

## 11.0 ARCHAEOLOGICAL, ARCHITECTURAL AND CULTURAL HERITAGE

### 11.1 INTRODUCTION

#### 11.1.1 General

This chapter assesses the potential impacts, if any, on the archaeological, architectural and cultural heritage resource of a proposed data centre development at Tooreen and Cahernalough, Ennis, County Clare (ITM 537485/679651; Figure 11.1).

This study determines, as far as reasonably possible from existing records, the nature of the archaeological, architectural, and cultural heritage resource in and within the vicinity of the proposed development using appropriate methods of study. Desk-based assessment is defined as a programme of study of the historic environment within a specified area or site that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic, and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets (ClfA 2014). This leads to the following:

- determining the presence of known archaeological and architectural assets that may be affected by the proposed development;
- assessment of the likelihood of finding previously unrecorded archaeological and architectural remains during the construction programme;
- determining the impact upon the setting of known cultural heritage sites in the surrounding area; and
- suggested mitigation measures based upon the results of the above research.

The study involved detailed interrogation of the archaeological, architectural and historical background of the proposed development area. This included information from the Record of Monuments and Places of County Clare, the Record of Protected Structures, National Inventory of Architectural Heritage, the Clare County Development Plan (2017-2023), the topographical files of the National Museum of Ireland, and cartographic and documentary records. A field inspection has been carried out in an attempt to identify any known archaeological, architectural and cultural heritage sites and previously unrecorded features, structures, and portable finds within the proposed development area.

An impact assessment and a mitigation strategy have been prepared. The impact assessment is undertaken to outline potential adverse impacts that the proposed development may have on the cultural heritage resource, while the mitigation strategy is designed to avoid, reduce, or offset such adverse impacts.

#### 11.1.2 Legislation and Guidelines

The following legislation, standards and guidelines were consulted as part of the assessment.

- National Monuments Act, 1930 to 2014;
- The Planning and Development Acts, 2000 (as amended) ;
- Heritage Act, 1995, as amended;

- Draft Advice Notes on Current Practice (in the preparation of Environmental Impact Statements), 2015, EPA;
- Draft Guidelines on the Information to be Contained in Environmental Impact Statements. Dublin. Government Publications Office, 2017, EPA;
- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999, (formerly) Department of Arts, Heritage, Gaeltacht, and Islands; and
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999

### 11.1.3 Consultation

During scoping and research for the assessment and EIAR, a number of statutory and voluntary bodies were consulted to gain further insight into the cultural background of the receiving environment and study area, as follows:

- Department of Housing, Local Government and Heritage – the Heritage Service and Policy Unit, National Monuments and Historic Properties Section: Record of Monuments and Places; Sites and Monuments Record; Monuments in State Care Database; Preservation Orders; Register of Historic Monuments;
- National Museum of Ireland, Irish Antiquities Division: topographical files of Ireland;
- National Inventory of Architectural Heritage: County Clare; and
- Clare County Council: Planning Section.

### 11.1.4 Definitions

In order to assess, distil and present the findings of this study, the following definitions apply:

'Cultural Heritage' where used generically, is an over-arching term applied to describe any combination of archaeological, architectural, and cultural heritage features, where:

- the term 'archaeological heritage' is applied to objects, monuments, buildings or landscapes of an (assumed) age typically older than AD 1700 (and recorded as archaeological sites within the Record of Monuments and Places);
- the term 'architectural heritage' is applied to structures, buildings, their contents and settings of an (assumed) age typically younger than AD 1700; and
- the term 'cultural heritage', where used specifically, is applied to other (often less tangible) aspects of the landscape such as historical events, folklore memories and cultural associations.

The quality, magnitude and duration of potential effects are defined in accordance with the criteria provided in the EPA Draft '*Guidelines on the information to be contained in Environmental Impact Assessment Reports*' (2017) as outlined in Table 1.2 of Chapter 1 (introduction).

## 11.2 METHODOLOGY

Research for this report was undertaken in two phases. The first phase comprised a paper survey of all available archaeological, architectural, historical, and cartographic sources. The second phase involved a field inspection of the site.

### 11.2.1 Paper Survey

This is a document search. The following sources were examined and a list of areas of archaeological, architectural and cultural heritage potential was compiled:

- Record of Monuments and Places for County Clare;
- Sites and Monuments Record for County Clare;
- National Monuments in State Care Database;
- Preservation Orders List;
- Register of Historic Monuments;
- Topographical files of the National Museum of Ireland;
- Cartographic and written sources relating to the study area;
- Clare County Development Plan, 2017-2023;
- Aerial photographs;
- Excavations Bulletin (1970–2019);
- Place Names; and
- National Inventory of Architectural Heritage.

*Record of Monuments and Places (RMP)* is a list of archaeological sites known to the National Monuments Section, which are afforded legal protection under Section 12 of the 1994 National Monuments Act and are published as a record.

*Sites and Monuments Record (SMR)* holds documentary evidence and field inspections of all known archaeological sites and monuments. Some information is also held about archaeological sites and monuments whose precise location is not known e.g. only a site type and townland are recorded. These are known to the National Monuments Section as 'un-located sites' and cannot be afforded legal protection due to lack of locational information. As a result, these are omitted from the Record of Monuments and Places. SMR sites are also listed on a website maintained by the Department of Housing, Local Government, and Heritage (DoHLGH) – [www.archaeology.ie](http://www.archaeology.ie).

*National Monuments in State Care Database* is a list of all the National Monuments in State guardianship or ownership. Each is assigned a National Monument number whether in guardianship or ownership and has a brief description of the remains of each Monument.

The Minister for the DoHLGH may acquire national monuments by agreement or by compulsory order. The state or local authority may assume guardianship of any national monument (other than dwellings). The owners of national monuments (other than dwellings) may also appoint the Minister or the local authority as guardian of that monument if the state or local authority agrees. Once the site is in ownership or guardianship of the state, it may not be interfered with without the written consent of the Minister.

*Preservation Orders List* contains information on Preservation Orders and/or Temporary Preservation Orders, which have been assigned to a site or sites. Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference with the site illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders with the written consent, and at the discretion, of the Minister.

*Register of Historic Monuments* was established under Section 5 of the 1987 National Monuments Act, which requires the Minister to establish and maintain such a record. Historic monuments and archaeological areas present on the register are afforded statutory protection under the 1987 Act. All registered monuments are included in the Record of Monuments and Places.

*The topographical files of the National Museum of Ireland* are the national archive of all known finds recorded by the National Museum. This archive relates primarily to artefacts but also includes references to monuments and unique records of previous excavations. The find spots of artefacts are important sources of information on the discovery of sites of archaeological significance.

*Cartographic sources* are important in tracing land use development within the development area as well as providing important topographical information on areas of archaeological potential and the development of buildings. Cartographic analysis of all relevant maps has been made to identify any topographical anomalies or structures that no longer remain within the landscape.

- William Petty, Down Survey, Barony of Bunratty, c. 1655;
- Henry Pelham, The County of Clare, 1787; and
- Ordnance Survey maps of County Clare, 1840-2, 1893-1907 and 1913-8.

*Documentary sources* were consulted to gain background information on the archaeological, architectural and cultural heritage landscape of the proposed development area.

*Development Plans* contain a catalogue of all the Protected Structures and archaeological sites within the county. The Clare County Development Plan (2017–2023) was consulted to obtain information on cultural heritage sites in and within the immediate vicinity of the proposed development area.

*Aerial photographic coverage* is an important source of information regarding the precise location of sites and their extent. It also provides initial information on the terrain and its likely potential for archaeology. A number of sources were consulted including aerial photographs held by the Ordnance Survey, Google Earth and Bing Maps.

*Excavations Bulletin* is a summary publication that has been produced every year since 1970. This summarises every archaeological excavation that has taken place in Ireland during that year up until 2010 and since 1987 has been edited by Isabel Bennett. This information is vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files. This information is also available online ([www.excavations.ie](http://www.excavations.ie)) from 1970–2020.

*Place Names* are an important part in understanding both the archaeology, history, and cultural heritage of an area. Place names can be used for generations and in some cases have been found to have their root deep in the historical past. The main references used for the place name analysis is *Irish Local Names Explained* by P.W Joyce (1870) and the Place Names Database of Ireland.

*The National Inventory of Architectural Heritage (NIAH)* is a state initiative established under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999 tasked with making a nationwide record of significant local, regional, national and international structures, which in turn provides county councils with a guide as to what structures to list within the Record of

Protected Structures. The NIAH have also carried out a nationwide desk-based survey of historic gardens, including demesnes that surround large houses.

### 11.2.2 Field Inspection

Field inspection is necessary to determine the extent and nature of archaeological, architectural, and historical remains and can also lead to the identification of previously unrecorded or suspected sites and portable finds through topographical observation and local information.

The archaeological and architectural field inspection entailed:

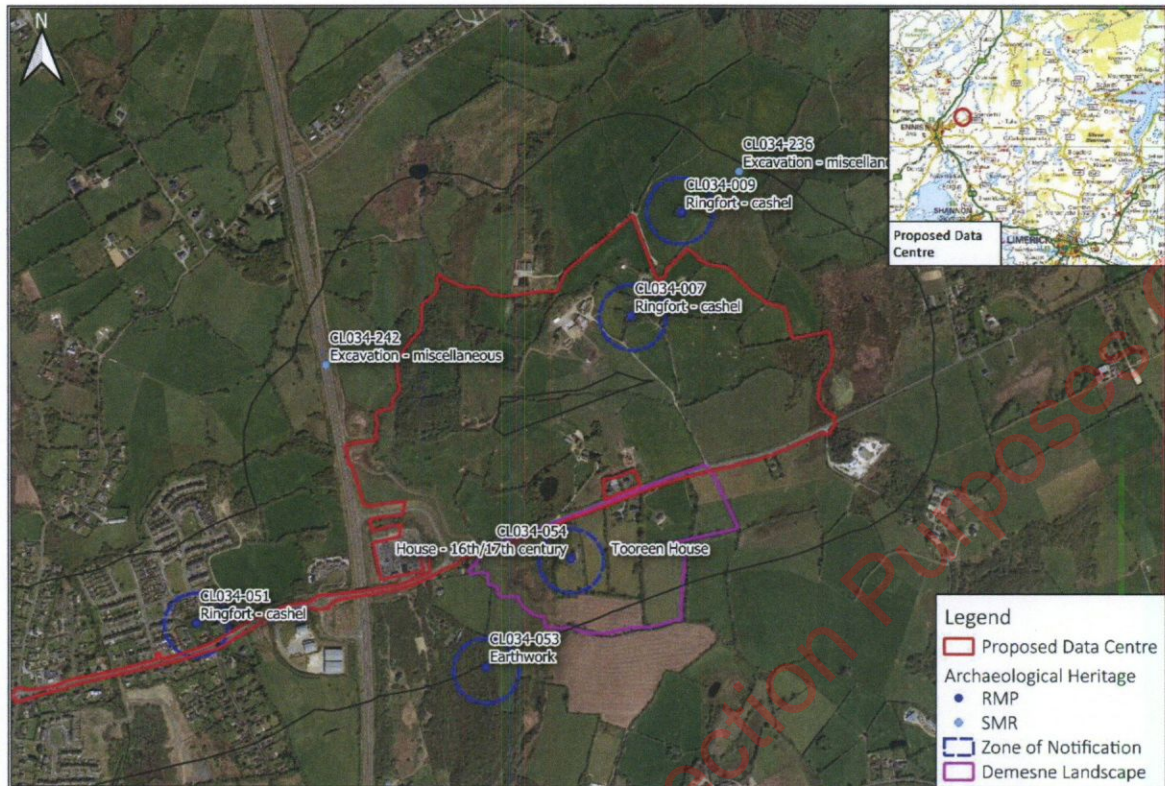
- Walking the proposed development and its immediate environs;
- Noting and recording the terrain type and land usage;
- Noting and recording the presence of features of archaeological or historical significance;
- Verifying the extent and condition of any recorded sites; and
- Visually investigating any suspect landscape anomalies to determine the possibility of their being anthropogenic in origin.

During the baseline analysis and field inspection, a number of sites of heritage merit have been identified, which do not have statutory protection, but represent sites that require assessment as part of the overall cultural heritage resource. Cultural Heritage (CH) has been applied to sites or structures that possess archaeological and/or architectural heritage significance. Area of Archaeological Potential (AAP) has been applied to areas of the landscape, such as loughs or watercourses, that whilst are not specifically archaeological in nature, are landscape features that have proven throughout the prehistoric and historic period to attract human habitation and settlement.

## 11.3 RECEIVING ENVIRONMENT

### 11.3.1 Archaeological and Historical Background

The proposed development area is situated within a number of open fields primarily in the townlands of Cahernalough and Tooreen with small sections extending west into the townlands of Ballymacahill and Knockanean, which are located in the parishes of Kilraghtis and Doora and barony of Bunratty Upper, County Clare. The landscape is currently under agricultural use, which would likely continue without the proposed development. The site is bordered to the south by the R352 and to the west by the M18. There is one recorded monument within the northern half of the proposed development, a cashel (RMP CL034-007) with a further six recorded sites located within the study area (250m) (Figure 11.1). There are no protected structures or structures listed in the NIAH located within the study area of the proposed development.



**Figure 11.1** Location of proposed development and surrounding recorded monuments and demesne landscapes

### 11.3.1.1 Prehistoric Period

#### Mesolithic Period (6000-4000 BC)

Although very recent discoveries may push back the date of human activity by a number of millennia (Dowd and Carden 2016), the Mesolithic period is the earliest time for which there is clear evidence for prehistoric activity in Ireland. During this period people hunted, foraged, and gathered food and appear to have had a mobile lifestyle. The most common evidence found to show the presence of Mesolithic communities at a site consists of scatters of worked flint material, a by-product from the production of flint implements. There are no known Mesolithic sites located within the vicinity of the proposed development; however, the River Fergus, with its range of materials and resources, c. 2.4km to the west-southwest, would have been an attractive location for early hunter gatherers, providing access to the Shannon estuary to the south and deep into the Irish Midlands.

#### Neolithic Period (4000-2500 BC)

In the Neolithic period communities became less mobile and their economy became based on the rearing of stock and cereal cultivation. The transition to the Neolithic was marked by major social change. Communities had expanded and moved further inland to more permanent settlements. This afforded the development of agriculture which demanded an altering of the physical landscape. Forests were rapidly cleared, and field boundaries constructed. Pottery was also being produced, possibly for the first time.

While recent years have seen a large increase in the number of identified Neolithic settlement and habitation sites, the period is most commonly characterised by its impressive megalithic tombs. There are four types of tomb; court cairn, portal, passage, and wedge. The court, portal, and passage style tombs are of pure Neolithic date, while the wedge tomb straddles the Neolithic to Bronze Age transition. Evidence of Neolithic activity in the county is represented by the presence of court tombs and portal tombs in the Burren and stray artefacts typical of this period. A wedge tomb (RMP CL026-091) is recorded c. 2.1km to the northeast of the proposed data centre.

#### Bronze Age (2500-800 BC)

During the Bronze Age settlement within the wider landscape continued and intensified and there is a range of evidence for activity in the surrounding wetlands and drylands of the Shannon estuary and Fergus valley (O' Sullivan 2001). Evidence for a possible late Bronze Age wooden trackway crossing the upper Fergus estuary, providing access between dryland islands, was recorded c. 8km south-southwest of the site (O' Sullivan 2001, 109; RMP CL042-149). This has been interpreted as evidence for the herding of cattle or sheep on the saltmarshes by the local farming community (ibid. 261).

The Bronze Age was marked by the widespread use of metal for the first time in Ireland. As with the transition from Mesolithic to Neolithic, the transition into the early Bronze Age was accompanied by changes in society. The construction of megalithic tombs went into decline and the burial of the individual became typical. Cremated or inhumed bodies were often placed in a cist, which is a stone-lined grave, usually built of slabs set upright to form a box-like construction and capped by a large slab or several smaller lintels (Buckley and Sweetman 1991). Barrows and pit burials are also funerary monuments associated with this period. A Bronze Age palstave was recovered during testing for the Ennis Bypass, c. 910m to the north-northwest (Licence 03E1293).

Another site type thought to reveal a glimpse of domestic life at this time is the burnt mound and fulacht fiadh. A common site within the archaeological record, they are normally interpreted as temporary cooking sites but may have been used for other industrial or even recreational functions. They survive as low mounds of charcoal-enriched soil mixed with an abundance of heat-shattered stones. They are usually horseshoe shaped and located in low-lying areas near a water source and are often found in clusters. Even when levelled by an activity such as ploughing, they are identifiable as burnt spreads in the landscape (Brindley and Lanting 1990).

#### Iron Age (800 BC-AD 500)

The Iron Age was traditionally seen as a period for which there was little evidence in comparison to the preceding Bronze Age and the succeeding early medieval period. However, development-led excavation in recent decades and projects such as the 'Late Iron Age and Roman Project' have added significantly to our knowledge of the Irish Iron Age. In Europe, there are two stages to the Iron Age, the earlier Hallstatt and followed by the La Tene phase. It is clear there was significant contact and interaction between the Continental Europe, Britain and Ireland at this time. There are no recorded sites of Iron Age date in the vicinity of the proposed development area.

#### 11.3.1.2 Early Medieval Period (AD 500–1100)

County Clare formed from a very early period as a native principality, designated *Tuath Mumhan* (North Munster), or Thomond and contained the six cantrels of *Hy Lochlean*, *Corcumruadh*, *Ibh Caisin*, *Hy Garman*, *Clan Cuilean* and *Dal Gaes*. Archaeological

evidence for settlement at this time is characterised in the landscape by ringforts, cashels, souterrains and early ecclesiastical sites.

The early medieval period is depicted in the surviving sources as largely rural characterised by the basic territorial unit known as *túath*. Byrne (2001) estimates that there were likely to have been at least 150 kings in Ireland at any given time during this period, each ruling over his own *túath*. Enclosures comprise the greatest number of sites recorded in the County Clare Sites and Monuments Record (SMR). Cashels are the stone equivalent of ringforts and are normally found in the west of the country. These together with the ringfort or rath are considered to be the most common indicator of settlement during the early medieval period. Ringforts were often constructed to protect rural farmsteads and are usually defined as a broadly circular enclosure. One of the most recent studies of the ringfort (Stout 2017) has suggested that there is a total of 47,000 potential ringforts or enclosure sites throughout Ireland. They are typically enclosed by an earthen bank and exterior ditch and range from 25m to 50m in diameter. Ringforts can be divided into three broad categories – univallate sites, with one bank or ditch; multivallate sites with as many as four levels of enclosing features and platform or raised ringforts, where the interior of the ringfort has been built up. These enclosed farmsteads were intimately connected to the division of land and the status of the occupant. There is one ringfort recorded within the site containing the proposed data centre (CL034-007), where the enclosure is defined as a cashel. There is a further two ringforts located within 250m of the site (CL034-051, 009).

#### 11.3.1.3 Medieval Period (AD 1100–1600)

It was shortly after the arrival of the Anglo-Normans that Donncadh Cairbreach O' Brien, King of Thomond, moved the O' Brien royal residence from Limerick City to the newly constructed earthen fort at *Clonroad* or *Cluain Ráda*, c. 2.7km to the southwest of the development area (Ó' Dálaigh 2012, 1; RMP CL033-085005). The new stronghold was located at a fording point on the River Fergus in the northeast of modern Ennis town. Following his death, his son and successor Conor Ruadh, transferred the stronghold and settlement from the northern banks of the River Fergus to the southern bank (RMP CL033-085006).

A Franciscan Abbey (RMP CL033-082001) was founded, by King *Donncadh Cairbreach O' Brien* in the 1240s at a place known as *Inish Mac nInil*, c. 3.4km to the southwest of the development area. The friary was suppressed in 1543 and was leased to James Naylande in 1569 after which it became an effective centre for English government in Thomond. Courts were held in the abbey – possibly in the sacristy. At the time of dissolution the friary property included a church, belfry, graveyard, a mill on the Fergus, an eel weir, two messuages with stone walls and twelve houses in the town of *Innishe* (Ó' Dálaigh 2012, 3). In 1589 the friary was leased to *Donnchad O' Brien* 4th Earl of Thomond who was credited with ensuring the preservation of the building. The monastery was the principal burial place of the Kings (and later Earls) of Thomond. The remaining ruins comprise of a church and parts of a cloister.

In 1543, the last recognised King of Thomond, Murrough the Tanist, travelled to London to become the first Earl of Thomond as part of the Surrender and Regrant scheme (Ó' Dálaigh 2012, 17). The account of a raid on Clonroad in 1553 indicates that a substantial settlement was associated with the castle and in 1581 Clonroad was superseded by Bunratty as the Earls' principal residence. The volume of commercial traffic on the River Fergus in the late 1500s appears to have been considerable and the town traded corn, furs, hides, and wool for manufactured goods such as cloth, iron, salt and wine.



The Annals of the Four Masters record that in 1559 a battle was fought at Spancil Hill (RMP CL034-017/20) between the forces of the Earl of Desmond and the joint forces of the Earl of Thomond and the Earl of Clanrickard, c. 1.1-1.5km to the east-northeast of the proposed development. The battle was the culmination of a cross-country skirmish extending over 6km before the forces of the Earl of Desmond gained the summit of the hill and routed the army of the Earl of Thomond and the Earl of Clanrickard.

In 1565 Connaught was divided into six counties by Sir Henry Sidney (the lord-deputy). Thomond, which was sometimes called O'Brien's country, was made shire ground and called Clare, after its chief town and its Anglo-Norman possessors. In accordance with its natural position, the county was subsequently re-annexed to Munster in 1602, on petition of the Earl of Thomond. The medieval town of Ennis had developed at the convergence of three route ways leading to Limerick, Galway, and the Burren (Spellissy 2003, 40). The town was granted a market in 1609 and in 1613 Ennis was incorporated and the abbey was adopted as a parish church for Doora and Dromcliff.

#### 11.3.1.4 Post-Medieval Period (AD 1600–1900)

In 1641 Barnabas O'Brien, Earl of Thomond owned a large portion of the lands in the Baronies of Islands and Bunratty. Following the rebellion of the same year many of the English families were forced out of Ennis and Clare (now Clarecastle); however it was at this time that a number of displaced wealthy Catholic merchant families settled here.

In the late 17th century Ennis is thought to have contained c. 120 houses and 12 English families. The 18th century saw an increase in leases taken and the town sprawled south and north of the river. In 1741 the O'Brien estates passed to Percy Wyndham and the markets and tolls expanded in the following decades. In 1733 the main trade road to Limerick was made a tolled turnpike (Ó' Dálaigh 2012, 6). By the late 18th century the market at Ennis had grown to the point where the market square failed to provide sufficient space. As such the sale of 'milk, potatoes and other gross goods' was moved to Clohaneagour (*Clochán na nGabhal* or Stepping stones of the forked stream) at the western end of town (Spellissy 2003, 42). By the 19th century, encouraged by trade and commerce, the town had expanded well into Lifford, north of the river.

The 18th century witnessed a more pacified Ireland and the political climate settled; this saw a dramatic rise in the establishment of large residential houses around the country. This was largely due to the fact that after the turbulence of the preceding centuries, the success of the Protestant cause and effective removal of any political opposition, the country was at peace. The large country house was only a small part of the overall estate of a large landowner and provided a base to manage often large areas of land that could be dispersed nationally. During the latter part of the 18th century, the establishment of a parkland context (or demesnes) for large houses was the fashion. Although the creation of a parkland landscape involved working with nature, rather than against it, considerable construction effort went into their creation. Major topographical features like rivers and mountains were desirable features for inclusion into, and as a setting, for the large house and parkland. The demesne of Toureen House, was established to the immediate south of the proposed data centre; however, by the late 19th century the house and demesne had fallen into ruin.

Toureen House itself is a recorded monument (CL034-054), located c. 76m south-southeast of the proposed development area. Today the house has been restored and renovated and comprises a three-bay, three-storey, over basement house dating to

the 17th century. Prior to renovation the structure was completely ruinous and had lost its roof and internal floors.

Vernacular architecture is defined in James Steven Curl's Encyclopedia of Architectural Terms as 'a term used to describe the local regional traditional building forms and types using indigenous materials, and without grand architectural pretensions', i.e. the homes and workplaces of the ordinary people built by local people using local materials. This is in contrast to formal architecture, such as the grand estate houses of the gentry, churches, and public buildings, which were often designed by architects or engineers. The majority of vernacular buildings are domestic dwellings. Examples of other structures that may fall into this category include shops, outbuildings, mills, lime kilns, farmsteads, forges, gates and gate piers.

The ruins of a vernacular farmstead are located within the proposed development area, which are marked on the first edition OS map (CH 1). A later 19th century modified cottage, which is now derelict, is also located within the site (CH 2) (Figure 11.2). The first edition OS map also marks the site of a lime kiln within the site (CH 3) and the further site of a structure is also recorded, as marked on the first edition OS map (CH 4).

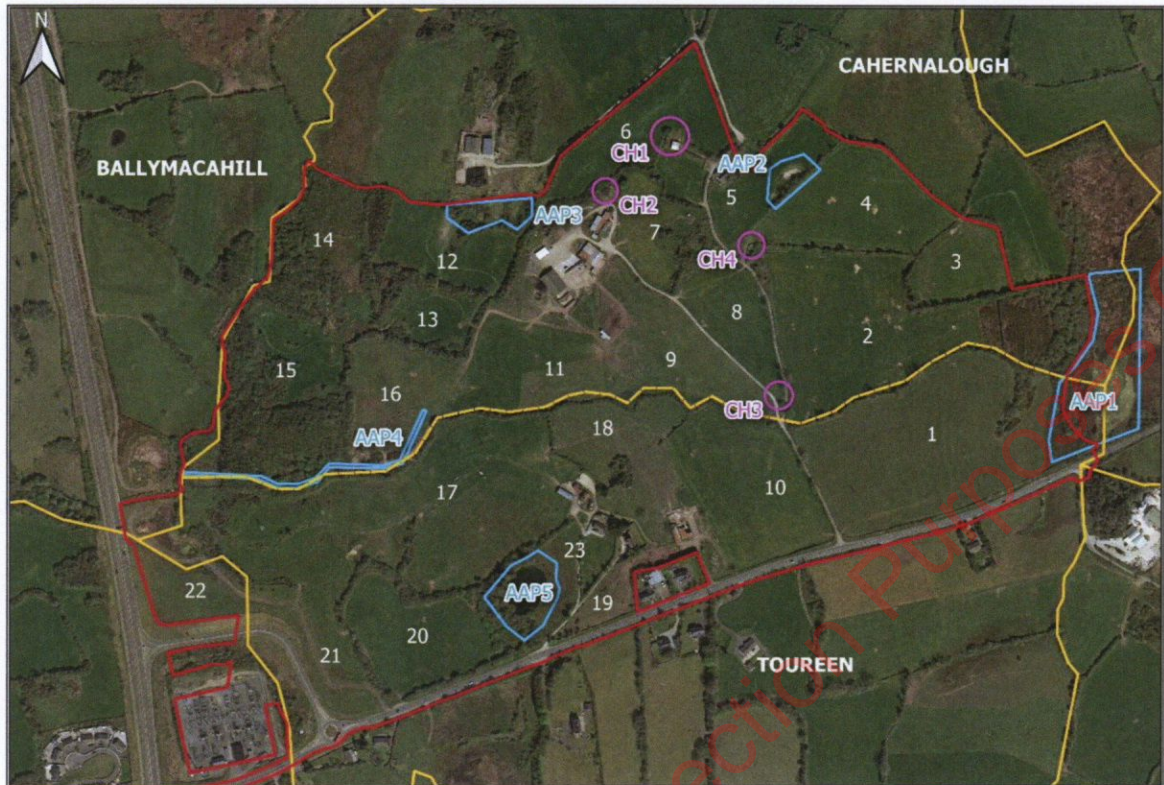
### 11.3.2 Summary of Previous Archaeological Fieldwork

A review of the Excavations Bulletin (1970–2020) revealed that no previous archaeological investigations have been carried out within the confines of the proposed data centre; however, there have been four investigations carried out within the study area, which are summarised below.

A single oval pit, measuring 1.9m by 1.4m and 0.28m deep, was excavated in advance of a gas pipeline c. 223m to the northeast (Licence 02E1187, Bennett 2002:0113). The single fill of the pit was a fine silt that darkened from a mid-brown at the surface to black at the base. The lowest 0.08m of the deposit was pure charcoal, suggesting in situ burning. The site has since been added to the SMR as CL034-236.

Testing for the northern section of the N18 Ennis Bypass identified one site of archaeological interest within the study area of the proposed development in Ballymacahill. This comprised three small fire pits, potentially of modern date that were identified at the base of a natural slope, c. 170m to the west (Licence 04E0054, Bennett 2004:0135). This site has since been added to the SMR as CL034-242.

A programme of investigation was carried out c. 200m to the west (Licence 02E1495, Bennett 2002:0091), but nothing of significance was identified. Similarly, all renovations associated with works at Toureen House (CL034-054), were archaeologically monitored c. 76m to the south-southeast, but nothing of significance was identified (Licence 00E0753, Bennett 2001:102).



**Figure 11.2** Location of proposed development showing townland boundaries, CH sites, AAPs and field numbers

### 11.3.3 Cartographic Analysis

William Petty, Down Survey, Barony of Bunratty, c. 1655

The Down Survey depicts the area of the proposed data centre in the southern limit of the parish of Kilraghtis in the townlands of 'Lehanagh North' and 'South'. No features are depicted within these townlands.

Henry Pelham, The County of Clare, 1787

The route of the modern R352 to the immediate south of the proposed data centre is marked on this map. Tooreen House (CL034-054) is marked to the south of the site and Castletown House and castle are depicted further to the east. This map shows Tooreen Lough within the site with Lough Ardnamurry to the east.

First Edition Ordnance Survey Map, 1840-2, scale 1:10,560

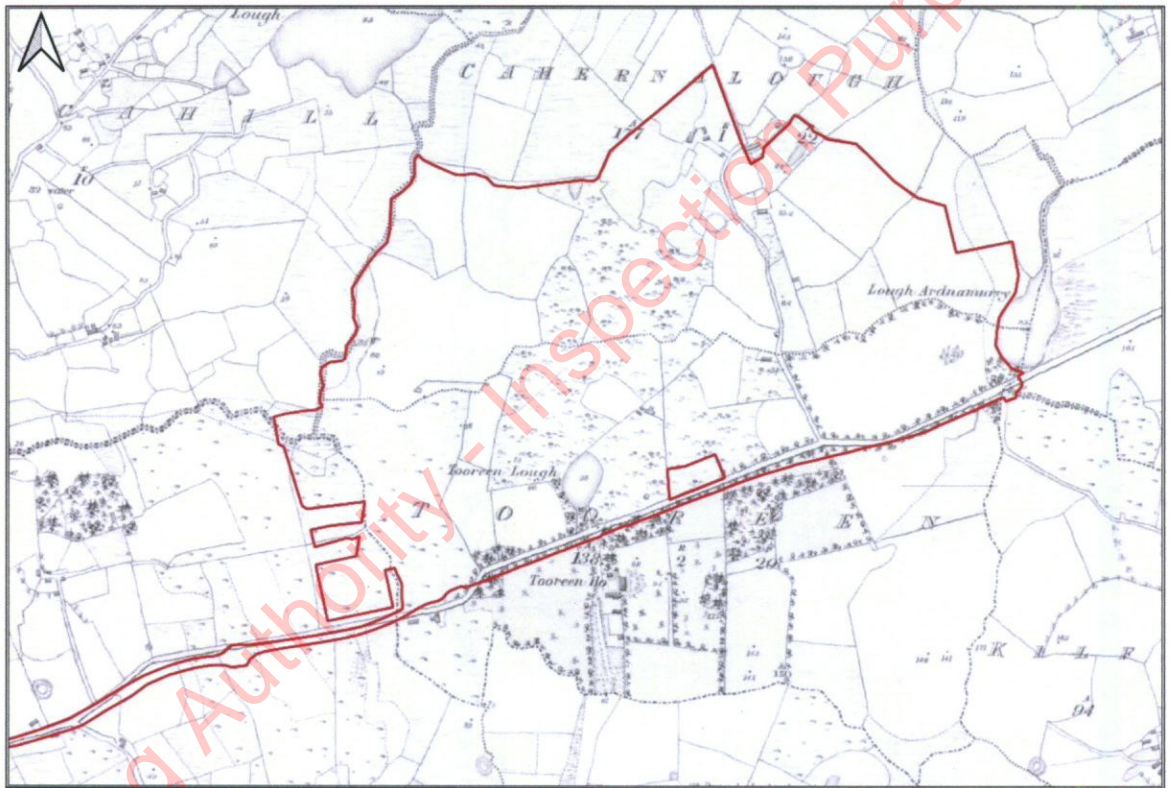
This is the first map to depict the proposed data centre in detail (Figure 11.3). The site consists of a number of open fields and the two loughs. A small number of houses are marked along a trackway extending north-northwest from the road to the south (CH 1). A circular feature marks the location of the recorded ringfort (CL034-007) on the west side of the trackway in the north of the site. A lime kiln is also marked in the eastern part of the site (CH 3). A watercourse, a tributary of the River Fergus, is depicted along the western limit of the site. The demesne of Tooreen House is depicted to the south and the small demesne of Castletown House is depicted to the east.

Ordnance Survey Map, 1893-1907, scale 1:2,500

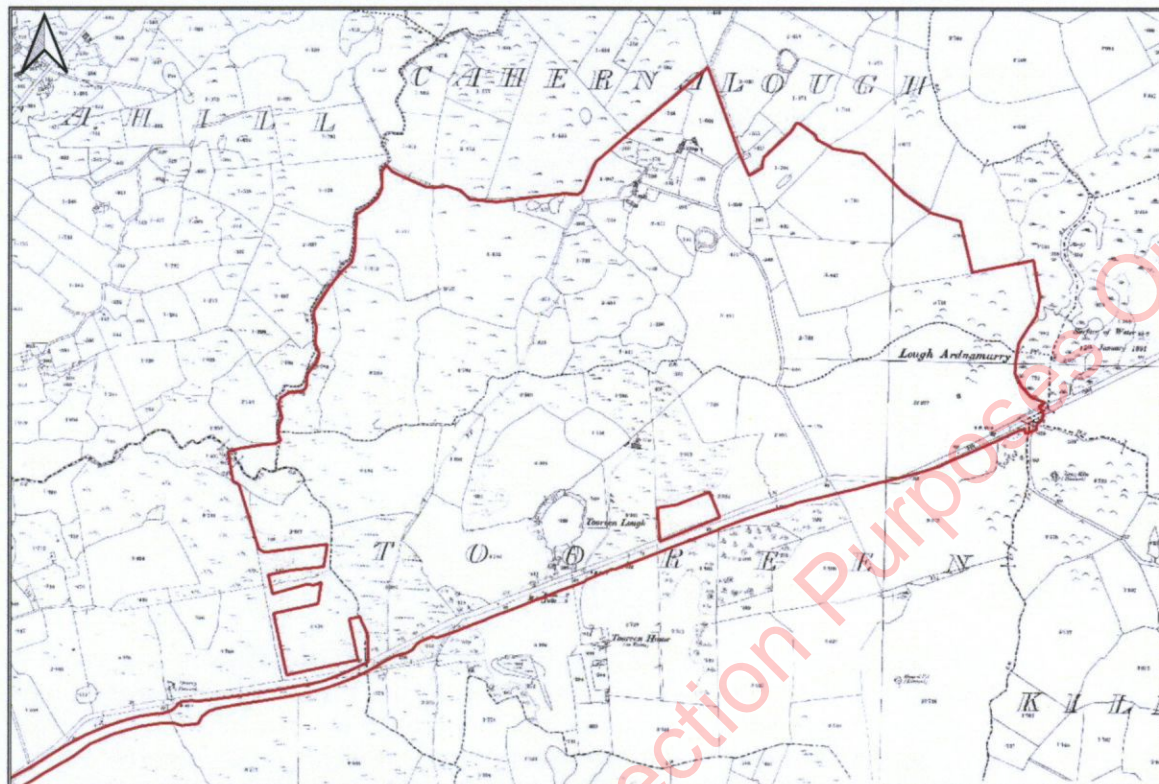
There have been some minor changes to the layout of the fields by the time of this OS map and some alterations are shown to the vernacular structures depicted within the north of the site along the trackway (CH 1) (Figure 11.4). A footpath is marked extending south-southwest from these structures to the road to the south. Lough Ardnamurry is depicted as covered in furze to the east of the site. Tooreen House (CL034-007) is marked in ruins to the south and its demesne has fallen into disrepair. The lime kiln (CH 3) is no longer depicted.

Third Edition Ordnance Survey Map, 1913-8, scale 1:10,560

The only major change to note within this is that a small house is now shown at the location of CH 2 within the northern part of the development area.



**Figure 11.3** Extract from the 1840-2 OS map showing the site location



**Figure 11.4** Extract from the 1893-1907 OS map showing the site location

### 11.3.4 Clare County Development Plan, 2017-2023

#### 11.3.4.1 Record of Monuments and Places

The Clare County Development Plan, 2017-2023 recognises the statutory protection afforded to all Record of Monuments and Places (RMP) sites under the National Monuments Legislation (1930–2014). The development plan lists a number of aims and objectives in relation to archaeological heritage (Appendix 11.1). It is an objective of the plan to secure the preservation of all archaeological monuments included in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, and of sites, features and objects of archaeological and historical interest generally, with the preference to preserve in situ and only in exceptional cases preserve by record.

There are seven recorded archaeological sites within 250m of the proposed development, one of which, a cashel (RMP CL034-007) is situated within the northern portion of the site (Table 11.1; Figure 11.1). Of the seven sites, five represent recorded monuments, whereas two are included in the SMR only as records of previous archaeological investigations. SMRs are not subject to statutory protection.

None of the archaeological sites are further protected as National Monuments, or are subject to Preservation Orders.

**Table 11.1** Recorded Archaeological Sites

SMR No.	Location	Classification	Distance to Site	Statutory Protection
CL034-007	Cahernalough	Ringfort - cashel	0m	Yes
CL034-051	Knockanean	Ringfort - cashel	c. 56m north	Yes
CL034-009	Cahernalough	Ringfort - cashel	c. 71m north	Yes
CL034-054	Tooreen	House - 16th/17th century	c. 76m south	Yes
CL034-242	Ballymacahill	Excavation - miscellaneous	c. 170m west	No
CL034-236	Cahernalough	Excavation - miscellaneous	c. 223m north-northeast	No
CL034-053	Knockanean	Earthwork	c. 250m south-southeast	Yes

#### 11.3.4.2 Record of Protected Structures

The Clare County Development Plan, 2017-2023 recognises the value of the built heritage to the county and is committed to the protection and enhancement of this heritage by providing measures for the protection of architectural heritage. These include the establishment of a Record of Protected Structures (RPS) and the designation of Architectural Conservation Areas (ACAs).

There are no structures included on the RPS within 250m of the proposed development. The nearest protected structure comprises Castletown tower house (RPS 266), situated c. 765m to the east in the townland of Muckinish. The tower house is also included on the Record of Monuments and Places (RMP CL034-014002).

#### 11.3.4.3 ACAs

There are 35 ACAs designated within the Clare County Development Plan, 2017-2023, none of which are situated within the proposed development. The nearest ACA is Our Lady's Hospital Complex, Gort Road, which is situated c. 2.6km to the west.

### **11.3.5 National Inventory of Architectural Heritage**

#### 11.3.5.1 Building Survey

The National Inventory of Architectural Heritage survey of Clare was published in 2009. A review of the architectural survey was undertaken as part of this assessment and included buildings within 250m of the study area. There are no structures listed on the NIAH building survey within the study area, the nearest comprises Knockanoura Castle (NIAH 20003065), c. 2.2km to the west-southwest in the townland of Knockanoura.

#### 11.3.5.2 Garden Survey

The National Inventory of Architectural Heritage has also carried out a garden survey of the demesne landscapes in County Clare. The first edition Ordnance Survey map of County Clare (1840-2) shows the extent of demesne landscapes as shaded portions of land within the study area. These were established as a naturalised landscaped setting for the large houses of the landed gentry.

There are no demesnes within the study area listed on the NIAH Garden Survey; however, there is one demesne depicted on the first edition OS map within the study area, which comprises Tooreen House, located to the immediate south of the road that borders the development area to the south (Figure 11.1).

The demesne of Tooreen House is depicted to the immediate south of the development area on the first edition OS map. By the time of the 1893-1907 OS map the principal structure (RMP CL034-054) is annotated 'in ruins' and the demesne is denuded. Today elements of the demesne's footprint are still visible and the main house has been restored with a modern annex constructed to the east.

### 11.3.6 Cultural Heritage

The term 'cultural heritage' can be used as an over-arching term that can be applied to both archaeology and architectural. However, it also refers to more ephemeral aspects of the environment, which are often recorded in folk law or tradition or possibly date to a more recent period. Cultural Heritage sites can also include elements of the landscape, such as placenames or townlands (and their associated boundaries). Sites and areas identified as possessing cultural heritage significance are included below.

#### 11.3.6.1 Townlands

The townland is an Irish land unit of considerable longevity as many of the units are likely to represent much earlier land divisions. However, the term townland was not used to denote a unit of land until the Civil Survey of 1654. It bears no relation to the modern word 'town' but like the Irish word *baile* refers to a place. It is possible that the word is derived from the Old English *tun land* and meant 'the land forming an estate or manor' (Culleton 1999, 174).

Gaelic land ownership required a clear definition of the territories held by each sept and a need for strong, permanent fences around their territories. It is possible that boundaries following ridge tops, streams or bog are more likely to be older in date than those composed of straight lines (*ibid.* 179).

The vast majority of townlands are referred to in the 17th century, when land documentation records begin. Many of the townlands are mapped within the Down Survey of the 1650s, so called as all measurements were carefully 'laid downe' on paper at a scale of forty perches to one inch. Therefore, most are in the context of pre-17th century landscape organisation (McErlean 1983, 315).

In the 19th century, some demesnes, deer parks or large farms were given townland status during the Ordnance Survey and some imprecise townland boundaries in areas such as bogs or lakes, were given more precise definition (*ibid.*). Larger tracks of land were divided into a number of townlands, and named Upper, Middle or Lower, as well as Beg and More (small and large) and north, east, south, and west (Culleton 1999, 179). By the time the first Ordnance Survey had been completed a total of 62,000 townlands were recorded in Ireland.

The majority of the proposed development area is located within the townlands of Cahernalough and Tooreen with small sections extending west into the townlands of Ballymacahill and Knockanean. The surrounding townlands consist of Cappagh More, Muckinish, Kilfeilim, Tullyvaghan, Creggaun, and Drumdoolaghty. These are townlands are located within the parishes of Kilraghtis, Clooney, and Doora, within the Barony of Bunratty Upper, County Clare.

There are eight townland boundaries and two parish boundaries within and bordering the proposed development. The townland boundary between Cahernalough and Tooreen winds east-west through the centre of the proposed data centre. Much of this boundary is formed by a mature hedge line. The western section contains a small stream, where it runs through a valley.

### 11.3.6.2 Place name Analysis

Townland and topographic names are an invaluable source of information on topography, land ownership and land use within the landscape. They also provide information on history; archaeological monuments and folklore of an area. A place name may refer to a long-forgotten site and may indicate the possibility that the remains of certain sites may still survive below the ground surface. The Ordnance Survey surveyors wrote down townland names in the 1830's and 1840's, when the entire country was mapped for the first time. Some of the townland names in the study area are of Irish origin and through time have been anglicised. The main references used for the place name analysis are *Irish Local Names Explained* by P.W Joyce (1870) and [logainm.ie](http://logainm.ie). A description and possible explanation of each townland name in the environs of the proposed development is provided in the below table.

**Table 11.2** Place names

Name	Derivation	Possible Meaning
Tooreen	<i>An Tuairín</i>	Little bleach green/ little paddock/ little (cultivated) field/ little pasture
Cahernalough	<i>Cathair na lough</i>	Caher (circular stone fort) of the lake
Ballymacahill	<i>Baile Mhic Cathail</i>	Town/place of Mhic Cathail
Knockanean	<i>Cnoc an Éin</i>	Bird hill
Cappagh More	<i>An Cheapach Mhór</i>	Great tillage-plot
Muckinish	<i>Mucrois</i>	Pig island
Kilfeilim	<i>Cill Feidhlime</i>	Church of Feidhlim
Tullyvoghan	<i>Tulach Uí Bhuacháin</i>	Hillock of Ó Buacháin
Creggaun	<i>An Creagán</i>	Little rock/ rocky ground
Drumdoolaghty	<i>Drom Dubhlachna</i>	Ridge of the black duck
Kilraghtis	<i>Cill Reachtais</i>	Church of Reachtais
Clooney	<i>Cluaine</i>	Meadow land
Doora	<i>Dubh dúire</i>	Black oak-wood
Bunratty Upper	<i>Bun Raite Uachtarach</i>	The mouth of the River Ratty, now called the Owen O'Garney
Clare	<i>Clar</i>	A level piece of land

### 11.3.6.3 Cultural Heritage sites

Four cultural heritage sites have been identified during the course of this study. CH 1 relates to the site of a ruined vernacular farmstead, located in the northern part of the proposed development area, which is marked on the first edition OS map. CH 2 consists of a late 19th century modified vernacular cottage (now derelict), also located in the northern part of the site. CH 3 represents the site of a lime kiln, located in the eastern part of the site, which is marked on the first edition OS map. CH 4 consists of



the site of a probably vernacular building located to the southeast of CH 1. The sites are shown on Figure 11.2.

### 11.3.7 Stray Finds within the Surrounding Area

Information on artefact finds from the study area in County Clare has been recorded by the National Museum of Ireland since the late 18th century. Location information relating to these finds is important in establishing prehistoric and historic activity in the study area.

A review of the topographical files revealed that no stray finds have been recovered from in or within the study area of the proposed development.

### 11.3.8 Aerial Photographic Analysis

Inspection of the aerial photographic coverage of the proposed development area held by the Ordnance Survey (1995-2013), Google Earth (2009-2020) and Bing Maps (2020) revealed that the M18 to the west of the proposed data centre was built between 2005 and 2009 resulting in landscaping in the western corner of the site. The remainder of the site has remained as open pasture fields and no previously unrecorded sites of archaeological potential were noted within the proposed development area.

### 11.3.9 Field Inspection

The field inspection sought to assess the site, its previous and current land use, the topography, and any additional information relevant to the report. During the course of the field investigation the proposed data centre and its immediate surrounding environs were inspected. The 23 fields that form the development area are described below and marked on Figure 11.2.

#### Field 1

Sub-rectangular in plan, this field of pasture is located in the southeast corner of the development area and is bounded by the R352 to the south; Lough Ardnamurry to the east; an access lane to the west and the townland boundary between Toureen and Cahernalough to the north (Plate 11.1). Lough Ardnamurry, and its immediate environs, are considered to be of archaeological potential (AAP 1) due to the fact that water bodies were often utilised during prehistoric and historic periods for ritual and settlement (Plate 11.2). The eastern part of the field contains a drumlin that slopes on all sides, with a plateau in the field to the north (Field 2). The eastern side of the slope slopes steeply down towards the lough and contains possible evidence of localised quarrying, although this section is heavily overgrown. The western part of the field is relatively level. The townland boundary that runs through the development area is primarily formed by a denuded stone wall of rough masonry with mature trees (Plate 11.3). Only the very western and south-western portion of the field will be affected by the proposed development.



Plate 11.1: Field 1, facing northeast



Plate 11.2: Lough Ardnamurry (AAP 1), facing east



*Plate 11.3: Townland boundary, facing southwest*

### Field 2

This is a sub-rectangular field of pasture, located to the north of Field 1 and south of Fields 3 and 4. The field is bordered to the south by the townland boundary between Toureen and Cahernalough; by Lough Ardnamurry to the east; an access lane to the west and mature field boundaries to the north. The centre of the field is formed by the plateau of a drumlin that slopes in a western direction through much of field (Plate 11.4). The ground level slopes steeply towards to the lough to the east, and this portion of the field is planted with trees. Only the western section of this field will be affected by the proposed development.



*Plate 11.4: Field 2, facing east*

### Field 3

This field of pasture is roughly triangular in plan and is located to the north of Field 2 and southeast of Field 4. It is bounded on all sides by mature field boundaries and

slopes to the north and northwest away from the drumlin plateau in Field 2. This field will remain unaffected by the proposed development.

#### Field 4

An irregular field in plan, this field of pasture is located to the north of Field 2 and 3 and is east of Field 5. It is bounded on all sides by mature field boundaries. The field slopes to the west and northwest. The proposed development will be located in the western part of this field.

#### Field 5

This is a small sub-rectangular field with Fields 6, 7 and 8 to the north, west and south and Fields 4 and 2 to the east and southeast. The field contains a large pond, which is also marked on the historic mapping and has been designated as AAP 2. The first edition OS map shows that a building formerly occupied the southeast corner of the field (CH 4). No remains associated with the structure were noted during the inspection. The field is relatively level, with a modern residence to the northwest and access lane running along the western boundary (Plate 11.5). The proposed development will not extend into this field.



Plate 11.5: Field 5, facing northeast

#### Field 6

This field is located in the northern most point of the proposed development area, with a modern farmyard complex and Field 7 to the south and a modern residence and Field 5 to the southeast. The field contains natural undulations and slopes gently to the south and southwest (Plates 11.6). A modern shed is located in the field, with the ruins of a vernacular farmstead to the immediate west, which is marked within the historic OS mapping (CH 1). The ruins are heavily denuded and represents the remains of single storey vernacular structures with walls of roughly coursed masonry (Plate 11.7). This field will remain unaffected by the proposed development.

#### Field 7

This field is located to the south of Field 6 and is bounded to the east and south by Fields 5, 8 and 9. A modern farmyard is located to the immediate west. The field is

under pasture and contains natural undulations and a gentle westerly slope. A recorded ringfort (CL034-007), in the form of an overgrown cashel, is located in the southeast corner of the field (Plate 11.8). The site is heavily overgrown (Plate 11.9) and barely accessible, although the denuded cashel wall was visible along the south-eastern side with an apparent width of c. 5m. No features potentially associated with the ringfort were noted within any of the surrounding fields. Very little development will occur within this field, with a potential attenuation pond proposed in part of the western section of the field. The ringfort will be preserved in-situ with only minor intrusions into the zone of archaeological potential, associated with the proposed development road layout.



Plate 11.6: Northern part of Field 6, facing southwest



Plate 11.7: Remains of vernacular farmstead (CH 1), facing east-northeast



Plate 11.8: Ringfort (CL034-007), within Field 7, facing east



Plate 11.9: Interior of ringfort (CL034-007)

### Modern Farmyard

The modern farmyard comprises a roughly oval area of modern agricultural sheds and areas of disturbance, which is bordered to the north and east by Fields 6, 7 and 9 and to the west and south by Fields 12 and 11. The extent of the disturbance is visible in the aerial photographic coverage of the landscape. The only feature of merit is a semi-derelict single storey cottage with dormer level located to the immediate northeast of the farmyard (CH 2). This structure (Plate 11.10) has been modified in the past and dates to the late 19th century. It possess three bays, with an entrance porch on the main east facing elevation. The door and window fittings have been replaced and the structure has been rendered. The structure will be located to the immediate west of a proposed attenuation pond and northeast of the main distribution road network.



Plate 11.10: Vernacular cottage (CH 2), facing north

### Field 8

This field is roughly triangular in plan and comprises level pasture with occasional undulations, located to the immediate southeast of the recorded ringfort (CL034-007) (Plate 11.11). The field is bordered to the east by an access lane and to the southwest by a more recent drive accessing the modern farmyard. In the very southern tip of the field is the site of a lime kiln (CH 3), which is marked on the first edition OS map. No evidence of this site remains today and it may have been affected by the installation of the more recent access track (Plate 11.12). Whilst much of this field will remain unaffected by the proposed development, the site of the lime kiln will be impacted by the distribution network.

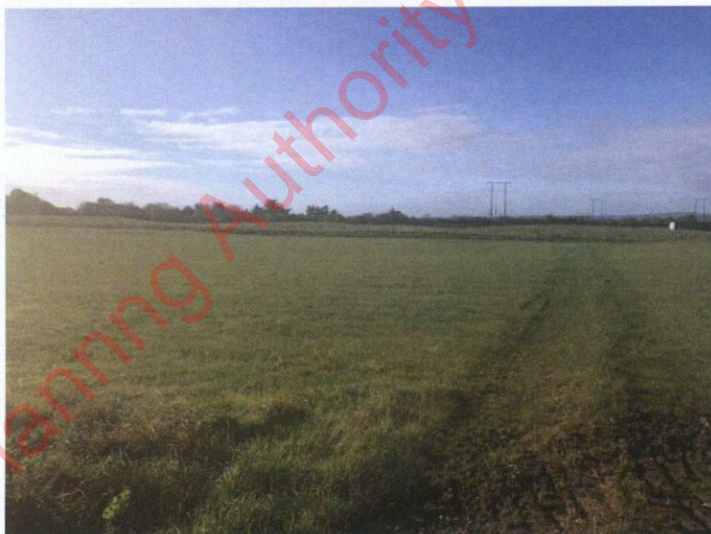


Plate 11.11: Field 8, facing south



Plate 11.12: Site of lime kiln (CH 3), facing northwest

#### Field 9

This field is located at the centre of the proposed development area and comprises a level field of pasture with Fields 7 and 8 to the east and Fields 10, 18 and 11 to the south and southwest. The modern farmyard is located to the immediate northwest. The modern access track to the farm forms the eastern boundary of the field and the townland boundary between Toureen and Cathernalough forms the southern boundary. The field will be included in the main layout of the data centre development.

#### Field 10

This is another field of level pasture, which is sub-rectangular in plan (Plate 11.13). The R352 forms the southern boundary, with recent scattered residential development to the west; Fields 18 and 9 to the north and Field 1 and the access lane to the east. The northern boundary is formed by the townland boundary between Toureen and Cathernalough. This portion of the site will contain a portion of the proposed data centre, a realigned access road and some attenuation ponds.



Plate 11.13: Field 10, facing west



### Field 11

This field is located to the immediate south of the modern farmyard and bounded to the south by Fields 17 and 18, along with the townland boundary between Toureen and Cathernalough. Field 9 is located to the east and Field 13 and 16 to the west. The field is formed by level pasture with some natural shallow undulations (Plate 11.14). The majority of this field will be affected by the development that is proposed.



Plate 11.14: Field 11, facing east

### Field 12

This area comprises an area of pasture containing small drumlins, which are present within this north-western corner of the development area (Fields 12-16) (Plate 11.15). The northern part of the field is heavily overgrown and slopes sharply to the north, where a large pond is present (Plate 11.16). This water body is marked on the historic OS map and has been designated as AAP 3. A modern farm and pasture is located to the north, whereas Field 14 is located to the west and Field 13 to the south. The modern farmyard is located to the immediate east. At the time of the inspection, there was evidence of flooding in the western part of the field. A portion of this field will be used as attenuation for the proposed development.



*Plate 11.15: Field 12, facing southwest*



*Plate 11.16: Pond (AAP 3), facing north*

### Field 13

This field consists of a rectangular area of pasture containing natural drumlins. The field is bounded to the north and east by Fields 12 and 11 and to the west and south by Fields 14, 15 and 16. Much of the field will be occupied by the proposed data centre and associated attenuation.

### Fields 14 and 15

These fields form the northwest portion of the proposed development area and will not be affected by the proposed development. They comprise a mixture of small drumlins under rough pasture, boggy areas of ground and heavily planted area, such as the southern parts of Field 14 and Field 15.

### Field 16

This is a roughly triangular field of rough pasture containing small drumlins and undulations. It is bounded by Fields 15, 13, 11 and 17. The southern part of the field slopes steeply down towards a stream that runs along the path of the townland boundary, separating Toureen from Cahernalough (Plate 11.17). The stream is only evident in this part of the site, and it remains unclear where the watercourse commences. This section of the stream to the south of Field 16 (and 17 to the west) is heavily overgrown and has been designated as AAP 4. Only a small section of the eastern part of the field will be affected by the development. The stream does not follow the townland boundary along the southern side of Field 11 and as such it will not be affected by the development.



Plate 11.17: Stream (AAP 4), facing southwest

#### Field 17

This is a large field in the south-western part of the proposed development area. It comprises a field of pasture that is irregular in plan and bounded to the north by the townland boundary between Toureen and Cathernalough. As described in Field 16, a portion of this boundary is formed by a stream. Fields 20-23 are located to the south, with Field 18 to the east and Fields 16, 16 and 11 to the north. The field is characterised by small drumlins, similar in form to those located in the north-western part of the site. The eastern part of this field only will be affected by the proposed development.

#### Field 18

This is an irregular field of rough pasture located in between Field 17 to the west and Field 10 to the east. The field is relatively level and the southern section of the field contains a number of modern houses and outbuildings. Only the northern section of the field will be affected by the proposed development.

#### Field 19

This is a small area of level pasture surrounding some modern houses (outside the development area) fronting onto the R352. This area will not be affected by the proposed development.

#### Field 20

This is an irregular field of pasture located in the southwest section of the proposed development area. It is bounded to the south by the R352, with Fields 17, 23 and 19 to the north and east and Field 21 to the west. A small drumlin occupies the western part of the field, which slopes gently to the east (Plate 11.18). The eastern part of the field will be affected by the construction of an access road.



Plate 11.18: Field 20, facing northeast

#### Fields 21 and 22

These are two small fields of pasture located to the east and north of a link road onto the M18. There is a modern attenuation pond located to the immediate north of Field 22. A modern access track runs through both of the fields, which provides access to the ponds. Both areas appear to have been disturbed due to the presence of the M18 and the construction of the access track.

#### Field 23

This area consists of a small rectangular field of rough pasture, which is also the grounds of a modern house, located at the eastern end of the field. Toureen Lough is located within this field and has been designated as AAP 5. This field will remain undisturbed by the proposed development.

With the exception of AAPs 1-5 and CH 1-4, no other previously unrecorded sites of archaeological, architectural or cultural heritage significance were noted during the course of the field inspection.

### 11.3.10 Summary of Receiving Environment

The proposed data centre is located within 23 fields bordered to the west by the M18 and to the south by the R352. The site is situated within the townlands of Cahernalough, Tooreen, Ballymacahill and Knockanean in the parishes of Kilraghtis and Doora and barony of Bunratty Upper, County Clare. There are seven recorded archaeological sites within 250m of the proposed development, one of which, a cashel (RMP CL034-007) is situated within the northern portion of the site. Of the seven sites, five represent recorded monuments, whereas two are included in the SMR only as records of previous archaeological investigations. SMRs are not subject to statutory protection.

There are no buildings included on the Record of Protected Structures for Clare or the NIAH Building Survey in or within 250m of the proposed development area. Similarly, no Architectural Conservation Areas are located within the study area. One demesne landscape has been identified within the study area, which comprises Tooreen House, located to the immediate south.

A review of the Excavations Bulletin (1970–2020) revealed that no previous archaeological investigations have been carried out within the confines of the proposed data centre; although four investigations have been undertaken within the study area. Two of the sites revealed archaeological remains of minor significance, whereas the remaining two failed to identify any features of significance.

A review of the aerial photographic coverage and historic mapping, along with the field inspection, has resulted in the identification of a number of Cultural Heritage Sites and Areas of Archaeological Potential. CH 1-4 comprise the site of vernacular structures and the site of a lime kiln, all of which are marked within the historic mapping. Today only CH 1 and 2 possess upstanding remains. AAPs 1-5 relate to small loughs/ponds within the area (which are a characteristic of drumlin landscapes) along with a stream in the western part of the site, which follows the path of the townland boundary between Toureen and Cathernalough. A large portion of this townland boundary is located within the proposed development area, but much of it is defined by a denuded stone wall and mature trees. No other features or structures of archaeological, architectural or cultural heritage significance were identified.

## 11.4 CHARACTERISTICS OF THE DEVELOPMENT

### 11.4.1 Construction Phase

The proposed development will comprise construction of a six data storage facilities, a gas powered energy centre and associated ancillary development. The key civil engineering works which will have a potential impact on archaeology during construction are summarised below:

- Significant cut and fill will be required for site levelling, construction of roads, car parking areas, foundations, installation of drainage services and ancillary infrastructure;
- Piling for foundations (where required)

### 11.4.2 Operational Phase

During operation there will be no ground disturbance required.

## 11.5 POTENTIAL IMPACTS OF THE DEVELOPMENT

### 11.5.1 Construction Phase

Ringfort CL034-007 will be preserved in-situ as part of the development with any potential direct impacts screened out as part of the design process. Works associated with the access roads will impinge within c. 27m of the ringfort, but the site will not be directly impacted by construction activities.

AAPs 1-5 will not be affected by the construction of the proposed development. Similarly CH 1, 2 and 4 remain outside of the footprint of the proposed works. CH 3 (site of lime kiln) will be subject to a direct, negative impact. Assuming buried remains survive beneath the current ground level, the impact (prior to mitigation) may be significant in nature.

Although no other previously unrecorded sites of archaeological, architectural and cultural heritage significance were identified during the assessment, it remains possible that previously unrecorded archaeological remains survive beneath the

current ground level with no surface expression. Prior to the application of mitigation, it is possible that construction activities may result in a direct negative impact on same. Impacts may vary in scale from moderate to profound.

The construction of the proposed development will result in the removal of a section of townland boundary in between Toureen and Cathernaboy. Prior to the application of mitigation, this represents a direct negative moderate impact upon the cultural heritage resource.

### **11.5.2 Operational Phase**

Whilst the recorded ringfort (CL034-007) will be preserved in-situ, the operation of the proposed development will result in an indirect negative impact on the setting of the monument, due to the proximity of the data centre and distribution roads. The impact is moderate negative.

No other impacts have been identified during the operation of the proposed development, which relate to the archaeological, architectural or cultural heritage resource.

## **11.6 REMEDIAL AND MITIGATION MEASURES**

### **11.6.1 Construction Phase**

A full geophysical survey and programme of archaeological testing will be carried out prior to the commencement of construction. The works will be carried out under licence to the DoHLGH. This work will be carried out in order to identify any remains associated with CH 3, along with any buried archaeological remains within the landscape that may be affected by the proposed development. Further mitigation may be required, dependant on the results of the assessment, such as preservation in-situ/by record and/or archaeological monitoring. Any further mitigation will require the approval of the National Monuments Service of the DoHLGH.

A full written and photographic record will be made of the section of townland boundary to be impacted upon by the development. This will be carried out at the same time as the archaeological testing assessment.

### **11.6.2 Operational Phase**

A full photographic record of the landscape setting of ringfort CL043-007 will be made prior to the commencement of construction.

## **11.7 PREDICTED IMPACTS OF THE DEVELOPMENT**

### **11.7.1 Construction Phase**

Following the completion of mitigation measures detailed in section 11.6.1, there will be no predicted impacts on the archaeological, architectural and cultural heritage resource as a result of the construction of the development.

### 11.7.2 Operational Phase

Following the completion of mitigation measures detailed in section 11.6.2, there will be a slight negative indirect impact on ringfort CL034-007, due to the proximity of the operating development.

### 11.8 CUMULATIVE IMPACTS

No other existing or approved developments have been identified that would give rise to any cumulative impacts upon the archaeological, architectural and cultural heritage resource.

### 11.9 RESIDUAL IMPACTS

Following the completion of the mitigation measures described in this chapter, there will be no significant negative residual impacts upon the archaeological, architectural or cultural heritage resource. A slight negative indirect impact on ringfort CL034-007, will remain due to the proximity of the operating development.

### 11.10 INTERACTIONS

Potential impacts detailed in Chapter 10 Landscape and Visual have been reviewed as part of this assessment.

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### **Electronic Sources**

[www.excavations.ie](http://www.excavations.ie) – Summary of archaeological excavation from 1970–2020.



[www.archaeology.ie](http://www.archaeology.ie) – DoH/LGH website listing all SMR/RMP sites.

[www.osiemaps.ie](http://www.osiemaps.ie) – Ordnance Survey aerial photographs dating to 1995-2013 and 6-inch/25-inch OS maps.

[www.heritagemaps.ie](http://www.heritagemaps.ie) – The Heritage Council web-based spatial data viewer which focuses on the built, cultural, and natural heritage.

[www.googleearth.com](http://www.googleearth.com) – Satellite imagery of the proposed development area.

[www.bingmaps.com](http://www.bingmaps.com) – Satellite imagery of the proposed development area.

[www.libraryireland.com](http://www.libraryireland.com) – Irish Local Names Explained by P.W Joyce.

[www.logainm.ie](http://www.logainm.ie) - Placenames Database of Ireland (Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media)

Clare Planning Authority - Inspection Purposes Only!