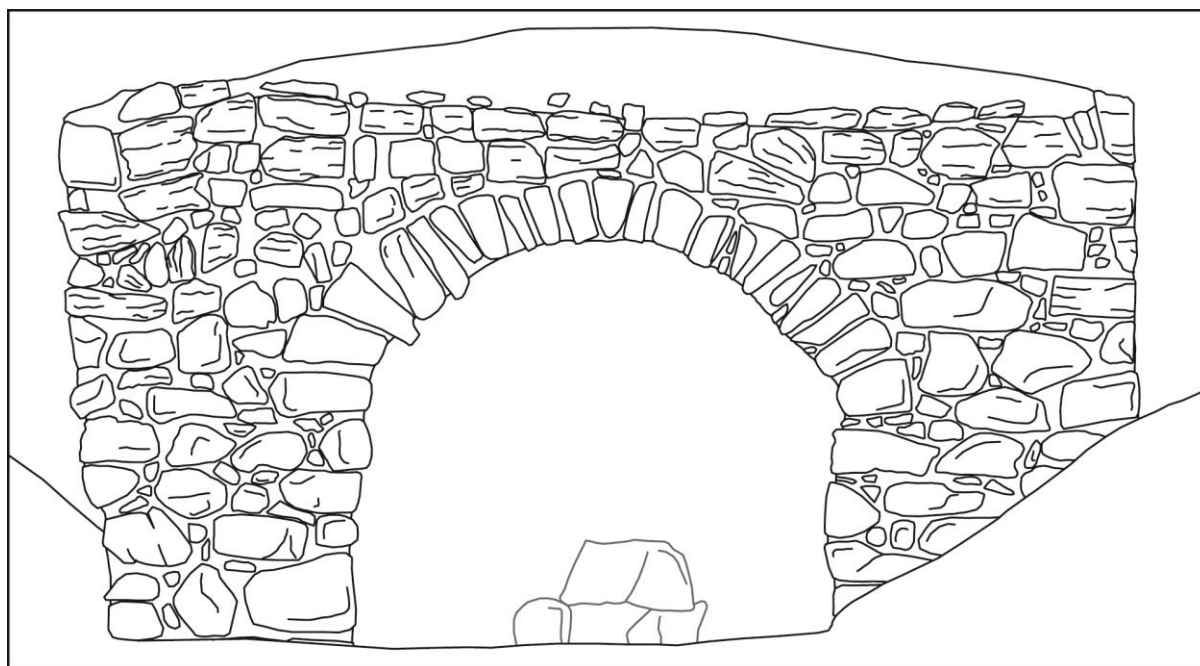


Centre for Archaeological Fieldwork

School of Geography, Archaeology and Palaeoecology

Queen's University Belfast



Data Structure Report: No.106

Dunanney vernacular house and lime kiln,

Carnmoney Hill, Co. Antrim

AE/14/67

On behalf of:





DUNANNEY VERNACULAR HOUSE AND LIME KILN,
CARNMONEY HILL, CO. ANTRIM

Sarah Gormley

CAF DATA STRUCTURE REPORT 106

Licence No.: AE/14/67

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July 2014

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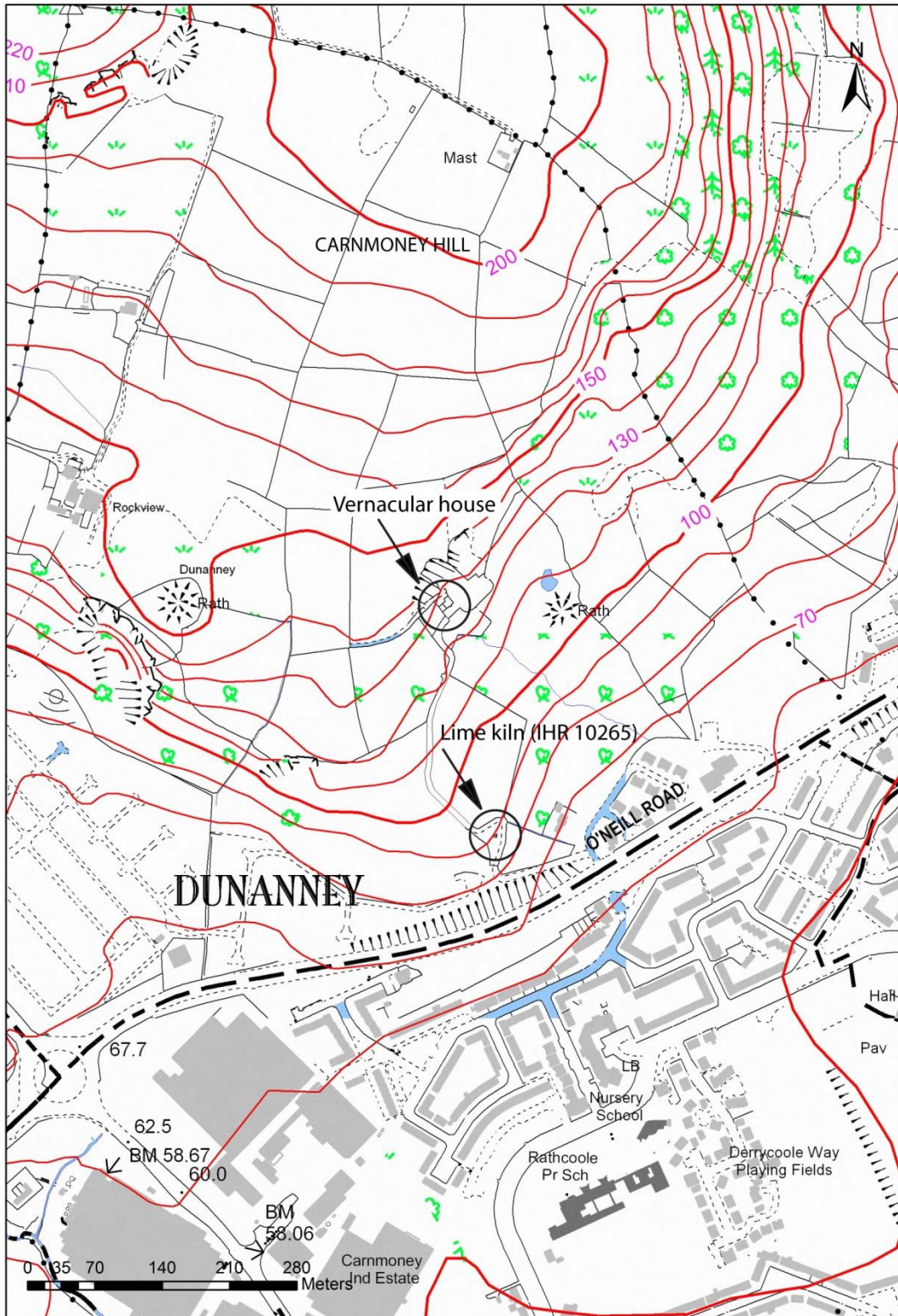


Figure 1: Map showing the location of the vernacular house and lime kiln on Dunanney Lane, off the O'Neill Road, Newtownabbey, Co. Antrim. Note the quarry located behind the vernacular house.

INTRODUCTION

General

The following report details the results of an archaeological investigation carried out by the Centre for Archaeological Fieldwork, School of Geography, Archaeology and Palaeoecology, Queen's University Belfast for the Belfast Hills Partnership between 19 May and 2 June 2014 in Dunanney townland, Carnmoney Hill, Newtownabbey, Co. Antrim (IGR J33616 82432 & IGR J33648 82189; Figure 1). The work was supported by the Northern Ireland Environment Agency (Licence No.: AE/14/67). The excavation was undertaken at the farmhouse and lime kiln which are located on public pathways within a woodland area owned by Newtownabbey Borough Council and managed by the Woodland Trust.

Prior to the excavation works the vernacular house and lime kiln were surveyed as part of a project undertaken by the Centre for Archaeological Fieldwork for the Belfast Hills Partnership (see Gormley 2013). In 2013, the remains of the farmhouse and outbuildings were found to be in a completely ruinous condition, with collapsed and overgrown walls (Figure 2) and the limekiln was entirely hidden by overgrown vegetation (Figure 3). The Belfast Hills Partnership planned a project which would see the conservation and consolidation of the farmhouse remains, the repointing of the limekiln and the erection of information boards in conjunction with upgrading the access and signage for the Carnmoney Hill woodland amenity at the Dunanney Lane entrance. In advance of the excavation, the Belfast Hills Partnership cleared the vegetation from the farmhouse and kiln and in April 2014 cleared the rubble from within the farmhouse under archaeological supervision (see Welsh 2014; Figure 4 and 5). It was the intention that the farmhouse would then undergo a two week excavation during 'The Carnmoney Hill Woodland Festival' and would be open to children from local schools along with volunteers and would feature in a Saturday public open day. As the preparations for the community excavation began, however, it became clear that asbestos had been used in repairs to the building and so all works in the farmhouse were halted. The focus of the excavation was shifted instead to the lime kiln which was located further down hill on Dunanney Lane.

Historical and archaeological background

The farmhouse and out buildings are depicted on the 6 inch and 25 inch county series maps. In 1833, on the 1st edition 6 inch Ordnance Survey map, three structures are shown, located in similar positions to those buildings which are visible today (Figure 6). The 2nd edition of the OS 6 inch map (1852) shows the same arrangement as the earlier map. In 1902, by the 3rd



Figure 2: Collapsed and overgrown remains of the vernacular house in 2013, looking west.



Figure 3: The overgrown remains of the limekiln in 2013, looking west.



Figure 4: The vernacular house prior to the excavation in May 2014, cleared of fallen masonry and trees and vegetation, looking west.



Figure 5: The lime kiln. Much of the vegetation was cleared prior to the excavation, looking west.

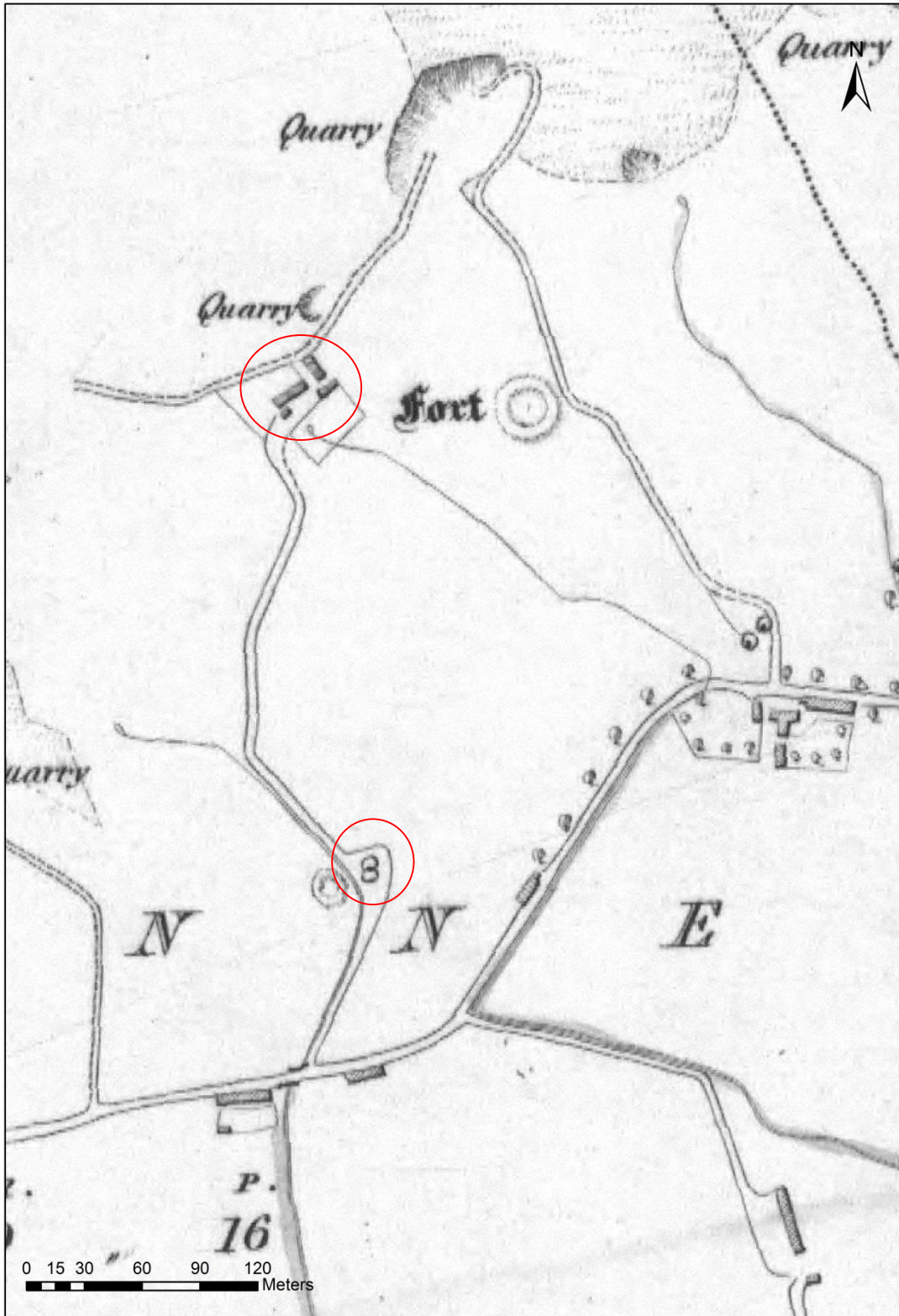


Figure 6: 1st edition Ordnance Survey 6 inch map (1833), showing a double lime kiln and location of the farm buildings and quarry, circled in red.

edition of the map, a number of additions are apparent. Extensions have been added to the rear (north-west) of the farm house at the northern end and to the rear (north-east) of one of the out-buildings at its south-eastern end. By this time also a further small building has been added in a linear arrangement to the north-west. By 1920, the 3rd edition of the 25 inch county series map shows a number of further changes (Figure 7). One of the outbuildings appears to have been remodelled significantly in the intervening years, the north-western end of the house is also extended to the rear (north-east) and also has been added to at the west. The 4th edition of the 25 inch map (1931) and the 6th edition of the 6 inch map (1938), show the same arrangement as the 1920 map, with the further addition of another structure running north-eastwards from the outbuilding.

The Griffith Valuation of 1862 lists John Thompson as the occupier of the farmhouse on Carnmoney Hill. The description of the tenement notes 'House, offices and land, limestone quarry and kilns and blackstone quarry'. 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 2nd class house, at this time 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 house is described as having five rooms and two windows in the front where it previously had three. It is still considered to be a 2nd 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 20th century.

The limekiln is also depicted on the 1st edition of the Ordnance Survey 6 inch map of 1833 (Figure 6) The early map editions depict a double circle indicating that there may have originally been a two kilns at this location. By the 1st edition (1901) of the 25 inch series, however, only a single circle, annotated 'lime kiln' is shown. The lime kiln was surveyed as part of the Greater Belfast Industrial Archaeology Survey (IHR no. 10265), however no further information is available. Evidence from the Griffith Valuation and the census documents suggest that the farm, adjacent quarry and lime kiln were rented by John Thompson who was not only burning limestone for farm use, but at the time of the Griffith Valuation in 1862 was also selling it to the public.

Objectives

The objective of the excavation was to discover more information about the vernacular house ahead of its conservation and consolidation and to facilitate community involvement in the project, particularly through the participation of local school children in the excavation.

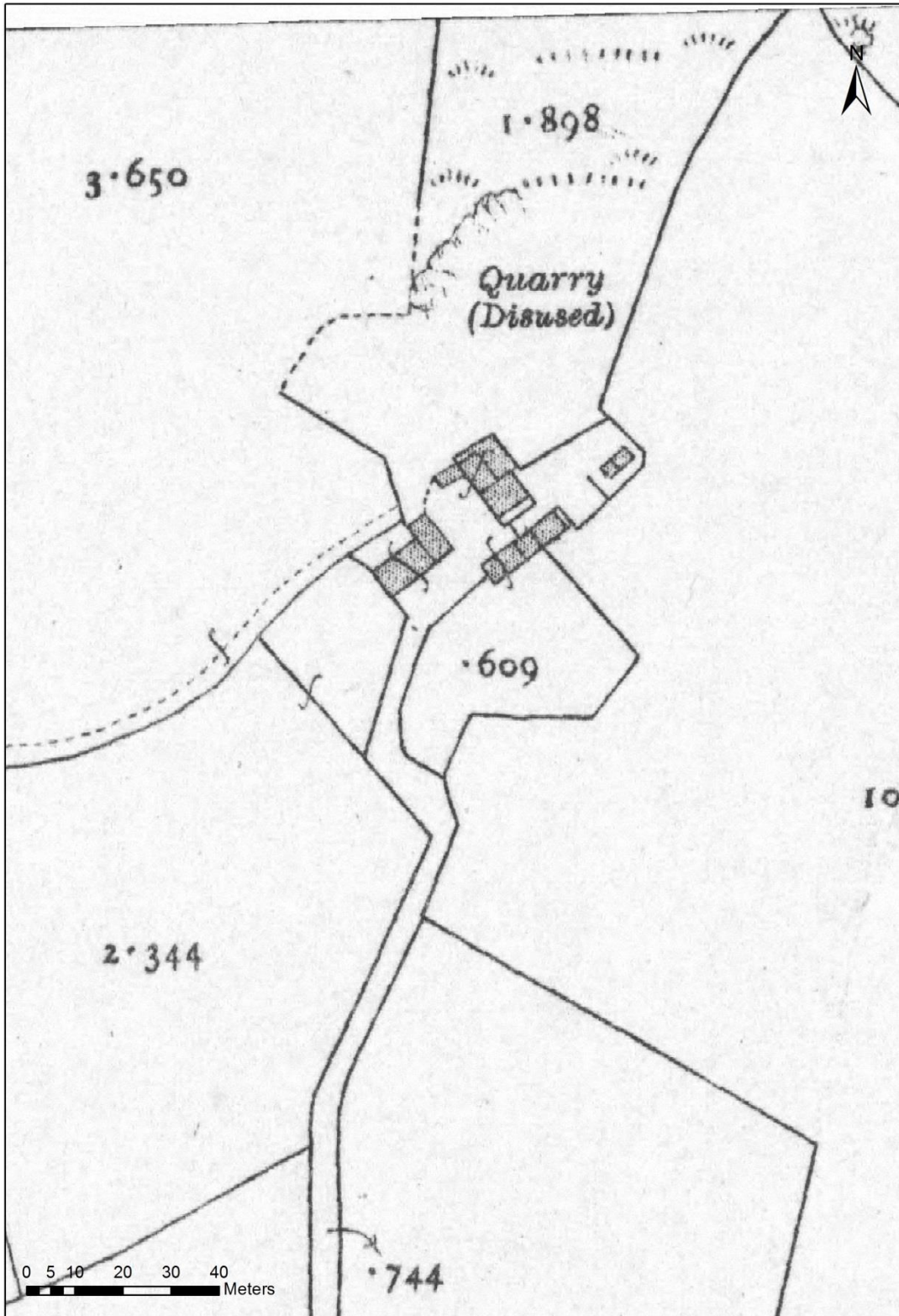


Figure 7: The 3rd edition of the 25 inch county series (1920) showing the arrangement of the buildings around the farmyard. Note that by 1920 the quarry is disused.

Archiving

Copies of this report will be deposited with the Northern Ireland Environment Agency and the Belfast Hills Landscape Partnership. The site records and finds will initially be archived with the Centre for Archaeological Fieldwork.

Acknowledgements

The excavation was funded by the Belfast Hills Partnership and the NIEA. The author is grateful to Johanna Vuolteenaho, Vicky Ginn and Paul Logue of NIEA, Lizzy Pinkerton and Jo Boylan of Belfast Hills and Harry Welsh, Dermot Redmond and Ruth Logue of CAF for support and assistance during the course of the excavation.

THE EXCAVATION

Site description

Dunanney farmhouse and lime kiln are located in Dunanney townland on the steep slopes of Carnmoney Hill within the Woodland Trust amenity on Newtownabbey Borough Council land. They have far reaching views to the north and east across Belfast Lough and to Cave Hill at the south (Figure 8). The farmhouse and outbuildings are set around a farmyard on Dunanney Lane adjacent to a quarry face at the 130m contour mark. The lime kiln is also on the lane, downslope from the farm at the 90m contour (see Figure 1). At some time in the past the farmhouse had been reduced to rubble and anyone using Dunanney Lane would have walked within a few metres of the kiln without realising it was there, so overgrown were the weeds and bushes around the structure (see figures 2 and 3).



Figure 8: View across the Lough to Belfast from the vernacular house on Carnmoney Hill.

Clearing of the structures prior to the excavation has allowed for a fuller assessment of the remains to be made, so although excavation of the farmhouse was not possible, we do have a better understanding of the internal layout of the building (Figure 9). The house measures 10m by 6.8m and the stone walls are 0.5-0.55m thick and built using the available lime and basalt (Figure 10). The house was originally a two roomed (at ground floor), direct-entry building, although additions and alterations have been undertaken in later years. The

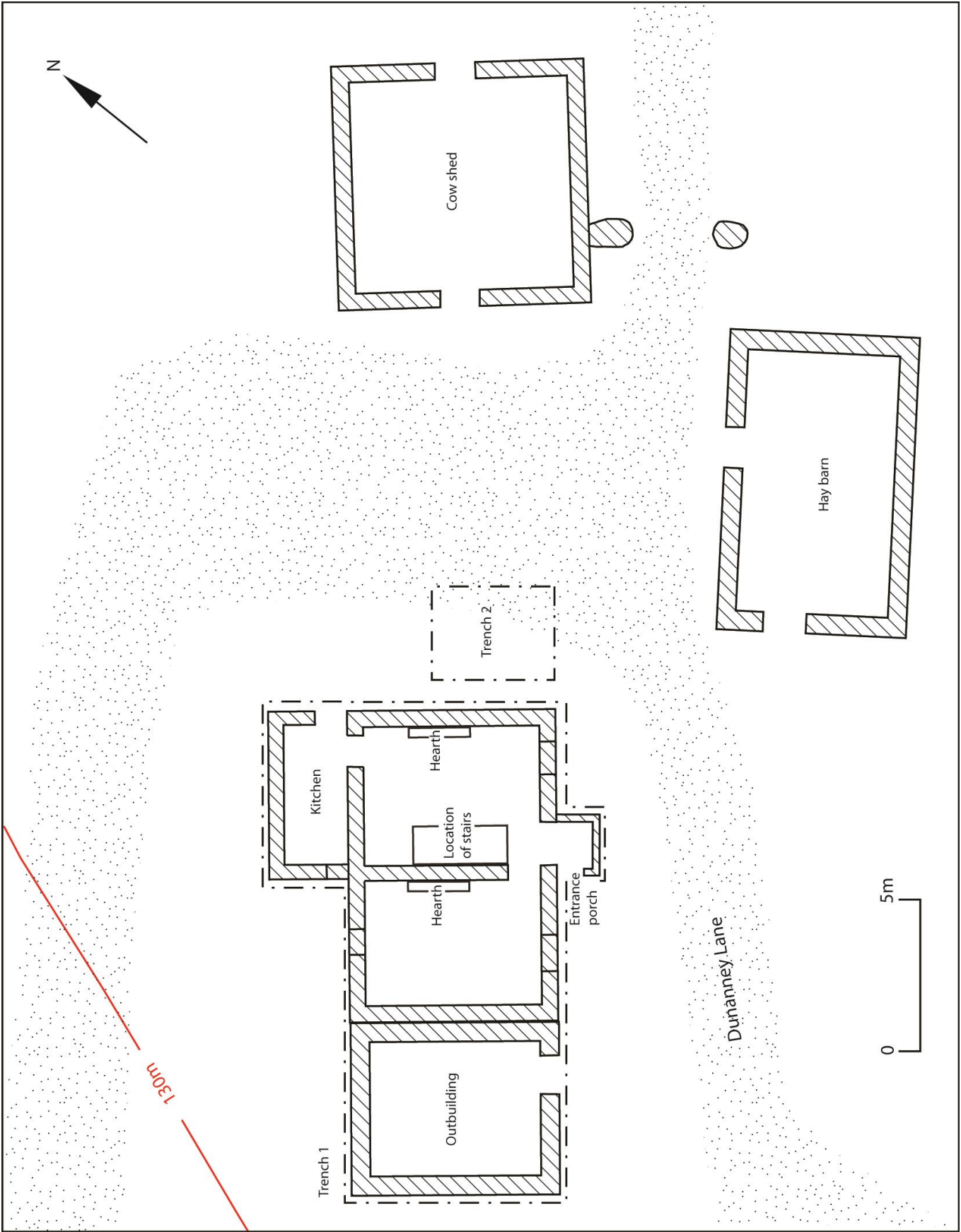


Figure 9: Plan of the vernacular house and outbuildings, showing trenches 1 and 2.



Figure 10: Lime and basalt in front façade of the vernacular house.



Figure 11: First floor joist holes in the NW corner of the second room, circled in red.

location of a stair case is evident situated in the north eastern most room (the main room), against the south western internal wall and while it is not possible to ascertain whether the structure was originally two storey, it was certainly two storey in its latter years. The front door is south east facing and although there is now an entrance porch, this is a later addition. The door would have originally opened directly into the main room with the hearth located against the north eastern gable wall. An additional room (according to local knowledge used as a kitchen) was added to the back of the house and accessed directly from the main room. This kitchen also had a back door to the yard. The second original room was accessed directly from the first, to the left of the front entrance. A hearth is also evident in this room against the internal wall. In the north western corner of this room the wall survives to sufficient height to preserve the remains of the first storey floor joist holes (Figure 11). There are two windows in the front façade and one in the rear wall. Evidence of a window also survives in the south western wall of the kitchen. A single storey outbuilding measuring 5.5m by 6.8m is adjoined to the south western most gable wall of the house. There are two outbuildings in the same location as those shown on the 1st edition Ordnance Survey maps (1833). The first, at the north east of the yard was apparently used most recently as a cow shed, it measures 7.9m by 8.2m (Figure 12) and the second, to the south east of the yard was used in recent times as a hay barn and measures 9.4m by 5.7m (Figure 13). The farmhouse was apparently destroyed by fire sometime in the late 20th century and has subsequently collapsed, for the most part leaving only the lower parts of the first storey walls standing.



Figure 12: Cow shed, looking south west.



Figure 13: Hay barn, looking south south east.

The lime kiln, in comparison to the farmhouse, has survived remarkably well. Dunanney Lane curves around the lime kiln and the steep rise would have allowed for access to the furnace shaft from above. It stands 3.16m in height and is 5.4m across. As with the farmhouse, the kiln is built from lime and basalt blocks bonded with lime mortar. The draw hole is entranced by an arched recess (Figure 5), which currently measures 2.36m wide and 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. There are three cavities within the arched recess. One, the draw hole, is located centrally at the back, and measures 0.37m wide and 0.56m deep (Figure 14). The top is 0.33m from the present ground surface. This is where the lime was removed from once fired. Two cavities are located in the walls of the recess (see Figure 14). 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 (Figure 15). 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 16). The function of these side cavities remains unclear, however, they perhaps held a lamp for workers tending the kiln by night or were possibly even used as ovens to warm food for the workers. A possible vent or 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.



Figure 14: Cavities and draw hole within the arched recess, looking west.



Figure 15: Cavity in the northern wall of the recess, looking north.



Figure 16: Cavity in the southern wall of the recess, looking south.



Figure 17: Trench 2 located at the north east of the farmhouse, looking north west.

Methodology

Initially the interior of the house was to be cleared of rubble to floor level and a trench 3m x 4m was to be laid out on the exterior at the north east (see Figure 9 and 17). The trench was to be parallel to the north east gable and located 1m from it. It was hoped to gather information about the date, lay out and nature of the building in order to inform the conservation project. These plans were quickly abandoned, however, whenever the presence of asbestos was suspected within the building. Subsequently a trench measuring 3m by 4m was set out at the front of the lime kiln to facilitate prearranged visits by school groups (Figure 18 and 19). The trench was excavated by hand using the standard methodology outlined in the *Excavation Standards Manual*. The principle site records consisted of context sheets, supported by photographs, field drawings and field notes. The written site archive is presented in Appendices 1 – 5. The site code used was DUNA'14.

Account of the excavation

Clearing of the interior of the house (Trench 1) was begun and some rubble collapse (c101) was removed. Crockery, glass and metal such as cutlery and door furniture were apparent in the main room and the porch of the house. All artefacts were consistent with a mid-20th century date for the latest occupation of the house and consistent with the house having been burnt down. A second trench (Trench 2) was laid out, parallel and 1m from the north east gable. The thin sod (c200) was removed from this trench (Figure 17). No further excavation work was carried out in this area.

A third trench (Trench 3) was then laid out to the east of the limekiln, measuring 3m by 4m (Figure 18). The sod (c300) was removed by hand and trowelling of the topsoil (c301) was undertaken by visiting children from the local primary schools (Figure 19). Artefacts from the black-brown humic loam (c301) were all of fairly recent origin and included plastic, beer cans, corroded iron, a 1900 penny and a 1971 penny and an unidentified coin. Abundant lime and coal were also found within the topsoil (c301). The topsoil covered the trench and was up to 0.1m thick in places. The topsoil was removed to reveal a loose black-brown loam which had decayed mortar, lime and coal throughout (c304). The loam (c304) varied in thickness from 0.06-0.18m and was also trowelled by hand by the participating school groups. These two contexts, topsoil (c301) and the black-brown loam (c304) were removed across the whole trench (3m x 4m) and revealed a grey-brown clay loam (c302; Figure 20).

Once the timetabled school visits had finished, the trench was box sectioned and the western half the trench (2m by 3m) was taken down further. The grey-brown clay (c302) was found to vary in thickness from 0.02-0.18m. Glass was recovered from this context (c302) as well as

coins dated to 1938 and 1944, some clay pipe stem fragments and a decorated bone piece, possibly a handle (Figure 21). On removal of the clay loam (c302) a layer with a high lime content (c303) was uncovered. This layer (c303) was higher at the south and stepped down towards the north, with an east west running slope (Figure 22). The lime layer was thinly spread (0.02-0.06m) over the red-brown clay subsoil at the north and was thicker (up to 0.15m) at the south where it overlay a hard packed mortar layer (c306; Figure 23).

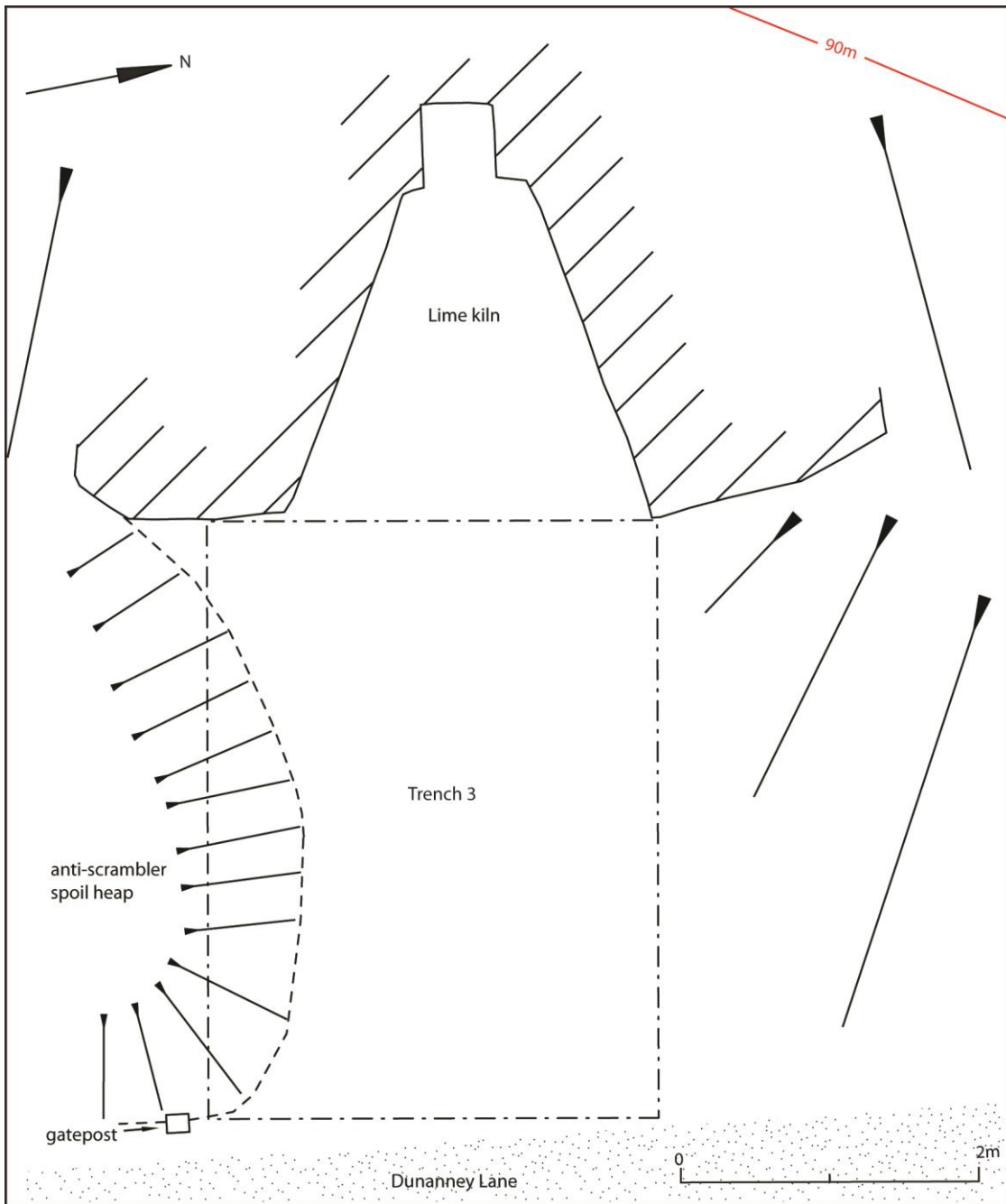


Figure 18: Plan of the lime kiln and trench 3.



Figure 19: Trench 3 being excavated by local school children, looking west.



Figure 20: East facing section of trench 3, showing c301, 304, 302 and 303.

No finds were recovered from the lime rich layer (c303). It seems likely that this was a working surface associated with the kiln. Some slaked lime was apparent within this context. A stake hole (c307) was uncovered, cut through the lime layer (c303) at the western edge of the trench and into the solid mortar layer (c306) below (Figure 23 and 24). The stakehole (c307) was 0.08m in diameter and 0.22m deep and was filled with a charcoal rich loam (c308). It may be that it was associated with some kind of temporary lean-to structure erected at the entrance to the draw hole in order to keep the lime dry when it was being raked out.

A small box section (0.6m x 3m) was taken down further and the lime rich layer (c303) was removed to subsoil in the most northerly part of this box-section (Figure 24 and 25). At the south, however, its removal revealed a solid mortar layer (c306). It would appear that the kiln was constructed directly onto this mortar base which acted as a foundation (Figure 26). It was not possible to remove any of the mortar layer (c306) as it was so hard packed, however, it appears that it was laid directly on to subsoil.



Figure 21: Decorated bone artefact, possibly a handle or toggle, recovered from c302.

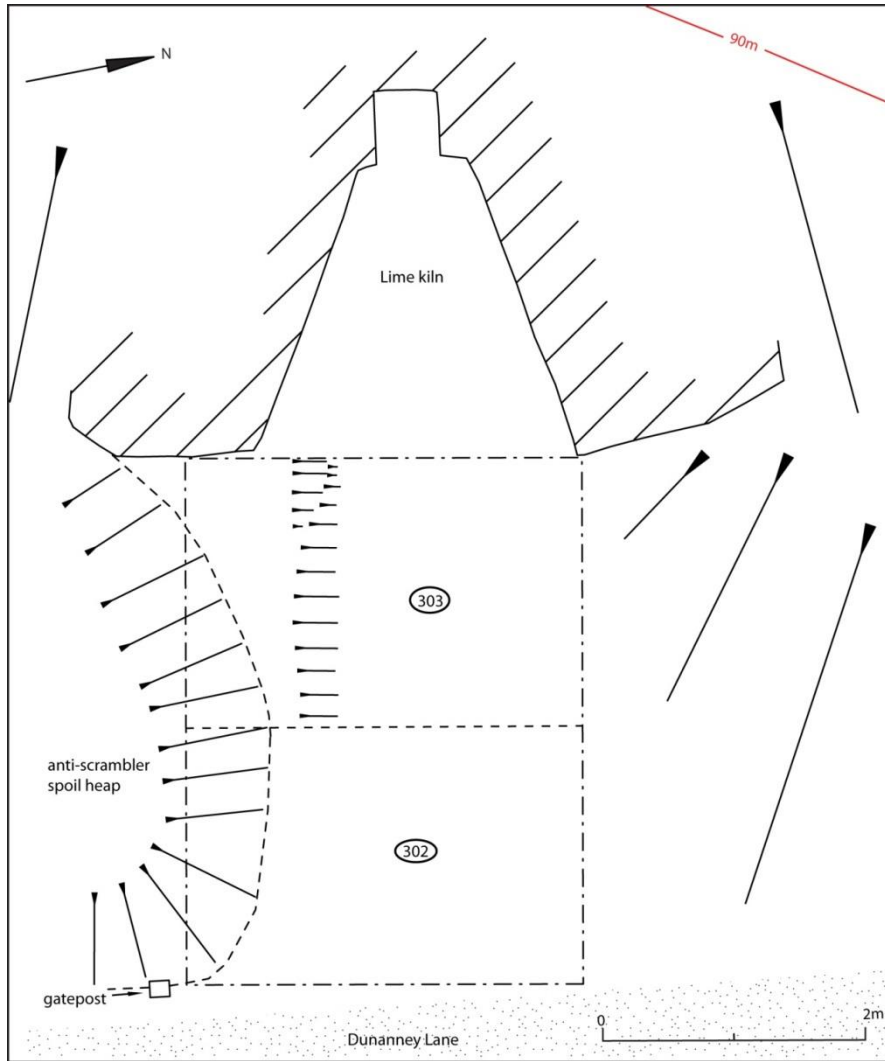


Figure 22: Surface of lime layer, c303 on removal of c302 in western half of the trench.

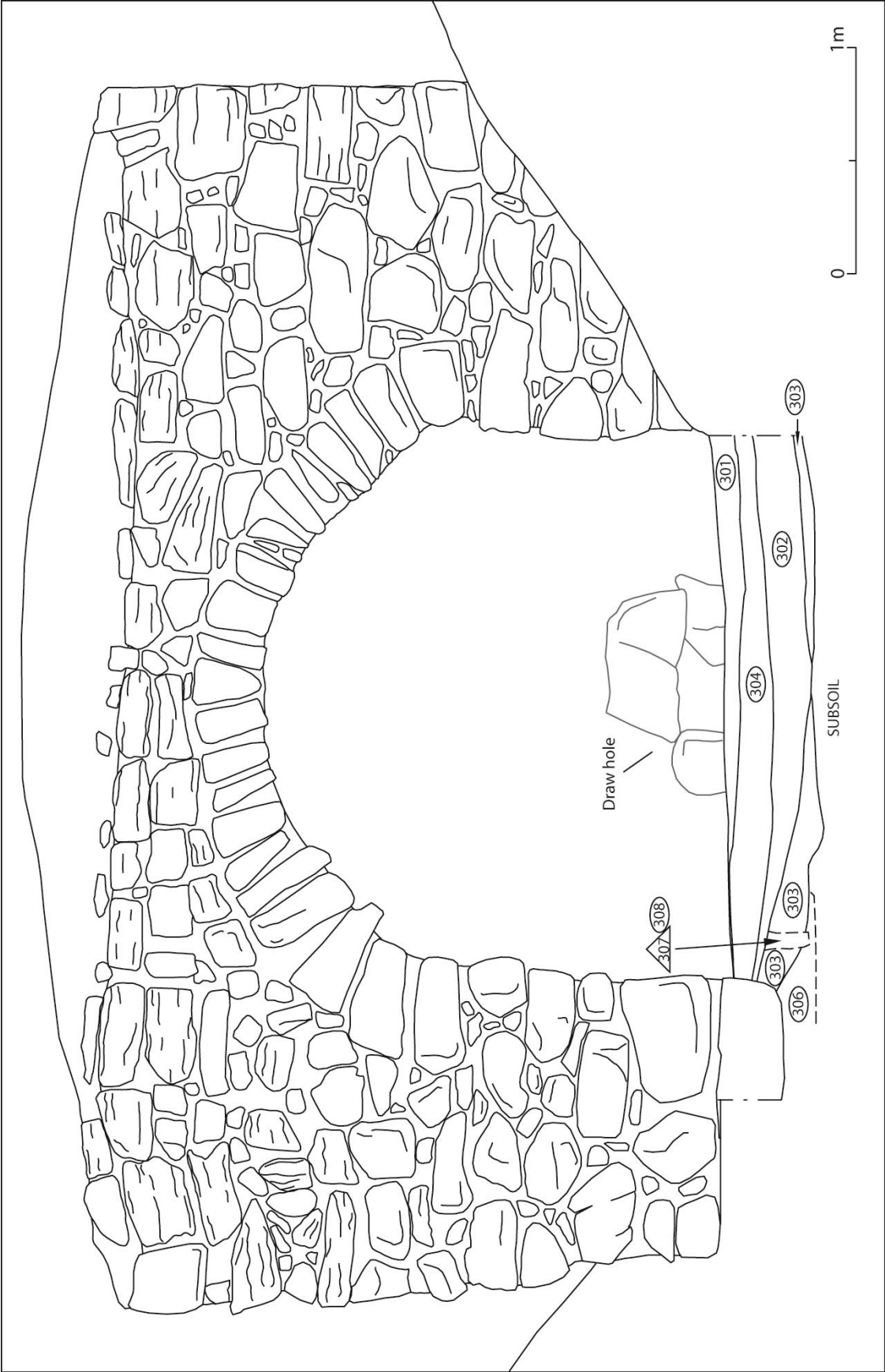


Figure 23: East facing section of Trench 3 and elevation of kiln façade.

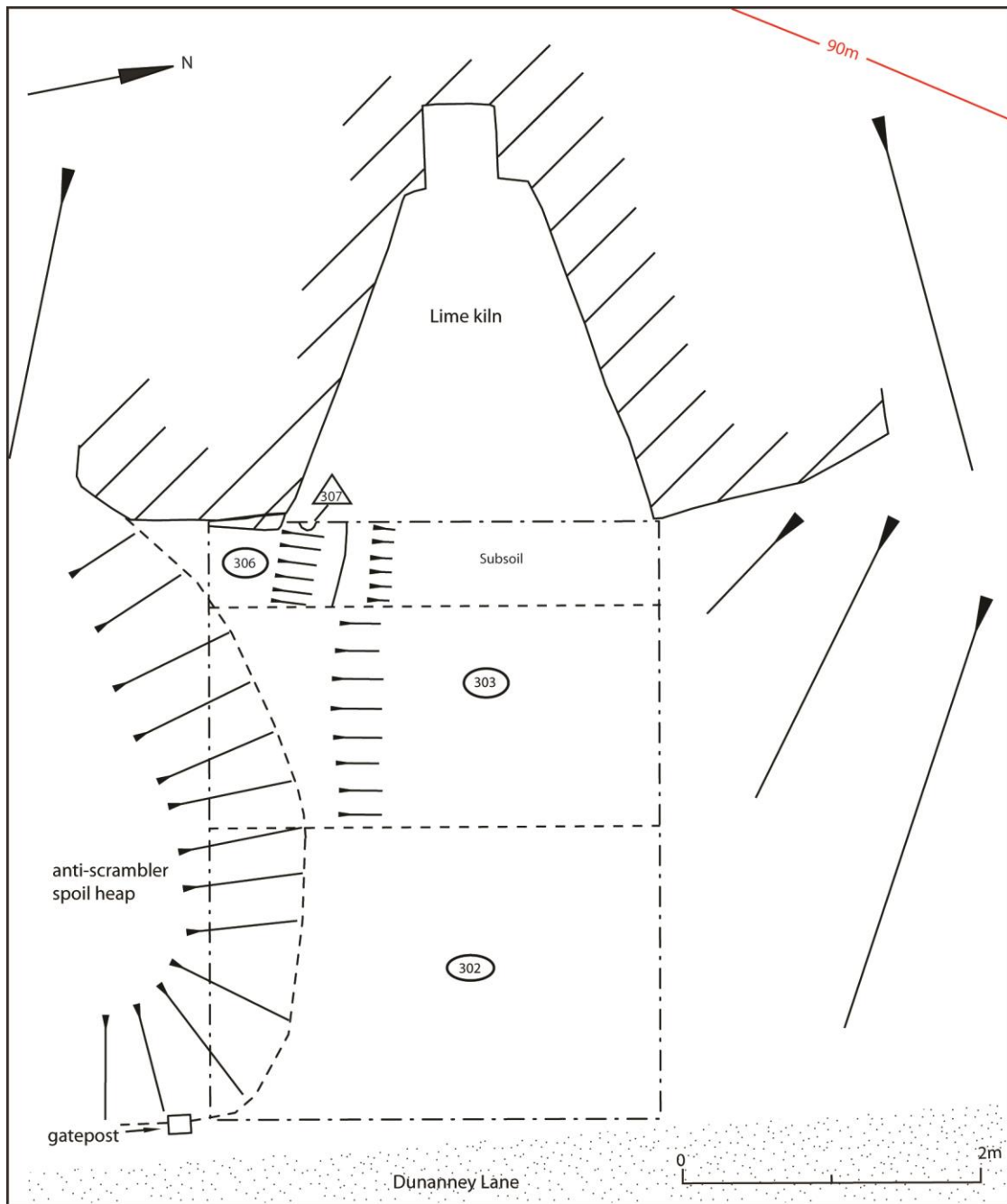


Figure 24: Box-section at the west of the trench, on removal of c303, showing c306, 307 and subsoil.

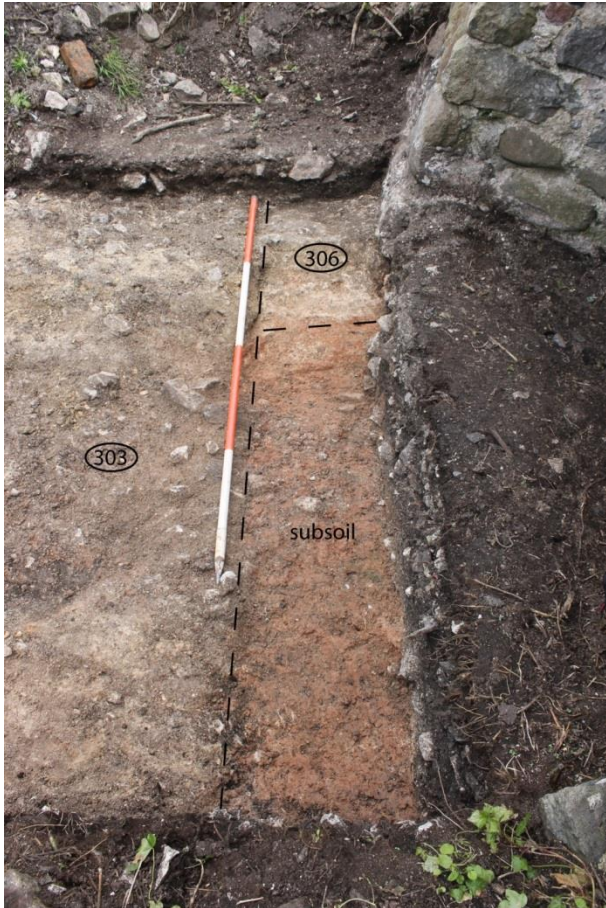


Figure 25: Box-section, showing the removal of c303 to hard packed mortar (c306) and subsoil.



Figure 26: Lime kiln wall, set on foundation of hard-packed mortar (c306).

DISCUSSION

It is unfortunate that the excavation of the farmhouse was unable to proceed, however, the work which was undertaken was successful in establishing a considerable amount about the farmhouse which was previously unknown (see figure 9). The room at the south west, for example, was clearly not part of the dwelling space, but was in fact a single storey out-building which was not accessed directly from the house, but rather via an external doorway opening to the south east. The house was a direct entry building originally and had two ground floor rooms, both with hearths. It also had two additional rooms added at a later date; a porch to the front (south east) and a kitchen at the back (north west). A space was located which held the staircase and this confirmed that the dwelling had two storeys. That the farmhouse was a two storey building had been indicated by its listing as a 6 roomed building in the 1901 census. Unfortunately being unable to continue the excavation meant that it was not possible to establish the nature or layout of the house in its earlier phases or to determine a date for the original construction of the house.

Moving the focus of the excavation to the lime kiln meant that the prearranged school visits could go ahead and allowed for a small investigation of the kiln to be undertaken and a plan and elevation drawing of the structure to be completed. Much of the general discussion of lime kilns below is taken from the *Belfast Hills Heritage Survey* document (see Gormley 2013).

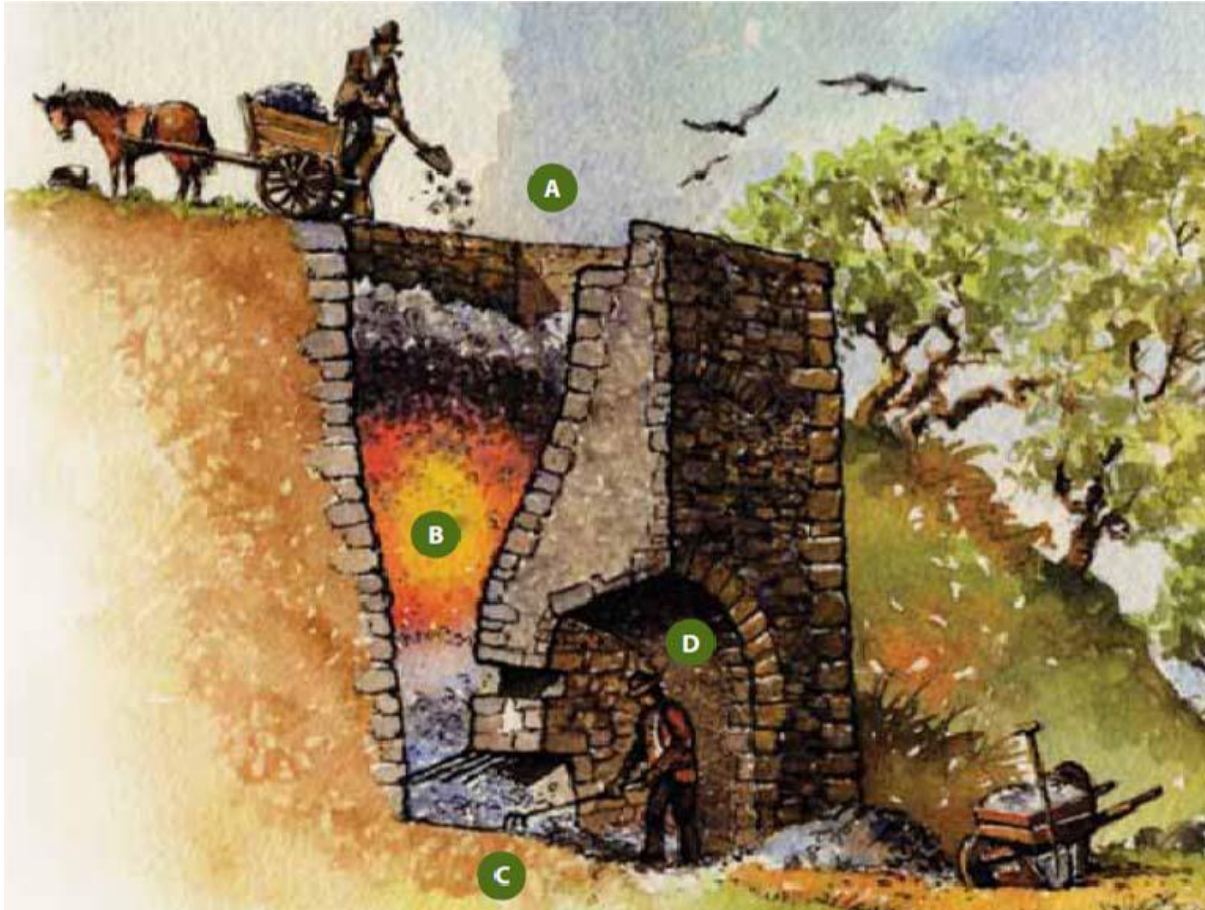
Lime is an important resource, exploited for (amongst other things) mortar production and as an alkali to neutralize acidic soils (Williams 1989, 3). In Ireland it is thought to have been first used for building and related uses in the mid-1st millennium AD (during the early medieval period) whilst the practice of adding lime to soil began later and was carried out through the 12th – 17th centuries (O’Sullivan and Downey 2005, 21). By the 18th and early 19th centuries, however, lime was used extensively, to such a level that the lime kiln 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 18th and 19th 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 27). 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).

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).



A: THE CHARGE HOLE

A large hole at the top of the kiln where alternative layers of coal and limestone pieces were tipped

B: THE PROCESS

A coal fire was lit at the base of the charge hole which ignited the fuel in the whole kiln. This burnt slowly for days with temperatures reaching over 900°C producing quicklime

C: THE DRAW-HOLE

The powdery quicklime dropped through a grate into the draw-hole where it was raked out and bagged

D: THE KILN EYE

The arched opening, known as the kiln eye, allowed air to feed the fire while preventing rain from getting the quicklime wet

Figure 27: Illustration by Philip Armstrong of lime kiln in operation (from Pinkerton 2014).

The production of lime on an individual farm scale was in decline by the end of the 19th 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 19th century using rotary kilns and bottle-type kilns and effectively saw the end of the production of lime at farm level (ibid.).

The limekiln on Dunanney lane is one of at least ten which were once located on Carnmoney Hill in the 19th century (Figure 28), 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. 10265) and another located immediately to the north east (IHR no. 10264; Figure 28), 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%).

The kiln at Dunanney is a continuous draw type and may have replaced an earlier double kiln on the site (as suggested by Ordnance Survey map evidence) although no evidence for an earlier structure was apparent during the excavation. The kiln would have been loaded with lime taken from the quarry adjacent to the farmhouse with access facilitated by the lane curving around the kiln, the slope allowing the cart to be brought directly to the top of the structure. When burned, the lime would have been removed from the draw hole and loaded on to carts for use on the farm or for sale. The kiln was constructed on a mortar bed (c306) laid directly on the subsoil. A post-hole cut through the lime layer (c303) into the mortar bed (c306) was uncovered and may be from a light structure used to keep the lime dry as it was being unloaded from the kiln. Although it seems likely that the kiln would have gone out of use by the late 19th century, there was no evidence from the lime-rich working layer (c303) to confirm the date of its final use. The layer directly above it (c302) had artefacts with a 1930s/1940s date and so the kiln had certainly gone out of use by that period at the latest.

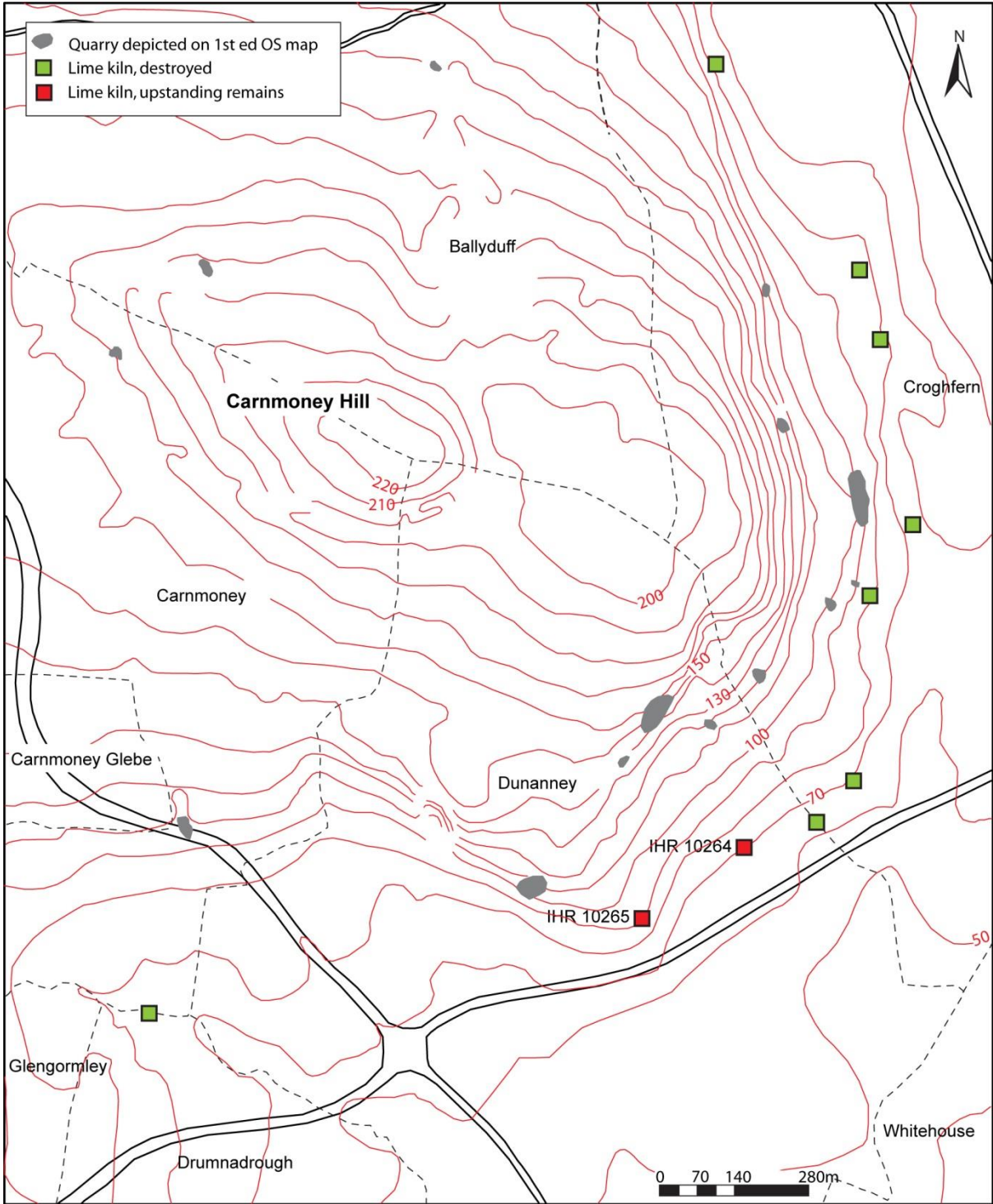


Figure 28: Location of kilns and quarries on Carnmoney Hill.

RECOMMENDATIONS FOR FURTHER WORK

No specialist artefact analysis is necessary and no further archaeological works are recommended.

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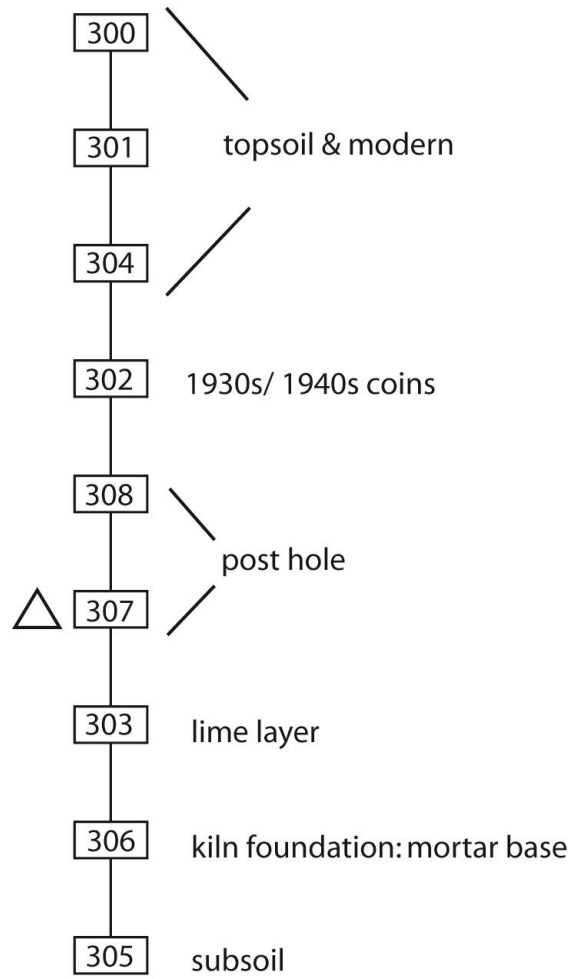
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APPENDIX 1: CONTEXT LIST

| Context no. | Description |
|--------------------|--|
| | |
| Trench 1 | |
| 100 | Large rubble and soil fill of vernacular building, cleared mechanically prior to excavation (see Welsh 2014) |
| 101 | Remains of rubble collapse within vernacular building (unexcavated) |
| | |
| Trench 2 | |
| 200 | Sod layer |
| 201 | Gritty mid brown loam with stone chips, possible metalling (unexcavated) |
| | |
| Trench 3 | |
| 300 | Sod |
| 301 | Dark black-brown humic soil, topsoil |
| 302 | Grey-brown clay loam |
| 303 | Light brown layer with high lime content, including larger pieces of lime |
| 304 | Loose black-brown loam, with mortar throughout |
| 305 | Red-brown clay subsoil |
| 306 | Solid mortar base. Kiln foundation |
| 307 | Post hole cut through c303 and into c306. Filled by c308. |
| 308 | Charcoal fill of small post hole c307. |

APPENDIX 2: HARRIS MATRIX



APPENDIX 3: PHOTOGRAPHIC RECORD

| Photo. no. | Description |
|------------|--|
| 1 | Vernacular house, looking NW |
| 2 | Vernacular house, looking NW |
| 3 | Window in second room, looking NW |
| 4 | Vernacular house, looking NNW |
| 5 | Vernacular house, looking NNW |
| 6 | Vernacular house, looking SW |
| 7 | Vernacular house, looking SW |
| 8 | Lime in front facade below window in main room, looking NW |
| 9 | NE gable wall, looking WSW |
| 10 | NE gable wall, looking WSW |
| 11 | Kitchen lean-to at back of vernacular house, looking WSW |
| 12 | Kitchen lean-to at back of vernacular house, looking WSW |
| 13 | Interior of kitchen lean-to at back of vernacular house, looking WSW |
| 14 | Interior of main room, looking S |
| 15 | Interior of main room, looking S |
| 16 | Interior of main room, looking S |
| 17 | Interior of main room, looking S |
| 18 | Internal wall, main room, looking SW |
| 19 | Front wall, main room interior, looking S |
| 20 | Window in second room, interior, looking SSE |
| 21 | Window in second room, interior, looking SSE |
| 22 | Window in second room, interior, looking SSE |
| 23 | Fireplace in second room, internal wall, looking NE |
| 24 | Fireplace in second room, internal wall, looking NE |
| 25 | Second room, SW gable wall, interior, looking SW |
| 26 | Second room, internal wall, looking NNE |
| 27 | Adjoining outhouse, interior, looking NW |
| 28 | Adjoining outhouse, interior, looking NW |
| 29 | Adjoining outhouse, interior, NW wall, looking NW |
| 30 | Looking SE across main room, kitchen lean to and Belfast Lough |
| 31 | Looking SSE across main room, kitchen lean to and Belfast Lough |

| | |
|----|---|
| 32 | Looking S across second room, kitchen lean to and Belfast Lough |
| 33 | Looking S across second room, kitchen lean to and Belfast Lough |
| 34 | Looking E across cow shed and Belfast Lough |
| 35 | Looking E across cow shed and Belfast Lough |
| 36 | Looking E across cow shed and Belfast Lough |
| 37 | Looking SE across hay barn and Belfast Lough |
| 38 | Looking SSE across main room, kitchen lean to and Belfast Lough |
| 39 | Looking S across second room, kitchen lean to and Belfast Lough |
| 40 | Trench 2, trowelling c201, looking NW |
| 41 | Trench 2, trowelling c201, looking NW |
| 42 | Trench 2, trowelling c201, looking NW |
| 43 | Trench 2, trowelling c201, looking WNW |
| 44 | Trench 2, trowelling c201, looking SW |
| 45 | Trench 2, trowelling c201, looking S |
| 46 | Trench 2, trowelling c201, looking SSE |
| 47 | Trench 2, trowelling c201, looking SSE |
| 48 | Trench 2, trowelling c201, looking SSE |
| 49 | Trench 2, trowelling c201, looking SSE |
| 50 | Trench 2, trowelling c201, looking SW |
| 51 | Lime Kiln, before excavation, looking W |
| 52 | Lime kiln, before excavation, looking W |
| 53 | Lime kiln trench, pre ex, looking NE |
| 54 | View from kiln, looking E |
| 55 | View from kiln, looking E |
| 56 | View from kiln, looking S |
| 57 | Kiln, pre ex, looking W |
| 58 | Trench 3, c300 removed, surface of c301, looking W |
| 59 | Trench 3, c300 removed, surface of c301, looking W |
| 60 | Harry instructing survey group |
| 61 | Outbuildings, looking N |
| 62 | View from farmyard, looking E across Belfast Lough |
| 63 | Rath on slope below farmyard, looking E from farmyard |
| 64 | Rath on slope below farmyard, looking E from farmyard |
| 65 | Outbuildings, looking NNW |
| 66 | Looking E from farm yard, across Belfast Lough |

| | |
|----|---|
| 67 | Looking E from farm yard, across Belfast Lough |
| 68 | Cow shed, looking SW |
| 69 | Gate post |
| 70 | Hay barn looking SSE |
| 71 | Trench 2, surface of 201, looking NNW |
| 72 | Trench 2, surface of 201, looking NNW |
| 73 | Outbuildings, looking N |
| 74 | Outbuildings, looking NE |
| 75 | Lime kiln, trench 3, trowelling c301, looking W |
| 76 | Lime kiln, trench 3, trowelling c301, looking W |
| 77 | Trench 2 backfilled |
| 78 | Trench 2 backfilled |
| 79 | Recess in northern wall of kiln, looking N |
| 80 | Recess in northern wall of kiln, looking N |
| 81 | Recess in southern wall of kiln, looking S |
| 82 | Trench 3, east facing section, c300, 301, 304, 302 and surface of c303 |
| 83 | Trench 3, east facing section, c300, 301, 304, 302 and surface of c303 |
| 84 | Trench 3, east facing section, c300, 301, 304, 302 and surface of c303 |
| 85 | Kiln, looking W |
| 86 | Trench 3, east facing section, c300, 301, 304, 302 and surface of c303 |
| 87 | Trench 3, east facing section, c300, 301, 304, 302 and surface of c303 |
| 88 | Trench 3, east facing section, c300, 301, 304, 302 and surface of c303 |
| 89 | Trench 3, east facing section, c300, 301, 304, 302 and surface of c303, looking W |
| 90 | Surface of c303, looking N |
| 91 | Surface of c303, looking N |
| 92 | Looking E from kiln |
| 93 | Trench 3, east facing section, c300, 301, 304, 302 and surface of c303, looking W |
| 94 | kiln, looking WSW |
| 95 | kiln, looking S |
| 96 | kiln, looking WSW |
| 97 | Trench 3, surface of c303, looking W |
| 98 | Anti-scrambler spoil heap |
| 99 | Surface of c303, looking S |

| | |
|-----|---|
| 100 | Surface of c303, looking N |
| 101 | Trench 3, surface of c306 and subsoil, looking W |
| 102 | Trench 3, surface of c306 and subsoil, looking W |
| 103 | Trench 3, surface of c306 and subsoil, looking W |
| 104 | Trench 3, surface of c306 and subsoil, looking W |
| 105 | Trench 3, surface of c306 and subsoil, looking W |
| 106 | Box section, c306 and subsoil, looking S |
| 107 | Trench 3, surface of c306 and subsoil, looking S |
| 108 | Corner of vernacular house, looking NW |
| 109 | Interior of second room, NW corner, showing joists for second floor, looking NW |
| 110 | Kiln wall sitting on mortar base (c306), looking W |
| 111 | Safety fence |
| 112 | Safety fence |

APPENDIX 4: FIELD DRAWINGS REGISTER

| Drawing no. | Context no. | Plan/ section | Scale | Description |
|--------------------|--|----------------------|--------------|---|
| 1 | 301 | Plan | 1:20 | Plan of Trench 3 and lime kiln |
| 2 | 301, 302, 303, 304, 307, 308 | Section | 1:20 | Elevation & east facing section of trench 3 |
| 3 | 302, 303 | Plan | 1:20 | Plan of surface of c303 |
| 4 | 302, 303, 306 | Plan | 1:20 | Plan of box section on removal of c303 |
| 5 | na | Plan | 1:100 | Plan of Dunanney vernacular house and outbuildings and trenches 1 and 2 |

APPENDIX 5: SMALL FINDS REGISTER

The majority of the small finds were not retained as they were of modern character. The following artefacts were retained:

| Trench | Context | Find |
|--------|---------|--|
| 3 | 301 | Slag |
| 3 | 301 | Coin (unidentified) |
| 3 | 302 | Coin (1944) |
| 3 | 302 | Clay pipe stem fragments (3) |
| 3 | 302 | Decorated bone piece (possibly handle) |
| 3 | 302 | Coin (1938) |