

# Belfast Hills Heritage Survey

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# Introduction

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The Belfast Hills Partnership Landscape Partnership Scheme (LPS) comprises over 5000 hectares of the Belfast Hills from Carnmoney Hill at the north to Collin Mountain at the southern extent. Numerous projects will run across the four year LPS with the aim of protecting and increasing access to the hills as well as improving understanding of the landscape. The projects cover a range of areas focusing on natural, built, cultural and social heritage, drawing together residents, community groups, landowners and statutory agencies to develop and implement a plan for the area.

The current report details the results of just one of these projects. The legacy of millennia of settlement, burial, agriculture and industry in the Belfast Hills has left many visible features dotted across the landscape. This report details the results of a baseline survey, focusing on 12 heritage features, selected by the Belfast Hills Partnership (Figure 1), with the intention that its findings will direct future management of these sites and future project plans. As such the report contains descriptions of the 12 individual sites and monuments, provides a survey of their condition and presents recommendations for any specific conservation needs, as well as outlining how the potential of each site might be best realised.

Through these individual surveys it has been possible to identify the variety and quality of the archaeological and historical remains located in the Belfast Hills, however, it has also been recognised that in order to improve understanding of this heritage and to fully exploit the resource there is much need for further work. Not only does this apply to the 12 individual heritage features surveyed (potential for further work at each site is summarised below) but also it is recommended that more broad based and thematic projects are planned in order for the archaeology and history to be better understood and for the recreational and educational potential to be realised.

A summary of the main recommendations for further work at the 12 sites and monuments is given below. A series of project outlines are then presented which could be used to plan future investigations into the built heritage of the Belfast Hills. The 12 baseline surveys are then presented and include descriptions of each site along with recommendations for further work. The surveys also highlight conservation needs and costings are provided (All costings given are indicative and full estimates should be sought prior to planning any works).



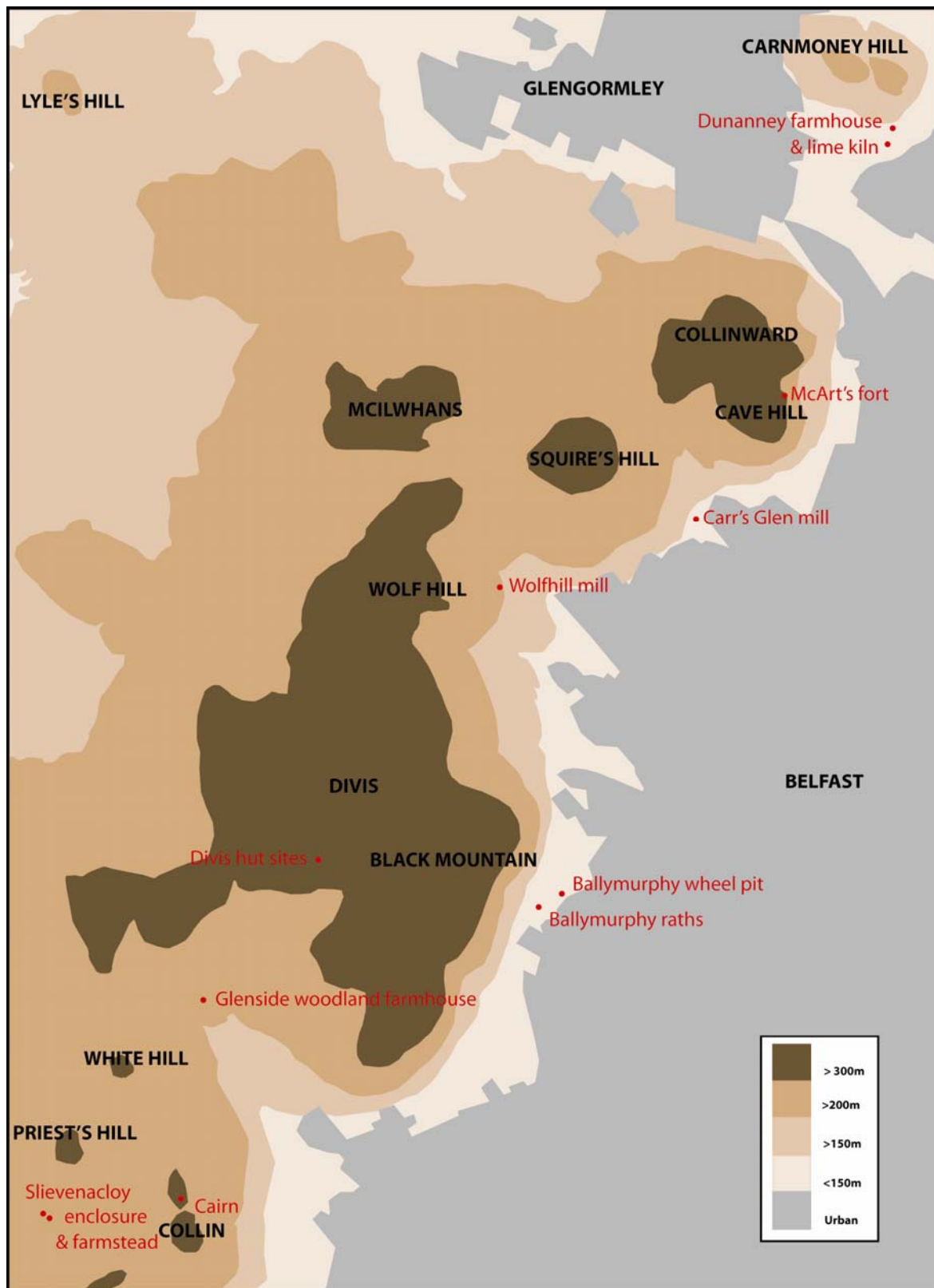


Figure 1 – Location of the 12 sites and monuments included in the Belfast Hills Heritage Survey.

# Recommendations: Summary

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Detailed recommendations are given for each of the 12 sites in the main section of the report. The main recommendations involve firstly ensuring the protection of the sites into the future. A recurring theme has been the encroachment of ivy, trees and shrubs on the masonry monuments and a number of recommendations have been made for the removal of this vegetation and for the repointing of the underlying masonry. Not only will this consolidate the remains but it will allow for the heritage features to be more visible to visitors and will allow for them to be the subject of further study. The earthworks included in the survey appear to have fewer conservation needs than the masonry structures and benign management regimes seem to be serving them well.

Further recommendations involve broadening our understanding of the monuments, promoting community involvement in heritage and improving the quality of the visitor experience to the landscapes in which these monuments sit. It is recommended that programmes of geophysical survey are undertaken, a series of community digs are carried out, involving local groups and school children, and also that other digs are open to the public. Using these methods, knowledge and data can be gathered from the sites, improving our understanding of them, whilst at the same time encouraging community participation allows for the public to become involved in heritage, whilst also promoting the site as a point of interest in the Belfast Hills.

The recommendations for further work at each site are summarised as follows:

## **Dunanney farmhouse**

It is recommended that the farmhouse and farm buildings at Carnmoney are conserved and preserved as an important community resource.

It is recommended that a community excavation is undertaken in order to establish the internal layout of the farm house, with trenches located within the farmhouse, and out-buildings 'B' and 'C'.

## **Dunanney lime kiln**

It is recommended that the limekiln is conserved and presented as a heritage feature within the Woodland Trust amenity.

### **McArt's fort**

It is recommended that an excavation is undertaken, with a trench located across a section of the bank and ditch, to allow for better understanding of this familiar, but enigmatic monument.

### **Carr's Glen mill**

It is recommended that the mill site is made safe and presented to visitors to the park.

### **Wolfhill mill**

The mill building should be conserved and made safe in order to protect its survival into the future.

It is recommended that a community excavation is undertaken, targeted to find the location of the wheel pit.

Following this work, it is recommended that visitors are encouraged to the site and an information board should be erected.

### **Divis hut sites**

It is recommended that a portion of one or more of the hut sites is excavated to establish both the architectural style and the date of the site.

It is recommended that the dig is promoted to the general public and that open days are held.

A publication in a suitable journal should be compiled to contribute to the study of upland settlement sites.

### **Glenside community woodland farmhouse**

It is recommended that the farmhouse in Glenside Community Woodland is conserved and presented for visitors to the amenity.

### **Slievenacloy Nature Reserve: cairn**

It is recommended that an excavation is undertaken at the site to determine its type and date.

It is recommended that a reconstruction drawing is completed and an information board erected for visitors to the nature reserve.

### **Slievenacloy Nature Reserve: enclosure**

It is recommended that a programme of geophysical survey is undertaken on the interior of the large enclosure to identify any internal features and potential targets for excavation.

An excavation should then be undertaken, involving the community and local primary schools.

Using the information gathered during this work, the monument could then be promoted more effectively as a point of interest within the Slievenacloy Nature Reserve.

### **Slievenacloy Nature Reserve: farmstead**

It is recommended that a community dig is undertaken at this site to gather more information about its date and the layout and function of the buildings.

## **Future strategy**

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It is recommended that future projects in the Belfast Hills might take a broad based approach to establish more widely how the built heritage of the hills has developed through time and to identify the heritage features within the LPS area which can inform how this unique landscape has been utilised across the millennia. This could take a thematic approach, for example, and it is evident from the current survey of 12 sites that there are areas which could be advanced further. The built heritage of the Belfast Hills is a valuable and important resource and understanding it is vital for the appreciation and promotion of this local landscape.

- The zones within the Belfast Hills which were utilised for ritual and burial activity in prehistory should be identified. The prehistoric sacred landscape takes in all of the Belfast Hills and is characterised by the summit cairns and round cairns, barrows, standing stones and megalithic tombs. Fieldwork would undoubtedly detect previously unrecorded associated sites and monuments. Intervisibility within the hills and with other upland locations should be explored and targeted excavation would help to determine more precisely the nature and date of some of these monuments. This could be complimented by survey work concentrating on the identification of prehistoric settlement and field systems and again targeted excavation would help to establish the date of such features. Not only will such a project further our understanding of this prehistoric landscape but will allow for it to be presented in a more comprehensive way to the public.

- The landscape around McArt's fort should be investigated to determine if it is part of an Early Medieval inauguration landscape associated with the fort. This would take the form of topographical and field survey of the landscape to identify earthworks, followed by geophysical survey and targeted excavation of some of the features.
- The evidence for 18<sup>th</sup> and 19<sup>th</sup> century agriculture and settlement in the Belfast Hills should be explored and defined. This should include analysis of farmsteads, field systems and associated vernacular features. Targeted excavation of some of these features will help to elucidate this further. The definition and conservation (where possible) of this recently abandoned landscape will add value to the visitor experience for those coming to the hills.
- The legacy of Belfast's 19<sup>th</sup> century industrial boom should be explored in terms of the mark it has left on the Belfast Hills. This should include a survey of the mill sites, water wheels, dams and bleach greens for example and identify features suitable for conservation.



# 1. Dunannee farmhouse

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## Introduction

The farmhouse is located on the slopes of Carnmoney Hill, at around the 130m contour, with splendid views to the north east and east across Belfast Lough (IGR J33616 82432). It is sited on a laneway, within land managed by the Woodland Trust. Although in a ruinous condition, a number of structures are evident around the farmyard and along the laneway. This interesting collection of buildings is an important part of the historic environment of the area and along with the other traditional farm features, such as the limekiln, gate pillars and possible churn-stand, is a vital part of our rural heritage. The farmhouse provides insight into the rural farming life and economy of the 19<sup>th</sup> and 20<sup>th</sup> century and, as it has a number of rare features, it is important that it be conserved and preserved for future generations.

The farmhouse was surveyed and the remains are described in detail below. Vernacular architecture and traditional farm features are discussed. The condition of the farmhouse and recommendations for its conservation are detailed. The potential for a community excavation is examined.

### **18<sup>th</sup> – 20<sup>th</sup> century farming and farmhouses**

During the 18<sup>th</sup> and 19<sup>th</sup> centuries agricultural land in Ireland was controlled by landlords who leased land to tenant farmers. These tenants ranged widely from wealthy commercial farmers who ran large and profitable farms to the smaller farmers who leased a small holding and essentially practising subsistence farming. These small holders may also have undertaken other commercial activity (such as weaving) or have laboured for other larger tenant farmers (Bell and Watson 2008, 21). Land Acts introduced at the end of the 19<sup>th</sup> century paved the way for tenant farmers to purchase their holdings from their, largely absent, landlords.

Vernacular houses in Ireland are generally single storey and a single room deep, front to back (Gailey 1984, 8). The end walls are rarely pierced by doors or windows and axially placed chimneys are most often placed on the ridge line of the roof which is most commonly thatched (ibid.). Many two storey houses were created later by adding bedrooms above the older single storey, however, other two storey buildings were built as such, but with the ground plans based on the enlarged vernacular single storey houses (ibid.). Therefore, with time houses were extended by adding to the length of the house to provide, for example, sleeping areas, formal parlours and byres with separate entrances. The extension of houses upwards happened later, however, once it began to spread, two storey houses were built as such from new (ibid., 10). Vernacular style houses are further subdivided as 'direct-entry' and 'hearth-lobby' houses. Direct-entry houses may be derivatives of byre-dwellings, where cattle and people were housed under the one roof (Gailey 1984, 163). With direct entry houses, the hearth is always placed against a wall at the opposite end of the room from the entrance (ibid.). With hearth-lobby houses the front doorway is adjacent to the hearth position and the two are separated by a jamb-wall partition (ibid., 165).

Studies have been undertaken to identify the main types and layouts of traditional farmyards (eg Ó Danachair 1981) and four main types have been identified; 'extended farmyards' have a single row of buildings, 'parallel farmyards' have out-buildings aligned parallel to the farmhouse, 'scattered farmyards' appear to have evolved in an more ad hoc way, particularly where level ground is in short supply and finally 'courtyard farmyards' the most common type, which itself has several variations (ibid.).

## Previous work

There is no record of survey work ever having been carried out at Dunanney farmhouse. The buildings are not listed.

## Historical background

The buildings are depicted on the 6 inch and 25 inch county series maps. In 1833, on the 1<sup>st</sup> edition 6 inch map, three structures are shown, located in similar positions to those buildings which are visible today (annotated 'A', 'B2' and 'C' on Figure 1.1). Building 'A' is depicted larger, however, extending a further 5m to the south-west. Building 'B1' is located to the south-west of its current position ('B2'). It is not possible to know (without excavation perhaps) if these variations are due to surveying inaccuracies or if indeed this was the original location of building 'B' and if building 'A' was originally larger. A fourth small building ('E' on Figure 1.1) is also shown on the 1833 map to the south-south-east of building 'A'. The 2<sup>nd</sup> edition of the OS 6 inch map (1852) shows the same arrangement as the earlier map, however, building 'A' has shrunk in size to the same length as it is today. Building 'B' is by that time (1852) located further to the north-east, in the same position (although different layout) as it is today ('B2'). In 1902, by the 3<sup>rd</sup> edition of the map, a number of additions are apparent. Extensions have been added to the rear (north-west) of building 'A' at the northern end and to the rear (north-east) of building 'B' at its south-eastern end. By this time also a further small building has been added in a linear arrangement to the north-west (annotated 'I' on Figure 1.1) of building 'B'. By 1920, the 3<sup>rd</sup> edition of the 25 inch county series map shows a number of further changes. Building 'B' appears to have been remodelled significantly in the intervening years, the north-western end is also extended to the rear (north-east) and also has been added to at the west (annotated 'J' on Figure 1.1). Structure 'E' and 'I' are no longer depicted. Structure 'F' and 'G' are depicted for the first time by 1920. The 4<sup>th</sup> edition of the 25 inch map (1931) and the 6<sup>th</sup> edition of the 6 inch map (1938), show the same arrangement as the 1920 map, with the further addition of structure 'D' running north-eastwards from 'B2'. Only the structures shown in black on Figure 1.1 are now visible, although further remains may be lie undetected beneath the scrub.

The Griffith Valuation of 1862 lists John Thompson as the occupier of the farmhouse on Carnmoney Hill (annotated 4a on Griffiths' map; see Figure 1.2). The description of the tenement (referenced as 4a) notes 'House, offices and land, limestone quarry and kilns and blackstone quarry'. John Thompson is further listed as occupier of the tenement at map reference 4d; a stable and store. Although it is not possible to be certain, it may be that the Thompson family listed on the 1901



Census of Ireland return in Dunanney townland are living in the farmhouse and are descendants of John Thompson, perhaps his son and grandchildren. Farmer, George Thompson, aged 41, is listed on the 1901 Census return for Dunanney townland as the head of family. He and his wife Mary (aged 40) have four sons and a daughter living with them, aged between 4 and 16, all listed as scholars. Significantly perhaps, the eldest boy (aged 16) is named John (after his paternal grandfather?). Also living with the Thompson family are a nephew, Hugh Semple, aged 32, a horse dealer and Patrick Hamill, a 40 year old servant whose occupation is given as farm labourer. On the 1901 census the house is described as having 'stone, brick or concrete' walls and a 'slate, iron or tiled' roof. Described as a 2<sup>nd</sup> class house, there were three windows in the front of the house and six rooms were occupied. In addition the census notes nine outbuildings; a stable, harness room, cow house, piggery, fowl house, boiling house, barn, turf house and shed.

By the time of the 1911 Census of Ireland the Thompson's have had a further daughter, and although their nephew is still residing with them, they no longer have a servant. Two of the sons, John and Edward (ages 26 and 23) are listed as farmers now, so perhaps they have replaced the labour once provided by their employee. The family are now only occupying five rooms in the house, which has two windows in the front where it previously had three. It is still considered to be a 2<sup>nd</sup> class house. Seven out-buildings are now occupied, a stable, two cow houses, a piggery, fowl house, boiling house and barn. The house was destroyed by a fire in the late 20<sup>th</sup> century.

## Survey

The corner points of the structures were measured using a Leica TPS 705 Series Total Station, in order to relate the various buildings accurately to one another. The results were processed using Leica Liscad software. The survey was completed using measuring tapes to capture further detail of the buildings where they could be detected (Figure 1.3). The survey was much hindered by the shrubs, trees and bushes growing in and around the buildings and many details were inevitably masked. Many of the walls were in a ruinous state to such an extent that details of internal divisions and doors and hearths, for example were not detected. Further work will be required, following the removal of the vegetation and fallen masonry to determine precisely the details of the architecture of the house, and also the uses of the many out-buildings.

## Description of the remains

The farmhouse (annotated 'A' on Figure 1.1) is aligned along the laneway and faces south-east (Figure 1.4 & 1.5). It measures 16.2m north-east to south-west and 6.6m north-west to south-east. It

is built of basalt blocks, roughly 0.2m-0.4m high and although varying in length they are up to 0.8m long (Figure 1.6). The corners of the building are dressed with limestone quoins (Figure 1.6). There are some patches of render visible in places. The walls are in a fallen down condition and stand variously between 0.5m to 2m in height. The structure appears as three units, with a small extension to the rear. Given the Census return descriptions of a 5 and 6 room house, it seems likely that (in its later stages at least) the house was two storeys. Two windows are now evident at ground floor level. One in the front, measuring 1.2m across and one at the rear measuring 0.7m across. The room at the south-westernmost end was entranced from the outside by a door way in the south-eastern wall, 1.2m in width. This doorway has brick in the jamb and it may be that this opening was a later addition. There are no windows apparent in this room. It seems likely that this was, if not originally, then later used for animals, or as a store. The other two rooms are presumably interconnecting, although there is no evidence of this now and any internal door is masked by fallen masonry. A doorway opening, 1.1m wide, in the south-eastern wall provides access from the outside to the central room. The south-western wall in this room appeared to be thicker than the rest (which were 0.6m thick) at 0.9m thick and it may be that this was the location of the hearth and chimney. There is access from the north-easternmost room, through a doorway 0.85m wide, into the rear extension. The rear extension measures 5.9m by 2.6m and has an opening to the north-east and outside, measuring 1.25m wide.

Built adjoining the front of the house is a possible milk-churn stand, a rectangular plinth, measuring 1.95m by 1.43m, constructed using basalt blocks (see Figure 1.5). This is a platform upon which full milk-churns would have stood awaiting collection by cart, and later truck, in the late 19<sup>th</sup> and first half of the 20<sup>th</sup> century. These churn stands, once common, are now at risk of destruction (Whelan 2011, 246). Belonging to an out-dated system of milk collection, the stands were made defunct by the introduction of tankers that collected milk directly from the dairy. Following the introduction of the tankers, along with tighter regulation of the storage and transportation of milk, churn stands have in many cases been removed. The example at Carnmoney is an important and rare survivor, therefore, which informs us of past farming practices.

Without further work, such as excavation for example, it is difficult to be certain of the exact layout of the house, where the stairway might have been and so on. On present evidence it seems that it may have been a 'hearth-lobby' house, with the door adjacent to the hearth. It is likely therefore that there was a jamb partition between the door and the hearth.

Further buildings lie to the north-east and east of the house, on the opposite side of the yard and laneway. These structures are also constructed of basalt blocks and are in a similar ruinous condition. These are likely to be the remains of the various outbuildings described in the 1901 and 1911 Census returns and therefore functioned primarily to house animals (horses, cows, pigs and chickens) but also as stores (barn) and as a boiling house (to prepare feed for pigs). The structure to the east of the house (annotated 'C' on Figure 1.3) is largely hidden in thick scrub and trees (Figure 1.7). The structure faces north-north-west and is 9m wide. The walls are 0.5m thick and the entrance is 1.1m wide. It is not possible to determine further features of this building, although there has been a structure here since at least 1833, as depicted in the 1<sup>st</sup> edition of the 6" map. The building appears to have been enlarged on its long axis by the time of the 3<sup>rd</sup> edition of the 25" map in 1920 and although this extension was not visible at the time of the survey, remains may be hidden beneath the vegetation. The structure which lies to the north-east of the yard ('B' on Figure 1.3) has gone through various stages of remodelling. Today it survives 8.3m north-west to south-east and 7.7m north-east to south-west (Figure 1.8). A doorway in the south-westernmost wall is 2.05m wide and the walls are 0.4m thick. Attached to the rear of this building, although not accessed from it, is a further long range of buildings ('D' on Figure 1.3), mostly disguised by trees and bushes. Aligned north-east to south-west, this structure is at least 18.5m long, although the north-easternmost end is hidden within the trees. It is 4m wide north-west to south-east and is separated into two units, which do not appear to be inter-connected. There is a small annexe on the front at the north-easternmost end which measured 5.5m by 2.8m in size and is accessed from outside through a doorway, 1m wide, in the south-west wall. The walls range between 0.3m and 0.6m thick. There is a window in the south-westernmost unit measuring 0.7m wide; its doorway is not apparent. A doorway into the north-easternmost unit measures 1.1m wide.

A set of stone built traditional gate pillars survive at the north-eastern exit from the farmyard (Figure 1.9). There is a trace of render on the pillars.

The farmyard at Carnmoney may have started out as an 'extended type', with everything housed under a single row of buildings. It may be, of course that it was originally laid out as it appears on the 1<sup>st</sup> edition map in 1833, and as it appears now - a 'scattered' type. The buildings are placed in what seems like a random fashion, but are presumably sited to take advantage of the level ground where it is available on the steep slopes of Carnmoney Hill.

## Condition of the farmhouse

The farmhouse and outbuildings survive fairly well and are generally sound and in a good condition. There is a significant problem with trees, shrubs and weeds growing in and around the buildings which are causing significant damage and will destabilise the walls, causing further collapse.

## Recommendations

It is recommended that the farmhouse and farm buildings at Carnmoney are conserved and preserved as an important community resource. Any work undertaken should be sensitive of the fact that a fire destroyed the house in the 1970s. The buildings and traditional farm features add character to the area and enhance the visitor experience for those using the Woodland Trust amenity, providing a link to 19<sup>th</sup> and 20<sup>th</sup> century rural farming life. It is recommended therefore that the buildings are cleared of trees and vegetation as a priority, following guidelines issued by NIEA (outlined below). The fallen masonry should then be removed from in and around the buildings and the standing remains repointed with lime mortar, again following NIEA guidelines. It is recommended that an excavation is undertaken in order to establish the internal layout of the farmhouse. This will provide information, for example, on the position of the hearth, stairs and other features such as doorways. It would also be useful to recover artefacts which might demonstrate when the house was first occupied and would provide greater insight into the daily lives of the occupants. Excavation in the area of the out-buildings, and in particular buildings 'B' and 'C', would also be useful and likely to provide more information on how these buildings might have functioned through the 19<sup>th</sup> and early 20<sup>th</sup> centuries. Advice should be sought from the Built Heritage directorate of the NIEA prior to undertaking any works.

A number of conservation actions are recommended:

1. All trees and ground vegetation in and around the farm buildings should be removed to ground level and a suitable herbicide used.
2. The ivy on the buildings should be treated:
  - Ivy should be cut back as close to the walls as possible.
  - This trimmed face should then be sprayed with an appropriate herbicide immediately.
  - The main ivy stems should be cut at the base of the root, removing a piece at least 300mm in length.
  - The cut root should then be drilled and treated with an appropriate herbicide.
  - The ivy should then be left to die away naturally, a process which can take more than a year. Checks should be made to determine if a second treatment is required.

- Once dead, the ivy can be removed from the structure, by hand, with care.
3. Regular maintenance will be required to keep the ivy and ground vegetation growth under control.
  4. Fallen masonry should be removed from within and around the buildings. This work should be supervised by an archaeologist.
  5. Repoint masonry:
    - Rake out old or inappropriate mortar to a minimum depth of 25-40mm or until sound mortar. The exposed joints should be cleaned with water or compressed air. The joint and masonry should then be moistened.
    - Where necessary voids should be filled to provide a uniform depth prior to pointing.
    - Pointing should be carried out using an appropriate lime mortar.
    - The repointed joint should be protected for a minimum of 7 days (eg dampened sacks hung in front of the wall to prevent drying too quickly). The masonry and joints should be remoistened after 24 hours. Lime mortars are vulnerable to frosts for a minimum of three months after application, and so work programmes should be timed in consideration of this.
  6. A community excavation should be organized, with trenches located within the farmhouse, and out-buildings 'B' and 'C'.
  7. A reconstruction drawing should be commissioned and text compiled, including the results of the excavation, to accompany the drawing.
  8. A sign board should be erected within the farmyard.

## Costing

• Repointing masonry	£27,000.00 plus VAT	£32,400.00
• Community excavation:		
Fieldwork	20 days X 4 Field Archaeologists X £170	£13,600.00
Fieldwork Consumables		£250.00
Transport & Fuel		£800.00
Site Infrastructure		£500.00
Report	20 days X 1 Excavation Director X £170	£3,400.00
Graphics	10 days X 1 Illustrator X £170	£1,700.00
Initial finds processing	5 days X 1 person crew X £170	£850.00
Allocation for post-excavation specialist reports		£1,000.00
Report Consumables		£50.00
Sub-total		£22,150.00
• Commission a reconstruction drawing:		£700
		<b>TOTAL £55,250.00</b>

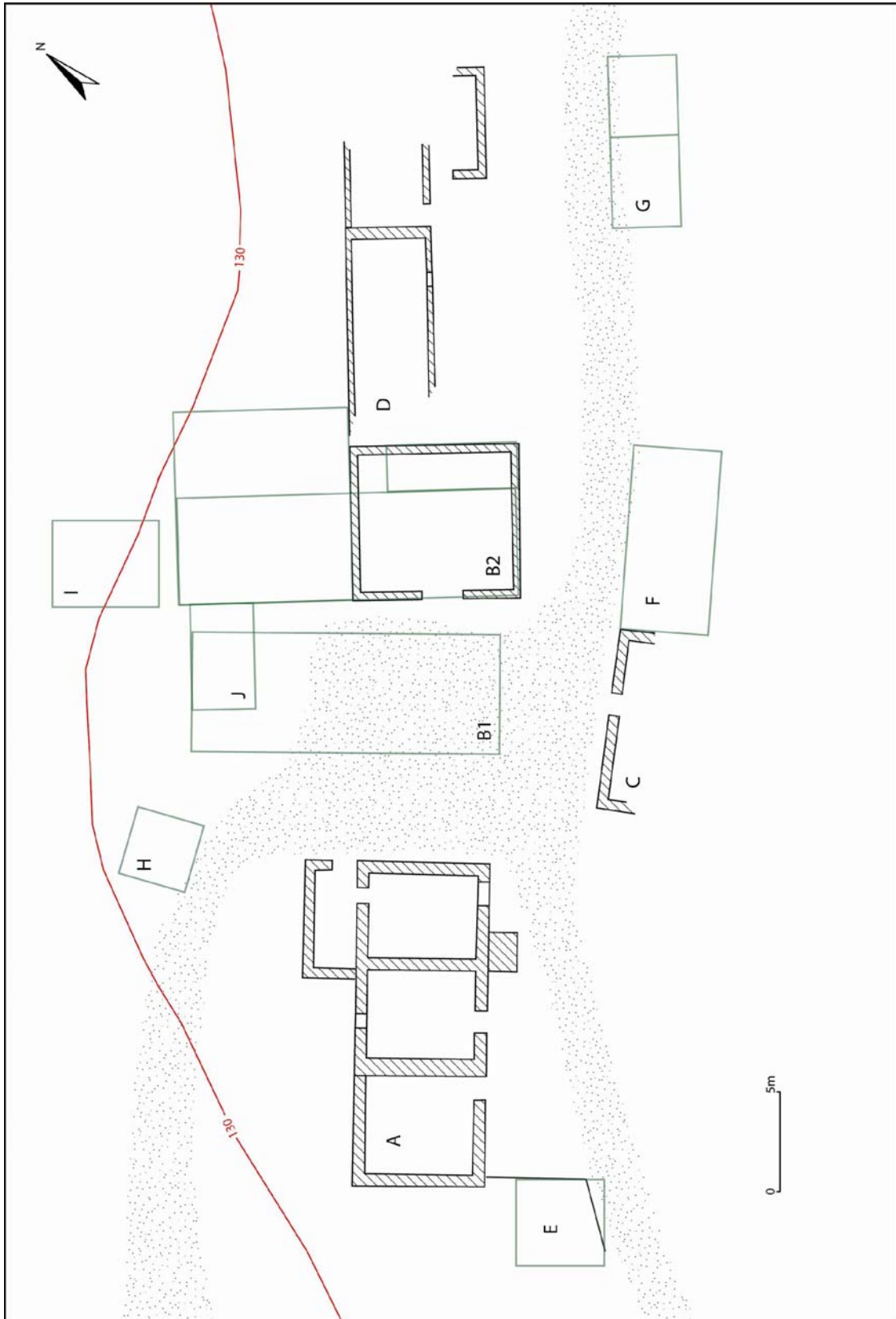


Figure 1.1 – Wall footings visible today are shown in black, while the buildings shown on the various editions of the Ordnance Survey maps are highlighted in green.



Figure 1.2 – Map showing Griffith Valuation annotations.



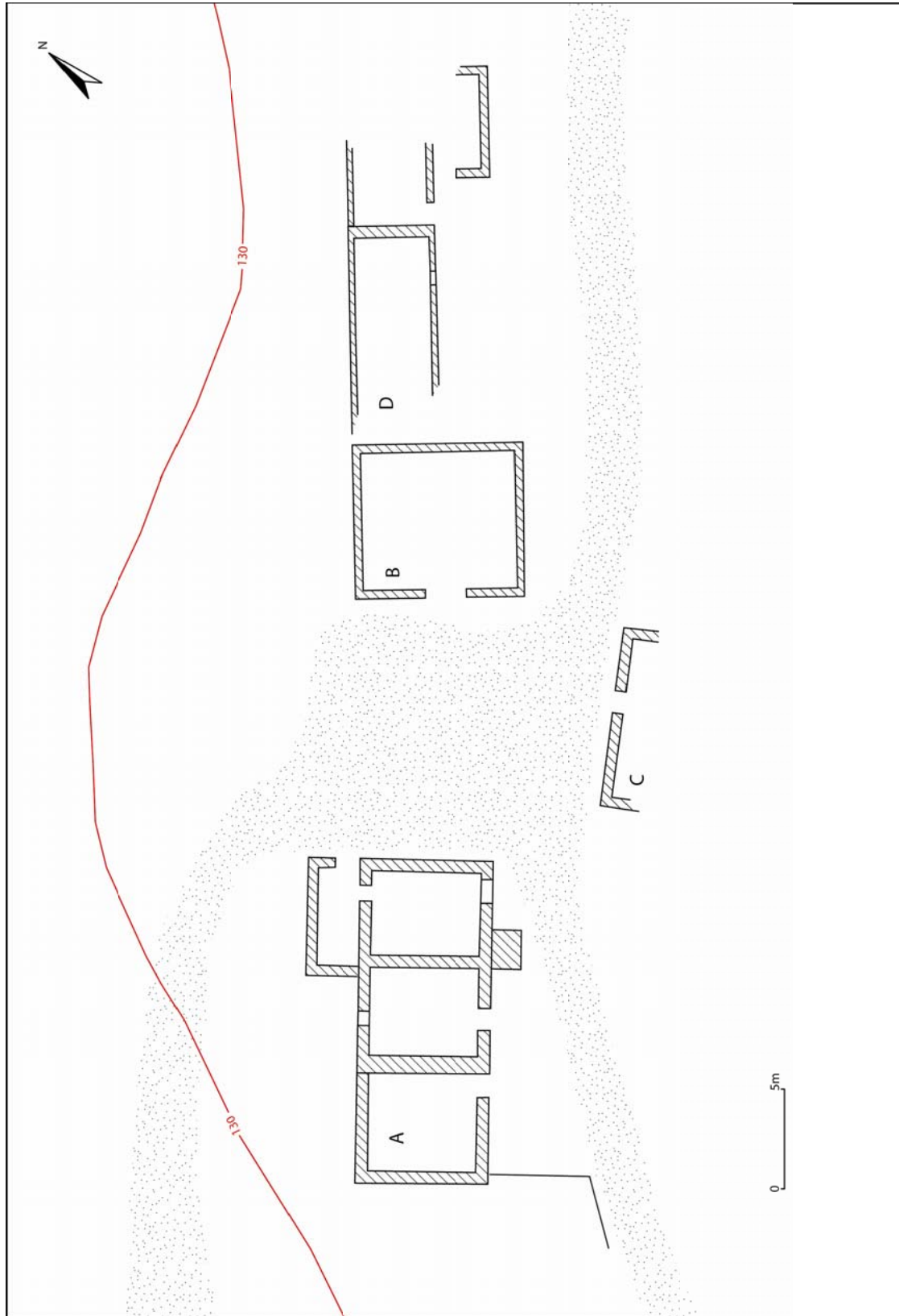


Figure 1.3 – Carnmoney farmhouse building survey.



Figure 1.4 – Carnmoney farmhouse, from traditional gate pillars, looking south-west across farmyard.



Figure 1.5 – Front of the farmhouse, looking south-west, showing milk-churn stand.





Figure 1.6 – North-eastern wall of the farmhouse, looking south-west.



Figure 1.7 – North-western wall of building 'C', looking south-east.





Figure 1.8 – Building 'B', south-western wall, looking north-east.



Figure 1.9 – Traditional gate pillars, on either side of laneway running between buildings 'B' and 'C'. Looking north-east.

## 2. Dunanney lime kiln

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### Introduction

Lime kilns were an integral part of agricultural life and ubiquitous in the landscape across Ireland throughout the 18<sup>th</sup> and early 19<sup>th</sup> centuries. Dunanney limekiln (IGR J33648 82189) is located on the southern slopes of Carnmoney Hill, with excellent views north east across Belfast Lough through to Cave Hill at the south west. The limekiln is presently largely obscured by ivy, shrubs and weeds. It sits on the edge of a laneway which rises steeply from O'Neill Road, leading to Carnmoney old farmhouse and the land managed by the Woodland Trust beyond. Most visitors to Carnmoney Hill will be unaware of the existence of the kiln, so overgrown as it is, despite passing immediately by it. This report details the remains of the limekiln, as can be presently identified, and discusses lime kilns generally, providing a historical context for the Dunanney kiln. The potential for conservation and presentation are explored and recommendations are proposed.

### Lime kilns

Utilized since prehistoric times, lime is an important resource, exploited for (amongst other things) mortar production and as an alkali to neutralize acidic soils (Williams 1989, 3). In Ireland it is thought to have been first used for building and related uses in the mid-1<sup>st</sup> millennium AD (during the early medieval period) whilst the practice of adding lime to soil began later and was carried out through the 12<sup>th</sup> – 17<sup>th</sup> centuries (O'Sullivan and Downey 2005, 21). By the 18<sup>th</sup> and early 19<sup>th</sup> centuries, however, lime was used extensively, to such a level that the limekiln is Ireland's most numerous and widely distributed industrial monument (Rynne 2006, 157). It has been estimated that there may have been 250,000 or more lime kilns in Ireland at that time, given that there is likely to have been one for every cluster of three or four landowners (O'Sullivan and Downey 2005, 21).

The ruinous kilns which can be found dotted around the countryside, are for the most part, the remnants of rural agricultural practices of the 18<sup>th</sup> and 19<sup>th</sup> century. Although two different types were used ('intermittent flare kilns' and 'continuous draw kilns') most of the field monuments are of the continuous draw kiln type (Rynne 2006, 158). With flare kilns the limestone and fuel are kept separate within the body of the kiln by an arch or a dome and the kiln is charged, fired, cooled and emptied in one cycle, while with the draw kiln the fuel and limestone are layered continuously into the furnace and the lime drawn at the base (Rynne 2006, 157; Figure 2.1). Continuous draw kilns are

usually rubble stone built, around 4-8m wide and up to 5-8m high, most often square or rectangular in ground plan, though sometimes circular (Rynne 2006, 158). The internal shaft is usually around 2m wide and is enclosed by stone walls, with the space in between the shaft and outer wall in-filled with an earthen rubble core. Lime kilns are usually built against a natural hill slope, to facilitate access to the furnace shaft from above. The kiln shaft, once filled with layers of fuel and limestone, was lit via an opening at the base, usually accessed by an arched recess. This opening within the recess was ultimately where the lime was withdrawn from the kiln once burnt. A vent was usually located above the opening, within the recess, to allow for a draft and also to allow for the insertion of a stick to dislodge ash and assist in the burning process (Rynne 2006, 158). The arched recess was usually large enough to accommodate two men standing and sometimes even a horse and cart. Once burnt, it was important that the quicklime was kept dry and sometimes a lean-to was constructed against the recess opening to facilitate this. Often a ledge and the joist holes from the lean to can be seen on the exterior wall above the recess (Sleeman 1990, 96; Figure 2.2).

Lime kilns were operated intermittently depending on the agricultural cycle. The furnace shaft was filled with layered limestone and fuel, sometimes coal, although more usually either culm (coal dust), peat or furze (whin bushes) (Rynne 2006, 159; O'Sullivan and Downey 2005, 20). The fuel and limestone were loaded in roughly equal amounts, although this was largely dependent on the type of fuel used, with estimates suggesting that 10 times more peat than coal would be needed to produce the same amount of lime (O'Sullivan and Downey 2005, 20). A mixture of fuel types was also frequently used (*ibid.*). The fire was kept burning for up to 2 days, although times were dependent on a number of factors, including the fuel type used (Sleeman 1990, 96). Temperatures had to reach 900-1000°C and the kiln would be constantly attended by a lime burner who added fuel and limestone as needed and ensured that the correct temperature was reached (*ibid.*). The cooled quicklime was then raked from the opening in the base of the recess where it was loaded onto a cart and removed by horse or donkey. The quicklime was then distributed on the fields and became effective once rained upon (*ibid.*, 97). Although primarily employed as an alkali to neutralize acidic soils it was also used for a variety of other purposes, including the production of lime based mortar, as a disinfectant in the farmyard, as a slug repellent and as frost protection for stored potatoes (Rynne 2006, 157; Sleeman 1990, 95). Lime also had uses beyond the farm, for example, as a flux in blast furnaces, in the purification of town gases, in the production of bleaching powder, in the tanning process and in civil engineering works and was produced for these purposes on a larger, more continuous scale, generally in towns and at ports (Rynne 2006, 157, 159). In some cases the

heat rising from this more intensive lime production was used to boil salt pans and so the fuel used to produce the lime was, at the same time, being used to refine salt (ibid, 159).

The production of lime on an individual farm scale was in decline by the end of the 19<sup>th</sup> century as industrial scale lime works replaced the rural agricultural kilns (O'Sullivan and Downey 2005, 18). One of the first Hoffman kilns to be built was constructed in 1866 at Castle Espie outside Comber, Co. Down by Robert Murland. As well as making bricks, the Hoffman Kiln had the capacity to produce over 600 tons of quicklime a week (Rynne 2006, 160). Industrial production of lime continued at the end of the 19<sup>th</sup> century using rotary kilns and bottle-type kilns and effectively saw the end of the production of lime at farm level (ibid.).

### **Previous work**

The Dunanney lime kiln is depicted on the 1<sup>st</sup> edition of the Ordnance Survey 6 inch map of 1833 as a double circle (Figure 2.3), indicating that this may have originally been a double lime kiln. The kiln is not shown on any of the subsequent 6 inch map series, however, is depicted on the 25 inch series as a single circle and annotated 'lime kiln' on the 1<sup>st</sup> edition (1901) and 'L.K.' on the subsequent editions. The lime kiln was surveyed as part of the Greater Belfast Industrial Archaeology Survey (IHR no. 10265), however the description simply notes 'Dwelling now on site'.

### **Current condition**

A close inspection of this lime kiln was not possible due to the thick undergrowth (Figure 2.4). The structure is covered in ivy, and further surrounded by a thicket of brambles, nettles and weeds. Prior to the current inspection a small area around the arched recess was strimmed of vegetation and allowed a limited survey of the structure to be carried out.

The part of the structure which can be seen appears in fairly robust condition and would suggest that the remainder has also survived well and is currently in a good condition. The removal of the vegetation would allow for a fuller inspection to be carried out.

### **Description of the remains**

The lime kiln is located at the edge of a laneway leading to Dunanney farmhouse which rises steeply to Carnmoney Hill. The lane curves around the lime kiln and the steep rise would have allowed for access to the furnace shaft from above. The limekiln is now almost completely obscured from view by thick undergrowth, ivy and brambles. Only the draw hole is visible for inspection, however, its

condition would indicate that the remainder of the kiln is still in fairly robust condition despite being concealed by vegetation. The kiln appears to be approximately 9m wide and is around 3m in height; however, it is not possible to determine this more precisely due to the vegetation. The structure is constructed using large sub angular basalt blocks, ranging in size from 0.1 x 0.2m to 0.65 x 0.35m, bonded with lime mortar.

The draw hole is entranced by an arched recess (Figure 2.5), which currently measures 2.36m wide and 2.03m high at the entrance and is 2.4m deep. The recess appears to be constructed using an arch at the mouth which extends into the recess 1.2m. The roofing at the rear of the recess is corbelled. The height within the recess reduces from 2.03m at the entrance to 1.35m at the back. It is likely that the original height within the recess was greater, however, as the build-up of debris and soil on the ground surface within, is likely to have reduced the overall height. The width of the recess reduces from 2.36m at the mouth to 0.8m at the back.

There are three cavities within the arched recess. One, an opening, is located centrally at the back, and measures 0.37m wide and 0.56m deep. The top is 0.33m from the present ground surface. It seems likely that this is where the lime was removed from once fired. Two cavities are located in the walls of the recess. One to the right of the entrance, in the northern wall, 1.16m from the entrance, is 0.8m from the present ground surface and measures 0.4m wide, 0.35m in height and is 0.56m deep. The other, to the left of the entrance in the southern wall, is 1.7m from the entrance and is 0.6m from the present ground surface. It measures 0.23m wide and 0.29m in height and is 0.46m deep (Figure 2.6). Their function remains unclear. A possible vent and stoke hole is located just above the centrally located opening at the back of the recess. This appears as an unmortared gap between two basalt blocks.

### **Historical context**

The Griffith Valuation of 1862 lists John Thompson as the occupier of the farmhouse at the top of Dunanne lane and lists him as the occupier of a limestone quarry and kilns, a black stone quarry, a stable, a store, a herd's house, sheds and land. It seems likely therefore that the limekiln on Dunanne lane was operated by John Thompson intermittently in order to satisfy the agricultural needs of his farm and that of neighbouring farms. It has been suggested that each farm would burn a charge of lime almost every year (Davies 1938, 80).



## Archaeological context

The limekiln on Dunanney lane is one of ten which were located on Carnmoney Hill in the 18<sup>th</sup> and 19<sup>th</sup> centuries (Figure 2.7), all undoubtedly sited to take advantage of the chalk within the seam of the Ulster White Limestone Formation which can be found on the north-east, east and southern slopes of Carnmoney Hill surrounded by basalts of the Lower Basalt Formation. Of the ten limekilns which once were located on Carnmoney Hill, only two now remain extant. The Dunanney kiln (IHR no. 1026500000) and another located immediately to the north east (IHR no. 1026400000; Figure 2.8-2.9), both on land managed by the Woodland Trust. High destruction rates have been identified elsewhere in the country, for example, in Mallow, Co. Cork, only 8 of 53 kilns extant in 1842 are now in reasonable repair (Sleeman 1990, 99). The destruction rate of 85% observed in Mallow is similar to the destruction which has occurred on Carnmoney Hill (80%). These destruction rates highlight the need for those limekilns which do remain to be protected and conserved.

## Recommendations

Dunanney lime kiln was an important part of the rural agricultural life of the 18<sup>th</sup> and early 19<sup>th</sup> century farm on Carnmoney Hill. It is a rare survivor and only 2 of the 10 once located on the Hill are now extant. As such, the kiln provides a rare tangible link with the rural agricultural past of the area. If conserved and presented appropriately, the kiln could be a valuable addition to the Woodland Trust amenity, adding considerably to the visitor experience. This would be additionally meaningful if carried out in conjunction with the conservation and preservation of the farmhouse complex itself.

The priority for conservation of the structure should be to deal with the vegetation problem. This will, in the first instance, allow for the structure to be more effectively assessed, but will also facilitate making the structure sound. Once the vegetation has been removed it will be necessary to repoint and repair the masonry, where necessary. It would also be pertinent to seal off the furnace shaft to prevent visitors from climbing, or falling in. This has been successfully achieved at other lime kilns, such as that at on the National Trust land at Murlough Bay, Co. Antrim, with the use of a metal grill (Figure 2.10-2.11).

The NIEA have produced a guidance booklet which details how ivy, trees and ground vegetation can be effectively removed from masonry structures without causing damage to the structure itself and another which advises on the selection and application of mortars for repointing historic buildings. The guidelines should be consulted prior to undertaking any work on the lime kiln and advice should be sought from the Built Heritage directorate of NIEA.

It is also recommended that a sign board is erected at the lime kiln to inform visitors how the structure functioned, as well as detailing the important part the structure would have played in the life of the farm in the 18<sup>th</sup> and early 19<sup>th</sup> centuries. A good comparable example has been erected at a limekiln in Dyserth, Denbighshire, Wales, and includes a reconstruction painting, illustrating the various parts of the kiln and how it functioned (Figure 2.12).

A number of conservation actions are recommended:

All ground vegetation around and against the limekiln should be removed using a strimmer.

1. The ivy on the limekiln should be treated:
  - Ivy should be cut back as close to the structure as possible.
  - This trimmed face should then be sprayed with an appropriate herbicide immediately.
  - The main ivy stems should be cut at the base of the root, removing a piece at least 300mm in length.
  - The cut root should then be drilled and treated with an appropriate herbicide.
  - The ivy should then be left to die away naturally, a process which can take more than a year. Checks should be made to determine if a second treatment is required.
  - Once dead, the ivy can be removed from the structure, by hand, with care.
2. Regular maintenance will be required to keep the ivy and ground vegetation growth under control.
3. Repoint masonry:
  - Rake out old or inappropriate mortar to a minimum depth of 25-40mm or until sound mortar. The exposed joints should be cleaned with water or compressed air. The joint and masonry should then be moistened.
  - Where necessary voids should be filled to provide a uniform depth prior to pointing.
  - Pointing should be carried out using an appropriate lime mortar.
  - The repointed joint should be protected for a minimum of 7 days (eg dampened sacks hung in front of the wall to prevent drying too quickly). The masonry and joints should be remoistened after 24 hours. Lime mortars are vulnerable to frosts for a minimum of three months after application, and so work programmes should be times in consideration of this.
4. A metal grill, or similar should be fixed to the top of the furnace shaft.
5. Commission a reconstruction drawing and compile text to accompany the drawing.
6. Erect sign board adjacent to the limekiln.

## Costing

Repoint masonry	£8,700.00 plus VAT	£10,440.00
Commission reconstruction drawing		£700.00
		<b>TOTAL £11,140.00</b>

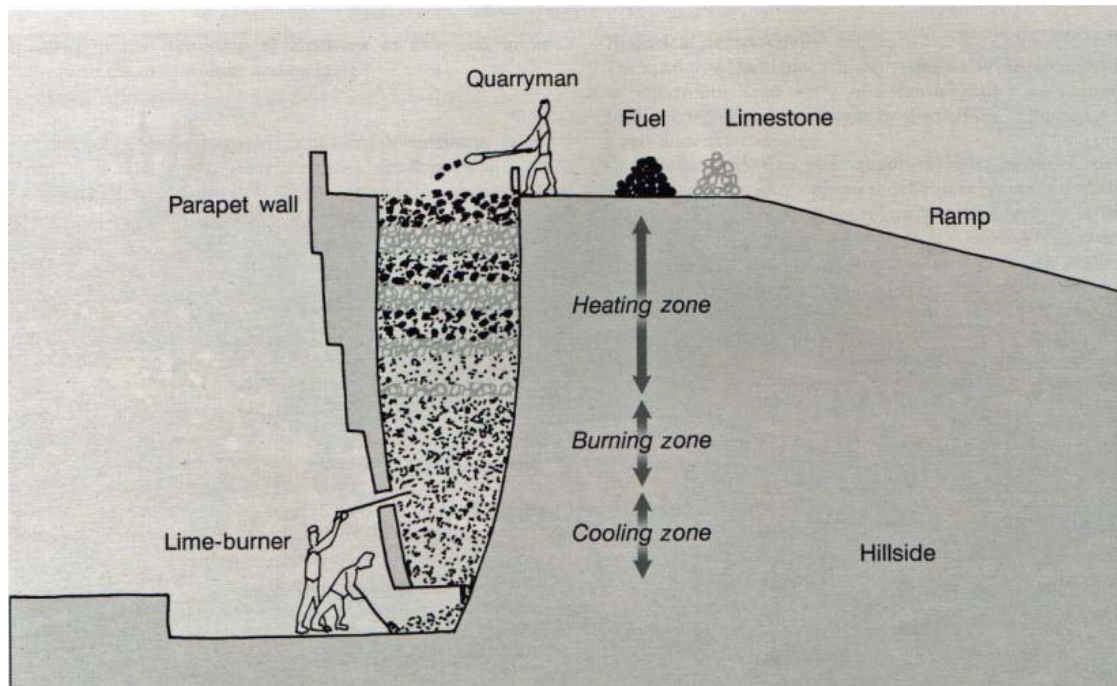


Figure 2.1 - Diagram of a working kiln (from O'Sullivan and Downey 2005, 19).



Figure 2.2 - Joist holes and ledge, above recess for fixing lean to against the lime kiln at Bighouse, Co. Antrim (after Welsh 2011, figure 6).

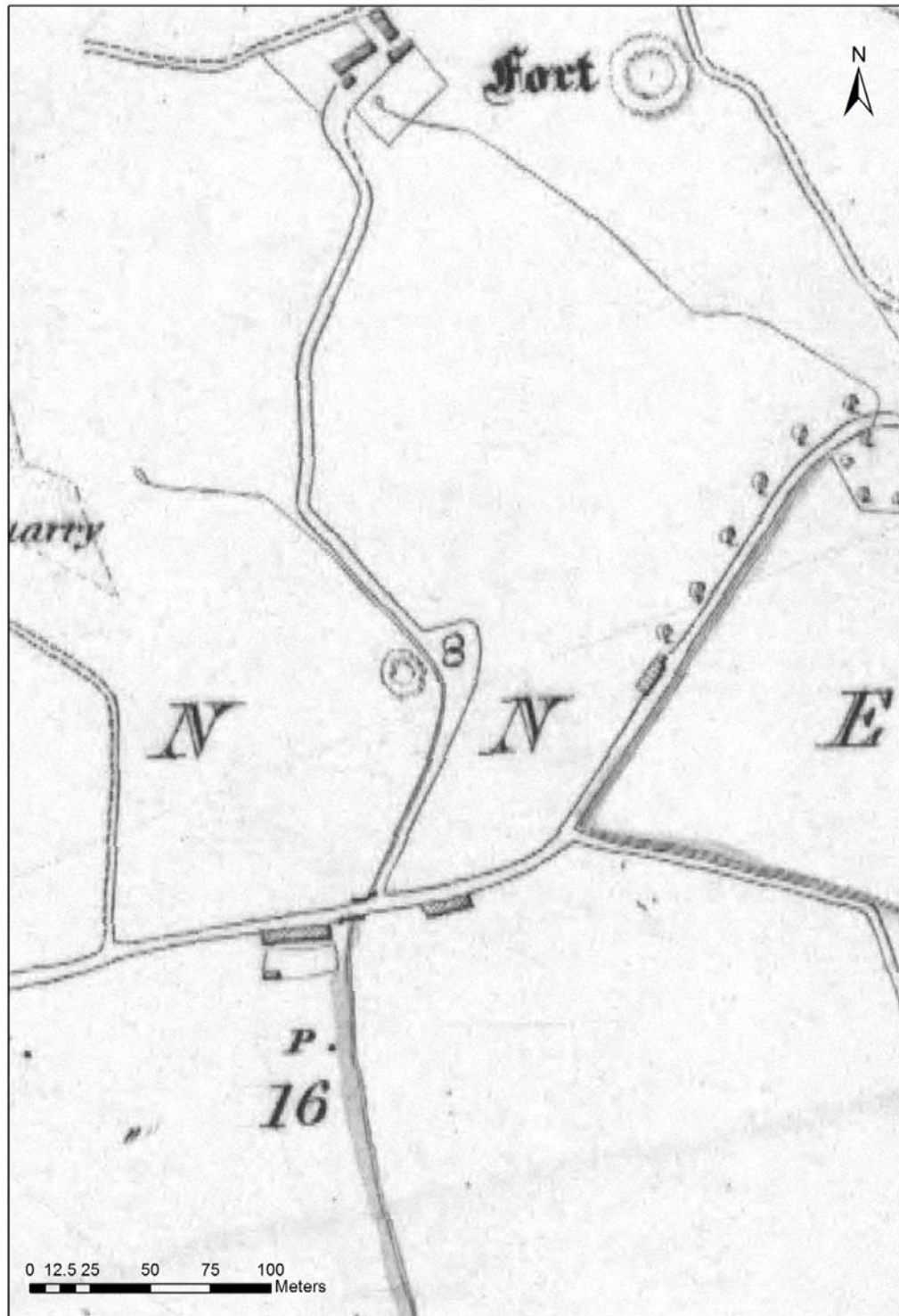


Figure 2.3 - 1<sup>st</sup> edition OS map (sheet 57, 1833) showing the limekiln as a figure of 8.





Figure 2.4 - Duanney limekiln (IHR 1026500000)



Figure 2.5 - Arched recess at Duanney lime kiln (IHR 1026500000).





Figure 2.6 – Cavity within southern wall of the arched recess.

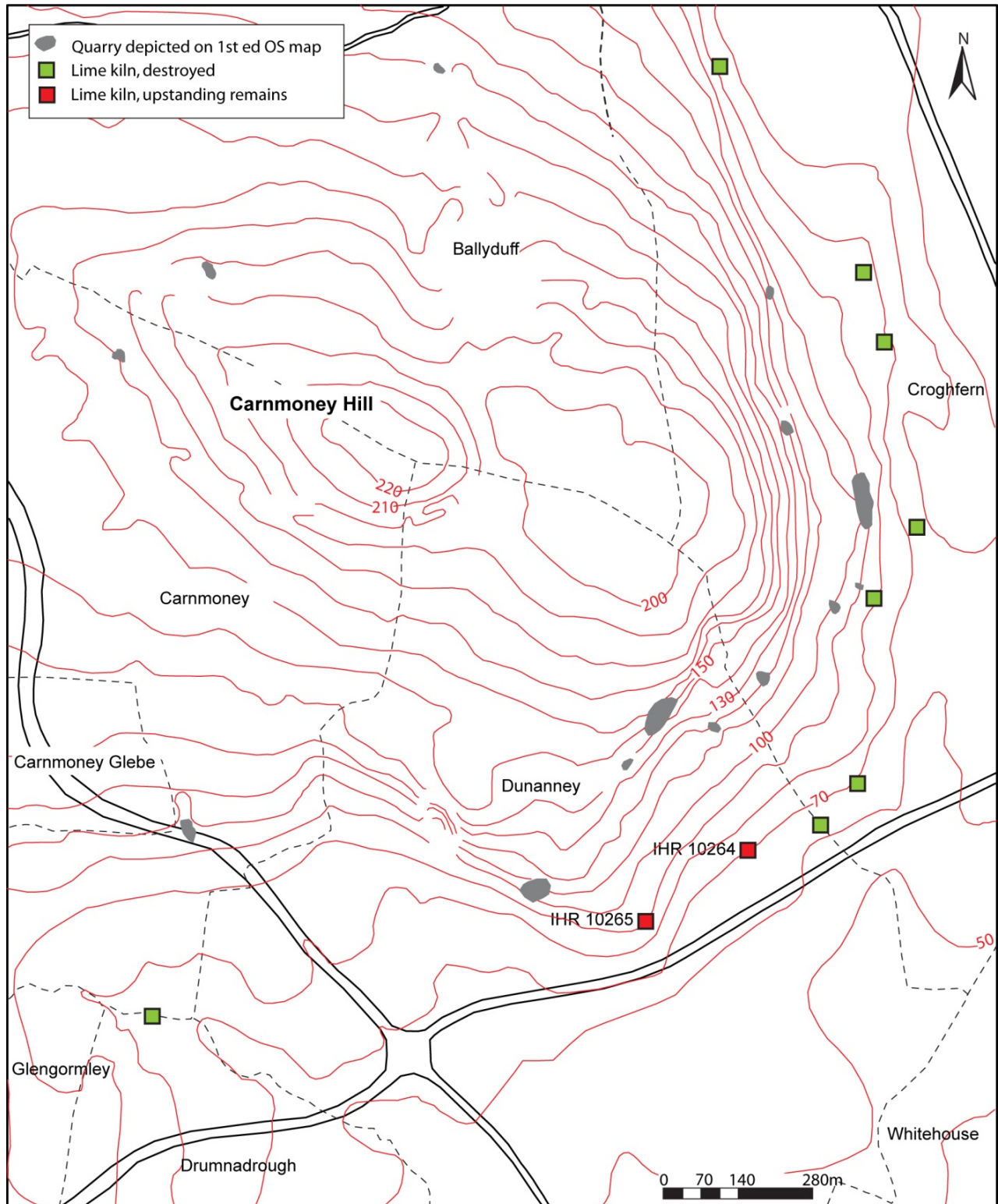


Figure 2.7 – Location of limekilns and quarries on Carnmoney Hill.





Figure 2.8 - Carnmoney lime kiln, IHR 1026400000 (image courtesy of Gregor Fulton, Woodland Trust).



Figure 2.9 - Carnmoney lime kiln, IHR 1026400000 (image courtesy of Gregor Fulton, Woodland Trust).





Figure 2.10 - Lime kiln, Muroolough Bay, Co. Antrim (from Welsh 2011, figure 2).



Figure 2.11 - Metal grill covering furnace shaft at Murlough Bay lime kiln (from Welsh 2001, figure 16).





### 3. McArt's Fort

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#### Introduction

Located on a rocky outcrop on Cave Hill, this familiar yet enigmatic monument known as McArt's fort (ANT 056:018; J32526 79594) has far reaching views across the city and Belfast Lough. The promontory fort is much visited by walkers coming to the Cave Hill and is a superb vantage point. The monument is described below and a survey plan and profile of the monument presented. The condition of the monument is discussed along with recommendations for further work.

#### Promontory forts

Promontory forts are a not particularly well understood monument type. They are characterised by their naturally defensive, usually coastal, promontory locations which are cut off from the adjoining land by a ditch and bank (or multiple ditches and banks). Although most commonly coastal in siting, promontory forts bounded by cliffs in inland locations are also known, as at McArt's Fort and at

Lurigethan near Cushendall (Proudfoot and Wilson 1961-1962, 108). The results from the few excavations which have been undertaken at promontory forts have not conformed to a consistent pattern and so a standard picture of how these monuments were used or even of what period they date to has yet to emerge. Some promontory forts (eg Dunbeg, Co. Kerry and Dubh Cathair, Inish mor, Co. Galway) are Bronze Age and Iron Age in their earliest phases and others were reoccupied later, even as late as the 17<sup>th</sup> century as in the case of Dooneendermotmore, Co. Cork (Barry 1981, 12; Edwards 1990, 41). Others, on excavation, have provided evidence of significant occupation in the Early Medieval period, as at Larrybane, Co. Antrim, where four occupation layers, hearths and the remains of structures along with Early Medieval artefacts indicated that the site was occupied during this period (Proudfoot and Wilson 1961-1962). At Dalkey Island, the promontory fort had been used in the Mesolithic, Neolithic and Bronze Ages, as well as the Early Medieval period and there was evidence of an Early Medieval house, midden and hearth (Edwards 1990, 42). It seems likely that these sites might not all have functioned in the same way, with some clearly occupied for periods of time at least (eg Larrybane and Dalkey Island) and others such as Dunseverick acting as a royal stronghold. Others show little sign of any permanent settlement and excavations at Dunbeg, for example, produced no dateable occupation or artefactual evidence. It seems likely that some of the sites which were not permanently occupied were perhaps used for ritual or symbolic purposes or might have served for temporary refuge.

### **Previous work**

Described in the Proceedings of the Royal Irish Academy in 1905 as an 'impregnable fortress' in a short account which also mentions that a rude stone inauguration chair was once located here (1905, 288). McArt's fort is also the location where, in 1795, the celebrated oath was sworn by a group of United Irishmen, including Wolfe Tone 'never to desist in our efforts until we had subverted the authority of England over our country, and asserted our independence' (Quinn 2002, 26). The site is described in detail in the Preliminary Survey (1940, 53) and measurements are given. The survey reports that Cave Hill was known as Ben-Madagan, apparently after one or other of the two Kings of Ulaidh named Madagan who reigned from AD 838-855 and AD 933-948 respectively. The later Madagan was succeeded by his son Ardgall (AD 969-976) and subsequently his son MacArdgall who was killed during a battle at Crew Hill in AD 1003. It has been suggested that McArt's fort is named after this king (Chart 1940, 53).

The site is further described in the sites and monuments record (SMR) and a scaled plan and profile have been compiled by NIEA and are available in the SMR. These NIEA drawings have been digitised and augmented for the current study (Figure 3.1). The monument is Scheduled for protection under



the Historic Monuments and Archaeological Objects (NI) Order 1995. There are no records of archaeological excavation at the site, although an excavation was undertaken in 2011 at nearby earthworks. These earthworks may be associated with McArt's Fort. Preliminary excavations at the curvilinear earthworks provided an Early Medieval date for the feature and suggested that they may be part of a wider ritual landscape centred on McArt's Fort as a royal inauguration site (McSparron 2011, 40).

### **Description of the remains**

McArt's fort is a rocky promontory cut off by a rock-cut ditch at the west and a sheer drop at the north-east, east and south-east (Figure 3.1 and 3.2). The site is 350m OD and has superb views to the north, through east to south-east, but is overlooked by Cave Hill immediately to the west. The remains of a bank are apparent, enclosing the interior of the fort measuring 7-8m wide and standing around 1m above the interior and up to 8m above the base of the ditch (Figure 3.3). The ditch is around 3m wide and 2m below the outer bank which is almost 8m wide and 0.6m above the exterior.

### **Condition of the monument**

There are three causeways across the ditch (Figure 3.1), allowing access to the interior and steps (Figure 3.4) have been added to the steep slopes. The monument is much crossed with visitor worn paths, which have caused erosion of the monument (Figure 3.5). There is also a large quarried hole on the interior (see Figure 3.1).

### **Recommendations**

Given that so little is known about this monument it is recommended that an archaeological excavation is undertaken to try to determine how the site has been used in the past and during which period (or periods) it has been occupied. Trenches should be placed across the inner bank and also the outer bank and ditch with the aim of identifying artefacts and occupation debris. This would allow for a better understanding of the monument and would enable it to be presented to visitors to the monument in a more meaningful way. The location and siting of the promontory fort, by its very nature, poses a number of health and safety risks, which would make the work unsuitable for community participation. Any archaeological excavation undertaken here would need to undergo a stringent risk assessment and in particular the works would need to be securely fenced off with signs erected notifying the public of the danger. In addition, barriers should be erected between the works and the cliff edges in the event of works being undertaken in the vicinity of the cliff edges.

## Costing

- Excavation:

Fieldwork	20 days X 5 Field Archaeologists X £170	£17,000.00
Fieldwork Consumables		£250.00
Transport & Fuel		£800.00
Site Infrastructure		£500.00
Report	20 days X 1 Excavation Director X £170	£3,400.00
Graphics	10 days X 1 Illustrator X £170	£1,700.00
Initial finds processing	5 days X 1 person crew X £170	£850.00
Allocation for post-excavation specialist reports		£1,000.00
Report Consumables		£50.00
Sub-total		£25,550.00



Figure 3.1 – Plan and profile of McArt's fort. After NIEA SMR file (ANT 056:018).



Figure 3.2 – McArt's fort from the north-north-east.



Figure 3.3 – Ditch and outer bank, looking south east.





Figure 3.4 – Steps cut into the steep slopes.



Figure 3.5 – Erosion of the bank.



## 4. Carr's Glen Mill

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### Introduction

The remains of a mill and wheel pit (IHR 10289; IGR J3156 7826) are located in Carr's Glen Linear Park, in Oldpark townland. The mill has been used for a variety of manufacturing processes in the past and was one of only three mills on the Milewater River. As the Milewater was outside Belfast's centre of industry and commerce it largely avoided being harnessed for industrial purposes and instead the valley and surrounding area became the location of a number of large villas and country estates (O'Reilly 2010, 198). The remains of the mill are now overgrown and completely ruinous and are in danger of further collapse. A description of the remains is detailed below and a number of recommendations are presented.

### Historical background

The mill is depicted on the Ordnance Survey 1<sup>st</sup> edition 6" map (1833) and labelled 'print works'. In the 18<sup>th</sup> and 19<sup>th</sup> centuries linen and cotton were printed using wooden blocks or rotating copper cylinders (Rynne 2006, 221). Printing proved to be expensive, however, and many print works did not survive into the 19<sup>th</sup> century (ibid.).

On the 2<sup>nd</sup> edition (1857) map the mill at Carr's Glen is annotated 'flour mill'. In Ireland, large-scale mechanisation of grain milling began in response to government bounties and duties placed on the import and export of flour in the latter half of the 18<sup>th</sup> century which led to widespread changes in the grain-milling industry (ibid. 256). Between 1835 and 1850 around 2500 grain mills were operating in Ireland (ibid.). The First General Valuation (commonly the Griffith Valuation) was undertaken between 1848 – 1864, with Antrim completed in 1862. The valuation lists Henry Neeson as occupier of a house, flour and corn mills, kiln, kilnman's house and land at this location in Carr's Glen.

The use of the mill had changed again by 1901 and it is annotated 'Glencar Beetling Mill' on the 3<sup>rd</sup> edition 6" map. A postcard (<http://www.flickr.com/photos/belfastcitycouncil/5033335790/>), dated 3 September 1907, depicts the Milewater stream in Carr's Glen and shows the picturesque mill building and large mill wheel (Figure 4.1). Beetling was one of the finishing processes in the linen manufacturing industry. After washing, the linen web would have been passed through the beetling

engine (Rynne 2006, 219). These water powered engines gave the finished cloth a sheen by repeatedly dropping large vertical wooden pounders onto the cloth (ibid). The beetling engines would have been placed on the ground floor and the upper floor of the mill would have been used to hang the damp cloth to dry (ibid.). The mill complex is depicted on all subsequent map editions, but is no longer annotated.

## Previous work

Photographs taken by Prof. W. A. McCutcheon during his comprehensive industrial heritage survey of Northern Ireland in the 1960s show the buildings at two different stages during that time. In the first group of photographs (McC ANT 2703, 2705 and 2707; Figures 4.2-4.4), the walls of the unroofed mill building are standing at full height, whilst the two adjoining houses are still roofed. The second set of photographs (McC ANT 2709, 2712 and 2713; Figure 4.5-4.7) show a very different picture. Only the two gable walls of the mill now stand at full height and the front and back walls are almost completely ruinous, as are the attached houses. The mill was surveyed as part of the Greater Belfast Industrial Archaeological Survey in September 1987 (IHR 10289), when it was described as having ‘some remains’. Hamond details ruinous walls and wheel pit of random rubble construction with brick ope surrounds (NIEA IHR file).

## Description of the remains

By the time of the current study the mill and surrounding area are almost completely unrecognisable from that depicted in McCutcheon’s photographs. Only the north-easternmost gable wall is standing and the entire remains are completely engulfed in trees and shrubs within a wooded area of Carr’s Glen Linear Park (Figure 4.8-4.9), rather than in open grass as depicted in earlier photographs. The mill structure appears to have measured around 15m, north-east to south-west and 13m north-west to south-east. The adjoining two houses together would have measured around 8.9m south-west to north-east and around 9.4m north-west to south-east. The wheel pit is apparent immediately to the north-west of the mill, orientated south-west to north-east on its long axis and measures around 15.2m long and 2.5m wide (Figure 4.10). The basalt random rubble wall of the gable stands at least two storeys high and is now covered in ivy. A large, elongated brick lined ope is apparent in the gable wall, leading to what would have been the rear of the houses.

## Condition

The mill and house remains are reduced to rubble save for the north-east gable of the mill building which is now towering dangerously over the ruined remains; an issue, particularly given that it is in a

public park. Trees and vegetation grow in and around the rubble and indeed the vegetation disguises the presence of the open wheel pit. This is a hazard, particularly as the wheel-pit is located immediately adjacent to the public path.

## Recommendations

The mill currently poses a number of health and safety risks and as such it is recommended that the site is made safe as a priority. This would involve clearing the site of trees and of the fallen masonry and making the gable wall safe. Making the wall safe, whilst also retaining it, is not likely to be an economically viable option and so it is recommended that following the removal of the ivy, a full survey of the elevation should be undertaken before the wall is taken down to a safe height.

Presently visitors to the Carr's Glen Linear Park could easily pass by the remains of the mill without realising that the ruin lies hidden within the trees. It is recommended that the site is presented to visitors to the park and accompanied by a sign board informing people about the mill. This would involve clearing the site of fallen masonry, rubbish and trees to expose the wall footings of the mill and houses and consolidating these. Attention should be drawn to the wheel pit and it should be covered with a metal grill or should be fitted with a fixed replica wheel.

## Costing

Costs given below are indicative. Following 'Construction (Design and Management) Regulations NI 2007', a CDM co-ordinator should be consulted prior to planning or tendering the works.

Make safe the mill building:	Erect hoarding around the works.	
	Remove trees, shrubs and tree stumps.	
	Erect scaffolding and dismantle gable wall to 0.90m above ground.	
	Excavate to expose remaining mill walls.	
	Remove all from site.	
	Clean out joints and repoint remaining walls with lime mortar and cap with an in situ lime mortar coping (as per NIEA guidelines).	
	Excavate for and concrete to foundations and fit a steel grill to cover 15.00 x 4.00m wheel pit.	
		£37,000.00 plus VAT
3D Laser scan of the elevation		£500

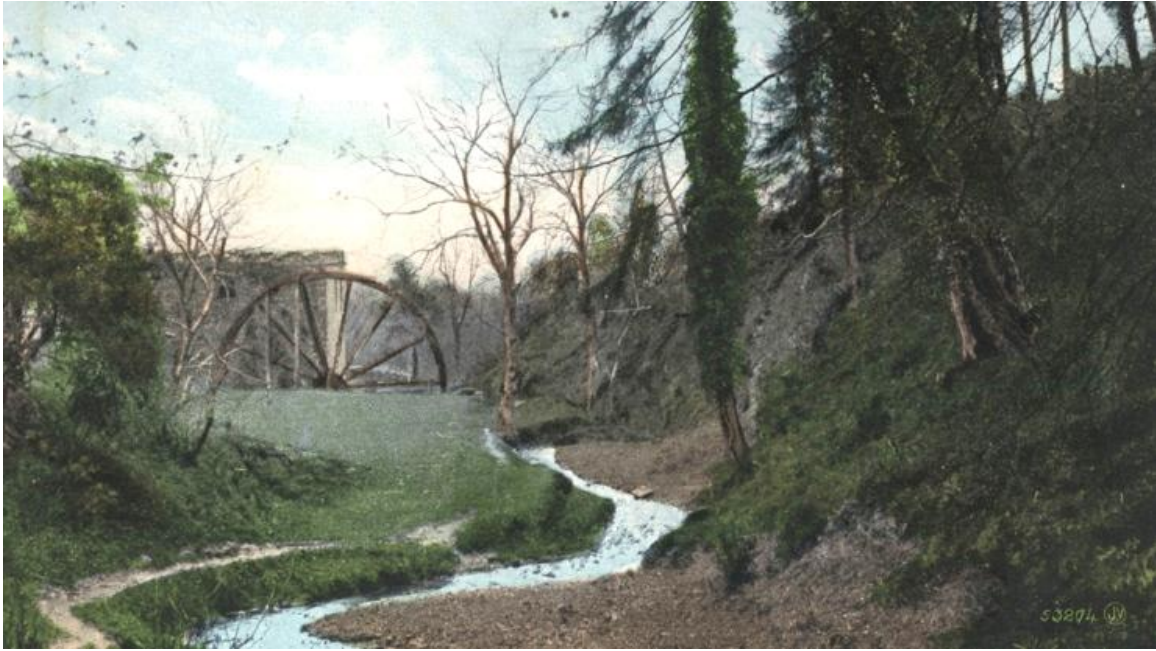


Figure 4.1 - Postcard (<http://www.flickr.com/photos/belfastcitycouncil/5033335790/>), dated 3 September 1907, depicts the Milewater stream in Carr's Glen and shows the picturesque mill building and large mill wheel, looking south-south-east.



Figure 4.2 – The mill building and adjoining houses, looking north-north-west (McC ANT 2703).

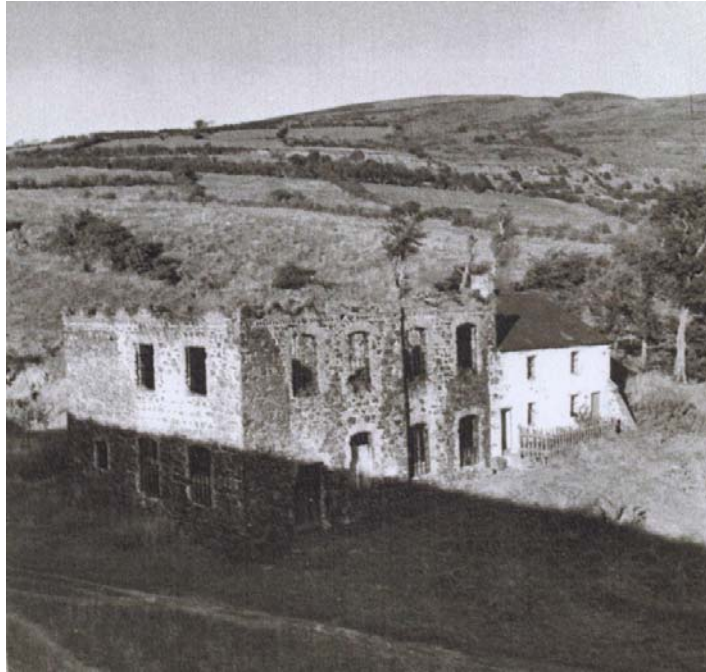


Figure 4.3 – The mill building and adjoining houses, looking north-north-east (McC ANT 2705).



Figure 4.4 – The mill building and adjoining houses, looking east-south-east (McC ANT 2707).





Figure 4.5 – The mill building and adjoining houses, looking north (McC ANT 2709).



Figure 4.6 – Portion of the façade of the mill building, looking north-north-west (McC ANT 2712).



Figure 4.7 – The mill gable, looking north-west (McC ANT 2713)



Figure 4.8 – The remains of the mill today, disguised by trees, looking south-south-east (a similar perspective as that depicted in the postcard of 1907, see Figure 4.1 above).





Figure 4.9 - Remains of the mill gable today, looking south-south-west across the wall-footings of the houses.

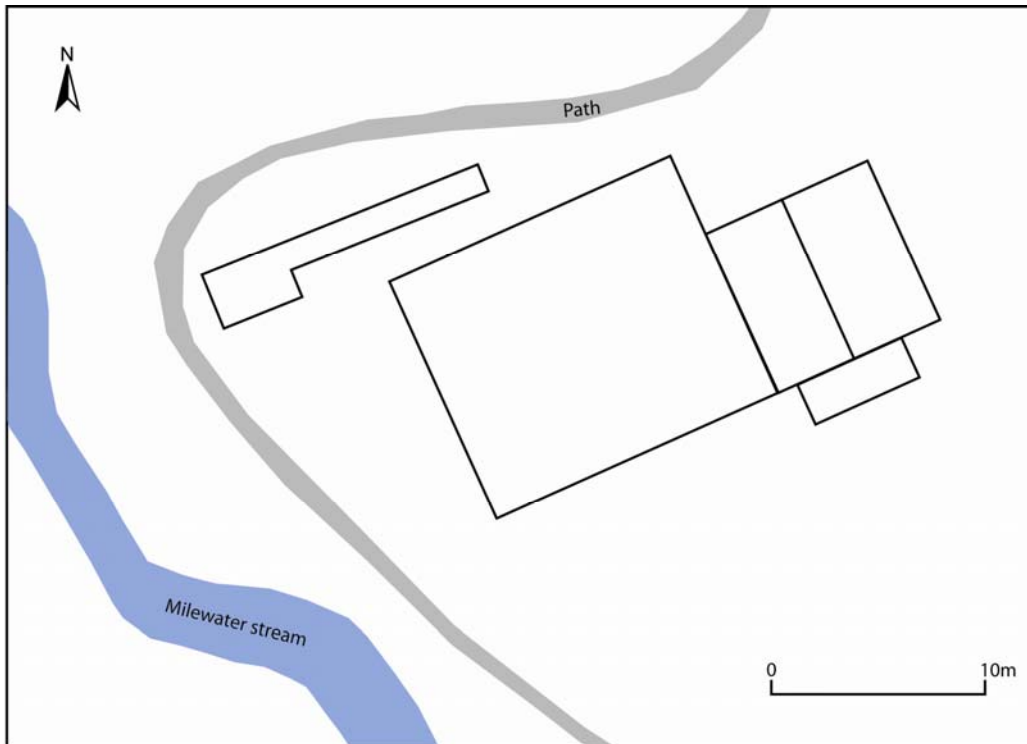
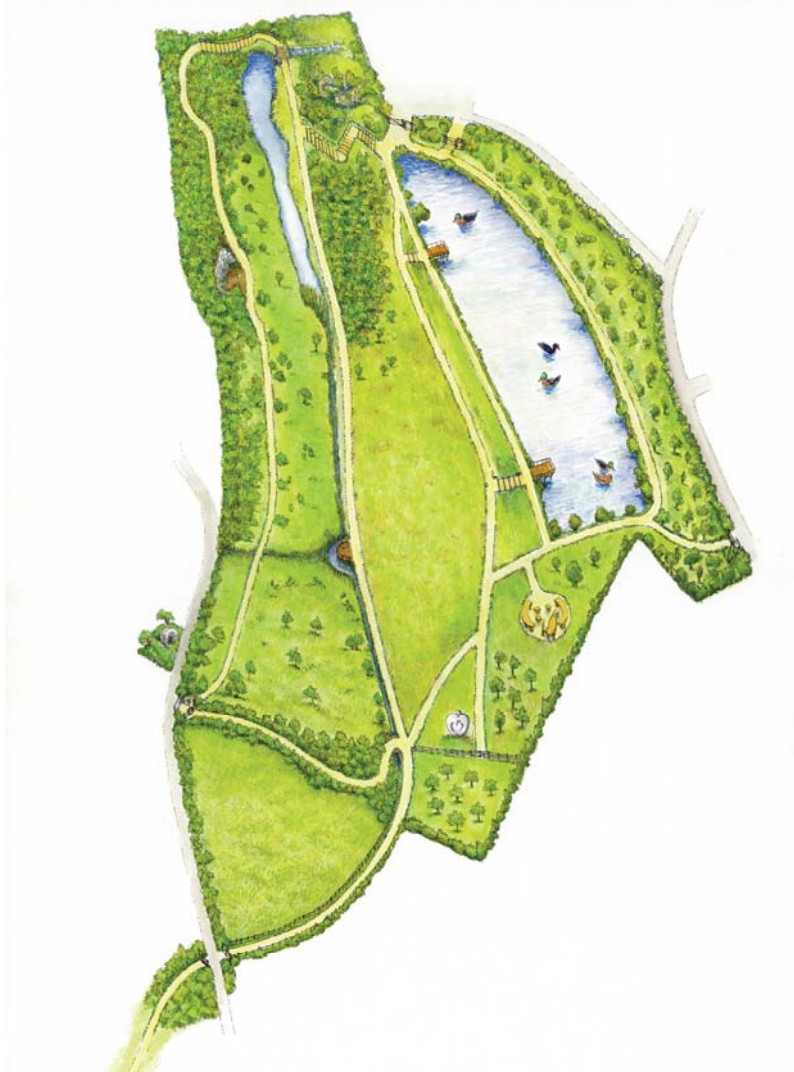


Figure 4.10 – The outline of the mill, the houses adjoining the north-east and the location of the wheel pit to the north-west.

## 5. Wolf Hill Mill

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### **Introduction**

The mill building at Wolf Hill presently stands between two large mill ponds within an amenity area in Legoniel townland (IGR J29477 77538). The building, now ruinous and largely obscured by trees and bushes (Figure 5.1), may have its origins in the late 18<sup>th</sup> century and later formed part of the large mill complex of Wolf Hill Spinning Company which was operational until the 1960s. Legoniel was once a thriving industrial area, particularly important for linen manufacture and this building, the remnants of the adjacent bleach green and the two mill ponds are the last survivors of the works at Wolf Hill. For the current study, the building is described and placed within its wider historical context and its potential as a community resource has been explored. Conservation needs have also been highlighted.



## Historical background

The slopes of Wolf Hill were the focus of the linen industry throughout the 19<sup>th</sup> century, with a number of important works, such as the Mountain Spinning Mill and the Ligoniel Spinning Mill, located along the Ligoniel and Crumlin Roads. Indeed the Ewarts family, who owned the largest linen manufacturing company in the world by the late 19<sup>th</sup> century, opened bleachworks at nearby Glenbank in 1852 (O'Reilly 2010, 185). The concentration of linen manufacture in this area is largely due to the power and reliability of the flow of the Ligoniel river, along with the south facing aspect which enticed the linen manufacturers to the area (O'Reilly 2010, 183; Rynne 2006, 230). Indeed while many of the Belfast Spinning Mills were powered by steam by the mid-19<sup>th</sup> century, the Ballysillan and Legoniel mills continued to use water power throughout the century and water turbines were installed in Wolfhill mill rather than steam engines (Rynne 2006, 230).

In Bradshaw's General and Commercial Directory for 1819 William Thompson is listed as a linen merchant based at Donegall Square West. William Thompson first established a bleach green at Wolf Hill. Robert Thompson and Company are listed in Matier's Belfast Directory in 1835-36 as flax spinners at Wolf Hill, with an office at 1 Donegall Square West. A large bleach green is depicted on the 1<sup>st</sup> edition Ordnance Survey map at Wolf Hill and buildings are shown, located to the north of the bleach green (where the Wolf Hill Spinning Company mill is later located), and also to the north west of the bleach green (the location of the 'corn mill' building; Figure 5.2). Two mill ponds are depicted, one to the north and another to the west of the bleach green.

Robert Thompson and Company are further listed on the Belfast Street Directories in 1839, 1841-42, 1850 and 1852 as flax spinners, with offices at 1 Donegall Square West and mills at Wolf Hill. By the publication of the 2<sup>nd</sup> edition Ordnance Survey map in 1857 the lower mill pond has been constructed and the buildings are now annotated. That to the north of the bleach green is annotated 'Flax Spinning Mill' whilst the building to the north-west is noted as 'Old Corn Mill'. Belfast was by this time the largest linen manufacturing centre in the world.

The First General Valuation, known as the Griffith Valuation, was undertaken between 1848 – 1864. The Antrim section was completed in 1862 and lists Thomas McClure, Charles Finlay, William Finlay, H.G. Smith, and James Montgomery of the Wolf Hill Spinning Company as the occupiers of the site, which is leased from the Northern Banking Company. Sir Thomas McClure and the Finlay brothers were cousins (Bigger 1902, 89) and the Finlay family seems to have continued to run the mill throughout the remainder of the century and indeed into the 20<sup>th</sup> century. The Belfast street

directories track the various directors and offices used by the Wolfhill Spinning Company over time. In the 1860s they have offices at 16 Corporation Street and are listed as Flax and tow spinners. By 1884 the offices of the Finlay Brothers appear to have moved to Royal Avenue and William Laird Finlay jun. is residing at Wolfhill House. In 1892 Fred W. Finlay is listed at Wolfhill House and he is also named as the proprietor of the Wolfhill Spinning Company. In this year also an advertisement by The Belfast Electrical Works indicates that electric lighting had been added to the mill at Wolfhill. The offices of the company appear to have moved again by 1896 to 1A Bedford Street. In 1899 the company directors are W.L. Finlay, F.W. Finlay, John Malone, John Frame and Clarence Finlay. By 1900 as well as the property at Wolfhill and the offices at Bedford Street the company has stores at 8 Franklin Street. The linen industry in the Legoniel area continued to flourish until the 1920s when it saw the beginning of the decline and ultimately the closure of the Wolfhill Spinning Company in the 1960s.

## Previous work

An examination of the works at Wolfhill was undertaken by McCutcheon in the 1960s as part of a survey of the industrial archaeology of County Down. McCutcheon's photographs are held by the Northern Ireland Environment Agency and there are a number showing the buildings at Wolfhill (McCutcheon Collection ANT/3359-3368 and ANT/2220-2225). Photograph (Figure 5.3) is taken from the bank of the mill pond, to the south west of the 'old corn mill' building, looking north east towards the Wolfhill Flax Spinning Mill complex. The south east corner of the 'old corn mill' building is just visible at the left hand edge of the photograph. There is no other photograph of the exterior of the corn mill building in McCutcheon's archive, however, there are a number showing the machinery (Figures 5.4-5.8).

The works at Wolfhill were also surveyed in 1989 for the Greater Belfast Industrial Archaeological Survey (GBIAS No.s 10309:1 and 10309:2). It was noted that in the preceding 5 years the entire site had been cleared, leaving only the millpond, a short aqueduct, a metal penstock and the outfall channel (Figure 5.9). Also surveyed were the remains of the corn mill and adjacent mill ponds and asserted that the bleach works might ultimately have its origin in the late 18<sup>th</sup> century (Figure 5.10). The mill race and upper mill pond, the lower mill pond and the standing building are all described. The mill race was led from a stretch of the Forth River, to the upper millpond above the mill building. One half of an emplacement of a possible control sluice for the race survived as well as a small basalt masonry footbridge. At the north-east corner of the pond were the remains of an inclined sluice and a weir. The outlet sluice had an adjustable gate with a central threaded control rod and a submerged

grill. The most recent editions of the OS maps show an open channel leading down to what was presumably a waterwheel emplacement north of the surviving building. The weir adjacent to the outlet sluice was lined with basalt slabs and the outfall may have been led through a culvert at the break of slope at the base of the hill to the lower millpond. The GBIA Survey also highlights that the 'corn mill' building is the only one associated with the mill ponds on each of the various editions of the OS maps from 1833 suggesting that this was the structure which held the water powered machinery, even when it is annotated as 'Old Corn Mill' on the 2<sup>nd</sup> edition OS map in 1857.

The lower mill pond is not shown on the 1<sup>st</sup> edition map of 1833. It is depicted on the 2<sup>nd</sup> edition map and so it had been constructed by 1857. In the GBIA Survey the sides of the lower mill pond are described as regularly formed and of heavily pointed basalt blocks, with a slight batter. By the time of this survey the inlet ope was closed off by the sluice gate and a vertical notch for the rack component of the original sluice gate lifting mechanism was also evident. No outlet was visible nor were any buildings for which the lower millpond might have provided a head of water.

The standing building appears to be much as described in 1989 when it was described as a basalt, random rubble masonry building with an 'L' shaped ground plan (Figure 5.10). The east facing elevation was almost completely gone, except for a portion at the north. It was also described as being in two sections, with the northern half perhaps a dwelling house which intercommunicated with the larger southern section at first floor level. An elongated ope in the northern gable of the smaller section extends from just below the eaves to the floor (Figure 5.11). It was suggested this was likely to have been a provision for some type of power transmission. Joist sockets indicated the presence of a first floor level in this section. An irregularly shaped flue is located on the internal face of the northern gable wall. There is no trace of a hearth.

Also described in 1989 were two window opes in the southern wall of the main section and joist sockets which were evident on the interior of this wall also and the remains of a semi-circular arch, with tapered basalt voussoirs were noted mid-way along the wall which extended to the floor and it was suggested that this was probably for a waterwheel axle.

## **Condition and conservation**

The building is in good condition, particularly given its likely origins in the late 18<sup>th</sup> century. It is also a rare survivor and the remainder of the buildings associated with the works at Wolfhill have been entirely removed. This and the mill ponds stand testament to what was once a thriving industrial

complex on this site. That said, there are considerable conservation needs. It is recommended that the building should be made safe. The fallen masonry and rubbish in and around the building would need to be cleared under archaeological supervision/ direction. The ivy on the walls should be treated and the other shrubs and trees growing in and around the structure removed. The advice of specialist structural engineers and/or architects working in the field of historic buildings would need to be sought in order to identify how the building can be made safe and how best the remains can be consolidated to prevent any further collapse.

## Recommendations

This surviving building is useful in telling the story of the linen industry for which this area was so important. Indeed it is an integral part of the history of the area. If the local community group are keen to renovate the structure for use as a community centre and café, it is recommended that they seek specialist advice from professionals who regularly deal with the renovation and repair of historic buildings, such as Consarc Design Group ([www.consarc-design.co.uk](http://www.consarc-design.co.uk)), for example. If the building is not to be renovated, it is recommended that it should at least be conserved and made safe in order to protect its survival into the future. Once it is made safe, visitors could be encouraged to the site and an information board erected. As part of this process it is recommended that a community excavation is undertaken, targeted to find the location of the wheel pit.

## Costing

- Community excavation:

Fieldwork	5 days X 2 Field Archaeologists X £170	£1,700.00
Fieldwork Consumables		£100.00
Transport & Fuel		£100.00
Site Infrastructure		£200.00
Report	10 days X 1 Excavation Director X £170	£1,700.00
Graphics	2 days X 1 Illustrator X £170	£850.00
Initial finds processing	3 days X 1 person crew X £170	£510.00
Allocation for post-excavation specialist reports		£500.00
Report Consumables		£50.00
		<b>Total £5,710.00</b>





Figure 5.1 - Wolfhill cornmill, from the bank of the upper mill pond, looking north east.

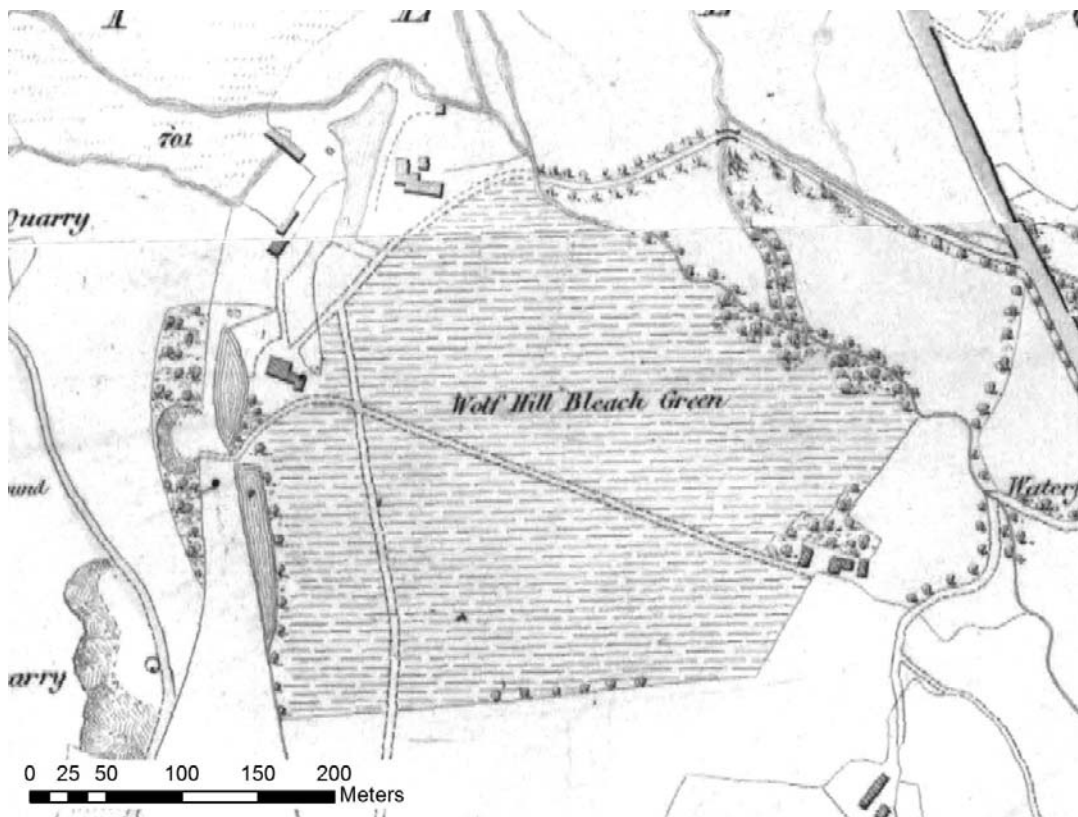


Figure 5.2 - Ordnance Survey 6" map, 1<sup>st</sup> edition (1833), sheet no.s 56 and 60.

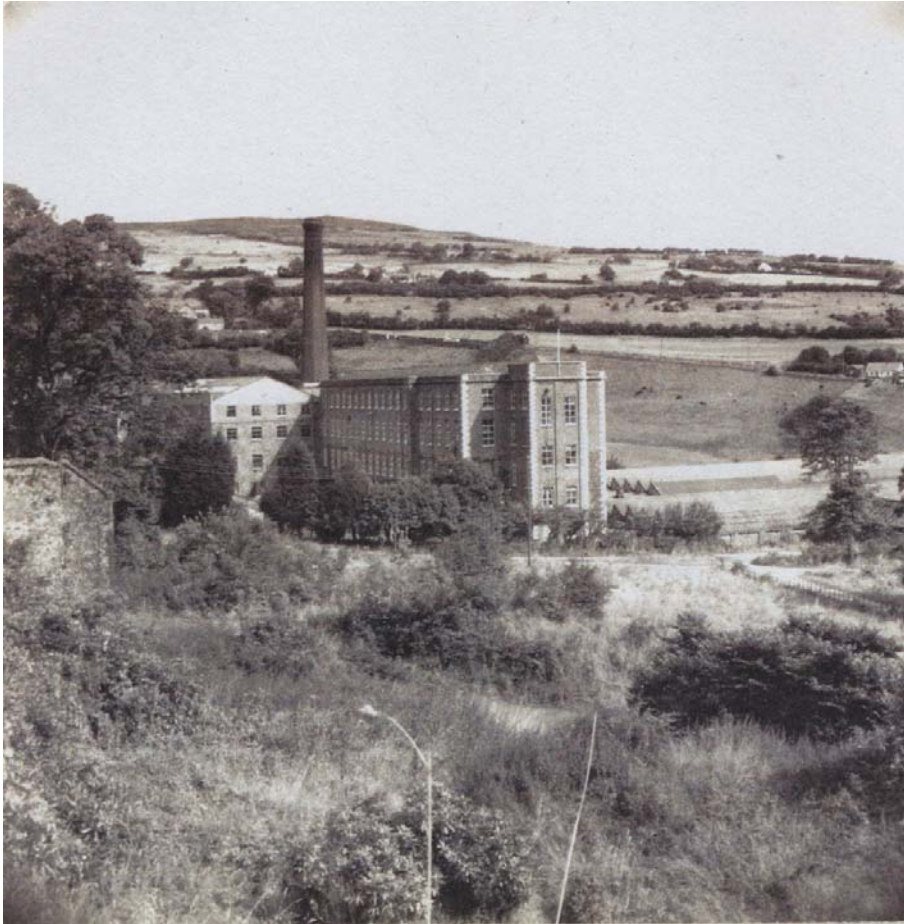


Figure 5.3 - Wolfhill Spinning Mill complex, McCutcheon Collection (McC ANT/2220).



Figure 5.4 – Mill machinery, now removed (McC ANT/ 3362).



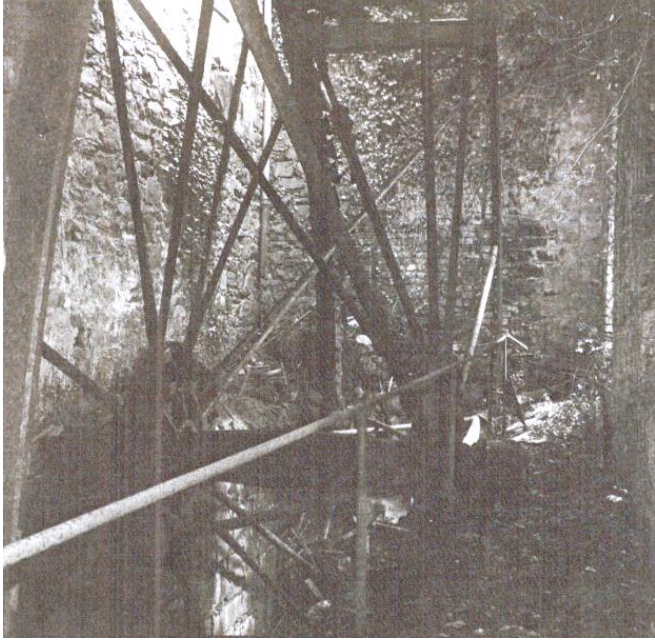


Figure 5.5 – Mill machinery, now removed (McC ANT/3359).



Figure 5.6 – Mill machinery, now removed (McC ANT/3365).

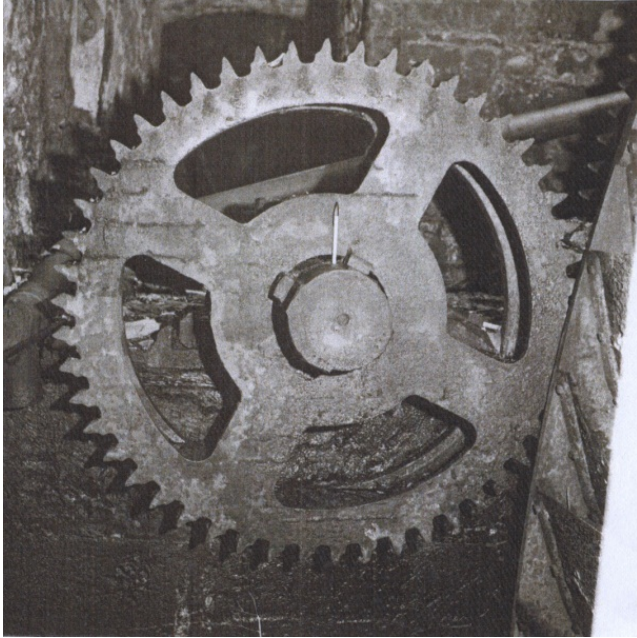


Figure 5.7 — Mill machinery, now removed (McC ANT/ 3360).

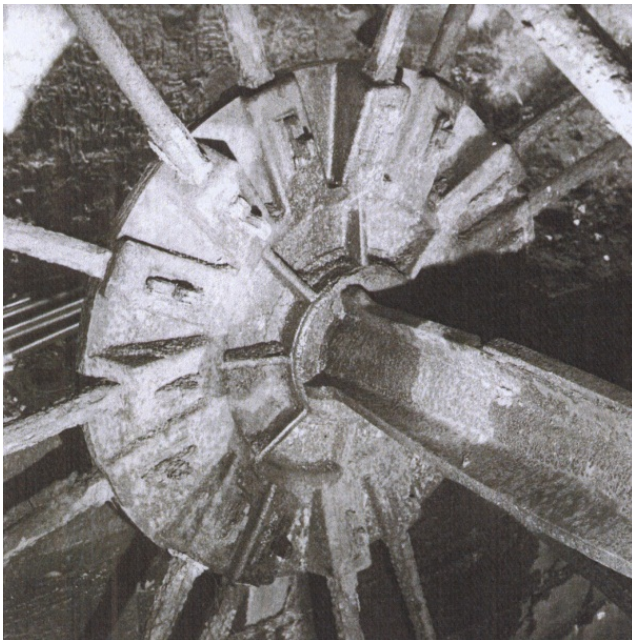


Figure 5.8 – Mill machinery, now removed (McC ANT/3364).



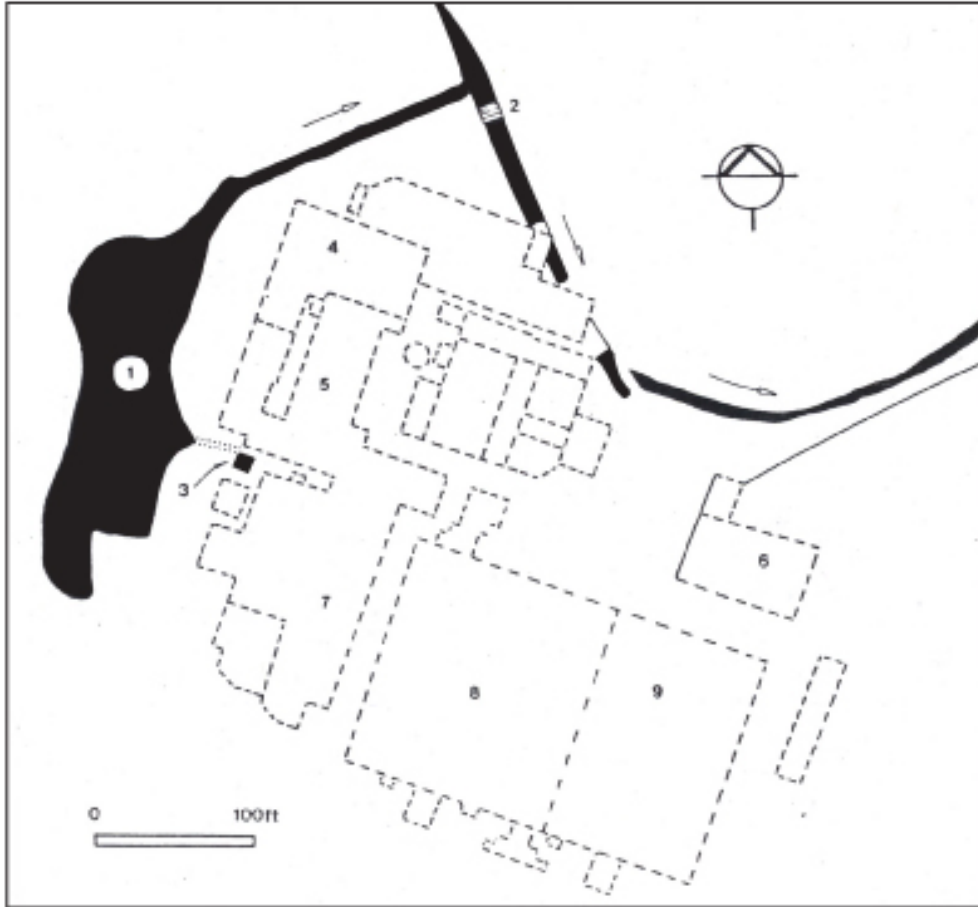


Figure 5.9 - Rynne's plan of Wolfhill Spinning Mill Complex. 1: Mill pond, 2: Weir, 3: Penstock/ Flume, 4: Additions to 'Old'mill (1909), 5: 'Old' mill, 6: Flax store, 7: New mill, 8: Flax store roughing shop, 9: Preparing shed.

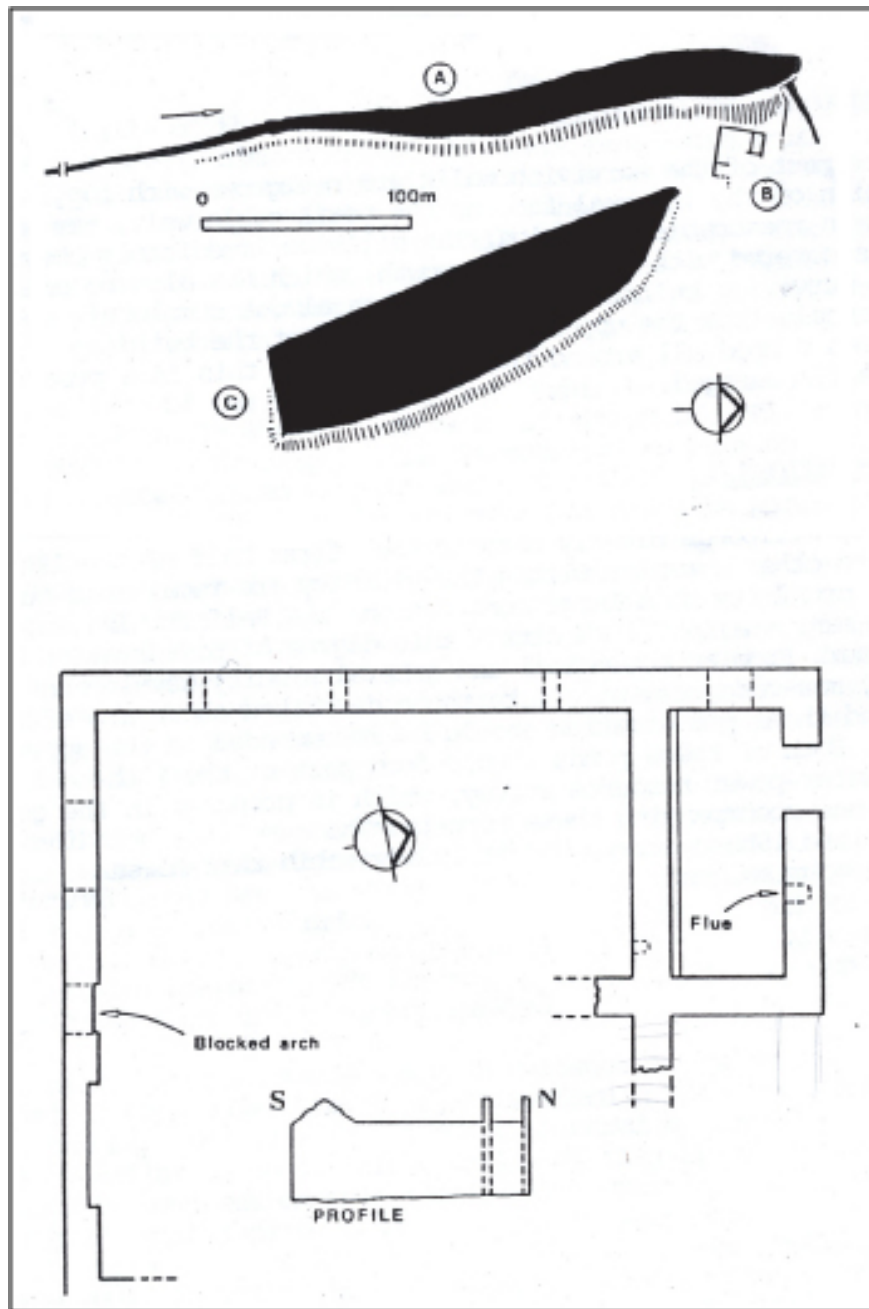


Figure 5.10 - Rynne's plan of Wolfhill cornmill. A: Upper millpond, B: Mill building, C: Lower millpond. Sketch plan of the mill building (Not to scale).



Figure 5.11 - Elongated ope in the northern gable of the 'corn mill'.

# 6. Ballymurphy Water Wheel

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## Introduction

The remains of a wheel-pit are enclosed within steel fencing on derelict land in Ballymurphy townland (IGR J30139 74228). The mill wheel once formed part of the Whiterock bleach green and beetling works, which is now largely built over by the New Barnsley housing development. The works at Ballymurphy were part of the hugely successful linen industry in Ulster, which was the largest in the world by the latter half of the 19<sup>th</sup> century. The remains of the wheel pit are described below and recommendations are presented.

## Historical background

The wheel pit itself is not marked on the 1<sup>st</sup> edition 6 inch map (Sheet 60; 1833), however, a building associated with the Whiterock bleach green is shown in this location. The wheel location is depicted on the 2<sup>nd</sup> edition map (1857), fed by a mill race (Figure 6.1). At this time the building is annotated as a beetling mill within the 'White Rock Bleach Green'. The structure is also shown on the 3<sup>rd</sup> edition of the map (1901) and the complex at this time is labelled 'Whiterock Beetling Wks'. The beetling engines were used to add a sheen to the finished cloth by passing the linen through a water-powered beetling engine which dropped a series of heavy vertical beech pounders onto the cloth (Rynne 2006, 219). The beetling engine would typically be on the ground floor of the mill, with the first floor used to hang the damp cloth to dry (ibid. 220). The beetling engines produced considerable noise when in operation, which could be constant day and night for a week at a time. As a consequence the beetling mills were located away from other buildings in the bleach yards (ibid.). The 4<sup>th</sup> edition of the map (1920-1931) shows the structure now unroofed and on the edge of the complex which is by that time annotated 'Springfield Dyeing Works'. This map shows that the mill race which had been feeding the Ballymurphy water wheel was, by this time, diverted to another structure.

## Previous work

There are no previous surveys of the wheel pit on record. The GBIA Survey (IHR 1035200200) notes that the complex had by that time been 'redeveloped'.



## Description

On the lower slopes of the Black Mountain, the remains of the wheel pit and the outline of the mill building are enclosed within steel fencing on derelict land on the edge of housing development. The remains are barely visible in trees and bushes (Figure 6.2). Graffiti, dumped rubbish and the remains of bonfires have left the mill and wheel pit in a rather dilapidated and sorry state. The stone built remnants of the wheel pit are the most apparent remains visible (Figure 6.3) and measure around 13.9m east-west and 3.3m north-south. The remains of the mill building are less apparent and can only be discerned as a sub-rectangular hollow measuring approximately 16.7m north-south and 6m east-west.

## Condition

The remains of the wheel pit appear to be in a fairly robust condition; however, given the dereliction of the immediate surroundings, it is difficult to determine the condition of any other associated remains.

## Recommendations

This site has interest, particularly given that the remainder of the works associated with the Whiterock bleach green have now been encroached upon by the urban expansion of Belfast. The immediate surroundings, however, make the study and exploitation of the remains untenable, at present. The issues, such as dumping and anti-social behaviour would need to be addressed before the potential of the monument could be realised. Clearing the monument of vegetation, for example, might only serve to attract further unwanted attention and any such conservation would need to be accompanied by a larger programme of works improving the immediate derelict landscape.

Overall, if the area of land on which the wheel pit sits could be improved in order to be used as a recreational space, the industrial remains would add value to such a scheme. Clearing the vegetation from around the works would also allow for a more detailed survey to be carried out.



Figure 6.1 – Location of the Ballymurphy water wheel and mill, as depicted on the 2<sup>nd</sup> edition of the 6 inch map (Sheet 60; 1857).



Figure 6.2 – The overgrown remains of the wheel pit, looking east.



Figure 6.3 – The wheel pit, looking east.

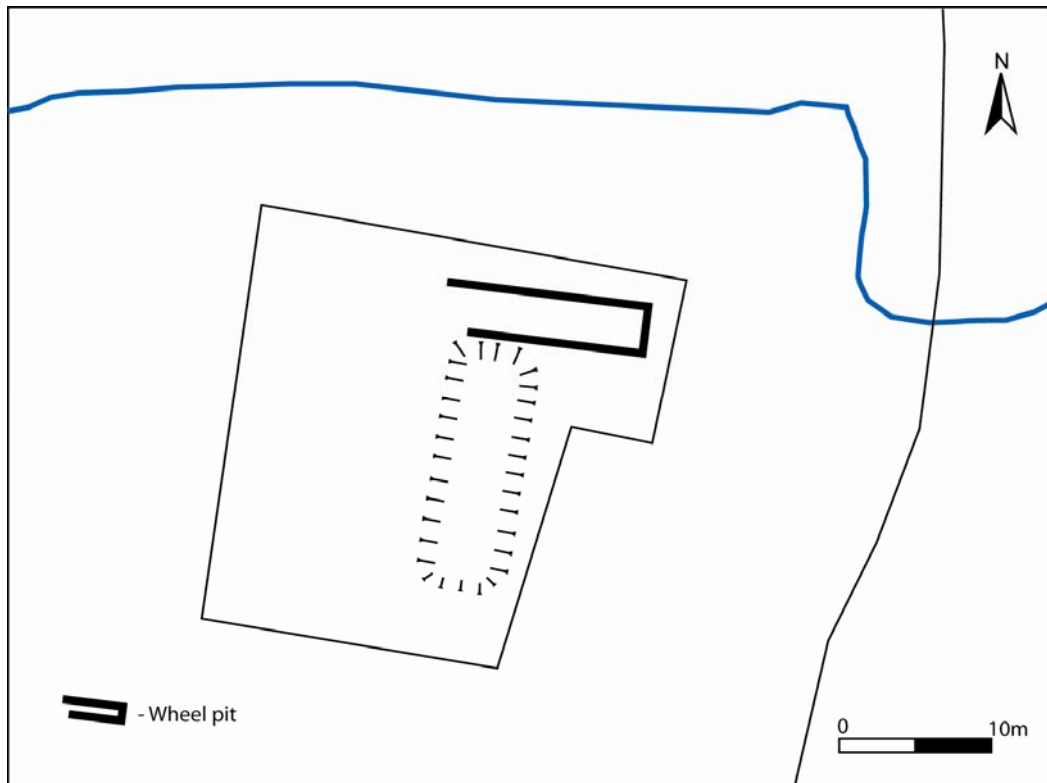


Figure 6.4 – Outline of the wheel pit and mill building, within the steel fencing. The fence line of the housing estate is depicted immediately to the east and the stream runs immediately to the north.



# 7. Ballymurphy raths

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## Introduction

Two raths lie in derelict land in Ballymurphy townland (IGR J29913 74203 & J29889 74064). They are rare survivors of what was once an extensive group of raths located in west Belfast. Indeed these are two survivors of around twenty which once stood on the lower slopes of the Belfast Hills, in a group running from Black Mountain to Cave Hill (Lynn 1988, 66; Ó Baoill 2011, 57). As such they provide a rare visible link with Belfast's Early Christian past.

The raths in Ballymurphy townland are described below and their present condition is detailed. A topographical survey of the raths was undertaken and is presented here. The potential of the raths is discussed and recommendations are made.

## Raths

Raths, also known as ringforts, are the most numerous archaeological monument found in Ireland and it is estimated that there may have been as many as 45,000 of these sites (Stout 1997, 11), however, a total of 60,000 has also been advanced (Mytum 1992, 131). These monuments are commonly formed by enclosing a central sub-circular area with a bank and external ditch (or multiple banks and ditches) or by creating a platform, raised above the surrounding ground level. Raths most commonly range in internal diameter between around 25m and 40m (Stout 1997, 15). These sites were essentially secular settlements of the Early Christian period, farmsteads constructed and occupied in the period around AD 600-900 (Kerr 2009, 63). These dispersed individual farmsteads would usually have enclosed the buildings for an individual family, including a house and other farm buildings, such as sheds or byres (Figure 7.1; Stout 1997, 32).

## Previous work

The raths are depicted on the 1<sup>st</sup> edition map and designated 'fort' (Figure 7.2) and although shown on the 2<sup>nd</sup> edition they are annotated 'site of'. The raths are absent from subsequent editions of the 6 inch maps. Commercial dumping and a planned road scheme led to the Environment and Heritage Service (now NIEA) planning a programme of survey and excavation at the site of the northern-most rath (ANT 060:036) in 1977. The programme of work was prematurely and abruptly ended, however, due to civil disruption in the area (Lynn 1988, 66) and so the excavations and survey work were not completed as planned. The excavation did, however, uncover artefacts typical of the period, such as souterrain ware pottery, glass beads and lignite bracelets along with scant structural traces (*ibid.*).

A description of the two raths is available in the Sites and Monuments Record. The northern most one (ANT 060:036) is described as a circular platform 33m in diameter, elevated 1-1.5m above the surrounding land with the surface tilted towards the east, and towards a possible entrance ramp measuring 8m wide. The SMR notes that the ramp is obscured by the field boundary which separates the northern quarter of the site from the remainder to the south of the boundary. An indistinct enclosing bank is described, running around the upper edge of the platform in the north-western part, measuring around 4m wide and 0.5m high. In the area south of the field bank a ditch was apparent, 1-4m wide, running around the base of the platform. The ditch was absent to the north of the field boundary. The surface of the platform had been cultivated in the past and traces of lazy beds are noted. The SMR also notes that by 1980 the eastern edge of a 5m high commercial tip of clay and rubbish had reached the western edge of the rath.

The SMR notes that the rath (ANT 060:035), which lies around 105m to the south, survived less well. It had been bisected by a mill-race and the ground around it, including a section of the platform, was bulldozed during the construction of an adjacent playing field in 1976. No features were noted in the bulldozed section of the platform which stood around 1.5m high, however, some souterrain ware was recovered. As part of the CHRONO Ringfort Dating Project, undertaken by Queen's University Belfast, a sample was taken by core from the ditch of this rath (ANT 060:035) and was submitted for radiocarbon dating in 2006. A date of cal AD 775-962 (95.4%, 2 sigma; UB-6868) was produced from the sample.

## Survey

A topographical survey of the two raths was undertaken using a Leica TPS 705 Series Total Station and was processed using Leica Liscad software. The plan (Figure 7.3) shows the raths and the commercially dumped landfill material which has encroached on the northernmost rath (ANT 060:036).

## Description of the remains

The raths lie on an area of wasteground on the lower slopes of Black Mountain, with wide ranging views to the south and across New Barnsley, Whiterock and Turf Lodge estates (Figure 7.4). They lie in unimproved grassland which is currently grazed by cattle. Although the raths remain largely as described in the Sites and Monuments Record, the most significant change relates to the further encroachment of the dump on the north and west of the northern rath (ANT 060:036; Figure 7.3).

An arc of a platform and traces of a ditch are all that is now visible, surviving as a wedge which lies south-west of the field boundary and south-east of the landfill (Figure 7.3). The platform stands between 1-1.5m above the original ground level. The visible part of the platform measures 21m across from the SSW to the NNE and 15m from the NW to SE. A ditch is apparent running around the base of the platform and measures between 2-4m wide. This rath (ANT 060:036) is scheduled for protection under Article 3 of the Historic Monuments and Archaeological Objects (NI) Order 1995. The southern rath (ANT 060:035) remains largely as described in the Sites and Monuments Record. It is around 32m in diameter and survives as a denuded, irregular platform standing around 1m above the surrounding ground level. A ditch is apparent in places and measures between 1.5m-3m wide (Figure 7.3).

### **Condition of the raths**

The Ballymurphy raths are unusual to have survived the urban expansion of Belfast which has resulted in the destruction of a large number of the other raths in the immediate area (Ó Baoill 2011, 60). Despite being in a fairly complete state, they have been significantly damaged in the past. The northernmost rath (ANT 060:036) was cultivated and lazy beds are apparent on the surface and in the field to the south east. This cultivation will have damaged the uppermost archaeological layers. A field boundary crosses the monument which is first depicted on the 2<sup>nd</sup> edition of the OS 6 inch map. More recently, landfill on a significant scale has encroached on the north and west of the monument. Although the dumping may not have damaged or interfered with the underlying archaeological layers, it has had a significant impact on the monument and its setting. Only an arc of the platform and ditch now remain visible. The northern section of the monument is completely covered by the grassed-over dump. What remains of the monument (ANT 060:036) is currently in a stable condition and there are no apparent immediate threats to its condition.

The southernmost rath (ANT 060:035) was bisected by a mill race associated with the Whiterock Bleach Green. The mill race is depicted on the first edition OS map of 1833. The rath was further damaged by a bulldozer when a playing field was being constructed nearby in the 1970s. The current appearance of the irregular perimeter and the uneven surface of the monument would suggest that significant damage to the underlying archaeological layers has been done. There are also recent scambler tracks running over the monument which will further affect its condition and survival if left unchecked.

## Recommendations

The landscape in which the raths now sit has a rather neglected feel and encouraging visitors to the area would not, currently, be appropriate. There are ongoing issues, for example, with dumping of household rubbish, burning of tyres and the use of scramblers on this waste ground which would need to be addressed before the potential of the area, and the monuments, could be realised. The presentation of the monuments to the public could not be considered until the surrounding derelict ground has undergone a substantial makeover.

Outside of improving the surrounding area, there would appear to be no current conservation needs specific to the raths themselves. Damage is being caused to the southern rath by scambler tracks (ANT 060:035) and should be discouraged, although while there is easy access to this area from the Upper Whiterock and Ballygomartin Roads it is difficult to see how this could be achieved. Fencing the monument would not be recommended as it would lead to the rath becoming overgrown.

Overall, if the area of land could be improved in order to be used as a recreational space, the monuments would add value to the visitor experience. This could be further augmented by the erection of a sign board highlighting the nature of the monuments. This would need to be done in conjunction with a health and safety review, which would consider the risks posed by the mill race which runs through the southern rath. The possible ways of making this safe, either by fencing it off, or covering it over, would need to be investigated.





Figure 7.1 – Reconstruction drawing of a rath. Drawing by S Shaw, NIEA.

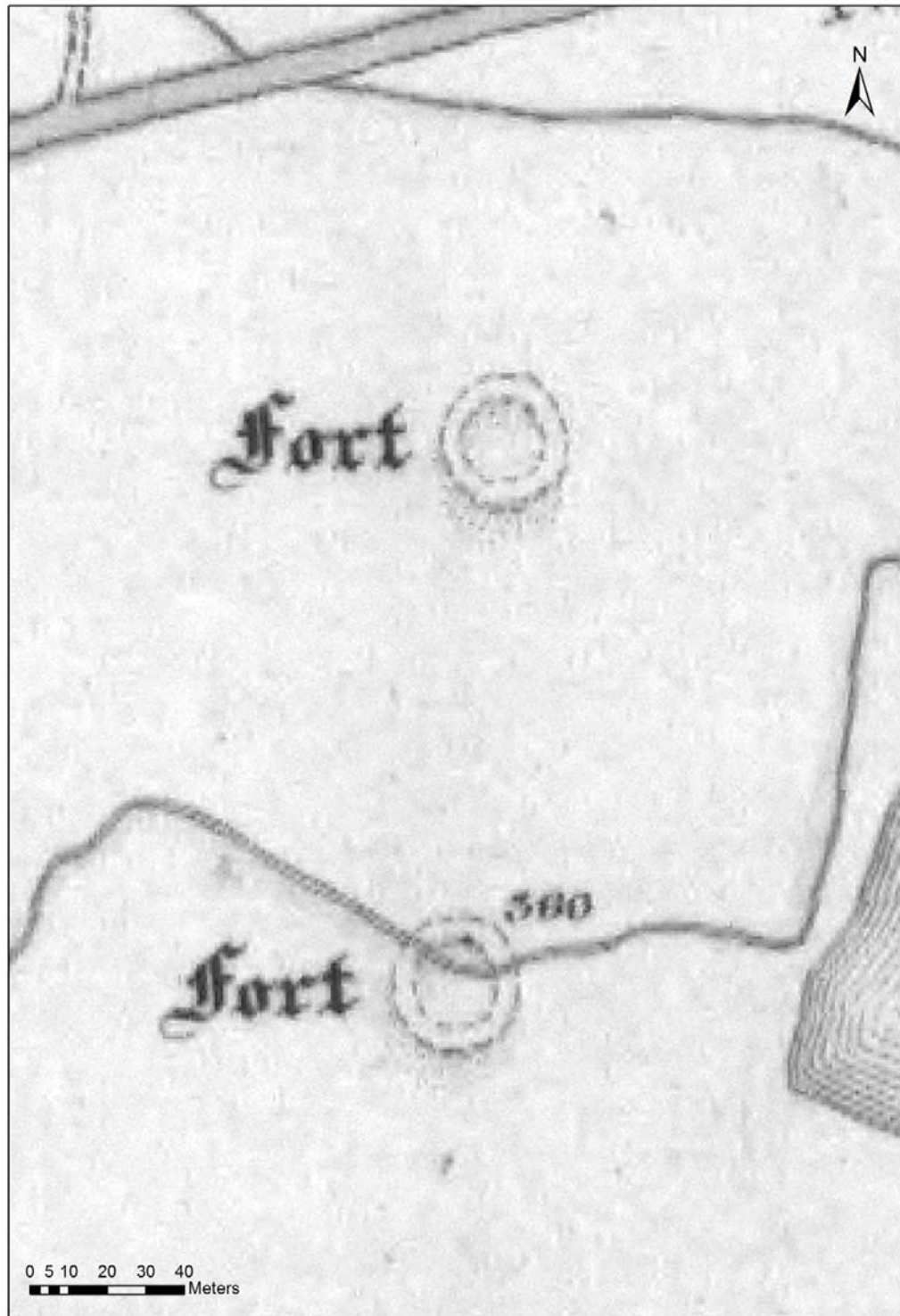


Figure 7.2 – The Ballymurphy raths (ANT 060:035 & ANT 060:036) with ANT 060:035 cut by a mill race. 1<sup>st</sup> edition 6 inch map (1833), sheet 60.

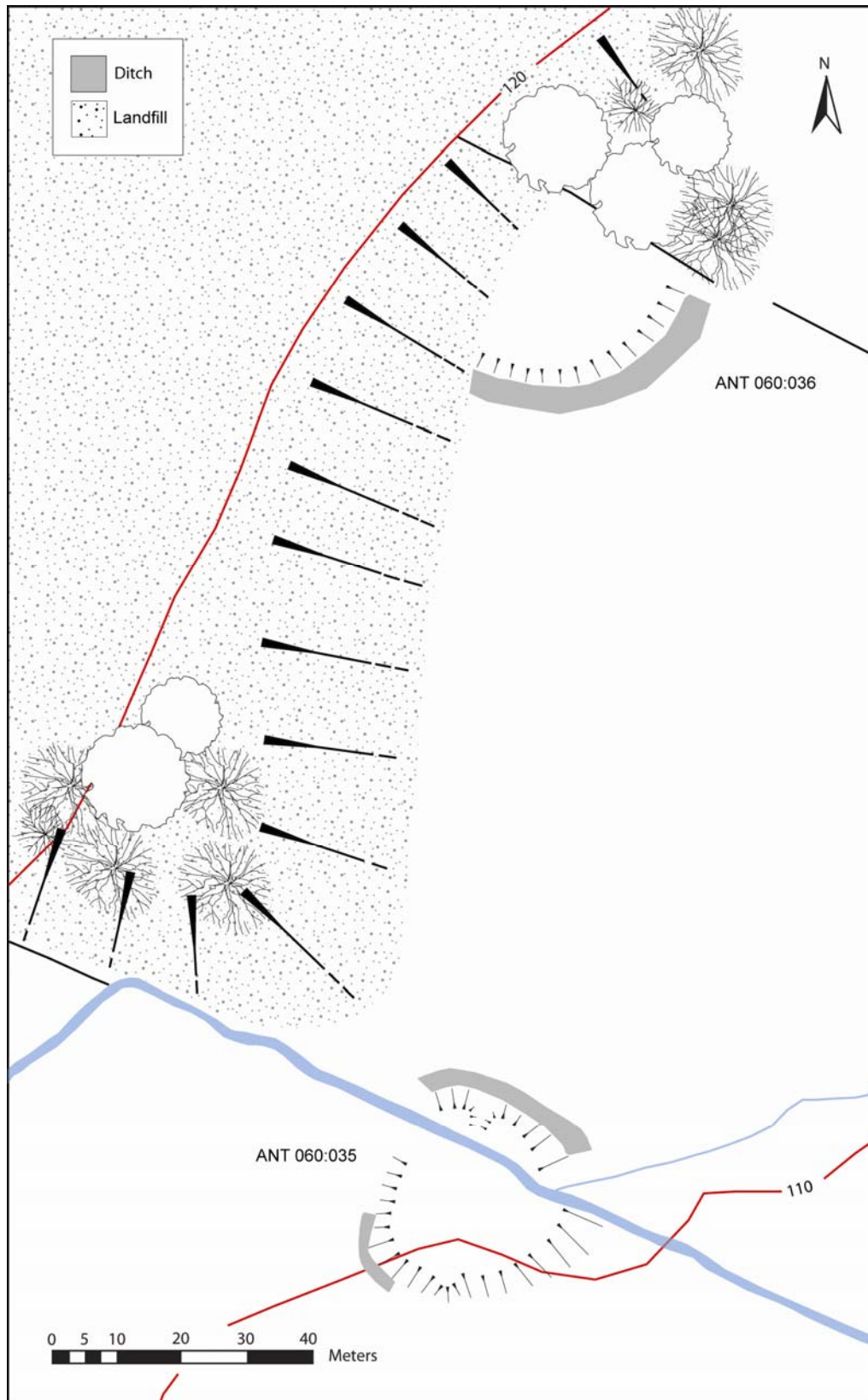


Figure 7.3 – Plan of Ballymurphy raths.



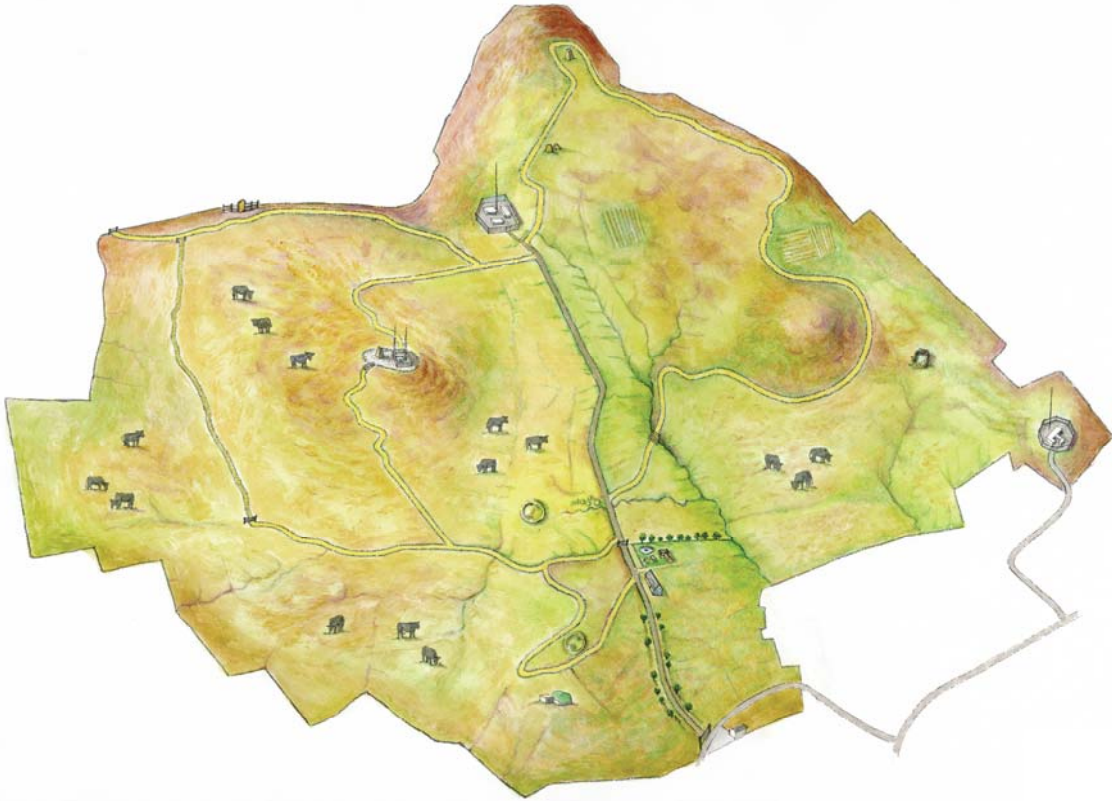


Figure 7.4 – Ballymurphy rath (ANT 060:035), from the tip heap, looking south-south-east.



## 8. Divis hut sites

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### Introduction

The hut sites on the south-western slopes of Divis (IGR J27477 74572; Figure 8.1) were discovered during an archaeological survey undertaken by the National Trust, who own the land. The settlement is located on the eastern bank of a tributary of Collin River, close to the National Trust's ranger station and is comprised of seven possible oval and sub-rectangular hut sites ranging in size from 4m to 8m across. Situated at a height of around 320m OD (Figure 8.2), the grasslands, heath and bog of this upland landscape are presently grazed by cattle. There are wide ranging views from the site, particularly to the south and south-west (Figure 8.3).

The hut sites have undergone topographical survey, by the Ulster Archaeological Society Survey Group and more recently by the students of the Queen's University Belfast Professional Archaeology Masters Programme. The hut sites are described below and placed in context. Potential for further work is explored.

## Hut sites in upland landscapes

On present evidence these features are presumed to be hut sites. Without archaeological excavation, however, it is not possible to be certain of their exact form and function, or of what period they date to.

Round houses excavated elsewhere have been found to date to the Bronze Age, for example at Corrstown, Co. Derry (Ginn and Rathbone 2011) and Ballypriorbeg, Co. Antrim (Suddaby 2003). An example has also been excavated in the Belfast Hills at Mcllwhans Hill in Ballyutoag td (MacDonald et al 2005; ANT 056: 073, IGR J288794). The house on Mcllwhans Hill was set in a similar upland landscape and at a height OD which is comparable to the Divis examples. The excavated roundhouse at Mcllwhans Hill, within a large irregular enclosure, was found to have walls of stone and clay around 1.25m thick which enclosed a space approximately 5.5m in diameter, a typical size for a Bronze Age roundhouse (MacDonald et al 2005, 46). A 1.5m wide entrance was found to face south-east and two central hearth like features were uncovered (ibid. 47). A radiocarbon date suggested a Late Bronze Age date for the construction and occupation of the house (Ibid. 49).

Hut sites in upland landscapes are also often likely to be settlements associated with booleying or transhumance, a form of farming involving summer grazing of cattle in upland pastures which was practiced from the 16<sup>th</sup> century into the mid-nineteenth century (O'Sullivan and Downey 2003, 34). Structures which are presumed to be booley houses vary widely in form and size, however, examples from West Cork, often visible as wall footings, were found to be circular, oval, rectangular or square and measured 2-5m across (ibid., 35). On Achill Island, oval booley huts measuring 5m by 3.5m were recorded and traces of oval huts have been surveyed in the Mourne Mountains (Gardiner 2008, 142; Rathbone 2010, 152). It has been suggested that the oval examples may be earlier in the typology, with a change to square plans around 1700 (Gardiner 2008, 142).

On present evidence the hut sites on Divis could fall into either of these categories, Bronze Age settlement or post-medieval booley huts or indeed could relate to any other period. Excavation is needed to clarify this further and should easily determine the nature and date of the site.

## Previous work

The hut sites are not included in the Sites and Monuments Record held by the NIEA and are not included on any edition of the Ordnance Survey maps. They were recognized after the area came into National Trust ownership in 2004. Archaeological survey of the landscape, which had previously

been limited as the land was under the control of the Ministry of Defence, could now be undertaken. Malachy Conway of the National Trust describes the sites as follows:

A small cluster of possible prehistoric hut sites were recorded to the south of the Divis Cellular enclosure. In total 7 possible huts have so far been identified, six of which are round or oval in shape and one is sub-rectangular. Most of the huts are grass covered but are defined by a low ring of stones representing the wall circuit. They also have stones which protrude the interior space and one of the huts, measuring 5.9m by 3.6m in size, displays the remains of what appears to be a southeast facing porch. (Hut 1; 4.5m by 5.6m/ Hut 2; 3.6m by 5.9m/ Hut 3; 6.6m by 7.5m/ Hut 4; 4.8m by 6.5m/ Hut 5; 4.3m by 5.2m/ Hut 6; 3.5m by 2.9m/ Hut 7; sub-rectangular 5.3m by 3.2m). The date of these hut sites is unknown (none have been excavated) but it is probable that they date from the Bronze Age period.

The site has been subsequently surveyed by the Ulster Archaeological Society Survey Group who completed a plan and profile drawing using a Leica Sprinter 100 electronic measuring device in 2009 (Gillespie 2009). The huts were also the subject of a topographical survey by the Queen's University Belfast Professional Archaeology Masters students which was undertaken using a Leica TS06 Series Total Station and was processed using Leica Liscad and Surfer software. The detail of the stones and main topographical features were also captured by the masters students. Figures 8.4 and 8.5 have been compiled using a combination of the information in the UAS survey group plan and profile and the masters students plan. Figure 8.4 shows a hachure plan with the visible stones and the location of the two profiles. Whilst Figure 8.5 shows a section through the huts.

### **Description of the huts**

The hut sites lie on raised, fairly dry ground, which is in unimproved grass and presently grazed by cattle. The ground level slopes down in a gradual incline to the south-south-east. The most apparent hut examples are arranged in a linear fashion, north-north-west to south-south-east along the eastern bank of a tributary of the Collin River. A further example is just visible on the western bank. All are immediately adjacent to the tarmac path, the Mast Road. The huts are not easily definable and exist primarily as a raised, dry, stony area adjacent to the river. On closer inspection it is possible to discern discreet areas which are likely to be the remains of individual huts. They exist as grassed over stone footings, with stones scattered around. In some cases the huts are discernible as an approximate ring (eg. hut 3, Figure 8.6) and in other cases as a low mound of stone (eg. Hut 6, Figure 8.7). The footings are no more than 0.3m in height above the surrounding ground level. The huts

range in size, from around 4m to 8m across and are sub-circular and sub-rectangular in form. There is slight evidence for porch features at the east and south-east of huts 1, 2 and 4.

### **Condition of the huts**

The huts are in good condition and no conservation requirements have been identified. The current management regime of light grazing is serving to preserve and protect the hut sites.

### **Recommendations**

This is the potentially well preserved remains of a Bronze Age settlement site or of a booley settlement and as such would merit further investigation to establish its date and form more firmly. Archaeological excavation of one or more of the huts is recommended. An academic publication arising from the excavation, identifying more precisely the nature and date of these hut sites could add significantly to the study and understanding of either of these monument types, but would also provide the opportunity for them to be more effectively promoted to visitors to the National Trust property and would certainly add value to the visitor experience. The excavation is unlikely to be suitable for a community dig, due to the small scale and the expertise needed. The accessible nature of the site, however, would provide an opportunity to have the dig 'open' to visitors during the work.

- It is recommended that a portion of one or more of the hut sites is excavated to establish both the architectural style and the date of the site.
- It is recommended that the dig is promoted to the general public and that open days are held.
- A publication in a suitable journal should be compiled to contribute to the study of upland settlement sites.
- The results of the excavation should be used by the National Trust and the Belfast Hills Partnership to enhance the visitor experience, by promoting the site on sign boards and in leaflets and other media.



## Costing

Excavation for 2 weeks for two people and write-up

- Excavation:

Fieldwork	10 days X 2 Field Archaeologists X £170	£3,400.00
Fieldwork Consumables		£100.00
Transport & Fuel		£400.00
Report	30 days X 1 Excavation Director X £170	£5,100.00
Graphics	5 days X 1 Illustrator X £170	£850.00
Initial finds processing	5 days X 1 person crew X £170	£850.00
Allocation for post-excavation specialist reports		£1,000.00
Report Consumables		£50.00
		<b>Total £11,750.00</b>



Figure 8.1 – The hut sites are located on the south-west slopes of Divis.

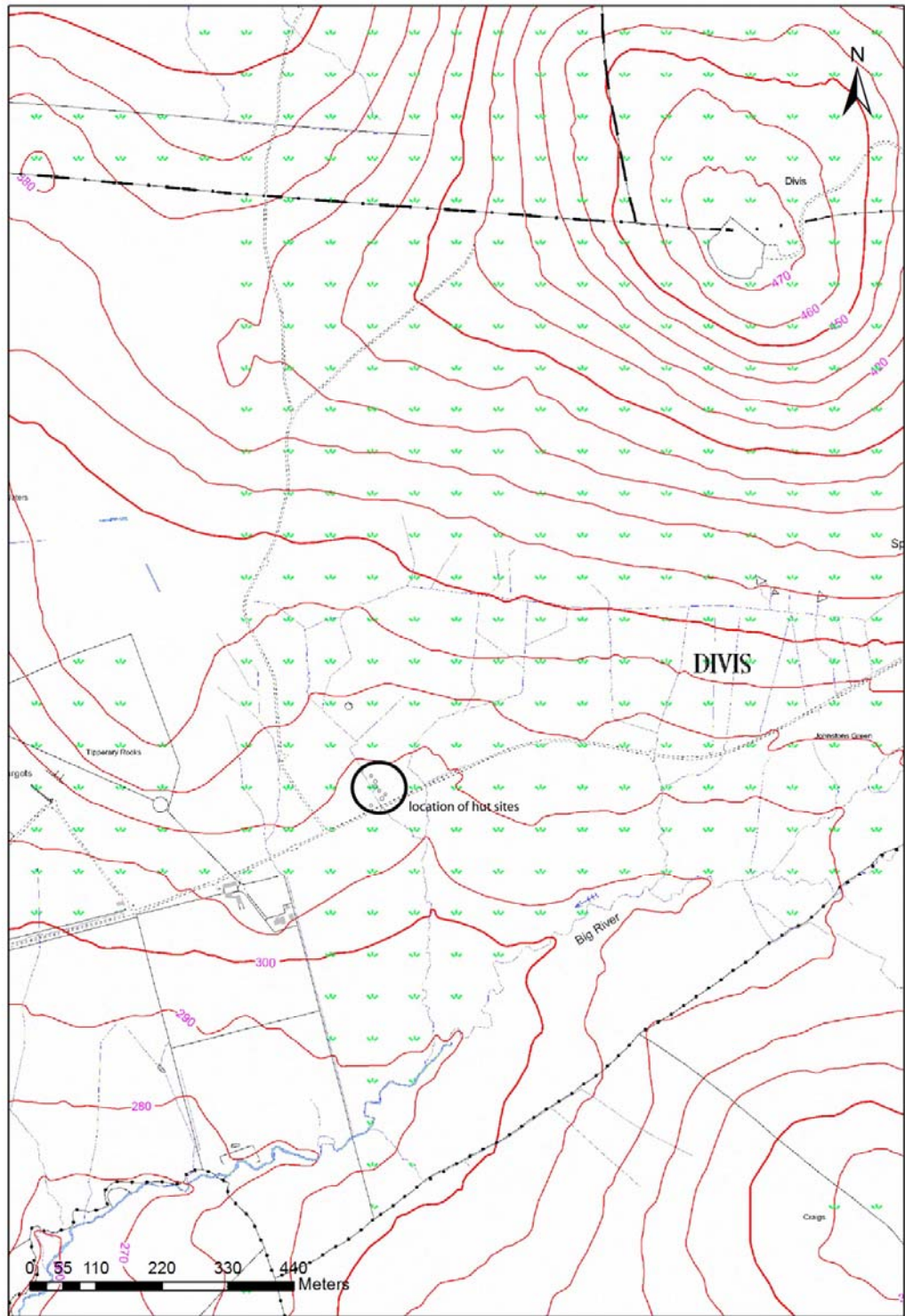


Figure 8.2 – Location of hut sites.



Figure 8.3 – Views to the south and south-west.

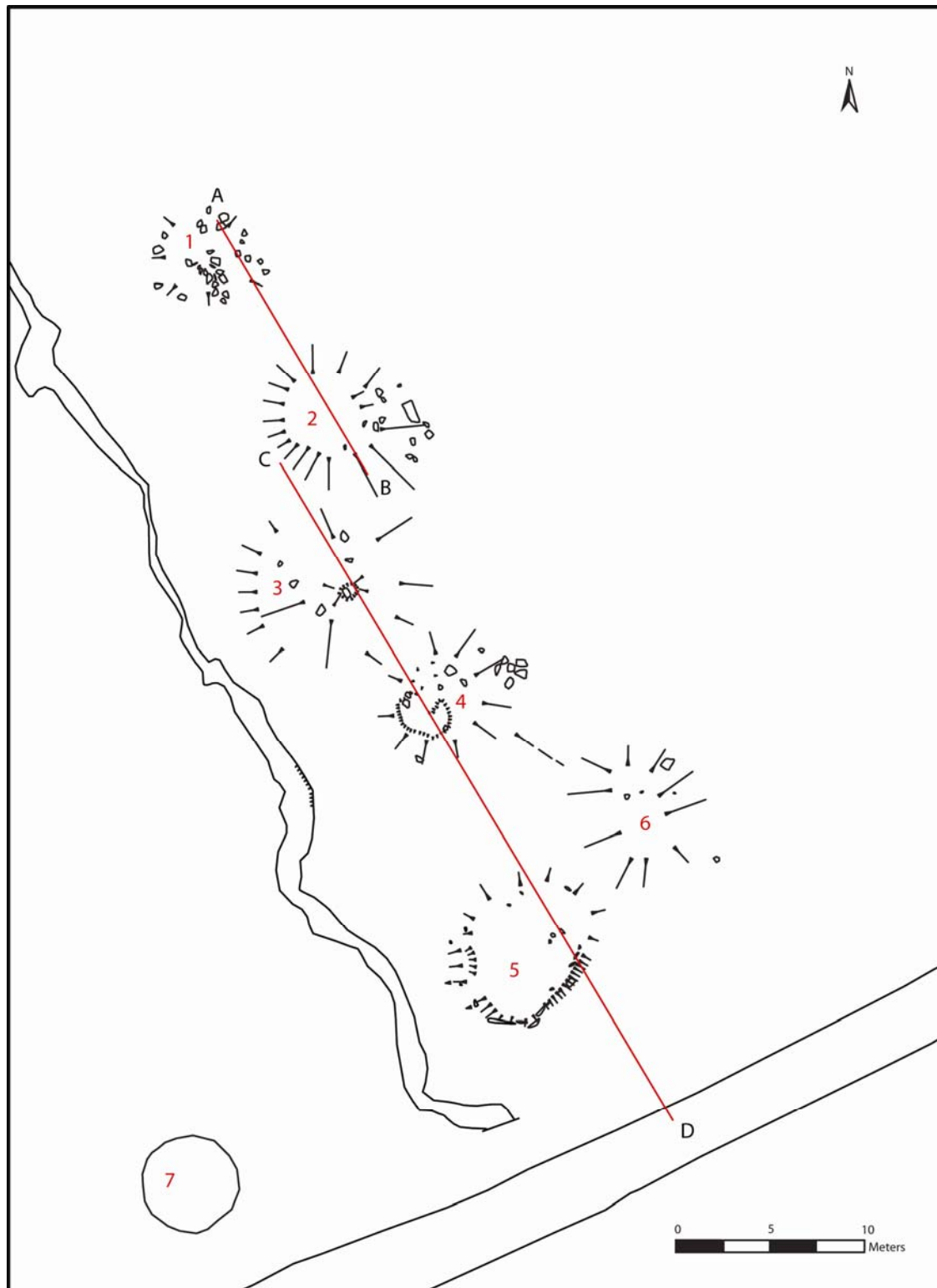


Figure 8.4 - Plan of hut sites after Gillespie 2009, Fig. 5-7 and after plan courtesy of Dr Eileen Murphy.



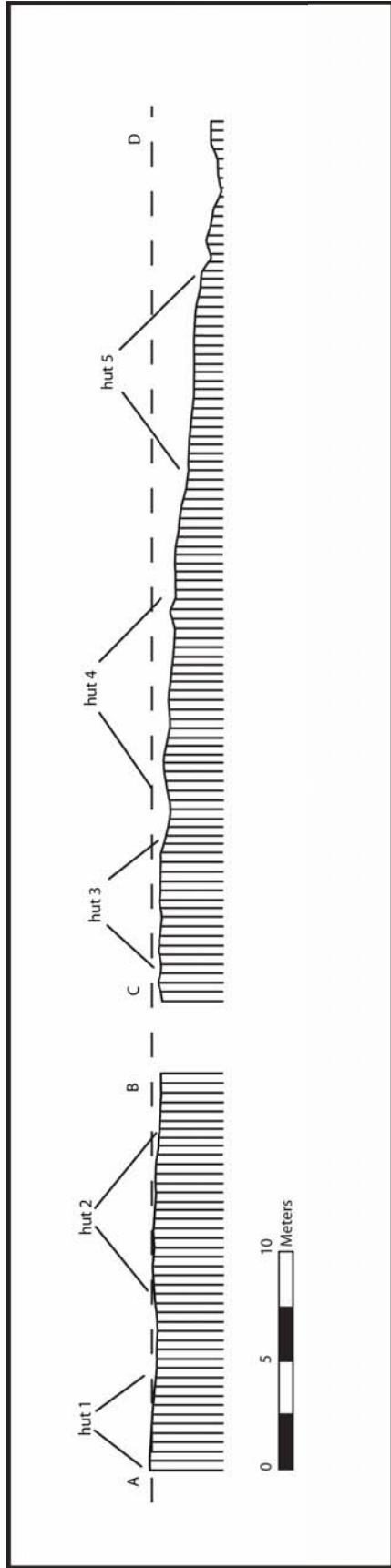


Figure 8.5 - Profiles of the hut sites (see Figure 8.4 for A-D locations), after Gillespie 2009, Figures 5-7.



Figure 8.6 – Hut 3, looking south-west.



Figure 8.7 – Hut 6, looking east.

# 9. Glenside woodland farmhouse

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## Introduction

The farmhouse lies in a clearing, within a coniferous plantation in Tornaroy townland (IGR J26284 73134). The ruin is set within the limits of Glenside community woodland, in Upper Colin Glen and has the potential to be meaningfully presented to the public. This could add value to the woodland amenity, providing another point of interest and informing visitors of the past socio-economic history of the area.

In this report the farmhouse is described and the survey presented. It is placed in context and its potential is examined further. Recommendations for conservation are presented and costings are provided.

## 18<sup>th</sup> – 20<sup>th</sup> century farming and farmhouses

Vernacular houses in the Irish countryside are traditionally a single room deep and single storey in height (Gailey 1984, 8). The roofs were most commonly thatched, chimneys were placed on the ridgeline and windows were on the front and rear walls (ibid.). Houses were extended by adding to the length of the house to provide for extra sleeping areas, formal parlours and byres with separate entrances. During the early part of this period, land in Ireland was in the control of landlords who leased the land to tenant farmers. In terms of scale, these tenant farms ranged widely from the large and profitable to small holdings which only supported subsistence farming. Tenants of these small-holdings may also have undertaken other commercial activity (such as weaving) or have laboured for other larger tenant farmers (Bell and Watson 2008, 21). Land Acts, introduced at the end of the 19<sup>th</sup> century paved the way for tenant farmers to purchase their holdings from the (usually absent) landlords.

## Previous work

There is no record of survey work ever having been carried out at Glenside woodland farmhouse. The buildings are not listed.

## Historical background

The farmhouse is depicted on the 1<sup>st</sup> edition of the Ordnance Survey 6" map (sheet 60; 1833) in the same position as it is today (Figure 9.1). By 1857 the building had been extended northwards and an additional building is depicted at the south-east. This out-building is absent from the 3<sup>rd</sup> edition of the 6" map (1901). The main building has an unroofed section by 1920, as shown on both the 6" and the 25" county series Ordnance Survey maps.

The Griffiths Valuation of 1862 lists Adam Browne as occupant of the tenement at Tornaroy, which is described as a house, offices and land. The Will Calendars held by the Public Record Office note the death of Adam Brown of Tornaroy on the 1 March 1888 and grant his personal estate to his widow, Sarah Brown. His effects are listed as £64 6s 3d. Sarah Brown appears on the Census of Ireland return of 1901, now listed as a widow and farmer, aged 68. She has a son, Adam (aged 30) also listed as a farmer, and daughter Sarah (aged 21) living with her. In 1901 the walls of the house are categorised as being of 'stone, brick or concrete' whilst the roof is of 'thatch, wood or other perishable material'. The house has three occupied rooms and three windows in the front of the house. It is designated a '2<sup>nd</sup> class' house. The farmstead has three out-buildings, a cow house, a fowl house and a barn.

By the time of the 1911 census return, the daughter Sarah Brown is no longer living in the house at Tornaroy and the son Adam is married to Annie (aged 30), they have two sons and three daughters aged between 1 and 8. Adams mother, Sarah Brown is still residing in the house, and is by this time aged 77. At this time the house is described as '3<sup>rd</sup> class' as it now only has 2 rooms occupied by the family and 2 windows in the front of the house. The maps in 1920 depict the house with a section unroofed, and it seems likely that this is the 3<sup>rd</sup> room, which was occupied by the family in 1901, but was not in use by time of the 1911 Census return. Four out-buildings are listed, a stable, fowl house, barn and shed. It is perhaps noteworthy that they no longer seem to have a cow house, and Adam Brown is listed as a 'farm labourer' rather than 'farmer' which might suggest that he was mainly employed in labouring for a larger tenant farmer, rather than farming his own land.

## Description of the remains

A single unroofed structure, constructed of sub-angular basalt boulders, is visible on the site today measuring 27.5m north-north-east to south-south-west and 5.8m west-north-west to east-south-east, with wall between 0.5m-0.7m wide (Figure 9.2). The walls stand variously between 0.5m and



2m in height. There are now three internal dividing walls running from front to back (west-north-west to east-south-east) dividing the space into four rooms.

### **Condition of the farmhouse**

The farmhouse is currently unroofed and in a fairly ruinous condition, with trees and shrubs growing in and around the structure and on the walls. The remains appear to be in a fairly good condition, however, and could be consolidated following the removal of the vegetation.

### **Recommendations**

It is recommended that the farmhouse in Glenside Community Woodland is conserved and presented for visitors to the amenity. This would essentially involve the removal of vegetation and fallen masonry from the site, followed by repointing of the walls in line with NIEA guidance (outlined below). Along with regular maintenance to keep the vegetation at bay, this remedial work will serve to conserve the building into the future. The farmhouse could serve as testament to the upland smallholders and inform visitors about the rural agricultural past of the area and about a way of life which was largely abandoned by the middle of the 20<sup>th</sup> century. An archaeological excavation at this site would be informative in providing further information about the layout of the house and out-building and how they might have functioned. As there is currently only pedestrian access to the site, from the busy and dangerous Upper Springfield Road, it is difficult to see how an excavation could be facilitated, particularly one which would involve community participation. Given the access difficulties, therefore, an excavation is not recommended at this time.

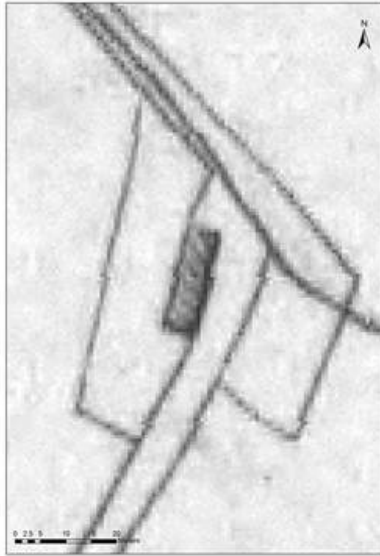
A number of conservation actions are recommended:

1. All trees and ground vegetation in and around the building should be removed to ground level and a suitable herbicide used.
2. The ivy on the buildings should be treated:
  - Ivy should be cut back as close to the walls as possible.
  - This trimmed face should then be sprayed with an appropriate herbicide immediately.
  - The main ivy stems should be cut at the base of the root, removing a piece at least 300mm in length.
  - The cut root should then be drilled and treated with an appropriate herbicide.
  - The ivy should then be left to die away naturally, a process which can take more than a year. Checks should be made to determine if a second treatment is required.
  - Once dead, the ivy can be removed from the structure, by hand, with care.

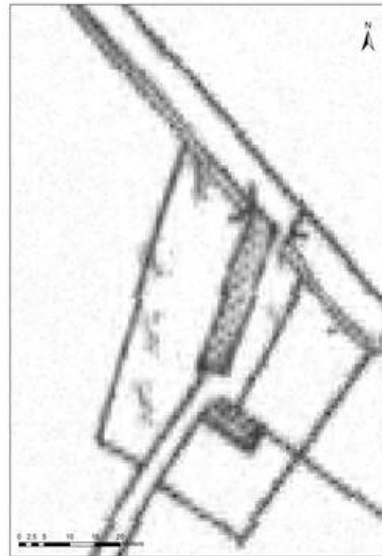
3. Regular maintenance will be required to keep the ivy and ground vegetation growth under control.
4. Fallen masonry should be removed from within and around the buildings. This work should be supervised by an archaeologist.
5. Repoint masonry:
  - Rake out old or inappropriate mortar to a minimum depth of 25-40mm or until sound mortar. The exposed joints should be cleaned with water or compressed air. The joint and masonry should then be moistened.
  - Where necessary voids should be filled to provide a uniform depth prior to pointing.
  - Pointing should be carried out using an appropriate lime mortar.
  - The repointed joint should be protected for a minimum of 7 days (eg dampened sacks hung in front of the wall to prevent drying too quickly). The masonry and joints should be remoistened after 24 hours. Lime mortars are vulnerable to frosts for a minimum of three months after application, and so work programmes should be timed in consideration of this.

### Costing

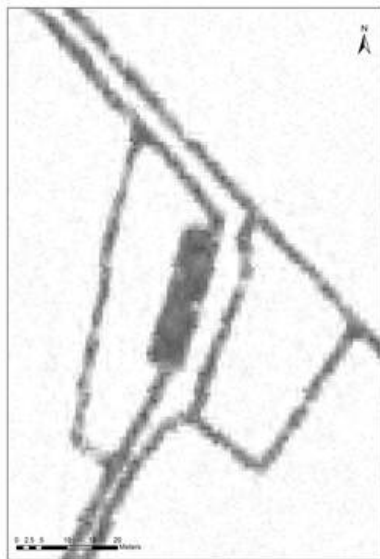
Cost for repointing of masonry	£23,000.00 plus VAT	£27,600.00
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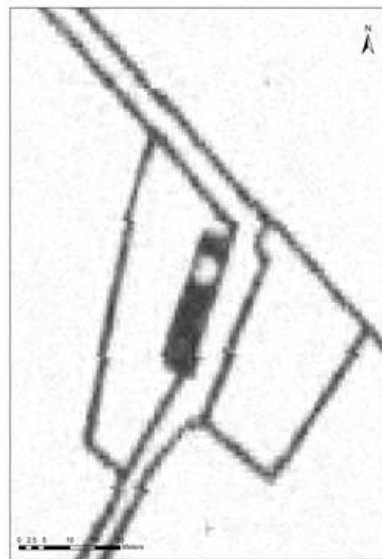
Sheet 60, 1<sup>st</sup> edition 1833



2<sup>nd</sup> edition 1857



3<sup>rd</sup> edition, 1901



4<sup>th</sup> edition, 1920-1931

Figure 9.1 – Glenside woodland farmhouse, as depicted on the various editions of the 6" maps.

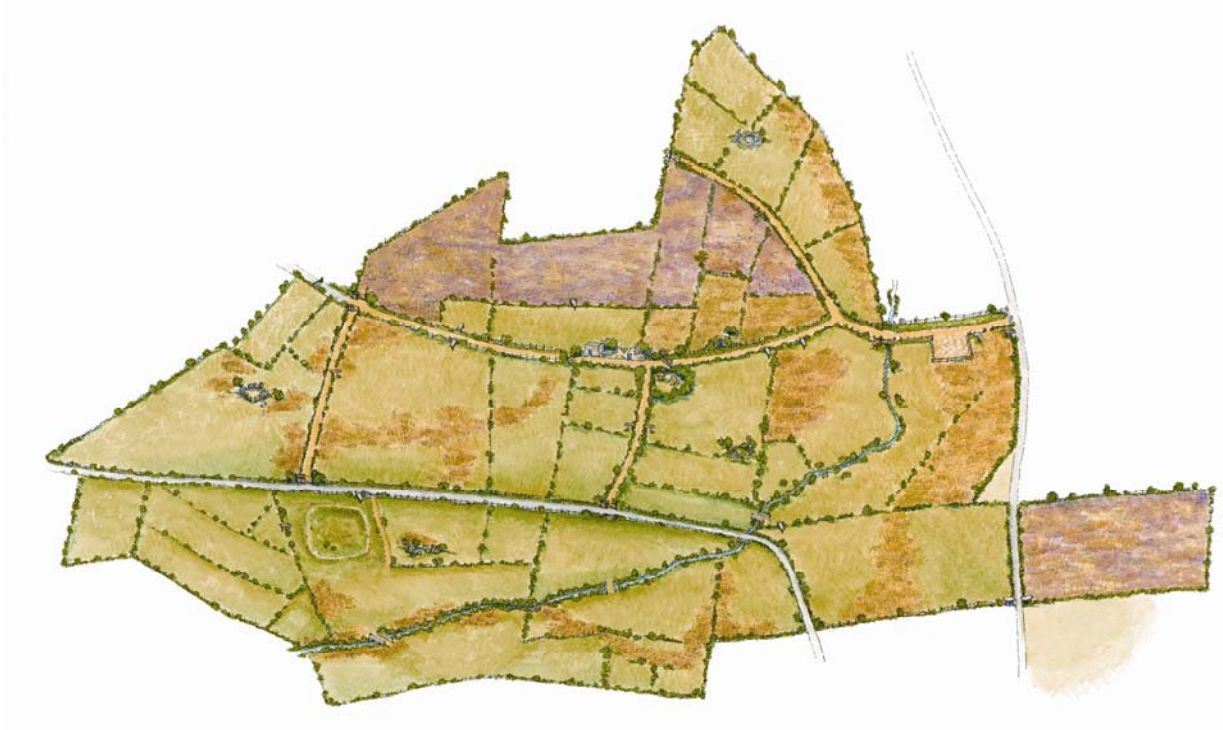


Figure 9.2 – Glenside woodland farmhouse, looking north-north-west.



# 10. Slievenacloy Nature Reserve: Cairn

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## Introduction

In Ballycollin townland, within the Slievenacloy Nature Reserve, a cairn is recorded (ANT 064:027; IGR J25976 71095). This monument is an integral part of a wider prehistoric burial landscape both within the landscape of Collin Mountain, and the wider Belfast Hills area. The upland terrain is a typical setting for prehistoric burial activity, with cairns in particular often set in prominent positions on ridges and hill tops. In total eight prehistoric burial monuments and associated features are recorded as having once stood on Collin Mountain and the ridge running northwards from it (Figure 10.1). Today only three have visible remains (ANT 064:072, ANT 064:001 and ANT 064:027) but, along with existing historic references which describe the other monuments, they attest to the likelihood that Collin Mountain was an important sacred landscape utilised for prehistoric burial in the Neolithic and Bronze Ages. The cairn located within the Slievenacloy Nature Reserve was undoubtedly an important part of this landscape.

A full topographical survey of the cairn has been carried out. A description of the cairn is presented in this report and the monument is discussed in the context of its wider landscape setting. Recommendations are made for maximising the potential of the cairn within the Nature Reserve.

## Summit cairns

Mounds of varying size, comprised of loose stone, are a common occurrence in upland locations with visibility and in particular intervisibility being a characteristic feature. These prehistoric ritual monuments are associated with both Neolithic and Bronze Age burial activity and while they often have architectural features associated with passage tombs, they have also been found to contain Bronze Age cist burials and urn burials (O'Sullivan and Downey 2011, 22). They vary in size and form and can be as small as 10m in diameter or as large as 60m in diameter, such as Maeve's Cairn on the summit of Knocknarea Mountain, Co. Sligo (ibid.). It is clear from their siting and from the clustering of such monuments in these locations that the upland landscape of the mountains and hills had a particular significance as a sacred place in prehistoric times. The distribution of cairns in the Belfast Hills uplands is testament to the sacred nature of these high places. There are cairns on the summits of Black Mountain, Divis, Cave Hill, Collinward and Carnmoney Hill and megalithic tombs on Wolf Hill and McIlwhans. None of these has been formally excavated in modern times; however, investigations have been undertaken in the past. When two of the cairns (ANT 060:043 and ANT 064:072) in Ballycollin were opened, cist like structures were found, suggestive of Bronze Age burials (see descriptions below). A food vessel was removed from Yellow Jack's Cairn (ANT 0650:015), Divis, around 1840, evidence of Bronze Age activity at this monument (Patterson 1871, 506-507). Whilst both cairns which survive extant on Collin Mountain (ANT 064:001 and ANT 064:027) show architectural features reminiscent of the passage tomb tradition.

## Previous work

The landscape of Collin Mountain has long been recognised as the location of prehistoric burial activity and in particular the Ordnance Survey Memoir (compiled in the 1830s) describes a number of monuments. O'Lavery writing in the 1880s also describes the burial monuments of Collin Mountain. The Sites and Monuments Record, held by the Northern Ireland Environment Agency lists eight prehistoric burial monuments located on Collin Mountain. The various descriptions are detailed below by site and the exact location, if known, is given on Figure 10.1. Measurements have been converted from feet, inches and yards to metres.

### *ANT 060:043: Cairn*

An unlocated cairn (ANT 060: 043) is described by O'Lavery in 1880 as a 'little mound' about 4.88m in diameter which contained a stone-lined grave within (O'Lavery 1880, 353). The mound was used as a Mass station during Penal times and was said to be located in a sheltered position, on the side

of Collin Mountain fronting Hannahstown. The SMR notes, in a record dated March 1981, that this site can now not be located.

#### ***ANT 060:076: Barrow***

The Sites and Monuments Record held by the Northern Ireland Environment Agency records a burial monument, a barrow (ANT 060:076), located on the ridge running northwards from Collin Mountain. There is no description of the site and no further details given. This barrow could not be located during the current survey.

#### ***ANT 064:001: Cairn***

The Ordnance Survey memoir (Day and McWilliams 1991, 97) describes a cairn on top of Collin Mountain as composed of stones of different sizes, forming a convex 18.3m in diameter and rising to 2.75m above the ground surface at its highest point. Its condition is described as 'dilapidated and scattered about' and it is also recorded that the cairn had been explored in the past and 'caves' and decayed bones had been found within. O'Lavery mentions the cairn also, and describes it as formed of small stones piled up in a conical heap, nearly completely grassed over (1887, 340-341). The SMR describes a possible passage tomb, consisting of a round cairn with a low rounded profile, 1.6m high, 17.5m north-south and 21.5m east-west. A triangulation station is located on top of the cairn (Figure 10.2). This is fairly common and can be seen at summit cairns and passage tombs elsewhere (O'Sullivan and Downey 2011, 21). These summit cairns were clearly sited in order to optimise their distant visibility and also intervisibility, something which the 19<sup>th</sup> century Ordnance Survey engineers also required for their fixed surveying stations and this has resulted in the overlap in their locations (Ibid.).

#### ***ANT 064:027, ANT 064:028, ANT 064:29: Cairn & standing stones***

A second cairn (likely to be ANT 064:027) is described as a being located a short distance to the north of ANT 064:001 (Figure 10.3). The OS memoir notes that it is circular and is 12.8m in diameter, standing 1.2m high (Day and McWilliams 1991, 97). A row of large stones is described around the base 'a few of which still remain undisturbed' but the cairn is pronounced 'greatly destroyed'. A standing stone (ANT 064:028) is detailed, 6.4m north of the cairn, standing 1.17m tall and 0.6m across by 0.46m thick with a large stone lying beside it. A further two smaller standing stones (ANT 064:029) were reportedly located on the south west side of the cairn, one 0.68m high and the other 0.46m. The cairn is further described in the SMR (dated July 1994) as a poorly preserved round cairn, overgrown with heather and measuring 19.1 N-S by 18.5m. In total 11-14 possible kerb stones were identified in an arc running from west, through north to east-north-east. The SMR notes that the

interior of the cairn has been quarried, however, two upright stones may be in their original positions and may have formed part of a gallery. A flat slab, 1.24m long was noted lying 3m to the north east of the cairn. The standing stones described in the OS memoirs were not visible in 1994.

#### ***ANT 064:043: Standing stone***

A standing stone (ANT 064:043), now unlocated, is also noted in the memoirs (ibid., 97-98) as having once stood in Ballycollin townland. It is described as being 0.99m high, 0.91m wide and 0.41m deep.

#### ***ANT 064:072: Cairn***

A third destroyed cairn (ANT 064:072) is described in the OS memoirs (Day and McWilliams 1991, 97). It is described as circular, 9.14m in diameter, and was destroyed in 1819, within the cairn was found a cist, formed by a long flat stone which was supported on stone columns, bones were found within. Further 'graves' were found around the base of the cairn, however contained only clay. The cap stone has been placed upright on the site, according to the memoirs, sunk 0.61m into the ground. According to the SMR (record dated 2006) the stone is now visible in the field standing around 1m high.

### **Survey of the cairn**

The survey of the cairn (ANT 064:027) in the nature reserve was undertaken using a Leica TPS 705 Series Total Station and was processed using Leica Liscad and Surfer software. A 30m grid square was established over the cairn and the survey was carried out at a resolution of 2m x 2m, with a higher resolution used where necessary. The detail of the stones and main topographical features were also captured. Figure 10.4 shows a hachure plan with the visible stones and the east-west profile. Figure 10.5 shows the contour data as a surfer model, with x2 exaggeration.

### **Description of the Slievenacloy Nature Reserve Cairn**

The cairn (ANT 064:027) set in heather and rough grazing within the Slievenacloy Nature Reserve, is a fairly unimposing monument, in an impressive location. There are views in all directions, except to the south, where they are blocked by Collin Mountain (Figures 10.6-10.8). The cairn (ANT 064:001) on the summit of Collin Mountain is clearly visible from the site (Figure 10.8). The Slievenacloy Nature Reserve cairn is roughly circular and measures 18.48m east-west and 19.56m north-south, it stands 1.32m above the surrounding ground level at its highest point (Figures 10.3-10.5). Five kerb stones are visible in an arc from south-west through west to north (Figure 10.4) and it is likely that more are obscured by heather; indeed more kerb stones were visible during the 1994 survey by the



EHS (now NIEA). The surfer model produced from the topographical survey suggests that there are more kerb stones surviving below the sod in an arc from east through south east to south (Figure 10.5). These were not visible on the ground. On the interior of the cairn, two uprights are visible (Figures 10.4, 10.9-10.10), and it is possible that these are in their original position and formed part of a central passage or chamber. A recumbent slab which lies immediately to the north-north-east (Figure 10.11) has been disturbed from its original position and may also have formed part of a chamber or passage. Loose stones are scattered about on the interior and to the north of the site. The monument has been damaged in the past (see below) making positive identification difficult, however, it is possible that this is the remains of a passage tomb.

### **Condition of the cairn**

The cairn has been all but removed in antiquity and only traces remain. Presumably much of the stone has been taken in order to be reused elsewhere, perhaps in nearby field boundaries. There has also been some quarrying of the interior in the past and four depressions are evident (Figures 10.4-10.5), leaving the surface very uneven. It is possible that these holes are the result of treasure hunting. The OS memoir records that the cairn on the summit of Collin Mountain was explored in the past (see description above), and it is possible that this cairn was investigated at that time also.

### **Recommendations**

As this area is an ASSI, NIEA should be consulted prior to planning any invasive works at this site.

In order to maximise the potential of this site a reconstruction drawing should be commissioned, depicting the cairn, in its landscape setting. This could accompany a signboard, for example, highlighting the importance of the upland landscape as a sacred place for people in prehistory. The potential for interpretation would be further enhanced by an archaeological excavation, which could help to determine more satisfactorily the nature of the monument and its date. This would not be a suitable target for a community excavation due to the likely complex nature of the remains.

No recommendations for conservation are proposed and the current regime of light grazing will serve to keep the vegetation down without interfering with the archaeological remains.

## Costing

Fieldwork	20 days X 4 Field Archaeologists X £170	£13,600.00
Fieldwork Consumables		£250.00
Transport & Fuel		£800.00
Site Infrastructure		£500.00
Report	20 days X 1 Excavation Director X £170	£3,400.00
Graphics	10 days X 1 Illustrator X £170	£1,700.00
Initial finds processing	5 days X 1 person crew X £170	£850.00
Allocation for post-excavation specialist reports		£1,000.00
Report Consumables		£50.00
Sub-total		£22,150.00
Reconstruction drawing		£700
		<b>TOTAL £22,850.00</b>

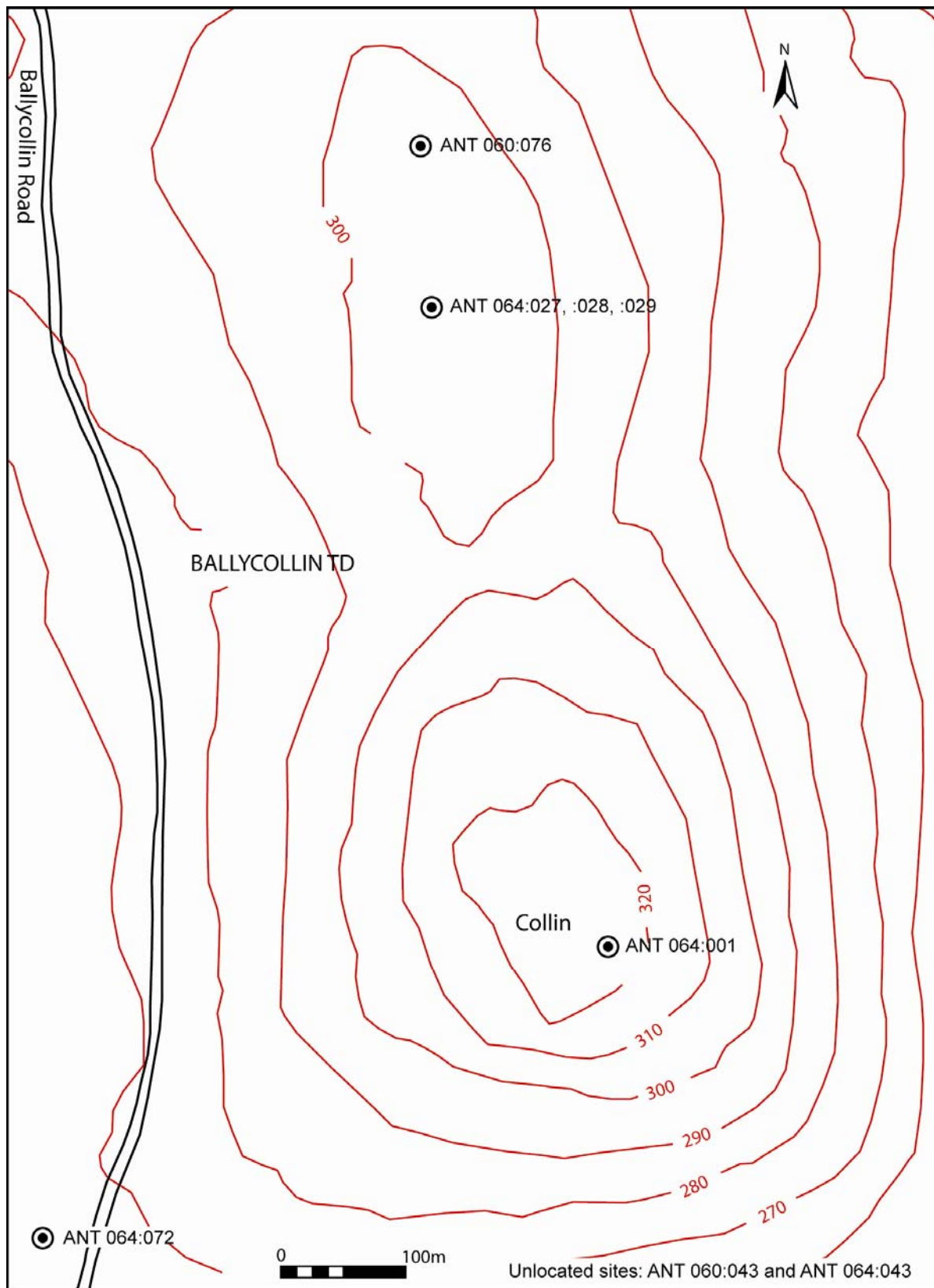


Figure 10.1 – Location of cairns in Ballycollin townland.



Figure 10.2 – Possible passage tomb (ANT 064:001) on the summit of Collin Mountain, with triangulation station on top (image NIEA, SMR).



Figure 10.3 – Cairn (ANT 064:027), a low heather covered rise, looking north.



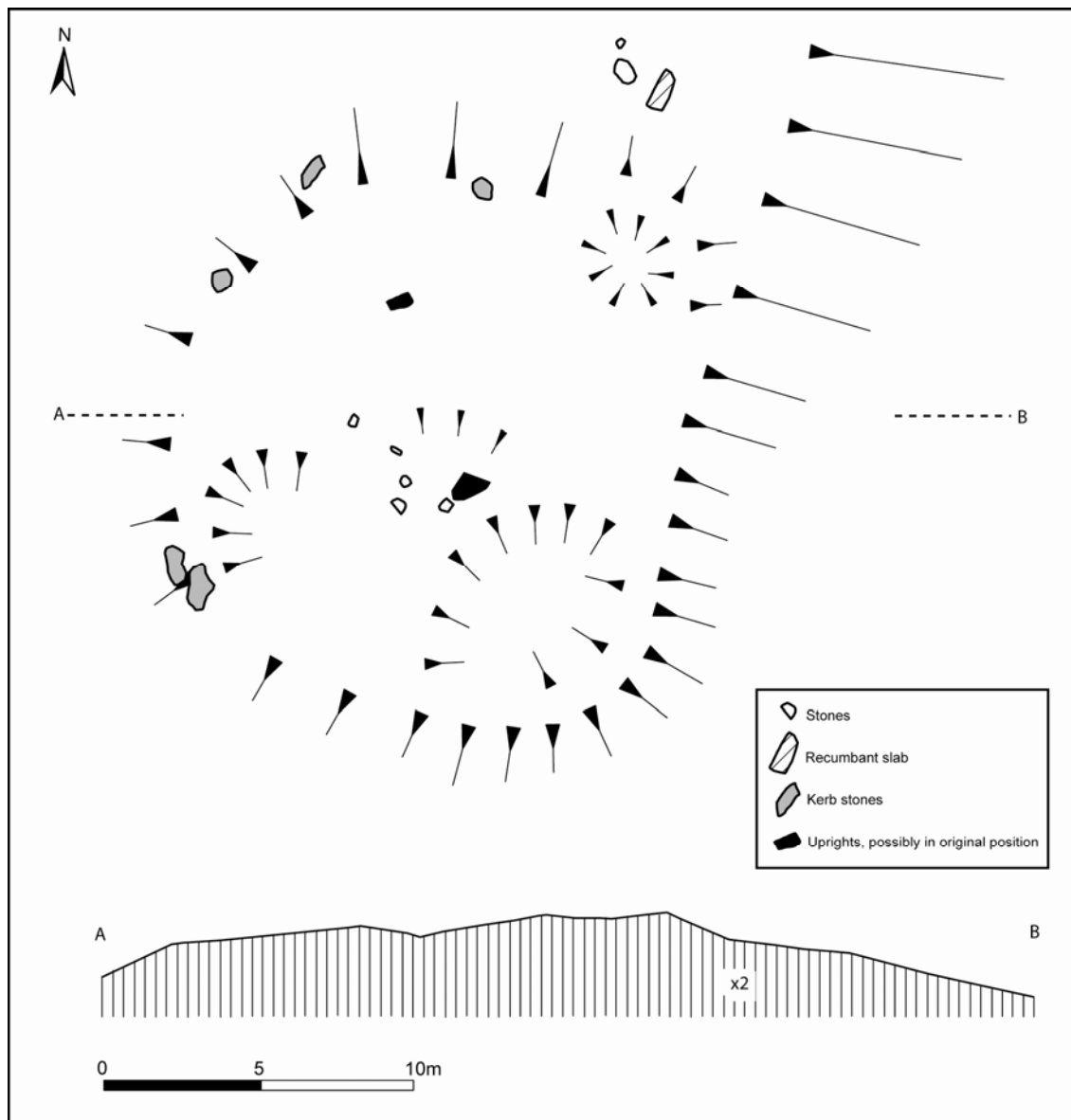


Figure 10.4 – Plan and profile of the cairn.

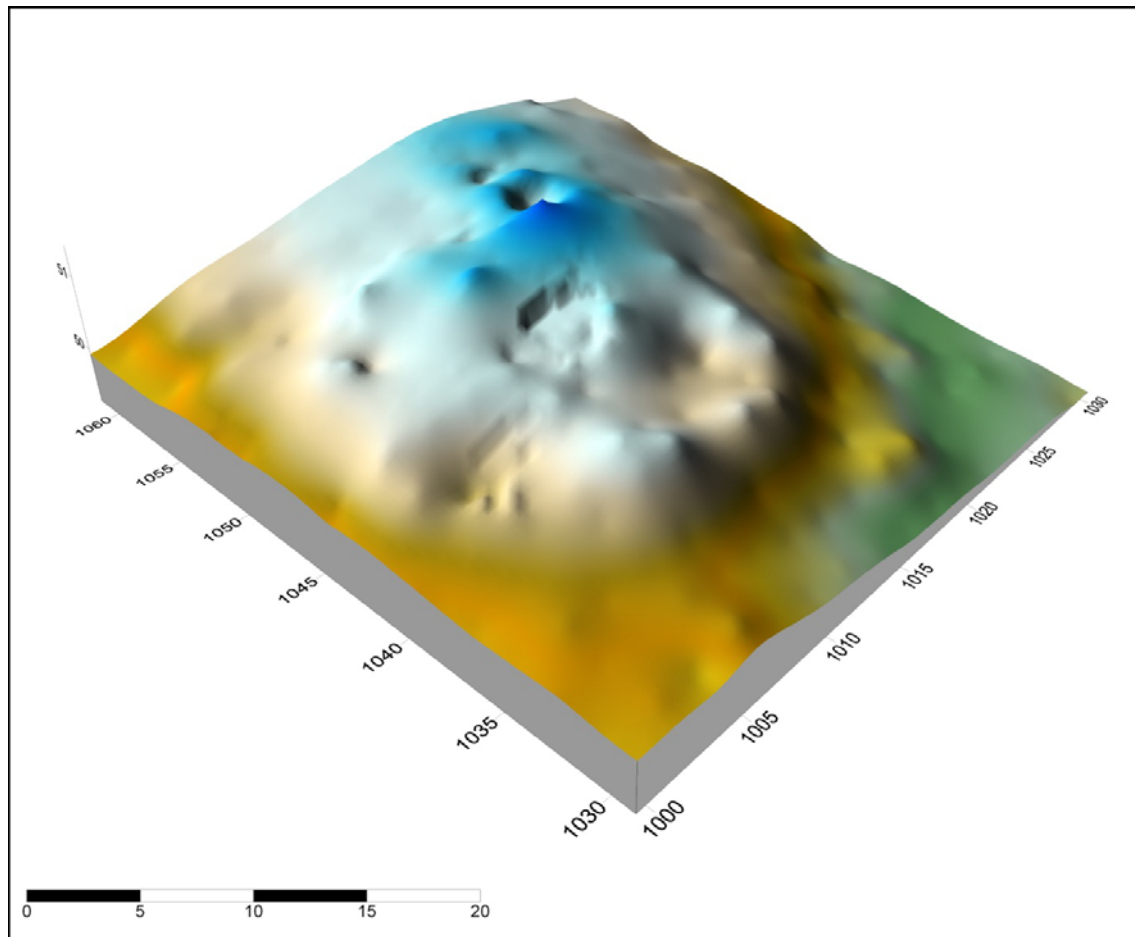


Figure 10.5 – Surfer contour model of the cairn.



Figure 10.6 – View to the north-east from the cairn



Figure 10.7 – View to the west from the cairn



Figure 10.8 – View of Collin Mountain to the south from the site. The cairn (ANT 064:001) is visible on the summit with the trig. station located on top.



Figure 10.9 – The cairn, looking south-west, with a kerbstone visible in the fore ground and the two uprights beyond, possibly in their original position.





Figure 10.10 – The cairn, looking south-west, across the quarried interior, two upright stones are visible.



Figure 10.11 – Recumbent slab, from the cairn, looking north-north-east.

# 11. Slievenacloy Nature Reserve: earthwork

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## Introduction

A large sub-rectangular earthwork (IGR J24527 70826; Figure 11.1) lies on the southern slopes of Priest's Hill, on a terrace above Stoneyford River, with Boomer's Hill to the south and Ballycollin to the east. Located at an altitude of 230m on rough ground, presently grazed by cattle, the monument lies within the Slievenacloy Nature Reserve and ASSI. The enclosure is overlooked by the higher ground to the north, east and south, while it has far reaching views to the south-west and west along the river valley (Figure 11.2). Further work could add significantly to our understanding of this enigmatic site, as its date and function are currently uncertain.

Survey and small-scale excavation have been carried out here in the past and this has been augmented by further field survey for the current project. The site is described below and the survey presented. Possible origins and functions are explored and recommendations for management and the potential for further projects are explored. The enclosure is scheduled for protection under Article 3 of the Historic Monuments and Archaeological Objects (NI) Order 1995.

## Earthwork enclosures

Earthwork enclosures, with a central area defined by a bank of earth sometimes also a ditch, are a common monument type. In the late Neolithic, henge monuments were formed by enclosing a central area with a large bank. These monuments were used for ceremonial purposes and often enclose large areas, for example, the Giant's Ring at Ballynahatty, Co. Down, measures 180m in diameter. Hill Forts usually enclose large areas, for example, at Knock Dhu, Co. Antrim an earthwork over 300m long north-south cuts off a portion of the Antrim plateau measuring over 350m east-west. Hill forts usually occupy naturally defensible sites and although their function may be defensive, it is also possible that they were used for periodic communal gatherings or had ritual significance. Dating is problematic; however, they often have evidence of Bronze Age and Iron Age activity. Earthen enclosures were also constructed in the early medieval period. Rathes, a common monument type, were farmsteads of the period and enclosed an area, commonly around 30m in size to accommodate a house, farmyard and outbuildings. Larger earthen enclosures were also constructed in this period (for example at Balriggeran, Co. Louth and Steeple, Co. Antrim) and often

enclosed oval or sub-rectangular areas over 60m in diameter. Evidence of structures, industrial activity and cemeteries, for example, have been recovered from within these enclosures on excavation. Artillery forts, usually fortified camps in enemy territory, constructed during the 17<sup>th</sup> century were also formed using earthen enclosures and ditches. Usually these forts were polygonal in plan and had angular bastions placed at the corners. The earthen enclosure at Slievenacloy does not fit easily into any of these classic earthwork enclosure monument types and further work must be undertaken to determine its date and function with certainty.

### Previous work

Although the enclosure is not shown on the 1<sup>st</sup> edition of the Ordnance Survey map, it is described in the Memoirs. The Memoir reports:

'In Slievenacloy and holding of William Graham there stands the ruins of a fort of rather unusual size. It is of a very irregular shape but approaches to oval, 108 by 100 yards and higher in the middle than exterior. The parapet was made chiefly of clay but now greatly destroyed. The existing part of it is from 3 to 5 feet high and from 10 to 13 feet thick and the moat from 8 to 14 feet wide, and all in grazing at present. There was a second parapet of earth round this fort but now nearly destroyed. It was 10 feet thick.

21 yards south of this fort there stood a 3-angle or 3-point fort 26 yards long, 20 yards wide at one end and 6 yards wide at the other as it now stands, but it is much changed from its original form. The parapet was of earth and stones. The existing part of it is 5 feet high and 17 feet thick, and the moat 13 feet wide. This fort seemed to serve as an outpost to the large one. Contiguous to the above fort there was the skeleton of a human body found beneath the surface at some former period, and a few yards distant from the body the skull was afterwards found. Both were subsequently buried on the site where found.' (Day and McWilliams 1991, 97).

The enclosure is depicted on all subsequent versions of the Ordnance Survey maps and was the subject of an emergency excavation in 1984 (Williams 1985). The monument, not recognised as an antiquity by the tenant, was partially levelled at that time, at the eastern and south-eastern edge during the construction of a farm lane. Intervention by the Historic Monuments and Buildings Branch (now NIEA), halted further destruction and provided the opportunity for a brief examination of the monument. An exposed section of the bank was

cleaned up by archaeologists and the section was drawn. It was found that the bank of orange-brown sandy clay was of rounded profile. It was 1.2m in height and 3.2m wide, with steep sides and was partly reveted with stones on the inner and outer faces. Beneath the bank was uncovered the old ground surface, a bluish grey clay 5-10cm thick. No finds were recovered in association with the bank. A sherd of 18<sup>th</sup> century pottery was uncovered from an area of demolished bank, although not from a secure context. Williams concluded that the monument could not be easily fitted into existing classifications of field monuments and although it does not show classic features, thought it may be an artillery fort. Williams highlights that the enclosure is on a strategic point of the Stoneyford River valley and is close to both Castle Robin (over 2km away; Mullaghglass td; J2479 6857) and 'Butcher Hill' a place name known to commemorate the site of a massacre in 1641 (almost 4km away; Magheralave td; J2627 6734). Williams concludes that the enclosure may belong to the same period as these sites, however, he concedes it is not clear (Williams 1985, 152). A plan was prepared at the time of the excavation and included in the report was a description of the sub-angular enclosure, the smaller enclosure at the south-east and two stretches of bank which survive at the south-west.

The site is further described in the Sites and Monuments Record and again the report notes that 'classification of this site is difficult' (NIEA SMR7 file: ANT 064:087).

## Survey

A plan of the site was prepared in 1984 by the Historic Monuments and Buildings Branch (now NIEA) and has been digitised for this report (Figure 11.3). This was further augmented and a measured profile across the interior of the large enclosure was carried out for the current project (see Figure 11.3 & 11.4). The survey was undertaken using a Leica TPS 705 Series Total Station and was processed using Leica Liscad software.

## Description of the remains

The large enclosure remains much as described by previous writers. The interior measures around 95m north-south and 105m east-west and is enclosed by a bank and outer ditch (Figure 11.5). The bank is preserved less well at the north (where there are no signs of a ditch; Figure 11.6) and measures around 4m wide and 0.5m high at this side. To the west and south the bank is better preserved and is over 4.5m wide and 0.5m above the interior and 1m above the ditch. The ditch is 3.5m wide, but is absent at the north. There are traces of a second, outer bank from the north-west through west and south to south-east. It is up to 2m wide and is 0.2m higher than the ditch and stands 0.35m above the exterior ground surface. There are a number of breaks in the banks and the



enclosure has been modified at the eastern side with the construction of a laneway (Figure 11.7). A field boundary crosses the monument from north-west to south-east (Figure 11.8). The level of the interior of the enclosure falls off naturally to the south and south-west and the rush covered interior rises in the centre (Figure 11.9). There is a hint of some internal features towards the north of the enclosure (see Figure 11.4), which may be wall footings, however, these are not definable and further work, such as geophysics, might serve to elucidate this further. There are two further earthworks which may be associated with the large enclosure. They are a platform 30m to the south-east (Figure 11.10) and two linear stretches of bank 20m to the south-west. The sub-rectangular platform appears to be constructed of earth and stone and measures 28m north-north-west by south-south-east and 23m south-south-west to north-north-east and stands around a metre above the surrounding ground and is highest at the south-west. The platform appears to have been modified at the north where it joins the laneway and there is no sign of the 'parapet' described in the Memoirs as 1.5m high and 5.2m wide, or of the ditch. Around 20m to the south-west of the large enclosure are two linear sections of bank, around 5.5m wide and 1.5m above the surrounding ground level. One is aligned north-south and is 20m long. The other runs east-west and measures 10m long.

### **Condition of the remains**

Despite some modification at the eastern side in the past when the lane was being constructed, the large enclosure survives well. The platform appears to have been considerably modified in the past, but despite this interference they are both in good condition. They lie in an upland landscape, not intensively farmed in recent times which may have served to protect the remains. Cattle trampling is causing some isolated areas of erosion on the banks of the main enclosure, particularly at the western side (Figure 11.11) and also around the perimeter of the platform at the eastern side and at the south-west. This is caused by cattle crossing the banks, particularly in wet conditions, creating stock paths which is gradually leading to soil erosion.

### **Recommendations**

As this area is an ASSI, NIEA should be consulted prior to planning any works at the site.

No conservation strategy is recommended for this site and the current management conditions will serve to see the monument well protected into the future. It is important to keep a check on the stock erosion and reduce stock density if the problem persists.

The potential of this site cannot be fully realised at present. It is not possible to say with confidence how it functioned, or what period it dates to. Not only is this crucial to our understanding of the

significance of the monument, it also affects its capacity to attract visitors. Presenting the site in a meaningful way, without knowing its date and function is challenging. It is recommended that a programme of work is undertaken to establish with more certainty the nature of the monument. The site could then be promoted, both with an information board and in the Slievenacloy Nature Reserve literature. This monument also provides a good opportunity for involving the wider community.

- It is recommended that a programme of geophysical survey is undertaken on the interior of the large enclosure to identify any internal features and potential targets for excavation.
- An excavation should then be undertaken, involving the community and local primary schools, to recover artefacts and establish the date and function of the monument. A trench should be placed across the ditch and bank and others over targets identified by the geophysical survey.
- Using the information gathered during this work, the monument could then be promoted more effectively as a point of interest within the Slievenacloy Nature Reserve.

## Costing

- Geophysics

Full area geophysical survey (principle surveyor and assistant) 5 days @ £170.00 x 2 = £1700

Completion of geophysical survey report (principle surveyor) 10 days @ £170.00= £1700

Sub-total £3,400.00

- Community excavation:

Fieldwork	15 days X 4 Field Archaeologists X £170	£10,200.00
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Fieldwork Consumables		£250.00
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Transport & Fuel		£600.00
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Site Infrastructure		£500.00
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Report	20 days X 1 Excavation Director X £170	£3,400.00
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Graphics	10 days X 1 Illustrator X £170	£1,700.00
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Initial finds processing	5 days X 1 person crew X £170	£850.00
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Allocation for post-excavation specialist reports		£1,000.00
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Report Consumables		£50.00
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Sub-total £18,550.00

**TOTAL £21,950.00**

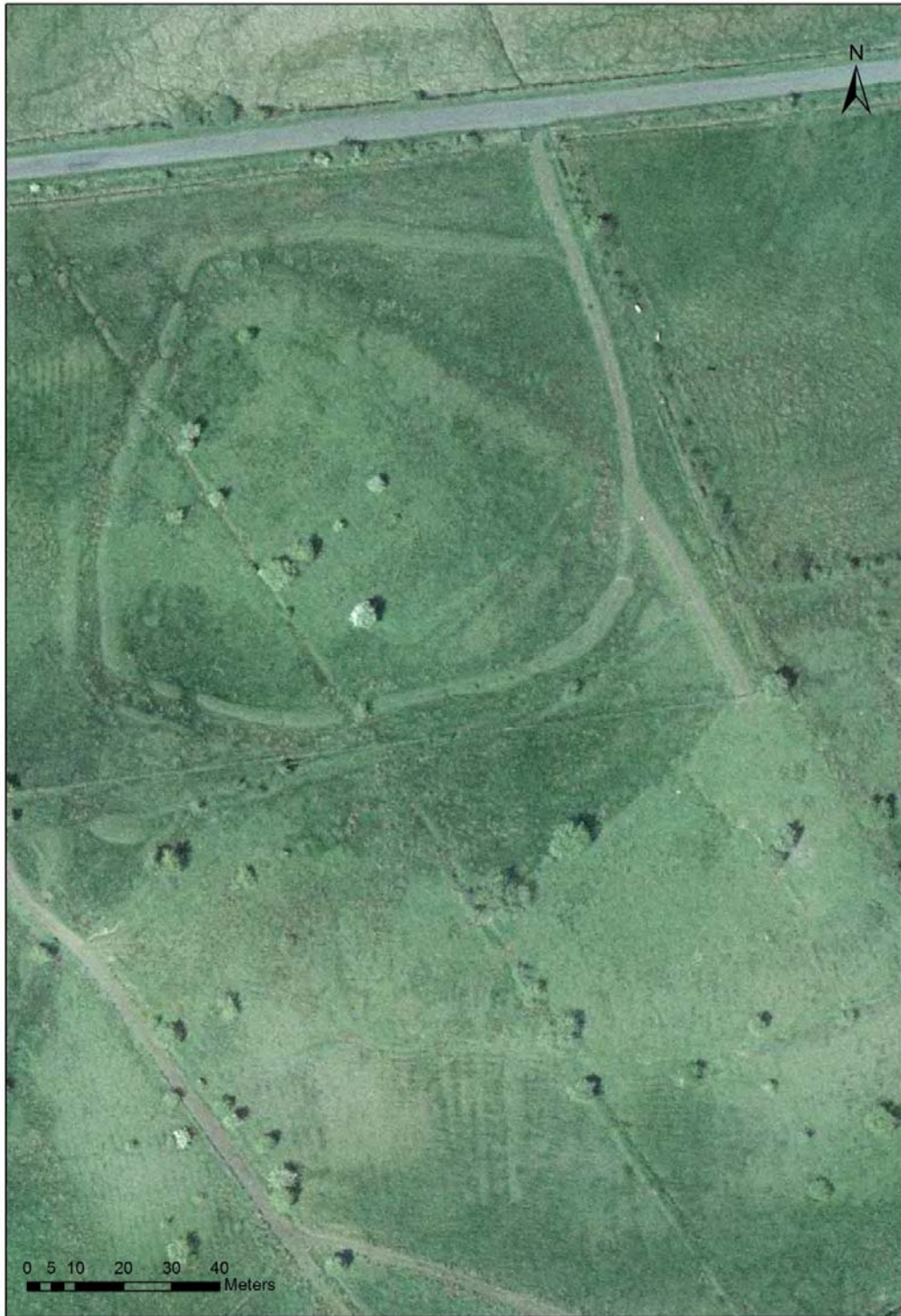


Figure 11.1 – Aerial photograph of Slievenacloy earthwork enclosure.



Figure 11.2 – Looking south-west across the interior of the enclosure.





Figure 11.3 – Plan and profile of Slievenacloy enclosure (after Williams 1985, Figure 1).

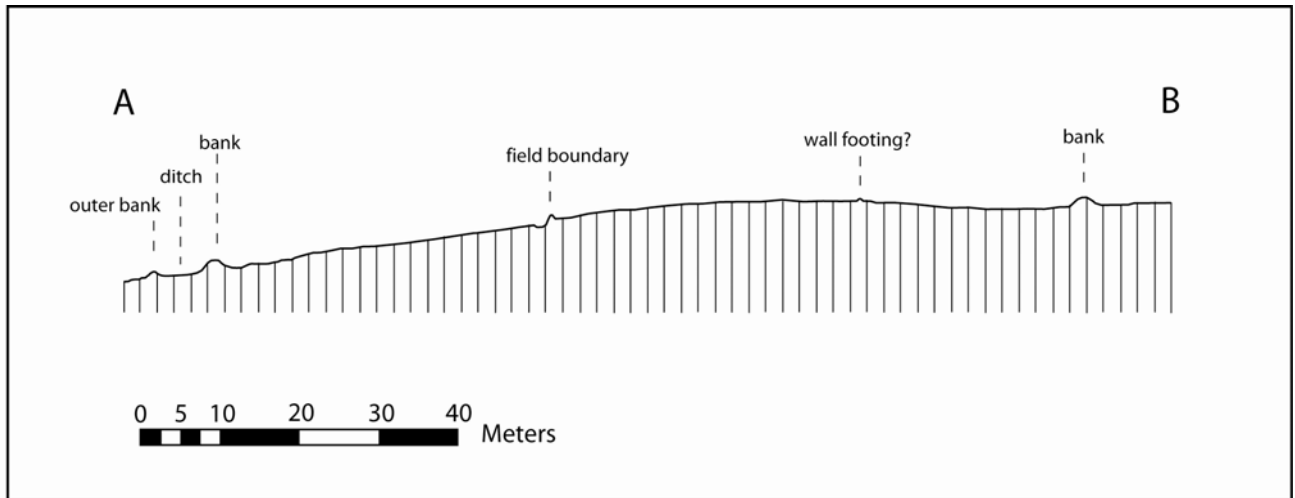


Figure 11.4 – Profile of the earthwork enclosure. See plan, Figure 3, for location of A and B.



Figure 11.5 – Bank, ditch and outer bank at the west side, looking north.



Figure 11.6 – Bank at the north, looking west.



Figure 11.7 – The south-eastern side of the enclosure was levelled during the construction of a farm lane, looking south-west.





Figure 11.8 – Field boundary which runs across the earthwork, looking south.



Figure 11.9 – From south-west the level of the interior rises to the centre. Looking across the interior of the enclosure to the north-west.





Figure 11.10 – The platform to the south east of the enclosure, looking south east.



Figure 11.11 – Erosion to the bank at the south-west, looking south.

# 12. Slievenacloy Nature Reserve: farmstead

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## Introduction

A grass covered ruin (IGR J24668 70797) lies on the lower slopes of Priest's Hill, on a terrace above the Stoneyford River. At an altitude of 230m, the ruins lie in an upland landscape, grazed by cattle, with Ballycollin to the east and Boomer's Hill to the south. The building is now incorporated within the Slievenacloy Nature Reserve, an Area of Special Scientific Interest.

The site has much potential to inform about 18<sup>th</sup> and early 19<sup>th</sup> century life in this upland landscape. The remains are detailed below and placed in context, while the potential for a community excavation is also outlined.

## 18<sup>th</sup> – 20<sup>th</sup> century farming and farmhouses

Traditionally Irish farmhouses are single storey and a single room deep (Gailey 1984, 8). Doors and windows were rarely placed on the end walls. Chimneys were most often placed on the ridge line of the roof, which was most often thatched (ibid.). Houses were often extended by adding to the length of the house to provide further sleeping areas, formal parlours and byres with separate entrances. Studies have been undertaken to identify the main types and layouts of traditional farmsteads (ÓDanachair 1981) and four main types have been identified; 'extended farmyards' have a single row of buildings, 'parallel farmyards' have out-buildings aligned parallel to the farmhouse, 'scattered farmyards' appear to have evolved in an more ad hoc way, particularly where level ground is in short supply and finally 'courtyard farmyards' the most common type, which itself has several variations (ibid.). Houses were often built in clachans, clusters of single storey dwellings which were related to the rundale system of farming, where land was jointly leased by a number of tenants and divided into infield and outfield plots.

This farmed land would have been controlled by landlords and tenants would have ranged from wealthy commercial farmers who ran large and profitable farms to subsistence farmers. The small holders may also have undertaken other commercial activity (such as weaving) or have laboured for other larger tenant farmers (Bell and Watson 2008, 21). Land Acts introduced at the end of the 19<sup>th</sup>

century paved the way for tenant farmers to purchase their holdings from the (largely absent) landlords.

### **Previous work**

There has been no previous survey work carried out at the Slievenacloy farmstead.

### **Historical background**

The buildings at Slievenacloy are shown on the 1<sup>st</sup> edition of the Ordnance Survey 6" map (1833) as two separate structures, with adjoining enclosed land on their northern side, which is divided into four small units. An 'L' shaped portion of a laneway is also depicted running along the south and east of the buildings (Figure 12.1). This land is described as the holding of William Graham in the Ordnance Survey memoirs dated 1832-1838 (Day and McWilliams 1991, 97). The Griffiths Valuation of 1862 also lists William Graham as the occupier of this land, however, the description of the tenement is of a 'herd's house and land'. The parcel of land indicated by the Griffiths Valuation as the holding of William Graham has, in addition to the buildings which are subject to this report, a further building depicted to the north, on the slopes of Priest's Hill (Figure 12.2). It is not clear which one of these is the 'herd's house' indicated by Griffiths Valuation.

The Census return of 1901 also lists a William Graham in Slievenacloy townland (perhaps the son of the William Graham mentioned in the Ordnance Survey memoirs). The farmer, then aged 78, is married to Sarah (aged 65) and they have two children living with them, a son Robert aged 38 and a daughter Sarah aged 21. The 1901 OS map of the holding, however, shows all of the buildings as unroofed (Figure 12.3). It is not clear, therefore, whereabouts in Slievenacloy the Graham family were living. William Graham died in 1904 and is buried at Dundrod Presbyterian Church. A headstone reads 'In memory of William Graham, Slievenacloy, died 14th Nov 1904 also Sarah his wife died 24th Oct 1915 also their sons Samuel died 11th March 1886. Robert died 13th Feb 1936. Graham'. The 1901 Census describes the Graham's farmstead as having walls of 'stone, brick or concrete' and a roof of 'thatch, wood or other perishable material' and having four rooms occupied and four windows in the front of the house. It is described as a 2<sup>nd</sup> class house. Seven out-buildings are listed, a stable, cow house, fowl house, barn, potato house, workshop and shed. The Graham family are also listed in Slievenacloy townland on the 1911 census return. The description of the house remains the same, except that three rooms are now occupied, rather than four. They also have 7 out-buildings, although one is now described as a shed, where it had previously been a potato house.

The history of these buildings is difficult to decipher. They appear to be historically on the holding of the Graham family. It is apparent that the structures were roofed into the 1850s, by which time they had gone from being depicted as two single structures in the 1830s to a continuous row of buildings. The division of the adjoining garden plots, might suggest that there was more than one dwelling here, as opposed to a single dwelling with outhouses, however this is not certain. By 1901 the row of buildings is shown as unroofed, and although the Graham family are still residing in Slievenacloy, they were presumably not living here. Indeed the Griffith Valuation return would suggest that there was no dwelling here as early 1860s and if the structure was still being used, it was as a 'herd's house', when a farmer might employ a man to live in a herd's house to look after his land and cattle for him.

### **Description of the remains**

The remains appear as depicted on the 6<sup>th</sup> edition of the OS 6" map of 1920-1939, although are largely moss and grass covered now, with trees growing within the structure (Figure 12.4). Eleven units are adjoined in a row, presumably representing individual rooms (13 units are shown on the 1<sup>st</sup> edition of the 25" map sheet, 1901). The row measures 55m long east-west and 5.5m north-south (Figure 12.5). Some of the units are as small as 3.5m east-west by 5.5m north-south. The walls were constructed of sub-rounded basalt boulders. The walls survive between 0.5m and 0.7m wide and stand between 0.3m and 1m high (Figure 12.6). One wall, which may be a gable (see Figure 12.7) stands 1.1m in height above the ground surface. It is now not possible to detect the remains of doors or of windows or to determine if the various units make up a single house and out-buildings or if more than one house is represented and this is the remains of a 'clachan'. Without excavation, therefore, it is not possible to determine some of the most basic details of this building and only further work will conclude whether hearth-lobby or direct entry vernacular style is represented and whether this is an extended farmyard of a single dwelling, or made up of multiple dwellings and forming a clachan.

There are four enclosures attached to the rear, which have remained the same since at least 1833 (Figure 12.8). They measure around 20.7m x 25.4, 20.5m x 24.7m, 17.4m x 10.8m and 13.9m x 14.2m. The enclosing walls now survive around 0.7m wide and up to 0.5m high (Figure 12.9). The fields surrounding the ruin are crossed with lazy-beds, evidence that this marginal land was cultivated in the past, perhaps for potatoes (Figure 12.10).



## Condition of the farmhouse

The buildings are completely ruinous, and are almost unrecognisable as a structure (see Figure 12.4). Moss and grass cover stone piles and trees grow within the structure.

## Recommendations

As this area is an ASSI, NIEA should be consulted prior to planning any works at this site.

These intriguing remains offer incredible potential for investigating 18<sup>th</sup> and early 19<sup>th</sup> century life in this upland landscape. This may be the remains of a clachan or of a single farmstead, and evidence of old field systems and lazybeds surrounding the structure suggest that this landscape was once more intensively farmed. Evidence indicates that the structure has not been formally occupied since at least the 1860s and therefore much evidence may have been preserved which might otherwise have been destroyed if the building had continued in use. This structure would be a good candidate for a community excavation. Access to the monument is good; there is great potential for adding to knowledge, whilst also promoting the area and its history to the wider public. The community, including local interest groups and local school children could participate in archaeological excavation at this site to help discover its enigmatic past. A dig could determine much about this building that cannot be determined by other means. For example, what form did it once take? was it a single dwelling or a clachan? Which units were occupied by the inhabitants, and where were animals and stores located? Where were hearths sited and which rooms were interconnecting? The recovery of artefacts would also do much to inform us about the daily lives of the inhabitants.

Prior to undertaking a dig some of the vegetation in and around the structure would need to be removed, or cut back, in line with NIEA guidance (NIEA, no date). Otherwise the site has no conservation needs at present. The current regime of light grazing is sufficient and will serve to control the vegetation without interfering with the integrity of the remains.

## Costing

Community excavation:

Fieldwork	15 days X 3 Field Archaeologists X £170	£7650.00
Fieldwork Consumables		£250.00
Transport & Fuel		£600.00
Site Infrastructure		£500.00
Report	20 days X 1 Excavation Director X £170	£3,400.00

Graphics	10 days X 1 Illustrator X £170	£1,700.00
Initial finds processing	5 days X 1 person crew X £170	£850.00
Allocation for post-excavation specialist reports		£1,000.00
Report Consumables		£50.00
		<b>Total £16,000.00</b>

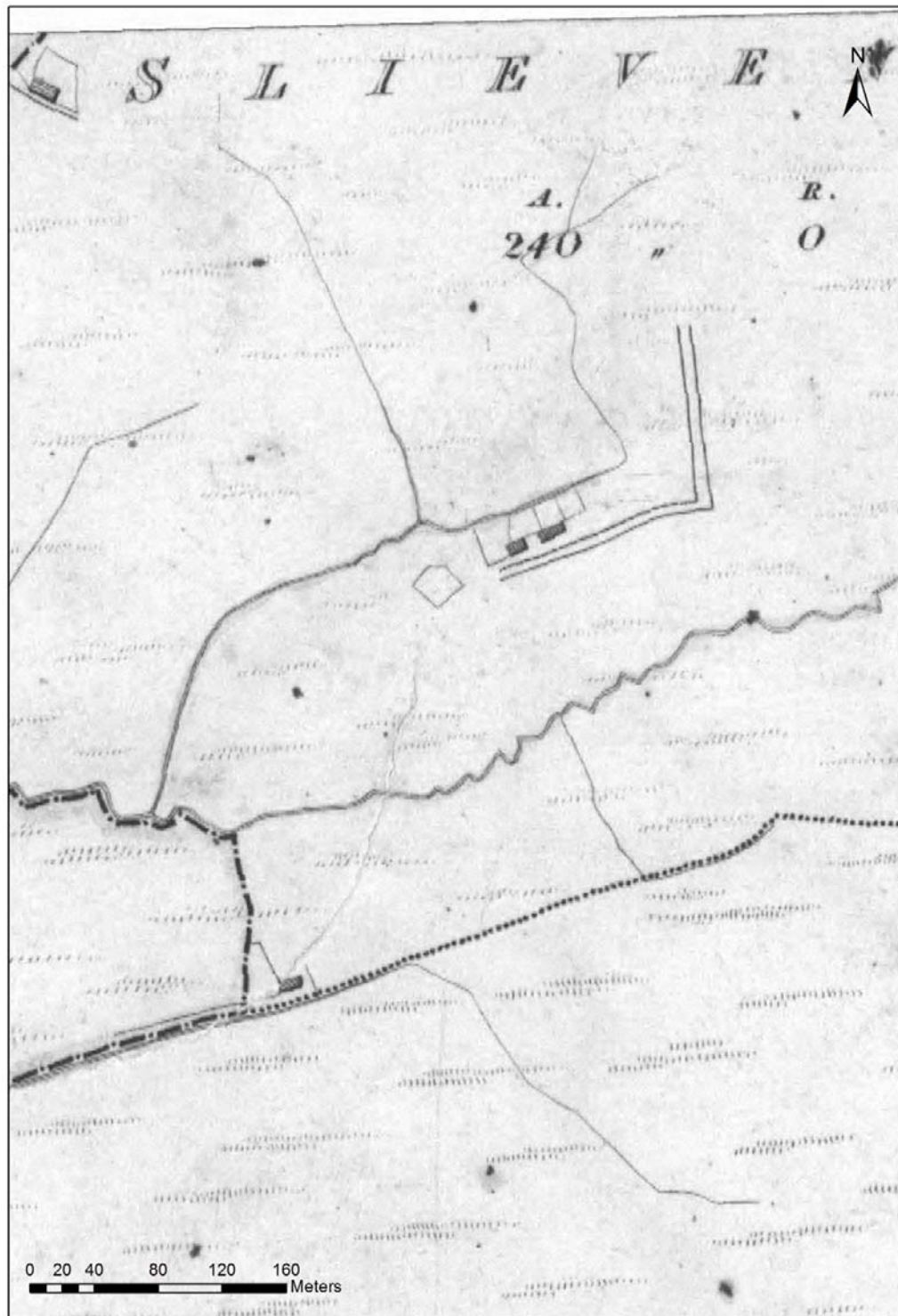


Figure 12.1 – 1<sup>st</sup> edition 6" map, sheet 64, 1833

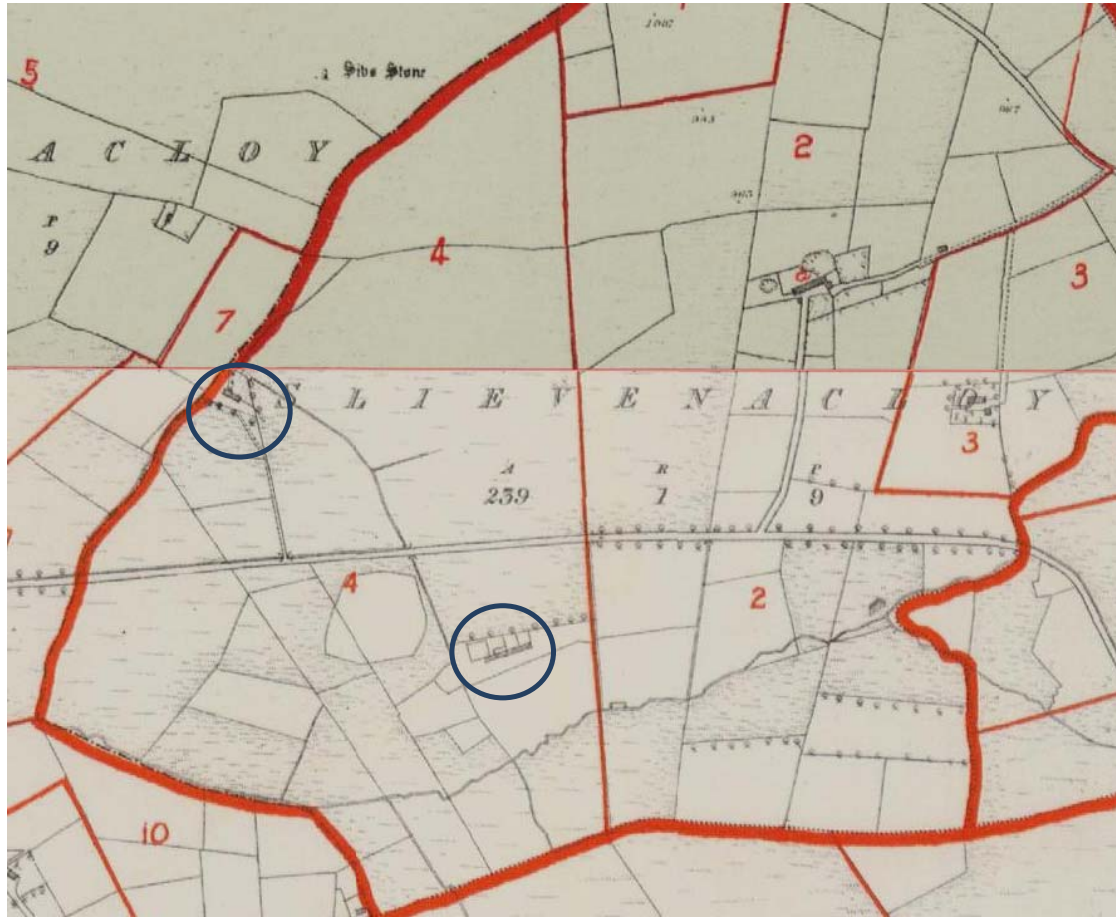


Figure 12.2 - Griffith's Valuation map. William Graham is listed as the occupier of tenement '4', a herd's house and land and also a parcel of land adjoining at the west (annotated '7'). There are buildings in two locations within William Graham's holdings (circled in blue).



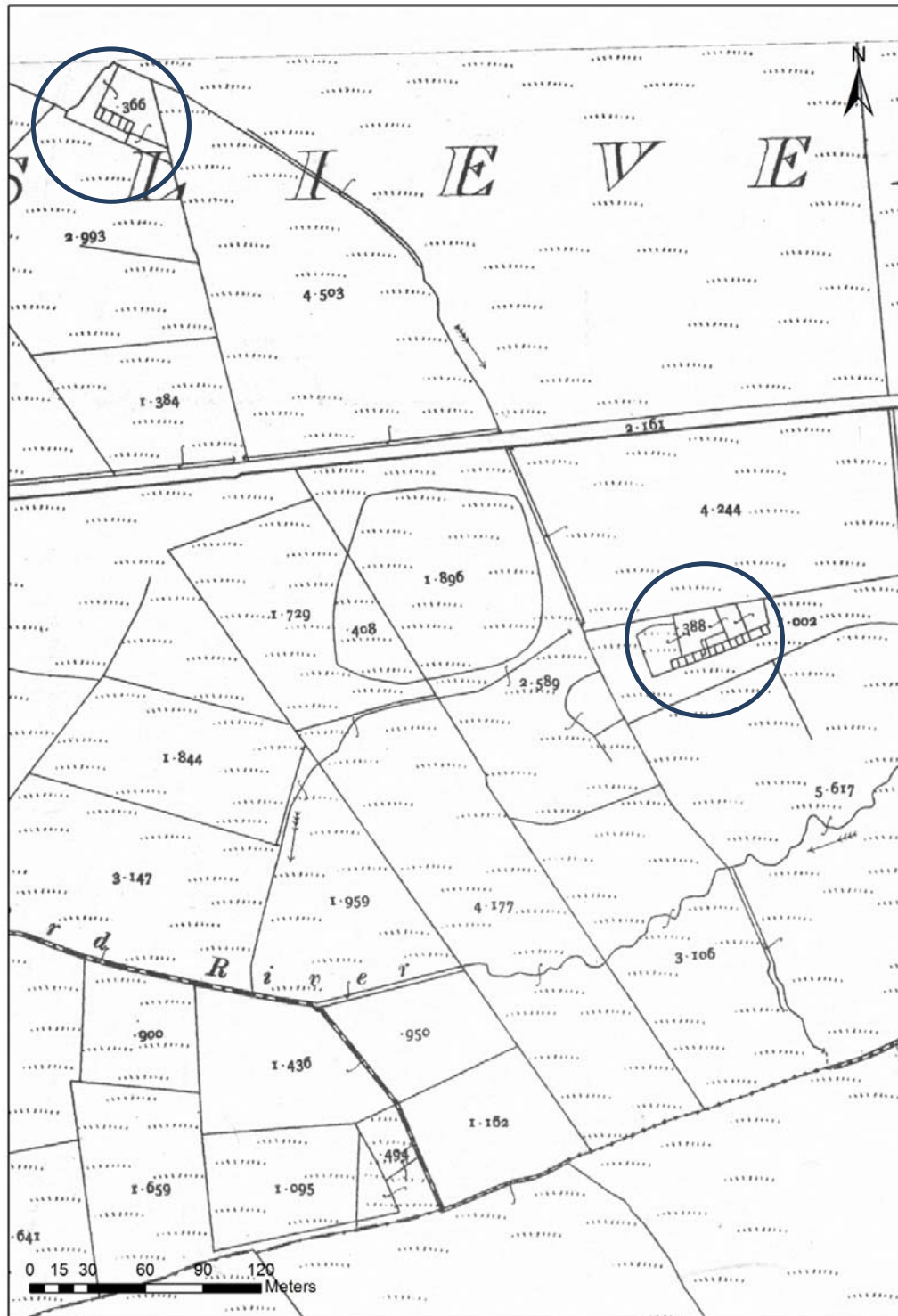


Figure 12.3 – 1<sup>st</sup> edition of the 25" map, sheet 64, 1901. All of the buildings are now unroofed (again circled in blue).



Figure12. 4 – The ruin is almost unrecognisable as a building, looking north-east.





Figure 12.6 – Grass and moss covered remains of the row of buildings, looking south-south-west.





Figure 12.7 – Dividing north-south wall, looking north.



Figure 12.8 – Looking west across the enclosures at the rear of ruin.



Figure 12.9 – Remains of the enclosure wall, looking north.





Figure 12.10 – Looking south from the building, lazy-beds are apparent in the surrounding fields.

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