12 CARBONISED PLANT REMAINS, *by Susan Ramsay*

12.1 Laigh Newton West

12.1.1 Structure A (Appendix 7)

The charcoal assemblages from the features of Structure A were generally mixed, with alder, birch, hazel, oak and willow all present. There was no evidence for any of the remains being posts burnt in situ, ie a post-hole with a charcoal assemblage almost exclusively of one type. Many of the post-hole fills also contained fragments of hazel nutshell.

Linear hollow 005 and post-hole 154 contained charcoal assemblages dominated by alder and birch, with lesser amounts of hazel. Notably, oak was absent from the fills of both of these internal features. In addition, these features contained significant numbers of carbonised cereal grain, mainly identifiable as oats. Several of the post-holes and pits forming the outline of Structure A also contained traces of oat grains.

Aligned parallel to the north-east of the structure were a further series of post-holes and stake-holes, only one of which (032) contained significant quantities of charcoal, comprising a mixed assemblage of alder, birch, hazel and hazel nutshell.

12.1.2 Structure B (Appendix 8)

The carbonised remains recovered from Structure B, in the south-east corner of Laigh Newton West, were not abundant and many of the post-holes (054, 046, 044, 053 and 301) produced no carbonised remains. Other post-holes (167, 050, 051, 048 and 049) contained only trace amounts of charcoal, with alder, hazel, oak, willow and heather represented in all and hazel nutshell recorded in two of the post-holes (049 and 050). Post-hole 052 contained the greatest amount of charcoal, comprising alder and birch, although not a particularly significant amount.

12.1.3 Structure C (Appendix 9)

The large pit 099 was filled with angular stones and soil but produced no carbonised remains. Of the arc of post-holes apparent on the north side of pit 099, nine were analysed for the presence of carbonised remains (080, 081, 082, 083, 084, 085, 086, 087 and 093). Oak was the only charcoal type in post-holes 080 and 081, and the dominant type in post-holes 083 and 087, though only in small amounts. Small amounts of alder, hazel and willow charcoal were also recorded from the fills of this arc of post-holes, together with occasional cereal grains, tentatively identified as oats, and traces of hazel nutshell. An earlier pit (133) had been cut by some of these post-holes but no carbonised material was recovered from this feature.

Five further post-holes were located between pit 099 and the arc of post-holes. Four of these were analysed for the presence of carbonised remains (090, 091, 092 and 122). Of these, only one (090) produced any carbonised remains, with traces of alder, birch and hazel charcoal with fragments of hazel nutshell.

12.1.4 Structure D (Appendix 10)

The primary fill (116) and the upper fill (114) of pit 040 contained significant amounts of charcoal, with hazel, alder, oak and birch all present, whilst there was significantly less charcoal in the middle fill (115), which contained only small amounts of birch and hazel. The upper and middle fills also contained traces of hazel nutshell and a single carbonised raspberry/bramble pip was also recovered from the middle fill.

Of the segmented linear feature to the north of pit 040, only fill 139 from linear feature 126 contained any carbonised remains, and these consisted merely of traces of alder and oak charcoal.

Post-holes 034 and 035 contained traces of alder and birch charcoal. A single carbonised bramble/raspberry pip was identified in post-hole 035, whilst post-hole 034 contained a single fragment of hazel nutshell. Four of the post-holes (038, 039, 183 and 193) from the arc to the east and south of pit 040 were analysed for the presence of carbonised remains. However, the fills produced no significant carbonised remains, with only a single fragment of hazel nutshell recovered from post-hole 038. Only traces of charcoal were recovered from the post-holes (041, 042, 185 and 186) to the south of pit 040, with alder, oak and willow represented. Post-hole 042 also contained hazel nutshell and two cereal grains identified as barley and possibly oat.

12.1.5 Western cluster of pits (Appendix 11)

Both lower fills (277 and 278) of pit 250 produced significant quantities of charcoal, with alder, birch, hazel, oak and willow all represented. The upper fill (258) also contained significant quantities of charcoal, with alder, birch and hazel represented. Of the six pits located in the vicinity of pit 250, five were analysed for the presence of carbonised remains. Pit 062 contained no carbonised remains, whilst pit 251 contained only traces of charcoal. Pits 059, 060 and 061 all contained carbonised remains, with oak as the dominant type, although traces of birch, willow and hazel nutshell were also recorded. These were the only pits in this grouping that had oak as the dominant type.

12.1.6 Miscellaneous features (Appendix 12)

Of the pits and post-holes to the north of the linear segmented feature, pits 204, 270, 174 and tree-throw hole 095 were analysed. Fill 079 from pit 174 contained a mixed charcoal assemblage of birch, heather type and oak, together with an indeterminate cereal grain. Tree-throw hole 095 contained a mixed assemblage of oak, hazel, willow and birch charcoal with a single fragment of hazel nutshell. From pit 204, only fills 199 and 200 produced any carbonised remains, but these were not abundant, with only traces of alder charcoal and hazel nutshell present, whilst the fill (173) of pit 270 produced no carbonised remains. Examination of features 073, 075, 078, 150, 148, 147, 141, 143, 162 and 145 produced little in the way of carbonised remains. Only features 150, 147 and 148 contained any carbonised remains, though only trace amounts of mixed charcoal and hazel nutshell.

Slightly towards the east lay another circular pit 61004 (filled by 61003), which was excavated during the 2005 evaluation and showed evidence for in situ burning. The charcoal assemblage was dominated by hazel, with alder, birch and oak present in lesser amounts. Of particular note were a significant number of carbonised cereal grains. Although almost 70% of the grain recovered was not identifiable to type, the remaining 30% was barley, some identifiable as six-row barley.

Pit 230 contained fire-reddened gravel, but produced only a single fragment of alder charcoal, suggesting that relatively insignificant burning occurred here. Another similar feature (226) again showed fire-reddening on its base, its fills (266 and 267) in this case containing significant amounts of carbonised remains, with charcoal of alder, hazel and oak, together with numerous carbonised cereal grains. Although the majority of the cereals were too poorly preserved to be identifiable to type, many were identifiable as six-row barley and some to the naked variety of this type. Fill 263 from elongated pit 229 produced alder charcoal with traces of oak.

Of the three small features to the west (252, 253 and 254), only post-holes 252 and 254 produced any carbonised remains, with traces of hazel nutshell present. A couple of features to the south of the excavation area were also analysed (232 and 233). However, only pit 232 produced any carbonised remains, with only small traces of alder and oak charcoal.

12.2 Laigh Newton Central

12.2.1 Structure E and associated features (Appendix 13)

Seventeen samples were taken from various slots cut through the fill (052) of the shallow rectilinear groove (051) to the north-east of this excavation site. A mixed charcoal assemblage of birch, hazel, oak and willow was identified, along with a couple of possible oat grains and a single fragment of hazel nutshell. The fill (283) of a stake-hole (282) near the centre of the northern gully contained no carbonised remains.

To the east of the rectilinear structure lay a small circular pit (308), which produced only small quantities of birch and hazel charcoal. However, a large rectangular pit (063) to the south-west, contained large quantities of charcoal, mainly birch with lesser amounts of alder. Significant quantities of carbonised bark were also identified. The charcoal had come from large pieces of roundwood, and during excavation it was noted that this roundwood seemed to have been laid as bundles in a north-west/south-east orientation. Some of the charcoal fragments had diagonally cut, rather than broken ends and there was evidence of burning having occurred in situ. The upper fragments of roundwood showed incomplete combustion, suggesting more than one episode of burning.

12.2.2 Pit clusters (Appendix 14)

The fills (218, 222, 228 and 230) of pits 217, 221, 227 and 229 were similar in terms of their carbonised assemblages, composed of alder, birch, hazel, oak and willow, along with a few fragments of hazel nutshell. However, the fill (214) of the outlying pit (213) of this group contained only hazel charcoal along with hazel nutshell fragments.

The fill (298) of one of these pits (297) to the south-west of this cluster of pits contained large quantities of hazel charcoal with traces of rowan, oak and willow, together with over 600 fragments of hazel nutshell. The fill (296) of another pit (295) also contained large quantities of hazel charcoal, with the only other charcoal present being a single fragment of willow. Again, over 400 fragments of hazel nutshell were also identified. The fill (294) of the third pit (293) had a carbonised assemblage dominated by hazel charcoal, with traces of alder, rowan type, oak and willow also present, together with over 200 fragments of hazel nutshell. These three pits contained very similar carbonised assemblages, dominated by hazel charcoal and hazel nutshell fragments.

12.2.3 Miscellaneous pits and post-holes (Appendix 15)

A number of smaller pits and post-holes within the north-west part of the excavation area were analysed for the presence of carbonised remains, although all proved to be barren apart from feature 211, which contained large quantities of hazel and oak charcoal, with lesser amounts of birch and willow. There were also more than 600 fragments of hazel nutshell present. This assemblage was similar to those recorded from the pits to the south (293, 295 and 297).

To the south-east of the rectilinear structure was pit 303, which contained large amounts of hazel and alder charcoal with some oak and hazel nutshell. Pit 029 also lay to the south-east of the rectilinear structure, but stood out as having a contrasting carbonised assemblage to the other pits within this area. The charcoal consisted of alder and birch but cereal grains were also present above trace level. Although a significant number of the grains were indeterminate due to poor preservation, the remainder were all identified as barley, with six-row hulled barley certainly present.

Analysis revealed carbonised remains within only some of the other features distributed randomly across the excavation area (001, 017, 025, 029, 033, 117, 119, 139, 275, 285, 289, 291, 301 and 305). These frequently contained similar mixed charcoal assemblages of alder, birch, hazel and oak, with occasional willow. Hazel nutshell was also commonly present.

12.3 Laigh Newton East (Appendix 16)

The fills (39005 and 39007) of the two pits (39006 and 39008) within this excavation area were similar, containing significant quantities of oak and hazel charcoal with lesser amounts of birch. More notably, significant numbers of carbonised cereal grains were also recorded and these were primarily emmer wheat with lesser numbers of possible bread wheat. Chaff from emmer wheat was also present, together with occasional carbonised weed seeds, and a large number of hazel nutshell fragments within pit 39006.

12.4 Discussion of carbonised plant remains

12.4.1 Laigh Newton West

Radiocarbon dates of 4350–4220 cal BC (SUERC-22443), 3360–3080 cal BC (SUERC-22444), 3360–3090 cal BC (SUERC-24620) and cal AD 1030–1220 (SUERC-24624) were recovered from four separate post-holes that defined Structure A (table 5). The lattermost radiocarbon date very likely derives from contamination from linear feature 005, which provided a similar radiocarbon date of cal AD 1020–1190 (SUERC-22167) and, along with post-hole 154, contained significant numbers of oat grains, which had evidently contaminated those closest features to linear hollow 005, probably by plough action. Excluding the evidence of medieval contamination, Structure A is therefore likely to be Neolithic in date. The carbonised remains from Structure A were very different, however, from those recorded in Neolithic timber rectilinear structures at Balbridie (Fairweather & Ralston 1993), Claish (Barclay et al 2002), Balfarg (Barclay & Russell-White 1993) and Eweford (MacGregor & Stuart 2007). These structures, unlike Structure A at Laigh Newton West, showed extensive use of oak in the construction process, were associated with finds of significant quantities of grain (barley or wheat) but showed little evidence for general domestic occupation debris. These structures also appeared, again unlike Structure A, to have been destroyed by fire, with post-holes containing the carbonised remains of oak posts and wattlework. In general, the features that formed Structure A contained very similar mixed charcoal assemblages of alder, birch, hazel, oak and willow, with some hazel nutshell fragments, and were just like those that would be expected from domestic hearth waste during the Neolithic. There was no evidence for the preferential collection of any particular wood type for fuel. There was also no evidence for burnt turf or heather, which might have suggested potential roofing material for the structure. However, as there were no significant spatial differences in the charcoal assemblage, it was not possible to identify any activities that may have taken place within the structure.

Structure B yielded radiocarbon dates of 520–370 cal BC (SUERC-22405), 2850–2470 cal BC (SUERC-24625) and 2460–2140 cal BC (SUERC-24626) from three of its post-holes. The carbonised plant remains provided little further evidence for the use of this structure, though the mixed charcoal was more indicative of domestic hearth waste than structural debris.

No carbonised remains were recorded from pit 099, the central feature of Structure C, indicating that had any timber post been set here, it had been removed or left to rot and had not been burnt in situ. A standing stone, it might also be observed, would have left a pit devoid of charcoal too. Oak was the dominant type in several of the associated arc of stake-holes, suggesting perhaps that an oak-built palisade or fence bounded the pit on one side, though the quantities of charcoal involved were not large. Hazel and willow charcoal were also recorded from the post-holes, but the quantities were not sufficient to say that the oak palisade also supported wattlework panels. Mixed charcoal assemblages with hazel nutshell and occasional cereal grains, suggests that some domestic occupation occurred nearby. Carbonised willow from two of the post-holes yielded radiocarbon dates of 3640–3490 cal BC (SUERC-22409) and 3500–3330 cal BC (SUERC-22410).

The centre of Structure D, pit 040, was interpreted in the field as a fire-pit due to the large quantities of charcoal it contained, and analysis of the carbonised assemblage supports this interpretation. The charcoal was consistent with domestic hearth waste, with the presence of hazel nutshell and a raspberry/bramble pip indicating that food was probably being prepared or eaten in the immediate vicinity. Similar food remains from post-holes 034, 035 and 038 are suggestive of scatter from fire-pit 040. It was suggested during the field excavation that the position of this pit, on the highest point of the terrace, might imply a ritual function but there are no unusual charcoal types or food plant remains contained within the carbonised assemblage that

Table 5 Radiocarbon dates

Lab code	Context	Feature	Single-entity species (charcoal)	Years BP	$\delta^{13}C$ (‰)	Calibrated 1-sigma (years)	Calibrated 2-sigma (years)
		Laigh Newton West					
SUERC-22443	179	Structure A post-hole 176 fill	*Corylus*	5405±35	–25.6	4330–4240 BC	4350–4220 BC
SUERC-22444	209	Structure A post-hole 208 fill	*Corylus*	4500±35	–27.6	3340–3100 BC	3360–3080 BC
SUERC-24620	128	Structure A post-hole 004 fill	*Corylus*	4515±35	–25.7	3350–3110 BC	3360–3090 BC
SUERC-24624	257	Structure A post-hole 248 fill	*Corylus*	895±35	–27.2	AD 1040–1210	AD 1030–1220
SUERC-22167	153	Linear feature 005 fill	*Alnus*	920±30	–29.3	AD 1040–1160	AD 1020–1190
SUERC-22405	284	Structure B post-hole 048 fill	*Alnus*	2345±30	–26.8	415–380 BC	520–370 BC
SUERC-24625	180	Structure B post-hole 050 fill	*Corylus*	4055±35	–24.5	2830–2490 BC	2850–2470 BC
SUERC-24626	299	Structure B post-hole 052 fill	*Betula*	3825±35	–25.8	2340–2200 BC	2460–2140 BC
SUERC-22409	009	Structure C post-hole 082 fill	*Salix*	4745±35	–24.2	3640–3550 BC	3640–3490 BC
SUERC-22410	014	Structure C post-hole 087 fill	*Salix*	4600±30	–26.5	3500–3350 BC	3500–3330 BC
SUERC-22168	116	Structure D pit 040 primary fill	*Alnus*	3875±30	–27.8	2460–2290 BC	2470–2280 BC
SUERC-22414	114	Structure D pit 040 upper fill	*Alnus*	3750±35	–24.4	2210–2050 BC	2290–2030 BC
SUERC-24628	160	Structure D post-hole 034 fill	*Corylus avellana*	5380±35	–25.8	4330–4170 BC	4340–4060 BC
SUERC-24627	218	Structure D post-hole 042 fill	*Alnus*	905±35	–26.7	AD 1040–1180	AD 1030–1210
SUERC-22413	139	Linear feature 126 fill	*Alnus*	980±30	–26.5	AD 1010–1150	AD 990–1160
SUERC-22411	278	Pit 250 primary fill	*Corylus*	3880±35	–28.1	2460–2300 BC	2470–2270 BC
SUERC-22412	307	Pit 060 fill	*Salix*	7450±30	–24.6	6380–6250 BC	6400–6240 BC
SUERC-22433	61003	Fire-pit 61004 fill	*Hordeum vulgare*	3310±35	–25.2	1625–1525 BC	1690–1500 BC
		Laigh Newton North-west					
SUERC-22419	288	Occupation layer 288	*Corylus*	3455±30	–25.4	1880–1730 BC	1880–1690 BC
SUERC-22421	285	Layer 285	*Alnus*	2960±35	–28.1	1260–1120 BC	1310–1050 BC
SUERC-22422	273	Layer 273	*Corylus*	3460±30	–27.5	1880–1730 BC	1890–1690 BC
SUERC-22424	422	Outer ditch 037 fill	*Salix*	4825±30	–26.6	3660–3530 BC	3660–3520 BC
SUERC-22429	418	Inner ditch 002 fill	*Corylus*	2800±30	–23.7	995–910 BC	1040–890 BC
SUERC-22430	361	Ditch 041 fill	*Alnus*	2305±30	–26.7	405–365 BC	410–350 BC
		Laigh Newton Central					
SUERC-22434	052	Rectilinear groove 051 fill	*Betula*	1725±30	–25.0	AD 250–350	AD 240–400
SUERC-24629	052	Rectilinear groove 051 fill	*Betula*	2250±35	–24.3	390–230 BC	400–200 BC
SUERC-24630	052	Rectilinear groove 051 fill	*Corylus*	890±35	–24.9	AD 1040–1210	AD 1030–1220
SUERC-22435	270	Pit 063 fill	*Alnus* roundwood	1620±30	–27.1	AD 390–540	AD 380–540
SUERC-22439	230	Pit 229 fill	*Betula*	3880±30	–25.1	2460–2300 BC	2470–2280 BC
SUERC-22440	030	Pit 029 fill	*Hordeum v var vulgare*	2215±30	–22.0	320–200 BC	380–200 BC
SUERC-22441	296	Pit 295 fill	*Corylus avellana*	4785±35	–24.4	3590–3510 BC	3650–3510 BC
SUERC-22442	11004 (=298)	Pit 11006 fill (=297)	*Corylus avellana*	4745±35	–24.5	3640–3380 BC	3640–3490 BC
		Laigh Newton East					
SUERC-22432	39007	Pit 2028–39008 fill	*Triticum dicoccum*	4910±35	–23.9	3710–3650 BC	3770–3640 BC

might confirm this hypothesis. Radiocarbon dates from the primary and tertiary fills of fire-pit 040 were 2470–2280 cal BC (SUERC-22168) and 2290–2030 cal BC (SUERC-22414) respectively. The segmented linear feature to the north of the fire-pit and post-hole 042 to the south, while yielding generally similar carbonised remains to the fire-pit, provided radiocarbon dates of cal AD 990–1160 (SUERC-22413) and AD 1030–1210 (SUERC-24627) respectively, thereby indicating that these were probably not contemporaneous with the fire-pit or the ring of post-holes around it, one of which (034) yielded a radiocarbon date of 4340–4060 cal BC (SUERC-24628).

The largest of the pits (250) excavated in the north-west corner of the area contained significant quantities of charcoal, the primary fill providing a radiocarbon date of 2470–2270 cal BC (SUERC-22411). The charcoal assemblage was consistent with domestic hearth waste and provided no indication that this feature was ever a post-hole. The remaining pits within this cluster produced small quantities of charcoal, with oak dominating in three of the assemblages. Though this might suggest oak posts burnt in situ, the quantities of charcoal involved were small and a radiocarbon date of 6400–6240 cal BC (SUERC-22412) was produced from one of these pits (060). The limited quantities of charcoal recovered would suggest that if these did indeed hold any structure, this was not destroyed by fire. There was a suggestion during the field excavation that this cluster of pits might have been evidence for deliberate planting of trees for a ritual purpose. However, it was not possible to determine this through excavation and there is no definitive evidence for this practice having occurred anywhere in Scottish prehistory.

A large number of apparently unrelated pits, post-holes and other features were scattered across the Laigh Newton West excavation area. In general, these contained mixed charcoal assemblages with occasional fragments of nutshell. This suggests that there was significant occupation in the vicinity which resulted in the scatter of general domestic hearth waste over much of this area. Even for features such as tree-throw 095, the mixed charcoal assemblage it contained was consistent not with the burning of the tree that created this feature, but with the deposition of hearth waste. Possible evidence for the processing of grain, however, was recorded in several of the scattered features. Pit 61004 contained significant numbers of carbonised cereal grains along with a mixed charcoal assemblage. The presence of barley, and no other cereal type, might by itself suggest a later prehistoric date for this feature, which was confirmed by a radiocarbon date from one cereal grain of 1690–1500 cal BC (SUERC-22433). Pit 226 contained a similar assemblage, but with some cereals further identifiable to naked six-row barley. This might narrow down the possible age of this particular feature to the Neolithic, as naked barley was most commonly grown during the Neolithic period in Scotland and is rarely seen in sites of later date (Dickson & Dickson 2000). The presence of in situ burning, charcoal and grain suggests that small-scale cereal processing, possibly parching prior to grinding, was being undertaken in this area and that some of the grain was accidentally charred.

A number of single entity charcoal fragments from Laigh Newton North-west, located downslope from Laigh Newton West, yielded radiocarbon dates ranging from the Neolithic (3660–3520 cal BC (SUERC-22424)) through the Bronze Age (1880–1690 cal BC (SUERC-22419); 1310–1050 cal BC (SUERC-22421); 1890–1690 cal BC (SUERC-22422); 1040–890 cal BC (SUERC-22429)) to the Iron Age (410–350 cal BC (SUERC-22430)), which had probably been deposited here by plough action and soil movement downhill.

12.4.2 Laigh Newton Central

Structure E, defined by rectilinear gully 051, produced carbonised remains consistent with domestic hearth waste rather than structural debris, but from which a range of radiocarbon dates (cal AD 240–400 (SUERC-22434), 400–200 cal BC (SUERC-24629) and cal AD 1030–1220 (SUERC-24630)) were obtained. The single stake-hole (283) apparent within the gully produced no charcoal and so provides no further evidence as to whether the gully once held a line of timber posts.

Of particular interest was a large rectangular pit (063) to the south-west of Structure E. Large quantities of charcoal were found within this pit and it was clear, during excavation, that bundles of branches had been placed in a north-west/south-east orientation and then been burnt in situ. The branches were less than 100mm in diameter but predominantly intact roundwood, rather than split timbers. There was evidence for tool marks on the ends of some charcoal pieces, with the ends having been diagonally cut, rather than having broken ends. The charcoal was predominately birch with smaller quantities of alder, and bark was extremely common, indicating that the branches had not been stripped of bark prior to burning. The upper fragments of roundwood showed incomplete combustion, suggesting more than one episode of burning. Birch and, more especially, alder are known to have been coppiced for charcoal production and the presence of such a large proportion of similar-sized pieces of roundwood within this pit might lend weight to this as an explanation (Edlin 1973; Gale & Cutler 2000). No evidence for food plant remains, such as hazel nutshell or cereal grain, was recorded from this feature. Considering the large quantities of charcoal present, if this had been a domestic hearth it might be expected that at least some carbonised food remains might have survived. The radiocarbon date of cal AD 380–540 (SUERC-22435) obtained from a fragment of alder charcoal lends weight to occupation of this site during the late Iron Age.

Of the pit cluster to the west of the rectilinear structure, the group of large, sub-circular pits contained mixed charcoal assemblages and hazel nutshell fragments, similar to the general domestic hearth waste scatter that was seen over much of Laigh Newton West. A fragment of birch charcoal from one of these pits (229) yielded a radiocarbon date of 2470–2280 cal BC (SUERC-22439). The outlying pits of this cluster (297, 295 and 293) to the south-west, contained more distinctive carbonised assemblages dominated by hazel charcoal and very large numbers of hazel nutshell fragments, generally indicative of a Mesolithic or early Neolithic date (Mithen et al 2001). This was confirmed by the radiocarbon dates obtained from two of those pits, 3650–3510 cal BC (SUERC-22441) from pit 295 and 3640–3490 cal BC (SUERC-22442) from pit 297. This material was found in conjunction with pottery, burnt bone and flint, which suggests that these were rubbish pits. The fact that the charcoal assemblage was overwhelmingly made up of hazel could simply be that this species was easy to collect for fuel, though it is possible that there was a component of structural debris incorporated into this assemblage.

The large number of isolated scattered features excavated within this area generally contained carbonised assemblages of mixed charcoal and hazel nutshell, in keeping with the rest of the site and providing further evidence for the presence of prehistoric settlement in the immediate vicinity. Of particular note was pit 211, which produced a charcoal assemblage dominated by hazel and hundreds of hazel nutshell fragments, similar to the larger pits to the south-west (293, 295 and 297), suggesting that these pits were broadly contemporaneous. Only one pit (029) produced any significant evidence for arable agriculture in the form of carbonised cereal grain, mainly barley, although the quantities involved were small and not sufficient to indicate that cereal processing was occurring in this area. A radiocarbon date of 380–200 cal BC (SUERC-22440) from one of these grains indicates occupation around the same time as that indicated further along the terrace at Laigh Newton West.

12.4.3 Laigh Newton East

The two pits (39006 and 39008) here yielded significant numbers of carbonised cereal grain, which was primarily emmer wheat, with some possible bread wheat. These were the only features at Laigh Newton with significant numbers of wheat grains present. Chaff and a few carbonised weed seeds were also present, suggestive of cereal processing waste. A radiocarbon date of 3770–3640 cal BC (SUERC-22432) confirmed the likely Neolithic date for these deposits (Dickson & Dickson 2000), which was also indicated by the significant numbers of carbonised hazel nutshell fragments present.

12.4.4 General observations

The excavations at Laigh Newton have provided evidence for occupation across this terrace over a prolonged period of prehistory. It is clear from the carbonised remains that during the earlier phases of occupation, the surrounding woodlands were probably still relatively undisturbed, providing a range of typical lowland woodland tree species for fuel and construction.

Although it appears that a Neolithic timber building may have existed at Laigh Newton West, the carbonised remains here are not comparable to similar timbered halls excavated in Scotland. Oak does not seem to have been the primary building material and there was no evidence for the hall having been destroyed by fire. It is also notable that there seemed to be significant amounts of domestic hearth waste over much of the area, whereas many Neolithic ritual structures are noticeably ‘clean’ of domestic waste.

The concentrations of hazel nutshell fragments in some of the pits may indicate a Mesolithic or early Neolithic date for these earliest occupation features. Evidence for Neolithic agriculture was found in the form of carbonised emmer and bread wheat, together with naked barley, all of which are characteristic of the Neolithic period in Lowland Scotland. Other carbonised barley grain also extends the period of occupation into the Bronze Age.

Evidence for the production of charcoal was present in Laigh Newton Central. This might suggest that there was industrial activity of some kind taking place on this site. The fact that birch and alder wood were being used instead of oak would suggest that this activity was probably later prehistoric or early historic in date, as much of the native oak woodland was cleared by this time.