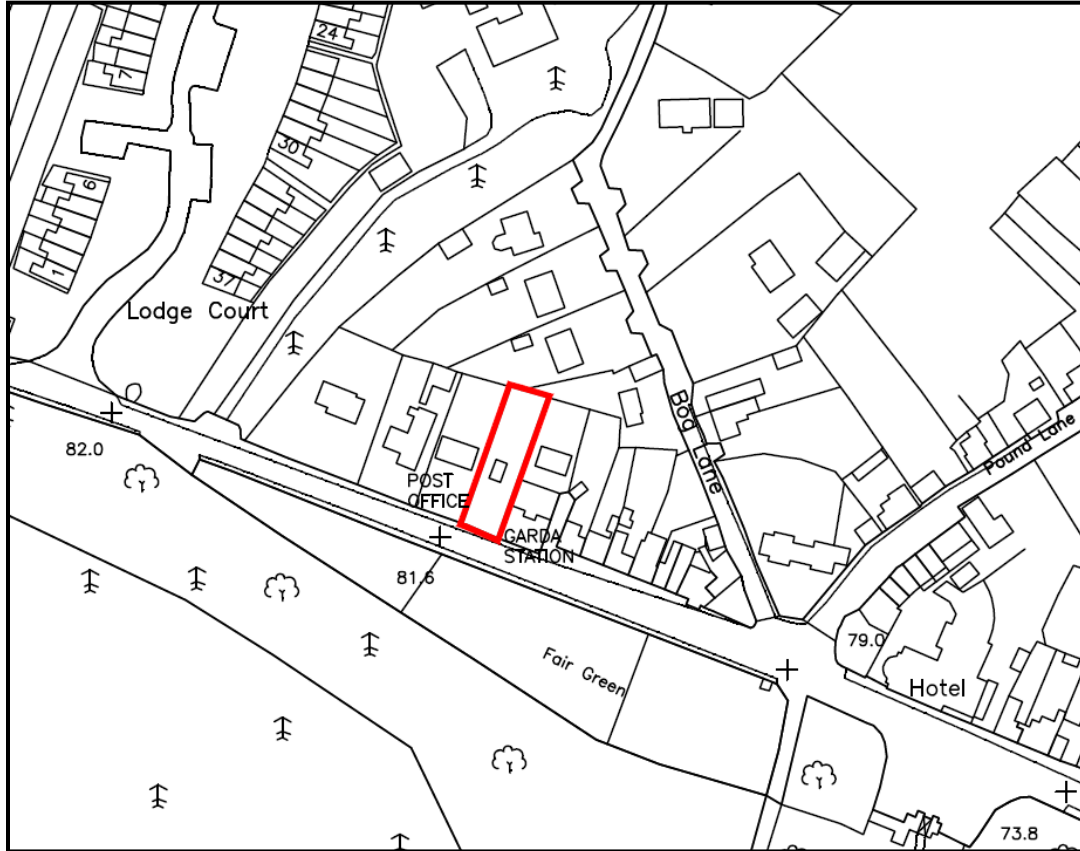


Figure 3 - Existing site layout plan.

1.2 Proposed Development

The proposed development will comprise the construction of 2 attached 2 bed, 2-storey dwellings (Figure 4). The proposed site layout positions the dwellings in the centre of the site, which will be accessed via the existing entrance and will be associated with 4no. carpark spaces abutting the boundary wall with the Garda Station. 2no. private gardens will be laid out to the rear of the dwellings. The existing granite stone walls on the street frontage and on the east boundary will remain. A concrete block wall will be constructed on the rear (north) boundary and a concrete post and timber panel fence on the west boundary.

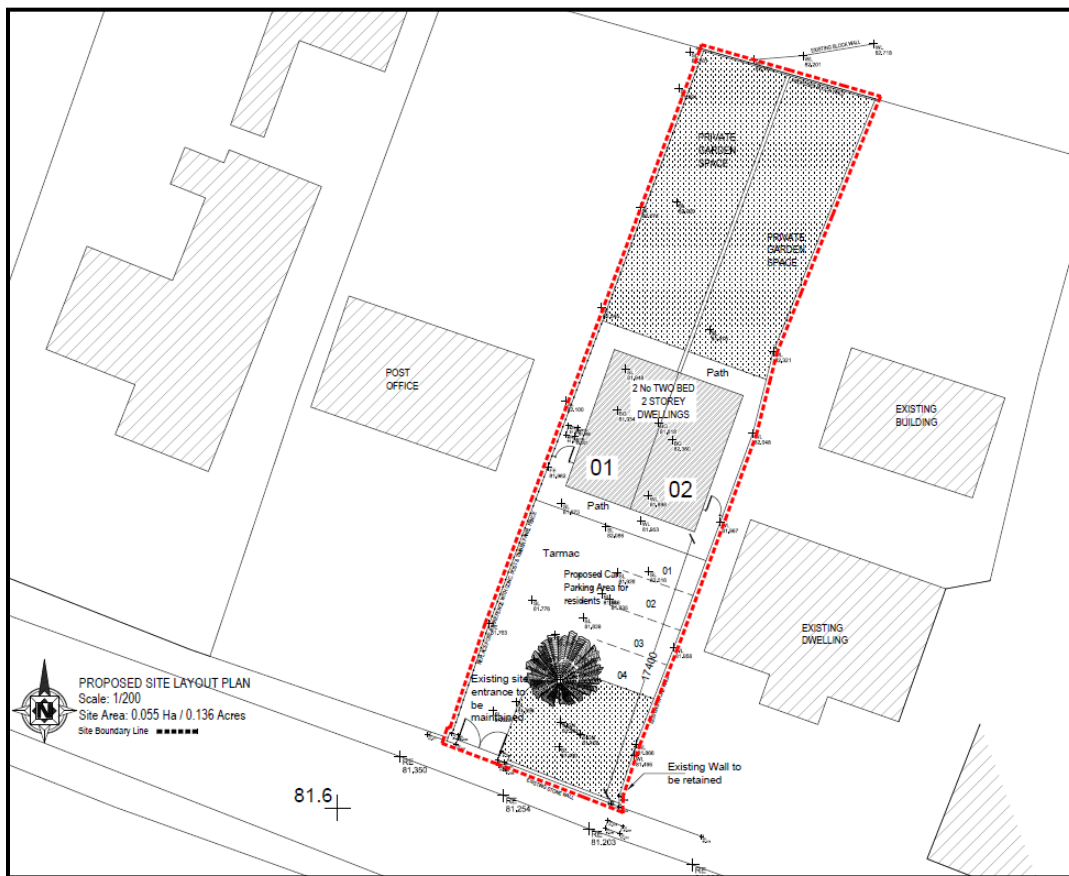


Figure 4 - Proposed site layout plan.

2. Assessment Methodology

The assessment is based on a desk-top study of relevant archaeological, architectural and cultural heritage sources, supported by an on-site inspection of the proposed development site and targeted archaeological test excavation. The assessment is guided by relevant legislation, standards and guidelines in respect of archaeology and cultural heritage, as follows.

2.1 Legislative Protection for Archaeological, Architectural and Cultural Heritage

Ireland has ratified several international and European conventions on the protection of cultural heritage, principally:

- UNESCO World Heritage Convention 1972;

- Charter for the Conservation and Restoration of Monuments and Sites (Venice) 1964;
- European Convention on the Protection of the Archaeological Heritage (Valetta Convention) 1992;
- European Convention on the Protection of the Architectural Heritage (Grenada Convention) 1985;
- European Council Directive on Environmental Impact Assessment (85/337/EEC) 1985, amended by Directive (97/11/EC) 1997, Directive (2003/35/EC) 2003, Directive (2011/92/EU) 2011, amended by Directive (2014/52/EU) 2014.

National legislation protecting cultural heritage sites comprises:

- National Monuments Act 1930, amended 1954, 1987, 1994 and 2004;
- Heritage Act 1995;
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999; and
- Planning and Development Act 2000 (as amended).

The following standards and guidelines were also consulted as part of this assessment:

- Frameworks and Principles for the Protection of the Archaeological Heritage (1999), Department of Arts, Heritage, Gaeltacht & the Islands;
- Policy and Guidelines on Archaeological Excavation (1999), Department of Arts, Heritage, Gaeltacht & the Islands;
- The Heritage Council, 2000. Archaeology & Development: Guidelines for Good Practice for Developers (2000), The Heritage Council;
- Guidance on the preparation of the EIA Report, 2017, European Commission;
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018;
- Guidelines on the information to be contained in Environmental Impact Assessment Reports (Draft) (August 2017), Environmental Protection Agency;
- Advice notes on current practice in the preparation of Environmental Impact Statements (2003), Environmental Protection Agency;

- Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Scheme (2005), National Roads Authority; and
- Guidelines for the Assessment of Architectural Heritage Impacts of National Roads Schemes (2005), National Roads Authority.
- Architectural Heritage Protection Guidelines for Planning Authorities (2011), Department of Arts, Heritage, Gaeltacht & the Islands.

2.2 Assessment Criteria

Impacts to archaeological, architectural and cultural heritage sites are generally categorised as one of three types, as described in Table 1.

Table 1: Type of Impact

Type of Impact	Description
Direct	Occurs where an archaeological, architectural or cultural heritage feature, site or structure is physically located within the footprint of development, resulting in the partial or total removal of the feature, site or structure.
Indirect	Occurs where an archaeological, architectural or cultural heritage feature, site or structure, or its setting, is located in close proximity to the footprint of development, which may be indirectly effected as a result e.g. visual effects.
None predicted	Occurs where an archaeological, architectural or cultural heritage feature, site or structure is not adversely or positively affected by development.

The impacts on archaeological, architectural and cultural heritage sites are assessed in terms of their quality, as described in Table 2.

Table 2: Quality of Impact

Quality of Impact	Description
Negative	A change that will detract from or permanently remove an archaeological, architectural or cultural heritage feature, site or structure.
Neutral	A change that will not affect an archaeological, architectural or cultural heritage feature, site or structure.
Positive	A change that will improve or enhance the setting of an archaeological, architectural or cultural heritage feature, site or structure.

The level or significance of impact is assessed, as described in Table 3.

Table 3: Significance of Impact

Significance	Description
Imperceptible	An impact on an archaeological, architectural or cultural heritage feature, site or structure, which can be measured, but without noticeable consequences.
Not significant	An impact on an archaeological, architectural or cultural heritage feature, site or structure, which causes noticeable changes, but without significant consequences.
Slight	An impact that causes a minor change in the character of the environment, which, although noticeable, does not directly impact or affect the integrity of an archaeological, architectural or cultural heritage feature, site or structure. Such impacts are generally reversible and of relatively short duration.
Moderate	An impact that results in a change to an archaeological, architectural or cultural heritage feature, site or structure, which, although noticeable, does not compromise the integrity of the heritage. These effects arise where an archaeological, architectural or cultural heritage feature, site or structure can be incorporated into a modern day development without damage and that all procedures used to

Significance	Description
	facilitate this are reversible.
Potentially significant	An impact to a potential feature/area of archaeological, architectural or cultural heritage that could be significant without mitigation measures being implemented, e.g. potential sub-surface archaeological remains.
Significant	An impact that, by its magnitude, duration or intensity alters the character and/or setting of an archaeological, architectural or cultural heritage feature, site or structure. These effects arise where an aspect or aspects of the archaeological, architectural or cultural heritage are permanently impacted on, leading to a loss of character, integrity and data about the feature/site/structure.
Very significant	An impact that, by its magnitude, duration or intensity significantly alters most of the character and/or setting of an archaeological, architectural or cultural heritage feature, site or structure. These effects arise where an aspect or aspects of the archaeological, architectural or cultural heritage are permanently impacted on, leading to a loss of character, integrity and data about the feature/site/structure.
Profound	An impact that completely and irreversibly destroys an archaeological, architectural or cultural heritage feature, site or structure.

2.3 Desktop Study

The following were the principal desk-based sources consulted:

2.3.1 National Monuments

Under the National Monuments Acts 1930-2004, archaeological sites in the ownership or guardianship of the State or a Local Authority and sites under Preservation Orders are designated as National Monuments. Such sites are offered the highest level of protection under Irish legislation, as the preservation of such sites is considered of national importance.

2.3.2 Record of Monuments & Places and Sites & Monuments Record

The Record of Monuments and Places (RMP) was established under Section 12 of the 1994 National Monuments (Amendment) Act. The RMP is a list of archaeological monuments known

to the National Monuments Service, and over 120,000 are currently recorded. This RMP list is based on the earlier Sites and Monuments Record (SMR) files housed at the National Monuments Service. The SMR was initially based on cartographic, documentary and aerial photographic sources, was revised through fieldwork and forms the basis of the statutory RMP. The record is updated on a constant basis.

2.3.3 Topographical Files of the National Museum of Ireland

The topographical files of the National Museum of Ireland (NMI) are the national archive of all known antiquities recorded by the NMI. These files relate primarily to artefacts but also include references to monuments and contain a unique archive of records of previous excavations. The find-spots of artefacts can be an important indication of the archaeological potential of the related or surrounding area.

2.3.4 Excavations Bulletin and Excavations Database

The Excavations Bulletin is both a published annual directory and an on-line database that provides summary accounts of all the excavations carried out in Ireland – north and south – from 1969. The on-line database has been compiled from the published Excavations Bulletins from the years 1970-2010, with additional online-only material from 2011 onwards. The database gives access to summary descriptions of archaeological excavation reports and can be browsed or searched using multiple fields, including Year, County, Site Type, Grid Reference, Licence No., Sites and Monuments Record No. and Author.

2.3.5 Carlow County Development Plan 2015-2021 & Borris Local Area Plan 2010-2016

Each City and County Development Plan is compiled in accordance with the requirements of the Planning and Development Act 2000 (as amended) and contains lists of national monuments, recorded monuments, a Record of Protected Structures (a list of buildings which cannot be materially altered or demolished without grant of permission under the Act), Conservation Areas and Architectural Conservation Areas (to protect and enhance the special character of an area).

The Carlow County Development Plan 2015-2021 sets out Carlow County Council's vision and strategies for the proper planning and sustainable development of the County for the life of the Plan. Chapter 9 outlines Council policies and objectives in regards to heritage, addressing archaeological heritage in Section 9.2, and architectural and built heritage in Section 9.3. A list

of Protected Structures is provided as Appendix 8 of the Plan. Historic Buildings and Structures are also addressed in Section 11 of the Borris Local Area Plan 2010-2016, prepared by Carlow County Council to promote the proper planning and sustainable development of Borris.

2.3.6 National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage (NIAH) is an ongoing survey within the Department of Culture, Heritage and the Gaeltacht. The work of the NIAH involves identifying and recording the architectural heritage of Ireland, from AD1700 to the present day and includes country houses, churches, mills, bridges and other structures of note. The NIAH survey for Carlow was carried out in 1999, with 'An Introduction to the Architectural Heritage of County Carlow' published in 2002. It is the largest survey of the post 1700 built heritage of County Carlow, and is a representative sample of the architectural heritage of the county.

2.3.7 Cartographic Sources

Information gathered from cartographic sources is fundamental to the identification of archaeological and architectural heritage sites, as well as demesne or cultural landscapes, which can often be identified based on cartographic records alone. For example, the earliest Ordnance Survey maps date to the late 1830s and 1840s. Much change has occurred in the use and treatment of the landscape in the intervening years, with the rate of change and loss of cultural sites and landscapes increasing rapidly during the second half of the 20th century.

2.3.8 Toponymy Sources

A townland name may preserve information relating to its archaeology, history, folklore, ownership, topography or land use. Most placenames were anglicised by the Ordnance Survey, which begun in the 1830's. Despite some inaccuracies in translation, the Gaelic, Viking, Anglo-Norman and English origins of placenames are generally recognisable. The Placenames Database of Ireland website (www.logainm.ie) hosts online bi-lingual placename research and archival records for townlands.

2.3.9 Documentary Sources

Documentary sources are a valuable means of completing the written archaeological, architectural and cultural heritage record of an area, and of gaining insight into the history of the receiving environment. A list of consulted documentary sources is provided in the bibliography.

2.4 On-Site Inspection

On-site inspection offers the opportunity to examine a study area in light of desk-based research and evidence. Inspection is essential in determining the nature and extent of any surviving above-ground evidence, and in predicting the potential effects of a proposal on potential below-ground remains. An inspection of the Carlow County Council owned property was carried out by Shanarc Archaeology Ltd. on 02nd September 2019.

3. Receiving Environment

3.1 Archaeological and Historical Background

The town of Borris, whose origin is intertwined with the Kavanagh family and the estate at Borris House, developed a short distance from the east bank of the River Barrow, next to the Dinin or Black River. Prehistoric activity in the vicinity of the town is represented by a possible megalithic structure (CW022-007) in Clonygoose townland and a fulacht fia (CW022-058) in Borris townland close to the bank of the River. The files of the National Museum of Ireland also contain record of a polished stone axehead recovered in the demesne of Borris House near the Dinin or Black River (IA/109/1983).

There is more archaeological evidence dating from the early medieval period in the vicinity of the town, with a church (CW022-006001) and graveyard (CW022-006004), with likely associated holy well (CW022-008), near the Dinin or Black River in Clonygoose. The church remains consist of a pre-Norman nave with later chancel. The well, called Lady Well, is located to the southeast of the church, to which a patron was held on the last Sunday of June (O'Toole 1933, 111). A second holy well (CW022-005) is recorded in Borris townland at the northwest end of the town.

Ringforts were the principal secular residences or farmsteads of the early medieval period, mainly constructed between the periods 550-850AD, and in the vicinity of Borris there are examples recorded in Clonygoose (CW022-009) and in Ballyteigelea (CW022-002). The Clonygoose example is classified as a cashel, described as an approximately circular area (diameter c.4m) enclosed by a substantial drystone wall. The Ballyteigelea example is described as the remains of a rath located in a farmyard next to the R702 to the northwest of the town.

The closest archaeological site to the centre of Borris is castle CW022-019, fabric of which has been incorporated into present Borris House. The castle was the ancestral seat of the Kavanaghs, whose lineage derived from Dónal Caomhánach, son of Diarmuid MacMurrough, last King of Leinster. During the reign of King Henry VIII, in the 16th century, Art 'Boy' MacMurrough and his son Cahir Mac Art acknowledged the overlordship of the English monarch, and the family seat at Borris dates to this period (Pearson & Mulcahy 2009, 105). The seat was attached by Cromwellian forces in the 17th century as then occupant, Bryan Kavanagh, was a supporter of Charles II. Allegiances appear to have changed, as in 1654

Bryan Kavanagh is listed as a Protestant, and his lands were subsequently not subject to forfeiture (*ibid*). The present Borris House was built in 1731 by Morgan Kavanagh, and was restored c. 1820 after suffering damage during the 1798 rebellion. The restoration was carried out by Richard and William Vitruvius Morrison, in Tudor Revival style. Further renovation and extensions were carried out c. 1870.

Samuel Lewis describes the village of Borris as it existed in 1837, which coincided with the first large-scale survey of Ireland carried out by the Ordnance Survey. Borris House is described as the seat of the late T. Kavanagh Esq., set in an extensive and richly wooded demesne. The grounds of the House dominate the south side of Main Street through the village. During the Confederate Wars the then residence was garrisoned by Parliamentarians and in 1642 was attached by the Irish. The village had a chief constabulary police station, with a small barracks for the accommodation of c. 30 men.

The police station referred to by Lewis was located opposite the main entry to Borris House, a short distance southeast of the current Garda Station. The current Station was built as an RIC Barracks c. 1850. It is described in the National Inventory of Architectural Heritage as a detached three-bay, 2-storey Tudor Revival station with half-dormer attic and gabled projecting entrance bay (NIAH Reg. No. 10400811). The RIC Barracks was reconstructed for An Garda Síochana in 1925 (Figure 5), and reconstruction plans depict the 2-storey building with a rear outbuilding used for food and fuel store (amongst others) with 2 x privies in each rear corner of the property. The plans do not show a basement or any other form of underground structure.

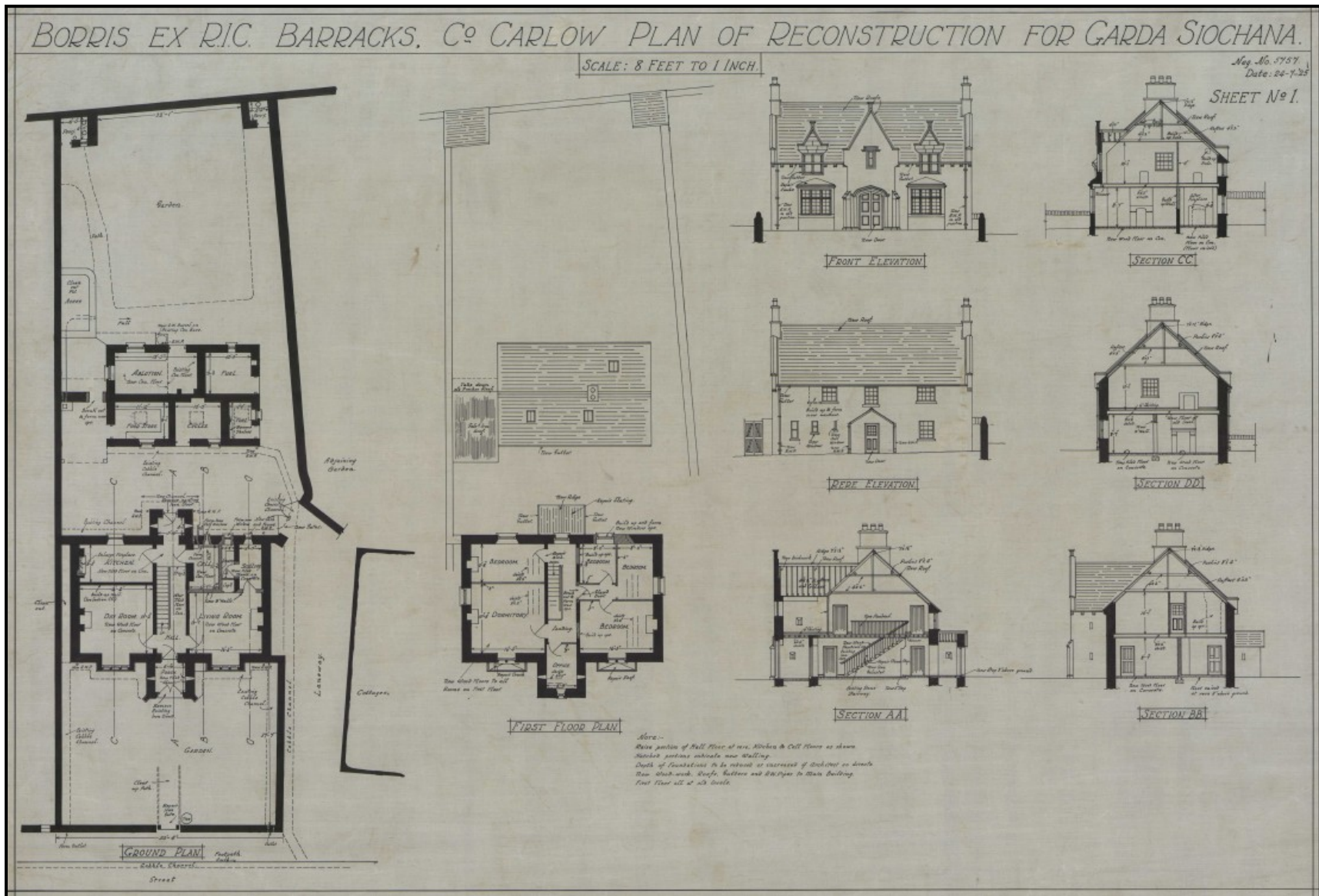


Figure 5 - Reconstruction plan of RIC Barracks for An Garda Síochána, dated 1925 (Source: Carlow County Council).

Down Survey maps 1656-58

The Down Survey is a mapped survey carried out between 1656 - 1658 under the direction of Sir William Petty that recorded townland boundaries and their areas with precision throughout Ireland. The resultant maps contain other detail, such as on roads, rivers, towns, churches, castles, houses and fortifications, as well as topographic and landuse detail.



Figure 7 - Down Survey map of County Carlow, 1656-58 (Source: www.downsurvey.tcd.ie).

At the time of the Down Survey, the present town at Borris was located in the Barony of Idronie (currently the Barony of St. Mullin's Lower) and the Parish of Clonogosh (now Clonygoose). The town developed on land in the angle formed by the 'Barrow Flu' (Barrow River) and the 'River Seallows' (Dinin or Black River). No structures or settlement is shown on the county map (Figure 7), although there are discernible placenames - Clongouse (Clonygoose), Oldbeg (Owlbeg), B teglea (Ballyteighlea) and Kilcallatrim (Kilcoltrim). The Barony map of Idronie (Figure 8) shows that part of the lands bordered by the two rivers was unfortified land belonging to 'Mr. Bryan Cauanagh' (Protestant), in the land in which Borris Demesne later developed. The Parish Map of Clonosh and Balliellin (Figure 9) names this land as 'Borrouis.' Similarly, no structures or settlement is shown on the Barony and Parish maps.



Figure 8 - Down Survey Barony map of Idronie, 1656-58 (Source: www.downsurvey.tcd.ie).



Figure 9 - Down Survey Parish map of Clonosh and Balliellin, 1656-58 (Source: www.downsurvey.tcd.ie).

Taylor & Skinner 1777

George Taylor and Andrew Skinner, both geographers, produced a volume in 1778 containing maps recording the roads of Ireland, the towns and villages on route, and county seats and other structures in proximity to the roads. The road from Dublin to New Ross in 177 is recorded on Map 134. The maps records the small settlement at Bally-Burris lining the north side of the road opposite the seat of 'Kavanagh Esq.' The map shows two entrance roads to the house, sitting in a mature wooded setting. The town of Bally-Burris is also depicted on Map 153, detailing the road from Enniscorthy to Bally-Burris. The latter (Figure 10) shows a developed street frontage between the entrance roads to Borris House, as well as a scattering of houses on the same side of the road northwestwards on the Carlow road.

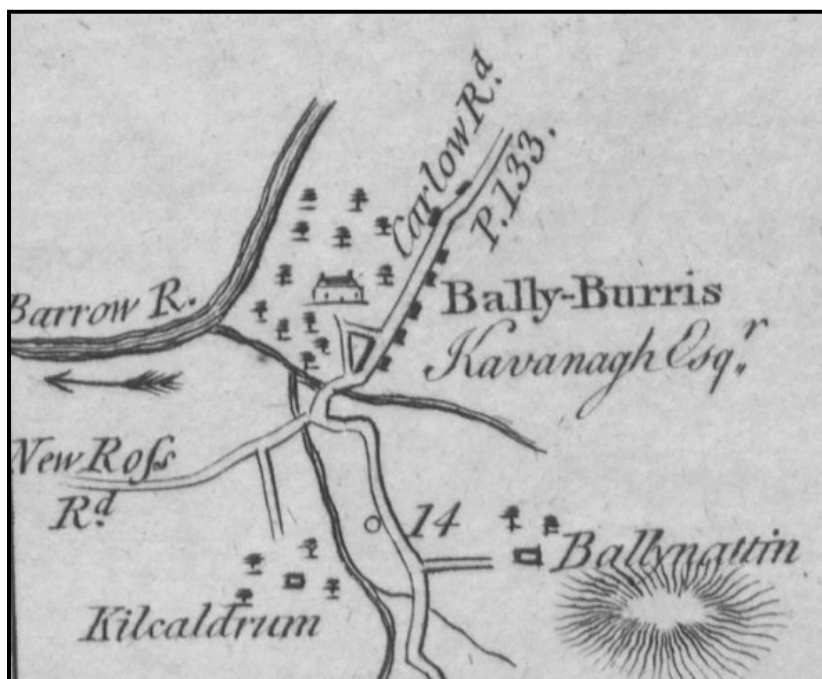


Figure 10 - Extract from Taylor & Skinner's Map 153, 1777 (Source: digitalcollections.tcd.ie).

Ordnance Survey Maps

The first ever large-scale survey of Ireland was undertaken by the Ordnance Survey between 1829 and 1842, producing highly accurate maps at different scales. The first edition Ordnance Survey 6-inch map, produced between 1837-42 (Figure 11), is the first to show the town of Borris in any detail. The settlement is sited next to the landscaped demesne at Borris House, in particular a large stone demesne wall, spread along a single main street. The proposed

development site is situated on the northwest periphery of the settlement and is shown in an undeveloped roughly rectangular, tree enclosed field. The Police Station at this time is sited opposite the main entry to Borris House.

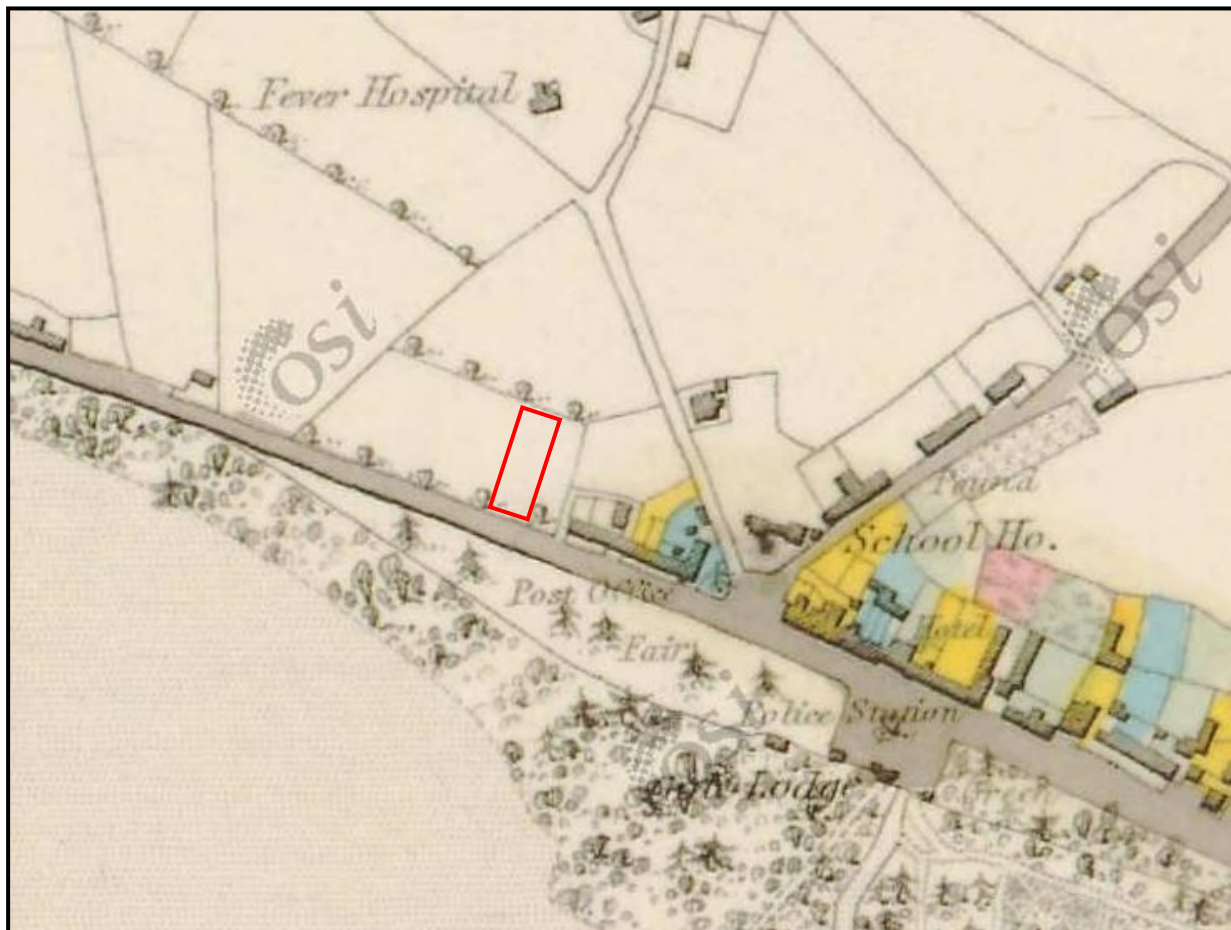


Figure 11 - Proposed development site boundary (red outline) on the first edition OS map, 1837-42 (OSi Licence No. EN 0077919).

Notable expansion of the village occurred in the intervening years to the publication of the revised 25-inch Ordnance Survey map (1888-1913) (Figure 12). 'The Cottages,' a row of semi-detached dwellings with long, linear rear sections, have developed to the northwest of the village, and a Constabulary Barracks has been built on the western extent of the earlier Main Street, on the site adjacent to the proposed development site. The remainder of the field, adjacent to the Barracks, remains undeveloped. The meaning of a black marking in the proposed development site immediately adjacent to the Barracks is unclear.

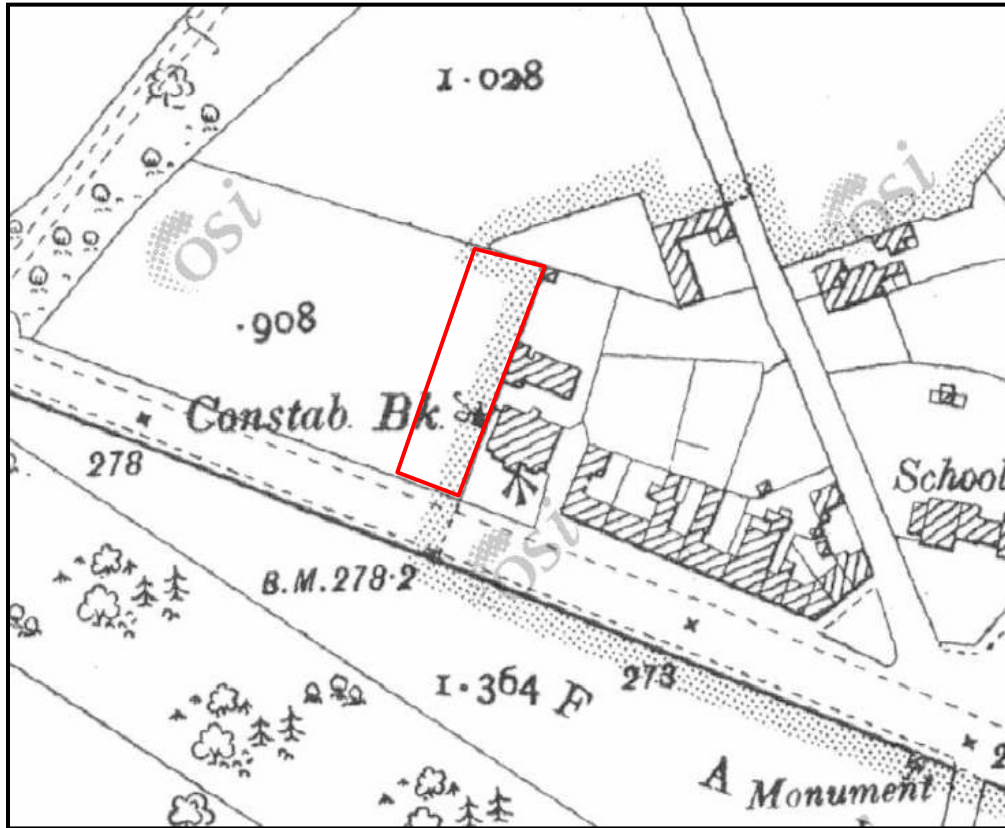


Figure 12 - Proposed development site boundary (red outline) on the revised 25-inch edition Ordnance Survey map 1888-1913 (OSi Licence EN 0077919).

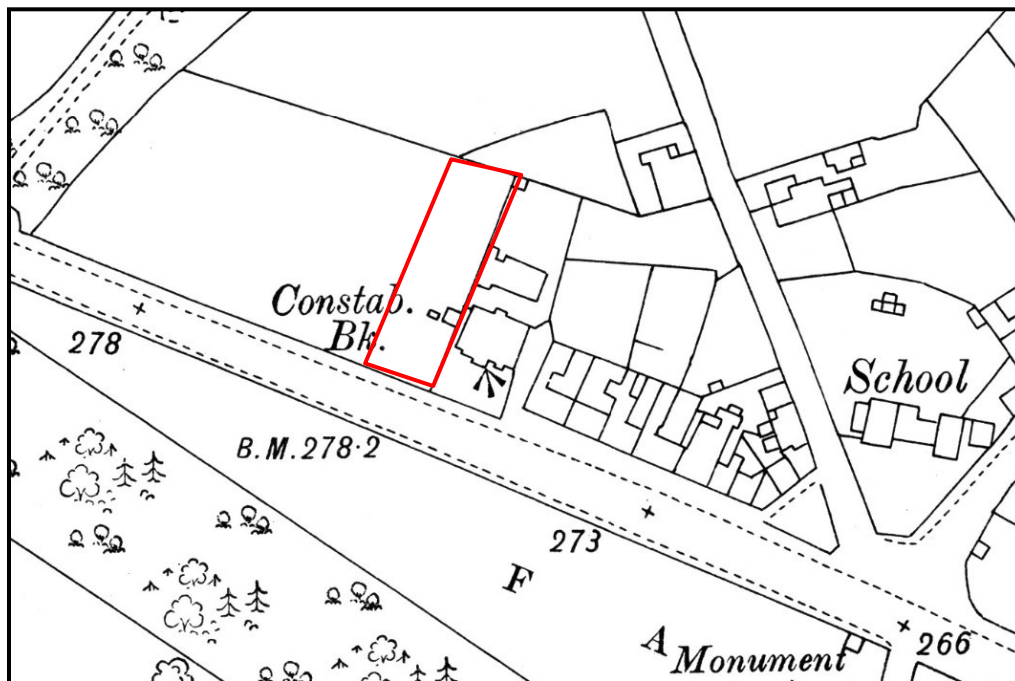


Figure 13 - Proposed development site boundary (red outline) on a 1908 town plan of Borris (scale 1:1056) (<https://digital.ucd.ie/view/ucdlib:40766>).

In 1908, it is clear that two small structures were present in the proposed development site, immediately adjacent to the Constabulary Barracks (Figure 13). It is unclear, what, if any, relationship these structures had with the Barracks. No other buildings are indicated nearby to suggest another link.

The Ordnance Survey 6-inch map dated c.1940 (Figure 14) no longer shows the two small structures, and the remainder of the field containing the proposed development site remains undeveloped.

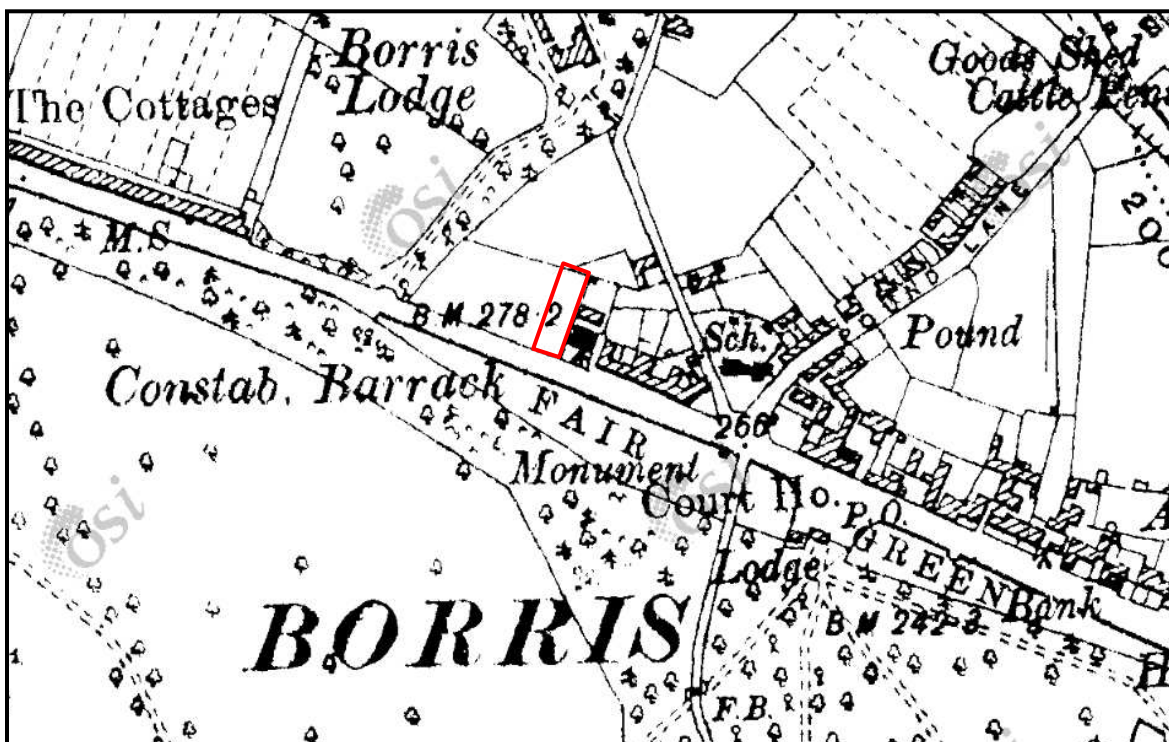


Figure 14 - Proposed development site boundary (red outline) on the Cassini 6-inch edition Ordnance Survey map, c. 1940 (OSi Licence EN 0077919).

3.3 Toponymy

The placename Borris, anglicised from the Irish *An Bhuiríos* or *Buirgeas ó nDróna*, is derived from the English medieval term 'burgage' (Flanagan & Flanagan 2002). The term was applied to land in a town or city held by rent or service to the Crown or a lord, and was also used to denote small borough towns established in the years following the colonisation of Ireland by the Anglo-Normans. The archive of the Placenames Database of Ireland contains documentation on research results of the Branch, and traces the origin of the placename

Borris, Co. Carlow, to at least 1552, when it is referred to as 'Burroys.' It has had various other spellings, including 'Borace' (c. 1570, and as depicted by John Speed in 1610), Borage (1571), Borresh (1582), the Borres (1593), and Borish (1639). A vicarage of Burreys is referenced in 1660. In the 19th century it is referred to as Borris or Ballyborris.

3.4 Archaeological Heritage

3.4.1 National Monuments

No national monuments either in the guardianship of the state or in the ownership of Carlow County Council are located on, or in close proximity to the proposed development site.

3.4.2 Sites and Monuments Record and Record of Monuments and Places

No archaeological monuments are listed in the RMP on, or in close proximity to the proposed development site. A list of the recorded monuments that lie within an approximate 1km radius of the proposed development site is presented in Table 4; monument locations are depicted on Figure 16. The closest archaeological site to the proposed development site, and to the centre of Borris, is castle CW022-019, in the grounds of Borris House.

Table 4: Recorded monuments within a 1km radius of the proposed development site.

RMP No.	Class	Townland	ITM Easting	ITM Northing	Proximity to site (m)
CW022-004---	Designed landscape feature	Borris	671595	650895	953
CW022-005---	Ritual site - holy well	Borris	672001	651046	662
CW022-007---	Megalithic structure	Clonygoose	673066	651393	920
CW022-009---	Ringfort - cashel	Clonygoose	673015	651189	722
CW022-019---	Castle - unclassified (Borris House)	Borris	672715	650235	382

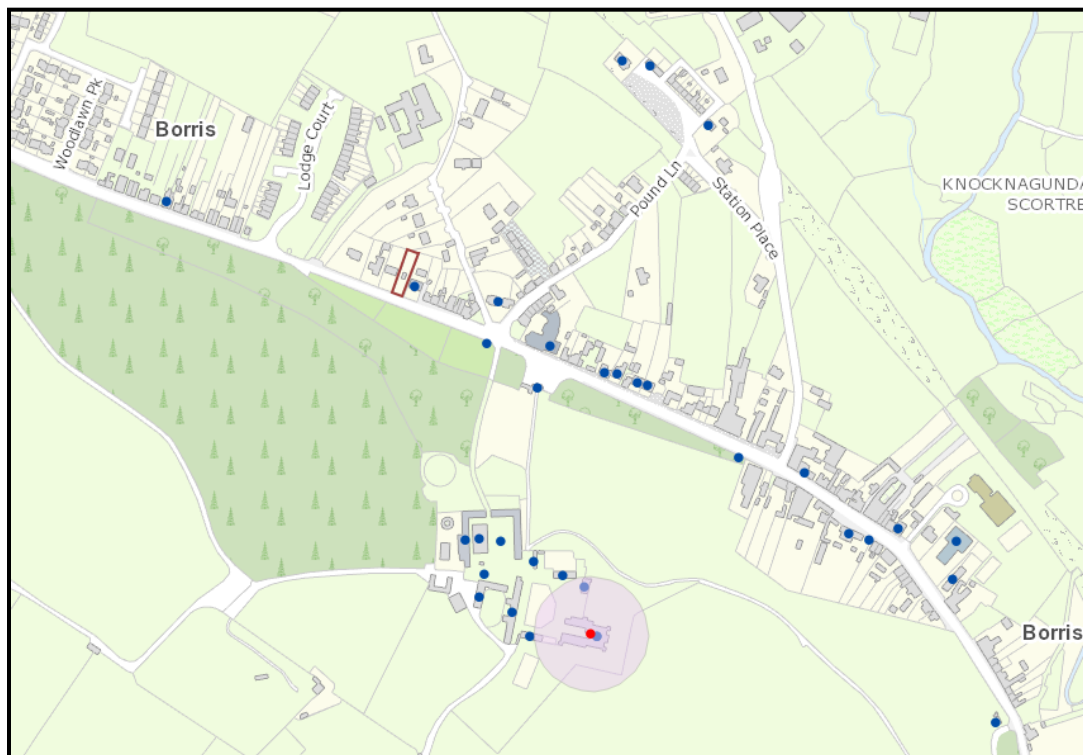


Figure 15 - Distribution map of sites listed in the Record of Monuments and Places (red dots) and the National Inventory of Architectural Heritage (blue dots) at Borris, as they relate to the proposed development site (outlined in red) (OSi Licence No. EN0077919).

3.4.3 Previous Archaeological Investigations

No previous archaeological investigation is recorded in the excavations database (www.excavations.ie) in proximity to the proposed development site. Relevant archaeological investigations carried out elsewhere in Borris and its immediate hinterland are listed in Table 5.

In 2003, Emmet Stafford (Excavations No. 2003:0045) monitored groundworks during construction of a detached dwelling in Clonygoose townland, adjacent to the location of possible megalithic structure CW022-007. No archaeological material was uncovered.

Archaeological monitoring was also carried out by Catherine McLoughlin during development at 'The Cottages' at the northwest end of the town in 2003 (Excavations No. 2003:0035), 2004 (Excavations No. 2004:0084) and 2005 (Excavations No. 2005:069). Nothing of confirmed archaeological significance was uncovered. A pit of unknown date was uncovered in the foundation trench of one house in 2005.

Table 5: Previous excavations in proximity of the development site.

Excavation No.	Licence No.	Location	Site Type	Author
2003:0045	03E1497	Clonygoose, Carlow	No archaeological significance	Emmet Stafford
2003:0035	03E0478	The Cottages, Borris, Carlow	No archaeological significance	Catherine McLoughlin
2004:0084	03E0478	The Cottages, Borris, Carlow	No archaeological significance	Catherine McLoughlin
2005:069	03E0478	The Cottages, Borris, Carlow	No archaeological significance	Catherine McLoughlin

3.4.4 Previous Archaeological Finds recorded in Topographical Files

There is one record entered in the Topographical Files of the National Museum of Ireland for the placenames Borris. It is not a find as such, but rather a purchase from the Kavanagh family, details as follows:

Ref: 1976:2

Description: Ivory horn with copper alloy fittings, known as the Kavanagh Charter Horn.

The 12th century horn, made of ivory, is currently on display in Borris House (<https://borrishouse.ie/the-estate/>). It may have represented the charter by which the Kavanagh family held tenure of their estates.

Ryan's (1833) history and antiquities of the county of Carlow details other artefacts recovered in the demesne at Borris House or held by the Kavanagh family, including 'The Figeen', a neck piece made of silver and tin, and a box known as the Liath Meisicith, described as an heirloom of the family.

3.5 Architectural Heritage

3.5.1 Record of Protected Structures

The Record of Protected Structures (RPS) for Borris is listed in Appendix 8 of the Carlow County Development Plan 2015-2021. No Protected Structure is located on the proposed

development site. However, the site is located adjacent to Borris Garda Station, which is listed as protect structure CW208. Numerous additional RPS structures are present in Borris, associated with the town, Borris House and the railway, which are listed in Table 6.

Table 6: RPS structures in Borris.

RPS Ref.	NIAH Ref.	Location	Description
CW36	10400803	Borris House Chapel, Borris House, Borris	The chapel is a three-bay church designed in the Tudor-gothic style by the Morrison's and was once linked to Borris House.
CW37	10400802	Borris House, Borris	The house is on the site of a late-medieval castle which was sited in front of the present house. The cellars of the castle survive running out in front. The house is an 18th century structure remodelled by the Morrisons in the early 19th century in their Tudor-gothic revival style. It has a seven-bay, three-story façade with corner towers and a gothic, arched porch.
CW180	10400801	The Dublin Gates, Borris House, Borris	Mid-18th century entrance gates.
CW181	10400805	South Lodge, Borris House, Borris	A small gate lodge of three bays with gable ends probably dating from the 1830s.
CW182	10400804	Turret Gates, Borris House, Borris	Entrance arch and lodge were designed by Sir Richard Morrison about 1813.
CW183	10400802	Borris House Yard Buildings, Borris House, Borris	Yard buildings, including stables, granary, hospital block, cart shed, entrance walls, and various ranges.
CW184	10400802	Borris House Walled Garden, Borris House, Borris	Walled garden enclosed in tall wall of coursed rubble granite.
CW185	10400819	Mitchell's, Main Street, Borris	A three-bay, two-storey, gable-ended house which is set back from the street, dating from c.1835.
CW186	10400824	Main Street, Borris	A three-bay, two-storey, gable-ended house with rough-cast walls, a pointed, granite doorcase, and drip-mould over. Adjacent elliptical-headed

RPS Ref.	NIAH Ref.	Location	Description
			carriage arch.
CW187	10400818	Main Street, Borris	A three-bay, two-storey, gable-ended house of circa 1815.
CW188	10400820	Main Street, Borris	A three-bay, two-storey, semi-detached, Tudor-revival house, dating from c.1835.
CW189	10400821	Main Street, Borris	A three-bay, two-storey, semi-detached, Tudor-revival house, dating from c.1835.
CW190	10400823	DJ Nolan Drapers, Main Street, Borris	A six-bay, two-storey terraced house, dating from c.1840 with renovations of c.1890.
CW193	10400827	Borris Catholic School, Borris	Tudor-gothic revival school dated 1832.
CW194	-	House, Bog Lane, Borris	A three-bay, two-storey house which is attached to a similar, gabled house.
CW195	-	House, Main Street, Borris	A terrace house which is entered from the main street but has a façade set at ninety degrees to the main street.
CW196	-	Borris Lodge, Borris	A three-bay, two-storey house of circa 1840 designed in a mildly gothic-revival style.
CW197	-	Burmah Petrol Station House, Main Street, Borris	A three-bay, two-storey, gable-ended house dating from the early 19th century.
CW198	-	M O'Shea, Main Street, Borris	A five-bay, two-storey, terrace house dating from the late 19th century.
CW199	-	E. Breen, Main St, Borris	A small, three-bay, two-storey, gable-ended house.

RPS Ref.	NIAH Ref.	Location	Description
CW200	-	Lamp Post, Main St, Borris	Three mid-19th century, cast-iron lamp posts.
CW201	-	Hand Pump, Main St, Borris	A late-19th century hand pump set in circular enclosure with granite posts and steps up to the pump.
CW202	-	Hand Pump, Main St, Borris	Late-19th century, cast-iron hand pump set on a granite platform.
CW203	-	House, Main St, Borris	A simple, two-bay, two-storey, early-19th century house.
CW204	-	Mill Owners House, Main St, Borris	A three-bay, two-storey, gable-ended house dating from circa 1840.
CW206	10400826	Church of the Sacred Heart, Borris	A large, T-plan, barn-church built in 1820.
CW207	10400825	The Presbytery, Main Street, Borris	A simple, three-bay, two-storey house dating from c. 1850.
CW208	10400811	Garda Station, Main Street, Borris	A detached, three-bay, two-story, gothic-revival house dating from c. 1850.
CW209	10400806	Kavanagh Memorial Fountain, Main Street, Borris	A memorial to the Hon. A. Kavanagh, dating from the 1890s.
CW210	10400807	Water Pump, Main Street, Borris	The remains of a cast-iron water pump, dated 1829, set within a circular wall and with a shallow stone trough in front.
CW211	10400808	J. Daltons, Main Street, Borris	A seven-bay, two-storey building, originally three houses amalgamated circa 1890.
CW212	10400822	Joyce's, Main Street, Borris	A group of buildings which were originally a coaching inn.

RPS Ref.	NIAH Ref.	Location	Description
CW213	10400810	Borris Estate Cottages, Main Street, Borris	A line of semi-detached, single-storey estate cottages originally two bays each. The houses date from circa 1855.
CW214	10400816	Coady's The Step House, Main Street, Borris	An end-of-terrace, six-bay, two-storey building, dated 1808, originally two separate buildings with irregular plans.
CW215	10400817	Coady's The Step House, Main Street, Borris	A three-bay, two-storey, gable-ended house over a high basement. The house dates from circa 1835.
CW216	10400812	Old School House, Main Street, Borris	A detached, five-bay, two-storey, Tudor-revival school and master's residence. The school dates from circa 1830.
CW217	10400813	Former Station Masters House, Borris Train Station, Borris	A detached, three-bay, single-storey, gable-ended station master's house.
CW218	10400814	Former Station House, Borris Train Station, Borris	The former railway station of circa 1855.
CW219	10400815	Former Goods Shed, Borris Train Station, Borris	A small, detached, two-bay, single-storey goods shed converted into a house.
CW220	10400809	Victorian Letter Box, Main Street, Borris	Wall-mounted cast-iron Victorian letter box, c. 1880.

3.5.2 National Inventory of Architectural Heritage

The NIAH survey of County Carlow records numerous buildings and structures in Borris, which reflect the history and development of the town, and its hinterland. The structures have been incorporated into Carlow's RPS, which are listed in Table 6. NIAH structures are depicted on Figure 16.

3.5.3 Architectural Conservation Areas

Borris was designated as an Architectural Conservation Area (ACA) during the preparation of the Borris Local Area Plan. In this regard, most structures in the town are important in the context of their contribution to the streetscape and character of the town (Carlow County Development Plan, Section 9.3.3, 229).

4. Archaeological Test Excavation

In accordance with Excavation Licence No. 19E0612, issued by the Department of Culture, Heritage and the Gaeltacht, a total of 6 test trenches were machine excavated across the footprint of the proposed development site (Figure 16 in Appendix; Plates 1 and 2). The purpose of testing was to assess the impact of site development on potential sub-surface archaeological remains, and in particular to determine the nature and extent of an underground stone and brick structure - a cell or passage like structure - on the site. The structure is located in the front half of the proposed development site, extending westward from a point next to the boundary wall with Borris Garda Station. Test excavation was carried out by the licensee on 1st November 2019.

4.1 Results of Test Excavation

Table 7: Results of test excavation.

Trench No.	Alignment	Dimensions (m)	Depth (m)
1	N-S	20L x 1.8W	0.5
<p>Description: The upper layer comprised of 0.15m of compact gravel (yard surface). This deposit overlay 0.35m of dark-brown topsoil material with small sub-angular stone inclusions. The natural subsoil deposit comprised of moderately compact yellow/brown gritty sandy silt with occasional medium and large sized granite boulders. A large linear cut (orientation NW x SE) was exposed approximately 10m from the south end of the cutting. A concrete storm water pipe was found at the base of the cut. Plates 3 and 4.</p>			
<p>Result: No features or finds of archaeological significance.</p>			

Trench No.	Alignment	Dimensions (m)	Depth (m)
2	N-S	20L x 1.8W	0.5
<p>Description: Situated to the west of Test trench 1. There was no notable change in stratigraphy between the trench and Test trench 1. The linear cut (orientation NW x SE) containing a concrete storm water pipe exposed in Test trench 1 was also noted in the northern end of the cutting. Plate 5.</p>			
<p>Result: No features or finds of archaeological significance.</p>			

Trench No.	Alignment	Dimensions (m)	Depth (m)
3	N-S	20L x 1.8W	0.35-0.5
<p>Description: Situated to the west of Test trench 2. There was no change in the stratigraphy from that in Test trenches 2 and 3. The linear cut (orientation NW x SE) containing a concrete storm water pipe exposed in Test trenches 2 and 3 was also noted in the northern end of the cutting, so that the linear cut is common to all three test trenches. Plate 6.</p>			
<p>Result: No features or finds of archaeological significance.</p>			

Trench No.	Alignment	Dimensions (m)	Depth (m)
4	N-S	3L x 1.8W	0.35
<p>Description: Excavated on the west side of a concrete access ramp into the 20th century shed/garage building on site. The purpose of the cutting was to investigate the west extent of the underground cell/passage on site, and if it extended under the concrete ramp. No evidence of the underground cell/passage was identified extending from the west side of the concrete ramp. The stratigraphy comprised of 0.06m of tarmacadam overlying a concrete plinth on the east side of the cutting and a layer of mid-brown gritty, sandy silt (similar to Test trenches 1-3), which in turn overlay the natural subsoil, described as a yellow, sandy silt. Plate 7.</p>			
<p>Result: No features or finds of archaeological significance.</p>			

Trench No.	Alignment	Dimensions (m)	Depth (m)
5	E-W and N-S (L-shaped)	3-6L x >1.8W	0.5
<p>Description: The trench was placed in the area containing the underground cell/passage on the west boundary adjacent to the Garda Station. The cutting was L shaped in order to determine the northern and southern extents of the structure. It was difficult to get a straight line with the mechanical excavator due to the shed/garage building and associated access ramp. The test trench measured 0.50 m in depth, but was less deep in the area where the sidewalls of the structure were found. The north part of the test trench extended E-W and measured c. 3m in length. The southern return of the cutting, extending N-S, measured c.6m in length. Two side walls delineating a passage were exposed extending from E-W from a roughly square or box opening (c. 0.66m N-S x 0.56m E-W) in the eastern end of the structure (next to the Garda Station boundary wall). The walls are</p>			

formed of a mixture of granite stone (roughly dressed) and brick bonded with a lime mortar measuring approximately 0.50m in thickness. A brick facade was built up against the granite wall on the inside of the passage; brick extends below the granite stone in the square opening. The exposed extents of the east-west walls measured approximately 1.60 m in length. Towards the eastern end of the cutting a number of flat, regularly coursed granite paving stones and blocks are set close to the box opening, possibly forming steps or a yard area around the structure. The interior of the structure was quite narrow, measuring approximately 1.35m wide north-south, and had mostly been filled in when the crown had been demolished sometime in the recent past. Small quantities of finds were recovered from the area including slate, clay tobacco pipe, and 19th century pottery. Further investigation will reveal the full extent of the structure to the west when the access ramp and shed/garage building are demolished at a future date. Plates 8-11.

Result: Underground cell/passage with box opening.

Trench No.	Alignment	Dimensions (m)	Depth (m)
5	E-W	7.5L x 1.8W	0.4
<p>Description: Excavated at the southern or street frontage part of the site, east of the site entrance. The stratigraphy was similar to that found throughout the site. A linear feature, possibly a plough mark, extended in a NW- SE direction towards the west end of the cutting. Plate 13.</p>			
<p>Result: No features or finds of archaeological significance.</p>			

4.1.1 Review of Finds Recovered During Test Excavation

Small quantities of finds were recovered from backfill in the underground cell/passage investigated in Test trench 5. The finds included slate fragments, an oyster shell fragment, a black glazed tile fragment, a clay tobacco pipe, and 19th century pottery sherds (Plate 14).

4.2 Plates



Plate 1 - Proposed development site, Main Street, Borris, with Borris Garda Station to right (looking NE, 01.11.2019).



Plate 2 - Rear of proposed development site (looking S, 01.11.2019).



Plate 3 - Test trench 1 from S-N (01.11.2019).



Plate 4 - Concrete storm water pipe in Test trench 1 (01.11.2019).



Plate 5 - Test trench 2 from N-S (01.11.2019).



Plate 6 - Test trench 3 from S-N (01.11.2019).



Plate 7 - Test trench 4 from W-E (01.11.2019).



Plate 8 - Test trench from W-E showing surface of walls delineating underground cell/passage (01.11.2019).



Plate 9 - Test trench 5 from E-W with square or box opening in foreground (01.11.2019).



Plate 10 - Test trench 5 from S-N across underground cell/passage structure (01.11.2019).



Plate 11 - Underground cell/passage as viewed E-W from box opening (02.09.2019).



Plate 12 - Vertical drone image of the proposed development site showing location of underground structure relative to Borris Garda Station on the adjoining property (01.11.2019).



Plate 13 - Test trench 6 from W-E (01.11.2019).



Plate 14 - Finds recovered from backfill of underground structure in Test Trench 5.



Plate 15 - Concrete mortar on granite boundary wall at location of underground structure (02.09.2019).

5. Conclusion and Recommendations

With the exception of an underground linear stone and brick structure, no additional features of archaeological or built heritage interest were exposed during archaeological test excavation at the proposed development site. There is currently no evidence of a direct physical link between the underground structure and Borris Garda Station on the adjoining property. However, it is probable that the structure is associated with the operation of the adjoining site when it functioned as a Constabulary Barracks in the 19th and early 20th century. A 1908 town plan of Borris records the existence of two small structures adjoining the west boundary of the Constabulary Barracks. That a structure adjoined the boundary is supported by the presence of concrete mortar that still covers part (1.98m) of the granite stone boundary wall (Figure 15).

The underground structure is comprised of a roughly square granite stone opening accessing a linear, brick lined passage, measuring 1.35m wide internally. A notch in the west stone of the opening suggests it was accessed via a hinged door. The passage extends 3.3m westward of the opening, to a point beneath the concrete ramp at the base of the 20th century shed/garage on the site.

The proposal to construct 2 attached 2 bed, 2-storey dwellings will have a negative, direct impact on the underground structure.

5.1 Mitigation Measures

Mitigation measures are necessary in order to comply with national policy guidelines and statutory provisions for the protection of archaeological, architectural and cultural heritage, including the National Monuments Acts 1930-2004, the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999 and the Planning and Development Act 2000 (as amended).

5.1.1 Avoidance of Impact

Avoidance of direct and indirect impacts on the underground structure is the preferred option with regards to proposed development at the subject site. Given the shallow nature of the structure, which is no more than 0.25m below the present ground surface, preservation *in-situ*

may not be feasible. If avoidance or preservation through redesign is not achievable, the following recommendations are made.

5.1.2 Pre-Construction Mitigation

Archaeological excavation and recording of the underground structure, to full resolution, is recommended. Adequate funds to cover excavation, fencing (if required), post-excavation analysis, and reporting should be made available.

This work should be carried out by a suitably qualified archaeologist, under licence, in accordance with Section 26 of the National Monuments Acts 1930-2004, and with a method statement agreed in advance with the National Monuments Service (Department of Culture, Heritage, and the Gaeltacht) and the National Museum of Ireland.

6. Bibliography

Bence-Jones, M. 1978. *Burke's Guide to Country Houses, Vol. 1, Ireland*. Burke's Peerage Ltd. London.

Dean, J.A.K. 2016. *The Gate Lodges of Leinster: a gazetteer*. Wordwell, Dublin.

Flanagan, D. & Flanagan, L. 2002. *Irish Place Names*. Gill & Macmillan, Dublin.

Joyce, P.W., 1923. *Irish Local Names Explained*. B.T. Batsford Ltd., London.

Lewis, S. 1837. *A Topographical Dictionary of Ireland*. S. Lewis & Co. London.

<https://www.libraryireland.com/topog/>.

NIAH, 2002. *An Introduction to the Architectural Heritage of County Carlow*. Government of Ireland.

Ó Riain, F. 2000. *Townlands of Leinster and the people who lived there*. Open Air, an imprint of Four Courts Press, Dublin.

O'Toole, E. (1933). The Holy Wells of County Carlow (Continued). *Béaloidéas*, 4(2), 107-130.

Retrieved from <http://www.jstor.org/stable/20521779>.

Pearson, P., & Mulcahy, J. (2009). Borris House, Co Carlow. *Irish Arts Review (2002-)*, 26(2), 102-

107. Retrieved from <http://www.jstor.org/stable/25654689>

P. 1832. Ancient Irish Horn. *The Dublin Penny Journal*, 1(10), 76-77.

Retrieved from <http://www.jstor.org/stable/30003091>.

Ryan, J. 1833. *The History and Antiquities of the County of Carlow*. R. M. Times, Dublin.

Retrieved from <https://archive.org/details/historyandantiq00ryangoog>.

Taylor, G. & Skinner, A. 1778. *Taylor and Skinner's Maps of the roads of Ireland, Surveyed 1777*.

Cartographic Sources

Speed's Map of Leinster, 1610.

Petty, W. Down Survey, 1656-58.

Ordnance Survey Ireland-

1837-42, first edition 6" map,

1888-1913, revised 25" map,

1908 town plan edition, and

c. 1940 Cassini 6"map.

Electronic sources

Carlow County Development Plan 2015-2021:

<http://www.carlow.ie/wp-content/documents/uploads/carlow-county-dev-plan-2015-2021.pdf>

Borris Local Area Plan 2010-2016:

<http://www.carlow.ie/wp-content/documents/uploads/borris-lap.pdf>

www.excavations.ie: Summary of archaeological excavations
www.archaeology.ie: DoCHG website listing RMP sites and NIAH sites
<http://www.buildingsofireland.ie>: National Inventory of Architectural Heritage
<https://www.logainm.ie/>: Placename database
www.jstor.org: Journal articles, books and primary sources
www.libraryireland.com/topog: A Topographical Dictionary of Ireland

Ordnance Survey Ireland (OSi) 19th Century Historical Maps:

<https://digital.ucd.ie/view/ucdlib:41722>

Taylor and Skinner's Maps of the Roads of Ireland:

<https://digitalcollections.tcd.ie/>

Speed's Map of Leinster 1610:

www.swilson.info/maps/leinster1610-speed.php

Down Survey maps:

www.downsurvey.tcd.ie/down-survey-maps.php

<https://borrishouse.ie/the-estate/>: Borris House history

<https://archive.org/details/historyandantiqu00ryangoog>:

The History and antiquities of the County of Carlow

7. Appendix

Figure 16 - Post-excavation plan of test trenches.