

DATA STRUCTURE REPORT: ARCHAEOLOGICAL EVALUATION OF A
BURNT MOUND, CRAIG FARM, DUMFRIES AND GALLOWAY

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Client: Craig Farm Company

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0. NON TECHNICAL SUMMARY

0.1 An archaeological evaluation was carried out on the site of burnt mound on Craig Farm, Langholm, in advance of the construction of a large greenhouse. The evaluation confirmed the existence of the burnt mound and its lateral extent. It is the recommendation of this report that the footprint of the glasshouse is moved to avoid the burnt mound and preserve it *in situ*, however, if this is not possible then the burnt mound should be subject to full archaeological excavation, post-excavation and publication.

1. INTRODUCTION

1.1 The site (Fig. 1) lies within Dumfries and Galloway Administrative Area. The burnt mound was originally recorded by the RCAHMS at NY 32400 86910, but a more recent site visit by the local authority archaeologist recorded it at NY 32389 86915; the archaeological evaluation confirmed the existence of the burnt mound at NY 32392 86917.

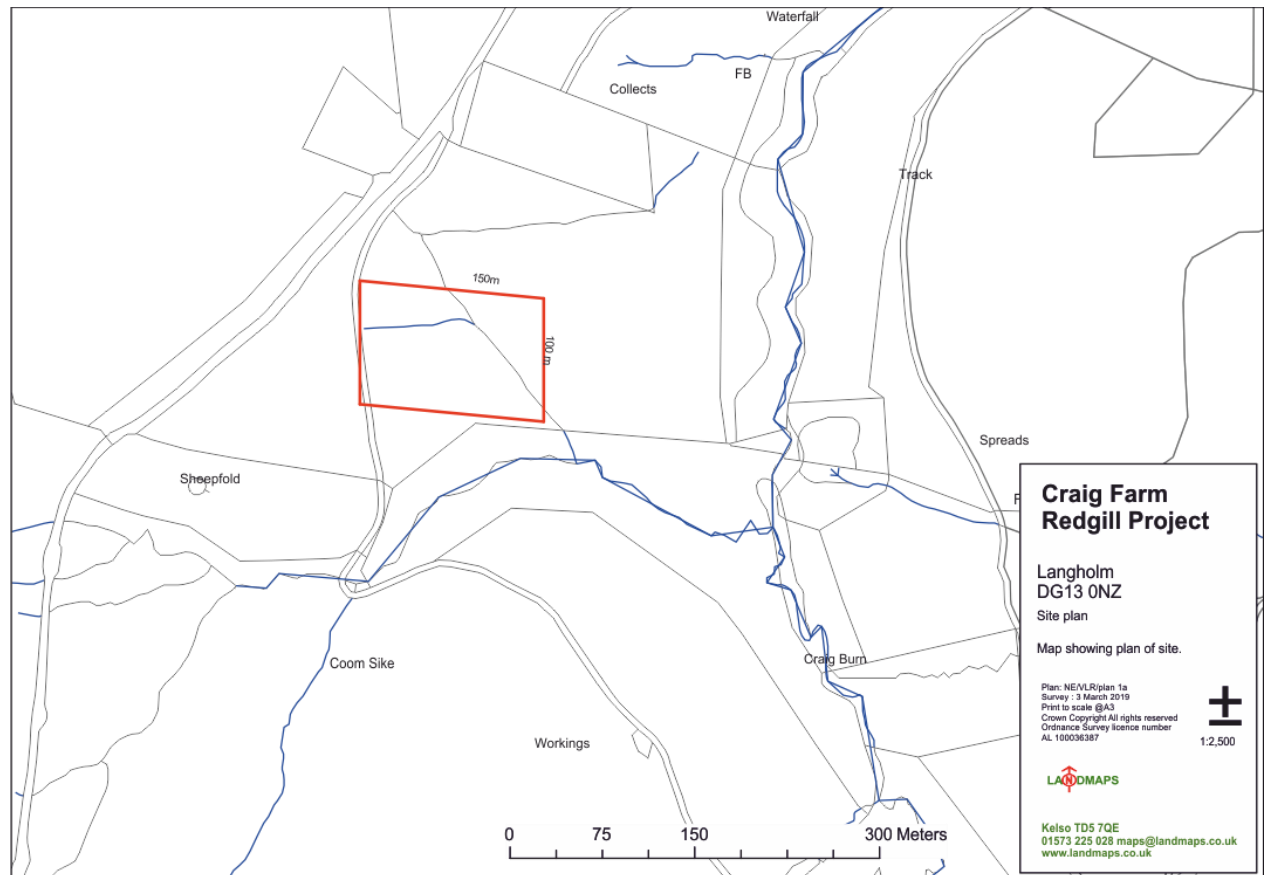


Fig. 1. Location of the proposed development area

2. OBJECTIVES

2.1 The archaeological objectives were:

- a. to determine the presence or absence of a burnt mound within the confines of the proposed development
- b. in the event of the burnt mound being present then to determine its basic character and extent
- c. to propose further stages of work as required

3. METHOD

- 3.1 On arrival on site the burnt mound was immediately obvious as a low grass covered mound (Plate 1). A small tracked excavator equipped with a 1m wide ditching bucket was used to excavate the trial trenches (Fig. 2); while excavating the trial trenches the machine was under constant archaeological supervision. Three trenches were opened over the burnt mound. The topsoil and underlying burnt mound material were carefully removed in a series of spits until the undisturbed natural was reached. The overburden was placed on one side of the trench; no backfilling was undertaken under archaeological supervision. A fourth trench was opened over the original grid reference given by RCAHMS but this area was devoid of archaeology (Fig. 2).



Plate 1. Burnt mound visible as a low green mound

- 3.2 A description of the trenches is given in Appendix 1, the contexts in Appendix 2, the photographic register in Appendix 3, Sample register in Appendix 4 and the DES entry in Appendix 5.

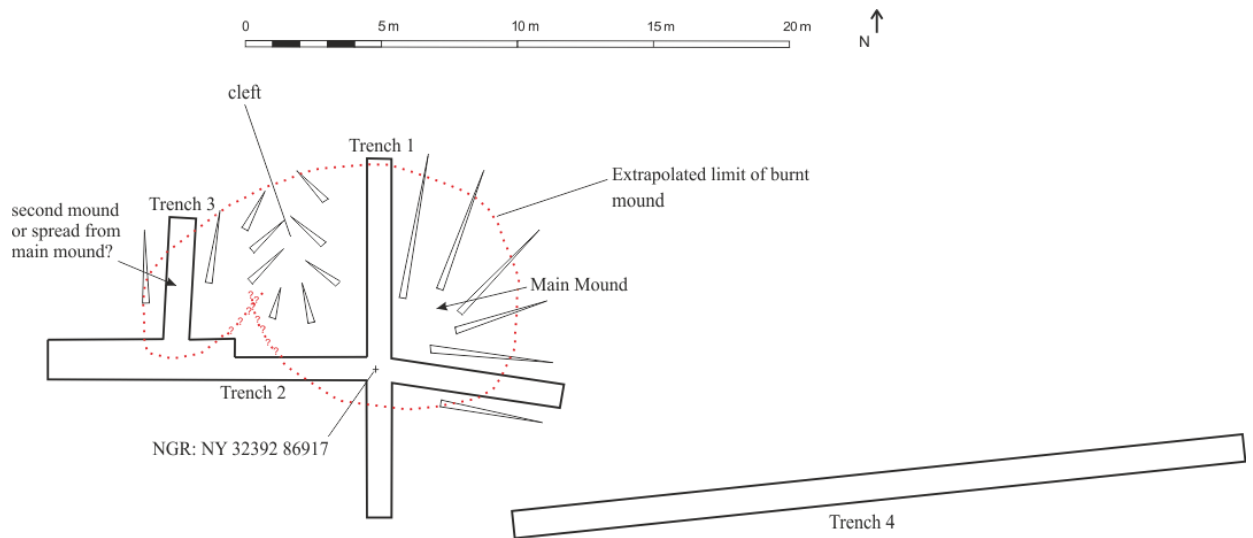


Fig. 2. Plan of evaluation trenches.

4 RESULTS

- 4.1 The burnt mound was located on gently sloping ground, the unconsolidated sediment comprising yellow clay with some gravel and occasional large stones. A small burn ran below the mound and may have been the source of water utilised by those responsible for the creation of the burnt mound.
- 4.2 The burnt mound material (102) comprised up to 0.78m of heat fractured, blackened stone that formed a mound some 8m in diameter north-south and up to 14m east to west, although included within the latter is a further spread of burnt stone and charcoal enriched soil (107) which may be a continuation of the main mound or a separate adjoining mound (Fig. 3 to 6 & Plate 2). There was no evidence for a hearth or water tank within (102) or (107) nor beyond the burnt mound material to the west of (107). The burnt mound material (102) spread down slope towards the north. Trench 1 was extended to the south, but again no evidence for any hearths or tanks associated with the burnt mound were found. In Trench 2 a thin grey layer of fractured stone (105) occurred immediately above the natural and under a thin clay layer also containing fractured stone (104). These deposits are likely to be the remnants of the initial use of the site as a burnt mound. A similar grey coloured dump of heat fractured stone was observed overlying (102); the colour difference may be a result of differential leaching within the profile of the burnt mound or may reflect a slightly different source of rock.

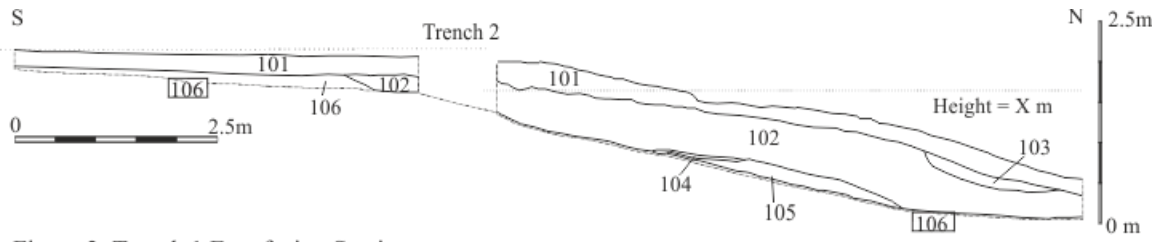


Figure 3: Trench 1 East-facing Section

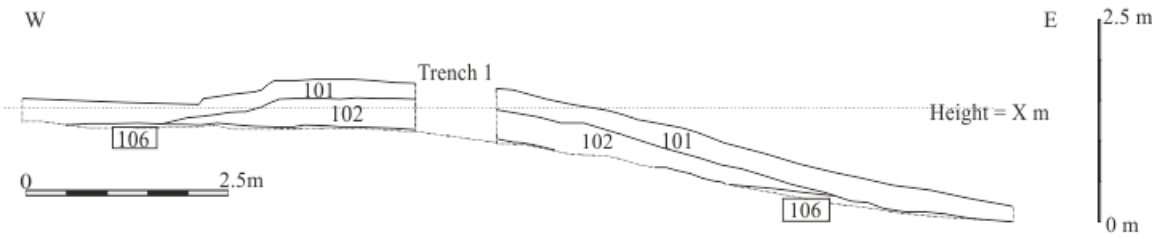


Figure 4: Trench 2 (eastern part) South-facing Section

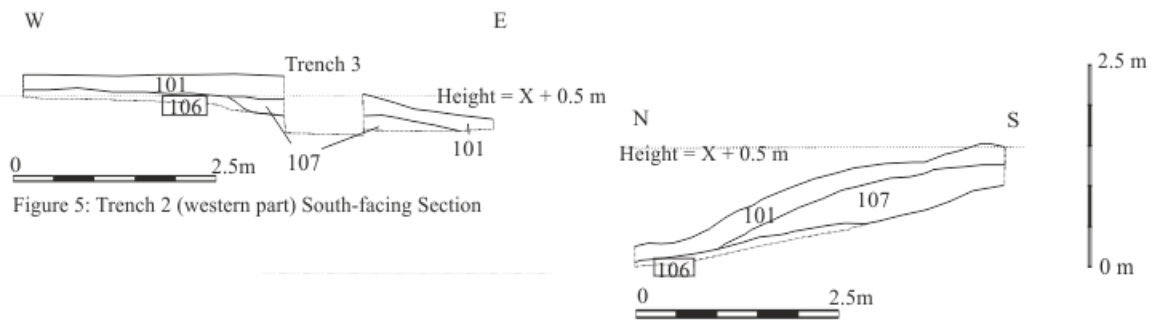


Figure 5: Trench 2 (western part) South-facing Section

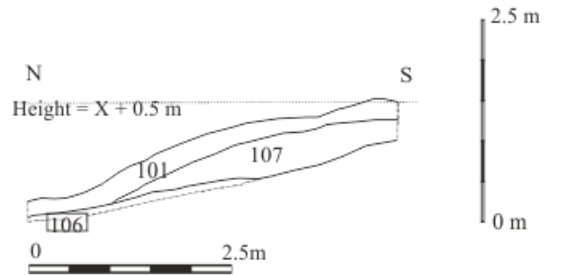


Figure 6: Trench 3 West-facing Section

Fig. 3 to 6. Sections across the burnt mound



Plate 2. Section through the burnt mound material

3.0 DISCUSSION

- 3.1 The evaluation has confirmed the presence of a burnt mound. Over 1900 burnt mounds have been recorded in Scotland (Suddaby 2009). Burnt mounds are the result of heating relatively large quantities of water using hot stone and to account for the quantity of stone this must have been carried out on a regular basis or over a relatively long period of time. Excavation elsewhere has shown that the water was held in a stone trough, or stone lined pit or in wooden troughs (Cressay & Strachan 2003; McLoughlin 2012). The troughs must have been lined either with clay, or a saturated and tightly woven basket, or even animal skins to render the trough waterproof. Stone was then heated on an adjacent hearth and placed into the water to boil it; the sudden cooling off of the stone in the water invariably caused it to fracture though experiments have shown that sandstone could be used up to five times before shattering (Buckley 1990 cited by McLoughlin 2012). Once shattered the rocks were cast aside. The function of burnt mounds has long been debated. The most widely accepted interpretation is that they were used to boil food stuffs, such as large cuts of meat which otherwise would have been difficult to cook over a relatively small domestic hearth (O'Drisceoil 1988). Other interpretations include saunas or sweat lodges (Barfield & Hodder 1987) or breweries (Quinn & Morre 2009) or industrial activities such as the dyeing of cloth or hide (Waddell 1998), or indeed they may have been multifunctional (Barber 1990).

5.0 MITIGATION

- 5.1 It is the recommendation of this report that the footprint of the proposed glasshouse is moved to avoid the burnt mound preserving it *in situ*. If the development proceeds immediately adjacent to the burnt mound it should be cordoned off, with a 20m buffer zone beyond its outer limits, to ensure it is not accidentally disturbed during construction works.
- 5.2 If the development is to proceed and the burnt mound will be destroyed or impacted upon by the development then the burnt mound should be subject to full archaeological excavation with a subsequent programme of post-excavation (sample processing, radiocarbon dating etc.) culminating in a small publication. No excavation works can take place until an amendment to the existing WSI, detailing the archaeological works, is agreed by the local authority archaeologist.

6.0 REFERENCES

- Barber, 1990. Burnt mound material on settlement sites in Scotland. *In* V Buckley(ed) *Burnt Offerings*, 92–97
- Barfield, L & Hodder, M 1987 Burnt mound saunas and the prehistory of bathing. *Antiquity* Vo. 61, 370-379

- Cressay, M & Strachan, R 2003 The excavation of two burnt mounds and a wooden trough near Beechwood Farm, Inshes, Inverness. *Proceedings of the Society of Antiquaries of Scotland*, Vol. 133, 191-204
- McLoughlin, C 2012 The enigmatic *fulacht fiadh* or burnt mound, <http://irisharchaeology.ie/2012/07/the-enigmatic-fulacht-fiadhburnt-mound/>
- O'Drisceoil, D A 1988 Burnt mounds: cooking or bathing? *Antiquity* Vol. 62, 671-680
- Quinn, B & More, D 2009 *Fulacht fiadh* and the beer experiment. In Stanley et al (eds) *Dining and Dwelling, NRA Monograph Series No. 6*, 43-53, NRA, Dublin
- Suddaby, I 2009 'The excavation of an Early Bronze age burnt mound at Arisaig, Lochaber, Highland', *Scottish Archaeological Internet Reports* 39, 2009 [<http://www.sair.org.uk/sair39>].
- Waddell, J., 1998 *The Prehistoric Archaeology of Ireland*, Galway University Press.

Appendix 1: Trench Descriptions

Trench 1

<i>Placement rationale:</i>	N-S element of cruciform trenching pattern designed to investigate putative burnt mound located on low natural knoll projecting northwards from raised ground lying to the south and west.
<i>Orientation:</i>	N-S
<i>Size:</i>	13.2 m by 1.0 m
<i>Excavation Depth:</i>	1.0 m (max)
<i>Topsoil depth:</i>	0.20 - 0.25 m
<i>Modern Features:</i>	None
<i>Significant features:</i>	Burnt/fractured stone dump [102] Late burnt/fractured stone dump [103] Thin clayey layer [105] Initial burnt/fractured stone dump [105]
<i>Artefacts:</i>	None.
<i>Interpretation(s):</i>	Burnt mound located over natural knoll, dumped stone tailing down to N. from flattish plateau in central part of trench. Continues into Trench 2 (eastern part)

Trench 2

<i>Placement rationale:</i>	E-W element of cruciform trenching pattern designed to investigate putative burnt mound located on low natural knoll projecting northwards from raised ground lying to the south and west. The trench (western part) also encompassed a plateau area lying immediately west of the knoll.
<i>Orientation:</i>	E-W
<i>Size:</i>	18.0 m by 1.0 m (1.8 m wide in western part of trench)
<i>Excavation Depth:</i>	0.65 m max
<i>Topsoil depth:</i>	0.20 – 0.25 m
<i>Modern Features:</i>	None
<i>Significant features:</i>	Burnt/fractured stone dump [102] continuing from Trench 1 Burnt/fractured stone dump [107] continuing from Trench 3
<i>Artefacts:</i>	None.
<i>Interpretation(s):</i>	Burnt mound [102] located over natural knoll, dumped stone tailing down to E. from flattish plateau in central part of trench. Burnt mound [107] located over natural knoll, dumped stone tailing down to N. from flattish plateau in central part of trench.

Trench 3

<i>Placement rationale:</i>	Designed to investigate the extent of burnt mound material [107] extending from the northern second of Trench 2.
<i>Orientation:</i>	N-S

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Size: 4.6 m by 1.0 m
Excavation Depth: 0.80 m (max)
Topsoil depth: 0.20 - 0.25 m
Modern Features: None
Significant features: Burnt/fractured stone dump [107] continuing from Trench 2
Artefacts: None.
Interpretation(s): Secondary burnt mound(?) sloping down to N. from plateau area to immediate west of knoll. Trench 3 / [107] and the northern part of Trench 1 / [102] are separated by a steep-side narrow cleft suggesting two mounds may be present. Alternatively the apparently distinct discard events could have been created by circumstances deriving from the constraints of natural topography or eccentric discard patterns.

Trench 4

Placement rationale: Situated over general area of originally plotted location of burnt mound
Orientation: E-W
Size: 25.0 m by 1.0 m
Excavation Depth: 0.25 m (max)
Topsoil depth: 0.20 - 0.25 m
Modern Features: None
Significant features: None
Artefacts: None.
Interpretation(s): No significant archaeological features present. Absence probably deriving from the limitations of surveying technology at the time of the original survey (1:10,000 OS map and taking bearings?).

Trench Locations		
	NGR (NY)	NGR (NY)
Trench 1	32392 86911	32392 86924
Trench 2	32398 86914	32381 86917
Tr.1 / Tr.2 intersection	32392 86917 -----	(central point)
Trench 3	32386 86917	32387 86920
Trench 4	32396 86911	32423 86914

Appendix 2: Context Descriptions

<i>Context</i>	<i>Trench</i>	<i>Type</i>	<i>Description</i>	<i>Interpretation</i>	<i>Stratigraphy</i>	
					<i>Overlies</i>	<i>Underlies</i>
101	All	Topsoil	Unsorted mid brown clayey sand. Frequent small stones. Shallow – only c.0.20 m thick. Cohesive and consolidated by thick vegetation. Water saturated in places.	Unimproved moorland soil	102 / 103 (Tr.1) 102 (Tr.2) 107 (Tr.3)	
102	1 & 2	Dump	Principal discard material from burnt mound in Trenches 1 & 2. Blackened, small, angular, heat-fractured stones (average size approx 90 x 50 X 40 mm). Frequent ‘reddened’ stones. Best preserved in Trench 1 where maximum of 0.78 m thick, shallowing downslope to N. and to level ground to S. Tails downslope to E. in Trench 2.	Principal discard material from burnt mound in Trenches 1 & 2	104	103
103		Dump	Light/mid grey fractured stone dump. Loose, less charcoal staining, than [102] – perhaps colour leaching as located downslope. Measured 200 mm thick (max).	Late discard material from burnt mound	102	101
104		Layer	Thin clayey layer approximately 100 mm thick. Very frequent fractured stones.		105	102
105		Dump	Grey fractured stone basal dump. Loose, noticeably lighter in colour, less charcoal staining, than [102]. Average 200 - 250 mm thick.	Initial discard material from burnt mound	106	104
106	All	Natural subsoil	Yellow clay with gravel mix. Occasional large stone.	Natural subsoil		All

Archaeological evaluation, Craig Farm, Langholm, Dumfries and Galloway - 541

107	3	Dump	Principal discard material from burnt mound in Trenches 2 & 3. As [102] in Trench 1 & 2 but stone less concentrated within looser charcoal-rich soil matrix. Frequent 'reddened' stones.	Principal discard material from burnt mound in Trenches 3 & 2	106	
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Appendix 3: Photographic register

<i>Frame</i>	<i>Trench</i>	<i>Description</i>	<i>From</i>
1-2		Pre-excavation of Area of Trenches 1, 2 & 3 (recently determined location of mound)	N
3-4		Pre-excavation of Area of Trenches 1, 2 & 3 (recently determined location of mound)	NW
5-6		Pre-excavation of Area of Trenches 1, 2 & 3 (recently determined location of mound)	S
7-10	1	Working shot of machine excavation through dump [102]	S
11-12	4	Excavated sterile trench over general area of original location of mound	
13-14	1	East-facing section showing thickness part of mound material (N. part of trench)	NE
15-16	1	East-facing section showing thickness part of mound material (close-up)	NE
17-18	1	East-facing section showing	ENE
19-20	1	East-facing section, N. of Tr.2 intersection	SE
21-24	1, 2 & 3	Mound - post-excavation of Trenches 1, 2 & 3	N
25-28	1, 2 & 3	Mound - post-excavation of Trenches 1, 2 & 3	NNE
29-32	1, 2 & 3	Mound - post-excavation of Trenches 1, 2 & 3	NNW
33-34		Small burn running down (from W) to immediately N. of mound	W
35-36	2	South-facing section, E. of Tr.1 intersection	SW
37-38	2	South-facing section, immediately W. of Tr.1 intersection	ESE
39-41	2	Mound dump [107] within Trench 2, with Tr.3 running to N.	SE

Archaeological evaluation, Craig Farm, Langholm, Dumfries and Galloway - 541

<i>Frame</i>	<i>Trench</i>	<i>Description</i>	<i>From</i>
42-43		Mound dump [107] within Trench 2, part of N-facing section (drawing)	S
44-45	3	West -facing section in N. (narrowing near base of slope)	SW
46-47	3	West -facing section	SW
48-49		Dump [102] material	
50-51	2	East-facing section (detail -)	x

Appendix 4: Samples

No.	Context	No. of bags
1	102	1

Appendix 5: DES Entry

LOCAL AUTHORITY:	Dumfries and Galloway Council
PROJECT TITLE/SITE NAME:	Craig Farm
PROJECT CODE:	541
PARISH:	Langholm
NAME OF CONTRIBUTOR:	Clare Ellis
NAME OF ORGANISATION:	Argyll Archaeology
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	NY38NW48

Archaeological evaluation, Craig Farm, Langholm, Dumfries and Galloway - 541

SITE/MONUMENT TYPE(S):	Burnt mound
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NY 32392 86917
START DATE (this season)	24 th July 2019
END DATE (this season)	25 th July 2019
PREVIOUS WORK (incl. <i>DES</i> ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archaeological evaluation was carried out on the site of burnt mound on Craig Farm in advance of the construction of a large greenhouse. The evaluation confirmed the existence of the burnt mound and its lateral extent. It is the recommendation of this report that the footprint of the glasshouse is moved to avoid the burnt mound and preserve it <i>in situ</i> , however, if this is not possible then the burnt mound should be subject to full archaeological excavation, post-excavation and publication.
PROPOSED FUTURE WORK:	Unknown
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Craig Farm Company
ADDRESS OF MAIN CONTRIBUTOR:	Davaar Cottage, Campbeltown, Argyll. PA28 6RE
EMAIL ADDRESS:	ellisclare@argyll-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Intended NRHE