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# Addenbrooke's Hospital Excavations, 2007 & 2010: The Last of the Cra'ster's Enclosure

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With contributions by Katie Anderson, Rachel Ballantyne, Matt Brudenell,  
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As far as can be gathered, the conditions under which Mary Cra'ster and her team excavated the Iron Age enclosure at Addenbrooke's Hospital in 1967 were atrocious (Figs 1 & 2). It had only been discovered during the course of construction and, accordingly, was dug under dire rescue circumstances, with much of the ground-surface churned by machinery (Cra'ster 1969; see Evans *et al.* 2008, fig. 1.5). The site, nevertheless, was crucial for the development of the County's archaeology. On the one hand, they were able to reconstruct the form of a La Tène-style decorated pot from one of its ditches (*ibid.* fig. 1.4; Cra'ster 1969) and, given the rarity then of such vessels within the region, it assumed a rather iconic role and hinted at the site's status. On the other hand, the very fact that they were able to achieve a complete plan of its main sub-square enclosure was important, as it presented a convincing 'picture of the past' at a time when most excavation was limited to small hand-dug trenches.

Following the Cambridge Archaeological Unit's (CAU) large-scale excavations at the Hutchison Site along the western side of the hospital's ground in 2002–03 (Fig. 1), the opportunity that subsequent development afforded to further investigate Cra'ster's enclosure was welcomed. The fieldwork was staged and involved two phases. The first was in 2007, when the construction of the multi-storey NCP Car Park allowed for limited trenching across 0.8ha, at which time the enclosure's northeastern side was located and dug along the plot's western limits (Figs 2–4; Hutton & Evans 2007). Thereafter, in 2010, anticipating the construction of the neighbouring Cambridge Centre for Applied Learning building (CCAL) immediately to the west, the enclosure's northern corner and an adjoining length of its northwestern circuit were dug (Fig. 2; Timberlake 2010). Indeed, the excavations had something of a leapfrog-like quality, as the second phase only progressed when the car park was completed and we were able to take full advantage of its height for site photography (Fig. 5).

As is outlined in the CAU's *Borderlands* volume concerned with the Hutchison Site and the archaeology of the Addenbrooke's/Trumpington Environs generally, due to its network of interconnecting tun-

nels the hospital's construction in the 1960s was undertaken on a mass-area scale and in a manner almost akin to an open-cast mine (Evans *et al.* 2008, 8, fig. 1.6 & .8). Given the degree of downcutting this involved, it unfortunately means that the 2007/10 investigations do, indeed, mark the last of Cra'ster's enclosure and no more of it is likely to survive. Equally, the scale of the '60s building programme meant that both of our recent site-areas were severely affected by lateral truncation and suffered from localised machine disturbance. Mention should be made that we had intended to expose more of the enclosure's interior within the 2010-area, but were prevented through the location of large oil storage tanks (Fig. 3).

Cra'ster's findings were summarised in the 2008 volume (*ibid.*, 3–7, figs 1.4–6) and, therefore, only a brief appraisal is necessary here. Its main feature was a rectangular ditch enclosure, with rounded corners, some 340ft across (c. 103m). Its 'V'-shaped profile was 7ft (2.10m) across and four feet deep (c. 1.20m; Figs 2 & 6; Cra'ster 1969: fig. 1–3). A few pits were exposed within its interior (apparently unexcavated) and it was remarked that many others probably went unnoticed. Much domestic refuse was recovered from the ditch's basal fills and there can be little doubt that the enclosure's interior had been occupied. The pottery recovered was held to be of 'Iron Age A' type and thought comparable to the assemblage from Barley (Cra'ster 1961).

Aside from the main enclosure, a series of parallel ditches ran along its southern side (Cra'ster 1969, fig. 2.'B' & 7). These were not firmly dated and only one seems to have been fully excavated (*ibid.*, fig. 4). This yielded pottery of the same general type as the main enclosure, but also had the fine, La Tène-style decorated pot (*ibid.*; see Evans *et al.* 2008, fig. 1.4). The only definite settlement evidence *per se*, was found outside of the main enclosure and south of the parallel ditches (also location 'A' on Cra'ster's 1969 plan). There the remains of sub-circular building ('hut'), as defined by postholes and a prepared floor were recovered.

The site's finds are held by the University of Cambridge Museum of Archaeology and Anthropology (Acc. No. 1968.345, 348, 349, 351, 352 &

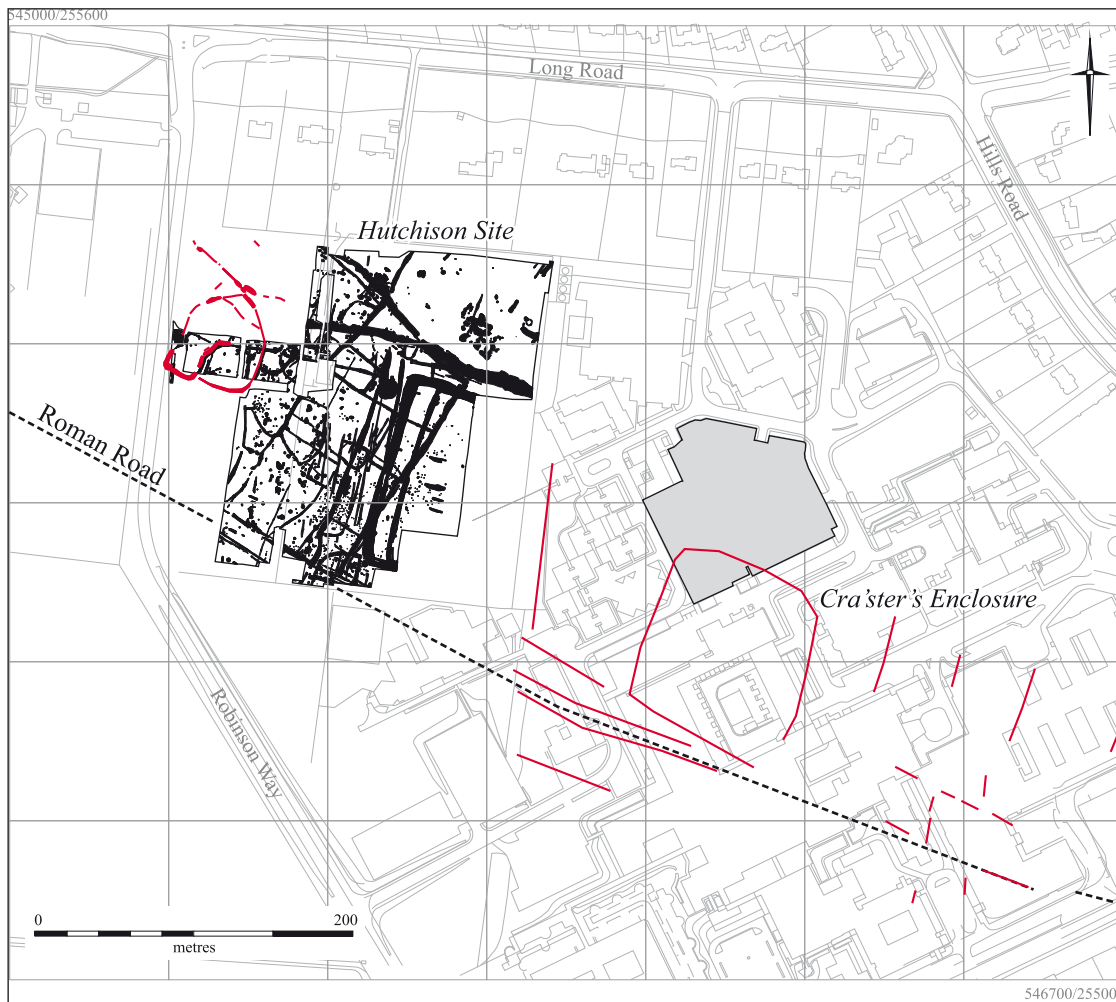


Figure 1. Addenbrooke's Hospital Investigations base-plan (with red indicating cropmarks).

ZZZ015), and its Middle/late Iron Age pottery has been reviewed and is further discussed below (the assemblage includes a few Romano-British sherds and a piece of roof tile, which apparently derived from the upper profile of the main enclosure ditch). The bone from the '67 excavations cannot be located and was probably discarded. It was, however, studied for Cra'ster's report and of the 107 pieces recovered, 57% were cattle and 38% sheep/goat; three horse (3%) and two pig (2%) bones were also noted (Cra'ster 1969, appendix).

Before progressing to discuss the recent programme's results, the quality of Cra'ster's surveying warrants special notice; by the standards of the day, it proved to be extraordinarily accurate (Fig. 2).

### The 2007/10 Excavations

Knowing the area was truncated and that any minor settlement features were unlikely to survive, the main aim of the programme was to achieve substantive finds and environmental assemblages from the enclosure to provide greater context for the earlier

fieldwork. Indeed, it had also been hoped to achieve pollen results, but appraisal of the ditch's fills indicated that this would not prove successful.

Aside from a possible pit within the north-centre of the CCAL Site (yielding only a worked flint; F. 1) and, otherwise, plough furrows and geological hollows, Cra'ster's main enclosure ditch (F. 2) was the only significant feature present (Fig. 3). In total, approximately eight metres of its fill were excavated. Its 'V'-shaped profile varied from between 1.90–2.50m wide (c. 3.50m across at the north corner proper) and it was 0.75–1.20m deep (Figs 4–5). Evidence of recutting was apparent. The profiles of more shallow gullies/ditch segments, c. 0.40 and 0.85m deep (F. 4 & F. 11) were held in the circuit's exterior profile at the northern corner and may relate to an early version of it. Two slight, trough-like gully lengths also lay immediately beyond its line at that point (F. 5 & F. 6) and while also possibly pertaining to this putative earlier layout, alternatively they might have related to some manner of entranceway setting (Fig. 3).

Beyond this, there was also evidence that the main enclosure's ditch had, at one time, itself been recut with a broader more 'U'-shaped profile (F. 3; c. 0.60m

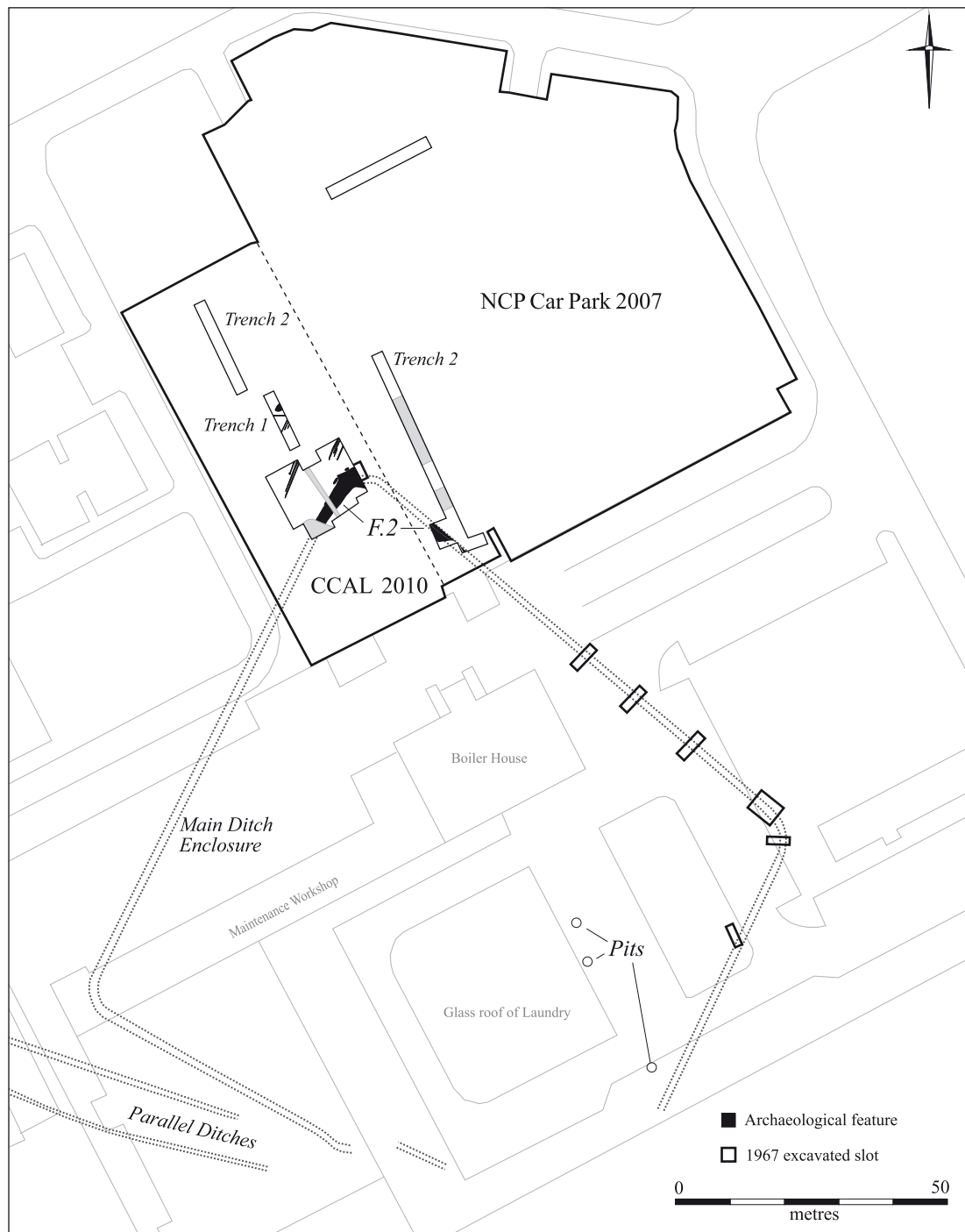


Figure 2. 2007/10 excavations base-plan, with Cra'ster's features imposed.

deep; Fig. 6).

Of the ditch's fill sequence, this varied somewhat between the two areas. The eastern 2007 cutting essentially saw basal silting and secondary weathering consisting of marl-mottled light grey clay silts (Figs 4 & 6). This was followed by a tertiary, very dark grey/black clay-silt loam with ash, charcoal and burnt stone inclusions, which in all likelihood represents the F. 3 recut's infilling and it was from this that the majority of the finds derived. Within the 2010 exposures,

the main lower/upper fill division was somewhat less distinct as the recut's deposits lacked the same black charcoal- and ash-derived discolouration – being instead a dark brown loam – and in the lower profile there was evidence of bank-slippage along the ditch's interior side (Fig. 6). There, while most of the bone also derived from the F. 3 uppermost fill, substantial quantities of pottery were also present in the lower deposits.

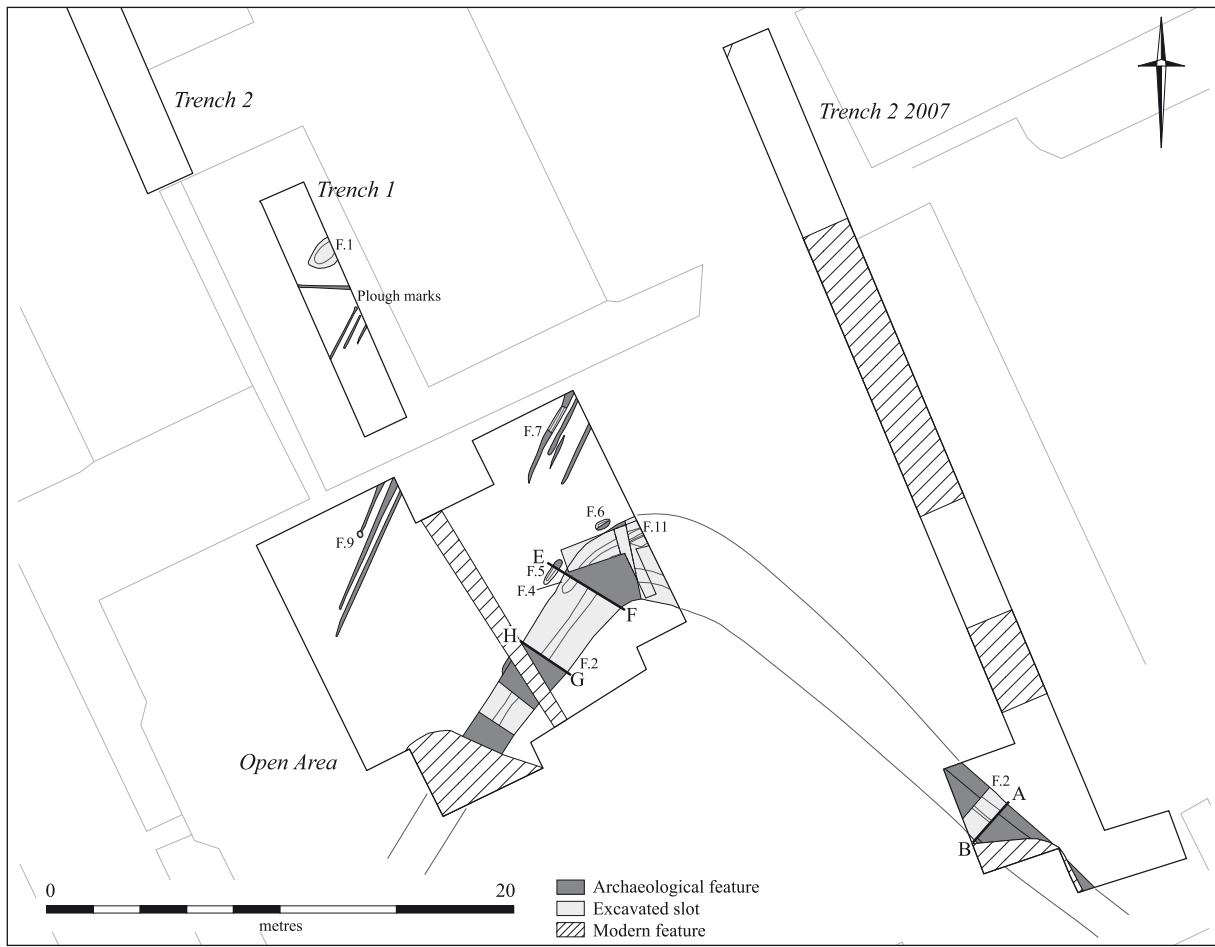


Figure 3. 2007/10 excavations main area base-plan (with section location).

### Finds Assemblages and Environmental Data

Aside from the material outlined below, 11 flints were recovered. These were of residual status and, apart from a single Mesolithic/earlier Neolithic blade, were of later Neolithic/Bronze Age manufacture. Otherwise, ignoring what modern building material was present, also found were pieces of non-diagnostic fired clay (11; 13g), burnt stone (22; 3636g) and two lumps of probable iron smithing slag (F. 3; 99g).

### Pottery

Matt Brudenell and Katie Anderson

A minor assemblage of handmade Iron Age pottery, totalling 127 sherds (1160g) was recovered from two phases of excavation: nine in 2007 (353g) and, in 2010, a further 118 (807g). With the exception of a single sherd of undated pottery, all of the material was recovered from the large enclosure ditch (F. 2) and its later re-cut, F. 3 (Fig. 7).

Material from the 2007 excavations were predominately medium-sized (<8cm), with moderately abraded edges; its mean sherd weight is high at 39.2g, though this figure is skewed by the presence of one large sherd. The pottery

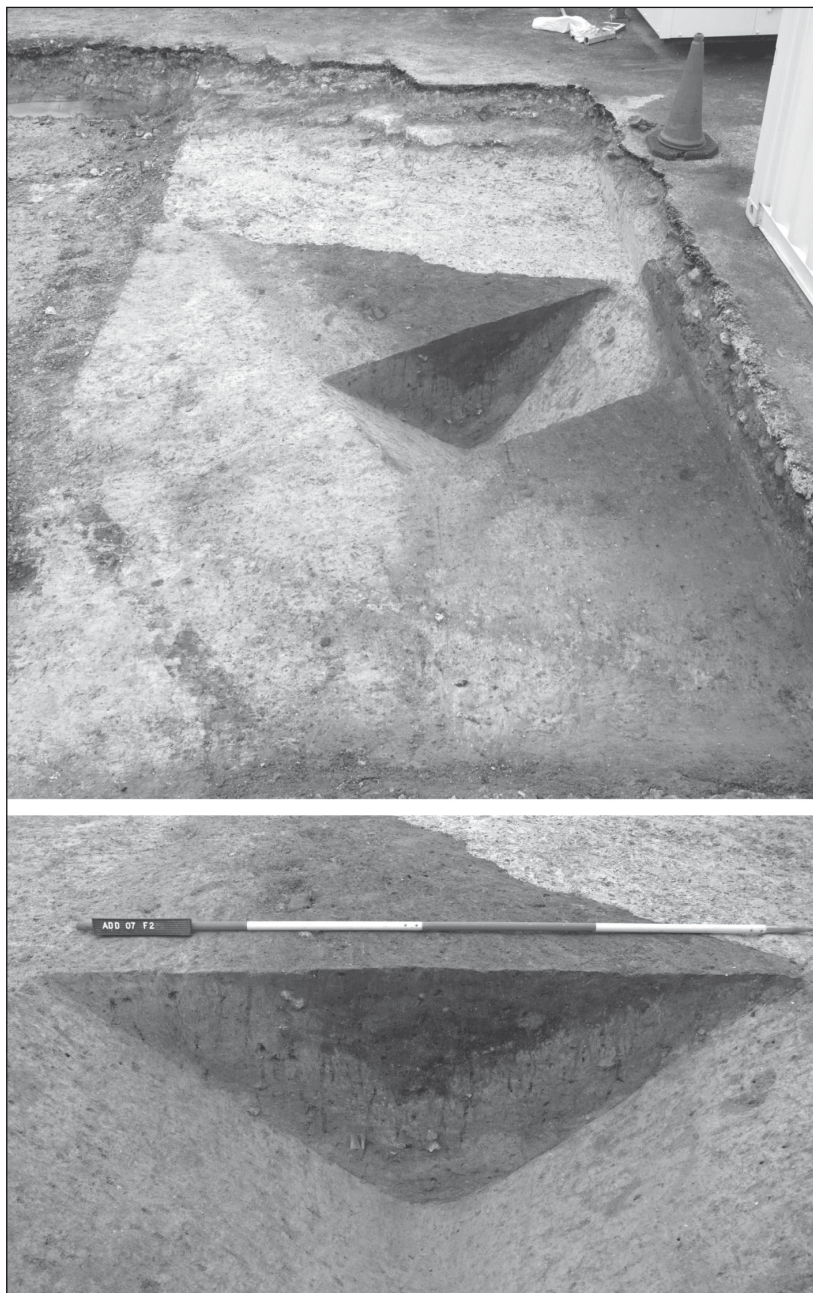
from the 2010 phase was more fragmented, with a lower mean weight of 6.8g and smaller sherds (most <4cm), although the condition of the material in terms of abrasion was comparable to the earlier excavations.

The assemblage was dominated by dense sandy fabrics, which represented 93.2% of all the pottery by count. Other fabrics represented much smaller percentages of the assemblage (shell, 3.9%; flint, 0.78%; and grog, 2.3%). All of these wares are typical of Iron Age assemblages in Southern Cambridgeshire.

The majority of sherds were non-diagnostic, with just six vessel forms identified, of which three were rims, two were bases and there were two refitting sherds from the shoulder of a slack-profiled vessel. One ditch context produced 45 sherds (516g), which including 39 from a single vessel: a round shouldered jar/bowl with heavy carbonised residue on the interior. This broadly dates to the Middle Iron Age, and is one of the few groups of pottery from the 2010 excavation that comprise fairly large, 'fresh' sherds. Decoration was also scarce, with only two combed sherds and ten burnished sherds from a single vessel.

Feature 3, the re-cut of ditch F. 2, contained 73 sherds (291g). These included two everted rim vessels and two pinched bases. There were also two body sherds with a light combed decoration on the exterior and another





*Figure 4.* 2007 site, looking south, with enclosure-ditch sectioned (D. Webb).

ten sherds (16g) from a burnished vessel. Several of the sherds from F. 3 were fired hard and the fabrics suggest a Middle/Late Iron Age date, although a more specific attribution is not possible.

The pottery belongs to the Middle/Later Iron Age, conventionally dated *c.* 300 BC – AD 50. The absence of wheel-turned wares, sherds with vertical combing, or 'late' handmade forms (such as the internally thickened rims of pronounced 'S'-profiled bowl/jar forms), suggests that the pottery pre-dates the first century AD and a date bracketing the third to first century BC would seem appropriate. More broadly, the pottery compares well with that recovered from Cra'ster's 1967 excavations (Cra'ster 1969). A further review of the ceramics collected from the '67 site has

confirmed that the forms and fabrics are identical. Of note are a small number of flint-tempered sherds amongst Cra'ster's Middle Iron Age material, which indicate a previously unrecognised or unpublished Late Bronze Age/ earliest Iron Age presence in this area.

*Faunal Remains*  
*Vida Rajkovača*

Totalling 386 assessable fragments (4136g), the faunal assemblage came from the enclosure ditch's upper and lower ditch fills. The marked distinction between the two deposits would indicate that the settlement activity was more intensive during the later stages





Figure 5. 2001 site, looking west along excavated enclosure ditch (taken from atop the NCP Car Park; right, detail of F. 2/3; D. Webb).

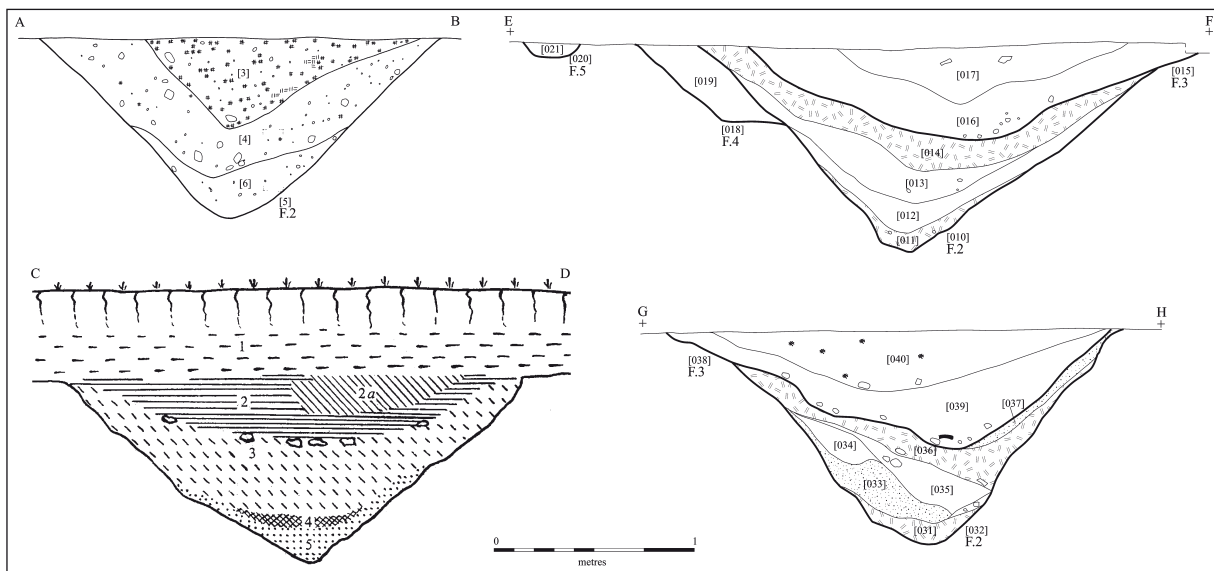


Figure 6. Enclosure ditch section (see Fig. 3 for location; C–D is representative of Cra'ster's sections).

of the enclosure's usage. This was corroborated by the evident difference in the quantity of animal bone recovered from each of the fills. Of the 386 bone fragments, 96 came from the lower fill (24.9%), whilst 290 (75.1%) came from its upper deposits. The only two species identified from the primary fill were cattle and horse. The other species include dog and ovicaprid (sheep/goat). While pig is absent, the original report cites that two such specimens were recorded (Cra'ster 1969, 28, Appendix).

The assemblage showed an overwhelming prevalence of cattle (Table 1), both within the NISP and MNI counts. Horse accounted for 14 specimens, 13 of which were loose teeth and tooth fragments. Similar skeletal element representation was recorded in the ovicaprid cohort, where 70% of the elements were mandibles and loose teeth. Dog was represented by a skull and maxilla fragment, both probably from the same animal. Extracting these leaves us with a cattle cohort amounting to 157 specimens, corresponding to 85.8% of the identified species sub-set. The predominance of cattle within the assemblage is reflected in high numbers for cattle-sized elements amounting to 175 specimens (45.3% of the assemblage).

**Table 1.** Number of Identified Specimens (NISP) and Minimum Number of Individuals (MNI) for all species from the Middle Iron Age enclosure ditch (ADD07 and CAL10 assemblages combined)

| Taxon                      | NISP       | NISP%      | MNI      |
|----------------------------|------------|------------|----------|
| Cow                        | 157        | 85.8       | 5        |
| Ovicaprid                  | 10         | 5.5        | 1        |
| Horse                      | 14         | 7.6        | 1        |
| Dog                        | 2          | 1.1        | 1        |
| <b>Total ID to species</b> | <b>183</b> | <b>100</b> | <b>.</b> |
| Cattle-sized               | 175        | .          | .        |
| Sheep-sized                | 28         | .          | .        |
| <b>Total</b>               | <b>386</b> | <b>.</b>   | <b>.</b> |

Although it is widely held that British Iron Age communities favoured sheep to cattle (e.g. Albarella 2000; Cunliffe 2005, 416; Serjeantson 2007, 91), and findings from numerous excavations corroborate this (e.g. Grant 1984, Davis 1995, Serjeantson 2006), this is rather an over-generalisation. Certainly, there are Middle Iron Age assemblages from enclosed settlement sites where cattle take on a major role (Legge *et al.* 1989; Higbee forthcoming), as well as in many other assemblages from other settlement- and site-types.

#### *Charred Plant and Mollusc Remains* *Rachel Ballantyne and Anne de Vareilles*

Four bulk samples have been analysed from the enclosure ditch (40.5 litres total). Two are from the 2007 excavations of upper and basal fills of F. 2 ([03] and [06], respectively), with two further samples excavated in 2010 from F. 2 ([031]) and of re-cut F. 3 ([030]).

All samples have been flotation sieved at the CAU, using a modified version of the Sträf tank (Williams 1973). Flots (> 300µm) and heavy residues (>1mm) have been dried,

then sorted using a Leica M55 (x6.3 – x50) binocular microscope for flots and by eye for residues greater than 4mm; full raw data is summarised in Table 2. Taxonomic names follow Stace (1997) for plants and an updated version of Beedham (1972) for molluscs.

The plant remains are all charred. Mollusc shell is well preserved and frequent, as consistent with the calcareous geology. Numerous *Cecilioides acicula*, a burrowing snail, are likely to be intrusive and so bioturbation may have also moved other smaller ecofacts down the profile.

Charred plants are rare, with low amounts of comminuted charcoal in all the samples. Single seeds of buttercups (*Ranunculus acris/bulbosus/repens*) and henbane (*Hyoscyamus niger*) in re-cut F. 3 have no clear origin. Only the upper fill [03] of F. 2 contains charred cereals and wild plant seeds. The cereals are poorly preserved, with two grains identifiable to emmer/spelt wheat (*Triticum dicoccum/spelta*) and two glume bases identifiable to spelt wheat. The wild seeds are types from disturbed and/or arable ground; goosefoots (*Chenopodium* sp.), knotgrass (*Polygonum aviculare*), clover/medick (*Trifolium/Medicago* sp.) and selfheal (*Prunella vulgaris*). The range is too limited to interpret crop husbandry.

Moderate quantities of mollusc shell provide some indication of the local environment in both ditch phases. Terrestrial habitats are consistently represented, with the open land types *Pupilla muscorum*, *Vallonia pulchella/exentrica* and *Helicella itala* common in all samples. Infrequent *Lymnaea truncatula* and *Anisus leucostoma* indicate episodes of shallow standing water, particularly in ditch re-cut F. 3, which also contains several ostracod valves (tiny aquatic crustaceans). Shady conditions are suggested by occasional *Aegopinella/Oxychilus* sp. and *Vitrea* sp. There are two charred shells in [03] F. 2, of *Vertigo* cf. *pygmaea* and *Tricia* sp.

The limited range of charred plants in [03] F. 2 is likely waste from spelt wheat crop processing, but cannot be interpreted further. Ditch fills usually contain biota that are *in situ* (autochthonous) and from the surrounding area (allochthonous). Frequent molluscs of open-land species probably represent the local environment, perhaps dry calcareous turf on the ditch flanks and the adjacent ground. Occasional molluscs of wet and shady conditions probably represent leaf litter and standing water within the ditch bases, notably re-cut F. 3.

The molluscs are very similar to those from later Iron Age features at the nearby Hutchison Site (Roberts 2008), where a predominantly open grassland environment was inferred with damper habitats in some cut features.

## Discussion

While the animal bone species-representation from the neighbouring Hutchison Site suggested a fairly stable economic basis throughout its Bronze Age to Saxon phases (e.g. cattle 47.6–54.4%; sheep 35.4–40.9%), the evidence from both Cra'ster's '67 enclosure and the recent fieldwork there would indicate a higher cattle component, significantly so in the case

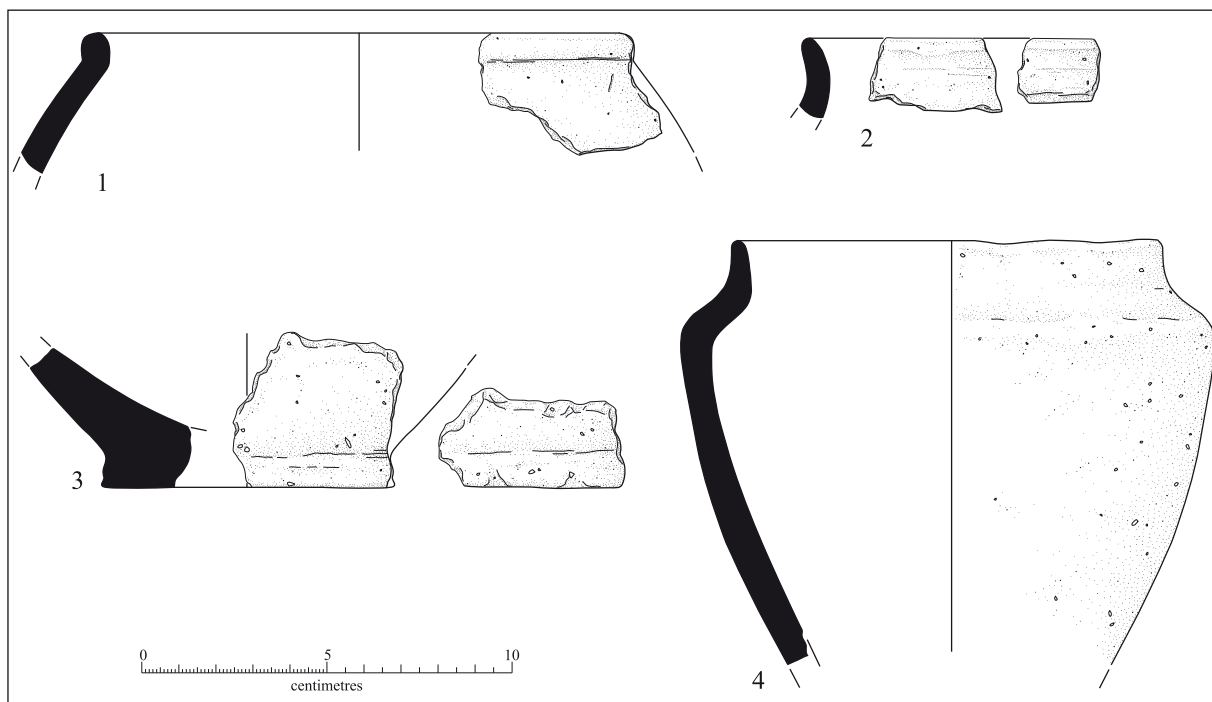


Figure 7. Iron Age pottery: 1–3) F. 3; 4) F. 2.

of the latter (respectively, c. 57 and 86%). Given that Cra'ster's assemblage apparently saw sheep levels comparable to the Hutchison Site's figures – 38% – their very low values in its CAU-phase excavations (5.5%) can only be accredited to immediate depositional variability rather than any markedly different economic practices. Nor does the recent sites' environmental samples – aside from attesting to a largely open landscape with localised wet conditions – greatly add to the wider knowledge of the area.

What is, however, important from recent phases of work is the tying down of the enclosure's pottery-dating evidence. That no wheel-turned wares occurred within its assemblage clearly indicates its Middle/late Iron Age attribution and that the enclosure's usage did not continue into the first century AD. As no further La Tène-decorated pottery was recovered this would equally imply that there are no grounds for seeing the enclosure as in any way 'special' and it must essentially be ranked as a fairly typical domestic compound of the period. Indeed, any reading of status from the occurrence of such decorated wares would now have to turn upon their mass-recovery, as they are known to occur in very low numbers on a wide range of the period's sites in the county (e.g. Evans 2003).

With so much fieldwork currently underway and otherwise anticipated across the western side of the hospital and around Trumpington (see Evans *et al.* 2008, 141–66), it would be rash at this time to speculate upon its landscape's early development. Given, however, that no further substantive fieldwork is likely within the hospital's core comments are warranted concerning its archaeology, especially as re-

gards the interrelationship of Cra'ster's enclosure and the Hutchison Site's sequence (Fig. 1).

The crux issue here is the status of the 'parallel ditches' arranged along the southern side of the enclosure; unfortunately, their interrelationship is ambiguous. While the pair seem broadly sympathetic with the 'square's' layout, if projected the northern of the two would actually have overlain the enclosure's southern corner. Given this, and the fact that the La Tène bowl was apparently recovered from one of these southern ditches, it is reasonable to assign them to the later/Late Iron Age, if not to the Conquest Period. As shown on Figure 1, if we project this pair north-westward they would correspond to the route of the Roman road that was excavated along the southern side of the Hutchison Site. This would require a slight north-over-west kinking of its straight-line projection (it being the main Colchester road), but then, based on precedent, this is probably quite likely. (As indicated by its exposure within the Perse School early last century, Cambridge's northward *Via Devana* approach-road theoretically should have passed through the interior of Cra'ster's enclosure, but of which no trace was evident and it, also, may well have kinked along its length; see Evans *et al.* 2008, fig. 1.12.).

Based on the arrangement of the early-phase roadside paddocks at the Hutchison Site it was postulated that its east-west road may have had an Iron Age precursor. This is a suggestion that, again, finds further credence from the layout of Cra'ster's site. Given this, it maybe relevant that there was an Early Roman cemetery beside this road-line at the Hutchison Site and, by this, it is possible that Cra'ster's La Tène bowl



actually derived from a cremation beside its earlier precursor. Unfortunately, the '67 site conditions were such that this possibility will forever remain unresolved.

### Acknowledgements

With the fieldwork undertaken on behalf of Addenbrooke's Hospital, the NCP Car Park investigations were organised by David Bryant of RG Carter and Roger Cutting of the hospital's management. In the case of the 2010 CCAL excavations (jointly commissioned by Cambridgeshire County Council), we were grateful for the support of Rachel Northfield throughout, and the co-operation of Nolan Smith (Fusion Project Management) and Andrew Tatlock (Keir Marriott) must also be acknowledged.

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**Table 2. Environmental Remains**

Key: \* 1 or 2 items, + &lt;10 items, ++ 10–50 items, +++ &gt;50 items, ch charred mollusc shell

| Feature  |                                | F.2     | F.2     | F.2      | F.3      |
|--|--------------------------------|---------|---------|----------|----------|
| Context number/year  |                                | [03]/07 | [06]/07 | [031]/10 | [030]/10 |
| Volume/ litres   |                                | 9.5     | 6       | 13       | 12       |
| CHARRED CEREAL GRAIN   |                                |         |         |          |          |
| <i>Triticum dicoccum</i> Schübl./ <i>spelta</i> L. caryopsis     | Emmer or Spelt wheat grain     | 2       |         |          |          |
| <i>Triticum</i> sp. caryopsis                                    | Wheat grain                    | 5       |         |          |          |
| <i>Hordeum/Triticum</i> sp. caryopsis                            | Barley or Wheat grain          | 1       |         |          |          |
| Cereal indet. caryopsis  | Indeterminate grain            | 8       |         |          |          |
| CHARRED CEREAL CHAFF   |                                |         |         |          |          |
| <i>Triticum spelta</i> L. glume base                             | Spelt wheat glume base         | 2       |         |          |          |
| <i>Triticum</i> sp. glume base                                   | Wheat glume base               | 2       |         |          |          |
| CHARRED WILD FRUITS/SEEDS  |                                |         |         |          |          |
| <i>Ranunculus acris</i> L./ <i>bulbosus</i> L./ <i>repens</i> L. | Large-seeded Buttercup         |         |         |          | 1        |
| <i>Atriplex patula</i> L./ <i>prostrata</i> Boucher ex DC. seed  |                                | 1       |         |          |          |
| <i>Chenopodium album</i> L. seed                                 | Fat-hen                        | 1       |         |          |          |
| <i>Fallopia convolvulus</i> (L.) Á. Löve                         | Black-bindweed                 |         |         |          |          |
| <i>Polygonum aviculare</i> L. seed                               | Knotgrass                      | 5       |         |          |          |
| <i>Trifolium/Medicago</i> sp. seed                               | Clover/Medick                  | 2       |         |          |          |
| <i>Prunella vulgaris</i> L. nutlet                               | Selfheal                       | 1       |         |          |          |
| <i>Hyoscyamus niger</i> L. seed                                  | Henbane                        |         |         |          | 1        |
| Cyperaceae indet. fragmented trigonus nut                        | Sedge Family                   |         |         |          |          |
| <i>Bromus</i> cf. <i>secalinus</i> caryopsis                     | Rye Brome                      | 3       |         |          |          |
| Indeterminate wild seed  |                                | 2       |         |          |          |
| Estimated charcoal volume/ millilitres                           |                                | 2       | <1      | <1       | <1       |
| Charcoal >3mm  |                                | +       |         |          | *        |
| Charcoal <3mm  |                                | ++      | *       | +        | +        |
| Vitrified charcoal   |                                | *       | *       |          |          |
| Charred concretion   |                                | *       |         |          | +        |
| Poaceae culm node  | Grass stem joint               | 1       |         |          |          |
| MOLLUSC SHELL  |                                |         |         |          |          |
| <i>Lymnaea truncatula</i> (Müller)                               | Marshy, very shallow water     | *       | *       | +        | ++       |
| <i>Anisus leucostoma</i> Millet                                  | Seasonal ponds and ditches     | *       |         |          |          |
| <i>Cochlicopa lubrica</i> (Müller)/ <i>lubricella</i> (Porro)    | Generally distributed          | *       |         |          |          |
| <i>Vertigo pygmaea</i> (Draparnaud)                              | Marshes, meadows, woods        | * 1ch   |         |          | *        |
| <i>Columella edentula</i> (Draparnaud)                           | Damp places and woodlands      |         | *       |          |          |
| <i>Pupilla muscorum</i> (L.)                                     | Turf, walls and dry places     | +       | *       | ++       | ++       |
| <i>Vallonia pulchella</i> (Müller)/ <i>excentrica</i> Sterki     | Open land, dry to damp         | ++      | *       | +        | +        |
| <i>Cecilioides acicula</i> (Müller)                              | Burrowing, probably intrusive  | +++     | ++      | ++       | +++      |
| <i>Trichia</i> sp.   | Generally distributed          | ++ 1ch  | *       |          | +        |
| <i>Helicella itala</i> (L.)                                      | Dry, grassy, calcareous places | +       | +       | ++       | ++       |
| <i>Vitrea</i> sp.  | Shady damp places              | *       |         |          | +        |
| <i>Aegopinella/Oxychilus</i> sp.                                 | Shady damp places              | *       | *       | *        |          |
| OTHER BIOTA  |                                |         |         |          |          |
| Ostracod valve   | Tiny aquatic crustacean        |         |         |          | +        |