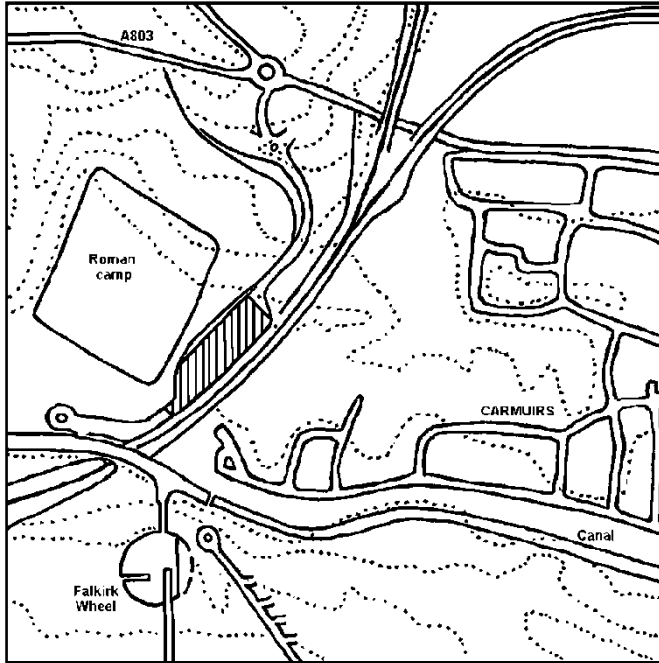


## Excavations at WESTER CARMUIRS in 2002

Geoff B Bailey



### Introduction

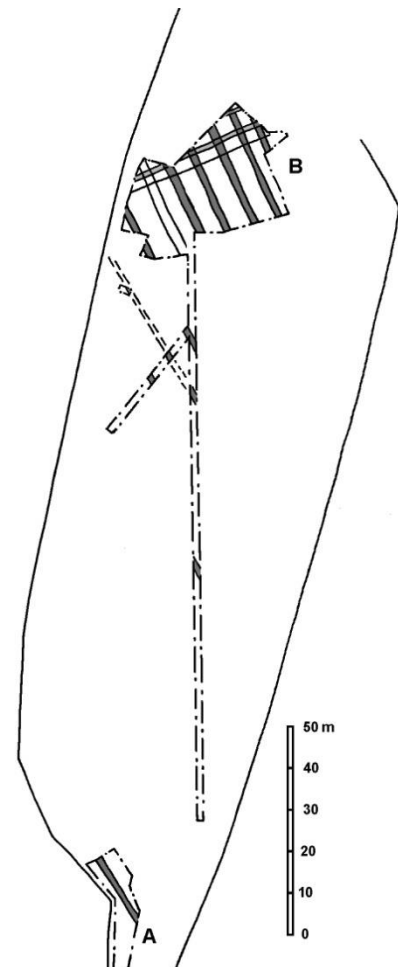
In 2002 the Roads Department of Falkirk Council commissioned Falkirk Museum Service to undertake the archaeological investigation of the area to the west of the railway and north of the Forth and Clyde Canal at Carmuir which was to be developed for a car park for visitors to the Falkirk Wheel at NS 8539 8056. It was known that the sand and gravel ridge between Camelon and Bonnybridge was densely occupied in the late Iron Age. Aerial photographs taken by the RCAHMS in 1976 (ST/2562) and 1978 (ST/2997-9) seemed to indicate the possibility of large circular enclosures in the area but the observed pattern of numerous dark cells appeared more likely to be the result of variations in geology.

**Illus 1: Map showing the 1km grid square at Carmuir with the area investigated hatched.**

Access to the site was only possible once the land had been transferred from Callendar Estates to Falkirk Council and so the archaeological work had to be undertaken alongside the construction work. A large earth-moving machine with a smooth bucket was lent to the project by the Roads Department for one and a half days. The initial effort was focused on the south end of the site which was close to the south-east corner of a Roman temporary camp - Site A. An area approximately 32m N/S and averaging 6m wide was opened up. The topsoil was removed to the top of the brown-orange natural sand which was then cleaned by hand. The only man-made item that cut the natural was a broad and shallow ditch-like feature with an irregular base aligned roughly NW/SE. At the time this was thought to have been the base of a cultivation furrow forming part of a rigg system and this was subsequently confirmed by the finding of more examples further north on the same alignment.

**Illus 2: The location of the excavation trenches within the hatched area shown on illus 1.**

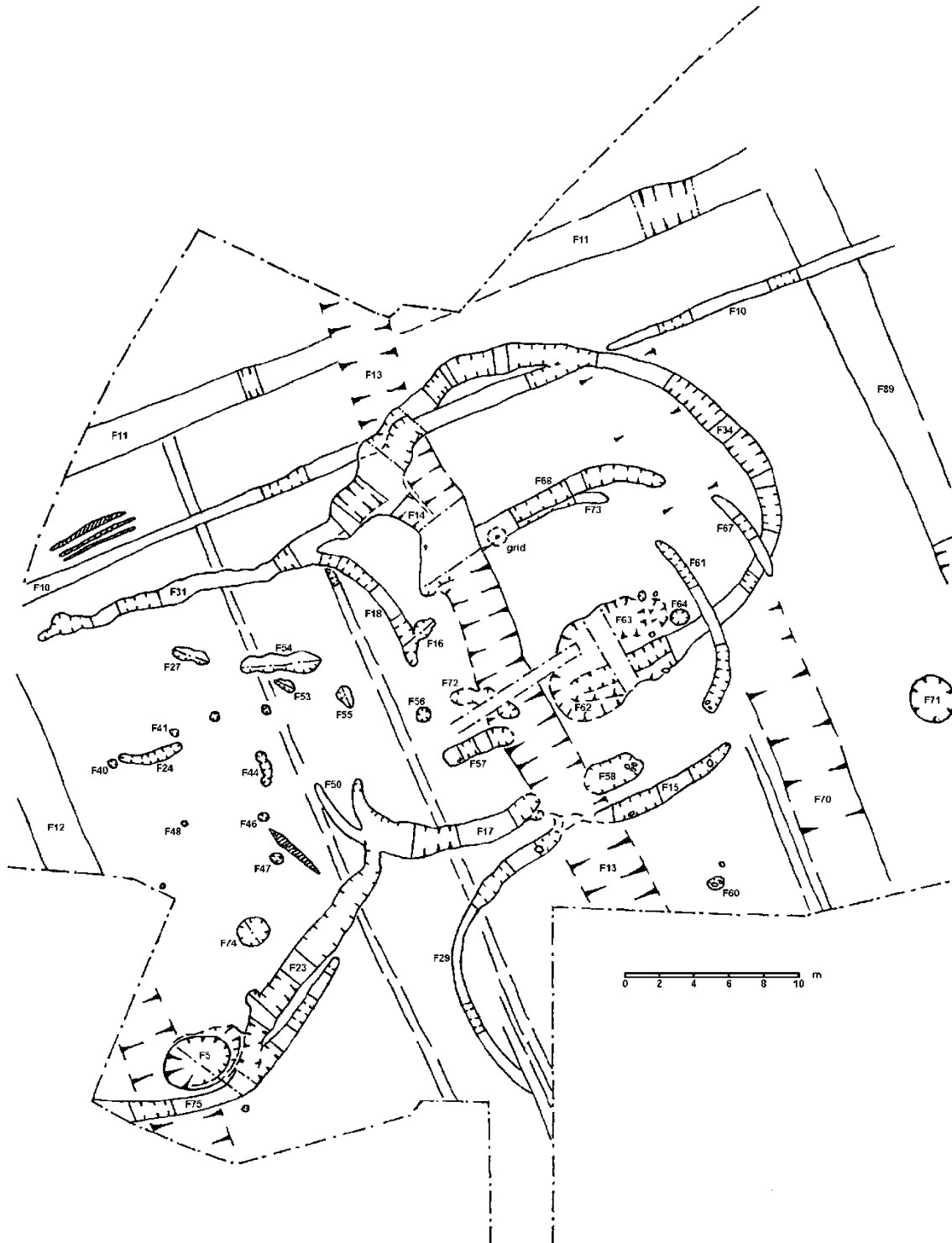
It was evident that the recent agricultural regime on the site, which included deep ploughing for potato crops, had truncated the furrow and that shallow features would not have survived. With this negative result the remaining time was spent on a



## Excavations at Wester Carmuir, 2002

N/S transect of the area. The trial trench was 1.8m wide and an enormous 161m long. Several more furrows were noted but it was only where the topsoil cover was slightly deeper at the north end of the trench – Site B - that curving shallow gullies were found and considered to have archaeological potential. This area was enlarged and it soon became evident that the features represented an early settlement. The loan of the machine was extended to the end of the second day and this enabled a large area to be opened up for further cleaning.

### Excavation



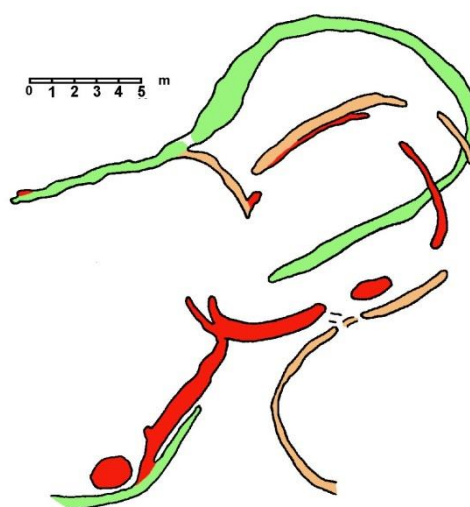
**Illus 3: Plan of the Area B showing the feature numbers.**



The complex of gullies, ditches, post-holes and pits ranged from 2cm to 40cm in depth – the majority being on the shallower side. This made the use of sections to determine the sequence of gullies redundant and so we are reliant upon surface observations made in plan.

**Illus 4: The main excavation trench, Area B, looking south towards the Falkirk Wheel.**

The main element of the settlement had been a horse-shoe shaped “ditched” enclosure measuring 9m in either direction. This had been replaced with slighter ditches or gullies on at least two occasions reducing in size to 8.5m and then to 7m. Each enclosure was slightly displaced to the south of its predecessor. A shallow scoop in the centre of the final enclosure hints that they provided the setting for a large dwelling made of earth and timber. The open end of the “horse-shoe” had further ditches radiating out from it and the curving terminals of these partly closed the opening. Close to this point were several post-holes and pits. It is suggested that these represent the working end of a farmyard attached to the dwelling.



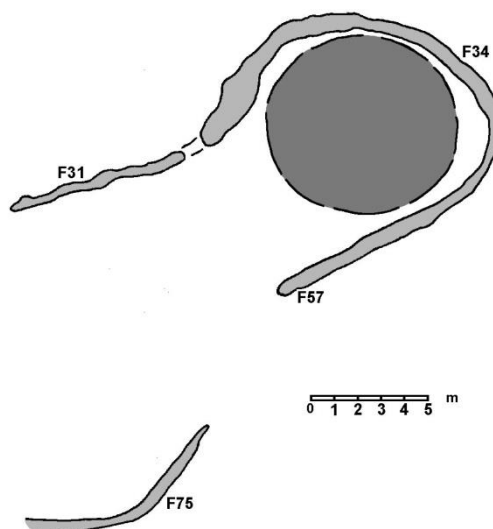
**Illus: Phase plan showing the features of the three phases.**



**Illus 5: The intersecting lines of F34 and F10 in the foreground looking south.**

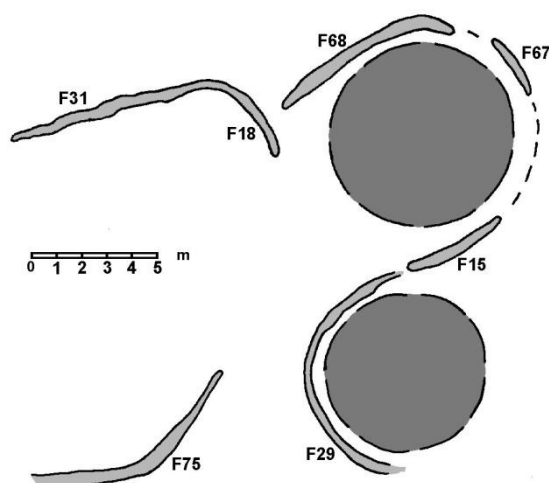
terminal. It was notable that this contained a few stones which were otherwise scarce on the site. The northern arm was also cut by the furrow F13 but continued as a swollen terminal 1.2m wide (Section 10). The two terminals were 6.7m apart. The fill of F34 was a fairly homogeneous orange-brown silty or loamy sand. It is too shallow to have functioned as a ditch and the sandy nature of the subsoil would have made the base relatively porous. It was probably a drain for a structure located within it

which, given the absence of stone or post-holes, must have been made of turf. Its probable footprint is shown in dark grey on the phase plan. A linear feature (F31) extended westward from the northern terminal of F34. It originally stopped short of F34 but was continued to connect with it at a later date. F31 was 0.45m wide and up to 0.27m deep. The sides were relatively steep (Sections 86 & 87) and it contained charcoal throughout its length suggesting that it was a slot for a fence rather than a drain. It ran out after 17m. Its equivalent in the south was F75. This was 0.45m wide but only survived to a depth of 0.08m (Sections 4 & 7) due to later truncation. As it continued westward it survived better and in Section 3 was 0.18m deep with evidence of two fills (as in S31). Its full extent was not traced. The gap between F75 and F57 may represent the entrance to the spectacle-shaped “enclosure” – appropriately placed in the centre of the long south side.



**Illus 6: Phase 1 showing probable site of dwelling in dark grey.**

The enclosure, and presumably the dwelling, were replaced in the second phase. The new gullies, F68, F67 and F15, were slighter and cut across the old ones. F67 cut the old gully F34. Their intermittent nature may be illusory and it is probable that there was a single channel with a varying depth which has subsequently lost its upper levels. The eastern end of the northern arm of the forecourt (F31) was now curved to the south (F18) to compensate for the southern movement of the main enclosure. The southern boundary of this court remained the same but on the other side of the enclosure entrance the gully of the main enclosure curved back on itself as F29. Here it looks like the gully of a roundhouse and may have been the drip gully of another circular building – as shown on illus 7.

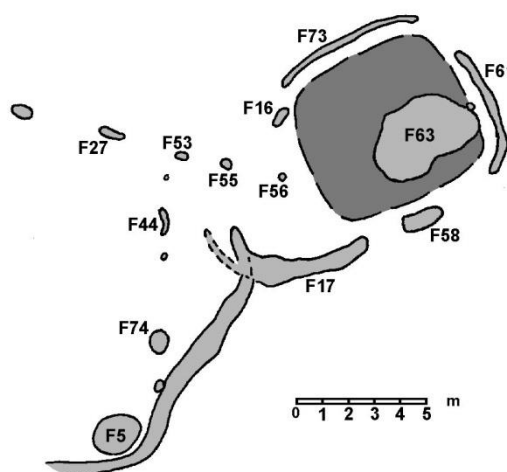


**Illus 7: Phase 2 with two possible roundhouses.**

No artefacts of any kind were found in any of the features, or indeed in the immediate vicinity. To all intents and purposes the layout would be at home in an Iron Age context. That this was not the case was demonstrated by a radiocarbon date obtained from the third phase which clearly evolved from the earlier two.

In Phase 3 the gullies were even slighter, demonstrating that they did not function as boundary ditches. The main enclosure became more sub-rectangular and now contained a large shallow amorphous pit in the south-east corner. This scoop had gently sloping sides and can be considered to be an internal scraping as is often found on the interior of such dwellings.

**Illus 8: Phase 3.**





## Excavations at Wester Carmuir, 2002

The northern fence of the forecourt was replaced by another fence using individual post-holes (F56, F55, F53, F27 & a swelling on F31). This fence focused on the south-west corner of the postulated

building where it would seem that the entrance had been sited in each of the three phases.



**Illus 9: Oven F5 in the foreground with slot F23 beyond looking NNE.**

oak, willow and hazel trees. Burning in situ had not been intense indicating that this was an oven rather than a furnace. The upper edges of its pit were eroded and in places formed a recessed lip



suitable for a clay dome. Small fragments of partially fired clay in the fill and a high clay content of some of the layers (eg layer 7 Section 6) may confirm such a feature whilst again indicating a low temperature. A piece of the willow provided a radiocarbon date in the 9<sup>th</sup> century AD for its last use. The willow would have been obtained from the banks of the Lightwater Burn just a short distance to the north-east.

**Illus 10: Section across oven F5.**

Long after the dwellings had been demolished the area was laid down as large fields with rigg and furrow. Within the main trench four furrows were found running NW/SE (F12, F13, F70 and F89). These had removed most of the earlier deposits in their paths. The five eastern furrows were 12m from centre to centre which is not unusual. The next furrow to the west was 26m away but the intervening space was occupied by two gullies on the same alignment. These may have been trackside drains. Another three furrows were seen in the trail trench and a fourth in Area A. At the northern end of Area B the furrows were crossed at right angles by narrower linear features which correspond with the W/E field boundary shown on Ordnance Survey maps.

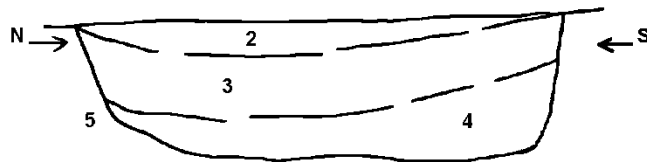
### Sections

Feature number	Section number	Feature number	Section number	Feature number	Section number	Feature number	Section number
75	2	31	87	11	73	39	88
75	3	24	80	65 & 56	74	18	89
23 & 75	4	46	81	90	75	16 & 18	90
5 & 75	6	47	82	55	76		8

# Excavations at Wester Carmuir, 2002

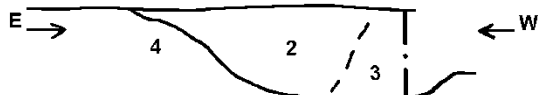
23 & 75	7		41	84		27	77		29	13
42	83		56	85		44/45	78		29	22
89	72		31	86		40	79		15	21
15	20		61	25		61	24		67	19
34	14		34	13		34	12		34	11
17	29		65/34	15		17	28		17	30
68	16		68	17		10	32			

Section 1



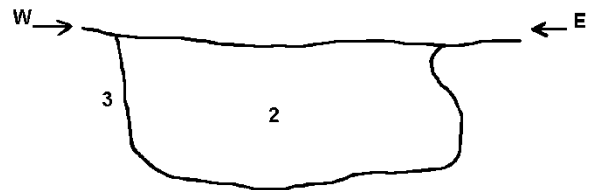
- 2 orange-brown loam
- 3 pale orange-brown loam with some grit
- 4 mixed grit & brown clay loam
- 5 compact grit in clay - natural

Section 2



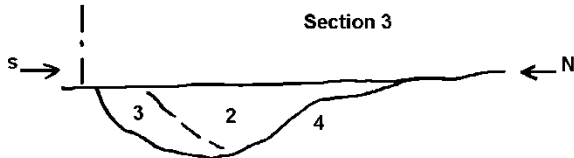
- 2 mottled grey-brown loam & orange sand
- 3 brown sandy loam
- 4 brown-orange sand - natural

Section 5



- 2 pale brown silty sand
- 3 orange sand - natural

Section 3



- 2 orange-brown sandy loam
- 3 brown-orange sandy loam
- 4 orange sand & grey silty sand - natural

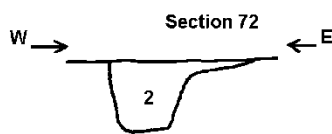
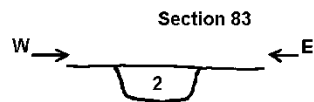
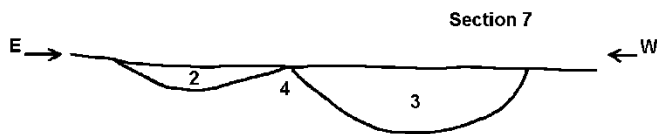
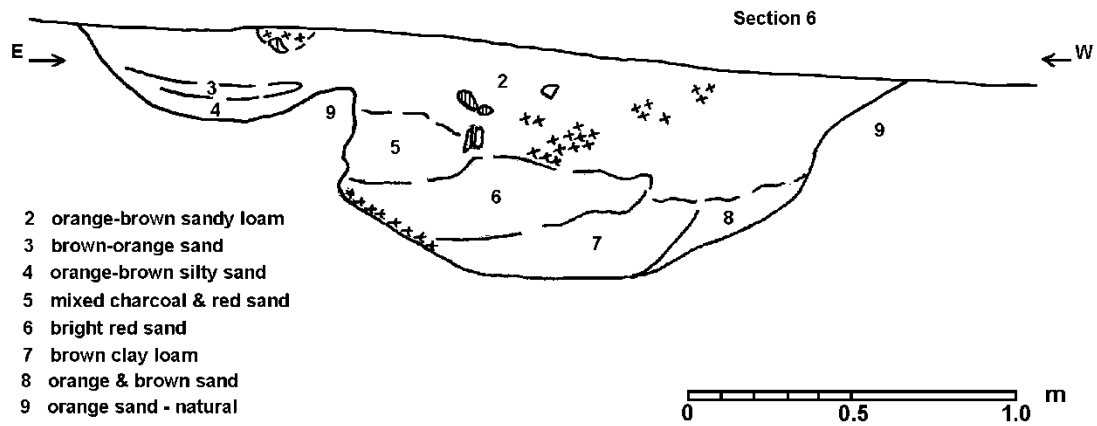
0 0.5 1.0 m

Section 4

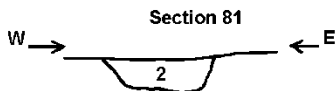


- 2 orange-brown sandy loam
- 3 orange sand - natural

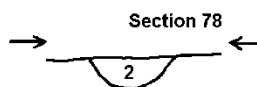
# Excavations at Wester Carmuir, 2002



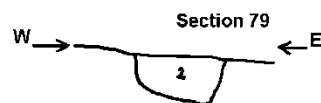
2 orange-brown sandy loam



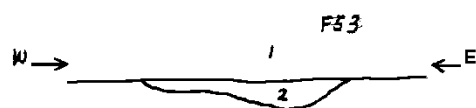
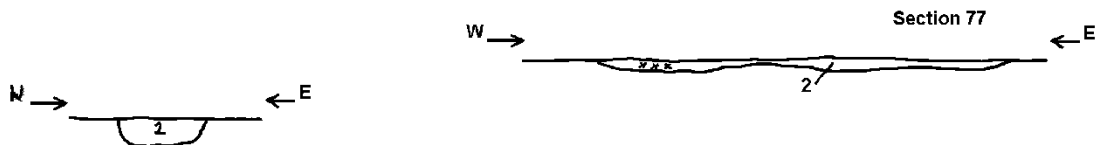
2 orange-brown sandy loam



2 orange-brown sandy loam



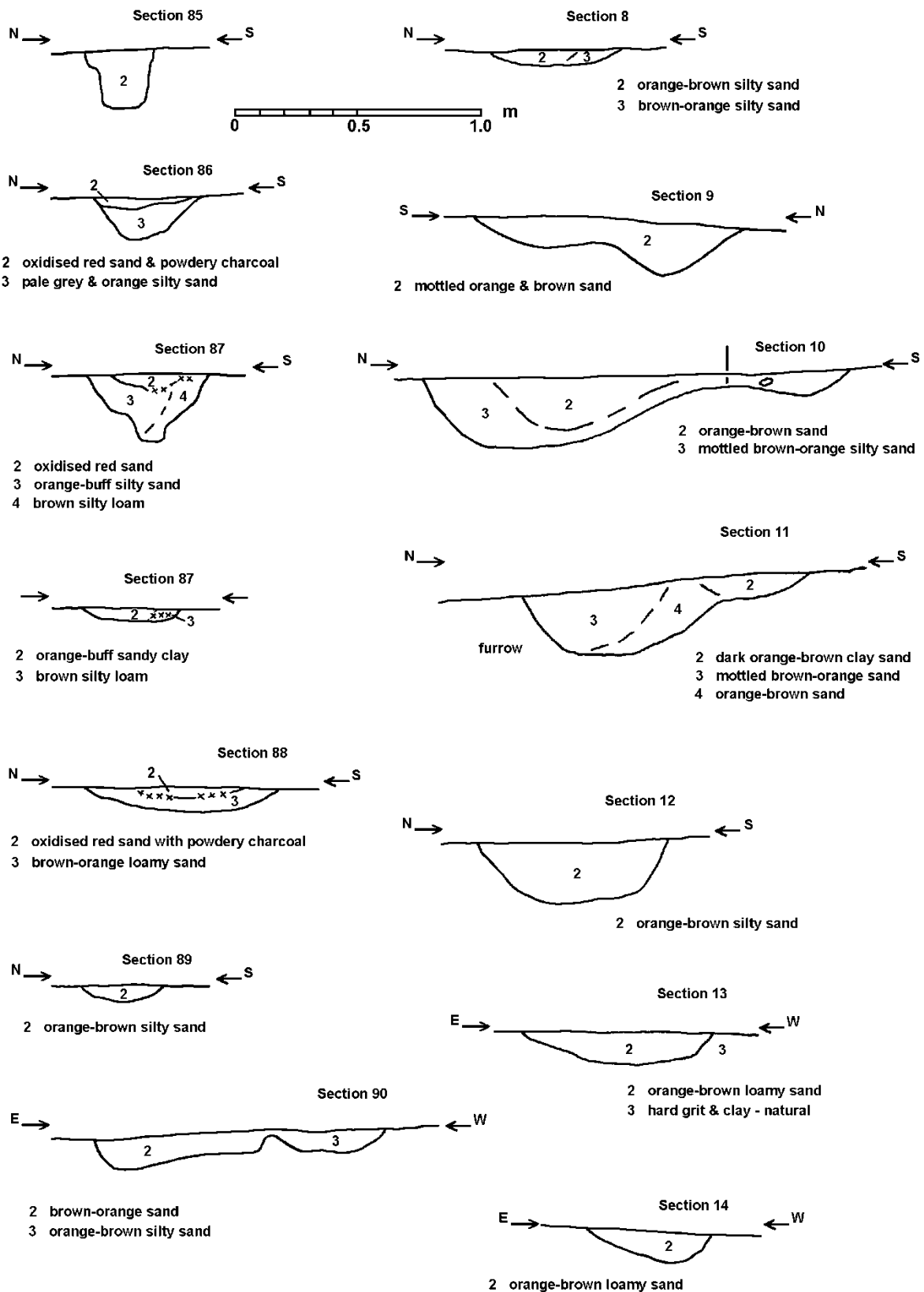
2 pale orange-brown sandy loam



2 orange-brown sandy loam

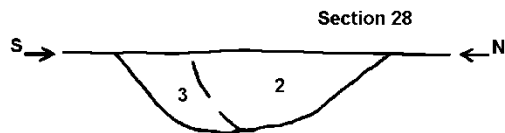
3 animal burrow

# Excavations at Wester Carmuir, 2002

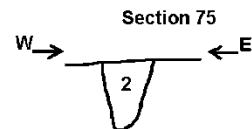




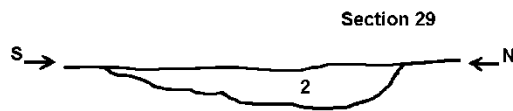
# Excavations at Wester Carmuir, 2002



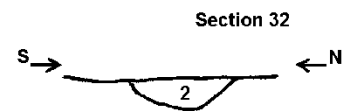
- 2 orange-brown silty sand
- 3 mottled orange sand



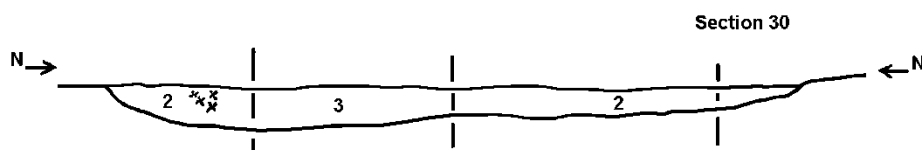
- 2 orange-brown loamy sand



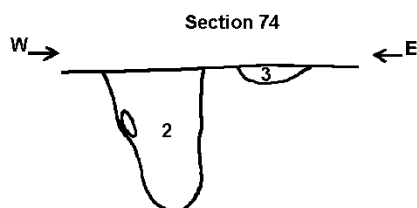
- 2 brown loamy sand



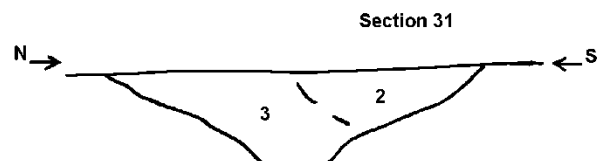
- 2 dark brown loamy sand



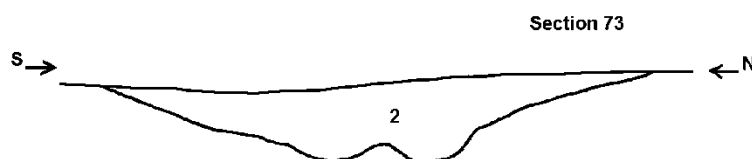
- 2 brown loamy sand
- 3 orange-brown loamy sand



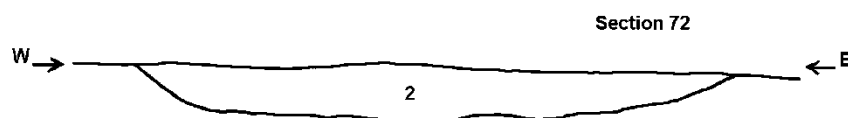
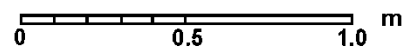
- 2 brown loamy sand - more silty to bottom
- 3 orange-brown sand



- 2 mixed brown-grey sandy clay & orange sand
- 3 brown-grey sand

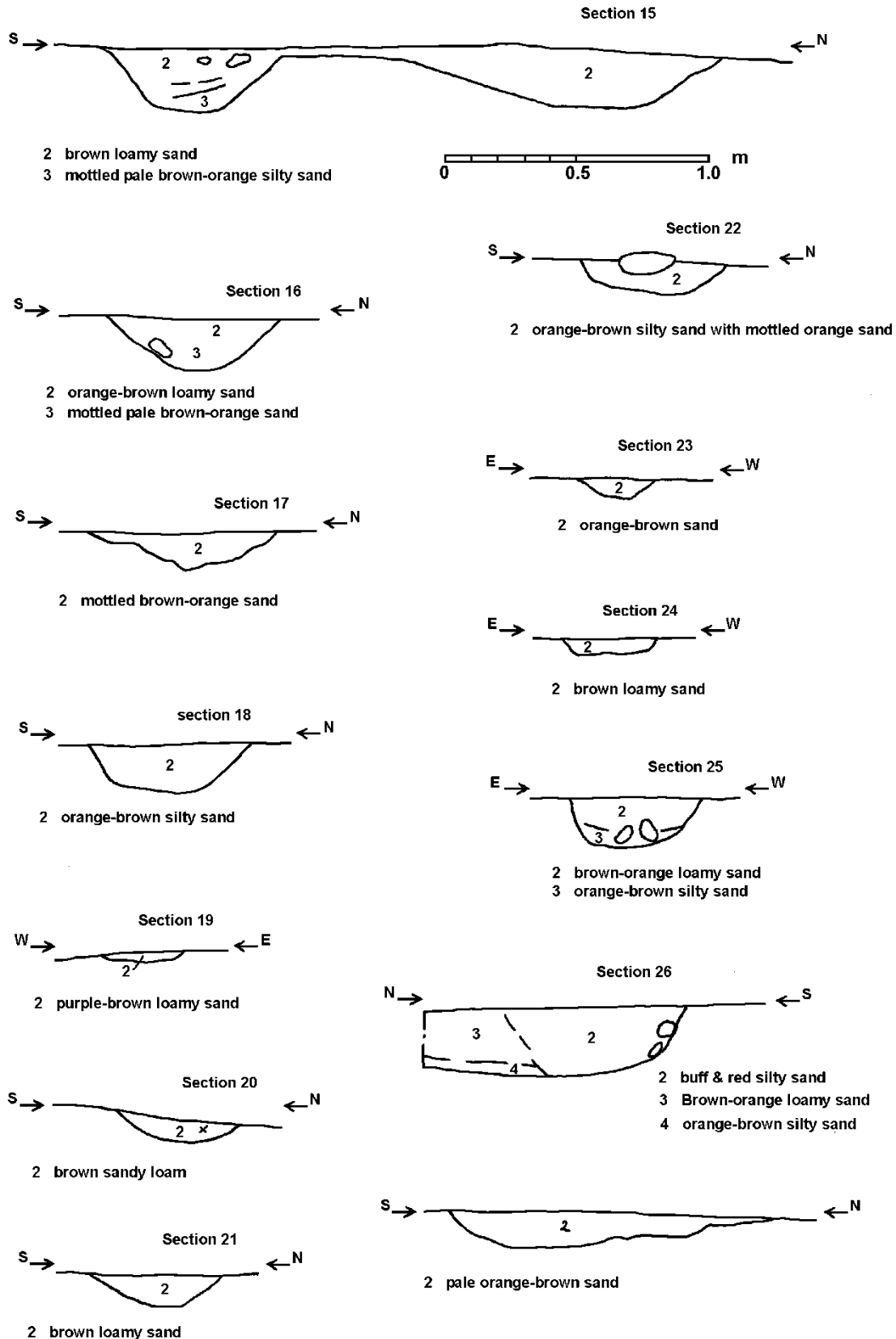


- 2 brown silty sand



- 2 gritty buff sand

# Excavations at Wester Carmuir, 2002



## Radiocarbon date

Radiocarbon date from *Salix* roundwood (6 years old) charcoal in the oven F5 1072  $\pm$  29 BP (878 AD) (SUERC-43967 [GU29203])

# Excavations at Wester Carmuir, 2002

## Charcoal

Susan Ramsay

	Context	F5	F5	15/17	23	27	29	31	39	58	50/51
	Description	Oven A?	Oven (S. half)	-	wide slot	shallow oval feature	slot at S. end of trench	linear burning	burnt pit	-	junction of 2 slots
	Vol charcoal	800ml (25% identified)	200ml	<5ml	<5ml	<5ml	<5ml	<5ml	<5ml	<5ml	<5ml
	AMS potential	Corylusrw 14 rings (2.32g)	Salix rw 6 rings (2.31g)	Salix (0.10g)	Alnus (0.17g)	-	Corylus (0.02g)	Salix rw 4 rings (0.34g)	Betula (0.19g)	Salix (0.11g)	Corylus (0.05g)
Charcoal	Common name										
Alnus	alder				1 (0.17g)					1 (0.13g)	
Betula	birch	9 (13.48g)					3 (0.10g)		5 (0.35g)		
Corylus	hazel	5 (3.93g)	21 (15.70g)		1 (0.10g)		2 (0.04g)	2 (0.03g)		1 (0.13g)	1 (0.05g)
Pinussylvestris type	Scots pine type										1 (0.10g)
Quercus	oak	8 (11.20g)	25 (8.41g)		2 (0.10g)	2 (0.32g)					
Salix	willow	13 (18.06g)	49 (42.39g)	5 (0.27g)	1 (0.04g)			6 (0.72g)		2 (0.17g)	
Indet	indet										1 (0.02g)
Other											
Bone					1 (0.71g)						
Coal											
Iron rich 'lump'											

rw - roundwood

## Discussion

The remains of the ninth century settlement were slight and vestigial. Had the modern plough gone down just 10cm deeper it would have removed over half of the features and the recovered plan would have been meaningless. The planting of potatoes in the field in the two or so decades before the archaeological excavation took place probably did a similar amount of damage. It is with this in mind that the aerial photographic evidence should be viewed. The photographs, taken in the late 1970s, show a honeycomb of circular cells occurring in patches throughout the area and indicate just how much has been lost.

The site lies near the northern lip of a relatively flat plateau at 35m OD. This plateau is largely occupied by a Roman temporary camp whose shape reflects the contours. To the north the ground slopes down 15m to the Lightwater Burn and its tributaries splay out to the east of the site under discussion. The site is on the line that the road issuing from the north gate of the Roman fort at Rough Castle must have taken to the neighbouring fort at Camelon and it would have been this route that was used in the medieval period before the turnpike road, now followed by the A803, was constructed.

The morphology of the "enclosures" is not diagnostic of a period but are typical of domestic dwellings over a very long time span. Indeed, the features cutting into the natural subsoils should not be seen as the boundary ditches of small fields but rather as soak-aways for the run-off coming from roofs and as settings for fenced yards. The Carmuir/Camelon area was a relatively populous one in the Iron Age through to the medieval periods. The location, near the junction of the main road from Edinburgh and Glasgow and the northerly branch to Stirling gave it a strategic importance and one

that could be beneficial to trade. Sustained by good quality, easily worked soils it would have spawned a thriving agricultural community. Some of the ring-ditches a little to the west of the present site observed on the aerial photographs were undoubtedly of the Iron Age period and the ninth century radiocarbon date for the Site B at Wester Carmuir shows continuing occupation. 500m to the NNW was a multi-vallate "hill fort" which appears on aerial photographs but which was largely destroyed by major levelling operations in the early 1990s. It too had been surrounded by individual ring ditched dwellings. 1km to the north-east was the extensive civilian settlement at the Roman fort. Here a large round house, measuring 11-14m in diameter, was seen as a native dwelling which had been replaced at least once on the same site (Proudfoot 1978). Smaller circular gullies were found a little to the west (McCord & Tait) and were also attributed to the indigenous Iron Age as they were cut by Roman features.

The ninth century is part of what used to be called the Dark Ages. Archaeologically part of the reason for this is that sites of this age are hard to distinguish in form from those of the Iron Age and the complete absence of artefacts makes them almost invisible. Nevertheless, in recent years we have come across sites of this period in a semi-urban setting at Falkirk (at Comely Park, Hodge Street, and probably Clyde Cottage and Rosehall Terrace) and on a grander domestic scale at the Thane's Hall in Callendar Park (for a summary see Bailey 2016). We even have a tenth century high cross from Carriden (FLHS website).

The duration of the occupation at the Wester Carmuir site is difficult to determine. That it was relatively long-lived is hinted at by the replacement of the building on at least two occasions. Nor is the reason for the demise of the settlement known. By the late medieval period the site of the former dwelling was under cultivation. No dating evidence was forthcoming for the broad rig and furrow as even these late features did not contain any pottery. They are assigned to the late medieval period when they were the prevalent form of agriculture. The sandy soil in this area is relatively free-draining, especially as the ground slopes down to the north and surface drains which were extensively used on the clayey soils located on the higher ground to the south in the 18<sup>th</sup> century would not have been needed. The rig system provided a means of land division as much as drainage.

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McCord, N. & Tait, J. 1978 'Excavations in the northern annexe of the Roman fort at Camelon, near Falkirk, 1961-3.' Proc Soc Antiq Scot 1978 (109), 151-165.  
Proudfoot, E.V.W. 1978 'Camelon native site,' Proc Soc Antiq Scotland, 1978 (109), 112-128.

**SMR 1340    Wester Carmuir Enclosure NS 8537 8054**