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CAF Data Structure Report: No. 111

Excavations at Dunluce Castle, Co. Antrim

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VOLUME 1: MAIN TEXT

ANT 002:003 & ANT 002:008



On behalf of





EXCAVATIONS AT DUNLUCE CASTLE, CO. ANTRIM

Excavations carried out on behalf of
The Northern Ireland Environment Agency (NIEA)

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CAF Data Structure Report No. 111

SMR: ANT002:003 and ANT 002:008
Excavation Licence: AE/14/78

30th October 2014

VOLUME 1: MAIN TEXT

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1 SUMMARY

Archaeological excavations (Licence No. AE/14/78) took place at Dunluce Castle (SMR No. ANT 003:002) and in its surrounding environs, including the Town Field (SMR No. ANT 003:008), over a 13 week period between June and August 2014. The excavation was carried out by the Centre for Archaeological Fieldwork (CAF), Queen's University Belfast (QUB) as part of the Northern Ireland Environment Agency's (NIEA) Dunluce Project which aims to improve public access and knowledge of the site. The Project is supported by the Heritage Lottery Fund (HLF). The main objective of the excavation was the targeted investigation of archaeological remains associated with the 17th-century occupation of the site. It is intended that the information generated by the excavation will be used to prepare an informed programme of works to be submitted as part of the HLF Round 2 funding bid for the Dunluce Project.

The 2014 season of excavation follows on from, and is informed by, extensive archaeological investigations which were carried out at the castle and in the immediate environs between 2008 and 2012. This research was undertaken as a collaborative project between the Centre for Maritime Archaeology (CMA) in the University of Ulster, Coleraine, the CAF and the NIEA and was directed primarily by Dr Colin Breen (CMA). The research involved several seasons of survey and excavation (Breen 2012).

In the 2014 investigations five areas of specific interest were identified; the Castle Area (Area C), the Diamond Area (Area D), the Eastern Field (Area E), the Garden Area (Area G) and the Town Field (Area T). Across these five areas, 43 trenches (totalling an area of 218.85m²) were hand-excavated.

The stratigraphic, artefactual and radiocarbon evidence from the 2014 excavations in these areas identified three broad phases of activity:

- Phase 1 represents the pre-17th century activity.
- Phase 2 represents the 17th-century occupation of the castle. This phase of activity incorporates the construction of the town, which began in 1608, the renovations to the mainland castle buildings and the construction of the gardens which date to post 1920.
- Phase 3 represents the abandonment of the site, and dates from the late 17th century through to the present day.

Phase 1 was represented in both Area G (Garden Area) and Area E (Eastern Field). In Area G medieval occupation was recognised through artefactual evidence which included multiple sherds of coarse pottery including Souterrain Ware and Medieval Coarse pottery while 16th-century artefacts from the area included a Mary I silver groat and a possible Elizabeth I silver coin (possibly a half groat). A number of pre-17th century features were also preserved below the archaeological horizons associated with the gardens (Area G). These included a probable ditch which may have enclosed an extra-mural settlement outside the castle which was represented by a series of drip gullies delineating a sub-rectangular structure approximately 4m in diameter. The fill of the enclosing ditch produced a

15th century radiocarbon date and the fill of one of the drip gullies produced a late 15th / early 16th century radiocarbon date. A clay bonded structure uncovered in Area E is also associated with earlier settlement or agricultural activity at Dunluce, and a sample from its interior returned a mid-15th to early 17th century radiocarbon date. These are significant discoveries providing evidence for MacQuillan activity at Dunluce which could push back the previously suggested construction date (1490-1513) for the castle (Breen 2012, 49). The excavated evidence also demonstrates that settlement was not just confined to the castle at this time. The majority of the sherds of Scottish Grey Ware found on the site were also found in association with these early features (McSparron Chapter 10). The presence of this pottery at Dunluce, a type predominantly found in Western Scotland, is of significance as it demonstrates the political and trade links Dunluce shared with the Western Isles of Scotland during this phase.

Phase 2 was represented by a major construction period which included the construction of the town, the formal castle gardens and the mainland castle buildings. The absence of slate and nails suggests that many of the town buildings were probably thatched prior to abandonment, while excavation of sections of the cobbled roadway demonstrated its sequence of construction suggesting that it was laid down first and that the houses were built subsequently. The 2014 excavations in the Town Field (Area T) also demonstrated that there was a second phase to this enterprise and that after the initial period of construction the town had been extended with the construction of an additional cobbled roadway along its northern extent. A third 'phase' to the town's existence was also demonstrated by the modification and subdivision of at least one of the buildings investigated, a feature also observed in the excavation of the merchant's house in 2009. These modifications and the downgrading of the buildings probably dates to the latter decades of the town's existence and to its demise before eventual abandonment. Excavations in Area G showed the remarkable preservation of the terrace walls and the associated garden terraces. There was also evidence that crushed red brick had been used as path surfaces. Few horticultural features were identified which may be indicative of the short period of time the gardens were in use, although remains of a substantial drain was found which had been inserted during the initial garden construction. A copper alloy seal matrix recovered in this area and which probably dates to the 17th century may be reflective of the high status of some of the castle's inhabitants. Excavation in Area D (the Diamond Area) indicated that there was only one phase of construction in this area as excavation through the cobbled surface showed that there were no earlier surfaces. The excavation of Area C (the Castle Area) and the uncovering of the cobbled surface represent the construction phase associated with the mainland buildings which the artefactual assemblage dates to the 17th century.

Phase 3 was represented by the extensive rubble deposits associated with the abandonment of the site. It is evident that some of the stone (especially towards the east of Area T) was robbed out and reused for the construction of nearby boundary walls. Otherwise damage to the site has been limited due to non-intensive agriculture which has resulted in the excellent preservation of the 17th-century horizons.

In conclusion, the excavation revealed additional information about settlement associated with the castle which will advise future excavation and conservation works intended as part of The Dunluce Project. Garden features inferred through the geophysical and LiDAR data were confirmed by excavation which showed the effort made to present Dunluce as a 17th century high status settlement, while evidence was also uncovered which demonstrates that attempts were made to extend the town before its eventual demise. The excavation also showed the survival of pre-17th century activity across the site, despite the extensive landscaping and construction activity undertaken in the 17th century. These pre-17th century features also indicate that settlement at Dunluce pre-dates the establishment of the formal town in 1608 and probably represents a more substantial MacQuillan settlement than previously thought.

In addition to the extensive excavations conducted over the summer months and documented in this report, an additional geophysical survey was carried out following the completion of the excavation (McDermott Chapter 9) which completed the fieldwork aspect of the geophysical survey of the site. The 2014 pottery assemblage has also been analysed by Cormac McSparron, CAF (Chapter 10) and four samples have been radiocarbon dated (see Chapter 4.4).

2 INTRODUCTION

This data structure report (DSR) details the results of an archaeological excavation (Licence No. AE/14/78) undertaken at Dunluce Castle (SMR No. ANT 002:003) and in the surrounding environs, including the Town Field (SMR No. ANT 002:008), in 2014 by the Centre for Archaeological Fieldwork (CAF) on behalf of the Northern Ireland Environment Agency (NIEA). The excavation was undertaken as part of 'The Dunluce Project', an NIEA project supported by the Heritage Lottery Fund (HLF) designed to improve public access and knowledge of the site. The excavation was carried out over a 13 week period from 2nd June to 29th August 2014 and was jointly directed by Grace McAlister (CAF) and Andrew Gault (Dunluce Project Archaeologist, NIEA). Scheduled Monument Consent was applied for and granted before the excavation began (SMC Ref: B47/84).

2.1 Background

Dunluce Castle is an enigmatic fortification situated on a dramatic promontory on the north Antrim coast, 2km west of Bushmills and 3km east of Portrush (Figure 1). The site has been fortified since the early medieval period but the most notable phase of activity occurred between the late 15th century (when the castle was constructed) and the late 17th century (when the castle was abandoned). The surrounding area is of significant archaeological interest due to the remarkable survival of an historic landscape, mainly centred on the remains of an abandoned 17th-century town and formal castle gardens.

A brief overview of the history of the castle and the surrounding area is detailed below. It is largely taken from McDonnell (2004) and Breen (2012).

The place-name of *Dun* suggests that settlement at the site dates back to the early medieval period and probably refers to a possible earlier fortification of the natural promontory on which the castle stands today. It can be argued that this is substantiated by the presence of a rock-cut souterrain, an early medieval monument type, on the promontory (McDonnell 2004, 12; Breen 2012, 21). Historical evidence indicates that there was settlement at Dunluce in the 13th century with the establishment of an Anglo-Norman manor. Very few details are known about the precise location and extent of the manorial settlement but presumably it was close enough to the promontory to make use of the earlier place name. St Cuthbert's Church, to the south-west of the castle, rebuilt in the 17th century, may be a remnant of this earlier settlement. There is no obvious enclosure associated with the church suggesting that it is unlikely to be an early medieval ecclesiastical foundation, however, the dedication to St Cuthbert, a saint associated with Northumbria, could suggest an Anglo-Norman origin for the church (McDonnell 2004; Breen 2012, 31). There is no evidence for an Anglo-Norman construction phase of the castle, though it is possible that if there had been any evidence for this, that it has since been removed by later construction.

The castle itself was only occupied for approximately 200 years, but during this time it went through significant periods of alternation and refurbishment, resulting in an architecturally complex building. This, combined with the modern conservation works, has made the identification of some architectural phases difficult. The original castle was constructed between 1490 and 1513 by the MacQuillans who had recently become the dominant family in the Route, a medieval territory between The River Bann and River Bush and stretching southwards to Clough. The castle was constructed on the naturally defensible promontory and consisted of a large rectangular building, within a curtain wall, with at least two corner towers and a gate house. The MacQuillan's power was short-lived, however, with inter-clan skirmishes culminating in the MacDonnells taking over the castle in the 1550s. Immediately the MacDonnells carried out an extensive phase of refurbishment works which continued into the 17th century. Despite the increased prosperity and status of the MacDonnells, the later 16th century was an unsettled period, with the castle temporarily switching between the MacQuillans and the English before returning to the MacDonnells (Breen 2012, 202-203).

The substantial MacDonnell construction phase was not limited to the castle itself and in 1608 Randal MacDonnell established a settlement in the land surrounding the castle complex. This was a formally planned settlement of considerable size. By the 1620s it was reported to have had 40 houses and other buildings which included a probable courthouse or jail, a mill, a smithy and a church. Between the 1620s and 1630s formal gardens were constructed in the area to the west of the lodgings block, one of the Upper Inner Ward buildings of the main castle complex. These gardens consisted of three terraces, and probably included features such as paths, raised beds and a possible bowling green. The prosperity of the town was short-lived due to a combination of factors including the death of Randal MacDonnell, the changing political situation and its location. In 1642, a fire broke out in the town and it was largely abandoned by the 1680s.

After abandonment, the town was used as the location for the Dunluce Fair until the 1740s. Since then little activity has been recorded on the site with the exception of conservation works to the castle building and probable removal of stone for the construction of the 19th and 20th century boundary walls. Agriculture in the immediate environs, including the Town Field and East Field has been limited to pasture which has resulted in the excellent preservation of the 17th century archaeology.

2.2 Previous Work

Between the late 18th century and mid-20th century studies of Dunluce Castle mainly focussed on the architectural history of the castle buildings and in the collection of artefacts uncovered during site clearance undertaken as part of the conservation works to the site (Breen 2012, 15). The first archaeological excavation was carried out by Nick Brannon in 1987 prior to the construction of the visitors centre (Brannon 1987). The main source of publication has come from Hector McDonnell, who has published a detailed history and architectural description of the castle (McDonnell 2004) and also a 17th century inventory of the castle's contents (McDonnell 1992).

From 2008 to 2012, extensive archaeological investigations were carried out at the Castle and in the immediate environs (Figure 2). This work was largely undertaken as a collaborative project between the Centre for Maritime Archaeology (CMA) in the University of Ulster, Coleraine, the Centre of Archaeological Fieldwork (CAF), Queen's University Belfast (QUB) and the Northern Ireland Environment Agency (NIEA) and was directed primarily by Dr Colin Breen (CMA). The research involved several seasons of survey work which incorporated topographic (DGPS), LiDAR, and geophysical survey (primarily resistivity with limited GPR transects) and was accompanied by four seasons of excavation, which included the excavation of nine trenches. This work culminated in the publication of *'Dunluce Castle: A History and Archaeology'* (Breen 2012).

2.3 2014 Excavation

The 2014 excavation was carried out as part of 'The Dunluce Project', an NIEA project supported by the Heritage Lottery Fund (HLF). The project aims to improve public access to, and understanding of Dunluce Castle and the archaeological remains of the associated 17th century town and terraced gardens. It is hoped that this will be achieved through an enhanced interpretation of the site and the construction of new visitor facilities.

The excavation was carried out during the HLF Round 1 development phase of the project. It is intended that the information generated by this excavation will be used to prepare an informed programme of works comprising excavation, conservation and presentation, including accurate estimates of cost and time, which is required for the HLF Round 2 funding bid.

With this in mind, the main research objectives of the excavation were as follows:

- Targeted excavation of the 17th century formal gardens to investigate their layout, any surviving horticultural remains and determine the level of preservation of the structural features associated with the terraces.
- Further excavation of the 17th century town by investigating features highlighted in the geophysical and LiDAR survey data such as the presence of a second cobbled roadway and additional buildings.
- Investigate the survival of archaeological remains in the area to the east of the castle.
- Investigate the survival of a probable cobbled surface in the Upper Inner Ward of the castle
- Determine the depth of stratigraphy across the site.

The existing survey and excavation data, along with site inspection, informed the Project Archaeologist's plans for evaluative excavations at Dunluce in 2014 as part of Round 1 of the Dunluce Project. Areas of specific interest and the location of the evaluative trenches were identified by the Project Archaeologist which formed the basis of the excavation research design (Gault 2014; McAlister and Murray 2014). These areas were as follows: the Castle Area (Area C), the Diamond

Area (Area D), the Eastern Field (Area E), the Garden Area (Area G) and the Town Field (Area T). Originally 40 trenches totalling an area of 219m² were to be excavated (Figure 3). However, as the excavation progressed, it became apparent that research questions would be better answered by the relocation of some of the trenches, the addition of new trenches and the extension of other trenches. As a result a total of 43 trenches comprising an area of 218.85m² were hand-excavated

Area C, Area G and Area T are all scheduled for protection under the Historic Monuments and Archaeological Objects (NI) Order 1995. Prior to excavation Scheduled Monument Consent was applied for and granted, and any alterations made to the trench layout during the course of the excavation were approved in advance by the NIEA Scheduling Team.

The background to each excavation area is detailed below. The specific trench locations are tabulated and any changes made to the trenches detailed in the original design have been italicised.

2.3.1 Trench locations

Area C – Castle Area

Area C incorporated the mainland castle buildings (Figure 4). A geophysical survey was previously conducted in this area in 2009 and subsequent excavation was carried out in 2009 and 2011 which involved the excavation of a 1m x 3m trench in the stables block, a 1m x 3m trench in the lodgings block and a 2m x 1m trench over the brew-house (Breen 2012, 110-122). As part of the 2014 investigations three trenches, totalling 3m² were opened in the area between the stables block and brew-house (Table 1). *In the original research designed it was stated that a fourth trench would be excavated (Trench 3). However, conservation works earlier in 2014 close to where Trench 3 was to be located had already shown that the cobbled surface survived in this location.*

Trench	Comments
1	This trench was positioned to the west of the brew-house in an area of high geophysical resistance and measured 1m x 1m
2	This trench was positioned to the north of Trench 1 over an area of high geophysical resistance. It measured 1m x 1m.
4	This trench was positioned to the west of Trench 1 over an area of high geophysical resistance. It measured 1m x 1m.

Table 1: Area C trench locations

Area D – Diamond Area

Area D incorporated the Diamond/Market Place area to the immediate south of the castle entrance (Figure 4). A geophysical survey was conducted across this area in 2009 and parts of it were

excavated in 2011 (Breen 2012, 150-155) and 2012 (Murray 2012). The 2012 trench was trapezoidal in shape measuring 25m north-south and 8m east-west tapering to 4.3m at the southern end. The purpose of the 2012 excavation was to expose the cobbled surface in this area and to leave it open, at the request of the NIEA, so it could be seen by visitors to the castle. Two trenches were excavated in this area in 2014 totalling an area of 7.6m² (Table 2). *Trench 6, included in the research design was not excavated as the research question was answered by the excavation of Trench 5.*

Trench	Comments
5	Trench 5 was positioned over a rectangular area of disturbance within the exposed cobbled surface previously excavated in 2012. The trench measured 4m x 0.9m and was aligned northwest - southeast.
29	Trench 29 was located in the grassy area to the north of the carpark and was positioned to investigate a high resistance geophysical anomaly. This trench measured 2m x 2m. <i>This trench was included as part of the addendum to the original research design</i>

Table 2: Area D trench locations

Area E – Eastern Field

Area E incorporated the agriculture field to the east of the castle (Figure 4). A geophysical survey was carried out across this area in 2012 (McHugh 2012) and no previous excavations are known to have taken place. The results of the survey suggested the presence of houses in this area, but more intensive agriculture seemed to have removed any associated topographic representation of these. Two trenches were excavated in this area, totalling an area of 15m² (Table 3).

Trench	Comments
26a	Trench 26a was positioned over a high resistance anomaly which was thought to represent a building. The trench measured 3m x 2m and was aligned northwest – southeast.
26b	Trench 26b was positioned over a high resistance anomaly which was thought to represent a building. The trench measured 3m x 3m.

Table 3: Area E trench locations

Area G – Garden Area

Area G incorporated the northern end of the field adjacent to the mainland castle buildings (Figure 5). A geophysical survey (Figure 6) was conducted across this area in September 2012 (Mussen 2012) and previously excavated on a small scale with two test trenches (2m² and 1m² in size) in 2009 (Breen 2012, 128-129). In 2014, 14 trenches totalling an area of 85.75m² were excavated to

investigate the three garden terraces and the associated features (Table 4). *Trench 18, included in the original research design was not excavated to facilitate extensions to Trenches 12, 13a and 15a instead.*

Trench	Comments
7	This trench was positioned over the break of slope associated with the lowest garden terrace, and over a high resistance linear geophysical anomaly thought to represent a terrace wall. It was aligned northwest-southeast and measured 12m x 1m.
8	This trench was positioned over a high resistance anomaly identified in the geophysical survey and measured 3m x 3m.
9a	This trench was positioned over a linear geophysical anomaly which was aligned northwest - southeast, perpendicular to the trench which was aligned northeast – southwest. It measured 8m x 1m.
9b	This trench was positioned over two high resistance geophysical anomalies, one of which coincided with the break of slope associated with the lower garden terrace. It was aligned northwest - southeast and measured 10m x 1m
10	This trench was located close to the gable end of the lodgings block where it was believed a path or steps associated with the gardens may be located. It measured 3m x 1m and was aligned northwest - southeast.
11	This trench was positioned over a high bank-like feature on the western edge of the gardens. It was aligned northeast- southwest and originally measured 2m x 1m. <i>It was extended by 2.5m to the west resulting in total dimension of 4.5 x 1m</i>
12	This trench was positioned over the break of slope associated with the middle garden terrace and adjacent to the end gable of the stables block. The trench was aligned northwest -southeast and measured 3m x 1m. <i>A 0.5m x0.5m extension was added to the northern edge of the trench during the course of the excavation.</i>
13a	Trench 13a was positioned over a high resistance geophysical anomaly which appears to show a dog-leg in the terrace wall. The trench was aligned northeast - southwest and originally measured 4m x 1m. <i>It was extended during the course of the excavation by 1m x 0.5m to the north and by 0.5m x0.5m to the southern edge.</i>
13b	Trench 13b was positioned over a high resistance geophysical anomaly and a topographic expression thought to represent the wall associated with the middle terrace. This trench was aligned northwest - southeast, perpendicular to Trench 13a and measured 6m x 1m.
14	Trench 14 was positioned over a high resistance, northwest - southeast aligned linear geophysical anomaly present in the upper garden terrace. The trench was aligned northeast – southwest and measured 3m x 1m.
15a	Trench 15a was positioned over a topographic expression thought to indicate the western boundary of the gardens. The trench was aligned northeast – southwest and

	measured 4m x 1m: <i>a 0.5m x 0.5m extension was added to the eastern edge of the trench during the course of excavation.</i>
15b	Trench 15b was positioned over a high resistance geophysical anomaly which potentially represented the western boundary of the gardens. This trench was positioned adjacent to Trench 15a, aligned northeast- southwest and measured 4m x 1m.
16	Trench 16 was positioned over the topographical expression that represents the boundary between the town and formal garden area and also over the high resistance feature thought to represent a roadway. Also to the south of the trench there was a raised bank like feature. The trench was aligned northwest -southeast and measured 12m x 1m.
17	Trench 17 was positioned in the middle garden terrace, adjacent to the blocked-up doorway in the lodgings block. The trench was aligned northeast - southwest and measured 2m x 1m. <i>This trench was moved from its original position (adjacent to the stables block) in order to investigate the access routes through the garden.</i>

Table 4: Area G trench locations

Area T – Town Field

Area T incorporated what is known as the Town or Village Field (Figure 7). A geophysical survey (Figure 8) was conducted across this area in 2009 and targeted excavations were carried out in 2009 and 2010. The 2009 excavation uncovered the footprint of a 17th-century building referred to as the merchant's house and also part of a cobbled roadway (Breen 2012, 139-148). The 2010 excavation also uncovered another section of the cobbled roadway and the remains of another 17th century building thought to represent a blacksmith's workshop (Breen 2012, 157-159). In the summer of 2014, 22 trenches were excavated, totalling an area of 107.5m² (Table 5). *Trenches 19a, 19b, 19c, 24a, 24b and 24c highlighted in the original research design were not excavated. The additional square meterage was used to excavate additional trenches which are detailed below.*

Trench	Comments
20	Trench 20 was positioned in the northwest of Area T, in an area not covered by previous geophysical surveys. This was a key area, as is situated at the transition zone between the town and the formal gardens. The trench was aligned northeast – southwest and measured 6m x 1m.
21	Trench 21 was positioned over a geophysical anomaly which seemed to show the end of the cobbled roadway (investigated during excavations in 2009 and 2010) with a higher resistance linear feature running off in a north-west direction. The trench

	<p>measured 3m x 3m.</p> <p><i>This trench was moved slightly to the west to avoid a trench previously excavated in 2009.</i></p>
22a	<p>Trench 22a was located behind the merchant's house (excavated in 2009) and positioned within the original garden plot. The trench was aligned northwest – southeast and measured 5m x 1m.</p> <p><i>In the original research design this trench measured 10m x 1m, however it was scaled down and the 5m² were used to excavate Trench 22c instead.</i></p>
22b	<p>Trench 22b was located perpendicular to Trench 22a, aligned northeast – southwest and measured 4m x 1m.</p>
22c	<p>Trench 22c measured 5m x 1m, was aligned northwest – southeast and located 8m to the north of Trench 22a.</p> <p><i>This trench was added during the course of excavation in order to fully investigate the plot associated with the merchants' house.</i></p>
23a	<p>Trench 23a was positioned over a high resistance anomaly thought to represent the end gable of a building, to the south of the visitors centre. It was aligned northeast – southwest and measured 2m x 1m.</p> <p><i>This trench was moved slightly to the south from its original location in the research design to avoid an area of disturbance associated with the construction of the visitors centre.</i></p>
23b	<p>Trench 23b was located adjacent to Trench 23a, and was positioned to investigate the possible continuation of the roadway and the corner of the building investigated in Trench 23a. The trench was aligned northeast – southwest and measured 4m x 2m.</p>
23c	<p>Trench 23c was located over a high resistance anomaly thought to represent the back wall of the building investigated in Trenches 23a and 23b. The trench was aligned northeast – southwest and measured 4m x 1m.</p>
23d	<p>Trench 23d was positioned over a topographic expression thought to represent the corner of the building investigated in Trenches 23a, 23b and 23c. The trench was aligned northwest – southeast and measured 2m x 1m.</p> <p><i>This trench was moved slightly to the northwest to correspond with a topographic expression thought to represent the corner of the building.</i></p>
25a	<p>Trench 25a was located on the western side of the main roadway, opposite the blacksmiths building (investigated in 2010). It was positioned over a rectilinear high resistance geophysical anomaly thought to represent a house. The trench was aligned northwest – southeast and measured 4m x 3m.</p> <p><i>During the course of excavation this trench was moved slightly to incorporate the topographic expressions thought to be associated with the building.</i></p>

25b	Trench 25b was positioned over another high resistance anomaly thought to be a part of a building. It was aligned north/west – south/east and measured 3m x 2m. <i>During the course of excavation this trench was moved slightly to incorporate the topographic expressions thought to be associated with structural remains.</i>
25c	Trench 25c was also positioned to investigate the building uncovered in Trench 25a. The trench was aligned southwest – northeast and measured 2 x 1.5m. <i>This trench was moved slightly to investigate the corner of the building rather than the interior to the south-east.</i>
27	Trench 27 was positioned over a high resistance geophysical anomaly which was sub-oval in plan. It was aligned north - south and initially measured 4m x 1m but during the course of the excavation a 3m extension was added to the southern end, making the total size of the trench 7m x 1m. <i>This trench was included as part of the addendum to the original research design.</i>
28	Trench 28 was located on the eastern side of the main cobbled roadway (excavated during investigations in 2009 and 2010). The trench was aligned southwest – northeast and initially measured 3m x 2m. During the course of the excavation a 10m x 1m extension was added to the north-eastern edge of the trench to investigate a series of low and high resistance linear features present in the geophysical results. <i>This trench was included as part of the addendum to the original research design.</i>
30a - 30h	Trenches 30a – 30h were positioned at 10m intervals along the supposed continuation of the cobbled roadway found in Trench 16. These trenches measured 1m ² each with the exception of 30h which was extended by 3m (4m x 1m) and aligned northwest - southeast to investigate a 'bank' feature. <i>These trenches were added during the course of the excavation, using the additional square meterage left from not excavating Trenches 24a, 24b and 24c.</i>
31	Trench 31 was positioned to try and trace the continuation of the trackway uncovered in Trench 21. This trench measured 5m x 1m and was aligned northeast – southwest. <i>This trench was added during the course of the excavation.</i>
32	Trench 32 was positioned over a high resistance geophysical anomaly which corresponded to a sub-rectangular raised topographic expression. The trench was aligned northwest – southeast and measured 3m x 1m. <i>This trench was added during the course of the excavation.</i>

Table 5: Area T trench locations

2.3.2 Method Statement

During the excavation the trenches were identified by both their Area (C, D, E, G and T) and their trench number (1-30h). The context register for the site was created using the standard context recording method. Separate context registers were maintained for each trench with a separate set of

context numbers relating to each trench (e.g. Trench 1 = context 100, Trench 2 = context 200, Trench 11 = context 1100 etc.). In addition to this a Site Diary was maintained by the excavation director (Grace McAlister). The context registers can be found in Appendix 1 and individual Harris Matrices produced for each trench can be viewed in Appendix 2. Individual features and overall plans of the trenches were produced during the course of the excavation and informative sections of the completed trenches were drawn (Scale 1:10 and 1:20). The drawing register can be found in Appendix 3 and relevant drawings have been included in the DSR (Figures 9 - 110). Individual features were photographed prior to, and following excavation. Additional photos of the trenches and of individual artefacts were taken by Tony Corey (NIEA). The photographic register is given in Appendix 4 and a selection of photos has been included here to illustrate the account of the excavation (Plates 1 - 118). Sample lists were also maintained on site and can be found in Appendix 5. The flint and bone artefacts have been washed, quantified (counted and weighed) and catalogued. Small find numbers were assigned to the pottery, clay pipe, tile, window glass, bottle glass, musket balls, coins and other miscellaneous small artefacts. The dimensions of the slate and brick were also recorded. The Finds Register can be viewed in Appendix 6.

On completion of the excavation a geophysical survey incorporating a small area of Area G and Area T was also undertaken. The area covered by the survey was important as it had not been previously surveyed and was in a key location between the town and the gardens. The results of this geophysical survey and a report on the same by Dr Siobhan McDermott (CAF) are included here as Chapter 9. The pottery assemblage was washed and catalogued and analysed by Cormac McSparron (CAF) and his report is included here as Chapter 10. Seven soil samples were also processed for charred remains suitable for radiocarbon dating. Four radiocarbon dates were submitted and the results are presented in Chapter 4.

3 EXCAVATION

The stratigraphic sequence for each individual trench is detailed below and these are grouped by their geographic area i.e. Area C, Area D, Area E, Area G and Area T. The supporting Harris Matrices can be found in Appendix 2.

3.1 Area C – Castle Area (Figure 4)

Trench 1 (Figures 9&10; Plate 1)

In Trench 1 the grassy sod (100; 0.07m) was removed to reveal a greyish brown, friable clay loam which contained animal teeth and pottery (101; 0.05m). Below this topsoil horizon was a layer of broken slate and small sub-angular stones (102; 0.04m) which also produced sherds of pottery, glass, roofing slate and flint. This was removed to reveal the cobbled surface (103) which consisted of sub-rounded cobbles (0.06m- 0.3m in diameter) bonded with clay. The surface of this cobbled layer sloped down to the north.

Trench 2 (Figures 11&12; Plate 2)

In Trench 2 the grassy sod (200; 0.08m) was removed to reveal a greyish brown clay loam, with a lens shell/mortar (201; 0.09m). This overlay a slate layer which contained animal bone, flint, roofing slate, brick fragments and glass (202; 0.07m). This was removed to reveal the cobbled surface (203) which was constructed with sub-rounded cobbles (0.08m- 0.26m diameter) and bonded with clay. As in Trench 1, the surface of this cobbled layer also sloped down to the north.

Trench 4 (Figures 13&14; Plate 3)

In Trench 4, the sod (400; 0.08m) was removed to reveal a mid-greyish, friable clayey loam with occasional small stones and broken slate (401; 0.08-0.12m). This topsoil layer contained fragments of roof slate, clay pipes, pottery and a possible gaming piece. This was removed to reveal the cobbled surface (402) constructed with sub-rounded cobbles (0.06m-0.20m diameter) bonded with clay, which again sloped down to the north.

3.2 Area D – Diamond Area (Figure 4)

Trench 5 (Figures 15&16; Plates 4&5)

In Trench 5, the cobbled surface (501; 0.05m-0.22m) was only present along the eastern edge of the trench. To the western side of the trench there was a blackish brown friable clay loam (502; 0.02-0.06m). The cobbles (501) were removed and revealed that the clayey loam (502) continued underneath and acted as a bedding layer for the cobbles. This contained flint, glass, clay pipes, pottery and animal teeth. The bedding layer (502) lay directly above the weathered natural subsoil.

Trench 29 (Figures 17&18; Plates 6&7)

In Trench 29, the grassy sod (2900; 0.08m) was removed which produced some modern slate, metal objects, ceramics and plastic. Underlying this was a mottled grey and dark brown gritty silty loamy clay with rubble inclusions (2901; 0.05m) which contained clay pipe, post-medieval ceramics, glass bottle stoppers and nails. This layer was probably associated with the construction of the adjacent car park in the 1970s. Underneath this deposit was a dark brown, friable clayey loam (2902; 0.1-0.35m) which produced a clay tobacco pipe stem and pottery. This had formed over the bedrock (2903) which dived down sharply at the eastern side of the trench.

3.3 Area E – Eastern Field (Figure 4)

Trench 26a (Figures 19&20; Plates 8-11)

In Trench 26a, the sod (2600; 0.04-0.09m) was removed to reveal a mid-brown silty loam (2601; 0.19-0.46m) which had large sub-rounded stone inclusions in places. In the northern end of the trench, running into the south-facing section was a burnt deposit semi-circular in plan which measured 1.36m wide and 0.12m in length. The uppermost layer of this feature was an orange, ashy deposit with burnt angular and sub-angular stones (2604; 0.02-0.16m). This overlay a blackish brown charcoal-rich silty loam (2607; 0.05m) which produced a fragment of red glazed earthenware (SF#0967). Directly underneath this deposit was a layer of medium brown silty loam (2605; 0.02-0.16m), confined to the north eastern corner of the trench which overlay the bedrock.

Trench 26b (Figures 21-23; Plates 12-17)

In Trench 26b, the sod (2600; 0.1m) was removed onto a mid-brown silty loam (2601; 0.03-0.1m). The removal of this topsoil layer revealed a tightly packed layer of rubble contained within a light brown, gritty, sandy loam soil matrix (2603; 0.1-0.28m). This rubble layer was excavated and revealed the tops of two walls 2608 and 2609. Within the area enclosed by these walls there was a dark brown silty loam with occasional stone inclusions (2610; 0.04-0.23). This overlay an irregular

shaped deposit of light brown silty loam with small stone inclusions (2611; 0.06m). This deposit measured approximately 1m in diameter and was located in the south-west corner of the trench. The wall in the northern end of the trench (2608) was aligned east-west and extended from the western edge of the trench for 1.4m. This wall was 0.6m in width, constructed with regular shaped stone which appeared to be soil bonded, and stood to a maximum height of 0.4m (between 1-3 courses). This wall was constructed on a layer of large boulders, between 0.35 and 0.5m in diameter and 0.25-0.3m in height (2619). This footing (2619) overlay a medium brown, firm, silty loam (2613) with a few stone inclusions and ash and charcoal flecking. Seven sherds of Scottish Grey Ware (Plate 17) were found in this layer, and which abutted the second wall, 2609, located in the eastern side of the trench. This wall (2609) was aligned north-south, perpendicular to wall 2608 and extended from the southern edge of the trench for 2.65m. The width of the wall was approximately 0.6m but was difficult to confirm due to constraints of space within the trench. This wall (2609) was well constructed with regular shaped stone and a regular western face with a slight outshot footing only present towards the northern termination of the wall. This wall was constructed on a dark brown clay loam (2620; 0.07m). Despite walls 2808 and 2809 potentially representing different phases, they extend to form a corner with a 0.8m gap forming a north facing entrance. Deposit 2613 was removed onto a mottled orange and brown, clayey, silty loam (2615). Within this layer was a lens of a firm, brownish grey, clay (2616) positioned at the 'entrance'. This was irregularly shaped and measured approximately 0.4m in diameter. Towards the centre of the trench there was an orange and black, charcoal rich, burnt deposit (2617) approximately 0.65m in diameter. Excavation stopped at this level but a sample of the burnt deposit (2617) was taken for radiocarbon dating (see Chapter 4.4).

3.4 Area G – Garden Area (Figure 5)

Trench 7 (Figures 24-26; Plates 18-25)

In Trench 7 the sod (700; 0.05m) was removed onto a mid-brown clayey loam topsoil (701; 0.07m) which extended across the trench but which was thicker towards the northern end. Finds were mostly post-medieval in date with the exception of a late Mesolithic/Early Neolithic flint blade (Brian Sloan pers comm.), evidently residual. Below the topsoil (701), at the northern end of the trench, there was a deposit of large stones (mostly Causeway basalt some of which appear to have been cut), contained within a mid-brown clayey loam similar to the topsoil (702; 0.05-0.28m). This stone collapse is probably from an earlier wall (703) located in the southern end of the trench - referred to in more detail later. Below 702 was a buried soil horizon, a greyish brown gritty loam (704; 0.12m) with small stones, charcoal and shell. To the south of the wall 703, the ground level had been raised using multiple layers of redeposited soil which formed the garden terrace. The uppermost of these layers was an orangey brown silty clay (705; 0.31m) which had slumped over the wall, 703, and the collapse deposit, 702. This was removed to reveal a greyish brown clayey loam (710; 0.37m) which abutted the wall 703 and overlay a layer of stone chippings (709; 0.06m) associated with the construction of the wall (703). These deposits, including the wall filled a steep-sided cut (708) which was 0.45m deep

and 0.85m wide. This had been cut through a light orangey brown firm clay (706; 0.47m) which overlay a mottled orange and brown clay (711; 0.2m) which had been deposited on a buried topsoil horizon (707). The cut through the terrace material suggests that the terrace earthworks were constructed first and then the terrace walls were built soon after. The wall 703 was aligned northeast – southwest and built as a retaining wall to contain the artificially built up ground level at the southern end of the trench. It is approximately 0.7m in thickness and stands to a height 0.56 - 0.72m, (3-4 courses). It is constructed with roughly angular basalt stones (0.07 - 0.37m diameter) bonded with mortar. The dressing of the stones on site probably resulted in the accumulation of the layer of stone chippings, 709. Only 1m of this walls length was exposed in this trench but it presumably follows the topographic expression which runs east across the field. The wall was constructed within cut 708 and directly on top of a buried soil (707; 0.21 - 0.35m) which is presumably the cultivation soil that pre-dates the construction of the gardens. This deposit was present as a thick layer throughout the trench.

Underneath this layer there were three subsoil-cut features. The southernmost of these features was a small linear cut (718) with a rounded termination which was filled by a mottled orange grey, clayey loam (717; 0.16m). This measured 0.48m in width and 0.52m in length and continued into the west-facing section. 2.5m to the south of this feature was a curvilinear cut (715) approximately 0.20m in depth and 0.42 – 0.8m in width with a gentle break of slope at the base. This was filled with a greyish brown, clayey loam with charcoal inclusions and small angular/sub-rounded stones (714; 0.14m). Notable finds included sherds of Medieval Ulster Coarse pottery (SF#0388; Plate 25, 0389, 0390) and animal bone. 3.9m to the south is a similar cut (713), 0.45m in width and although also curvilinear, it curves in the opposite direction towards cut 715. It was filled with a greyish brown clayey loam with charcoal flecks (712; 0.14m) but no other inclusions and the only finds were fragments of animal bone. At the extreme south of the trench there was a setting of large rounded and sub-rounded stones, these may be natural or they could be related to the adjacent cut (718). The features within this trench suggest the survival of pre-17th century horizons, possibly in the form of domestic structures. Samples from the gully features were submitted for radiocarbon dating and are discussed in Chapter 4.4.

Trench 8 (Figures 27-28; Plates 26-30)

In Trench 8, the sod was removed (800; 0.06m) onto a mid-brown clayey loam topsoil (801; 0.07m). This was overlying a deposit of large Causeway basalt stones (0.09m -0.49m diameter) contained within a gritty loam soil matrix (802/803; 0.12-0.18m) and produced fragments of clay roof tile (Plate 30). No structure was discernible within these stones which appear to represent a rubble collapse layer. The stones were removed to reveal a greyish brown, charcoal and shell flecked clay (804; 0.19m – 0.22m) which appeared to be the ground surface on to which the stones (802) had collapsed. Underlying this deposit was an orange brown clay with gravel and flint inclusions (805; 0.08m-0.10m). This lay directly over the natural subsoil.

Trench 9a (Figures 29-31; Plates 31-34)

In Trench 9a, the grassy sod (924; 0.05m) was removed onto the greyish brown topsoil layer (925; 0.06-0.25m). In the eastern end of the trench there were two collapse deposits. The uppermost of these was a layer of sub-angular stone rubble (926; 0.14-0.23m). Stratigraphically below this collapse and towards the western end of the trench was a mortar layer (929; 0.12m) with occasional small stones and shell, flint and brick inclusions. The removal of these deposits revealed the top of a wall (928). This wall divides the stratigraphy in this trench and will be described in more detail below. To the east of the wall the removal of the stone collapse, 926, revealed a light greyish brown mortar layer (927; 0.05m) this layer may be the washed out mortar from the rubble layer above. This was overlying a layer of compacted crushed red brick and gravelly stone (936; 0.1m), which stopped 0.35m short of wall 928. This was removed to reveal a dark brown loamy clay (933; 0.11m) which extended up to the wall. Below 933, there was a layer of stone chippings within a clayey loam soil matrix (934; 0.09m) which extended 0.8m from wall 928 and is most likely associated with the construction of the wall. This was overlying a dark brown clayey loam (935; 0.21m) with charcoal flecking and small stone inclusions. This layer butted up against the wall, 928, and contained sherds of Scottish Grey Ware. The wall, 928, was aligned northwest – southeast, constructed with cut basalt (0.1-0.23m) and was approximately 0.72m in width with a slight step out at the base on the western face. Between three and four courses of stonework survived to a maximum height of 0.6m.

To the western end of the trench the removal of the mortar deposit, 929, revealed a thin layer of mortar rich, dark brown loam (930; 0.03m). This was overlying a greyish brown clay loam (931; 0.27m) with flint and small stone inclusions and charcoal flecking. This deposit butted up against stone feature 932. To the western side of wall 928 there was a similar clayey loam deposit (945; 0.25m). Although the two garden soil deposits, 931 and 945, were effectively the same, they were separated by a stone-built feature (932). This stone built feature, 932, was aligned northwest - southeast, measured 0.75m in width and was constructed of three large unmortared Causeway stones (0.5-0.55m diameter) with smaller packing stones underneath, built directly onto the subsoil. A section excavated through this feature revealed a narrow, channel approximately 0.1m in width, 0.15m in depth which had silted up with a dark brownish grey clayey silt (948). This suggests that this feature was a drain, and considering its relationship to the surrounding garden soil (928 and 945), it would have been visible on the ground surface when the garden was in use. This drain was not cut into the subsoil but built on top of the subsoil. Underlying 931 and 945, were three shallow subsoil cut features. Feature 943 was a small linear feature which extended from the south edge of the trench and was filled a dark brown loamy clay (939; 0.04m). A second small, linear feature (944) was located adjacent to 943 and extended from the northern edge of the trench: it was filled by a dark brown loam (938; 0.06-0.09m). Partially underlying 932 was a third cut (942), irregular in shape which was very shallow with a flat base and was filled by a sticky dark brown loamy clay (937; 0.02-0.04m). Underlying wall 928 were two cuts. Cut 940 was located to the west side of the wall and was 0.2m in length and 0.4m wide, filled with a dark brown loamy clay (941; 0.04-0.16m). To the east of the wall was a steep sided cut (946) which ran parallel to the wall and was filled with a dark brown loamy clay

(947). These cuts were more ephemeral than those in Trench 7 but may also be associated with earlier domestic structures.

Trench 9b (Figures 32-35; Plates 35-43)

Trench 9b was positioned perpendicular to Trench 9a, over two high resistance geophysical anomalies, one of which coincided with the break of slope associated with the lower garden terrace. The trench measured 10m x 1m and was aligned north – south.

In Trench 9b, similar sod (900; 0.06m) and topsoil (901; 0.10m) layers as found in Trench 9a were removed. This revealed a variety of deposits, the uppermost of which were two rubble deposits located towards the middle of the trench. A rubble deposit (906; 0.18m) consisting of medium sized stones roughly 0.08-0.16m in diameter was located to the south and the second more substantial deposit (907; 0.26m), located in the middle of the trench, consisted of stones of a similar size but contained within a mortar rich loam. To the extreme north of the trench there was a similar rubble deposit (923; 0.1-0.32m). Collapse deposits 906 and 907 were separated by a thin layer of washed out mortar (902; 0.13m), which partly overlay them. The excavation of 906 revealed a layer of light brown stony clay, probable redeposited subsoil (904; 0.36m), the removal of which revealed the top of a wall (903). Similarly the excavation of 907 and 923 at the northern end of the trench revealed the top of a second wall (905). The two walls, 903 and 905, divide the stratigraphy in the trench into three sections which will be described in more detail below. To the southern side of 903, the removal of the 904, revealed a mid-brown clayey loam (911; 0.32), with orange mottling and rich with charcoal inclusions. This was overlying a layer of stone chippings within a greyish brown soil matrix (912; 0.05-0.12m). This layer had formed on top of a dark greyish brown clayey loam (918; 0.24m) with charcoal and small stones throughout and was overlying the natural subsoil. In the middle of the trench, between the two walls 903 and 905, the excavation of 906 and 907 revealed a crushed brick and gravel deposit (909; 0.13m), similar to the path deposit found in trench 9a (936). This indicates that the path leads from the lodgings block along the level platform below the terrace stopping at the wall in trench 9a. Below the probable path deposit, 909, was a light brown loamy clay with orange mottling (910; 0.18m -0.31m) with charcoal and small stone inclusions. This was overlying two deposits: a localised deposit of greyish brown, mortar flecked, clayey loam (922; 0.18-31m) which had built up against the wall (905) and a dark grey, clayey loam with gravel and charcoal inclusions (920; 0.12m) which abutted wall 903. At the northern end of the trench, to the north of wall 905, the removal of the rubble deposit, 923, revealed a greyish brown, clayey loam (908; 0.04-0.11m) which had formed against wall 905.

The southernmost wall (903) was aligned northeast – southwest and was a continuation of the terrace wall found in Trench 7 (703) which acted as a retaining wall for the artificially heightened area to the south. The wall was approximately 0.7m in thickness and stood to a height of 0.54m. It was constructed of sub-angular blocks of cut basalt (0.13 – 0.56m diameter) bonded together with mortar. The stone was most likely shaped during construction resulting in the formation of layer of stone

chippings, 912. As well as acting as a retaining wall for the garden terrace, wall 903 also forms the southern boundary of the pathway. 4.2m to the north of wall 903, and parallel to it, was a second wall (905). Wall 905 was also approximately 0.7m thick and built with basalt sub-angular in shape (0.08-0.31m in diameter) bonded with a strong mortar. The southern face of the wall is vertical and neatly constructed, the northern face, in contrast, was rougher and more haphazard appearance with smaller stone inclusions. Wall 905 was constructed within narrow construction cut which was only apparent on the northern side of the wall. The cut (915) was 0.22m wide and 0.12m deep and was filled with a light grey loamy clay with red mottling (914). It had been cut through a charcoal flecked, greyish brown, clayey loam (919; 0.11m). Cut 915 also cut through a mottled, ashy and charcoal, burnt spread (913) which was underneath 919. This burnt spread (913) produced a Mary I silver goat (Robert Heslip pers. comm; SF#1054; Plate 43). To the south of wall 905 no construction cut was apparent. The wall was constructed on a greyish brown, clayey loam (921; 0.18m) which was similar to 919 on the northern side of wall 905. This was overlying a bright orange ashy deposit (916; 0.01-0.04m) which produced two copper alloy strap fittings (SF#1055 and 1056; Plates 41&42). Underneath the ashy deposit was a charcoal rich layer (917). Both deposits 916 and 917 continued underneath wall 905 and are probably equivalent to the burnt deposit, 913, on the northern side of wall 905. However, the relationship has been truncated by the construction cut on the northern side of the wall (915). 917 was overlying a gravelly silty clay (949) which was directly overlying the natural subsoil.

Trench 10 (Figures 36-38; Plates 44-47)

In Trench 10, the sod was removed (1000; 0.03m) to reveal a thin layer of dark brown loam (1001; 0.03m). This topsoil layer was removed onto a layer of slates, rubble and mortar contained within a greyish brown loam soil matrix (1003; 0.26m). This deposit was confined to the southern half of the trench and appears to represent an episode of roof collapse from the adjacent lodgings block. Underlying this deposit was a light greyish brown, mortar flecked loam (1011; 0.16m) which was overlying a layer of redeposited subsoil (1002; 0.22m). This was overlying a deep ditch-like cut (1009), the uppermost fill of which was a blackish grey, charcoal-flecked gritty clay loam (1004; 0.39m). Below this was a greyish brown clayey loam (1006; 0.20m) which contained lots of chalk, charcoal and small flint nodules. The basal fill of the cut was a greyish brown sticky clay (1007; 0.24m) which contained charcoal, an abundance of animal bone and flint. Only the northern edge of the cut lay within the excavation trench. The ditch-like feature (1009) cut through a mid-brown clayey loam deposit (1005; 0.18m) which contained fragments of coarse pottery including a fragment of Souterrain Ware (SF#0437). This deposit (1005) lay directly above the orange clay subsoil (1008). The deposits within this trench indicate two phases of earlier activity: the ditch (1009) that pre-dates the 17th century garden deposits and the subsequent abandonment of the lodgings block and also the horizon which contained the coarse pottery (1005).

Trench 11 (Figures 39-40; Plates 48-52)

In Trench 11, the sod (1100; 0.06m) was removed onto the topsoil layer (1101; 0.05-0.26m) which was overlying a mortar-rich rubble deposit contained within a mottled brownish grey, loam (1102; 0.34m). This overlay a mid-brown, silty clay (1103; 0.22m) which contained fragments of a human femur, a half musket ball which was unfired (SF#1067; Plate 51) and an Elizabeth I silver coin, possibly a half groat (SF#1057; Plate 52; Robert Heslip pers. comm.). The removal of this deposit revealed a mid-greyish brown silty clay (1105; 0.15m) which filled a linear cut (1104) aligned north-south. It measured approximately 0.19m in width at the top and 0.06m wide at the base. This cut was located 1.45m from the eastern edge of the trench and had a tapered base with gradual sloping sides and had been cut through a layer of redeposited subsoil (1106). At this point it was decided to extend the trench by 2.5m to the west so that a full profile of the bank could be achieved, and to determine whether any more of these features were present. The sod (1100) and topsoil (1101) were removed onto the rubble layer, 1102. The rubble deposit (1102) dived down sharply and was overlying a mottled brown and orange, silty clay (1109; 0.18m) which was overlying a mixed deposit of mid brown, loamy clay with sub-rounded stones (1111; 0.32m). These deposits were within a steep sided cut (1113) which was 1.1m in length and 0.38m deep, it appeared that the rubble deposit (1102) had slumped over this cut. The remaining extent of the loam deposit 1103 was removed revealing a second linear cut (1107) made through the redeposited subsoil 1106 and filled with a mid-dark brown silty clay (1108). This cut was located parallel to and 1.14m to the west of cut 1104 and measured 0.17m in width and 0.12m in depth. A sondage, 0.5m in width and 1.5m in length (measured from the western limit of excavation) was taken along the southern section face through 1106 which had a maximum depth of 0.36m and was overlying a silty clay (1110; 0.18m). The steep sided cut to the west of the trench (1113) had been made through both of these deposits 1106 and 1110. 1110 overlay the subsoil and may be a buried soil which predates the garden construction, though no finds were recovered from this layer to confirm this.

Trench 12 (Figures 41-43; Plates 53-57)

The sod and topsoil layer (1200; 0.02 -0.05m) was removed onto a rubble deposit of slate and stone within a greyish brown loam matrix (1201; 0.05 – 0.1m) which contained a brass mount (SF#1058; Plate 58) and a fragment of Westerwald Pottery (SF#444; Plate 59). This was overlying a mid-brownish grey loam (1202; 0.04 – 0.09m) to the north of the trench, and an isolated spread of render/mortar (1203; 0.01 -0.04m) located towards the middle of the trench. Both 1202 and 1203 were overlying an episode of collapse represented by a thick layer of slate, stone and mortar contained within a light brownish grey loam (1204; 0.13 – 0.3m). This deposit was thickest at the southern end of the trench and thinned out towards the northern end. The removal of this deposit (1204) revealed the top of a wall (1208) which continued into the southern section beyond the limit of the trench. This wall will be referred to in more detail later. Also underlying the 1204 was another collapse layer (1205; 0.06 – 0.1m) which comprised exclusively of slate. Many of the slates were

almost fully intact with the nail hole still surviving. In the north of the trench, the collapse deposit 1204 overlay a dark, greyish brown, sandy silt (1207; 0.13 – 0.16m) which contained fragments of window glass and animal bone. This was filling a linear, drain like cut (1209), 0.4m in width and aligned east – west. The fill (1207) was also overlying a small sub-circular, subsoil-cut feature (1215; 0.1m diameter) which was filled with a dark brown, gritty loam (1216; 0.05m). The gully cut, 1209, was made through a mottled light reddish grey clayey loam (1206; 0.3m) with mortar flecking and small stone inclusions, which also physically underlay the slate layer, 1205. This deposit (1206) continued to the south of the trench where it abutted wall 1208. The removal of this deposit (1206) uncovered a mottled greyish yellow and brown loamy clay (1214; 0.28m), which partially overlay wall 1211. The latter was constructed of large basalt and sandstone stones, some of which appeared to have been dressed. The wall (1211) measured 2.5m in length and was aligned north – south, perpendicular to wall 1208 and continued beyond the eastern edge of the trench. This wall (1211) was poorly constructed and appeared to have subsided. The voiding between the stones suggested that the mortar had been washed out. The northern termination of the wall (1211) directly overlay the subsoil while to the south it abutted wall 1208. This wall, 1208, was aligned northeast – southwest and was constructed of sub-angular and sub-rounded basalt stones (0.1-0.4m diameter) bonded with a strong mortar. The wall survived to a height of 0.85m, between 3-4 courses of stone and was constructed over a stone drain (1212). The drain, 1212, was constructed from large unmortared boulders which appear to continue under the wall, 1208. The voids between these stones were filled by a grey silt deposit (1218) which was soft and wet suggesting that it functioned as a drain and still does to a certain extent today. If this is the case its alignment suggested that it may continue eastward under the adjacent stables block and westward through the middle garden terrace. The stone-built drain, 1212, was built within a linear cut 1213 which was cut into the natural subsoil. This cut was not fully exposed within the trench and was not excavated to its base but the exposed southern edge was steep sided with a gradual break of slope at the top.

Trench 13a (Figures 44&45; Plates 60-62)

In Trench 13a the sod (1300; 0.13m) and a light reddish brown silty loam (1301; 0.05m) were removed to reveal two deposits of rubble (1314 and 1328). A layer of medium sized stones (0.05-0.17m diameter) contained within a whitish, coarse mortar (1314; 0.35m) was located in the east of the trench while, towards the western end of the trench there was a separate but similar spread of rubble (1328; 0.28m). The removal of these deposits revealed the top of a wall (1315) which separates the stratigraphy within the trench. To the east of the trench the rubble, 1314, sealed a firm greyish brown clayey loam (1317; 0.04m-0.10m) which contained animal bone and pottery. This was removed to reveal a yellowish grey silty clay (1318; 0.16m) with stone inclusions (0.04-0.07m diameter). This overlay a dark brown and light grey mottled silty loam (1319; 0.09m) which was directly overlying the natural subsoil. To the west of the trench, the topsoil, 1301, overlay a thick layer of mid-brown friable silty loam (1316; 0.6m) which contained a small croatal bell (SF#1059; Plate 62). Underlying this deposit, 1316, was a compact metallated surface comprising angular small stones and

stone chippings (1320; 0.05m). This levelling deposit overlay a mid-greyish brown silty clay with small stone inclusions (1321; 0.1m).

The wall 1315 was aligned northwest - southeast and was positioned towards the middle of the trench. It measured approximately 0.7m in width and was constructed with large sub-angular stones. It was mortar-bonded and survived to three to four courses in height. The geophysical survey results suggested that a wall was present in this location and that it made a 'dog-leg' in this area. A 0.5m² trench was added to the southern edge of the trench to investigate whether the wall turned and continued to the northeast. The wall was found to turn at a right angle, heading east following the topography of the ground. Although this was essentially a continuation of the same wall, this section of wall, was given a separate context number (1331). Similarly, a 1m x 0.5m extension was added to the northern edge of the trench to investigate the second suggested dog-leg of the wall (1315). Again the wall turned at a right angle and this time extended to the southwest becoming wall 1327. The topographic expression was not as obvious for this wall but the geophysical data clearly shows that it continued. Wall 1327 was not as well constructed as the other sections of wall for which more irregular shaped stone was used; the northern side in particular was not as neatly faced. Wall 1315 appeared to be constructed within a linear cut (1322) which was on a slightly different alignment to the wall itself. After the wall was constructed the cut was filled with a mottled greyish brown, silty clay with frequent stone inclusions (1323). To the northern side of wall 1315, below the topsoil (1301) there was a linear cut (1330) which scarped the natural subsoil. Below 1321 in the north-west corner of the trench was the edge of a sub-circular cut (1324) filled by a mid-brownish, slightly gritty, silty clay (1325) which contained a sherd of possible early medieval pottery (SF#0460).

Trench 13b (Figures 46-48; Plates 63-65)

In Trench 13b, the sod (1300; 0.03m) and the topsoil layers (1301) were removed onto a rubble deposit (1302; 0.15m) which was limited to the southern side of a stone built wall (1307) which separates the stratigraphy in the trench and will be referred to later in more detail. The rubble layer (1302) sealed a greyish brown clayey loam layer (1303; 0.01-0.09m – similar to 1317 in Trench 13a). To the north of the trench there was a yellowish-orange, sticky, silty clay (1305). To the south of the trench this deposit (1305) overlay a yellowish grey sticky, silty clay with stone inclusions (1308; 0.16m). The removal of this deposit (1308) revealed a dark brown silty loam with light grey mottling (1309; 0.09m) which was overlying the natural subsoil. To the south of the trench, on the other side of the wall, there was a thick deposit of mid-brown silty loam (1310; 0.62m) which formed the garden terrace level. The wall (1307) was aligned northeast – southwest and was probably the continuation of wall 1331 in Trench 13a. It was of a similar construction, built with large roughly dressed stone (0.1-0.28m diameter) and mortar bonded. Presumably it is also the continuation of wall 1208 in Trench 12. Five courses survived on the northern face and three on the southern face, standing to a height of 0.67m. The wall was constructed within a narrow cut (1311), 0.16m deep, which was apparent on the northern side of the wall and was backfilled with a mid-yellowish grey silty clay (1312). The

subsoil appears to have been scarped or cut (1313) against the wall creating a 2.3m wide level terrace which matches the similar level surface found in Trench 12 (1206).

Trench 14 (Figures 49&50; Plates 66-68)

In Trench 14 the sod layer was removed (1400; 0.07m) onto a mid-reddish brown gritty loam (1401; 0.04-0.9m) which contained fragments of slate, animal bone, pottery and a sherd of green glass. This topsoil layer was removed to reveal a mid-brown gravelly loam (1402; 0.07-0.28m) deposit with stone inclusions which was slightly stonier on the western side of the trench. This overlay a mid-greyish brown clayey loam (1404; 0.14-0.17m) on the eastern side of the trench. On the western side of the trench 1402 overlay a mid-brownish grey clayey loam (1405; 0.09-0.22m) similar to context 1404 but containing more fragments of animal bone. Below 1405, to the extreme west of the trench, there was a layer of degraded stone within a mid-brownish grey silty sand soil matrix (1407; 0.05m). Deposits 1404 and 1405 were separated by the remains of a low wall (1403) which was constructed with basalt boulders with small chalk nodules and was bonded with clay. The wall measured 0.69m in width and survived to a height of 0.2 - 0.45m. It was aligned northwest - southeast and was constructed on a mid-brownish grey, smooth, loamy clay with yellow clay patches (1406). Due to the mottled nature of this context a sondage was excavated through the deposit at the eastern end of the trench which confirmed that the natural subsoil had been reached.

Trench 15a (Figures 51&52; Plates 69-71)

In Trench 15a, the sod layer was removed (1500; 0.08-0.13m) onto the light brown, clayey loam topsoil layer (1501; 0.12-0.18m). This revealed two similar stone deposits contained within a dark brown clayey loam soil matrix (1505 and 1510). These layers were separated by the surface of a raised bank-like layer of chalk and gravel in a light greyish brown clay matrix (1504; 0.05-0.24m). This chalk-rich deposit (1504) overlay two gullies, aligned north-south, cut into the subsoil. The first cut (1508) was in the extreme east of the trench with only the west edge visible within the trench. It was filled by a dark brownish black clayey loam (1509; 0.17m max) with medium sized stone inclusions. The second cut (1506) was located 1.95m to the west of 1508 and was 0.3m in width at the base. The cut was steeper on the eastern side and more gently sloping on the western side with a gentle u-shaped, bedrock base. It was filled with a dark brown clayey loam (1507; 0.35m maximum depth) and contained a 17th century copper alloy seal matrix (SF#1061; Plates 70 & 71). The subsoil (1503) was slightly higher in the eastern side of the trench.

Trench 15b (Figures 53&54; Plates 72)

In Trench 15b, the sod (1500; 0.09m) and topsoil (1501; 0.17m), as found in Trench 15a, were removed to reveal a thick layer of riddled light brown clayey loam (1502; 0.09m - 0.20m). This layer

was interpreted as the garden horizon and directly overlay the natural subsoil (1503) which was a plastic greyish clay. Due to the mottled nature of this context (1503), a narrow sondage (0.3m in width) was excavated through it at the western end of the trench and confirmed that the subsoil had been reached.

Trench 16 (Figures 55-58; Plates 73-78)

In Trench 16, the sod (1600; 0.03 – 0.1m) was removed onto a mid-greyish brown silty loam (1601; 0.10 – 0.15m) which extended throughout the trench. This topsoil layer was removed to reveal two rubble deposits (1605 and 1606) which were separated by the top of a wall (1607 - which will be described in more detail later). To the south side of the wall there was a deposit of sub-angular stones (0.1 – 0.2m diameter) within a mid-brown, silty loam soil matrix (1605; 0.05 – 0.25m). To the north end of the wall there was a similar, rubble deposit (1606; 0.1- 0.48m). This was overlying a dark brown, silty clayey loam (1608; 0.16- 0.32m) with some stone inclusions (0.05 – 0.1m diameter). To the southern end of the trench there was a homogenous layer of orange brown, clayey loam (1621; 0.27-0.4m) with occasional small stones and some charcoal flecking. This was overlying an ashy lens of orangey grey silty loam (1622; 0.04m) with charcoal flecking which in turn was above an orangey brown silty clayey loam (1623; 0.2m) which is similar to deposit 1621. Both 1621 and 1623 had built up against the southern side of the 'bank' evident on the present ground surface. To the northern side of this bank there was a deposit which contained large sub-rounded stones (0.2 – 0.3m diameter) within a mid-brown, loose, silty loam matrix (1617). This is possibly the remains of a stone revetment that would have been on the northern face of the bank (1616). The removal of both the rubble deposits, 1617 and 1605, revealed an underlying cobbled surface (1604) which will be described in more detail later. The uppermost bank deposit was a mid-brown silty loam (1616; 0.12 – 0.2m) with occasional stone inclusions. This was overlying a mottled mid-brown and orange, compact, clayey loam (1612; 0.14m) with small stone inclusions. This was removed to reveal a mid-brown, compact, silty clay loam (1618; 0.2-0.45m) with occasional sub-angular and sub-rounded stones (0.05-0.15m diameter). This deposit would appear to be the primary deposit associated with the construction of the bank which forms the southern boundary for the cobbled roadway.

Deposit 1618 was removed onto a compact layer of orange loamy clay (1619; 0.07-0.1m) which in turn overlay an orangey brown clayey loam (1615; 0.03-0.07m) with some small stone inclusions. This overlay the natural subsoil which sloped down slightly to the north with outcrops of protruding bedrock. The cobbled surface (1604) was constructed of rounded stone cobbles ranging in diameter from 0.08-0.26m. These were unmortared and instead bedded in the underlying gritty, clayey loam (1624) with slate inclusions. Within the cobbled surface there are some interesting features. Towards the middle of the roadway there was a linear arrangement of larger cobbles which were perhaps associated with the initial laying out and construction of the road. Towards the southern end of the road there was a large angular stone which sat higher than the rest of the cobbled surface, acting as a 'jostle' stone. To the south of this stone the cobbled surface comprised slightly smaller cobbles

which sloped down into a drain. The drain was constructed with two parallel lines of sub-angular cobbles set on their edge to create a narrow v-shaped channel. Wall 1607 was located at the northern edge of the roadway. It was aligned northeast - southwest and was approximately 0.7m wide: only 1m length of the wall was exposed due to the size of the trench. The wall acted as a boundary between the town and gardens and marks the change in ground level between the roadway on one side of the wall and the formal castle gardens on the other side. As such, the northern face of the wall stands to a height of 1.2m with the southern face only 0.4m in height. The wall appeared to be constructed of a rubble core faced with sub-angular and angular stones (0.15m – 0.45m in diameter). There were only a few traces of mortar adhering to the stones, but its occurrence in the associated collapse layer (1606) suggests that the wall was originally bonded with a weak mortar which had since washed out. Excavation stopped at the level of the cobbles so it was not possible to investigate the surface on which the southern face was constructed. The northern face of the wall, however, was constructed on a light greyish brown, compact, silty clay (1611; 0.48m) which was underlying 1608. This was filling an earlier cut (1610). Only the northern edge of this cut was visible and ran in a north-west – south-east direction continuing under the east and west limits of the trench. It also continued underneath the wall (1607). To the southern side of the cobbled surface (1604) there was a second cut (1613) which was filled by a mid-brown, silty loam (1620; 0.2m). Only the southern edge of this cut was visible in the trench and presumably continues underneath the cobbles (1604). There is the possibility that both cuts 1610 and 1613 are contemporary.

Trench 17 (Figures 59&60; Plates 79-81)

In Trench 17, the sod and greyish brown loam topsoil layer (1700/1701; 0.05-0.12m) was removed onto a layer of mortar (1702; 0.2m) which in turn was over a layer of collapse (1703; 0.2m) which consisted of medium sized stones (0.05-0.15m diameter) with occasional fragments of brick and animal bone. This was removed to reveal a layer of fragmentary red brick within a greyish brown, mortar-flecked loam (1705; 0.2m) which formed a relatively level deposit, perhaps the remnants of a path, which extended 0.9m from the eastern limit of trench. This was sealing a cut (1706) which was filled with dark brown silty clay (1707) which had a concentration of red brick in the south-east corner. The cut (1706) was aligned northwest – southeast, parallel to the blocked up doorway. It was steep sided and measured 0.35-0.45m in width, 0.42m in depth and 0.95m in length and stopped in line with the southern jamb of the blocked up doorway. This feature cut through a layer of dark brown, riddled, silty loam (1704; 0.25m) with some mortar inclusions.

3.5 Area T (Figure 7)

Trench 20 (Figures 61&62; Plates 82-84)

In Trench 20 the sod (2000; 0.04-0.08) was removed on to a mid-brown silty loam (2003; 0.07 – 0.15m) which extended across the trench. To the west of the trench underlying the 2003 was a mid to dark brown silty loam (2001; 0.04 – 0.09m) with small fragments of brick, chalk and stone inclusions. This was overlying a yellowish brown silty clay loam (2004; 0.02m – 0.11m) with a gravelly texture. Under 2004 there was an orange brown silty loam (2005; 0.12m – 0.18m). This deposit (2005) had built up against a north-south aligned linear arrangement of large sub-angular stones (2002) 2m east of the western limit of the trench. These stones, 2002, were overlying an isolated area of rough cobbling (2006; 0.04m-0.06m) which in turn was overlying a mid to dark brown silty loam (2009; 0.1m – 0.25m) with large sub-rounded and sub-angular stone inclusions (0.1-0.25m diameter) in the middle of the trench. This deposit (2009) was overlying a mid-brown silty loam (2007; 0.14m-0.2m). In the middle of the trench there was a light brown, fairly compact silty loam (2011; 0.18-0.28m). The removal of this deposit revealed a light to mid-brown silty loam (2012; 0.16m) which had formed in a stone lined channel approximately 0.2 – 0.32 wide (2015), aligned northwest – southeast. This was constructed within a steep-sided cut (2013) approximately 0.6m wide and 0.45m in depth. It was cut through a mid to dark brown silty loam (2010; 0.08-0.12m) with sub-rounded and sub-angular stones, to the west of the trench and a similar deposit which was slightly less stony (2008; 0.12 – 0.2m) to the east of the trench, both of which were overlying the natural subsoil. Also cut in to the natural subsoil in the western half of the trench was a shallow linear cut, 2017, aligned north-south and which continued beyond the northern limit of excavation. The cut, 2017, was 0.13m in diameter and filled with a dark brown silty loam (2016; 0.06m).

Trench 21 (Figures 62&64; Plates 85-87)

In Trench 21 the sod (2100; 0.08m), was removed onto the smooth brown loam topsoil layer (2101; 0.07m), which produced a musket ball (SF#1068; Plate 87), brick fragments and pottery. Under this topsoil layer (2101) and at the south end of the trench was a line of large cobbles (2105) aligned northeast - southwest and extending for 2.6m, which acted as a kerb to the main section of road. Extending northwest from this was a cobbled pathway (2102) which was 2.15m wide and extended the full length of the trench. This pathway was demarcated by larger cobbles (0.18m – 0.32m diameter) on either side of the path and also down the mid line, which were slightly raised. The rest of the cobbles were slightly smaller (0.06m -0.2m diameter), tightly packed and at a lower level. Although the musket ball was found within the topsoil layer, it was probably deposited on the roadway when it was still exposed and the topsoil gradually accumulated over it. The cobbles were not removed, however, a small sondage (1.3m x 0.8m) was excavated in the north-west corner of the trench to investigate the bedding layers underneath the cobbles. Within the sondage there was a dark brown loam (2103; 0.05m) similar to the topsoil, which was overlying a mid-brown gritty loam (2104; 0.2m) with charcoal flecking and small sub-angular stone inclusions. This deposit, 2104,

yielded numerous 17th-century artefacts including flint, slate, clay pipe stems, pottery, glass and nails. This layer ran under the cobbles (2102) and acted as the bedding layer for the cobbles.

Trench 22a (Figures 65&66; Plates 88&89)

In Trench 22a, the sod (2200; 0.06m) and the topsoil were excavated (2201; 0.14m) onto a greyish brown gritty loam (2205; 0.8-0.13m) that was only present at the southern end of the trench. This deposit contained glass, pottery, brick and clay pipe fragments. This gritty loam (2205) overlay a thick layer of dark brown, charcoal flecked loam (2208; 0.1-0.23m) which was overlying a lens of yellowish orangey clay (2207; 0.17m) only 0.75m in length. The removal of this deposit revealed a dark greyish brown, gravelly loam (2206) present only in the northern half of the trench which was overlying a thick blackish brown gritty, clayey loam (2212; 0.2-0.4m). This deposit was overlying the fills of two cut features. To the south of the trench there was a greyish brown silty clay (2209) which was filling a shallow, subsoil cut feature (2216; 0.4m), aligned north-south and measuring 1.5m in length with a rounded termination. At the north end of the trench there was a dark yellowy brown sticky clay (2220; 0.36m) which contained animal bone fragments which was overlying a light brownish red, ashy silt deposit (2222; 0.06m). These deposits were filling a ditch like feature (2221) which was steep sided with a flat base. Only the northern edge of the cut 2221 was exposed and it cut through a smooth brownish black layer of organic clayey loam (2213; 0.05-0.15m) approximately 2.5m in length and between 0.5m-1m in width which was possibly a buried sod horizon. At the base of 2221 there was a yellowy brown clay (2223) with no finds which was filling a small stakehole (2224) which was circular in shape with a 0.2m diameter, and u-shaped in profile, 0.12m in depth, which had been cut into the subsoil.

Trench 22b (Figures 67&68; Plates 90&91)

In Trench 22b, the sod (2200; 0.03 -0.1m) was removed onto the topsoil (2201; 0.06-0.14m). This was overlying a mid-greyish brown clayey loam (2204; 0.03-0.13m) in the east of the trench, with gravel inclusions and burnt material. Underneath this deposit there was a thick, dark greyish brown silty loam (2203; 0.3-0.7m) concentrated at the west of the trench which was overlying a mid-yellowish brown clayey loam with orange and grey mottling (2210; 0.03m-0.15m). This deposit was removed to reveal a dark greyish brown loam confined to the northern edge of the trench (2225; 0.15m-0.15m). To the western side of the trench there was a dark blackish brown silt layer (2226; 0.05m) which was partially overlying a mid-greyish brown silty clay (2211; 0.03-0.10m) with frequent sub-angular small stones (0.04-0.08m diameter) which formed a surface approximately 1.9m in width. It was aligned roughly north – south, however, the full length or width of this deposit, 2211, could not be determined due to constraints of the trench size. To the east of and underlying 2211 there was dark brown silty loam (2217; 0.03-0.18m) with stony inclusions and contained a base sherd of Scottish Grey Ware (SF#0602; Plate 91). This deposit was removed to reveal the subsoil.

Trench 22c (Figures 69&70; Plates 92)

In Trench 22c, the sod (2214; 0.09m) was removed on to a mid-brown, clayey loam (2215; 0.13-0.31,) which contained fragments of pottery, flint and tile. This topsoil layer was removed to reveal a mottled blackish brown lens with occasional stone (2218; 0.08m). This was overlying a dark brown, clayey loam (2219; 0.15m) with frequent flint and stone inclusions. This was overlying the natural subsoil which was gravelly in texture and sloped down gently to the north.

Trench 23a (Figures 71&72; Plates 93&94)

In this trench the sod (2300; 0.04-0.09m) was removed onto a mottled, orange and mid brown clayey silt (2330; 0.15m) with modern finds including breeze block fragments and modern glass. This filled a wide shallow cut (2329) which extended approximately 1.15m before continuing into the west-facing section of the trench. This modern cut had been made through a mottled layer of brown silty clay and mortar rich rubble (2312; 0.25m) which most likely represents the debris from the decay of the underlying wall which shows itself in this trench as a mortar rich, compact layer (2331; 0.08-0.2m). This compact mortar deposit 2331 extends 0.66m from the east-facing section of the trench and to the east end of the trench there is a dark brown, sticky silty clay (2332; 0.3m). Both these layers are overlying 2333 a layer of large sub-rounded and sub-rectangular boulders (0.25m – 0.6m diameter) with a relatively flat surface which are most likely forming a level surface for the construction of a building. Excavation was stopped at this level.

Trench 23b (Figures 71&73; Plates 94-96)

In Trench 23b the sod (2300; 0.03-0.15m) was removed to reveal a mottled layer of brown silty clay and mortar rich rubble (2312; 0.11-0.2m) which extended throughout the trench. The removal of the 2312, revealed the mortar rich deposit (2331), also present in Trench 23a; which seemed to be part of the underlying stone foundation (2316) and a loose mortar deposit (2315; 0.36m) which was also overlying the foundation (2316). To the western side of the trench, the removal of 2312 revealed a dark brown slightly sticky, silty clay (2313; 0.24-0.38m) which contained slate, clay pipe fragments, pottery and animal bone. This overlay a localised area of dark brown silty clay (2317; 0.17m) rich with mortar and slate fragments in the southern corner of the trench. The removal of these deposits 2312, 2313 and 2317 revealed a cobbled roadway (2314) which was 1.10m wide and continued beyond the northern edge of the trench, with its southern limit running up to wall 2316. Within the cobbled surface there was a drain feature constructed of medium sized cobbles laid at a slight tilt to form a shallow channel to direct water. The surface was disturbed in the north-east corner of the trench where a dark greyish silty clay was exposed (2318). The cobbled surface was bedded in a layer of dark brown, silty clay (2327; 0.1-0.22m) with small stone inclusions. A 0.8m x 0.2m sondage was cut through this deposit (2327) where it was exposed in the south-west corner of the trench. The removal of the bedding clay, 2327, revealed a mottled dark brown and red, sandy layer (2328; 0.2m). This

was overlying a mid-greyish brown silty clay (2334; 0.1-0.22m) which was directly overlying the subsoil. These deposits appear to be butted up against the wall, 2316. This wall was constructed of large boulders bonded with mortar which was still intact at on the upper courses (2315). The foundation was 0.76m in height, aligned northeast – southwest and extended 1.98m into the eastern edge of the trench, the exposed width was 0.78m.

Trench 23c (Figures 74&75; Plates 97)

In Trench 23c, the sod (2300; 0.03m) was removed onto a thin layer of topsoil (2335; 0.08m). The trench was stratigraphically divided by a wall aligned north-south (2302). On the eastern side of 2302, the topsoil 2335 overlay a rubble deposit within a mottled brown, silty clay matrix (2301; 0.15-0.2m). In the north-east corner of the trench there was an irregular shaped, modern cut/disturbance (2310) filled with a mottled dark brown silty clay (2311) which contained animal bone, pottery, clay pipe fragments and a modern metal screw. The modern cut, 2310, measured 0.8m in length and approximately 0.18m wide and 0.3m deep and sloped to the south. On the western side of the wall the topsoil, 2335, was overlying a mid-brown silty clay with large stone inclusions (2303; 0.25m), this was most likely collapse from the wall, 2302. The rubble, 2303, was overlying a dark brown, silty loam (2305; 0.05 -0.3m) which is probably an accumulation of soil after the abandonment of the site. The removal of these two deposits revealed the full extent of wall 2302, which was aligned northwest – southeast, approximately 0.85m wide and stood to a height of 0.22m. Only the rubble base of this wall survived which was soil-bonded and constructed of stones ranging in size from 0.08m to 0.35m in diameter. To the west of the wall, against the north-facing section there were two posthole cuts (2306 and 2308). Posthole 2308 was located 0.4m from the western edge of the trench, and was approximately 0.28m depth and 0.1m in diameter at the base and filled with a dark brownish black silty loam (2309 - similar to 2305). The second posthole, 2306, was located 0.35m to the east of posthole 2305 and was similar in shape and profile: 0.23m in depth and 0.12m in diameter at the base and filled with a similar dark brownish black silty loam (2307). These features were cut into a mid-brown, gritty silty clay (2304; 0.11-0.3m) which continued underneath the wall (2302) and provided its construction level. Excavation of the clay layer, 2304, demonstrated that it was directly overlying the subsoil.

Trench 23d (Figures 76&77; Plates 98)

In Trench 23d the sod (2320; 0.05 – 0.2m) was removed onto the dark brown, silty clay (2321; 0.15 – 0.3m) with small stone inclusions and one fragment of clay pipe stem. This was overlying a cut (2325) at the southern end of the trench which extended beyond the limit of excavation. The exposed width of this cut was 1.2m and the maximum depth was 0.3m. This cut (2325) was filled by an orange/red sandy clay (2323; 0.05 – 0.3m) which contained some scorched stone and occasional charcoal flecking indicating that it represents an intense episode of burning. This feature was cut

through a surface comprising compacted silty clay with small stone and gravel inclusions (2322) which appears to have been constructed on the natural subsoil (2324).

Trench 25a (Figures 78-81; Plates 99-103)

The sod (2500; 0.07m) and the greyish brown loam topsoil (2501; 0.15-0.20m) were removed to reveal the top of a wall (2502) associated with the corner of a building. Two layers of rubble (2503 and 2507) were associated with this wall; within the interior there was a layer of medium sized rubble stone within a soil matrix (2503; 0.31m similar to the topsoil 2501). To the exterior of the wall there was a similar collapse deposit (2507; 0.09-0.18m). This was overlying an orange sandy loam with charcoal flecking (2505; 0.05m). This deposit seemed to be an isolated deposit partially overlying the underlying cobbled surface (2506). This cobbled surface is the continuation of the cobbled roadway revealed during previous excavations in 2009 and 2010. The cobbled surface (2506) comprised a row of large flat cobbles possibly marking the boundary of the roadway and the property. In the space between the larger cobbles and the building, smaller cobbles or packing stones were used. In the interior of the building, the rubble layer 2503 was removed to reveal a light brown clayey loam (2504; 0.21 – 0.32m) with small stone inclusions and charcoal flecking and finds which included glass, pottery, bone, clay pipe and metalwork. The removal of this deposit fully exposed wall 2502 which extended from the southeast edge of the trench extending northwest for 3.6m before turning at a right angle and continuing southwest for 2.4m into the north-east facing section. The walls are approximately 0.6m thick and stand one to two courses (0.45m) in height; the main cornerstone of the building appeared to have been removed and the interior corner of the building had a curved appearance. To the interior side of the south-west facing stretch of this wall (2502) there was a line of six flat, square stones which formed a plinth (2539) which ran parallel to and abutted wall 2502. The plinth (2539) measured 1.22m in length, 0.18m in width and 0.16m in height and had a similar construction style as the wall (2502) suggesting that this feature is contemporary with the building construction. 0.13m from the north facing section edge of the trench there was evidence of a blocked-up doorway. This was indicated by the rougher construction of the wall in this area which also corresponded with a break in the cobbled surface to the exterior of the wall while in the interior of the building a beaten clay floor (2538) stopped in line with this blocked up doorway. The blocked up doorway (2542) is approximately 1.25m wide. The area of clay floor (2538) exposed within the trench measured approximately 1.25m by 1.5m and was overlying an area of large, relatively flat stones (2508), 0.22 - 0.44m in diameter, which extended throughout the interior but were concentrated to the northern end of the building. These appear to have formed an uneven flagstone floor. Within this surface (2508) there was a pivot stone (approximately 0.14m diameter) which may suggest an internal partition at this end of the building which would also correspond with the later clay floor (2538) and the associated blocked-up doorway (2542). There appeared to be a circular deposit (2513) in the northern corner of the building. This deposit was half-sectioned but no cut edge was discernible, instead the dark brown silty loam deposit (2513; 0.22m) continued under the flagged surface, 2508. This loam deposit (2513) was overlying a mid-brown silty clay layer (2540; 0.12m) which directly overlay the

subsoil. To the exterior of the building, where the cobbled surface stopped at the blocked-up doorway, there was a metalled surface (2541) at a slightly lower level than the cobbles (2506), which presumably is the original entrance level into the building as it appeared to be running under the blocked-up doorway. Excavation stopped at this level and did not continue to the subsoil.

Trench 25b (Figures 82-84; Plates 104-106)

In Trench 25b, the thin sod layer (2509; 0.02m) was removed onto a greyish brown, loam topsoil layer (2510; 0.13-0.19m) which was rich in artefacts including clay pipe, animal bone, flint and pottery including two sherds of Chinese porcelain (SF# 824 and 826; Plate 106). The removal of this revealed a network of walls. Wall 2523 formed a corner running northwest - southeast and then turning northeast-southwest. Wall 2520 was aligned northeast - southwest, wall 2511 was aligned north-south and wall 2524 was a short section of wall running northwest - southeast. Multiple layers of rubble and soil had accumulated in the trench, which were similar but were physically separated by the walls. In the north-west of the trench between walls 2511 and 2520 there was a greyish brown clayey loam (2514; 0.14m) with frequent sub-angular stone and charcoal inclusions and a small area of burning (2518; 0.02m). In the eastern half of the trench between walls 2511, 2523 and 2524, a greyish brown clayey loam (2512; 0.25m) with stone inclusions (0.05-0.45m diameter) had accumulated which overlay a metalled surface (2525; 0.1m) located between walls 2511 and 2523. On the internal side of wall 2523 the loam deposit 2512 overlay a mottled mid-brown and orange clayey loam (2517; 0.14m) with charcoal flecks and fragments of bottle glass, animal bone and pottery. To the south-west of the trench between walls 2520 and 2524 a dark brown silty loam had accumulated (2515). Wall 2524, extended from the southeast edge of the trench for 0.32m to meet wall 2523 and was 0.68m wide. This wall was overlying a brown, clayey loam (2516; 0.12m) to its eastern side which was on top of a blackish brown loam, burnt deposit (2521; 0.05m). To the western side, wall 2524 was overlying a dark brown, silty clayey loam layer (2522; 0.18m) with stone inclusions. Wall 2524 masked the relationship between deposits 2522 and 2521. Wall 2523 was the most substantial wall in the trench; it extended from the north-western edge of the trench for 1.75m before turning at a right angle and continuing for 1.1m into the north-eastern edge of the trench. The maximum height of this wall was 0.41m with multiple courses surviving and its width varied from 0.48-0.6m. Wall 2511 extended from the north-western edge of the trench for 0.9m to meet wall 2520, it had a maximum height of 0.2m and was 0.5m wide. Wall 2520 extended from the south-western edge of the trench for 1.8m and abutted wall 2523. It was between 0.5m and 0.6m wide and had a maximum height of 0.26m. Walls 2511, 2520 and 2523 were all constructed on a greyish brown, stony loam (2519; 0.07m) which contained fragments of pottery and glass. In the northern side of the trench, 2519 was overlying the natural subsoil. To the south side of the trench the removal of deposits 2521 and 2522 uncovered a greyish brown silty clay loam (2527) with charcoal flecking, the surface of this deposit was considerably lower than the adjacent natural subsoil, so excavation was stopped at this level. Presumably wall 2520 was overlying an earlier cut which would explain the difference in ground level on either side of the trench.

Trench 25c (Figures 85&86; Plates 107&108)

In this trench the sod (2543; 0.04m) was removed onto the topsoil layer (2544; 0.1m). The removal of this deposit (2544) revealed two layers of rubble collapse (2528 and 2529) separated by the corner of a wall (2530). The rubble on the external side of the wall was a dark brown, friable, silty loamy clay (2528; 0.35m) with large sub-angular basalt stones. On the internal side of the wall the deposit was a similar dark brown silty loamy clay with rubble inclusions (2529; 0.3m). Underlying the rubble layer, 2529, was a dark brown, slightly gritty silty clay (2531; 0.1m) which in turn was overlying a possible stone surface (2535). This surface ran up to the wall (2530) which extended from the north-east edge of the trench in a south-west direction for 1.6m before turning at a right angle and running to the south-east for 1.1m into the south-east facing section. The average thickness of this wall was 0.64m, and it stood to a maximum height of 0.44m. It was constructed on a dark brown, silty clayey loam (2532; 0.15m) which was overlying a mid-brown silty clay (2534; 0.14m), the fill of a shallow east - west aligned, subsoil-cut gully (2533), at the north-east end of the trench. Wall 2530, was probably part of the same structure uncovered in Trench 25a (wall 2502). Excavation on the interior of wall 2530 stopped at stone surface, 2535; on the exterior side of the wall, excavation stopped at the level of the subsoil.

Trench 27 (Figures 87&88; Plates 109&110)

In Trench 27, the sod (2700; 0.1m) was removed onto a mid-brown, friable, silty loam (2702; 0.2m) which was abundant in 17th-century artefacts including clay pipe fragments, pottery sherds, iron nails and glass fragments. The deposit (2702) was removed to reveal a layer of mid to large sub-angular stones (2703) which formed a 4.3m wide surface. There were no limits to this stone deposit so the trench was extended by 3 metres. The extension of this trench showed that the surface 2703 was 4.3m wide, there was then gap of 0.68m succeeded by a linear arrangement of stones (2706) 0.78m in width. Both 2703 and 2706 were overlying a dark brown layer of clayey loam (2705; 0.2m). At the southern edge of the trench this loam 2705 overlay a mid-brown, sandy silt with large sub-rounded boulders (2708) which was filling a subsoil cut feature (2707). The cut (2707) measured 1.3m in length and had a circular edge which continued into the western edge of the trench. Excavation stopped at this level and the cut 2707 and fill 2708 were not fully excavated.

Trench 28 (Figures 89&90; Plates 111-115)

In Trench 28, the sod (2800; 0.1m) was removed onto a mid-brown loam (2801; 0.1m) which contained animal bone and pottery, including a sherd of tin glazed earthenware (SF#1045; Plate 115). This was overlying a layer of stone rubble within a mottled orange and grey loam matrix (2804; 0.12m), which was filling a hollow between two areas of cobbles (2802 and 2803). To the west of the trench there was a linear arrangement of cobbles (2802), aligned northwest-southeast, 2m in length and 0.55m wide. This was interpreted as the eastern edge of the main cobbled roadway. 0.4m to the

north-east of this cobbling 2802, there was an irregular shaped patch of cobbles (2803) which overlay a mid-brown loam (2805) with charcoal flecking and orange ashy inclusions. A 0.5m wide sondage through this deposit revealed the natural subsoil. At this point a 10m x 1m extension was added to the north-eastern edge of the trench aligned to investigate the cobbles further and to investigate linear anomalies shown on the geophysics. The topsoil in the trench extension (2807; same as 2801) was removed. However, the cobbles (2802) were not found to continue. Instead the subsoil was revealed on excavation of the topsoil (2807) which had been cut by two feature. One of the cuts (2808) was located at the eastern end of the trench. Only the western edge of the cut was exposed, 0.2m in width, and it was filled by a brownish black loam (2809; 0.14m) with small stone and charcoal inclusions. Towards the middle of the trench there was a larger irregularly shaped cut (2810) which measured 5.2m in length and extended into the north-facing section. There was a thin, sporadic layer of mid yellowish brown gravel (2812; 0.1m) which was overlying the main fill, a mid-brown, clayey loam (2811; 0.22m). The fill, 2811, was removed and revealed an earlier linear cut feature (2813) which was 1.62m in length and 0.6m wide, and extended beyond the south-east edge of the trench. The upper fill of this cut (2813) was a mid-yellowish grey clay (2815; 0.1m) which overlay a mottled orange and mid-grey, gritty, clayey silt (2814; 0.02m) which contained a fragment of window glass and slate.

Trench 30a (Figures 91&92; Plate 116)

In Trench 30a, the sod (3000; 0.1m) was removed onto the mid brown, friable loam layer (3001; 0.11m) with stone inclusions. This topsoil was removed to reveal a cobbled surface (3002) which comprised rounded cobbles between 0.08 and 0.16m in diameter, uncovered 0.18-0.22m below the present ground surface. These cobbles were a continuation of the cobbles found in Trench 16 (1604). Excavation ceased at this point.

Trench 30b (Figure 93&94; Plate 117)

In Trench 30b, the sod (3000; 0.08m) and topsoil (3001; 0.07-0.18m) layers were removed to reveal the continuation of the cobbled surface (3002) 0.13 -0.22m below the present ground surface. The cobbles ranged in size 0.08 – 0.4m in diameter. This trench was considerably waterlogged possibly indicating the presence of a spring in the hollow ground to the immediate south.

Trench 30c (Figures 95&96; Plate 118)

In Trench 30c, the sod (3000; 0.06m) and topsoil (3001; 0.13m) layers were removed to reveal the continuation of the cobbled surface (3002) 0.15 – 0.2m below the present ground surface. The cobbles ranged in size from 0.06m – 0.20m diameter. Again these cobbles remained unexcavated.

Trench 30d (Figures 97&98; Plate 119)

In Trench 30d, the sod (3000; 0.06m) and the topsoil (3001; 0.08-0.18m) layers were removed onto a dark greyish brown loam with occasional charcoal flecking (3013; 0.13m). This was overlying a deposit of large rounded stones (3016; 0.28m) aligned east-west that were only present in the northern half of the trench, 0.2m below the present ground surface. The stones, 3016, overlay a layer of mottled, orange and brown silty clay (3017; 0.16m). Due to the small size of the trench, excavation stopped at this level.

Trench 30e (Figures 99&100; Plate 120)

Trench 30e was located 10m south-west of the western limit of Trench 20.

In Trench 30e, the sod (3000; depth) and the topsoil (3001; depth) layers were removed onto a layer of sub-rounded and sub-angular stones (3003) of varying sizes in a roughly linear formation aligned east-west. This is feature was very informal but it could have been the remains of a wall, however, it is perhaps more likely to have been coincidental collapse. Excavation was stopped at this level.

Trench 30f (Figures 101&102; Plate 121)

Trench 30f was located 10m south-west of Trench 30e.

In Trench 30f, the sod (3000; depth) was removed onto a brown loam topsoil layer (3009; 0.20m) with no inclusions. Underlying this layer was a dark brown loam deposit (3005; 0.12-0.17m) with stone inclusions which was overlying a metalled surface (3004) which comprised small flat stones (0.05-0.1 in diameter) and which was only present in the western half of the trench. The metalled surface (3004) overlay dark brown silty loam (3006; 0.06-0.08m) with charcoal inclusions that was directly above the natural subsoil.

Trench 30g (Figures 103&104; Plate 122)

Trench 30g was located 10m to the south-west of trench 30f.

In Trench 30g, the sod was removed (3000; 0.11m) onto a slightly stonier topsoil layer (3009; 0.1-0.21m). This was overlying a light yellowish brown stony layer (3007; 0.05m) which was directly over the natural bedrock which sloped down to the east.

Trench 30h (Figures 105&106; Plates 123&124)

The sod (3000; 0.06m) was removed onto a thick layer of brown loam (3009; 0.22m). This topsoil layer was overlying a layer of stone rubble (3011) which overlay an orangey brown silty clay (3014;

0.05-0.7m), with gravel inclusions and root disturbance which was directly overlying the bedrock. It was at this point that the trench was extended to the north to investigate the profile of the adjacent bank. The sod and topsoil (3000 and 3009) were both removed, revealing a row of stones at the top of the 'bank' which may have formed a low boundary (3012). The stones (3012) were overlying the silty clay deposit, 3014, which extended throughout the trench and overlay the natural subsoil. The subsoil to the north of the trench was very weathered possibly due to root action from 3014.

Trench 31 (Figures 107&108; Plate 125)

The sod (3100; 0.04-0.07m) was removed onto a brown loam topsoil layer (3101; 0.04-0.1m) which contained fragments of animal bone, slag and coal. Below this layer there was a greyish brown, friable gravel loam (3102), with sub-rounded stone inclusions (0.08-0.18m diameter). This was removed to reveal a thin layer of greyish brown sandy loam (3103; 0.01-0.04m) with small stone inclusions which was directly overlying the natural subsoil.

Trench 32 (Figures 109&110; Plate 126)

In Trench 32 the sod (3200; 0.1m) was removed onto a dark brown, friable, silty loam (3201; 0.25m). This topsoil layer was overlying a layer of large rounded and sub-rounded stones (3202) which rise at the southern end of the trench to form a platform which is visible in the surrounding topography. These stones (3202) were not excavated but at the northern end of the trench they were overlying a mid-brown, gritty clayey silt (3203; 0.04m) with small stone inclusions which in turn was overlying the natural subsoil. Excavation did not continue beyond this level.

4 DISCUSSION

The 2014 excavations at Dunluce Castle have strengthened theories made following earlier investigations at the site as well as unearthing new information about the town's construction and subsequent demise. Garden features inferred through the geophysical and LiDAR data were confirmed through excavation which showed the effort made to present Dunluce as a high status settlement in the 17th century. The excavation also provided the opportunity to investigate earlier features preserved underneath the 17th century horizons (mostly within the gardens), indicating activity in the area prior to the 17th century.

The following discussion is presented by phase and three broad phases have been identified (these are also highlighted and colour-coded in the Harris matrices, Appendix 2):

- **Phase 1 represents the pre-17th century activity on the site.**
- **Phase 2 represents the 17th century occupation and incorporates the construction of the town which began in 1608, the renovations to the mainland castle buildings and the construction of the garden which has been dated to post-1620 (Breen 2012, 110).**
- **Phase 3 represents the abandonment of the site, dating from the end of the 17th century through to the present day**

4.1 Phase 1 - Pre-17th century activity

Earlier activity in Area G (Garden Area)

In Area G, archaeological excavation demonstrated the existence of pre-17th century activity pre-dating the garden construction of post 1630. Despite its situation on a cliff edge, it is one of the more sheltered areas of the site, especially when compared to the north-west facing slopes of Area T where the 17th-century town was established. This is due to the presence of the higher ground to the south which provides natural shelter from the prevailing winds. The discovery of pre post-medieval settlement in this area is therefore not surprising.

In Trench 16, the edge of a substantial, subsoil-cut feature (1610) was uncovered. Only this small section was excavated but it is possible that it corresponded with another subsoil cut (1613) to the southern side of the cobbled roadway (1604). The presence of a 17th-century wall and roadway which overlay this feature prevented any further investigation but if these two cuts were related they could represent a substantial ditch running across the field, which enclosed the area to the north.

In the northernmost part of the gardens area, features were uncovered that hinted at associated earlier domestic activity. These included the gully features in Trench 7 (713, 715 and 718) which yielded significant amounts of animal bone (burnt and unburnt) and sherds of Medieval Ulster Coarse pottery suggesting a late 16th or early 17th century date for this activity (McSparron, Chapter 10). Two

of the gullies (713 and 715) were parallel, approximately 4m apart and seemingly curved towards each other suggesting that they may form part of a structure. It is possible that these features were drip gullies to catch water from the roof. Within the area enclosed by the cuts, the natural subsoil was more gravelly and there was an arrangement of stones (719) just to the south of cut 718, which is similar to cuts 713 and 715. Although these features were ephemeral, the combination suggests that they represent the remains of a sub-rectangular structure approximately 4m in diameter (Figure 112).

A fragment of animal bone retrieved from the fill (714) of one of the drip gullies (715) in Trench 7 returned a radiocarbon date of cal. AD 1445-1633 (UBA – 27109; see Chapter 4.4). A plant macrofossil from the fill (1611) of the ditch feature (1610) in Trench 16 returned a radiocarbon date of cal. AD 1414-1462 (UBA – 27217; see Chapter 4.4). The combined stratigraphic, artefactual and radiocarbon dating evidence therefore suggests that these features predate the 17th-century activity on the site and date to the 15th-16th centuries. There is an overlap in the radiocarbon dates returned from the drip gully and ditch, which may suggest that they are contemporary and it could be suggested that the ditch (1610) may have enclosed domestic activity which is represented by the cut features (713, 715 and 718). Cartographic evidence from the late 16th-century 'Dartmouth Map 25' (Breen 2012, 46), shows what looks like a settlement outside the castle that pre-dates the construction of the outer ward, and similarly the Bartlett map of Ulster (PRO MPF 1/35) dating to 1602-1603 seems to show structures outside the castle. The idea of sub-rectangular structures is reminiscent of images of medieval Gaelic houses often depicted as beehive in shape by 17th-century cartographers such as Raven (Andrews 2008). These structures or 'creats' as they are sometimes referred to, were sod and post and wattle built (O'Connor 2002, 201). It is also possible that the building was timber framed, with the frame placed directly on the ground surface and therefore leaving little trace in the archaeological record (Mark Gardiner pers comm.). Pre-plantation houses have also been investigated at Goodland, Co Antrim (Horning 2004), and although they are of stone construction, they are of a similar shape and size.

The ditch feature (1610) could, however, potentially be an earlier feature. Only a limited section of the ditch fill was excavated due to overlying 17th-century structural deposits and therefore it was not possible to determine if the sampled context was part of a basal fill of the ditch or if it represented later silting up or purposeful backfilling of the feature. One possible explanation of an earlier ditch would be a promontory fortification. Promontory forts are defensive coastal sites usually protected on two or three sides by the sea with the mainland site protected by a bank, wall or ditch (Downey 2004, 18). Further analysis of a GPR survey carried out in March 2014 (Ruffell 2014) may be able to trace the likely line of this ditch.

The burnt deposits (915 and 917) within Trench 9b also provided evidence for pre-17th century activity on the site as associated finds included the Mary I silver groat and the two unidentified, copper alloy toothed strap fittings. Although the coin was minted between 1554 and 1558, coinage stays in circulation considerably longer and this particular coin does not commonly appear in Irish contexts until the beginning of the 17th century (Robert Heslip pers comm.). However, we can be certain that the burning pre-dates the 1620s, as the construction cut for the later garden wall (905) truncates the

deposit. This narrows the date of the burning to between the late 1550s and the 1630s. This is significant as the late 16th century was a particularly turbulent time in the castle's history, with the castle switching between the MacQuillans, MacDonnells and the English numerous times between 1557 and 1585 (McDonnell 2004, 9-14).

Other probable earlier features were the ditch in Trench 10 (1009) and the stone drain in Trench 12 (1212). Both these features are adjacent to the stables and lodgings block and although only small sections have been exposed they appear to be orientated east-west and possibly extend under the mainland buildings. This indicated that the features could pre-date the construction of these buildings thought to date to the 1610-1620s and may be associated with earlier castle defences on the mainland, further radiocarbon dating of animal retrieved from the basal fill (1007) of ditch 1009, could confirm this.

Possible medieval structure in Area E (Eastern Field)

The structure uncovered in Area E was one of the most significant discoveries of the excavation. It had been presumed that the 17th-century town continued into this area but that preservation would be poor due to more intensive land improvement. The excavation of Trench 26b showed the relatively good preservation of two stone walls concealed by a layer of rubble. The character of the structure was different to those found in Area T, which were associated with the MacDonnell town. Firstly, there had been deliberate attempts to demolish the building in Area E and to level-out the associated rubble. The absence of any 17th-century red earthenwares or glass (that were prevalent in the collapse layers of the buildings investigated in Area T) in the collapse layer could indicate that the demolition of the structure possibly predated the 17th century. The walls are also solidly constructed with square-cut, flat-faced stones bonded with clay, which differs to the mortar bonded buildings in Area T. The stratigraphy indicated that the two walls belong to different phases but their position and alignment suggest that they are part of the same structure with a common entrance. The thickness of the walls suggest that this was a stone-built structure as timber building usually have a narrower, lower stone plinth. The absence of any roofing slate in the collapse layers also suggested that if the structure was roofed, it was probably thatched. The position of the entrance, in the north-facing side of the structure, towards the corner is unusual for a domestic building as it would be difficult to roof. This may indicate that this was not a domestic building but instead an outbuilding or farm building, possibly even an unroofed enclosure and the entrance in this position would have been ideal to funnel or herd animals (Mark Gardiner pers. comm.). It is also worth noting that the stones within the collapse layers were rather small which perhaps indicates that the walls did not stand much higher than their present height, i.e. the rubble did not contain any large stones equivalent to those employed in the extant walls. Alternatively, the larger stones may have been robbed out and reused for the construction of nearby field walls.

The submission of a plant macrofossil (oat grain) retrieved from the burnt deposit (2617) within the structure in Trench 26b returned a date of cal. AD 1435 – 1632 (UB – 27216; see Chapter 4.4). This indicates that the structure represents agricultural or domestic activity which predates the construction

of the 17th century MacDonnell town and is consistent with the artefactual evidence. The Scottish Grey Ware found in association with the structure has been found on sites in Ulster in 14th-17th century contexts (McSparron, Chapter 10). At Dunluce this type of pottery has been found in association with the 17th-century town but the lack of 17th century red earthenwares found in Area E would suggest that the structure was out of use and demolished by the start of the 17th century, possibly before the 17th-century town was established. As discussed previously, there is cartographic evidence for earlier settlement at Dunluce in the 16th century at least. Excavation in the field to the immediate south in 2009 uncovered pottery thought to date to the Anglo-Norman period (Breen 2012, 31). Although the Anglo-Norman presence in the area is interesting, it is probably not represented by the structure excavated in Trench 26b.

4.2 Phase 2 – 17th century

The Town (Figure 111)

Initial construction

From historical sources we know that the town was well established by 1611 and was probably initially constructed around 1608. Two contemporary buildings were investigated during this excavation – one in Trenches 23a, 23b and 23c and the other in Trenches 25a and 25c. The building in Trenches 23a, 23b and 23c was in a key location in the town, on the edge of the marketplace, next to the castle entrance. Although the walls were in a poor state of repair, the gable end was constructed on a substantial footing and bonded with a strong mortar. The layer of boulders in Trench 23a showed that parts of the land had to be effectively terraced during construction to counteract the substantial slope of the ground. This would explain why in some areas the interior of the buildings were at a lower level than the exterior whereas in other places the interior was at a higher level than the exterior. There was little other evidence about the construction of this building and no floor level seemed to survive. Roof slates and fragments of North Devonshire roof tile were found in association with the collapse layers, which may have originated from this building or from one of the adjacent castle buildings. If they did originate from this building in Trench 23 it could suggest that it was of relatively high status, possibly an administrative building directly associated with the castle or marketplace. The paved area uncovered in Trench 27 may have been associated with this structure, functioning as a yard.

More information was revealed by the excavation of the building uncovered in Trenches 25a and 25c. This building was also in a significant location, opening out on to the merchants' street, opposite the blacksmiths building and at a junction of the two main routeways. The two diagonally opposite corners of the building were excavated, indicating that the building measured approximately 14m in length and 5m in width, similar in size to the merchant's house excavated in 2009 (Breen 2012, 139-148). The location of the original entrance, uncovered in Trench 25a and which was positioned more towards the northern gable rather than centrally, perhaps suggests that the house had an internal partition and functioned as a dwelling and a byre. This perhaps occurred during the reoccupation of the town

following 1642 and could indicate a change from a mercantile to subsistence economy as suggested during previous excavation (Breen 2012, 146). There was no indication of a hearth in the northern gable though this may have been missed by the position and size of the trench, alternatively it have been placed elsewhere or due to the design, left no trace at floor level. The absence of roofing slate and nails amongst the collapse layers and building rubble suggested that the building had a thatched roof prior to its abandonment.

Part of the merchant's street was also exposed in this trench. From the small area excavated there seemed to be a row of larger cobbles (2506) parallel to and approximately 0.3m from the front wall of the building. These larger stones probably formed the edge of the original road and it seems likely that the merchant's street was constructed prior to the construction of this building with the smaller stones between the road and the house being set at a later date after the house had been built. A firm working surface would have made the transport of materials considerably easier in a field where the natural subsoil mostly consists of clay. The road continued downslope and its termination is marked by a row of larger cobbles or kerb stones in Trench 21. The cart track (2102) running north-west from the main cobbled roadway is of uncertain use as it is not clear where exactly it leads to. However, the overlying finds including the pottery and musket ball appear to be 17th century in date and the fact that it merges with the main section of road, suggests contemporary usage.

The excavation of Trench 22a revealed the edge of a ditch aligned southwest-northeast. This trench was located to the area to the rear of the merchant's house excavated in 2009 (Breen 2012, 139-148). The submission of a sample of short-lived charcoal from the basal fill (2222) of the ditch returned a radiocarbon date cal. AD 1494 – 1657 (UB – 27215; see Chapter 4.4). Although the feature has a wide date range, its location indicates that the cut feature (2221) is most likely a boundary ditch for a garden plot associated with the merchant's house. In Trench 25b, a wall (2520) was constructed on the edge of a dark silty loam deposit (2527). Although this deposit was not excavated, due to the presence of the wall, it is probably the fill of a cut, possibly a boundary ditch similar to that found in Trench 22a.

The northern limit of the town was demarcated by garden boundary wall (1607) uncovered in Trench 16 and which can be traced in the topography and the additional geophysics running east-west across the field (see McDermott Chapter 9). The western boundary was naturally demarcated by the narrow, steep valley and stream.

The excavation of Trench 5, showed that the cobbled marketplace was constructed on the old topsoil layer and that no earlier surfaces were present. The marketplace would have been a key area of the 17th-century town and is likely to have been one of the first parts to be constructed during the initial laying out of the town.

Later modifications

The town started to go into decline towards the mid-17th century with it reportedly being abandoned after the rebellion and fire in 1642. However, the 1659 census of Ireland (Pender 1939) and 1662

hearth rolls (Carleton 1991) detail people still living in the town beyond 1642, although the population had decreased. It is probable that modifications were being made to the buildings after 1642 that reflect the declining status of the townspeople.

In Trench 25a, the building appeared to have undergone modifications. The excavated evidence suggested that the original rough flagged floor (2508) had been overlaid with a later clay floor (2538) which corresponded with the blocking of the original doorway (2542). These modifications were possibly made to subdivide the building and to create an additional room within the building. The presence of the pivot stone found between the clay floor and the paved area would also support this. A similar sequence was also uncovered in the 2009 excavations of the merchant's house which had been subdivided to create a byre at one end (Breen 2012, 144).

The cobbled roadway uncovered in Trenches 16, 23b, 30a, 30b and 30c also seems to be later in date and to post-date the initial phase of construction. Although similar to the merchant's street there were a few significant differences. Firstly, it was considerably narrower (approximately half the width) and although a drain is present, it was of a different style, and with a deeper channel. This feature was probably more a reflection of the location of the road and the topography of this part of the site which is relatively flat and therefore a deeper channel is required to direct the water effectively. Another difference was that in Trench 16 the road (1604) was constructed on a substantial deposit of artificially heightened ground (1624) which was built up against the boundary wall (1607). Similarly in Trench 23b the road (2314) was constructed on thick deposits of imported soil (2327 and 2328) which was constructed against the footing of the building (2316). The excavation of Trenches 30d, 30e, 30f and 30g show that the road seems to peter out in this direction and did not extend towards the mill site in the valley. Similarly the 2014 geophysical survey results (see McDermott Chapter 9) indicated that it did not turn to join the cobbled surface (2102) in Trench 21. The roadway, leading from the castle entrance and marketplace therefore essentially goes nowhere as no buildings or plots have been detected to the south side of this roadway. There were also considerably fewer artefacts uncovered in the topsoil and the collapse layers which overlay the western stretch of this road perhaps suggesting that it was used less frequently. When these factors are viewed together it might suggest that this roadway was perhaps constructed later in the early 17th century when the prospects of the town were still good but that it was never finished once the town started to go into decline. Alternatively the roadway could have provided another access point to the gardens, however further excavation would be required to confirm this.

The stone drain uncovered in Trench 20 (2013) may also have been a later modification to the town, although few artefacts were recovered from the feature which makes it difficult to date. It had a similarity to a drain excavated within the stables block during the 2009 season of excavation which dated to the early part of the 17th century (Breen 2012, 112-114). However, the drain corresponds with a break in the boundary wall (1608) picked up in the 2014 geophysical survey (see McDermott Chapter 9) perhaps suggesting that the drain post-dates the construction and use of the boundary.

The Castle

Within the Upper Inner Ward of the castle, the excavation of Trenches 1, 2 and 4 revealed a cobbled surface (103, 203 and 402). This formed a cobbled courtyard that stretched from the present entrance to the cross wall between the brew house and the lodgings block. Previous excavation and documentary evidence from the 1642 depositions suggest that the mainland buildings underwent significant renovations in the 1610s – 1620s, with the construction of the lodgings block, brew house, cross wall, funnel walls and associated ‘new pavement’ all thought to date to this time (Breen 2012, 125-126). The cobbled surface in the Upper Inner Ward is most likely contemporary with this activity.

The Gardens (Figure 112)

The presence of the formal gardens at Dunluce reflects the increased popularity of formal gardens which were associated with high status houses in the 17th century (McErlean 2007, 277). Dunluce is a rather unique example of a preserved 17th century garden as it has not been subject to later modification (Reeves-Smyth 1999, 104) and therefore provides archaeologists with the opportunity to investigate a preserved 17th garden-scape with minimal later disturbance.

How the gardens were constructed

The creation and landscaping of the terraces was a substantial undertaking. Excavation in Trenches 7, 9a, 9b, 13a, 13b and 16 showed that the underlying subsoil naturally sloped down to the northwest and so to create level garden terraces, extensive groundworks would have had to have taken place. The shallow stratigraphy towards the southern end of each of the terraces, and the deep stratigraphy at the northern end, showed that the terraces were created by scarping soil from the upslope area, thereby reducing the natural ground level, and then deposited further downslope to build up the ground level. The new ground level was then kept in place with the construction of retaining walls. The retaining walls discovered in Trenches 7, 9b, 12, 13a and 13b were one of the key features uncovered during the excavation and show the formal way in which the gardens were constructed. Although only small sections of these walls were exposed, the geophysical survey results show that two main terrace walls traversed the garden area in an east-west direction. Wall 703 (Trench 7) and 903 (Trench 9) were part of the same wall which acted as the retaining element for the middle terrace and mark the transition into the lower garden terrace. Similarly wall 1208 (Trench 12) and 1307 (Trench 13) formed the same retaining wall that supported the upper terrace and marked the transition into the middle terrace. The excavated evidence suggested that the extensive landscaping and earth moving was conducted concurrently with the construction of the terrace walls. In Trenches 9b and 13b it was evident that the walls were constructed and that the ground was then artificially heightened behind it. However, in Trench 7 there was a clear construction cut through the terrace material for the terrace wall (703), which was then refilled after the construction of the wall demonstrating an alternate sequence in its construction. This perhaps was a reflection of inaccuracies when laying out the earthworks which were then rectified with the wall construction. It is interesting

that a purposeful decision was made to face both sides of the wall considering that the lower courses of the southern faces would not have been seen once the terraces were constructed and the ground level was raised.

All terrace walls (703, 903, 1208, 1307 and 1315) had a similar construction style and were of a consistent width, approximately 0.7m. It is difficult to determine the height of the walls; presumably they were high enough to provide shelter for plants and people but not so high as to block the view from one terrace to the other. Considerably more rubble or wall collapse was associated with the lower garden terrace, especially towards the western side of the terrace (Trenches 7 and 8). This could be a reflection of the terrace wall height or may simply be because more stone was removed later from the upper more accessible end of the site.

The boundary along the western side of the gardens was different in character to the southern boundary. It consisted of a bank and two narrow slot trenches excavated under this bank in Trench 11 may suggest that there was an associated hedge or pallsade.

A drain was also inserted during the original garden construction as evident in Trench 9 (932) and can be traced in the geophysical survey results running at a north north-west, south south-east angle through the garden terraces (Figures 6 and 112; Mussen 2012). The drain was constructed on the subsoil with the capstones set at the same level as the surrounding garden soil. This indicated that the drainage works were contemporary with the gardens and were a visible feature within the lower garden terrace. It is possible that this feature was further utilised to demarcate an area within the gardens, such as the edge of a flower bed. A similar drain was uncovered during the excavations of the terraced gardens at Aberdour Castle in Scotland (Hynd and Ewart 1983, 99). In Trench 15a it was unclear if the two linear features excavated functioned as drainage or formed part of the garden boundary to the west. The discovery of the seal matrix within cut 1506 was a key find and its form with flat, trefoil handle with suspension holes and the beaded border are typical of the 16th and 17th centuries (Philip Macdonald pers comm). The seal matrix would have presumably been a relatively high-status object which perhaps reflects the social standing of the people using the gardens. The linear feature (1506), although less formal, corresponds with the drain (2013) in Trench 20 and perhaps provided drainage from the town through the gardens, if this is the case, the seal matrix could have originated in the town and therefore be associated with mercantile activity.

How the gardens were utilised

It is believed that the formal gardens and adjacent lodgings block were contemporary with access to the gardens from the castle through the lodgings. Trench 17 was positioned at the blocked up doorway of the lodgings but it did not show any indication of a path leading from the building into the garden. A path of some form presumably existed and may have been disturbed by later conservation works and the addition of the modern above ground drainage.

In the lower garden terrace, the additional wall (905) in Trench 9b, and the perpendicular wall in Trench 9a (928), together formed a level platform against the retaining terrace wall (903) which can

be traced in the topography running east to the end gable of the lodgings block (part of the mainland castle buildings). The layer of crushed red brick and gravel (909 and 936) which formed a surface on the level platform was similar to a deposit used for paths at Lisburn Castle Gardens (O'Baoill 2004). It was not surprising that the red brick was utilised at Lisburn, considering the significant use of red brick to construct the terraces there (*ibid.*), however, at Dunluce red brick is only used in the chimney breasts in the lodgings block again confirming the contemporary construction date. The arrangement of these features in the lower garden terrace gave the clearest indication that there may have been steps between the terraces. Instead of the path stopping at wall 928, it is conceivable that the path turned at a right angle and connected to steps to the south that led upwards to the middle garden terrace or north, down into the lower garden terrace. There is no clear suggestion in the geophysical survey results that there is a break in the wall, but a narrow gap could easily be masked by later collapse and rubble.

There was no path deposit uncovered in Trenches 13a or 13b, however the dog-leg in the wall was an interesting discovery. The prevalence of symmetry in 17th century gardens (Reeves-Smyth 1999, 103) suggests the feature could be mirroring the walls in Trenches 9a and 9b to the north. Walls 1331 (Trench 13a) and 1307 (Trench 13b) can be traced intermittently continuing west in the geophysical data (Figures 6&112). In Trench 17, the red brick deposit (1705) which was at the same level as the original threshold of the doorway, possibly represents the remains of a path.

In the upper garden terrace the remains of a wall in Trench 14, indicated that the upper terrace was subdivided, creating different horticultural areas, however, due to the small size of the trench it is impossible to determine how these two areas were utilised. In other excavations such as Lisburn Castle Gardens, cuts for flower beds were noted which were filled by different textured soils (O'Baoill 2004). At Dunluce it was possible to identify the buried topsoil horizons and slight variations in soil colour and texture were observed but no distinguishable horticultural features were identified. This is perhaps not surprising considering the small scale of the excavation, but it could show that the terraces were never extensively cultivated. Excavations at the terraced gardens at Aberdour Castle yielded similar negative results with nothing recognisable as distinct garden beds or footpaths remaining (Hynd and Ewart 1983, 106). Samples of the garden soils have been taken for further environmental analysis which could indicate what plant species were growing across the site.

4.3 Phase 3 - Abandonment and Reuse

18th-19th centuries

The town was largely abandoned by the end of the 17th century with the buildings falling into disrepair, resulting in the substantial rubble deposits found across the site. The amount of rubble collapse varied and the largest quantities were found in the garden area. This may represent the removal of stone from the site to be used in building work elsewhere and presumably the buildings close to the road were utilised as they were more accessible. In Trenches 10 and 12 located in Area G, the

abandonment of the castle building was apparent through the layer of slate collapse (1003, 1204 and 1205) which overlay the garden horizons. Previous excavations have found evidence for the reuse of the town for the Dunluce Fair (Breen 2012, 177-179) which was held in the Town Field until the 1740s. The abundance of mid-17th – early 18th century glazed red earthenwares, bottle glass and some sherds of cream ware may be representative of this activity.

Modern

The disturbed nature and minimal structural remains in Trenches 23a, 23b and 23c show that the stone work had been reused for the construction of the adjacent boundary wall that lies to the east. The disturbance of the cobbled roadway (2314) in Trench 23b possibly occurred during building works to the visitors centre in the 1960s. Similarly the landscaping in Trench 29 probably originated from the construction of the car-park in the 1980s. In Trench 17 the stratigraphy suggests the doorway was also blocked up in the 20th century. There has been very little intensive agriculture on the site resulting in the topsoil layers being almost indistinguishable from the 17th century ground level, with no cultivation horizon visible. In recent times the ground has been grazed by cattle and sheep resulting in the varying thickness of topsoil across the site. For example, the ground has become very trodden and compacted in the middle garden terrace where the ground is much wetter. The grazing in the fields could also be responsible for the erosion of some of the earthworks.

4.4 The Radiocarbon Dates (Figures 113-117)

Four radiocarbon dates were submitted prior to the completion of this report and have been crucial to confirming suspected medieval activity on the site.

The submission of animal bone (unidentified mammal long bone) retrieved from the fill (714) of one of the drip gullies (715) in Trench 7 returned a radiocarbon age of 376 ± 31 BP which calibrates, at the 2-sigma range (95.4%), to cal. AD 1445 – 1633 (UBA – 27109; Figure 113). A plant macrofossil from the fill (1611) of the ditch feature (1610) in Trench 16 returned a radiocarbon age of 460 ± 28 BP which calibrates at the 2-sigma range (95.4%) to cal. AD 1414-1462 (UBA – 27217; Figure 114). The combined stratigraphic, artefactual and radiocarbon dating evidence suggests that these features predate the 17th-century activity on the site and date to the 15th/16th centuries. There is an overlap in the radiocarbon dates returned from the drip gully and ditch which might suggest that they are contemporary. It could therefore be suggested that the ditch (1610) may have enclosed domestic activity which is represented by the cut features (713, 715 and 718). However, the ditch feature could potentially be earlier. Only a limited section of the ditch fill was excavated due to overlying 17th century structural deposits and therefore it was not possible to determine if the sampled context was part of a basal fill of the ditch or if it represented later silting up or purposeful backfilling of the feature.

The submission of a plant macrofossil (oat grain) retrieved from a burnt deposit (2617) within the structure in Trench 26b returned a radiocarbon age of 397 ± 38 which calibrates, at the 2-sigma range (95.4%), to cal. AD 1435 – 1632 (UB – 27216; Figure 115). This indicates that the structure represents agricultural or domestic activity which predates the construction of the 17th century MacDonnell town.

The submission of short-lived charcoal (unidentified) retrieved from the basal fill (2222) of a ditch feature in Trench 22a returned a radiocarbon age of 294 ± 27 which calibrates, at the 2-sigma range (95.4%), to cal. AD 1494 – 1657 (UB – 27215; Figure 116). Despite the relatively wide date range, the location of the trench suggests that the cut feature (2221) is most likely a boundary ditch for a garden plot associated with the merchants' house excavated in 2009 (Breen 2012, 139-148).

5 CONCLUSION

The 2014 season of excavation has successfully revealed significant information about settlement associated with the castle by establishing the survival of both medieval and post-medieval horizons. More information has been revealed about the 17th century town and new evidence including the discovery of an additional cobbled roadway, has shown that attempts were made to extend the town before its eventual demise. The rich artefact assemblage, in particular the numerous sherds of 17th-century pottery, revealed more about the material culture of the inhabitants of Dunluce town. The recovery of a 17th century seal matrix may be suggestive of the mercantile activity within the town and may reflect the high status of some of the towns' inhabitants. The absence of other artefacts such as roofing slate and ridge tiles in contexts associated with the town suggested that at least some of the buildings in the town were thatched at the time of abandonment. The presence of an abundance of Irish made, glazed red earthenwares dated to the late 17th and early 18th centuries (McSparron, Chapter 10) as well as the evidence for the later sub-division of a building indicated that the town was still in use post 1642 and mirrors the evidence uncovered during the 2009 excavation (Breen 2012, 146). The 2014 geophysical survey (McDermott Chapter 9) completed the fieldwork aspect of geophysical survey of Area G (Garden Area) and Area T (Town Field).

The formal castle gardens had only been minimally investigated prior to the 2014 excavation. The excavation successfully confirmed the garden features inferred through the geophysical and LiDAR data. The excavation revealed the extent of the groundworks required to construct the garden terraces and also showed remarkable survival of structural remains associated with the gardens including the terrace walls, a path and a drain all of which show the effort made to present Dunluce as a 17th century high status site.

The excavation through the 17th century garden deposits proved that pre-17th century horizons still survive despite the extensive groundworks associated with the construction of the formal gardens. The features in Area G (Garden Area) seemed to show evidence for domestic settlement enclosed by a probable ditch that pre-dates the 17th-century MacDonnell town. The excavation in Area E (Eastern Field) also proved that archaeological features have survived more intensive agriculture in this area with the artefactual and stratigraphic evidence suggesting that the features in this area also pre-date the 17th century. This earlier activity and the accompanying radiocarbon dates show that the MacQuillan activity was not just confined to the castle itself and that it pre-dates the previously suggested construction date for the castle of 1490 – 1513 (Breen 2012, 49).

The recovery of multiple sherds of Scottish Grey Ware, predominantly found in Western Scotland, is of significance (McSparron, Chapter 10) and the stratigraphic and radiocarbon evidence suggests that the majority of this pottery is associated with the MacQuillan occupation of Dunluce. This represents the political and trade links Dunluce shared with the Western Isles of Scotland during this phase and shows the significance of Dunluce not only in an Irish historical context but also in a wider northern channel context.

Due to the small size of the trenches, all of the features could not be fully interpreted, but they have given an insight into the presence of multiple archaeological horizons and have provided research questions for future investigations. Unlike the castle, where major refurbishments have almost eradicated earlier activity on the site, future excavation in the surrounding fields has the potential to not only advance our knowledge of the 17th-century settlement but also provide an insight into the activity at Dunluce prior to the construction of the castle by the MacQuillans.

6 RECOMMENDATIONS FOR FURTHER WORK

Specialist Reports

The excavation produced a wide range of artefacts. A pottery report has already been completed (Chapter 10), but the remaining artefacts which include coins, tile, metalwork, animal bone, musket balls, window glass, bottle glass and clay pipe will require specialist analysis. Of particular interest will be the copper alloy strap fittings and the seal matrix. It is also recommended that the remaining soil samples are processed for the retrieval of macrofossil remains and subsequently analysed by a specialist. This would be extremely useful for Area G (Garden Area) where the identification of horticultural features would benefit the proposed garden reconstruction.

Radiocarbon dating

Four samples have already been submitted for radiocarbon dating and the results are detailed in this report (Chapter 4.4). It would also be beneficial to radiocarbon date animal bone retrieved from the ditch feature (1009) in Trench 10. This would indicate whether this feature is contemporary with the other pre-17th century activity in Area G (the Garden Area).

Publication

It is recommended that a general reader text summarising the results of the 2014 excavations are published in *Archaeology Ireland*. A summary will also be submitted for publication in the annual *Excavations Bulletin*. On completion of the specialist reports it is recommended that an article on the excavation is prepared for the *Ulster Journal of Archaeology*. A paper detailing the results of the excavation will also be presented at the *Society for Medieval Archaeology Student Colloquium* which will take place in November 2014.

Future excavation

If The Dunluce Project is successful in its bid for HLF Round 2 funding, future excavation will take place at Dunluce Castle. The 2014 season of excavation revealed the remarkable preservation of the pre-17th century horizons. Therefore it is recommended that during future excavations, these earlier horizons are investigated to further explore the history of settlement on the site and investigate the sites transition from promontory fort to castle.

2008-2012 Archive

It is recommended that a report on the 2009 season of geophysical survey is completed. This, combined with full analysis of the LiDAR data (after McDermott 2013) would greatly inform any future archaeological excavations at the site. Although the information detailing the previous seasons of excavation are included in Breen 2012, it would be beneficial to publish the results of the excavation to Data Structure Report standard and to commission specialist analyses and reports on the 2008-2012 artefact assemblage.

7 ACKNOWLEDGMENTS

I would like to thank Andrew Gault, who co-directed the excavation and as Project Archaeologist for The Dunluce Project provided the research outline for the excavation. The excavation was supervised by Stuart Alexander and Dermot Redmond (both CAF) to whom I am extremely thankful. The excavation crew consisted of Anna Boomsma, Cormac Duffy, Joel Goodchild, Michael Lavery, Conor McAdams, Laura Patrick, Clare Privilege, Deborah Skimin and Francis Woods. Thanks also go to Shannon Kenny (University of Notre Dame), Ryan Lash (Northwestern University), Sara Morrow (University of Notre Dame) and Flynn Stewart who volunteered during the course of the excavation. The artefact washing and cataloguing, soil sample processing and compilation of appendices were completed by Michael Lavery and Francis Woods. The digitising of the illustrations was completed by Anna Boomsma, Laura Patrick, Clare Privilege and Deborah Skimin. Laura Patrick and Clare Privilege also prepared the images and Harris Matrices included in this DSR.

The surveying was carried out on site by Dermot Redmond. The survey illustrations, maps and GIS package provided in this DSR were prepared by Dr Siobhan McDermott (CAF GIS Surveyor) and additional survey and GPS support was provided by James Patience (NIEA). Additional photographs were provided by Tony Corey (NIEA).

I am extremely appreciative to Dr Colin Breen (CMA), Tom McErlean (CMA) and Dr Tom McNeill all of whom visited the excavation and whose knowledge and insights were invaluable. The writing of this DSR was aided by the knowledge and advice imparted by Robert Heslip, Dr Mark Gardiner (QUB), Dr Colm Donnelly, Dr Philip Macdonald and Cormac McSparron (all CAF). I am particularly thankful to Dr Emily Murray (CAF) for her support and guidance during the course of the excavation and also in the preparation of this report.

Thanks also go to the staff at Dunluce, both in the Visitor Centre and in the NIEA depot for facilitating our time at Dunluce.

8 BIBLIOGRAPHY

Andrews, J.H. 2008. *The Queen's Last Map-Maker. Richard Bartlett in Ireland, 1600-3*. Geography Publications: Dublin.

Brannon, N. F. 1987. 'Dunluce Castle, Dunluce, Antrim' [Online] Database of Irish Excavation reports (<http://www.excavations.ie/report/1987/Antrim/0000709/>)

Breen, C. 2012. *Dunluce Castle History and Archaeology*. Four Courts Press: Dublin.

Carleton, T. (ed.) 1991. *Heads and hearths: the hearth money rolls and poll tax returns for Co. Antrim 1660-69*. PRONI: Belfast.

Downey, L. and O'Sullivan, M. 2004. 'Coastal Promontory Forts'. *Archaeology Ireland* 18:2, 18-20.

Gault, A. 2014. *Dunluce Project Development Phase – HLF Round 1. Archaeological Survey and Evaluative Works 2014*. NIEA: Innovation Strategies Directorate. Unpublished report (Feb. 2014).

Horning, A. 2004. 'Archaeological explorations of cultural identity and rural economy in the north of Ireland: Goodland, County Antrim'. *International Journal of Historical Archaeology* 8:3, 199-215.

Hynd, N.R. and Ewart, G. 1983. 'Aberdour Castle Gardens'. *Garden History*, 11:2, 93-111.

McAlister, G. and Murray, E. 2014. *Research Design & Method Statement for evaluative excavations at Dunluce Castle, Summer 2014*. Centre for Archaeological Fieldwork. Unpublished report (May 2014).

McDermott, S. 2013. CAF Geophysical Survey Report No. 29: *GIS landscape analysis: preliminary report*. Unpublished Report: Centre for Archaeological Fieldwork, QUB, lodged with the NIEA.

McDonnell, H. 2004. *A History of Dunluce*. EHS-Built Heritage: Belfast.

McErlean, T. 2007. 'The archaeology of parks and gardens, 1600-1900: an introduction to Irish garden archaeology'. In A. Horning, R. O'Baoill, C. Donnelly and P. Logue (eds), *The Post-Medieval Archaeology of Ireland 1550-1850*, 275-288. Wordwell: Dublin.

McHugh, R. 2012. CAF Geophysical Survey Report No. 017: *Dunluce Village Landscape, County Antrim. Unpublished CAF report (available at <http://www.qub.ac.uk/schools/CentreforArchaeologicalFieldworkCAF/Reports/>)*

McNeill, T.E. 1980. *Anglo-Norman Ulster*. Donald: Edinburgh.

Murray, E. 2012. CAF Data Structure Report No. 086: *Excavations at Dunluce Castle, County Antrim. Unpublished CAF report (available at <http://www.qub.ac.uk/schools/CentreforArchaeologicalFieldworkCAF/Reports/>)*

Mussen, S. 2012. CAF Geophysical Report No. 020: *Geophysical investigations at the site of Dunluce Castle Gardens, County Antrim. Unpublished CAF report (available at <http://www.qub.ac.uk/schools/CentreforArchaeologicalFieldworkCAF/Reports/>)*

O'Connor, K. D. 2002. 'Housing in later medieval Gaelic Ireland'. *Ruralia* 4, 197-206.

O'Baoill, R. 2004. *Archaeological Assessment at Lisburn Castle Gardens, Co. Antrim: An Interim Report*. Archaeological Development Services Limited.

Pender, S. 1939. *A census of Ireland, circa 1659*. Dublin.

Reeves-Smyth, T. 1999. *Irish Gardens and gardening before Cromwell*. Barryscourt Lectures IV. Barryscourt Trust in association with Cork County Council and Gandon Editions: Cork.

Ruffell, A. 2014. *Ground Penetrating Radar Survey around Dunluce Castle, County Antrim*. Unpublished report prepared on behalf of the NIEA. (March, 2014).

9 DUNLUCE VILLAGE & GARDEN FIELDS SUPPLEMENTARY GEOPHYSICAL SURVEY

Geophysical Survey Report No. 32

Licence No. AE/14/137

Produced by Dr Siobhan McDermott (CAF)

Summary of results

An evaluation resolution electrical resistance survey was carried out over a total area of 0.27 hectares along the westernmost limits of the gardens and the Village Field at Dunluce Castle (ANT 002:008). It was commissioned to supplement two earlier episodes of geophysical survey in the area and to feed into the interpretation of data gathered during the 2014 season of excavation. The castle and its environs are currently the focus of a Lottery Heritage Funded project to develop its potential as a unique heritage destination within Northern Ireland.

There are a series of linear anomalies which may have archaeological significance. Two of these, r2014_3 & r2014_4, are extensions of earlier features identified in the previous seasons of geophysical survey and targeted by the 2014 excavations. The other two narrow linear features, r2014_1 & r2014_2, extend from the western edge of r2014_4 which is probably the western limit of the cobbled surface (c. 1604) identified in Trench 16 of the 2014 excavations. It is proposed that r2014_2 is an extension of the wall (c. 1607) also revealed in Trench 16. The anomaly r2014_1 may predate features associated with 17th-century settlement to the south. It is possible that r2014_1 is an earlier routeway which utilised a natural bedrock outcrop and which may have been used to help demarcate later routes through the immediate landscape.

Site Specific Information

Site Name: Dunluce Village & Garden Fields Supplementary, Co. Antrim

Townland: Dunluce

SMR No: ANT 002:013 (Souterrain – unlocated), ANT 002:008 (Earthworks associate with town and gardens), ANT 002:003 (Dunluce Castle).

Grid Ref: C 90319 41193

County: Antrim

Date of Survey: 16th September 2014

Surveyors Present: Siobhán McDermott Centre for Archaeological Fieldwork, School of Geography, Archaeology and Paleoecology, Queens University, Belfast, with the assistance of Francis Woods & Claire Privilege

Size of area surveyed: 0.27 hectares

Weather conditions: Mild and warm.

Solid Geology: Upper Basalt Formation: Antrim Lava Group

Drift Geology: Diamicton till

Current Land Use: Pasture

Intended Land Use: Heritage tourism amenity

Survey methodology overview

Survey type:

Electrical resistance

Instrumentation:

Geoscan RM85 resistance meter

Probe spacing:

0.5m parallel twin probe array

Grid size:

30m x 30m

Traverse interval:

1m twin parallel three probes (2 x 0.5m)

Sample Interval:

1m

Traverse Pattern:

Zig-zag

Lecia TS06-plus total station

Station setup:

Tied into Irish National Grid using differential GPS

Spatial Accuracy:

Survey grade accuracy (<3cm)

Georeferencing:

The dataset was downloaded from the TS06 and imported into ArcGIS 10.2. The grid points were extracted as a separate feature class and used to georeference the geophysical survey datasets exported from Geolplot v.3.

Data processing:

The geophysical data was processed in Geolplot v. 3 software. The primary processes applied were high pass filtering (HPF) to remove geological 'background' noise and low pass filtering (LPF) which helps to eradicate minor spikes in the data. The datasets were also interpolated which creates a smoothing effect.

Visualisations:

The datasets were visualised within Geolplot v.3 using shade, trace, dot density and relief plots. Processed datasets and bitmap graph plots were exported from Geolplot v.3 and imported into ArcGIS 10.2. Once georeferenced statistical analysis were carried out on the rasters within ArcGIS 10.2 and they were interpreted in relation to the First, Third and Fifth Edition Ordnance Survey maps of the area, the 2006 orthorectified aerial photographs and relevant georeference bitmap imports.

Digital archive:

The geophysical datasets were collected, processed and archived in accordance with Archaeological Data Services best practice.¹

¹ Schmidt, A. & E. Ernenwein, 2011, Guide to good practice: Geophysical data in Archaeology [Online]
http://guides.archaeologydataservice.ac.uk/g2gp/Geophysics_Toc

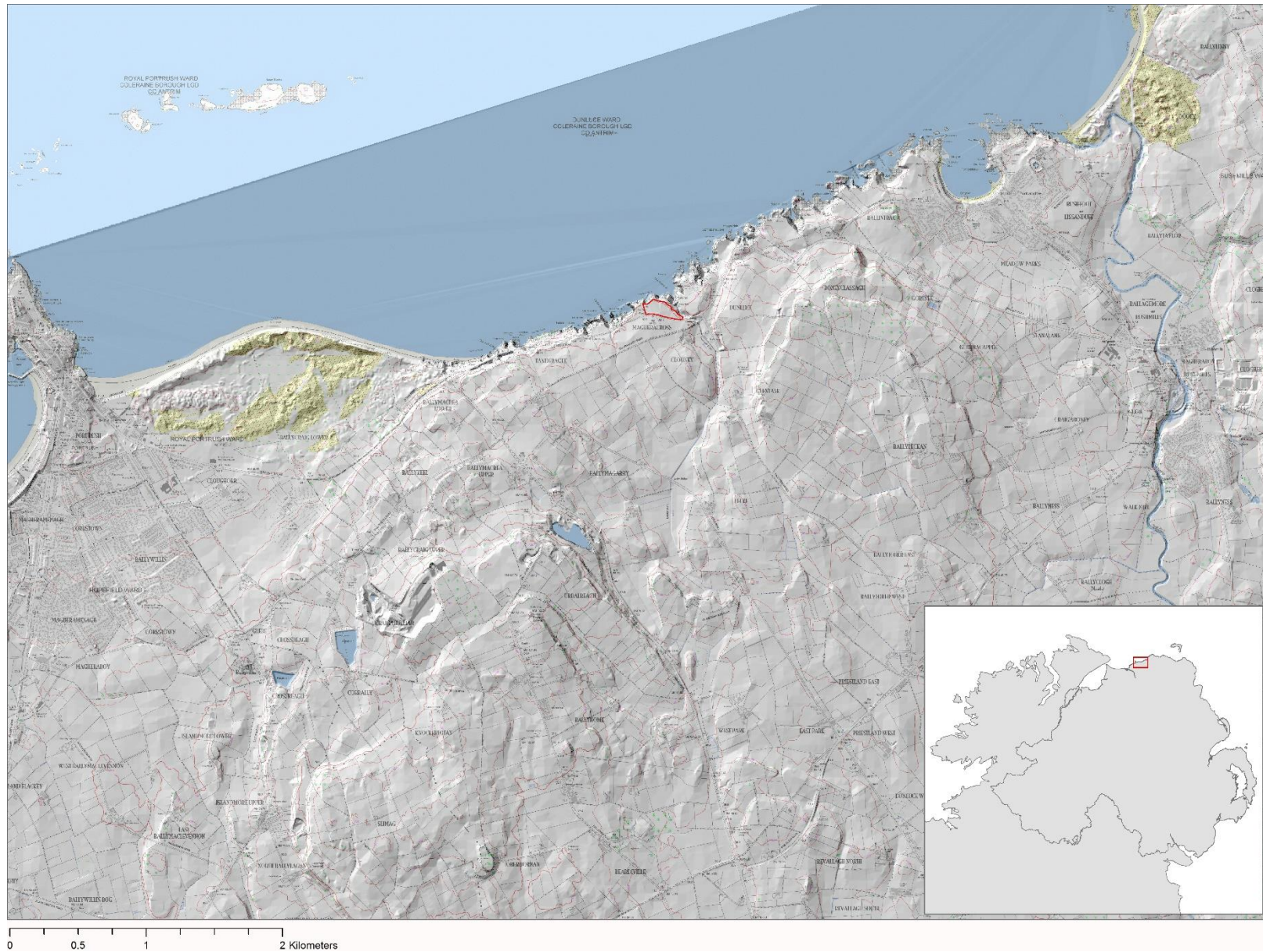


Figure 1

Location and landscape setting of the geophysical survey grid marked in red (OSNI 10km vector data layered over 5km DEM Hillshade).*

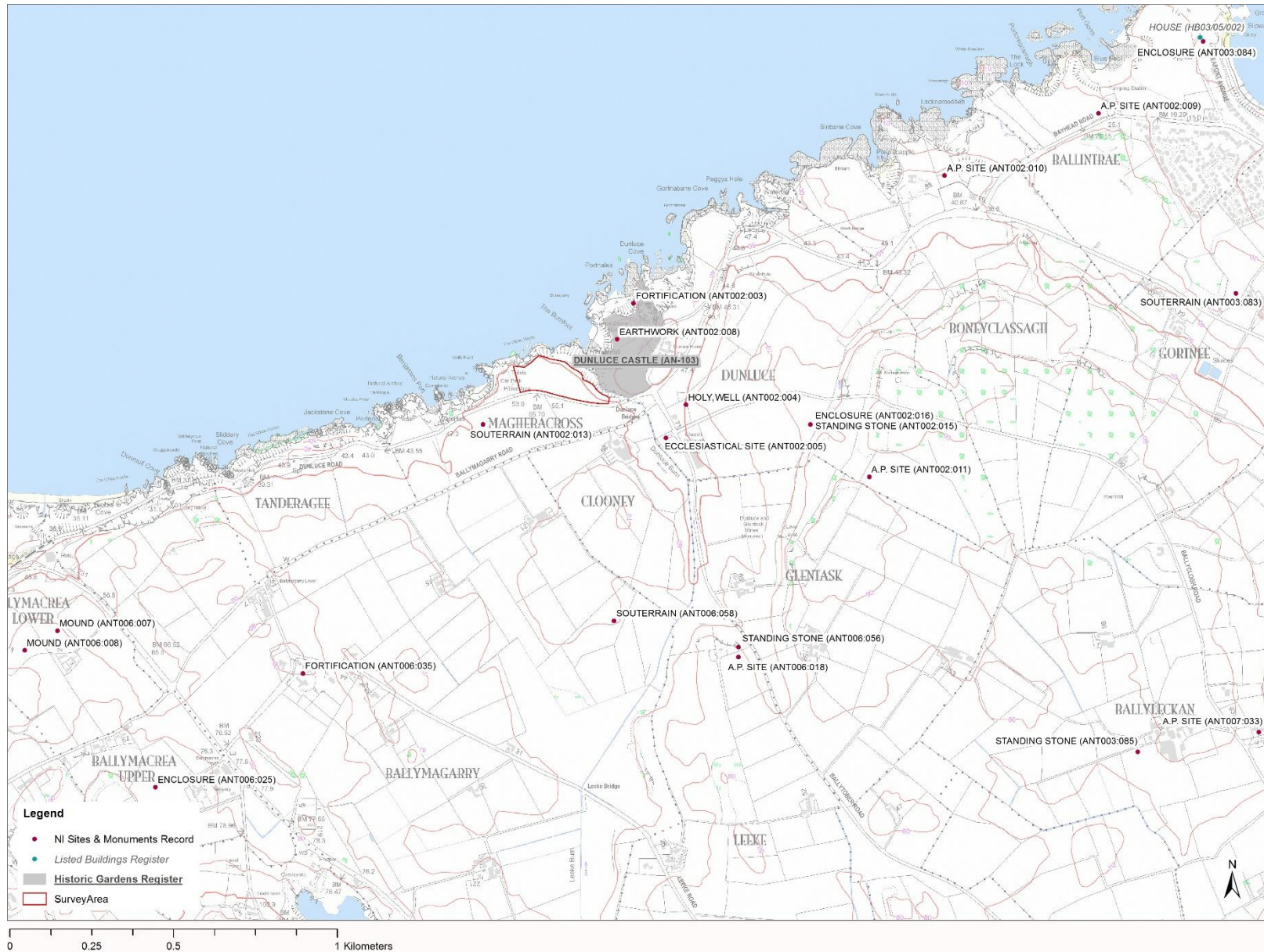


Figure 2

Wider recorded archaeological landscape setting. Geophysical survey area in red with Key NISMR locations noted.**



0 15 30 60 Meters



Figure 3 Location of supplementary geophysical, marked in red, in relation to the 2009 (bottom) and 2012 (top) seasons of geophysical survey.*

Introduction

An evaluation resolution electrical resistance survey was carried out over a total area of 0.27 hectares in the western vicinity of the castle gardens and to the north of the 17th-century village (ANT 002:008). Dunluce Castle (ANT 002:003) and its environs are currently the focus of a Lottery Heritage Funded project to develop their potential as a unique heritage destination within Northern Ireland. The survey area abuts two previous episodes of geophysical survey (McHugh 2012; Mussen 2012; Figure 3) carried out by the Centre for Archaeological Fieldwork, Queen's University Belfast. The 2014 survey was commissioned to supplement these earlier surveys and partly inform the interpretation of an extensive programme of excavation which took place within the vicinity of the castle over the summer of 2014.

Dunluce Castle is located midway along the A2 between the towns of Portrush and Bushmills, both Co. Antrim. The survey area is situated c. 80m to the west of mainland elements of Dunluce Castle. It is located c. 45m OD with the area to the north and west dropping away steeply to the Atlantic Ocean below. It is included in the Scheduled Monument Zone² associated with the Village Field (ANT 002:008) and part of the area defined by the Register of Historic Parks, Gardens and Demesnes.³

Historical & archaeological background

The following is a modified extract from McDermott (2014, 5 – 6).

The survey area is situated along the westernmost limit of Dunluce castle gardens and village (ANT 002:008). The castle is in State Care and the associated gardens and village are within a scheduled monument zone. The contemporary narrative of Dunluce and its wider archaeological landscape setting is dominated by later medieval and post-medieval phases of settlement activity. However there is evidence for prehistoric activity. Roughly 2km west a limited excavation at White Rocks sand dunes, in advance of the construction of Portrush golf course, unearthed multi-period activity. Finds included Neolithic flint lithics, hearths, a cist burial, saddle quern, bronze fibular and silver Henry III coin from an area measuring roughly 18m x 20m (Collins 1977). There is also a notable distribution of standing stones within a 5km radius of the survey area with a significant number of references to megalithic monuments, which can no longer be located, in the Ordnance Survey Memoirs (Day & McWilliams 1992). During the course of a geophysical survey to west of the current survey area, in Maghercross townland a number of struck and worked flints were identified eroding from the earth. Although lacking diagnostic features they were loosely grouped to the Neolithic and Bronze Age (McDermott 2014, 5). A small number of worked flint was recovered during monitoring of the archaeological mitigation of that area (Redmond 2012, 9). A small amount of struck flint was recovered during the 2014 excavations (McAlister *per comms*).

The early medieval period is evident through a strong distribution of souterrains and to a lesser extent raths. Many of these, including an example (ANT 002:013) 300m south-west of the survey area, are referred to in the

² Downloadable polygon dataset available online [http://www.doeni.gov.uk/niea/scheduled_zones.zip].

³ Downloadable polygon dataset available online [<http://www.doeni.gov.uk/niea/gardens.zip>].

Ordnance Survey Memoirs but cannot now be located. Another example, which underlies the northeast tower of the castle was revealed during clearance work in 1928 (Breen 2012, 21). Breen (ibid 19) has proposed that 'a fortified headland existed' at the location of Dunluce Castle during the 11th- to 12th-centuries. Evidence for which would have been heavily eroded by the later phases of castle building.

The later and post-medieval history and archaeology of Dunluce Castle and its environs has been extensively and ably covered by Breen (2012). The following is a brief synopsis of his work with notes which may have significance for the interpretation of the geophysical data from the survey area. Historical evidence indicates that an Anglo-Norman manor was established at Dunluce at the end of the 13th-century. Excavations to the south of the castle beside Dunluce House, to test the areas archaeological potential, unearthed high medieval ceramics. However, it appears that the main foci for settlement activity in the area, from the 13th to 15th centuries, was at Ballylough Castle, 2.5km south of Bushmills (Breen 2012, 27 – 31). The first significant phase of construction activity in the immediate vicinity of the castle dates to the close of the 15th-century and the lordship of the Route which was then controlled by the MacQuillans. The MacQuillans established themselves in Ulster society relatively quickly after their arrival as Scottish mercenaries. In the mid-15th-century they took Ballylough Castle, probably seizing upon opportunities created by the fall of Anglo-Norman Ulster. They refurbished Ballylough before moving their attention onto Dunluce (ibid 38 – 41). By the mid-16th century the MacQuillans had also established and were patrons of the Franciscan friary at Bonamargy in the style of a typical Gaelic Irish lordship. However by the end of the century the ambitions of their Scottish kinsmen, the MacDonnells, would see their territory and position lost.

By the 1580s the MacDonnells were identifying themselves as the lords of the Route, had taken Dunluce from the MacQuillans and begun a major phase of refurbishment at the castle in a typically Scottish architectural style (Breen 2012, 68 – 72, 86 – 7). A late 16th-century phase of gentrification retained its medieval antecedents in the form of the 'buttery' – which appears to be a reception hall separated from the lord's private quarters.

Much of what we understand about the castle, gardens and surrounding settlement dates to the period of MacDonnell occupation. By the early 17th-century the MacDonnells were successfully negotiating the complex political landscape of early modern Ireland. Under the leadership of Randal MacDonnell the family maintained the lands initially granted them in the 1580s and consolidated their relationship with the Stuart court. These Gaelic lords began a programme of plantation bringing in new Scottish and local Irish settlers, establishing settlements, trade centres and small-scale industries. The changes to Dunluce Castle reflect these emerging cultural norms as an emphasis was placed on consumption and privacy. On the rocky outcrop, the Jacobean manor house was built which incorporated the earlier 'buttery' and a new kitchen was constructed. An ambitious programme of building on the mainland adjacent to the castellated outcrop was started which included stables, brew-house and lodgings. It was during this period that the pleasure gardens and town to the west of the castle date. This was the zenith of the town and castle. By the 1680s after half a century of war and the death of the 2nd earl the town was abandoned. A fair continued to be held in the castle's environs up until the 1740s. Archaeological evidence for temporary structures associated with this phase of activity were revealed during Breen's excavations (Breen 2012, 177).

Understandably, most research on Dunluce and the MacDonnell lordship to date has focussed on either the castle, its immediate environs or other elite settlements within the territory (Breen 2012). Less focus has been given to how the MacDonnell's would have organised and worked their estate internally. The mid-17th-century Down Survey depicts a series of larger landholding parcels which appear to have been sub-divided at a later date. An episode of townland renaming and subdivision has been noted during the 18th- and 19th-centuries in mid-Ulster (McDermott 2013, 7) and something similar may have occurred at Dunluce.

By the 1830s the land surrounding Dunluce was improved enough to suit the tastes, and agenda, of Samuel Lewis (1837, 585). The ideology of Improvement linked a well-ordered and well-managed landscape with civility and civilising influences (Forsythe 2013, 73). Sixty years previous Arthur Young (Wollaston-Hutton 1892, 161) had noted that the area surrounding the Giant's Causeway was, 'in the rundale and likewise in the change-dale system'. Presumably this meant by the 1770s the collectively farmed system of in-fields, out-fields and common-lands in north Antrim was in the process of being enclosed and privatised.

Since 2008 the castle and associated settlement features has been at the centre of archaeological research. In 2008 the Centre for Maritime Archaeology (CMA), University of Ulster, opened a small trench near the south-west bay window of the manor house. The deposits were heavily disturbed although loose finds included 17th-century ceramics and plasterwork (Breen & Raven 2008). Further excavations were undertaken in 2009 & 2010, by members of the CMA and the Centre for Archaeological Fieldwork (CAF), Queen's University. They further revealed the extent of 17th-century material surviving in the castle's environs and indicated extensive earlier phases of activity. The 2009 season uncovered a Scottish merchant's house (Breen & Raven 2009). In 2010 a Blacksmith's workshop associated with the 17th-century village was excavated and evidence was found for the earlier 15th-century MacQuillan settlement phases (Breen 2010). This research has been discussed in detail in Breen (2012).

From 2009 – 2012 CAF carried out an extensive programme of electrical resistance geophysical survey in the environs of the castle and its hinterland (McHugh 2012; Mussen 2012). The 2009 study focussed on the Village Field (McHugh 2012). It revealed an arterial street running west-south-west to east-north-east onto which a number of house faced. This was the location of the 17th-century town already hypothesised from earthworks. A geophysical survey of the gardens identified many of their structural elements as well (Mussen 2012). A LiDAR survey commissioned by the NIEA confirmed the presence of many of these elements.

Description and interpretation of anomalies (Figure 4)

Table 1 Description and interpretation of archaeological anomalies.

Code	Description	Interpretation
r2014_1 (r2014_1a, r2014_1b)	High resistance linear anomaly running north-east to south-west for a maximum length of c. 44m. The feature comprises two sections; r2014_1a abuts the western end of r2014_4 and is mapped for a length of c. 4.7m. The western section is recorded for a distance of c. 34.m. Its westernmost limits appears to be truncated by an episode of quarrying along the western limits of the survey area. The two sections are elements of the one curvilinear high resistance feature. They are separated by a gap, c. 5m wide, which is visible in the 2010 orthorectified aerial photography (Figure 12) and the LiDAR survey (Figure 11).	<p>The feature r2014_1 follows the path of a ridge captured in the LiDAR data of the area. It appears to extend from the western end of a high resistance linear feature (r2) recorded during the 2012 electrical resistance survey of the Castle Gardens (Mussen 2012, 19). The 2012 anomaly was interpreted as a landscaping feature probably related to the 17th-century gardens to the north. Recent excavations have confirmed that the 2012 feature r2 is composed of a revetment wall, c. 0.6m wide, to the north and a cobbled routeway, c. 4.7m, to the south. A hollow-way following the route of this cobbled surface is clearly captured by the LiDAR survey.</p> <p>In plan r2014_1 appears to extend from the southern edge of an anomaly, identified as r1 in the 2012 survey (Mussen, 19), and suggests it may be the remnants of this cobbled routeway perhaps following a natural ridgeway through the survey area. The presence of a series of very high resistance returns in the vicinity of the quarrying activity which truncates r2014_1 confirms near surface solid geology. However neither trench 20 or 30e found evidence for a cobbled surface which would appear to have petered out further to the east.</p> <p>Notably there is a substantial break in r2014_1, c. 5m wide, noted in the LiDAR data. An excavation trench (Trench 20) was positioned over this gap during the 2014 excavations. The trench was aligned east – west. In the middle of this trench, running north – south, was a stone-lined drain. The drain is believed to date to the late 16th-century as it is similar to an example excavated in the interior of the stables in 2009 (Grace McAlister <i>per coms</i>). The geophysical anomaly r2014_2 does not display any evidence for a similar break but profiles through the bank, as captured by the LiDAR survey, along the path of r2014_1 and r2014_2 suggests that there is a depression (Figure 13). This would further the proposition that the drain cut (c. 2014) identified in Trench 20 cut through the cobbled surface and possibly the wall noted in trench 16.</p>
r2014_2	High resistance linear feature running west-south-west to east-north-east for a distance of c. 38m. It extends beyond the western limits of the current survey area.	A clearly defined drop was noted in the immediate vicinity of r2014_2 as the surveyors were moving over the survey area. With the ground level to the north c. 0.5m lower than that to the south.
r2014_3	High resistance linear running c. 4.5m north-west to south-east and c. 1.8m in width. The feature extends beyond the southern limit of the 2014 survey and	The anomaly r2014_3 is an extension of a linear recorded during the 2009 electrical resistance survey of the Village Field (Figure 3). Between the two seasons of survey the anomaly is mapped for a length of c. 18m running south-east to north-west. It is roughly parallel with the southern wall of an early 17 th -century building excavated by Breen (2012,

	appears to have been captured in the 2009 survey of the Village Field.	<p>139-148) extending from the western end of the roadway which delineated the 17th-century town. The building has been interpreted as a merchant's house on the basis of imported ceramics and coinage recovered during excavation. It was sub-divided later during the century to accommodate animals.</p> <p>During the 2014 excavations a trench (Trench 21) was positioned to capture the eastern limit of this high resistance linear. The 2014 trench cut into the area of the previous excavation which focussed on the merchant's house. The 2014 excavation located the northernmost limit of the 17th-century roadway defined by a line of large cobbles aligned east-west. Extending north from this was a cobbled pathway, c. 2.15m wide. It was composed of three lines of large cobbles two on either side and one running down the middle. The cobbled pathway was bedded into layers of loam which produced a large number of 17th-century artefacts, including flints, slate, clay pipe fragments, pottery, glass and nails (McAlister 2014).</p> <p>It is likely that r2014_3 maps the northernmost extension of this cobbled pathway.</p>
r2014_4	High resistance linear anomaly running west-south-west to east-north-east captured for a length of c. 11m with a width of c. 5m. The feature extends beyond the easternmost limits of the survey area and appears to have been captured in both the 2009 and 2012 electrical resistance surveys of the area.	<p>The feature r2014_4 is the westernmost limits of a high resistance linear feature recorded by the 2009 geophysical survey and identified as r2 in the 2012 study. It runs for a total distance of c. 53m and is associated with a distinct ridge evident in the LiDAR data (Figure 11).</p> <p>During the 2014 excavations a trench (Trench 16) was positioned perpendicular to the ridge. Excavation revealed a wall, cobbled surface and drain which may run the length of the high resistance anomaly. The cobbled surface, c. 5m wide, is defined to the north the wall, c. 0.7m wide, to the north. The wall appears to delineate the boundary between the 17th-century gardens to the north and the Village Field to the south. The cobbled surface ran down to a drain comprising sub-angular cobbles set on edge to create a narrow v-shaped channel (McAlister 2014).</p>
r2104_5	Two irregular areas of high resistance to the south of the survey area in the immediate vicinity of quarrying activity.	Near surface bedrock. The evidence for quarrying further indicates the presence an easily accessible source of stone.

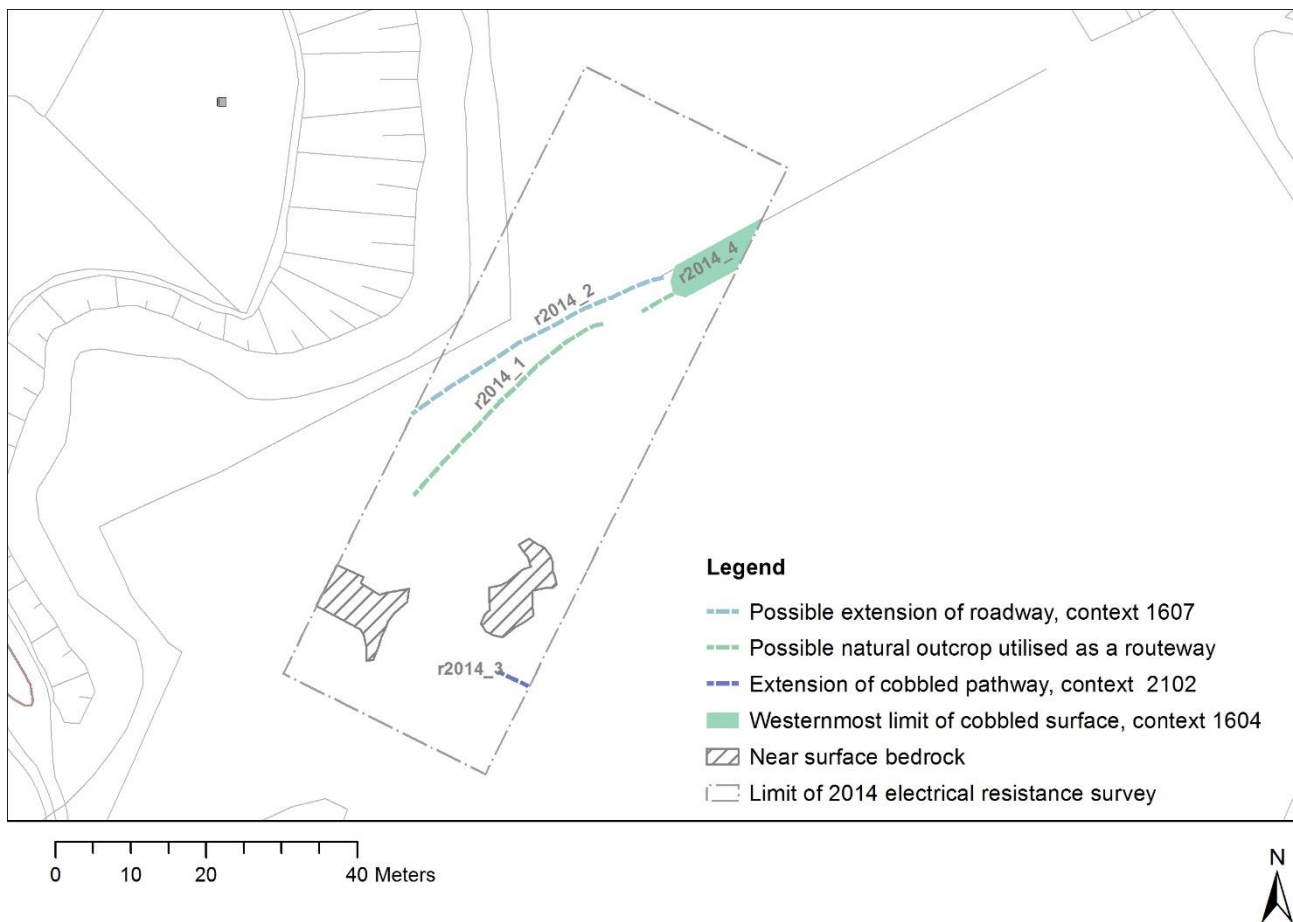


Figure 4 Interpretation diagram with geophysical anomalies identified

Discussion

This survey focussed on a small area to the west of the 17th-century castle gardens and to the north of the 17th-century town. Both these areas had been extensively and ably surveyed prior to this (McHugh 2012; Mussen 2012). The current survey sought to supplement this earlier work and to aid the interpretation of the 2014 archaeological excavations.

The electrical resistance survey identified a series of linear anomalies which have possible archaeological significance. Two of these, r2014_3 & r2014_4, are extensions of earlier features identified in the previous seasons of geophysical survey which were also targeted by the 2014 excavations. The anomaly r2014_4 maps the westernmost limit of the cobbled surface (context 1604) identified in Trench 16 of the 2014 excavations (Grace McAlister *per comms*). The cobbled surface was not captured in trenches 20 or 30d. Neither of these trenches overlaid the geophysical anomaly r2014_4. The cobbled surface was evident in trenches 30a – 30c which do overlay the eastern portion of r2014_4 as mapped by the previous electrical resistance surveys.

The feature r2014_3 is the northernmost extension of a narrow linear feature identified during the 2009 electrical resistance survey. During the 2014 excavations a trench (Trench 21) was positioned to capture its south-eastern

limit. The trench included the area of the previous 2009 excavation which focussed on the merchant's house. The 2014 excavation located the northernmost limit of the 17th-century roadway defined by a line of large cobbles aligned east-west. Extending north from this was a cobbled pathway, c. 2.15m wide. It was composed of three lines of large cobbles two on either side and one running down the middle. The cobbled pathway was bedded into layers of loam which produced a large number of 17th-century artefacts, including flints, slate, clay pipe fragments, pottery, glass and nails (McAlister 2014). It is this feature which appears to coincide with r2014_3 in the current geophysical survey.

The other two narrow linear features, r2014_1 & r2014_2, extend from the western edge of r2014_4 which is probably the western limit of the cobbled surface (context 1604) identified in Trench 16 of the 2014 excavations. It is proposed that r2014_2 is an extension of the wall (context 1607) also revealed in Trench 16. The anomaly r2014_1 appears to be cut possibly by the drain (context 2014) excavated in Trench 20. The drain is currently believed to be associated with the 17th-century settlement to the south. This would suggest that r2014_1 predates these later settlement features. It is a narrow, curvilinear band of high resistance curving from r2014_4 towards an area of quarrying. The quarrying truncates r2014_1 and therefore post-dates it. It is possible that r2014_1 is an earlier routeway which utilised a natural bedrock outcrop and which may have been used to help demarcate later routeways through the area.

Bibliography

Breen, C. & Raven, J., [2008] 'Dunluce Castle, Dunluce, Antrim – AE/08/03' [Online] Database of Irish Excavation Reports (<http://www.excavations.ie/report/2008/Antrim/000000019041>).

Breen, C. & Raven, J., [2009] 'Dunluce Castle, Dunluce, Antrim – AE/09/103' [Online] Database of Irish Excavation Reports (<http://www.excavations.ie/report/2009/Antrim/000000020371>).

Breen, C., [2010] 'Dunluce Castle, Dunluce, Antrim – AE/10/86' [Online] Database of Irish Excavation Reports (<http://www.excavations.ie/report/2010/Antrim/000000021245>).

Breen, C., 2012 *Dunluce Castle: archaeology and history*. Four Courts Press: Dublin.

Day, A. and McWilliams, P., 1992 *Ordnance Survey memoirs of Ireland, parishes of County Antrim V, 1830 – 5, 1837 – 8*. Belfast.

Devereux, B.J., *et al.* 2008 Visualisation of LiDAR terrain models for archaeological feature detection. *Antiquity* **82**, 470-479.

Forsythe, W., 2013 'The measures and materiality of Improvement in Ireland'. *International Journal of Historical Archaeology*, **17**, pp. 72 – 93.

Lewis, S., 1837 *A topographical dictionary of Ireland, volume 1*. S.Lewis & Co.: London. Available online [http://www.askaboutireland.ie/aai-files/assets/ebooks/75_125_299_A-Topographical-Dictionary-of-Ireland/125%20A%20Topographical%20Dictionary%20of%20Ireland%201.pdf].

McAlister, G., [Forthcoming] 'Dunluce excavations 2014'.

McDermott, S., [2013] 'GIS landscape analysis: preliminary report'. Unpublished Report: Centre for Archaeological Fieldwork, QUB, lodged with the NIEA.

McDermott, S., [2014] 'West Field, Dunluce: geophysical survey report no. 29'. Unpublished Report: Centre for Archaeological Fieldwork, QUB. Available online [<http://www.qub.ac.uk/schools/CentreforArchaeologicalFieldworkCAF/PDFFileStore/Fileupload,458518,en.pdf>].

McHugh, R., [2012] 'Dunluce village landscape: geophysical survey report no. 17'. Unpublished Report: Centre for Archaeological Fieldwork, QUB. Available online [<http://www.qub.ac.uk/schools/CentreforArchaeologicalFieldworkCAF/PDFFileStore/Fileupload,379413,en.pdf>].

Murray, E., [2012] 'Excavations at Dunluce Castle, Co. Antrim: Data structure report no. 86'. Unpublished Report: Centre for Archaeological Fieldwork, QUB. Available online [<http://www.qub.ac.uk/schools/CentreforArchaeologicalFieldworkCAF/PDFFileStore/Fileupload,446108,en.pdf>].

Mussen, S., [2012] 'Dunluce Castle gardens: geophysical survey report no. 20'. Unpublished Report: Centre for Archaeological Fieldwork, QUB. Available online [<http://www.qub.ac.uk/schools/CentreforArchaeologicalFieldworkCAF/PDFFileStore/Fileupload,372129,en.pdf>].

Redmond, D., [2014] 'Dunluce Castle visitors centre option, site D: monitoring report no. 283'. Unpublished Report: Centre for Archaeological Fieldwork, QUB, lodged with the NIEA.

Wollaston-Hutton, A., 1892 *Arthurs Young's tour in Ireland: 1776 – 1779*. London.

Acknowledgements

Thank-you to Francis Woods and Claire Privilege who held staffs, moved lines and generally made things happen. Also a great thanks to Grace McAlister whose expert knowledge of the recent excavations could be called upon with encyclopaedic accuracy.

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Appendix one: Georeferenced geophysical survey grid

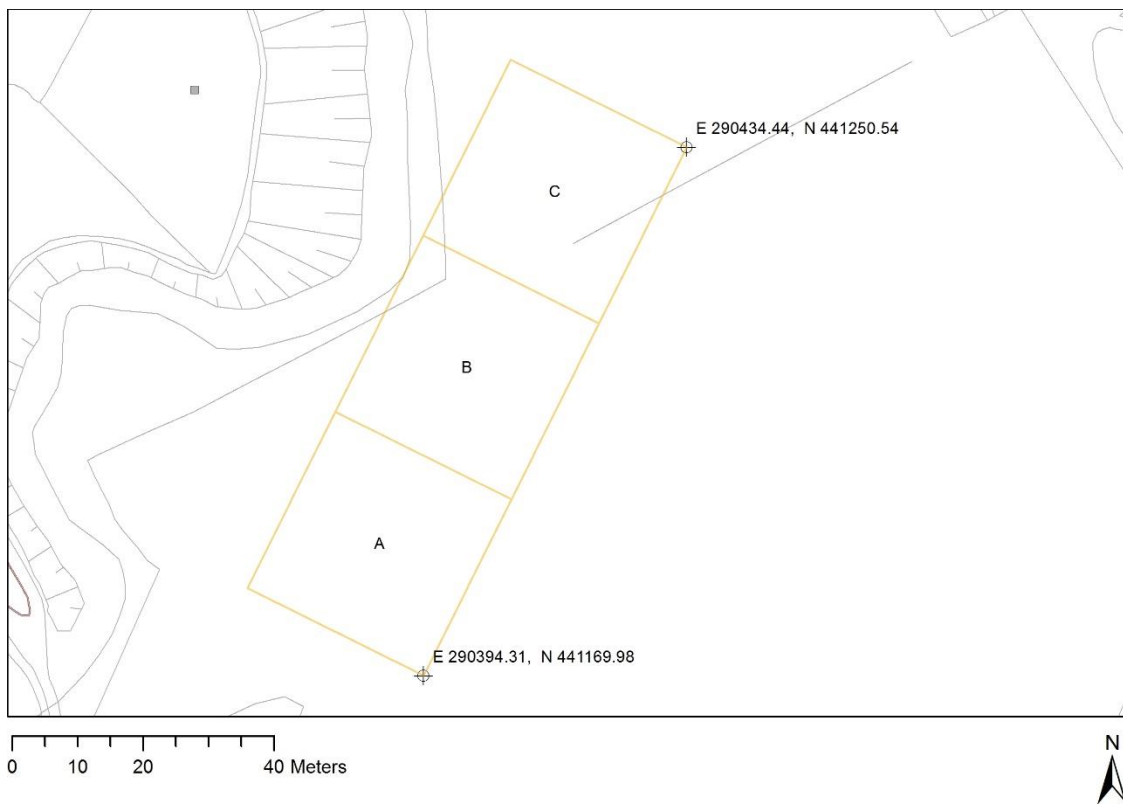


Figure 5 Irish National Grid coordinates for geophysical survey grid baseline.*

Appendix two: Processed and raw geophysical survey plots

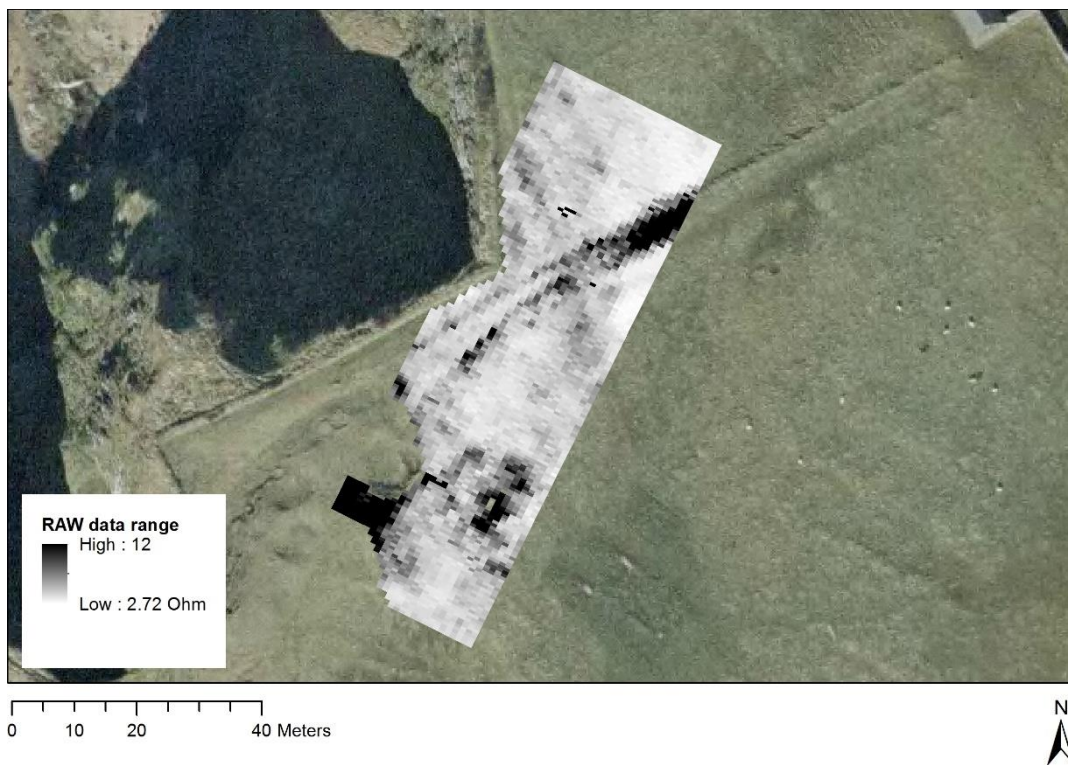


Figure 6 Greyscale plot of RAW data clipped -24/120 Ohm and despiked. Statistics: Mean: 4.62 Ohm, Std Dev.: 1.87.*

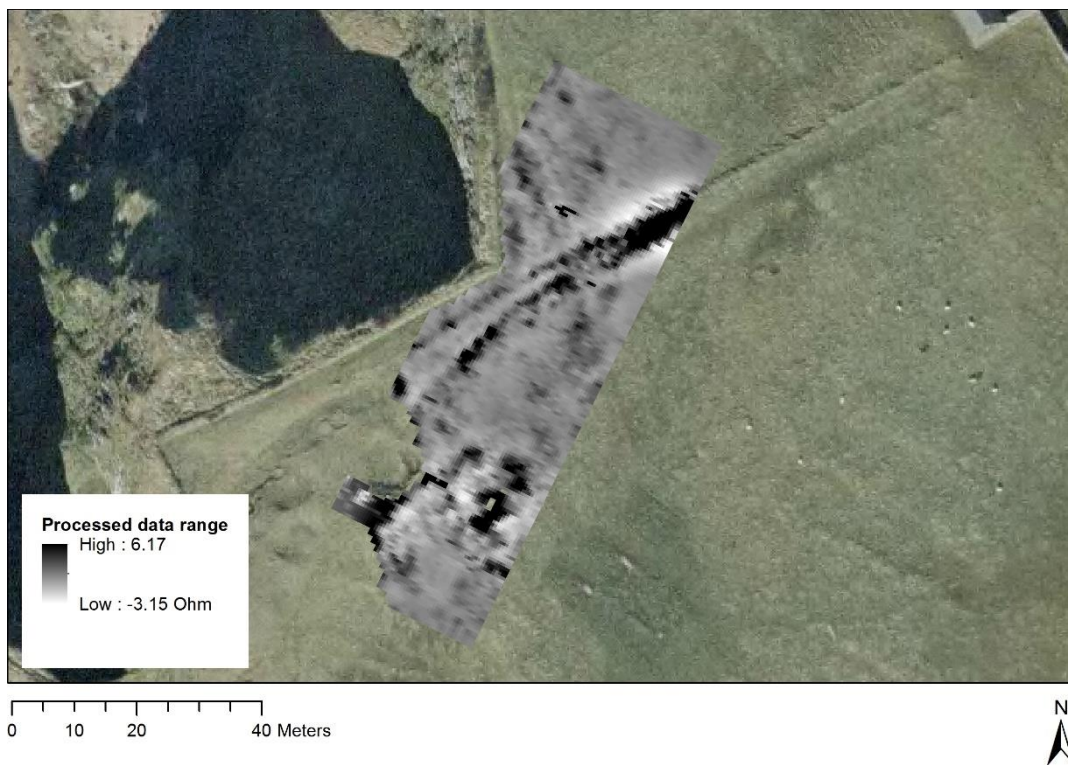


Figure 7 Greyscale plot of processed data clipped, despiked, LPF (Gaussian weighting applied x1 on x-axis, x2 on y-axis), and $\sin(x)/x$ interpolation on x- and y-axis. Statistics: Mean: 0.01 Ohm, Std Dev.: 1.04.*

Appendix three: Historical mapping

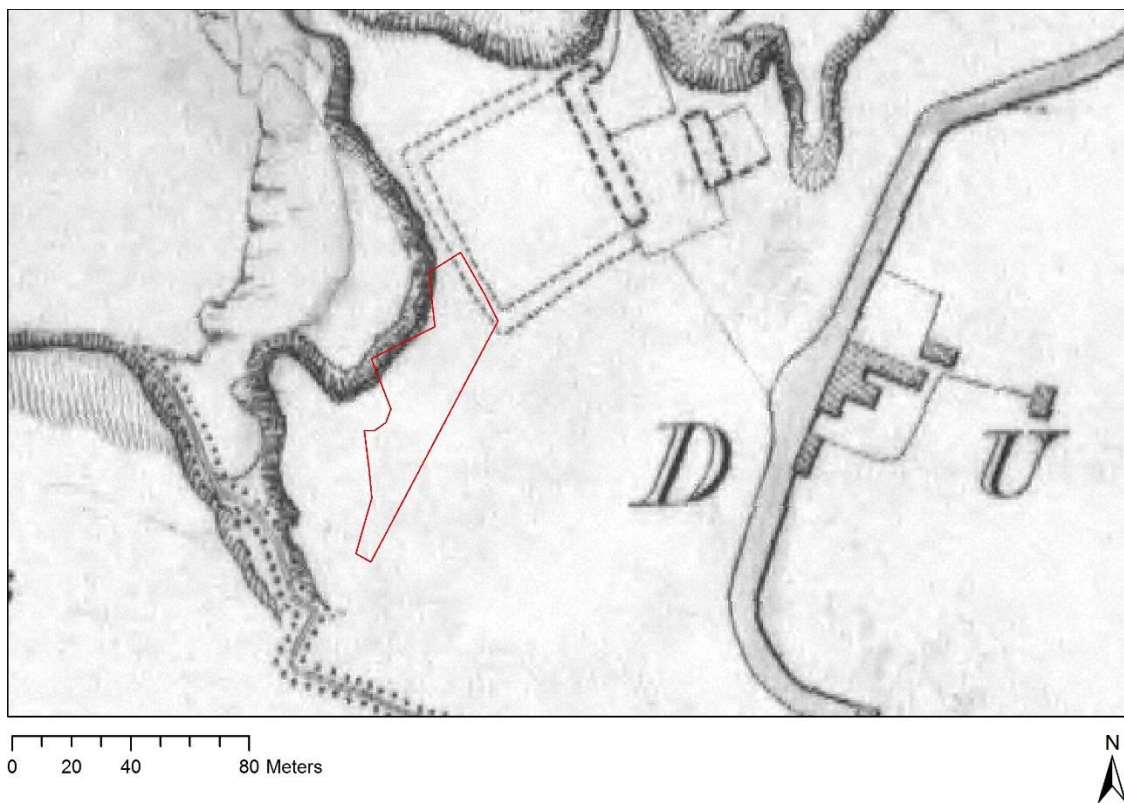


Figure 8 Geophysical survey area in relation to the First Edition Ordnance Survey map series, c. 1831-3.*

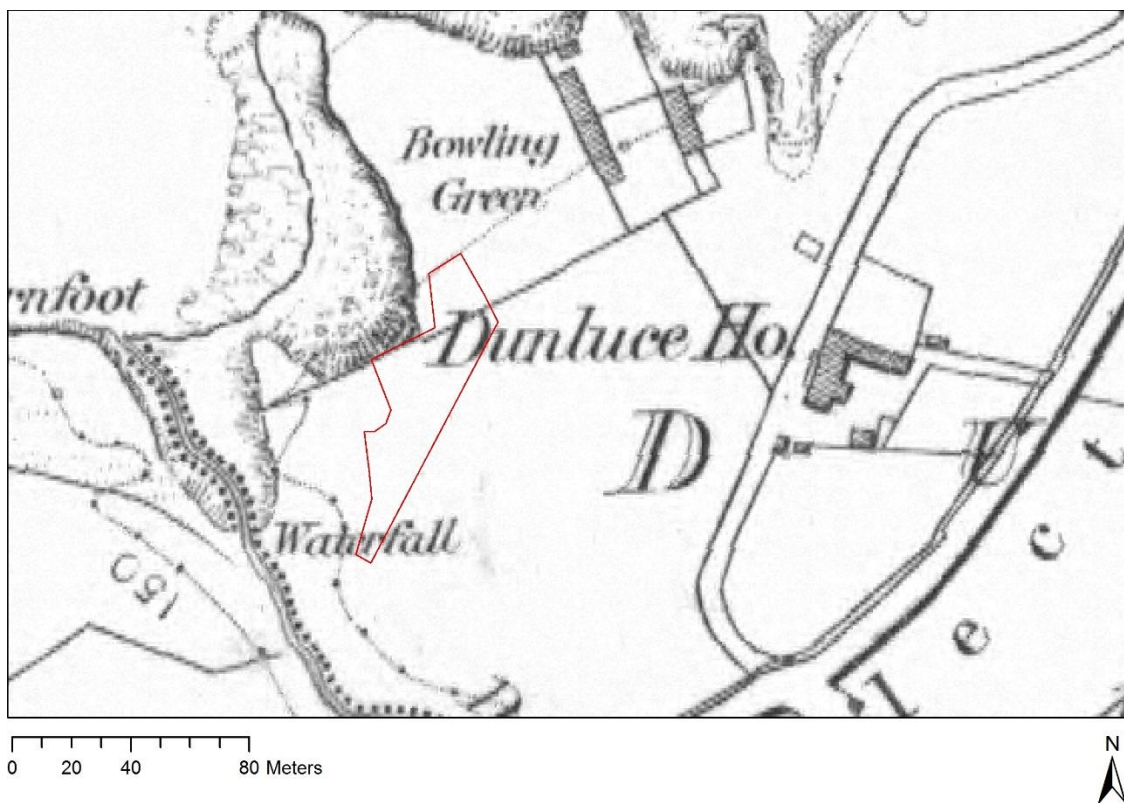


Figure 9 Geophysical survey area in relation to the Third Edition Ordnance Survey map series, c. 1853-58.*

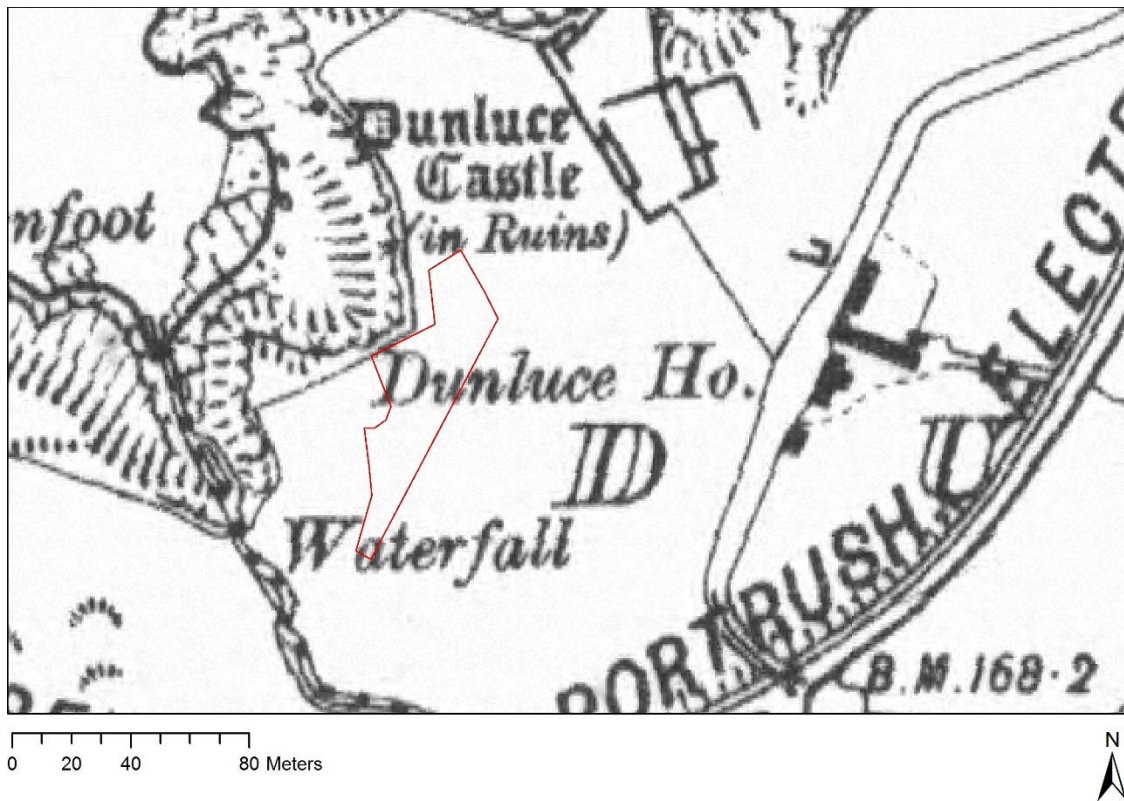


Figure 10 Geophysical survey area in relation to the Third Edition Ordnance Survey map series, c. 1900-6.*

Appendix four: Supporting images

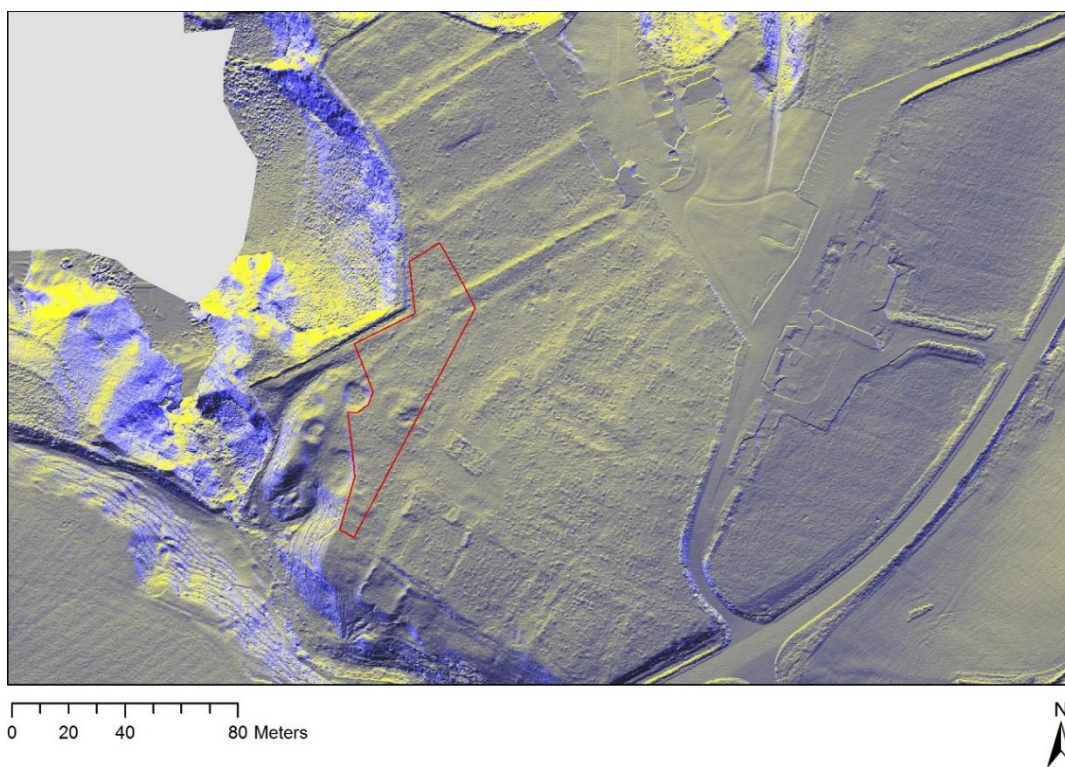


Figure 11 Area of the geophysical survey (marked in red) overlaid LiDAR visualisation produced from Principle Component Analysis of sixteen hillshades at zenith 4° , RGB of the first three bands (after Devereux 2008). *

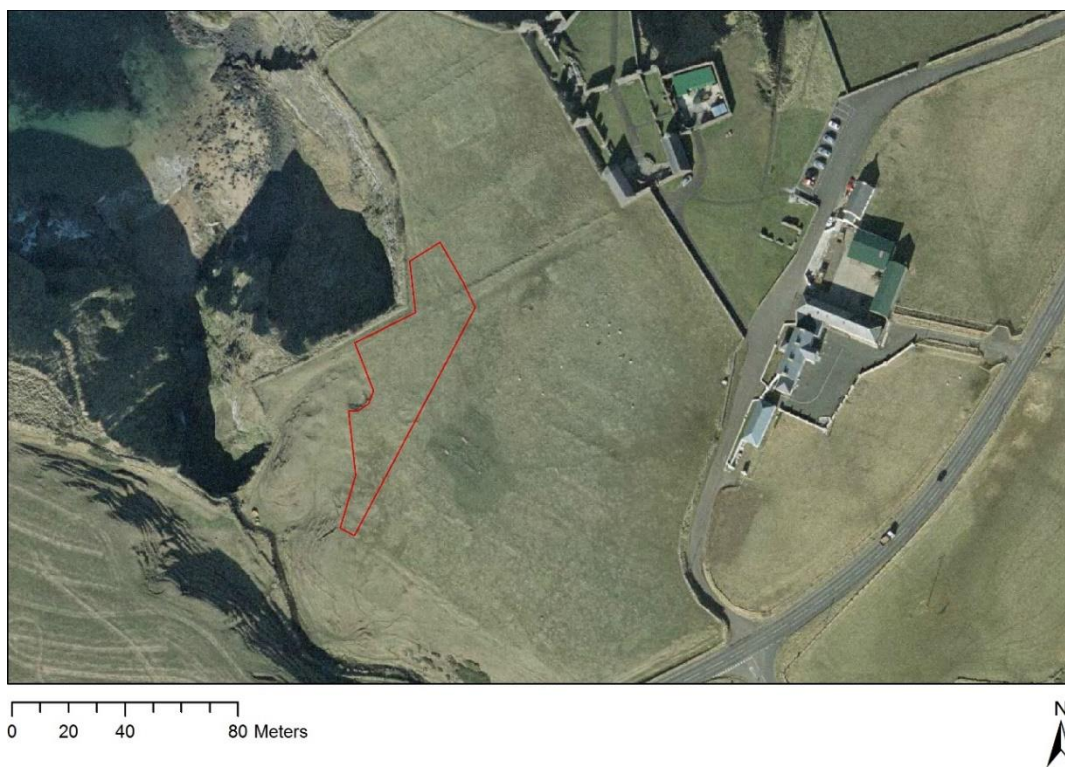


Figure 12 Geophysical survey area in relation to 2010 ortho-rectified aerial photographs.*

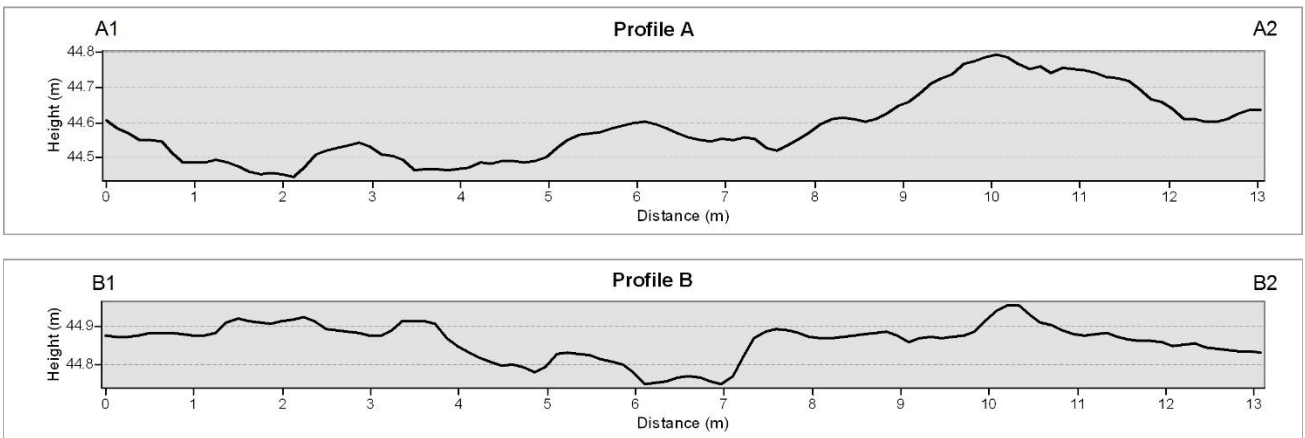
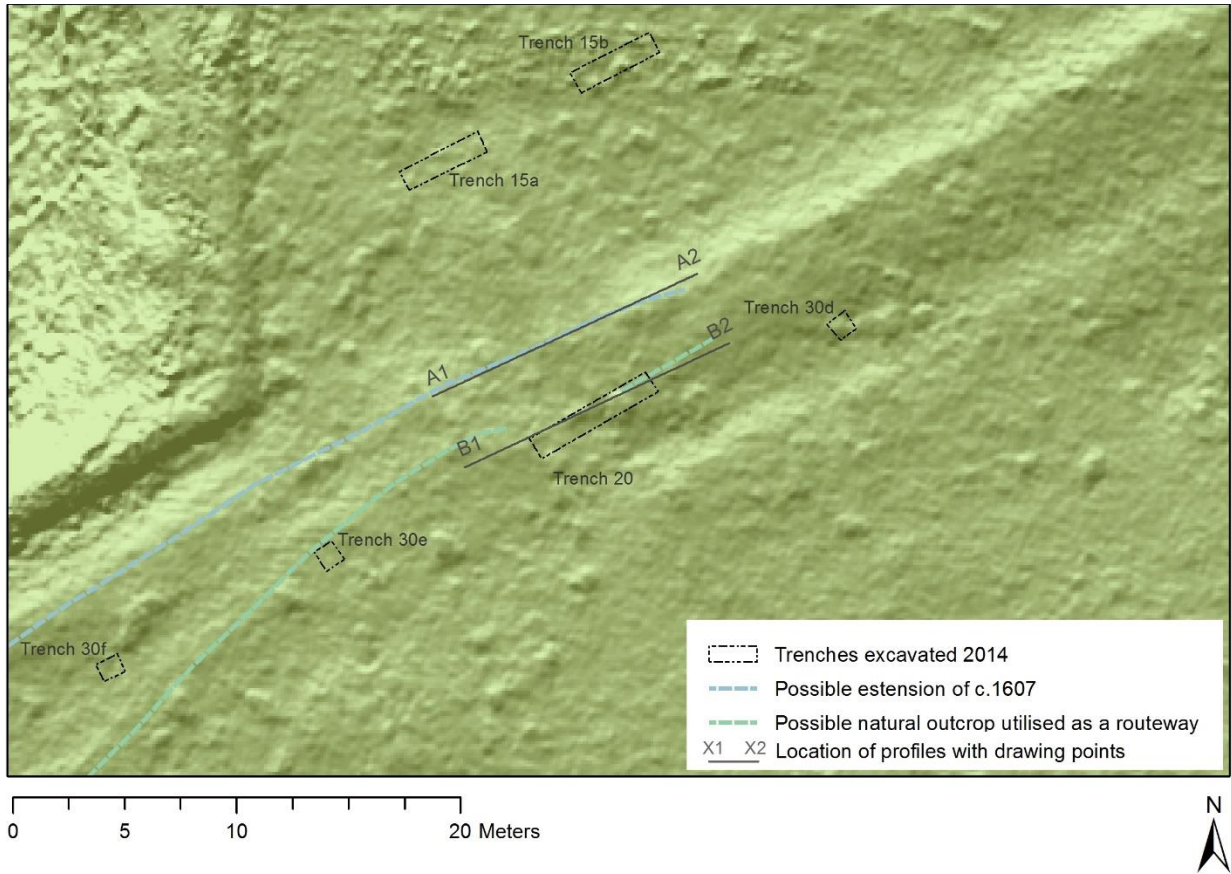


Figure 13 Profiles through possible breaks in r2014_1 and r2014_2 as captured in the LiDAR survey data.

10 POTTERY REPORT

Produced by Cormac McSparron (CAF)

10.1 Introduction

Seven hundred and four fragments of pottery were found during the 2014 excavation season at Dunluce Castle. These pottery sherds can be grouped into 19 main fabric groups, with just seven sherds which were too badly abraded or too small to be identified and a further four sherds which were well enough preserved to be identified but for which no identification to type has yet been made.

Most of the pottery found at Dunluce was Post-Medieval in date and overwhelmingly the most common class of pottery uncovered were the Red Earthenwares, with 349 pieces of pottery of this type found (Dunluce Pottery Catalogue Type 9). These all had a similar fabric under microscopic examination but displayed a number of different glazes and surface treatments. They were split up by surface treatment into nine separate sub-classes (Type 9.1 to 9.9). The most common of these were the earthenwares covered externally with a lustrous brown glaze, commonly referred to as Brownware, followed by vessels with similar fabrics covered in plain brown glazes, mottled glazes, white slips and plain unglazed vessels.

Other post-Medieval wares were the North Devon Gravel Tempered sherds (Type 1) of which 28 were found during the excavation. Twelve sherds of North Devon Gravel Free pottery (Type 2) were also found during the excavation. Cistercian wares / Fine Blackwares (Type 12) were also quite common with 25 sherds found and coarser Blackwares (Type 11), of which 20 were found, which could be differentiated from the finer Cistercian Wares, not just by their body forms and size, but by the presence of deliberately added temper in their fabric which otherwise had a similar paste to the Cistercian Ware. Nineteen sherds of various Tin Glazed Earthenwares were found and 18 pieces of Manganese Mottled (Type 21) pottery. Staffordshire Slipwares accounted for 15 sherds of the assemblage.

Three sherds of Chinese Porcelain of 17th or very early 18th century date were found (Type 6). Other 17th to 18th century wares include Westerwald Stoneware, of which two pieces were found and Brown Stoneware, which could be English or German.

As well as Post-Medieval pottery a significant amount of Medieval and possibly some Early Medieval pottery was found. Medieval Ulster Coarse Pottery (Type 19) was as common at the site as North Devon Gravel Tempered with 28 sherds, 11 rim and 17 body sherds, found.

Nineteen pieces of Scottish Reduced Ware, also sometimes called Reduced Grey Ware (Hall 1996, 126) pottery (Type 15) were also found. Although similar in terms of colour, firing and glaze, microscopic examination showed some distinction in the fabrics between vessels of this class, which may be partly chronological but which may indicate different kilns producing similar vessels.

A number of other Medieval pottery types were present in smaller amounts. Four examples of a type similar to Scottish White Gritty Ware pottery (Type 10) were found and two probable Souterrain Ware (Type 18) sherds were also found.

Thirty six fragments of Undiagnostic Coarseware (Type 20) were found, which may either be Souterrain Ware or Medieval Ulster Coarse Pottery, or even potentially prehistoric pottery, but which lacked distinguishing body forms or decoration.

Although the Red Earthenwares are very much more common than the other pottery types, their dominance is not complete. In a number of the trenches there are assemblages of pottery which are mainly Medieval, with only one or two later Post-Medieval sherds found. Some Trenches have a number of 17th century Post-Medieval pottery but few later sherds. It might be possible, based on the finds of pottery, to hypothesise periods of activity at different areas across the site, although the wide potential date range of some of the pottery Types, such as the Red Earthenwares, may make this difficult in many cases.

10.2 Methodology

The pot types were initially sorted by a visual examination based on fabric types. Where like-sherds were found they were grouped together into an informal type series. A closer visual examination was then made and where appropriate, such as with the Red Earthenwares, these groups were further subdivided into sub-groups based on surface treatment and firing characteristics rather than on the actual fabric.

At this stage a further examination was made of the fabrics, this time with the assistance of a binocular microscope which tested for internal consistency between the fabric groups based on the microscopic composition of the clay matrix itself and any added temper, or larger naturally occurring clay inclusions. There was then a small amount of reassignment of sherds from one Type to another. Once this process had been completed the type series was formalised and detailed notes on the fabric of each Type was made based on the microscopic examination.

10.3 A description of the pottery types found at Dunluce

Type 1: North Devon Gravel Tempered pottery

Twenty eight pieces of North Devon Gravel Tempered pottery were found during the excavation. These were almost all small, many were weathered on one or both surfaces.

The vessels mostly had an external muddy green glaze. The fabric was grey, with orange margins common. Frequent large inclusions added as temper to the clay could be seen under microscopic

examination to consist of a mixture of well sorted angular and rounded quartzite and quartz crystals up to about 1mm in size.

None of the pieces are large enough to give any indication of body form except one (SF 1004) which appears to come from a large globular vessel with a thick internal glaze and a partially glazed exterior. It may be part of a storage jar.

North Devon Gravel Tempered pottery was made from the 17th through to the 18th century (Fanning and Hurst 1975). In Ireland it is frequently found from the mid-17th century and has probably ceased to be used by the early years of the 18th century as Irish made high quality earthenwares began to become more commonly used

Type 2: North Devon Gravel Free pottery

Seven sherds of North Devon Gravel Free Pottery were found at Dunluce. These represent at least three separate vessels.

There were three base sherds, two were large and had a similar kicking out base angle, with one glazed internally (SF 676) and the other not (SF 535). A third base sherd (SF 420) had no extrusion at the base and was glazed internally and had a patch of external glaze. The four other body sherds all had an internal glaze with one (SF 760) displaying an additional quite regular glaze stripe, approximately 1cm wide, on its external surface.

The fabric of the North Devon Gravel Free pottery is light grey with, usually, an orange margin on either one or both of the exterior faces. The texture of the fabric could be described as slightly sandy. No deliberately added temper is visible in any of these sherds and microscopic examination only revealed a very few, tiny crystalline inclusions, naturally occurring in the clay and what may be very small shell fragments.

A further two sherds have provisionally been identified as North Devon Gravel Free (SF 884 and 891) but they have a rather darker olive green glaze on their exterior face and an orange-red interior surface. One of the sherds has a few quartzite inclusions, reminiscent of a very fine Gravel Tempered vessel. These sherds have two incised lines of decoration and both are upper body sherds with the beginning of the neck curve visible.

It is possible that these are early North Devon Gravel Tempered pottery, alternatively the lack of an internal glaze may indicate that they are Medieval.

North Devon Gravel Free pottery is earlier than the Gravel Tempered pottery, dating to the first half of the 17th century

Type 3: German Stoneware

Two sherds of Westerwald Stoneware mugs were found (SF 444 and 488). Both of these were fragments which had sprigs of rosette decoration applied to them surrounded by painted cobalt blue decoration. A third sherd (SF 966) was a fragment of plain grey base. Westerwald Cobalt blue mugs became common in Ireland in the early 18th century (Meenan 2007, 396).

Type 4: Brown Stoneware

Two sherds of Brown Stoneware were found. One (SF 979) had the typical brown “orange peel” brown glaze. These stonewares began to be produced in Germany in the later middle ages and production of stoneware is known from England from the later 17th century (Draper 1984, 33). The examples from Dunluce are likely to date to this period or a little later.

Type 5: White Stoneware

Six sherds of White Stoneware (SF 381, 541, 822, 823, 1016 and 1026) were found during the excavation. Three sherds are very plain, creamy white salt glazed (SF 381, 541 and 1026). A thicker sherd has green painted on decoration (SF 1016). White stoneware was first produced in England at the end of the 17th century but did not begin to be produced in large quantities until the 1720's (Draper 1984, 37). It is likely that these sherds date to this time or a little later. By the mid-18th century Stoneware had been replaced by Creamware as the fashionable tableware.

Type 6: Chinese Porcelain

Two adjoining sherds (SF 824 and 826) are fragments of blue and white Chinese Porcelain probably dating to the Kangxi period of the early Qing dynasty (1662-1722), although it is possible also that it dates to the late Ming dynasty which preceded it. The vessel appears to be a small cup or mug with a rim diameter of about 8cm, probably made for the export market. The rim is present, below the rim is a frieze or floral decoration, defined by two blue lines, within which individual floral motif groups are separated by vertical lines. Beneath this frieze is the main decorative scene of which only a fragment survives. It depicts a landscape of mountains, trees and lakes. There is a suggestion of a building, looking out over the water, to the left side of the larger sherd. At the bottom of this scene there are a pair of lines delimiting it, which probably lead to a second frieze around the base of the cup, which is, unfortunately, not present.

Two tiny pieces of porcelain had traces of red painted decoration (SF 822 and 823), they were very small and it is difficult to see any details of the motif and it is possible that these could be English instead of Chinese.

Two other, superficially similar, but very small, sherds of probable Chinese Porcelain (SF 474 and 883) were found. These were blue and white also but too small to get any idea of the form or decorative motifs.

Type 7: Manganese Mottled

Eighteen pieces of Manganese Mottled pottery were found. These pieces had the characteristic mottled golden brown glaze, with darker spots and streaks, possibly caused by iron oxide within the fabric of the pots. The fabric has rich cream colour to light tan colour and seems fairly uniform across the Manganese Mottled sherds. Inclusions are small, probably present in the clay rather than deliberately added temper and only easily observable under a microscope. The most typical inclusions are small off white rounded pellets of uncertain origin which look rather like peanut kernels. Rounded quartzite grains are also commonly found and sometimes small rounded black inclusions.

All of the fragments are small and attribution of sherds to vessel forms very difficult. Nine sherds are small body sherds and are of little use for identifying pottery forms. The other nine fragments are of some use.

There are three base / body sherds (SF 639, 640 and 1030), two of which adjoin (639 and 640). These two vessels both had a flat base and one or two incised lines around the base where the glaze collected especially heavily making an attractive contrast with the rest of the vessel.

There are also two handle sherds (SF 730 and 731) almost certainly from the same vessel, both of which have a concave upper surface. There is a single rim (SF 441) of a fine vessel with a slightly lighter glaze than the others of this type. There are also three body sherds decorated with incised lines (SF 549, 550 and 781).

Although these sherds are small they are typical of what you might expect to find from small later 17th century to early 18th century mug. A mug decorated with a manganese glaze and displaying the handle, rim, base and decorative forms displayed on the Dunluce sherds, dating to the early 18th century is illustrated by Draper (1984, 9).

Manganese Mottled vessels were frequently made in the potteries of the emerging ceramic powerhouse of Staffordshire (Meenan 2007, 399), indeed the fabric from these Dunluce Manganese Mottled sherds is reminiscent of the Staffordshire Slipware sherds discussed below although the added temper differentiates them.

Type 8: Tin Glazed Earthenwares

Nineteen Tin Glazed Earthenware sherds were found during the excavation. Some of the fragments were tiny but it was possible to identify a minimum of four different fabrics and at least that number of vessels.

The largest and most numerous collection of sherds come from a deep dish (SF 704, 705, 706, 707, 708, 709 and 728). Sherds of the base, body and upper body up to the start of the neck curve were found showing it to be probably a delft pancheon. The fabric of these vessels is creamy with only a few small, red and clear, inclusions, naturally occurring, in the clay.

A second fabric (SF 622 and SF 1045) occurs with a softer, almost friable, fabric and occasionally some largish red iron oxide inclusions. These sherds were covered in a glossy thick lead glaze with blue glaze painted decoration. These sherds are likely to form a part, or parts of small drug pots.

Type 9: Red Earthenwares

The most common class of pottery on the site was the Red Earthenware category, Type 9. These are a group of vessels which share a very similar fabric. The fabric is orange / red, well fired with a slightly laminar appearance under microscopic examination. There are generally few indications of deliberately added temper, just tiny black pellets of uncertain type and small specks of red iron oxide, naturally present within the clay. Tiny crystalline inclusions are naturally occurring in this fabric also, either mica or quartzite, their size being so small it was difficult to differentiate between them using an ordinary optical microscope.

The Red Earthenware Type 9 was subdivided into nine sub-classes. In eight of the categories the subdivision was based on the glaze, slip or other surface treatment of the vessel, in the ninth sub-division it was based upon a difference in the firing of the vessels.

Type 9.1

An orange-red fabric with a mid-brown glaze of which 40 examples were found during the excavation. Similar to, but browner and less lustrous than, Type 9.4.

Type 9.2

An orange-red fabric with a mottled glaze with some brown spots and streaks. Twenty four of this type of sherd were found.

Type 9.3

An orange-red fabric with a yellow glaze, which can have a greenish hue on some vessels. Twenty three sherds of this type were found during the excavation.

Type 9.4

An orange-red fabric with a lustrous, purple-brown glaze. This was the most numerous sub-category or all the red earthenwares, and the most common pottery type on the site, with 199 sherds of this type of pottery found.

Type 9.5 A grey fabric, very hard, brown internal glaze, golden-olive external glaze. Thirteen sherds of this type were found during the excavation. Similar shreds were found in O'Baoill's excavation at Toome Castle (Gahan 1999, 104).

Type 9.6 An orange-red fabric with a lustrous purple-red glaze on one side and a light yellowish cream. Four sherds of this type were found at Dunluce.

Type 9.7

An orange-red fabric with no glaze. Forty sherds of this type were found although it is impossible to know how many came from fully unglazed vessels and how many were simply from glazed vessels which were only partly glazed, perhaps over their upper bodies only.

Type 9.8

An orange-red fabric with a white slip. Seven sherds of this pottery type were found.

Type 9.9

An orange-red fabric with a yellow glaze on one side and a purplish red glaze on the other. Three pieces of this type of pottery were uncovered during the dig.

The Red Earthenwares from Dunluce are likely to have been produced in Ireland probably from the later 17th century and continuing into and through the 18th century (Meehan 2007). There is production of these wares known from Tuam, Co. Galway (Carey and Meenan 2004) and Dublin (Frazer 2009) and probably many other locations as well.

Type 10: Gritty Wares

Four sherds of this type of pottery were found (SF 601, 735, 1001 and 1512). These sherds were unglazed, one had traces of applied slip, and were light coloured, light grey to light orange-red. There were a large number of grits added to the pottery as temper, mostly well sorted slightly rounded quartz. These sherds are reminiscent of Scottish White Gritty Ware (Hall 1996) a type of Medieval pottery produced in Scotland, at a number of centres, from the twelfth through to the fourteenth or fifteenth centuries. Similar sherds, also identified as Scottish White Gritty Ware were found at Greencastle, Co. Down (pers comm. Sarah Gormley).

Type 11: Blackwares

Nineteen sherds of large Blackware vessels were found at Dunluce. Although some of the sherds were large no complete enough vessels were encountered to be able to identify the body forms, yet it is likely given the large size and thickness of some of the vessels that they were large utilitarian vessels such as pancheons.

The fabrics ranged from a light orange through to deep red and dark grey-red. A number of the sherds show a lighter coloured stripe of clay running within them, indicative of the imperfect mixing of two clays. This is often found with the Blackwares manufactured at Buckley (Will 2007) although as Meenan points out the types of clays used to make Blackware pottery are found over large swathes of western England (2007). The glazes are very dark purple-red to black.

Utilitarian Blackwares were imported into Ireland through the seventeenth and eighteenth centuries (Meenan 2007, 398). The Type 11 class can be differentiated from the Cistercian Ware class, below, not just by their size and thickness but also the inclusions within it. The Black Ware fabrics, while similar in colour and texture to the Cistercian Ware have deliberately added temper of chalk and possibly flint inclusions up to about 1mm in size.

Type 12: Cistercian Ware / fine Blackwares

Twenty nine sherds of what could be called Cistercian Ware or Fine Blackware were found during the excavation. These sherds were thinner than the coarse Blackware and the fabric, while sharing the generally deep red colour of the Blackwares had little or no added temper.

The fabric colour ranged from deep blood red through to deep orange-red to dark grey-red. Tiny angular quartz and quartzite grains were visible under microscopic examination as well as on occasion white and red crystals which could not be identified. The glazes on these sherds ranged from a rich dark golden brown through a purplish red to an almost black amaranth.

Most of the sherds were fine body sherds, body forms could only be guessed in a couple of vessels. Two rim sherds (SF 480 and 482) of a single vessel were found and three base angles of different vessels. One base angle had attached an elaborate double looped handle. No matching upper body or rim sherds could be identified for this vessel but it seems likely that it is a part of a small two-handled loving cup or similar.

Three sherds (SF 552, 553 and 554) had dollops of yellow slip applied under the glaze. They were initially thought to be Staffordshire Slipware but an examination of the fabric showed that they had the same paste and inclusions as the Cistercian Ware.

Type 13: Staffordshire Slipware

Thirteen sherds of Staffordshire slipware were found during the excavation. They seem to have been sherds of at least three, possibly four vessels.

One set of three sherds (SF 724, 880 and 981) had thin lines of dark brown slip against the familiar yellow background glaze then trailed to produce the common Feathered Trailed Slipware, the "bakewell tart".

A second set of sherds (SF 638 and 990) had similar, but thicker, lines of brown slip on a similar yellow background

A single fragment of a yellow glazed handle, with no applied slip was found.

It is possible that these three sets of sherds were all from one vessel, or one or more vessels of very similar type. Under microscopic examination the fabrics of these sherds looked similar. The fabrics of each was cream with white rounded crystals of uncertain type and red-brown pellets of a glistening crystalline, granular compound of uncertain type (although possibly red iron oxide). These inclusions were small and probably present naturally in the clay.

A second type of Staffordshire Slipware vessel was represented by five sherds (SF 540, 560, 561, 562, 945) which had thin brown lines of slip on a yellowish greenish background. The fabric of these sherds under microscopic examination was quite similar to the above mentioned Staffordshire fabric, cream with white rounded crystalline inclusions and pellets of an orange red granular substance, which in this case probably is red iron oxide.

A third type, which has a significantly different fabric and may not originate from Staffordshire, is represented by two sherds (SF 373 and 945) which have light yellow lines of slip on a light orange to brown background. The fabric is pink to orange with small white stone inclusions.

Slipwares were produced from the early 17th century and continued in production into the 18th century (Draper 1984, 15-17). The yellow glazed with dark brown trailed slipware sherds, the handle and the sherds with dark brown thick lines on a yellow background are likely to date to the later seventeenth or very early 18th century and may well be part of a drinking cup or cups.

Type 15: Scottish Grey / Reduced Ware

Nineteen sherds with a grey to dark grey fabric and a green glaze were found during the excavation. The fabric colour ranged from mid to very dark grey. All sherds had a grey core to their fabric, some displaying a light grey or whitish margin on one or both surfaces. Under microscopic examination there is some variation in the fabrics. Some fabrics seem devoid of any larger inclusions / added temper (SF 982, 988, 1043). Others were more gritty (SF 1011, 1055) and had a slightly rough interior texture and under the microscope could be seen to have added quartz and quartzite inclusions.

Several sherds (SF 1040-44), apparently fragments of a large jug, display some curvilinear incised decoration. One single piece (SF 980) is glazed on both the exterior and the interior. It has a rather more gritty fabric than any of the other sherds and has thumb impressed decoration.

A fine complete base and lower body of a Scottish Grey / Reduced Ware vessel (SF 602) may be a rather narrow jug base. It has a dark grey fabric, some red iron oxide inclusions which may be naturally occurring within the clay and a pale, very light grey internal and external margin over which there are hints of a light olive green glaze. The outer surface and base are oxidised orange red in places.

Scottish Grey / Reduced Ware is conventionally dated from the 15th to the 17th centuries (Hall 1984). It is not homogeneous and it is likely, in a similar manner to Scottish White Gritty wares (whose successor it is sometimes believed to be), to have been produced in a number of different kiln sites. In the past few years it has also been encountered on a number of sites in north and east Ulster (McSparron, Caldwell and Dean in prep). No kiln sites for this type of pottery have yet been found in Scotland and it is not impossible that it is not so much a Scottish type as a North Chanel Region potting tradition.

The variety encountered in this small collection of sherds from Dunluce may reflect either the production of a number of kilns or production over an extended period of time or a combination of both. The more gritty Scottish Grey / Reduced Wares from Dunluce seem similar to the Scottish White Gritty Wares in terms of feel and added temper, but their grey colour either indicating the use of different clay sources, or more likely, different kiln technology.

Type 16: Light green and brown glazed reduced ware

Four sherds (SF 5556, 557, 558 and 559) of a single vessel, apparently distinct from other types found at Dunluce. The vessels have a pale yellowish green external glaze on the exterior and inside the rim which gives way to a mid to dark brown, slightly lustrous glaze. The fabric is mostly mid grey, slightly sandy, but in places orange-red.

Type 17: Grey reduced fabric, brown external glaze and brown salt glaze (?) on the interior.

Three sherds (SF 624, 625 and 626) probably from a single vessel with a slightly sandy grey fabric, with very occasional small quartzite inclusions, covered externally with a deep red-brown glaze and internally with a brown, sparse in places, internal glaze which has a slightly orange peel texture possibly indicative of a salt glaze.

Type 18: Souterrain Ware

Three Sherds of Souterrain pottery were found during the excavation representing a minimum of two vessels. There were two rim sherds (SF 386 and 437), both too small for an accurate estimation of the rim diameter. Both of the rims had a rounded profile, rounded and flattened are the only rim types commonly found amongst Souterrain Ware pottery. The fabric of the vessels felt sandy to the touch. This was confirmed by microscopic examination which revealed tiny, angular grits of quartz and quartzite naturally occurring within the clay. Occasional larger, sub-angular, quartzite inclusions, up to about 1mm in size, appear to have been deliberately added to the clay as temper during the manufacture.

A third, base sherd (SF 387), had a similar fabric to the two rim sherds although there were also very small rounded black pellets within the matrix of the clay, possibly black iron oxide, although this cannot be confirmed by a simple visual inspection. The similarity to the fabric of the other Souterrain Ware sherds makes it likely that this is a Souterrain Ware base sherd, although it is not impossible that it could be a Medieval Ulster Coarse Pottery also.

Souterrain Ware production probably commenced in the 8th century and continued through until the early 14th century (McSparron, in press). Early vessels tend to be plain, with later vessels having applied cordons and incised rim decoration and the latest vessels sometimes applied, thumb impressed, "pie crust" cordons. The three small sherds found at Dunluce were all too small to place within the Souterrain Ware sequence so their date cannot be constrained within the general range for the type

Type 19: Medieval Ulster Coarse Pottery

Twenty eight sherds of Medieval Ulster Coarse pottery were found during the excavation. There were eleven rims and seventeen body sherds. The rims are all distinct and it can be stated therefore that there must be at least eleven separate vessels represented in the assemblage.

There were a range of fabrics, forms and decoration within the assemblage, although it was difficult to be definitive about either the body forms or decorative motifs because of the small size of most of the pottery fragments.

Of the eleven vessels represented by the rims nine had either rounded or flattened rims, which can be found in both earlier and later Medieval Coarse Pottery assemblages but two rims (SF 1007 and 1013) displayed the "Slight-hammerhead" rim which has only been found in late "Type B" Medieval Ulster Coarse pottery assemblages dating to the 15th century or later (McSparron 2011)

There were two fabrics present within the Medieval Ulster Coarse Pottery assemblage, a sandy fabric (SF 613, 404, 767) and a hard, well fired, fabric (SF425, 431, 806, 413, 600, 1007 and 1013) . There was a variety of fabric colours in the assemblage, some variously black or orange red, others more uniformly reduced or oxidised. Under microscopic examination the sandy fabrics showed tiny quartz and quartzite inclusions within the matrix of the clay itself. The less sandy, hard, well fired fabrics had fewer inclusions but quartz, quartzite, black and red iron oxide all appear to have been within the fabric of these vessels also. Most of the temper added to these vessels was quite small in size and mainly quite angular quartz or quartzite. A couple of sherds appear to have had little or no added temper.

Most of the sherds examined had no decoration. Three sherds were decorated. One rim (SF 613) had incised diagonal strokes visible at the neck and below the rim, which are similar to decoration on a vessel from Doonbought, Co. Antrim (McNeill 1977) and somewhat reminiscent of the incised oblique, although shorter, lines found on some Medieval coarse pottery uncovered at Finlaggan by David Caldwell. As with the Scottish Grey Ware pottery this raises the question of cross North Channel pottery traditions.

A second rim (1007), one of the rims with a “Slight-hammerhead” rim profile, had round impressed “dimples” on the neck above a curvilinear incision on the upper body. A third rim (806) had a lazy chevron defined by two incised lines which framed the bottom of the neck and the lip of the rim.

Medieval Ulster Coarse Pottery appears in east Ulster in the first half of the 13th century and continues into the 17th century (McSparron 2011). Although a conservative form there are changes in the body form and style and to some extent in decoration over the period of its use. The early, Type A, vessels are small with a limited range of rim and base forms and a very restricted range of decorative motifs, only occasionally employed. There also appears to be a tendency for these Type A vessels to have a largely oxidised, or variously oxidised and reduced fabric. Later Type B vessels are, on average, larger, usually reduced, have a wider range of forms and manufacture styles, with a number of distinctive rim forms, and are more likely to be decorated than earlier vessels. They probably first appear in the 15th century. There may also be a change of geographic distribution in the Medieval Ulster Coarse pottery with Type B found all over Ulster and Type A found infrequently, if at all, in west Ulster (McSparron 2011).

Type 20: Undiagnostic Coarse sherds

Thirty six fragments of coarse pottery were found which were either too small or too lacking in diagnostic features to allow them to be identified to any particular ceramic tradition. Given the nature of the other coarse pottery from Dunluce it seems likely that most of these sherds are Medieval Ulster Coarse pottery with a few Souterrain Ware sherds.

Type 00: Others

There were nine sherds in this category. Of these five were simply too small and abraded to be identified, all however were earthenware. The remaining four sherds represented three vessels.

Two small sherds (SF 649 and 669) had a matching deep grey-red earthenware fabric and a crazed dark lime green internal glaze. I have been unable to identify this pot but it seems consistent with a seventeenth or early 18th century earthenware.

A single sherd (SF 377) with a golden brown glaze both internally and externally and a slightly laminated buff fabric, similar to that found on the Staffordshire Slipwares in the assemblage but somewhat thicker, darker and with larger inclusions. It may be a variant of Staffordshire Slipware.

A single sherd (SF 588) of a vessel with a light grey / white fabric, few inclusion and covered in a mainly yellow glaze, inside and out with areas of apple green glaze running through it. It may be some sort of Surrey Hampshire Border Ware.

10.4 Discussion

The assemblage of pottery from Dunluce is overwhelmingly dominated by Red Earthenwares (Type 9), over 50% of the sherds from the excavation are of one variant or another of this type. Nevertheless, as shown by the graphs of Pot Type by Trench (see section A7.7), it can be seen that the distribution of these Red Earthenwares is not even and that other pottery types dominate, albeit in lesser numbers, in some trenches. In particular there are a number of trenches where various types of pottery, and pottery of various eras, dominate, perhaps giving an indication of the age of the dominant archaeological features remaining to be excavated in these trenches. In Trenches, like Trench 7, there appears to be a clear indication of genuine Medieval activity. In other trenches, such as Trench 2, Trench 25a, 25b, 26a and 29, the artefacts suggest activity in only the late Seventeenth and Eighteenth Centuries. In a few trenches, like Trench 9a and Trench 15a there are hints of activity straddling the later Sixteenth and Seventeenth Centuries, although in both these cases the numbers of sherds from the trenches are small.

The Medieval Pottery at Dunluce

The presence of Scottish Grey Wares at Dunluce is interesting, but perhaps not surprising, and appears to tie in with an emerging view of north and east Ulster and its place within a North Channel region straddling Northern Ireland and western Scotland. Recent finds of Scottish Grey Ware in Derry / Londonderry (pers comm. Emily Murray) and in north Ulster generally, and also noted similarities in coarse potting in Ulster and the Scottish Isles (McSparron, Caldwell and Dean, in prep), may place the MacDonalds at the centre of political and trading networks across the region.

Although there are examples of finds of Medieval Ulster Coarse Pottery and early to mid-17th century pottery, like North Devon Gravel Free and North Devon Gravel Tempered pottery at Dunluce, there are no examples of Medieval Ulster Coarse Ware being found in the same undisturbed context as these pottery types. The continuance of Medieval Ulster Coarse Pottery into the 17th century is still not firmly established, although there is evidence from Salterstown (Miller 1991) that it may continue until the later 17th century. The evidence so far points to this not happening at Dunluce and it instead being replaced by North Devon and later pottery types.

Post-Medieval Pottery at Dunluce

As with other sites in Ulster North Devon pottery is well represented in both its earlier Gravel Free and later Gravel Tempered variants. These, of themselves without any supporting historical documents, would indicate that the trade networks and associated polities of later Medieval Ulster had changed significantly. They are accompanied by a wide range of other vessels, brought mainly from England, throughout the Post-Medieval era.

The presence of fine Blackwares at Dunluce is interesting, these may be earlier than some of the later Blackwares, commonly found in Ulster, and may be what is sometimes referred to as Cistercian ware, fine table wares of the later Sixteenth and early Seventeenth Centuries produced in the English Midlands.

Later 17th century to early 18th century pottery Types include the Manganese Mottled, Staffordshire Slipware and Tin Glazed earthenwares, all of which are likely to have originated in England apart from the Tin Glazed Earthenwares which were produced in Ireland and Continental Europe also.

Definite imports are few at Dunluce. Two certain ones are the fragments of Westerwald mug and the fragments of a Chinese Porcelain mug. The Chinese Porcelain mug is very beautiful and probably dates to the latter half of the 17th century or early 18th century. It is tempting, given its beauty and exotic origin, to suggest that it indicates continued high status occupation at Dunluce towards and possibly even into the 18th century. However it seems that Chinese porcelain was routinely imported into Ireland at this time and was available to even the less wealthy customer, leading to no less than Jonathan Swift commenting on the abundance of Chinese Porcelain in Ireland, who noted that it was so common as to even be used as candlesticks (Shaw-Smith 1984, 191)!

The forms of pottery found in the Dunluce Assemblage

Body forms are hard to suggest for most of the vessels found at Dunluce because of the small size of the sherds. We know from previous studies (Ryan 1973) that the Souterrain Ware pots are likely to take the form of bucket shaped utilitarian vessels, and that the Medieval Ulster Coarse Pottery vessels are likely to be globular cooking and storage vessels (McSparron 2011). The North Devon Gravel Free vessels present a number of bases which are consistent with the bases of storage vessels. However the North Devon Gravel Tempered sherds are all far too small to hazard any such a reconstruction.

The Staffordshire Slipware vessels are likewise very small to suggest body form as are most of the fine Blackware / Cistercian Ware vessels found, although one base and body fragment preserves a fragment of handle which seems to indicate that it belongs to a two handled cup or similar.

A number of the vessel types found at Dunluce appear to be mugs or Tankards, such as the late 17th to early 18th century German Westerwald sprig decorated sherds, which presumably belonged to a tankard, the similarly dated Chinese Porcelain mug fragment and the sherds of Manganese Mottled pottery, which while fragmentary, seem from the base, rim, decorative pieces and handle fragments to represent one or more mugs.

The Red Earthenwares, are, as has been mentioned, overwhelmingly the most numerous type from the site, however as with other types the majority of the sherds are very small body sherds making attempted reconstructions impossible. It seems however from the rims and bases that a number of different storage jars and plates are represented within the assemblage.

10.5 Conclusion

The pottery assemblage from the excavations at Dunluce in 2014 is large and diverse. It includes locally made vessels as well as vessels from England, Scotland, Europe and China. It has a chronologically wide span, with some trenches appearing to have Medieval assemblages, others 17th century assemblages, others more Late 17th to 18th century assemblages. The changes in the society of Ulster in the later Medieval and Post-Medieval periods are encapsulated in this assemblage.

This assemblage gives a good indication of the types of pottery likely to be identified in further excavations at these locations and this analysis can easily be used as a framework to carry out further pottery analysis from excavations at Dunluce in the future.

10.6 Bibliography

- Carey A. and Meenan R. 2004. 'Excavation of a post-medieval pottery kiln, Tuam, Co. Galway'. *Journal of the Galway Historical and Archaeological Society*, 56, 37-45.
- Draper J. 1984. *Post-Medieval Pottery 1650-1800*, Shire Publications: Aylesbury
- Fanning, T. and Hurst, J.G. 1975. 'A mid seventeenth-century pottery group and other objects from Ballyhack Castle, Co. Wexford', *Proceedings of the Royal Irish Academy*, 75C, 103-118.
- Frazer, W.O. 2009. 'Native industry from newcomer artisans? Evidence for a post-medieval pottery in the Liberties, Dublin'. *Journal of Irish Archaeology*, 18, 115-127.
- Gahan, A. 1999. 'The artefacts'. In R. Ó Baoill and A. Gahan, 'Excavations at the site of Toome Castle', *Ulster Journal of Archaeology*, 58, 90-108.
- Hall D. W. 1996. 'Blind date: Scottish Medieval pottery industries', *Tayside and Fife Archaeological Journal*, 2, 126-129.
- McNeill, T.E. 1977. 'Excavations at Doonbought Fort, Co. Antrim', *Ulster Journal of Archaeology*, 40, 63-84.
- Meenan R. 2007. 'Post-Medieval pottery in Ireland'. In A. Horning, R. Ó Baoill, C. Donnelly and P. Logue (eds), *The Post-Medieval archaeology of Ireland*. Irish Post Medieval Archaeology Group. Wordwell: Bray.
- Miller, O.G. 1991. *Archaeological Investigations at Salterstown, County Londonderry, Northern Ireland*. University of Pennsylvania (unpublished PhD thesis).
- McSparron, C. (forthcoming) 'Pots and peoples: Identity and ceramic technology in Medieval Ulster 700 to 1600 AD'. In A. Horning and E. Fitzpatrick (eds), *Becoming and Belonging*.
- McSparron, C. 2011. 'The Medieval coarse pottery of Ulster', *Journal of Irish Archaeology*, 20, 99-119.
- Will, B. 2007. 'The glazed pottery'. In T. Ballin, B. Ballin Smith, D. Swan, B. Will, D. Gallagher and C. Smith, 'Additional artefacts from Townparks, Antrim Town', *Ulster Journal of Archaeology*, 66, 60-62.

10.7 Graphs: the distribution of pottery types in the various trenches.

The distribution of pottery types in each of the main trenches at Dunluce is presented below. If the trench produced no, or only two or three, pottery sherds it is not included. The pot types are arranged approximately chronologically from left to right, with Souterrain Ware the earliest and White Stoneware the latest. This should only be taken as a chronological indication as there are bog overlaps between these date ranges and just because a particular type of vessels production commences in, for example, the mid-17th century, its use at Dunluce may only date to several decades later.

