## CFA Archaeology Ltd



Historic Building Recording

Site \& Landscape Survey

Geophysical Survey

A91/B9124 Greenyards Roundabout, Bannockburn, Stirlingshire, Archaeological Excavation

Report No. 1752

## CFA ARCHAEOLOGY LTD

The Old Engine House<br>Eskmills Business Park<br>Musselburgh<br>East Lothian<br>EH21 7PQ

Tel: 01312734380
Fax: 01312734381
email: info@cfa-archaeology.co.uk web: www.cfa-archaeology.co.uk

| Author | Stuart Mitchell MA AIfA |
| :--- | :--- |
| Illustrator | Graeme Carruthers MA MAAI\&S |
| Editor | Bruce Glendinning BSc PgDip MIfA |
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## 1. INTRODUCTION

### 1.1 General

1.1.1 This report presents the results of an archaeological excavation undertaken by CFA Archaeology Ltd (CFA) in February 2010 within the area of a proposed roundabout and associated slip roads at the junction of the A91 and the B9124 at Bannockburn, Stirlingshire (centred on NGR: NS 8175 9018) (Fig. 1). The work was commissioned by Stirling Council: Roads, Transport \& Open Space.
1.1.2 The excavation resulted from an evaluation carried out by CFA (Suddaby 2009) during November 2009. The evaluation identified a number of shallow negative features, including a concentration of postholes set in a curvilinear alignment. Prior to the evaluation, no previous invasive archaeological fieldwork is known to have taken place within the proposed development area. This report should be read in conjunction with the evaluation report.
1.1.3 Prior to the excavation an addendum to the Written Scheme of Investigation (WSI) was produced by CFA, refining the scope of works presented in the WSI. The addendum was approved in advance by the Archaeology Officer for Stirling Council.

### 1.2 Objectives

1.2.1 The aims of the excavation were:

- to excavate an area measuring approximately 20 m by 20 m , which was identified in the 2009 evaluation report as containing a concentration of archaeological features;
- to characterise the features in this area;
- identify if they form part of a post-built structure; and
- if appropriate, recover suitable samples for dating and/or environmental analysis.


## 2. WORKING METHODS

### 2.1 General

2.1.1 Work was conducted with regard to the relevant Institute for Archaeologists' (IfA) guidance.

### 2.2 Excavation Strategy

2.2.1 Topsoil was stripped from the excavation area under archaeological supervision by an earth-moving machine equipped with a smooth-bladed ditching bucket.
2.2.2 The stripped area was cleaned by hand down to the natural subsoil surface. The features were cleaned by hand and all further excavation required to fulfil the aims of the excavation were be carried out by hand. All features of archaeological interest revealed within the stripped area were to be recorded, fully excavated and all artefacts recovered. The contents of all potentially significant archaeological features were sampled with a view to recovering material suitable for dating and/or environmental analysis.
2.2.3 All excavation and on-site recording was carried out according to standard CFA procedures, principally by drawing of plans and sections, by photography and by completing standard CFA record forms.
2.2.4 The location and extents of the features were recorded using industry standard electronic surveying equipment.
2.2.5 The trench will be backfilled upon completion.

## 3. ARCHAEOLOGICAL RESULTS

### 3.1 General

3.1.1 The trench was located on a small plateau which had been heavily overgrown and was surrounded by waist high surface vegetation consisting of thistles, foxgloves and small trees. In general, the soil profile within the site consisted of around 0.3 m topsoil ( $\mathbf{0 0 1}$ ) which overlay an orange-brown homogeneous
 (000) was coarse reddish sandy gravel.
3.1.2 The excavation revealed the remains of a single post-built roundhouse (Structure 1) with the remains of a possible porch, part of a possible second roundhouse (Structure 2) and several isolated pits. The horizons of the cuts were clear and the features were uniformly filled with firm dark grey soil.
3.1.3 No artefacts were recovered during the excavation or from the sieving of the soil samples. An assessment of the palaeoenvironmental remains recovered from the soil samples has been carried out and the results are presented in section 4 below.
3.1.4 Numbers in bold and parentheses refer to contexts, a full list of which is contained in Appendix 1.

### 3.2 Structure 1

3.2.1 Structure 1 comprised a circular post-built roundhouse, the post-ring measuring c. 5.75 m in diameter. It featured a double-ring of posts on its western half, and had an entrance oriented to the south-east with the possible remains of a porch $(\mathbf{0 3 2}, \mathbf{0 3 4})$. The outer ring consisted of eight postholes $(013,029,040,042,044,064,065,070)$ ranging in diameter from 0.25 m to 0.3 m and in depth from 0.1 m to 0.23 m . The partial inner ring consisted of six postholes $(\mathbf{0 1 5}, \mathbf{0 1 8}, \mathbf{0 3 5}, \mathbf{0 6 1}, \mathbf{0 6 6}, \mathbf{0 6 8})$ varying in diameter from 0.25 m to 0.35 m and depth from 0.1 m to 0.2 m . These postholes, outer and inner, are interpreted as the foundations for load bearing posts that would have supported a ring beam onto which a pitched roof would have been fastened.
3.2.2 Two shallow pits $(\mathbf{0 3 2}, \mathbf{0 3 4})$ were situated c. 1.5 m to the south-east of the postulated entrance to Structure 1. Both comprised a truncated shallow pit measuring c. 1 m by 0.5 m and 0.05 m deep. They most likely represent postholes which have either collapsed together or been replaced. These features are interpreted as being the foundations for posts which would have formed a porch entrance to Structure 1.

### 3.3 Possible Second Structure

3.3.1 Two pairs of postholes $(\mathbf{0 3 5} / \mathbf{0 5 3}, \mathbf{0 3 8} / \mathbf{0 5 7})$, an oval pit $(\mathbf{0 2 5})$ and a single posthole (022) forming a semi-circle roughly 5 m in diameter, were located just to the south of Structure 1. These features are tentatively interpreted as potentially being part of a second roundhouse. The postholes ranged from a
diameter of 0.25 m to 0.3 m and varied in depth from 0.15 m to 0.35 m . The pit (025) measured 0.8 m by 0.35 m and was 0.2 m deep, and is interpreted as being either the remains of two postholes which have collapsed together or a post replacement pit. The layout and alignment of the postholes closely parallel those of Structure 1, with the paired postholes on the west appearing to reflect a structure with a double post-ring. It remains possible that the features are a fortuitous scatter of isolated pits, however.

### 3.4 External and Isolated Features

3.4.1 A shallow pit (028) was located c .5 .5 m to the south-east of Structure 1. It measured 1 m by 0.5 m and 0.1 m deep. Its shallow irregular base and loose, stony, disturbed fill (027) makes any firm interpretation difficult although it is likely that is associated with the roundhouse feature.
3.4.2 Five further small pits $(\mathbf{0 0 3}, \mathbf{0 0 5}, \mathbf{0 0 8}, \mathbf{0 4 8}, \mathbf{0 5 0})$ were also discovered. Pits 048 and 050 were respectively located 3.5 m and 5 m to the south-west of Structure 1. Both measured c. 0.3 m by 0.4 m and were c .0 .14 m deep.
3.4.3 Pits $\mathbf{0 0 5}$ and $\mathbf{0 0 8}$ were located towards the west of the trench. Pit 005 measured 0.4 m in diameter and was 0.2 m deep. It had two fills; the primary fill (006) was 0.15 m depth of silty sand, while the upper fill (007) was dark silt. Pit 008 was 0.2 m in diameter and 0.2 m deep with a fill ( $\mathbf{( 0 0 9 )}$ of dark grey silty soil.
3.4.4 An isolated shallow sub-oval pit (003) was discovered towards the north-west corner of the trench. It measured 1.35 m by 0.45 m and was 0.05 m deep. Its shallow irregular profile and isolated position renders interpretation difficult.

## 4. SAMPLE ASSESSMENT <br> By Mhairi Hastie

### 4.1 Methodology

4.1.1 A total of twenty-nine samples were retained during the excavation. The soil samples were subjected to a system of flotation and wet sieving. The floating debris (flot) was collected in a $250 \mu \mathrm{~m}$ sieve and, once dry, scanned using a low-powered microscope. The material remaining in the flotation tank (retent) was wet-sieved through a 1 mm mesh and air-dried. The retents were then sorted for any archaeological significant material.

### 4.2 Results

4.2.1 No small finds or palaeoenvironmental remains were recovered from the retents. Low concentrations of charred cereal grain and wood charcoal were present in the flots. A summary of the results is presented below in Table 1. The findings are expressed quantitatively using the following criteria: $+=$ rare, $++=$ occasional, $+++=$ common and $++++=$ abundant.

Cereal grain: Small quantities of cereal grain were present in sixteen of the flots. The grains were generally poorly preserved. The cereals were dominated principally by hulled wheat (emmer or spelt) and naked barley. In addition, a small assemblage of flax seeds was recovered from three of the samples along with the cereal grain, and small fragments of hazelnut shell were present in one sample.

The recovery of flax seeds along with hulled wheat and naked barley is a common element of early prehistoric sites, particularly of Neolithic date, and their presence here would suggest a potential early prehistoric date for the majority of features.

One sample (no. 1) did, however, stand out due to its composition. The flot contained concentrations of cinders and several oat grains, one of which was identified as possible black oat. Black oat is more commonly found on medieval sites and its presence in this pit fill may suggest that this feature is of a later date than the other features uncovered.

The presence of cereal grain, albeit in small quantities, suggests that some crop processing or food preparation was being carried out in the area and suggests a domestic function for the structures/features.

Wood charcoal: Very low concentrations of wood charcoal were recovered from the flots; in most cases the charcoal fragments are less than 2 mm in diameter and would not be suitable for identification. Only three flots, Samples 10, 21 and 32a, contained sufficiently large enough fragments of charcoal for AMS dating.

### 4.3 Radiocarbon Dating

4.3.1 A single cereal grain from each of Samples 9 and 30 were sent for radiocarbon dating. Sample 9 comprises a grain of barley/wheat from context 020, the lower fill of posthole 018 . Sample 30 comprises a wheat grain from context 071, the fill of posthole 070 . Context 020 is the lower fill of posthole 018 from the inner ring of postholes, while context 071 is the fill of posthole 070 from the outer ring of postholes, both from Structure 1.
4.3.2 The results from the two samples submitted for radiocarbon dating are presented in Table 1 below (and also see Appendix 6). The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

| Lab Code | Context | Material | Radiocarbon Age BP | Cal date at 1-sigma | Cal date at 2-sigma | $\delta^{13} \mathrm{C}$ value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { SUERC-29174 } \\ & \text { (GU-21385) } \end{aligned}$ | $\begin{array}{\|l\|} \hline 020 \\ \text { (Posthole } \\ 018) \\ \hline \end{array}$ | Cereal Grain : Hordeum/Triticum indet | $3345 \pm 30$ | $\begin{aligned} & 1690-1540 \\ & \mathrm{BC} \end{aligned}$ | $\begin{aligned} & 1740-1520 \\ & \mathrm{BC} \end{aligned}$ | -23.4 \% |
| $\begin{aligned} & \text { SUERC-29619 } \\ & \text { (GU-21386) } \end{aligned}$ | $\begin{aligned} & \hline 071 \\ & \text { (Posthole } \\ & 070) \\ & \hline \end{aligned}$ | Cereal Grain : <br> Triticum sp. (wheat) | $3350 \pm 30$ | $\begin{aligned} & 1690-1600 \\ & \mathrm{BC} \end{aligned}$ | $\begin{aligned} & 1740-1530 \\ & \mathrm{BC} \end{aligned}$ | -24.8 \% |

Table 1. Radiocarbon dates
4.3.3 The dates calibrate at 2 -sigma to give the range $1740-1520 \mathrm{BC}$, the later part of the Early Bronze Age, and correspond very well with each other.
4.3.4 Sufficient carbonised plant remains for additional AMS dating, should this be required in the future, are present in a further five samples. These are highlighted by a ' $\bullet$ ' in Table 2. Identification of the cereal grain / wood species should be carried out prior to any further radiocarbon dating.
Table 2. Composition of flots

| Sample | Context | Context type | Sample | Cereal grain |  | Charcoal |  | Flax | Hazelnut | Burnt | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| number | number |  | $\begin{gathered} \text { vol } \\ \text { (litres) } \end{gathered}$ | Qty | AMS Dating | Qty | AMS Dating | Seeds | Shell | Bone |  |
| 1 | 004 | Fill of pit 003 | 10 | + | - | + |  |  |  |  | Cinders ++ Oat x $5(1=$ black oat $)$ cf. Barley indet x 2 |
| 2 | N/A |  | N/A |  |  |  |  |  |  |  |  |
|  | 007 | Upper fill of pit 005 | 5 | + |  | + |  | + |  |  | Barley indet x 1 $\backslash$ Flax seed x 1 |
| 4 | 006 | Primary fill of pit 005 | 5 | + |  | + |  |  |  |  | Cereal indet x 1 |
| 5 | 009 | Fill of posthole 008 | 3 |  |  | + |  |  |  |  |  |
| 6 | 014 | Fill of 015 |  | + |  | + |  |  |  |  | Barley indet x 1 |
| 7 | 012 | Fill of pit 003 | 2 |  |  | + |  |  |  |  | Cinders + |
| 8 | 019 | Upper fill of posthole 018 | 3 | + | - | + |  |  |  | + | Wheat (emmer / spelt) + <br> Barley indet + <br> Extremely small fragments of burnt bone |
| 9 | 020 | Lower fill of posthole 018 | 1 | + | - | + |  | + |  |  | Flax x 8 (some still partially fused together) <br> Barley / Wheat x 2 <br> Wheat indet x 1 (poss emmer / spelt) <br> Cereal indet x 3 <br> Radiocarbon dated cereal grain <br> SUERC-29174 |
| 10 | 021 | Fill of posthole 022 | 10 | + |  | ++ | - |  |  |  | Cereal indet x 2 |
| 11 | 024 | Fill of posthole 023 | 1 | + |  | + |  |  |  |  | Barley indet x 1 |
| 13 | 027 | Fill of pit 028 | 10 | + |  | ++ |  |  |  |  | Cereal indet x 3 |
| 14 | 030 | Fill of post cut 029 | 1 |  |  | + |  |  |  |  |  |
| 15 | 036 | Fill of posthole 035 | 1 |  |  | + |  |  |  |  |  |
| 16 | 051 | Fill of posthole 050 | 1 | + |  | + |  |  |  |  | Cereal indet x 1 |
| 17 | 054 | Fill of pit 053 | 1 |  |  | + |  |  |  |  |  |
| 18 | 056 | Fill of posthole 055 | 1 |  |  | + |  |  |  |  |  |
| 19 | 049 | Fill of posthole 048 | 1 |  |  | ++ |  | + |  |  | Flax seed x 1 |
| 20 | 037 | Fill of posthole 038 | 10 | + |  | + |  |  |  |  | cf. Barley indet x 1 Cereal indet x 2 |
| 21 | 033 | Fill of posthole 034 | 10 |  |  | ++ | - |  |  |  |  |
| 22 | N/A |  | N/A |  |  |  |  |  |  |  | Cinders + |


| Sample | Context | Context type | Sample | Cereal grain |  | Charcoal |  | Flax | Hazelnut | Burnt | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| number | number |  | $\begin{gathered} \text { vol } \\ \text { (litres) } \end{gathered}$ | Qty | AMS Dating | Qty | AMS Dating | Seeds | Shell | Bone |  |
| 23 | 058 | Fill of posthole 057 | , |  |  | + |  |  |  |  |  |
| 24 | N/A |  | N/A |  |  |  |  |  |  |  |  |
| 25 | 062 | Fill of posthole 061 | 1 |  |  | + |  |  |  |  |  |
| 26 | 065 | Fill of posthole 064 | 1 |  |  | + |  |  |  |  |  |
| 27 | 067 | Fill of posthole 066 | 1 |  |  | + |  |  |  |  |  |
| 28 | 039 | Fill of posthole 042 | 10 | + | - | ++ |  |  |  |  | Barley indet + (one or two well-preserved grains show characteristics of naked barley) <br> One grain sent for C14 dating but returned as too small in size |
| 29 | 069 | Fill of posthole 068 | 1 |  |  | + |  |  |  |  |  |
| 30 | 071 | Fill of posthole 070 | 1 | + | - | + |  |  |  |  | Wheat indet x 2 <br> Barley indet x 1 <br> Cereal indet x 4 <br> Radiocarbon dated cereal grain SUERC- $29619$ |
| 31 | 041 | Fill of posthole 042 | 1 | + |  | + |  |  |  |  | Barley indet + |
| 32a | 031 | Fill of posthole 032 | 1 | + | $\bullet$ | +++ | - |  |  |  | Barley indet x 5 Cereal indet x 3 |
| 32b | 031 | Fill of posthole 032 | 1 | + |  | +++ |  |  |  |  | Barley indet x 2 Cereal indet x 2 Hazelnut shell frags x 2 |

Key: $\quad+=$ rare,$++=$ occasional, $+++=$ common and $++++=$ abundant

## 5. DISCUSSION

5.1 One roundhouse (Structure 1), part of a possible second roundhouse, and a suite of isolated features were discovered by the excavation at the site of the proposed A91/B9124 Greenyards roundabout. Radiocarbon dating suggests this structure dates to the Early Bronze Age.
5.2 Structure 1 is defined by an outer ring of eight postholes and a partial inner ring of six postholes. The entrance faces the south-east and appears to be framed by a porch. No internal features were discovered. A possible second structure may be indicated by a postulated outer ring of three postholes and an inner ring of two postholes. Pit $\mathbf{0 2 5}$ forms part of both inner and outer ring, and probably represents either a post replacement or collapse between the two postholes at the time of excavation. The purpose and date of the outlying pits are unclear, as is their relationship, if any, with the postulated roundhouses.
5.3 Structures 1 appears likely to be the remains of a timber roundhouse, and the possibility exists that a second roundhouse lies to its south. If so, however, they are located very close together and it would seem unlikely that they were in simultaneous use. The roof eaves of the postulated second structure would probably have overlapped with the space required by the porch of Structure 1, thus two phases of occupation would be required. The post-ring structure, therefore, is suggestive of a single unenclosed residence which may have been replaced by, or the replacement for, the second potential roundhouse.
5.4 The postholes of Structure 1 show little evidence for re-building or replacing of posts, suggesting that it may have been a relatively short-lived structure. The fill deposits are not suggestive of in situ burning of posts or of the remains of degraded posts, which is either a result of poor preservation and truncation, or, that the posts may have been removed and the cuts either backfilled or allowed to infill naturally.
5.5 Such timber structures probably consisted of a circle of timber uprights that supported rafters, without having a central post. The rafters would have supported the weight of a pitched roof, with an outer wall running concentrically with the post-ring. The outer wall may have been turf or even stone, and would not often survive in the archaeological record. At Greenyards, the post-ring is about 6 m in diameter; if the outer wall was contiguous with the posts of the porch then its diameter is likely to have been about $10-11 \mathrm{~m}$.
5.6 Cereal remains, including emmer/spelt wheat and barley (probably the naked variety) were recovered in small quantities from some of the samples, along with a small quantity of burnt bone. These included postholes 015,018 and 042 from Structure 1, postholes 022 and 038 from the putative second structure, and isolated pits 005 and 028 . This suggests an earlier prehistoric date and the presence of cereal grain does suggest that some crop processing or food preparation was being carried out in the area, indicating a domestic function for the structure. It is unfortunate that no artefacts were recovered as these can be helpful in determining the date and function of such structures.

The function of this structure is problematic given the lack of artefactual evidence obtained.
5.7 Two single entity cereal grains from two different postholes within the inner and outer rings have been radiocarbon dated, resulting in a date range of 17401520 BC, the later part of the Early Bronze Age.
5.8 Given the proximity of the structure to the other Neolithic sites in the vicinity, a Neolithic date initially could not be ruled out, and indeed oval post-built structures excavated at Forrest Road, Kintore have been dated to the Late Neolithic (Cook and Dunbar 2008). However, there were structural discrepancies, as posts of such Neolithic structures tend to be tightly packed, with only $0.35-0.45 \mathrm{~m}$ between the posts, whereas at Greenyards they range from 1-2m, which is more suggestive of later prehistoric roundhouses, and the radiocarbon dates indicate an Early Bronze Age date.
5.9 Comparable structures which share the dimensions, the double-walled rear and south-east facing entrance porch, have been excavated at Gleneagles (O'Connell \& Gray 2008; O'Connell \& Gray forthcoming) and have been dated to the Middle Bronze Age through to the Early Iron Age, although the earlier structures tended to be ring-ditch structures rather than post-rings. In Angus, such structures have been dated to the latter half of the first millennium BC and the early centuries AD (Dunwell and Ralston 2008). At Kintore, post-ring type roundhouses are not being constructed until the Late Bronze Age (Cook \& Dunbar 2008). Similar post-ring structures were excavated at Dalladies, Kincardineshire (Watkins 1980) and date to the Iron Age. Entrances facing approximately south-east are a common characteristic. Indeed, most excavated examples of post-rings in Angus, for example, have dated to later prehistoric periods (Dunwell and Ralston 2008). However, there is evidence that Angus has a different chronology of round-house architecture to that from other north-east areas (Dunwell and Ralston 2008), and it is entirely possible that Stirlingshire is also different; care should be taken when transferring regional models from one area to another.
5.10 Such structures and the temporal and geographical relationships between them, have been the subject of much on-going debate, which is only recently gaining some clarification in the north-east of Scotland through excavation and dating of suites of roundhouses such as at Kintore in Aberdeenshire (Cook \& Dunbar 2008, Dunwell and Ralston 2008).
5.11 The Greenyards roundhouse thus increases the data set of known prehistoric post-ring houses, particularly in this area of Stirlingshire, and pushes the dating back into the Early Bronze Age. No other timber built roundhouses of this date are known from Stirlingshire at this time.
5.12 The site lies in an area of archaeological sensitivity, with a number of prehistoric sites known in the vicinity, including two large Neolithic ritual enclosures, a defended Iron Age homestead and a number of other, undefended, homesteads. These sites were first identified through aerial photography and later excavated in advance of the construction of the A91

Eastern Distributor road and new residential housing. To the north of the proposed roundabout two other homesteads have been identified, one of which has been partially excavated in advance of road construction, and a few kilometres to the east a number of important Mesolithic and Neolithic finds have been made at Chapelfield in Cowie.

## 6. SUMMARY

6.1 One roundhouse (Structure 1), part of a possible second roundhouse, and a suite of isolated features were discovered during the excavation at the site of the proposed A91/B9124 Greenyards roundabout. Radiocarbon dating results indicate a date of 1740-1520 BC.
6.2 The discovery at Greenyards is especially significant as no similar structures are known in the area (Lorna Main, pers comm.).
6.3 The project archive, comprising all CFA record sheets, maps and reports will be deposited with the National Monuments Record of Scotland (NMRS) and copies of reports will be lodged with Stirling Council Sites \& Monuments Record.
6.4 A summary statement of the results of this evaluation will be submitted for publication in Discovery and Excavation in Scotland 2011 (Appendix 5). The online OASIS record will also be completed.

## 7. REFERENCES

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Watkins, T 1980 'Excavation of an Iron Age open settlement at Dalladies, Kincardineshire’, Proc Soc Antiq Scot 110, 122-64.

## APPENDIX 1: Context Register

| Context | Fill of | Description |
| :---: | :---: | :---: |
| 000 |  | Natural |
| 001 |  | Topsoil |
| 002 |  | Buried soil |
| 003 |  | Cut of possible shallow pit, sub-oval in plan |
| 004 | 003 | Mid grey silt with fine gravel inclusions |
| 005 |  | Cut of possible circular pit, unclear horizon |
| 006 | 005 | Mid brown-orange sandy silt with gravel inclusions |
| 007 | 005 | Upper fill of 005, dark grey soil, merges slightly with (006) |
| 008 |  | Steep sided cut of small post-hole |
| 009 | 008 | Dark grey silt soil, firm compaction |
| 010 |  | Void |
| 011 |  | Void |
| 012 | 013 | Mid brown gravel silt, occasional small stone inclusions |
| 013 |  | Small circular pit/post-hole, close to [015] |
| 014 | 015 | Mid brown gravel silt, occasional small stone inclusions |
| 015 |  | Small circular pit/post-hole, close to [013] |
| 016 |  | Void |
| 017 |  | Void |
| 018 |  | Small circular pit/post-hole |
| 019 | 018 | Dark brown sandy soil, small stone inclusions |
| 020 | 018 | Dark-medium brown sandy soil, lower fill of 018 |
| 021 | 022 | Dark brown pea gravel silt, occasional small stone inclusions |
| 022 |  | Possible circular cut of post-hole |
| 023 |  | Possible circular cut of post-hole |
| 024 | 023 | Medium brown sandy silt, small stone inclusions |
| 025 |  | Cut of substantial oval pit |
| 026 | 025 | Dark-mid grey soil silt, frequent small gravel inclusions |
| 027 | 028 | Grey brown sandy silt, frequent small stone inclusions |
| 028 |  | Cut of shallow sub-rectangular pit |
| 029 |  | Cut of circular pit/post-hole |
| 030 | 029 | Medium dark brown fill, small to medium stone inclusions |
| 031 | 032 | Medium dark brown sandy soil, stone and gravel inclusions |
| 032 |  | Two possible post-hole cuts |
| 033 | 034 | Dark medium brown silt sand, stone and gravel inclusions |
| 034 |  | Cut of shallow oval pit |
| 035 |  | Oval cut of possible post-hole |
| 036 | 035 | Medium dark brown sandy soil, stone and gravel inclusions |
| 037 | 038 | Mid grey sandy silt, infrequent charcoal fragments |
| 038 |  | Cut of circular post-hole, adjacent to [057] |
| 039 | 040 | Dark medium brown sandy soil, stone and gravel inclusions |
| 040 |  | Cut of disturbed post-hole/possible linear feature |
| 041 | 042 | Dark medium brown sandy soil, stone and gravel inclusions |
| 042 |  | Cut of post-hole |
| 043 | 044 | Dark medium brown sandy soil, stone and gravel inclusions |
| 044 |  | Cut of post-hole |
| 045 | 046 | Medium dark brown fill, small to medium stone inclusions |
| 046 |  | N/A |
| 047 |  | N/A |
| 048 |  | Oval cut of small post-hole |
| 049 | 048 | Mid brown grey silt |
| 050 |  | Oval cut of small post-hole |
| 051 |  | Medium dark brown fill, small to medium stone inclusions |
| 052 |  | N/A |
| 053 |  | Disturbed post-hole/possible elongated pit |


| 054 | 053 | Dark medium brown sandy soil, small stone inclusions |
| :--- | :--- | :--- |
| 055 |  | Cut of post-hole |
| 056 | 055 | Mid brown grey silt |
| 057 |  | Cut of circular post-hole, close to [038] |
| 058 | 057 | Dark medium brown sandy soil, small stone inclusions |
| 059 |  | N/A |
| 060 |  | N/A |
| 061 |  | Cut of possible post-hole |
| 062 | 061 | Dark medium brown sandy soil, small stone inclusions |
| 063 |  | N/A |
| 064 |  | Possible post-hole |
| 065 | 064 | Dark medium brown sandy soil, small stone inclusions |
| 066 |  | Possible post-hole |
| 067 | 066 | Mid brown grey silt |
| 068 |  | Possible post-hole |
| 069 | 068 | Mid brown grey silt |
| 070 |  | Possible post-hole <br> 071 |

## APPENDIX 2: Photo Register

Colour Slides

| Photo No | Description | Taken From |
| :---: | :---: | :---: |
| Film 1 |  |  |
| 1 | Registration | -------- |
| 2-3 | 003 pre-ex | E |
| 4-5 | 003 section | S |
| 6-7 | General view of site 02/02/10 | SE |
| 8-9 | General view of site 02/02/10 | S |
| 10-11 | 005 pre-ex | S |
| 12 | 007 pre-ex | S |
| 13-14 | Finished feature shot of (010) | F |
| 15-16 | North facing section of (010) | N |
| 17-18 | South facing section of (010) | S |
| 19-20 | Feature/post? Pre-ex shot [035] | W |
| 21-22 | Pre-ex [013]\& [015] | W |
| 23-24 | Pre-ex shot of [012] | W |
| 25-26 | Half section of cuts [013] \& [015] | W |
| 27-28 | Pre-ex possible Post hole [016] | W |
| 29-30 | N/A | -------- |
| 31-32 | Post-ex shot of South facing section of [018] | S |
| 33-34 | Post-ex of cuts [013] and [015] | W |
| Film 2 |  |  |
| 1 | Registration | -------- |
| 2-3 | Pre-ex of post hole cot [022] | S |
| 4-5 | Half section of cut [022] south west facing | SW |
| 6 | Pre-ex and 025 | W |
| 7 | Pre-ex 025 | W |
| 8-9 | Pre-ex sot of [023] post-hole | W |
| 10 | Post-ex of [023] | W |
| 11 | Post-ex of [023] | W |
| 12-13 | Post East facing section of cut x fill [023] and[024] | E |
| 14-15 | Post-ex of cut [022] | SW |
| 16-17 | Pre-ex of cut feature [cut 028] | E |
| 18-19 | Section 025 | N |


| 20-21 | East facing section of cut [028] | E |
| :---: | :---: | :---: |
| 22-23 | Post-ex cut [028] | E |
| 24-25 | Pre-ex shot of [029] cut | W |
| 26-27 | 025 Fully excavated | NW |
| 28-29 | N/A | N |
| 30-31 | Pre-ex of feature Cut 032 | NE |
| 32-33 | Detail of pad stone at the bottom of (029) | W |
| 34 | Post-ex shot of [029] west facing section | W |
| 35 | Post-ex shot of [029] west facing section | W |
| 36-37 | Pre-ex of feature cut 034 |  |
| Film 3 |  |  |
| 1 | Registration | -------- |
| 2 | North face section of cut [35] | W |
| 3-4 | Pre-ex of cut [038] | W |
| 5-6 | Pre-ex of cut [040] | N |
| 7-8 | Pre-ex of cut [042] | N |
| 9-10 | Pre-ex of cut [044] | W |
| 11-12 | Pre-ex of cut [046] | W |
| 13-14 | Pre-ex of cut [048] | SW |
| 15-16 | Pre-ex of cut [050] | S |
| 17-18 | Post-ex detail of the stone at the bottom of [029] cut | W |
| 19-20 | N/A | -------- |
| 21-22 | General shot of site 04/02/10 | SE |
| 23-24 | General shot of site 04/02/10 | S |
| 25-26 | Working shot, removing plastic | S |
| 27-28 | Post-ex shot of [035] West facing section | W |
| 29-30 | Pre-ex shot of cut [053] | W |
| 31-32 | Post-ex shot of West facing section of [053] | W |
| 33-34 | Section 050 | S |
| 35-36 | Section 048 | NW |
| Film 4 |  |  |
| 1 | Registration | -------- |
| 2 | Post-ex [053] | SW |
| 3 | Post-ex [053] | W |
| 4-5 | Mid-ex [055] | S |
| 6-7 | 050 fully excavated | S |
| 8-9 | 048 fully excavated | W |
| 10-11 | 038 section and 057 fully excavated | SW |
| 12-13 | [034] Post-ex | SW |
| 14-15 | [055] South facing section | S |
| 16-17 | South facing section [059] | SE |
| 18-19 | 038 and 057 fully excavated | NW |
| 20-21 | Pre-ex [061] | S |
| 22-23 | N/A | SW |
| 24-25 | Post-ex shot of South-west facing section of [040] | SW |
| 26-27 | Pre-ex cut [064] | W |
| 28-29 | Pre-ex cut [066] | S |
| 30-31 | South facing section through [061] | S |
| 32-33 | Pre-ex [068] | S |
| 34-35 | Post-ex of North-east facing section of cut [032] | NE |
| 36 | Pre-ex of [070] | S |

## Digital Photos

| Photo No | Description | Taken From |
| :---: | :---: | :---: |
| 1 | 003 pre-ex | E |
| 2 | 003 section | S |
| 3 | General view of site 02/02/10 | SE |
| 4 | General view of site $02 / 02 / 10$ | S |
| 5 | 005 pre-ex | S |
| 6 | 007 pre-ex | S |
| 7 | Finished feature shot of (010) | F |
| 8 | North facing section of (010) | N |
| 9 | South facing section of (010) | S |
| 10 | Feature/post? Pre-ex shot [035] | W |
| 11 | Pre-ex [013]\& [015] | W |
| 12 | Pre-ex shot of [012] | W |
| 13 | Half section of cuts [013] \& [015] | W |
| 14 | Pre-ex possible Post hole [016] | W |
| 15 | Post-ex shot of South facing section of [018] | S |
| 16 | Post-ex of cuts [013] and [015] | W |
| 17 | Pre-ex of post hole cot [022] | S |
| 18 | Half section of cut [022] south west facing | SW |
| 19 | Pre-ex and 025 | W |
| 20 | Pre-ex 025 | W |
| 21 | Pre-ex sot of [023] post-hole | W |
| 22 | Post-ex of [023] | W |
| 23 | Post-ex of [023] | W |
| 24 | Post East facing section of cut x fill [023] and[024] | E |
| 25 | Post-ex of cut [022] | SW |
| 26 | Pre-ex of cut feature [cut 028] | E |
| 27 | Section 025 | N |
| 28 | East facing section of cut [028] | E |
| 29 | Post-ex cut [028] | E |
| 30 | Pre-ex shot of [029] cut | W |
| 31 | 025 Fully excavated | NW |
| 32 | Pre-ex of feature Cut 032 | NE |
| 33 | Detail of pad stone at the bottom of (029) | W |
| 34 | Post-ex shot of [029] west facing section | W |
| 35 | Post-ex shot of [029] west facing section | W |
| 36 | Pre-ex of feature cut 034 |  |
| 37 | Pre-ex of post hole cot [022] | S |
| 38 | Half section of cut [022] south west facing | SW |
| 39 | Pre-ex and 025 | W |
| 40 | Pre-ex 025 | W |
| 41 | Pre-ex sot of [023] post-hole | W |
| 42 | Post-ex of [023] | W |
| 43 | Post-ex of [023] | W |
| 44 | Post East facing section of cut x fill [023] and[024] | E |
| 45 | Post-ex of cut [022] | SW |
| 46 | Pre-ex of cut feature [cut 028] | E |
| 47 | Section 025 | N |
| 48 | East facing section of cut [028] | E |
| 49 | Post-ex cut [028] | E |
| 50 | Pre-ex shot of [029] cut | W |
| 51 | 025 Fully excavated | NW |
| 52 | Pre-ex of feature Cut 032 | NE |
| 53 | Detail of pad stone at the bottom of (029) | W |
| 54 | Post-ex shot of [029] west facing section | W |


| 55 | Post-ex shot of [029] west facing section | W |
| :---: | :---: | :---: |
| 56 | Pre-ex of feature cut 034 |  |
| 57 | North face section of cut [35] | W |
| 58 | Pre-ex of cut [038] | W |
| 59 | Pre-ex of cut [040] | N |
| 60 | Pre-ex of cut [042] | N |
| 61 | Pre-ex of cut [044] | W |
| 62 | Pre-ex of cut [046] | W |
| 63 | Pre-ex of cut [048] | SW |
| 64 | Pre-ex of cut [050] | S |
| 65 | Post-ex detail of the stone at the bottom of [029] cut | W |
| 66 | General shot of site 04/02/10 | SE |
| 67 | General shot of site 04/02/10 | S |
| 68 | Working shot, removing plastic | S |
| 69 | Post-ex shot of [035] West facing section | W |
| 70 | Pre-ex shot of cut [053] | W |
| 71 | Post-ex shot of West facing section of [053] | W |
| 72 | Section 050 | S |
| 73 | Section 048 | NW |
| 74 | Post-ex [053] | SW |
| 75 | Post-ex [053] | W |
| 76 | Mid-ex [055] | S |
| 77 | 050 fully excavated | S |
| 78 | 048 fully excavated | W |
| 79 | 038 section and 057 fully excavated | SW |
| 80 | [034] Post-ex | SW |
| 81 | [055] South facing section | S |
| 82 | South facing section [059] | SE |
| 83 | 038 and 057 fully excavated | NW |
| 84 | Pre-ex [061] | S |
| 85 | Post-ex shot of South-west facing section of [040] | SW |
| 86 | Pre-ex cut [064] | W |
| 87 | Pre-ex cut [066] | S |
| 88 | South facing section through [061] | S |
| 89 | Pre-ex [068] | S |
| 90 | Post-ex of North-east facing section of cut [032] | NE |
| 91 | Pre-ex of [070] | S |

## APPENDIX 3: Samples Register

| Sample No. | Context | Description | Comment | Volume (1) |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 004 | Fill of pit |  | 10 |
| 2 | N/A |  |  |  |
| 3 | 007 | Upper fill of 005 |  | 5 |
| 4 | 006 | Lower fill of 005 | ?Burnt material | 5 |
| 5 | 009 | Fill of 008 |  | 3 |
| 6 | 014 | Fill of 015 |  | 2 |
| 7 | 012 | Fill of 013 |  | 2 |
| 8 | 019 | Upper fill of 018 |  | 3 |
| 9 | 020 | Lower fill of 018 |  | 1 |
| 10 | 021 | Fill of 022 |  | 10 |
| 11 | 024 | Fill of 023 |  | 1 |
| 12 | 026 | Fill of 025 |  | 10 |
| 13 | 027 | Fill of 028 |  | 10 |
| 14 | 030 | Fill of 029 |  | 1 |
| 15 | 036 | Fill of 035 |  | 1 |
| 16 | 051 | Fill of 050 |  | 1 |
| 17 | 054 | Fill of 053 |  | 1 |
| 18 | 056 | Fill of 055 |  | 1 |
| 19 | 049 | Fill of 048 |  | 1 |
| 20 | 037 | Fill of 038 | Charcoal | 10 |
| 21 | 033 | Fill of 034 |  | 10 |
| 22 | 060 | Fill of 059 |  | 1 |
| 23 | 058 | Fill of 057 |  | 1 |
| 24 | N/A |  |  |  |
| 25 | 062 | Fill of 061 |  | 1 |
| 26 | 065 | Fill of 064 |  | 1 |
| 27 | 067 | Fill of 066 |  | 1 |
| 28 | 039 | Fill of 042 |  | 10 |
| 29 | 069 | Fill of 068 |  | 1 |
| 30 | 071 | Fill of 070 | Charcoal | 1 |
| 31 | 041 | Fill of 042 |  | 1 |
| 32 | 031 | Fill of 032 |  | 1 |

## APPENDIX 4: Field Drawings Register

| Drawing <br> No. | Sheet <br> No. | Description | Sec/Plan | Scale |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 1 | $003 / 004$ | P | $1: 20$ |
| 2 | 1 | $003 / 004$ | S | $1: 10$ |
| 3 | 1 | $005 / 007$ | P | $1: 20$ |
| 4 | 1 | $005 / 006 / 007$ | S | $1: 10$ |
| 5 | 1 | $008 / 009$ | P | $1: 20$ |
| 6 | 1 | $008 / 009$ | S | $1: 10$ |
| 7 | 1 | N/A |  |  |
| 8 | 1 | N/A |  |  |
| 9 | 1 | $013 / 015$ | P | $1: 20$ |
| 10 | 1 | $013 / 015$ | S | $1: 10$ |
| 11 | 1 | N/A |  |  |
| 12 | 1 | N/A |  |  |
| 13 | 1 | 022 | P | $1: 20$ |
| 14 | 1 | 022 | S | $1: 10$ |
| 15 | 1 | 023 | S | $1: 10$ |
| 16 | 1 | 023 | P | $1: 20$ |


| 17 | 1 | 025/026 | S | 1:10 |
| :---: | :---: | :---: | :---: | :---: |
| 18 | 1 | 025/026 | P | 1:20 |
| 19 | 1 | 028 | P | 1:20 |
| 20 | 1 | 028 | S | 1:10 |
| 21 | 2 | 024 | S | 1:10 |
| 22 | 2 | 028 | P | 1:20 |
| 23 | 2 | 035 | S | 1:10 |
| 24 | 2 | 035 | S | 1:10 |
| 25 | 2 | 048/049 | P | 1:20 |
| 26 | 2 | 048/049 | S | 1:10 |
| 27 | 2 | 050/051 | P | 1:20 |
| 28 | 2 | 050/051 | S | 1:10 |
| 29 | 2 | 053/054 | S | 1:10 |
| 30 | 2 | 053/054 | P | 1:20 |
| 31 | 2 | 055/056 | S | 1:10 |
| 32 | 2 | 055/056 | P | 1:20 |
| 33 | 2 | 037/038 | P | 1:20 |
| 34 | 2 | 037/038 | S | 1:10 |
| 35 | 2 | 033/034 | S | 1:10 |
| 36 | 2 | 033/034 | P | 1:20 |
| 37 | 2 | 059/060 | S | 1:10 |
| 38 | 2 | 059/060 | P | 1:20 |
| 39 | 2 | 039/040 | S | 1:10 |
| 40 | 2 | 039/040 | P | 1:20 |
| 41 | 2 | 031/032 | S | 1:10 |
| 42 | 2 | 031/032 | P | 1:20 |
| 43 | 2 | 042 | S | 1:10 |
| 44 | 2 | 042 | P | 1:20 |
| 45 | 3 | 070/071 | S | 1:10 |
| 46 | 3 | 070/071 | P | 1:20 |
| 47 | 3 | 066/067 | S | 1:10 |
| 48 | 3 | 066/067 | P | 1:20 |
| 49 | 3 | 069/068 | S | 1:10 |
| 50 | 3 | 069/068 | P | 1:20 |
| 51 | 3 | 064/065 | S | 1:10 |
| 52 | 3 | 064/065 | P | 1:20 |
| 53 | 3 | 061/062 | S | 1:10 |
| 54 | 3 | 061/062 | P | 1:20 |
| 55 | 3 | 035/036 | S | 1:10 |
| 56 | 3 | 035/036 | P | 1:20 |
| 57 | 4 | Plan of trench | P | 1:50 |

## APPENDIX 5: Discovery and Excavation in Scotland Entry

| LOCAL AUTHORITY: | Stirling |
| :---: | :---: |
| PROJECT TITLE/SITE NAME: | A91/B9124 Greenyards Roundabout, Bannockburn, Stirling |
| PROJECT CODE: | GYAR |
| PARISH: | St Ninians |
| NAME OF CONTRIBUTOR: | Stuart Mitchell |
| NAME OF ORGANISATION: | CFA Archaeology Ltd |
| TYPE(S) OF PROJECT: | Evaluation \& Excavation |
| NMRS NO(S): | None |
| SITE/MONUMENT TYPE(S): | Post-built roundhouse |
| SIGNIFICANT FINDS: | None |
| NGR (2 letters, 8 or 10 figures) | NS 81759018 |
| START DATE (this season) | November 2009 |
| END DATE (this season) | February 2010 |
| PREVIOUS WORK (incl. $D E S$ ref.) | None |
| MAIN (NARRATIVE) DESCRIPTION: <br> (May include information from other fields) | A trial trenching evaluation at the site of the proposed Greenyards Roundabout revealed three pairs of small post-holes and several isolated negative features. Further excavation revealed the remains of a post-built roundhouse c.10-11m in overall diameter with a post-ring measuring c .6 m in diameter. The roundhouse was double-walled towards the north and west, and open towards the south-east. Further post-holes indicated a possible porch entrance. No interior features or deposits survived. A series of postholes located nearby may have been the remains of a second roundhouse. A number of isolated pits were also recorded. No finds were discovered in any of the deposits. Soil samples retained have been sieved and the palaeoenvironmental remains analysed. The cereals were dominated principally by hulled wheat (emmer or spelt) and naked barley. In addition, a small assemblage of flax seeds was recovered and small fragments of hazelnut shell were present. The recovery of flax seeds along with hulled wheat and naked barley is a common element of early prehistoric sites. One isolated pit feature did, however, stand out due to its composition; it contained concentrations of cinders and several oat grains, one of which was identified as possible black oat. Black oat is more commonly found on medieval sites and its presence in this pit fill may suggest that this feature is of a later date than the other features uncovered. Cereal grain recovered from post-holes of the inner and outer post-ring of the structure produced dates of $3345 \pm 30$ BP (SUERC-29174) and $3350 \pm 30$ BP (SUERC-29619) which give a calibrated range at 2 -sigma of 1740-1520 BC. |
| PROPOSED FUTURE WORK: | - |
| CAPTION(S) FOR ILLUSTRS: | Site plan |
| SPONSOR OR FUNDING BODY: | Stirling Council: Roads, Transport \& Open Space |


| ADDRESS OF MAIN <br> CONTRIBUTOR: | The Old Engine House, Eskmills Business Park, Musselburgh, <br> East Lothian EH21 7PQ |
| :--- | :--- |
| EMAIL ADDRESS: | isuddaby@cfa-archaeology.co.uk |
| ARCHIVE LOCATION <br> (intended/deposited) | NMRS / Stirling SMR |

## APPENDIX 6: Radiocarbon Dating Results



## RADIOCARBON DATING CERTIFICATE

24 May 2010

Laboratory Code
Submitter

Site Reference

## Sample Reference

## Material

## $\delta^{13} \mathrm{C}$ relative to VPDB

## Radiocarbon Age BP

SUERC-29174 (GU-21385)
Sue Anderson
CFA Archaeology Ltd.
Old Engine House
Eskmills Park
Musselburgh EH21 7PQ
A91/B9124 Greenyards Roundabout, Bannockburn GYAR context 020 s .9

Cereal Grain : Hordeum/Triticum indet
$-23.4 \%$
$3345 \pm 30$
N.B. 1. The above ${ }^{14} \mathrm{C}$ age is quoted in conventional years BP (before 1950 AD ). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).
3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355270136 direct line.

Conventional age and calibration age ranges calculated by :-
Checked and signed off by :-

Date :-


## CALIBRATION PLOT



Scottish Universities Environmental Research Centre

Director：Professor A B MacKenzie Director of Research：Professor R M Ellam
Rankine Avenue，Scottish Enterprise Technology Park，
East Kilbride，Glasgow G75 0QF，Scotland，UK
Tel：＋44（0）1355 223332 Fax：＋44（0）1355 229898 www．glasgow．ac．uk／suerc

## RADIOCARBON DATING CERTIFICATE

15 June 2010

## Laboratory Code

Submitter

Site Reference
Sample Reference

## Material

$\delta^{13} \mathrm{C}$ relative to VPDB

Radiocarbon Age BP

SUERC－29619（GU－21386）
Sue Anderson
CFA Archaeology Ltd．
Old Engine House
Eskmills Park
Musselburgh EH21 7PQ
A91／B9124 Greenyards Roundabout，Bannockburn GYAR context 071 s． 30

Cereal Grain ：Triticum sp．（wheat）
－24．8 \％
$3350 \pm 30$

N．B．1．The above ${ }^{14} \mathrm{C}$ age is quoted in conventional years BP（before 1950 AD ）．The error，which is expressed at the one sigma level of confidence，includes components from the counting statistics on the sample，modern reference standard and blank and the random machine error．

2．The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program（OxCal3）．

3．Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature．Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code．The contact details for the laboratory are email g．cook＠suerc．gla．ac．uk or Telephone 01355270136 direct line．

Conventional age and calibration age ranges calculated by ：－
Checked and signed off by ：－

Date ：－

Date ：－


## CALIBRATION PLOT





| Key: | limit of excavation possible house reconstruction line previous evaluation trench | Fig. No: | 2 | Revision: A | Client: | Stirling Council |  |  | CFA AROHAEOLOGY LTL the Odergne Howe Euncrank Eant Lotinn Bel Tra <br> t 01312734380 <br>  <br> Whw cla archagoliogyco is |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Title: Plan of features |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Scale: 1:100 @ A4 |  | Project: |  |  |  |  | Drawn by: GC | Page No: | Report No: 1190 |



West facing section


West facing section


North east facing section


South facing section

South facing section


| Key: | Fig. No: 3 | Revision: A | Client: Stirling Council |  |  | CFA AFCHAEOLOGY LTD The OdAligne House Esinimpari <br> Eartlotin eer Tra <br> t 01312734380 <br> 0131273434 <br> *. whw cha archaociogy 00 ih |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Title: Sections of postholes |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | Project: <br> Greenyards Roundabout, Cowie, Stirling |  |  |  |  |  |
| Scale: 1:20@A4 |  |  |  | Drawn by: GC | Page No: | $\left.\right\|^{\text {Report No: }} 1190$ |



Fig. 4 Working shot showing conditions and protection measures


Fig. 5038 and 057 fully excavated

| Key: | Fig. No: | 4-5 | Revision: A | Client: | Stirling Council |  |  | CFA APCHAEOLOGY LTD <br> The Odit Engre House <br> Evinla Park <br> Musteburg <br> Eat Lotian Bert TRO <br> t 01312734380 <br> t. 01312734381 <br> tintordsachoedonycoula <br> *. wewneluachaosiogycoik |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Title: |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | Project: |  |  |  |  |  |  |  |
| Scale: |  |  |  |  |  | Drawn by: GC | Page No: | $\text { Report No: } 1190$ |



Fig. 6022 half section


Fig. 7 View of Structure 1

| Key: | Fig. No: | 6-7 | Revision: A | Client: | Stirling Council |  |  | CFA APCHAEOLOGY LTD <br> the Od Engre Howte <br> Evinila Park <br> Anselvary <br> Eart Lotian Bel Tra <br> t 04312734380 <br> t.01312734381 <br> sintobitercheobonycuik <br> * wew charchaociogycoik |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Title: |  |  |  |  |  |  |  |
|  | Project: |  |  |  |  |  |  |  |
| Scale: | Greenyards Roundabout, Cowie, Stirling |  |  |  |  | Drawn by: | Page No: | Report No: $1190$ |



Fig. 8 View of possible second structure


