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Multi-period activity, the European Marine Science Park, Dunstaffnage, Argyll

Clare Ellis

with contributions by

Derek Hamilton, Susan Ramsay, Angela Boyle, Anne MacSween,
Gemma Cruickshanks, Torben Bjarke Ballin

Address

Argyll Archaeology, Davaar Cottage, Campbeltown, Argyll. PA28 6RE

Author contact

ellisclare@argyll-archaeology.co.uk

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TABLE OF CONTENTS

List of illustrations	iv
List of tables	iv
1. Abstract	1
2. Introduction	1
3. The excavation	2
3.1 The northern group	2
3.2 The southern group	4
4. Specialist reports	9
4.1 Dating, <i>by Derek Hamilton</i>	9
4.2 Charcoal and seed analysis, <i>by Susan Ramsay</i>	11
4.3 Bone and cremated bone analysis, <i>by Angela Boyle</i>	14
4.4 Daub (pottery?) analysis, <i>by Anne MacSween</i>	16
4.5 Metalwork analysis, <i>by Gemma Cruickshanks</i>	16
4.6 Flint and coarse stone analysis, <i>by Torben Bjarke Ballin</i>	17
5. Discussion	17
5.1 Late Iron Age	17
5.2 Early historic period features	18
6. Wider context	19
6.1 Neolithic	19
6.2 Late Bronze Age	19
7. References	22

LIST OF ILLUSTRATIONS

1. Site location	1
2. Plan of excavation area	2
3. Sections and profiles of northern group of features	3
4. Sections and profiles of Bronze Age features, southern group	4
5. Plan of post-hole structure and sections and profiles, southern group	6
6. Section, profiles and plan of linear post-hole feature, southern group	7
7. Section and plan of grain-drying kiln, southern group	8
8. Sections and profile of pits, southern group	8
9. Chronological model for Iron Age activity at Dunstaffnage	9
10. Chronological model for medieval activity at Dunstaffnage	11

LIST OF TABLES

1. Radiocarbon results	10
2. Charcoal, the northern group	12
3. The carbonised remains, southern group	13
4. Dentition	14
5. Cremated bone	15
6. Metal artefacts	16

1. ABSTRACT

Excavation in advance of development of the European Marine Science Park at Dunstaffnage in Argyll revealed multi-phased activity from the Neolithic into the Early Historic period. An irregular row of fire-pits, interpreted as funerary pyres, was orientated east–west and incorporated an infant inhumation and a cobble path. Dating of charcoal revealed that the fire-pits were probably in use for a number of generations during the Late Iron Age. The fire-pits were located on the edge of wet ground and it is postulated that these were deliberately located on what may have been perceived as a liminal boundary to aid passage into the afterlife. Activity shifted to the drier ground in the Early Historic period, late 7th to 9th century, in the form of an extended farmstead within which barley and oats were being dried in a kiln. Evidence for possible barns and/or houses survives in the form of a post-hole structure, a post-built wattle and daub structure, at least one basket pit boiler and a number of cobble hearths. One pit contained ten metal artefacts thought to be derived from agricultural implements or a dismantled structure. The duration of use of the farmstead appears to have been relatively short and it may have been seasonally occupied.

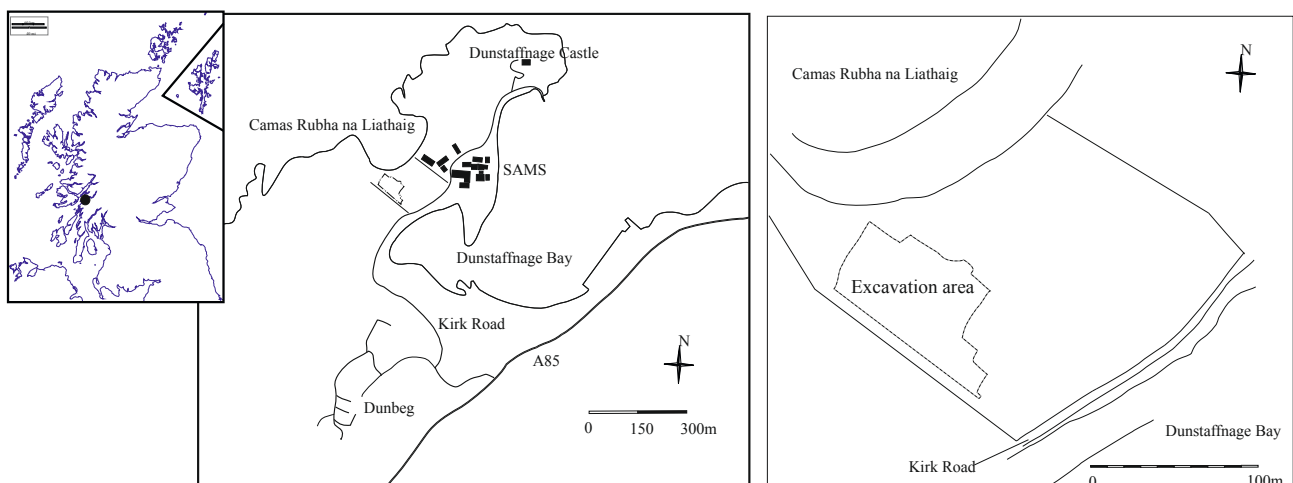
2. INTRODUCTION

The European Marine Science Park is located at Dunbeg, a small village situated on the north side of Oban in Argyll (Illus 1). The site is roughly centred on NGR: NM 87878 34063 and is bounded by Dunstaffnage Bay and Camas Rubha na Liathaig ('the blue/grey bay and promontory'). Argyll Archaeology was commissioned by Rok Prime Contracting Ltd, on behalf of Highlands and Islands Enterprise, to undertake an evaluation and subsequent excavation.

In March 2010 an archaeological evaluation was carried out by Argyll Archaeology in a field just to the west of Dunstaffnage Marine Laboratory and revealed a number of pits and possible post-holes

(Ellis 2009). At least one of the pits appeared to be a burial pit and others contained cremated bone which may or may not have been human. The pits and post-holes were thought likely to date to the prehistoric period, possibly the Bronze Age. The pits and post-hole features appeared to be confined to the north-west corner of the development area. In order that the development of the site could proceed, and in consultation with West of Scotland Archaeology Service, a programme of archaeological excavation was devised.

In May 2010 a substantial area in the north-west corner of the development area was machine-stripped of topsoil (Illus 2). An expansive suite of pits and post-holes was revealed and these were



Illus 1 Site location

subject to a full archaeological excavation. The features were divided into two geographic groups, the northern group comprising a line of shallow scoops or pits and the southern group comprising a scattering of pits, gullies and post-hole features. The majority of the features of the northern group date to the Late Iron Age, although there is one pit that dates from the Early Historic period. Within the southern group are pits dating from the Late Bronze Age, although the majority of features also date to the Early Historic period. Within these geographic groups six distinct categories of features were excavated; a stone-lined burial pit; a kiln; pits full of fire-cracked cobbles and ash; post-holes (including two distinct post-hole structures/alignments); pits with silty/sandy/gravelly fills; and linear gullies. In addition, a linear arrangement of large cobbles was also recorded, although whether this feature is natural or anthropic remains open for debate. Very few finds were recovered, although a large struck flint was recovered from the base of one pit, while a series of extremely corroded iron artefacts were recovered from another, daub from a possible kiln and numerous fragments of daub from a gully fill within which were set a series of post-holes.

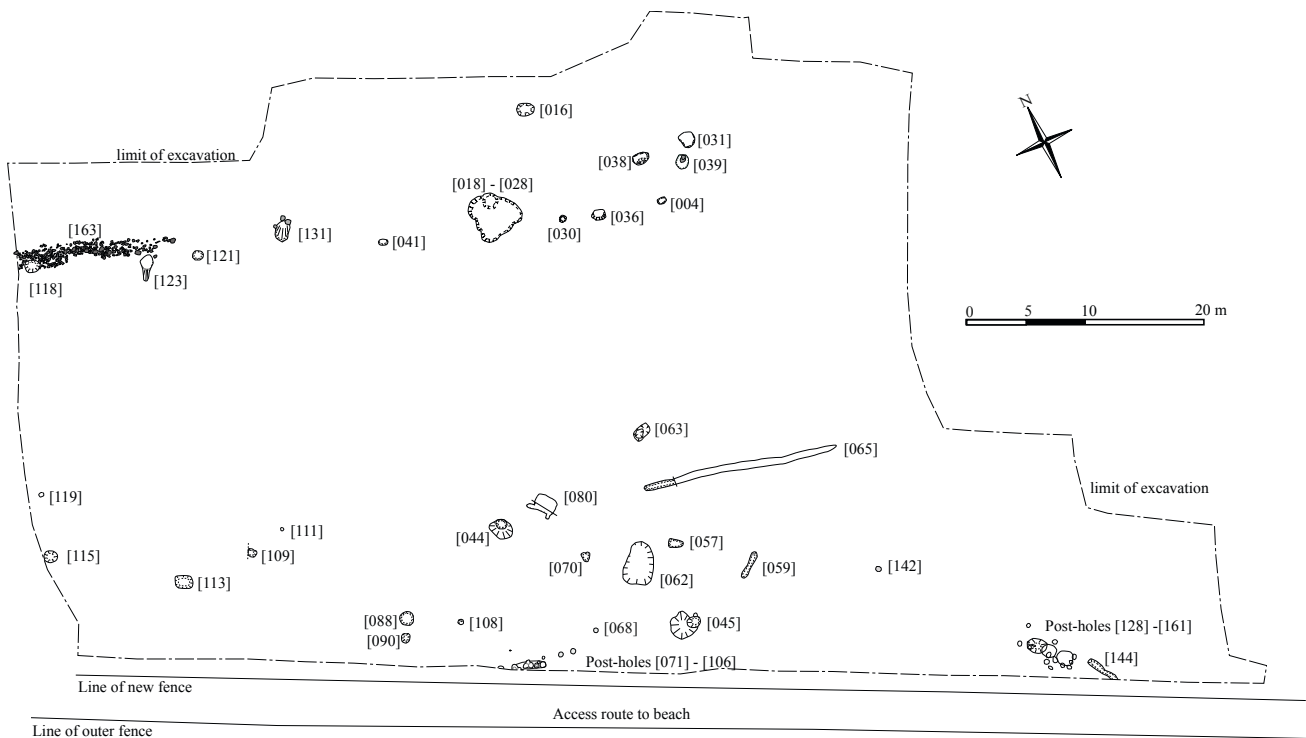
3. THE EXCAVATION

3.1 The northern group

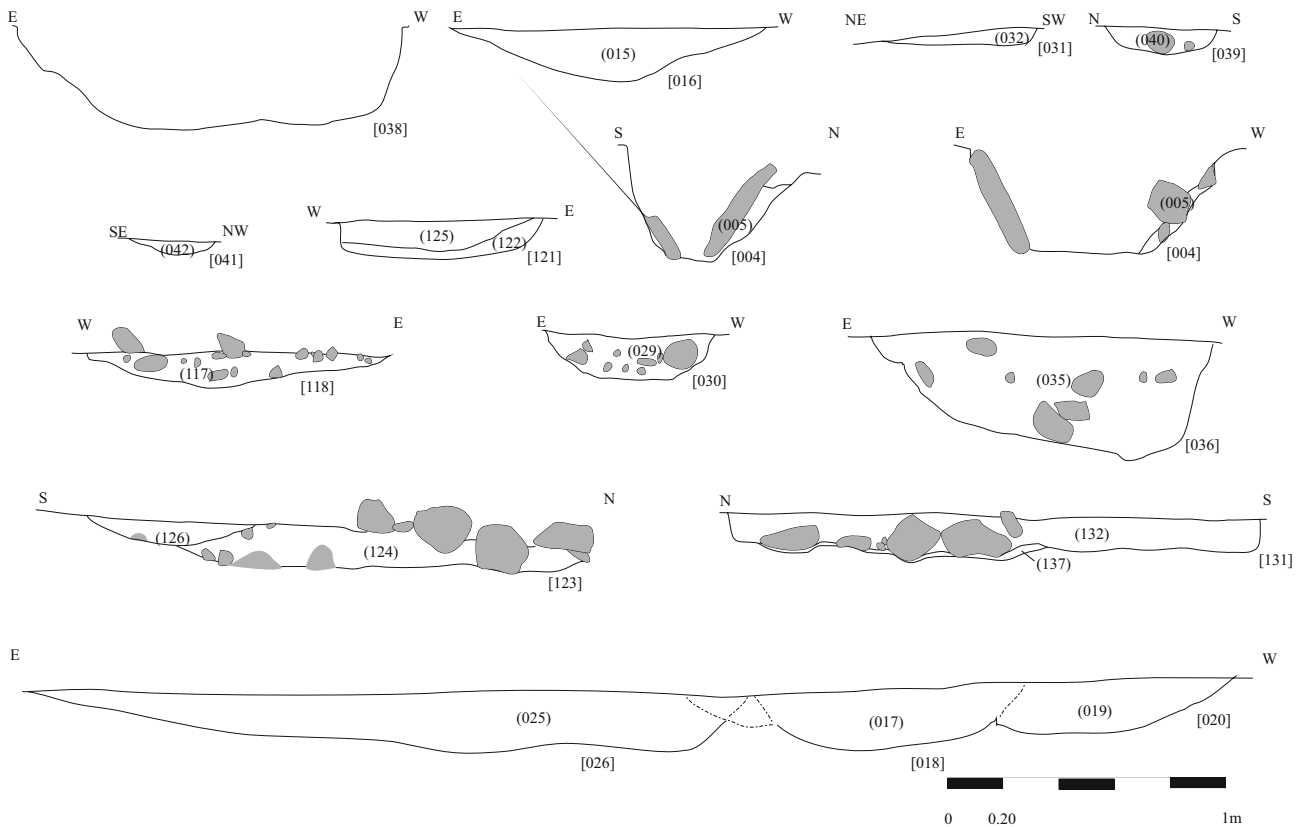
3.1.1 Results

The northern group of features are orientated along a roughly west to east axis at a break in the slope (Illus 2). Well-defined Pits [121], [041], [030], [036], [004], [038] and [016] and more shallow pits with irregular cuts ([118], [123], [131], [018]–[028], [039] and [031]) were fully excavated (Illus 3).

Pits [118], [123], [131], [039], [031] and the cluster of intercutting Pits [018]–[028] have irregular shallow cuts and flat bases. The cut of Pits [123] and [131] and the cluster of intercutting Pits [018]–[028] are shallow on the southern side but slightly steeper on the northern, down-slope side; however, this may be a function of plough truncation rather than a deliberate design feature. Occasional natural boulders and cobbles occur within the base of these pits, indicating that the presence of these did not adversely affect their function or use; in the case of Pits [123] and [131] they may have actually been deliberately placed. The fill of these pits is typically dark greyish brown to black, rich in small gravel-sized



Illus 2 Plan of excavation area



Illus 3 Sections and profiles of northern group of features

pebbles and ash-like material with few to common fragments of charcoal and occasional fire-crackled cobbles. The charcoal of Pits [118]/(117) and [131]/(132) is dominated by hazel roundwood, and the latter also contained carbonised hazel nutshells. The charcoal of Pit [031]/(032) is also restricted to hazel. No finds were recovered from any of the fills and a few fragments of burnt human bone were recovered from fill (017)/Pit [018]. The charcoal from Pit [123]/(124) is mixed, but dominated by oak; the single fragment of seaweed may indicate the exploitation of driftwood.

The fills of Pits [016], [038], [036], [030] and [041] are typically dark greyish brown sandy gravels with occasional fragments of charcoal. The charcoal of Pit [016]/(015) is dominated by alder and there is a significant amount of alder charcoal in Pit [038]/(037) as well as hazel. The circular Pit [121]/(039) is distinct from the other pits in this group as it contains abundant oak charcoal. The charcoal occurred as a thin layer at the base of the pit. There is no direct evidence of in situ burning in any of the pits.

The exceptional feature within this alignment is Pit [004] (Illus 2 and 3). Excavation revealed a cobble-lined cist set within an oval pit with the long axis aligned east–west. The pit measured 0.90 × 0.65m and was 0.38m deep. The beach cobbles (one stone had barnacles adhering) had been placed upright around the edge of the oval cut prior to an infant crouched inhumation being laid within. The body had been placed directly onto the floor of the pit with the head at the west and the feet at the east end; the skull had been partially crushed by a cobble that had slipped down the side of the pit cut. The floor of the cobble cist comprised natural pebbles and grit. The cist was capped by a number of large stones of mixed lithologies which were disturbed during topsoil stripping.

Associated with Pit [118] and possibly Pit [123] is a distinct linear concentration of cobbles [163] between 1.5m and 2m wide, with the cobbles averaging around 0.2m in diameter. The cobbles are set upon the natural grit and sand and their location coincides with a change in the natural unconsolidated geology from grit and sand to pebble

colluvium with silt. Pits [118] and [123] are set on the northern side of this concentration of stone and Pit [118] appears to be contemporary. It appears that the line of cobbles has been ploughed away after some 12m (as exposed in the excavation area).

3.2 The southern group

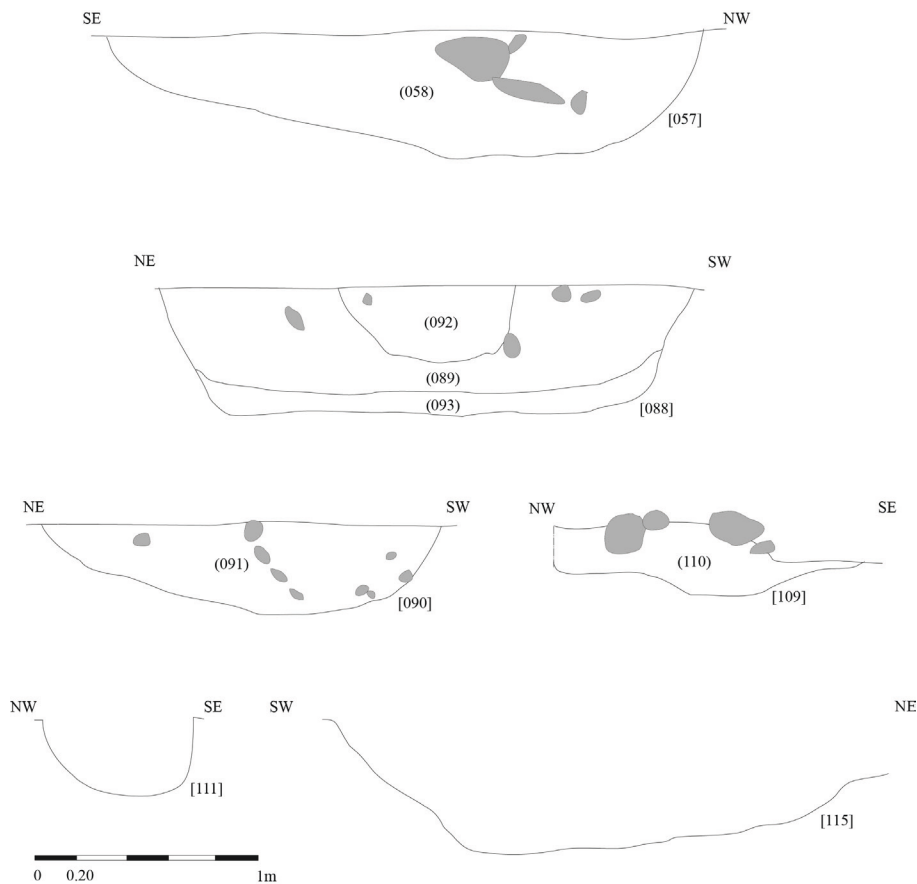
3.2.1 Results

The southern group of features occurs on the northern edge of a relatively flat gravel terrace that slopes down on the north side towards the damp raised beach, while the western side is bounded by a steep conglomerate escarpment (Illus 2). All but one of the dated features within the southern group belongs to the Early Historic period. Bayesian chronological modelling indicates that the Early Historic activity is contemporary, with activity starting cal AD 680–cal AD 745 (55% probability) and ending cal AD 780–cal AD 875 (65% probability).

A number of the excavated features in the southern group may date to earlier, prehistoric activity (Illus 2). Three Pits [057], [088] and [090] contained

dirty natural fills with minimal amounts of charcoal (Illus 4). A large piece of Late Neolithic flint was recovered from the basal fill (093) of circular Pit [088]; the flint had been deliberately pushed into this compact fill as it was located at the centre of the pit and was end-on. The pit was 1.20m in diameter and 0.30m deep. It is likely that the pit actually dates to the Late Neolithic as other Neolithic period pits and features have been excavated in a field to the south (Ellis forthcoming a).

The earliest absolutely dated feature is Pit [115] (Illus 4). This pit dates to the Late Bronze Age and contains tightly packed fire-cracked and heat-affected cobbles mixed with charcoal derived from a wide mixture of species. This feature may be the base of a hearth; it resembles the cobble and stone hearth bases within Middle Bronze Age roundhouses S1 and S2 excavated in a field to the south, these too displayed no direct evidence of in situ burning (Ellis 2012a, Ellis forthcoming a). A second undated Pit [109]/(110) has a very similar fill to Pit [115]/(116) and is also likely to be the base of a hearth and date from the Late Bronze Age. The adjacent Post-hole



Illus 4 Sections and profiles of Bronze Age features, southern group

[111] may also be associated with this possible hearth.

The majority of the features within the southern group date to the Early Historic period, specifically late 7th to 9th century. In the south-eastern corner of the excavation area are a series of post-holes. A four-post rectangular structure, comprising Post-holes [128], [130], [134] and [135], measures 6m × 4.4m externally. The post-holes were between 0.30m and 0.40m in diameter and between 0.12m and 0.30m deep and filled with sandy gravel and occasional clasts of charcoal. This structure is associated with or extends into a small L-shaped arrangement of post-holes, Post-holes [152], [150], [155], [157], [161] and [159], which enclosed an area roughly 2.5m × 4m. These post-holes were between 0.12m and 0.30m deep, oval and 0.30m × 0.40m in diameter and many of these post-holes contained packing stones (Illus 5). Post-holes [155], [157] and [161] were relatively shallow, 0.11m to 0.15m, and they were not as regular in form as the other post-holes. The fill of the post-holes was generally a dark brown silt with some charcoal; the overall impression was that the posts either rotted in situ or were removed. Post-holes [150] and [152] both had an additional shallow scoop on their northern sides perhaps made during the extraction of the posts. All the post-holes were initially masked by a dark brown silt (138) that lay in a shallow and irregular hollow, Cut [139], which formed three sub-circular depressions around which the post-holes were set. The charcoal recovered from the hollow was diverse, comprising hazel, rowan, alder, oak and heather. Grains of barley, fragments of hazelnut and a single seed of flax were recorded from this deposit. The charcoal recovered from the post-holes was generally mixed, although a significant quantity of roundwood hazel charcoal was recovered from Post-hole [152]/(146). Three Stakeholes, [140], [141] and [147] and an additional Post-hole [148] were revealed on removal of fill (138). A Gully [144], up to 0.30m deep but which became shallower and narrower towards the south, lay just to the south of the cluster of post-holes. The fill (145) was a mixed silt with fragments of charcoal and the odd fragment of burnt bone and fire-cracked cobbles.

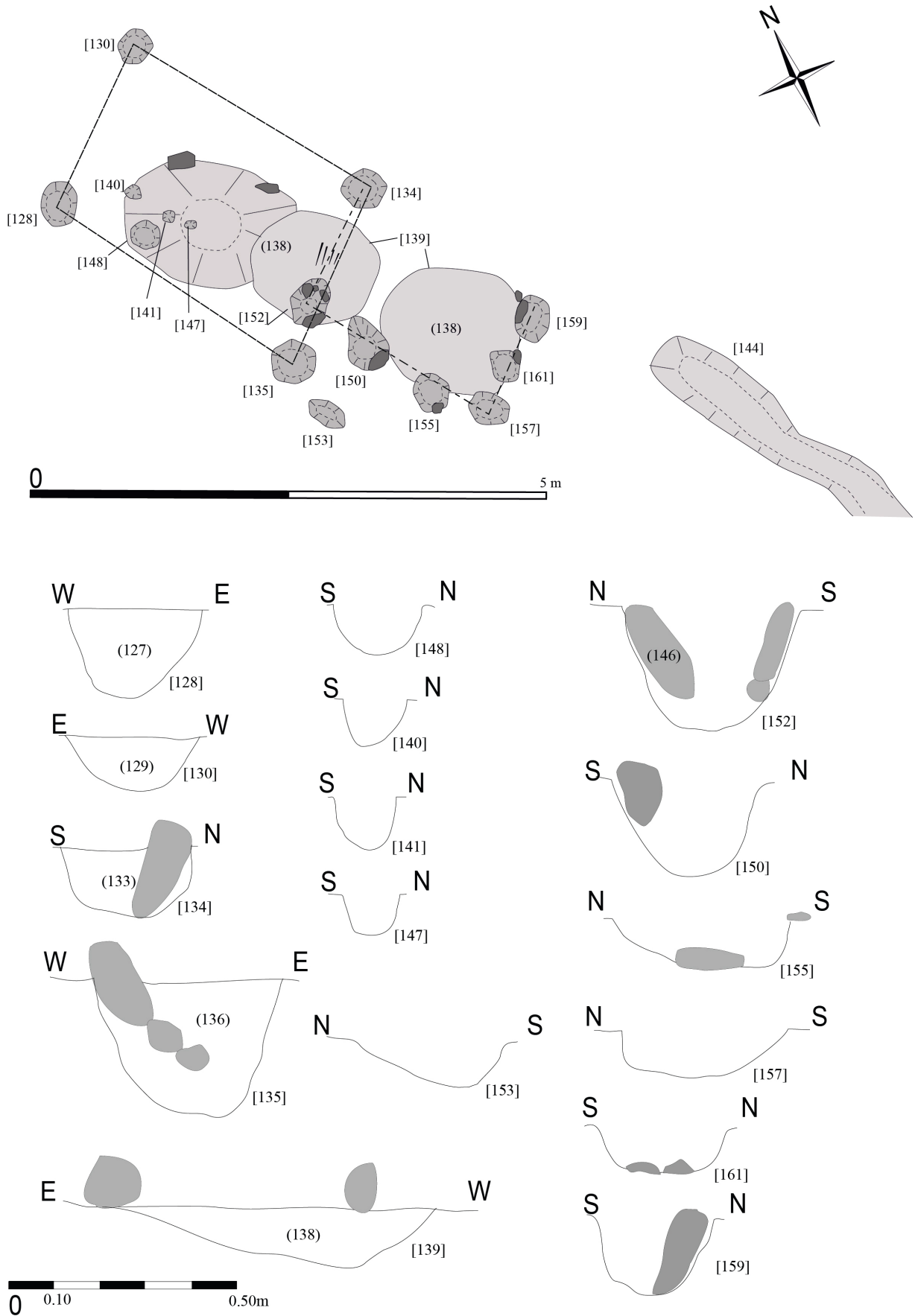
A linear arrangement of posts occurs on the southern edge of the excavation area (Illus 6). The post-holes, e.g. [096] and [075] are mainly oval, the

smaller 0.20m wide and the larger between 0.40m × 0.48m in diameter and range from 0.10m to 0.34m deep. Some of the post-holes were packed with stone and the posts appear to have rotted in situ. Five of the larger post-holes had distinct post-pipes (Illus 6) and there was a distinct clustering of post-holes into two groups of three. The posts were set within a shallow depression. The fill of this shallow depression (078) contained fragments of daub, alder and hazel charcoal as well as carbonised cereal grains including oats.

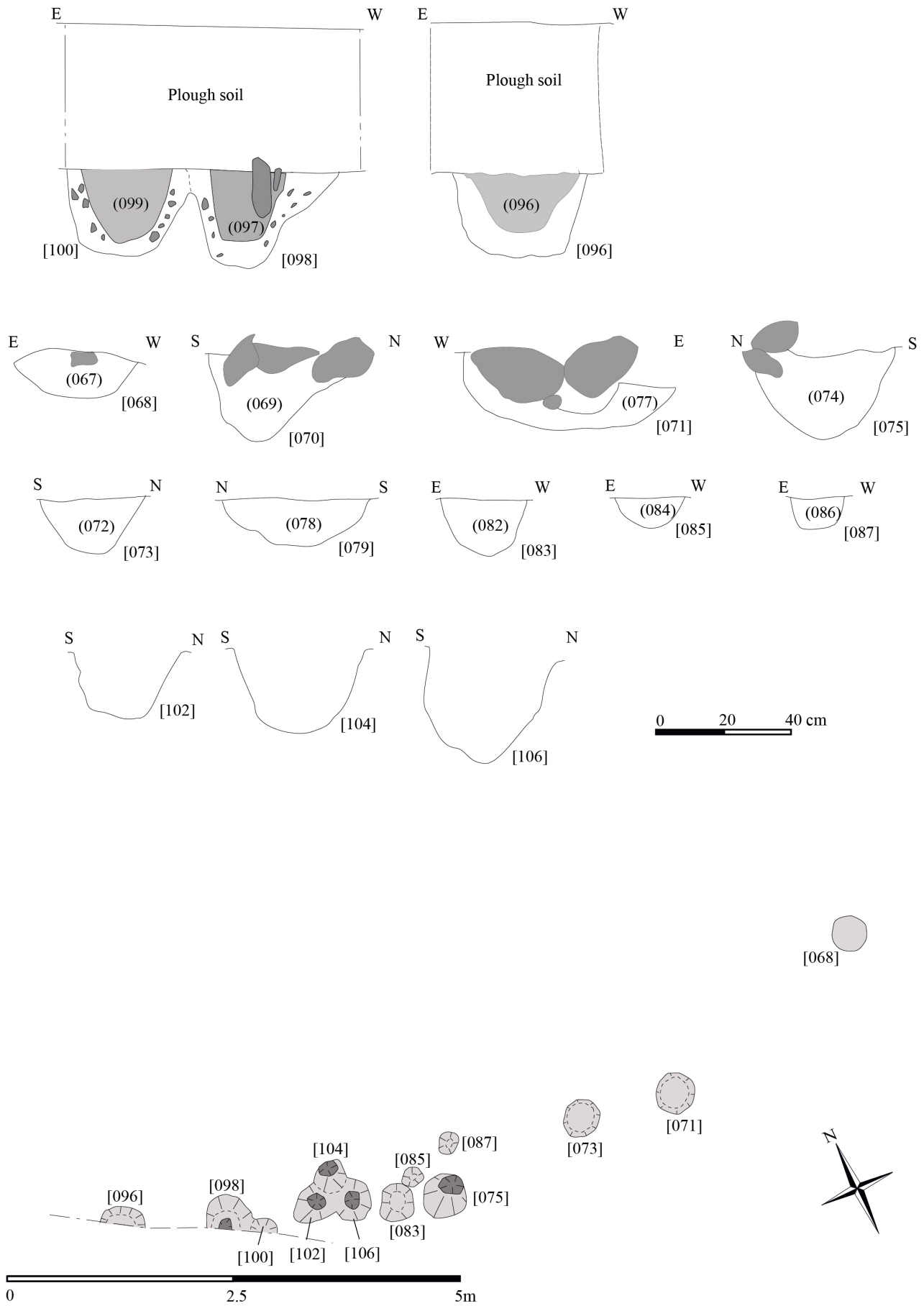
To the north of the linear arrangement of posts was a low heap of rounded cobbles mixed with ploughsoil set in a shallow Cut [062] or scoop which may be the remains of a ploughed out burial cairn or perhaps a later clearance cairn (Illus 2). However, a second arrangement of cobbles and Pits [054]/[045] located to the north-east of the linear arrangement of posts is interpreted as a probable grain-drying kiln (Illus 7). The kiln comprised a large shallow Scoop [054] and an adjoining deeper circular Pit [045]. At the surface a circle of cobbles (051) with a large central cobble defined the circular Cut [045]. The circle of cobbles (051) had been placed against the edge of the cut but over the lower fill (046) (Illus 7). The lower fill (046) contained ashes, fire-cracked pebbles and fragments of daub.

Three probable Early Historic pits, Pit [044], [063] and [108] located to the north of the linear arrangement of posts were filled with fire-cracked cobbles and ash (Illus 2 and Illus 8). The largest was [044], which was oval in plan, but on excavation revealed a shallow scoop (2.3m × 1.7m) at one end of which was a deep circular cut (1m) (Illus 8); a form noted in a number of other pits, e.g. Pit [063]. The primary fill was a deposit (049) that mainly comprised charcoal and which appears to have been some form of wicker lining to the pit that had been burnt in situ. The overlying fill (043) was dominated by fire-cracked cobbles and pebbles mixed with a dark brown sandy silt with a few fragments of charcoal and burnt bone.

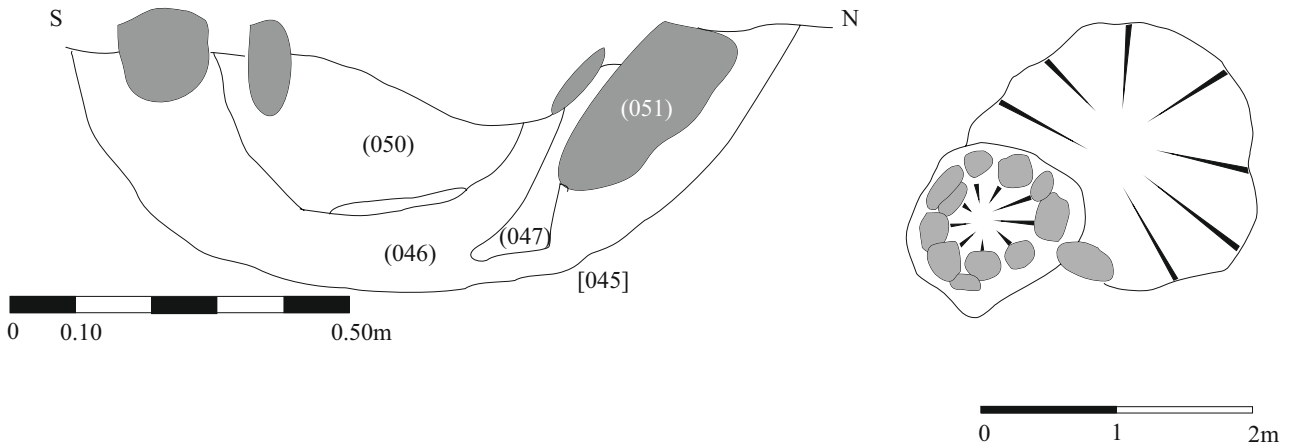
Ten items of metal including a fastener, a loop fitting, nails, a hook and collar were recovered from the single fill (114) of reddish brown silt within Pit [113], located on the south-western side of the site; the latter was semi-circular, measuring 1.2m × 1.45m, but was only 0.3m deep (Illus 8). Alder and hazel charcoal were recovered from this pit.



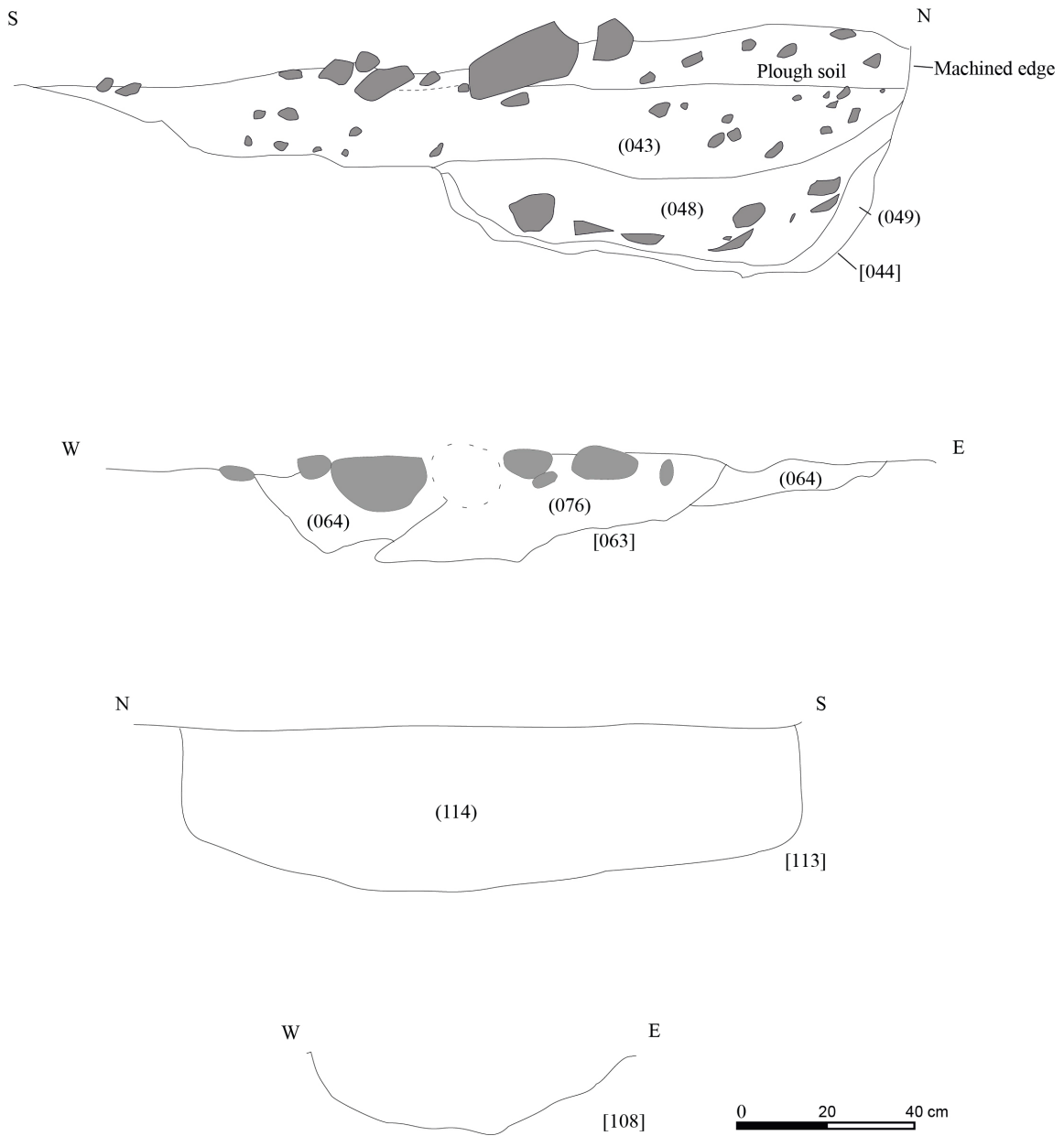
Illus 5 Plan of post-hole structure and sections and profiles, southern group.



Illus 6 Section, profiles and plan of linear post-hole feature, southern group.



Illus 7 Section and plan of grain-drying kiln, southern group



Illus 8 Sections and profile of pits, southern group

Linear feature [059] on the northern edge of this group of features was 0.3m deep and 2.85m long, the ends of which were quite steep, indicating that although truncated it would not have been significantly longer in its original form. The fill (060) was dominated by grit with occasional charcoal and cobble inclusions. The other linear feature [065] was 16.9m long. It was sample excavated and proved to be shallow, only 0.08m with tapering ends and filled with brown grit. Finally, there were two isolated Post-holes [070] and [142].

dated features of the northern group date to the Late Iron Age and initial analysis indicates that these are roughly contemporary. However, one of the features of this northern group, Pit [121], stands out from the others as it contains only oak charcoal and dates to a period midway between the Late Iron Age northern group and the southern, Early Historic group of features. Similarly to the Late Iron Age group of features the radiocarbon dates of the Early Historic features are rather broad, but again appear to indicate one phase of activity in the 8th to 9th centuries AD.

4. SPECIALIST REPORTS

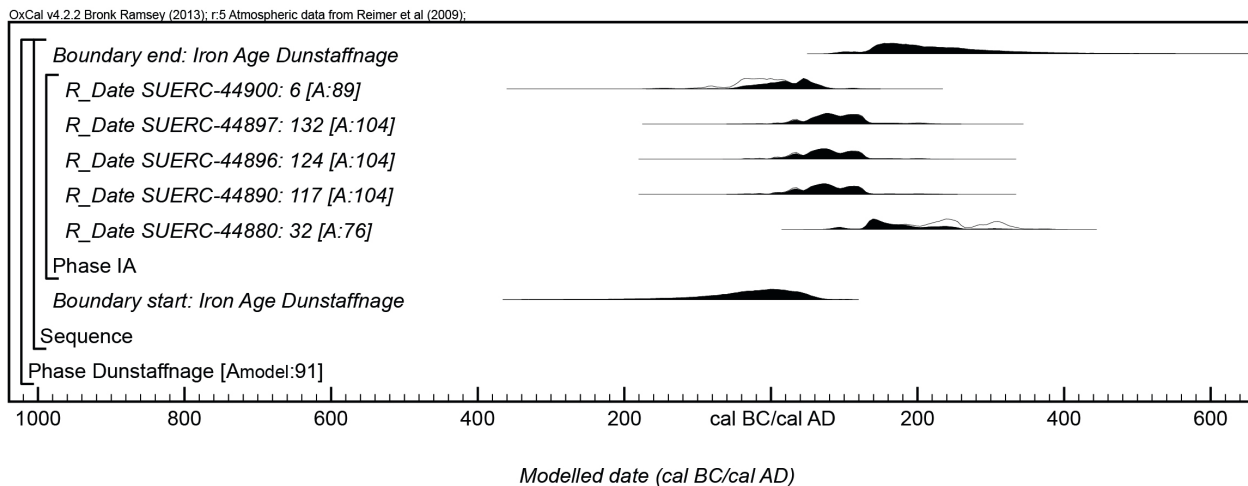
4.1 Dating

Derek Hamilton

Charcoal from selected processed bulk samples was identified to species prior to selection for radiocarbon dating. Fifteen radiocarbon dates were sought from a wide selection of feature types (Table 1). The samples were measured at the Scottish Universities Environmental Research Centre AMS Facility.

The radiocarbon dates fall into three distinct groups. The earliest feature is Pit [115], which dates to the Late Bronze Age. All but one of the

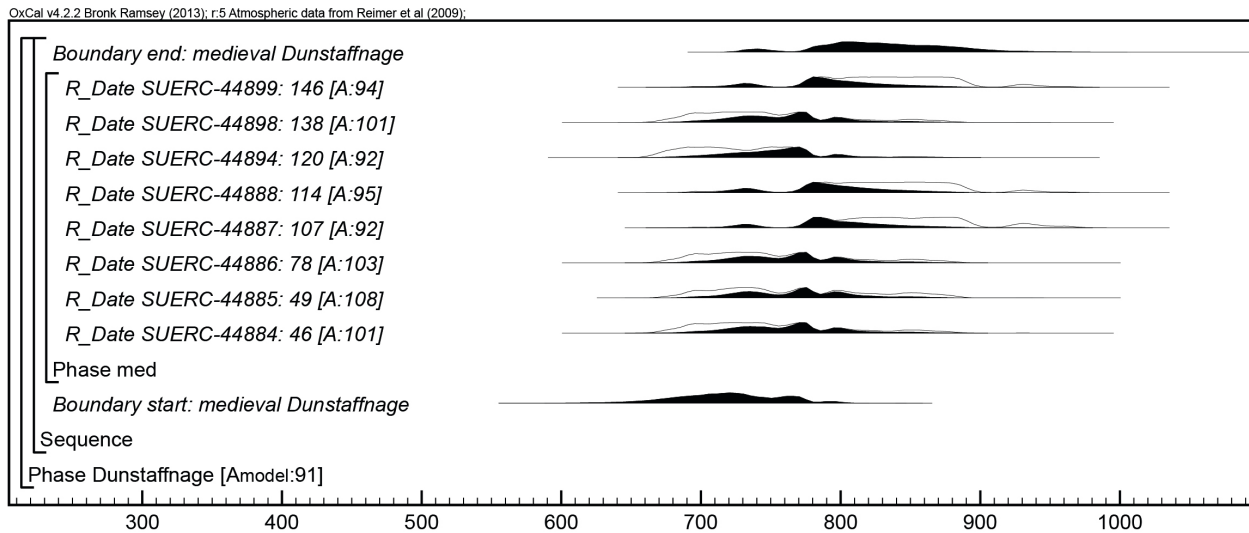
The radiocarbon dates were subject to a Bayesian modelling approach to aid in the interpretation of the chronology of the site and provide an indication of when activity began and when it ended, and over what time period it took place (Buck et al 1996). The 15 samples group into four distinct chronological phases spanning the Late Bronze Age through to the medieval period (Table 1). While the Late Bronze Age and the early medieval period are only represented by one result, there are enough results on features of later Iron Age and medieval date to apply Bayesian statistics to further refine the chronology for these periods of activity. Separate models were created for each of the two groups. The model assumption was only that these



Illus 9 Chronological model for Iron Age activity at Dunstaffnage. Each distribution represents the relative probability that an event occurred at some particular time. For each of the radiocarbon measurements two distributions have been plotted, one in outline, which is the result of simple radiocarbon calibration, and a solid one, which is based on the chronological model use. The other distributions correspond to aspects of the model. For example, 'start: Iron Age Dunstaffnage' is the estimated date that deposition activity began at the site, based on the radiocarbon dating results. The large square brackets along with the OxCal keywords define the overall model exactly.

Table 1 Radiocarbon results

Site	Sample	Material	Context	Feature type	Uncal	Calibrated 2 sigma	Delta-13C ‰
European Science Park	SUERC-44889 (GU29779)	<i>Corylus</i>	116	Pit filled with fire-cracked stone [115]	2836±33	1091–911 cal BC	-25.7
	SUERC-44900 (GU29787)	Bone femur	6	Cobble cist with infant burial [004]	2009±33	96 cal BC–70 cal AD	-21.4
	SUERC-44890 (GU29780)	<i>Corylus</i>	117	Fire base [118]	1926±33	2 cal BC–137 cal AD	-26
	SUERC-44896 (GU29783)	<i>Corylus</i>	124	Fire base [123]	1926±33	2 cal BC–137 cal AD	-27.7
	SUERC-44897 (GU29784)	<i>Corylus</i> (nutshell)	132	Fire base [131]	1915±33	4–140 cal AD	-24.1
	SUERC-44880 (GU29773)	<i>Corylus</i>	32	Fire base [031]	1785±33	133–336 cal AD	-27.5
	SUERC-44895 (GU29782)	<i>Quercus</i>	122	Oak filled pit [123]	1544±33	428–591 cal AD	-26.9
	SUERC-44898 (GU29785)	<i>Corylus</i>	138	Deposit in [139]	1257±33	670–830 cal AD	-27.8
	SUERC-44884 (GU29774)	<i>Alnus</i>	46	Grain-drying kiln [045]/ [054]	1256±33	671–869 cal AD	-26.7
	SUERC-44886 (GU29776)	<i>Alnus</i>	78	Deposit in [079]	1253±33	673–870 cal AD	-27.1
	SUERC-44885 (GU29775)	<i>Corylus</i>	49	Basket-lined pit [044]	1243±33	682–875 cal AD	-29
	SUERC-44894 (GU29781)	<i>Corylus</i>	120	Post-hole [119]	1279±33	659–783 cal AD	-26.2
	SUERC-44899 (GU29786)	<i>Corylus</i>	146	Post-hole of wattle structure [152]	1193±33	767–899 cal AD	-27.3
	SUERC-44887 (GU29777)	<i>Alnus</i>	107	Fire pit [108]	1184±33	770–900 cal AD	-26.4
	SUERC-44888 (GU29778)	<i>Corylus</i>	114	Rubbish pit [113]	1197±33	766–943 cal AD	-25.5



Illus 10 Chronological model for medieval activity at Dunstaffnage. The model structure is defined by the brackets and keywords.

stratigraphically unrelated samples, within a group, come from a relatively continuous period of activity that has a start and end date that cannot be directly dated by any single sample.

The modelling estimates that the Iron Age activity on the site began in 245 cal BC–cal AD 80 (95% probability; start: Iron Age (Illus 9)) or probably in 65 cal BC–cal AD 50 (68% probability). This activity lasted for 15 to 620 years (95% probability), but probably more likely for 100 to 345 years (68% probability). The Iron Age activity ended in cal AD 85–445 (95% probability), and more likely in cal AD 135–275 (68% probability).

The modelling estimates that the main Early Historic period of activity began in cal AD 630–805 (95% probability; start: medieval (Illus 10)), and most likely in cal AD 680–745 (55% probability) or less likely cal AD 750–775 (13% probability). The Early Historic activity lasted for 1–255 years (95% probability) or 1–40 years (18% probability) or most likely 50–160 years (50% probability). This activity ended in either cal AD 720–760 (7% probability) or cal AD 770–935 (88% probability), and most likely in cal AD 780–875 (68% probability).

The Iron Age measurements are not statistically consistent ($T' = 26.7$, $v = 4$, $T' (5\%) = 9.5$), suggesting that this material does date from activity of some longevity. The Early Historic measurements are statistically consistent ($T' = 8.3$, $v = 7$, $T' (5\%) = 14.1$), and these could be the same actual age; it

is more likely that the Early Historic activity is of a shorter rather than longer duration.

4.2 Charcoal and seed analysis

Susan Ramsay

In total 23 contexts were analysed for the presence of carbonised botanical remains which included charcoal and seeds (Table 2).

The Late Iron Age pit fills (117), (132) and (032) contained roundwood hazel charcoal. Pit fills (124) and (037) contained mixed charcoal assemblages while the charcoal of fill (015) was limited to alder. The Early Historic pit fill (122) was dominated by oak charcoal (Table 3).

The Late Bronze Age pit fill (116) contained a mixed assemblage that was dominated by hazel charcoal. The fills of the Early Historic period Kiln [054]/[045] contained a diverse charcoal assemblage of alder, hazel, birch and oak, with a significant number of cereal grains (both oats and barley) and carbonised grassland weed seeds. Fill (138), derived from the hollows within the sub-rectangular Early Historic structure on the eastern side of the excavation area, contained a very diverse charcoal assemblage, with hazel, rowan type, alder, oak and heather type. In addition, grains of barley, fragments of hazel nutshell and a single seed of cultivated flax were also recorded. The fills (127), (136) and (151) of three of the post-holes of this structure produced

Table 2 Charcoal, the northern group

Context	015	032	037	117	122	122	124	132
Sample	002	010	011	040	039	042	044	047
Description	Basal fill of Pit [016]	Ash ? Fill of scoop [031]	Fill of Pit [038]	Fill of possible Fire pit [118]	Fill of Pit [121]	Fill of Pit [121]	Fill of Pit [123]	Fill of Pit [131]
Modern	+	-	+	+	+	+	+	+
Volume of charcoal <4 mm	<2.5ml	2.5ml	<2.5ml	5ml	60ml	140ml	5ml	20ml
Volume of charcoal >4 mm	30ml	15ml	10ml	5ml	80ml	250ml	15ml	30ml
% >4mm identified	100%	100%	100%	100%	50%	25%	100%	100%
Charcoal								
<i>Alnus</i>	alder	22 (4.97g)	10 (1.05g)	-	-	-	-	-
<i>Betula</i>	birch	-	-	-	-	-	1 (0.02g)	-
<i>Corylus</i>	hazel	33 (1.84g)	12 (0.38g)	18 (0.90g)	-	-	14 (0.47g)	81 (5.83g)
<i>Quercus</i>	oak	-	-	-	93 (6.83g)	48 (13.39g)	65 (1.42g)	-
<i>Salix</i>	willow	-	-	-	-	-	10 (0.36g)	-
Indet.	indeterminate	5 (0.26g)	-	-	-	-	-	-
Carbonised seeds								
<i>Corylus avellana</i>	hazel nutshell frag.	-	-	-	-	-	-	13 (0.23g)
Misc								
cf seaweed	cf seaweed	-	-	-	-	-	1 (0.04g)	-

Table 3 The carbonised remains, southern group

Context	046	047	049	050	055	074	078	107	114	116	120	127	136	138	146	151
Sample	019	018	016	017	026	024	028	034	036	037	038	045	048	050	049	051
Description	Lower fill of stone-lined Pit (045)	Secondary fill of Pit (045)	Basal fill of Pit (044) cremation?	Upper fill of Pit (045) cremation?	Fill of scoop/ Pit (055)	Fill and packing of Post-hole (075)	Fill of possible gully (079)	Ash fill of Pit (081) with heated stones	Fill of Pit (113)	Fill of Pit (115)	Fill of Post-hole (119)	Fill of Post-hole (128)	Fill of Gully (135)	Fill of Gully (139)	Upper fill of Post-hole (152)	Fill of Post-hole (150)
Modern																
Volume of charcoal <4mm	10ml	2.5ml	25ml	5ml	<2.5ml	<2.5ml	50ml	30ml	5ml	150ml	10ml	<2.5ml	<2.5ml	10ml	35ml	<2.5ml
Volume of charcoal >4mm	15ml	5ml	300ml	10ml	<2.5ml	2.5ml	60ml	35ml	60ml	250ml	15ml	2.5ml	10ml	50ml	120ml	5ml
% >4mm identified	100%	100%	25%	100%	100%	100%	100%	100%	100%	25%	100%	100%	100%	100%	50%	100%
Charcoal																
<i>Alnus</i>	10 (1.50g)			14 (0.83g)		1 (0.02g)	13 (0.64g)	35 (5.91g)	16 (9.54g)	10 (4.49g)		4 (0.07g)	4 (0.94g)	21 (1.49g)		4 (0.27g)
<i>Betula</i>	1 (0.08g)			4 (0.13g)		4 (0.21g)		7 (0.51g)								1 (0.07g)
<i>Corylus</i>	9 (0.48g)		42 (21.68g)	3 (0.18g)	1 (0.03g)	1 (0.02g)	3 (0.09g)	11 (0.69g)	18 (6.53g)	18 (8.30g)	46 (2.61g)			25 (5.96g)	36 (13.34g)	
<i>Eriales</i>														2 (0.18g)		
<i>Fraxinus</i>						1 (0.02g)								20 (3.86g)		1 (0.10g)
<i>Malvaceae</i>																
<i>Pinus sylvestris</i> type																
<i>Prunellidae</i>								2 (0.22g)								
<i>Quercus</i>	1 (0.15g)	2 (0.10g)					5 (0.13g)			3 (1.63g)				2 (0.17g)		
<i>Salix</i>			1 (0.49g)				1 (0.01g)	9 (0.29g)	4 (0.11g)	2 (0.44g)	2 (0.06g)	1 (0.14g)				
Indet.	29 (1.77g)				2 (0.04g)		114 (17.23g)									60ml (30.11g)
<i>Cinder</i>				1 (1.39g)												
Carbonised cereals																
<i>Avena</i> sp.	51	5														1
<i>cf Avena</i>				16			2									
<i>Hordium vulgare</i> L. s.l.	15	5		7			4						3	5	1	
<i>cf Hordeum vulgare</i>	11						6							7		
Cereal indet.	32	8		21	4		21					1	3	11		
Carbonised seeds																
<i>Carex</i> spp.	10															
<i>Chenopodium album</i>	1	1														
<i>Corylus avellana</i> nutshell frag.	1 (0.02g)			1 (0.01g)		1 (0.01g)								4 (0.07g)		
<i>Cyperaceae</i>	3	1														
<i>Lamiaceae</i>	1	1														
<i>Linum usitatissimum</i>																1
<i>Pastinaca sativa</i>	1	1														
<i>Polygonum aviculare</i>	1															
<i>Rumex</i> spp.	1	1														

a few barley grains and only small amounts of charcoal, indicating that it was secondary in origin and possibly derived from (138). However, the fill (146) of Post-hole [152] produced large quantities of hazel roundwood charcoal, which is likely to be the remains of a wicker structure.

The fill (078) of the Early Historic period shallow Gully [079] associated with the linear arrangement of Posts [071]–[106], bottom centre of the excavation area, contained a mixed charcoal assemblage, with some carbonised grains of oats and barley and a large concentration of carbonised material that had the appearance of burnt soil/cinder. The fill (074) of Post-hole [075] contained a small amount of mixed charcoal and a fragment of hazel nutshell; this material is probably derived from (078).

Pit [044] contained fire-cracked stones and a large amount of hazel roundwood charcoal. The pit may have been lined with some form of woven wattle panels or basket-like structure. The charcoal from fill (107), Pit [108] was mixed and is likely to be the remains of the hearth waste used to heat the stones found within the pit. The fill (114) of Pit [113], from which a number of metal objects were recovered, produced large quantities of alder and hazel charcoal. The fill (120) of an outlying Pit/Post-hole [119] produced a charcoal assemblage dominated by hazel. In addition, significant numbers of carbonised grains of barley were also identified.

4.3 Bone and cremated bone analysis

Angela Boyle

4.3.1 Inhumation burial

An infant crouched inhumation (006) was excavated from a cobble Cist [004]. The body had been placed directly onto the gravel floor of the pit. The burial lay in a crouched position on its left side and was orientated approximately W–E.

Preservation of the skeleton was poor and surviving bones comprised skull vault fragments including the ?right petrous bone, scapula (unside), ribs, two vertebral arches, left and right femur ?humerus midshaft and a metatarsal. The dentition was well preserved and allowed for an estimate of age, which was 7–11 months (Van Beek 1983: 131) (Table 4). The mandible and maxilla did not survive.

Table 4 Dentition

6	6
e d c b a	a b c d e
e d c b a	a b c d e

The infant has been radiocarbon dated to 2009+/-33 years, which is 96 cal BC–70 cal AD (Table 1). The last synthesis of Iron Age burial in Britain had a very sparse Scottish section (Whimster 1981: 172–174). Whimster drew attention to the (then) difficulty of distinguishing poorly provisioned or unaccompanied Iron Age burials from Bronze Age, Roman Iron Age, Medieval and Post-Medieval burials (ibid). Routine dating of unaccompanied inhumation burials is now becoming more common and a number of Iron Age burials have been identified, for example the unaccompanied young adult from Pollochar, South Uist (Sharples et al 2005: 148). Yet overall the number of burials remains very small, given the time span and population involved, especially in contrast to large parts of the Continent at this time or to the Scottish Early Bronze Age record. Burial practices in Iron Age Scotland fit the general pattern for Britain, which has sporadic formalisation of burial rites at certain times and in certain places. Formal burial was the exception and there is increasing evidence for a variety of non-normative burial rites and manipulation of human remains (e.g. Armit & Ginn 2007; Shapland & Armit 2011). This includes (but is not limited to) fragmentation of individuals, partial burial and the retention of certain skeletal elements (often skull parts) on domestic sites. The infant burial from the Marine Science Park with its formal burial in a cobble cist is therefore a significant addition to the corpus of Iron Age burials documented in Scotland.

4.3.2 Cremated bone

The methodology for the recording of the cremated bone follows standard practice (McKinley 2004). Cremated human bone was recovered from nine separate contexts (Table 5).

All deposits were extremely small, ranging in weight from less than 0.1g to 2.8g. The human bone was recovered from contexts that are not typical of

Table 5 Cremated bone

Context No.	Context type	Total weight	Max. fragment size	Identifiable bone	Age	Sex	Comments
009=088	Pit	2.7g	22.38mm	Misc. long bone	?adult	?	White and well calcined, slight bluish tinge to one fragment
017	Fill of Pit [018]	1.8g	7.94mm	Nothing identifiable	?	?	White and well calcined
042	Fill of Pit [041]	1.2g	12.56mm	?skull vault, misc. long bone	?	?	White and well calcined, 1 small piece of charcoal
055	Fill of Pit/scoop [053]	0.1g	9.25mm	Nothing identifiable	?	?	White and well calcined
078	Fill of a depression [79] around several post-holes	2.8g	22.68mm	?long bone	?	?	2 animal tooth fragments (0.1g), two fragments of spongy bone could also be animal, charcoal and daub
110	Fill of Pit [109]	1g	19.41mm	Misc. long bone	?	?	White and well calcined
114	Fill of Pit [113]	>0.1g	4.99mm	Nothing identifiable	?	?	White and well calcined
138	Fill of a depression [139] around a group of post-holes	0.1g	6.58mm	Nothing identifiable	?	?	White and well calcined, charcoal, worked slate
146	Upper fill of charcoal-rich Post-hole [152]	0.1g		1 fragment unidentifiable	?	?	White and well calcined, 1 fragment of animal bone (0.3g)

cremation burials, some having fragments of animal bone and others mixed charcoal assemblages and/or carbonised cereal grains. The expected weight for a complete cremation burial, derived from known weights of adult cremated remains from modern crematoria, has been found to range between 1001.5g and 2422.5g, with an average of 1625g (McKinley 1993). Clearly, none of the deposits within this assemblage represent the complete remains of a single individual. While a range of reasons for potential loss of material need to be considered (incomplete recovery, disintegration related to soil type and truncation due to ploughing), this can be suggestive of deliberate selection and burial of a token deposit (Boyle 1999, 176). It has been argued for prehistoric Britain that the collection of entire cremated remains rarely ever occurred (Lange et al 1987; McKinley 1989, 1993). From a sample of c 4000 multi-period British cremations a range of 57–2200g was obtained from undisturbed adult burials.

4.3.2 Animal bone

Small quantities of burnt and unburnt animal bone and fragments of teeth were recovered from Pit [045] and Gully [059]. These weighed 1g and 1.5g respectively.

4.4 Daub (pottery?) analysis

Anne MacSween

Around 20 fragments of daub and some smaller crumbs were recovered from (078), a shallow gully into which posts were set. Some of the daub fragments have one flat surface from where they have been smoothed. The fabric is fine clay with some rock and organic impressions. Two fragments of daub and a number of small crumbs were recovered from (046) and three crumbs of daub from (050).

4.5 Metalwork analysis

Gemma Cruickshanks

Thirteen metal objects were recovered during excavations at Dunstaffnage, ten of iron and three of copper alloy. All of the objects came from the fill of pits, apart from one (SF 6), from disturbed ploughsoil (Table 6). None of the objects are chronologically diagnostic. An interesting aspect of the assemblage is that ten of the objects (SF 12–19) came from the single fill (114) of Pit [113]. The concentration of metalwork found in one pit, with so little found elsewhere on site, indicates they were deposited in a single event and not casually lost.

This group of objects are all fixtures or fittings, but not traditional coffin-fittings. This is perhaps

Table 6 Metal artefacts

Context	Object type
C 010 surface of pit fill	Nail (SF 1)
C 041 pit fill	Nail (SF 5)
C 052 disturbed ploughsoil	Nail (SF 6)
C 114 Fill of Pit [113]	Fastener (SF 18)
	Intact loop fitting (SF 16B)
	Loop fitting (SF 15)
	Flat-sectioned ring (SF 13)
	Nail (SF 12 and 17Ai)
	Nail shank (SF 16A)
	Nail shank? (SF 17B)
	Loop fitting (CuA) (SF 15)
	Hook (CuA) (SF 14A)
	Collar (CuA) (SF 19)

the remains of a dump of rubbish which may have included structural timbers and broken straps which have rotted away leaving only the metal fittings. Traces of mineralised wood/organics on some (SF 6, 12, 15, 16A, 16B) indicate they were deposited while still attached.

4.6 Flint and coarse stone analysis

Torben Bjarke Ballin

The small assemblage includes three flint artefacts, an edge-modified blade fragment (CAT 1), an edge-modified core tablet (CAT 2), and a combined strike-a-light/polished-edge implement (CAT 3). The former two are unstratified, and more or less water-rolled, and they were dated to the Upper Palaeolithic–Early Neolithic period; these appear to have been washed out of their original contexts by local marine transgressions or flooding events. CAT 3 recovered upstanding from the base of Pit [088] combines the function of two tool forms which are both characteristic of the British Late Neolithic period, namely the strike-a-light and the polished-edge implement; its deposition within the pit may represent ritual activity.

5 DISCUSSION

5.1 Late Iron Age

Four of the pits were dated to the late Iron Age (Table 1) and Bayesian chronological modelling of the dates indicates that the activity began 65 cal BC–cal AD 50 (65% probability) and ended cal AD 135–cal AD 275. The pits appear to be the remains of open, wood-fuelled fires. The cluster of interconnected Pits [018]–[028] is interpreted as the remnants of multiple events. The survival of fragments of charcoal and the general lack of heat-affected natural indicates that what survives is probably the very base of the fire, with the hotter heart of the fire presumably lost due to plough truncation. There appears to be no specific pattern to the type of fuel being utilised, with hazel, which burns fairly hot and fast, dominant in three of the pits, alder, which burns fast when seasoned, in two and oak, which burns hot but slowly when seasoned, dominant in only one. A minute quantity of cremated human bone was recovered from Pit [018]/fill (017) and

Pit [041]/fill (042) otherwise there is an absence of cremated bone from both the dated and undated pits within the northern half of the site.

What purpose the pits served remains open to debate. The archaeological evidence is not particularly indicative of funerary pyres; there is limited cremated bone and no evidence for particularly hot or long duration fires. But neither do the pits appear to have been used to cook food stuffs as there is a distinct lack of burnt animal bone or carbonised cereal grains. The absence of cremated bone does not preclude the pits from being funerary pyres as the lack of cremated human bone could be a consequence of complete retrieval of bone for subsequent burial; and/or the destruction of cremated bone in acidic soil; and/or removal and dispersal of the bulk of the feature through recent plough truncation. Lelong (2007: 195) suggests that the absence of cremation burials may be explained if the remains of cremation were added to the midden heap and in time spread over the fields. It is therefore interesting that a few minute fragments of cremated human bone have also been recovered from a number of the Early Historic period domestic/agricultural features, implying that this bone has either been eroded from its original, but unidentified context(s) or indeed perhaps deliberately incorporated into the soil.

Set at the eastern end of the line of pits was the cobble cist which contained an infant burial [004]. The choice of location appears to be deliberate. It is the only burial and its position defines the end or pivot point of the row of pits which appear to demarcate the boundary between what would have been drier, slightly elevated ground to the south and which comprised sand and gravel and lower, possibly waterlogged land to the north, the unconsolidated geology comprising silt within pebble colluvium and underlying raised beach. The infant burial is contemporary with the other pits (Table 1) (the possible exception is Pit [031] although this is likely to be roughly contemporary with the other pits).

The linear cluster of cobbles [163] located on the west side of the excavation area is interpreted as the foundation of a path. Pit [118] occurred within the cobbles and the two features are believed to be roughly contemporary. The path may have functioned as a formalised route used to access the pits.

The argument in favour of a funerary function is bolstered if significance is ascribed to the actual

location of the pits, as these demarcate the physical transition from dry to damp or waterlogged ground. This boundary may have been perceived as a liminal space between this world and the afterlife, the proximity of the funerary pyres facilitating passage into the next world. Secondly, it may be significant that the path and the pits are roughly orientated east to west, reflecting the rising and setting of the sun and hence birth and death. This may also explain the location of the infant burial at the eastern end, a relative newborn being associated with the rising sun. Bayesian analysis indicates that the activity was of some duration, implying that the pits were used at different times and therefore it is very unlikely that these pits functioned as a physical boundary (e.g. Rylatt & Bevan 2007), or as a territorial division or symbolic marker (e.g. section 4 'Castlesteads and Langside' in Cameron et al 2010) or as a means of land sub-division (Halliday 1982; Barber 1985).

Surprisingly, one of the pits within this irregular row, Pit [121], dates to the Early Historic period, significantly later than the Late Iron Age pits and infant burial (Table 1). Given this, it is possible that any of the other undated pits also date to the Early Historic period. Pit [041] is a possible candidate as a nail was recovered from its fill (042), but so too was a fragment of cremated human long bone. Pits [016] and [038] are off-set to the north and contained mostly alder charcoal, as opposed to hazel, which is dominant in three of the four dated late Iron Age pits and so these too could potentially be Early Historic in date. The placement of Pit [121] within the row of late Iron Age pits implies that the older pits and perhaps the path were still discernible within the landscape some three to four hundred years later and their cultural significance was still appreciated.

5.2 Early Historic Period features

The cluster of Post-holes [130]–[161] appear to form a single rectangular structure some 6m × 4.40m externally with a smaller attached structure on the southern side which may have been open or accessible on the north-eastern side (Illus 5). This smaller ancillary structure measures roughly 2.5m × 4m and is represented by Post-holes [152], [150], [155], [157], [161] and [159]. The shallow Scoops [139], internal to both structures and filled with

(138), appear to span both structures, implying that there was no internal division between Post-holes [134], [152] and [135] when these scoops were created. The scoops are thought to be the result of internal activity, perhaps caused by periodic cleaning and/or trampling which would have gradually eroded the soft and uneven sand and gravel substrate. The fill of these scoops, comprising black silt, charcoal derived from a wide variety of species and a mixture of carbonised cereal grains, may be the remains of domestic hearth ash set within an irregular elongated hearth, similar in form to those of some Viking-period longhouses such as Drimore (Maclaren 1974) and Cille Pheadair on South Uist (Pearson et al 2004). Alternatively, the fill (138) may be the ashy remains of the structure, if as hinted at elsewhere, it was destroyed by fire. The upper fill (146) of Post-hole [152] contained a significant quantity of roundwood hazel, the implication is that some part of the structure may have been constructed from hazel wattle and after it burnt down some of this carbonised wattle found its way into the post-hole. Also masked beneath fill (138) were Stakeholes [140], [141] and [147] and Post-hole [148] which may have formed part of an internal division and perhaps provided an additional roof support.

The function of the Gully [144] running southwards from just behind this structure is unclear. The composition of the fill (145) indicates that its final use was as a depository for domestic rubbish, mostly domestic ash, but it may have originally held some form of organic fencing. Two other linear Gullies [065] and [059] may also have held some form of organic fencing or walling, though whether they served to divide up space within the site or were part of large, plough-truncated structures is not clear.

The function of the linear arrangement of post-holes in the centre and on the southern edge of the excavation area is elusive, because the full extent was not revealed as it ran under the edge of the excavation area (Illus 6). The cladding on the exterior of the posts appears to have been made from wattle and daub set within a shallow bedding trench and into which midden material appears to have accumulated. It is possible that this feature is the remains of one side of a wattle and daub sub-rectangular structure.

To the east is the remains of a grain-drying Kiln [045] (Illus 7). The fire which produced the hot air for the kiln was located at the western end of the feature within a broad shallow Scoop [054] and which was filled with a grit rich in charcoal (055). The drying grain may have been supported on a wooden lath frame suspended over the adjoining pit, Pit [045]; a possible short flue and baffle stone lies on the north side of the pit. The carbonised content of the lowermost fill of the pit (046) demonstrates that a small amount of grain, comprising both oats and barley, spilled through the floor where they were subsequently charred. It is probable that at some point the wooden frame on which the grain was dried caught fire as well as the above-ground superstructure, accounting for the fragments of daub and the mixed nature of the charcoal. The kiln was subsequently rebuilt over the lower ash fill, the kiln bowl being lined by beach cobbles (051). These cobbles would have been used to support the timber rack on which the grain was housed. Further spillage of oats and other grains as well as at least one accidental fire is evident in the mixed charcoal content. The superstructure was built from wicker and daub and the roof clad in heather.

Pit [044] is an interesting feature, having contained a hazel wicker basket that was burnt in situ within the pit (Illus 8). Enclosed within the basket and mixed with the charcoal were fire-cracked pebbles. One possible explanation is that the basket was lined with animal skin which in turn was filled with water; hot stones were then added to it to boil the water and cook the contents within. A very similar pit, lined with a roundwood basket which was clearly burnt in situ and was filled with fire-cracked pebbles was recently excavated at Killinochonoch in the Kilmartin Glen (Ellis 2010a; Ellis 2010b); this pit produced a comparable date 770–970 cal AD (SUERC-34968 (GU-24258)). Pits [108] and [063] also contained fire-cracked pebbles mixed with the remnants of ash. The mixed nature of the charcoal derived from the ash (107) implies that this is not another basket-pit-boiler, but rather the base of a cobble pit-hearth and similarly it is postulated that [063] is the base of a cobble-rich pit-hearth. Post-hole/Pit [119] is interesting because the charcoal content is very similar to the basket pit [044]. However, within the fill is also the second largest assemblage of carbonised grains recovered

from the site. The feature is likely to be the base of a pit containing the burnt remains of a hazel wicker basket and its contents.

The ten metal objects recovered from Pit [113] are thought to have been dumped into the pit and at least some of it may have been attached to wood when thrown away. Given the nature of the artefacts it is possible that this material derives from defunct agricultural implements rather than structural timbers.

6 WIDER CONTEXT

6.1 Neolithic

Pit [088] probably dates to the late Neolithic. There is little confirmed Neolithic activity within the local area, although seven oval pits dating to the Neolithic (3517–3396 cal BC) have been recently excavated approximately 400m to the south-west, along with an irregular ditch which, although it remains undated, was cut by one of the later middle Bronze Age roundhouses (Ellis 2012a, Ellis forthcoming a). In addition around 30 pits, post-holes and a small number of hearths spanning the early to late Neolithic have recently been excavated on the south side of Oban (Ellis 2015, Ellis forthcoming a).

6.2 Late Bronze Age

Late Bronze Age activity on the site appears to be limited to a couple of pits packed with fire-cracked pebbles. The restricted quantity of Late Bronze Age features demonstrates the continued, if not continuous, exploitation of this landscape since the Middle Bronze Age signified by six roundhouses, a burnt mound and numerous pits located in a field some 300m south-west of this site (Ellis 2012a, Ellis forthcoming a). In addition a butt portion of a bronze flanged axehead was recovered at this locality by a local metal detectorist (Ellis 2008).

6.2.1 Late Iron Age

The late Iron Age curvilinear row of pits associated with an infant inhumation burial is unique within Argyll and no other close Scottish parallels are known to the author. The function of these pits has not been proven; although in the absence of

other reasonable explanations the author favours the interpretation of funerary pyres set along the boundary between wet and dry land, a location which may have been perceived as a liminal gateway into the afterworld.

The most credible Scottish parallel is four broad U-shaped pits at Camelon, Stirlingshire. These pits share many of the physical characteristics of those at Dunstaffnage, including their size, probable in situ burning, layers of charcoal interbedded with lenses of burnt and re-deposited natural and a general but not absolute dearth of cremated bone; a small amount of cremated human bone was recovered from one of the pits (Breeze & Rich-Gray 1980). The lack of domestic residue from the pit fills, such as animal bone and pottery and the immediacy of a stone cist burial led Breeze and Rich-Gray to tentatively interpret the Camelon pits as cremation pits within which or above which a body was placed on a pyre.

Similarly, parallel child cist burials of the Iron Age are extremely rare in Scotland. One known to the author is that of an infant, around three years old, buried in an isolated stone-lined cist overlooking the sea at Dunbar, East Lothian, which has been radiocarbon dated to AD 75–242 (Baker 2002).

There are no known Iron Age settlements within the local vicinity, although the absence of evidence is more likely to be a reflection of the lack of archaeological excavation than a true absence of existence. This is exemplified by the recent excavation of an exceptionally large Late Bronze Age or Early Iron Age roundhouse on the south side of Oban (Ellis 2015, Ellis forthcoming a). There is a fort, Eilean Mor, on an island just north of Dunstaffnage, which may have its origins in the later prehistoric period or Early Historic period and there is another fort, Dun Creagach, some 3km to the west, but neither site has been excavated.

6.2.3 Early Historic

The discovery of Early Historic structures and deposits not located within a dun or crannog (in Argyll) or defended enclosures (eastern Scotland) is extremely rare and therefore makes the discoveries at Dunstaffnage exceedingly significant. The only other open settlement site in Argyll from this period is Bruach an Druimein, at which there is a distinct lack of structural evidence but a substantial number

of Early Historic artefacts (Abernethy 2008). The recently excavated chapel site at Baliscate on the Isle of Mull has revealed 7th- to 9th-century activity, including a probable monastic cemetery, a possible palisade enclosure and evidence for ard cultivation, consumption of barley and metalworking (Ellis 2013, Ellis forthcoming b). Later activity on the site includes a probable late 11th- or early 12th-century stone and turf sub-rectangular structure within which is a slightly later 12th-century grain-drying kiln; the sub-rectangular structure is reminiscent of the Viking longhouses excavated on South Uist (Pearson et al 2004).

The site at Dunstaffnage, as excavated, comprises a sub-rectangular structure, a grain-drying kiln, one or two pit basket boilers, two cobble hearths, a number of probable storage pits, a probable timber-framed structure with wattle and daub walls, a rubbish pit, probable fence lines and a few isolated post-holes. Furthermore, the isolated pit-hearths may have been located within timber and/or earthen structures that had little or no foundations and so all traces of these, other than the central pit-hearth, may have been destroyed by subsequent ploughing. If this were the case then there would have been at least six structures on the site. The main activities visible in the archaeological record are domestic occupation and the preparation of oats and barley for long-term storage. The cleanness of the seed assemblages indicates that they had been winnowed and sieved prior to being dried and stored. The successful long-term storage of grain was necessary to ensure an adequate supply through the winter months as well as to guarantee the survival of seed for the following spring. It appears that the good, well-drained soil on the isthmus between Dunbeg and Dunstaffnage was being successfully cultivated for barley. The few sedge seeds from the lower fill of the kiln indicate that oats were being cultivated on less favourable soils, probably those on the slightly higher ground around the site. Furthermore, there is evidence for more widespread cultivation in this area. At Pennyfuir cemetery, located some 2.28km to the south of Dunbeg, a large pit-hearth with evidence of multiple firings contained carbonised barley grains as well as numerous weed seeds; this hearth has been dated to 666–780 cal AD and is therefore contemporary with the features at Dunstaffnage (Ellis 2012b).

It is unclear whether the Early Historic structures and deposits at Dunstaffnage are part of a permanent settlement or represent the remains of seasonal agricultural activity. There is a distinct lack of stone tools, rotary querns, animal bone, etc., the presence of which would imply more permanent settlement. It is assumed that during this period the upper classes and elite occupied duns and forts, with some crannogs at least appearing to be seasonal specialised craft centres (Campbell 1999; Crone & Campbell 2005). The names Dunstaffnage and Dunbeg may imply the presence of a dun, although no trace of one has been found and the term 'dun' has also been used elsewhere to describe a natural hill or knoll. However, some 3.5km to the south is the probable royal fort of Dunollie. This fort appears in the Iona Annals as Dun Ollaigh, being referred to in 686, 698, 701, 714 and 734; it was destroyed in 701 and rebuilt in 714 AD (Alcock & Alcock 1987). Without recourse to historical documents it is not possible to determine what, if any, was the relationship between elite sites like Dunollie and rural farming settlements such as Dunstaffnage. However, as the hearth pit at Pennyfuir demonstrates, the farmstead at Dunstaffnage was not operating in glorious isolation but as part of a larger farming community.

The cessation of activity on the site roughly coincides with documented attacks on Iona by Norse invaders in 795, 802, 806 and 825. Although there is no evidence for the deliberate conflagration of the Dunstaffnage site, some of the features may have been destroyed by fire. A Norse presence is hinted at by the pre-excavation discovery, by a metal detectorist, of a fragment of copper alloy Viking ring money (Ellis 2008). Further evidence for the presence of Norse warriors has recently been uncovered on the south coast of Ardnamurchan in the form of a boat burial which is likely to be 9th- or 10th-century in date (Cobb et al 2011). At Baliscate the influence of Norse settlers may be visible in the architecture of the later 11th- or 12th-century longhouse and kiln-barn (Ellis forthcoming b). Alcock & Alcock (1987) argue that the Norse were successfully repelled from the mainland during the late 8th and early 9th centuries, with Dunollie perhaps playing a major role in the defence of Dál Riata. However, the identification of a possible Norse bead at Loch Glashan and a motif piece with Norse-style ring-plait ornament from Bruach an Druimein, Poltalloch (Crone and Campbell 2005, 126) indicates a degree of Norse influence along coastal mainland Argyll.

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