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Peter W. Lock

Subject Editors:
Peter Lock *Local History* Claire Pinder *Archaeology*
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Notes for contributors are printed at the end of this volume.

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Aspects of Romanesque Ecclesiastical Architecture in Dorset: Wimborne Minster, Sherborne Abbey, Forde Abbey Chapter-House and St Mary's, Maiden Newton

MALCOLM THURLBY

Introduction

With the move of the cathedral from Sherborne to Sarum in 1075, Dorset was deprived of any major new building on the scale of a cathedral except the 11th-century abbey church at Shaftesbury which was larger than the new cathedral (Keen 1999, 7–8). However, there are several buildings in the county which can be shown to be of great significance for our understanding of architecture in Norman England. The study of the Romanesque churches in Dorset is facilitated by the inventory of the Royal Commission on the Historical Monuments of England, which, unusually, is complete for the county (RCHME *Dorset*, I–V). The entries provide detailed descriptions of the churches and are often accompanied by plans and photographs. However, aside from brief summaries in the introduction to the volumes, the architectural context of the buildings is not explained, nor are the historical circumstances that may explain why the churches look the way they do. This paper examines four buildings with the view to establishing their place in Romanesque architecture in England: the collegiate church of Wimborne Minster, the Benedictine abbey church of Sherborne, the chapter-house of the Cistercian abbey of Forde, and the parish church of St Mary at Maiden Newton

Wimborne Minster

The account of Wimborne Minster in the Royal Commission (1975, 78–83) presents the crossing, with its salient angles, and the half of each transept adjacent to the crossing, as Anglo-Saxon in plan. It is also suggested that the rubble masonry and weathered string courses on the west wall of both the south and north transepts, and on the former north-west, round stair turret of the north transept (Fig. 1), date from the first half of the 11th century (RCHME *Dorset* 1975, 80). The salient angles of the crossing and the masonry in question may be pre-Conquest. However, a date in the first half of the 11th century should be modified with reference to the historical circumstances connected with the establishment of Wimborne as a royal free chapel under secular canons. Precise documentation is lacking but Patricia Coulstock (1993, 98–9) has gathered evidence for a revival of religious life at Wimborne under Edward the Confessor (1043–66), and further that Maurice, bishop of London (1085–1108), and his predecessor, Bishop Hugh (1075–1085), were also successively deans of Wimborne. In light of this it would seem that the fabric in question dates from the time of Edward the Confessor or soon after the Conquest.

Other aspects of the transepts and crossing at Wimborne are allied to former minster churches in England (Blair 1985), and also to the great churches of the so-called West Country or South-West Midlands School of Romanesque architecture. Cruciform plans with aisleless transepts are frequent in former minster churches both before the Conquest — as at St Mary-in-Castro at Dover (Kent), Breamore (Wilts.) and Worth (Sussex) (Taylor and Taylor 1965, figs 42, 94 and 353) — and in those rebuilt after 1066 — as at Milborne Port (Somerset) (Taylor and Taylor 1965, fig. 200; Blair 1985, 134; Gem 1988, 27), Bishop's Cleeve (Glos.) (Middleton 1879–80), Ripple (Worcs.) and Hook Norton (Oxon) (Blair 1985). Of the parallels listed, Worth, Milborne Port, Bishop's Cleeve, Ripple and Hook Norton are especially interesting in relation to Wimborne because they preserve original altar niches — or clear evidence for them — in the transept east walls. They indicate that

Figure 1: Wimborne Minster, north transept and crossing tower, exterior from north-west (Photo: M. Thurlby)

Figure 2: Wimborne Minster, north transept, interior to east (Photo: M. Thurlby)

Figure 3: Wimborne Minster, interior from south-west (Photo: M. Thurlby)

Figure 4: Stogursey (Somerset), crossing to south (Photo: M. Thurlby)

Figure 5: Malmesbury Abbey, crossing from south-east (Photo: M. Thurlby)

the niche in the east wall of the north transept at Wimborne was always just that, and not the entrance to a chapel, as suggested by the Royal Commission (1975, 82) (Fig. 2). This reading is confirmed by the niche in the east wall of the north transept at Warminster (Wilts.) in which the presence of the Romanesque window shows that the arch never led to a projecting chapel.

Aisleless transepts are also the norm for great churches in the West Country School of Romanesque architecture, as in Worcester Cathedral (Gem 1978), St John's at Chester and Hereford Cathedral (Thurlby 1995a), in the former great Benedictine abbey churches of Shrewsbury, St Werberg's at Chester (now cathedral) (Gem 2000), Gloucester (now cathedral), Tewkesbury and Pershore (Thurlby 1985a and b; 1996), and on a smaller scale in the priory churches at Stogursey (Somerset), Ewenny (Glamorgan) (Thurlby 1988), Usk (Monmouthshire) and Leonard Stanley (Glos.). In the crossing at St John's at Chester, Hereford, Stogursey, Pershore, Tewkesbury and later at Leonard Stanley and Malmesbury Abbey, the east and west arches are much wider than those to the north and south; the former are either semi-circular or depressed, while the latter are stilted, as at Wimborne (Figs 3–5). For the depressed trajectory of the east and west arches at Wimborne it is worth recording that the same form is used in the early post-Conquest north and south crossing arches at Milborne Port. This raises the possibility that the Wimborne crossing arches repeat the trajectory of those

Figure 6: Wimborne Minster, crossing, interior (Photo: M. Thurlby)

in the early Romanesque church there. The crossing arches at Wimborne are plain and of two orders, the inner carried on paired shafts, and the outer on a single nook shaft. The abaci have multiple incisions above a hollow chamfer. To the east of the crossing the western bay of both the north and south arcades of the presbytery has a 12th-century, plain, pointed two-order arch. Against the plain east face of the crossing piers, the arches are carried on renewed chamfered corbels, but to the east there are paired shafts with richly carved, scalloped capitals with decorated abaci. The pointed arches of the presbytery west bay may be seen as proto-Gothic but it must be remembered that pointed arches appeared early in the west of England at Exeter Cathedral commenced 1112 or 1114 (Thurlby 1991). They also feature in the Romanesque crossings at Crediton and Colyton (Devon), and in the east and west arches of the central axial tower at Branscombe (Devon) (Thurlby 1991), in the north and south crossing arches at St John's, Devizes (Wilts.), and in the nave arcades at Malmesbury Abbey (Fig. 7).

The crossing tower rises three stages above the transept walls (Fig. 1). The first stage is plain except for the ringed *en-delit* shafts in recesses at the angles. These angle shafts continue into the second stage where there are two, two-order, round-headed windows on each face separated by a pointed blind arch, all with finely moulded arches. The third stage has an intersecting arcade with a single pointed window in the middle of each wall. *En-delit* shafts are used throughout the upper two stages with moulded, stylized leaf and proto-stiff-leaf capitals, and there is a heavily restored carved corbel table. Inside, above the crossing arches, there is a wall passage faced with two pointed arches with continuous quadrant mouldings that enclose four round-headed arches atop various multi-scalloped and foliage capitals and black, Purbeck marble shafts (Fig. 6). Above, there is a second wall passage and two round-headed windows with single-order, moulded arches on plain leaf capitals atop coursed nook shafts, between which there is a pointed, blind arch with a single continuous order. Ringed detached shafts in the angles of the crossing sit on head corbels immediately above the string of the lower passage. The design of the bays in the lower stage of the lantern combines the four, round-headed, minor arches of the nave triforium of Malmesbury Abbey (*c.* 1160), with the pointed enclosing arch and continuous roll moulding of the triforium of the west bays of the nave of Worcester Cathedral (Wilson 1978, pl. XIVa) (Figs 6 and 7). The closest family resemblances for the capitals are with the presbytery and transept triforium capitals at St Frideswide's, Oxford (*c.* 1160–80) (Halsey 1988), and west bays of the nave of Worcester Cathedral (after 1175) (Wilson 1978), all of which suggest a date somewhere between 1160 and 1190 for the Wimborne tower.

The lantern tower design with superposed wall passages was especially popular for the great church in Norman England. Modelled on the crossing tower in

Figure 7: Malmesbury Abbey, nave, interior to north-east (Photo: M. Thurlby)

William the Conqueror's foundation of St Etienne at Caen (Bony 1939, 165, fig. 3), the earliest extant example in England is at St Albans Abbey, begun by Abbot Paul of Caen in 1077 (Thurlby 1997). There is a particularly elaborate example at Norwich Cathedral (Fernie 1993), while geographically closer to Wimborne there is a simpler version at Romsey Abbey. Closer in date to Wimborne are the examples in the hospital church of St Cross at Winchester, begun around 1160, and Ripon Minster, *c.* 1180 (Harrison and Barker 1999, 60–4). The crossing tower with superposed internal wall passages is a feature associated with the architecture of the great church. The motif is appropriated by King Henry I for his chapel (now parish church) at Melbourne (Derbs.) (Fernie 2000, 239–42), and by Henry of Blois, abbot of Glastonbury (1126–71) and bishop of Winchester (1129–71), for his hospital church of St Cross at Winchester (Kusaba 1983). Its use at Wimborne speaks clearly of the patron's desire to create a church to vie with the finest in England.

Dark marble shafts were popularised in the rebuilding of the choir of Canterbury Cathedral after the fire of 1174, and are most readily associated with Early English Gothic architecture as at Salisbury Cathedral, begun in 1220. However, there is ample evidence for their use in the third quarter of the 12th century. The lead in this trend was probably taken by Henry of Blois with the view to imbuing his buildings with the grandeur of those of ancient Rome (Beavis 1970; Halsey 1980; Zarnecki 1986; Kusaba 1993; Riall 1994; Fernie 2000, 42). He used marble shafts and capitals at Glastonbury Abbey and in his palaces at Wolvesey and Bishops Waltham (Hants.), as well as in his hospital church of St Cross, Winchester (Kusaba 1993). Black Tournai marble was used under royal patronage at Faversham Abbey (Zarnecki *et al.* 1984, 182). Dark marble also featured in the infirmary cloister at Canterbury Cathedral (1153–67), the lavatorium at St Nicholas' Priory at Exeter (*c.* 1160) (Brakspear 1915–16), the cloisters at Rochester Cathedral (after the 1137 fire), and, in the third quarter of the 12th century, at Battle Abbey, Lewes Priory, and, geographically closer to Wimborne, at Shaftesbury Abbey. It is used extensively in the nave of the Temple Church, London, before 1161 (Lees 1935, 158–60; Wilson 1986, 91–4), by Archbishop Roger of Pont-l'Eveque (1154–81) in his palace at York, and by Bishop Puiset of Durham (1153–95) in the galilee chapel at Durham Cathedral and in his palace at Bishop Auckland (Halsey 1980). The use of Purbeck marble in the crossing tower at Wimborne therefore associates the church with the most prestigious building projects of the time.

The 12th-century nave had a two-storey elevation with pointed main arcade on columns with square, multi-scalloped capitals and round-headed clerestory windows (Fig. 3). It is now surmounted with a 15th-century clerestory. The eastern bay is narrower than those to the west and has a plain arch carried on a pier as opposed to the richly chevroned arches on columns in the three western bays of the Romanesque nave. The change may represent a break in construction but more importantly it is surely to be regarded as a marker for the nave altar as at St Albans abbey and Norwich Cathedral and elsewhere (Thurlby 1997; Fernie 1984; Fernie 1993).

The nave main arcade arches have a heavy soffit roll flanked with downward directed chevron as at the Water Tower of Canterbury Cathedral built by Prior Wibert (1153–67) and the crypt at York Minster constructed by Archbishop Roger of Pont-l'Eveque between 1154 and 1175. The motif is useful for dating, for it is unlikely that the use of this motif at Wimborne pre-dates these examples. The outer order also has chevron ornament and apex masks as in the crossing arches at Sherborne Abbey. Grotesque apex masks are discussed below in connection with Sherborne, but the more naturalistic human heads in bay 3 and animals in bay 4 at Wimborne (RCHME *Dorset* 1975, pl. 8) are allied to the figurated capitals of Wells Cathedral, after *c.* 1175, and the doorways and label stops of the Lady Chapel of Glastonbury abbey, 1184–86/89 (Gardner 1969; Thurlby 1976; Thurlby 1995b).

The church at Wimborne has developed from the plan of a cruciform minster church of the time of

Edward the Confessor. The plan of the early church is preserved in the inner bays of the transepts, and is reflected in the rectangular crossing, while the short nave probably marks the extent of the early aisleless nave. The richly remodelled fabric of the late 12th century derived many motifs from the West Country school of Romanesque and early Gothic architecture, while the superposed passages in the crossing tower complete with dark marble shafts associate the church with the most prestigious buildings of the day. The work may be attributed to Peter de Mellant (Meulan), dean of Wimborne after 1165 (Coulstock 1993, 234; Round 1899, 86, no. 253). Coulstock (1993, 100) records that 'In the cartulary of the Augustinian Priory of St Stephen, Plessis-Grimould, in the diocese of Bayeux, there is a grant (*c.* 1189–99) of the church of Wimborne Minster, *cum decanatu*, to the priory by John, Count of Mortain and earl of Gloucester, reserving to himself only the first presentation *"post destitutionem"* of Peter Mellant'. It seems likely that the remodelling would have been completed in association with this gift.

Sherborne Abbey

The foundation of the abbey of Sherborne is traditionally attributed to Bishop Aldhelm around the same time as the establishment of the episcopal see of Sherborne in 705 (*VCH Dorset* 2, 62). Bishop Wulfsige (992–1001) reconstructed the house and replaced monks with regular canons (*VCH Dorset* 2, 63). The see was removed to Sarum in 1072–5 (*VCH Dorset* 2, 64). In 1122 Bishop Roger of Salisbury, with the consent of Henry I, united the former abbey of Horton to Sherborne as a dependent cell, and raised Sherborne to the dignity of abbey, with Thurstan consecrated as its first abbot (*VCH Dorset* 2, 64). The start of construction of the Romanesque church is not documented (Gem 1975, 109) but evidence will be presented to associate it with the 1122 refoundation of the abbey.

Although heavily remodelled in the later middle ages, enough remains to reconstruct the plan of the Romanesque church at Sherborne as well as many aspects of its elevation and articulation. The extent of the present presbytery at Sherborne reflects the original eastern arm of the Romanesque church. This is not shown in the plan of the church in the Royal Commission on Historical Monuments (1952, opp. 200) but is included in the plan of the 12th-century church on page xlix of that volume. The evidence for this is found in the chamfered plinths of the former pilaster buttresses at the north-east and south-east angles of the Romanesque east front. This type of square-ended presbytery gained popularity early in the 12th century as at Ely Cathedral and Lindisfarne Priory where apsidal east ends were rebuilt square. This form is adopted at the outset at Southwell Minster (1107/14) (Coffman 1998) and later at St Frideswide's at Oxford (Halsey 1988), and St Andrew's Cathedral Priory (Thurlby 1994). As in these churches, the presbytery of Romaneque Sherborne probably extended one bay further east than the aisles.

Evidence for the form of the exterior articulation of the presbytery aisles is preserved in the choir vestry which is entered through a door in the western bay of the north aisle of the presbytery. The south wall of the choir vestry is the former exterior wall of the second bay from the west of the north aisle of the presbytery. Here there are three round-headed arches of a dado arcade with continuous roll mouldings, or rather one pair then a gap and one further to the east (Fig. 8). Above this there is a torus-moulded string course surmounted by four-and-a-half bays of intersecting blind arcading on coursed shafts and triple-scallop capitals. The arches have angle roll mouldings. In the middle bay there is an unmoulded round-headed arch beneath the intersecting arch. This is in the centre of the Romanesque bay of the choir aisle and would have been a window — the masonry beneath the arch does not course with the shafts to either side whereas it does course through in the other bays. The motif of a plain, round-headed arch beneath intersecting arches had earlier been used in the chapter-house of Worcester Cathedral (Willis 1863, pl. 4) and later on the west front of Malmesbury Abbey church (Brakspear 1931). The intersecting blind arcade with the same moulding finds an immediate parallel on the

Figure 8: Sherborne Abbey, north presbytery aisle, exterior wall (Photo: M. Thurlby)

Figure 9: Sherborne Castle, chapel, exterior from south, detail (Photo: M. Thurlby)

exterior of the upper chapel of Bishop Roger's castle at Sherborne (Figs 8 and 9). This suggests that the work on the abbey church started soon after 1122. The richness of exterior arcading may be paralleled nearby on the chancel and formerly on the west front at Milborne Port. Further afield it appears on the north transept at Christchurch (Twynham) Priory, the aisles of Anselm's choir at Canterbury cathedral, and on Cormac's Chapel at Cashel (Tipperary), consecrated 1134, a building with many West Country connections especially with Sarum Cathedral and the work of Bishop Roger (Stalley 1981, 62–5). The motif may be an extension of an Anglo-Saxon aesthetic, as on the chancel of St Laurence at Bradford-on-Avon (Wilts.), and the west tower at Barton-on-Humber (Lincs.) (Taylor and Taylor 1965, figs 38, 379 and 401). If Jim Gibb (1975, 92–7) is correct in his interpretation of the dado arcade on the exterior north wall of the north transept, then external wall arcading already existed at Sherborne before the Conquest.

The Perpendicular remodelling of the presbytery has left no archaeological evidence for vaulting of the aisles or the main span of the Romanesque fabric. However, the Sherborne Cartulary records the good works of the sacrist William Thorncombe: *'Insuper totam ecclesiam plumbo cooperuit et ii testudines ex duabus partibus prepeterii (sic) et introitum magni monasterii et claustrum cum lavatorio et capellam infirmorum ex fundo fabricavit'* (Fowler 1951, 137). Fowler (1951, 132), gives the following translation: 'He covered the whole church with lead — made two parts of the vaulting of the presbytery, and built the

Figure 10: Sherborne Abbey, south transept, east wall, detail of former clerestory window (Photo: M. Thurlby)

entry of the great monastery, the cloister with the lavatory, and the infirmary chapel from its foundations'. *Testudines* are almost certainly masonry vaults but whether the *duabus partibus presbetrii* are the north and south aisles of the presbytery, or the aisles (i.e. the lower part), on the one hand, and the presbytery proper, on the other hand, is ambiguous. To construct a high stone vault in the presbytery in the third quarter of the 12th century would be the norm for a monastic church the size of Sherborne. Parallel examples survive, in whole or in part, at Lilleshall Priory, Kirkstall Abbey and Malmesbury Abbey, while on a smaller scale presbytery vaults were built, or at least planned, at Ewenny (Thurlby 1988), Usk and Leonard Stanley. Then, there is the matter of the articulation of the Perpendicular presbytery which, on the one hand, is quite different to that in the nave and, on the other hand, may reflect the design of the Romanesque presbytery (Willis 1865, ills opp. 183 and 184). In particular, the articulation at the front of the pier rises through the elevation to carry the springers of the high vault and the wall arch over the clerestory. The front plane of the presbytery piers (i.e. the front of the vault shafts) is in line with the flat face of the eastern crossing piers, just as the front plane of the nave piers is in line with the flat face of the western crossing piers. This suggests continuity in design between the earlier fabric and the Perpendicular remodelling. And in this connection, it is worth recalling that in the presbytery piers there is an alternation of continuous and non-continuous orders, a feature that was popular in West Country Romanesque and early Gothic architecture (Brakspear 1931).

Intersecting dado arcading adorns the interior of the square-ended chapel off the north transept. Apsidal chapels are the norm in this position but the square plan does find precedent in the Romanesque cathedral of Lincoln (Bilson 1911). The aisleless transepts preserve their basic Romanesque plan and, in turn, repeat the Anglo-Saxon arrangement (Gibb 1975, 92–7). In the east wall of the south transept there remains part of a Romanesque clerestory window with a richly chevroned arch (Fig. 10). The size of this window precludes there having been a stone vault in the transept and therefore it must be concluded that the transepts were wood-roofed.

The aisleless transepts are closely associated with the great churches of the West Country School of Romanesque architecture discussed above in connection with Wimborne Minster. The asymmetrical crossing arches carried on piers elongated on the east–west axis and paired shafts to carry the inner order of the north and south crossing arches, are paralleled in the

Figure 11: Sherborne Abbey, crossing from west (Photo: M. Thurlby)

Figure 12: Tewkesbury Abbey, crossing from north-east (Photo: M. Thurlby)

great Benedictine abbey churches of Gloucester (now cathedral), Tewkesbury, Pershore and Malmesbury, and in Hereford Cathedral (Figs 11 and 12). The paired shafts that carry the inner order of the western crossing arch at Sherborne are corbelled out above a string course that marks the level of springing of the former nave arcade arches. This indicates that the choir stalls would have abutted the western crossing piers at this point, as at Gloucester and Tewkesbury (Figs 11 and 12). The crossing piers terminated towards the west in a large half cylinder, partially preserved at the north-west angle of the east respond of the nave south arcade, and at the south-west angle of the east respond of the nave north arcade. The height of the arcade approximates that of the nave of Great Malvern Priory — rather than the tall nave-arcade columns of Gloucester and Tewkesbury — and, as at Great Malvern, there would have been round-headed arches to the main arcade. This accords happily with the evidence of the extant Romanesque arches from the transepts to the nave aisles. The division between the ground and first storeys is marked by a string course on the north side ornamented with a meander exactly as above the eastern bays of the nave arcades at Malmesbury Abbey. There is also a fragment carved with this very ornament from Sarum Cathedral (English Heritage store, Salisbury, no. 81109783) (Figs 11 and 13). The placement of the next string course, two courses above the abacus of the capitals of the inner order of the crossing arch, indicates that there would have been a gallery in the nave of Sherborne, as in the naves at Shrewsbury Abbey and Malmesbury Abbey (Figs 7 and 11), rather than a triforium as at Gloucester and Tewkesbury (Thurlby 1985a). Presumably there was a clerestory above this. There is no trace of a high vault against the wall above the western crossing arch and, therefore, it must be concluded that the nave was wood-roofed.

The irregular rhythm of the present nave bays is unlikely to be the invention of the Perpendicular master mason or to have come about through the re-casing of Romanesque arcade piers (RCHME 1952, xlviii–xlix; Willis 1865, 183, ill. opp. 184). Instead, it seems likely to reflect irregularities in the nave of the Anglo-Saxon cathedral. Gibb (2000, 13) states that the Norman arcade columns in the nave were refaced with Perpendicular panelling. However, his plan (Gibb 2000, 30–1) suggests that the core of the piers is Anglo-Saxon and, concomitantly, that the Anglo-Saxon nave was flanked by porticus (Gibb 1975, fig. 11; cf. Gibb 1983, fig. 5). The length of the nave was determined by the location of the Anglo-Saxon west tower and transepts (RCHME 1952, xlix; Gibb 1975).

Figure 13: Salisbury, English Heritage Stone Store, meander ornament from Sarum Cathedral (Photo: M. Thurlby)

Figure 14: Sherborne Abbey, west crossing arch, detail west (Photo: M. Thurlby)

Figure 15: Sherborne Abbey, west crossing arch, detail east (Photo: M. Thurlby)

Figure 16: Sherborne Abbey, south crossing arch, detail north (Photo: M. Thurlby)

Figure 17: Sherborne Abbey, north crossing arch, detail south (Photo: M. Thurlby)

Figure 18: Salisbury, English Heritage Stone Store, corbel no. 81109754 (Photo: M. Thurlby)

Figure 19: Salisbury, English Heritage Stone Store, corbel no. 81109854 (Photo: M. Thurlby)

The apex masks on the east and west faces of the western crossing arch, the north face of the south crossing arch and the south face of the north crossing arch, relate to this motif at Sarum Cathedral (Figs 14–17) (Zarnecki 1953, ill. 45). Similar heads also appear on the westernmost bay of the Romanesque north nave arcade at St Peter's (cathedral), Gloucester, the nave arcades of Malmesbury Abbey (Fig. 7), Bolstone (Herefs.) north doorway, Elkstone (Glos.) south doorway, Forthampton (Glos.) south doorway, Siddington (Glos.) south doorway, Upleadon (Glos) re-used above the chancel arch (Thurlby 1999, figs 12, 20, 22 and 45; Zarnecki 1953, ills 46). On the west face of the west crossing arch, beaded medallions adorn the label (Fig. 14). They are a small-scale version of the motif found at Sarum Cathedral and on the east presbytery arch and the presbytery south clerestory window at Llandaff Cathedral (Thurlby 1999, figs 41 and 42). The heads on the north face of the south crossing arch and the south face of the north crossing arch are clearly related to two corbels from Sarum Cathedral (English Heritage Store no. 81109754 and 81109854), especially in the treatment of the cheeks in the manner of layered, over-inflated tyres (Figs 16–19).

The Romanesque crossing tower was of the lantern type with wall passages, later used at Wimborne. It is reconstructed in the Royal Commission inventory (1952, 203).

The massive cylindrical projections into the angles of the transepts next to the crossing piers are without parallel in post-Conquest architecture in England. Are they a reflection of the Anglo-Saxon crossing? This was suggested by Sir Alfred Clapham in his reconstruction of the Anglo-Saxon cathedral published in the Royal Commission on Historical Monuments (1952, xlix–l). His case is an attractive one and may be supported with reference to Repton (Derbs.) where at the entrance arches to the north and south porticus the inner order of the arch was carried on large detached shafts (Taylor and Taylor 1965, fig. 249).

The south porch is heavily restored but many details may be checked against Carter's (1837) engraving (pl. XXV) and shown to be essentially accurate (Willis 1865, 184) (Fig. 20). Romanesque vaulted porches appear in the early 12th century at Tewkesbury abbey and Southwell Minster but barrel vaults are used there. Malmesbury abbey, and the churches at Bishop's Cleeve (Glos.) and Bredon (Worcs.), both of which belonged to the Bishop of Worcester (Moore 1982, 3.7; Thorn and Thorn 1982, 2.22), all have rib-vaulted south porches as at Sherborne. There are blind arches with continuous roll mouldings in dado arcades of side walls topped by two arches with continuous chevron in south porch. The entrance-arch capitals in the form of grotesque masks relate to those of the external arcade of Anselm's choir of Canterbury Cathedral (Kahn 1991, ills 145 and 146). This motif is also popular in the West Country, as on the north doorway at Monkton Farleigh (Wilts.) and the south doorways at Siddington and Elkstone (Glos.), as well as a capital from Abbotsbury abbey and a corbel at Maiden Newton discussed below (Figs 25 and 26). The ribs have a triple-roll moulding like those at Keynsham Abbey (fd 1166/7) (Lowe *et al.* 1987, pls 10–12) and in the chapter-house of Buildwas Abbey (*c.* 1160–70) (Fergusson 1984, pl. 108). There also exists an earlier variant of this rib profile from Sarum Cathedral in which the central roll is slightly larger than those to the side (English Heritage, Salisbury Store, no. 88101829). The ribs are carried on angle-set capitals which is relatively unusual in English Romanesque architecture (Thurlby 1988, 291–2). It is likely that this placement is associated with French Gothic influence as in the rebuilding of the choir of Canterbury Cathedral after the fire of 1174 (Woodman 1981, figs 85, 92 and 96).

The finely moulded arch carried on trumpet-scallop capitals on the interior face of the south doorway is most closely paralleled on the slype east arch at St Augustine's, Bristol, and accords with the delicacy and complexity of West Country early Gothic mouldings as at Wells Cathedral.

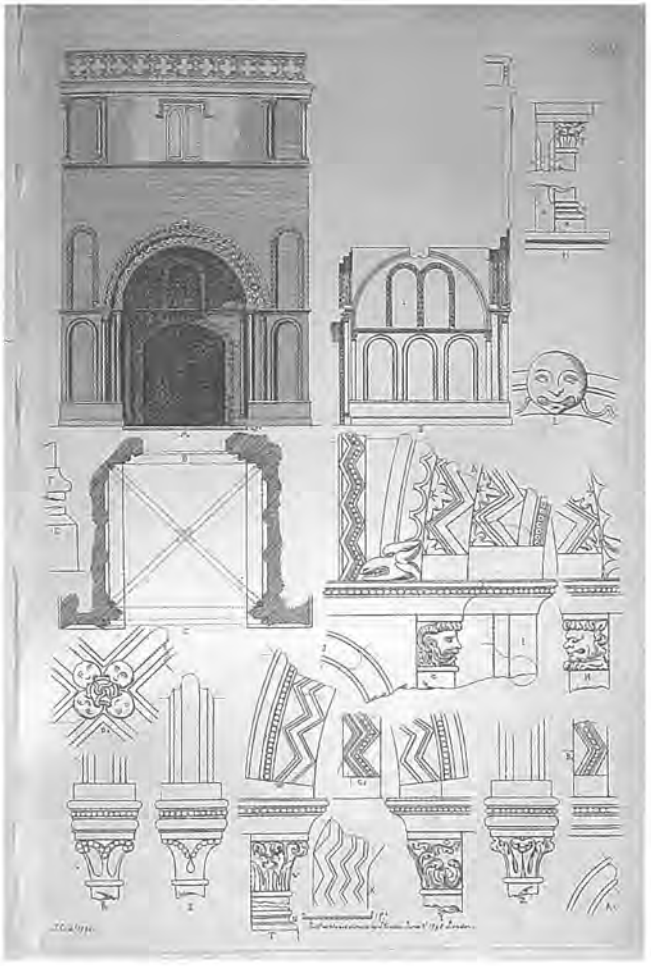

Figure 20: Sherborne Abbey, south porch (after Carter)

These comparisons suggest that the Romanesque remodelling of Sherborne abbey was not accomplished quickly. Parallels with motifs in Bishop Roger's cathedral at Sarum and castle chapel at Sherborne suggest that the work in the eastern arm and crossing was executed by masons who previously worked for this bishop. However, the richness of the beaded chevron in the south porch, the angle-set capitals with their waterleaf forms, suggest a date in the 1170s or even the early 1180s. This accords with the time of the sacrist, William Thorncombe, who, in addition to his work on the abbey, built a chapel in Sherborne in honour of St Thomas Becket 'in a place called the Greene' which was dedicated on 11 September 1177 (Fowler 1951, 132, 137).

Forde Abbey chapter-house

Cistercian monks from Waverley moved to Forde in 1147 (Fergusson 1984, 125). Of the 12th-century monastic complex, only a part of the lavatorium and the chapter-house remains today to serve as the chapel. It is rib-vaulted in two bays with semi-circular diagonal ribs with stepped triple- roll mouldings, and pointed transverse arches with two heavy rolls to either side of a thin angle fillet (Fig. 21). The ribs and transverse arches rest on four-shaft responds which, contrary to standard

Figure 21: Forde Abbey, chapter house, interior to east (Photo: M. Thurlby)

Figure 22: Forde Abbey, chapter house, detail, north respond (Photo: M. Thurlby)

practice, do not project from the plane of the wall but are recessed behind it (Fig. 22). A simpler version of this motif is used in the Gloucester north transept chapel (1089–1100), and later in the chapter-house there. Twin recessed shafts are used on the south face of the north-east crossing pier at Malmesbury abbey (Fig. 5), and in the crossing piers at Leonard Stanley (Glos.). There is also a damaged fragmentary recessed shaft in the north wall of the chancel at Loders (Dorset) (RCHM 1952, 138) and a recessed shaft with a double scalloped capital from Sarum Cathedral (English Heritage Store, no. 81109831). This suggests that similarly recessed responds were also used in Bishop Roger's extension to the cathedral. The motif is later used in the chapter-house at Bindon (Dorset), a Cistercian house colonised from Forde in 1172 (RCHME II, 404–6, pl. 204; Fergusson 1984, 112–13), and in modified form the chapter-house at Benedictine Sherborne about 1180 (Keen and Ellis, forthcoming). The triple-roll rib profile is the same as in the south porch of Sherborne abbey and allied works discussed above, while the paired rolls to either side of a thin angle fillet are used in the crossing arches at Malmesbury Abbey (Fig. 5).

Especially remarkable is the appearance of chevron ornament on the east and west wall arches, a motif that hardly conforms to the Cistercian ideal of architectural simplicity (Fig. 23), and one that leads to the consideration of the context of the Forde chapter-house. It is interesting that, with the exception of the daughter house at Bindon and the ribs in the chapter-house of Buildwas, the parallels for Forde are not with other Cistercian work but rather with buildings of other monastic orders in Gloucestershire, Wiltshire and Dorset. It is a case of a Cistercian community using local masons and local motifs just as they did elsewhere in England and Wales. Three such examples are cited here. The simple, round-headed nave arcades of Margam Abbey (Glamorgan) most closely resemble the early Norman nave arcades of Benedictine alien priory at Chepstow (Monmouthshire). The details of the east processional doorway at Flaxley (Glos.), with the alternation of a continuous quadrant roll with non-continuous, nibbed shafts go with the late-12th-century work at Worcester Cathedral and nearby works of the West Country School of masons (Brakspear 1931). Many aspects of Kirkstall Abbey (Yorks.), especially the rib vaults, depend on a northern architectural tradition developing from Durham Cathedral (Hope and Bilson 1907). Moreover, the rich chevron decoration on the arch between the north nave aisle and the north transept at Kirkstall derives from the crypt of York Minster (Hope and Bilson 1907; Thurlby 1995c).

Figure 23: Forde Abbey, chapter house, detail, west wall arch (Photo: M. Thurlby)

While the specific motifs used in the Forde chapter-house belong to the regional school of architecture, the general richness of the articulation is quite in keeping with other Cistercian chapter-houses of the third quarter of the 12th century, as at Rievaulx (Fergusson and Harrison 1999, 83–101), Fountains (Coppack 1993, 45–6), Kirkstall (Hope and Bilson 1907, 29–30) and even Fontenay (Cote d'Or) (Dimier 1982, pls 7 and 8; Kinder 1997, 244–67). There are no documentary sources to suggest why these chapter-houses should be so lavish and apparently flout the Bernardian rules of architectural simplicity. Undoubtedly the richer articulation serves to emphasise the importance of the chapter-house. And, it may simply be that, by the third quarter of the 12th century, the initial quest for a Cistercian architectural asceticism had been tempered by a desire for a little Benedictine or Cluniac aesthetic decadence. Certainly the plan of the Forde chapter-house with its single, tall space rib-vaulted in two bays has much more in common with its counterpart at Benedictine Durham, than with the usual low three-aisled schemes favoured in many Cistercian houses. However, it is interesting that in the early 13th century, unaisled, rib-vaulted chapter-houses are found in the Irish Cistercian abbeys of St Mary's, Dublin, and Mellifont, seemingly under the influence of the West Country school of masons (Stalley 1987, 165).

Maiden Newton

Of the Romanesque fabric of the church of St Mary, Maiden Newton, there remains the lower part of the central axial tower and the north and west walls of the nave (RCHME *Dorset*, 1952, 150–2). The plan of the Romanesque church would probably have been the same as at St Nicholas, Studland (Dorset), with a square-ended chancel, axial tower and aisleless, rectangular nave, and it is possible that, like Studland, the chancel of the Romanesque church at Maiden Newton was vaulted (Lundgren and Thurlby 1999). The evidence rests on a capital and attached corbel, now reset in the west wall of the south porch (Fig. 24). Such head corbels are frequently associated with the support of ribs, a tradition that commences at Durham Cathedral and is followed at Lincoln Cathedral and the chancel of Stow (Lincs.), Dalmeny (Lothian) and Leuchars (Fife). The form of the head is related to a mask capital from the Benedictine abbey of Abbotsbury (Dorset) (Figs 24 and 25). The 'linen-fold' of the Maiden Newton capital is a more complicated version of the pattern used on former cloister capitals from the Augustinian priory of Ivychurch (Wilts.) re-used in a fountain on the east side of the old A36 in Alderbury village.

Figure 24: Maiden Newton, capital and attached head reused in south porch (Photo: M. Thurlby)

Figure 25: Abbotsbury, mask capital (Photo: M. Thurlby)

Figure 26: Maiden Newton, mask (Photo: M. Thurlby)

Figure 27: Maiden Newton, north nave corbel no. 2

Figure 28: Maiden Newton, north nave corbel no. 15

Figure 29: Maiden Newton, Romanesque corbel, re-used as nave roof corbel N1 (Photo: M. Thurlby)

Built into the head of the squint to the south of the chancel arch is a grotesque head which is closely related to the apex label masks on either side of the west crossing arch at Sherborne Abbey (Figs 14, 15 and 26). However, unlike these Sherborne masks, the one at Maiden Newton has a plain section of stone at the top that suggests something was placed on the head, possibly a vault rib in the chancel.

The north nave wall preserves its original Romanesque corbel table albeit in a very weathered condition (Figs 27 and 28). Fortunately, inside the nave some of the arched braces of the roof are carried on re-used Romanesque corbels, and on the interior of the south wall of the south transept, to the left of the window sill, there are reset three more Norman corbels (Figs 29, 32–35 and 37). Presumably these came from the south wall of the nave (Figs 35 and 37). They are of the highest quality and relate to the sculpture of Bishop Roger of Salisbury at Sarum Cathedral and Sherborne Castle, heads at Malmesbury and Keynsham, and allied work at Lullington (Somerset) (Stalley 1971; King 1990). Even in its worn state, it is clear that the beakhead biting a roll moulding, on corbel 15 (counting from the east) of the north nave wall at Maiden Newton, is closely related to this motif on a corbel from Sarum

Figure 30: Salisbury and South Wiltshire Museum, beakhead corbel from Sarum Cathedral (Photo: M. Thurlby)

Cathedral, and on a vault rib from Bishop Roger's chapel at Sherborne Castle (Figs 28, 30 and 31). A somewhat less ferocious relation of this creature is re-used to support the first wall post on the north side of the nave (Fig. 29). The next re-used corbel (N2) is a rather happier member of the family of the Sherborne crossing apex masks (Figs 14–17 and 32). In these re-used corbels the drill work to the side of the eyeballs is more emphatic

Figure 31: Sherborne, New Castle, beakhead on vault rib from Sherborne Castle Chapel (Photo: M. Thurlby)

Figure 32: Maiden Newton, Romanesque corbel, re-used as nave roof corbel N2 (Photo: M. Thurlby)

Figure 33: Maiden Newton, Romanesque corbel, re-used as nave roof corbel N5 (Photo: M. Thurlby)

Figure 34: Maiden Newton, Romanesque corbel, re-used as nave roof corbel S5 (Photo: M. Thurlby)

than in the Sarum Cathedral sculptures and comes closer to the Abbotsbury mask capital (Figs 25, 29 and 32), and several label masks of the nave arcades at Malmesbury Abbey (Zarnecki 1953, fig. 46). This indicates an understanding of the working of the eye as a ball-and-socket joint and probably a date for the Maiden Newton corbels closer to Malmesbury than to Sarum. The Romanesque fabric of Malmesbury Abbey was probably commenced by Abbot Peter Moraunt (1141–*c.* 1158) (Wilson 1978, 82), and construction of the nave probably extended into the 1160s or even the 1170s. Be that as it may, the Sarum connection for Maiden Newton is firmly established through the horn-blower on re-used corbel N5 (Fig. 33). This motif is used on one of the Sarum corbels preserved in the Salisbury and South Wiltshire Museum (Thurlby 1999, fig. 44), while the general physiognomy and the finely groomed moustache combed over the beard of this Maiden Newton head are related to a head in the Robert and Lisa Sainsbury Collection at the University of East Anglia, attributed to the Sarum Master by James King (1990, 77). An analogous arrangement of the moustache is on corbel N2 outside (Fig. 27) and, complete with beard, on one of the corbels reset in the south wall of the south transept (Fig. 35). Here the beard and moustache are clutched by a hand on an arm appended to the figure's right ear. The central parting and grooming of the hair, combined with the depiction of the eyes with the clear delineation of the lids and the drilled pupils, relate to a head from Sarum Cathedral preserved in the Salisbury and South Wiltshire Museum (King 1990, fig. 1a). The double parallel-line folds on the arm relate to a capital in the chancel at Leonard Stanley that depicts

Figure 35: Maiden Newton, Romanesque head corbel reused in south wall of south transept (Photo: M. Thurlby)

Figure 37: Maiden Newton, Romanesque rosette corbel reused in south wall of south transept (Photo: M. Thurlby)

Figure 36: Romsey Abbey, south transept chapel, corbel, beard puller (Photo: M. Thurlby)

Mary Magdalene washing the feet of Christ, and to the figure of Christ in the niche of the north doorway at Lullington (King 1990, figs 7, 8b and 19). The male corbel head with an arm growing from the side of the head and holding the beard is also used on the south transept chapel at Romsey Abbey (Fig. 36). The rosette corbel (Fig. 37) recalls stylized flower bosses from Sarum Cathedral reset in the walls of the close of Salisbury Cathedral (Thurlby 1999, fig. 42). Re-used corbel S5 (Fig. 34), has a gaping mouth based ultimately on a classical theatrical mask used in Terence manuscripts (Kauffmann 1975, 102, ills 198–202) and, more directly, on other heads from Sarum Cathedral (King 1990, figs 1b and 2b). It is also closely related to a head on a vault capital in the nave of Cormac's Chapel, Cashel (Stalley 2000, pl. 5.13), a building that incorporates many Sarum-derived motifs (Stalley 1981, 62–65). The Maiden Newton and Cashel heads share a similar, rather flat physiognomy, the same outlining of the mouth, lines on and to the side of the rubbery nose, and huge eyes with drilled pupils.

Inside the north and south doorways at Maiden Newton are single medallions reset at the apex. The one above the north doorway is a seated figure holding a book in his left hand and with the right hand raised in blessing (Fig. 38), while above the south doorway other is an equestrian figure (Fig. 39). Stylistically the seated figure has draperies most closely paralleled in St Peter and St Paul from Ivychurch priory, now in the Victoria and Albert Museum (Williamson 1991). The finely incised folds of the rider also recall the ivory Virgin and Child in the Victoria and Albert Museum which possibly comes from Shaftesbury, Dorset (Zarnecki *et al.* 1984, 226). Figures in beaded medallions are used on the west processional doorway at Durham Cathedral (*c.* 1130), the south doorway of Kilpeck (Herefs.) (*c.* 1134), the north doorway at Brayton (Yorks.), and Fishlake

Figure 38: Maiden Newton, medallion above north doorway (Photo: M. Thurlby)

Figure 39: Maiden Newton, medallion above south doorway (Photo: M. Thurlby)

Figure 40: Abbotsbury, medallion from abbey church (Photo: M. Thurlby)

(Yorks.), the south doorway at Teversal (Notts.), on three sections of label preserved in the Yorkshire Museum possibly from All Saints, Pavement, York (Zarnecki *et al.* 1984, 178–9), York St Margaret's (from St Nicholas' Hospital), on the west doorway at Iffley (Oxon) (*c.* 1175–82) on a shaft and capital from Reading Abbey (*c.* 1130), and on four *ex situ* stones from the Benedictine abbey of Abbotsbury (Fig. 40). The latter are especially relevant for our study, for although they are quite unlike the Maiden Newton figures, one is carved with a crab, surely a sign of the zodiac. Concomitantly, this suggests that the Maiden Newton rider may be a labour of the month; May is often depicted with a rider (Webster 1938). Representations of labours of the month in medallions on doorways also find parallel in the south doorway at Barfreston (Kent) (*c.* 1180) (Collins 1933), the west doorway of Dunstable Priory (*c.* 1180) (Marks 1970). Moreover, at Alne (N. Yorks.) the inner order of the south doorway has some signs of the zodiac and one labour of the month (Zarnecki 1953, 59). These comparisons suggest that the Maiden Newton medallions would have come from an elaborately carved south doorway of the Norman church.

Documentation for the Norman church at Maiden Newton has not survived. Domesday Book (Thorn and Thorn 1983, 40.8) records that Waleran holds (Maiden) Newton himself, but there is no mention of a church or priest. The high quality of the sculpture and its connections with Bishop Roger's work at Sarum Cathedral and Sherborne castle and their followers, indicates the involvement of an ambitious patron. As to the date of the work, the parallel of certain details of the Maiden Newton heads with those at Malmesbury suggests execution in the 1160s. This is in keeping with the architectural detailing of the tall, round-headed window with chamfered single order in the north nave wall. Chamfered surrounds of similarly scaled, round-headed windows are found in the clerestory of the east bay of the presbytery at Lilleshall Priory (fd. 1148), and in the presbytery and transepts of Kirkstall Abbey (fd 1152). Be that as it may, it is worth emphasising that the incorporation of many Sarum-derived motifs at Maiden Newton demonstrates that the work executed for Bishop Roger in the 1120s and 30s was still considered worthy of emulation 30 or 40 years later.

Conclusion

The four buildings considered above enhance our understanding of Romanesque architecture in England. At Wimborne Minster the plan of the 11th-century church had a distinct bearing on the form of the later 12th-century fabric, while the design of the crossing tower demonstrates the patron's desire to have the church associated with the grandest works of the day. Similarly, at Sherborne Abbey the pre-Conquest church was significant for the 12th-century remodelling work that was undertaken by masons connected with Bishop Roger, one of the most munificent architectural patrons

of the day. The chapter-house at Forde Abbey takes its place amongst the most progressive, richly articulated Cistercian chapter-houses in England of the third quarter of the 12th century, and clearly shows a relaxation of the more ascetic architectural taste that characterised the earlier buildings of the order. Finally, at Maiden Newton, we find sculpture of the highest quality executed by craftsmen who had worked for Bishop Roger. This indicates that, even in small churches, the generosity of an ambitious patron can attract the finest artists of the day to produce work of the same high quality as in the splendid cathedrals and abbeys.

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Tregonwell Frampton: The Dorset Dimension

DENNIS BRAILSFORD

The national importance of Tregonwell Frampton (1641–1728) in the history of horse racing, and hence in the whole history of organised sport, has for long been rightly recognised, if not always with unqualified approval. As the Crown's 'Keeper of the Running Horses' at Newmarket for thirty years until his death, his powerful position enabled him to bring some order and form into what had been a haphazard mishmash of assorted racing challenges. Equally, his own breeding skills effectively introduced recognisable blood lines into the sport, bringing not only rising standards of performance but also laying the foundations of what was to become an important industry. All this has been duly celebrated, though the evidence even on this wider scene is disappointingly sketchy.[1]

What has been given virtually no attention at all is the Dorset dimension of Tregonwell Frampton. Although he was over fifty before he took up office under the crown, his life as a member of an important and well-established Dorset family has been treated as of little consequence, though it could scarcely have avoided impinging on his national involvements. The tendency has been to see his inheritance as something of an embarrassment to him when, as the fifth and youngest son, he survived all his brothers who left no sons themselves and he unexpectedly acquired the family estates. According to existing accounts he lost little time in making over the property to his cousin, Giles Frampton, the next heir, for £5,000, thus at a single stroke getting rid of an unwanted burden and providing himself with needed cash. The timing and details of what must have been an extraordinary transaction have always been obscure. In the *Dictionary of National Biography* (*DNB*), his biographer, Alsager Vian, asserted that the transfer 'took place some time prior to 1702', though without giving reasons for this show of confidence.[2] The Bridport antiquarian, A.M. Broadley, in a valuable article in *The Field*, effectively refuting the worst calumnies levelled against Frampton after his death, does none the less state quite baldly that 'in 1689 he allowed the family estates, which came to him on the death of his brother William, to pass to a cousin, in consideration of the latter paying him £5,000 ready money'.[3] All the implications have been that his Dorset responsibilities were of little consequence to him and that all his interests had become completely focussed on Newmarket.

There is, however, ample evidence of his local activities. He was born in 1641 and it is reasonable to assume that, as the youngest son of a family which seems not to have suffered greatly from the Civil War, he enjoyed a relatively relaxed childhood and youth. His father died in 1643 and his brothers were all too young to become much involved in the conflict. Then the Revd Thomas Payne, MA, their Rector from 1639,[4] was not noted for any Puritan excesses which might have inhibited his younger years. So long as he did not go tippling and dicing in well-policed Dorchester, the youthful Tregonwell would have been safe from serious interference. His schooling, whatever and wherever it was, did teach him to write a very legible hand to judge from the few of his letters that have survived[5] and he doubtless began early, from close familiarity with sporting animals, to discover the elements of genetics.[6]

He begins to emerge from surmise into substance 'about 1670' when he was, according to his kinsman, William Chafin (1733–1818), 'the most active pursuer' of hawking in the west of England, though even this was written from memory well over a hundred years later. Chafin also reproduces three letters written by Tregonwell — signed familiarly 'Will. Frampton'[7] — two from the 1680s devoted almost entirely to the purchase, care and transport of hawks and a third dated September 16, 1690, containing one particular sentence of which much has been made. 'I shall for near a fortnight', he writes, 'be tumbling up and down in Dorset and Wilts, till I have got up some money to make up part of my engagements, but I doubt shan't all'. Overall it is a somewhat strange missive. He doubts whether he will call on the Chafins at Chettle before he goes to Newmarket at the end of the month, but implies that he might and concludes, unsigned, 'I only add that I am your nameless friend'. The anonymity may add force to the usual interpretation that this was one example of his frequent financial difficulties.[8]

There is in fact considerably more cogent evidence of Frampton's activities in Dorset from the 1690s onwards. By 1690 he has inherited the estate and his name appears on both the Manorial Court Records and on the frequent Frampton property transactions. His Warmwell neighbour, John Richards (16xx–17xx) also makes at least fifteen certain references to Tregonwell Frampton between 1692 and 1701/2 as well as others where the identity of the 'Mr Frampton' is not clear. The more substantial surviving section of these diaries — that covering between 1697 and 1701/2 has — has been in the public domain since 1853 when extracts were published by William Barnes,[9] though they have not been picked up by subsequent biographers. They reveal a countryman apparently on good terms with his neighbours, much given to rural sports such as hawking, coursing and cock-fighting, and regarded for his breeding skills. He first appears in the unpublished and fragmentary 1692–94 section of the diaries, visiting Warmwell along with another landowner and friend, Mr

Henning of Poxwell, on the afternoon of 22 August 1692. Tregonwell and John Richards dine at each other's houses, they have contests between their respective fighting cocks, Tregonwell gives advice on a horse, brings along 'a young greyhound bitch puppy' and sends his man for 'two bottles of my port wine'.[10] In the more substantial section of the diaries, between 1697 and 1701, Tregonwell Frampton is a regular visitor to Warmwell. In July 1697 Richards records his 'third visit since my present gout' and the two men are in frequent contact over the breeding and training of fighting cocks and particularly of horses, with Mr Frampton's Dun Stallion performing good service more than once. Again, two years later,

> I sent my grey nag colt by Pymer this day twixt 11 and 12 to Mr Frampton's horse breaker at Moreton to be backed, he having been here with me this morning and undertaken it.[11]

The impression is that Tregonwell Frampton had settled comfortably in the family's Tudor house at Moreton and was enjoying his unexpected Dorset inheritance, though the dates of the diary entries — all in the depths of winter or high summer — strongly imply that he already also had his Newmarket house and was spending the spring and autumn racing seasons there.

By January 1701/2 and the last mention in the diaries Tregonwell was over sixty and had been responsible for the royal racehorses for some time — for how long is again uncertain but he was now a figure of considerable consequence at Newmarket. He was appointed under William III, the two men sharing a passion for both cock-fighting and horses and regularly together both on the Heath and at the cockpit for what was Newmarket's usual morning entertainment. He was to keep the post and the magnificent title of Keeper of the Running Horses through the reigns of Queen Anne and George I into the early years of George II. It gave him a permanent salary but not a consistent one. He is recorded by Chamberlayne as receiving £1,000 in 1700 but as the sum was determined by the number of horses in training (at £100 a horse) this would vary from year to year.[12] He was, however, by no means solely dependent on his royal appointment even so far as horse racing went since he was breeding and running horses at Newmarket on his own account, as well as usually running the royal horses under his own name.[13]

Mention of his financial affairs must bring us back to Dorset. At the time of his Chafin letter in September 1690, with its mention of cash shortage, he would just have inherited the family properties and he certainly was involved in at least six sales of cottages over the next eighteen months.[14] They would hardly, though, have contributed significantly to the coffers of someone reputed to gamble on Tregonwell's scale:

> one day he lost 1,000 guineas, the next he won 2,000, and so on alternately. He made as light of throwing away £500 or £1,000 at a time as other men do of their pocket-money, and was perfectly calm, cheerful, and unconcerned when he had lost a thousand pounds as when he had won it.[15]

If these property transactions did represent some financial crisis then by the same token the absence of sales over the rest of the decade could well be taken to mean that the crisis was past. Another feature of the early years of Tregonwell's Moreton stewardship was the preservation (quite possibly accidental) of some manorial court records, the first from February 1691, the last from July 1703, and all in his name.[16] This turned out to be a crucial year. There has been a family belief that Giles Frampton took over the estates at about this time and the discovery, within a mass of documents dealing with property transactions, of one sheaf, described as being not between Frampton and another but, unusually, as between members of the Frampton family revealed the full and fascinating details of how the transfer took place.

It was dealt with in three separate documents. The first was headed:

> Articles of Covenants and Agreements indented... Made Concluded and Agreed upon the three and twentieth Day of July in the Second Year of the Reign of our Sovereign Lady Anne in the Year of Grace 1703... between Tregonwell Frampton of Moreton... In the County of Dorset of the one part and Giles Frampton of Ilsington in the said County of Dorset Esq of the other part.[17]

The second was as a parallel indenture, dated three days later, giving more details of the transaction[18] and the third a proposed Act of Parliament 'for the better vesting in Giles Frampton the Manor and Farm of Morton', and obviously drawn up so that there could be no doubts in law over the transfer.[19]

The three documents taken together describe the transaction in all its complexities. Their common starting point is the assertion of Tregonwell Frampton's legal rights to the estates and manor of Moreton and Hurst, now settled on him 'for the term of his natural life'. Then to the nub of the matter — Tregonwell's expressed determination to remain a bachelor — 'whereas the said Tregonwell Frampton is fully minded and resolved not to marry and to encourage the said Giles to do so proposes that for five thousand pounds' he shall surrender 'the estates and the manor of Moreton to the said Giles Frampton.'[20] The Act of Parliament goes further:

> Tregonwell Frampton is or lately was seized by the virtue of the Said Release of all and singular the premises to raise the Summe of Five Thousand Pounds and being minded not to marry but being solicitous for the Continuance and Preservation of his Name... Desires that Giles Frampton should marry...[21]

What is clear throughout is that the transfer applies only to the single *Moreton* manor and estates. All the

other quite considerable Frampton properties and property rights remain firmly with Tregonwell and are referred to as such several times. They constitute 'the possession and enjoyment of the... other manors, messuages and lands' which (this from the Act) will pass to Giles as of right on the death of Tregonwell. The Act also makes provision not only for Tregonwell's use of these remaining properties during his own lifetime but even for their use not only by his sons 'severally and successively' but also for 'such woman as at the time of the Decease of the said Tregonwell Frampton shall be his wife'.[22] All this in spite of Tregonwell Frampton's insistence that he will not marry and backed up with the even stronger undertaking, from the indenture, where he declares that he has no male issue lawfully begotten, was not married to any woman whatsoever and that if he does marry or take to wife any woman whatsoever then 'immediately such marriage is solemnized he shall and will pay to the said Giles Frampton the sum of Ten Thousand pounds sterling.'![23]

The actual financial arrangements that did belong to the real world were then set out in business-like fashion. At the surrender of the estate £1,000 was to be handed over 'in the Inne commonly called the George Inne in Dorchester';[24] £1,000 was to be paid on or before the feast of St Michael the Archangel next ensuing and the final £3,000 on or before the feast of the nativity of John the Baptist (24 June) 1705. There was also to be the payment of interest at 5% a year on the outstanding debt as from 'the Nativity of the Lord Christs next ensuing' (i.e. 25 December 1703). It was agreed also that the two would share the cost of procuring the Act of Parliament, the proposing of the Act being declared to be a response 'to the humble suit as well of the said Tregonwell Frampton as of the said Giles Frampton'.[25]

The documents relating to this transfer prompt some reappraisals of the accepted story. In the first place there is the new assurance of the dating. The family estates have been seen as a fleeting encumbrance which he disposed of as soon as possible. It is clear now that he kept responsibility for all of them for a full fourteen years, and, Moreton apart, would continue to do so. Moreover, the assumption that it was the immediate shortage of money that provided the overall and pressing reason for the sale of the estate has to be more qualified than it was. While the demand for interest scarcely smacks of familial generosity, to have the payment in instalments with over half the money not due for two years was hardly the '£5,000 down' described by his *DNB* biographer or Broadley's '£5,000 ready money'. The sums involved were again also unlikely to be of the same consequence to Frampton as to most country gentlemen, given the reported extent of his gambling.[26]

Other possibilities than the need for cash do present themselves. He was now in his sixties and his Newmarket responsibilities were increasing rather than diminishing. He was working under a new sovereign, Queen Anne, who had been on the throne for just a year and was showing a much more all-embracing interest in Newmarket affairs than William III who had seldom looked further than the cockpit, the racing and hunting. The new queen shared the interest in racing, which led her to setting up the first meeting at Ascot in 1711.[27] At Newmarket she refurbished the palace in 1705, had the streets paved for the first time, founded two schools, one for boys and one for girls,[28] and had her Keeper of the Running Horses make all manner of racing challenges on her behalf.[29] Frampton was almost certainly finding that he had more to do with the royal horses, with his own and with his growing involvement in the general organisation of Newmarket racing. He could certainly have felt at just this time that he would have to shed some of his responsibilities. If it came to a choice between Moreton and Newmarket there could be little doubt about which way it would have to go, though there is no reason to suppose that his expressed desire to keep the property in the family by transferring it to Giles was other than sincere. One other possibility remains. There is a family belief that he came under pressure from those next in line to dispose of Moreton lest he should gamble it away and this was certainly an age of increasingly highly staked bets. More than one landed family had already been ruined, more would follow and more estates would change hands. This was the gambling fever which led to the passing of the symptomatic but ineffectual 1708 Act of Parliament (9 Anne c.14, s.3) forbidding the recovery of any gambling debts above £10. It is unlikely that Tregonwell ever imagined that he would fall into such extreme difficulties but at least he was protecting the central core of the family inheritance against any such danger. What he did not own he could not forfeit.

The fact, too, that he disposed of only the manor of Moreton and Hurst meant that he still had a considerable if much reduced stake in Dorset. He moved to Waddock Farmhouse,[30] a stone's throw from Hurst itself and just within Affpuddle, another Frampton parish. This was to be Tregonwell's Dorset base for the remaining 24 years of his life and to be the source of long memories of his mule trains moving back and forth between there and Newmarket. Not only did he now live in Affpuddle but he continued to be the lord of the manor both there and at Bryantspuddle. It is his name which appears regularly on property transactions in the two parishes, the last of which, as late as 1725, the transfer of Parrock Close is recorded under the heading:

> 'Manor of Affpuddle with Pallington in the County of Dorset...
>
> At the Court Baron of Tregonwell Frampton, Esq., Lord of the said Manor... It is enrolled as follows...'

The foot of the document then bears the shaky but still very recognisable signature of the 86 year old Frampton.[31]

His local responsibilities were even augmented in the last fifteen years of his life when he inherited the manor of Knook in Wiltshire, where the family interests have been noted earlier. After his brother Richard, the third son, died in 1685 with no male heirs, his widow Jane had succeeded him. Through to 1710 the records regularly describe the Knook Manorial Court as that of Jane Frampton, 'Lady of the Lordship and Manor of Knooke'.[32] Jane was, however, well before then, living permanently in Norfolk where her daughter, another Jane, had married Edward Paston of Paston and Barmingham. On the elder Jane's death the manor reverted to Tregonwell, the existing court records from 1713 to 1718 all describing him as Lord of the Manor.[33] There may well have been some profit from this new responsibility, to judge from a letter sent by Jane Frampton on 12 November 1707 from Barmingham Hall to Mr King at Knook instructing him to secure the due payments and rents there[34] and this was followed the next year by a formal declaration, signed and sealed by Jane Frampton, appointing Mr Harman King her deputy and representative at Knook.[35] When Tregonwell succeeded to the property it appears that Mr King continued to manage the Knook affairs as he had done in Jane's later years.[36]

It is clear that Tregonwell Frampton, in spite of seeing Newmarket as one centre of his world, having his own house and eventually his funeral there, also retained strong ties with the county of his birth and had a continuing involvement with appreciable elements of the family estates. Doubtless in the overall scheme of things his national — and even international — importance lies in his contribution to the development of what was to become a major sport and a major industry, but a look at the Dorset side of his life helps us to see him as a somewhat more rounded person, and not quite the almost mono-maniacal pursuer of the sports of the field and the chase that previous accounts have described. The fact, too, that his property transactions in Dorset have tended to be dismissed in the barest and least flattering light is in tune with the general denigration which Frampton's reputation met with after his death.

There is no doubt that in old age at least — and it is well to keep in mind that his most influential Newmarket days were all when he was in his sixties and later — he was undoubtedly eccentric, unpolished in manner, careless of fashion in his dress and, certainly in the eyes of the racing aristocracy, presumptuous in dealing with both them and the monarch. After his death, though, Newmarket fell into decline[37] and not until the early 1750s did recovery begin with new guiding hands in the form of the Jockey Club, which purchased its first premises there in 1752.[38] This, significantly as it turned out, coincided with the publication of John Hawkesworth's *Adventurer* (1752–54), a short-lived but influential journal which included Dr Johnson among its contributors. It was, too, the decade in which there was the first of several waves of protest against animal cruelty — six contributions on the subject to the *Gentleman's Magazine* for example.[39] It would be easy in the general climate of the day to persuade the *Adventurer* to publish the damaging accusation against Frampton that, to win a bet, he castrated a stallion which had just won a race in order to run it as a gelding the next day. Such a charge would also well suit the purposes of the newly formed Jockey Club which was itself an assertion by the racing aristocracy of its own rights to regulate its sport at Newmarket. It aimed to prevent the intrusion of any future unsuitable crown nominees into the business of managing their racing and it was a fitting moment to take this step since the Duke of Cumberland (the 'butcher' of Culloden) was taking a renewed royal interest in the sport, his name heading the first list of owners' colours.[40] There were to be no more rough and ready countrymen coming up to order their proceedings — and it could do their cause no harm to blacken the reputation of the one they had had to live with for so long. Thereafter the story of Frampton's ruthless cruelty took wing. The *Sporting Magazine* of January 1798, in an article whose tone — and doubtless its level of accuracy — may be judged from its opening words: 'In the year 1727, there lived a wretch named Tregonwell Frampton, Esq. of Moreton, Derbyshire'.41 *(sic)* The same magazine did publish a less scurrilous article in May 1805,[42] but he had to suffer an unduly tarnished reputation for over a century before Broadley, in his 1912 article in *The Field*, effectively answered the cruelty charge with strong contradictory evidence and opinion.

More immediately after his death and more tellingly, Frampton was being referred to, with respect and a measure of affection, as 'The Father of the Turf'. He remains the single most important Dorset figure in the whole history of British sport. He made an invaluable contribution to the birth of the national sport and the blood lines of some of his stock still have significance in racing today. Yet he remained also a man bearing permanently the traits and tongue of his native county and apparently genuinely concerned about preserving the Moreton estate and the family name. The final word though on the Moreton property transfer has still to be written. The Giles Frampton involved remains a shadowy figure whom it is hard to locate beyond the transaction documents and may have enjoyed his new status for a relatively brief spell before being succeeded by his brother, William Frampton of Buckland Ripers, who was also to be comfortably outlived by Tregonwell himself.[43]

NOTES

1 Earlier sources on Frampton's contribution to horse racing are quoted in the *DNB* article. The best of the limited modern accounts is in Richard Onslow, *Headquarters: A History of Newmarket and its Racing*, Cambridge, 1983, 12–17.

2 *DNB*. Family tradition incidentally also points to 1702, which may be Vian's source.

3 A.M. Broadley, 'Tregonwell Frampton in Fact and Fiction', *The Field* **19**, 3 February, 1912, reprinted in *Somerset and Dorset Notes and Queries* **13**, 1913, 26–28.

4 G.D. Squibb, 'Dorset Incumbents, 1542–1731,' *Proceedings of the Dorset Natural History and Archaeological Society* **73**, 1953, 145.

5 Broadley, in his *Field* article, reproduces a letter dated 22 September 1698, from Tregonwell Frampton to Lord Townsend. The original is in the Dorset County Library.

6 There is a persistent suggestion in the records of thoroughbred bloodlines that he inherited his famous Natural Barb Mare (which 'established the most important female line in the stud books of the world') from his grandfather through his mother, Katherine Tregonwell, who died in 1665. The mare's life span is estimated to have been *c.*1757–*c.*1670.See *www.thheritage.com.*

7 William Chafin, *Anecdotes and History of Cranborne Chase*, London, 1818; 1991 edn., 47–51. Frampton's names were, in fact, 'William Tregonwell,' and an elder brother, also a 'William,' lived until 1689. The contents of the Chafin letters leave no doubt as to their authorship but in the many documents that bear his name the signature is always 'Tregonwell Frampton'.

8 There were family interests in Wiltshire. His brother Richard, described as 'of Biston, alias Biddeston, co. Wilts.,' had married Jane, daughter of Sir Francis Cottingham of Fonthill in that county. She had been widowed in 1685.

9 William Barnes, 'Extracts from the Diary of John Richards , Esq., of Warmwell, in Dorsetshire,' *Retrospective Review* ***1***, 1853, 204.

10 DORSET CRO D/PLR F65.

11 DORSET CRO D884.

12 Chamberlayne's *Angliae Notitia*, part iv, 50. In 1703 he received £700 for the 'expenses of the Race horses' over the period from 8 March 1701 until 30 September 1703, but this was not necessarily his whole royal stipend. Onslow, *Headquarters*, 14.

13 *DNB*.

14 See e.g. DORSET CRO D/FRA T74 (1691), T75 (1692), T264 (1694), T212 (1697).

15 J.C. Whyte, *History of the British Turf, 2 vols. 1839*, **1**, 398; *DNB*.

16 DORSET CRO D/FRA M16, Manorial Court records for August 1691, February 1691/2, December 1699, December 1700 and July 1703, all incidentally well outside the Newmarket racing season.

17 DORSET CRO D/FRA T250.

18 Also classified under DORSET CRO D/FRA T250.

19 DORSET CRO D/FRA T243.

20 DORSET CRO D/FRA T250

21 DORSET CRO D/FRA T243

22 *Ibid.*

23 DORSET CRO D/FRA T250

24 The George Inn, in St Peter's parish, already had some history of involvement with significant financial transactions, such Julian Parkin's Legacy and the Hill Exhibition. See C.H. Mayo, *The Municipal Records of the Borough of Dorchester, Dorset*, 1908, 508 and *passim*.

25 DORSET CRO D/FRA T250; D/FRA T243.

26 See notes 2, 3 and 15, above.

27 On Saturday, August 11th. Dorothy Laird, *Royal Ascot*, 1976, 13–14.

28 Onslow, *Headquarters*, 13

29 One, for example, was to the Dukes of Devonshire, Rutland and Somerset to find any six horses from their combined stables to run matches on successive days against six belonging to the queen..

30 'worth a look', according to Pevsner (John Newman and Nicholas Pevsner, *Dorset*, 1972, 74.) For the complexities of ownership and tenancy of Waddock Farm in this period see Dorset CRO D/FRA T9.

31 Dorset CRO D/FRA T32.

32 Dorset CRO D/FRA M24.

33 *Ibid.*

34 *Ibid.*

35 *Ibid.*

36 *Ibid.*

37 See e.g. Onslow, *Headquarters*, 15–18.

38 John Tyrrel, *Racecourse on the Flat*, 1989, 142–43.

39 Dennis Brailsford, *A Taste for Diversions: Sport in Georgian England*, 1999, 58; Robert W. Malcolmson, *Popular Recreations in English Society*, 1973, 119, and more generally ch.7 'Popular recreations under attack'.

40 Laird, *Royal Ascot*, 22.

41 'Frampton's Cruelty Contrasted with An Instance of Modern Inhumanity', *Sporting Magazine*, January 1798, 224–26.

42 'Another Sketch of Old Frampton', *Sporting Magazine*, May 1805, 86.

43 The only identifiable 'Giles' who might have signed the transfer documents is, however, recorded as dying in 1689. Also the 'Giles' in the documents is described unequivocally and repeatedly as 'of Ilsington', while family memory and Hutchins (essentially, of course, the same source) refer to this as the Buckland Ripers branch of the family. The question remains all the more intriguing by the unusual absence in the decade after 1703 of any Moreton property transactions which would provide identification.

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Ecclesiology in Context: Post-Reformation Church Building and Restoration in Dorset 1560–1860

NIGEL YATES
University of Wales, Lampeter

Introduction

'The revival of the Church of England stimulated by the Oxford Movement brought with it... a resurgence in church building and restoration'.[1] Such views of the ecclesiological movement of the 1840s and 1850s may be widely held, not just in Dorset but across the British Isles, despite the fact that they have been totally undermined by recent scholarship. The concept of an Anglican revival in the second and third quarters of the 19th century has had to be modified in the light of research that has shown that the 18th- and early 19th-century church was a much more robust and effective organisation than its Victorian critics had recognised.[2] In particular, attention has been drawn to the fact that many of the architectural and liturgical innovations attributed to the early ecclesiologists had been promoted within the United Church of England and Ireland, admittedly in a somewhat less purist form, since the last quarter of the 18th century, both in the writings of architects and clergy,[3] and in the practical arrangement of church buildings.[4] In addition it is becoming increasingly clear that it was not until the last quarter of the 19th century that the ecclesiological movement had fully triumphed, and that throughout the 1840s, 1850s and, to a lesser extent, even in the 1860s ecclesiological principles for the design and liturgical arrangement of churches had to compete with more traditional concepts of how such buildings should be furnished and ordered.[5]

The purpose of this article[6] is to review the surviving evidence for church building and restoration in Dorset in the post-Reformation period in the light of recent national research, and indeed to test the validity of these arguments in a local context. Dorset is a particularly fruitful field for such a detailed case study. It has, in county terms, a higher than average number of substantially unaltered church interiors of the period 1560–1860. It also has no fewer than 121 instances of Anglican churches, representing more than a third of the total number of Anglican churches in the county, which were either newly built, rebuilt or substantially refurnished in the three decades between 1831 and 1860, which was the core period during which ecclesiological innovations were competing with more traditional concepts of church design. The first part of this article considers the surviving examples of churches in the county, Anglican and non-Anglican, which retain wholly or substantially complete interiors of a date earlier than 1830, together with a small number of buildings in which such arrangements, now significantly altered, can still be studied from illustrations or plan evidence. The second part gives detailed consideration to Anglican church building, furnishing and liturgical arrangement in the period 1831–60 by concentrating on the least altered buildings of this period and categorising them by liturgical type. The appendix lists, with brief descriptions, all 35 examples of wholly or substantially unaltered church and chapel interiors of the period 1560–1860, and also draws attention to a further 25 Anglican churches or chapels of the period 1831–60 which retain a reasonable number of their original furnishings.

Church and Chapel Interiors, 1560–1830

The process of adapting church interiors to the provisions for public worship established by the Prayer Book of 1559 and Archbishop Parker's Advertisements of 1566, and ratified by the canons of 1604, had largely been achieved throughout most parts of England and Wales by the last quarter of the 16th century. There was, however, no clear consensus about how churches should be arranged and much debate, in particular, about the location of the communion table until this was finally resolved, after the Civil War and Interregnum, with the imposition of the Prayer Book of 1662 and the gradual re-ordering of churches along the lines that had been favoured by the Laudian bishops and clergy in the 1620s and 1630s.[7] It is therefore not surprising that there are very few surviving examples of Anglican churches retaining unaltered interiors of the late 16th or early 17th centuries, and Dorset is particularly fortunate in having two of them. The church at Leweston, built in 1616, is completely unaltered. At Puddletown the nave and north aisle retain unaltered furnishings of 1635, but the chancel and north chapel have been refitted.[8] Two other churches also retain significant but less complete 17th century furnishings — Over Compton and West Stafford — the former surviving subsequent restorations in both the 18th and 19th centuries.[9] The church at Folke was rebuilt in 1628 and restored in 1875; the seating is a mix of original benches and later copies; the screens and pulpit also date from the 17th century rebuilding.[10] The choir of Wimborne Minster is furnished with stalls, wholly medieval in type, which date from 1610.[11] Their purpose seems to have been two-fold. They were probably used, as stalls in this position certainly were in other churches,[12] by communicants on sacrament days, but they were also occupied by members of the church's quasi-collegiate establishment for the daily services, described by a visitor to Wimborne in 1736:

Figure 1: Interior of Winterborne Tomson church prior to restoration in 1929–31

> To this church, which is the only Choir in the County, belong 3 Vicars, 3 Clerks, 3 other singing men, 4 Boys... and the organist. There are Prayers twice every day; the Vicars take their turns to officiate weekly; the officiating Vicar sits in the first stall on the South Side; there he reads Prayers, turning himself westwards to the Congregation; the lessons are read at Desks placed at the rise to the Choir; the Clerks read the 1st lesson in which they take their turn weekly as the Vicars; the Pulpit is in the Body [of the church] which is fitted up for a Congregation.[13]

These services were still taking place, as described, when the first edition of Hutchins' *History of Dorset* was published in 1774 but the afternoon services had been abandoned by the appearance of the third edition in 1868.[14] In 1774 these services, held daily at 11am and 3pm, were sung on Sundays and saints' days but said on other days. The stalls had originally been constructed with canopies but these were removed in 1855. The noted ecclesiologist, Sir Stephen Glynne,[15] who visited Wimborne Minster on 7 October 1825, made no mention of the services but noted 'that this church is not altogether in a state of good repair or decent order but has a rather dirty and neglected appearance'.[16] In addition to the major examples of early 17th century furnishings in Dorset churches that have been noted, several churches in the county retain pulpits or communion tables of this period including, at Maiden Newton and Over Compton, rare examples of the long communion tables which would originally have been placed in the middle of the chancels with the communicants sitting round them.

The Laudian ideal of Anglican liturgical arrangement, which was to dominate Anglican liturgical thinking right through to the ecclesiological movement of the mid-19th century, had envisaged a church building divided for practical purposes into two separate rooms. The chancel or communion room was frequently separated from the nave by a screen, the nave being fitted up with either benches or box pews and with the pulpit and reading desk being placed in either its north-east or south-east corner. However, these arrangements were not universal and by the middle of the 18th century a

significant number of churches had adopted alternatives which, it was felt, were more practical, since they made the minister more visible to, and audible by, the congregation. The pulpit and reading desk might be placed in the middle of the nave on either the north or south side, with the seating arranged to focus on them. In other churches, the pulpit and reading desk might be placed in the middle of the nave, directly in front of the entrance to the chancel; this arrangement was particularly popular in town churches, which frequently had galleries at the west end of the nave and across both aisles. Other alternatives were for the seating to be arranged facing inwards as in a college chapel, or for it to face the pulpit from two or more different directions, thereby making an Anglican version of the T-plan interior so popular with Presbyterians in Scotland.[17] Contrary to popular belief, most parishes took very good care of their church buildings between the late 17th and early 19th centuries, and some took advantage of rebuildings or restorations to re-order their interiors in one of the ways that have been described to produce an arrangement calculated to benefit both minister and congregation. Protestant dissenters from the established Church of England and Roman Catholics also experimented with their buildings, as did all the major religious groupings in mainland Europe and America.[18] Anglican clergy and laity were encouraged to take a detailed interest in the fabric, furnishings and liturgical arrangement of their churches by their bishops and archdeacons, who used their periodic visitations to enquire into the condition of church buildings and to order the correction of deficiencies.[19] Gifts of new furnishings and communion plate to churches were commonplace.

The period between 1700 and 1830 was a significant one for church building and restoration in Dorset. An earlier survey[20] noted the survival of some 21 churches wholly or partly rebuilt or refurnished in this period, of which three — Chalbury, Horton and the Roman Catholic Chapel at East Lulworth — have substantially unaltered interiors, and a further three — Charborough, Moreton and St George's, Portland — were interestingly refitted between 1837 and 1850.[21] There are, however, some notable omissions from this earlier list, including the wholly or substantially unaltered interiors at Winterborne Tomson (Fig. 1) and the Unitarian Chapel at Bridport, the rebuilding of the church at Sturminster Newton, discussed below, and the surviving furnishings at Tarrant Rawston, which include a 17th-century pulpit, early 19th-century reading desk and 18th-century altar rails and commandment boards.[22] Chalbury, Horton and Winterborne Tomson, at the last of which the furnishings were donated by none other than William Wake, Archbishop of Canterbury from 1716 until his death in 1737, are all churches of the traditional Laudian type with their pulpits and reading desks — the reading desk has been removed at Horton — placed in one of the eastern corners of the nave.[23] The Unitarian Chapel at Bridport, otherwise known as the Old Meeting, is a little altered example of the later type of pre-Victorian nonconformist interior, with the pulpit placed in the middle of one of the short walls, as opposed to the earlier type, where it was placed in the middle of one of the long walls.[24] The surviving T-plan arrangement at Over Compton, in which a canopied three-decker pulpit of 1620 is placed in the middle of the south wall of the nave opposite the family pew in the south transept, probably dates from the building of this transept in 1774, though the interior was partially refitted in 1821–2 (seating in the western part of the nave, west gallery and family pew) and again in 1877 (seating in the eastern part of the nave and chancel furnishings).

The most remarkable of Dorset's surviving 18th-century church interiors is that of the Roman Catholic Chapel at East Lulworth, designed for Thomas Weld of Lulworth Castle by John Tasker in 1786–7 at a cost of £2,380. Its present appearance, however, restored to something like that of the original, owes much to the work of H.S. Goodhart-Rendel, who in 1953 removed many of the later, largely Victorian, accretions.[25] The most recent painting of the central dome, whilst obviously late 20th century in composition, is designed to blend with the 18th-century fabric and furnishings. The seating is provided by simple benches, as it is in the slightly later Roman Catholic Chapel at Stonor (Oxon), though some Roman Catholic chapels were certainly fitted with box pews,[26] and there are surviving examples of these in the early 19th-century churches at Crathorne and Leyburn (N. Yorks). One item of furniture that seems to have disappeared from the church at East Lulworth is the pulpit. A plan of the church in 1861 shows a pulpit, entered through the wall from the sacristy, on the north side of the sanctuary but whether this was an original or a later piece of furniture is not clear.[27] The likely existence of this pulpit is confirmed by a later plan showing an opening on the north side of the sanctuary, whereas all the other walls supporting the dome are solid.[28] Certainly a pulpit was originally intended as is clear from Fr John Thorpe's comments on John Tasker's initial designs in a letter written to Thomas Weld on 5 November 1785:

> The Octagon area of it... brings every eye in the chapel within sight of the Altar. The angular rooms on each side of the Altar are intended for the Sacristy and Confessional... in the room on the Ghospel side a staircase within the wall leads to the Pulpit... The area of the Octagon here described will conveniently hold near six hundred persons... An elegant Altar and a good Picture over it are the best ornaments & alone suffice in this plan to delight a British eye & excite veneration in his mind.[29]

As Thorpe's letter makes clear, it was the altar that was to be the liturgical climax of the chapel at East Lulworth and he used the opportunity to offer Weld an altar designed by Giacomo Quarenghi, who had provided a similar altar for the chapel at Wardour Castle

(Wilts), completed in 1776.[30] Thorpe had been trying to find a suitable home for this altar, originally designed for a college in Bruges, since at least 1782; he had purchased it for £300 'without the crucifix and candles which went with it'.[31] The altar was set up in the chapel at East Lulworth in February 1787, having been shipped or transported overland in sections. By May that year it had been furnished with a tabernacle and the altar ornaments referred to by Thorpe, which comprised a crucifix of ivory inlaid with *lapis lazuli* and six candlesticks made in Rome to Thorpe's specifications.[32]

Seven other churches built in Dorset between 1700 and 1830, though much altered by subsequent restorations, retain some of their original furnishings. The earliest of these is Charlton Marshall, designed by Thomas Bastard of Blandford in 1712–13 for the then rector, Dr Charles Sloper, who paid for the whole cost of rebuilding.[33] The original reredos, incorporating panels for the Ten Commandments, Creed and Lord's Prayer, communion table, altar rails, canopied pulpit and baluster font survive, but the church was reseated in 1895. However, the original arrangement is shown in a surviving plan of *c.* 1790.[34] The pulpit and reading desk were placed in the south-east angle of the nave; most of the seating was uniform in size and faced eastwards, but there were larger pews, for the rector's family and servants, at either side of the entrance to the chancel and seating for communicants around the chancel walls. The church at Castleton, on the outskirts of Sherborne, was built in 1715 and retains its original west gallery, brass chandelier, stone baluster font and another reredos incorporating panels for the Ten Commandments, Creed and Lord's Prayer.[35]

The only town church in Dorset completely rebuilt in the 18th century was that at Blandford Forum, where the parish church was destroyed in the disastrous town fire of 1731. The church was rebuilt in 1733–9 to a design by the local architects, John and William Bastard.[36] Although built originally without galleries, its height suggests that, at the very least, the architects had assumed that galleries might be added later, as indeed they were. A west gallery was erected in 1793–4 to house an organ and the singers; in 1819 this gallery was extended across the western bays of the north and south aisles, and in 1837 the galleries were further extended to cover the whole of these aisles. Between 1837 and 1880, and possibly from the rebuilding of the church, the pulpit and reading desk were placed in a central position at the eastern end of the nave, in the middle of the entrance to the shallow chancel. This may, however, not have been the original arrangement. The position of the corporation pew, with its elaborately carved mayor's chair, erected part of the way down the nave on its southern side in 1748, suggests that a more likely original location for the pulpit and reading desk, and one that certainly existed in other churches,[37] would have been opposite this pew on the north side of the nave. In 1880–3 a major restoration of Blandford church took place. The box pews were retained but reduced in height and the central pulpit and reading desk were dismantled. A new pulpit, made in the late 17th century for the former church of St Antholin in the City of London demolished in 1874, was installed on the north side of the entrance to the chancel and a reading desk on the south side; the space between the pulpit and reading desk was occupied by an eagle lectern. These arrangements were changed again in 1895–6 when the original apse was moved further eastwards and a new chancel inserted between the apse and the body of the church. At the same time the organ was removed from the west gallery and placed on the north side of the new chancel. In 1971 the organ was moved back to the west gallery but the galleries across the north and south aisles were demolished and a number of box pews at the east end of the nave, and in the north aisle, were removed. The church retains its original reredos, though its text panels have been replaced with a wholly inappropriate picture of Christ 'on mosaic glass', and its original communion table, which is now used in the new sanctuary at the east end of the nave.[38]

The old church at Bryanston, built in 1745 but replaced with a new church in 1895–8, retains its original pulpit, reredos and altar rails.[39] The parish church at Melcombe Regis (St Mary's at Weymouth) was rebuilt in 1815–17 but has been much altered internally; it retains its original galleries and reredos, the latter incorporating a painting of the Last Supper, dated 1721, by Sir James Thornhill, which was probably transferred from the previous church.[40] The parish church of St James at Poole was rebuilt in 1819–20 at a total cost of £11,740. Of this £6,000 was raised by a parish rate, £1,000 provided by the corporation and £2,010 received from voluntary subscriptions. Some furnishings were removed from the previous church for installation in the new one, including the reredos of 1736, described as being 'repaired and beautified' in 1819–20, and the organ given in 1799 by Benjamin Lester, who also provided an endowment for the organist.[41] The reredos, the font 'of mahogany, with dainty decoration partly classical, partly Gothick', and the galleries with their tiered seating, still survive,[42] though the remainder of the church was extensively reordered and refurnished in 1893. The surviving plan of the church illustrating its internal arrangements in 1819–20 shows a very typical early 19th-century town church with the pulpit, reading and clerk's desks placed centrally at the east end of the nave, directly in front of the altar table, which is railed on three sides. There are staircases to the galleries at both the east and west ends of the building, the former being placed in vestibules on either side of the vestry. The nave and both aisles are fully pewed and there are also pews, facing west, on each side of the sanctuary.[43] The church at Allington, now a suburb of Bridport, was built in 1826–7, and retains its original pulpit, west gallery and four blocks of seating, an arrangement common in both the late 18th and the early 19th centuries,[44] in the nave.[45]

A particularly interesting early 19th-century church in Dorset is that at Sturminster Newton, virtually rebuilt in 1825–7 to a design by William Evans of Wimborne. The work was paid for by the Revd Thomas Henry Lane Fox of Bramham Park (Yorks), who was both patron and curate of Sturminster Newton, succeeding James Michel, who resided at Whatcombe House in the parish of Winterbourne Clenston, as vicar in 1838, and holding the vicarage until his death in 1861.[46] It was an advanced design for its date with a replica Perpendicular font, open benches and ceilings designed to complement the 15th-century nave roof, to which bosses, in the form of IHS in a glory, were added. Although the church was systematically refurnished in the late 19th and early 20th centuries, there is a surviving plan of the church dated 1828 showing the liturgical arrangements immediately after the rebuilding.[47] There were galleries across both the north and south aisles. The seating faced inwards in the north and south transepts, and west in the north and south chancel chapels. The chancel itself was empty apart from the communion table. The seating in the nave and aisles faced east. The pulpit was placed against the south-east pier of the crossing with the vicarage pew forming an L-shape around it. The reading and clerk's desks were placed against the north-east pier of the nave. The plan is inscribed with the names of those to whom the seating was allocated. The arrangement shown, with the pulpit and reading desk placed on opposite sides of the entrance to the chancel, and permitting an uninterrupted view of the communion table, was one that became increasingly common in the 1820s and 1830s, largely encouraged by the Incorporated Church Building Society founded in 1818, and of which there are several surviving examples in Dorset dating from the 1840s and 1850s. It was part of the pre-ecclesiological liturgical revival which has been largely overlooked by architectural historians, but which the ecclesiologists were able to build on to promote their own, more purist, ideas of liturgical reform.

Church and Chapel Interiors, 1831–60

The total extent of Anglican church building and restoration in Dorset during the 19th century was, as Table 1 shows, enormous.

The programme reached its height in the two decades 1861–80. During its earliest phases, up to 1850, existing churches were almost as likely to be completely rebuilt (46%) as to be renovated (54%). Thereafter, though renovations could be extremely destructive of existing furnishings, far more existing churches were renovated (74%) than rebuilt (26%). By the end of the 19th century there were only seventeen Anglican churches in Dorset which had not been either rebuilt or renovated during the previous century, sometimes more than once.[48] These included the unaltered 17th and 18th century interiors, noted above, at Chalbury, Leweston, Puddletown and Winterborne Tomson, and the two disused churches in Wareham, Holy Trinity and St Martin's; the former had been disused since 1762 and the latter since 1736. Holy Trinity was used as a school until 1886; in 1973 it was adapted for use as an art gallery. St Martin's was restored for use as a chapel-of-ease to Lady St Mary's in 1935–6.[49] Churches restored in the late 19th and early 20th centuries were more likely than those restored earlier to retain non-ecclesiological furnishings. This happened at Castleton in 1860–5, Folke in 1875, Over Compton in 1877, Blandford Forum in 1880–3, Horton in 1891, Charlton Marshall in 1895, West Stafford in 1898 and Puddletown in 1910–11. However, C.E. Ponting, who retained 17th-century furnishings at West Stafford and Puddletown, was less careful at Ibberton, which he restored in 1907–9. Despite the collapse of the chancel in 1889, the pre-ecclesiological furnishings were still complete in the rest of the building but Ponting removed them and completely refurnished the restored church.[50]

Table 1: Totals of Anglican churches newly built, rebuilt or renovated in Dorset between 1801 and 1900

Decade	New buildings	Churches rebuilt	Churches renovated	Total
1801–10	1	–	–	1
1811–20	–	2	5	7
1821–30	2	2	4	8
1831–40	9	8	16	33
1841–50	7	22	16	45
1851–60	5	12	26	43
1861–70	8	23	35	66
1871–80	6	14	52	72
1881–90	4	9	31	44
1891–1900	8	2	28	38
Totals	50	94	213	357

The most interesting period of 19th-century church building and restoration, both nationally and in Dorset, is that between 1831 and 1860 when the ideas of the early ecclesiologists were competing with those of the pre-ecclesiological liturgical reformers and those of even more conservative architects and churchmen still firmly committed to the liturgical outlook of the 17th and 18th centuries. Of the 121 Anglican churches and chapels built or restored between 1831 and 1860, together with a small number of Anglican cemetery chapels built as a result of legislation passed in 1852–3 to close overcrowded parish graveyards in the towns,[51] no fewer than 26 retain, with in some cases minor modifications, the bulk of their original furnishings and liturgical arrangements. These surviving buildings can be divided into four categories, as shown in Table 2. It is interesting that there are almost the same number of buildings in each category, with a slight edge (31%) for those still reflecting the ideas of the pre-ecclesiological liturgical reformers. Dates are not significant either; the earliest ecclesiological arrangement, the chancel at Rampisham

Table 2: Unaltered Anglican churches and chapels built or restored in Dorset between 1831 and 1860 categorised by liturgical type

Liturgical type	New buildings	Restorations	Total
17/18th cent. types	1	5	6
Early 19th cent. types	6	2	8
Quasi-ecclesiological	5	1	6
Fully ecclesiological	4	2	6
Totals	16	10	26

designed by A.W.N. Pugin, dates from 1845–7; the latest traditionalist interior of the most conservative type from 1855. The evidence for Dorset reinforces the view that the period 1831–60 was indeed the crucial transitional phase in liturgical arrangement that recent scholarship has argued. We now need to look in some greater detail at the buildings in all these four categories to understand what the differences were between them in liturgical and, increasingly, theological terms. It has to be remembered that the debate about church design took place in the Church of England at the same time as the debate about the theological ideas of the Oxford Movement and the link between them was frequently very close.[52]

The six churches and chapels of the most traditional type include four different examples of pre-ecclesiological arrangement. At Charborough, Holnest and West Parley,[53] the pulpit (and, in the cases of Charborough and West Parley, the reading desk) were placed together in one of the eastern angles of the nave; at both Holnest and West Parley the re-ordering of the interior involved the deliberate retention of some existing earlier furnishings. At Charborough the interior was completely refurnished but with fittings imported from churches in Belgium and Holland. Another Dorset church to acquire imported furnishings was Trent, where a 17th century pulpit from Belgium or Holland, and much stained glass from Germany, the Netherlands and Switzerland, were installed by the Revd W.H. Turner in 1840.[54] At Mapperton, the pulpit and reading desk are also placed together at the junction of the nave and chancel but they are, in effect, in the middle of the liturgical space since both nave and chancel are fully pewed.[55] At Portland, the liturgical arrangement is so old-fashioned that several previous descriptions of the interior[56] have assumed that the furnishings were contemporary with the building, designed and built by a local mason, Thomas Gilbert, between 1754 and 1766, when they are, apart from the baluster font and the altar rails, considerably later (Fig. 2). Notice of the reordering of the church was given by the churchwardens on 30 August 1849:

> The churchwardens beg to inform the Pew-owners that the Contract for REPEWING THE CHURCH has been taken, and a considerable part of the work completed. That every precaution has been adopted to render the church dry and comfortable, and to guard against decay in future. The seats will be of a comfortable height; and are to be painted, grained, and varnished, in the same way as those of St John's.[57] The total expenses will be eleven shillings and sixpence for each sitting. This sum will cover every charge; and will be collected in three instalments. Any person wishing to have their seats exchanged, so as to have them in one pew — or to sell them — are requested to apply as soon as possible.[58]

Figure 2: Interior of St George's, Portland

The pulpit and reading desk, of equal height, were placed on opposite sides of the middle of the nave so that the seating, still in the form of box pews, between them and the exceptionally cramped apsidal chancel faced west rather than east.

One of the most interesting, and completely unrecorded,[59] ecclesiastical buildings in Dorset is the cemetery chapel of 1855 at Blandford Forum. Originally there were two chapels, one for use by the Church of England and the other for use by dissenters, but the latter has been converted into a workshop. The Anglican chapel retains all its original fittings and the original liturgical arrangement had only been disturbed to the extent that the reading desk, originally placed directly

Figure 3: Interior of Compton Valence church

opposite the entrance, had been moved into the adjacent corner to permit the installation of a totally unsympathetic and largely unnecessary altar. The seating is provided by two rows of stalls, facing inwards, against the long walls. A similar seating arrangement survives in the cemetery chapel of 1856 at Lyme Regis, though here only those seats furthest away from the entrance are arranged in a collegiate manner, and the chapel was extensively altered in the late 19th or early 20th century, when a stone altar and much elaborate internal decoration were introduced. The Blandford chapel, by contrast, retains its original austerity and it is therefore particularly gratifying to be able to record that, as a result of recommendations made by the present writer, the altar has now been removed and the reading desk returned to its original position.[60]

As noted earlier, the largest group of Anglican churches in Dorset, built or restored between 1831 and 1860, are of the pre-ecclesiological type that anticipated some of the principles of ecclesiology, with the pulpit and reading desk placed on opposite sides of the entrance to the chancel, and the communion table clearly visible between them, but with their chancels not stalled for clergy or a surpliced choir. They range in date from Compton Valence (1839–40) (Fig. 3) to Winfrith Newburgh, restored in 1854; the others are Bradford Peverell (Fig. 4), Chettle, Iwerne Stepleton, Plush, Sutton Waldron and Tincleton.[61] It is worth noting that the church at Sutton Waldron was designed for a committed though moderate Tractarian, Archdeacon Huxtable,[62] who, despite his theological views, still favoured a traditional high church design of the pre-1840 type; the chancel is unstalled and has, on opposite sides of the chancel steps, a stone pulpit and a stone reading desk; Huxtable's ecclesiological and Tractarian sympathies are only revealed by the elaborate decoration to the roofs and walls and the fact that the floors are laid with Minton tiles.

In addition to these surviving buildings there is good documentary and, in one case, partially surviving physical evidence of three churches of this type, built between 1834 and 1840, at Holt, East Burton and Winterborne Clenston. Holt was a chapelry in the extensive parish of Wimborne Minster. The chapel there had been repaired in 1691, 1725, and 1819. On the last of these occasions the Wimborne vestry had considered either extending or completely rebuilding the chapel but had opted instead for a more modest repair. By 1834, however, the vestry had resolved that

> The chapel of Holt is in such a dilapidated state as to render expedient forthwith to take it down

Figure 4: Interor of Bradford Peverell church from a photograph taken in c. *1885*

> and to rebuild the same... as to afford convenient room for six hundred persons to attend Divine Service therein, four-fifths of which should be free sittings.[63]

The vestry's original proposals were, however, subsequently modified since the new church, completed in 1836 to a design by John Tulloch,[64] could only accommodate 319 people. The plan of the interior showed a single cell building with the altar railed in against the east wall and two rows of benches for communicants on each side of the communion space. There were three blocks of seating facing the altar, with passageways on each side of the central block, the pulpit at the east end of the northern pew block and the reading desk at the east end of the southern one. The central block of seating provided accommodation for 96 people, the two side blocks for 64 each, and there was a west gallery with seating for 15 adults and 80 children. The font was placed at the west end of the central pew block. The new church cost £1,065 of which £551 came from a parish rate, £364 from subscriptions and £150 from a grant made by the Incorporated Church Building Society.[65] This interior was completely altered in 1875 when a faculty was applied for to replace the seating, demolish the west gallery and build a chancel. The first two elements of this work were carried out at a cost of £586 18s 3d, raised by subscriptions, and a late 16th-century pulpit, formerly in Wimborne Minster, was relocated at Holt. The chancel was not added until 1889–90.[66]

The church at East Burton, built in 1839–40, was a smaller version of that at Holt. A plan of the interior, made before the fittings were removed in 1978, showed two blocks of box pews against the side walls, with the communion table railed in against the east wall, and the pulpit and reading desk placed, respectively, on its north and south sides.[67] All these furnishings were 'contemporary with the building itself' but, after the church had been declared redundant, they were dismantled 'in the course of converting the premises into a harpsichord making workshop'.[68] It is unfortunate that research into early 19th-century church buildings of a pre-ecclesiological type was not sufficiently advanced at the time to prevent this highly regrettable act of destruction. East Burton church would have been an excellent candidate for vesting in what was then the Redundant Churches Fund, but has since been renamed the Churches Conservation Trust, the body responsible for the surviving interiors, discussed above, at Winterborne Tomson and St George's, Portland.[69] The church at Winterborne Clenston preserves many of its original fittings, including its five-sided altar rails, unusual in England though common in Scandinavia, but the nave was reseated in 1901. The church was rebuilt in 1839–40 at the sole cost of Mrs Michel, the widow of James Michel, a former vicar of Sturminster Newton, who lived at Whatcombe House. Her generosity extended to the provision of 'the painted Glass in the East Window and also that in the windows of the North and South transepts', the com-

munion plate, two sanctuary chairs, the 'Crimson cloth fitted to the [altar] table... 2 Table Cushions covered with Crimson cloth... 2 Oak Crimson cloth covered faldstools... 2 Prayer Books (quarto) bound in blue Morocco... a Clerk's robe', and the cushions and hangings, designed to match those of the sanctuary, in the pulpit, reading desk and family pew.[70]

Churches of the basically pre-ecclesiological type, which made slightly more concessions to ecclesiological principles than those in the previous group, survive in Dorset at Askerswell, Hinton Parva, Little Bredy, Melbury Abbas, Melbury Bubb and Wraxall.[71] At Askerswell, Little Bredy and Melbury Abbas the reading desk is arranged so that the officiating minister can face either west, to read the lessons, which ecclesiologists felt should be read from a separate lectern, or towards the pulpit, which enabled the minister to read the service, according to ecclesiological principles, without being forced to turn his back to the altar. At all these churches the chancels were also stalled but probably for children rather than for a surpliced choir; at Little Bredy there are seats for the singers adjacent to the organ at the west end of the nave. At Melbury Bubb the reading desk faces west but the chancel is stalled and separated from the nave by a screen, a clear indication of a desire to follow ecclesiological principles by the 1850s. All these churches were built or restored between 1850 and 1860, though Sir Stephen Glynne describes Wraxall in 1865 as only 'partly restored'.[72] Here there is a mixture of open benches and closed pews, the chancel is unstalled but the minister's desk is placed on the south side of the chancel facing north. It is very likely that Glynne regarded this arrangement as temporary and would have been amazed that it remained unaltered more than 130 years later.

As in many other parts of England and Wales, the progress of the ecclesiological movement in Dorset was relatively slow, as the large number of surviving pre-ecclesiological or only partly ecclesiological churches of the 1840s and 1850s in the county demonstrates, but there are also in Dorset some interesting surviving examples of fully ecclesiological churches which date from the early years of the ecclesiological movement. The chancel at Rampisham, one of very few Anglican commissions undertaken by the Roman Catholic architect, A.W.N. Pugin,[73] was rebuilt in 1845–7 though the rest of the building was not rebuilt, to the design of John Hicks, until 1859–60.[74] Both parts of the church retain their original furnishings. Pugin was also responsible for the design of the nearby church at Halstock in 1845–6,[75] but the interior was completely refurnished in 1872. Another early ecclesiological church, subsequently altered, was Monkton Wyld, designed by one of the leading Anglican ecclesiological architects, R.C. Carpenter,[76] in 1848–9, but further embellished with a stone altar, rood screen, chancel stalls, eagle lectern, stained glass and stencilling during the incumbency of the Revd John Camm (1869–91).[77] The most unusual surviving early ecclesiological interior in Dorset is that at Moreton (Fig. 5), where the church rebuilt in 1776, to which a

Figure 5: Interior of Moreton church

Figure 6: Interior of Chilfrome church from a photograph taken in c. 1930

north aisle had been added in 1841, was completely refurnished in 1848–9.[77] The person responsible for this work was W.C. Frampton, rector from 1841 until 1898, whose grandfather, the principal landowner in the parish, had rebuilt the church in 1776. Frampton took the view that the church had been rebuilt

> at a very bad period of church architecture, and there is nothing to recommend it architecturally either in shape or in proportions... the sole object of those persons who... commenced to improve the appearance and to beautify the very plain, bald and poor interior of St Nicholas' church, as far as the construction and the circumstances of the building would admit, was... to render it a temple as worthy as possible for the honour which is due to the worship and service of the Lord God Almighty.[78]

This was a typically ecclesiological and Tractarian view of church restoration, one which was almost always disparaging of church building and furnishing in the 17th and 18th centuries. At Moreton the pulpit and reading desk, which before 1841 had stood in the middle of the north side of the nave, were replaced with a new low pulpit and a lectern and the box pews with 'medieval' benches and choir stalls; two unusual features were the semi-circular altar rails, which had the effect of making the apsidal sanctuary circular, and the brackets for lighted candles fixed to the wall behind the altar.

The progress of church restoration in Dorset, and particularly the ecclesiological restorations of which he approved, is recorded by Sir Stephen Glynne. In 1852 he noted that All Saints at Dorchester was 'very properly and ecclesiastically arranged within' but that at Bridport no progress had been made since he had last visited the church in 1825: 'the interior is frightfully encumbered with pews and galleries, even close to the altar, and the position of the pulpit is most unhappy'.[79] He was particularly impressed with the recent restoration at Maiden Newton.

> The church has lately been put into good order, and presents on the whole a satisfactory appearance... The chancel is fitted up with new stalls very plain. A handsome new altar has a nicely carved front in wood with pediment canopied niches on shafts containing figures of angels in relief. The nave is fitted with nice open benches; but a west gallery remains, in which is an organ with painted pipes. The pulpit is a new wooden one, also the prayer-desk of Gothic pattern.[80]

Two churches which retain the furnishings described by Glynne are Rampisham, noted above, and Chilfrome, restored in 1852 (Fig. 6). Glynne visited both churches on 28 July 1865. Rampisham he described as

> A good church, very well restored... The altar bears candlesticks, and the seats are set stall-wise... The floor is laid with tiles, more ornate in the chancel. The font is very large and ornate and new. All the seats of the nave open, and the organ in the tower.[81]

He was also very complimentary about the restoration at Chilfrome:

> A small church in good order, and lately judiciously restored... The roofs new and open. There is a pointed arch on the south side of the chancel arch by which the pulpit is entered. The chancel is stalled and arranged well as to ritual; the east wall has hangings, and on the altar is a super-altar with candlesticks. The sacrarium is raised; at the south-east is a *sedile*, and the south side a *piscina* with basin sculptured with foliage... The pulpit is a new one of stone. The Font also new and handsome.[82]

On 12 June 1871 Glynne visited the church at Sturminster Marshall and noted:

> The seats in the nave are all open and new. The chancel is fitted up in high ritual fashion. The sacrarium has fine polished tiles. The altar of marble bears cross and candlesticks. There is much coloured glass in the windows.[83]

The church had been restored by Henry Woodyer, another of the leading ecclesiological architects, in 1859. It retains the choir stalls and chancel screen designed by Woodyer, but has otherwise been refurnished.[84] Other unaltered early ecclesiological interiors surviving in Dorset are those at Catherston Leweston, Pentridge and Powerstock, all dating from the 1850s.[85]

The surviving evidence of the church building and restoration programme in Dorset between 1831 and 1860 shows an interesting sidelight on the theological divisions among the local clergy in their responses to both the ecclesiological and the Tractarian movements. The examples of churches, noted by Sir Stephen Glynne, which were introducing crosses and candlesticks on their altars, and the known Tractarian sympathies of Walter Kerr Hamilton, bishop of Salisbury — to which diocese Dorset had been transferred from that of Bristol in 1836 — from 1854 until his death in 1869, had prompted a strong backlash from some Dorset clergy, urged on by two of the county's leading landowners, the Evangelical seventh Earl of Shaftesbury and the less Evangelical, but still strongly anti-ritualist, first Viscount Portman.[86] This culminated in a petition to Archbishop Longley of Canterbury against Hamilton's 1867 *Charge* which was seen to be insufficiently critical of ritualist innovations and far too robust a defence of Tractarian doctrines. Nearly two-thirds of the clerical signatories of the petition were from Dorset and about 40% of these were from parishes on either the Portman or Shaftesbury estates, one of the most vociferous of the bishop's opponents being C.J. Glyn of Witchampton and Hinton Parva. Hamilton's clerical supporters in Dorset included W.P. Ward of Compton Valence and Duncan Campbell of Pentridge, where the church had been restored in a fully ecclesiological manner in 1855–7. Ward was the son of William Ward, Bishop of Sodor and Man from 1828 until his death in 1838, and had expressed extreme high church opinions from his days as an undergraduate at Oxford in the early 1830s, leading to some concern from his mother that he might be tempted to become a Roman Catholic. Shortly before his ordination by his father in his chapel at Bishopscourt on the Isle of Man in 1836, Ward's mother had noted:

> I became frightened at his month's residence at Dijon with a very amiable and accomplished Popish Priest, and though the Bishop laughed at my fears I really hurried him away to the Protestant air of Geneva... Italy showed him Popery in all its grossness and altogether he is returned with the natural curiosity of youth satisfied.[87]

Nevertheless this did not prevent Ward from entering into a long correspondence with his mother, following his father's death, on the need for unity between Christians 'and to show what are the real not the fancied errors of Popery'. Mrs Ward replied that while 'I quite agree with you that Catholic should be the surname of every Christian... I do earnestly and urgently advise... that you will not proclaim hatred to the word Protestant'.[88]

The churches erected by Ward at Compton Valence in 1839–40 and by Glyn at Hinton Parva in 1860 are not that dissimilar in their liturgical arrangement but they are poles apart theologically and they illustrate the speed at which religious views had changed in a period of only 20 years. Compton Valence was an exceptionally advanced building for its date, with a strong emphasis on the importance of the sacrament of Holy Communion and anticipating many of the architectural innovations of the ecclesiologists. Hinton Parva was, by contrast, an exceptionally conservative building for its date. Although the chancel was stalled and the reading desk faced across the chancel, the Protestant views of its rector are revealed in the shallow sanctuary, which is barely raised above the level of the chancel and the nave. This is a church in which the primary emphasis is still on reading the service and preaching and the celebration of Holy Communion is a secondary consideration. The former church at Hinton Parva 'was taken down and replaced... at the expence of the late Sir Richard Glyn, bart'. Carr John Glyn, MA, student of Christ Church, Oxford, was instituted on 12 March 1830 to the rectory of Hinton Parva and, on the follow-

ing day, to that of Witchampton, the two benefices having been previously served by different rectors.[89] He remained rector of both parishes until his death in 1896 at the age of 97.[90] W.P. Ward had died in 1875 'having resigned the living of Compton Valence a few years before'. His niece described him as being 'well known as an active High Churchman in the diocese of Salisbury'.[91]

Conclusion

This survey of the ecclesiastical buildings in Dorset which survive wholly or substantially unaltered from the period between 1560 and 1860 provides clear local evidence of the two trends that have emerged from recent research on the design, furnishing and liturgical arrangement of churches in this period. The first is a rejection of the older view that church design was at a fairly low ebb in the 17th and 18th centuries and that clergy and their congregations were content to patch up their buildings at the minimum possible cost. It is becoming increasingly clear that this was not the case. Churches were frequently repaired and refurnished in this period and often at very considerable cost. There was also a good deal of experimentation and innovation in the liturgical arrangement of church buildings aimed at improving the provision for public worship. In particular there was in Anglican churches a clear attempt, from the last quarter of the 18th century, to anticipate some of the innovations attributed to the ecclesiologists of the mid-19th century, by arranging buildings in a manner which created a single liturgical focus at the east end, and a more equal emphasis on the different liturgical functions of the building, namely the reading of Morning and Evening Prayer, preaching and the celebration of Holy Communion. The second area in which the local evidence for Dorset supports the trend of recent research nationally is in showing that the progress of ecclesiology was, in some respects, much slower than had been realised, and that in the period between 1831 and 1860 probably as many churches were still being built in a pre-ecclesiological manner as those that, either wholly or partly, reflected the principles of ecclesiology. That does not, of course, mean that a liturgical revolution was not underway in the middle years of the 19th century, but simply that its progress was more mixed and more complicated than many architectural historians of the 19th century are, even at the present time, prepared to allow.[92]

NOTES

1 *Dorset Churches*, 4th edn, Dorset Historic Churches Trust 1988, p.6.

2 See especially F.C. Mather, *High Church Prophet: Bishop Samuel Horsley (1733-1806) and the Caroline Tradition in the Late Georgian Church*, Oxford 1992; *The Church of England c.1689–c.1833: From Toleration to Tractarianism*, eds J. Walsh, C. Haydon and S. Taylor, Cambridge 1993; P.B. Nockles, *The Oxford Movement in Context: Anglican High Churchmanship 1760–1857*, Cambridge 1994; F. Knight, *The Nineteenth Century Church and English Society*, Cambridge 1995; W.M. Jacob, *Lay People and Religion in the Early Eighteenth Century*, Cambridge 1996; A. Burns, *The Diocesan Revival in the Church of England c. 1800–1870*, Oxford 1999; W.N. Yates, *Anglican Ritualism in Victorian Britain 1830–1910*, Oxford 1999, especially chapters 1 and 2

3 See S.M. Bradley, 'The Gothic Revival and the Church of England 1790–1840', London PhD thesis 1996

4 W.N. Yates, *Buildings, Faith and Worship: the Liturgical Arrangement of Anglican Churches 1600–1900*, Oxford 1991, pp.108–23. A second, revised edition of this book, with a substantially extended list of surviving buildings, will be published during 2000

5 *Ibid*, pp.150–68

6 This paper is based on the text of a lecture, covering similar ground, delivered to a Dorset Local History Group day school held at the Dorset County Museum on 27 February 1999

7 Yates, *op. cit.*, pp.30–43, 68–76

8 J. Newman and N. Pevsner, *The Buildings of England: Dorset*, Harmondsworth 1972, pp.252–3, 349–50

9 *Ibid.*, pp.308–9, 447; the entry for Over Compton does not really do justice to this important, and exceptionally interesting, interior.

10 *Ibid.*, p.206

11 *Ibid.*, p.465

12 G.W.O. Addleshaw and F. Etchells, *The Architectural Setting of Anglican Worship*, London 1948, pp.111–17, 175–6; G. Yule, 'James VI and I: furnishing the churches in his Two Kingdoms', *Religion, Culture and Society in Early Modern Britain: Essays in Honour of Patrick Collinson*, eds A. Fletcher and P. Roberts, Cambridge 1994, pp.193–5

13 S. Markham, *John Loveday of Caversham 1711–89: The Life and Tours of an Eighteenth Century Onlooker*, Salisbury 1984, p.241

14 J. Hutchins, *History and Antiquities of the County of Dorset*, 3rd edn rev. W. Shipp and J.W. Hodson, 4 vols, Westminster 1861–74, iii, pp.207–8

15 See A.G. Veysey, 'Sir Stephen Glynne, 1807–74', *Journal of the Flintshire Historical Society* **30** (1981–2), pp.151–70

16 'Notes on Some Dorset Churches, by Sir Stephen Glynne, Baronet', ed. J.M.J. Fletcher, *Proceedings of the Dorset Natural History and Archaeological Society* **44** (1923), p.90. Glynne visited 88 of the extant churches in Dorset, some of them more than once, between the 1820s and 1870s and recorded detailed descriptions of their fabrics and, less frequently, their furnishings and liturgical arrangements.

17 See Yates, *op. cit.*, pp.77–107; G. Hay, *The Architecture of Scottish Post-Reformation Churches*, Oxford 1957; W.N. Yates, 'Church Buildings of the Protestant Establishments in Wales and Scotland: Some Points of Comparison', *Journal of Welsh Ecclesiastical History* **9** (1992), pp.1–19

18 See K. Lindley, *Chapels and Meeting Houses*, London 1969; W.N. Yates, 'Unity in Diversity: Attitudes to the Liturgical Arrangement of Church Buildings between the late Seventeenth and Early Nineteenth Centuries', *Crown and Mitre: Religion and Society in Northern Europe since the Reformation*, eds W.M. Jacob and W.N. Yates, Woodbridge 1993, pp.45–62; D. Upton, *Holy Things and Profane*, New York 1986

19 Yates, *Buildings, Faith and Worship*, pp.47–55

20 E.T. Long, 'Georgian Churches in Dorset', *Proceedings of the Dorset Natural History and Archaeological Society* **97** (1975), pp.31–5

21 Long incorrectly describes the furnishings at St George's, Portland as 'original'

22 Newman and Pevsner, *op. cit.*, p.419

23 *Ibid.*, pp.136, 234–5, 486–7. The earlier surviving interiors at Folke, Leweston, Puddletown and West Stafford are also of this type

24 *Ibid.*, p.113

25 *Ibid.*, pp.195–6; B. Little, *Catholic Churches since 1623*, London 1966, pp.40–1, pls 3a and b

26 e.g. W.A. Delamotte's drawing of the former interior of the Roman Catholic church in Brighton, see A. Dale, *Brighton Churches*, London 1989, p.188. There are interesting examples of French Roman Catholic churches with surviving box-pews at Cheverny and Souvigny-en-Sologne (Loir-et-Cher) and the much larger town church of Richelieu (Indre-et-Loire)

27 Hutchins, *op. cit.*, i, plans between pp.376 and 377

28 *An Inventory of Historical Monuments in the County of Dorset: Volume 2*, London 1970, pp.145–6

29 T.G. Holt, 'Thomas Weld's New Chapel at Lulworth: Some

Contemporary Correspondence', *Proceedings of the Dorset Natural History and Archaeological Society* **99** (1977), pp.33–4

30 Little, *op. cit.*, pp.33–4, pl. 2b

31 Holt, *op. cit.*, pp.36–7

32 *Ibid.*, pp.39–41

33 Newman and Pevsner, *op. cit.*, pp.141–2

34 D[orset] R[ecord] O[ffice], PE/CHM/CW4/1

35 Newman and Pevsner, *op. cit.*, pp.379–80

36 *Ibid.*, pp.96–7

37 Yates, *op. cit.*, p.84; the railed pew for the elders was placed in a similar relationship to the pulpit and precentor's desk at St Nicholas West church in Aberdeen, rebuilt in 1752–5 to a design by the English architect, James Gibbs, and the corporation pew placed in one of the galleries that ran around four sides of the interior. At St George's, Deal, the church was built in 1716–17 with the pulpit and reading desk in the middle of the south wall of the nave and the corporation pew placed opposite it in the middle of the north gallery; in *c.* 1822 the pulpit and reading desk were removed to the same position as they occupied at Blandford before 1880, and remained there until 1869; *ibid.*, pp.89–90

38 B.G. Cox, *The Parish Church of St Peter and St Paul*, Blandford Forum 1989; the photograph of the interior on p.28 shows the arrangement of pulpit, reading desk and eagle lectern as it was between 1883 and 1895, and the reredos before alteration.

39 Newman and Pevsner, *op. cit.*, pp.120–1

40 *Ibid.*, p.450

41 Hutchins, *op. cit.*, i, pp.48–50

42 Newman and Pevsner, *op. cit.*, pp.318–19

43 DRO, PE/PL/CW4/5/2

44 Yates, *op. cit.*, p.87 and plans of St George's, Portsea (pl. 8) and Holy Trinity, Sunderland (p.88)

45 Newman and Pevsner, *op. cit.*, p.110

46 *Ibid.*, pp.406–7; see also O. Morshead, *The Story of the Parish Church of St Mary, Sturminster Newton*, Wareham n.d.

47 W[iltshire] R[ecord] O[ffice], D 28/19/2/37

48 e.g. Blandford St Mary 1837 and 1862, Bourton (new church 1810) 1837–8 and 1878; Bradpole 1845–6 and 1897; Broadway 1815 and 1874; Chedington 1840–1 and 1898; Chickerell 1834 and 1865; East Stoke 1828 and 1885; Farnham 1835 and 1886; Fortuneswell 1839 and 1872; Frampton 1820 and 1862; Halstock 1845–6 and 1872; Hooke 1840 and 1874–5; Kingston 1833 and 1873–80; Langton Herring 1827 and 1858; Pentridge 1815 and 1855–7; Pilsdon 1830 and 1875; Toller Porcorum 1833 and 1891

49 F.P. Pitfield, *Purbeck Parish Churches*, Milborne Port 1985, pp.73, 77

50 Newman and Pevsner, *op. cit.*, p.236; photographs of the destroyed furnishings are preserved and displayed in Ibberton church

51 W.O. Chadwick, *The Victorian Church*, 2 vols, London 1966–70, i, pp.326–8

52 See W.N. Yates, 'The Legacy of the Oxford and Cambridge Movements', *Churchscape* **3** (1983–4), pp.4–20

53 Newman and Pevsner, *op. cit.*, pp.140, 232, 447

54 *Ibid.*, pp.427–8

55 *Ibid.*, pp.266–7

56 *Ibid.*, pp.341–2 and footnote 20 above

57 This was the church at Fortuneswell, built in 1839 and much altered internally in 1872

58 DRO, PE/PTD/CW4/1

59 There is no entry for this chapel in Newman and Pevsner, *op. cit.*, and the cemetery buildings are not listed as buildings of special architectural or historic interest by the Department of the Environment, Transport and the Regions. The original plans of the chapel, formerly in the custody of Blandford Forum Town Council, have been transferred to the DRO; the diocesan copies are in the WRO

60 Blandford Forum Town Council, Minutes of meetings of Recreation and Amenities Committee 11 January 2000 and of Town Council 24 January 2000

61 Newman and Pevsner, *op. cit.*, pp.107, 151, 160, 241, 317, 409, 423, 474; plans of Bradford Peverell in DRO, PE/BRP/CW8/1-2, CW9/1/1-11; and of Chettle and Tincleton in WRO, D1/61/7/1 and 2

62 See E. Ward, 'Archdeacon Anthony Huxtable (1808–1883): Radical Parson, Scientist and Scientific Farmer', *Proceedings of the Dorset Natural History and Archaeological Society* **101** (1979), pp.7–25; Huxtable was appointed rector of Sutton Waldron in 1834 and archdeacon of Dorset in 1862; he financed personally the rebuilding of Sutton Waldron church

63 P.J.K. Warren, 'The Story of Holt Church and Holt Forest, Wimborne', *Proceedings of the Dorset Natural History and Archaeological Society* **88** (1966), pp.191–2

64 Newman and Pevsner, *op. cit.*, p.232

65 Warren, *op. cit.*, p.193

66 *Ibid.*, pp.196–7

67 *An Inventory of Historical Monuments in the County of Dorset: Volume 2*, London 1970, pp.403–4

68 Pitford, *op. cit.*, p.26

69 *Churches in Retirement: A Gazetteer*, London 1990, pp.39, 42–3

70 DRO, PE/WCL/CW 2/1; fabric, though not furnishings, described in Newman and Pevsner, *op. cit.*, p.477

71 *Ibid.*, pp.79, 229–30, 253–4, 272–3, 500–1; plans of Askerswell, Melbury Abbas and Melbury Bubb in WRO, DI/61/8/3 and 5, DI/61/10/6

72 'Notes on Some Dorset Churches, by Sir Stephen Glynne, Baronet', ed. J.M.J. Fletcher, *Proceedings of the Dorset Natural History and Archaeological Society* **45** (1924), p.72

73 P. Stanton, *Pugin*, London 1971, pp.138, 205

74 Newman and Pevsner, *op. cit.*, p.356; plans in WRO, DI/61/10/13

75 Newman and Pevsner, *op. cit.*, p.220; original plans in DRO, PE/HAL/CW3/1/2-10

76 Newman and Pevsner, *op. cit.*, p.296; for Carpenter's career see P.F. Anson, *Fashions in Church Furnishings 1840–1940*, 2nd edn London 1965, pp.75–8, and B.F.L. Clarke, *Church Builders of the Nineteenth Century*, rev. edn Newton Abbot 1969, pp.116–17; Carpenter was one of the architects most thoroughly approved of by the Cambridge Camden Society, see J.F. White, *The Cambridge Movement*, Cambridge 1962

77 Newman and Pevsner, *op. cit.*, pp.300–1

78 Quoted in *A Short History of St Nicholas' Church, Moreton*, Dorchester 1984, p.3

79 Fletcher, *op. cit.*, **45**, pp.98, 102

80 *Ibid.*, **45**, pp.32, 34; see also Newman and Pevsner, *op. cit.*, pp.264–5; the interior has been much altered.

81 Fletcher, *op. cit.*, **45**, pp.48–9

82 *Ibid.*, **45**, pp.20–1; see also Newman and Pevsner, *op. cit.*, p.155

83 Fletcher, *op. cit.*, **45**, p.61

84 Newman and Pevsner, *op. cit.*, pp.405–6

85 *Ibid.*, pp.130, 312, 344–5; plans of Powerstock in DRO, PE/POW/CW2/1, CW3/2/1-11; and of Catherston Leweston and Pentridge in WRO, D1/61/8/21, D1/61/10/9

86 See Yates, *Anglican Ritualism in Victorian Britain*, pp.184–91

87 E.C. Wilson, *An Island Bishop 1762–1838: Memorials of William Ward, DD, Bishop of Sodor and Mann 1828–1838*, London 1931, p.152

88 *Ibid.*, pp.217–18. The original documents quoted from in Wilson's study of Bishop Ward, who was her grandfather, and his family are now deposited in the Manx Museum, Douglas

89 Hutchins, *op. cit.*, iii, pp.137, 140, 480

90 Memorial tablet in Hinton Parva church

91 Wilson, *op. cit.*, p.220

92 As an illustration of this point see *The Victorian Church: Architecture and Society*, eds C. Brooks and A. Saint, Manchester 1995, and my review of this collection of essays, based on lectures delivered to the Victorian Society in London in 1992, in *Journal of Ecclesiastical History* **47** (1996), pp.767–8

Appendix

Dorset churches retaining wholly or substantially unaltered interiors of the period 1560–1860

Pre-Ecclesiological Interiors

*BLANDFORD FORUM (Cemetery Chapel)
1855. Collegiate interior with double row of stalls along N and S walls. Reading desk placed directly under E window. Chapel retains original hearse.

BRADFORD PEVERELL (St Mary)
1849–51 by Decimus Burton. Nave filled with open benches and stone font with wooden cover. Chancel tiled but not stalled, with original altar table raised on two steps, and original stained glass, including some medieval glass given in 1850 by New College, Oxford. Stone pulpit on N side of nave entered through wall from combined vestry and organ chamber. Wooden reading desk facing W on S side of nave. Stone niches on either side of tower arch enclose panels inscribed with Ten Commandments, Creed, Lord's Prayer and eucharistic texts; other texts painted over chancel arch and next to W door. Original brass altar rails and pulpit candle sconces.

BRIDPORT (Old Meeting, Unitarian)
1794. Pulpit on short wall opposite entrance with communion table railed in below it. Three blocks of box pews on ground floor of chapel with seating for singers on each side of communion enclosure. Galleries on three sides of interior used for Sunday school and retaining original seating and desks for teachers. Organ has been moved from gallery over entrance, which has been reseated, to position under gallery to side of communion enclosure.

CHALBURY (All Saints)
Substantially complete 18th century fittings with three-decker pulpit at E end of nave. Box pews in nave and raised family pew in chancel but W gallery has been reseated. Tripartite arch, separated by wooden columns, between nave and chancel. Neo-classical altar rails date from 1974.

*CHARBOROUGH (St Mary)
Built 1775 and refitted 1837 with imported woodwork from Belgian and Dutch churches. 17th century stalls for members of Drax family with 16th century Antwerp altarpiece placed over them. Enormous pulpit built over reading desk at E end of nave and approached by steep staircase. Painted glass in E and W windows with another large altarpiece below E window. Seating for servants and estate workers provided by loose benches in middle of nave.

CHETTLE (St Mary)
1849–50 by Morris and Henson. Family pew in S transept, since 1940 housing organ. Stone pulpit on N side of chancel arch but balancing reading desk on S side removed. Open benches in nave. Chancel empty apart from altar table and rails. Original stained glass with text of Beatitudes in windows of nave.

COMPTON VALENCE (St Thomas of Canterbury)
1839–40 by Benjamin Ferrey. Pulpit, canopied with inscription 'Thy Word is Truth', entered through wall from chancel, on S side of nave. Balancing reading desk has been moved into chancel. Reredos with three elaborately carved niches housing panels inscribed with eucharistic texts. Texts also painted over chancel arch, 'God is a Spirit and they that Worship Him must Worship Him in Spirit and in Truth', and in chancel with Ten Commandments on N and Beatitudes on S wall. Open pews with poppyheads and low benches for children in nave. Chancel not stalled. Late 19th century organ, lectern, altar table and credence table. Original stained glass in windows of apsidal sanctuary.

EAST LULWORTH (St Mary, Roman Catholic)
1786–7 by John Tasker. Apsidal Greek cross interior with galleries in three projections and sanctuary in fourth. Original organ in W gallery. Family pews in N and S galleries. Open benches in central space under dome. Original altar complete with candlesticks and crucifix of ivory inlaid with *lapis lazuli*. Late 19th century accretions removed in sensitive restoration of 1953 by H.S. Goodhart-Rendel. Modern painting of central dome sympathetic to original design and furnishings.

HOLNEST (St Mary)
Restored 1855. 17th century pulpit and backboard lacks original tester and reading desk. Late 18th or early 19th century box pews in nave, but seating in S aisle later reordered to incorporate organ. 18th century altar table with barley-sugar legs incorporating front panel of 17th century carved woodwork. Simple stalls in chancel, probably not designed for surpliced choir. Church lit by candles in iron brackets attached to walls and seating. Church closed for worship in 1939 and re-opened in 1968.

HORTON (St Wolfrida)
1722 and 1755. Unusual ground plan with N transept projecting from W end of nave. Original canopied pulpit, with later wrought iron staircase, lacks reading desk. Box pews in nave and chancel. Handsome original reredos with dove surrounded by cherubs in a glory and surmounted by a pelican in its piety.

*IWERNE STEPLETON (St Mary)
Mid 19th century restoration, of neo-Norman type, possibly by George Alexander. Open benches in nave, those at W end raised over Beckford and Pitt family vaults. Neo-Norman arcaded pulpit on S side of chancel arch, but balancing reading desk on N side removed. Unstalled chancel raised two steps above level of nave and sanctuary one step above that of chancel; latter has tiled floor and neo-Norman altar table. Some mid 19th century stained glass but also later 19th century stained glass and lectern and early 20th century altar rails.

*LEWESTON (Holy Trinity)
1616. Canopied pulpit and reading desk on S side of altar table and rails. Open benches with elaborately carved ends. Walls lined with hat pegs.

*MAPPERTON (All Saints)
Restored 1846. 17th century pulpit on N side of chancel arch, altar rails and plaster ceilings of 1704, roundels of imported heraldic and foreign painted glass in windows of nave. Open benches in nave. Family pews in chancel with reading desk at W end of N side, to E of pulpit staircase and fitted with two book ledges, one facing S and the other facing W.

OVER COMPTON (St Michael)
Refitted 1620, 1775 and 1821–2, retaining furnishings of all three dates. T-plan interior with canopied three-decker pulpit in middle of S wall of nave directly opposite family pew, fitted up with domestic chairs, in N transept. Transept also houses surviving early 17th century long communion table. 'Gothick' open benches in W part of nave and W gallery. Early 19th century coloured glass in nave windows. Chancel and E part of nave refitted in 1877.

*PLUSH (St John Baptist)
1848 by Benjamin Ferrey. Substantially complete contemporary fittings include pulpit on S side of chancel arch entered through wall from vestry, reading desk (formerly on N side of chancel arch), stalls (formerly in chancel), altar table and rails, sanctuary chairs, stone reredos, elaborately tiled sanctuary floor, stained glass and nave seating. Many fittings no longer *in situ* as platform has been inserted in chancel to enable church to be used as venue for concerts.

*PORTLAND (St George)
Refitted 1849. Extremely conservative re-ordering of church built in 1754–66. Gallery with organ at W end of nave and galleries in both N and S transepts. Pulpit and reading desk of equal height on opposite sides of nave to E of crossing with separate clerk's desk on S side. All seating focused on pulpit and reading desk with box pews in E part of nave facing W and pews for churchwardens backing immediately on to cramped apsidal sanctuary with space only for small altar table and rails. 18th century baluster font and altar rails. Vested in Churches Conservation Trust.

PUDDLETOWN (St Mary)
Refitted 1635. Three-decker pulpit in SE corner of nave. Box pews in nave and N aisle with gallery across W end of both. Chancel and N chapel refurnished by C.E. Ponting in 1910–11.

SUTTON WALDRON (St Bartholomew)
1846–7 by George Alexander. Stone pulpit and reading desk on opposite sides of entrance to chancel, raised well above level of nave but not stalled. Open benches in nave. Elaborate wall and roof decoration by Owen Jones and floors laid with Minton tiles.

TINCLETON (St John Evangelist)
1841–9 by Benjamin Ferrey. Organ at W end of nave and chancel stalled only on N side with family pew on S side. Open benches in nave. Stone pulpit in NE corner of nave, but reading desk in SE corner has been altered. Alabaster reredos and jewelled altar frontal date from 1889.

WEST PARLEY (All Saints)
Refitted 1841. Canopied pulpit and reading desk of 1640 at E end of nave. Seating in nave comprises mix of numbered open 'free' benches and 'appropriated' box pews, with special seats for choir, at W end of nave, squire and rector. Chancel rebuilt and refurnished 1898.

WEST STAFFORD (St Andrew)
Refitted 1640. Retains original screen between nave and chancel, canopied pulpit at E end of nave, lacking reading desk, benches and altar rails. Chancel extended and largely refurnished by C.E. Ponting in 1898.

WINFRITH NEWBURGH (St Christopher)
Restored 1854. Open benches in nave and aisles, all numbered, some labelled 'free'. Pulpit entered through doorway to N side of chancel arch. Reading desk on S side originally faced W. Some recent re-ordering in chancel and at E ends of nave and aisles.

*WINTERBORNE TOMSON (St Andrew)
Complete 18th century fittings paid for by William Wake, archbishop of Canterbury 1716–37. Three-decker pulpit at E end of nave, with pulpit entered through chancel screen. Box pews in nave and family pew in chancel. Altar table and rails in apsidal sanctuary. W gallery made up from parts of pre-Reformation rood screen. Church repaired in 1929–31 under direction of Society for Protection of Ancient Buildings. Vested in Churches Conservation Trust.

Interiors combining some ecclesiological and some pre-ecclesiological features

ASKERSWELL (St Michael)
1858 by Talbot Bury. Pulpit on S side of chancel arch; reading desk on N side with double front facing both S and W. Open benches in nave and N aisle. Chancel stalled.

*HINTON PARVA (St Kenelm)
1860 by Lewis Vulliamy. Low benches, some with doors, in nave and N transept. Organ in S transept. Chancel stalled with pulpit at W end of stalls on S side and reading desk, facing S, on N side. Shallow sanctuary with neo-Norman altar rails, and elaborate altar table matching equally elaborate pulpit and reading desk, raised only one step above level of chancel and nave. Chancel walls elaborately tiled. Some original and some later stained glass. Panels for Ten Commandments either side of E window. Stone octagonal font moved from original position in E aisle of N transept to new position on N side of entrance to chancel.

LITTLE BREDY (St Michael)
1850 by Benjamin Ferrey. Long nave aisled only at E end with entrance through porch under tower at W end of S aisle. Organ case on either side of nave W window with seats for singers in front, but chancel also stalled. Open benches in nave and aisles, with L-shaped seating arrangements at E end of N aisle. Panels for Ten Commandments, Creed and Lord's Prayer on either side of E window. Mostly original stained glass. Stone pulpit on N side of chancel arch. Wooden reading desk on S side with double front facing both N and W.

MELBURY ABBAS (St Thomas)
1851–2 by George Evans of Wimborne. Chancel stalled with panelled and painted roof. Open benches with poppyheads in nave and S aisle. Pulpit on N side of chancel arch; reading desk on S side with double front facing both N and W. Elaborately tiled baptistery with stone font, at W end of S aisle, and sanctuary with panels for Ten Commandments on either side of E window. Original stained glass in most windows. Organ in S transept and lectern to side of pulpit are later additions.

MELBURY BUBB (St Mary)
1854. Open benches facing E in nave; pulpit at E end on N side and reading desk, facing W, on S side. Chancel, separated from nave by screen, is stalled and has elaborately tiled sanctuary, with original altar table, raised two steps above level of chancel which is three steps above level of nave. Original coal-fired stove in middle of S side of nave. Interior lit by oil lamps. Late 19th century stone reredos and stained glass in W window.

WRAXALL (St Mary)
Mid 19th century restoration. Open benches in nave apart from two seats fitted with doors at E end of N side. Low arcaded wooden pulpit on S side of chancel arch. Minister's desk facing N on S side of unstalled chancel. Tiled sanctuary with altar table raised on one step. Brass altar cross, candlesticks and flower vases may be contemporary with other furnishings. Ten Commandments inscribed on metal panels on either side of E window.

Ecclesiological Interiors

CATHERSTON LEWESTON (St Mary)
1852 by J.L. Pearson. Complete original furnishings and stained glass. Open benches in nave, stalled chancel and raised sanctuary. Scheme of internal decoration supervised by Clayton and Bell.

CHILFROME (Holy Trinity)
Restored 1852. Open benches in nave with stone font at W end and stone pulpit, entered through wall in chancel, in SE corner. Chancel stalled with brass desk attached to stall front on S side, for reading service, and brass lectern in NE corner of nave, for reading lessons. Sanctuary raised three steps above level of chancel and laid with encaustic tiles; altar table on platform against E wall. Original stained glass in E, N, and S windows of chancel. Roofs supported by stone corbels in form of carved angels bearing shields.

MORETON (St Nicholas)
Refitted 1848–9. Interesting example of church built in 1776 with idiosyncratic ecclesiological interior. Stone font placed in middle of nave. Low open benches for congregation and stalls for surpliced choir. Curved altar rails make apsidal sanctuary circular. Painted altar table with brackets for candles fixed to wall behind.

PENTRIDGE (St Rumbold)
Nave rebuilt and chancel refitted 1855–7 by William Slater. Complete original furnishings with open benches in nave, stalled chancel, pulpit, lectern, raised sanctuary and stained glass in E window.

POWERSTOCK (St Mary)
1854–9 by John Hicks. Open benches in nave and both aisles, elaborately carved stone pulpit on S side of chancel arch, eagle lectern on N side and organ at E end of N aisle. Chancel stalled with elaborately carved minister's desk at W end of N side facing S. Sanctuary has elaborately carved stone reredos and tiled floor. Mostly original stained glass. Walls of chancel, and of nave above arcades, stencilled with painted *fleur-de-lys* around windows of chancel.

RAMPISHAM (St Michael)
Chancel 1845–7 by A.W.N. Pugin, nave and aisles 1859–60 by John Hicks. Original stalls in chancel with minister's desk on N side, sedilia incorporated in SE window, painted ceiling, tiled floor, stained glass in E window and metal panels inscribed with Ten Commandments. Pulpit, now redundant at E end of N aisle, contemporary with choir furnishings. Original chancel screen has been removed. Low open benches in nave and aisles with font at W end of nave, and benches for children between font and W window. Stained glass mostly contemporary with nave furnishings, but some later stained glass together with candle sconces attached to walls of aisles and chancel.

In addition to the churches listed above, the following contain important furnishings of the period 1831–60 which have survived later alterations:

Caundle Marsh (St Peter and St Paul): 1857 by R.H. Short; original furnishings apart from stone pulpit, lectern and altar of 1920.

Charmouth (St Andrew): 1836–8; original reredos and W gallery with 'Gothick' organ case; mostly refitted 1885.

Church Knowle (St Peter): enlarged 1833–41, retains N and W galleries and pulpit of this date; other furnishings date from restoration of chancel in 1891.

East Stour (Christ Church): 1842 by George Alexander; former T-plan arrangement with original seating in nave and transepts and transept galleries from which seating has been removed; other furnishings later apart from 18th century pelican lectern on modern base.

Langton Herring (St Peter): restored 1858; original benches in nave and S aisle and somewhat altered pulpit of 1787.

**Lyme Regis* (Cemetery Chapel): 1856; original seating, partly collegiate in arrangement; late 19th century stone altar and elaborate decoration to roofs and walls.

Melcombe Horsey (St Andrew): restored 1844; original seating in nave; cut-down pulpit of 1723, 17th century altar table and rails, 17th century panelling made up into choir stalls

Morecombelake (St Gabriel): 1841; original seating in nave and large pulpit on N side of chancel arch; chancel refurnished.

Mosterton (St Mary): 1832–3 by Edmund Pierce; original W gallery with tiered seating; otherwise refurnished.

Motcombe (St Mary): 1846 by George Alexander; original numbered benches and stone altar table; otherwise refurnished.

Osmington (St Osmund): 1846 by Benjamin Ferrey; original seating in nave and chancel unstalled; late 19th century pulpit and minister's desk.

Preston (St Andrew): 1855 by T.H. Wyatt; original seating in nave but otherwise refurnished.

Spetisbury (St John Baptist): 1859 by T.H. Wyatt; original seating in nave but that in N aisle removed; pews originally had doors but only one, at W end of nave on S side, survives; original choir stalls, clergy desks, tiled floor, painted roof and stained glass in E window in chancel.

Stour Provost (St Michael): 1838; original seating in form of box pews with poppy-heads, family pew in chancel and inscriptions over chancel arch, porch door and N arcade; other furnishings later.

Sturminster Marshall (St Mary): restored 1859 by H Woodyer; original choir stalls and wooden chancel screen; otherwise refurnished.

Swyre (Holy Trinity): 1843; original pulpit, altar rails, benches on N side of chancel and pews in nave with 'Gothick' bobbin-headed bench ends; plaster rib-vault to nave, supported on wall shafts, with elaborate 'Gothick' surround to S doorway; small boards for Ten Commandments either side of chancel arch with small Royal Arms in middle.

Sydling St Nicholas (St Nicholas): restored 1841; box pews of this date in S aisle and seating in nave formed from cut-down former box pews.

Tarrant Gunville (St Mary): 1844–5 by T.H. Wyatt; original open benches in nave and stalls, probably for children, in chancel; railed family pews at E ends of N and S aisles; late 19th century pulpit and wall stencilling.

Tarrant Keyneston (All Saints): 1852–3 by T.H. Wyatt; original pulpit approached by stairs in wall between chancel and nave; original stalls in chancel and pews in nave; font, near S door, originally had seats around it for families of those being baptised.

Trent (St Andrew): restored 1840; important group of imported furnishings including Dutch pulpit of *c.*1650,

lectern made up from 17th century woodwork, and bench ends, some original work of *c.*1500 and others copies of 1840; windows filled with mix of 16th–17th century Dutch, German and Swiss stained glass and English stained glass dated between 1842 and 1849.

**Tyneham* (St Mary): partly rebuilt *c.*1850; W gallery and benches of this date; 17th century pulpit; church disused since 1943 and now used as visitor centre

West Knighton (St Peter): mid 19th century box pews, large pulpit and stone tablets for Ten Commandments, Creed and Lord's Prayer and, most unusually, table of kindred and affinity retained in conservative re-ordering of 1894.

West Stour (St Mary): 1840; original W gallery incorporates 15th century woodwork from former rood screen; 17th century pulpit and altar table; reseated 1912.

Winterborne Clenston (St Nicholas): 1840 by Lewis Vulliamy; original pulpit on S side of chancel arch and reading desk on N side, formerly facing W; baluster font at W end of nave; organ in N transept; family pew in S transept; shallow chancel with five-sided altar rails and panels for Ten Commandments, Creed and Lord's Prayer either side of E window which retains original painted glass; nave reseated 1901.

Winterborne Whitechurch (St Mary): restored 1844 by Benjamin Ferrey who installed much-repaired medieval stone pulpit from Milton Abbey and low box pews in E part of nave; otherwise refurnished.

*Churches marked with an asterisk are not in regular use and some are in private ownership; other buildings listed may also be locked outside service times.

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An Identification of Four Casts of Heads of Hanged Men in the Dorset County Museum

G.A. CHESTER

Introduction

The Dorset County Museum has four plaster casts of heads of hanged men (Fig. 1). They were never accessioned. They are stored in boxes numbered 1, 2, 3 and 4, and the only clues to the identities of the individuals from whom the casts were made are to be found in a brief note in the box numbered 1:

> 4 Casts of Heads of Hangmen [*sic*] from Dorchester Public Hangings (Ω 1860s).
> Probably made by R D'O Good's father.
> Dr Good was in practice in Dorchester and was Prison Doctor. Practiced in High West Street.
> These heads were some of the last prisoners to be hung in public in Dorchester.
> They were given to the museum by Dr Turner of Icen Way, Dorchester.

The clues — there are three of them — are in somewhat vague terms: the casts are (1) from *about* the 1860s; (2) were *probably* made by R.D.'O. Good's father; and (3) were *some* of the last prisoners to be hanged in public at Dorchester.

The Four Casts

The 1860s were taken as the starting point of the investigation. This was consistent with the casts having been taken from some of the last prisoners to be hanged in public, since the Act abolishing public executions was passed in 1868.

Working forwards and backwards from 1868, a list of prisoners charged with capital offences was compiled from the Dorset assize calendars 1833–87 and the reports of the assizes in the *Dorset County Chronicle*. All except those sentenced to death were eliminated from the list. Finally, those sentenced to death who were afterwards reprieved were also eliminated. The result was a list of prisoners executed at Dorchester and the dates of their executions (Table 1). The list contained a distinct group of six, spanning the years 1856–1870. Before 1856, the last execution at Dorchester had been 23 years previously (Sylvester Wilkins in 1833); whilst it was 17 years after 1870 until the next (Henry William Young in 1887).

The reports in the *Dorset County Chronicle* of the six executions which were carried out between 1856 and 1870 were then examined. In four of the six cases (Charles Fooks and Edwin Alfred Preedy in 1863, Jonah Detheridge in 1869 and Thomas Ratcliffe in 1870) there were specific references to casts having been taken; whereas in the other two cases (Elizabeth Martha Brown in 1856 and James Seal in 1858) there were no references (Table 1).

The case for eliminating Mrs Brown as a candidate was further strengthened, not only by the fact that all the casts appeared to be of males, but by a report in another newspaper, the *Dorset County Express* (12 August 1856, p.4), which stated: 'No application was made to take a cast of the culprit's head, or to examine it for phrenological purposes.'

Figure 1: The four casts left to right, 4, 2, 1, 3 (all photographs are by A.P. Dawson)

Table 1: Executions at Dorchester 1833–87

Date of execution	Name of person hanged	Reference to casts in *Dorset County Chronicle*	Name of Dorchester goal surgeon
1833	Sylvester WILKINS	No reference(a)	?
1856	Elizabeth Martha BROWN	No reference(b)	Christopher Arden
1856	James SEAL	No reference(c)	Christopher Arden
1863	Charles FOOKS Edwin Alfred PREEDY	'casts of both Fooks' and Preedy's heads were afterwards taken'(d)	John Good John Good
1869	Jonah DETHERIDGE	'a cast of the head of the prisoner was taken'(e)	John Good
1876	Thomas RATCLIFFE	'Messrs Voss took a cast of the prisoner's head'(f)	John Good
1887	Henry William YOUNG	No reference(g)	William Ernest Good

(a) 4 April 1833
(b) 14 August 1856
(c) 12 August 1856
(d) 2 April 1863, p.704
(e) 19 August 1869, p.4
(f) 18 August 1870, p.4
(g) 19 May 1887

There was also additional evidence for eliminating James Seal. Seal possessed a distinct facial injury which was not present on any of the casts: 'he bore the mark of a bite on the left cheek from a horse' (*Dorset County Chronicle*, 12 August 1858, p.24), his face being 'greatly disfigured' (*Poole and South-Western Herald*, 6 May 1858, p.6).

The evidence therefore pointed to the casts being of the heads of the following executed men: Charles Fooks and Edwin Preedy (1863), Jonah Detheridge (1869) and Thomas Ratcliffe (1870).

The Criminals and their Crimes

Charles Fooks[1] was a 49-year-old farmer who lived at Walditch, near Bridport. He was an unmarried, ill-tempered, hypochondriac, and had complained of pains in the head for many years. He harboured a deep feeling of animosity towards a cousin, Daniel Stone, who lived nearby. He believed Stone was talking and plotting behind his back. On occasions Fooks had threatened to 'shoot him like a rook'; at other times he had spoken of killing himself. On the morning of 29 August 1862, Fooks came out into the street and shot Stone dead. He was tried before Mr Serjeant Shee at the Lent Assizes, 1863. A defence of insanity failed to impress the jury, and he was found guilty of murder and sentenced to death.

Edwin Alfred Preedy,[2] a 20-year-old convict, was tried at the same assizes for the murder of Charles Evans, a warder at Portland prison. Preedy's childhood in London with his mother and a violent step-father had not been pleasant and he had lived for some time as a 'city Arab'. A spell in the army, from which he deserted, and a string of prison sentences followed. The last sentence he received — three years' penal servitude for stealing clothes — took him to Portland prison. He had a history of violence when in captivity and on 8 September 1862 he stabbed Warder Evans in the neck with a knife. At his trial he cursed and behaved so violently that he had to be restrained in chains. The jury were not persuaded that he was insane, and he was found guilty of murder and sentenced to death. While awaiting execution he was ministered to by the Reverend Henry Moule, vicar of Fordington, who later wrote an account of the case (Moule 1863).

Fooks and Preedy were both hanged on 27 March 1863. They were the last two people to be hanged in public at Dorchester.

Jonah Detheridge,[3] a 25-year-old convict, killed Joseph Trevett, a warder at Portland prison, on 23 March 1869, battering in his head with a stone pick. Detheridge hailed from Staffordshire and was by trade a bricklayer. He had been summarily convicted on numerous previous occasions, before receiving the sentence of seven years' penal servitude, for pocket-picking, which took him to Portland. Warder Trevett, on the day he was killed, had told off Detheridge for the way he was doing his work and on a previous occasion had reported him for misconduct. Detheridge was tried before Mr Justice Lush at the Summer Assizes, 1869. He was found guilty of murder and sentenced to death. He showed no remorse for his crime, scorned the ministrations of the prison chaplain, and determined to 'die game'. He was greatly disappointed to learn that he would not be hanged in public. His execution, on 12 August 1869, was the first at Dorchester to be carried out in private.

Thomas Ratcliffe,[4] a 26-year-old convict, formerly a seaman, also killed a warder at Portland prison. Ratcliffe was a native of Lancashire. His mother had died when he was 18 months old and he had been put in the Union house. A life of petty crime followed and a string of prison sentences, culminating with one of seven years' penal servitude, for stealing a pipe, which led to his incarceration at Portland. He was 'tired of his life', and on 20 April 1870 attacked Warder Edward Bly with a shovel. Bly died on 15 June and Ratcliffe was sent

Table 2: Summary of physical features of Ratcliffe, Fooks, Detheridge and Preedy

Thomas RATCLIFFE	Age: 26, Height: 5′11″(a) 'a tall powerful fellow' (b) 'a well-built powerful man' (c) Facial marks: 'mole right side face; blue mark over left eyebrow; dimpled chin' (a)
Charles FOOKS	Age: 49, Height: – (d) 'a powerful man, standing over 6 feet' (e) 'a very heavy man, and six feet two inches in height' (f) Facial marks: – (d) 'At his trial he still exhibited the scar on his forehead... [the result of] a large scalp wound on the left side of the forehead... about two inches long and an inch and a half broad' (g)
Jonah DETHERIDGE	Age: 25, Height: 5′7″(a) 'a short stocky man' (h) 'a short thick-set man' (i) Facial marks: – (a) 'pock-marked' (h) 'a low forehead' (i) 'compressed lips' (j)
Edwin Alfred PREEDY	Age: 20, Height – (d) 'a very slender man' Facial marks (d) 'nothing at all repulsive in his appearance' (g)

(a) Dorset Record Office: Dorset County Prison. Description of Prisoners. NG/PR: 1/C.3. (MIC/R/881)
(b) *Poole and South-Western Herald*, 23 June 1870, p.2.
(c) *Dorset County Chronicle* (Supplement), 28 July 1870, p.15.
(d) Dorset Record Office: Dorset County Gaol. Description of Prisoners. NG/PR:1/C.1. (MIC/R.880)
(e) *Dorset County Chronicle*, 4 September 1862, p.106.
(f) *Western Flying Post*, 31 March 1863, p.3.
(g) *Dorset County Chronicle*, 12 March 1863, pp.644–45.
(h) *Poole and South-Western Herald*, 1 April 1869, p.6.
(i) *Dorset County Chronicle*, 29 July 1869, p.8.
(j) *Dorset County Chronicle*, 19 August 1869, p.4.

for trial at the Summer Assizes before Mr Justice Willes. Convicted of murder and sentenced to death, he gladly received the ministrations of the prison chaplain and while awaiting execution spent most of his time in prayer. He was hanged on 15 August 1870.

Individual Identification of the Casts

Having established that the four casts were made from the heads of Fooks, Preedy, Detheridge and Ratcliffe, there remained the task of identifying them individually.

Information on the physical characteristics of the four men was extracted from the Dorchester prison registers and from contemporary newspaper accounts of the committals, trials and executions of the prisoners (Table 2).

The most readily identifiable was Charles Fooks, who was upwards of 20 years older than the other three men. Even on a cursory examination of the casts there was little doubt that the cast numbered 2 was that of Fooks. This view was confirmed by a particular detail. After shooting his victim, Fooks turned the gun on himself, inflicting a wound which the surgeon who attended him described as: '... a large scalp wound on the left side of the forehead, blackened, and exposing the bone. It was about two inches long and an inch and a half broad' (*Dorset County Chronicle*, 12 March 1863, p.645). At the trial, several months later, 'He still exhibited the scar on his forehead, caused by the wound he had inflicted on himself' (*Dorset County Chronicle*, 12 March 1863, p.645). Such a feature is plainly visible on the cast numbered 2 (see Figs 1, 2a–c).

A naturally occurring physical characteristic enabled the cast of Thomas Ratcliffe to be positively identified. In the Dorchester prison registers Ratcliffe's facial features were described in some detail. The first two features mentioned were too superficial to be of much value ('Mole right side face' and 'blue mark over left eyebrow'), but the third was critical: Ratcliffe was stated to have a 'dimpled chin'. Only one of the four casts possessed this feature: the cast numbered 1 (see Figs 1, 3a and 3c).

For the identification of the remaining two casts (3 and 4) the general physical descriptions of Detheridge and Preedy were relied upon.

It was felt that the description of Detheridge in the Dorchester prison registers as a short man — five feet and seven inches — and as being 'stocky' (*Poole and South-Western Herald*, 1 April 1869, p.[6]) or 'thick-set' (*Dorset County Chronicle*, 29 July 1869, p.8) was more consistent with the features of the cast numbered 3 than with those of the cast numbered 4 (compare the two casts in Fig 1, and compare Figs 4a–c with Figs 5a–c).

Meanwhile, it was felt that the description of the youthful Preedy — he had 'scarcely any whiskers, and attained his majority two days after his trial' (*Western Flying Post*, 31 March 1863, p.[3]) — as 'a very slender man' (*Western Flying Post*, 31 March 1863, p.[3]) who had 'nothing at all repulsive in his appearance' (*Dorset County Chronicle*, 12 March 1863, p.644) was more consistent with the features of the cast numbered 4 than with those of the cast numbered 3 (compare the two casts in Fig. 1, and compare Figs 5a–c with Figs 4a–c).

There were additional physical features possessed by Detheridge which tended to point in the same direction. That his face was 'pock-marked' (*Poole and South-Western Herald*, 1 April 1869, p.[6]) was considered too

Figure 2a–c: Cast 2, identified as Fooks (left to right) half-face, profile, full-face

Figure 3a–c: Cast 1, identified as Ratcliffe (left to right) half-face, profile, full-face

superficial a feature to be relied upon, but his 'low forehead' (*Dorset County Chronicle*, 29 July 1869, p.8) seemed to be better represented by the cast numbered 3 than by that numbered 4 (compare Fig 4b with Fig 5b). Similarly, particular mention was made of Detheridge's 'compressed lips', and on entering the gallows yard it was noted that 'His lips were more compressed than at his trial' (*Dorset County Chronicle*, 19 August 1869, p.4). Whether this was a description of mere demeanour, or whether there was a physiological dimension, the description seemed to be more consistent with the thin lips and aspect of the mouth of the cast numbered 3 than with the much fuller lips of that numbered 4 (compare Fig. 4c with Fig. 5c).

Therefore it is contended that the following identification of the individual casts can reasonably be asserted: 1. Thomas Ratcliffe; 2. Charles Fooks; 3. Jonah Detheridge; 4. Edwin Alfred Preedy.

Dr Good and Mr Voss

Casts of heads of executed people were commonly made for phrenologists or doctors interested in studying the physiognomy of criminals. The German anatomist Franz Joseph Gall (1758–1828) first put forward the idea that variations in the shape and contours of the skull revealed a person's character. Following on from Gall other researchers attempted to isolate a physical

Figure 4a–c: Cast 3, identified as Detheridge (left to right) half-face, profile, full-face

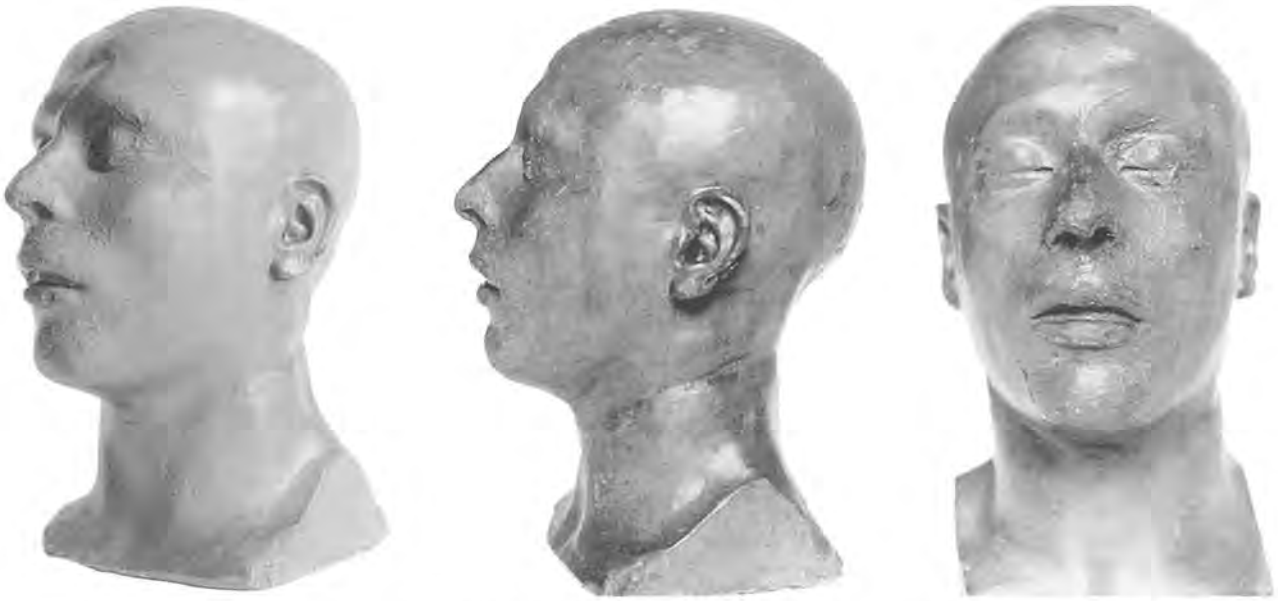

Figure 5a–c: Cast 4, identified as Preedy (left to right) half-face, profile, full-face

'criminal type' — an idea highly congenial to respectable Victorian society but now discredited. The 'criminal type' theory is particularly associated with the Italian criminologist Cesare Lombroso (1836–1909). Lombroso's major work *L'Uomo Delinquente* was published in 1889, but he had his predecessors, including '... Lauvergne, prison surgeon at Toulon, who examined many criminals to see what physical characteristics they had in common and made plaster casts of their skulls,...' (Symons 1966, 32).

Against this background and in view of the statement in the note previously adverted to that the casts were 'Probably made by R D'O Good's father...[who] was Prison Doctor', an examination of post office directories was undertaken in order to ascertain who was the Dorchester gaol surgeon at the time of the various executions (Table 1). This revealed that the executions of Fooks, Preedy, Detheridge and Ratcliffe coincided with the tenure of office of one man: Dr John Good.

As the only casts known to have been made of executed criminals at Dorchester were made during the time that Dr Good was gaol surgeon, there is a strong inference that it was Dr Good himself who applied to have the casts made. The same inference can be drawn from the wording of a report in the *Dorset County Chronicle* (2 April 1863, p.704) describing the executions of Fooks and Preedy: 'Mr. Good, the surgeon of the gaol, was in attendance, accompanied by his partner,

Mr. Curme; and casts of both Fooks' and Preedy's heads were afterwards taken.'

John Good[5] (1817–1892) was born at Lymington, Hampshire. He studied at Guy's and St Thomas's Hospitals, and became a Member of the Royal College of Surgeons and Licentiate of the Society of Apothecaries in 1840. In that year he came to Dorchester as house surgeon at the Dorset County Hospital. After two or three years he removed to Sturminster Newton, where he was in practice as a surgeon and apothecary until 1854. He then returned to Dorchester, residing initially at Cornhill. He went into practice with George Curme, a surgeon at 9 Cornhill. Curme had been in practice at Dorchester since 1829, and was an alderman and magistrate as well as holding several important medical positions in the town. The practice was styled 'Curme and Good, surgeons, Cornhill', until Dr Good removed to 48 High West Street, whereupon it became 'Curme and Good, surgeons, Cornhill and High West Street'. John Good soon found himself holding a number of important medical appointments, including that of gaol surgeon. The partnership of Curme and Good lasted until the early 1870s, when George Curme retired, after which Dr Good continued in practice at 48 High West Street, until his own retirement in 1883. At that time he had been 26 years surgeon-major of the Dorset Yeomanry, 21 years gaol surgeon and medical attendant of the county police, and 20 years medical officer to the Dorchester Union. On retiring he removed to 4 Alexander Terrace (he later died there, on 30 January 1892, at the age of 74) and was succeeded in his practice by his son, William Ernest Good. Although William, who 'looked after William Barnes at the end of his life (*teste* John Cowper Powys)' (Peers 1992, 286), was also appointed gaol surgeon, only two men were executed at Dorchester during his tenure of office, and no reference to casts having been taken on those occasions has been traced. William Ernest Good was the father of Ronald D'Oyley Good: the casts were not therefore made by 'R D'O Good's father', as suggested in the aforementioned note, but by his grandfather.

Whatever John Good's interest was in having casts made of the heads of executed men, it would seem to have been a private pursuit — at least to the extent that he is credited with no published work in the *Medical Directory* (1885).

The practical task of making the casts of the heads was undertaken by Thomas Haviland Voss (1806–1889), of Durngate Street, Dorchester, who was variously described in post office directories of the period as a 'builder' and/or, of particular materiality, 'plasterer'. Following his death, on 29 September 1889, the *Dorset County Chronicle* (3 October 1889, p.4) reported: 'Dorchester has just lost its oldest tradesman in the person of Mr. Thomas Haviland Voss,... Deceased who belonged to an old and much respected Dorchester family whose connection with the town extended considerably over a century, was in business himself for more than half-a-century as a plasterer, &c, from which he retired some years ago.'

Thomas Haviland Voss's grandson, Harold Lionel Voss, was Thomas Hardy's favourite chauffeur.Harold Voss recalled (Cox 1963, 7):

> [Hardy's] father was a builder and at one time employed six or seven workers. My grandfather was also a builder and ornamental plasterer. I remember hearing how in, I believe, 1887 [*sic*] my grandfather made plaster casts of the heads of the last two men, Stone [*sic*] and Preedy, to be publicly hanged at Dorchester. Hardy's father and my grandfather sometimes combined forces to tackle a building job that either had to be completed quickly or would have been too big for either builder separately...
>
> Once, I remember, [Hardy] said to me as we motored out of Dorchester towards Piddletown, "When I was a boy I often had to walk into Dorchester with a message for your grandfather and wait for an answer, and your grandfather would give me a threepenny bit for my trouble."

The error in naming Stone (the victim) in place of Fooks (the killer) had been made earlier by Hardy himself, in a note dated 9 September 1888 (Hardy 1928, 280), and which is a unique record of the minutiae of the making of two of the casts:

> T. Voss used to take casts of heads of executed convicts. He took those of Preedy and Stone. Dan Pouncy held the heads while it was being done. Voss oiled the faces, and took them in halves, afterwards making casts from the masks. There was a groove where the rope went, and Voss saw a little blood in the case of Stone, where the skin had been broken, — not in Preedy's.

How the Casts came to the Museum

It appears that John Good kept the casts at 48 High West Street, and that they remained there after he retired and removed to Alexander Terrace. William Ernest Good took over his father's practice at High West Street, and in later years had a partner called Gerald Osbrey Taylor. Dr Taylor subsequently removed to Icen House, Icen Way, Dorchester, where he was in practice for many years. He must have taken the casts with him when he left the High West Street practice for Icen Way, because Dr I.H. Seddon, who came to Dorchester as a *locum* in the 1950s, recalls seeing the casts, stored in a garage, at Icen House. They were offered to the museum, and were removed there, as far as Dr Seddon can recollect, in the early 1960s. Therefore the statement in the note, which accompanies the cast, that 'They were given to the museum by Dr Turner of Icen Way', would appear to be erroneous, to the extent that the doctor at Icen Way was Dr Taylor, not 'Turner'.

NOTES

1 The Fooks case was reported in: *Dorset County Chronicle*, 4 September 1862, 12 March, 2 April 1863; *Western Flying Post*, 2 September 1862, 17, 31 March 1863.

2 The Preedy case was reported in: *Dorset County Chronicle*, 11 September 1862, 12 March, 2 April 1863; *Western Flying Post*, 16 September 1862, 17, 31 March 1863.

3 The Detheridge case was reported in: *Dorset County Chronicle*, 1 April, 29 July, 19 August 1869; *Poole and South-Western Herald*, 1 April, 29 July, 19 August 1869.

4 The Ratcliffe case was reported in: *Dorset County Chronicle*, 23 June, 28 July, 18 August 1870; *Poole and South-Western Herald*, 23 June, 28 July, 18 August 1870.

5 Sources of information on Dr John Good were: *Dorset County Chronicle*, 4, 11 February 1892; 'Extract from partnership agreement between John Good and John Wills for practice of apothecary and surgeon at Sturminster Newton Castle, 1856' (Dorset Record Office: D/PIT/F108); 1881 Census, Dorchester Holy Trinity (piece 2110, folio 68, page 1); post office directories (1848–89); medical directories (1865 and 1885).

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Palaeoenvironmental and archaeological investigations on Wyke Down and in the upper Allen Valley, Cranborne Chase, Dorset, England: Interim summary report for 1998–9

C. FRENCH, H. LEWIS, M. ALLEN AND R. SCAIFE

With contributions by
J. Gardiner, K. Gdaniec, M. Green and GSB Prospection

Palaeoenvironmental and geoarchaeological fieldwork focusing on the later Neolithic-earlier Bronze Age periods in the Wyke Down area of Cranborne Chase in Dorset is in the process of gathering new data with which to re-examine the landscape models put forward by Barrett *et al.* (1991a and b) and Barrett (1994) regarding the Wessex area. The research is funded by the Arts and Humanities Research Board, the McDonald Institute for Archaeological Research and a private donor, and focuses on the upper Allen valley (east of the A354 Salisbury to Blandford Forum road at the valley head, down to the Knowlton henge monuments some 8km to the south-east where the river valley broadens, and across the valley from Bottlebush Down to the north, to Gussage and Harley Downs to the south) (Fig. 1). This landscape is a classic example of the chalk downlands in southern England, with numerous prehistoric monuments of all kinds present in close proximity and in different parts of the valley system.

Rationale Behind the Project

The project was designed to investigate landscape in the chalk downland region of southern England through studying recurrent signatures of land management practices in the geoarchaeological and ecological records of buried land surfaces. The new data collected will develop our understanding of the interactions between prehistoric settlement and land use, the monumental landscape and landscape/environmental change.

Much of the emphasis of the project is on the prospection for and analysis of buried prehistoric soils. Buried soils constitute the only readily available and widespread reservoirs of evidence for prehistoric land use in Wessex. They also contain time-depth information in terms of landscape and land-use change, but this record has rarely been systematically exploited, especially in regard to site-specific, pre-monument land use. In order to document landscape changes in the later Neolithic period and earlier Bronze Age through changes in land-use patterns, we are investigating buried soils under monuments, along with soils used in monument construction, and associated colluvial/alluvial deposits, using a combined approach of soil stratigraphic and micromorphological study with pollen and molluscan analyses (see Allen 1998). All of these methods have been used in previous research in the area (Allen *et al.* 1995; Barrett *et al.* 1991a and b; Cleal and Allen 1994; Cleal *et al.* 1995), but only very rarely have all three of them been combined (Macphail 1993; Cleal *et al.* 1994). This unique approach holds that only through the systematic comparison of these methods can a well-defined and detailed history of the late Neolithic and earlier Bronze Age landscape in this region be developed. Problems of interpretation, reworking and preservation, especially in the unique environments underneath monuments such as barrows in the chalk downlands (calcitic parent material with overlying weakly acidic barrow deposits), mean that molluscan and soil pollen methods on their own can only partially address the history of landscape changes in the region. Previous soil micromorphological studies (e.g. Gebhardt 1992; Courty *et al.* 1989; Lewis 1998a) suggest that it is possible through a pedogenic approach and by analogy with experimental results to identify the nature of prehistoric landscapes and land-use practices, as these are reflected by relict pedofeatures found in modern soil horizons. Furthermore, it is possible to discuss these practices on both a site-specific and wider regional scale over time.

The majority of the existing detailed palaeo-environmental work from the region is based on the analysis of molluscan assemblages and, more rarely, on palynological data from ditch fills and buried soils from a number of monuments (e.g. Cranborne Chase, Hambledon Hill, Wessex Linear Ditch project, King Barrow Ridge) (Barrett *et al.* 1991a and b; Cleal and Allen 1994; Allen 1994; 1995; 1997; 1998). This evidence has been coupled with more generalised colluvial sequences (e.g. Strawberry Hill; Heytesbury) and with the regional pollen record in order to reconstruct sequences of early prehistoric land use (Allen 1992; 1995). When specific monuments have been investigated (Cleal and Allen 1994; Allen *et al.* 1995), only rarely has micromorphological analysis of the buried palaeosols accompanied archaeological, molluscan and occasionally palynological studies (Fisher 1982; 1983; 1991; Macphail 1993; Scaife 1994). The free-standing sequences at each monument investigated require corroboration and integration with the wider archaeological and palaeo-environmental record of the region, along with testing of previous palaeo-environmental results through the application of finer sampling intervals and in the light of recent disciplinary/technological developments and ecological and experimental studies (Allen *et al.* 1993).

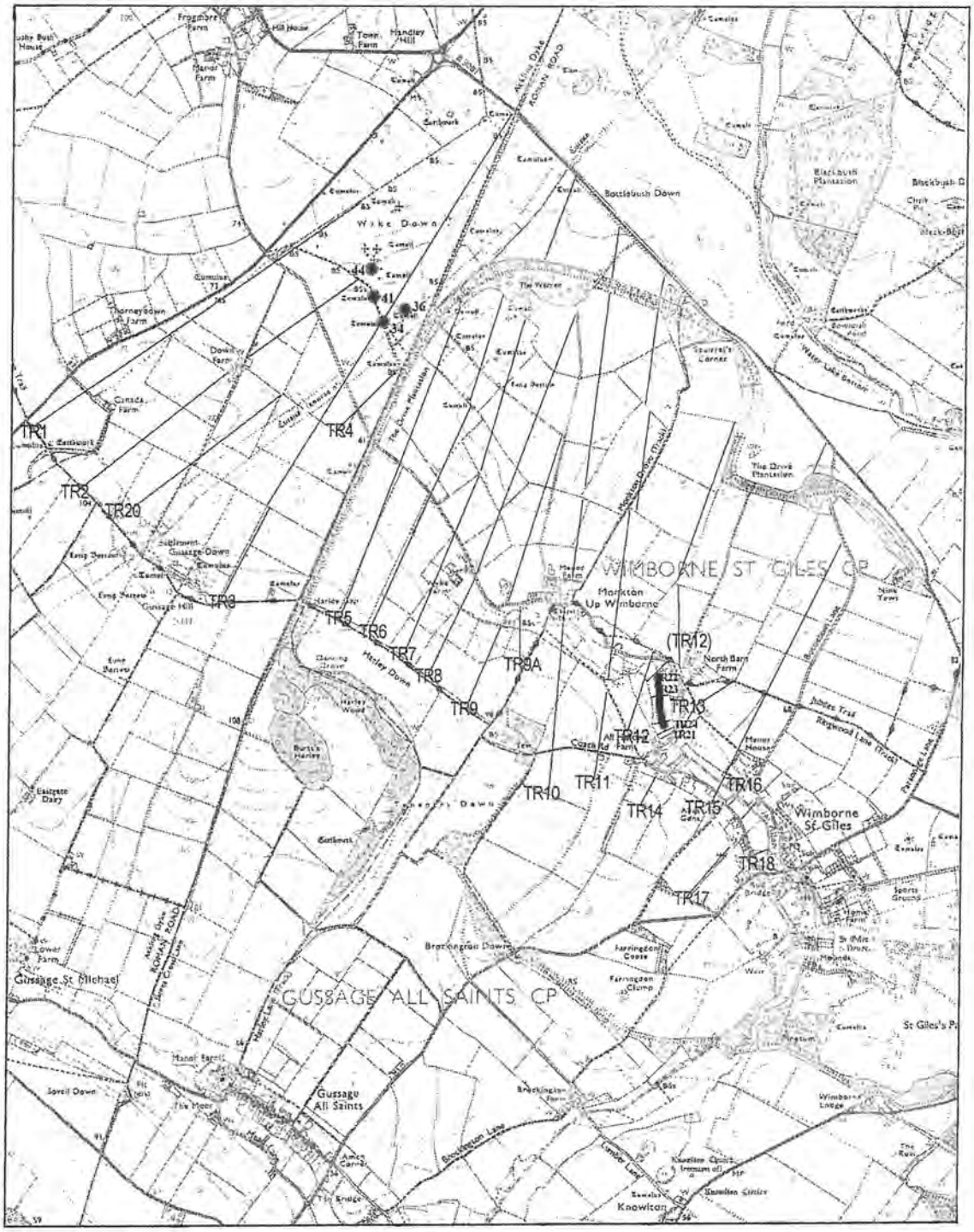


Figure 1: Location map of the research area showing the Wyke Down barrow group, the auger transects and the relict stream channel area (Scale 1:25,000; after the Ordnance Survey of England and Wales, Crown Copyright reserved) (H Lewis)

The present state of knowledge concerning the environmental evidence for land use during the late Neolithic to the Middle Bronze Age in Wessex may be summarised as follows. The regional pollen record shows an increase in forest clearings over time, and a change from small, short-term clearings to larger and longer-term clearings by the 2nd millennium BC (Scaife 1982; 1988; Thorley 1981; Kerney *et al.* 1964). The implied connection (inferred from a small amount of archaeological evidence, supplemented by the use of ethnographic analogy) is increasing human clearance of woodland and scrub vegetation, and greater maintenance of open areas for settlement and pastoral and arable use (Barrett 1994; Bradley 1978). Associated with this record is evidence indicative of a period of accelerated erosion and colluviation during the 2nd millennium BC (Allen 1992). This is also often cited as evidence for the intensification of agricultural land use associated with the Middle Bronze Age transition, but there may be a variety of factors responsible for this erosion, such as soil destabilisation owing to forest clearance, intensification/extensification of arable practices in

general, 'evolutionary' technological changes in tillage implements, or even extensive abandonment or lack of management of this landscape, none of which has been addressed in detail across the landscape. The molluscan record is the most comprehensive (Allen 1992; 1995; 1997; 1998; Bell 1983; Evans 1972; Kerney *et al.* 1964), and suggests an increasing opening-up of woodland over these periods, with more frequent occurrence of grassland areas and disturbed, possibly tilled, land over time.

The importance of systematically examining buried soils in the chalk downland region for indicators of landscape and land-use changes lies in the fact that many past and current models of social practices in prehistoric southern England as a whole are based primarily on the archaeological remains of this area (Barrett 1994; Barrett *et al.* 1991a and b; Bradley 1978). Barrett (1994) for example, suggests that the 4th millennium BC is marked by long fallow systems in a partially cleared landscape, with extensive mixed agriculture practised by a mobile community. Long-term land-use and landscape perception changes, relating the agricultural system and the funerary monuments of the region to the development of land tenure, are said to have culminated in the evolution in the 2nd millennium BC of a short fallow and more agrarian system, with traction-based tillage, permanent settlements and land division. Despite the long popularity of models such as this, which invoke land use and subsistence changes to explain the archaeological record in the region, very little systematic effort has been expended to document the proposed land-use changes themselves. This project sets out to examine a number of broadly contemporaneous buried soils and colluvial/alluvial deposits in one area of the region, to assess and refine such models in light of new evidence on both site-specific and regional scales.

The project also addresses the key interpretative problems associated with each technique when used in this chalk downland context. For example, the ability to accurately observe the pedological effects of agricultural land use in thin section through soil micromorphology is not unproblematic (Gebhardt 1992; Macphail *et al.* 1990; Carter and Davidson 1998; Macphail 1998; Lewis 1998a). The recognition and interpretation of true woodland molluscan faunas is also difficult, especially when dealing with landscapes that may be in a state of transition from woodland to open ground, and which may be subject to periods of decalcification (Bell and Johnson 1996; Cameron 1978; Evans 1991). The interpretation of pollen assemblages from buried land surfaces and soils, especially from calcareous soils and sediments, may be affected by a variety of taphonomic problems (Dimbleby and Evans 1974; Dimbleby 1985; Crabtree 1996). Moreover, there is an apparent dearth of sub-regional pollen sequences for the chalklands of southern England due to the lack of suitable deposits with good preservation being located. Only by repeatedly applying the three methods to similar contexts with fine sampling resolution will these specialisms provide reliable results applicable to archaeological questions in this landscape. Thus the expected results of this threefold approach will be of wide use to the whole archaeological and archaeological science community involved with the interpretation of past landscapes.

Finally, the land-use model(s) developed through this research project will have a predictive value for the other chalk downland areas of the Wessex region, for example in the Stonehenge environs (Richards 1990; Cleal *et al.* 1995).

Specific Aims

The specific aims of the project are two-fold and interlinked. First, we will re-examine a selection of scheduled and unscheduled monuments — namely a selection of long barrows and round barrows of the Wyke Down group, the Dorset cursus and the Gussage Down field systems — by targeted excavation to allow environmental sampling for new pollen, molluscan and soil micromorphological analyses. This should allow the establishment of chronologically controlled palaeoenvironmental sequences to augment existing studies in the area (Allen 1995; 1997; Allen and Green 1998; Green and Allen 1997). Second, a geomorphological survey of the upper part of the Allen valley will employ aerial photographic survey to allow geographical information system mapping of erosion *versus* aggradation zones in the landscape, plus systematic augering transects followed up by sampling trenches (where appropriate) to extract pollen, soil and molluscan samples from zones of colluvial and alluvial aggradation, old land surfaces, and relict channel systems in the valley bottom. This will enable the assessment of the processes of change in the landscape, plus allow prospection for off-site buried landscapes containing new palaeoenvironmental data that will produce new sub-regional palaeoenvironmental sequences. The whole will be combined to produce new models of land-use change in the earlier to mid-Holocene, and to re-examine existing models, which are based largely on prehistoric funerary monument distributions (*cf.* Bradley 1978; 1998; Barrett 1994).

Field Methodology

Normally the actual methodologies employed in a field project are confined to the specific design brief and are rarely available for others to see. In this case, however, the methodology is key to the whole project, so it is worth briefly describing the approach used in the field for this project. Prehistoric monuments in different parts of the valley (on brow, upper slopes, lower slopes and valley bottom) are selected for survey and sampling. For the most part, the monuments are scheduled and therefore require scheduled monument consent before any work begins; prospective sites must be identified, and the project design and access to them discussed with

the relevant English Heritage inspector and ancient monuments warden, and the land owner, and then an application made to the Secretary of State, Department of Culture, Media and Sport for consent. Once consent has been obtained, an initial hand auger survey is conducted to construct main profiles, confirm the presence/absence and thickness of buried soil survival beneath the mound and on the inner berm of the ringditch, and to ascertain the depth of deposits in the ringditch. A topographical survey and plan of each monument at a scale of 1:20 is produced, and magnetometer and resistivity surveys of each monument are carried out to reveal structural components; this is occasionally augmented by ground penetrating radar survey. A full photographic record is made of the barrows as they survive today. Selection of areas for sample excavation is made on the basis of the above and in discussion with the English Heritage inspector and warden, and the land owner. Sample trenches (of *c.* 1 × 2m, 2 × 2m and 2 × 3m in size) are excavated through ditches, banks and mounds. The sections thus created are thoroughly described, drawn at a scale of 1:10 and photographed. Three series of samples are taken for molluscan, soil micromorphological and palynological analyses from the buried soil and, if possible, samples for radiocarbon assay and optically stimulated luminescence (OSL) are also taken. Samples from soil materials in the mound may also be taken. Reinstatement involves the deposits being backfilled into the excavation trenches in their original order, and the turves replaced, with every effort made to follow the pre-existing contours.

Off-site investigations entail obtaining land owner's permission for access, and then carrying out augering transects (set at *c.* 500m intervals) across the valley system, with *c.* 100m between auger holes. A full aerial photographic mapping of the study area is conducted, delimiting zones of thin and thick soil cover with respect to the known archaeological record. The results of these procedures allows an erosion assessment map for the region to be produced, on the basis of which we can target zones of colluvial aggradation or lynchet systems for sample excavation using small trial trenches (1 × 2m).

During the course of the fieldwork and post-excavation analyses, detailed information on the present condition of each monument and the sequence of past land-use history of the site with respect to its current scheduled status is also acquired. This new information could aid in future management decisions taken by both the responsible national and county curators.

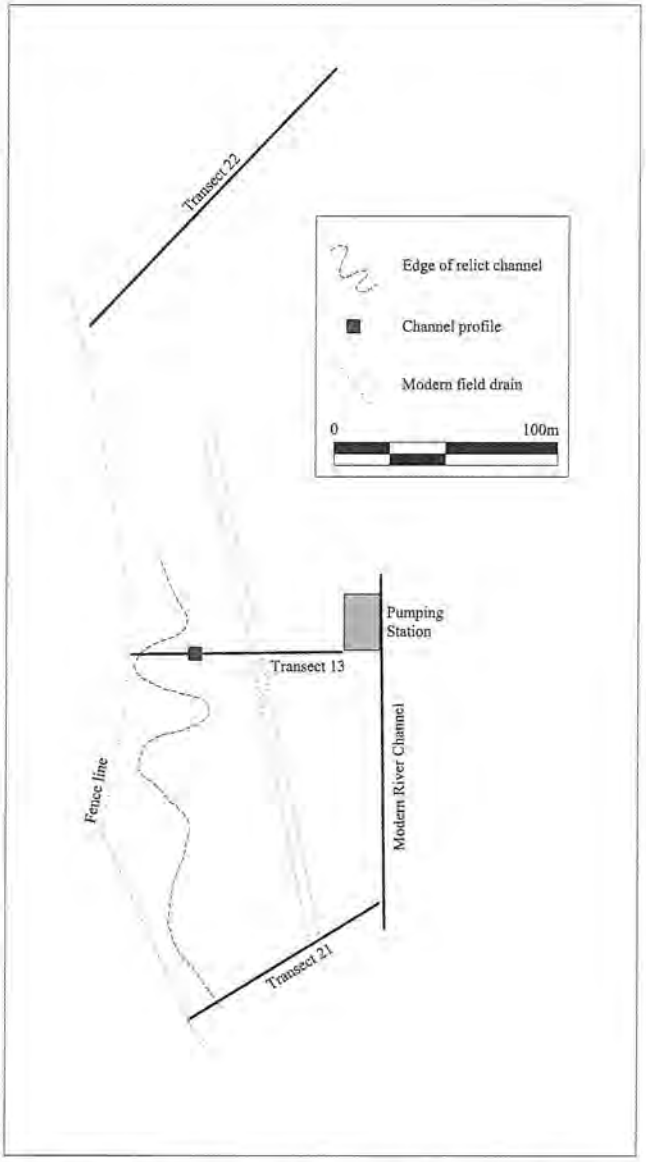


Figure 2: Location map of the relict palaeochannel west of Wimborne St Giles (P. White)

Results to Date

The valley auger survey

The systematic augering survey (Fig. 1) has revealed a few instances of relict argillic brown earths but much more commonly rendsina soil profiles (French 1998; 1999; Green *et al.* 1998). The rendsina-type soils appear to have been well developed by the beginning of the second millennium BC (see below), with argillic brown earth survival in only a few cases. The latter's survival is often associated with tributary dry valleys and on upper to mid-slopes currently under pasture. The augering survey of a *c.* 10km by 4km stretch of river valley has indicated a generally low level of colluvial deposition (thicknesses of <70cm) and/or preservation within tributary dry valleys and the main valley, and no alluvial deposition west of Wimborne St Giles. The tributary valleys and the upper 2.5km of the Allen valley are now dry and rarely contain even winterborne streams, and the river just west of Wimborne St Giles has shrunk from a wide and deep river to very shallow and narrow stream since the earlier Holocene. As such, it appears that there has been extensive change in the hydrological system over the Holocene.

One major discovery of the augering survey has been the location and sampling of a relict palaeochannel system between Wimborne St Giles and Monkton-up-Wimborne on the southern side of the modern floodplain of the River Allen (Figs 1 and 2). Here, just visible in the field, are two cut-off meanders of a relict river channel. The channel is up to 3m deep and about 30m wide, with a completely waterlogged profile composed of a basal *c.* 50cm of calcareous silt mud with abundant fine chalk fragments, overlain by a sequence of well-preserved detrital and wood peats *c.* 2–2.5m in thickness. Initial palynological assessment of the lower 20cm of the peat indicates good pollen preservation plus evidence for an open landscape dominated by herbaceous plants, probably of very late glacial to early Holocene date. The underlying chalky silt mud could represent erosion of bare slopes under periglacial conditions at the end of the last glacial period. It is believed that the pollen sequence in the peat extends into the Holocene, but further analysis plus associated dating of the peat sediments is necessary to confirm this. Earlier late glacial–earlier Holocene peat sequences appear to be rare in the southern chalk downlands, this being only the third studied, after one on the Isle of Wight (Scaife 1984 and 1987) and another just east of Durrington Walls (Cleal *et al.* 1994).

The Wyke Down barrow group investigations

The main part of the Wyke Down barrow cemetery was evaluated by magnetometer survey of about 1 hectare in extent (Figs 1, 3 and 4). This clearly shows barrow 44 (bottom left) and 47 (top left) upstanding with evident internal features, but the remainder are ostensibly ploughed out with only ring-ditches surviving as earthfast features. There are also hints of a field system and other cut features in the area which would merit open-air excavation.

To date, four upstanding barrows in the Wyke Down group have been hand augered. Barrows 36 and 44 have been investigated by augering and combined magnetometer and resistivity surveys (Figs 1 and 5). The augering transects suggest that these are well-preserved turf and chalk rubble mounds with a turf-like buried soil beneath. In addition, the geophysical surveys suggest the presence of two sets of ring-ditches associated with each mound, which either suggests multi-phases as in barrow 34 and/or later Neolithic antecedents to these mounds. It is intended to test barrow 36 in the summer of 2000 through sample excavation. Barrows 34 and 41 were partially excavated in the 1998–9 season (Fig. 1). The results from these investigations will be discussed here.

The conventional magnetometer and resistivity surveys of barrows 34 and 41 pin-pointed with great accuracy the position of the ring-ditches, the extent of the surviving mounds, and areas of disturbance (Figs 6 and 7, Areas A and C) (GSB 1998; 1999). The magnetometer survey of the very shallow dry valley between the barrows (Fig. 7, Area B) revealed no definite archaeological features. The assessment study using ground penetrating radar on barrow 34 (by Christian Pierce and Colin Shell) (Fig. 8) also located the outer and inner ring-ditches with great accuracy, suggested the shape of the ditch cuts, and gave hints at multi-horizonation within the ditch fills; these were not, however, completely verified in the excavated sections. It is suggested that the radar was confused by bedding disconformities within the chalk subsoil itself (C Pierce pers. comm.). The radar survey also recognised changes in the composition and form of the mound which were proved by excavation to be entirely accurate. Nonetheless, the composition of the mound materials and the nature of the changes could only be identified with the hindsight of excavation.

Barrow 41 (Figs 9 and 10) turned out to be much destroyed/denuded, and to a large extent this had already occurred in the past, rather than more recently as had been the common perception. Today there is a small, low turf mound (*c.* 1m high, but this may be accentuated as the mound is situated on the top centre of a low knoll), surviving in the centre of an area enclosed by a ring-ditch. The ring-ditch is about 3.5m wide and 1.6m deep, with an internal diameter of about 19m and an external diameter of about 26m. Within the fill of the ring-ditch itself, the part closest to the mound was composed of densely packed and relatively clean chalk rubble. This appears to be a deliberate backfill deposit into the ring-ditch. One could speculate that the chalk was originally either a cap to the turf core, or, more probably, a circular bank on the inner edge of the ring-ditch, which had later been deliberately put back into the ditch after a very short period (as this chalk rubble is very clean and soil-free). After this deliberate backfilling, the remaining ring-ditch was narrower (*c.* 2.5m) but of the same depth as the original ditch, and remained open to infill naturally. This evidence suggests that barrow 41 has been either two slightly modified versions of a disc barrow, or (if the chalk comes from a capping), a bowl barrow modified to be a disc barrow. A great number of struck flints were found at the base of the mound (see below). It is uncertain whether or not these were placed at this level or have moved there post-depositionally, although it is likely that at least some have moved downwards through sorting.

Barrow 34 (Figs 11 and 12) exhibited a more complicated and diverse sequence. Despite the presence of a large antiquarian trench (which may be early 20th century in date, and is regrettably unrecorded), the mound of this barrow appears to be substantially intact and stands to a height of about 2m above the present-day ground surface. One trench was excavated through the south-eastern quadrant of the mound and revealed the following sequence: first, a small (*c.* 2 × 3m), sub-rectangular chalk cairn was erected on a thin (<10cm) truncated old land surface. This cairn would appear to

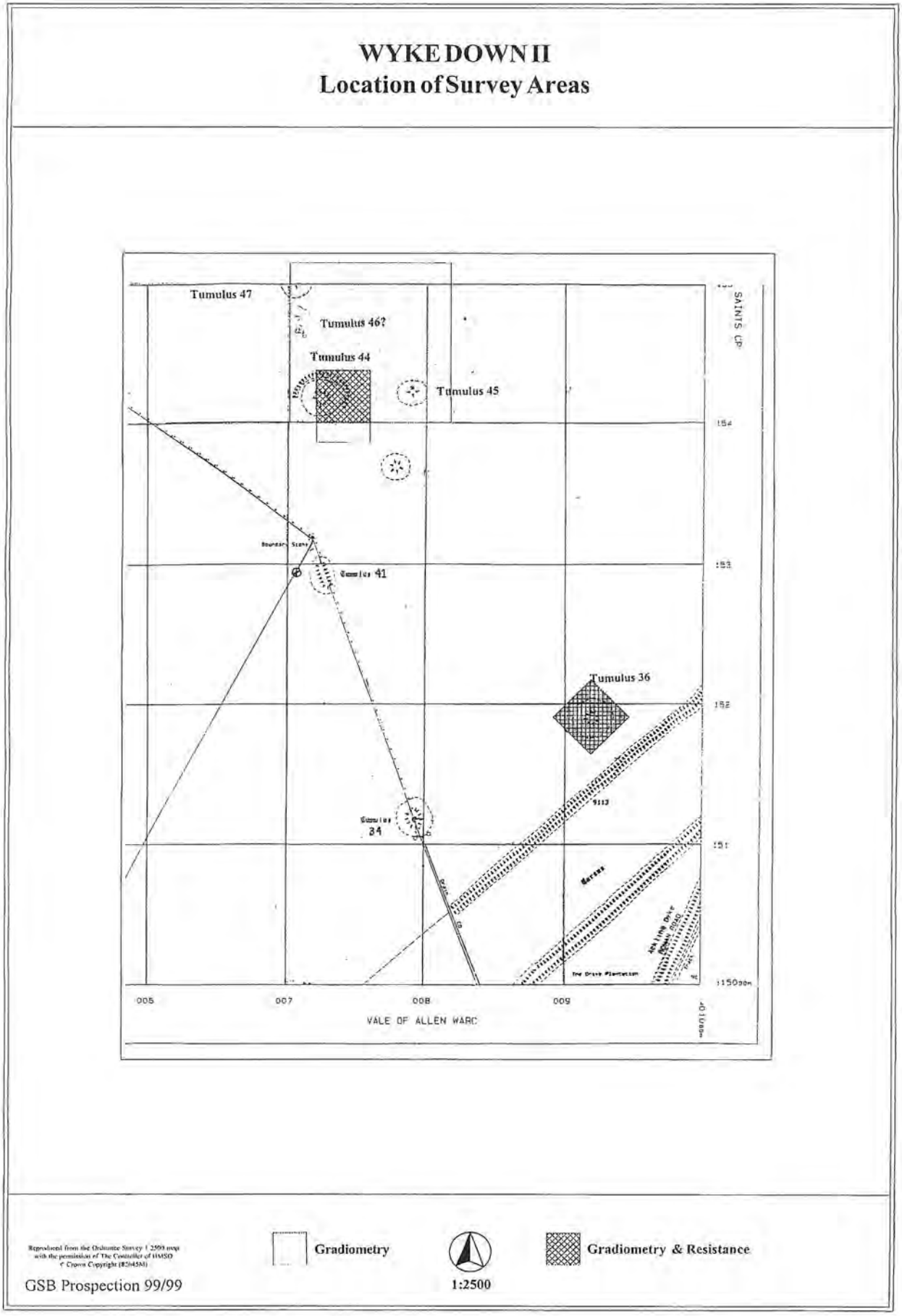


Figure 3: Location map of the 1999 geophysical surveys of the main barrow group and of barrows 44 and 36 (GSB Prospection)

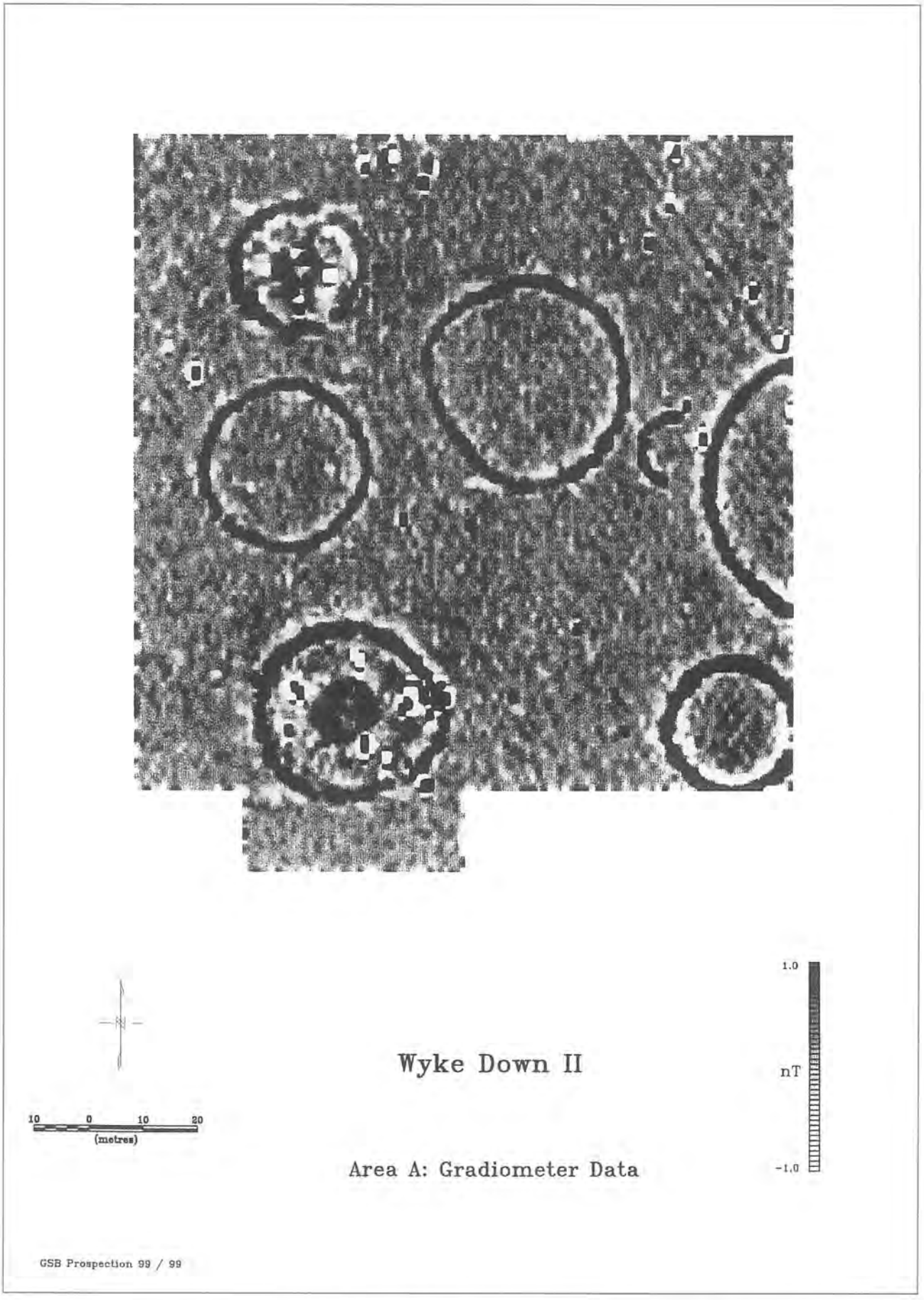


Figure 4: The 1999 magnetometer survey of the main Wyke Down barrow group with barrow 44 in the lower left-hand corner (GSB Prospection)

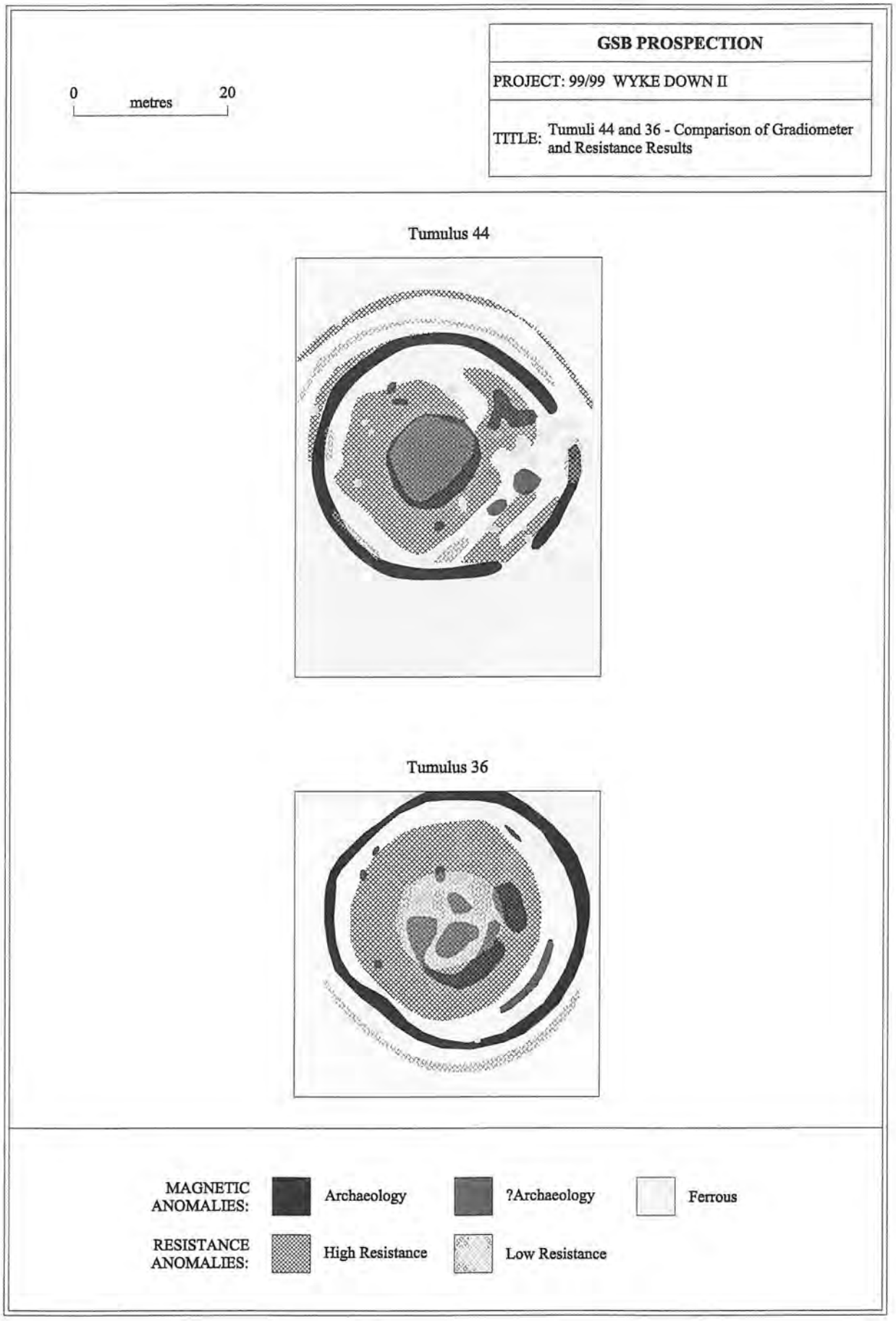


Figure 5: The combined magnetometry and resistivity surveys of barrows 36 and 44 (GSB Prospection)

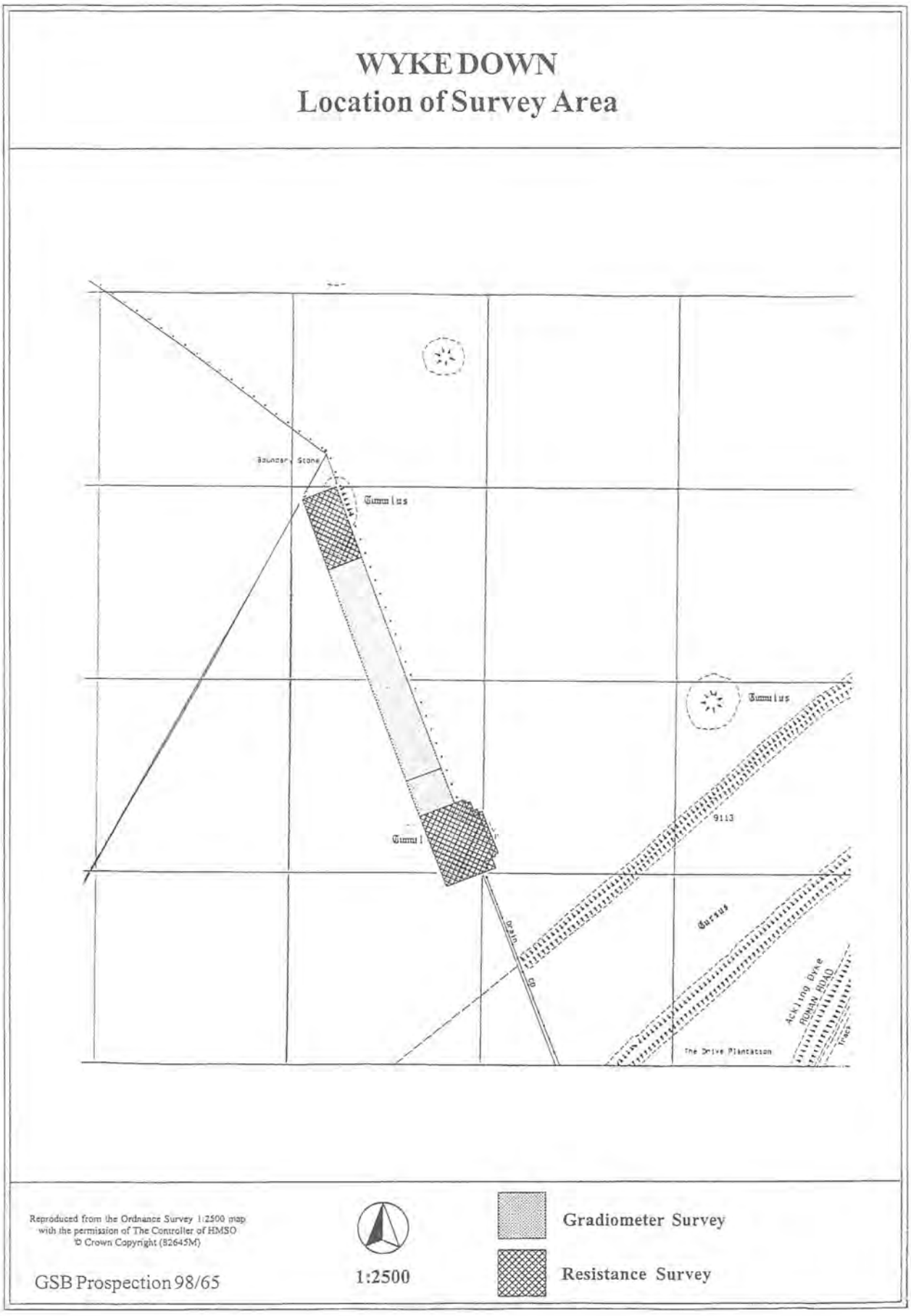


Figure 6: Location map of the 1998 geophysical surveys of barrows 34 and 41 and the intervening land (GSB Prospection)

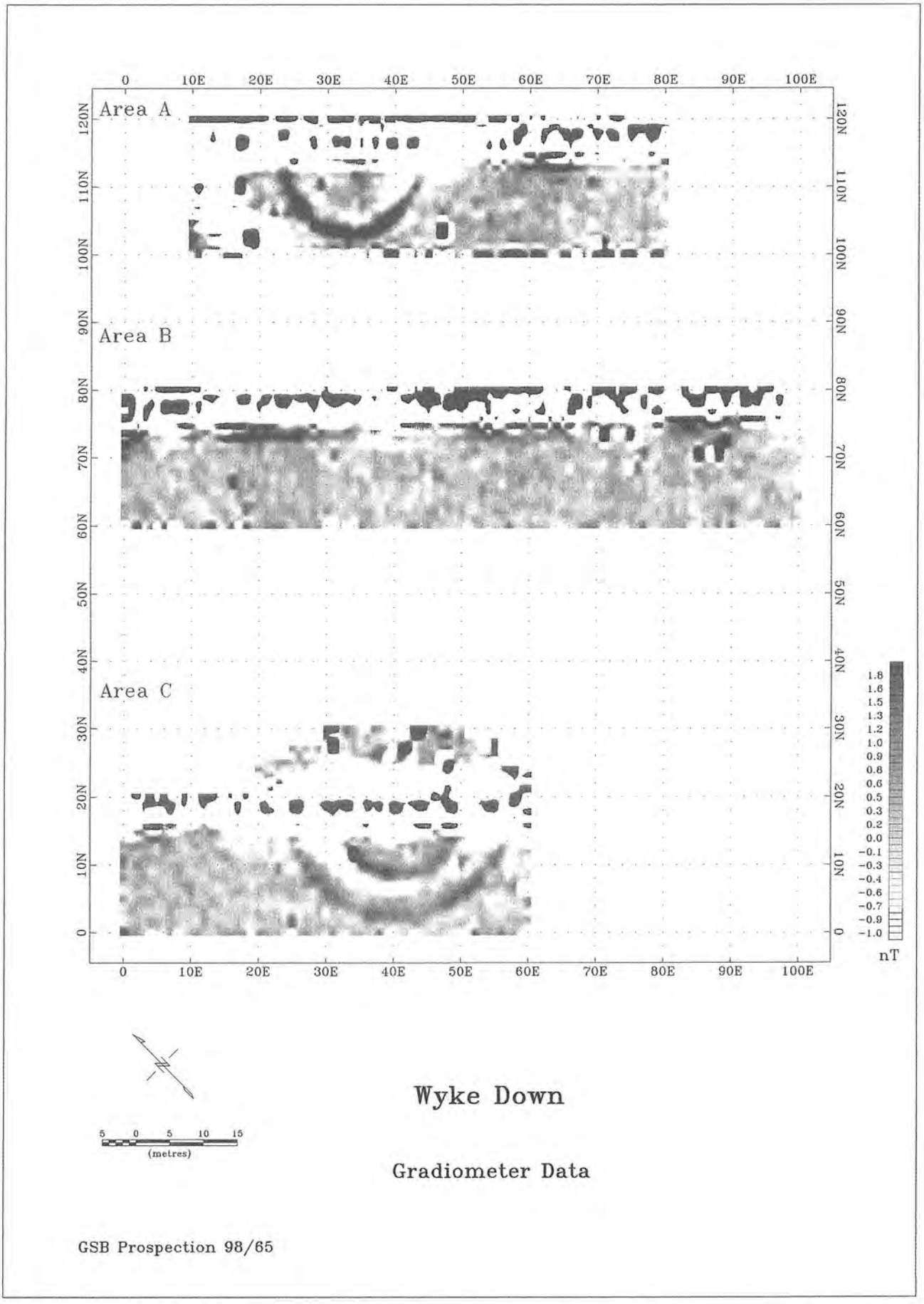


Figure 7: The 1998 magnetometer survey. Area A is barrow 41, Area C is barrow 34 and Area B is the intervening land between the two barrows (GSB Prospection)

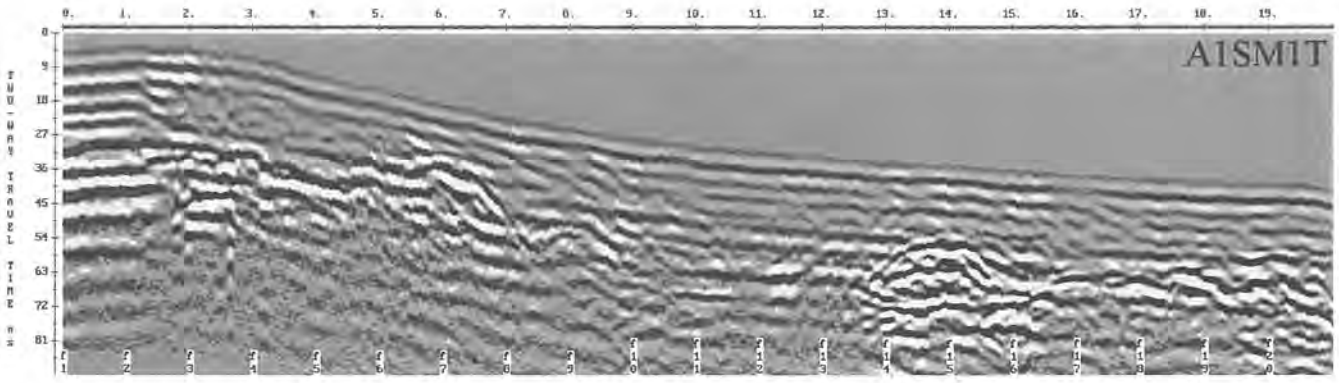


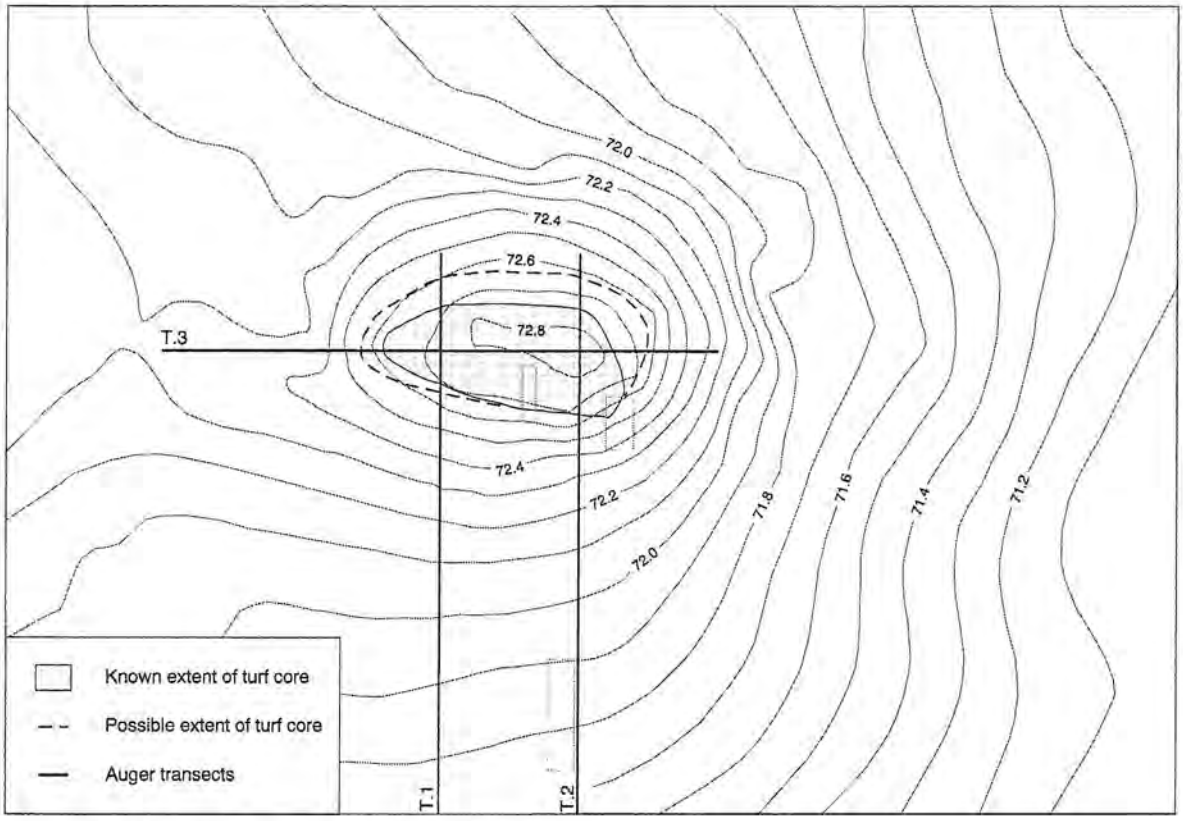
Figure 8: Selected part of the ground penetrating radar survey of the southern central sector of barrow 34 showing a section through the mound, internal ring-ditch and outer scarp bank (scale in metres). (Data were collected with the NERC Pulse Ekko GPR system using a 225MHz antenna. The data were then spatially and topographically corrected. A spreading and exponential compensation gain was then used). (C. Pierce)

mark the centre of the subsequent mounds. It was covered by one or two layers of turf. It was decided not to disturb the cairn during the excavation, as it is probably preserving a central and primary interment. A ring-ditch (of about 18m internal diameter) was then dug (or deepened?), and the chalk subsoil upcast from this was used to make a primary chalk mound of about 16m diameter placed over the small chalk and turf cairn. The surface of this chalk mound was initially left bare and underwent a period of weathering sufficient to discolour the upper 5–8cm of the chalk, and saw the accumulation of large quantities of worked flint, probably worked *in situ*. Then a more substantial turf mound was created, at least doubling the height of the mound (to about 2m), with its outer edge vertical sided and retained by a slight wooden revetment of stakes (slender fence post size, <10cm). Each stake was placed about 40cm apart, presumably retaining a woven wattle-work fence, located about 1m in from the inner edge of the ring-ditch (in Trench 6). This ring-ditch (in Trench 4) had become completely infilled by the time an outer, slighter ring-ditch was dug (with a *c.* 23m internal diameter, *c.* 24.5m external diameter). The mixed upcast of turves, soil and chalk rubble produced by the digging of this ditch was thrown up against the outside of the wattle fence around the barrow, which was now leaning outwards, thus increasing the diameter of the barrow mound by about 3m and creating a gently sloping outer edge to the barrow, but still leaving a wide berm (2.5–3m). The outer ring-ditch infilled naturally.

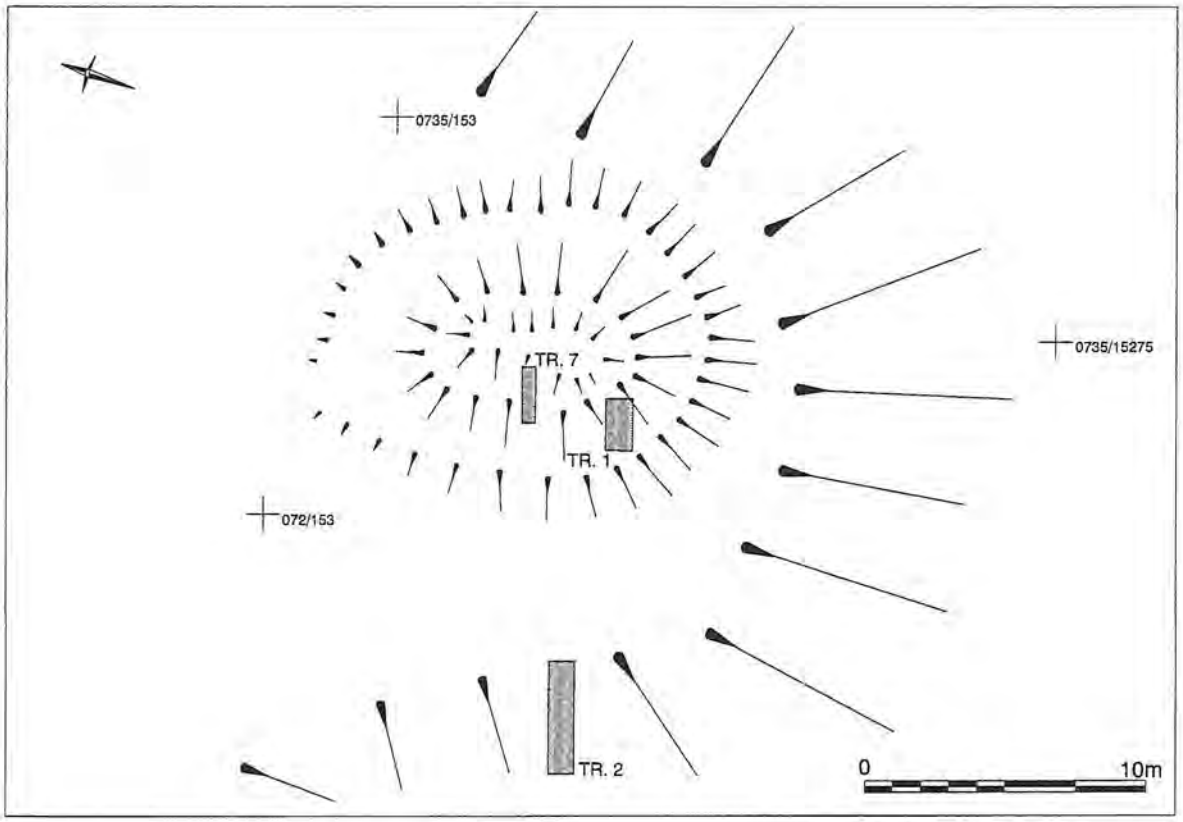
A total of 849 struck flints were recovered from the mound surfaces and the fills of the ring-ditches (Gardiner 1998). Of these 216 (25%) came from contexts associated with the denuded mound 41, and the remaining 633 from contexts associated with barrow 34. Less than 1% of the total assemblage consists of retouched implements and only 1.7% of cores or tested nodules. Only six retouched implements were recovered: three scapers, a denticulated piece and a bifacially retouched piece, and an irregular flake with some invasive retouch. Almost the entire assemblage consists of discarded material in the form of flakes, irregular waste, chips and broken pieces. About 78% of the flints were struck from nodules freshly quarried from the chalk, presumably during the digging of the barrow ditches. With very few exceptions, all the quarried flints are in very fresh, sharp condition with no edge damage or post-depositional breaks. Essentially this material is very similar to the material that was recorded from the Dorset Cursus excavations in 1984 (Gardiner 1985; 1991). As the likely raw material would have been encountered during the construction of the monuments (flint in the chalk and in any drift deposits — see below), and the waste material discarded in a completely fresh condition, it can be proposed that the knapping of flint was exactly contemporary with the construction of the barrows. It seems most likely that the flint knapping represents no more than fortuitous working of suitable nodules encountered during ditch digging. The paucity of 'proper' cores is explained by the expedient, brief and unsystematic working of the discarded nodules, and the lack of tools strongly suggests that any useful items were taken away for use elsewhere.

Just six sherds of pottery were recovered, one from barrow 41 and five from barrow 34, all from secondary or tertiary contexts. Only one sherd of possible Beaker pottery was found in the upper secondary fill of the ring-ditch of barrow 41. From barrow 34, there was one sherd of either Beaker or Collared Urn with deeply incised, filled lozenges, and three small sherds of Beaker pottery (one with rows of impressed ?bird bone decoration, one with comb-impressed decoration, and one rusticated sherd) in the upper secondary and tertiary fills of the inner ring-ditch, one very abraded piece of possible Beaker from the secondary fill, and one simple, flat-topped sand and quartz-tempered rim sherd of possibly Neolithic pottery from the tertiary fill of the outer ring-ditch.

There is little specific dating evidence for either mound. The general characteristics of the flint assemblage suggest a mature, probably middle Bronze Age, date for the material manufactured from the freshly



Barrow 041- Topsoil contours (height in m. O.D.)



Barrow 041- Trench Location

Figure 9: The contour plan of barrow 41 and the location of the sample trenches and auger transects (P. White)

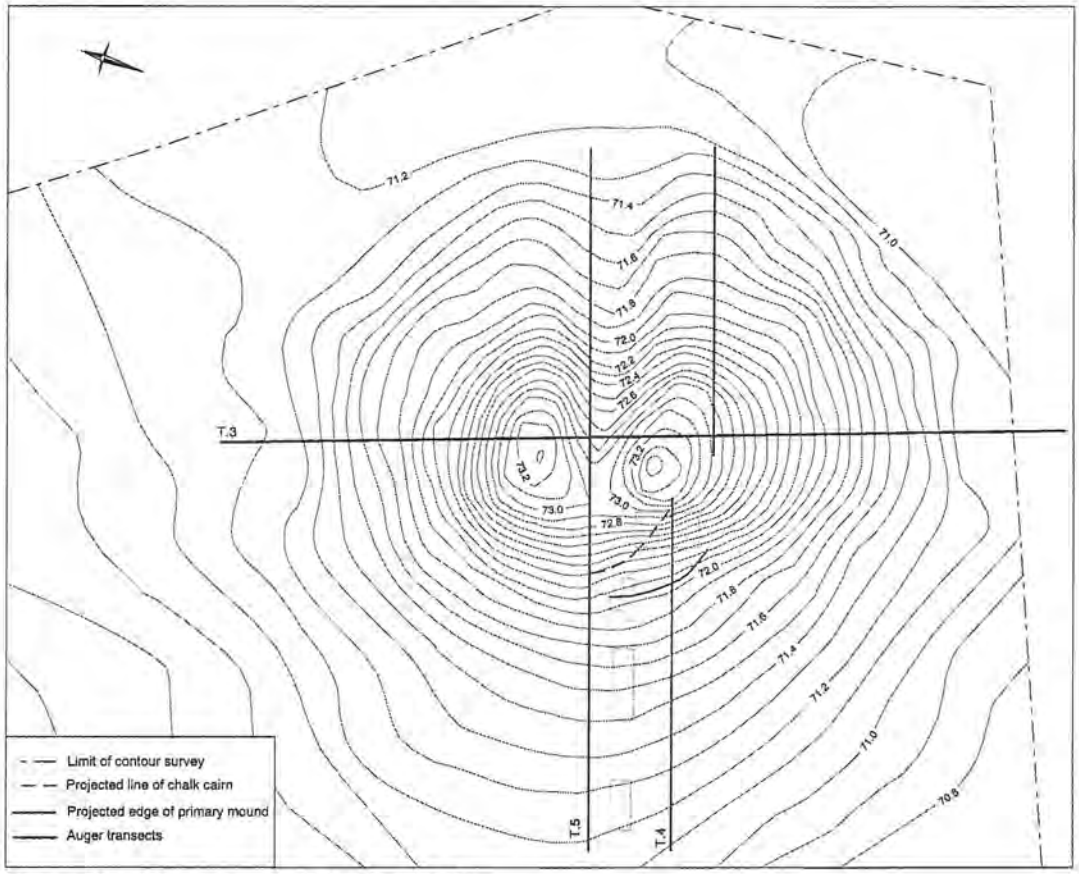
quarried flint. This fits with the idea of a rebuilding of barrow 34, but tells us little about the date of the primary interment in the same mound. The small, but mainly Beaker, pottery assemblage is all in secondary contexts; it was already present when the barrows were constructed, and is therefore suggestive of a post-Early Bronze Age date. Nonetheless, there is sufficient charcoal recovered from the old land surface, primary turves and surface of the primary chalk mound of barrow 34 that radiocarbon assay will be possible, and provide *terminus post quem* dating evidence.

The buried soils and turf mounds

The sample excavation through the mound of barrow 34 revealed a buried turf and weathered subsoil horizon comprising what appears to be a thin (<15cm) rendsina type of soil profile (Ah, B/C, C) (Lewis 1998b) (Fig. 12). It contains no relict features of any B horizon material and is strongly earthworm reworked but is not perfectly sorted with respect to its chalk fragment component. These features suggest that this was a grassland soil with either some early disturbance which has left no trace, or which saw some continued input of fine chalk through physical disturbance. The turves that comprise the bulk of the barrow 34 mound contain a significant clay content. This hints at an origin as part of an argillic brown earth type of soil, which are known from elsewhere in the valley (see above). Compared to the evidence from barrow 41, to the turves from barrow 34, and to general models of soil changes in the region from thicker brown earths to thinner rendsinas over the Holocene, the presence of this thin rendsina suggests that this location was already severely denuded and altered by the Bronze Age. In addition, M. Allen suggests that the high silt component of the secondary fill of the inner ring-ditch could be indicative of local aeolian deposition, which could imply a very open, bare earth (arable?) environment in the near vicinity in later Bronze Age times. There were no plough, ard or spade marks visible, but in such a small area of excavation one cannot be categoric on this score.

The section beneath barrow 41 reveals a different story (Fig. 10) (Lewis 1998b). Beneath the turf mound is an irregular horizon of large, compacted flint cobbles, probably some kind of late glacial drift or solifluction deposit. Almost no soil cover appears to have survived on these cobbles beneath the turf core of the barrow mound except for a thin turf line, implying both poor soil development and severe truncation in pre-barrow times (see below). Underlying this cobble horizon is a series of nearly contiguous solution hollows with palaeosol material preserved within them exhibiting two horizons. The upper horizon is a reddish brown silty clay loam with a small, sub-angular blocky ped structure and the lower horizon is a dark brown silt clay loam. The observation that most of the clay in these horizons is located in the pore spaces instead of being incorporated within the fine groundmass, suggests that

Figure 10: Section through the mound of barrow 41, with flint cobbles and relict palaeosol beneath (C. French)



Barrow 034- Topsoil contours (height in m. O.D.)

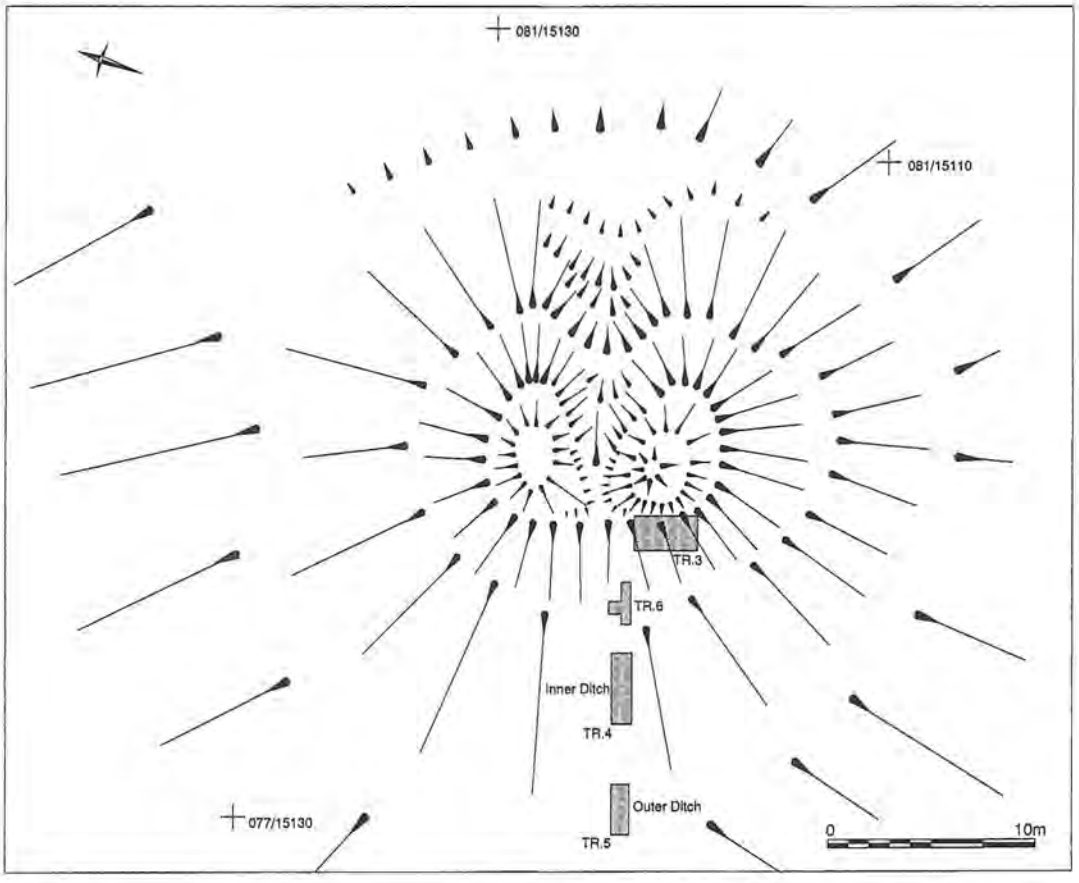


Figure 11: The contour plan of barrow 34 and the location of the sample trenches and auger transects (P. White)

clay translocation associated with the presence and disturbance of a much thicker original soil (argillic brown earth development), since lost, and/or a great deal of later disturbance of the barrow mound itself occurred.

The translocation of clay and the inclusion of silt and organic matter particles creating a dusty aspect, as seen in the buried soil horizons under barrow 41, are generally related to soil disturbance (Macphail *et al.* 1987), and this could be related to a number of events in this case. These include drift deposition, pre-barrow land-use and/or erosion, barrow construction or even modern plough destruction of the mound itself. In summary, the most likely interpretation is that this buried profile represents soil formation in an interstadial phase within the last glacial period with strong evidence of much more recent disturbance.

The observable horizon sequence found within the turves of the barrow 41 mound suggests that they originated from an argillic brown earth type of profile (Lewis 1998b). The turves possess a thin (<3cm) turf horizon (Ah) developed on a horizon depleted of clay and organic matter (Eb). Assuming that the turves originated from the general vicinity of the barrow mound, this sequence suggests that a thick argillic brown earth or former forest brown earth had once existed where the mound was constructed. This idea fits with the underlying drift deposit, which would have been a natural location for argillic brown earth development. And, as there is only very thin turf development beneath the mound, the pre-barrow soil appears to have suffered severe truncation, removing most of the soil profile.

The profile truncation seen in the mound material itself could also be associated with turf and soil stripping for earlier monument construction in the vicinity (Wyke Down henges 1 and 2, or other barrows in the Wyke Down group), or the stripping and stacking of the turves from the very spot chosen for the building of barrow 41 at a slightly later date. Subsequently, the turves within the mound have been affected by the deposition and translocation of dusty and dirty clays within their pore spaces. This could be indicative of modern disturbance, including perhaps localised windblow of fine material from adjacent ploughed fields.

A similar type of profile is seen about 5km to the east, where recent archaeological investigations at Deer Park Farm within St Giles Park (Fig. 1, lower right) have produced a very late Upper Palaeolithic lithics assemblage (thermoluminescence date of 10,740±1120 BP) associated with a well developed argillic brown earth soil profile surviving beneath the modern soil profile (Green *et al.* 1998). The lower half of the *in situ* brown earth profile has survived, and exhibits a well-oriented clay component indicative of an argillic or Bt horizon (Avery 1980; McKeague 1983). The Eb and Ah horizons completing this profile have probably been incorporated into the modern ploughsoil through physical mixing processes.

Other recent archaeological investigations at the Southern Henge of the Knowlton Circles (Fig. 1) by the University of Bournemouth has also revealed a palaeosol beneath a ploughed-out henge bank (Burrow and Gale 1995). Here, a 7cm thick, dark brown and stone-free silty clay loam or probable turf horizon was developed over a 11cm thick, calcareous, silty clay stony layer or the weathered A/C horizon. This is indicative of a typical rendsina profile already being developed by the later Neolithic or later 3rd millennium BC. Micromorphological analysis of this same profile suggests that this soil was once an argillic brown earth which has suffered some pre-burial denudation and more recent disturbance through the impact of modern agriculture.

The environmental record
(with Rob Scaife and Mike Allen)

Samples for pollen analysis were taken from the buried soils and the turf mound material comprising both barrow mounds. Given the calcareous subsoil and thin rendsina type profiles, any pollen preservation would have been a bonus. Overall, pollen preservation was very poor.

The buried soil beneath barrow 34 (Fig. 12) produced pollen of bracken and ferns, as well as grasses, and might imply a herbaceous and grassland habitat. There are a couple of indicators of former woodland, such as *Polypodium vulgare* and *Corylus avellana*.

The possible late Quaternary soil from beneath barrow 41 (Fig. 10) produced slightly more pollen, and suggests a cold and open herbaceous environment, possibly of the Loch Lomond stadial.

A series of 29 samples for land snail analysis were taken from the ditch, palaeosol and mound contexts of both barrows. There was variable shell survival; consequently 2kg size samples were processed. The molluscan record from both barrows has provided a consistent picture of the contemporary environment during and after barrow construction.

The palaeosol beneath barrow 41 exhibited the poorest molluscan preservation of any context examined, exhibiting an impoverished open-country fauna, possibly indicative of cold climate, periglacial type conditions existing in late glacial times. There were also relatively very low numbers of open-country snails in the fill of the ring-ditch, dominated by *Vallonia costata*. It is likely that there has been some decalcification of the ditch deposits subsequent to their infilling.

On the other hand, all the contexts in barrow 34 exhibited good preservation of molluscs. Each major context was consistently dominated by the open-country species *Vallonia costata*, *V. excentrica*, *Helicella itala* and *Vertigo pygmaea*. This is strongly indicative of well-drained, close-cropped grass sward being established by the Early Bronze Age in this area. There is little evi-

Figure 12: Section through the mound of barrow 34 with the thin rendsina soil and turf line visible at the base of the section and laid turf overlying the primary chalk cairn (C. French)

dence of woodland or shaded contexts existing in the near vicinity, but the secondary fill of the inner ditch did exhibit a more restricted range of open-country snails, with the lower secondary fill containing the only shade-loving species present (mainly *Carychium tridentatum* and *Punctum pygmaeum*). However, the presence of these species along with the catholic species *Trichia hispida* and *Cochlicopa* sp. probably reflect the establishment of longer (?ungrazed) grass on and around the barrow, or possibly in the ditch itself. These assemblages are mirrored to an extent by those in the outer ditch, although the diversity of shade-loving species of Clausiliidae may reflect changes in the wider landscape rather than at the barrow itself.

Implications for Land-use and Landscape Change in the upper Allen Valley

It is now beginning to look as if quite a stable soil and slope system was established in the area by at least the early 2nd millennium BC, if not considerably earlier. There is also a significant lessening in freshwater through-put taking place in the valley system from at least the mid-Holocene. The soils were already largely thin rendsinas under grass by the main period of barrow building on Wyke Down in the earlier-middle Bronze Age or the first half of the 2nd millennium BC. But, every indication from the turves in the barrows is that argillic brown forest earths had previously existed on the slope investigated to date, as indeed is the case for the buried soil at the Southern Henge at Knowlton and at Deer Park Farm. Fisher (1991, 17) has suggested that argillic brown earth soils were at one time probably much more prevalent in the area than has been previously realised, naturally occurring on the more clay-rich subsoil outcrops such as the clay-with-flints, and perhaps even on the chalk downland itself which dominates the region. Some of the results of this work reinforce this model.

The buried soils surviving beneath barrows 34 and 41 on Wyke Down had apparently suffered several episodes of erosion and/or turf and soil stripping prior to barrow construction. So, if there had been a major regional or local change in soil type associated perhaps with wind-blow and sheetwash erosion, caused by the disruption of once thicker forest brown earth soils (possibly through cultural activity), this may have occurred significantly earlier than the middle Bronze Age at this location. It is possible that the rendsina profiles beneath the barrows may be exceptional, and unrepresentative of the locality. Why, for example, is the rendsina profile under barrow 34 (Fig. 10) less than 14cm thick, even with a compression factor of one-third (see Macphail and Cruise 1996), while present day rendsina profiles in the adjacent fields (arable and pasture) are generally 25–32cm thick? Also at the Southern Henge, Knowlton, the rendsina profile beneath the henge bank is much

thicker, at 28cm. Landscape models for Wessex would suggest that ancient agricultural land-use practices can account for most erosion; the importance of this in these cases is still unclear. The pattern of profile truncation followed by turf development, followed by further truncation for mound building, suggests that repeated turf stripping to provide building materials for the numerous mounds, banks and roofs of monuments and structures constructed in the Wyke Down area during the Neolithic and earlier Bronze Age can be implicated in the apparently severe denudation of certain parts of this area of chalk downland.

Wind and water erosion, although these must have occurred sporadically depending on soil exposure, disturbance and locally extreme climatic events, have not generated thick aggraded deposits in any of the valley bottoms investigated. This is unlike what is found elsewhere in the region (Allen 1992), and unlike many of the models proposed to explain soil loss (Catt 1978; 1979; Allen 1994; Macphail 1992). For example, a conservative estimate of soil loss in the Cranborne Chase area is 18cm (Fisher 1991, 17), whereas Catt (1979) suggests as much as 1–4m of loessic material may have eroded off this chalk downland landscape in both late glacial/early post-glacial under periglacial conditions and again in Holocene times due to human activities. Also, Boardman and Favis-Mortlock (pers. comm.) have run a soil erosion model for the chalk downlands of Sussex with a loss of about 1m of soil. Although it is doubtful whether this much soil loss was involved in the upper Allen valley, losses of about 20–45cm of soil could have occurred off the chalk subsoil areas, but virtually no erosion is suggested from the clay-with-flints and Reading Beds regions of the study area. If the erosion of brown earth soils on chalk subsoils mainly occurred much earlier in the Holocene than the late Neolithic–Bronze Age, the greater through-put of water, suggested by the discovery of the large relict palaeochannel system in the Allen valley, may have flushed much of the eroded soil material through this part of the valley system to beyond our study area. Subsequent and intensifying land-use, coupled with wind and water erosion, has kept the soils exposed, thin and mono-horizonal from then until the present day. This model is contrary to the mainstream of landscape interpretations for this area which would see the major periods of erosion and soil change occurring during and after the time these barrows were built (middle–later Bronze Age), associated with land-use and settlement intensification and the development of enclosed settlements and field systems (Barrett 1994; Bradley 1998).

Future Work

The results of this pilot study show that it is essential to target other relict river meanders downstream between Wimborne St Giles and Knowlton to attempt to locate repositories of the mid to later Holocene palaeobotanical record to complement and extend what has been recovered so far. In addition, colluviated zones discovered by the augering survey in different parts of the slopes of the Allen valley must be targeted for sample trenching, especially for micromorphological and molluscan analyses, and a selection of prehistoric earthwork sites in different parts of the valley system will be sample excavated to create the time and sub-regional depth to the picture that is just beginning to emerge. In particular, the question of the relative effects of deforestation, sheetwash and wind erosion, plus cultural activities directly interacting with the soil, in denuding and changing soil types prior to the Bronze Age, can only be addressed through further sample excavations of a cross selection of on- and off-site locations in the valley system.

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Excavation of Neolithic and Bronze Age features at the Thomas Hardye (formerly Castlefield) School, Coburg Road, Dorchester, 1994

ROLAND J.C. SMITH

Introduction

Between 1994 and 1995 a series of archaeological investigations was carried out in furtherance of development and improvement of facilities at two adjacent local authority properties in the vicinity of Coburg Road, Dorchester (centred on SY 680 898). The properties, Thomas Hardye (formerly Castlefield) School, and the West Dorset District Leisure Centre, are run by the Dorset County Council (DCC) and the West Dorset District Council (WDDC) respectively. Together these properties comprise an area of some 4.5ha located in the important prehistoric and Roman landscape which lies to the north of Maiden Castle (Fig. 1). The site lies on a gentle south-facing slope below a low ridge on the chalk downland between Maiden Castle and the River Frome. The north of the site lies close to the top of the ridge at about the 87m OD contour.

Archaeological surveys established the potential of the Thomas Hardye School site. The majority of the site was subjected to geophysical survey in 1988 (Gater and Bartlett 1988; Smith *et al.* 1992, fig. 2) and 1993 (Johnson 1993). A small trial trenching evaluation was undertaken in 1994 (Wessex Archaeology 1994a). On the basis of the results of these investigations the County Archaeological Officer advised that the whole development area should be made available for archaeological investigation prior to construction works. Excavations were undertaken between June and September 1994. After partial excavation and in view of the unforeseen exceptional quality of survival, a scheme for the preservation *in situ* of four barrows was implemented in accordance with Planning Policy Guidance (PPG 16). The process of preservation *in situ* entailed the consolidation of the remains of the barrows prior to their reburial beneath up to 2.5m of chalk. Further small-scale archaeological recording was undertaken in June 1995 when existing buildings at the school were extended (Wessex Archaeology 1995).

On completion of the fieldwork, the site records were checked and cross-referenced. A list of all features was compiled and correlated with finds context records. Artefacts and environmental samples were processed and assessed as appropriate (Heaton 1995; Wessex Archaeology 1997).

In the absence of funds made available for post-excavation analysis, Wessex Archaeology has prepared this summary to provide an introduction to the archaeological project and to the contents of the project archive.

Results

Figure 2 shows the distribution of the pre-modern features identified during fieldwork. Archaeological features, including pits, barrows or ring-ditches and linear ditches, were recorded.

At least 33 pits were recorded, mainly in the central northern area of the site. There was no demonstrable patterning of pits, with the exception of pit group 1945. This group comprised five pits of similar plan and dimensions set out in a semi-circular arrangement (Fig. 3). The plan bears some similarity to a Late Neolithic pit-ring at Conygar Hill (Smith *et al.* 1997, fig. 37). The worked flint recovered from the pits at Thomas Hardye School suggests that they may be of similar date.

The remaining pits on the site varied in size from 0.5m to 1.1m in diameter. They were generally no more than 0.5m deep, with U-shaped profiles. They contained a range of artefacts including pottery, animal bone, antler, worked flint, worked stone, a coin and charred plant remains, including grain and weed seeds. This material had a wide date range, from the Neolithic to Roman periods, although the majority of the material recovered was of Late Neolithic and Early Bronze Age date. Particularly significant objects included sherds of Grooved Ware pottery, a greenstone axe, a barbed-and-tanged arrowhead, and a large number of oblique transverse arrowheads.

The majority of these pits were likely to be of prehistoric date, with some certainly of Late Neolithic date. The small quantities of Roman pottery in some pits are interpreted as intrusive (although note the likely presence of a Late Iron Age/Romano-British field system, discussed below). At least two of the pits containing Grooved Ware also contained other apparently deliberately deposited artefacts, while the worked flint from some pits was probably the result of domestic activities.

Eight barrows or ring-ditches were recorded. Five of these features formed a linear cemetery set out along a natural break of slope in the south of the site (Figs. 2, 4; 1003–1006, 1611). These barrows formed an impressive series of monuments, all the more remarkable for the fact that their prior existence was not known. Three round barrows were approximately 32m in external diameter with a fourth (barrow 1004) sub-rectangular in shape, and a fifth round barrow (1611) approximately 15m in diameter. They were aligned east–west along a common axis approximately 130m long, measured from centre to centre.

The western and easternmost barrows were separated from the central three barrows by spaces less than 20m across. The central three barrows comprised two round

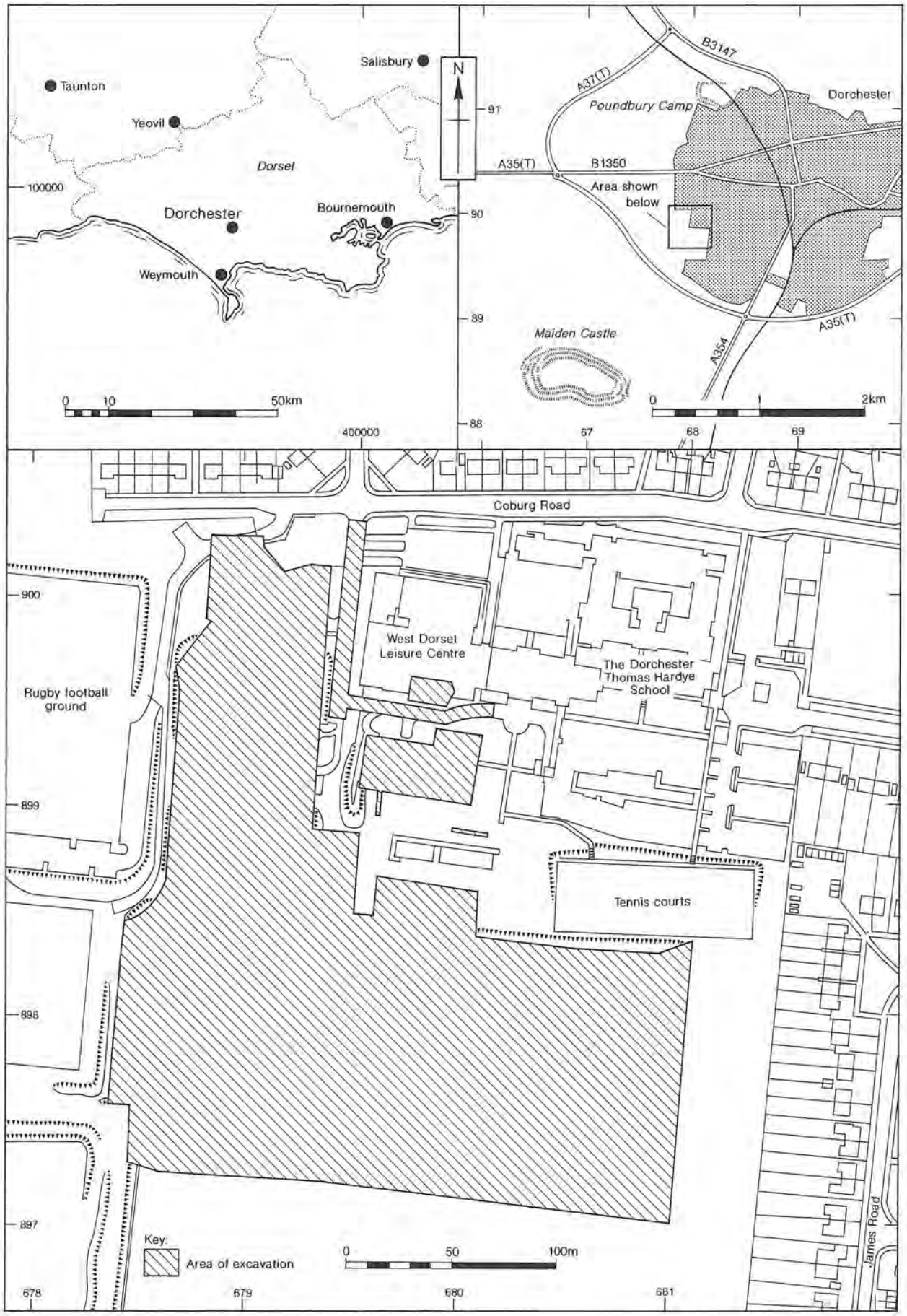

Figure 1: Site location

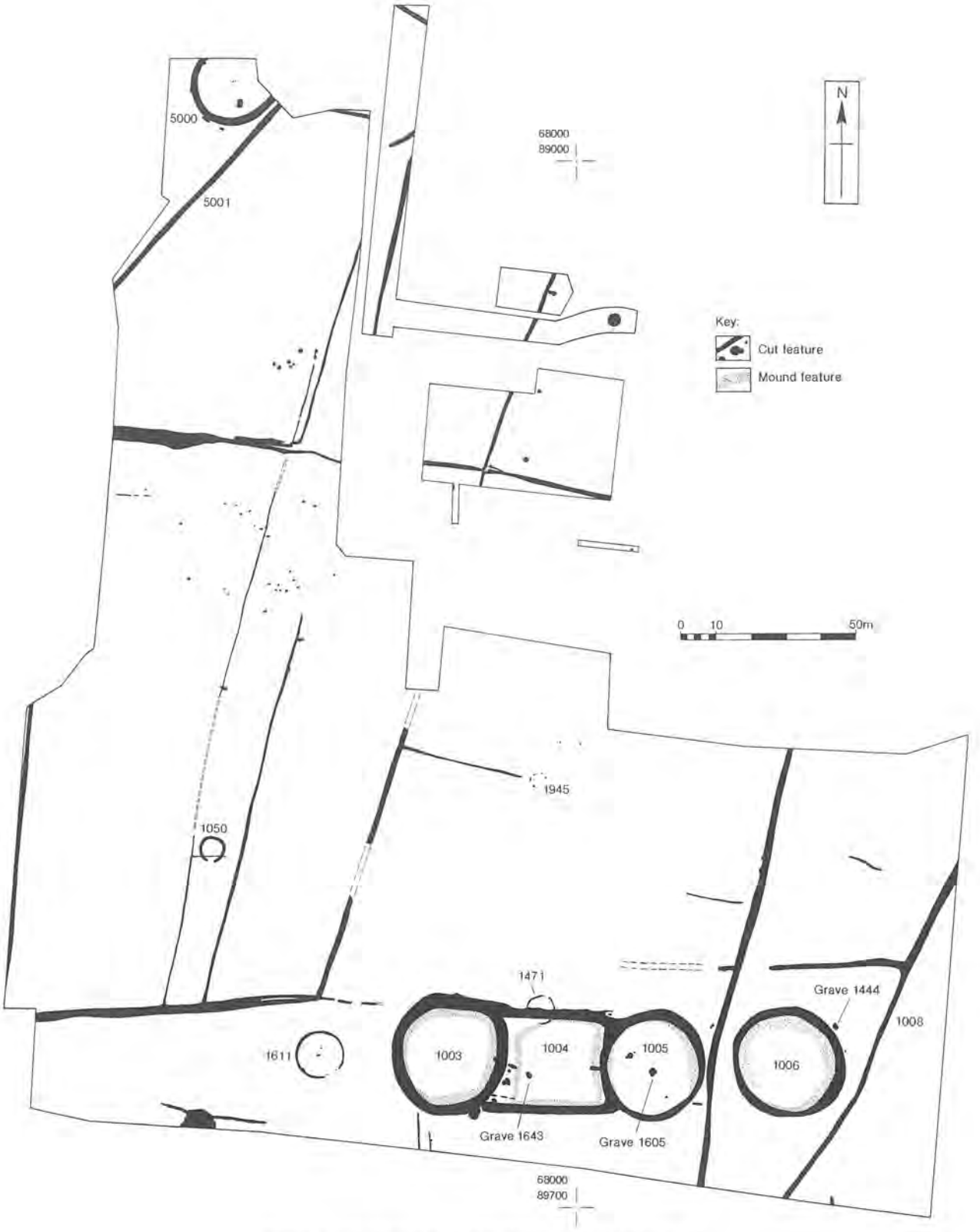

Figure 2: Location plan of principal archaeological features

barrows (1003 and 1005) linked by a pair of parallel ditches forming a central sub-rectangular enclosure (1004). Barrow 1004 cut across a small ring-ditch (1471).

The westernmost barrow (1611) survived only as a shallow circular ditch less than 0.12m deep. The barrows to the east had survived in better condition. They retained spreads of mound material and original pre-monument land surfaces, but were eroded to various degrees. All four of the main barrows had an internal circular mound of chalk. Barrows 1003, 1005 and 1006 were constructed from the chalk upcast from surrounding ditches. The natural break of slope appears to have been used and enhanced deliberately to create the effect of mounds.

Figure 3: Late Neolithic Pit Group 1945 looking west. Scales 2m

Figure 4: Barrows 1003, 1004, 1005 and 1006 looking east

Figure 5: Grave 1643 within Barrow 1004 with a Beaker at the feet and a bronze dagger and stone wrist guard by the head. Scale 1m

No features were recorded in the centre of barrow 1003. In each of barrows 1004, 1005 and 1006, however, a substantial grave (described below), was identified. Inhumation burials were recovered from the graves in barrows 1004 and 1005, although these may not have been the primary burials. The grave cut in barrow 1006 contained a cremation burial. Further inhumation burials, including that of an infant, were recovered from within the partially infilled ring-ditches although these were not associated with substantial grave cuts. To the east of barrow 1006, a grave (1444) containing an inhumation burial was recorded.

Barrow 1004 contained a large, sub-rectangular grave (1643) within which lay an adult skeleton in association with a bronze dagger, a stone wrist guard, three barbed-and-tanged arrowheads, and a Beaker (Fig. 5). This grave was not central to the barrow, and at least two others remain unexcavated within this monument.

Barrow 1005 also contained a large, sub-rectangular grave (1605) within which was an adult skeleton, buried in association with a bronze dagger, a large animal scapula and a Beaker. The grave had been disturbed at some point and the upper part of the skeleton was disarticulated and scattered throughout the robbing backfill. Barrow 1005 also contained at least three cremation burials, both urned and un-urned, with stratigraphic relationships between the associated ash spreads and upcasts indicating a clear sequence of interment.

Un-urned cremation burials were also contained in barrow 1004 with ash spreads extending across the centre of the barrow, possibly sealing the Beaker burials referred to above. These ash spreads, including much burnt flint, may be the remains of ploughed-out cremations, or pyre debris. Whilst all the urned cremations were within Collared Urns and may therefore be attributed to the Early Bronze Age, it is likely that some of the loose cremations are of a later date and may be attributable to the Middle Bronze Age.

In barrow 1006, a grave contained a loose cremation burial scattered on the base of the grave cut, accompanied by a bronze dagger. The cut had been backfilled with flint nodules.

The barrow cemetery marks the northern upslope boundary of an area of intense chalk truncation. All chalk below the barrows was clean, white and solid, without any overlying clay-with-flints tertiary deposits. To the north and west of the barrows, the chalk was noticeably less firm, and more soliflucted with increasing tertiary deposits surviving on it. Deep deposits of colluvium and/or redeposited mound material, which were absent elsewhere, dominated the immediate, scoured, vicinity of the barrows.

Two outlying barrow/ring-ditch features were also recorded. One, ring-ditch 5000, lay in the north of the site, and had been previously identified by geophysical survey. It was part of a ploughed-out Bronze Age barrow cemetery

recorded at Coburg Road to the west of the site (Smith *et al.* 1992, fig. 2). It comprised a ring-ditch some 24m in diameter and a severely truncated cremation was recorded in approximately the centre of it. The other, a small penannular ditch 1050, (approximately 8m in diameter), lay approximately 60m to the north-west of 1611.

A series of linear ditches was recorded across the site. Dating evidence for these ditches was sparse although their likely date can be inferred from the results of recent excavations in the vicinity. These ditches were generally aligned east–west or north–south except for one ditch, 5001. It was aligned north-east to south-west and represents the continuation of a later Bronze Age ditch recorded at Coburg Road (Smith *et al.* 1992, fig. 3).

Ditch 1008 was also recorded by geophysical survey (Johnson 1993) and can be traced for some distance to the south as a cropmark on aerial photographs and as a feature recorded in recent excavations adjacent to Maiden Castle Road (Smith *et al.* 1997, 301; Bellamy *et al.* 1993). These excavations indicate that the ditch represents part of a ditched trackway of Late Iron Age/Roman date linking a number of rural settlements to the Roman town of *Durnovaria*.

The remaining shallow ditches at the site conform either to the alignment of the open medieval fields of the Manor of Fordington (Sharples 1991, fig. 11) or are components of the post-enclosure field system.

Finds

All finds collected on site have been washed, marked (where appropriate), and quantified by number, weight and by material type within each context. All artefacts have been briefly scanned in order to provide spot-dating for contexts, and to give broad details of the range and condition of material present. Total quantities of artefacts by category are presented in Table 1.

Late Neolithic pottery

The recognisably earliest pottery from the site is represented by 56 sherds from one pit which appear to comprise parts of two Grooved Ware vessels. All sherds are in a soft, coarse, fabric tempered with shell together with some beef calcite. The majority consists of sherds from at least one thick-walled vessel with no visible decoration, but there are a few sherds in a visibly finer version of the fabric which would seem to represent a second, thinner-walled, smaller vessel with impressed decoration, including a circular motif.

Further material came from two other pits comprising 25 plain sherds in both fine, sandy fabrics and coarse, calcite-tempered fabrics. This material is not readily diagnostic of the Neolithic period but may also be of this date. Small, plain bowls of this period are known in fine, soft, sandy fabrics from Maiden Castle (Cleal 1991), and calcite-tempered fabrics would not be out of place in such an assemblage.

Early Bronze Age pottery

Four Beakers, two full-sized Collared Urns and four miniature Collared Urns came from burial contexts. A further 56 sherds were identified as Early Bronze Age, largely on the basis of fabric type (grog-tempered) and decoration.

The contents of all the funerary vessels have been retained for sieving to recover any potential artefactual and environmental evidence, including cremated human remains.

Middle/Late Bronze Age pottery

A small proportion of the total pottery assemblage was identified as of later prehistoric date, largely on the basis of fabric type, as diagnostic sherds are almost completely absent. Fabric types present include flint-gritted, calcareous and sandy fabrics, all likely to be of at least fairly local manufacture. A tentative date range of Middle/Late Bronze Age, possibly into the Early Iron Age, is likely for this group of sherds.

Romano-British pottery

The majority of the Romano-British assemblage comprised sherds of Black Burnished ware of Poole Harbour type (BB1 and variants). Other coarsewares, consisting of greywares of uncertain source, were very sparsely represented. Imports are restricted to sherds of samian, Dressel 20 amphora from southern Spain, and one example of a mortarium from a postulated source either in north-east France or Kent. British finewares were represented by sherds of New Forest colour-coated wares, largely from indented beakers, and possible sherds of Oxfordshire colour-coated wares. On the basis of the small number of rim sherds and other diagnostic material, a broad date range of 2nd to 4th century may be suggested for this material.

Table 1: Overall finds totals (excluding worked flint) by number of pieces and weight in grammes

Amber	Burnt flint	Burnt stone	CBM*	Fired clay	Glass	Pottery	Shale	Slag	Stone	Metal
1 bead	1339/55214	69/3096	205/7999	3/51	135/625+ + beads	953/7238 + 10 vessels	104 + beads	19/98	49	12 copper alloy 70 iron

* Ceramic building material

Medieval, post-medieval and modern pottery

There is a very small number of medieval sherds, all in an oxidised sandy fabric, some glazed, probably of 13th/14th century date. The remainder of the assemblage comprises post-medieval and modern material, including glazed red earthenwares, pale-firing earthenwares of Verwood type, English stonewares, fine whitewares and Staffordshire-type slipwares, with a broad date range of 18th to 20th century.

Other materials

Stone roofing tiles (slate and limestone) were discarded on site or during the assessment. Retained stone objects include quern fragments and rubbers, a whetstone, a wrist guard from the Beaker burial in barrow 1004, and a group of flint/quartzite pebbles which may have been selected for utilisation as slingshot. A complete 215mm long greenstone axe was recovered from one of the Neolithic pits. A quantity of unworked burnt stone was also recovered.

Small quantities of Romano-British fired clay and vessel glass were also identified.

A number of beads of various material types, almost certainly representing a necklace, were found together in a deposit within the barrow cemetery, but not clearly associated with a burial. The necklace comprises one bead of probable amber, somewhat decayed, at least 40 cylindrical glass or faience beads, and over 100 disc-shaped shale beads.

Metalwork recovered consists of 12 copper alloy objects and 70 iron objects, of which 68 iron objects were identified as of modern date and were not retained. The two retained iron objects comprise one nail and one rod. The copper alloy Bronze Age objects include two possible awl fragments, one rivet, three daggers, and two unidentified objects. Two Romano-British coins and one domed stud from a post-medieval context were also recovered, as was a small quantity of slag, probably of recent or modern date.

Worked flint

A total of 23,601 pieces of flint, weighing 529,713g, was recovered from the excavations. The majority of this came from stratified contexts. All the flint was rapidly scanned to gain an overview of the character of the complete assemblage. Then most of the flint from the more significant contexts was visually examined in greater detail to determine more precisely its character and potential for more detailed analysis.

The raw material was predominantly chalk flint, with a very small proportion of tertiary gravel flint and Portland chert. The condition of the flint artefacts was heterogeneous ranging from extremely fresh, mint condition, pieces in some stratified contexts, to much more worn and damaged pieces elsewhere. In many contexts there was a mixture of worn and unworn flint, suggesting some mixing of flint derived from different episodes of activity.

A large part of the assemblage comprises waste products from the collection and working of cores — this is present in almost all contexts, though there are some significant concentrations of knapping debris in specific contexts. Not all of the flint consists of waste products as a range of implements was also present. The proportion of implements is typical of the assemblages from many of the sites in the South Dorset region, and the range of tool types is similar to other prehistoric sites in the area which span the same date range as this site.

The implements recovered indicate a range of different activities in the vicinity of this site. The chronological range of the implements spans at least from the Late Neolithic (oblique arrowheads, fabricator) to the Middle/Late Bronze Age (denticulates, some piercers, and some retouched flakes). The Early Neolithic is less certainly represented in the implement assemblage, though the serrated flakes may belong to this period. The assemblage includes several characteristic Early Neolithic small blade cores (similar to those found at Maiden Castle) and small blades.

Environmental Materials

Human bone

There are three complete inhumation burials, and redeposited human bone from 13 additional contexts. One of the complete skeletons is in very poor condition and requires careful cleaning. In addition, a maximum of eleven cremations were excavated, eight urned and three un-urned. The contents of these vessels have been retained for sieving in order to extract all bone, as well as any other potential artefactual and environmental evidence.

Twenty-five samples were taken from cremation or graves contexts for the recovery of human remains or associated material. None of the cremated bone has been extracted from these samples.

Charred plant remains and charcoal

Eighty-four bulk samples of about 10 litres were taken from a range of dated features. This included 26 samples from the Neolithic pits and 39 samples from the Bronze Age barrows and associated cremations, features and the old land surface. A representative sample of these bulk samples was assessed to characterise the palaeo-environmental potential of the assemblage.

The flots of five samples from Neolithic pits were scanned under a ×10–×30 stereo-binocular microscope and the quantities of plant remains semi-quantitatively recorded. A relatively large quantity of charred material was recovered. The preservation of both charcoal and seeds, and in particular cereal grains and weed seeds, was good.

Molluscs

A number of mollusc samples were taken from the Neolithic pits and Bronze Age barrows (1005, 1006 and 1004). Two columns of three samples were taken through the mound and colluvial sequences of barrows 1005 and 1004. Twenty-one samples were taken from various other Bronze Age features and another 22 samples from various Bronze Age, Roman and medieval ditches.

Four samples from barrow 1004 produced variable numbers, dominated by open country species. Two columns of samples from the north and south sides of the ditch of barrow 1005 were assessed. In contrast to the north side, the samples from the south side of the barrow ditch contained high shell numbers, predominantly open country species.

Five samples from two linear ditches produced low shell numbers in their flots. The residues did not seem to contain significantly more shells.

Animal bone

A total of 841 bone fragments (9,313g) of bone was recovered by hand excavation. In addition, six antlers, one scapula and eight cow long-bones were recovered as placed deposits in the Neolithic pits.

The Bronze Age material derived mainly from the barrows and was highly fragmented. The species represented were predominantly sheep with some cattle. The assemblage is typical for the Dorchester area (Bullock and Allen 1997) though fragmentation here was relatively high.

Discussion

The excavation broadly established the location, nature, date and function of a number of archaeological features, including those anticipated as a result of geophysical survey and other techniques, and others that had not been predicted (Fig. 6).

The identification of a number of pits of Late Neolithic date outside the principal monuments of Dorchester, provides a significant contribution to the archaeological record of the area. Occupation sites of this date with associated subsoil features, such as pits, are 'particularly elusive' (Healy 1997, 297).

At least four pits containing Grooved Ware pottery and a further number of pits containing worked flint of Late Neolithic and Early Bronze Age date of domestic character were identified. Grooved Ware recovered from non-monument contexts in the Dorchester area is limited

Figure 6: Aerial view of the excavation looking east over Dorchester

to sherds from a few pits at Poundbury (Smith 1987) and Maiden Castle (Cleal 1991) and two pits on the South Dorset Ridgeway (Wessex Archaeology 1994b). The pits from the site represent a range of activities including settlement and ceremony, the latter suggested by the pits possibly containing deliberately placed objects and the possible pit-ring.

A phase of monument construction is represented at the site by the construction of as many as eight Bronze Age barrows. At least three of these monuments had been significantly eroded by subsequent agricultural activity (or truncated by the construction of a later barrow). The four remaining barrows, were particularly well preserved, with their major structural elements intact. These four were all large barrows compared to other local bowl barrows. They compare in size to significant barrows such as those at Flagstones (Healy 1997), and Fordington Farm (Bellamy 1991), which is one of the largest bell barrows in Dorset, and Conquer Barrow (Wainwright 1979). These four barrows formed part of a visually spectacular arrangement of barrows ranged along the ridge from Mount Pleasant to Maumbury Rings and now extended to the four barrows at the Thomas Hardye School site (Healy in Smith *et al.* 1997, 289). The prehistoric monumental focus of this ridge has been enhanced further by the recent discovery of a probable henge monument at Dorchester Middle School, some 300m to the east (McMahon 1998).

The linear ditches recorded at the site represent the remnants of field systems and field boundaries dating from the later Bronze Age onwards. The majority of ditches are probably of medieval or later date, although at least one ditch is of Bronze Age date and one is of Late Iron Age/Romano-British date. These features provide information on the nature of land-use and the environment after the construction and use of the barrow cemetery. Their spatial and chronological relationship to the barrows is interesting considering the quality of preservation of the barrow cemetery and the reasons for their survival as earthworks. The dating evidence for these features is, however, generally poor and the palaeo-environmental data obtained from them is also limited. Widespread archaeological evidence for the nature of the Late Bronze Age and later farming landscape has been recovered from previous archaeological excavations in the vicinity (Smith *et al.* 1992; Allen 1997, 280).

Acknowledgements

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Mr Laurence Keen, then the County Archaeologist, monitored the archaeological excavation on behalf of the Local Planning authority.

The 1994 field work was supervised for Wessex Archaeology by Michael Heaton and Paul Pearce, assisted by Andrew Powell, Alan Graham, Peter Bellamy and Jo Mills. An assessment report was compiled by Michael Heaton, Lorraine Mepham, Michael J. Allen, S.F. Wyles, Jonathan Nowell and Roland J.C. Smith. Peter Bellamy undertook the flint assessment. The illustrations were prepared by Linda Coleman. The project was managed on behalf of Wessex Archaeology by Susan M. Davies and Jonathan Nowell.

The Archives

The archaeological investigations discussed above were originally administered and organised separately and have produced three archives which have been microfiched and stored separately. They comprise Thomas Hardye School Playing Fields (Wessex Archaeology ref: 37838), Thomas Hardye School Evaluation and Watching brief (ref: 37535) and West Dorset District Leisure Centre Extension (ref: 39273). They will in due course be deposited with The Dorset County Museum, Dorchester.

Archive contents	**37838**	**37535**	**39273**
Index to the archive	≤	≤	≤
Assessment Report/Summary report	≤	≤	≤
Day books	≤	≤	≤
Trench summary records		≤	
Number allocations	≤		≤
Context index	≤	≤	≤
Level books	≤	≤	≤
Context records	≤	≤	≤
Post-excavation notes	≤		
Graphics register	≤	≤	≤
Site graphics	≤	≤	≤
Object records,	≤	≤	
Context finds records	≤	≤	≤
Sieved finds records	≤	≤	≤
Pottery scan summary	≤		
Finds box index	≤		≤
Photographic record	≤	≤	≤
Environmental sample index and records	≤	≤	≤
Colour slides and black and white prints and negatives	≤	≤	≤
Correspondence		≤	
Finds boxes	103	6	1

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Excavations at Penny's Farm, Cranborne

PETER S. BELLAMY
terrain archaeology, 10 Monmouth Road, Dorchester, DT1 2DG

Summary

An archaeological evaluation in 1992, followed by further excavation in 1996 of an area adjacent to the River Crane on the eastern outskirts of Cranborne, revealed traces of sporadic later prehistoric, Roman and medieval activity along the edge of the river. This included several pits of Bronze or Iron Age date filled with burnt flint and charcoal; a single isolated 3rd-century Roman cremation burial in a pottery vessel; and a number of 13th-century AD pits.

Penny's Farm lies on the eastern side of Cranborne village, on the lower valley slopes immediately north of the River Crane (SU 059132; Fig. 1). This area has been gradually encroached upon by the expansion of Cranborne — during the 1980s, Penny's Mead housing estate was built in the area to the west of Penny's Farm and in 1996–7 a small residential development was built between Penny's Farm and Higher Holwell Farm (Fig. 1). The archaeological investigation of this latter area forms the subject of this report.

The site covers *c.* 8500m^2 of the lower valley slopes and the river floodplain. The north-eastern limit was defined by a field boundary along a large positive lynchet and the south-western limit by the River Crane itself. Geologically, the site is on the Upper Chalk, with relatively recent valley gravels forming the flat floodplain of the river. Excavation revealed that both the Chalk and the valley gravels were covered by more recent superficial deposits.

Archaeological Background

Cranborne lies within Cranborne Chase, an extensive former royal hunting ground encompassing a large block of land of some 324,000ha, spreading over the three counties of Hampshire, Wiltshire and Dorset. The Chase abounds with archaeological sites (RCHME 1990, fig. 1) and is one of the most intensively researched archaeological landscapes in the country (see, for instance, Pitt-Rivers 1887–98; Barrett *et al.* 1991a; 1991b; Green 2000). Cranborne itself lies on the eastern periphery of the main areas investigated by Pitt-Rivers and by the Cranborne Chase Project (*op. cit.*) and the environmental and archaeological history of the Crane Valley is much less well explored than is that of the River Allen, which runs more-or-less parallel to it around 4km to the south-west.

The RCHME map of 1990 (*op. cit.*) shows extensive field systems, probably of late prehistoric date, on the downlands upstream from Cranborne to either side of the River Crane and running down onto the floodplain. Those to the north of the river seem to have been more extensively damaged by later ploughing than those to the south and are partly overlain by a Romano-British settlement (SU 047155; RCHME 1975, 5). Interspersed among the fields are a number of barrows, and the head of the valley, between the modern springhead and the Dorset Cursus which cuts obtusely across the landscape, is marked by a tight cluster of barrows. A Romano-British building was recorded at Holywell to the south-east of the village in the 19th century and pottery, oyster shells and tiles have been noted in several places (*ibid.*). Part of the north-eastern boundary of the Parish is formed by a section of Bokerley Dyke, a linear boundary ditch of probable Iron Age origin that seems to have been re-established as a frontier work in the post-Roman period (RCHME 1990).

The village of Cranborne includes few buildings of historic importance. The Manor House is described by the Royal Commission (RCHME 1975, 5) as 'historically one of the most important domestic buildings in England' and incorporates elements of one of King John's Chase hunting lodges. A Benedictine abbey was founded in Cranborne *c.* 980 and a motte and bailey lies to the south-east of the village.

No previous archaeological discoveries have been recorded from the site itself. Several pits dating from the Late Neolithic to the medieval period were discovered in the field adjacent to the north-western side of Penny's Farm (Wilson and Chowne 1987) and a small number of archaeological features was revealed during the construction of the Penny's Mead estate. In 1982, a pit containing Middle Saxon occupation debris was discovered during the construction of a house at 10 Penny's Mead (Brisbane 1986). There were few surface traces of any archaeological features in the area of the present site other than a number of irregular subcircular hollows in the south-eastern corner of the field. The date and function of these earthworks is unclear but they may have been the result of small-scale gravel extraction.

Methods

An archaeological evaluation consisting of four machine-dug trenches was carried out on the site in 1992. Based on the results of the evaluation, a larger area of the site, *c.* 780m^2, was excavated in advance of house construction in November 1996. The position of this trench (Fig. 2) was designed to investigate the area of greatest archaeological potential revealed by the evaluation and the area most likely to be disturbed by the development. The trench was machined down to the top of soliflucted chalk and gravel layers and all archaeological features revealed were excavated by hand.

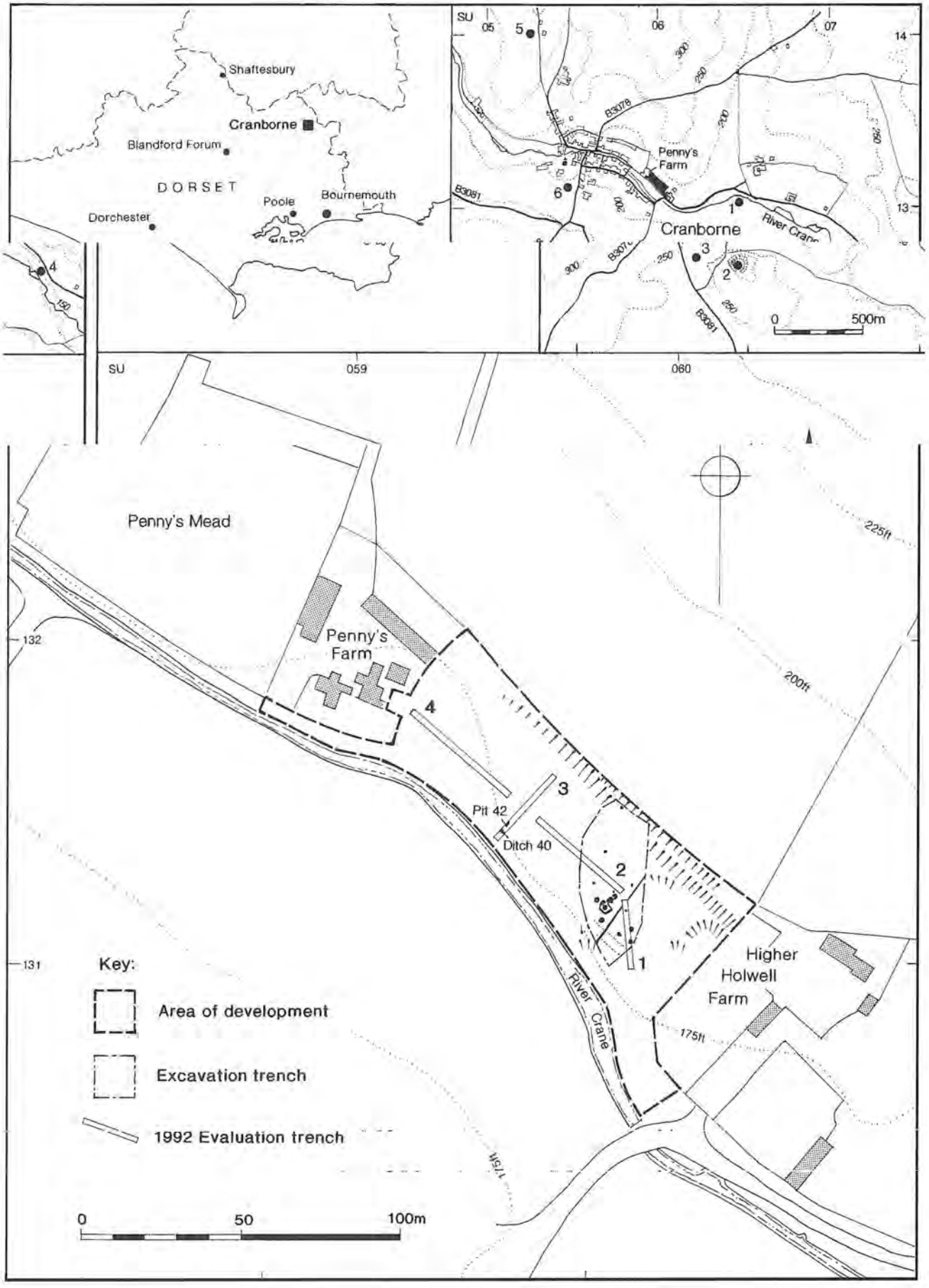

Figure 1: Site location (1. Holwell Farm; 2. Castle Hill; 3. Castle Hill west; 4. Lower Holwell Roman building; 5. Blackbush Down Road; 6. site of Cranborne Abbey)

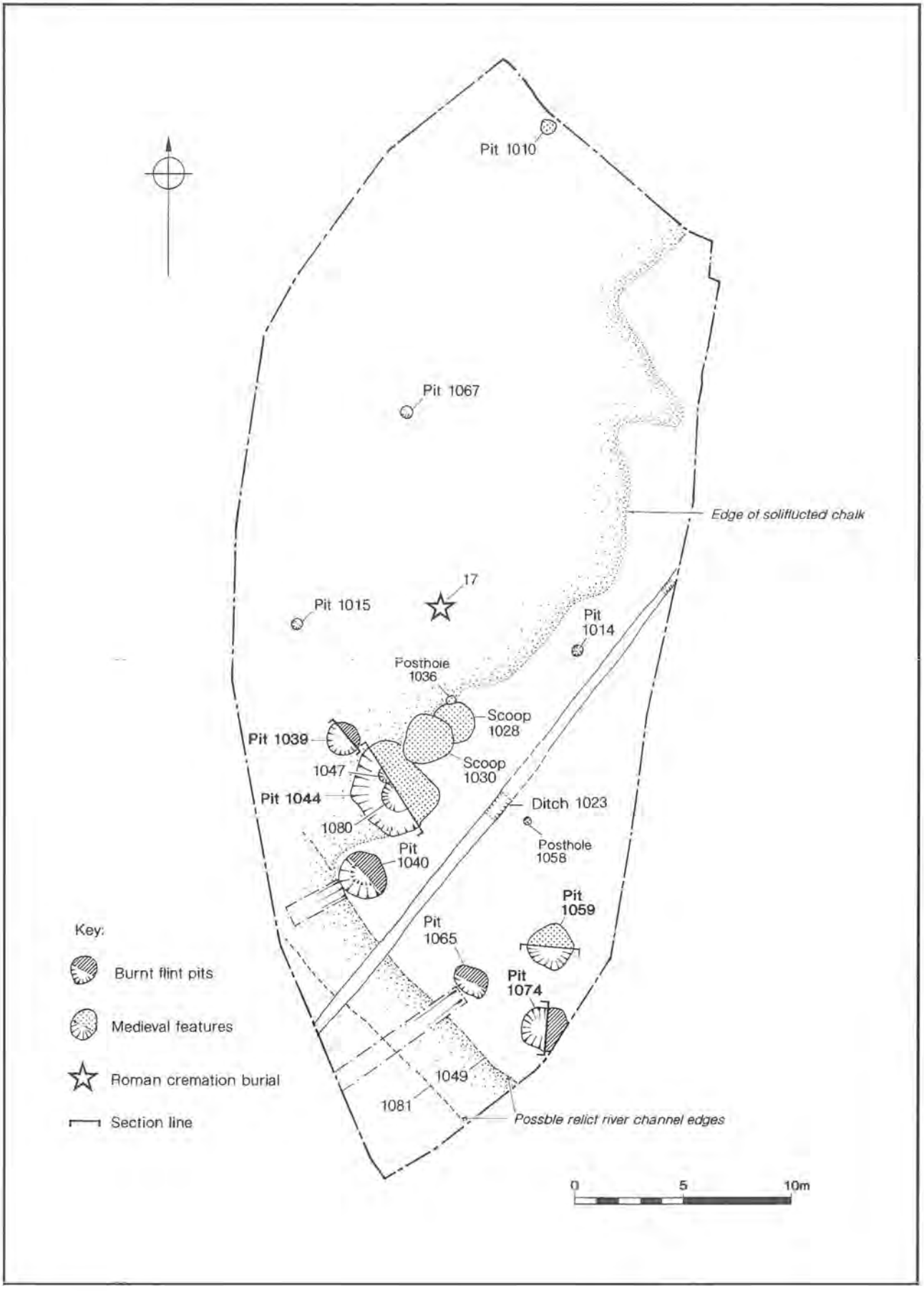

Figure 2: Plan of 1996 excavation trench showing all features exposed during the excavations and the 1992 evaluation

Excavation

The results of both the 1992 evaluations (Hearne 1992; Rawlings and Hearne 1992) and the 1996 excavations are presented here.

'Natural' deposits

The earliest deposits encountered were flint valley gravels, which lay at a height of *c.* 51.2m above Ordnance Datum. Overlying these gravels (and presumably the Upper Chalk) in the south-eastern part of the site, was a deposit of pale grey, creamy white calcareous silty clay with frequent patches of red clay and with frequent solid chalk flecks, which is thought to be redeposited soliflucted chalk. Over this solifluction layer, in the central and north-western part of the field, was a layer of loose gravel subsoil composed mainly of rounded flint pebbles up to 100mm in size in a sand and flint grit matrix. This gravel layer became progressively thicker towards the north-west and was observed to be at least 0.8m thick in places. This gravelly layer may be a colluvial deposit and the presence of pieces of worn, patinated, worked flint scattered throughout it suggests that it was a prehistoric formation. The majority of the archaeological features were cut through this deposit.

Two possible relict river channels were identified on the edge of the floodplain (Figs 1 and 2). The earlier channel (1049) was *c.* 0.4m deep and only one edge was defined. It was filled with layers of flint gravel in a brown silty loam matrix which contained a large quantity of burnt flint, a single Roman pot sherd in its lower part (1053), and some medieval pottery in the upper fill (1050). The later channel (1081) cut through all the layers filling the earlier one. Only its north-eastern edge was recognised in the excavated area.

Prehistoric features

A general scatter of Neolithic–Bronze Age worked flint occurred across the site but none of it was directly associated with any cut features.

Four pits along the edge of the river floodplain (1039, 1040, 1065, 12/1074) were found to be filled with large quantities of burnt flint and charcoal (Fig. 2). These pits were all subcircular to subrectangular in shape, between 1.4m and 2.1m across, with steeply sloping sides and a fairly flat bottom, between 0.3m and 0.65m deep (Fig. 3). They were all dug through the colluvial gravel subsoil or the solifluced chalk layer down to the top of the valley gravels. Their fills were all remarkably similar in character, comprising about 70% burnt flint in a dark charcoal-rich silty loam matrix. Pit 1065 also contained a small quantity of burnt sandstone. The only other finds from these pits were an occasional piece of worked flint and a single sherd of Late Iron Age pottery (from pit 1074) which provides the only dating evidence for these pits. Although the pits were full of burnt material, there were no signs of burning on the sides or bottom, indicating that the material was not burnt *in situ*. They appear to have been left open after the initial filling, as there was some evidence for erosion of the sides (Fig. 3). The upper fills also contained large quantities of burnt flint but were generally less charcoal-rich. Some medieval and post-medieval pot sherds were recovered from the top of pits 1039 and 1064 — these are likely to be intrusive, a result of the settling of the contents of the pits.

One other pit (42) and a post-hole (1058) may be of a similar date to the pits described above, though neither produced any dating evidence. The pit lay about 35m to the north-west in a similar topographic position (Fig. 1). It was oval in shape measuring *c.* 1.95 × 0.9 × 0.2m. The very dark grey sandy loam fill (43) contained much burnt flint and a number of worked flints. The isolated post-hole (1058), 0.3m in diameter and 0.35m deep, packed with pieces of burnt sandstone (1057), was found *c.* 5m upslope from the burnt flint pits (Fig. 2).

Romano-British features

A human cremation burial (18) in a Romano-British Black-Burnished ware vessel was found embedded in the solifluced chalk near the centre of the excavated area. No cut was observed through this layer but it is likely that the cremation vessel was placed in a pit (17) (Fig. 2) cut through the contemporaneous topsoil and positioned directly on the surface of the underlying solifluced chalk. The vessel was disturbed and partially removed during machining. No other evidence for Roman activity was found other than a small number of Romano-British sherds recovered from later contexts.

Medieval features

Medieval features were the most widespread across the site, though, in common with the prehistoric features, most were concentrated along the edge of the river floodplain. Just slightly upslope from the later prehistoric burnt flint pits were a number of pits and scoops (1028, 1030, 1044, 1059) containing medieval material. These contained some habitation material in the form of pottery and animal bone. The most notable feature was a large, roughly rectangular cut (1044), 4.1m by 3.3m across, with steeply sloping sides and an irregularly flat bottom, 0.5m deep (Figs 2 and 3). This may have been a large shallow pit or perhaps a sunken-floored structure or activity area with a 0.4m deep pit (1080) in the centre and another adjacent shallow feature (1047). Pit 1080 was filled layers of brown silty loam (1032, 1033) containing some medieval pottery as well as a small quantity of animal bone. Feature 1044 was filled with a layer of mid to dark brown silty loam (1026) which covered pit 1080 and filled feature 1047. There was a fair amount of pottery lying flat at the base of this layer which might suggest that the base of feature 1044 was used as a surface, though there was no evidence for any compaction, nor were there any other finds recovered. Immediately adjacent to feature 1044 were a couple of intercutting shallow scoops (1028,

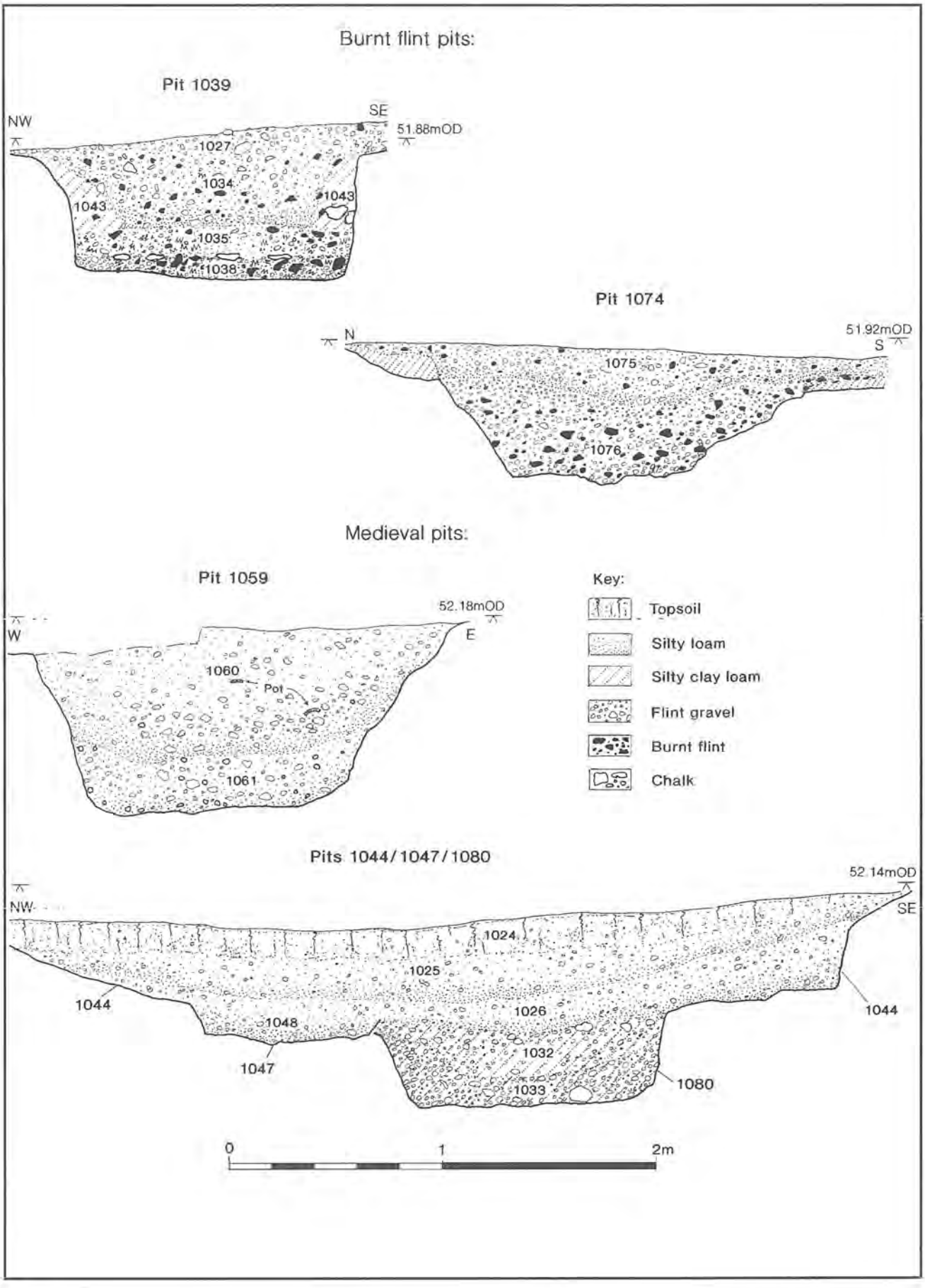

Figure 3: Sections through selected prehistoric burnt flint pits and medieval pits

1030) and a small post-hole (1036), all filled with brown silty clay and containing small quantities of medieval pottery.

Pit (11/1059) was notable for the comparatively large quantity of pottery recovered from it. It measured *c.* 2m in diameter and was 0.85m deep (Figs 2 and 3). The basal fill (1061) was a mid greyish-brown chalky silty loam, containing a small amount of medieval pottery and the rest of the pit was filled with a layer of darker brown silty loam (1060), which contained much medieval pottery and some animal bone.

Further upslope and scattered over the excavated area, were several small shallow pits (1010, 1014, 1067) of similar size and shape. Pits 1010 and 1014 contained medieval pottery. Pit 1010 was circular, 0.8m in diameter and 0.25m deep, with steeply sloping sides and a flat bottom. The lower fill (1009) was a dark charcoal-rich silty loam which contained several pieces of iron-smithing slag and one sherd of medieval pottery. The upper fill (1005), a brown silty loam, did not have any signs of burning. It contained some animal bone and a copper alloy disc. The other pits were filled with brown silty loam.

A shallow ditch (40), 0.95m wide and 0.35m deep, running north-west to south-east, parallel to the river, was revealed in the north-western half of the site. Only a very short length of this ditch was exposed and its full course is not known. Three sherds of medieval pottery were recovered from the dark brown stony sandy loam fill (41).

Post-medieval activity

A 0.2m thick layer of brown, silty, colluvial soil (1020) covered much of the excavated area sealing the archaeological features described above. A small gully (1023) appeared to cut through this colluvial soil and the upper fills of the possible river channels (1050, 1071). The position and orientation of ditch 1023 coincides with one of a series of four parallel linear soil marks running up and down the slope in the field (Dorset County Council Sites and Monuments Record map SU01SE). The large positive lynchet (1011) which forms the north-eastern boundary to the field appears to be post-medieval in date as it sealed the small medieval pit 1010.

Finds and Environmental Evidence

Worked flint

A total of 418 pieces (5425g) of worked flint was recovered (Table 1). The majority of the stratified material came from the colluvial soils which covered the archaeological features, the colluvial gravels and the fill of the possible relict river channel 1049. Small quantities of worked flint were recovered from a number of other features. The raw material used was primarily small chalk flint nodules with a fairly thin smooth cortex, with some gravel flint.

Two industries could be identified within the assemblage. The first, which comprises almost 90% of the recovered assemblage, is recognised by the patinated and rolled condition of the pieces. It is dominated by flakes which exhibit a slightly more sophisticated technology than the second industry, with some evidence for the preparation and rejuvenation of cores. The tools consist of one thumbnail scraper, four undiagnostic scrapers, one piercer manufactured on a broken flake, and one retouched flake. A Neolithic date is likely.

The other industry comprises material which is unpatinated or very lightly patinated and in a very fresh condition. It includes some gravel flint. The flakes are fairly thick and crude and all were removed using a hard hammer. The tools consist of three piercers (two on thermal fragments and one on a core fragment) and two retouched flakes. A later Bronze Age date is most likely for this industry.

Worked flint from the earlier industry was scattered across the whole site. Its worn condition and patination suggest that it had been washed into the valley from the surrounding chalk slopes. The Bronze Age material was

Table 1: Total worked flint assemblage from 1992 and 1996 fieldwork

context	cores	broken cores	flakes	broken flakes	blades	broken blades	chips	misc. debitage	scrapers	piercers	retouched flakes	total
	no.	no.	no.	no.	no.	no.	no.	no.	no.	no.	no.	no/wt
topsoil			5	1			1					7/80g
colluvium	2	1	31	31	2	1	10	19	1			98/823g
colluvial gravels		1	10	12			6	2				31/219g
pit 1039			2	1	1		1					5/46g
pit 1065				1			1					2/11g
pit 42			3	6				1				10/98g
river channel 1049	2	2	34	13			3	11	2			67/1235g
ditch 40			5	2				1				8/76g
pit 1010			1					1				2/19g
pit 1080			1	1								2/17g
pit 11/1059			1	2							1	4/39g
unstratified	2	4	86	49	2	2	7	22	3	4	1	182/2762g
total	6	8	179	119	5	3	29	57	6	4	2	418/5425g

almost all recovered from the fill of the possible relict river channel and from the burnt flint pits, with a small number also found in the colluvial gravels and the later colluvial soils. Its limited distribution and unworn condition suggests that this later industry represents knapping activity in the local vicinity.

Burnt flint

A large quantity (180,586g) of burnt unworked flint was recovered, mostly (156,599g) from pits 12/1074, 1039, 1040 and 1065. This material predominantly comprises burnt, cracked and shattered flint nodules, averaging *c.* 100mm across. The vast majority of these burnt nodules are clearly chalk flint rather than gravel flint and it seems that the raw material was preferentially brought to the site from the surrounding chalk slopes rather than using the flint gravel available on site. The reason for this preference may be related to size, since most of the colluvial gravels were generally less than 50mm across, much smaller than the nodules in the pits. Larger flint valley gravels in the area of the excavation were buried below *c.* 0.6m of colluvium and alluvium.

Only the burnt flint from pits 1039, 1040, 1065 and 12/1074 is likely to be in any way *in situ*, the rest is probably residual and most probably derives from activity associated with the pits. A small quantity recovered from the colluvial gravels is probably earlier and derives from earlier prehistoric activity further up the slope.

Pottery

L.N. Mepham

Prehistoric material comprises one sherd from the base of a Beaker, decorated with square-toothed comb impressions (layer 1012), and one sherd in a sandy fabric with sparse flint, probably of Late Iron Age date (pit 1074). The latter sherd appears to have been *in situ*.

Romano-British material consists of coarsewares, both greywares and oxidised sandy wares. The few diagnostic sherds that are present indicate a late Romano-British date (3rd/4th century AD). The Romano-British material mainly occurred as redeposited sherds in various medieval contexts.

The Roman cremation burial was contained within a thin-walled, Black-Burnished Ware (BB1) jar. Only the lower third of the pot remained. It bears obtuse lattice decoration in a panel around the girth and its outer surface is burnished below the decoration. The decoration dates it to the later Roman period; a 3rd-century date is most appropriate in the absence of any internal rough wiping which is often found on 4th-century and later vessels (Seager Smith and Davies 1993).

The medieval pottery assemblage from Penny's Farm comprises 486 sherds (6674g), recovered from various stratified and unstratified contexts within the excavated area. Visually, the assemblage is strikingly homogeneous, with the overwhelming majority of sherds occurring in variants of a single fabric type, which is likely to be of at least relatively local manufacture. The general condition of the pottery is relatively good, with a significant proportion of large, unabraded sherds (mean sherd weight 13.5g), although no complete profiles could be reconstructed.

Table 2: Medieval pottery: fabric totals

Fabric type	No. sherds	Weight	% of total by weight	No. scratch-marked
E422a: Laverstock-type coarseware	105	1926	28.9	60
E422b: Laverstock-type coarseware	112	1504	22.6	39
E422c: Laverstock-type coarseware	265	3172	47.6	49
E421: Laverstock-type fineware	1	1	–	–
E426: Poole Harbour type whiteware	1	56	0.8	–
F400: 'Gravel-tempered' ware	2	8	0.1	–
TOTAL	486	6667	–	148

Analysis of the medieval pottery followed the standard Wessex Archaeology recording system (Morris 1992), involving the identification of fabric types on the basis of the range, size and frequency of macroscopic inclusions, and the grouping of these types according to the dominant inclusion type or known source. In this instance the majority of the fabrics were within the series based around the Laverstock-type and Poole Harbour-type fabrics coded within Wessex Archaeology's 'established wares' series (Group E); other fabrics comprise just one flint-tempered type (Group F). Fabric totals are presented in Table 2.

Vessel forms have been defined using rims and other diagnostic sherds, and follow the recommended nomenclature for medieval vessel forms (MPRG 1998). Details of surface treatment, decoration, manufacture and evidence of use have also been recorded; detailed pottery records by context are held in archive. In the fabric descriptions below, the terms used to describe the density of inclusions follow Terry and Chilingar (1955), and are defined as follows: rare (1–3%); sparse (3–10%); moderate (10–20%); common (20–30%). The fabrics identified are discussed below within groups according to known or putative source.

Fabrics

Ninety-nine per cent of the medieval assemblage from Penny's Farm comprises coarseware sherds which are comparable to products of the Laverstock kilns (Musty *et al.* 1969). The coarsewares are sufficiently visually similar throughout the medieval assemblage as to represent variations of a single fabric (E422); this has been subdivided here into three fabrics (E422a–c) on the basis of the size of the quartz inclusions. The division might be considered as somewhat arbitrary, but could have chronological implications.

E422a Hard, moderately coarse matrix; common, fairly well sorted, subangular/subrounded quartz, sometimes iron-stained, <1mm; rare iron oxides. Handmade; firing varies from com-

pletely oxidised to completely unoxidised; 'pimply' surface finish.

E422b As E422a but with quartz <0.5 mm; slightly 'pimply' surface finish.

E422c As E422a but with quartz <0.25 mm.

The excavated kilns at Laverstock, just outside Salisbury, have an estimated lifespan of 1230–1275 (Musty *et al.* 1969, 93), although there is indirect documentary evidence for the operation of kilns in the Laverstock/Clarendon Park area in the early 14th century, and it seems apparent, given the predominance of Laverstock-type fabrics in the city, that pottery production continued in the vicinity long after the known date of the excavated kilns.

It is probable, however, that other centres were manufacturing products in very similar fabrics. Visually similar coarseware fabrics have a wide distribution across south-east Wiltshire and east Dorset as far south as Purbeck, dominating medieval assemblages in this area to the almost total exclusion of other fabric types. Recent chemical analysis has failed to differentiate between coarseware pottery samples from Laverstock and south Dorset (Spoerry 1988), while a documentary search has demonstrated the likelihood of the existence of further medieval production centres exploiting the clays of the Reading Beds and London Clay which outcrop in a band from south-east Wiltshire to Purbeck, particularly in the area of the post-medieval Verwood industry (Spoerry 1988). Documentary references are particularly plentiful along the band of Reading Beds and London Clay which outcrop along the Dorset/Hampshire border. There are indeed indirect (and largely undated) references to pottery production in the parish of Cranborne, in the form of personal and place-names *(ibid.*, 32), and the proximity of the parish to those of Alderholt, Horton and Verwood, centres of the well documented post-medieval pottery industry (Algar *et al.* 1987), should be noted. Reading Beds occur within 4km of the site on Pentridge Hill and around Wimborne St Giles.

Three other fabrics were identified, each represented by just one or two sherds:

E42 I Laverstock-type fineware: hard, fine matrix; moderate to common, well sorted, subrounded quartz, iron-stained, <0.25 mm; rare iron oxides. Oxidised (pale-firing: buff to pale salmon pink).

E426 Poole Harbour-type whiteware: hard, moderately fine-grained fabric; sparse, well-sorted quartz <0.25 mm. Oxidised (pale-firing: cream/white).

F400 'Gravel-tempered' ware: soft, silty or moderately coarse-grained matrix; sparse, poorly sorted, subangular, patinated flint <4 mm; rare subrounded to subangular quartz <0.25 mm. Firing irregular.

The two fineware fabrics are both well paralleled elsewhere in Dorset and south Wiltshire. The two sherds of F400, both plain body sherds, both came from the same context (terrace 1049); these are of uncertain date, but similar 'gravel-tempered' wares have been noted at Middle to Late Saxon sites, for example at Southampton, where they appear in the 9th century (Timby 1988, fabric group VI) and continue in use at least until the 11th century (e.g. Mepham 1996).

Forms

The range of vessel forms consists largely of jars. Four main jar rim forms may be defined, all of which can be paralleled amongst the Laverstock kiln assemblage:

Type 1: Everted, long, slightly thickened, rounded rim; everted at approximately right angles to the body; the orientation of the rim varies from flared to almost horizontal, to give either a rounded or more upright (convex) body profile (Fig. 4, 1). Equivalent to Laverstock rim type I (Musty *et al.* 1969, fig. 7).

Type 2: Everted long, slightly thickened, rounded rim as Type 1, but with a slight lid-seating (Fig. 4, 2). Equivalent to Laverstock rim type TI *(ibid.)*.

Type 3: Everted, long, thickened and slightly moulded rim, sometimes with slight lid-seating, and with a more noticeable neck zone than Types 1 and 2 (Fig. 4, 3). Broadly equivalent to Laverstock rim type III *(ibid.)*.

Type 4: Everted, short simple rim, squared, sometimes with groove along the top to give an almost bifid profile (Fig. 4, 4).

Most, if not all, of these jars are likely to have been round-based, although base angle sherds are present within the assemblage. All vessels are handmade, although the rims have an appearance of better finishing which may be due to finishing on a wheel or turntable. Jars with rim type I represent the survival of a form which is common in the Salisbury area, at least from the late 11th century into the 13th century. The other three rim types, all attested at Laverstock, do not appear before the 13th century; although their full lifespan is unknown, it is likely, from evidence in Salisbury, that they continued in use at least into the early 14th century.

Jars are frequently scratchmarked on both exterior and interior surfaces below the rim (e.g. Fig. 4, 4). Scratchmarking ranges from deeply incised marking to a finer marking, almost like wiping. The most pronounced marking is nearly always (but not exclusively) found on vessels in the coarsest variant (E422a). There is no certain evidence of glaze on any of the jars, and only one rim is embellished in any way; in this instance a type 2 rim with finger impressions around the outside of the rim and incised curvilinear decoration around the inside (Fig. 4, 3). One type 1 vessel in fabric E422a has a series of pre-firing perforations around the neck (Fig. 4, 2). Two examples of handled jars are present, both with rims of type 4 (Fig. 4, 6). These vessels have vertical loop strap handles springing from the rim to the shoulder, and were almost certainly two-handled. Both are in the finest fabric variant (E422c). These may be cauldrons (see Musty *et al.* 1969, fig. 11, 48).

One acute-angled base derives from a 'West Country' or incurved dish *(ibid.*, fig. 11, 41–4), a form found widely across the West Country and south Wales but whose function is unknown. Other dishes or bowls are present in small numbers, all convex-profiled or flared vessels with thickened rims (Fig. 4, 8). Evidence for other vessel

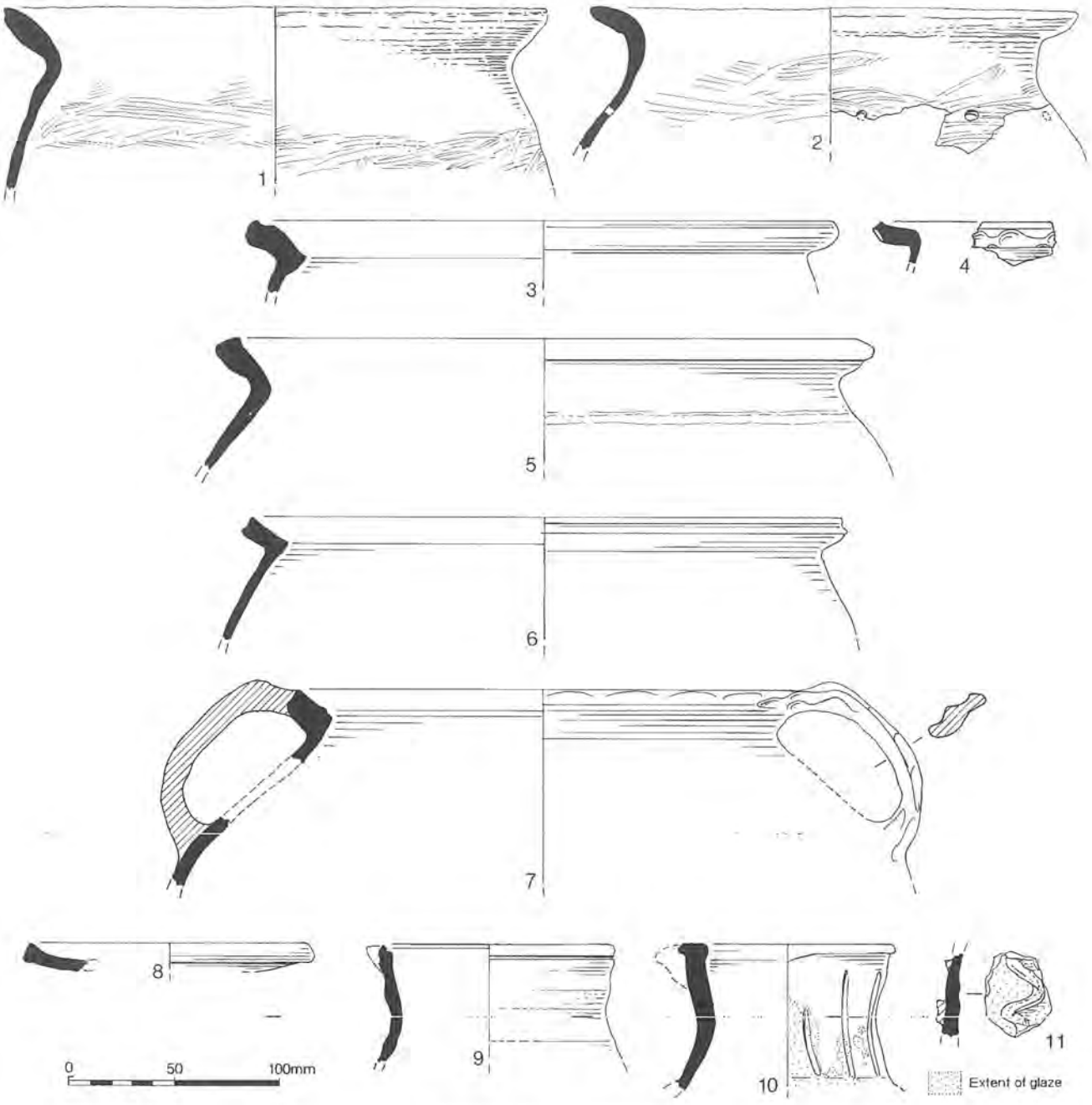

Figure 4: Medieval pottery

forms is confined to three jug or pitcher rims, mostly in the finest variant E422c, one with a pulled lip; and a single rim from a shallow, internally glazed vessel, possibly a lamp or candlestick drip tray.

Jugs or pitchers are represented by three coarseware rims (see Table 3) from vessels of unknown form, one with a pulled spout (e.g. Fig. 4, 9), and a small number of body sherds in fabric E422c with painted slip decoration (stripes) in red and/or white and traces of a thin, patchy glaze. There is also one other decorated body sherd in fabric E422b, a glazed sherd with an applied curvilinear strip. Such decoration is known on tripod pitchers from Sherborne, vessels which are generally dated to the 12th century.

Table 3: Medieval pottery: vessel forms by fabric

Rim Form	E422a	E422b	E422c	E426	Total
Rim, form unknown	2	2	3	–	7
Jar type 1	7	3	3	–	13
Jar type 2	–	1	3	–	4
Jar type 3	–	4	–	–	4
Jar type 4	–	–	16	–	16
Jar type 4 (handled)	–	–	2	–	2
Convex/flared bowl	1	4	1	–	6
Jug	–	1	2	1	4
Lamp	–	–	1	–	1
TOTAL	10	15	31	1	57

Table 4: Medieval pottery by context

Context	E422a	E422b	E422c	E421	E426	FL400	Total
unstratified	5/65	10/152	38/446	–	1/56	–	54/719
layer 1003	–	–	3/14	–	–	–	3/14
pit 1010	–	1/4	–	–	–	–	1/4
layer 1012	1/4	–	–	–	–	–	1/4
pit 1014	1/10	1/4	2/5	–	–	–	4/19
colluvial layer 1020	2/8	2/18	10/88	–	–	–	14/114
buried topsoil 1021	4/26	13/108	21/542	–	–	–	38/676
gully 1023	1/6		3/14	–	–	—	4/20
buried topsoil 1024	3/28	7/35	14/70	–	–	–	24/133
buried topsoil 1025	12/248	14/223	139/1592	1/1	–	–	166/2064
scoop 1028	–	2/26	2/7	–	–	–	4/33
scoop 1030	–	4/80	–	–	–	–	4/80
scoop 1036	–	–	2/4	–	–	–	2/4
pit 1039	–	1/4	3/32	–	–	–	4/36
pit 1044	–	1/4	4/104	–	–	–	5/108
terrace 1049	–	6/32	11/54	–	–	2/8	19/94
pit 1059	70/1471	37/728	–	–	–	–	107/2199
pit 1065	1/4	–	1/2	–	–	–	2/6
pit 1080	5/56	13/86	12/198	–	–	–	30/340
Total	105/1926	112/1504	265/3172	1/1	1/56	2/8	486/6667

Both fineware fabrics (E421, E426) derive from glazed jugs, although whether decorated or not is unknown. The Poole Harbour-type example is represented by a rim with a rod handle stump; the handle/body junction has been embellished with a pair of finger impressions in imitation of the northern French decorated jugs with applied 'ears' (impressed pads) which were imported from the early 13th century.

Discussion

This small assemblage fits into the well-documented medieval industry of the 13th and 14th centuries in south Wiltshire/east Dorset with parallels from Salisbury to Purbeck. The Laverstock-type coarseware fabrics are visually homogeneous and, despite close parallels with Salisbury assemblages, a local source is possible given documentary references and the evident availability of raw materials.

A date range within the 13th century is suggested for this assemblage, possibly extending into the early 14th century although the lack of finewares could be misleading here, either indicating a date early in the 13th century before such wares became common, or absent because of the economic status of the site. The single sherd from a possible tripod pitcher could be residual from an earlier (12th century) phase, although it is possible that these forms continued in use in Dorset well into the 13th century. All of the other vessel forms are paralleled within the 13th-century kiln assemblages from Laverstock.

There is some possible chronological sequence within the assemblage, which is at least partially supported by the stratigraphic sequence, although quantities from most features and contexts are too small for any patterns to be discernible. Table 4 gives a breakdown of the pottery fabrics by context. A broad division into 'earlier' and 'later' contexts could be achieved on the basis of the relative proportions of the coarseware variants. Pit 1059, for example, produced an above average proportion of the coarsest coarseware variant E422a, in the simplest jar forms (types 1 and 3), and could represent an 'earlier' ceramic phase. The topsoil layer 1025, in contrast, contained an above average proportion of the finest coarseware variant E422c, and forms include more developed jar rims of type 4, including a handled jar, as well as sherds from at least one glazed, slip-decorated jug in the same fabric. Other features can be seen to contain no sherds (or few) of E422a (including pit 1044 and scoops 1028, 1030 and 1036). Pit 1080 contained few sherds of E422a, and also included one handled jar (type 4) in E422c. These features and contexts could be taken as typical of a 'later' ceramic phase.

The post-medieval material comprises glazed earthenwares that are not closely datable within the post-medieval period. Sherds came from unstratified clearance, from topsoil layer 1024 and from the top of pit 1039.

List of illustrated vessels (Fig. 4)

1. Type I jar rim. PRN (Pottery Record Number) 148 [rim 31, context 1060, pit 1059.
2. Type 1 jar rim; pre-firing piercing below neck, fabric B422a. PRN 150 [rim 5], context 1060, pit 1059.
3. Type 2 jar rim. PRN20 [rim 511], unstratified.
4. Type 2 jar rim, finger-impressed and incised decoration, fabric Q402. PRN 87 [rim 14], layer 1025
5. Type 3 jar rim. PRN 156 [rim 9], context 1060, pit 1059.
6. Type 4 jar rim. [rim 39], layer 1021.
7. Handled jar, context E422c. PRN 103 [rim 25], layer 1025.
8. ?Lamp rim, internally glazed, fabric E422c. PRN 104 [rim 26], layer 1025.
9. Jug rim, pulled spout, fabric Q402. PRN 106 [rim 27], layer 1025.

10. Jug or pitcher, fabric Q401, slipped and glazed overall. PRN 159 [rim 17], context 1060, pit 1059.
11. Body sherd from ?tripod pitcher; applied curvilinear decoration, glazed, fabric E422b. PRN 45, layer 1021.

Other finds

Small quantities of post-medieval, and a few fragments of possibly later medieval, ceramic building materials were recovered, together with some plain clay pipe stems, two pieces of post-medieval glass, a possible limestone roofing tile fragment, a possible whetstone fragment, a small amount of iron-smithing slag, some iron nails and wire, a buckle and knife blade and five copper alloy fragments.

Cremated human bone

Jacqueline I. McKinley

In addition to the bone contained in the Black Burnished ware vessel, some unstratified human bone was also recovered after machining. This material is believed to derive from the burial. Osteological analysis followed the writer's standard procedure for the examination of cremated bone (McKinley 1994a). Age was assessed from the stage of skeletal development (McMinn and Hutchings 1985).

The burial had probably been placed in a pit, though no trace of it was recorded. approximately two-thirds of the vessel had been removed during machine stripping. Although recovery of some fragments of cremated bone from the adjacent spoil was undertaken by hand, it is probable that some bone is missing. Most of the bone appears in good condition. However, a few fragments of femur shaft have the slightly chalky surface appearance indicative of burial in adverse (acidic) soil conditions.

The 239.2g of bone recovered (84% from the burial, 16% redeposited), represents the remains of an adult; insufficient evidence remained to give a closer age band or suggest the sex of the individual. No pathological lesions were observed.

The bone was almost universally the buff-white colour indicative of a high degree of oxidation, i.e. efficient cremation (Holden *et al.* 1995). Two fragments of femur shaft were blue inside and one tarsal bone was slightly grey. The peripheral position on the pyre of the feet and heavy soft tissue coverage of the femur, were probably contributory factors to their incomplete combustion.

Since it is probable that some bone was lost from the burial as a result of the machining, little significance can be attached to the weight of bone recovered (maximum of 23% by weight of what would have comprised the total cremated remains (McKinley 1993)). The majority (>59%) of the bone fragments from both contexts were >10mm, with a maximum fragment size of 55mm (NB: the hand recovery of bone from context 23 is likely to have been biased towards the collection of larger fragments). Many factors may affect the size of bone fragments (McKinley 1994b), including disturbance, and there is nothing to indicate deliberate fragmentation of bone prior to burial. Bone elements from each skeletal area were recovered and there is no evidence to suggest any deliberate selection of specific bones for burial. Full details are in archive.

Animal bone and charred plant remains

Michael J. Allen and Sarah F. Wyles

A total of 140 bone fragments was recovered and has been rapidly scanned (fourteen fragments found during the 1992 evaluation have not been included). The bones are moderately well preserved but highly fragmented, with teeth and the more robust long bone fragments being over-represented. Apart from teeth, there are no measurable bones. The assemblage is largely cattle and sheep/goat. No pig, dog, fowl or other species were noticed. Thirty-two bones from medieval features comprise largely cattle and sheep/goat horn cores, skull fragments, teeth and long bone fragments. Horn core and bone fragments from pit 1010 had been cut, probably for bone working rather than butchery.

A series of five bulk samples of 10 litres was taken from the four prehistoric pits for the retrieval of charred plant remains and processed by standard flotation methods. Four samples contained up to 60% rooty material. This can be indicative of bioturbation and possibly contamination but only sparse numbers of uncharred weed seeds were present. The other (from pit 1074) contained only 1% rooty material and sparse numbers of uncharred weed seeds. The samples contained only sparse numbers of charred grain fragments or none at all. No charred chaff fragments or charred weed seeds were observed. A number of cereal grains of at least two species (?rye: *Secale* spp. and wheat/barley: *Triticum/Hordeum*) were recognised in the cremation deposit. The cereal grains are very likely to be contemporaneous with the cremation and thus relate to the Roman agricultural economy, if not to the funerary practice itself.

Charcoal

Rowena Gale

Charcoal was noted from the flots of the bulk samples. All samples contained high numbers of charcoal fragments of >5.6mm in both the flots and coarse residue fractions. Charcoal from the burnt flint pits 1040 and 1065 was selected for identification to provide environmental data and indicate the use of woodland resources.

Bulk soil samples were processed and prepared by standard methods. Where appropriate the maturity of the wood (i.e. sapwood/heartwood) was assessed and the number of growth rings recorded. It should be noted that the measurements of stem diameters are from charred material; when living these stems may have been up to 40% or more wider.

Context 1045 (pit 1040) contained fragmented charcoal but consisting of pieces measuring up to 5mm in the longest axis. Taxa identified (Tutin *et al.* 1964–80) included members of the hawthorn group (Pomoideae), blackthorn *(P. spinosa)*, hazel *(Corylus)*, yew *(Taxus)*, unidentified bark and a piece of either alder *(Alnus)* or hazel. Most of the charcoal was too fragmented to assess the age of the wood although the (incomplete) radius of the yew measured 5mm and included 10 narrow growth rings.

Context 1063 (pit 1065) consisted mainly of charred hazel, of which the largest fragment measured 25mm radially. Although this was probably roundwood, both the innermost (central axis) and outermost regions of the wood were missing and it was impossible to assess its age. The five growth rings included were wide (approx. 4mm) and indicative of fast growth. Taxa included hawthorn group, oak *(Quercus)*, ash *(Fraxinus)*, blackthorn, yew, and purging buckthorn *(R. cathartica)*. The diameter of oak roundwood was estimated at 10mm and included at least six growth rings. The structure of the remaining charcoal suggested that most of it was from narrow roundwood although the material was too fragmented for confirmation.

The close association of the charcoal with the burnt flints testifies almost certainly to its use as fuel to heat the flint. Shrubby taxa (hazel, blackthorn, hawthorn type, and buckthorn) provided the bulk of the fuel. Trees were represented by oak, ash and yew, although these may also have been shrubby since the charcoal appeared to be from fairly narrow stems.

Although difficult to verify, the fuel appeared to consist mostly of roundwood. The largest (estimated) measurements (from hazel) recorded roundwood exceeding 60mm in diameter when charred; thereby implicating the use of narrow logs up to, and possibly wider than, 90mm in diameter. There was no evidence of heartwood. The wood of the species used is dense and reasonably heavy, and would have provided a high-energy fuel source. In addition, the high ratio of the surface area to wood volume in the narrow roundwood would have produced a fast burning although short-lived fire — unless the fire was frequently refuelled.

The species used are characteristic of calcareous soils and were probably gathered very locally. The apparently scant use of oak and ash, which provide wood with the highest calorific values in Britain (Edlin 1949), may indicate their rarity in the neighbourhood. If the purpose of the fire was to heat relatively small flint nodules in order to boil water, the use of roundwood, which could be quickly and easily gathered from scrubby species growing around the site, would have provided an adequate fuel. If the activity was frequent and prolonged wood supplies may have become degraded, leaving only regrowth of scrubby specimens for use. If the use of the site was sequential and/or sporadic the shrubby species on the chalkland would probably have sustained the needs of the activity.

There was no evidence of managed coppicing and the topographical contours of the site suggests that this may have been unlikely. The fast growth recorded in some hazel wood probably reflects soil moisture — possibly implicating an origin near the base of the valley.

A range of trees and shrubs was identified, of which yew and purging buckthorn are characteristic of chalkland. The remaining taxa grow in various types of soil but, in general, do not tolerate waterlogged conditions. In all probability these taxa formed an open woodland or scrubby layer on the chalk hillsides. The apparent paucity of oak and ash and the absence of heartwood in the samples suggest that these taxa may not have been common at the site or, if present, may also have been shrubby or stunted. It seems likely that the low-lying floodplains would have provided an ideal situation for wetland species such willow *(Salix)*, alder *(Alnus)* and poplar *(Populus)*, and although there was no evidence of them in the charcoal deposits, this probably reflects economic rather than environmental factors.

Comparable environmental studies of charcoal from chalkland in this region include an Early Bronze Age pond barrow and ring-ditch at Down Farm, in the Allen Valley, where a similar range of taxa was recorded (Robinson 1991); the Middle Bronze Age settlement, on clay with flints, at South Lodge Camp produced charcoal of ash, hawthorn type, and oak and the adjacent Barrow Pleck barrow cemetery produced hazel, ash, blackthorn and oak (*ibid*).

The charcoal from pits 1040 and 1065, therefore, probably represents fuel for heating the large quantity of flints found in them. The fuel included (probably) roundwood of various widths from a range of taxa but mainly from shrubby species including hazel, blackthorn, hawthorn group, and purging buckthorn and from trees including oak, ash and yew.

Fuel was probably mostly gathered from the chalkland rather than the floodplain. The woodland environment on the chalk hillsides was probably fairly open and probably predominantly shrubby. Larger trees such as oak and ash may have been relatively infrequent, since both provide high-energy fuel and neither was well represented in the charcoal and, in addition, there was no evidence of the use of heartwood.

Discussion

The excavations have shown that the immediate area of the site was not heavily occupied at any period in the past but was a marginal area beyond the main focus of any settlement. This is likely to be largely a result of the location at the bottom of the river valley in an area which, until recent years, was often subject to seasonal flooding (Jake Keen, pers. comm.).

The occurrence of soliflucted chalk deposits is not unexpected. Periglacial deposits occur in the Allen Valley, most notably in the form of a relict Pleistocene

river cliff and a series of naleds at Down Farm (Barrett *et al.* 1991a; Green 2000). There is no *in situ* evidence for activity of the earlier prehistoric period in the bottom of the river valley, although Mesolithic flint scatters occur widely within Cranborne Chase and several are known along the Allen Valley (see, for instance Arnold *et al.* 1988; Green 2000, 20–8, fig. 11).

A small pit containing a possible late Neolithic flint assemblage recorded at Penny's Mead (Wilson and Chowne 1987), immediately to the north-west, indicates that features of this date may still survive in the immediate vicinity. The evidence for Neolithic activity at Penny's Farm is restricted to a number of pieces of worked flint in the colluvial gravels and in later colluvial soils. The condition of this flint suggests that it is material washed into the valley from the surrounding chalk slopes and indeed a surface scatter of worked flint is still visible in the fields above the site. Although the area around Cranborne has not been as thoroughly investigated as other parts of the Chase, the presence of Neolithic sites in the neighbourhood, if not in the valley bottom itself, is to be predicted. Neolithic flint scatters abound in the Chase and Penny's Farm lies not far distant from the middle Neolithic-Early Bronze Age complex associated with Dorset Cursus and less than 3km from the extra-ordinary Late Neolithic complex at Monkton Up Wimborne (see Green 2000, 77–84 for a summary).

Evidence for Bronze Age activity is also largely confined to a scatter of flint within the gravels but in contrast to the Neolithic flint, the Bronze Age material is in a fresh condition and has a relatively restricted distribution, suggesting that it was derived from knapping activity in the valley itself. Again, Cranborne Chase contains a wealth of Bronze Age settlement and funerary sites and the presence of a number of barrows overlooking the Crane Valley points to occupation in the area around Cranborne itself. No features which could be confidently dated to the Bronze Age were found during the excavation though it is quite likely that the burnt flint pits are of this date.

Burnt flint pits

The first major activity on the site is represented by the series of pits filled with burnt flint. The original ground surfaces belonging to this period have been destroyed and much of the burnt flint and traces of fires have been washed down the slope into the relict river channel. No evidence was recovered to indicate the precise activities being undertaken. It is clear that the flint was brought to the site from the surrounding chalk hillsides, rather than exploiting the local flint gravels. The fuel also appears to have been gathered from this same area.

Generally, the occurrence of large surface scatters and mounds of burnt flint have been taken to represent evidence of Bronze Age domestic activity (e.g. Buckley 1990; Schofield 1991). At Penny's Farm, the large quantities of burnt flint, pits, close proximity to a water supply and a general lack of other finds are certainly reminiscent of burnt mounds. However, burnt flint can be produced by a variety of processes and large quantities of burnt flint do not necessarily imply burnt mounds. The pits would presumably have needed a lining if they were to function as troughs to hold water since they were cut into the valley gravels. Isolated burnt mounds and troughs are chronologically restricted to the middle part of the Bronze Age and examples in Cranborne Chase are known from South Lodge Camp (Pitt-Rivers 1898; Barrett *et al.* 1991a) and along the upper Gussage Valley, where they occur in a similar location to the pits at Penny's Farm beside the River Terrig (see, for instance, Green 2000, fig. 78). The dating evidence from Penny's Farm is very slim — relying on a single sherd of Iron Age pottery. Pits filled with burnt flint have been found on a number of Iron Age sites, for instance at Lains Farm (Bellamy 1992) and Little Somborne, both in Hampshire (Neal 1980) where they may have been the result of a number of processes including the parching of grain and pit roasting.

The siting of the pits close to the river, on land that had a propensity to flood, suggests that their use may have been seasonal and this, together with the dearth of other contemporaneous material, indicates that this part of the river valley was not a habitation site. The marginal siting may indicate that this was an industrial zone beyond a settlement area or may have been on the border between territories in an area shared by different communities, perhaps a mutual meeting place for feasting or similar activities. Any interpretation is hampered by the lack of associated contemporaneous material. The location of the contemporary associated settlement(s) is not known.

Roman cremation burial

The Romano-British cremation burial was an unexpected and unusual find for Dorset. During the earlier Roman period, the late 1st century BC/AD Durotrigian inhumation burial tradition seems to have been preserved and during the whole of the Roman period inhumation burial seems to have been the norm. A small number of cremation burials have been found in and around the *Civitas* capital of *Durnovaria* (Dorchester) (Startin 1981; Farwell and Molleson 1993). Very occasional cremation burials have been found in the more rural areas of Dorset but these appear to belong to the early Roman period. At Cogdean, an early cremation burial has been attributed to the military phase (RCHME 1970, 527); at Knobs Crook, Woodlands a 1st-century AD cremation deposit was buried in a barrow accompanied by a number of grave-goods (Fowler 1965); and at Woodcutts there was a 2nd-century AD urned cremation burial in a mound (RCHME 1975, 68–9).

A small number of cremation burials dating to the late 3rd–4th centuries AD have been found in Britain and there has been much speculation as to whether

these represent intrusive Germanic elements (Philpott 1991). This seems unlikely in southern England where the cremation burials appear to derive from Romano-British practices, for example at Winterborne Down, Wiltshire (Algar 1961–3) where the cremation burials are seen as a local custom (Philpott 1991, 51). At Lankhills, Winchester, it has been suggested that cremation burials were confined to certain occupations, classes or families (Clarke 1979, 351). It is not possible to determine whether this applies to the Cranborne cremation deposit.

The burial seems to be an isolated example and not part of a cemetery. The lack of evidence for any other Roman period activity on the site and the scattered evidence for Romano-British settlement elsewhere in the Cranborne area between 500m and 1.3km distant from the site (Fig. 1, 1–5) suggests that the it was made in a liminal position, perhaps on the boundary between two estates. Although the Romano-British evidence is largely restricted to findspots, some form of habitation is suggested at Holwell Farm and Blackbush Down Road (Farrar 1964, 119) and more certainly at Lower Holwell, where the remains of a Roman building, comprising two areas of red tessellated floor, have been found together with a range of early-late Roman finds (Wake Smart 1887, 395; RCHME 1975, 15). Roman pottery has also been found on Castle Hill (Hutchins 1861, 381; RCHME 1975, 15) and several burials, perhaps in association with Roman pottery, were noted from the western slopes of the hill (Warne 1872, 252).

Medieval features

The precise form of medieval activity on the site is difficult to determine on the evidence revealed. The smithing slag in pit 1010 may indicate some industrial activity but this does not seem to have been on a large scale. The quantities of pottery and animal bone in other pits may indicate some habitation in the vicinity, though little structural evidence was found on site. The impression gained is of sporadic, perhaps seasonal, use of an area on the edge of the medieval village.

It is probably no coincidence that medieval activity on the site is dated to the 13th century AD, the period of greatest expansion of the settlement of Cranborne (Penn 1980, 49). This expansion was not long-lived and by the 16th century Cranborne had declined and remained a small settlement thereafter. This is reflected in the use of the site in the post-medieval period as rather marginal agricultural land.

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Archaeological Excavation and Recording of Land between 28 and 30 Bell Street, Shaftesbury, Dorset

JOHN VALENTIN AND STEPHEN ROBINSON
AC *archaeology*

With contributions from
Jo Draper and Claire Ingrem

Summary

A programme of archaeological assessment, evaluation and excavation was undertaken by AC archaeology in 1998 and 1999 on derelict land between numbers 28 and 30, Bell Street, Shaftesbury, Dorset (NGR ST 86352311). The work was carried out prior to the development of the site involving the construction of a pair of semi-detached cottages. The site lies within the ancient parish of St Laurence, the parish established in the 13th century, around the time of Shaftesbury's rapid expansion and shift of settlement eastwards outside the line of the burh.

Early maps of Shaftesbury show the site as open land in 1615, but by 1799 a large building is present on the site, which is not shown on the 1817 and later maps. The investigations confirmed the historical evidence, that a building constructed in the earlier part of the 17th century was present on the site, and subsequently demolished early in the 19th century. The excavation also revealed a sequence of rubbish pits which pre-date the construction of the building and are of medieval date. The excavation has established that the building is of single phase construction, with no earlier (medieval), or later (19th century) structural components present below ground level. The pottery recovered from relevant deposits confirms a date for construction of early in the 17th century, with the period of use for the building extending seemingly throughout the 18th century. It is likely that the structure was for commercial, rather than domestic, use.

Introduction

A programme of archaeological assessment, evaluation and excavation was undertaken by AC *archaeology* in 1998 and 1999 on land between numbers 28 and 30, Bell Street, Shaftesbury, Dorset (NGR ST86352311).

The work was carried out prior to the construction of a pair of semi-detached cottages on the site. It was requested by North Dorset District Council as a condition for planning permission on the site, as advised by the County Archaeological Officer, Dorset County Council.

Site Description

The site covers an area of approximately 220m^2 and lies on the north side of Bell Street. It is positioned on slightly sloping ground at around 218m OD, on the eastern edge of the historic core of Shaftesbury within the conservation area. The underlying geology consists of greensand.

Prior to the intrusive archaeological investigations, the site was derelict, with several outbuildings, and covered with rough grass and weeds.

Archaeological and Historical Background

There have been several previous investigations recorded in the County Sites and Monuments Record within the vicinity of the site, as shown on Figure 1 and in Table 1. In addition, a number of listed buildings are known along Bell Street, mainly of 17th- to 18th-century date. To the west is the site of the former church of St Laurence (now the site of the Methodist church), the church constructed around 1292 but demolished by 1776.

Table 1: Summary of archaeological finds within close proximity to the site

Site no.	SMR ref.	Type	Period	Description
1	153	Findspot	Post-medieval	Iron tools from site of former blacksmith's shop found during drain laying at Bell Street car park
2	160	Findspot	Post-medieval	Two *in situ* inglenook fireplaces found in cellar of 19 Bell Street
3	179	Findspot	Medieval	Inlaid medieval floor-tile found adjacent to the rear boundary wall between 6 and 8 Parsons Pool, within the boundaries of the former church of St Laurence (see site 6, Fig. 1)
4	166	Structure	Post-medieval	Curving garden wall found in garden of 4 Haimes Lane; probably 18th century
5	–	Findspot	Medieval to post-medieval	Recent development to the north of the site, off Parsons Pool, revealed various artefacts including pottery of 13th century date and a piece of a clay tobacco pipe made by Richard Howell, dated between 1680 and 1720
6	–	Site of	Medieval	Location of parish church of St Laurence, founded in 1292

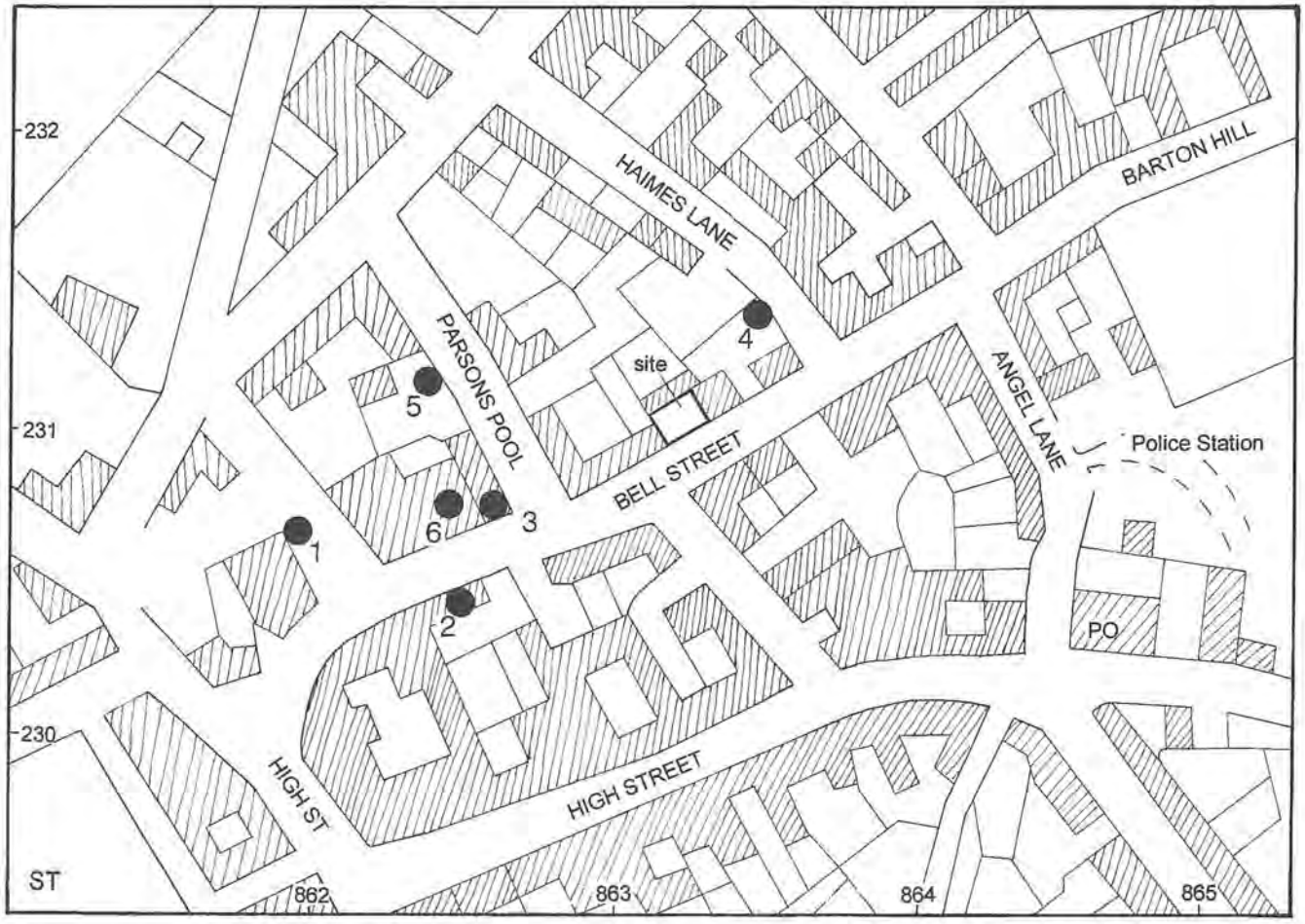

Figure 1: Site location plan showing previous archaeological investigations

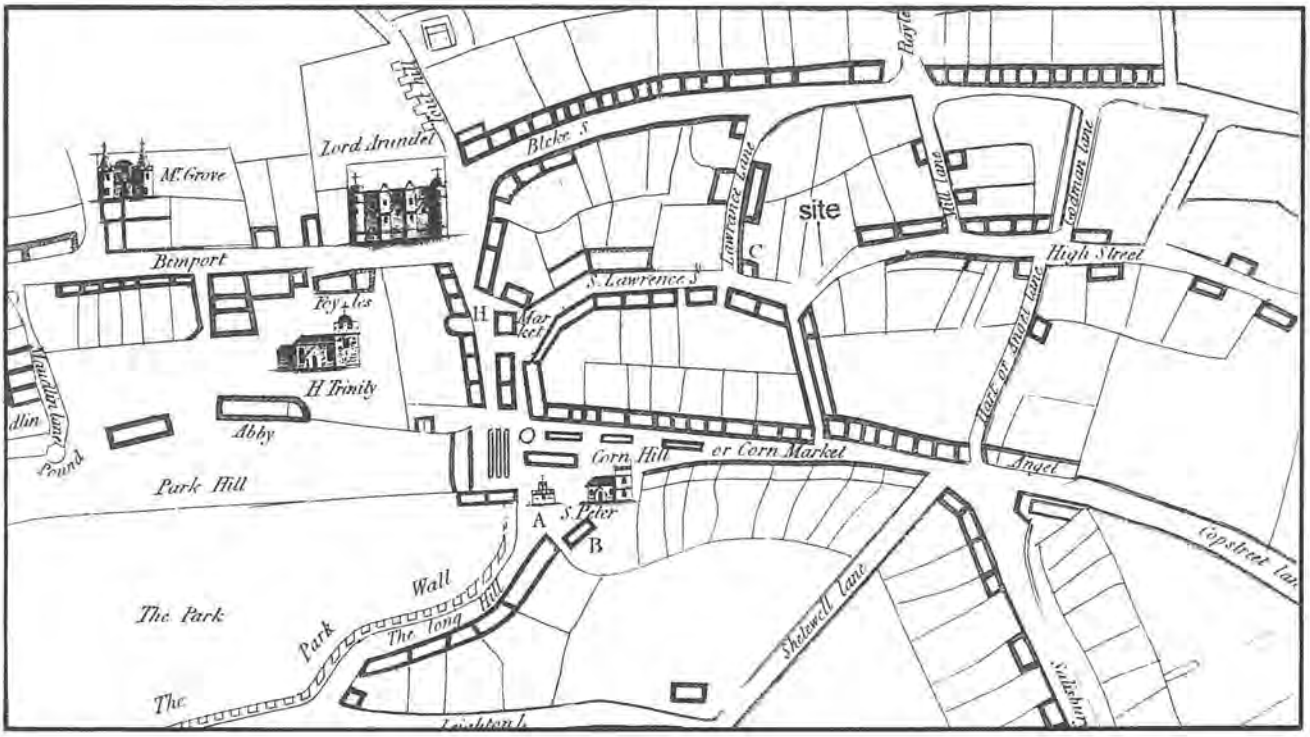

Figure 2: 1615 map of Shaftesbury

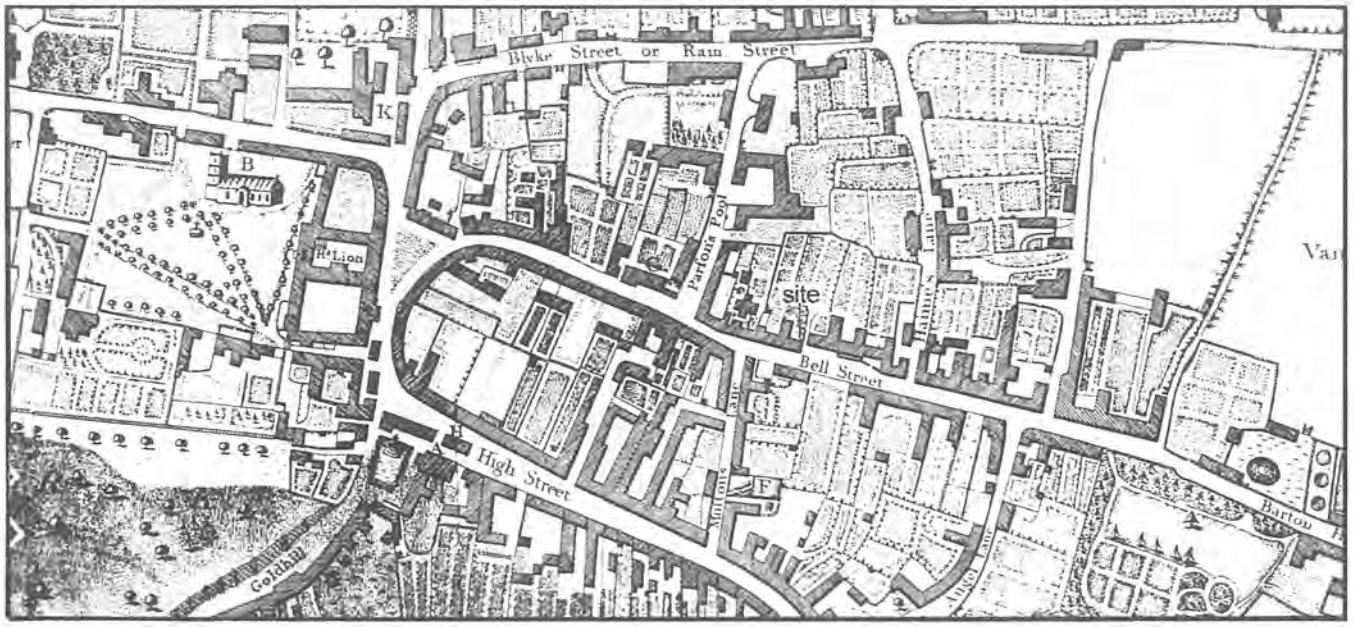

Figure 3: 1799 engraved map of Shaftesbury

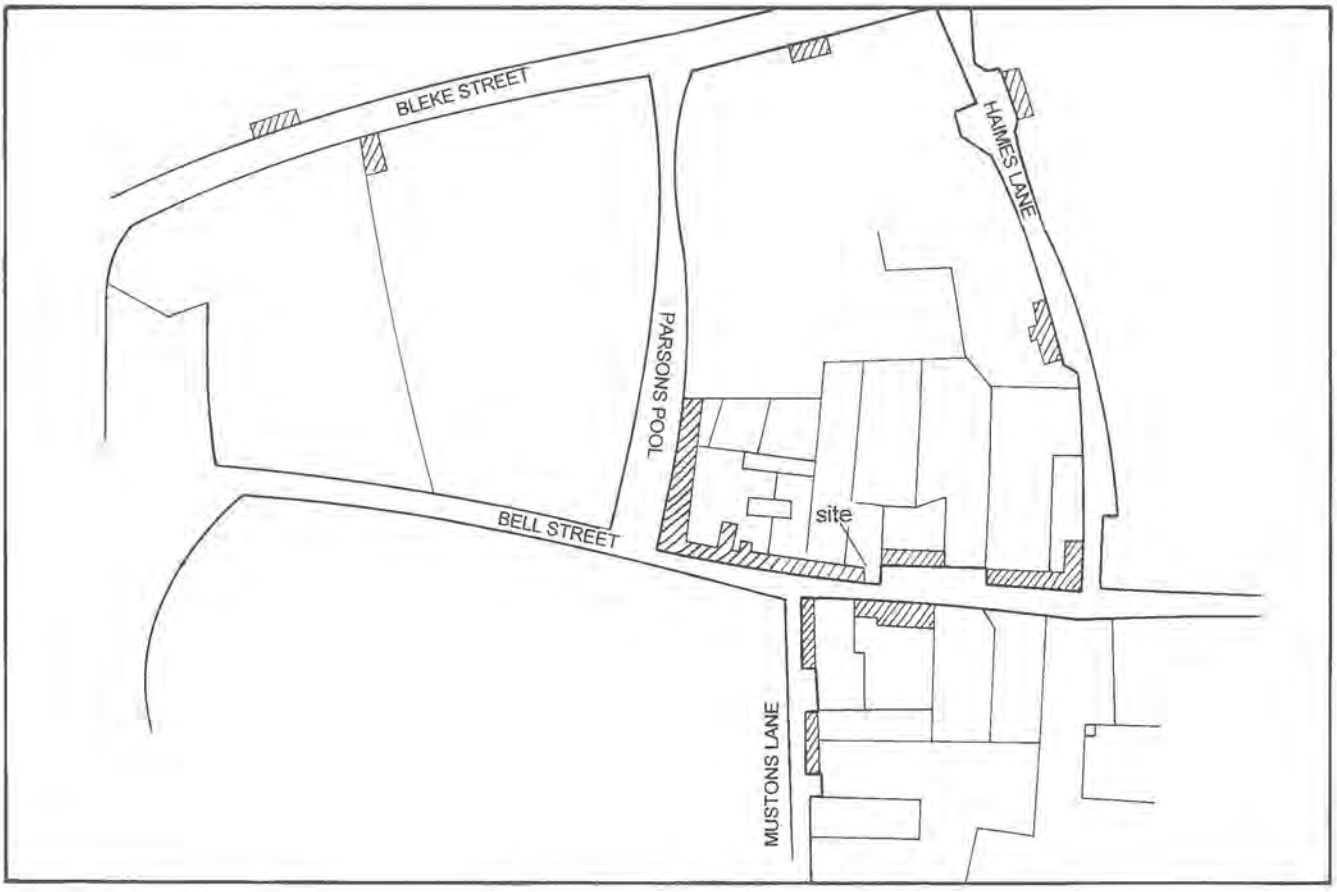

Figure 4: 1817 map of Shaftesbury

An engraved copy of a manuscript map of Shaftesbury town, by William Willis, dated 1615, reproduced in Hutchins (1803), is the earliest known map depicting the site (Fig. 2). A detailed map of the town by William Upjohn, dedicated in 1799 (DCRO D1/KL34), is reproduced as Figure 3. An extract from a map of Shaftesbury dated 1817 (DCRO Photocopy 485), which includes the site, is illustrated as Figure 4. The 1799 map (Fig. 3) shows a large building on the site, which is not present on the 1615 map nor the 1817 map.

Figure 5: View of excavation area from north (AC archaeology)

Excavation Methodology

Archaeological excavation was limited to the area of the site to be affected by development (Fig. 5). The development was to take place in the southern half of the site fronting onto Bell Street, incorporating a total area of 110m^2 (Fig. 6). The site was initially cleaned totally by hand and recorded in plan. Hand-excavation was generally confined to areas to be used as foundation trenches, and was limited to the following:

i) where there was a need to clarify complex areas;

ii) to provide evidence for date or to determine function; and,

iii) soil-filled cut features of 18th century or earlier date.

Following completion of the excavation, intermittent monitoring of the building works was carried out. The results of this work are included below.

Site Phasing

Three broad phases of activity were identified and can be summarised as follows :

Phase 1: deposits associated with activity on the site concentrated around the 14th century prior to its development in the 17th century;

Phase 2: 17th century structural remains and associated deposits, with possible later additions associated with the development of the site, and;

Phase 3: post-demolition deposits of the 17th century building and mid 19th-century activity.

Excavation Results

A plan showing the principal features by phase on the site is included as Figure 6. The foundations of a building formed the main feature on the site, part of which was encountered in Trench 2 during the earlier evaluation of the site. Another substantial wall foundation was also present immediately to the north of this building at the limit of the excavation. In order to clarify the various activities identified on the site, the following descriptions summarise the results by phase.

Phase 1 (Fig. 6 plan, Figs 7 and 8 sections)

This phase consisted of a former agricultural soil layer (507), cut by medieval pits. Only five pits (F508, F514, F521, F548 and F553) present within the line of the new footings trenches were hand-excavated out of a total of nine on the site. Pottery from the remaining unexcavated features was collected from their exposed surface.

Pit F514 (Fig. 7) was situated towards the rear of the site and almost completely covered by a later wall foundation, with only 250mm of its diameter exposed.

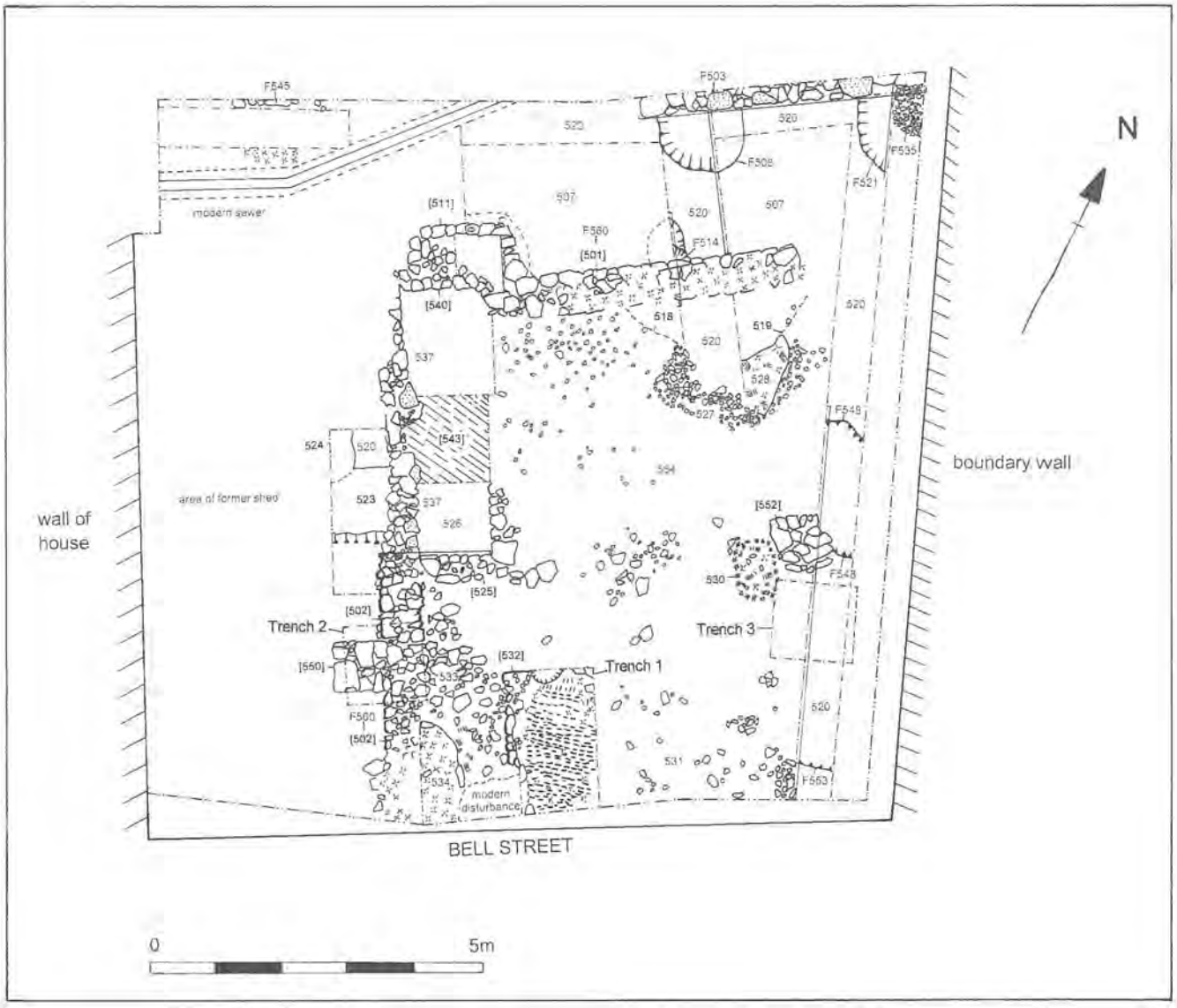

Figure 6: Site plan

A small segment was excavated to a depth of 500mm (full depth not reached) showing, at least initially, a steep-sided cut. A large quantity of medieval pottery was retrieved from its single fill (515), which was composed of a dark grey silty clay.

Pit F521 (Fig. 8) was situated in the northern corner of the site within the line of a proposed footing trench, continuing beyond the limits of the excavation. Approximately 1.20m was exposed in length, comprising a sub-circular pit with near-vertical edge, excavated to an arbitrary depth of 500mm. Its fill (522), was composed of a very dark greyish-brown silty clay.

Pit F508 (Fig. 8) was situated at the northern-most limits of the site, continuing outside the limit of excavation. Measuring at least 1m in diameter, the feature was approximately circular or oval in plan, with steep sloping edges and a flat base at a depth of 550mm. Medieval pottery was retrieved from its single fill (509), which was composed of a dark grey silty clay.

Pit F548 (Fig. 7) was situated at the eastern edge of the excavation area, within the line of a proposed footing trench. The feature continued outside the limit of the excavation. Measuring at least 1.80m in extent, the feature was rectangular in plan with almost vertical edges to a depth of at least 1.20m. Although not fully excavated, it contained at least three fills of which the uppermost fill (546) and secondary fill (547) contained medieval pottery.

Feature F553 was located on the line of the new house footings trench, towards the south-east corner of the site. Not fully excavated, but visible for a distance of approximately 3m north to south with a depth of 250mm, this is likely to be a pit, but may represent terracing and subsequent infilling towards the street-frontage portion of the site. The single fill (549) was composed of a mid greyish-brown silty clay.

The four unexcavated pits identified by deposits (518), (519), (523) and (524) had been partly truncated

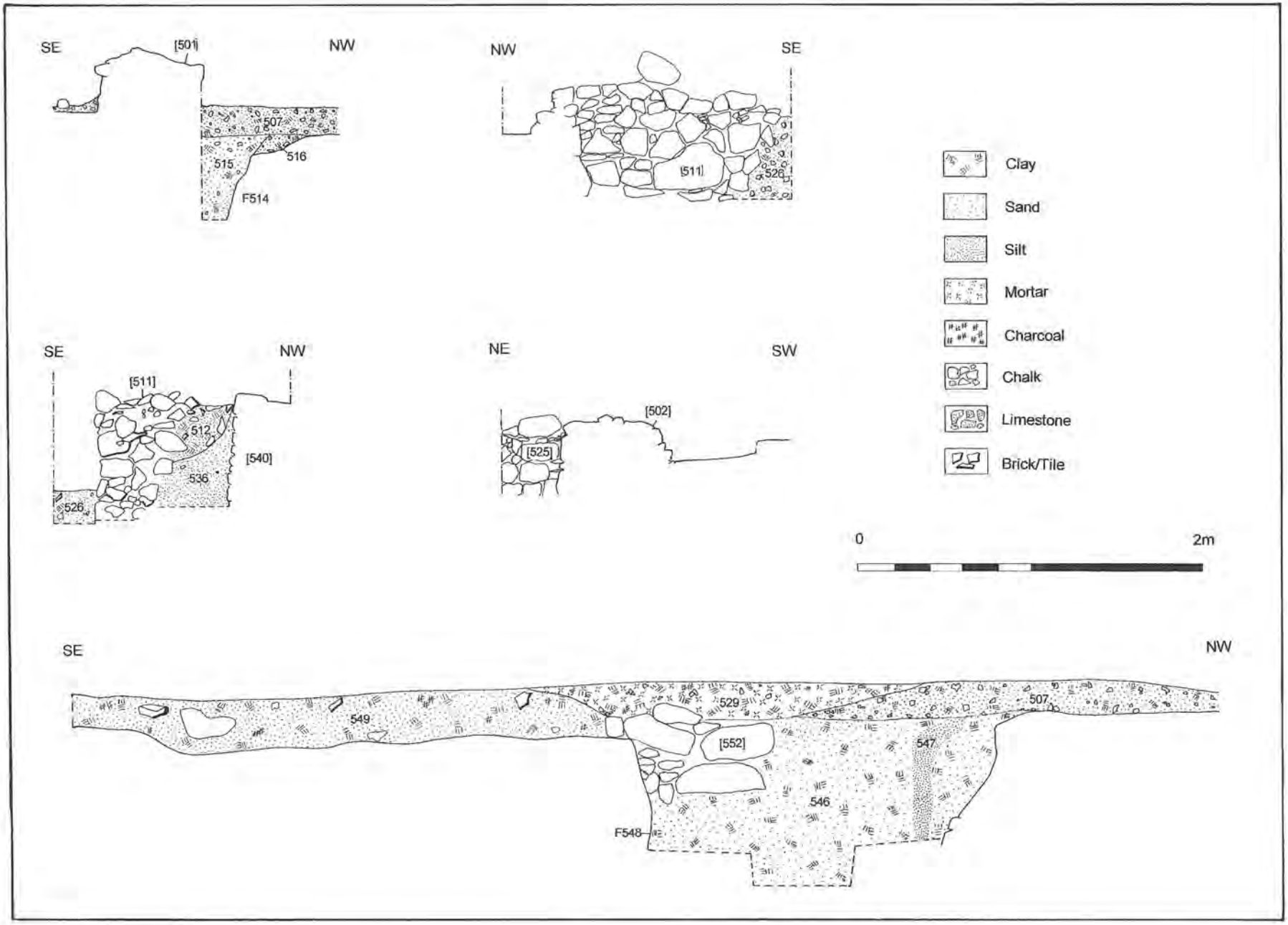

Figure 7: Detailed sections

by later building foundations and not fully exposed in plan. It was not possible to determine the nature of the features represented by these deposits, but the similarity of fills to the excavated examples, and the presence of medieval pottery within the uppermost horizons appears to indicate a medieval date and pit function.

Phase 2 (Fig. 6 plan, Fig. 7 sections)

The main components of this phase comprised the remains of a stone-built structure and its related deposits. The structural remains identified are likely to be 17th-century date.

The building (F560) comprised two joining wall foundations on north to south (west wall) and east to west (north wall) alignments. Associated structural components comprised part of a cellar [543], exposed internally adjoining the west wall, a single buttress [550], attached externally to the west wall and a large post pad [552] on the east side of the building. Also present was a probable well shaft [511] at the north-west corner of the building, and a pitched stone hearth [532] towards the current Bell Street frontage.

Building F560 measured at least 8m × 6m in plan, although any street frontage wall foundations which may survive were not exposed, and may be present under the footpath alongside Bell Street. A large portion of the foundations of the west wall comprised the walls of a cellar [543]. Generally though, the west wall [502], comprised three courses of greensand blocks, bonded by white sandy mortar. A square buttress [550] had been incorporated into the foundations during construction of the building. Buttress [550] consisted of a single surviving course of various sized greensand slabs, the feature having total plan dimensions of 650 × 800mm. The main foundations of the north wall [501] measured 6m in length, seemingly terminating within the confines of the excavation area. The north wall consisted of three courses of greensand blocks and rubble totalling 300mm in height and bonded by a white, hard sandy mortar. This foundation cut through deep soil horizon (504), which contained quantities of residual medieval pottery.

There were no wall foundations present on the eastern side of the building. However, a structure interpreted as a large post-pad [552] was present. This was positioned on line and central with the end of wall foundation [501]. It comprised large greensand blocks covering an area in plan of approximately 800mm² and present to a depth of 600mm.

Structure [543] comprised a rectangular infilled cellar with plan dimensions of approximately 2m × 4m. It

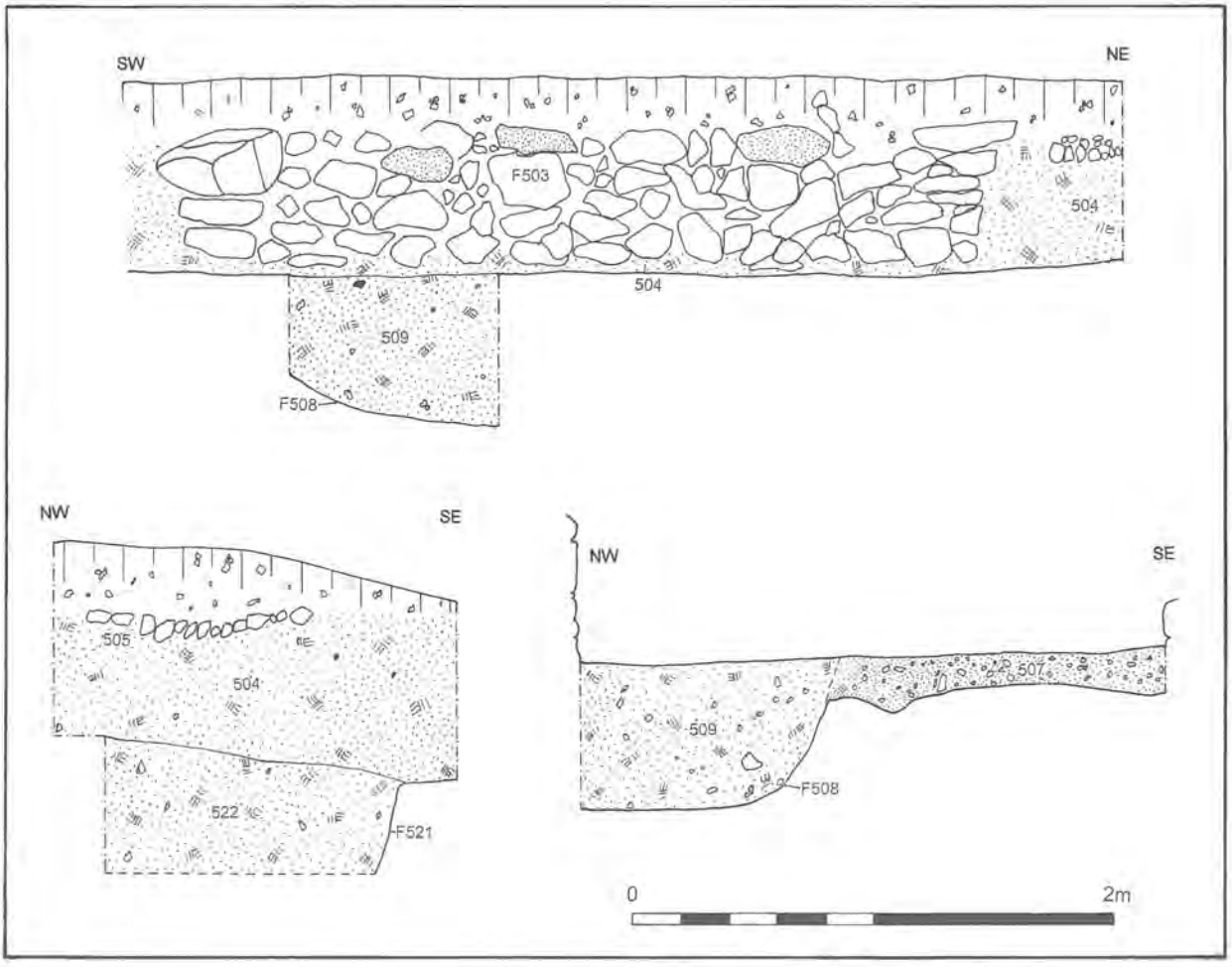

Figure 8: Detailed sections

was positioned at the north-west corner (internally) of the building. Only part of this structure was exposed; enough to clarify its dimensions and the nature of the construction. The infill was partly excavated at both ends in order to expose the 500mm surviving depth of the walls. These walls comprised six courses of unbonded greensand blocks. It was evident from the nature of the artefacts recovered from the fill that the cellar had been infilled during the 19th century.

Adjoining the north-west corner of the building (externally) a probable well shaft [511] was present. This measured approximately 1m × 1.60m in plan. Approximately 700mm of fill was removed, exposing eight courses of unbonded greensand blocks. Subsequent monitoring during building works revealed a minimum depth of *c.* 2m for this feature, but the full extent was not reached.

A hearth [532] located in the south-west corner of the building was fully exposed in Trench 1 of the 1998 evaluation. This comprised pitched, cut and regularly-sized thin limestone pieces set into mortar, with evidence of burning on the surface. One line of cut limestone and greensand blocks was present on one side of this feature appearing as an edge and associated with the construction of this feature. A probable floor surface was also present on one side butting 532 and only partly exposed, but likely to be associated with the hearth structure. This comprised a depth of 80mm of buff sandy clay mortar apparently set on a charcoal bed overlying redeposited greensand.

The final structure recorded on the site was a second well, in this instance brick-lined and circular, located in the centre of the building. The structure was identified by builders following completion of the excavation. No detailed information is available, other than a record of its approximate position (shown on Fig. 6) and method of construction.

Soil and rubble deposits, which are likely to be contemporaneous with this structure, have also been allocated to this phase. These comprise layers 504 and 533. Quantities of both medieval and post-medieval pottery were retrieved from some of these layers.

Phase 3

Activity relating to this phase comprises demolition deposits from the phase 2 building, as well as later structures within the depositional sequence. Some of the later structures are also recorded on recent maps.

A substantial wall foundation (F503), immediately below the most recent yard surface and to the rear of building F560 was encountered. This wall was 4m in length, consisting of up to four courses of large greensand and limestone blocks to a total height of 600mm (Fig. 8). It was unclear whether this foundation was associated with the main building or represented part of a range of buildings at the rear of the site shown on Ordnance Survey maps of 1901 and 1965. Also present within this area of the site were the remnants of a cobbled surface (535), likely to represent an external courtyard surface, also associated with the latest structures on the site.

Part of a mainly brick-constructed feature (F545), was present in the north-west corner of the site and may also relate to the later range of buildings at the rear of the site.

Other deposits allocated to this phase comprised mainly demolition spreads or layers and occasional cut features all of which, based on the depositional sequence and artefact evidence, are clearly of 19th or early 20th century date.

The Finds

SF1 Lead object (Fig. 9)

Token. Obv. Geometric pattern formed of rows of raised circles. Rev. Imitation of short cross penny. 13th–15th century (Blockley *et al.* 1995).

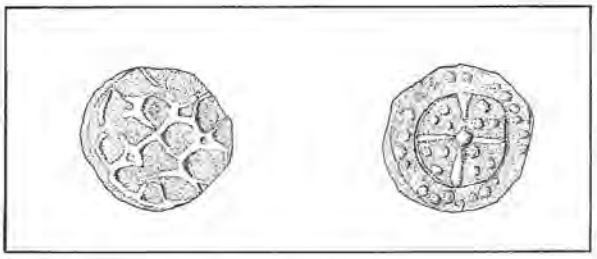

Figure 9: Lead object SF1

Medieval and post-medieval pottery (Fig. 10)
by Jo Draper

All the pottery from the site (*c.* 9kg) has been examined and details are available in archive. Only groups useful for dating are discussed here.

Medieval

Pit F514; Context 515

1 Jug with red paint stripes; hard sandy fabric with a grey core and terracotta surfaces; bubbly, flaking pale greenish to pale buff patchy glaze over middle ⅔ of body, and stripes of red paint, again flaking badly, 655g.

Not illustrated; body sherds from another, slightly larger but all surfaces eroded, 210g. Single sherd from another, with red stripe, 55g. Three small sherds from another jug with glazed 'stripes' which are dark brown, and olive-green glaze elsewhere, 55g.

2 Handle from a jug similar to no.1 but buff surfaces and no glaze; tiny remnant of red stripe by handle, 80g.

3 Cook pot; almost certainly oval; hard grey fabric, more granular than no. 1; black internally and over the rim, rest varying from buff to reddish. Except for the rim, both surfaces are 'scratch-marked' having been wiped when wet with something fairly coarse, 370g.

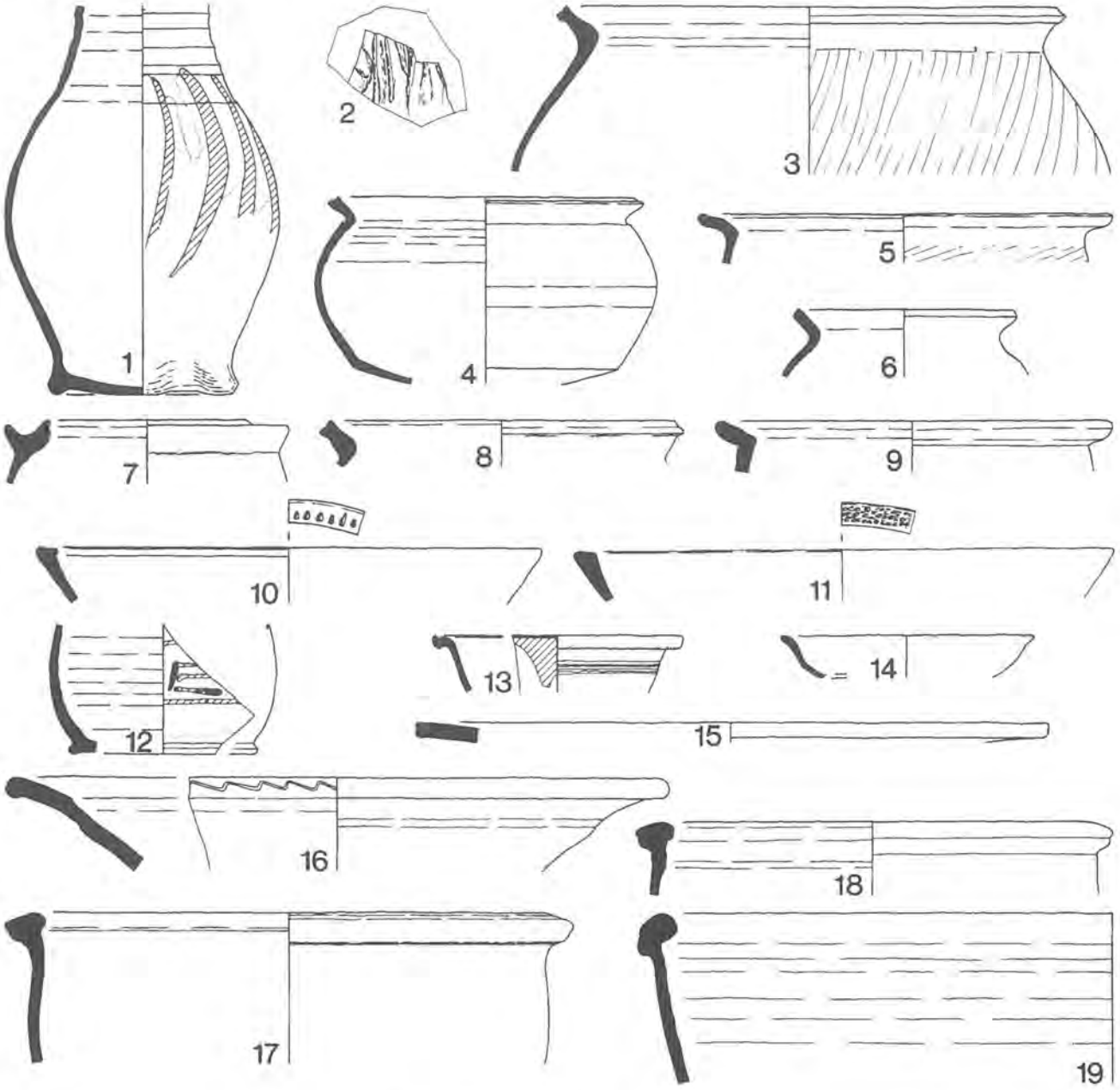

Figure 9: Medieval and post-medieval pottery

4 Small cook pot; hard grey fabric with reddish-buff surface internally, black externally, like no. 3, large proportion of vessel present, 400g.

5 As no. 3 but much smaller, 125g.

6 Similar to no. 3 but not scratch-marked, 25g

This group dates from the 14th century. The red-striped jugs are well paralleled at Christchurch (Jarvis 1983, 66, no. 145) and Poole (Jarvis 1992, 67, no. 28). The type is thought to have been made near Poole (*ibid* 64–65) and has not been found in other Dorset towns before. At Poole it has been found in groups with bifid rims like no. 4 here, and simpler cook-pots with scratch marking like no. 3 etc. here. This Shaftesbury group is too small for comment on the proportions of different forms to be useful.

Pit F521; Context 522

7, 8 & 9 Emphatically lid-seated jar; terracotta fabric rather granular, blackened externally.

Not illustrated: scratch marked sherds as no. 3; jug sherds with brown strips and olive green glaze. Sample too small for quantification.

Context 522 is probably much the same date as 515, but no. 7 is an unusual vessel because of the high rim to fit a lid.

Other pits; Contexts 507, 509 and 518 each contain a few (less than half) rather abraded body sherds in a flint-gritted ware, sometimes with voids, which would seem to be earlier than the other pottery. They probably date from the 13th century, but could be earlier. Since they have no diagnostic features dating is difficult.

Layer 504

10 & 11 Bowls with stabbing on the rim — one (no. 10) with single stab; the other (no. 11) has comb-stabbing with drags between the stabs. Both have blackish sandy fabric and surfaces with a little dark olive glaze internally.

Context 504 contains mostly medieval pottery, but one-third is 17th century. The sample is rather small to determine whether the medieval pottery is all of the same date. It could be later 14th century, and includes sherds of jugs with red strip, plain jugs and cookpot sherds. The two bowls illustrated are unusual in the comb-stabbed decoration on the rim which does not seem to have been recorded from Dorset before.

Post-medieval

Backfill of F511; Context 512

Fineware

Not illustrated: white stoneware saucer, slightly buff fabric and surfaces *c.* 110mm across dating from between *c.* 1730 and *c.* 1770, the period this ware flourished (Mountford 1971). Slight dent in the rim due to handling before firing. Small sherd from another white stoneware vessel, possibly a jug. 40g together.

12 Staffordshire or Bristol slipware; yellowish fabric; yellow glaze internally, and externally with blobs of dark brown slip which have run; fired right way up, 50g.

13 Slipware: fine red-bodied, with white slip internally except for a V-shaped part: yellow glaze over slip brown to tan elsewhere with scar in internal part of rim where the glaze has pooled, 15g.

Local earthenwares

14 Bowl; grey sandy fabric, wet-looking, olive green glaze internally, 10g.

15 Oval plate or possibly lid with dull green glaze upper side otherwise as no. 14, 35g.

16 Big dish with scratched line underglaze and a kiln scar; as no. 15, 125g.

17 As no. 14 but fabric reddish and surfaces dark buff glaze paler so brown speckling clearer, 200g.

18 Paler yet with pale buff surfaces, otherwise as no. 17, 440g.

19 As no. 18, 890g.

This small group from the backfill of well shaft F511 dates from the mid-18th century. The plain white stoneware is a typical fineware of that period, and the two slipwares are also typical, although the origin of no. 13 is unknown. The local earthenwares are all from the Verwood kilns, and show a wide range of forms. Chamber pots are not present, a surprising omission.

Pottery discussion by phase

The important components of the assemblage are described above. The remainder of the pottery comprises generally small and abraded pieces, recovered from all phases of activity.

Pottery from phase 2 not described includes material from throughout the 17th century. This confirms the date range of the principal structure as derived from the map evidence.

The remainder of the phase 3 group, is as would be expected, provides a broad coverage from the 13th century through to the late 20th century.

The animal bone

by Claire Ingrem

A total of 32 animal bone fragments was recovered from the site. A few fragments of cattle and sheep/goat were derived from medieval deposits. Similarly, both the early and post-medieval contexts produced a few fragments of cattle and sheep/goat; however pig was also present in small numbers. A few bones displayed evidence of butchery. A calcaneus belonging to cattle recovered from an early post-medieval context and a sheep/goat metarsal from a post-medieval pit had both been cut. In addition, an axis belonging to a post-medieval cow had been chopped through the centrum. No ageing data was available from toothwear and eruption but, amongst the post-medieval remains, one bone from both cattle and pig belonged to juvenile animals. A few measurements were available from four bones and these were compared and all fall within the expected range for animals from medieval and post-medieval sites.

The small sample size prohibits further analysis and it is only possible to say that cattle and sheep were being exploited during the site's occupation and pig in the later phases.

Conclusions

Phase 1

Medieval activity on the site comprised a series of large pits. Of those identified, only limited investigation within the confines of new footings trenches was carried out. The nature and medieval date of these pits suggest that they are likely to represent rubbish pits, normally located to the rear of a property. In this instance no evidence for a medieval structure was present on the site, suggesting that the pits may relate to a building neighbouring the plot, or to its front or rear. The 1615 map of Shaftesbury shows a building adjoining the site on the eastern side only.

The pottery recovered from the pits suggests a date of 13th or 14th century; around the time of Shaftesbury's rapid expansion and shift of settlement eastwards outside the line of the *burh*. The former St Laurence's church is believed to have been founded in 1292 and the earliest reference to St Laurence Street (now Bell Street) was in 1416 (Penn 1980). The pits and their contents therefore provide additional evidence for the date and development of this medieval suburb.

Phase 2

The archaeological results confirm the historical evidence, that a building of early 17th-century date was formerly present on this site. The 1799 map (Fig. 3) shows a large building present, which is absent on the 1817 and later maps. If this is the case, a building was constructed on the plot sometime between 1615 and 1799, but was demolished by 1817. The excavation has established that the building is of single phase construction, with no earlier (medieval), or later (19th century) structural components present. The pottery recovered from relevant deposits confirms a date for construction of early 17th century, with the pottery evidence also indicating a period of use for the building extending throughout the 18th century.

The 1799 map provides a plan outline of the building, but little detail is apparent. However, it broadly corresponds with the excavated structural evidence. The excavation identified the remnants of the eastern portion of the structure as shown on the 1799 map; the western end either present beneath or represented by a cart shed which was demolished as part of the current development.

Following the excavation, it is now possible to attempt to identify the function and layout of the 17th-century structure. We have established that the building had an open-sided east wall, constructed using a probable central pier with gaps or entrances on each side, where it is likely that gates or doors were present. The south wall was not revealed, although if the structure identified as a pier base was central, then this wall would lie just beyond the excavation limits, underneath the current path along Bell Street. Internally, there was a pitched-stone hearth in the south-west corner and a small cellar in the north-west corner.

The nature of this structure suggests a commercial rather than a domestic function, with the entrance probably located on the eastern side. The 1799 map shows the building as projecting further into Bell Street than the adjoining property; therefore it is likely that the entrance would have faced east, into the road. If the building identified had a non-domestic, possibly commercial function, it can be surmised that the wide east-facing entrance would have been practical for the delivery and collection of goods by traffic approaching from both the east and west.

Phase 3

Deposits allocated to this phase comprised a sequence of demolition-type deposits and limited evidence for activity on the site post-dating 1817, continuing through the 19th and 20th centuries.

The east to west wall line identified at the rear of the site may represent either the position of a property division, or the foundation for a shed which was demolished in June 1998 and recorded on recent maps in this position.

Acknowledgements

The fieldwork was directed by Stephen Robinson, assisted by Stephen Leach, Phil Mcmahon and Ginette Ratcliffe. The landowner, Ms Susanne Harding, provided the historical text and gave much encouragement and support throughout the investigations. Illustrations for this report were prepared by Sarah Cottam and Guy Stapleford. The collaborative role of Steven Wallis and Claire Pinder of Dorset County Council is duly acknowledged.

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Dorset Proceedings 122, 2000, 111–123

Medieval and post-medieval Bridport: Excavations at 43 South Street, 1996

D. GODDEN, J. GROVE and ROLAND J.C. SMITH

With contributions from
Emma Loader, Lorraine Mepham and C.J. Stevens

Summary

Redevelopment of the former Fire Station in South Street provided a rare opportunity to undertake an archaeological excavation within the historic core of Bridport. No Late Saxon features or finds were recorded and the earliest phase of activity was represented by several pits containing domestic refuse of 12th–13th century date. There was little surviving evidence for occupation on the site in the 14th and 15th centuries, but a structure had been built on the street frontage and robbed for its stone by the early 17th century. The 16th to 18th centuries saw a period of relatively intense pit digging, although no contemporary structures were certainly identified. The restricted range of finds included the first substantial assemblage of medieval pottery excavated from the town.

Introduction

Project background

An excavation was undertaken by Wessex Archaeology in May–June 1996 at the former Fire Station, 43 South Street, Bridport (SY 46620 92735), prior to the construction of a new Public Library (Fig. 1a). This followed a small evaluation, comprising two hand-dug test pits, in the yard to the rear of the Fire Station buildings that revealed structural remains of probable post-medieval date (Wessex Archaeology 1996a).

South Street lies at around 10m aOD (above Ordnance Datum), with existing floor and yard within the site at *c.* 10.3m aOD. The underlying geology comprises 'Eype' Lower Jurassic Marl, recorded as a brownish yellow marl at a maximum height of 10.05m aOD during the excavation.

Historical and archaeological background

The site is located within the area of the postulated Saxon burh and medieval town, on the east side of South Street (Fig. 1b). A detailed consideration of the historical and archaeological background of Bridport has been published (Penn 1980, 23–29), and this forms the basis of the summary below.

Brydian, probably Bridport, is listed in the Burghal Hidage (*c.* 919) as holding 760 hides (Hill 1969), and there is a reference to a mint there during Athelstan's reign in AD 925–939 (Blunt 1974). It is thought that Bridport was newly established as a burh in the 10th century (Keen 1984, 236), with South Street and St Mary's Church representing original elements of this town which occupied a low promontory at the confluence and lowest bridging point of the rivers Brit and Asker. Documentary evidence indicates the existence of a ditch, approximately 100m north of the site, which would have defined the northern limit of the Late Saxon town and cut off the promontory (Short 1975, 63).

Bridport was a well-established borough by the time of the Norman Conquest, having 120 houses and a moneyer, although the Domesday Survey of 1086 records only 100 houses, of which 20 were damaged (VCH iii, 62). In 1150 Henry Plantagenet captured the town, and a temporary castle may have been erected. By the early 13th century Bridport was flourishing, in part due to the rope industry which became established there, and in 1253 received its charter. The presence of a Jewish community implies that Bridport was a trading centre of some importance (Penn 1980, 26). The harbour developed from a small anchorage documented in 1086, and a low level of activity is documented throughout the following centuries until it finally silted-up during the 16th century (Hannah 1986).

It is probable that the town expanded to the north in the 13th century, with East Street and West Street laid out as a wide market-street with regular burgage plots either side, and a new town ditch to the north. Late 14th century documents indicate that shops, cellars, solars and halls lay along these streets (Penn 1980, 26). The old town to the south possibly fell into decline around this time, and came to be occupied by the poor and the roperies.

The population of Bridport was heavily reduced by the Black Death in 1348, but there was no apparent decline in the town's fortunes until the 16th century. Leland called it 'a fair large town' in 1540 (*Itin.* 245–6), but the Lay subsidy of 1525 (Dawe, n.d.) and the Hearth Tax of 1662–4 (Meekings 1951) suggest otherwise. There was some recovery in the 18th century, but this was followed by a further decline during the late 19th century.

The former Fire Station occupied two earlier, narrow properties running eastwards from South Street, which were finally amalgamated when the Fire Station was built in the 20th century. These properties are both indicated as part of the Police Station on the 2nd Edition Ordnance Survey map of 1902, with two buildings separated by a passage on the street frontage and another, larger, building to the rear in the northern property.

Recent archaeological fieldwork in or on the fringes of the historic town has been limited, recording unstratified medieval pottery at the Glebe (Bailey 1975) and

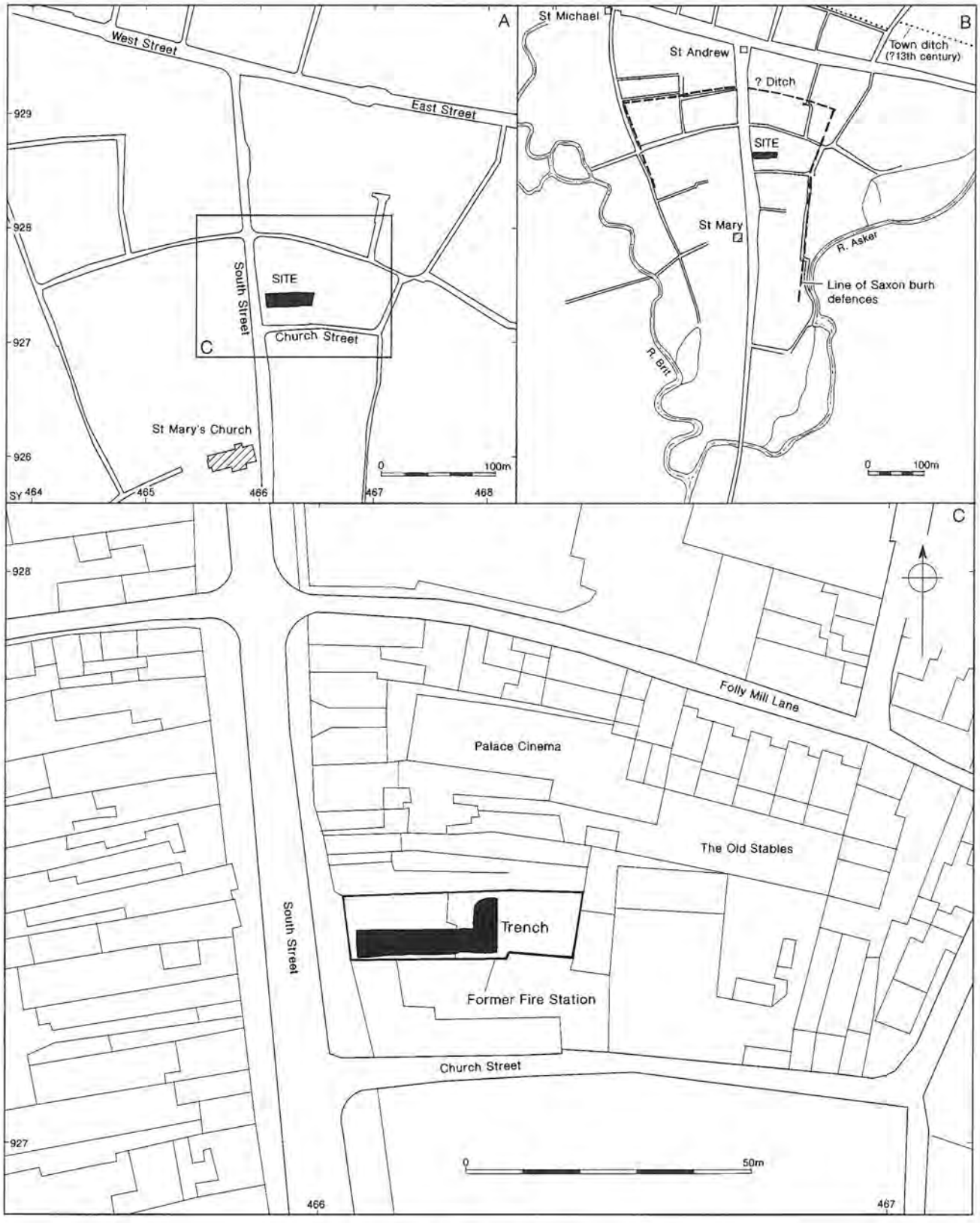

Figure 1: Site location plans

foundations of post-medieval buildings at Star Garage (Hunt 1986). Inconclusive evidence for the line of the medieval ditch was recorded at Cornick's Jam Factory (Wallis 1994, 116), and no archaeological deposits were recognised during piling work behind the Chantry on South Street (Graham 1993).

Excavation methods

Archaeological work was undertaken within the constraints imposed by the extant former Fire Station buildings, and the excavation area was, therefore, limited to the tender room and part of the yard to the rear (Fig. 1c). A total of approximately 124m^2 of the new

building footprint of *c.* 300m² was investigated, with additional areas subject to a watching brief during construction work.

Following the removal, by machine, of concrete and associated make-up deposits up to *c.* 0.6m thick, the site was cleaned and planned. Sample excavation of all archaeological features and deposits was undertaken and all artefacts retained. Environmental samples were taken from sealed and dated deposits for the recovery of plant macrofossils. The work was undertaken in accordance with a Schedule of Works and Services prepared by the County Archaeological Officer, and full details of both the evaluation and excavation can be found in the site archive and the assessment report (Wessex Archaeology 1996b).

Site Description

The excavation revealed no features or deposits which could be dated to before the 12th century and, except for some possible 11th century pottery, the only earlier finds were two residual, undiagnostic flint flakes of probable prehistoric date. The survival of medieval deposits indicates that no large-scale truncation can have been responsible for the lack of earlier features.

12th–13th century (Fig. 2)

The earliest phase of activity was represented by five sub-circular pits (1328, 1336, 1398, 1437 and 1449), 1.5–2m in diameter and up to 1.4m deep, and one post-hole (1390) 0.5m in diameter. The apparent east–west alignment of five of these features may reflect a boundary dividing two properties fronting onto South Street. Pit 1328, approximately 7m to the north, may have lay in another property.

Pottery and animal bone were the most frequent finds recovered from the pits, with small quantities of ironworking (smithing) slag, fired clay and oyster shell. A largely complete jar (see Fig. 4, 1) came from pit 1336, and pit 1398 contained over 50% of the fired clay found, one piece of which had wattle impressions.

14th–15th century (Fig. 2)

The only context containing exclusively 14th–15th century pottery was layer 1333, close to the South Street frontage, which overlay pit 1449. The layer may represent a natural soil build-up, suggesting a possible hiatus in activity on the site which may also be reflected in the paucity of residual pottery of this date in later deposits.

However, four structural features comprising three wall lines and a drain have been assigned to this phase as they were robbed of stone in the 16th or early 17th century, implying a probable date in the 14th or 15th century for their construction. Structure A (represented by later robber trenches 1425 and 1426; see Fig. 3) fronted onto South Street, although only the south-east corner was located within the excavation trench. This building occupied the northernmost of the two postulated properties within the excavation area, and was at least 4m long and 4m wide, but no floor surfaces or other internal features survived.

A stone-lined drain (1349), 0.4m wide and with a channel width of 0.2m, ran east–west and appears to have respected the position of Structure A; it may have lay along the property boundary. At the eastern end of drain 1349 was a substantial, robbed wall foundation, Structure B (robber trench 1435), aligned north–south, though whether it formed part of a building is unclear. There were no stratigraphic relationships between these various structural features, although drain 1349 cut layer 1333, and it is likely that they were all broadly contemporary. No evidence for activity to the east of Structure B was found.

16th–18th century (Fig. 3)

Structures A and B had been robbed by the early 17th century, and the western part of stone-lined drain 1349 demolished, with the eastern end surviving below layer 1344. Robber trench 1425/1426 (Structure A) was 0.8–0.9m wide, 0.3–0.6m deep, and contained fragments of limestone impressed into its base, indicating the original building material. Robber trench 1435 (Structure B) was 0.55m wide, 0.49m deep, with a flat bottom and vertical sides. Most of the small quantity of wall plaster recovered came from possible post-holes 1414 and 1419 nearby, which may indicate that they were dug shortly after Structures A and B were demolished. The absence of pits in the area closest to the South Street frontage might suggest that a structure(s), for which little or no trace has survived, replaced those demolished at this time. However, the only evidence for this was the two possible post-holes (1414 and 1415).

Many features lay further to the east, at least 10m from the present street frontage. These comprised mainly pits of various sizes, at least one linear (possibly a shallow ditch), a well and several post-holes. Approximately ten of these features were of probable 16th–early 17th century date, with the remainder (pits 1346, 1359 and 1406) assigned to the later 17th or 18th century.

Across the centre of the trench, and probably perpetuating the line of the earlier property boundary, were several post-holes and at least six irregularly shaped and sometimes intercutting pits (1346, 1362, 1406, 1419, 1434 and 1451), with an average width of 2–3m and up to 1.4m deep. Stone-lined well 1326 (not bottomed) probably also belonged to this phase. Towards the east end of the trench was rectangular pit 1359, assigned a slightly later date, which was 2.5m long, 2m wide and at least 0.8m deep; this may have served as a latrine.

Finds from these features comprised mostly pottery, animal bone and oyster shell, with smaller quantities of metalwork, stone, mortar and clay pipe. The iron

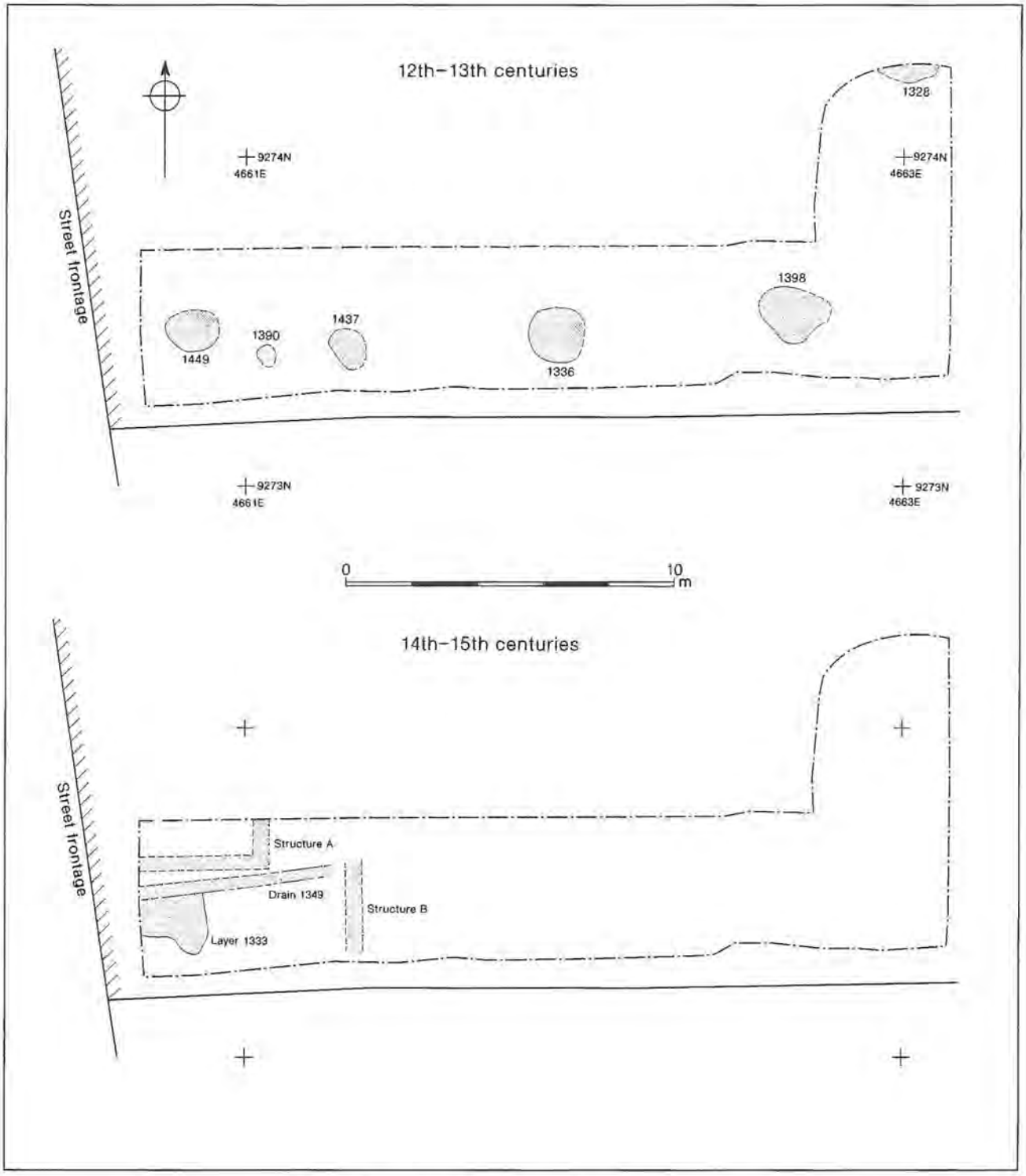

Figure 2 Phase plans (12th –13th and 14th–15th centuries)

objects included a knife and a possible punch, and three whetstones were also recovered (from pits 1346 and 1406).

19th–20th century (Fig. 3)

This phase was represented by the stone and mortar foundations for two buildings within the two properties fronting onto South Street. Most of the foundations exposed belonged to a building on the street frontage in the southern property, with 1302, 1308, 1309 and 1372 defining at least four rooms with a small cellar in the north-east corner; this building was subsequently extended to the east (foundation 1335). Towards the rear of the northern property further building foundations were recorded (1304, 1312 and 1313), probably representing the south-west corner of the large building shown on the 2nd Edition Ordnance Survey map of 1902, parts of which were also recorded during the evaluation.

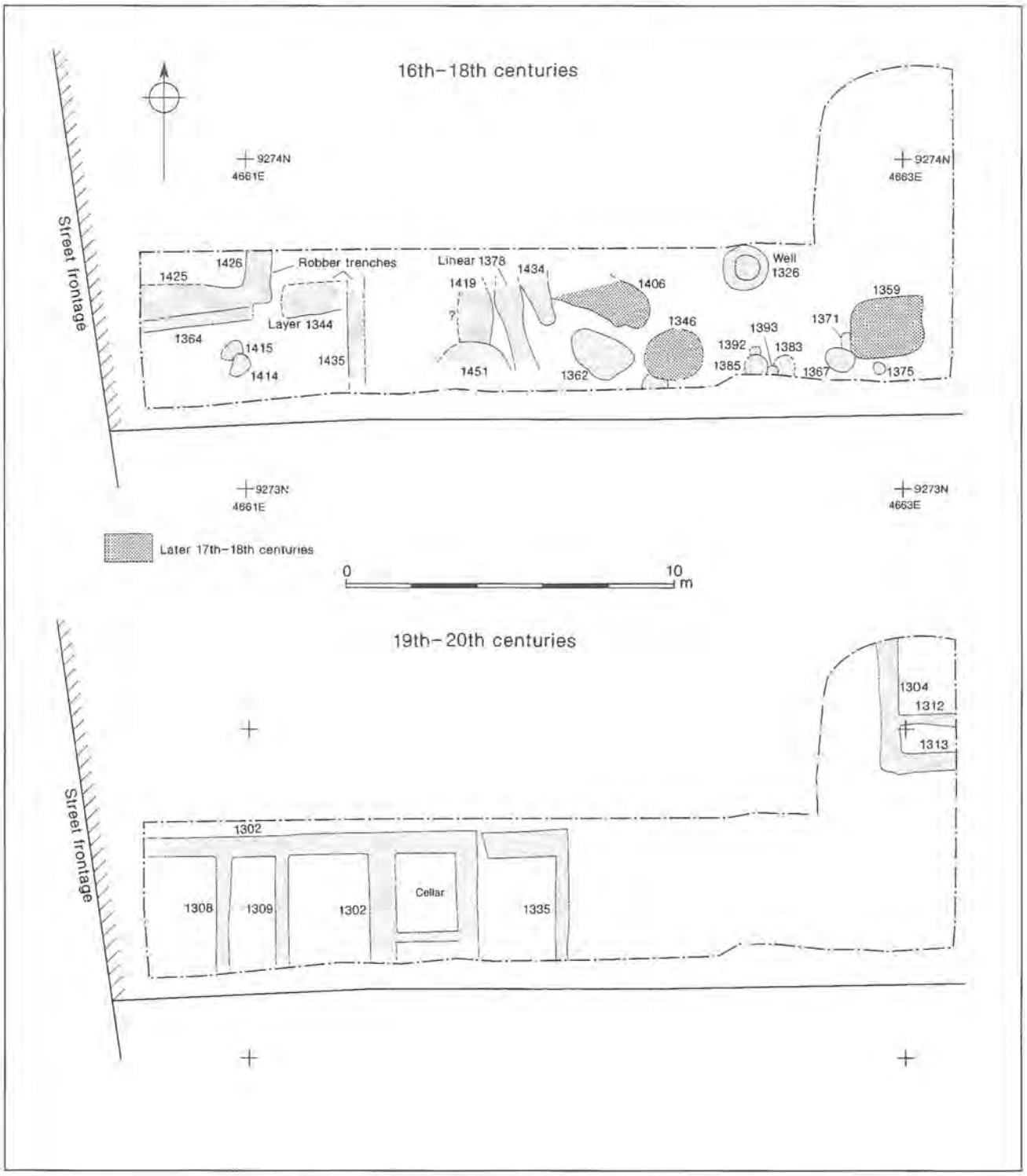

Figure 3: Phase plans (16th–18th and 19th–20th centuries)

The Finds

Pottery

Lorraine Mepham

Introduction

The pottery assemblage amounts to 1075 sherds (17,571g), all of medieval or post-medieval date (Table 1). This report focuses on the medieval assemblage, which constitutes a valuable addition to the understanding of the ceramic sequence of the area by virtue of being the first medieval assemblage of any size excavated from the town. As well as locally produced and regional wares, it also contains a small number of imported wares.

Methods

Methods of analysis for the medieval assemblage have followed the standard Wessex Archaeology recording system (Morris 1994), which involves the definition and

Table 1: Pottery fabric totals

Fabric	No. sherds	Weight	% of period
MEDIEVAL			
Imports	2	14	0.3
Regional British			
E422 (Laverstock-type)	1	4	0.1
E426 (Poole Harbour)	2	2	0.1
E427 (Donyatt)	26	291	6.7
Q401	5	13	0.3
Local wares			
F400	185	2849	65.5
F400A	28	611	14.0
F401	5	56	1.3
Q400	33	197	4.5
Q403	33	232	5.3
Q406	7	84	1.9
Total medieval	***327***	***4353***	–
POST-MEDIEVAL			
Imports	2	47	0.4
Coarse redwares	667	11653	88.2
?East Holme whiteware	2	20	0.1
Slipwares	46	1110	8.4
Staffs-type slipware	4	62	0.5
Tinglaze	2	24	0.2
Creamware	6	44	0.3
Stonewares	13	138	1.0
White salt-glaze	1	10	0.1
Basalt ware	1	42	0.3
Industrial wares	4	68	0.5
Total post-medieval	***748***	***13218***	–
TOTAL	1075	17571	–

coding of fabric types on the basis of dominant inclusion type and chronological period. Eleven fabric types were recorded here, most of which fall into two broad groups: sandy fabrics (Group Q) and flint-tempered fabrics (Group F). There are also some fabrics of known type or source (Group E). Rim forms have been recorded and used to infer vessel form wherever possible; details of manufacture, surface treatment and decoration have also been recorded, and full details are held in archive. Post-medieval pottery has been recorded by broad type, all of which fall into well-known local, regional or imported wares. Fabric totals are given in Table 1.

Medieval fabrics and forms

Imported wares

Two sherds have been identified as imported wares. Both are whitewares, one base sherd in a fine fabric with an all-over dark green glaze; and one body sherd, unglazed, with rouletted decoration. The fabric of the latter sherd is noticeably sandy (quartz grains <0.125mm) with prominent iron-stained quartz or chert (<2mm). Both sherds were redeposited in later features.

The source for both vessels is likely to be France, although a more precise production area for either is difficult to isolate. The green-glazed base sherd appears to fall within the group of monochrome green-glazed wares of North French origin found along the southern English coast, for example at Southampton and Exeter, and with a potential date range in the 13th century (Allan 1983, 197). The rouletted whiteware is perhaps closest to, although not an exact match for, Normandy Gritty wares, generally dated to the 12th century in this country although possibly still in circulation on the south coast in the 13th century (*ibid.*, 197).

Regional British wares

Four fabrics are represented in this group, of which three are of known type or source, and are described below. All fabrics are hard, i.e. cannot be scratched with a fingernail. Terms used to define frequency follow Terry and Chilingar (1955), i.e. rare (1–3%); sparse (3–10%), moderate (10–20%), common (30–40%), abundant (40–50%).

E422 *Laverstock-type coarseware*; moderately coarse matrix, containing common, fairly well sorted, subangular/subrounded quartz, sometimes iron-stained, <0.5mm; rare iron oxides; handmade; variable firing, 'pimply' surface finish.

E426 *Poole Harbour whiteware:* moderately fine, slightly micaceous matrix, containing common, poorly sorted, subrounded quartz <0.25mm; uncertain manufacture, oxidised, pale-firing (pale pink/buff).

E427 *Donyatt medieval ware:* fine-grained matrix, containing common, well-sorted, subrounded quartz <0.125mm; rare shell fragments <1mm; wheelthrown, oxidised with unoxidised core.

Q401 Fine, slightly micaceous matrix, containing common, well sorted, subangular/subrounded quartz <0.25mm; handmade, oxidised with unoxidised core.

Of these only the Donyatt-type ware occurs in any quantity, and even this is scarce (26 sherds). Poole Harbour whiteware is represented by two very small glazed sherds, of which one may be identified as a slip-decorated Rouen copy; both are likely to be of 13th century date. The single sherd of Laverstock-type coarseware is glazed, and possibly derives from a tripod pitcher of 12th or early 13th century date. The seven sherds of fabric Q401 are all small body sherds. Fabric Q401 matches examples of sandy coarsewares found from south-east Wiltshire to Poole Harbour, although the exact source(s) for these wares remains uncertain; two of these sherds are glazed.

Locally-produced flint-tempered and sandy fabrics

Five fabrics fall within this group; all contain both flint and quartz in varying frequencies and in a range of coarseness. The flint includes patinated fragments and appears water-worn.

F400 Moderately fine, slightly micaceous clay matrix, containing moderate, poorly sorted, subangular flint <2mm; sparse subrounded quartz <1mm; rare iron oxides; handmade, harsh texture, variable firing.

F401 Moderately fine, slightly micaceous clay matrix, containing moderate, poorly sorted, subangular flint <5mm; rare subrounded quartz <1mm; handmade, variable firing; perhaps a coarser version of F400?

Q400 Moderately coarse clay matrix, containing common, fairly well sorted subrounded quartz <0.5mm; rare subangular flint <1mm; handmade, variable firing.

Q403 Moderately fine, micaceous fabric, containing rare, subangular flint <1mm; rare subrounded quartz <1mm; rare iron oxides; handmade, oxidised.

Q406 Fine, micaceous matrix, containing sparse, poorly sorted, subangular flint <3mm; sparse subrounded quartz <1mm; sparse iron oxides; handmade, variable firing.

The dominant fabric type within this group is the coarseware fabric F400 (79.3% of the total medieval assemblage by weight). This occurs mainly in jar forms (13 examples), with everted, slightly thickened rims (e.g. Fig. 4, 1–3); one example has a finger-impressed rim, but otherwise these forms appear to be plain. There is one more elaborate form, a straight-sided, two-handled bowl, with the upstanding loop handles formed from the body of the vessel; curvilinear combing runs around the 'shoulder' and along the internal bevel of the rim, and the whole vessel is heavily sooted on the outside (Fig. 4, 4).

A slightly less harsh-textured variant of this fabric, but which could not be distinguished macroscopically, has been designated here as F400A; this is more frequently oxidised, and examples are invariably glazed. While some of these glazed sherds could derive from jugs or pitchers, the only identifiable forms comprise a dripping dish (Fig. 4, 6), a bunghole jar or pitcher, and a frying pan of which only the handle section survives. The latter vessel is internally glazed, and has stamped decoration at the junction of handle and body wall (Fig. 4, 5).

The other four fabrics in this group appear as variants on the same theme, with varying frequencies and size of inclusions — fabric F401 slightly coarser than F400 and the other three fabrics finer. Very few diagnostic forms are present in these fabrics; there is one straight handle, probably from another frying pan, one strap handle from a jug or pitcher (fabric Q403), and one thumbed jug base (fabric Q406). Glaze and decoration is completely absent.

Post-medieval pottery

Imported wares

Two sherds have been identified as imported wares, both Spanish. One sherd of lustre ware was recovered, from an open form decorated with simple horizontal bands; the precise source is uncertain but the potential date range is 15th to 16th century (Hurst *et al.* 1986, 42). The second sherd is in a coarse sandy fabric with buff external slip, and derives from an olive jar; these vessels were exported from the late 16th century, and trade continued well into the 18th century (Hurst *et al.* 1986, 66).

Both these imported wares are types which are not uncommon on sites along the south coast, such as Poole and Exeter (Barton *et al.* 1992; Allan 1984), although their penetration inland, as for the medieval imports, is slight.

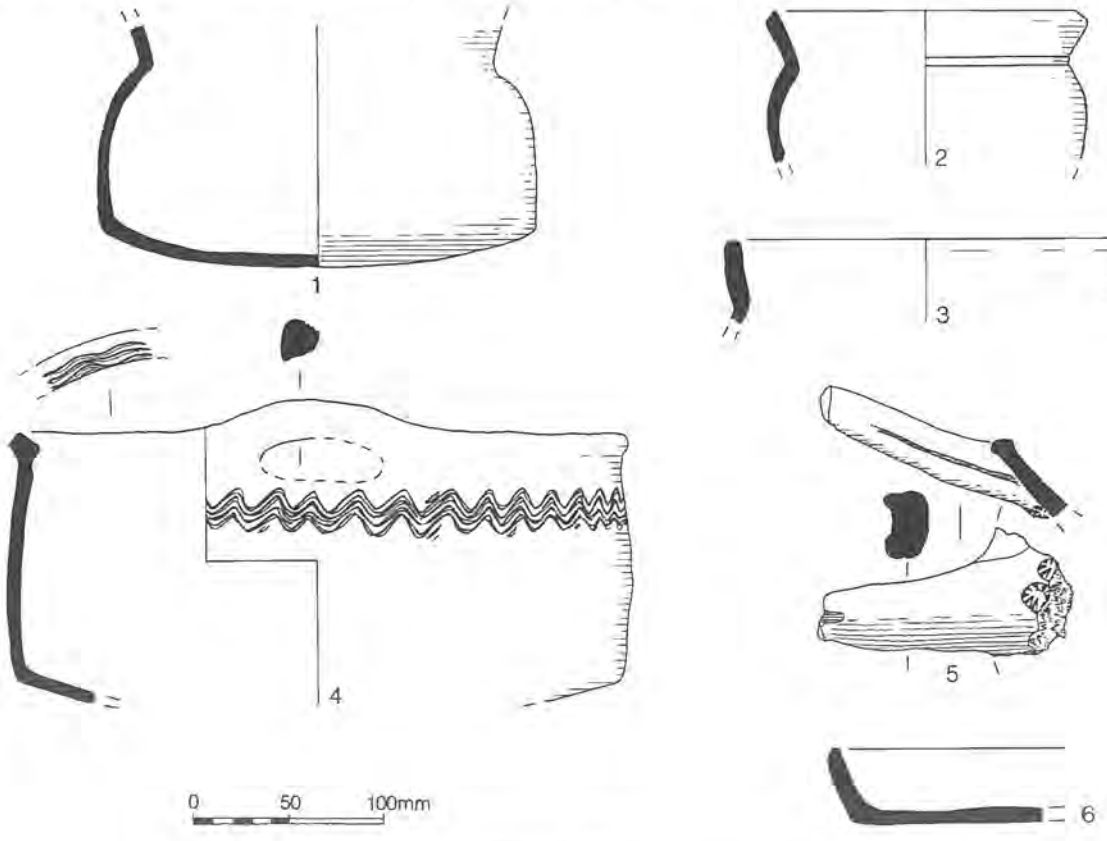

Figure 4: Pottery

Coarse earthenwares

This group makes up the overwhelming majority of the post-medieval assemblage, and almost certainly contains wares from more than one production centre. Included within this group are slipwares and sgraffito wares. The most obvious source is the Donyatt production centre, *c.* 25km to the north-west, which was in operation throughout the post-medieval period. Closer to Bridport, however, is Lyme Regis, *c.* 12km to the west, where mid 18th century production of Donyatt-type earthenwares is attested (Draper 1982). Somewhat confusingly, Lyme also acted as a redistribution centre for the Donyatt wares themselves, exporting them along the south coast (*ibid.*, 137).

Two joining sherds in a white-firing fabric, with a copper-mottled yellow glaze, could derive from the 17th/18th century East Holme kiln in Purbeck (Terry 1987).

Other wares

Other wares are present in small quantities (Table 1). Stonewares include English and German types (Cologne/Frechen, Raeren and Westerwald), with a potential date range of 16th century onwards. Other English wares of 17th or 18th century date include Staffordshire-type slipware, tinglazed earthenware, creamware, white salt-glaze and basalt ware; a handful of sherds of 19th/20th century industrial wares were also recovered.

Discussion and ceramic sequence

Affinities of the assemblage

The relative absence of medieval assemblages from south-west Dorset means that parallels for the Bridport assemblage must be sought further afield. In fact it is apparent from the range of fabrics and vessel forms present that this assemblage has more in common with areas to the north and west than with the rest of Dorset. Assemblages to the east, from Dorchester and Sutton Poyntz, near Weymouth, which contain a range of coarse sandy wares (East Dorset types), flint-/calcareous-tempered wares (South Dorset types) and finer sandy wares (West Dorset types), are quite different in character (Draper and Chaplin 1982; Mepham forthcoming), and virtually none of these ware types are present here. Regional contact from this direction is limited to a single sherd of Laverstock-type coarseware, two sherds of Poole Harbour whiteware and a handful of sherds of South-East Wiltshire/East Dorset coarsewares.

The dominant coarseware type, the flint-tempered fabric F400, and the variants thereof, fall within a widespread tradition of flint- and chert-tempered wares found across east Devon and south Somerset. These wares are predominant within early medieval assemblages from, for example, Ilchester, Taunton and Exeter (Pearson 1982; Pearson 1984a; Allan 1984), but in each case are considered to be of local manufacture.

From further afield, Donyatt wares constitute most of the regional wares found at Bridport; this production centre expanded its distribution in the 14th century and its wares are found widely across the south-west from this period (Coleman-Smith and Pearson 1988, 399–400). It is known that later Donyatt wares were redistributed along the south coast through Lyme Regis (Draper 1982), and this may have been the case also for the earlier wares. Coastal trade is also likely to account for the presence of the Poole Harbour whitewares and the imported wares. The presence of the latter is interesting but not unexpected given their mainly coastal distribution in the medieval period (Allan 1983).

Dating

The dating of the Bridport assemblage is thus based on parallels with assemblages to the west and north, but is hampered by the predominance of the local coarsewares which might be expected to have a lengthy currency. At Exeter, for example, the dominant chert-tempered fabric (fabric 20) was in use from the early 11th to the late 14th century (Allan 1984, 4). Some comment may be made on the basis of the vessel forms present here. At Exeter a typological change has been noted around the end of the 12th century from high-shouldered jars with flared necks to sloping shouldered forms with 'cupped' or convex necks (*ibid.*, fig. 3). Those jars for which profiles are available fall within the earlier group, and squat forms (such as Fig. 4, 1) also seem to be a pre-13th century phenomenon. How early these forms could be placed is debatable; at Exeter the high-shouldered jars are dated as 11th/12th century, and it is entirely possible that the Bridport examples could be this early (pits 1336, 1437, 1449). A small assemblage of jars of very similar character from Seaton, *c.* 22km along the coast to the west, was dated to the 11th/12th century on stylistic grounds (Miles 1976). The handled bowl (pit 1328), can probably be tied down to the 12th century — combed wares and more elaborate handled forms are characteristic of the 12th century horizon (Allan 1984, 4). The possible tripod pitcher sherd in Laverstock-type coarseware could also be 12th century.

A continuation of the chert-tempered wares into the 13th century seems probable, although there are no 'cupped' jar rims. The internally glazed frying pan is unlikely to be earlier than late 12th century, and the dripping dish is certainly a later form. While there is no stratigraphic or other evidence here to support the idea, the variant fabric F400A, along with the finer, sandier variants Q400, Q403 and Q406, may mark a later development of the flint-tempered fabrics from the late 12th or 13th century (pits 1398 and 1437, post-hole 1390). Other 13th century material includes the two Poole Harbour whiteware sherds (pit 1437, and residual in pit 1346), the South-East Wiltshire/East Dorset coarseware Q401 (pit 1398) and the North French green-glazed sherd (residual in pit 1367).

The later medieval period (14th/15th century) is more sparsely represented. To this period can be attributed the medieval Donyatt wares (E427), often white-slipped and generally glazed. Only one context can be assigned to this phase (layer 1333), as most Donyatt sherds were residual in post-medieval contexts. The finer local fabrics (Q403, Q406) may continue into the later medieval period, and a single bunghole, from a later medieval bunghole jar or pitcher, in variant F400A, was found in layer 1333.

For the post-medieval period, the earliest contexts are characterised by the appearance of coarse redwares, probably largely from the Donyatt production centre, and including slipwares and sgraffito wares. These wares also have a long currency, and contexts have been dated on the presence or absence of other wares. Contexts containing only redwares are broadly dated here to the 16th/early 17th century (post-holes 1375, 1414 and 1415, pits 1319 1355, 1367, 1385, 1414 and 1419, robber trenches 1425 and 1435, drain 1364, feature 1351). Later features, dated to the later 17th/18th century, have been identified by the presence of more closely datable types such as Staffordshire-type slipware, German and English stonewares, white salt glaze and creamware (pits 1346, 1359 and 1406).

List of illustrated vessels (Fig. 4)

1. Jar, almost complete profile, fabric F400. Obj. no. 3007, pit 1336.
2. Jar rim, fabric F400. Context 1336, pit 1336.
3. Jar rim, fabric F400. Context 1443, pit 1449.
4. Two-handled bowl, combed decoration, heavily sooted exterior; fabric F400. Context 1325, pit 1328.
5. Frying pan, fabric F400A; glazed internally; stamped decoration under handle. Context 1329, pit 1346.
6. Dripping dish, fabric F400A, glazed internally. Context 1306, pit 1362.

Other finds

Emma Loader

Metalwork

The metalwork assemblage consists of 54 objects, 45 of iron, seven of copper alloy and two of lead. All objects (except lead) have been X-radiographed. All came from post-medieval contexts and, although the dating of some objects is uncertain, particularly the undiagnostic items such as nails and pins, there are none which can be definitively identified as medieval.

The iron objects are all highly corroded, seven too heavily to identify. A further 23 objects are nails, two possibly horseshoe nails and the rest structural items. Other identifiable objects include a large key (robber trench 1435), a scale-tang knife (pit 1346), a rod fragment and a rectangular-sectioned point — possibly a small punch (layer 1327), a rectangular socket (layer 1404), and a possible mount (pit 1406). The remaining objects include undiagnostic strips and fragments.

The copper alloy comprises three unstratified wire-headed pins, a lace tag (pit 1346), a small, tapered collar (pit 1383), a small ring of unknown function (robber trench 1425), and a Victorian penny. The lead comprises a point (layer 1332) and a fragment of window came (layer 1403).

Clay pipes

The majority of clay pipe fragments consist of plain stems, but the assemblage does include 27 bowl fragments, of which 13 bear makers' marks. The pipes cover a potential date range of late 16th through to the early 18th century, with the majority dating to the late 17th century. The bowls have been dated using Oswald's general typology (1975, fig. 3, G), compared with the typologies for southern England and the West Country (*ibid.*, figs. 8 and 10).

Stamps were noted on 13 pipes, all heel stamps, of which one is completely illegible. All of these stamps are assumed to belong to local manufacturers. The most frequent stamp, noted on six pipes dated 1660–80, was the letter 'M' within a wheel design. The wheel is a common motif on clay pipes (cf. Pearson 1984b, fig. 97:57), but no parallels including the letter 'M' have been found. Similarly, there are no known parallels either for the simple grid stamp (one example, unknown date) or for the stamp seen on three pipes (dated 1660–80), which is barely legible but appears to be a motif rather than initials.

A stamp with the initials 'RM' in relief within a circle was noted on one bowl of uncertain date. These initials have been noted on pipes from Salisbury, although in this instance within a heart, attributed to an unknown Wiltshire manufacturer (Atkinson 1980, fig. 1d).

Stone

The stone includes both portable objects and building material, all from post-medieval contexts. Three whetstones were recovered from pits 1346 and 1406 respectively, and a flat, rounded pebble, possibly similarly utilised, came from pit 1448.

Two fragments of mortar, both in Oolitic Limestone, were recovered from pit 1419, and probably derive from the same vessel. One fragment is from the base and the other is from the rim and body wall of the vessel. The estimated original diameter of the vessel is between 160mm and 180mm. The vessel has upright sides, smooth internal surfaces and pecked external surfaces; a small fragment of a rib remains on the base.

Two pieces of probable building material were identified. One shelly limestone fragment, probably a roof tile, came from post-medieval robber trench 1425, and a small fragment of Purbeck Marble, with one smooth surface and part of a straight edge, from feature 1353.

Miscellaneous finds

Small quantities of other finds, almost all from post-medieval contexts, comprise ceramic building material (roof tiles, floor tile), wall plaster (mainly monochrome white, one with red pigment), ironworking (smithing) slag and glass (vessel and window). Small quantities of fired clay were also recovered (some from medieval pit 1398) including one piece with wattle impressions. Two worked flint flakes were probably residual finds of prehistoric date.

Environmental Evidence

Animal bone

Only 220 of the 812 bones collected are identifiable to species comprising, in descending order of frequency, cattle, sheep or goat, pig, chicken, horse and other bird species; fishbone was also present, particularly from the soil samples. Very little evidence of age at death is available as few mandibles were present and butchery had removed much of the fusion evidence. Only 40 bones were complete enough to yield measurements.

Charred plant remains

C J Stevens

Seven samples from four pits of 12th–13th century date were examined, and the counts of cereal seeds of each taxa and other cereal remains are listed in Table 2 (full details of all charred plant remains are in the archive). The nomenclature used follows that of Stace (1991).

Crop remains

The crop remains consisted entirely of cereals and pulses. The most predominant cereal remains were those of free-threshing grains, *Triticum aestivum sensu lato*. Where rachis fragments were recovered both bread wheat, *Triticum aestivum* and tetraploid wheats (e.g. *T. turgidum* and *T. durum)* were present. Remains of barley and glume wheats were fairly uncommon, with only a single glume base recovered from pit 1449. Remains of rye were relatively infrequent, and rachis fragments were generally more abundant than grains. Only one spikelet recovered was well enough preserved to make a tentative identification of wild oats, *Avena fatua* (Helbaek 1953). Two grains from pit 1328 were very large, possibly suggesting the cultivated variety.

The other crop remains were mainly pulses. Poor preservation meant that very few specific identifications could be made. Seeds of broad bean, *Vicia faba* subsp. *minor* were recovered from pits 1328, 1437 and 1449, while a possible cotyledon of wild pea, *Pisium sativum*, was recovered from pit 1437. Two possible finds of lentil, *Lens culinaris*, were also found from pit 1437. An exceptionally large seed of parsnip *Pastinaca sativa* was also found, the size of which, about 5mm by 8mm with three highly distinctive ridges, might well suggest the cultivated variety *Patinaca sativa* subsp. *sativa*.

Table 2: Charred plant remains (cereals only)

Feature no.	**pit 1328**		**pit 1390**		**pit 1437**		**pit 1449**
Context	**1314**	**1325**	**1381**	**1389**	**1424**	**1441**	**1443**
Volume (litres)	10 Ltrs	5 Ltrs	10 Ltrs	10 Ltrs	20 Ltrs	2 Ltrs	10 Ltrs
Flot Size	50 ml	25 ml	175 ml	60 ml	50 ml	450 ml	30 ml
Number of items per litre (items/volume)	16	25.4	6.3	18.1	10	392	5.9
Hordeum sp. (grains undiff.)	2	–	2	–	cf.2	–	1
Hordeum sp. (grains, tail)	1	–	–	–	–	–	–
Hordeum sp. (rachis fragments)	–	–	–	1	–	–	1
Secale cereale (grains)	–	4	2	–	5	–	–
Secale cereale (rachis frags)	–	–	–	4	–	27	–
Triticum sp. (grain)	14	–	3	6	4	–	2
Triticum sp. (embryo)	–	–	–	1	1	–	–
Triticum sp. (rachis frags.)	–	–	–	–	2	–	–
Triticum sp. (basal rachis frags)	–	–	–	–	–	7	–
Triticum diccocum/spelta (glume bases)	–	–	–	–	–	–	1
Triticum aestivum sensu lato (grain)	65	42	7	36	26	–	24
Triticum aestivum sensu lato (rachis)	–	1	–	3	–	–	1
Triticum sp. free threshing tetraploid (rachis)	–	–	–	–	2	2	–
Triticum aestivum (rachis)	3	1	–	1	2	–	–
Triticum/Secale cereale (grain)	–	–	–	1	–	–	–
Cereals undiff. (grains)	7	–	1	2	3	–	–
Cereals undiff. (rachis)	–	1	–	–	1	5	–
Cereals undiff. (culm internodes)	–	–	–	1	–	2	–
Cereals undiff. (culm nodes)	2	1	–	8	1	4	1
Cereals undiff. (basal culm nodes)	–	1	–	1	–	–	–
Cereals undiff. (awns)	1	1	–	–	–	–	1

Wild species

Most wild species recovered are associated with arable, grassland and/or wasteland, with the exception of the fragments of hazelnut, *Corylus avellana* and two bramble seeds, *Rubus* sp. from pit 1328. Most wild seeds relate to arable fields, and indicate the utilisation of perhaps as many as four different soil types including lighter sandy or calcareous soils as well as heavy, clay soils and wetter environments.

Discussion

The assemblage from South Street, with the predominance of free-threshing cereals with lesser amounts of barley, rye and possibly oats, compares well with the material recovered from 12th and 13th century deposits at Howard's Lane, Wareham (Carruthers 1995). However, unlike the assemblage at Wareham, glume wheat remains were almost absent. Hulled wheats, for example spelt, may have persisted as contaminants of other cereal crops, and it is possible that the glume found at Bridport is derived from such a source. In terms of other crop remains, both broad bean and pea are commonly recovered from medieval sites (Greig 1991), whilst lentil is somewhat rarer.

The samples from pits 1328 and 1449 suggest the burning of waste from crops stored in a semi-cleaned state; one sample from pit 1328 was rich in both grain and large weed seeds, while that from pit 1449 contained about equal proportions of grain and small and large weed seeds. The other samples were richer in small weed seeds. The proportions of the various wild species are also very similar to those seen from Wareham (Carruthers 1995). The predominance of stinking mayweed, *Anthemis cotula* in most of the samples indicates the cultivation of drier, heavy, clay soils.

Discussion

Very little archaeological work has been undertaken in Bridport and the site in South Street has, therefore, provided a rare opportunity to investigate the town's development. Although the area excavated was relatively small, the results represent a significant contribution to the archaeology of Dorset's towns.

Surprisingly, perhaps, no evidence for Saxon occupation was found, despite the fact that the site lay adjacent to South Street which was probably an original feature and the main thoroughfare within the postulated Late Saxon burh. It is likely that South Street has been widened since the 10th century, and the original street frontage is estimated to have been at least 7m to the west of the excavated trench. However, some residual Late Saxon pottery, if not structural remains or pits, might have been expected from the site. Perhaps the density of Late Saxon features was low, and the relatively narrow excavation trench failed to reveal any of these or any finds. This lack of evidence may be paralleled with some other known Late Saxon settlements, for example Wilton, where limited excavations in the centre of the town have failed to produce a single sherd of Late Saxon pottery (Kate Taylor, pers. comm.). Nevertheless, it must be concluded that archaeological evidence to confirm Bridport's identification with *Brydian* is still awaited.

The earliest evidence for occupation was in the 12th–13th century, although some of the pottery may date to as early as the 11th century. This broadly corresponds with a period of prosperity and growth of the town culminating in its expansion north of the postulated line of the Late Saxon defences in the 13th century. A small number of pits was recorded, their alignment probably reflecting an east–west property boundary between two burgage plots which are likely to have extended up to 100m or more to the east, as indicated on later maps. There was no evidence for any buildings except for a single post-hole but, again, this might reflect a later widening of South Street, and it is possible that the original burgage plots were wider (and subdivided later) with buildings aligned parallel, rather than at 90° to the street. The finds from the pits indicate domestic rubbish, and analysis of the charred plant remains hints at the possibility of crops having been stored in a semi-cleaned state.

Only one deposit has been assigned a 14th–15th century date, which may suggest a break in occupation, although small quantities of residual 14th and 15th century pottery were recovered from later features and this paucity of evidence should be treated with caution. Possible buildings relating to this phase on the South Street frontage have been suggested on the grounds that several walls, robbed of stone by the early 17th century, were constructed at an earlier date. These indicate at least one building (Structure A) fronting directly on to South Street and aligned at 90° to it. While too little of the structural remains survived to reconstruct its nature and function, the foundation/robber trenches appear to indicate a relatively substantial building, perhaps of timber on stone footings. Early 15th century documents identify burgage plots in South Street and refer to, for example, a 'tenement, curtilage and croft in South Street in Bridport... lying between a tenement of... and a tenement of...' and 'a cottage and curtilage in South Street' (DRO:D/WCH/T5/1). While these are not specifically associated with the excavated site, they serve to indicate the type of property present and perhaps suggest that the street was not densely built up at this time. It is possible that the South Street area was in decline from the 13th century as East Street and West Street developed as the main commercial focus of the town, with further depopulation of the area resulting from the Black Death in 1348.

The medieval pottery is of some importance as it represents the first medieval assemblage of any size excavated from the town and contains locally produced and regional wares, as well as a small number of imported wares. Of particular interest is the contact seen

through the pottery with regions to the north and west (i.e. Devon and Somerset), rather than with east Dorset.

The post-medieval period saw further changes on the site. The walls of Structures A and B, and an associated drain, were robbed of stone by the early 17th century, and new buildings may have replaced them, although there is no direct evidence for this. To the rear of the frontage, a phase of pit digging in the 16th–17th centuries continued, to a lesser degree, into the 18th century, possibly spanning a further decline and subsequent rise in the area's fortunes. Pits may have been dug variously for clay/marl extraction and rubbish disposal, and a well and a possible latrine were also identified. The finds from this period are predominantly utilitarian and domestic, although three whetstones and a possible punch might suggest some small-scale 'craft' activity. The properties are likely to have been relatively long and narrow, extending back approximately 120m to a lane at the rear, with fields beyond to the east, as depicted on Hutchins' map of 1774 (DRO/DC/BTB/R2). This layout most probably reflects the arrangement of medieval or earlier burgage plots, although these may subsequently have been subdivided as the town's population increased. A document of 1653 describes a 'burgage on the east side of South Street with backside court and outhouses' (DRO/D/BGL/B22), and Hutchins' 1774 map shows ten or more properties fronting South Street within the block of land between Church Lane and Folly Mill Lane (see Fig. 1c).

The later history of the site is not detailed here, but by the end of the 19th century it had become the town's Police Station, with the gaol occupying the large building in the rear of the northern property. This building was subsequently demolished when the Fire Station was established and the two properties finally amalgamated in the 20th century.

Acknowledgements

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The excavation was directed by Michael J. Heaton, assisted by Jan Grove, Jane Liddle, Richard May and Barry Hennessy. Phil Andrews and Nicholas Wells undertook the evaluation. Lorraine Mepham and Michael J. Allen have been responsible for managing the finds and environmental work respectively, and Sarah Wyles processed the soil samples. This report is partly based on the assessment prepared by Michael J. Heaton, and has been edited for publication by Phil Andrews with the illustrations prepared by Linda Coleman. The project was managed for Wessex Archaeology by Roland J.C. Smith.

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Hitherto Unnoticed Tree Remains from the Submerged Forests at Bournemouth and Charmouth

J.B. DELAIR

Introduction

Unfossilised stumps and woody remnants of ancient trees exist just below normal low-tide level at several places along the Dorset coast. Although traces of these have been noted around Poole (Clarke 1838) and close to where the River Stour debouches into Mudeford Water, the two most familiar examples of these offshore forests occur at Bournemouth and Charmouth. Evidently of early or mid-Holocene age, these are not, of course, necessarily exactly contemporaneous with one another.

Usually remaining just out of sight below low-water mark, these forests are sometimes briefly visible at very low spring tides, or when storms, temporarily removing foreshore material normally concealing them, briefly expose their former occurrence. Accordingly, the existence of these submerged forests has long been known to naturalists and prehistorians (Hutchins 1774, 95–6).

Despite such lengthy awareness of these forests, the actual irregularity and brevity of their exposure has inevitably resulted in exceedingly few specimens being collected from them and preserved for study. Thus the recent retrieval, as detailed below, of four tree stumps from the Bournemouth forest and of a sizeable portion of another with adherent leaves from that at Charmouth, have been occasions of more than passing interest.

It should be noted that, in the present context, 'recent' embraces the period 1979 to 1998.

The Bournemouth Discoveries

Lying at some depth below mean sea-level, the forest at Bournemouth occupies an area immediately west of Bournemouth pier. The first printed notice of it apparently dates from 1835, when Charles Lyell (1836, 266–7) reported that it was 200 yards in longest extent and 50 in width (see also Reid 1913). These dimensions are generally compatible with the experiences of Bournemouth's present-day engineering department, as a statement by the town's Development Services Directorate, made in a letter dated 22 January 1996, confirmed that the forest's '...presence is apparent in any deep excavation or site investigation carried out on the West side of Bournemouth pier'.

In Lyell's day rooted stumps of *Pinus* (pine), *Alnus* (alder), and *Betula* (birch) trees were observed on the sea floor, while associated beds of peat ran inshore up the middle branch of the Bourne Valley as far inland as Rossmore (Osborne-White 1917, 66). Later sporadic exposures of the forest received less scholastic attention, although Oakley (1943), Arkell (1947, 317), and others, have referred to it from time to time in connection with the submergence many thousands of years ago of the old Solent River valley.

Between 1979 and 1981, reconstruction work carried out at Bournemouth pier laid bare the subfossilised remains of several tree stumps, four of which were disinterred and acquired for the geological collection of the Bournemouth Natural Science Society. Registered as specimens BNSS 37593 and 37596, these specimens were subsequently cleaned and identified as being, almost certainly, examples of pine trees. They appear here as Figures 1–4. The stumps are presently firm and show no traces of having been bored by marine worms during the period of their submersion.

The Charmouth Find

Noticed as long ago as 1826 (De La Beche 1826; 1829, 417), the submerged forest at Charmouth lies near the western groyne close to where the River Char flows into the sea.

Like the Bournemouth forest, the Charmouth example, although similarly exposed only at very low tides or by transient storm foreshore damage, is normally concealed by beach deposits. Certain of the earlier exposures (Lang 1948; 1953; Cope 1978; 1980), however, permitted recovery (in 1925) of *in situ* tree and plant debris from the forest site (Lang 1926; Cunnington 1927), and established (in 1961) that, as now preserved, the forest features two distinct botanical layers — one characterised by the presence of undecayed leaves, the other by an absence of leaves (Lang 1961). These differences are thought to reflect separate environmental phases in the forest's former existence.

The material retrieved in 1925 was lodged in the British Museum (Natural History) in South Kensington, London. It included a portion of the unfossilised trunk of an Ash tree (BMNH V17208), parts of Birch or Birch-like wood (BMNH V17209-V17210) twigs and undecayed leaves (BMNH V17211), and a quantity of hazel nuts (BMNH V17212) (Lang 1926, 209).

All the foregoing was, in effect, preparatory to the discovery, in 1997, of a piece of wood bearing leaf impressions in the bed of the River Char close to the western groyne. It appeared to have washed out as a piece of forest debris through natural river action. This

1.

2.

3.

4.

Figures 1–4: Tree stumps (BNSS 37593–37596) from Bournemouth

Figure 5: Subfossil timber (BNSS 37597) from Charmouth

find was made by Mrs Greta Grimshaw (now of Wimbledon), who duly presented it to the Bournemouth Natural Science Society, where it is now registered as specimen BNSS 37597. More brittle than the Bournemouth tree stumps, this specimen is also devoid of marine worm borings. It is shown here as Figure 5.

Conclusion

It is to be hoped that this short account will encourage continued monitoring of the two sites described for new exposures of the vegetable debris typifying them; and, since the specimens presently available are numerically insufficient for meaningful statistical analysis, that circumstances will arise allowing for the retrival of additional examples of this significant palaeogeographical and palaeobotanical evidence.

Acknowledgements

My best thanks are due to Mrs Vera Copp for placing specimens BNSS 37593-37596 at my disposal for study, and to Mrs Greta Grimshaw for allowing me access to the Charmouth find prior to presenting it to the Bournemouth Natural Science Society. Sebastian Studios of Lansdowne, Bournemouth, furnished the excellent photography.

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A New Plesiosaurid Specimen from the Sinemurian, Lower Jurassic, of Southern England

PHILIP J. HOPLEY
Department of Earth Sciences, University of Bristol, Wills Memorial Building, Queen's Road, Bristol BS8 1RJ
Correspondence Address: Department of Earth Sciences, University of Liverpool, Brownlow Street, Liverpool L69 3GP
Email: pjhopley@liverpool.ac.uk

Summary

*A sequence of twenty-eight cervical and dorsal vertebrae of ?*Plesiosaurus *sp. from the Sinemurian of southern England are figured and described. This adult individual (BRSUG 26539) exhibits unusual features such as dorsal neural spine cavities and cervical rib processes but the taxonomic significance of these characters is currently uncertain. An analysis of Vertebral Length Index (VLI) in Lower Jurassic plesiosaurs shows taxonomic potential, but has proved inconclusive in the present study.*

Introduction

The plesiosaur specimen BRSUG 26539 was collected by the late Professor Savage in the 1970s and deposited in the University of Bristol Geology Museum. Details of the locality and horizon are uncertain, although the nature of the Liassic sediment and its fossil biota enables the provenance of the specimen to be constrained to the Sinemurian stage of probably the Lyme Regis area of southern Britain.

The specimen was prepared using a combination of acid and mechanical methods. Each block was repeatedly submerged in dilute acetic acid (7.5%) and consolidated with dilute paraloid in acetone between treatments (for further details see Lindsay 1987). Breakages were repaired using a concentrated solution of paraloid in acetone. A hand-held pneumatic engraver was used to remove matrix from localised areas of coarser sediment that proved more resistant to the acid treatment. Whenever possible, acid was used to expose new areas of bone in order to avoid the risk of accidental drill contact.

History of research

Lower Jurassic plesiosaurs of southern England are of historical importance, playing a significant role in the early development of vertebrate palaeontology. The description of plesiosaurs from Lyme Regis and Street by Henry De la Beche and Reverend Conybeare in the early 1820s pre-dates Owen's construction of the Dinosauria by two decades, during which time the marine reptiles enjoyed public attention prior to the current emphasis on dinosaurs (Taylor 1997). After their initial discovery and description at the end of the 19th century, marine reptiles were overshadowed by their land-dwelling contemporaries. However, recent and ongoing studies signify a new interest in the historical Lower Jurassic plesiosaur specimens, the results of which may help to elucidate the origin and early evolution of this important group of reptiles.

Most English Liassic plesiosaurs come from one of two localities — the Rhaetic to Hettangian of Street in Somerset (ST 4836) or the Sinemurian of Lyme Regis (SY 3492), Dorset. Other plesiosaur finds, mainly disarticulated material, have been recorded throughout the Lias outcrops from Dorset to Yorkshire, most notably from the North Somerset coast around Watchet, the Rhaetic of Aust and localities in the Bristol district (Benton and Spencer 1995). The quarries of Street have yielded the earliest known complete plesiosaur specimens; however the quarries are now closed and new finds are unlikely (Storrs and Taylor 1996). Lyme Regis and other coastal exposures of the English Lias are still yielding marine reptile specimens, albeit at a slower rate due to modern coastal protection (Benton and Spencer 1995).

The taxonomy of Lower Jurassic plesiosaurs is problematic. Historic type and figured specimens have been described morphologically with little regard for intraspecific variation, to the extent that over one hundred species have been assigned to *Plesiosaurus*, the archetypal plesiosaur genus from the Lower Jurassic of Lyme Regis (Storrs 1997). However, recent studies (Storrs 1997; Storrs and Taylor 1996) have attempted to clarify early plesiosaur taxonomy, resulting in a vast reduction of the nomenclature and exposing many taxa as nomina dubia. The genus *Plesiosaurus* now consists of one species, *Plesiosaurus dolichodeirus* (Conybeare 1824), a moderately sized (up to 3.5m in length) long-necked plesiosaur from the Sinemurian of Lyme Regis (Storrs 1997). No diagnostic material for this species has been found outside of the Lyme Regis/Charmouth area. However, material may well be found in contemporary strata of western Europe.

Thalassiodracon hawkinsi (Owen 1838) is a small plesiosaur (rarely up to 2m in length) from the Rhaetic to Hettangian of Street, with a neck of moderate length. This species has not been found in Lyme Regis which suggests a high degree of chronostratigraphic control (Storrs and Taylor 1996). *Rhomaleosaurus megacephalus* is

the third taxa to survive the recent taxonomic review of Lower Jurassic plesiosaurs. It is a large-headed 'pliosaur' approximately 5m long from the 'Pre-planorbis Beds', lower Hettangian of Street on the Fosse. Its large size and short neck length distinguish it from BRSUG 26539 and it therefore requires no further discussion in the context of this study.

These three taxa represent well-defined species based on numerous complete specimens. However, there are vast collections of unidentified post-cranial specimens from the British Lias in museums across the country that may well belong to unrecognised taxa.

Sediment and Fauna

BRSUG 26539 is embedded in a 200mm thick bed of blue/grey lower Lias limestone. This massive limestone lacks lamination and is well cemented. The sediment is highly bioturbated by branched and unbranched burrows of *Chondrites*, no bigger than 5mm in length and infilled with a light-grey limestone. These trace fossils are uniformly developed throughout the limestone bed, but are locally absent where the sediment has been bioturbated by large *Thalassinoides* burrows characterised by an increase in the concentration of fossil fragments, including a fish vertebrae and tooth, *Pentacrinus* fragments and shelly debris. These crustacean burrows are coarsely branched structures up to 150mm in length.

Chondrites represents dysaerobic to anaerobic conditions, whereas the presence of *Thalassinoides* suggests higher levels of oxygenation (Ekdale and Mason 1988). Low oxygen conditions must have been important in the preservation of BRSUG 26539; however the unusual ichno-assemblage may indicate an increase in oxygen levels on the sea floor prior to lithification.

Immediately below the plesiosaur bones is a horizon of arietitid ammonites oriented sub-horizontally. The ammonites range in size from 100mm to 300mm in diameter, have a well-developed keel and a broad flat ventral surface (see Fig. 1). The large size of the ammonites suggests they may belong to the *Arietites bucklandi* zone of the lowermost Sinemurian. However the partial remains are not conclusive and further preparation is necessary for specific identification of the ammonites. Arietitid ammonites are restricted to the Sinemurian, enabling the age of BRSUG 26539 to be constrained to this time period.

The presence of trace fossils and the disturbed nature of the plesiosaur bones suggests that the palaeoenvironment was of a soft-ground substrate on the continental shelf above the storm-wave base. The degree of disarticulation of BRSUG 26539 steadily increases anteriorly, indicating that wave action was able to disturb the anterior cervical region but that the stronger ligaments of the pectoral region helped to maintain almost perfect articulation. The anteriormost cervical vertebrae are dispersed whereas the mid-cervical region has been compressed, with each vertebra deposited in contact with at least one other.

BRSUG 26539 was a relatively recent find, discovered long after the closure of the inland quarries at Street, leaving the Lias of the Dorset and North Somerset coasts as the most likely source rocks. The *Arietites bucklandi* zone consists of a cyclical sequence of limestone and shale of 10m thickness at Lyme Regis and 6m thickness at Kilve (Whittaker and Green 1983). At Seven Rock Point, west of Lyme Regis (SY 327908) the *Arietites bucklandi* zone shares *Chondrites*, *Thalassinoides*, *Pentacrinus* and a similar sediment colour and texture with the sediment of BRSUG 26539. In contrast, the *Arietites bucklandi* zone of the North Somerset coast at Kilve (ST 144445) lacks *Thalassinoides* burrows and consists of a well-cemented yellow-brown limestone that is significantly different to the sediment of BRSUG 26539. Although this is not a conclusive study of the *Arietites bucklandi* zone of southern England, it seems possible that BRSUG 26539 originated from Seven Rock Point to the west of Lyme Regis.

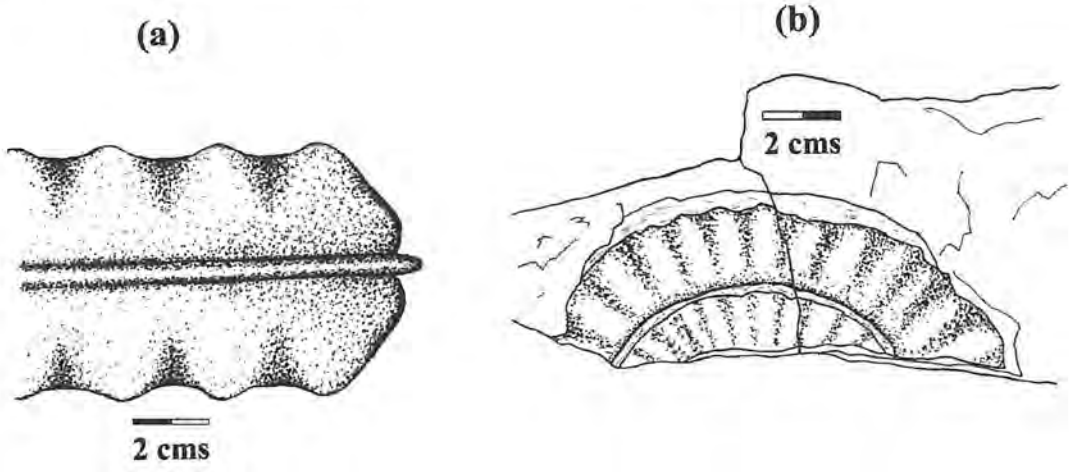

Figure 1: Ammonites associated with BRSUG 26539: (a) Ventral view of Arietites ?bucklandi *(BRSUG 26539/45) of Sinemurian age, possibly belonging to the* Arietites bucklandi *zone of the Lower Sinemurian: (b) External cast of unidentified ammonite in lateral view, BRSUG 26539/46*

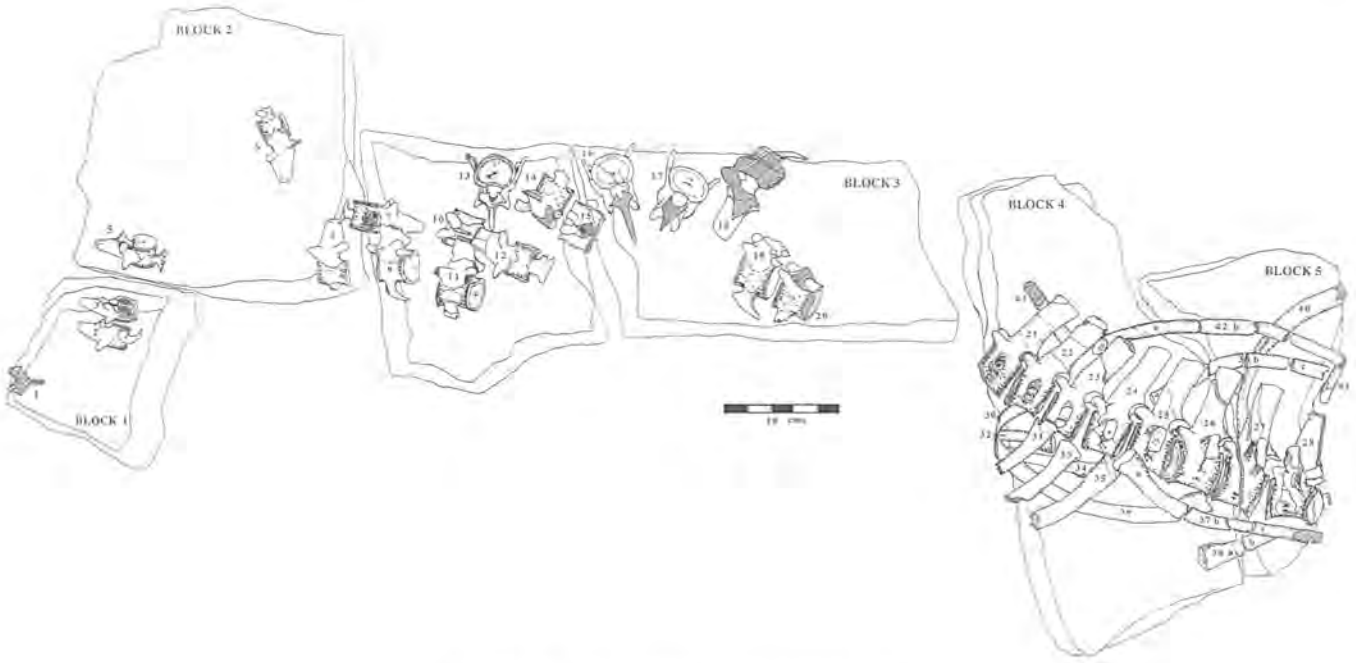

Figure 2: Sketch map of BRSUG 26539 in situ

Systematic Palaeontology

Subclass DIAPSIDA Osborn 1903
Infraclass SAUROPTERYGIA Owen 1860
Superorder EUSAUROPTERYGIA Tschanz 1989
Order PLESIOSAURIA de Blainville 1835
?PLESIOSAURUS de la Beche and Conybeare 1821
aff. *PLESIOSAURUS DOLICHODEIRUS* Conybeare 1824
Figures 3–8

Material: BRSUG 26539; twenty-two cervical vertebrae, four pectoral vertebrae, two dorsal vertebrae, twelve dorsal ribs, two pectoral ribs and one posterior cervical rib.

Locality and Horizon: Sinemurian stage of the Lower Lias, ?Lyme Regis, southern England.

Description

Vertebrae

BRSUG 26539 contains an exceptionally well-preserved and well-articulated sequence of twenty-two cervical vertebrae, four 'pectoral' vertebrae and two dorsal vertebrae (Fig. 3). The extreme anterior section (five to eight vertebrae) and a posterior sequence of up to ten vertebrae immediately anterior of the two posterior-most cervical vertebrae, have been lost during collection. The vertebrae that have been preserved represent a continuous sequence of articulated and disarticulated cervical vertebrae only slightly disturbed by taphonomic processes.

The four pectoral vertebrae lie within a transitional sequence of eight vertebrae preserved in articulation, ranging from the two posterior-most cervical vertebrae (BRSUG 26539/21 and 22) to the two true dorsal vertebrae (BRSUG 26539/27 and 28). This division between posterior cervical, pectoral and dorsal vertebrae (illustrated in Fig. 7) is determined by the location of the transverse process relative to the centrum and neural arch, as defined by Seeley (1874). However, it must be noted that the vertebral sequence is gradational and a clear distinction between the three types of vertebrae is not always possible.

Each centrum is amphicoelous and relatively elongate (length sub-equal to diameter) and the presence of paired nutritive foramina on the ventral surface of each

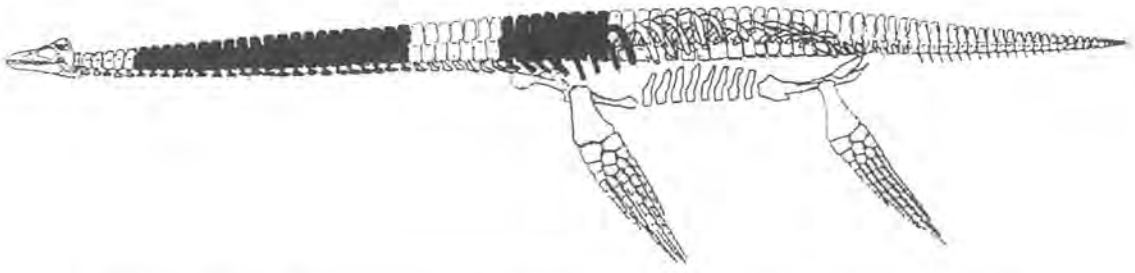

Figure 3: Sketch of Plesiosaur skeleton. Black shading indicates bones present in BRSUG 26539

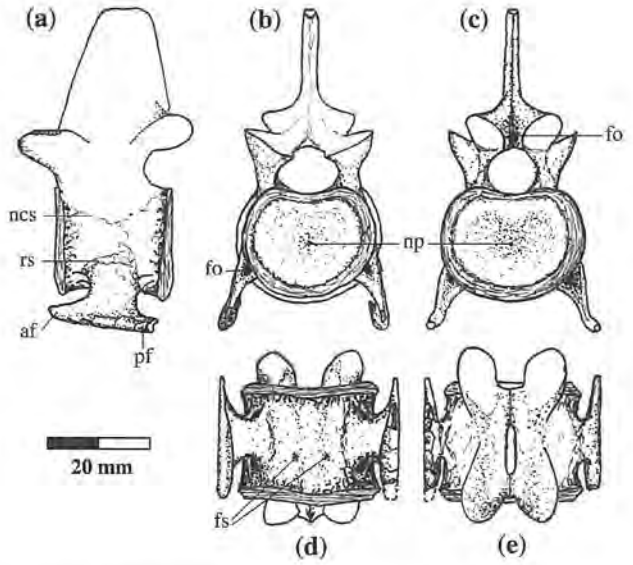

Figure 4: Anterior cervical vertebra BRSUG 26539/5 in ***(a)*** *left lateral* ***(b)*** *anterior* ***(c)*** *posterior* ***(d)*** *ventral and* ***(e)*** *dorsal views. Abbreviations:* ***af****, anterior flange;* ***fo****, foramen;* ***fs****, foramina subcentralia;* ***ncs****, neurocentral suture;* ***np****, notochordal pit;* ***pf****, posterior flange;* ***rs****, cervical rib suture*

centrum is diagnostic of the Order Plesiosauria (Brown 1981). All cervical ribs and neural arches are firmly fused to the centra to the extent that the suture lines are represented by a subtle increase of rugose ornament (Figs 4a and 6c) on the surface of each centrum. The V-shaped neurocentral suture (Fig. 4a) extends ventrally to the mid-lateral surface of each cervical centrum but has become obscured by the transverse processes in the pectoral and dorsal vertebrae. The well-sutured nature of the specimen indicates a mature individual (see Storrs 1994 for comparison with a juvenile plesiosaur).

The foramina subcentralia (Fig. 4d) occur on the ventral surface of the cervical centrum, their position and separation remaining constant relative to centrum size. In the pectoral and dorsal vertebrae, the foramina subcentralia split into two paired foramina (see Figs 6d and 7a) and mount the lateral central surface. A pair of foramina on the mid-ventral surface of each neural canal indicates that the foramina subcentralia pass vertically through the entire centrum. A mid-ventral ridge (Brown 1981) that runs longitudinally between the foramina subcentralia can be variably present in the anterior cervicals of Lower Jurassic plesiosaurs (Storrs 1997; Storrs and Taylor 1996) but this feature is lacking in BRSUG 26539.

A further foramen is located between the postzygopotheses of each cervical vertebra at the dorsal margin of the neural canal (see Fig. 4c). This foramen has no anterior or ventral outlet and reduces to a paired facet in the posteriormost cervical, pectoral and dorsal vertebrae (see Figs 6a–b and 7b–d).

The prezygopotheses and postzygopotheses are consistently angled at approximately 50° to the vertical and show no significant variation along the vertebral sequence. In the anteriormost cervical vertebrae the prezygopotheses protrude laterally beyond the articular surface of the centrum by approximately twice as far as the postzygopotheses. The relative length of the prezygopotheses decreases posteriorly so that by the posteriormost cervical vertebrae the pre- and postzygopotheses protrude laterally by sub-equal distances. The subcylindrical neural canal changes shape during its passage from the anterior to posterior opening within each vertebra. The anterior section of the neural canal is greater in width than in length, but the posterior opening is greater in height than in width. The average diameter of the neural canal increases posteriorly along the vertebral sequence from 0.8cm to 1.2cm.

Striking pathological lesions of the vertebral endplates (Schmorl's nodes) occur on the anterior endplates of eight mid to posterior cervical vertebrae (Figs 6a and 7b). The Schmorl's nodes are up to 8mm in depth and are located between 3mm and 5mm ventral to the notochordal pit. The cause of these lesions is uncertain but may be due to the presence of compressive

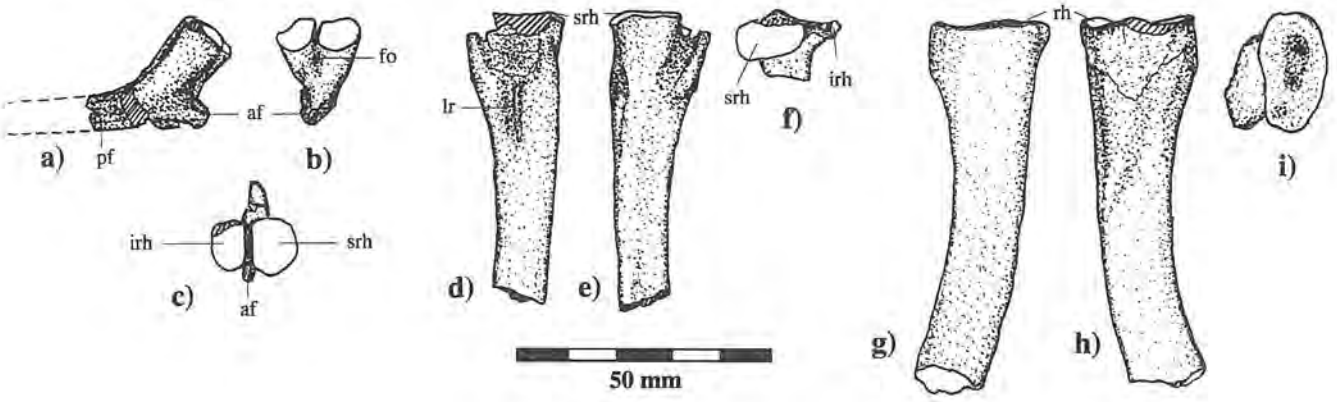

Figure 5: Posterior cervical, posteriormost cervical and pectoral ribs. Posterior cervical rib BRSUG 26539/29 in ***a)*** *right lateral* ***b)*** *anterior and* ***c)*** *proximal views; posteriormost cervical rib BRSUG 26539/31 in* ***d)*** *anterior* ***e)*** *posterior and* ***f)*** *proximal views; pectoral rib BRSUG 26539/37 in* ***g)*** *anterior* ***h)*** *posterior and* ***i)*** *proximal views. Abbreviations:* ***af****, anterior flange;* ***fo****, foramen;* ***irh****, inferior rib head;* ***lr****, longitudinal ridge,* ***pf****, posterior flange;* ***rh****, rib head;* ***srh****, superior rib head*

stresses in the ventral portion of the plesiosaurian vertebral column or due to the degeneration of the intervertebral discs, as discussed by Hopley (in press).

Cervical vertebrae

The specimen contains 22 cervical vertebrae, 20 of which have been preserved with the vast majority of their morphology intact. The cervical neural spines are small, highly erect and angular — there is no posterior curvature to the tip of the anterior neural spine as is common in most Lower Jurassic plesiosaurs (Storrs 1997; Storrs and Taylor 1996). When viewed in horizontal longitudinal section (HLS), the cervical vertebrae display shallow V-shaped articular faces and an angular contact with the lateral surfaces (see Hopley 1999), indicating an affinity with the elasmosaurid morphology of Brown (1993).

Cervical ribs

Each cervical centrum bears sub-equal dorsal and ventral articular facets fused firmly to the double-headed (dichocephalic) cervical ribs and separated by a narrow foramen. Each cervical rib has an anterior flange and posterior flange, the two projections being sub-equal ('hatchet-shaped') in the anteriormost vertebrae (Fig. 4a) with the posterior flange becoming increasingly dominant posteriorally (Fig. 5a–c). The cervical ribs consistently articulate with the ventro-lateral surface of the centrum until the articular facets are seen to move dorsally in the last two cervical vertebrae BRSUG 26539/21 and 22 (Fig. 7a–b).

Dorsal vertebrae

Two true dorsal vertebrae are preserved in perfect articulation immediately behind the four pectoral vertebrae (Figs 7a and 8). Neural spine length accounts for over 50% of the vertebral height, indicating that the dorsal spines are proportionally longer than the cervical spines (Hopley 1999). Each neural spine is rectangular in shape with a gently arched tip in lateral view. The dorsal centra are proportionally shorter relative to diameter and have flatter articular faces than the cervical centra.

An unusual neural spine cavity at the dorsal extremity of the neural spine is up to 5mm deep and contains a shallow anterior and posterior pit (Figs 6a, b, e, 7b–d and 8). Immature individuals may show superficially

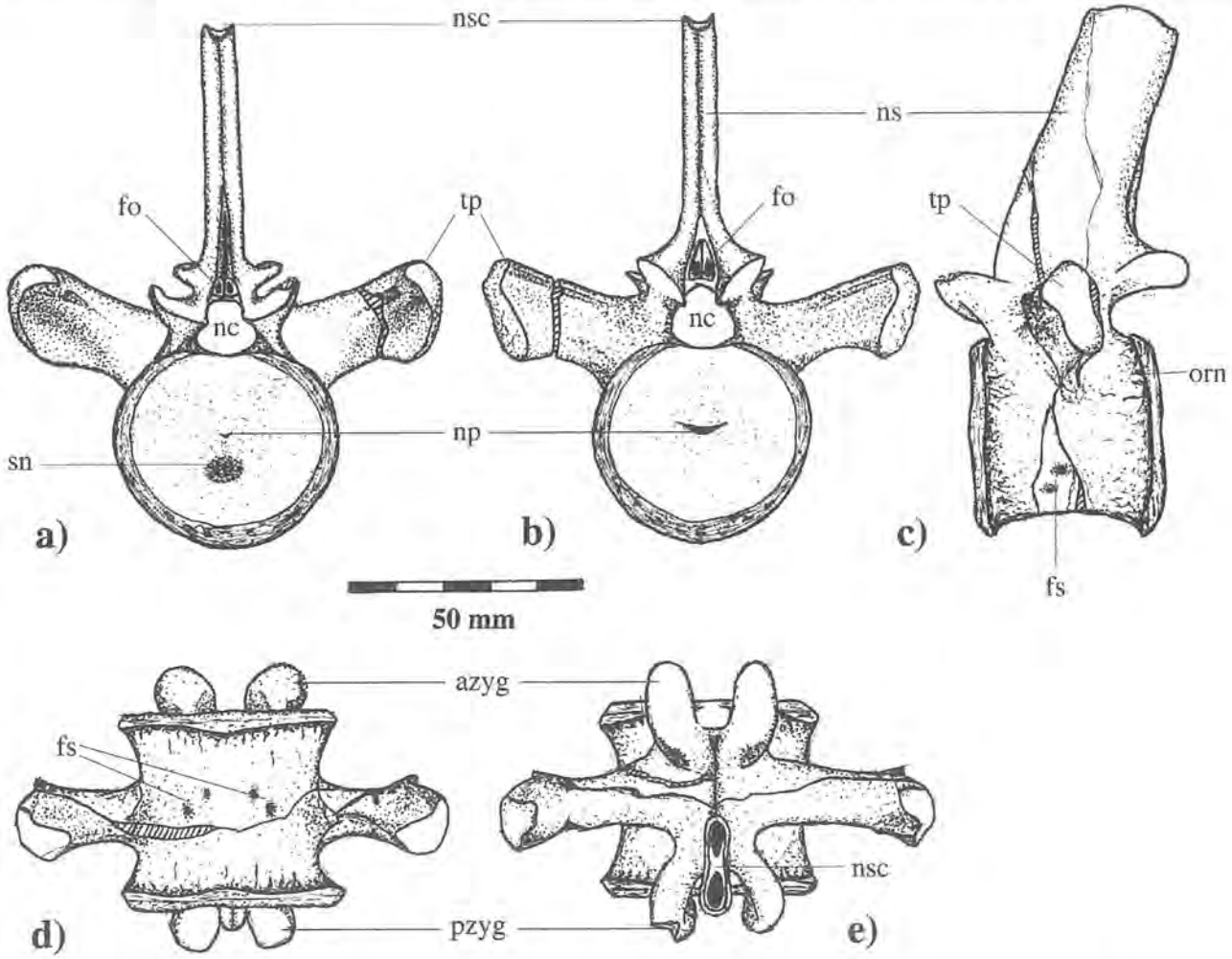

Figure 6: First dorsal vertebra of Sinemurian Plesiosaur. BRSUG 26539/27 in ***a)*** *anterior view* ***b)*** *posterior view* ***c)*** *left lateral view* ***d)*** *ventral view and* ***e)*** *dorsal view. Abbreviations:* ***azyg****, prezygapophysis;* ***bna****, base of neural arch (neurapophysis);* ***fo****, foramen;* ***fs****, subcentral foramen;* ***nc****, neural canal;* ***np****, notochordal pit;* ***ns****, neural spine;* ***nsc****, neural spine cavity;* ***orn****, rugose ornament;* ***pzyg****, postzygapophysis;* ***sn****, Schmorl's node;* ***tp****, transverse process. Damage indicated by shading*

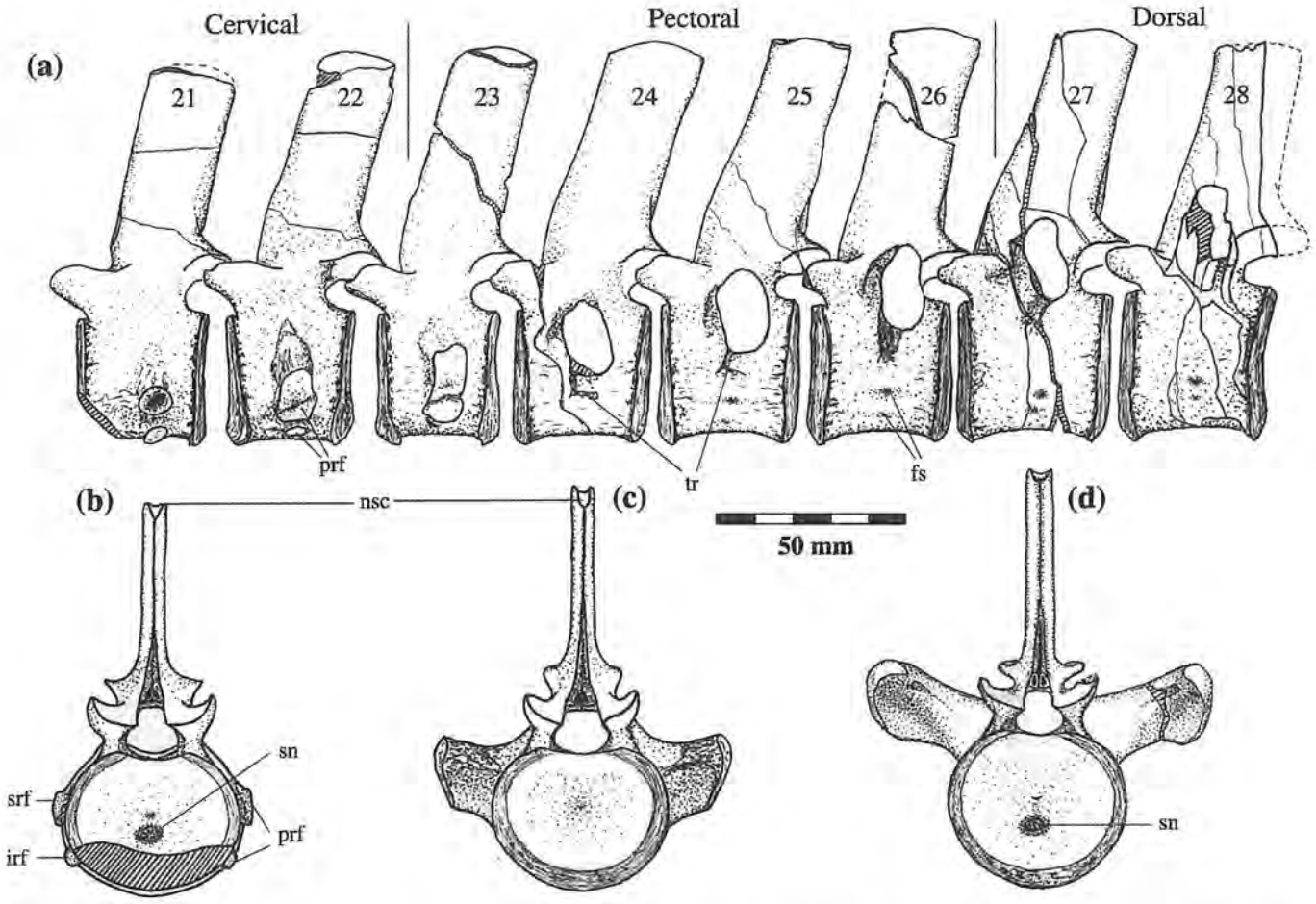

Figure 7: Sequence of articulating cervical, pectoral and dorsal vertebrae BRSUG 26539/21–28. ***(a)*** *BRSUG 26539/21–28 in left lateral view;* ***(b)*** *BRSUG 26539/21 in anterior view;* ***(c)*** *BRSUG 26539/24 in anterior view and* ***(d)*** *BRSUG 26539/27 in anterior view. Abbreviations:* ***fs****, paired foramina subcentralia;* ***irf****, inferior rib facet;* ***nsc****, neural spine cavity;* ***prf****, paired rib facets;* ***sn****, Schmorl's node;* ***srf****, superior rib facet. Damage indicated by shading.*

similar cavities due to the rotting away of non-ossified cartilage at the tip of the neural spine. However, the internal surfaces of the neural spine cavities are lined with 1mm thickness of cortical bone which provides structural support to the tip of the spine, indicating that the entire neural arch has been preserved. The well ossified neurocentral and cervical rib sutures suggest that BRSUG 26539 is a mature individual (see above), so it is unlikely that large areas of cartilage were present when the animal died. A possible explanation is that each cavity is a groove along which the nuchal ligament or an associated structure was attached to the tip of the dorsal vertebrae to support the neck and tail (M.A. Taylor 1999, pers. comm. and Alexander 1989).

Dorsal ribs

Fragments of twelve pectoral/dorsal ribs have been preserved (Figs 8 and 9). The longest fragment is 180mm; however no rib is preserved in its entirety. Each rib is single-headed, gently curved and expanded in proximal width. The rib heads are concave and articulate neatly with the transverse process of the respective centrum. The distal surface of the dorsal ribs does not expand in diameter.

Posteriormost cervical vertebrae

The two posteriormost cervical vertebrae (BRSUG 26539/21 and 22) have paired rib facets (Fig. 7a, b) on the lateral surface of the centrum, enabling them to be classified as cervical vertebrae. The paired rib facets are dominated by the dorsal superior rib facet (Fig. 7a, b) and the two facets have moved dorsally to the lateral surface of the centrum. The transition to single-headed (monocephalic) transverse processes characteristic of true dorsal vertebrae is gradual, as the remnants of the ventral inferior rib facet survive to at least the second pectoral vertebra. Both the neural spines are elongate and rectangular and exhibit the neural-cavity at the tip of the neural spine (Fig. 7) and therefore share morphological affinities with the dorsal vertebrae.

The two corresponding posteriormost cervical ribs BRSUG 26539/30 and 31 are dichocephalic, but the dorsal superior rib head dominates with an articular surface over eleven times greater than the articular surface of the inferior rib head in the posteriormost rib (see Fig. 5d–f). The general morphology of these ribs resembles the dorsal ribs being gently curved, elongate and lacking the anterior flange possessed by all cervical ribs.

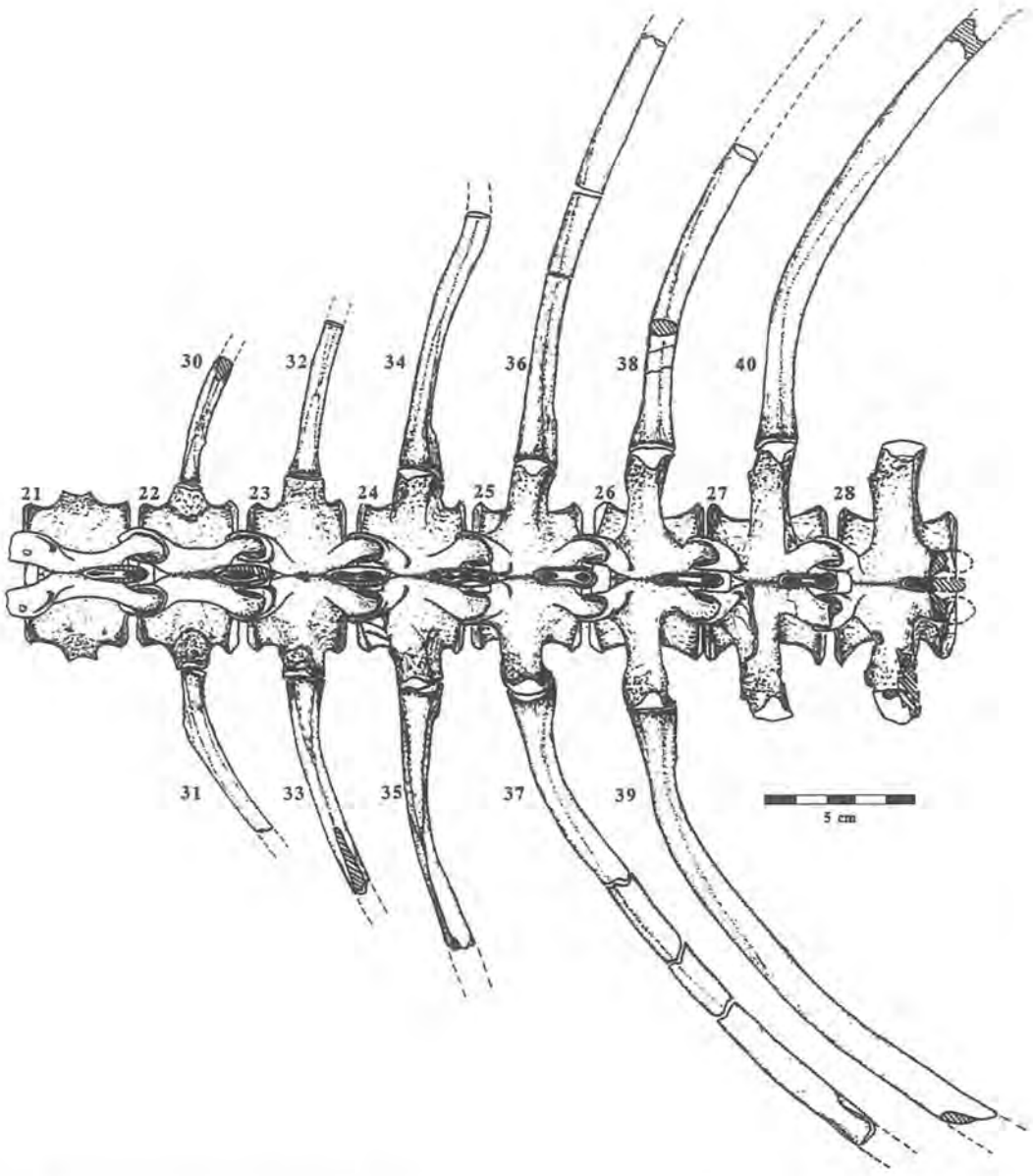

Figure 8: Reconstruction of pectoral and dorsal vertebrae and ribs (BRSUG 26539/21–28 and BRSUG 26539/30–40)

These ribs have a unique sub-triangular morphology in proximal cross-section due to the presence of a longitudinal ridge (Fig. 5d) on the mid-anterior surface. This ridge fades away within 30mm of the superior rib head.

Taxonomy

Vertebral Length Index

Relative neck length in the Plesiosauria has long been recognised as of taxonomic importance (Owen 1869) but evolutionary convergence has often obscured any phylogenetic signal. Detailed analysis of vertebral dimensions was first undertaken by Welles (1942; 1952) but the taxonomic implications were not fully understood until a synthesis by Brown (1981). He discovered that a relatively long neck is usually produced by increasing the number of cervical vertebrae and increasing the proportional length of each centra and that the increase in relative length tends to occur in the anterior cervical vertebrae (Brown 1981) . Similarly a decrease in neck length leads to proportionally short cervical centra, especially in the anterior part of the neck. However, individual and ontogenetic variation and the position of a centrum within the vertebral column are all sources of variation in the proportional length of plesiosaurian vertebrae, so extreme care must be taken.

Because of these complicating factors, some researchers (e.g. Storrs 1999, pers. comm.) are sceptical of vertebral analyses, especially below the family level. However, it has been proven that if a series of ontogenetic stages (Brown 1981), a limited number of taxa (Forrest 1998) and a range of vertebral types (e.g. cervical, caudal, etc.) are all included in the vertebral analysis, a useful phylogenetic signal can be found (Brown 1981; Forrest 1998).

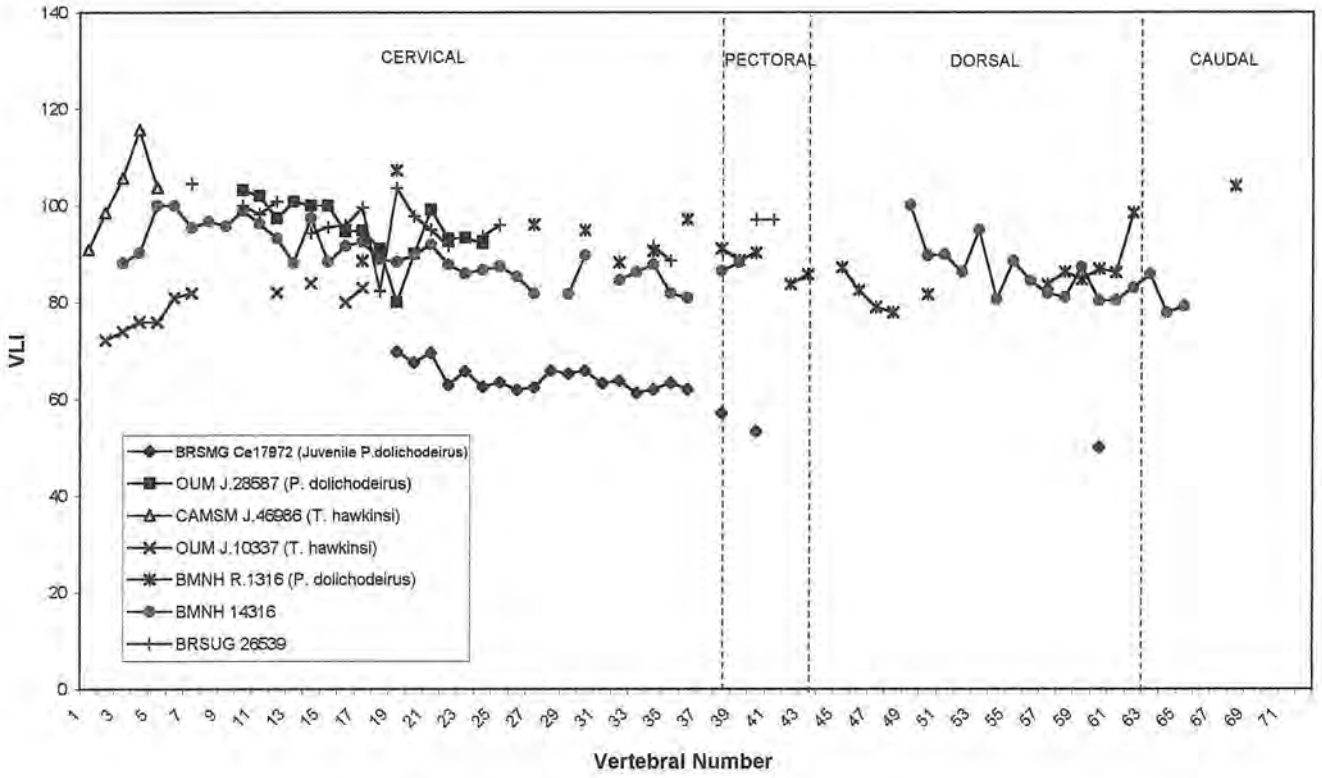

Figure 9: Vertebral length indices for seven Lower Jurassic plesiosaurs

The Vertebral Length Index (VLI), as defined by Brown (1981) is the mid-ventral length as a percentage of the average posterior centrum diameter. The average centrum diameter is the mean of the maximum width and the minimum height of the posterior articular surface. The VLI was calculated for each vertebra of BRSUG 26539 that showed each of the three necessary dimensions. When the posterior of the centrum was obscured by sediment, the anterior average centrum diameter was measured and this was recorded in the database. Dimensions that had not been preserved were recorded by a question-mark. Six English Lower Jurassic specimens of *Plesiosaurus dolichodeirus* and *Thalassiodracon hawkinsi* were measured and added to the VLI database to see if any phylogenetic signals could aid in the identification of BRSUG 26539.

Discussion

The results shown in Figure 9 are inconclusive. Each specimen indicates a gradual decrease in VLI posteriorly. Both of the *Thalassiodracon hawkinsi* specimens show a reduction of VLI in the anteriormost (approximately five) vertebrae which may reflect the moderate neck length of this species (see above). However with only two specimens, inference is limited.

Vertebral length index in the juvenile *Plesiosaurus dolichodeirus* BRSMG Ce17972 is lower than in the adult specimens but shows a similar pattern, indicating simple allometric elongation of the vertebrae into adulthood. The mid-cervical region of *Plesiosaurus dolichodeirus* OUM J.28587 shows a drop in VLI due to vertebral wedging as is evident in the mid-cervical region of BRSUG 26539. This may also be present in *Plesiosaurus dolichodeirus* BMNH 1316 although the signal is partially obscured by lack of material. This may indicate that vertebral wedging and the cervical rib processes of BRSUG 26539 are an apomorphy of *Plesiosaurus dolichodeirus*. Unfortunately these findings are undermined by the lack of data which reflects the inaccessibility of Lower Jurassic plesiosaurs due to limited preparation.

Neural spine cavities

Identification of axial material to genus or species level must be treated with caution. Table 1 lists characters that are found in *Plesiosaurus dolichodeirus* and *Thalassiodracon hawkinsi*, the two Lower Jurassic long-necked plesiosaurs known from complete specimens, and compares these features with BRSUG 26539. The cavities of the neural spine present in the eight pectoral and dorsal vertebrae (Figs 6–8) must be considered to be of taxonomic importance. Identical structures were also found in the post-cranial material of ?*Plesiosaurus dolichodeirus* BMNH 14316 and *Thalassiodracon hawkinsi* BMNH 2021*. Both specimens lack cranial material and can be classed as adult based on the closure of the neurocentral sutures. Due to the poor preservation potential of the delicate neural spine and the tendency for historical type and referred specimens to be mechanically prepared, the distribution of this morphology is currently poorly understood.

Table 1: Comparison between vertebral features of BRSUG 26539 and two common lower Jurassic taxa

	BRSUG 26539	***Plesiosaurus dolichodeirus* (data from Storrs 1997)**	***Thalassiodracon hawkinsi* (data from Storrs and Taylor 1996)**
total length	Estimated at 2.51m	'up to 3.5m'	'rarely up to 2m in length'
age and locality	Sinemurian of ?Lyme Regis	Sinemurian of Lyme Regis	Rhaetic to Hettangian of Street
number of cervical vertebrae	~35?	~40	~30
anterior cervical spine morphology	erect	curved posteriorly at tip	curved posteriorly at tip
cervical vertebrae sutures	cervical rib and neurocentral sutures are separate	cervical rib suture connected by a mid-lateral suture to the neurocentral suture	cervical and neurocentral sutures are separate
dorsal neural spine cavities	present	present in *?P. dolichodeirus* of ?Lyme Regis BMNH 14316	present in Referred Specimen BMNH 2021*
cervical rib process	present	absent	absent
mid-cervical wedging	present	present in OUM J.28587 and ?BMNH R.1316	absent
No. of characters shared with BRSUG 26539		4	2

Cervical rib processes

The two articulating cervical rib processes of BRSUG 26539/12 and 13 are referred to as pathological on the basis of their absence from the right-hand cervical ribs and from the circumstantial association with osteophyte growth, vertebral wedging and end-plate lesions (Hopley in press). However, given the lack of well-preserved and well-prepared cervical ribs in lower Jurassic plesiosaur specimens, it is entirely possible that this feature is shared by other specimens.

Specific adaptations related to the extreme neck length of plesiosaurs can be taxonomically informative in an otherwise morphologically conservative group. Cervical adaptations such as the lateral keel of elasmosaurs (Brown 1993) enabled an increase in neck musculature and, similarly, it is possible that the cervical rib processes provided a localised neck strengthening function in the mid-cervical region.

Age and locality

As discussed above, current plesiosaur taxonomy divides the Lower Jurassic long-necked plesiosaurs into one of two species: *Thalassiodracon hawkinsi* or *Plesiosaurus dolichodeirus*. *Thalassiodracon hawkinsi* comes exclusively from the Rhaetic to Hettangian of Street whereas *Plesiosaurus dolichodeirus* comes from the Sinemurian of Lyme Regis. Caution must be taken when basing taxonomy on stratigraphic constraints, but at present this division stands as a rough indicator of the taxonomy.

Total length

Total length has also been used as a taxonomic indicator, *Thalassiodracon hawkinsi* being the smaller of the two Lower Jurassic species. This is a qualitative characteristic given that *Thalassiodracon hawkinsi* BGS 51235 is approximately 2.4m in length (Huxley 1858) and the holotype of *Plesiosaurus dolichodeirus* (BMNH 22656) is 2.9m in length (Storrs 1997), leaving only a small margin for error.

Conclusions

There are currently many uncertainties in the significance of the axial skeleton in Lower Jurassic plesiosaur taxonomy. This study has failed to find any conclusive evidence for the taxonomy of BRSUG 26539. The total length, the Sinemurian age and the presence of mid-cervical vertebral wedging suggests that BRSUG 26539 has a greater morphological affinity with *Plesiosaurus dolichodeirus* (see Table 1). Dorsal neural spine cavities, mid-cervical wedging and the cervical rib processes are previously unrecorded plesiosaur morphologies which may prove to have taxonomic significance.

Repository Abbreviations

BGS: British Geological Survey, Keyworth, Nottingham
BMNH: Natural History Museum, London
BRSMG: City of Bristol Museum and Art Gallery
BRSUG: Bristol University Geology Museum
CAMSM: Sedgwick Museum, Cambridge
OXFUM: University Museum, Oxford.

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The Environmental Quality of two iron-rich streams in southern Dorset, Assessed with Macroinvertebrate Data

RINK WIGGERS and PATRICK D. ARMITAGE
Centre for Ecology and Hydrology, CEH Dorset, Winfrith Technology Centre, Winfrith Newburgh, Dorchester Dorset DT2 8ZD

Summary

The macroinvertebrate fauna of the Wood Street Stream and the Winfrith Drain was examined. Both water courses are characterised by deposits of iron-ochre and the Winfrith Drain is an artificial drainage channel. Despite the relatively spatey discharge regime of the Wood Street Stream and the unnatural origin of the Winfrith Drain, 78 taxa were recorded from both streams. The Winfrith Drain supported a more abundant and species-rich faunal community (66 taxa) than did the Wood Street Stream (47). The environmental characteristics of the sites on the two watercourses studied are not featured in the RIVPACS database and predictions of quality may be unreliable. It is not possible, however, to classify these streams as having 'bad' environmental quality because the observed communities are possibly a natural feature of small iron-rich streams in the lower Frome catchment.

Introduction

As part of a continuing series of studies of small Dorset streams (Armitage *et al.* 1994; 1996) two semi-natural watercourses characterised by iron-hydroxide deposits were investigated. These ochreous deposits are a common feature of streams draining the Tertiary sands and gravels of the Lower Frome valley. The objectives of the study were to survey the benthic macroinvertebrate fauna and to use the data to assess the environmental quality of the stream and compare it with other small streams in the area.

Study Area and Methods

Two streams were selected for the study.

Winfrith Drain

This short watercourse (Figure 1) arises at an altitude of 20m and drains water from Winfrith Technology Centre, a business park (formerly Atomic Energy Research Establishment) built on acid heathland. Surface water drainage is collected on site and channelled into a concrete drain which exits the site via a culvert under the railway line. We consider the emergence point from the culvert as the source of the stream. After flowing through a more or less open stretch with trees lining the southern bank, the stream enters a small woodland and subsequently drains into the River Frome, approximately 600m downstream from the source. Samples were taken from three sites.

Site 1 is situated at the emergence point from the culvert and is characterised by a substratum consisting of cobbles and boulders with no instream vegetation. Shading is moderate.

Site 2 is 250m downstream of site 1, unshaded and with a substratum of sandy silt overlain with dense growths of *Potamogeton* and *Juncus* at the stream edge.

Site 3 is 500m downstream of site 1, just below a road bridge and densely shaded. The substratum consists of a sandy silt deposit overlying, in part, the concrete foundation of the bridge.

Faunal samples were taken in winter (February 15 1999), spring (April 21 1999), summer (June 23 1999) and autumn (October 25 1999).

Wood Street Stream

This arises at an altitude of 25m and flows for approximately 2km before entering East Stoke Fen which drains into the River Frome (Figure 1). The stream flows through woodland (mixed conifers and

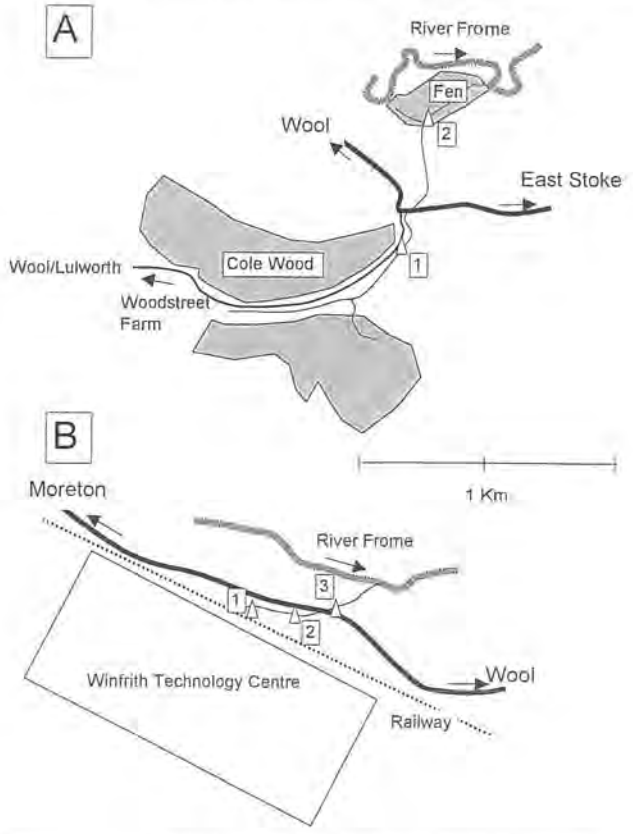

Figure 1: Sketch map showing the location of sampled sites on the Wood Street Stream (A) and the Winfrith Drain (B) in relation to the River Frome

birch) in its upper reaches and alongside agricultural land before entering the Fen. At both sites the stream was characterised by deposits of iron-hydroxide covering the substratum. Samples were taken from two sites.

Site 1 is about 500m downstream from the source with a substratum consisting of loose clay sediments overlain with peaty organic matter and, apart from a little patch of *Glyceria*, has no aquatic vegetation but woody debris is common. Both sides of the stream are lined with trees and the site is densely shaded in the summer months. The combination of local topography and surface runoff results in a spatey flow regime and the stream has cut a deep channel through the soft bed sediments.

Site 2 is close to East Stoke Fen, approximately 1200m downstream from the source with a substratum of clay, leaf litter and patches of *Glyceria*. Woody debris in the stream channel results in a wide range of flows. The stream flows through woodland but is less shaded than site 1. Faunal samples were taken in winter (February 3 1999), spring (April 22 1999), summer (June 24 1999) and autumn (October 27 1999).

Faunal samples in both streams were collected using a standard 3 minute kick/sweep technique (Wright *et al.* 1993) with a pond net of 900 μm mesh. Samples were fixed in 5% formaldehyde solution and sorted into 70% alcohol. Identifications were made to species level wherever keys and life-history stage allowed. Exceptions are the *Chironomidae* which were identified to sub-families and the *Oligochaeta*, which were not identified further. Water samples were taken for chemical analysis from both streams in April 1999.A summary of the environmental characteristics of the sites is presented in Table 1.

Results and Discussion

The fauna

Winfrith Drain

A total of 66 taxa were found at the three sites in the four seasons (Table 2). The distribution of taxa amongst major groups is given in Table 3. The groups contributing most species/taxa are Coleoptera (9) and Trichoptera (8). The composition in terms of major faunal groups and total abundance (based on the four seasons) is illustrated in Figure 2.

The three sampling sites on the Winfrith Drain show differences in macroinvertebrate composition. Site 1 is the only site with Psychomyiidae present (*Tinodes waeneri* and *Tinodes maclachlani*). The occurrence of these species is directly related to the presence of the cobbles that these caddis use as a substratum to affix their silk galleries. The caseless caddis *Plectrocnemia conspersa* (Polycentropodidae) was also best represented at this site, preferring to live underneath cobbles and stones.

Site 2 shows by far the highest total abundance being dominated by Chironomidae, Gastropoda (*Lymnaea peregra*) and Crustacea (*Gammarus pulex*, *Asellus aquaticus*). The site also showed the highest abundance of *Pyrrhossoma nymphula* larvae (Coenagrionidae). Most likely this high abundance is due to the presence of abundant submerged vegetation (mainly *Potamogeton* sp.) which the other two sites were lacking. The dense aquatic vegetation not only offers a greater surface area for colonisation but causes silt and detritus to get trapped, providing an abundant nutrient resource which may explain the high numbers of *Asellus aquaticus* which feed on decomposing organic matter.

Table 1: The location and physical characteristics of the three sites on the Winfrith Drain and the two sites on the Wood Street Stream together with water chemistry from samples taken on April 22 1999

Site Grid Reference	WD1 SY821872	WD2 SY822872	WD3 SY824873	WS1 SY863860	WS2 SY862866
Altitude (m OD)	20	19	18	18	11
Distance from source (km)	50	220	310	500	800
Slope (m/km)	5	5	5	5	5
Water width (m)	1.2	2.5	1.2	0.7	1
Mean depth (cm)	13	30	11	15	10
Surface velocity (cm/s)	25	25	9	14	14
Substratum cover %					
Cobbles	95				
Pebbles and Gravel	3				
Sand	2	85	90		
Silt and Clay		15	10	100	100
pH	5.96	5.89		5.5	5.47
Alkalinity (meq/l)	1.196	1.135		0.285	0.24
Conductivity (μS/cm)	230	226			
NO3 (mg/l)	0.501	0.396		0.82	1.16
SRP(μg/l)	ND	ND		11.3	ND
Si (mg/l)	2.13	2.3		4.61	4.62

Table 2: The occurrence of species/taxa in samples taken at three sites on the Winfrith drain and two sites at Wood Street stream based on 3 minute kick/sweep samples taken in winter, spring, autumn and spring

	WD			WS	
Taxa/Sites	**1**	**2**	**3**	**1**	**2**
TRICLADIDA					
Polycelis nigra group	0	0	1	0	0
GASTROPODA					
Potamopyrgus jenkinsi (Smith)	0	1	1	0	0
Lymnaea peregra (Müller)	1	1	1	0	0
Lymnaea truncatula (Müller)	1	0	0	0	0
BIVALVIA					
Pisidium sp.	1	1	1	0	0
OLIGOCHAETA	1	1	1	0	1
HYDRACARINA	0	0	1	0	1
CRUSTACEA					
Asellus meridianus Racovitza	0	0	1	1	0
Asellus aquaticus (L.)	1	1	1	0	1
Crangonyx pseudogracilis Bousfield	0	0	0	0	1
Gammarus pulex (L.)	1	1	1	0	0
EPHEMEROPTERA					
Baetis rhodani (Pictet)	0	1	0	0	0
Baetis niger (L.)	0	0	1	0	0
Baetis vernus Curtis	1	0	0	0	0
Ephemera danica Müller	0	0	1	0	0
PLECOPTERA					
Nemurella picteti Klapalek	0	1	1	0	1
Nemoura avicularis Morton	0	0	1	0	0
Nemoura cinerea (Retzius)	1	0	1	1	1
Leuctra geniculata (Stephens)	0	1	1	0	0
ODONATA					
Pyrrhosoma nymphula (Sulzer)	0	1	1	0	0
Cordulegaster boltonii (Donovan)	0	1	1	0	1
Aeshna sp.	0	1	0	0	0
HEMIPTERA					
Hydrometra stagnorum (L.)	0	0	1	0	1
Velia caprai Tamanini	1	0	0	0	1
Gerris gibbifer Schummel	0	1	0	0	0
Hesperocorixa sahlbergi (Fieber)	0	1	0	0	0
COLEOPTERA					
Agabus sp.	0	1	1	1	1
Agabus bipustulatus (L.)	0	0	0	0	1
Agabus didymus (Olivier)	1	1	1	0	1
Agabus paludosus (Fabricius)	0	0	0	0	1
Ilybius fuliginosus (Fabricius)	0	1	0	0	1
Hydroporus incognitus Sharp	0	0	0	1	0
Hydroporus sp.	0	0	0	1	0
Gyrinus sp.	0	0	0	0	1
Gyrinus urinator Illiger	0	0	1	0	0
Gyrinus substriatus Stephens	0	1	1	0	1
Helophorus brevipalpis Bedel	1	1	0	0	0
Limnebius truncatellus (Thunberg)	0	0	0	0	1
Anacaena lutescens (Stephens)	1	0	0	1	0
Elmis aenea (Müller)	0	0	1	0	0
Cyphon sp.	0	0	1	1	0
MEGALOPTERA					
Sialis lutaria (L.)	0	1	0	1	1
TRICHOPTERA					
Plectrocnemia conspersa (Curtis)	1	1	0	1	1
Tinodes waeneri (L.)	1	0	0	0	0
Tinodes maclachlani (Kimmins)	1	0	0	0	0
Oxyethira sp.	1	0	0	0	0
Halesus radiatus (Curtis)	0	0	1	0	0
Micropterna lateralis (Stephens)	0	0	0	0	1
Limnephilidae indet. juvs	0	0	0	1	1
Limnephilus lunatus Curtis	1	1	1	0	0
Limnephilus rhombicus/marmoratus group	0	0	1	0	0
Sericostoma personatum (Spence)	0	0	1	0	0
LEPIDOPTERA					
Pyralidae	0	1	1	0	0
TIPULIDAE					
Tipula sp.	0	0	1	1	1
Tipula maxima Poda	0	0	0	0	1
Tipula montium group	1	0	1	0	0
Tipula vittata Meigen	0	0	0	1	0
Dicranota sp.	1	0	0	0	0
Limnophila (Eloeophila) sp.	1	1	1	0	0
Pilaria (Pilaria) sp.	0	1	0	1	0
Phylidorea sp.	0	0	0	0	1
Helius sp.	0	1	0	0	0
Limonia sp.	0	0	1	0	0
CHIRONOMIDAE					
Tanypodinae	1	1	1	1	1
Orthocladiinae	1	1	1	1	1
Diamesinae	0	0	0	0	1
Prodiamesinae	1	1	1	1	1
Chironomini	1	1	1	1	1
Tanytarsini	1	1	0	1	1
SIMULIIDAE					
Simulium (Nevermannia) angustitarse group	0	0	1	0	0
Simulium (Simulium) ornatum group	0	0	1	0	1
Simulium vernum group	0	0	0	0	1
Simulium aureum group	0	0	0	0	1
OTHER DIPTERA					
Pericoma trivialis group	0	0	1	0	1
Psychodidae indet	0	1	0	0	0
Culicidae	0	0	0	1	0
Ceratopogonidae	1	1	0	1	1
Chaoboridae	1	0	0	0	0
Empididae larvae	1	0	1	0	1
Chrysops sp.	0	0	0	1	0
Ephydridae	0	1	1	1	0
Limnophora sp.	1	0	0	0	1
Dolichopodidae	0	0	1	0	0
TOTAL	29	34	43	22	37

Table 3: The distribution of species/taxa amongst major groups and total number of taxa per group at three sites on the Winfrith drain and two sites on Wood Street stream based on samples taken in four seasons

	WD1	WD2	WD3	WS1	WS2	Total WD	Total WS
TRICLADIDA	0	0	1	0	0	1	0
GASTROPODA	2	2	2	0	0	3	0
BIVALVIA	1	1	1	0	0	1	0
OLIGOCHAETA	1	1	1	0	1	1	1
HYDRACARINA	0	0	1	0	1	1	1
CRUSTACEA	2	2	3	1	2	3	3
EPHEMEROPTERA	1	1	2	0	0	4	0
PLECOPTERA	1	2	4	1	2	4	2
ODONATA	0	3	2	0	1	3	1
HEMIPTERA	1	2	1	0	2	4	2
COLEOPTERA	3	5	6	5	8	9	12
MEGALOPTERA	0	1	0	1	1	1	1
TRICHOPTERA	5	2	4	2	3	8	3
LEPIDOPTERA	0	1	1	0	0	1	0
TIPULIDAE	3	3	4	3	3	7	5
CHIRONOMIDAE	5	5	4	5	6	5	6
SIMULIIDAE	0	0	2	0	3	2	3
OTHER DIPTERA	4	3	4	4	4	8	7
Totals	29	34	43	22	37	66	47

Site 3 shows the lowest total abundance of the three sites but the faunal community is richer in species/taxa when compared with the other two sites. It was the only site where the mayfly *Ephemera danica* was found. This burrowing mayfly prefers a sandy substratum. Larvae of *Cordulegaster boltonii* (Odonata) were also most abundant at this site. This also is a burrowing species and is very often found in shaded sections of streams. More stonefly species (Nemouridae and Leuctridae) were found at this site than at the other two.

Another feature of interest here is that the crustacean *Asellus meridianus* seems to replace *Asellus aquaticus*, the only asellid found at the first two sites. This phenomenon may be due to greater competitive success in the particular conditions prevailing at this site of dense shade and absence of aquatic vegetation. Previous studies have shown this local pattern of distribution and active competition between the two species has been suggested to explain this species replacement (Gledhill *et al.* 1993) and local surveys have revealed similar exclusive distribution of the two species (Armitage *et al.* 1994).

Wood Street Stream

The total abundance of macroinvertebrates in the Wood Street stream is much lower compared to the Winfrith Drain. This is probably related to the greater acidity of the stream (pH 5.5) but may also be due to the harsher flow regime which results in extremes in discharge, although this theory is based on observed flow conditions rather than hard data. In total, 47 taxa were found at the two sites in the four seasons (Table 2). The

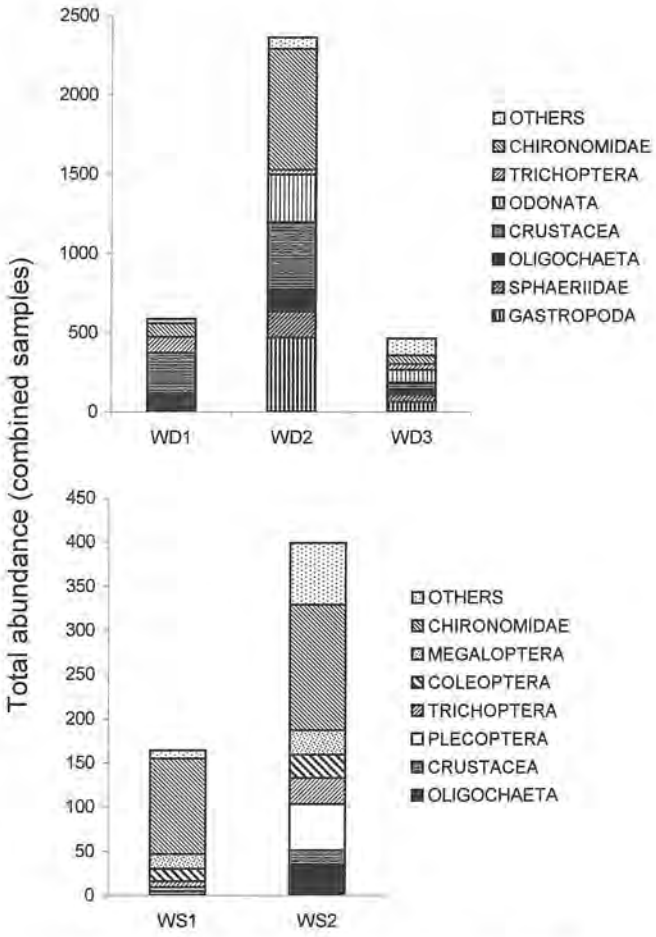

Figure 2: The faunal composition (relative numbers in major groups) at three sites on the Winfrith Drain and two sites on the Wood Street stream, based on collections in winter, spring, summer and autumn

distribution of taxa amongst major groups is given in Table 3. The group contributing most species/taxa is Coleoptera (12).

Figure 2 illustrates the composition of major faunal groups and total abundance, based on the four seasons.

Site 1 has a very low total abundance and is dominated by Chironomidae, Megaloptera (*Sialis lutaria*) and Coleoptera. Chironomidae is the most abundant group and the larvae provide a food source for the predatory *Sialis lutaria* (Elliott 1977). Of the beetles, *Hydroporus incognitus* is characteristic of peaty water in woods, and *Anacaena lutescens* is found in acid waters.

Site 2 has a higher total abundance as well as a richer species community. Unlike site 1, Plecoptera (mainly *Nemurella picteti*) were present at this site and contributed substantially to the total abundance. This site was rich in leaf litter which was trapped in small debris dams caused by fallen branches and twigs. Leaf litter is a major food source for this species (Hynes 1941). Trichoptera, mainly *Plectrocnemia conspersa*, were also more abundant at this site. There is some evidence that *Plectrocnemia* is abundant in acid streams owing to the

absence of fish predation to which large predatory insects might be more susceptible (Sutcliffe and Hildrew 1989). In contrast to Site 1, Oligochaeta were recorded in moderate numbers, Chironomidae were common with all five sub-families and tribes represented. Megaloptera were abundant and eight Coleoptera taxa were recorded, all of which are generally widespread species.

Environmental assessment

RIVPACS (River Invertebrate Prediction And Classification System), a software program developed by the Institute of Freshwater Ecology at their Dorset River Laboratory (now Centre for Ecology and Hydrology, Dorset) for the classification and prediction of macroinvertebrate communities in running water (Wright *et al.* 1993), was used to assess the environmental quality of the sites (see Armitage *et al.* 1999 for more details). A warning message is shown on the output from the program (on screen or printout) if, on the basis of the physical and chemical data, the site has a probability of less than 5% of belonging to any of the classification groups used to develop the system. The banding system developed by Wright *et al.* (1993) in conjunction with biologists in the water industry has recently been modified (Murray-Bligh *et al.* 1997) and the Environment Agency now recognises six classes where a is very good and f is bad. These bands now apply only to number of scoring taxa and ASPT.

Class	Description	Lower Class limits EQI ASPT	EQI Taxa
A	Very good	1.00	0.85
B	Good	0.90	0.70
C	Fairly good	0.77	0.55
D	Fair	0.65	0.45
E	Poor	0.50	0.30
F	Bad	0.00	0.00

(EQI = Environmental Quality Indices, Observed/Expected values)

Table 4 presents the results of the environmental assessment. Combined seasons data from the Winfrith Drain indicate quality ranging from 'fair' at WD1 to 'fairly good' at WD2 and WD3. However, it should be noted that in WD3 the two indices do not provide the same assessment and whereas the ASPT index is at the top of class c ('fairly good') the Taxa index is close to the lower class limit of class b ('good'). Considering that the Winfrith Drain is an artificial watercourse that drains off heathland and hard surfaces in the Winfrith Technology Centre, the observed indices reflect a higher biological quality than would be expected. For the Wood Street Stream the ASPT and Taxa indices provide different assessments of quality. At WS1 the taxa index indicates a class 'e' or 'poor' quality stream whereas the ASPT indicates class 'c' or 'fairly good' quality. At WS2 the Taxa index is band d ('fair') and the ASPT index is 'c' ('fairly good').

Table 4: Indices of environmental quality based on three faunal parameters (BMWP score, number of scoring taxa and Average Score Per Taxon) for all sites on the Winfrith Drain (WD) and the Wood Street Stream (WS). Also shown is the probability (%) of a site belonging to any group in the classification

Watercourse/site	WD1	WD2	WD3	WS1	WS2
OBSERVED					
BMWP score	65	89	119	50	75
Total BMWP taxa	14	18	22	10	15
ASPT	4.64	4.94	5.41	5	5
EXPECTED					
BMWP score	184.6	184.9	191.7	207.1	207.1
Total BMWP taxa	29.1	30	30.4	33	33
ASPT	6.34	6.16	6.29	6.27	6.27
INDICES					
Score index	0.35	0.48	0.62	0.24	0.36
Taxa index	0.48	0.6	0.72	0.3	0.45
ASPT index	0.73	0.8	0.86	0.8	0.8
Taxa band	d	c	b	c	d
ASPT band	d	c	c	c	c
Probability (%)	<0.1	<0.1	<2.0	<2.0	<5.0

Although RIVPACS bases its classification on a wide variety of running-water sites, environments like the Winfrith Drain and Wood Street stream are not part of the database. All the sites sampled in this survey possessed characteristics which did not match those of the RIVPACS classification groups (see Table 4). Thus the RIVPACS predictions can not be used to assess the biological quality of these sites accurately. The assessment, however, indicates reduced quality but it is likely that relatively low numbers of low scoring taxa are a natural feature of small iron-rich streams in the lower Frome catchment.

Conclusions

Despite being an artificial stream, the Winfrith Drain supports a varied fauna. This is probably attributable to the proximity of the Frome that provides a colonisation pathway and the range of habitats available in the short length. The environmental assessment with RIVPACS, although not strictly valid, indicates the selected sites as being of *'fair quality'* (WD1) to *'fairly good quality'* (WD2 and WD3). WD2 shows the highest total abundance associated with the presence of dense growths of aquatic vegetation that were absent from the other two sites. The proximity of the Frome to WD3 (about 100m) contributes to a richer faunal community in terms of species/taxa present when compared to the other two sites. Twenty-one taxa were recorded only at WD3, these include two mayflies *Ephemera danica* and *Baetis niger* and two blackfly (Simuliidae) species common in the River Frome (Armitage *et al.* 1999). If we compare the faunal community of the nearby Win

Stream which also shows evidence of ochreous deposits, (excluding identifications of worms, chironomids and Sphaeriidae), the taxa richness is very similar to that of the artificial Winfrith Drain (47 compared with 43) (Armitage *et al.* 1994).

Compared to the Winfrith Drain the total abundance of macroinvertebrates in the Wood Street stream is much lower. The quality indices provided by the environmental assessment indicate different assessments of quality, from *'poor quality'* to *'fairly good quality'* but again these assessments should only be considered as 'guides' in view of the lack of such sites in the RIVPACS database. WS2 has a higher total abundance and the community is richer in species and taxa. A similar shaded site without ochreous deposits on the Fursebrook Stream (Armitage *et al.* 1996) supported 53 taxa compared to 37 at WS2.

The environmental characteristics of the sites on the two watercourses studied are not featured in the RIVPACS database and hence predictions of quality may be unreliable. It is not possible however, to classify these streams as having 'bad' environmental quality because the observed communities are possibly a natural feature of small iron-rich streams in the lower Frome catchment.

Acknowledgements

We are grateful to our colleagues David Leach (chemistry) and John Blackburn (taxonomy) for their help and to Chris Barratt of Johnson Controls, Winfrith Technology Centre, for providing background information on the Winfrith Drain.

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Shorter Contributions

THE LATE BRONZE AGE GOLD NECKRINGS FROM CHICKERELL: AN INTERIM NOTE

Two gold neckrings were discovered in February 1999 with the use of a metal detector in a ploughed field near Chickerell. The two discoverers marked the location of the find, and described the objects and the context of their discovery as 'Two gold torques, together, interlinked but not 'nested', 18–20 inches below ground surface, in clay'. Thus in less than twenty words in the report of potential treasure to HM Coroner for the Western District of Dorset, the objects themselves had led to the discovery and exploration of a prehistoric site of great significance.

Under the arrangements of the Treasure Act 1996, the two neckrings were first identified and studied at the British Museum (West and Needham 2000). These two neckrings (Fig. 1), although unique in form and with an absence of applied decoration, belong to a later Bronze Age metalworking tradition (Eogan 1994). In this period Ireland and Britain received influences from ornament types that originated in both the centre and north of Europe, and appearing in this period are plain or decorated solid bar neckrings and penannular bracelets of round or lozenge shaped cross-section. However the Chickerell neckrings are a new addition to the assemblage, with their sleek profiles, the larger having a crescentic section and the smaller a slightly concave 'D' shaped section, undecorated surfaces and gentle trumpet shaped terminals with a circular flat end. The only other examples of this type from the British Isles are from Downpatrick, County Down (Eogan 1994), Greysouthern, Cumbria (Needham and Richardson 1994), and Ickleton, Cambridgeshire (Longworth 1972). All these have incised decoration of a type that can be related to a series in Finistere, France, and the Iberian peninsula (Eogan 1994, 68, fig. 31). The dating of these neckrings, due to the lack of associations, currently rests on stylistic grounds. Eogan suggests a period of currency from 1300–1000 BC, but a more limited timespan within a longer period 1200–800 BC has been argued (Needham and Richardson 1994; West and Needham 2000).

Figure 1: The Chickerell neckrings (photograph courtesy of the British Museum)

The neckrings were the subject of a Treasure Inquest on 26th July 1999, and were duly declared Treasure and claimed by The Crown. Having declared an interest in the acquisition of these unique and important objects, the Society launched The Gold Neck-Torc Appeal to membership for donations to support purchase through the Treasure Valuation Committee and the Department of Culture Media and Sport. The Appeal leaflet was mailed to membership at the end of August and, in anticipation of a high valuation, a target £10,000 was set for The Appeal, to raise a local contribution against which application to national purchase grant funds might be sought and matched (*DNHAS Newsletter* 62). The DCMS made the arrangement for the neckrings to be put to the independent Treasure Valuation Committee, 'to recommend a provisional fair market value for the torcs', on the 24th September. After a second meeting in November the Society was notified on the 18th January 2000 that, '..the Torcs from Chickerell were valued at £110,000.', and under the arrangements four months were allowed for the Society to raise the necessary funds for purchase. This valuation was subsequently agreed by all parties, the Appeal target for purchase met, and purchase grant fund support given by The Museums and Galleries Commission/V&A Purchase Grant Fund, The National Art Collections Fund and The Trustees of The National Heritage Memorial Fund of The Heritage Lottery Fund, to complete purchase and acquisition on 24th March 2000. The neckrings were placed on temporary display in the Library at the Museum from 14th April 2000, until permanent display with a full description of the archaeological context can be achieved in the Archaeology Gallery (*DNHAS Newsletter* 63 and 65, and *DNHAS Annual Report* 2000). This progress of museum acquisition was an integral and essential part of the archaeological process whereby the site and context of the neckrings was subsequently discovered and explored, and an appropriate record and archive consolidated at the Dorset County Museum for study.

During the process of acquisition all parties had agreed not to present the exact location of the site for reasons of security and site protection, but it was clearly necessary to undertake a project to explore and investigate the findspot. In September 1999 a site visit by the author was made with the two detectorists and landowner. An agreement to undertake small-scale excavations and survey was made with the landowner, provided that the location of the site remained unpublished until such time as the future of the neckrings was determined and the proposed site investigations were complete. It is therefore not possible to describe the full context of the discoveries at this stage.

The neckrings were not the first artefacts to be recovered from the site. Earlier field work had begun to identify a rich material assemblage from the Neolithic to the Romano-British period, including lithics, pottery, metalwork and coinage of the 1st to 4th centuries AD. The metalwork had been collected by the detectorists, and in 1995 samples of lithics were collected from the site as part of an ongoing research programme by the author to begin to compare prehistoric coastal assemblages with those from the chalk in the hinterland of Maiden Castle and the South Dorset Ridgeway. Thus it had been demonstrated that there was a rich settlement sequence present across the site.

In October 1999 Francesca Radcliffe was asked to undertake an aerial survey of the field, on which no archaeological features had been previously recorded. After a winter flight when the field was ploughed and nothing was in evidence, Francesca Radcliffe flew again in March 2000 and recorded, in a crop of winter wheat, a rich array of cropmarks, of which the most clearly defined was a double-ring ditch enclosure on the hillcrest. Rectification of some of the aerial images was carried out by Francesca Radcliffe using Professor Scollar's Airphoto Programme. Relative mapping of the possible archaeological features was also undertaken. As well as a double-ring ditch near the crest of the hill, a range of settlement features could be identified, including a rectilinear field system, pits, tracks and buildings. Some features were masked by deeper soils and colluviation.

The analysis of the aerial photographs provided direction for the next phase of field investigation. Paul Cheetham, of Bournemouth University, agreed to carry out a geophysical survey which was undertaken on 4–5 September 2000 using a fluxgate magnetometer across a transect 40 by 140 metres, running from the neckring find site to the double ring-ditch on the hillcrest above. This survey covered 15% of the cropmark spread, but because of a late harvest it was not possible to survey across the double ring-ditch. A further area 50 by 20 metres was also surveyed over the findspot with a caesim gradiometer, but this failed to identify the cut from which the neckrings were recovered. This survey along a shallow coombe identified, in addition to a large anomaly at the centre and near the top of the coombe, a fan of colluvium running from the large anomaly down to and across the neckring site, and an extensive linear field system. This survey provided a structural framework for sample excavations.

Between the 11th and 20th September small sample excavations were undertaken. Three small hand-dug trenches, across two of the geophysical anomalies above the site of the neckring discovery, identified a possible hut and a terrace bounded by a gully. These features, dated by the pottery to the Late Bronze Age/Early Iron Age period, could thus be contemporary with the neckrings themselves. The possible hut structure was a part of the larger geophysical and cropmark feature near the top of a shallow coombe in which a colluvial fan of deeper soils spread down to and across the point where the neckrings had been deposited. Hand trenches across the latter site failed to identify the cut from which the neckrings were recovered. The area of search was extended by the removal of the ploughsoil with a toothless ditching bucket, but no cut was found in a fine colluvial deposit over an area of 53 square metres. In discussion with the finders it was concluded that the hole from which the neckrings had been taken may have been infilled with identical material and any visible cut removed subsequently by ploughing. Although it is possible that the spot indicated by the discoverers and thus the area of search were incorrectly located, this would seem unlikely. A metre wide machine trench across the colluvium showed that this deposit was a fine clay with no marked silt banding and almost devoid of cultural material. This ancient colluvial soil was up to one metre deep, and no pottery and few lithics were recovered. Although the lack of pottery may indicate that this hillwash was not contemporary with the settlement structures excavated higher up the hillslope, it is possible that only the fine clay fraction of the settlement soils was washed downslope, leaving the cultural material behind. However, it is perhaps more likely that this deposit is a hillwash or palaeosol of greater antiquity,

incorporating only particles of charcoal, fragments of animal bone and a few fragments of cereal grain in the upper 20 centimetres. The few fragments of animal bone and charcoal may be sufficient to provide a radiocarbon date. Although these results are not conclusive, it can be suggested that the neckrings had been buried in an isolated position below a contemporary settlement and above a spring line at the head of a small side valley.

From preliminary analysis of the aerial photograph and the geophysical survey and excavation it is possible to identify an extensive complex of overlapping structures and enclosures. This included several sets of rectilinear boundary systems. From excavation it was shown that one of these was in existence by the Late Bronze Age/Iron Age period, and that this was succeeded by another on a slightly different alignment. The excavated rear portion of a probable Late Bronze Age/Early Iron Age circular hut lay at the back of a field terrace within these boundary systems. Excavated Romano-British pottery dated a further phase of activity, and from the recovered distribution of 3rd/4th century coins, one set of boundary systems can be associated with this period. One of the most prominent features visible on the aerial photograph is the double-ring enclosure, *c.* 30–35m in diameter for the outer ring and 15m for the inner, located on the crest of the hill. Initially it was thought that this represented a large fancy barrow of Early Bronze Age type, similar in size to the largest bowl barrows nearby in south Dorset, Conquer Barrow east of Dorchester (Grinsell 1959, Dorchester 6) and Ridgeway 7 on the South Dorset Ridgeway (Grinsell 1959, Weymouth 8), and ten of the south Dorset bell barrows. The pair of barrows at Clandon west of Maiden Castle are slightly smaller (Grinsell1959, Winterborne St Martin 31 and 32), as is one of those within Poundbury hillfort (Grinsell 1959 and 1982, Dorchester 3). However such barrows seldom occur in isolation, and there is no cropmark evidence to suggest the existence of a Bronze Age barrow cemetery at the Chickerell site. Perhaps it seems more likely that the circular cropmark relates to a ring-fort of a type which is well known in eastern England and which originates in the Late Bronze Age period. To date no examples have been suggested in Dorset, although square and sub-rectangular enclosures of the later Bronze Age are known for south Dorset (Woodward 1991, fig. 71). Abutting the Chickerell double ring on the south is a small square enclosure with an entrance on the south-west corner, although with a breadth of only 10–15m this may be perhaps too small for the type (Woodward 1991, fig. 72). Ring-forts of the later Bronze Age have been defined by Needham as circular ditched enclosures that are smaller than hillforts and more regular in plan (Needham 1993). These sites sometimes include double ring ditches, as at Mucking South Rings, Essex (Bond 1998, fig. 2) or Thwing (Manby 1980, fig. 9) and several are of similar size to the cropmark recorded at Chickerell. Thus the Chickerell ringwork, of 30m diameter, is one of the smallest , and can be compared with those of 36 metres at South Hornchurch, Essex (Guttmann and Last 2000), and 38m diameter at Mucking North Ring (Bond 1988). Several such enclosures , including those at Mucking and at South Hornchurch, are associated with contemporary enclosures, systems of fields and trackways, and a similar relationship may have existed at Chickerell.

The identity of the Chickerell double ring will only be proved by excavation. Although no ring-forts have been suggested in Dorset to date, a possible candidate can be suggested within Poundbury hillfort. The parch-mark recorded by Christopher Sparey Green of a double-ring with single eastern entrance was identified in 1976 as another barrow in a group of three (Grinsell 1959 and 1982, Dorchester 11; Sparey Green 1987, fig. 4). However, with a diameter of 30–35m for the outer ring, an entrance to the south-east and its association with a later Bronze Age linear ditch immediately to the east it can be seen to be contemporary with the Chickerell example. A square ditched enclosure of a suggested Middle to Late Bronze Age date lies *c.* 100m to the north. The linear boundary separates the Poundbury double-ring from the large round barrow (*Op cit*, Dorchester 3) with a smaller ring ditch to the north-east (*Op cit*, Dorchester 12). This deliberate separation can perhaps be seen to favour differing functional associations for the two sets of structures, i.e. settlement and cemetery. Thus a Late Bronze Age ring-fort can be argued for the double-ring.

It had been hoped to gain further data on the complex at Chickerell from systematic fieldwalking across the site after ploughing and seeding in October 2000. However, the exceptionally heavy and near continuous rainfall did not allow such a survey to be undertaken, and this has been postponed until 2001. With further geophysical survey and sample excavation in 2001 it is hoped to bring this initial site study to a more satisfactory conclusion.

Acknowledgements

The acquisition of the neckrings, the subsequent fieldwork and excavations, involved many institutions and individuals. All are thanked, particularly the Council of the Society and the great deal of financial support and voluntary input from members. The fieldwalking in 1995 for lithic scatters was undertaken by Nigel Chapman. Fieldwork in 2000 has been undertaken with sixteen volunteers and members of the Society, under the supervision of Paul Martin and Karen Rumsey. Dr Ann Woodward provided specialist input to pottery studies and other aspects of research. Pat Hinton is currently undertaking the study of the environmental samples. Ron Howse and Bob Acton, discoverers of the neckrings, provided a great deal of assistance to the excavations. The landowner was most helpful in many ways and was pleased to allow access after a late harvest. Francesca Radcliffe and Paul Cheetham are particularly thanked for their input to the project, and Francesca Radcliffe thanks Giles Romanes for first spotting the cropmark and immediately flying again so that she was able to make the all-important photographic record. Francesca also thanks Ross Dalgleish for his assistance with the rectification of the aerial photographs. Stuart Needham gave much invaluable advice and kindly commented on this paper. This project would not have been possible without the help of many members of the Dorset Natural History and Archaeological Society, and the donors to The Gold Neck-Torc Appeal and the grant-giving bodies which made the purchase and acquisition of the neckrings possible. The fieldwork was supported by an anonymous donation and with a grant from the Dorset Archaeological Committee.

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Peter J. Woodward

EVALUATION EXCAVATION, BADBURY ROMANO-CELTIC TEMPLE. INTERIM REPORT

This is an interim report on the 40m by 1.2m archaeological evaluation trench excavated between 18th–29th September 2000 on the site of the suspected Romano-Celtic Temple which lies immediately south-west of the Iron Age hillfort of Badbury Rings, Shapwick (ST 960029). Previous research on this site has been published in these *Proceedings* (Papworth 1996, 134).

Geophysical survey

The initial resistivity survey of the site has been followed up by a fluxgate gradiometer survey of the earthworks, carried out by Geoffrey Brown. His work has revealed the 18m diameter ring ditch surrounding the1.4m high round barrow that lies on the west side of the temple enclosure (ST 96040300) and evidence for two, possibly three, smaller burial mounds that lie nearby. One ring ditch, 10m in diameter, lies 15m north-west of the large barrow. Its north-west side has been cut by the side ditch of the Badbury to Dorchester Roman road. Another ring ditch lies 25m south-east of the large barrow with a diameter of 8m. It can be seen on the ground as a faint swelling 0.2m high. Traces of another ring ditch, 10m in diameter, can be seen on the geophysical plot within the temple enclosure 15m east of the large barrow. This feature was picked up as a parch mark by Brian Pybus in his plot of the temple site in 1975 (Pybus 1975).

These barrows, in addition to those already recorded at Badbury Rings (RCHM 1975, 63) indicate that the area was already sacred in the Early Bronze Age. Other Romano-Celtic temple sites have been found in close proximity to burial mounds and the temple at Brean Down, Somerset, is a good example of this as it lies next to the largest round barrow on the Down (Apsimon 1965).

The gradiometer survey also reveals a series of linear ditches aligned south-west to north-east roughly in line with the Roman road.

Interim results of the excavation

The excavation took place primarily to determine the survival of Romano-British deposits revealed by debris thrown up in mole-hills. This debris has attracted the attention of metal detectorists who have removed an unknown quantity of artefacts from the site in the last 20–30 years.

It was the effect of the mole disturbance and activity by metal detectorists on the archaeological stratigraphy that was of particular concern but the excavation also enabled a better understanding of the past use of the site and provided information to enable better conservation management of the temple.

The evaluation trench was aligned north to south and sited to pick up features revealed by geophysical survey. The suspected temple area was defined by an eight-sided boundary 60m in diameter, thought to be the remains of a wall that enclosed at least two buildings. The largest building lay near the centre of the enclosed area and the second building lay against the south side of the enclosure boundary. The north end of the trench was located across the centre of the 25m square central building. The trench ran south and down a gentle slope to cross the short axis of the second building. The pattern of high resistance geophysical readings indicated that the debris from the southern building was spread over an area measuring15m long and 8m wide. The trench crossed the enclosure boundary and continued 5m further south to try to pick up a linear feature indicated by the fluxgate gradiometer survey.

The topsoil was a dark brown-black humic loam 0.16m deep at the north end of the site but thinning to 0.10m thick at the south end. Within this layer was a shilling dated 1922 and several lead bullets dating from the end of the 19th century, when the area was used as a rifle range. All the artefacts that have been identified from below this layer date to the Romano-British period or earlier.

At the north end of the site, the topsoil covered debris from the central building consisting mainly of mortar with occasional fragments of Purbeck limestone roof tiles and flint nodules. This rubble was very thin above the courtyard surface between the central and southern buildings and became deeper where it crossed the foundations of the southern building. The debris tumbled downslope across the position of the enclosure boundary wall but further south it was a thin scatter of stones above the chalk bedrock.

At the southern edge of the site the depth of soil was only 0.12m above bedrock. Archaeological features only survived where they cut the chalk. A single post-hole was found in this area filled with fragments of Purbeck limestone roof slates. The post-hole was square in plan and measured 0.4m wide and 0.15m deep.

At the north end of the trench there was 0.5m of demolition rubble above the surviving floor level of the central building. Above the courtyard surface, between the buildings, the rubble layer was only 0.08m to 0.05m thick and had been penetrated by mole burrows that had disturbed the buried stratified gravel surfaces below. The indication that upper layers of the yard had been removed is revealed

in the finds from the courtyard. The courtyard coins tended to date to the 2nd century, but beneath the thicker rubble mantle over the buildings the coins were 4th or 5th century.

Temenos boundary features

The remains of five walls were identified in the trench. At the south end of the site, on the line of the eight-sided enclosure, a concentration of flint nodules indicated the presence of a ruined boundary wall. This wall remnant overlay two ditches.

The southern ditch was square-cut and terraced into the chalk slope. This ditch measured 0.3m wide and cut 0.06m into the chalk on the south edge but 0.26m deep on the upper north side. It is thought to have been excavated to take a palisade of posts but there were no deeper post-holes cutting into the flat bottom of the ditch.

The upper ditch was on a slightly different alignment and it appeared that it would have converged with the southern ditch just beyond the western section line. The ditch was 1.1m wide, where it cut the chalk, narrowing to 0.6m wide at the bottom of the ditch. The ditch was 0.4m deep on the north side and 0.2m deep to the south and, like the narrower ditch immediately to the south, its floor had an even level surface.

The ditches probably represent early boundaries although the relative chronology of the ditches is unclear. The fillings of both ditches contained mortar and oyster shells and they are thought to have been backfilled in the early Roman period. The flints above the ditches were presumably the remains of the enclosure boundary wall indicated by the high resistance response on the geophysical survey.

The southern building

Only 2m north of the ditches a linear concentration of rubble and mortar, 0.7m wide and 0.15m deep, was thought to be the filling of a robber trench but it was not cut into the natural chalk and there were no *in situ* remains of the wall surviving. The best preserved wall footing was found 5m further north. It was 0.7m wide and constructed mainly of flint nodules and mortar, and survived 0.2m high above the chalk bedrock. Its survival had protected building debris and beneath this rubble, compacted earth floor surfaces were preserved for 3m on either side of the wall. The evidence for these two walls and the debris and floor surfaces confirm the position of the southern building indicated by the geophysical survey.

The courtyard

A distance of 16m separated the north wall of the southern building from the south wall of the central building. Remains of gravel deposits were excavated which indicated the sequence of courtyard surfaces that had been present in this area. Late Roman pottery was mixed with earlier Roman coins and it was clear that the archaeology of this zone of the site had been badly damaged in the past.

This destruction of yard surfaces was clearly demonstrated where the yard had once abutted the central building. The collapse of this building had protected a 2m wide band of the courtyard stratigraphy beneath a mantle of building debris. A compacted chalk floor dating to the 4th century lay above a deposit of Purbeck limestone chippings which covered a floor of flint, limestone, chalk and clay tile fragments with a 2nd century coin embedded in it. This lower surface was not excavated.

The central building

The walls of the central building were parallel, concentric and spaced 3m apart. The south wall was 0.9m wide and the inner wall 1.0m wide. Both had been robbed for building stone after the site had been abandoned and there were only thin bands of mortar and fragments of mortared stone surviving below the robber trenches.

Between the south or outer wall and north or inner wall was a compacted chalk floor 0.16m deep. A similar floor survived between the inner wall and the north end of the trench but this was thicker, being 0.25m deep. This chalk floor had been cut away by a robber trench at the north end of the site but the reason for this 2.5m wide excavation was unclear, unless it was to remove some structure from the centre of the building. On the surface of the chalk floors and within the filling of the robber trenches were coins of the 4th and early 5th centuries.

The chalk floors were removed to reveal a floor of flint, limestone and clay tile fragments between the inner and outer walls (similar to the lower courtyard surface). To the north of the inner wall, the remains of various mortar floors were found below the chalk floor. These layers were covered by a thin soil layer that contained 2nd-century material.

One of these mortar surfaces, seen in plan, was on a different alignment from the central building walls and appeared to have subsided into a buried feature. This subsidence had then been backfilled to create a new level floor surface. A coin was found embedded in this sunken mortar floor of 1st or 2nd century type. It has not been closely dated at this stage.

Below the robbed area within the central building was a circular post-hole 0.3m in diameter, with, on the south side, the remains of a structure of mortared chalk, flint and limestone. Only a small part of this central area was seen and the purpose of these wall remnants is unclear.

Conclusion

The evidence from the central building would support the view that the remains represent a Romano-Celtic temple although there were no specifically votive objects found during the excavation.

In addition to the coins, an interesting concentration of finds from the site comprised remains of small New Forest ware 'poppy-head' beakers. Miniature beakers have been found at other temple sites. Vessels like these are thought to have been sold to pilgrims who used them as containers for their offerings (Woodward 1992, 69).

The plan of the central square building, with its two concentric walls, compares well with the plans of other known temples. The following description is based on the excavated evidence and the generally accepted interpretation of Romano-Celtic temple sites. At Badbury, it is probable that the inner wall formed the inner room or *cella*, *c*.15m square, which contained the shrine. This may have been a two storey building constructed of heathstone, decorated with the painted plaster found in this area and roofed with Purbeck limestone slates. The outer wall defined an *ambulatory* that surrounded the *cella* and was a 3m wide covered walkway.

The south building may have been the priest's accommodation, a stables or shop selling votive offerings. The finds give no clear evidence for its use. Only a moderate amount of pottery was found in comparison with many Roman sites, much of it in small fragments. The pottery was found mixed with some animal bone and oyster shells and indicated that food was prepared in the area. A pair of bronze tweezers, an iron knife, a bronze finger ring with key attached, and nearby two fragments of horse harness, including an iron bridle and a pewter/gun metal terret, were found in and around the south building.

The site's position beside the Roman road to Dorchester on the south-west side of Badbury Rings is significant as it could be visited by travellers as they journeyed to and from the local market centre at Shapwick (Papworth 1995, 133). The temple lies beside the ancient local tribal centre represented by the hillfort and it is likely that the temple occupied a position already sacred at the Roman conquest and that the buildings continued to be used until the end of the Roman period.

The excavation has revealed the thin covering of soil across the site and the vulnerability of the archaeology to further stratigraphic damage. A work programme to conserve the site will be formulated as a consequence of this evaluation.

Acknowledgements

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Martin Papworth
The National Trust

SURVEY AND EXCAVATION OF AN ENCLOSURE AT EAST HOLTON, WAREHAM ST MARTIN

Introduction

In 1992 N.H. Field set out the evidence for a Roman road from Lake Farm (Corfe Mullen CP) to Wareham. A stretch of this route was believed to cross Holton Heath (Wareham St Martin CP) on a line almost parallel with the A351 but a little less than 1km to the south-east. Field proposed that two rectilinear earthworks on the Holton Lee estate (Fig. 2, A and B) were Roman forts associated with the road (Field 1992, 143–8). The Trustees of the Holton Lee Estate invited Bournemouth University to test this hypothesis by field survey and sample excavation. The programme

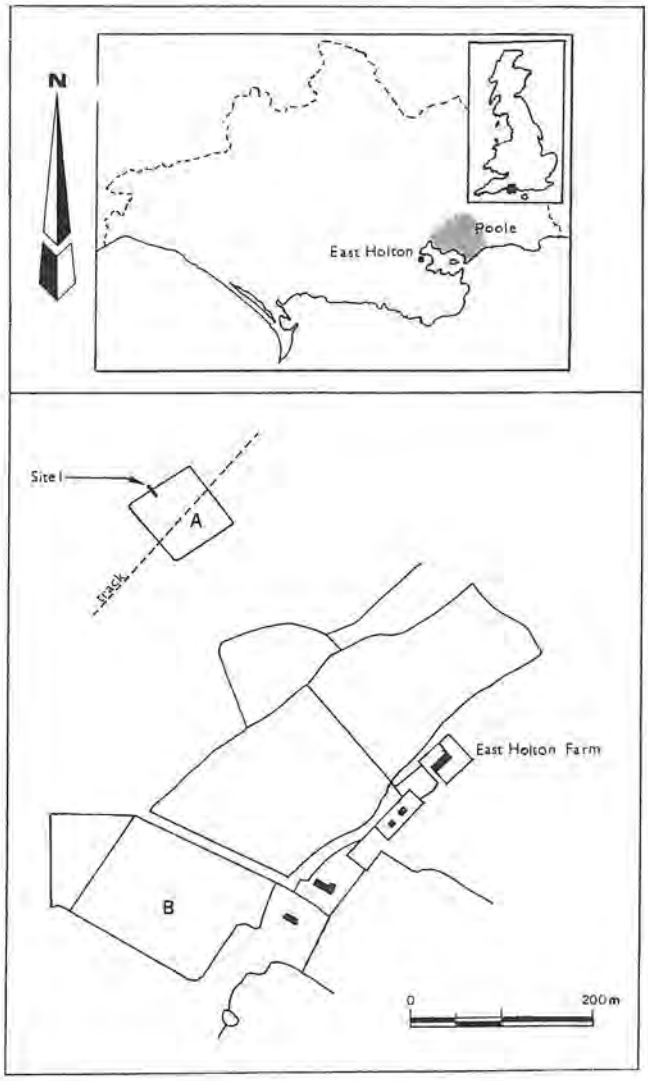

Figure 2: Location plans (after Field, 1992 and with additional details)

of work was carried out in the wider context of an archaeological study of the Holton Lee Estate and its littoral.

Location and description

Field's Site A was chosen for the initial investigation (Fig. 2, after Field). Site inspection revealed it as a rectilinear earthwork situated on open heathland approximately 400m north-west of East Holton Farm (NGR 396000 091700). A stand of coniferous trees lies within 100m to the south and the River Sherford flows eastwards into Lytchett Bay 500m north and east of the site. The river has been canalised as a part of a 19th-century land reclamation and irrigation scheme. Associated drainage leats are ubiquitous, though not within the vicinity of Enclosure A.

The Enclosure A earthworks comprise an external ditch with an inner bank enclosing 0.6 hectares, or approximately one-and-a-half statute acres. Field's plan of the enclosure shows it as having rounded corners and this would have been consistent with the form of a Roman military camp (Field 1992, 144–5). A vehicle trackway now cuts across the enclosure from south-east to north-west and this disturbance could have been responsible for obliterating important diagnostic features such as original entrances.

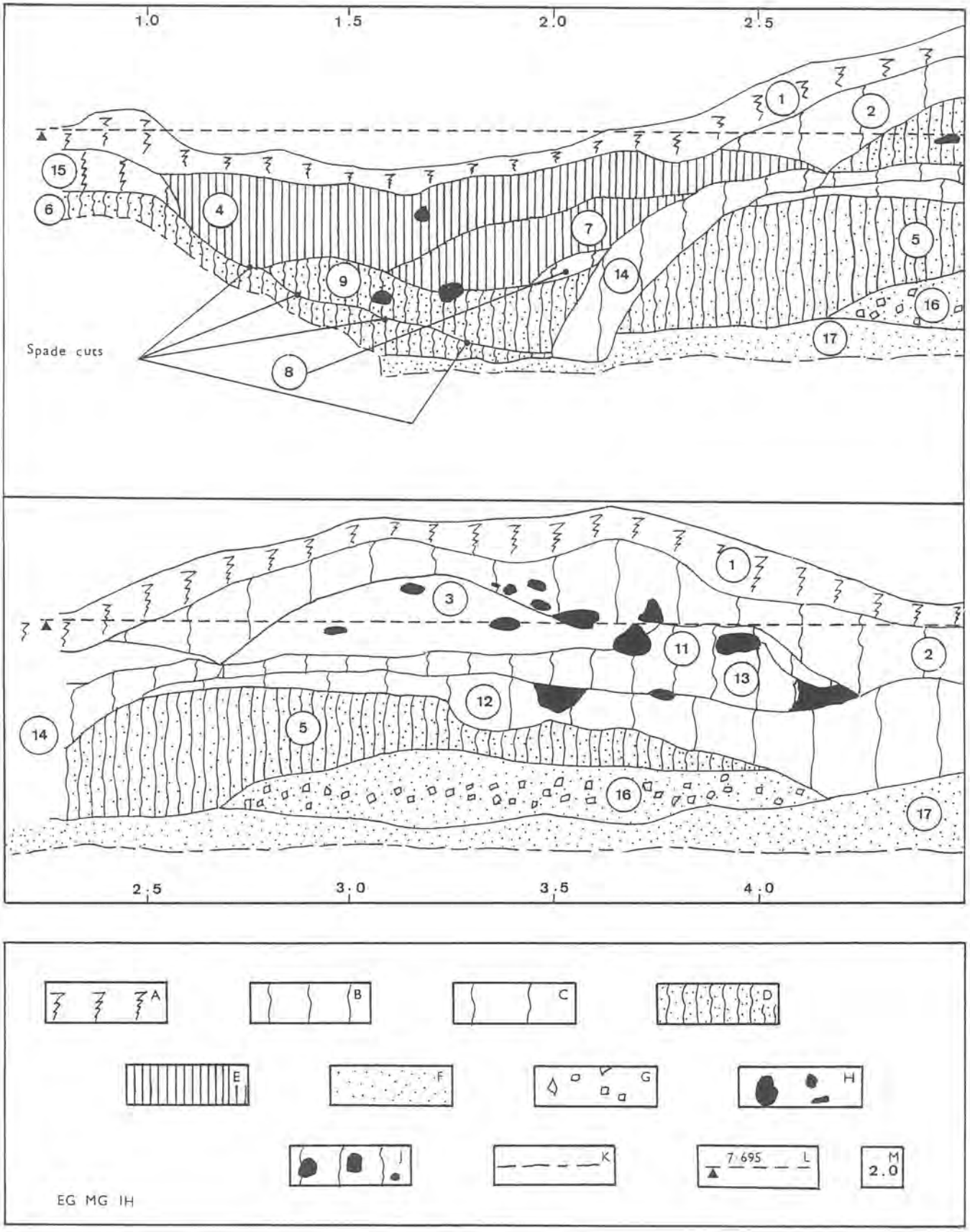

Figure 3: Ditch (above) and bank (below). South-west facing section through Enclosure A ditch. Key: A = topsoil, B = sandy loam, C = loamy sand, D = sandy clay loam, E = loam, F = sand, G = sand with pebble inclusions, H = surface stones, J = grit stones within sandy loam matrix, K = extent of excavation, L = datum line (7.695m), M = section measurements in 0.5 gradations

Geology

The whole of the parish of Wareham St Martin comprises acid heathland soils over Bagshot Beds (RCHME 1970, 326). At East Holton there are extensive coastal mudflats and reed beds.

Archaeological and historical context

A desk-based assessment produced a limited amount of contextual evidence. Holton is listed in the Dorset Domesday Book (Morris 1983) as a small estate of half a hide. Mills (1998, 88–9) suggests that the place-name might derive from Old English *holt*, a wood, and substantial oaks still stand close to the shoreline. RCHME confirms the antiquity of the estate but has nothing else to add (1970, 326). Enclosure A is not shown on the 1843 tithe map but it was included in the first edition of the Ordnance Survey six-inch County Series (*c.* 1870).

Excavation method

In order to determine the date, structure and purpose of Enclosure A limited excavation was necessary. With the aim of deriving the maximum amount of information with the minimum of destruction, a single trench, 1.5m wide and 7.1m in length, was cut across the ditch and bank on the north-west side of the enclosure (Fig. 2). Hand tools were used throughout. The position of the trench was adjacent to a section of the enclosure bank that had been previously damaged during the process of recent tree clearance.

Results

The excavation revealed a shallow enclosure ditch of 0.55m depth and 1.45m width. The north side of the ditch comprised a series of four shallow steps, typically with risers of 0.1m and treads of 0.25m (Fig. 3). These steps have been interpreted as spade cuts. Spoil from the digging of the ditch had been cast southwards to form a shallow internal bank. At present, this bank measures approximately 2m wide (north–south) and 0.3m high, but this does not allow for spread and it is probable that the original height of the bank was close to 0.5m (i.e. equal to the depth of the ditch).

The section through the bank revealed a complex stratigraphy that included some lumps of gritty stone at the base close to the south end (Fig. 3). These stones varied in size from 0.1m × 0.1m down to examples less than half that size. All appeared blackened as if burned but there was no evidence of associated charcoal. The formation of these stones is an example of the process of cementation.

No artefacts of any period were recovered from the trench and no surface finds have been reported.

Discussion

The shape of the ditch was unlike those that are found on Roman camps and forts (Fig. 4). These would normally have had a V-shape profile, with a slot cut into the bottom (Webster 1985, 177) whereas the Enclosure A ditch was gently rounded and without a slot. In addition, a palisade might be expected on the bank of a Roman camp but there was no evidence for such a feature at Enclosure A.

In short, Enclosure A possessed no defensive potential and its characteristics indicated that it is a comparatively modern feature. Other clues reinforce this conclusion. The site inspection had revealed that the corners of the enclosure are almost square and not distinctly rounded as indicated by Field (1992, 145). Upon each corner of the bank a low mound can be seen. These are known as corner mounds and they are typical of 18th- and 19th-century woodland enclosures. Such mounds are formed when spoil from conjoining sections of ditch becomes heaped up at one point (Rackham 1993, 114–16). A number of other Dorset woodland enclosures are mentioned by Harte who refers to them as *cuckoo pounds* or *cuckoo pens* (1986, 29).

Figure 4: Enclosure B ditch and bank facing south

Conclusion

As a result of our investigations we can demonstrate that Field's Enclosure A at Holton Lee is between 150 and 200 years old. It was created within the heathland in order to mark out an area for growing trees. These trees have since been felled and the original use of the enclosure had been forgotten. The reclassification of Enclosure A challenges the case for Field's associated Roman road but this is a separate issue that remains to be resolved. Field's Enclosure B also demands attention and these matters will be on the agenda for the 2001 season.

Acknowledgements

Our thanks to the Trustees and staff of the Holton Lee Estate and to our colleagues John Beavis and Bill Putnam for their helpful interpretative comments regarding the soils and Roman forts respectively. Emma Graham and Michael Green excavated the site and produced the section drawing (Fig. 3).

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Eileen Wilkes and Ian Hewitt
Bournemouth University

SIXPENNY HANDLEY, GOLDFIELDS FARM: INTERIM STATEMENT, 2000

Bournemouth University completed the third phase of its survey and excavation programme in a field known as East Long Ground on Goldfields Farm, near Farnham, Dorset (NGR 396900 113900). Resistivity and magnetometer surveys of the field were extended and these were used to determine the position of two areas of open excavation that are briefly described below.

Trench 1

This trench was first opened under the direction of Dr Steven Burrow in 1997 when it became apparent that it contained at least two superimposed inhumations, one of which was perilously close to the present plough soil. The site was re-opened in 1998 and slightly enlarged. It became apparent that at least one other grave was present. An east–west ditch appeared to form a northern boundary to the burial group. New magnetometer surveys in 1999 indicated that the cemetery extended westwards and it was clear that the 0.3m depth of plough soil offered little protection to shallow graves. In order to ascertain the severity of the threat and to establish a context for the cemetery, Trench 1 was extended eastwards and westwards in 2000. Two west–east graves were found to be shallow and in imminent danger of destruction. One of these was an infant burial. A further grave cut, this time on a north–south alignment, achieved a depth of 0.5m, but the upper torso of the incumbent was incomplete and there was evidence of pre-deposition damage to the skull. From this sample it was clear that the grave pits were of variable depth. Other graves remain unexcavated. A lynchet of late Iron Age or Romano-British date formed the southern boundary of the cemetery. It should be noted that the excavation of human remains was undertaken in accordance with the conditions stated with the grant of a Home Office licence.

Trench 13

At the eastern boundary of East Long Ground, a magnetometer survey showed a complex of ditches and pits that suggested the presence of a settlement. This notion was supported by a number of coin finds that were made throughout the 1990s, most of which are Late Roman (Bowd 1996). Prior to excavation, the East Dorset Antiquarian Society had undertaken field walking of the site.

Excavation did not provide convincing evidence of settlement but of note was a scatter of Late Romano-British coarsewares that were associated with an irregular hollow. North of this was a substantial east–west ditch that achieved a depth of over 1m. The ditch contained a range of artefacts including Iron Age pottery, an articulated dog skeleton, and red deer antlers with saw-marks. Some of these were stratified within the original fills of the ditch whilst others had been deposited in re-cuts.

Conclusion

The sample excavation and survey has revealed that the archaeological features within East Long Ground include a Bronze Age ditch but with a preponderance in favour of Late Iron Age and Romano-British activity. The project now moves into its post-excavation and report phases.

Acknowledgements

My sincere thanks to Andrew Meaden, the landowner, to my colleagues and the participating students at Bournemouth University, Yeovil College, Bridgwater College, and Salisbury College, and to the members of the East Dorset Antiquarian Society. In particular, I wish to acknowledge the faithful and dedicated work of my Assistant Director, Karen Rumsey; a professional throughout.

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Ian Hewitt
Bournemouth University.

EXCAVATIONS AT MYNCEN FARM, SIXPENNY HANDLEY, DORSET: INTERIM REPORT 2000

Evaluation work on this site was continued for the fifth year between 26th August and 2nd September. This season was limited to testing the nature and survival of deposits in two areas (C and D) to the north of the Roman building remains on Sites A and B (Figs 5 and 6; Sparey-Green 1996; 1997; 1998; 1999). Area C, centred at SY 97271444, has yielded no significant traces of occupation of any period but a metal-detectorist had reported a scatter of Roman coins and brooches from this northern corner of the field, near the lane to Farnham (Sparey-Green 1996, 156). Area D, centred at SY 97331433, was notable for a scatter of peg-tile debris, medieval and post-medieval pottery, presumably debris from a building at this spot. Immediately north-west lies the site of Maidment's Cottages which were in existence in the 19th century, if not earlier, and are shown as still standing on the 1901 OS 1:2500 plan. This map also shows the line of a boundary that passes diagonally through the field from its northern corner to the lane on the south-east, 90m east of the present farm. This feature was visible as a slight earthwork on air photographs prior to the ploughing of the old meadows in 1986 but now shows, after 15 years of ploughing, as a chalky band crossing the field from Site C on the north to the region of Site D.

Of the four trenches dug this season, one was on Site C and three on Site D. In the former area, the aim was to investigate the projected line of the diagonal boundary and to seek a possible context for the metal finds. In the latter, the intention was again to section the diagonal boundary and to test the survival of medieval structures in an area subject to ploughing erosion.

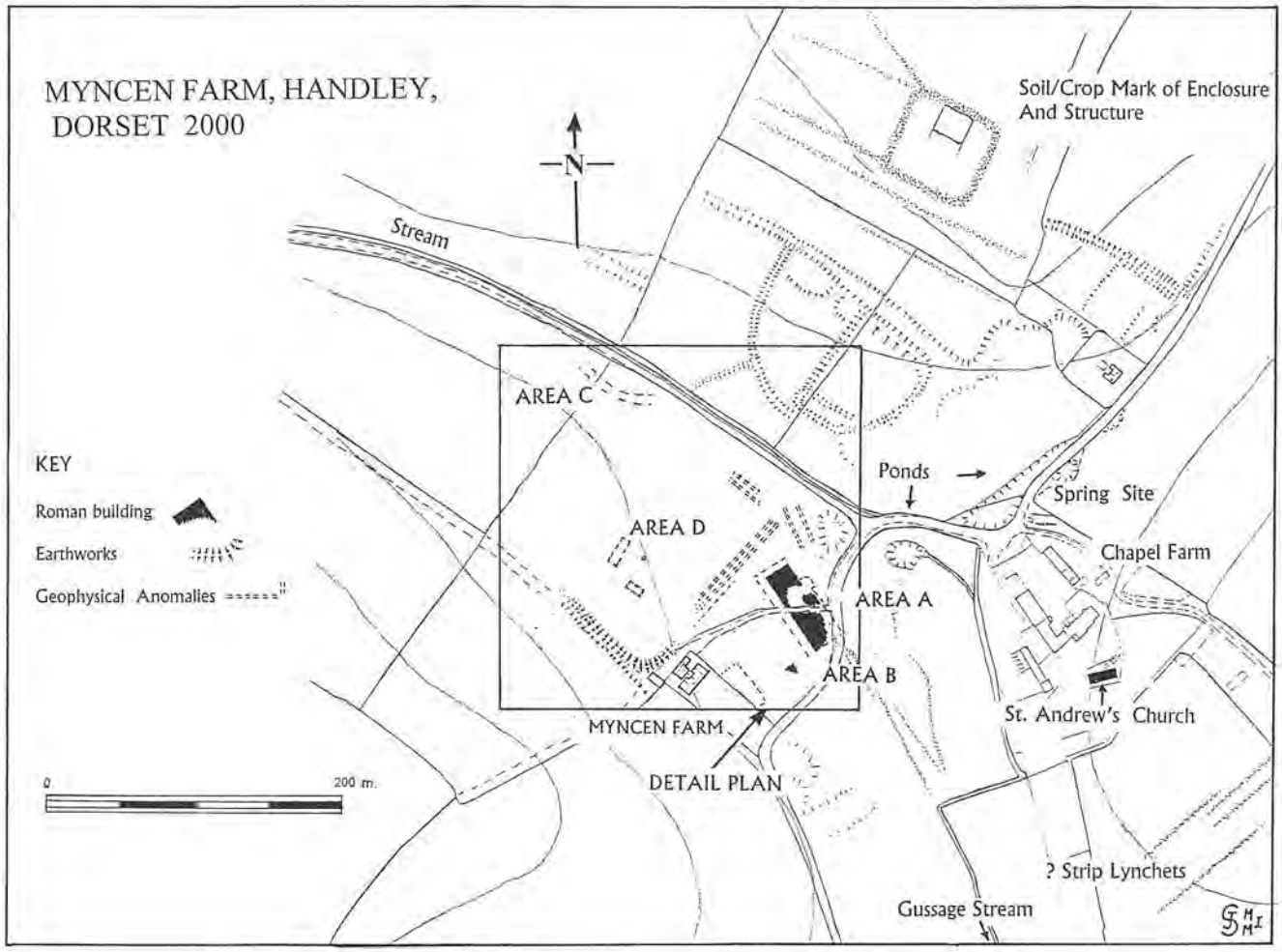

Figure 5: Location plan

The Excavation

Area C Trench 10

A trench 14m long and 2m wide was cut on a south-west to north-east alignment, approximately at right-angles to the line of the boundary and on ground rising slightly towards the west. At the western end of the trench the agricultural soil overlay comminuted chalk, a natural deposit encountered elsewhere on the site and derived from periglacial action on the bedrock. This was cut by a large feature that extended for at least 8.5m to the eastern end of the trench. At its western edge this feature was 0.5m deep, the face dropping steeply to a base which, although comprising several shallow rounded hollows, maintained a level of approximately 67.25m OD. The lowest fill was a dark silt sealed by lenses of fine chalk rubble, the upper fill a fine brown chalky silt with many comminuted flints. This had the appearance of a cultivated soil eroded into the hollow over some length of time. No artefacts were recovered from the lower fill and only rare flint flakes from the upper.

Towards the eastern end of the trench the upper fill was cut by two shallow ditches 1.8m apart, the silt in these containing sherds of Verwood-type pottery of the 19th or early 20th century. The topsoil contained little material of Roman date and no metal finds; later finds were also rare.

Soil samples from this feature have not yet been examined but its form and the nature of the silts within it suggest a natural origin as an ancient and probable prehistoric river course, lying on the western side of the ancient flood plain, approximately 30m west of the present stream. There was no sign of later prehistoric or Roman activity here but the two slight ditches coincide with the projected line of the 19th and 20th century boundary, although at this point it was so slight as to have silted up entirely and not to have been subject to recent levelling.

Site D

Two trenches 10 by 2m were cut, Trenches 8 and 9 being set at right-angles to each other and 6m apart, the intention being to section the north-eastern side of the tile scatter and the linear feature in Trench 9 and the south-eastern edge of the tile scatter in Trench 8. Trench 10 was 6m long and lay south-east of Trench 8, close to the farm track.

In Trench 8 the topsoil sealed the surface of the natural comminuted chalk, the latter cut by two linear features crossing the line of the trench at right-angles, two further shallow gullies being identified in an extension at the south-eastern end. The northern-most feature was a V-cut ditch, 1.8m wide and 1m deep, filled with silted layers of chalk rubble and containing a little occupation material of Roman date. Two possible sockets for earth-fast posts lay either side of the V-cut ditch and another lay on its eastern lip.

Parallel to this and 3.5m to the south was another substantial cut into the chalk, this being a trench 2.2m wide and 0.7m deep, the sides sloping steeply to a flat base.

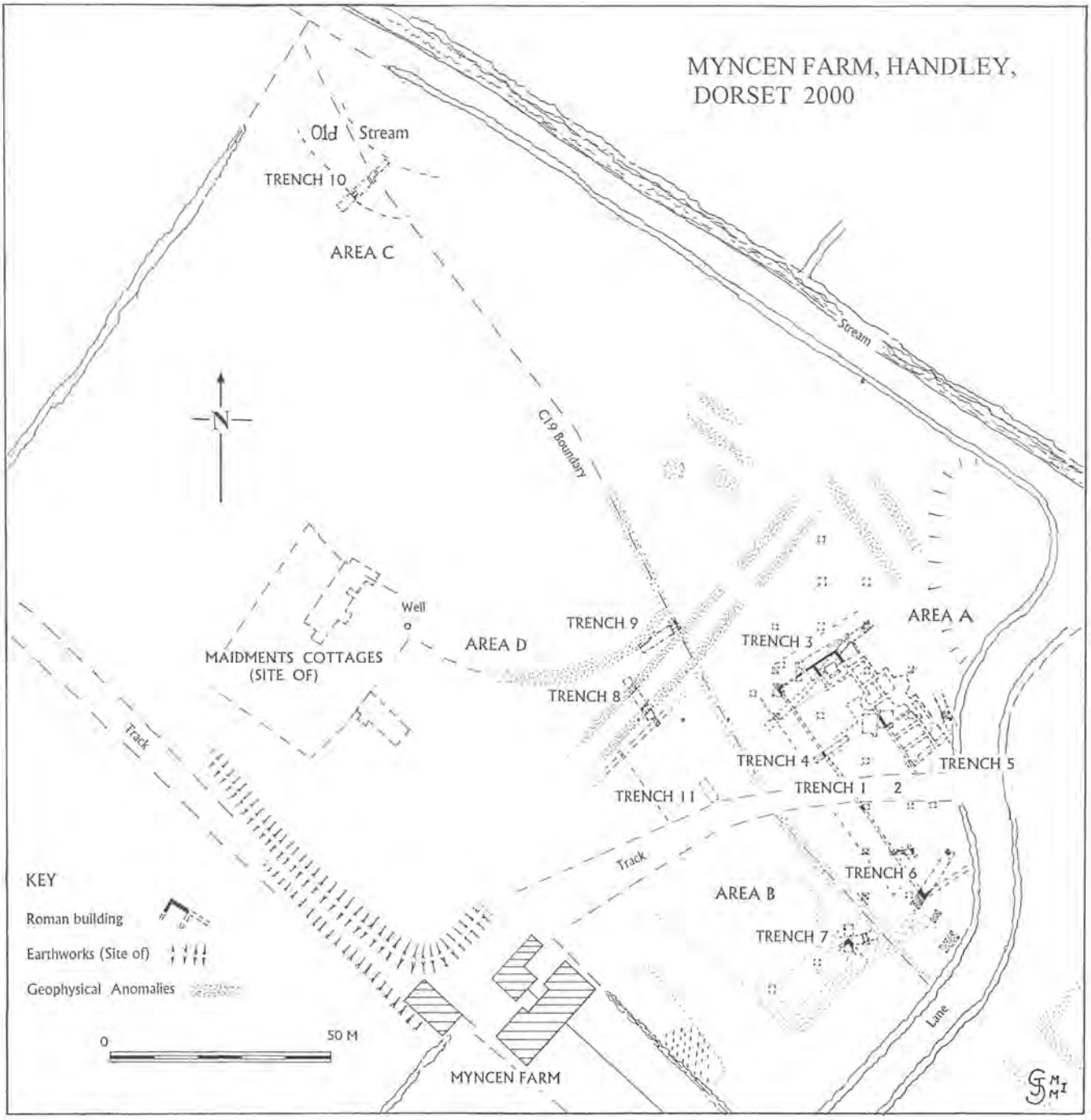

Figure 6: Plan Sites A–D

The fill was distinct from the former ditch, consisting of coarse chalk rubble flanking a central void filled with loose rubble, brown silt and flints. The fill was sterile of any occupation or building materials.

In a narrow extension 2.5m to the south-east two small V-cut gullies were exposed containing chalk rubble and dark silts; no dateable finds were recovered from these.

Trench 9 revealed the disturbed natural of broken chalk cut by a series of irregular and ill-defined features, some of which may have served to support earth-fast posts. Two possible post-holes and a length of shallow trench, 2.5m long, were identified on the north-western side and two irregular gullies at right-angles to them at the south-western end. No significant finds were recovered from the fill of these features. At the north-eastern end a rounded hollow 2m wide filled with chalk rubble was identified on the line of the diagonal boundary, the chalk sealing an old turf line and silt in the base of the ditch. Finds of 19th century date were recovered from the base. An earlier feature lay in the eastern side of this ditch but was not investigated. Overlying the possible features in the western end of the trench was the southern edge of another feature with a turf filled base sealed by chalk rubble.

The topsoil in both trenches produced quantities of peg-tile debris but little other material. No medieval pottery or tile was recovered from the features in either trench.

Trench 10 lay 11m to the south of the extension to Trench 8 and adjacent to the north side of the present track

to the farm. Beneath a hard packed layer of chalk rubble was a decayed turf line and layers of flint and dark soil filling a shallow hollow. This was probably a recent quarry similar to that found on Area A, on the same side of the track 40m to the east.

Discussion

The four trenches dug in 2000 succeeded in revealing none of the anticipated elements of the site, other than the post-medieval boundary, the major features being entirely unexpected but of considerable significance for the interpretation of the whole complex.

Firstly to dispose of the later phases of the site, the medieval and post-medieval finds in Trenches 8 and 9 can now be recognised as a scatter of debris with little *in situ* beneath, either because ploughing has completely erased any structures or because settlement here was limited in nature. Possibly the medieval focus lies closer to or beneath the site of Maidment's Cottages. The pattern of slight post sockets in the very broken natural would only be intelligible with the clearance of larger areas, but the number of such features encountered in the evaluation trenches suggest a complex phase of timber construction across the site. In Areas A and B at least this can be shown not to result simply from recent fencing activity and can, in part at least, be dated to the early post-Roman period.

Two post-medieval boundaries shown on the OS 1:2500 plan and on tithe maps have been confirmed in this evaluation and can now also be recognised on the geophysical survey. The linear feature in Trenches 9 and 10 represents a relatively recent boundary that, at least in Trench 9, had been an open earthwork until its filling with chalk in the levelling operations in 1986. Trench 10 showed that at that point no major earthwork had existed, and the boundary was of an altogether slighter nature, possibly simply a hedge with slight ditches on either side. The other chalk-filled feature inTrench 9 was of a similar nature and may be identifiable with another 19th century boundary linking this linear boundary with Maidment's Cottages. Research by Peter Irvine into the documentary evidence for the post-medieval land use and ownership will be crucial in resolving the more recent agricultural history of the site, particularly the origins of these cottages.

The hollow in Trench 10 can be identified as another relatively modern quarry which was also levelled with chalk in 1986. The hypothesis that the band of chalk coinciding with the boundary across the field was the line of an earlier road can now be discarded, the chalk and gravel being entirely imported material to level up the earthwork in 1986 (Sparey-Green 1996, 156).

From the earlier phases of the site, the main feature in Area C is almost certainly an early watercourse and an important hint of changes in the past topography of the valley floor, probably within the prehistoric period. Study of environmental samples may help to clarify the context of this eroded cut and its silting.

Although the larger cuts in Area D had not previously been encountered they can, retrospectively, be identified with linear anomalies on existing geophysical surveys and it is also now apparent that earthworks shown on older OS plans are in approximate conformity with them. The lack of dateable finds hinders interpretation but the major cuts in Trench 8 are identifiable with two linear anomalies on geophysical surveys carried out in 1991 and 1992 by Bournemouth University (Surveys GSA 91 and GSA92). From these surveys the features can be traced north-east, passing south of Trench 9 and continuing to a point 20m from the hedge. A gap in the anomalies may be apparent immediately north of the northern end of the building in Area A. Two slight traces suggest that they then returned north-west, parallel to the hedge. On the south-west, uphill, side their line was obscured by recent levelling but the projected line coincides with the eroded end of a bank shown on the OS 1:2500 map of 1901 70m from Trench 8. This bank was levelled for the present farm track but it had originally turned through a rounded right-angled corner to continue for a further 70m to the north-west. A scarp on the uphill side suggests an outer ditch on that side. Maidment's Cottages lay within the south-western half of this enclosure, the northern extent of which remains unknown.

Evidence from these three sources suggest that, in Area D and the region north and north-east from the present farm buildings as far as the lane to Farnham, an area of approximately 1.2ha.was bounded by an earthwork boundary, the southern corner and uphill south-western side of which survived as an earthwork until 1986. The southern side could measure 150m, assuming the return at the north-eastern end is correctly identified. The rectilinear enclosure was bounded by a V-cut ditch which appears to lie within the projected line of the bank, the large trench to its south either lying beneath or just outside its projected line. From the section of this trench it would appear to have held major uprights packed round with chalk rubble. The two slighter gullies would then lie outside the putative bank and palisade, their line confirmed as continuing uphill from observations during the cutting of a drain nearby.

Any interpretation of these earthworks must remain tentative but a provisional assessment cannot be resisted. This enclosure appears to be separate from the major Roman buildings in Areas A and B, the boundaries described here certainly turning northwards at one end to enclose a block of land to the north. The south-east side may measure 150m, the south-western at least 70m, an interruption in the former suggesting an entrance on that side towards the eastern corner, near the buildings. The setting of the major ditch within the projected line of the bank and the apparent coincidence of the latter with a massive timber foundation trench suggests a boundary of unusual form and of at least two phases. A sequence of palisaded boundary replaced by a bank and internal ditch on at least this south side of the enclosure is suggested, the sterile fill of the foundation trench indicating a prehistoric date, the V-cut ditch belonging to the early Roman period. The sequence of structures and the cutting of a ditch internally makes a function as a simple agricultural or settlement enclosure less likely and an interpretation as a *viereckeschanzen* or enclosure for some ritual or funerary use should be considered. The scatter of coins and brooches in the topsoil at the northern corner of the field, near the ancient watercourse discovered in Trench 10, might be consistent with a religious interpretation but the number of metal finds reported to date is, however, hardly significant and there are no pre-Roman coins or items of intrinsic value.

The site must be considered in the context of the other features revealed by aerial survey and partly visible as

earthworks (Fig. 5). The valley side enclosure proposed for Area D is roughly aligned with the puzzling D-shaped feature on the opposite side of the valley and the outline of an enclosure on the hilltop to the north-east. These three elements adjoin the Roman building in Area A and B and the spring site to the south-east, the present winterbourne bisecting the alignment. Although all three elements are presently only incompletely recorded they form a pattern comparable to that of, for instance, other enclosure complexes of the Iron Age and Roman period such as that beneath and east of *Verulamium*, a complex also set across the axis of a valley (Niblett 1999, 404–12; Frere 1983, 193–4). This parallel is reinforced by the existence of the complex of dykes and Iron Age settlement on Gussage Hill, a potential oppidum extending into this valley. Against an interpretation as part of some major native centre continuing into the Roman period is the seeming lack of coinage and metalwork of the period and the general paucity of finds. The coincidence of medieval settlement and earthworks partially mask the site and may mislead. The above must, for the moment, remain only an hypothesis worthy of testing by further survey and limited evaluation trenching.

Acknowledgements

Sincere thanks are again very much due to the landowner, Simon Meaden, who encouraged and supported this work, providing material assistance in soil removal and backfilling and in the loan of a site office. I am very grateful to Phil Roberts for his assistance in the supervision of the excavation and to Marion Roberts for supervising the processing of the finds. Elizabeth Waller and Clare and Simon Gillett again were generous in their hospitality. John and Della Day were also of great assistance in the organisation of the excavation. I am very grateful to Peter Irvine for information on his documentary research into the history of the farm. Paul Cheetham of Bournemouth University was of great assistance in providing further details of the surveys carried out previously on the site. The bulk of the site work was conducted by members of the East Dorset Antiquarian Society to whom many thanks are due for their hard work and financial support. Several members of the Society assisted in mounting a very successful temporary exhibition for visitors.

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Christopher Sparey-Green

Dorset Proceedings 122, 2000, 159–175

Dorset Archaeology in 2000

The contributions for 2000 are arranged by project type, and within those types by place alphabetically. This year's notes include reports on some work carried out in 1999.

The collaborative role of the Local Planning Authorities and the Archaeological Office, Environmental Services, Dorset County Council, is acknowledged by all contributors in those projects arising from the planning process.

ARCHAEOLOGICAL SITES ADDED TO THE COUNTY SITES AND MONUMENTS RECORD

No report of previously unrecorded sites was received for 2000.

SURVEY AND ASSESSMENTS

CHIDEOCK: SITE OF A 13TH-CENTURY MANOR HOUSE

In September 2000 an archaeological landscape survey was completed for the National Trust's Golden Cap Estate. This work included an examination of the documentary evidence relating to field names in an attempt to understand the evolution of the irregular field systems typical of this area of West Dorset. The aim of this research was to provide information for a conservation programme to protect the hedge boundaries on the Trust's farms.

In most of the parishes included in the Golden Cap Estate there were no maps or documents available that listed field names earlier than the 18th century. However, for Chideock, the archives of the Arundell and Weld families enabled some field names to be traced back to the 16th century and one field to be linked to a place mentioned in a 13th -century document.

In the Saxon period, evidence suggests that Chideock was part of a Saxon royal estate that covered an area that was also the minster territory of Whitchurch Canonicorum (Hall pers. comm.). It was still part of a royal estate in 1086 but by that time the old Saxon estate had been greatly reduced in area. Chideock probably ceased to be part of a royal manor in 1205 when King John granted this land to William de Mandaville and made him baron of Marshwood. William was a great-grandson of Geoffrey de Mandeville who had come to England from Normandy as part of the invasion army of William I.

There does not seem to have been a manor house at Chideock until 1248 when the manor was separated from Marshwood. In that year Geoffrey de Mandeville granted Chideock to Thomas le Bretthun with covenants for enough timber to build a hall there (DRO D/WCH T10/1). On the death of Thomas, the manor of Chideock was inherited by his daughter Margery who married Geoffrey de Bridport.

Their son John Gervase was confirmed in his tenure of Chideock by a charter dated 1255. In this document Sir Geoffrey de Mandeville granted the manor for a term of nine years on condition that he maintained the hall with the chamber adjoining and held courts (DRO D/WCH T10/2).

Another undated document within the archive of the Arundells of Laherne is also between Sir Geoffrey and John Gervase. Geoffrey granted the whole of the manor of Chideock to John to hold from Geoffrey for ever ('except for religious houses and the Jewish place of worship'). John was to receive the rent at the court of Coppedhull amounting to £20 a year (CRO AR 1/653, 654). The document probably dates to the end of the nine year lease begun in 1255 and the reference to the Jewish place of worship means it must date from before the expulsion of the Jews in 1290.

The document of 1255 implies that the hall and the court were in close proximity. It was customary for manor courts to be held in the hall of a medieval manor house and therefore it is likely that the manor house lay near or on the site of the court of 'Coppedhull'. This place name can be traced through documents into the 20th century.

An account roll dated 1516 (CRO AR 2/1260) records the field name le Coppyd Hyll along with other field names that had become part of South Farm by a survey of 1725 (DRO D/WCH M122). The names of the neighbouring fields Broad Mead and Lady Craste or Lady Crate are mentioned in both documents. In 1725 le Coppyd Hyll had become Great Copped Hill.

The field names of South Farm or Doghouse Farm, as it later became known, are listed in various 18th-century surveys. When the tithe map was drawn in 1843, the field was known as Coppers Hill (DRO T/CD/T). This survey locates the field north-east of Doghouse Farmhouse at (SY 430925) on a small spur of land on the lower south-west slope of Quarry Hill. It lies just above the stream on which both Frogmore and Doghouse farms have been sited. Therefore the topography of the field is suitable for occupation, and medieval buildings may have been sited there. Fieldwork may confirm or deny this.

The field name Coppers Hill is unusual and no similar name was found during the Golden Cap survey. Its association with neighbouring field names since the 16th century is strong evidence that Coppers Hill is the site of the court of Coppedhull and probably the site of the manor house before 1380 when Chideock Castle was built.

The earthworks of Chideock Castle lie 1km to the north-west of Coppers Hill. This castle was demolished after a Civil War siege in 1645 and the modern manor house now lies 0.5km north-west of Chideock Castle beside the River Winniford.

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Papworth, M., 2000 'Golden Cap Estate Archaeological and Historic Landscape Survey' (unpublished). The National Trust.
Dorset County Record Office (DRO)
Chideock tithe map 1843 (T/CD/T)
Welds of Chideock family archive (D/WCH)
Leases 1248 (T 10/1); 1255 (T10/2)
Surveys 1725 (M122); 1736 (M123); 1769 (M125)
Cornwall County Record Office (CRO)
Arundells of Laherne family archive (AR)
Leases 13th century (1/653, 654)
Bailiffs' Account roll 1515-1516 (2/1260)

M. Papworth
The National Trust

DORCHESTER, WEYMOUTH AVENUE

An archaeological desk-based assessment, which included data gathered from the monitoring of geotechnical trial pits, has considered the archaeological potential of the proposed redevelopment of the Dorchester Police Headquarters. Using existing archaeological and historical records, the site can be shown to have a high archaeological potential, but the survival of any archaeological remains is likely to be variable as a result of the 19th century and later use.

Peter Cox
AC *archaeology*

EXCAVATIONS

BESTWALL QUARRY EXCAVATIONS 2000 — INTERIM REPORT

The ninth phase of work at Bestwall Quarry continued throughout 2000. Approximately 31,726m^2 of topsoil was removed from an area to the north of Swineham Farm and was centred on SY 935883. In total, 194 discrete features were investigated, including ditches, post-holes, pits and charcoal-filled pits. These dated from the Middle Bronze Age to the post-medieval period.

Middle Bronze Age

In general, features of this period were dated on ceramic evidence or by analogy to similar features from previous years' work. A flint-knapping area approximately 40m × 20m produced quantities of flint including tools and large quantities of waste. The locally procured flint was generally crudely worked and was typical of the Middle Bronze Age and later Bronze Age flint-working industries. Two shallow gullies underlay this flint-knapping area.

Two ditches, each 125m long, on a north–south alignment and 75m apart, traversed the length of the excavation area. The first had seemingly been open intermittently until the second century AD. There were few ceramic finds but large amounts of Bronze Age flint were found in the basal fills of this feature. Of note was a reworked, broken, Neolithic stone axe of possible Welsh provenance (Fig. 1).

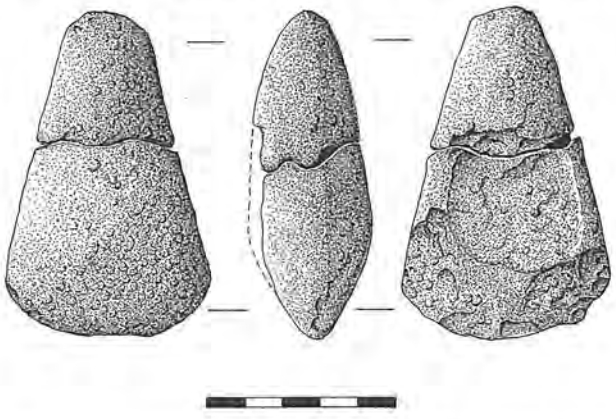

Figure 1: Bestwall Quarry, Stone Axe BQ2KS, Special Finds No. 1857. Scale 1:2. Drawn by James Taylor

The second ditch appeared to have been back-filled shortly after its original excavation. The ditch consisted of two more or less equal lengths separated by a 5m gap. The terminals contained large quantities of domestic and industrial waste including pottery, shale, worked and burnt flint, burnt hearthstone, raw and fired clay and fragments of quern stones. For a short part of its length it was cut by a shallower Roman ditch.

A single bucket urn was sunk into the prehistoric ground surface; its top had been destroyed by ploughing in antiquity. Of note were three pits, two of which contained substantial quantities of burnt flint and are likely to have been associated with pottery production. The third pit contained a shale bracelet, rough-cut, together with other shale waste, pottery and worked and burnt flint. This is possibly the first instance of such a bracelet at this date.

Iron Age and Roman period

A further 81 charcoal-filled pits were excavated, of which 47 contained dateable finds. They are likely to have been bonfire pits associated with small-scale pottery production. Three spreads of iron slag were noted and although there were no discernible features, the presence of associated Roman pottery implies an AD 2–4th century date. A further series of east–west and north–south ditches were located and are likely to have been field boundaries.

Medieval and post-medieval period

One medieval feature was excavated and consisted of a shallow pit which had within its fill, substantial fragments of a 12th-century, 'pie-crust' rimmed, hand-made cooking pot. Two 18th-century ditches were followed, one of which contained a spectacular 'dump' of late 17th- and early 18th-century pottery. This consisted of fragments from at least 35 vessels, which included locally made Verwood types as well as slipped ware, stoneware, salt-glazed and Staffordshire type pottery.

Lilian Ladle
Wareham and District Archaeology and Local History Society

CRANBORNE ANCIENT TECHNOLOGY CENTRE

During winter 1999/2000, archaeological excavation of the terraced footprint of the new 'roundhouse' timber structure at Cranborne ATC at the Middle School in Cranborne (NGR SU 0565 1365) revealed 181 post-holes, two lynchet groups and a number of linear features beneath a 1m deep colluvial soil, within a circular area of only 30m diameter. Artefacts recovered included pottery of Bronze Age to 19th-century date, worked flint, and non-local stone, distributed throughout the archaeological deposits and the overlying topsoil layers.

The conjunction at right-angles of a number of re-cut linear ditches suggests that this site is situated within the south-west corner of a rectangular plot within a 'celtic' field system. The plethora of post-settings, however, appears to form no structural arrangements except short linear groups of 4–5 aligned NW–SE and predominantly in the SE quadrant of the site. The post-hole features, therefore, do not appear to represent a settlement. The post-holes were overwhelmingly concentrated in the NE diagonal half of the site, upslope of lynchet [152]. Whilst some erosion of shallower features could be expected, comparison of the profile of F. [308] for example (Fig. 2) with the depth of the lynchets indicates that these latter features were not sufficiently deep enough to erode the larger post-settings completely. The distribution of post-settings as revealed, therefore, is likely to represent accurately their

Figure 2: Cranborne, plan of main excavation site

maximum original southwards extent. Furthermore, the greater number of post-settings respect a southward boundary that partially disregards the northern edge of lynchet [152], extending due NW–SE slightly to the north of a group of tree root-holes.

The deposits investigated produced relatively little artefactual material, the bulk of which was heavily abraded and recovered from the ditch fills and lynchet soils; of the 181 post-settings, only 24 contained artefactual material, and only 10 contained pottery, the majority as tiny crumbs less than 1g in weight.

A preliminary interpretation of the stratigraphic results is that the features, deposits and materials revealed here are the remains of activities peripheral to or distant from a centre of more settled activity. The eroded artefactual material in the upper layers suggests that it is derived from an origin further upslope — possibly a settlement or burial site — and has been transported to this site, like the deep topsoil and subsoil, by plough action. The linear ditches mark out the south-west corner of a field within a larger field system, within which lynchets have developed after years of ploughing. The post-settings do not indicate structures in the commonly understood sense of the word, but are more likely to have been created during the perennial re-marking of land boundaries, probably after the ditched boundaries fell into disuse. The Bronze Age material contained within them — as well as the more recent pottery — has become incorporated during the process of post insertion through the overlying layers of topsoil and subsoil from which, in all probability, the artefacts are derived.

Michael Heaton
David Murdie
Jake Keen

DORCHESTER, MEMBERS CAR PARK, COUNTY HALL

The archaeological excavation of six tree pits at the members car park, County Hall, Dorchester (NGR SY690907), was carried out by AC *archaeology* during late April 2000. The site lies within the defensive circuit of the former Roman town in its north-west zone, where extensive evidence for Romano-British occupation has previously been identified; buildings and other features of this date have been excavated immediately to the west at the County Library, and at the Merchants Garage site to the rear of the Library. All six tree pits revealed Romano-British features or deposits from a depth averaging 400mm below the present ground surface and in each case sealed by a post-medieval soil deposit. Tree pits 1, 3 and 5 contained structural remains in the form of wall foundations and surface levels, whilst Tree pits 4 and 6 contained cut features such as post-holes and pits. Only in Tree pit 2 were there no features or intact structural deposits evident but this could be accounted for by the possible truncation of Romano-British deposits by later development. It is likely that the deposits identified represent the remains of domestic structures.

Stephen Robinson
AC *archaeology*

DORCHESTER, OLD COUNTY HOSPITAL

Excavations of two areas at the Old County Hospital site in Dorchester were undertaken by AC *archaeology* during the spring of 1999. The largest excavation area — located just to the north of Somerleigh Court — covered an area of approximately 35m × 15m and excavations uncovered evidence for two adjacent, but separate, Roman buildings which had at least four phases of use, and appear to have been modified and re-styled over a period of around 200 years. To the west of these buildings was an area which contained a deep hillwash type soil, which was both cut by and sealed Romano-British archaeological features. The features cutting the soil which — based on the associated pottery evidence — are likely to be broadly contemporary with the two stone-built structures, include a compacted chalk pathway leading to a stone-lined well and a large rubbish pit. Also in this area there is evidence for what may prove to be earlier Romano-British occupation (AD 1st century), where a large storage pit and a number of post-holes (perhaps representing a timber-built building of this date) have been identified.

The second excavated area was located in the northern portion of the site, adjacent to Somerleigh Road. Excavations here identified a Roman street line with associated ditches, a roadside building (only partly exposed against the western edge of the trench) and a sequence of later pits and other cut features cutting into the street make-up. The street was initially constructed using compacted clay and chalk with flint fragments set into it. The ditches on the west side were re-cut on at least three occasions and there were a number of subsequent temporary repairs to the surface. Following abandonment of the road, it appears that a substantial structure was located in this area, comprising a sequence of post-pits, each with a limestone slab in the base to act as a pad for support.

Work is still ongoing at the site, where AC *archaeology* are maintaining a continuous watching brief during groundworks.

Simon Hulka and John Hodgson
AC *archaeology*

PAMPHILL, LODGE FARM

Lodge Farm is a heathstone first-floor hall house built for the park keeper and warrener of Kingston Lacy deer park in the early 15th century. Refurbishment of the building in 1986 was accompanied by archaeological excavation and building recording (Papworth 1994). This work revealed that the lodge was built across a deer park ditch filled with the debris from an earlier lodge. The park ditch cut across ditches and post-holes dating from the Iron Age.

During 2000, the brick farmyard wall that encloses lean-to sheds and the great barn to the north-west of the lodge was repointed and repaired. This work revealed additional details of a pair of brick cottages that had been built into the south-east side of the farmyard wall. They had been demolished in the 1960s. Part of a floor of earthenware quarry tiles was exposed together with the fireplace in the gable end of the south-west cottage. This had the remains of a bread oven lined with sand built into the north-west side of the fireplace. The cottages date to the early 19th century and are shown on the Wimborne tithe map 1847 (DRO T/WM)

The repairs also included work to the carriage house which lies on the south-west side of the lodge. In 2000 the carriage house was converted into an office. A drain 0.3m wide and 0.3m deep was excavated around the building. It

was noted that the building had been repaired and altered several times between the 18th and 20th centuries. The various changes in brick construction were recorded.

Below the topsoil was a spread of building debris containing pottery of mid to late 18th-century date and numerous bricks and Purbeck limestone fragments. Many of the bricks were of thin unfrogged 17th-century type. The debris confirmed the1986 discoveries that had shown that considerable remodelling of Lodge Farm had taken place in the later 18th century leading to the demolition and reuse of some17th-century brickwork. The footings of the carriage house included many reused 17th-century bricks.

A large block of Chilmark limestone found near the south-east corner of the carriage house compared with a similar block of Chilmark found in 1986. It had been found in a pit filled with 18th-century material that had been dug against the north-east side of the house. This showed that the Chilmark stone medieval chimneys had been removed and rebuilt in brick in the 18th century.

The drains laid in 1979 against the exterior face of the north-east wall of the lodge were re-excavated in 2000 because the fall was too shallow and they had become blocked. The angle of the fall was increased by removing the 1979 filling and cutting deeper into the chalk across to the soakaway pit which lay 5m south-east of the east corner of the building. The trench to the soakaway and the soakaway pit were not exposed in 1986 and the re-excavation enabled the section of the trench and pit to be drawn.

The soakaway trench revealed a thin scatter of oyster shells and occasional clay tile fragments at a depth of 0.5m below the turf. Below this was a dark yellow brown clay with occasional struck black flint flakes above chalk natural at 0.6m depth. In the section of the 1m square soakaway cutting was a layer at 0.4m below turf level containing oyster, clay tile and animal bone, including a fallow deer antler fragment. This debris, together with two sherds of medieval pottery from this layer, were similar to material found in 1986 that filled the deer park ditch and therefore dates this layer to the 14th and early 15th century. Clay tile fragments were found in the section down to the chalk bedrock at a depth below the surface of 0.8m.

Cutting the chalk and aligned north to south as it crossed the position of the soakaway was a ditch 0.6m wide and 0.4m deep with a 'V' shaped section and a flat bottom 0.1m wide. No dateable objects were found in the ditch filling but this feature is similar in size and shape to the Iron Age boundary ditches found under the south-west wall of Lodge Farm in 1986.

Papworth, M., 1994 'Lodge Farm, Kingston Lacy Estate, Dorset', *Journal of the British Archaeological Association* **CXLVII**, 57–121.

M. Papworth
The National Trust

PORTESHAM, MANOR FARM

Archaeological excavation and subsequent monitoring of the installation of trenching for services, on land at Manor Farm, Portesham, Dorset, was carried out by AC *archaeology* during the summer of 2000. The Manor Farm complex is of mixed land-use and is situated at the base of a prominent south-facing slope covering approximately 0.75 hectares. An archaeological evaluation of the site, by means of trench excavation and monitoring of engineering test pits, was carried out during 1999, which revealed extensive evidence for archaeological activity of early Iron Age, late Iron Age, Romano-British and medieval date

The current investigations comprised the open-area excavations of four separate plots, which revealed the following:

Phase 1: Late Neolithic — Large pits in the central portion of the site.

Phase 2: Middle to late Bronze Age — Large pits in the central and northern portion of the site.

Phase 3: Late Bronze Age to early Iron Age — Settlement-type features in the central and northern portion of the site, comprising large storage pits and a sequence of pits with a structural function.

Phase 4: Middle Iron Age — Large pits in the northern portion of the site, again with a structural function.

Phase 5: Late Iron Age to early Roman — Activity of this date was present across large parts of the site. Settlement evidence included a rectangular structure formed with squared, flat limestone slabs covering *c.* 3m × 3m in plan, and a circular structure, *c.* 6m in diameter, constructed with a combination of shallow gully and limestone foundation. There was a large number of associated features, including large circular pits, as well as a sequence of smaller post-hole type features. The structure was overlain by deep occupation soils containing large quantities of domestic artefacts. Funerary evidence consisted of six well-preserved crouched or flexed inhumations, all with associated grave objects, including pottery vessels, animal bone and brooches.

Phase 6: Late Romano-British — Following completion of the excavation phase of work, subsequent monitoring of groundworks at the southern end of the site identified a cemetery and other features of late Romano-British date (*c.* AD 3rd or 4th centuries). A large pit was recorded which contained the remains of at least six individuals, with a further three separate graves also present. All the burials were extended and laid out on an east to west alignment, with heads at the west end.

Phase 7: Saxo-Norman — A substantial east to west aligned boundary ditch was located alongside the northern excavation limits, and a north to south aligned section was present along the western limits of the site. Significant quantities of 10th or 11th-century pottery was recovered from most excavated segments.

Phase 8: Medieval — The lower foundation of the north-east corner of a limestone and flint constructed wall was identified in the northern portion of the site, with a crushed chalk floor present internally. The foundation layer for the floor contained quantities of 13th century pottery.

A detailed assessment report for the site is currently being prepared, with full publication expected in 2002.

John Valentin
AC *archaeology*

PORTLAND, AND OFF REAP LANE, SOUTHWELL

Following two stages of evaluation in 1999, excavation was undertaken on two areas of this large residential development site on the northern slopes of Sweethill, during February–April 2000. These works were carried out by Terrain Archaeology and funded by Betterment Properties Ltd.

A large part of the area of a concentration of possible Early Neolithic flint and chert artefacts (centred on SY 682702) was stripped. Immediately to the south of a shallow pit or hearth discovered during the evaluation phase in 1999, the remains of a rectangular post-built structure were uncovered. This structure comprised a group of about 33 post-holes, which formed a square or rectangular building between 4.4m–8m long and about 4m wide, with some internal division evident. The post-holes were severely truncated and the full plan did not survive. The pit or hearth appeared to lie immediately outside this building. Very few finds were recovered, mainly flaked Portland chert, with a few scraps of possible Early Neolithic pot from the pit. An assessment of the charred plant remains has indicated the presence of hazelnut shells, cereal grains and weed seeds. The structure has been tentatively identified as an Early Neolithic house with associated pit.

At the base of the coombe (at SY 68177037), a trench was excavated along the northern margins of what was thought to be a prehistoric settlement with the remains of a possible round house and associated surfaces, identified during the evaluation. An irregular surface of burnt stone and charcoal was exposed. A trench-like feature filled with charcoal and burnt stone was found associated with this surface. The only finds were a single sherd of Beaker pottery, together with a sparse scatter of worked chert. This, together with the fact that the surface comprises almost exclusively charcoal with virtually no charred plant remains present, puts the settlement interpretation into doubt. It is more likely that the archaeological remains in this area are from a 'burnt mound' with the curving drystone wall found during the evaluation representing some sort of boundary feature. The burnt stone and charcoal surface was cut by a later pit filled with clay and large stones. Two drystone field walls of post-medieval date were also found.

Peter Bellamy
Terrain Archaeology

POOLE, SHAPWICK ROAD, HAMWORTHY

Terrain Archaeology was commissioned by Flower Bros Ltd to carry out an excavation and watching briefs in advance of the construction of storm drains and sewers on the former Pilkington Tile site to the south of Shapwick Road, in Lower Hamworthy (centred on SYSZ 0015 9025). Previous evaluation by Terrain Archaeology had revealed numerous Late Iron Age/early Roman features in the western part of the site.

The excavations revealed large double ditches crossing the site in a NNW/SSE direction. These ditches were both about 8m wide and about 2.5m deep. To the west of these ditches was a complex of small ditches on a similar alignment. Parts of two rectilinear enclosures, which were later than the ditch system, were revealed. A possible trackway ran westwards, cutting across the ditch system and one of the enclosures also. A number of briquetage kilns, hearths and pits were found, mainly to the east of the large double ditches. A watching brief in the eastern part of the site revealed that much of this area was disturbed by modern development. The finds recovered from the site indicate that the main period of activity was between AD 50–70. The double ditches had been filled up by the end of the 1st century AD and the enclosures probably date to the late 1st or early 2nd century. Given the small proportion of the site excavated, it is difficult to interpret the remains fully, however, it seems likely that the double ditches are Roman military in origin, associated with the postulated supply base linked to the legionary fortress at Lake Farm. By the end of the 1st century AD, the area appears to have been used for salt production.

Peter Bellamy
Terrain Archaeology

STRATTON, DORCHESTER ROAD

Archaeological excavations on land off Dorchester Road, Stratton (NGR SY 649938)

comprised the second phase of fieldwork on the site, and were conducted by AC archaeology during May 1999. The land is currently under development for housing, and has been the subject of both a preliminary assessment and an archaeological field evaluation. The evaluation identified two areas of the site where significant archaeological remains were likely to lie *in situ*, and these were the focus for the current work.

Area A was centred on the site of a large apparent hollow recorded during the evaluation, the fill of which yielded Romano-British pottery and was cut by an undated, ash-filled pit. Excavations in this area revealed two intercutting pits of probable Iron Age date, located to the west of the large hollow, which is likely to be a quarry pit of probable Romano-British date.

Area B was positioned to determine the course of six linear features recorded during the evaluation. More detailed examination revealed phases of probable agricultural activity, and fragmentary evidence for a post-built structure of probable late Iron Age date. A more detailed report is currently in preparation.

Phil Mcmahon
AC *archaeology*

VERWOOD, POTTERS WHEEL

The archaeological excavation of the site known as the 'Potters Wheel' in Manor Road, Verwood (SU 0869 0908) was carried out by AC *archaeology* during summer 2000. The work was carried out in collaboration with members of the Verwood and District Potteries Trust, The Verwood Historical Society, East Dorset Antiquarian Society and the Avon Valley Archaeological Society.

The excavation, which followed on from an earlier evaluation on the site, revealed structures and deposits associated with the former 'Crossroads' pottery kiln, known to have been manufacturing on the site between 1812 and 1852. In addition, a large assemblage of pottery dating between 1740–1760 was recovered from a pit complex, including waster sherds indicating manufacture, thereby extending the history of pottery manufacture on site by some 60 years.

Jo Whelan
AC *archaeology*

EVALUATIONS

ABBOTSBURY, ROSEMARY LANE

An archaeological evaluation by means of trench excavation on land off Rosemary Lane, Abbotsbury (NGR SY 57848535) was undertaken by AC *archaeology* during July 2000. The site lies on derelict land which is generally level, covered with dense nettles and shrubs. A preliminary desk-based assessment carried out prior to this investigation showed that there were no previously recorded archaeological sites or finds on the site, but that it lies within the earlier, eastern portion of the village, and therefore has the potential for the presence of medieval activity to the rear of properties fronting onto the roads surrounding the site.

The evaluation comprised the machine-excavation of two trenches, each 3m × 1m in plan, which revealed an overlying sequence of modern deposits only. These appear to have been deliberately deposited directly onto the natural subsoil, which was present at a depth of at least 1.2m below current ground levels. The absence of weathering on the exposed natural subsoil does suggest that landscaping has taken place in the area of proposed development prior to the deposition of this excess spoil. There were no cut subsoil features present and a complete absence of pre-modern artefacts within overlying soil layers.

John Valentin
AC *archaeology*

BATCOMBE, GORE HILL

An archaeological field evaluation of land at Gore Hill near Batcombe (centred on NGR ST 636039), was carried out by AC *archaeology* during April 2000. The site is situated in woodland within the Batcombe Down picnic area covering *c.* 2500m², on land which is generally level but slightly sloping down to the north, the underlying geology consisting of clay with flints overlying chalk. The evaluation comprised the machine-excavation of three trenches totalling 11 metres in length. All trenches contained an identical sequence of overlying deposits, comprising topsoil above subsoil with a combined depth of between 400 and 450mm. No evidence for archaeological features or deposits was present in any of the trenches and a single flint flake was the only artefact recovered.

Stephen Robinson
AC *archaeology*

BERE REGIS

An archaeological field evaluation on land to the north of Bere Regis (NGR SY 849951), was carried out by AC *archaeology* during early February 2000. The site covers an area of approximately 5 hectares, located on a generally south-east facing slope on land between the north side of Bere Regis and south of the current A35 trunk road. An earlier archaeological assessment and a geophysical survey on the site (Wessex Archaeology 1998) identified some potential for the site, including the possibility of a Roman Road along Snow Hill Lane and a number of surface and sub-surface features. The evaluation comprised the machine-excavation of twelve trenches and two hand-dug trial pits. This exercise provided largely negative results, with surface features likely to be naturally formed and most geophysical anomalies seemingly of geological origin. Some activity was however identified, comprising a former ditch of probable Bronze Age date and evidence for a ditch or hedge boundary, parallel with one of the current boundaries). In many of the trenches, positioned towards the base of the south and south-east facing slope, largely sterile, deep colluvial soils were present. Small quantities of artefacts (mainly worked and burnt flint) were recovered from these deposits in some trenches, which may not indicate *in situ* activity but may suggest archaeological evidence further up slope, probably on the higher ground at Snow Hill. Despite the positioning of trenches alongside Snow Hill Lane, thought to represent the line of a Roman road, no conclusive evidence for a road was identified. It is considered that should a Roman road be present, it lies underneath the existing Snow Hill Lane trackway.

Wessex Archaeology, 1998 *Land at Bere Regis: Archaeological desk-based assessment*, unpublished document for client, ref. 45477.

Stephen Robinson
AC *archaeology*

BOURNEMOUTH, THE HAMPSHIRE CENTRE

An archaeological field evaluation by trial trenching on land to the north of The Hampshire Centre retail park, Bournemouth, Dorset centred on (NGR SZ 113949), was carried out by AC *archaeology* during December 2000. The site is located on the north-east fringes of Bournemouth and covers an area of *c.* 3.5 hectares at around 5m OD. There are no records of previous archaeological discoveries on the site, but it does lie on raised ground above the River Stour floodplain, where in similar topographic locations nearby, extensive evidence for later prehistoric settlement and funerary activity has previously been identified.

The evaluation comprised the machine excavation of fifteen trenches, each generally 30m in length and 1.60m width, located in accessible areas of the site. This revealed an extensive agricultural soil layer of variable depth present across the whole of the site. Some archaeological features were identified, which comprised mainly shallow ditches or gullies on generally either NW to SE or NE to SW alignments. This appears to suggest a deliberately planned field system pattern, with perhaps some drainage elements incorporated, the agricultural function seemingly confirmed by the paucity of finds and absence of occupation-type debris such as charcoal, humic material, etc. within the largely sterile fills. An exception to this linear arrangement was in the central portion of the site, where a ditch was identified which was aligned east to west and, significantly, contained prehistoric pottery. A large probable pit was also identified in the central area which is likely to represent evidence for former quarrying.

John Valentin
AC *archaeology*

BRIDPORT, SOUTH STREET

A second stage archaeological evaluation, by means of the machine- excavation of trial pits was carried out by AC *archaeology* on land currently used as a car park immediately south of the junction of South Street and Church Street, Bridport (SY 46619270). The first stage of works comprised a brief review of historical maps dating from 1773 to 1999. The 1773 map shows that the site occupies part of the frontage of two burgage plots running back from South Street. Buildings are shown on both the Church Street and South Street frontages at this date. Between 1962 and 1980 the entire site was cleared of buildings before being used as a car park.

The evaluation comprised the excavation of two trial pits, each 2m × 2m in plan. Both trial pits contained evidence for intact archaeological deposits, in the form of two linear features and a probable former rubbish pit. Pottery was recovered in moderate quantities, an assessment of this material indicating two separate phases on the site; the earliest is late 12th to early 13th century, the second late 13th to early 14th century. These two periods are little understood within Bridport, where only limited archaeological work has previously been carried out. It is possible, although the evidence is somewhat limited within the confines of two trial pits, that the site may contain links between the old town and, so-called 14th-century 'new town', with evidence from both phases seemingly represented. The earliest phase is considered to be around the time when the settlement focus within Bridport is thought to have shifted from south to north, when the 'new town' centred around East Street and West Street was founded. More comprehensive investigations are planned during 2001.

John Valentin
AC *archaeology*

CHICKERELL, CHAFEY'S LAKE

An archaeological field evaluation of land near Chafey's Lake, Weymouth (SY 65958017), was carried out by AC *archaeology* during July 1999. The evaluation comprised the machine-excavation of nine trenches, amounting to a 2% sample of this 3 hectare site. Only one subsoil feature may be of archaeological origin, in Trench 7, but the sinuous nature of the feature does not allow any functional assessment. Small quantities of prehistoric finds were recovered from topsoil and upper subsoil contexts, but do not provide evidence for any intense occupation of the area.

Astrid Hudson
AC *archaeology*

CHRISTCHURCH, MILLHAMS STREET

During June 1999 an archaeological field evaluation, by means of machine-cut and hand-excavated trenches, was carried out by AC *archaeology* on the site of the proposed redevelopment of land adjacent to Millhams Street, Christchurch, Dorset (SZ 15929286). The site is located on the north side of Christchurch High Street and lies within the defensive circuit of the Saxon burh of Twynham. The evaluation comprised the machine-excavation of three trenches, amounting to a *c.* 2% sample of this 0.17 hectare site. In Trench 1 a single large pit was excavated, filled with a greyish-orange brown silty sand and containing medieval pottery. Trench 2 contained a clearly defined north–south aligned ditch which could not be dated. In the east half of this trench an exploratory slot was excavated through an area of dark greyish-brown soils. Here the profiles of two small pits, a narrow gully, and a post-hole were identified, but none contained artefacts of medieval date. The fills of these features were indistinct and it was not possible to establish a sequence of events in this area. In Trench 3 the only feature present was a clay and timber-lined structure at the eastern end. This feature contained post-medieval pottery in its upper fill and was probably the remains of an earth closet.

Astrid Hudson
AC *archaeology*

DORCHESTER, COLLITON PARK

An archaeological field evaluation, by means of the excavation of a single (2m × 1m) trench at Colliton Park, Dorchester, was carried out by AC *archaeology* during February 2000. The trench was located within the Roman Town House and positioned on the internal edge of the north-west corner of the Roman town defences (M648). This exercise identified intact deposits of Romano-British date at a depth of 800mm (east side of trench) and 1.10m (west side of trench) below existing ground levels. These comprised probable evidence for the Roman town ramparts, consisting of a thick sandy clay soil deposit overlain by a chalk 'capping'. Also present was a deep, steep-sided cut on the west side of the trench, which may represent the construction trench for the town defensive wall, considered to have been inserted during the 4th century, cutting into the existing bank. Overlying these deposits were levelling or infilling deposits, most considered to be of post-medieval or modern date.

John Valentin
AC *archaeology*

DORCHESTER, DORCHESTER LIBRARY

An archaeological evaluation by means of trench investigation and monitoring of geotechnical test pits adjacent to Dorchester Library (NGR SY68959076), was carried out by AC *archaeology* during March and May 2000. The site lies within the County Hall complex, which has been subjected to several archaeological investigations. The present library site was excavated prior to its construction, which revealed at least two multi-phase Roman buildings and evidence for a north to south aligned street on the edge of the building complex.

The current work revealed no evidence for intact archaeological deposits or finds in any test pit. It is likely that earlier archaeological excavations and groundworks associated with the initial construction of the library will have removed any surviving evidence.

Astrid Hudson
AC *archaeology*

DORCHESTER, ST JOHN AMBULANCE HALL, NORTH SQUARE

Terrain Archaeology was commissioned by Signpost Housing Association to carry out an archaeological evaluation of the former St John Ambulance Hall, North Square,

Dorchester (SY 6932 9086), during February 2000. Four hand-dug test pits were excavated. Roman levels were only encountered in a single test pit on the Friary Lane frontage. Here, part of a mortared flint and limestone wall was exposed. A later Roman chalk surface covered the remains of this wall. The remains of two successive post-medieval buildings fronting on to Friary Lane were also discovered.

In the corner of North Square and Friary Lane, all archaeological deposits had been destroyed by cellaring. To the east of the hall, at the rear of the property, 19th-century deposits over 1.6m deep were encountered, indicating there had been substantial landscaping of this area.

Peter Bellamy
Terrain Archaeology

GILLINGHAM, LE NEUBOURG WAY

An archaeological field evaluation of land adjacent to Plank House, Le Neubourg Way, Gillingham, centred on NGR ST 80532655, was carried out by AC *archaeology* during April 2000. The site comprises a single plot of land of *c.* 1200m^2, which is generally level and slightly raised in the northern corner of the site, there is then a pronounced break of slope, with the site sloping moderately down to the west and low-lying ground of the floodplain of the River Stour.

The evaluation comprised the machine-excavation of two trenches, both containing an identical sequence of overlying deposits, comprising topsoil above alluvial layers to a depth of between 600 and 800mm below existing ground levels. In Trench 1, located on raised ground in the northern portion of the site, a linear feature was present, which probably represents a former drainage ditch of unknown date. The low-lying position, coupled with the poorly-drained, heavy clay soils present, appears to make the site unsuitable for early settlement activity. The single ditch identified was clearly draining the relatively higher ground in the eastern portion of the site onto the low-lying flood plain of the River Stour.

John Valentin
AC *archaeology*

GILLINGHAM, PARK FARM

The archaeological evaluation by means of trench excavation and earthwork survey on the site of two proposed development areas on land totalling 12 hectares adjacent to Park Farm, Gillingham (ST 820258 and ST 821255) was undertaken by AC archaeology during July 1999. The main archaeological interest in the site is the presence of part of the western boundary of the medieval deer-park, a large part of which is a Scheduled Ancient Monument (SAM Dorset 796), but not the portion which crosses through the proposed development areas. Here, the former boundary is represented by a low earthwork bank, approximately 3m wide, with a linear hollow on its south-west side representing the associated ditch. In other parts of the site (to the south-east) the park pale does not survive as a surface feature.

The trench excavation comprised 17 trenches with a total length of 640m. This exercise revealed that archaeological interest for the site appears to be confined to two areas; first, a cluster of faint features within Trenches 2 and 3 in Area 1, and secondly; the surviving portion of the medieval deer park boundary in Area 2. The remaining trenches provided wholly negative, or very limited archaeological results. Archaeological features within Area 1 comprised a small cluster of poorly defined features in Trench 3, and a probable ditch in Trench 2, which contained the only positive dating evidence from a sealed context in this area, although small quantities of worked flint were also present in some features. These features may indicate limited settlement of later prehistoric date, although edges were poorly defined, and there was a general paucity of artefacts within features and topsoil contexts. This small cluster of features appear to indicate short-lived and non-intensive occupation; this based on low-level artefact recovery and the surrounding poorly drained soils.

The park pale survives as a low earthwork within Plot 3 only. Trench 12 revealed that the boundary feature had been wholly removed by a large quarry pit or pond within Plot 2, likely to be present across the whole of this field. However, a profile through the park pale was obtained within Trench 11, revealing the presence of a wide, shallow ditch on its outside only, and evidence for a low, stone-covered bank, clearly spread by ploughing. Although the former deer-park boundary is an important landscape and historical feature, when considered as a whole, the earthwork shows only poor survival in this location.

Astrid Hudson
AC *archaeology*

GILLINGHAM, PEACE MARSH

An archaeological field evaluation of land at Peacemarsh, Gillingham (ST 80352743) was carried out by AC *archaeology* during early December 1999. The site comprises two land plots (A and B). Field A covers an area of approximately 0.9 hectares on land which is currently pasture and generally level, but slopes down very gradually from the centre of the field to the east and west. Field B covers an area of approximately 1.2 hectares on land which is again pasture, sloping moderately down to the west to low lying ground on the east side of the River Stour. The evaluation comprised the machine-excavation of fourteen trenches, amounting to an approximate 2% sample of the proposed development area.

With the exception of clay-filled and stone-lined field drains present in most trenches, the evaluation produced largely negative results. Two trenches did, however contain some archaeological activity. Trench 1, located close to the road frontage, revealed demolition-type deposits, the associated pottery evidence indicating a 19th-century date. No intact structural evidence was present. Trench 2 contained two parallel ditches adjacent to the existing boundary, which are likely to represent earlier (19th century or later) boundaries in this location.

Historic maps of 1841 and 1900 show no building in the vicinity of Trench 1 or on the site. On both maps the site is shown as meadow. It is conceivable that the building material found in Trench 1 may represent upcast from landscaping operations during the construction of the adjacent fire station, or that the rubble has been deliberately imported to the site and used as hardstanding adjacent to the entrance to the field. Across the remainder of the site, the exposed and low-lying position, coupled with the poorly drained, heavy clay soils present, appears to make the

site unsuitable for early settlement activity. Archaeological activity close to the road frontage is clearly of recent date, with earlier evidence on the site limited to small quantities of pottery recovered from some trenches. These clearly derive from plough horizons.

John Valentin
AC *archaeology*

HAMWORTHY, 165–67 BLANDFORD ROAD

The evaluation of this proposed residential development at SY 99929040 comprised the machine-excavation of six trenches, each 10 × 1m in plan amounting to an approximate 2% sample of the total site area. All trenches were located in areas likely to be significantly affected by proposed development. The site is currently occupied by two semi-detached houses with surrounding rear and front gardens and is located in a roadside position on the south-side of Blandford Road. The site has been the subject of a preliminary, largely desk-based, assessment which identified the high potential on the site for the presence of archaeological remains of Iron Age or Romano-British date. A Roman penannular brooch and pottery sherds are recorded as being found on the site and Hamworthy itself is the location of a 1st-century harbour and military store base associated with the Roman conquest of Britain. A Roman road to Badbury Rings has been identified, by both earthwork evidence and excavation, in a number of locations at Hamworthy close to the Blandford Road, as well as roadside settlements and findspots of similar date.

The evaluation failed to provide evidence for early settlement activity on the site in the form of pits, post-holes, gullies etc., and there was almost a complete absence of artefacts within identified features and layers. Three ditches were, however, identified, the nature of their shallow sloping profiles and large width indicating agricultural rather than settlement activity. A single sherd of medieval pottery and one likely to be prehistoric were recovered from two of the excavated segments. Two post-holes of modern date were also identified in the northern (street frontage) portion of the site.

It is considered unlikely, based on currently available evidence, that any Roman settlement activity is located within the site. The three ditches of pre-modern date which were identified are unlikely to yield any further information which was not obtained during this evaluation.

John Valentin
AC *archaeology*

HOLTON HEATH, WAREHAM ROAD

An archaeological field evaluation of land off Wareham Road, Holton Heath (SY 94259170), was carried out by AC *archaeology* during November 1999. The site lies to the north of Holton Heath on heathland soils, and incorporates a large earthwork mound situated towards the south of the development. The site was sub-divided into fields A, B and C. The evaluation comprised the machine-excavation initially of 20 trenches within area A, amounting to a 2% sample. After finding negative results, a further 12 trenches were excavated at random throughout the southern area of the site and one trench through the earthwork mound at the southernmost limits of the site. Except for the presence of land drains in some trenches, the evaluation contained completely negative results. The trench excavated through the mound suggested this was a natural feature and not man-made as initially thought. There were no artefacts of modern or earlier date recovered from any trench apart from post-medieval or modern tile fragments from the field-drain fills.

Stephen Robinson
AC *archaeology*

IWERNE COURTNEY OR SHROTON, CHURCH FIELD

An archaeological evaluation at this proposed development site (ST 86051442) comprised a 2% sample by machine-excavated trenches. Two trenches revealed the presence of deep modern infilling in the area of a former pond; while other trenches revealed that subsoil archaeological deposits survive over most of the site area. The presence of small quantities of often abraded pottery makes accurate dating of all features problematic. It is clear, however, that in the central area of the proposed development site there exists evidence for settlement activity of late Iron Age and Romano-British date, probably spanning the 1st century BC to the AD 2nd century. Elsewhere other subsoil features may be of this date, but the presence of medieval pottery in subsoil deposits may indicate that more dispersed medieval activity is also present. The presence of slight earthworks on the site can be shown at the south end to be related to a backfilled pond, but in the central zone cannot be shown to be of archaeological origin.

Peter Cox
AC *archaeology*

KIMMERIDGE BAY, NEW MARINE CENTRE

An archaeological evaluation was conducted by AC *archaeology* during May 1999 on the site of the proposed new marine centre at Kimmeridge Bay, Dorset (SY 90927880). The evaluation comprised a single machine-dug trial trench measuring 5 × 1m, and a trial pit measuring 1 × 1m. Both were positioned within the footprint of the proposed building and were designed to evaluate the extent of the industrial archaeological remains known to lie within the area of the site. The south-east end of Kimmeridge Bay has been the focus of industrial activity from the Romano-British period to the 19th century, with evidence for processes including saltworking, alum production, glassmaking and the transportation of bituminous shale. The evaluation revealed that deep, stratified deposits of industrial residues and dumped rubble deposits exist across the area of the proposed building, with the natural shale bedrock being exposed only within the trial pit, sited on the upslope part of the site. Although no artefacts were recovered to date the industrial residues, a series of bulk soil samples were taken — the analysis of which may produce evidence for the associated industries. A single fragment of glass from a redeposited soil layer can be assigned to the Kimmeridge glassworks (AD 1613–1625), although the presence of modern artefacts within the same layer must cast doubt on whether this is an *in situ* 17th-century horizon. A poorly preserved wall footing was recorded within the trial trench, and survives as an extant wall south of the trench. This feature seals the industrial residues and related layers within the trial trench, and yielded finds of

modern pottery and scrap metal. The wall is thought to be the remains of a fisherman's hut or boathouse, examples of which survive nearby. These are thought to be of 19th-century construction.

Phil Mcmahon
AC *archaeolgy*

MILTON ABBAS, POND HEAD COTTAGE

The archaeological evaluation by means of trench excavation and earthwork survey on the site of a proposed new pumping station and access track at ST 804013 was undertaken by AC *archaeology* during July 1999. The total area of the access track and pumping station comprises *c.* 1000m^2, extending over two land plots. The new pumping station is to be located on the east side of Milborne Brook on land which is currently pasture towards the base of a steep, west-facing slope. This slope contains extensive and well-preserved remains of ancient strip-lynchets. The access track crosses through the northern portion of a generally level arable field.

The trench excavation comprised four trenches with a total length of 20m, each 1.50m wide. This exercise revealed largely negative results with deep colluvial deposits in the valley bottom (Trenches 3 and 4) the principal archaeological interest. These deposits were up to 2.20m deep and in one trench (Trench 3) a probable former land surface was identified. The nature of the access road construction means that this layer will not be affected by the scheme. The two remaining trenches were located in a slightly raised area where medieval pottery and prehistoric worked flint scatters were previously identified. However, neither trench contained evidence for cut subsoil features, with only small quantities of artefacts (pottery, worked flint and bone) recovered from spoil-heap contexts.

The earthwork survey was executed at a scale of 1:1000. The earthworks recorded comprise a series of five substantial and four slight lynchets located on a steep west-facing slope overlooking the Milborne Brook. All, except the lynchet on the highest ground (lynchet 9), are parallel to each other and follow the contour of the slope. The features recorded by this earthwork survey are clearly cultivation terraces ('strip lynchets') and are most probably of medieval date. The earthworks form a well-preserved and coherent block of classic 'strip lynchets' featuring substantial and well-preserved 'risers'. It would also appear that there are at least two phases discernible.

John Valentin
AC *archaeology*

MINTERNE MAGNA, DOGBURY PLANTATION

In December 2000, Terrain Archaeology was commissioned by Tony Thorpe Associates on behalf of Vodafone Ltd to undertake an evaluation at Dogbury Plantation, Minterne Magna, Dorset (ST 662051), prior to determination of an application for planning permission to erect a cellular radio base station and mast. The evaluation was undertaken following the advice of the County Archaeological Officer. Two test pits were excavated by hand. No archaeology was revealed.

Peter Bellamy
Terrain Archaeology

PORTESHAM, MANOR FARM

An archaeological field evaluation of proposed housing development on land surrounding Manor Farm House, Portesham, was carried out by AC *archaeology* during late August and early September 1999. The site is situated at the base of a prominent south-facing slope on land covering approximately 0.75 hectares. The general topography is gently sloping down to the south, with generally level areas along the northern and southern boundaries. There are no previously recorded archaeological sites or monuments within the development area, but immediately to the north of the current site a recent evaluation carried out by AC archaeology identified occupation layers and cut features of Romano-British date below deep colluvial and medieval lynchet soils. Also, two Romano-British inhumation burials were also discovered approximately 25m to the east of the current site and two further undated burials were identified immediately to the south-east of the site at 13 Front Street.

This evaluation comprised the machine-excavation of eight trenches, all revealing extensive evidence for archaeological remains, comprising cut features including pits, ditches, post-holes and graves, with four different periods represented. The earliest (Phase 1) was early Iron Age activity identified within cut features towards the southern end of the site. Very limited quantities of pottery of this date was also found in a pit in Trench 7, but later material was also present. Middle to late Iron Age activity (Phase 2) represents the most extensive settlement evidence on the site, with finds and features of this period in Plots A and C. It is likely that many of the large circular pits recorded, but not excavated, are of this period and, presumably, a large number of adjacent unexcavated features. Romano-British (Phase 3) activity comprises two distinct elements; first, what appears to be funerary evidence in Plot A in the northern portion of the site; and secondly, structural components towards the northern end of Trench 7. The burials were only partly investigated to confirm their presence, but both are on identical alignments — approximately north to south — and both contain grave goods. Two stone structures present in Trench 7 are likely to represent stone post-pads, or more likely, wall remnants. The associated pottery evidence for all these features indicates an AD 2nd century date. The final phase of activity (Phase 4) is medieval. Evidence for activity of this period is located in the eastern portion of the site, where limited excavation revealed a cut feature — possibly a ditch — of late 13th-century date. It is not certain whether this feature indicates settlement activity of this date on the site or if it is simply a ditch associated with agricultural practices.

Simon Hulka
AC *archaeology*

PORTLAND, PERRYFIELD AND COOMBEFIELD QUARRIES

Two plots of pasture land on the Isle of Portland, one situated at Perryfield Quarry (SY 68287026), the other at Coombefield Quarry (SY 67866930), were evaluated by AC *archaeology*, in January 2000. At Perryfield, some fragments of modern and post-medieval pottery, along with stray fragments of worked flint, were recovered from the topsoil. The investigations at Coombefield Quarry located a prehistoric buried soil that yielded Late Neolithic/Early Bronze Age

pottery, along with a number of worked flint fragments. This soil was sealed below 0.9m of orange-brown silty clays, which were interpreted as natural deposits, possibly colluvium. Subsequent investigations failed to identify any archaeological features that could be associated with the flint and pottery. Deposits found at a similar level to the buried soil, but in a different trench, were interpreted as lenses of natural deposits and not man-made features.

Astrid Hudson
AC *archaeology*

PORTLAND, STONEHILLS MINE ACCESS ROAD, WESTON

In July 2000, Terrain Archaeology was commissioned by Albion Stone Ltd to undertake an evaluation along the line of the proposed access road to the proposed Stonehills Mine (centred on SY 6833 7090). No archaeology was revealed.

Peter Bellamy
Terrain Archaeology

PUDDLETOWN , SHERRING'S GREEN CLOSE

Archaeological evaluation was undertaken by Terrain Archaeology, in a field, known as Sherring's Green Close, off Blandford Road, Puddletown (SY 7559 9448). A number of earthwork banks and lynchets survive in this field. The evaluation revealed that only one of the earthworks was associated with sub-surface features — a boundary ditch and hedge. The lynchets and other earthworks were entirely composed of agricultural soils and appear to be post-medieval in date. Part of a late medieval boundary ditch on a slightly different alignment was exposed in one of the evaluation trenches

In the south-western corner of the field, part of a complex of possible palisade ditches and gullies was exposed. At present, the plan and extent of these features is unknown and they are undated but it is tentatively proposed that they are prehistoric, perhaps Bronze Age in date.

Peter Bellamy
Terrain Archaeology

SHAPWICK, ST BARTHOLOMEW'S CHURCH

Archaeological monitoring and excavation during the construction of a new surface drainage system at St Bartholomew's Church, Shapwick, Dorset, was undertaken during June–July 1999. The works involved the excavation of a total of more than 85m of machine-dug drainage trenches along both the north and south sides of the church, plus the removal of brick-lined water channels around the base of the church wall. Evidence relating to earlier phases of the church comprised the exposure of a single wall footing at the south-east corner of the chancel. Within the graveyard there was a reasonable density of graves towards the west end of the church, and particularly on the south side, although there are few recorded instances of intercutting graves or superimposed burials. There was a general lack of displaced human remains in the overburden deposits. Burials of medieval date can be confirmed at the west end of the church where several burials are sealed by an apparent medieval soil horizon, and where one burial is cut through by an apparently medieval buttress foundation. Amongst a small medieval pottery assemblage, a single sherd of Saxon pottery was recovered.

Simon Hulka
AC *archaeology*

SHERBORNE, NEWLAND

An archaeological evaluation was carried out by AC *archaeology* on the site of semi-derelict netball and tennis courts formerly belonging to Lord Digby's School, Newland, Sherborne (NGR ST 639186). The evaluation consisted of three machine-excavated trenches which revealed shallow post-holes and a truncated pit of medieval date along the northern, Newland street frontage portion of the site. Additional evidence for extensive ground disturbance was revealed within the centre and to the south of the site.

Joe Whelan
AC *archaeology*

STEEPLE, NORTH HILLS PLANTATION

An archaeological field evaluation of a proposed new lagoon system at North Hills Plantation, Steeple parish, Dorset (SY 89858275), was carried out by AC *archaeology* during January 1999. The site is located on a broad flat ridge which slopes moderately to the north within the development area, and to the south and east outside the development area. The work comprised the machine-excavation of four trenches totalling 265m in length, an approximate 2% sample of the area for the proposed lagoon.

The evaluation identified extensive evidence for late Iron Age or early Romano-British occupation on the site in the form of significant quantities of cut subsoil features and artefacts. The presence of extensive remains meant excavation of archaeological features was limited to resolving the nature and function of a selection of feature types — principally pits, post-holes, ditches and gullies, and the detailed recording and collection of surface artefacts (where present) from the remaining unexcavated features. Significant quantities of pottery were recovered from the site, all of which is native coarseware (Black-Burnished Ware) with few diagnostic forms. The only other artefact recovered was a Kimmeridge shale Class A armlet core. The limited artefact evidence does however indicate that occupation on the site is likely to date to around the late 1st century BC or early AD 1st century. However, most finds were recovered from the surface of features and from only limited hand-excavation. It cannot therefore be presumed that evidence for earlier, later or more prolonged occupation is not also present elsewhere on the site. It is likely that activity on the site is delineated by a large ditched enclosure — a possible entrance through this was identified at the southern end of Trench 1. There is also evidence for at least one post-built hut circle. Numerous other post-holes across the site also suggest further structural components.

John Valentin
AC *archaeology*

STEEPLE, POVINGTON PIT

An archaeological evaluation by machine-excavated trenches adjacent to the existing Povington Pit in Steeple parish (SY 895824) was carried out by AC *archaeology* during autumn 2000.

The evaluation comprised investigations in five separate fields, which provided mixed results. Deep, extensive soils (including peat-like deposits) were present in one area, which seem to have been naturally-formed within the relatively low-lying ground. Some trenches in this field contained evidence for former field ditches. Trenches excavated to the south of West Creech Farm contained a simple deposit sequence of topsoil directly onto undisturbed natural subsoil. No evidence for archaeological activity, either features or finds, was present in any trench. The main area of archaeological interest was to the west of West Creech Farm (SY 893825), where evidence for Romano-British settlement, consisting of cut features, occupation soils and significant quantities of pottery was identified. The types of pottery and other artefacts recovered, and the nature of the archaeological deposits identified, suggests settlement-type activity characteristic of a farmstead or low-level industrial site, seemingly in use for only a short-lived period, centred on the 3rd century AD.

John Valentin
AC *archaeology*

STEEPLE, WEST CREECH FARM

An archaeological field evaluation of a proposed new lagoon on land adjacent to West Creech Farm, Steeple parish, Dorset (SY 895823), was carried out by AC *archaeology* during April 1999. The site is located on a slight ridge which slopes moderately to the north within the development area. The main archaeological interest for the site comprises a prominent curvilinear bank and shallow ditch extending from the west end of the field in an easterly direction and curving round to the south. It does not appear to continue into the adjacent fields to the west or south.

The evaluation comprised the machine-excavation of six trenches totalling 169m in length, one of which was located across the earthwork bank. Limited evidence for archaeological activity was identified in the central area of the site, comprising a series of ditches, all of which were sampled by hand-excavation and some producing pottery of Romano-British date. This area does not appear to contain evidence for settlement on the site, the ditches likely to represent sub-surface evidence for former boundaries.

The trench excavated across the earthwork bank has confirmed that the bank was man-made, but cannot provide conclusive evidence for the date of its construction. There does not appear to be an associated ditch, but the bank does seal a buried soil horizon — probably a former land surface — from which fragments of late Iron Age pottery were recovered. The bank was, therefore, constructed during or after the later Iron Age and may be Romano-British or medieval in construction. A medieval date for construction is considered most likely. Subsoil layer (601) in Trench 6 is comparable to subsoil horizons throughout the remainder of the site, more particularly layer 101 in Trench 1, which was cut by F108. This feature contained a large proportion of the Romano-British pottery recovered from the site.

Although the earthwork bank is of some antiquity, it does not appear to represent the boundary to a former settlement, and is more likely to have been constructed in order to provide an effective barrier between the low-lying, waterlogged land on one side and the more usable farmland to the south and west.

John Valentin
AC *archaeology*

STOURPAINE, MANOR FARM

An archaeological evaluation by trial trenching on land at Manor Farm, Stourpaine, Dorset (NGR ST 86070935) was carried out by AC *archaeology* during December 2000. The site lies immediately to the north and north-east of the Scheduled Ancient Monument known as 'The Manor House' (SAM no. Dorset 241), which comprises the earthwork remains of what is considered to be the former Manor House, positioned within a square moat, also incorporating other earthworks to its south. The evaluation comprised the machine-excavation of four trenches with a total area in plan of *c.* 50m², each positioned in an area likely to be affected by development. This exercise revealed largely negative results, with a deep sterile alluvial deposit present to depths in excess of 1.80m below existing ground levels in all areas. It is also evident that the farmyard was terraced into the slope during its construction, which is likely to have completely removed any evidence for archaeological remains that may have been formerly present. A tile and brick surface of the former farmhouse located in Trench 2, which is believed to have been constructed during the 19th century and was destroyed by fire in the 1920s, can be shown to be largely superficial, with no evidence for an earlier building identified. Within the farmyard area an earlier (although undated) flint and chalk surface was recorded, which is also likely to be 19th century (or later) in date.

John Valentin
AC *archaeology*

THORNCOMBE, BROADBRIDGE FARM

An archaeological field evaluation of the proposed Chard Junction quarry extension on land adjacent to Broadbridge Farm (ST 34370473), was carried out by AC *archaeology* during April 1999. The site lies on a generally north-west facing slope at around 60m OD, the underlying geology consisting of Pleistocene sands and gravels. The evaluation comprised the machine-excavation of four trenches, amounting to an approximate 2% sample of the proposed extension area. Most trenches contained largely negative results, with the exception of Trench 1 located on the western side of the site, which contained a shallow ditch of probable 19th-century date, likely to represent a continuation of the southern boundary to the orchard area located to the west of this site. Two further linear features were identified, which were undateable but may be of prehistoric origin.

John Valentin
AC *archaeology*

THORNCOMBE, CHARD JUNCTION

The archaeological evaluation by means of trench excavation on the site of two proposed areas of gravel extraction on land at Hodge Ditch Chard Junction Quarry, Thorncombe Dorset was carried out by AC *archaeology* in two phases during June and July 1999. Both areas are situated on a steep-sided west-facing spur overlooking the River Axe at around 75m OD. Area 1 extends over approximately 4.4 hectares, centred on ST 3495 0475, currently under permanent pasture, and Area 2 covers 2.8 hectares centred on ST 3515 0475, currently used for market gardening.

The site has previously been the subject of a desk-based preliminary archaeological assessment and geophysical

survey. The former provided evidence for archaeological activity in the area derived from recent fieldwork in other zones of the Chard Junction quarry. The most notable of these, located approximately 100m to the south on the adjacent gravel spur, was a middle Bronze Age settlement enclosure (Valentin 1998).

The geophysical survey of the current site indicated the presence of two curvilinear ditches, one of which was considered may represent the ploughed-out remains of a former Bronze Age burial mound, the larger feature possibly indicating the presence of another later prehistoric settlement enclosure. Other anomalies identified comprised a sequence of possible linear features, representing boundaries of former field systems of more recent date.

This evaluation comprised the machine-excavation of 21 trenches. The principal aims were to assess the nature of sub-surface anomalies identified during the geophysical survey of the site and to sample those areas that contained no evidence for sub-surface features or where it was not possible to carry out detailed geophysical survey. The total trench length was 765m amounting to an approximate 1.5% sample of both areas. The investigation confirmed the presence of a Middle Bronze Age settlement enclosure (b) which straddles the boundary separating Areas 1 and 2. Segments were exposed and excavated in a number of trenches, which also confirmed the presence of an entrance on the western side of the enclosure, as well as internal occupation features. Other anomalies identified during the geophysical survey, with the exception of a single probable ditch in Trench 14, were absent in trenches, including what was initially considered to be a ring ditch (a). The pottery evidence recovered from enclosure (b) appears to indicate that it is broadly contemporary (*c.* 1000 BC) with the recently excavated example on the adjacent hilltop (*ibid.*), but is smaller in plan. Archaeological activity on the site appears to be concentrated around this Middle Bronze Age feature, with only limited evidence from trenches further afield and, perhaps more significantly, a complete absence of artefacts from ploughsoil and subsoil contexts.

Valentin, J., 1998 'Thorncombe, Chard Junction', *Proceedings of the Dorset Natural History and Archaeological Society* **120**, 115.

Simon Hulka
AC *archaeology*

THORNCOMBE, CHARD JUNCTION

An archaeological field evaluation by means of trench excavation on the site of the proposed 'Sheep Field' extension to Chard Junction Quarry, Thorncombe, Dorset (ST 34700445), was carried out by AC *archaeology* during early November 1999. The site stands as an isolated plot of land within the existing quarry boundary at around 76m OD. It covers an area of approximately 1.4 hectares centred on ST 34700445 and is currently under permanent pasture. An earthwork survey of the site recorded a series of earthworks on the site, comprising small and large mounds, a linear bank along the southern boundary and three linear depressions towards the centre of the site.

This evaluation comprised the machine excavation of nine trenches. The principal aims were to assess the nature of surface anomalies identified during the earthwork survey and to determine whether the Romano-British enclosure, previously recorded in an adjacent field, was present within the development area. Other trenches were excavated to clarify the presence or absence of sub-surface features where no earthworks were present. The total trench length was 170m, amounting to a 2.7% sample of the total site area.

The investigation confirmed a modern date for the creation of all the surface anomalies identified during the earthwork survey. Evidence for the existence of the western side of the Romano-British enclosure was inconclusive; a dark soil horizon identified in Trench 3 and containing charcoal, burnt stone and burnt flint was located in the vicinity of the enclosure, and is considered to represent evidence for past tree clearance. The evidence for archaeological sub-surface features was limited to a probable former hedge boundary in Trench 6 and what appeared to be a former drainage ditch in Trench 9, both likely to be of modern date. No artefacts were recovered from the fills of the two cut subsoil features or from soils associated with the extant earthworks.

Simon Hulka
AC *archaeology*

WEYMOUTH, GUILDHALL CAR PARK

An archaeological field evaluation on the site of the Weymouth Guildhall Car Park (SU 67957874), was carried out by AC *archaeology* during early October 1999. The site is located close to the north side of the harbour towards the southern end of the town centre. It lies adjacent to a possible former medieval market and quay area and it was considered that the site may provide evidence for waterfront activity in the form of a merchant's house containing cellars. In 1805, a maritime warehouse ('the great warehouse') was constructed on the site, which was subsequently modified in the early part of this century to become part of a police and fire headquarters. The building was demolished during the 1950s.

The evaluation comprised the machine-excavation of two trenches with a total length of 6.80m, each 1.80m wide in plan. The sequence of deposits in Trench 1 comprised modern tarmac and hardcore layers overlying a greyish-brown silt soil accumulation above redeposited beach gravels. The south-west corner of a red brick building, visible in the north-west corner of Trench 1 was considered to be of relatively modern date. The upper sequence of deposits in Trench 2 were similar to those in Trench 1, comprising modern tarmac and hardcore layers overlying a greyish-brown sandy clay soil accumulation. Below this were the remains of two stone-built walls, a brick wall and a brick-constructed floor surface. These structures represent three construction phases of one or more buildings. The structures were not removed and although it is probable that the brick wall and surface are of relatively modern date, the stone-built structures could not be attributed to a specific period. They may once have been part of the 'great warehouse', constructed in 1805. Hand-excavation of deposits lying adjacent to, and pre-dating the earliest wall, were removed. These clearly represent former beach deposits. The presence of deposits of this type immediately beneath probable 18th and 19th century building remains confirms the absence of an earlier (medieval) building, at least in these locations.

Simon Hulka
AC *archaeology*

NEGATIVE EVALUATIONS

Crossways, Woodsford Fields, SY 7695 8885. Evaluation following an archaeological desk assessment identified no archaeological features or artefacts. (Cotswold Archaeological Trust).

WATCHING BRIEFS

CHARMINSTER, 1 WEST HILL

Between September and December 2000, Terrain Archaeology carried out a watching brief during the construction of a new extension to a house at 1 West Hill, Charminster (SY 67889270), which lies adjacent to the south-west corner of St Mary's churchyard. Eleven, possibly twelve, graves were partially exposed. The burials appeared to be arranged in rows and were aligned E–W. The burials continued beneath the house and the present churchyard boundary wall. The human remains were not lifted and any bones disturbed were reburied immediately. No dating evidence was obtained. The site was clearly carved out from an earlier enlarged churchyard, which is thought to be associated with the Saxon minster church.

Peter Bellamy
Terrain Archaeology

CORFE MULLEN, HIGH PARK ROAD

An archaeological watching brief was carried out during water main replacement works along High Park Road and Roman Road, Corfe Mullen, Dorset (SY 99339610) during October 2000. The main trench ran down the centre of the known route of the Hamworthy to Badbury Rings Roman road. Observations of the trench sections revealed a stratigraphic sequence which showed the agger of the Roman road to be well preserved, albeit truncated in a number of places by modern service trenches. No associated ditches could be observed, although the best opportunity to see one, on the eastern edge of the current road, was denied by the intrusion of a modern service trench. A distinction was noted between the sections of the modern road which were covered in tarmac and those which are currently rough trackway. Under the tarmac, the Roman road is sealed below a 0.5m thick deposit of soil, gravel and roots. In the areas of trackway, the agger is covered only by a thin layer of chippings and is close to becoming exposed in some places.

Neil Adam
AC *archaeology*

DORCHESTER, FAIRFIELD ROAD

Archaeological monitoring during the excavation of geotechnical trial pits on the site of Dorchester Market, Fairfield Road (SY 69059020) was carried out by AC *archaeology* during February 2000. The site lies adjacent to the southern approach road into the Roman town and previously recorded finds from the site include evidence for a substantial Roman building and Romano-British burials.

The current work comprised seven trial pits of varying size located across the site, which revealed areas where probable truncation had removed pre-existing deposits, areas where an apparently undisturbed deposit sequence lay above weathered chalk, and two locations where Romano-British burials and other features were recorded. It was established that one of the burials was lying on its left side in a flexed posture and facing south. The burial was recorded and left *in situ*. In another trial pit a substantial NE–SW aligned ditch was present, which contained Romano-British pottery and building material.

Philip Mcmahon
AC *archaeology*

DORCHESTER, WDDC CAR PARK, COLLITON STREET

A watching brief was undertaken by Terrain Archaeology during the replacement of the retaining wall of the West Dorset District Council car park in Colliton Street, Dorchester (SY 6917 9079) in January/February 1999. About 0.6m of Roman stratigraphy was revealed. At the southern end of the site, a number of small pits, probably dating to the 1st–2nd century AD, were sealed below a rammed chalk floor of probable 2nd century date. The northern part of this surface was cut by several post-holes. At the northern end of the site were three small hearths. A number of later Roman pits were also revealed.

Peter Bellamy
Terrain Archaeology

MAIDEN NEWTON, CRUXTON

Archaeological observations were conducted during January 1999 in conjunction with groundworks at the site of the former Woolaway Bungalow, Cruxton, Maiden Newton (SY 606963). No intact archaeological features were disturbed during the work, although an undated chalk-lined well and two undated subsoil horizons were observed during the area topsoil strip and site preparation. Large areas of the site were truncated by modern disturbance, which may have removed any evidence for former occupation on the site, although a milk churn stand of probable 18th/19th-century date was recorded in the northern zone.

Phil Mcmahon
AC *archaeology*

PORTLAND, REAP LANE SEWER, SOUTHWELL

Archaeological observations were conducted during the laying of a new sewer pipe across land to the south of Reap Lane, Southwell, Dorset, in July/September 2000. The line of this sewer (SY68167029–68327018) crossed an area previously evaluated by Terrain Archaeology in 1999. Two areas of (undated) buried soils were encountered, as well as the remains of a stone rubble field wall (also undated). The work was commissioned from Terrain Archaeology by Wessex Water.

Peter Bellamy
Terrain Archaeology

SHERBORNE, BRECON HOUSE, LONG STREET

A watching brief was undertaken by Terrain Archaeology during the construction of a new building on the south side of Long Street, Sherborne, adjacent to Brecon House (NGR ST 64641661). A line of four, perhaps five medieval rubbish pits was discovered immediately behind the present street frontage. These have been dated by pottery to the 12th century. About four metres to the south, was a small east–west boundary ditch, also dated to the same period. The location of the rubbish pits on the present street frontage has been interpreted as evidence for the realignment of Long Street probably in the 12th century.

Peter Bellamy
Terrain Archaeology

STANTON ST GABRIEL

A watching brief during the construction of a new reed bed sewage system for St Gabriel's House, Stanton St Gabriel was carried out by Terrain Archaeology on behalf of the National Trust, in June 2000. Three reed beds (centred on SY 4002 9242), connected by drain trenches, were excavated by machine immediately to the west of the remains of a brick kiln and medieval settlement previously excavated by the National Trust (Papworth 1998). No archaeological features were observed. A very small quantity of medieval pottery was recovered from colluvial deposits.

Papworth M., 1998 'Stanton St Gabriel, brick kiln and medieval settlement: Interim report' *Proceedings of the Dorset Natural History and Archaeological Society* **120**, 114.

Peter Bellamy
Terrain Archaeology

WAREHAM, 36 NORTH STREET

An archaeological watching brief was undertaken over the summer of 1999 on a housing development sited at 36 North Street, Wareham (SY 92248732). The site lies in an area of high archaeological potential, being within the Saxon 'burh' of Wareham on a main arterial route into the town, close to St Martin's church. Various archaeological works have taken place recently within Wareham, notably the 1994 excavation of Howard's Lane by Wessex Archaeology and the 1970s excavations of Hinton and Hodges on the land immediately to the south of 36 North Street (on the corner of North Street and Dollins Lane). Both of these sites revealed ample evidence for early medieval settlement and industry within the town. The results of this recent watching brief have uncovered a similar pattern, with the focus of medieval activity fronting onto North Street.

Astrid Hudson
AC *archaeology*

WEYMOUTH, WYKE ROAD, WYKE REGIS

An archaeological watching brief was undertaken during the summer of 1999 for a new water-main at SY 664779. The site lies adjacent to several known discoveries of Romano-British settlement and funerary activity. The current site revealed evidence for deep deposits of Romano-British occupation soils. This may represent a continuation to the south of material recorded during earlier investigations.

Astrid Hudson
AC *archaeology*

WINTERBORNE ST MARTIN, ASHTON

Archaeological observations were carried out on this site during the construction of a new cricket pavilion for Martinstown C.C. The site lies on the northern floodplain of the South Winterbourne stream, approximately 400m to the south-west of Maiden Castle hillfort at ST 662881. The watching brief comprised the observation of topsoil stripping and subsequent machine-excavation of footings for the new building and associated service trenches. Evidence for archaeological activity on the site was limited; a shallow linear ditch aligned north-west/south-east across the centre of the building and a feature showing a similar profile visible in a wall-footing section some 4m to the south-west were the only cut features recorded. They may represent the remnants of infilled drainage channels associated with post-medieval farming practices. The excavation of a square pit to house a septic tank revealed what appeared to be several thin alluvial deposits, one of which contained burnt flint fragments. It is probable that the burnt flint was derived from floodplain deposits higher up the South Winterbourne valley.

Simon Hulka
AC *archaeology*

STINSFORD, DORCHESTER SHOWGROUND, COKER'S FROME

Dorchester Agricultural Society submitted a Planning Application for the establishment of a new showground at Coker's Frome Farm, north of Dorchester (NGR 369740 091320). Preparation of the site included the cutting of a number of service trenches in an area that included Roman remains and post-medieval water meadows. Bournemouth University carried out an evaluation and watching brief during the course of groundworks during April to May 2000. The trenching produced negative evidence except in two areas.

North of the farm buildings (NGR 369750 091400), and over an area of approximately 150m^2, there was a surface scatter of Roman roof tiles and pottery fragments. This confirmed the results of previous fieldwork (Williams 1973). A service trench at the northern periphery of this scatter produced no artefacts or features. The site remained otherwise undisturbed.

Immediately west of Coker's Frome farmhouse (NGR 370000 091550) a service trench revealed a 20th-century rubbish pit and a section through a ditch of at least 0.4m depth and 0.9m width, reducing to 0.7m at base of the cut. The presence of 1960s beer bottles provided the date for the rubbish pit. The ditch contained no diagnostic material at this point but it was aligned north-north-east to south-south-west.

Williams, P.F., 1973 'Some Surface Finds in South Dorset', *Proceedings of the Dorset Natural History and Archaeological Society* **94**, 87.

Ian Hewitt and Karen Rumsey
Bournemouth University

WIMBORNE LODGE

Wimborne Lodge (Grade II listed) was constructed *c.* 1850 at the entrance to the west carriageway to Canford House (NGR 401700 099025). In September 2000, an extension was being constructed against the north-east elevation of the Lodge, and this was the subject of a watching brief.

Visual inspection of the site prior to the commencement of ground works indicated that the archaeological potential of the site was low. The land at the front of the Lodge (south-west) appeared to be undisturbed but on the site of the house and extension the natural contours of the ground had been cut away in order to provide an even platform for the construction of the Lodge itself.

Mechanical excavation of the extension site revealed a complex of ceramic storm water pipes and tanks, and a brick built cesspit. Given the limited scope of the excavation, it was not possible to be certain of the relationship between all of the component features of the drainage and sanitation system. However, two phases of construction could be recognised. The first included a brick culvert that was probably contemporary with the original construction of the Lodge. An unrelated system of ceramic pipes would have post-dated the Great Exhibition of 1851 and these must represent a later 19th-century modification to the system. On the basis of this evidence, one can infer that Wimborne Lodge was not built in one phase although evidence for the second phase is not readily apparent from the above ground architectural features of the Lodge.

Ian Hewitt
Bournemouth University

WATCHING BRIEFS WITH NEGATIVE RESULTS

Bovington, Bovington Lane (ST 83458775) — monitoring of replacement water main (AC *archaeology*)

Corfe Mullen, Lake Farm (SY 999989) — monitoring during groundworks and barn conversion (AC *archaeology*)

Corfe Mullen, Lake Gates (SU 99599902) — monitoring during building construction (AC *archaeology*)

Gussage St Michael (ST 986114) — observations of footings trenches (AC *archaeology*)

Milton Abbas, Pond Head Cottage (ST 804012) — monitoring during the construction of a new pumping station and associated works (AC *archaeology*)

Sutton Waldron Church (ST 862157) — lowering of the floor level within the interior of the west tower (AC *archaeology*)

Wareham, North Bridge (SY 92188782) —monitoring during trenching for an electricity cable trench (AC *archaeology*)

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NATURAL HISTORY REPORTS

DORSET GEOLOGICAL NEWS

Michael R. House,
School of Earth and Ocean Science
Southampton Oceanography Centre
European Way
Southampton SO14 3ZH

World Heritage Coast Bid

In June 2000 a *Nomination of the Dorset and East Devon Coast for inclusion in the World Heritage List*, a substantial document, was forwarded by Secretaries of State John Prescott and Chris Smith to UNESCO. The coast section, excluding access town areas, stretches from Orcombe Rocks in East Devon to the southern end of Studland Bay. It thus comprises a complete section through the whole of the Mesozoic, that is the Triassic, Jurassic and Cretaceous Systems. The nomination document was prepared under the auspices of the Devon and Dorset County Councils through the World Heritage Steering Committee (chaired by David Andrew) and the Dorset Coast Forum (chaired by Denys Brunsden). This fine document comprises 150 pages of detailed description and coloured illustration, and includes contributions from over 60 specialists. Assembly was the responsibility of Tim Badman and Denys Brunsden.

Following the submission, the UNESO Investigator, Paul Dingwall, visited the site for inspection and discussions with interested parties in the week beginning 25 February 2001. This included a helicopter traverse along the whole of the nominated site, inspection of critical parts of the coast and examination of fossils from the coast, including collections in the Natural History Museum. A decision is expected in December 2001.

Coastal landslips

Following very heavy rainfall in the autumn of 2000 and early 2001, most parts of the coast suffered landslips. West of Lyme Regis, the Wilderness area above the cliffs has been in continual movement. Near The Cobb, beyond the western end of Victoria Gardens, slippage led to buildings being condemned. Above The Spittals, the 15th green of the golf course landslipped, more of the old road was slipped and there were mud glaciers below Black Venn. Stonebarrow was especially active with landslips removing sections of the coastal path, with the Cretaceous rocks and sequence down to the Green Ammonite Beds slipping over the vertical and rather stable Belemnite Marl to the shore; considerable debris was soon dispersed by wave action. The large pillars, up to the Three Tiers, which had been in place for some time below Golden Cap foundered and collapsed. Beaches to the east now have shingle concentrated on the west side, the contrary to last year, so those west of Seatown concealed again the rocks temporally exposed last year.

A landslip between Bincleaves and Sandsfoot Cove severed the coastal footpath for almost 100 metres where the path traversed the middle cliff. The cause is similar to that elsewhere. A thick clay unit below, in this case the Sandsfoot Clay, became mobile as a result of water seepages from an aquifer above (the Sandsfoot Grits) and by its increased mass when filled with water. Parts of the lawns of properties adjacent to the path were also lost.

At Furzy Cliff, east of Overcombe, there were small falls of the Red Nodule Beds close to the promenade, and many mud flows over the beach shingle. Noticeable over recent years have been masses originating high in the cliff moving downwards, like glaciers, leaving a striated chute or channel behind them in their passage to the cliff foot. At Redcliff, there was a landslip at the cliff top to the east and adjacent to that described last year, but smaller. There were small falls of the chalk at White Nothe and further along the coast. At Swanage, a stretch of the coastal path of some 50m was lost near the Zig Zag ascent and the path is now routed inland using the road. At New (North) Swanage slips disturbed chalets and several of the usual footpaths to the cliff top were overslipped. In January 2001, at Pondfield Cove, there was a landslip of some 200m length with a toe of overturned Upper Greensand projecting at the shore. This was followed later by a slip of chalk from the high cliff above. Along the Studland shore several metres were lost and beach chalets were moved back, and gabions at the just north of Redcliff were disturbed. The presently eroded sands here are relatively recent and post-date the inland cliff line shown on early maps. The cause of periods when sand accumulates, as opposed to the present year, when sands are lost, is probably controlled stochastically by periods when low waters correspond with easterlies and blow beach sand ashore where it accumulates forming new ground, as opposed to periods when high water, due to tides and barometric pressure, correspond with easterly gales and erosion.

At Hengistbury Head sands and gravels above the Barton Clay have slipped over the more vertical face of the firmer Boscombe Sands below leaving talus fans on the beach to be removed by the sea. Posts have been set near the cliffs to document recession. A similar, but milder, landslip situation is presently seen at Friar's Cliff, but the armoured cliff between there and Chewton Bunny has been stable. Not so the Barton Clay cliffs farther east toward Barton, but they are in Hampshire.

Geological Survey Maps

Two new editions of coastal BGS 1:50,000 maps were published in 2000, but are still (early 2001) only available as flat sheets. These are the West Fleet and Weymouth Sheet (341 and part of 342), and the Swanage Sheet (342 (east) and 343). Considerable detail is included including extensive cross sections, structure maps and maps showing offshore seabed sediment distribution. One general problem is that the maps now show very much more detail than former editions, detail which is perhaps more appropriate to the 1:25,000 or 1:10,000 scale. Formerly it was easily possible to elucidate overall structural and distributional patterns, but now member and subdivision colouring is so

diverse, that this is not possible to do at a glance. Furthermore a complex stratigraphic terminology is introduced; the Chalk, for example is now divided into seven Formations. The Corallian Beds (given as 80–110m in thickness) are regarded as the Corallian Group and divided into five formations whilst the Kimmeridge Clay (given as up to 245m) and almost certainly of very much longer duration, is regarded as a single Formation: this gives curious deference to differences in a largely carbonate succession (the Corallian) as opposed to equally diverse differences in a largely argillite succession (the Kimmeridge Clay). Both should be treated equally and, in the writer's view, Formation is appropriate to both. The Kimmeridge Clay, in addition, is likely to have been the longer in duration. Some specific errors are mentioned below.

West Fleet and Weymouth Sheet. Thomas Webster made some of the best early drawings of this coast which were eventually published in 1818 in Englefield's *Picturesque Beauties of the Isle of Wight.* Plate 45 of that work shows how the Portland Beds of Durdle Door pass westward to form the offshore rocks of The Bull and The Calf, and many will have swum out, as has the writer, to check this. Not so the BGS, and these are mapped as Chalk Group on the map. Such an error gives little confidence. In our *Proceedings* (Vol. **71**, 175–83) Mottram showed by detailed excavation and full report how the Gault was not cut out at Moigns Down Barn and to the ESE: this evidence is ignored here. The remarkable discovery of outcropping Upper Greensand 200m WNW of Greenhill, near Sutton Poyntz, reported in our *Proceedings* (Vol. **91**, 39) was missed and is mapped as Chalk. Missed also is the small fault cutting the Tufa west of Chalbury Camp. These are not matters of opinion. There has been a traditional practice to show where a boundary is uncertain with a dotted line and keeping a full line only for certainty. In the Weymouth lowlands everything is shown as certain with great prejudice to the truth. The welcome attempt to map the Forest Marble shell beds suffers here. The introduction of many faults in the Sutton Poyntz area and the Ringstead area, contrary to earlier mapping, will need careful justification. This type of justification is curiously absent from the published Technical Reports which give details on the mapped areas.

Swanage Sheet. The remarkable contribution here is the detailed subdivision and mapping of the early Tertiary deposits. The main Chalk ridge from Lulworth to Old Harry Rocks and Ballard Down shows dip faults at Arish Mell and south of Studland but otherwise does not invoke faulting to explain twists along the ridge. The Cretaceous/Tertiary boundary south of Studland is mapped as faulted.

OXFORD CLAY AT POTTERY LANE, WESTHAM, NEAR WEYMOUTH

N. Chapman

A housing development during the spring of 1999 situated (SY 672 798) alongside Newstead Road and bordered by Pottery Lane in the Westham district of Weymouth has afforded an investigation of Oxford Clay of the area. This relatively undisturbed site showed topsoil underlain by weathered clay unlike waste ground of lower relief that stretched north-eastwards to the A354, which bounds the margins of Radipole Lake Nature Reserve. Landfill with mid 20th-century refuse on this downward slope covers workings of a defunct pottery complex trading as 'Weymouth Pottery' in 1867 (Young 1972, 240), later noted by Strahan (1898, 20) and which appeared on maps at the turn of the 20th century as 'Weymouth Brick and Tile Works' before closure in 1908. The site layout illustrated on the OS map of 1902 (Young 1972, 240–41) shows fairly deep and extensive quarrying situated (SY 673 796) immediately behind the recently erected dwellings, hence an investigation of clay exhumed here should indicate the youngest beds exposed in the western face of the now defunct pit. Fortuitously, House (1955, 134–35) conclusively proved that Red Nodule Bed fossils that he had found nearby on Radipole Lake foreshore were dredged from Weymouth Harbour and thus were not eroded from exposures in the vicinity of the derelict pit.

Excavation of footings trenches centred on SY 672 798 produced spoil mounds of poorly fossiliferous, weathered brown and khaki clays and a smaller quantity of grey and blue-grey clay that yielded indifferently preserved fossils. These included crustacean remains, broken hibolitid belemnites, bivalves, serpulids, and fragmentary and pyritic juvenile ammonites listed as follows: *Hecticoceras* sp., *Kosmoceras annulatum* (Quenstedt) [m], *Kosmoceras spinosum* (J Sowerby) [M], *Kosmoceras tidmoorense* Arkell (= *spinosum*), *Kosmoceras* sp., *Quenstedtoceras ?henrici* (Douvillé), *Alligaticeras* sp. and *?Choffatia* sp. Beds (W51–52 in Chapman 2000, fig. 3) of comparable facies encountered on the north-west corner of Tidmoor Point were recently assigned to the *henrici* Biozone ('Total Range Biozone' in Whittaker *et al.* 1991, 816, fig. 2), lower Lamberti Zone by Chapman (1998, 117, loc. A, 119, fig. 1).

That a Lamberti Zone fauna is evidenced on the 10m contour line close to Pottery Lane is hardly surprising since there are two other records for fossils of comparable age in the Radipole Lake/Westham area. Ammonites from the same zone were recorded by Riley and Thomas (1987, 209) during piling for the bridge across Radipole Lake (SY 677 793), whilst pyritised ammonites, perhaps of similar age, were uncovered close to Weymouth College (SY 675 794). This latter record is due to Richard Samways of Portland, who witnessed the exhumation of ammonites during the levelling of waste ground lying 400m to the south-east of the intersection of Newstead Road and Pottery Lane. The spoil from this site, rather than consigned to landfill, was transported instead to the Tidmoor Point ranges and dumped on open ground close to SY 647 791.

But these records are at variance with a Mariae Zone fauna reported by Arkell (1947, 33, pl. ii, fig. 3a, b) from a 2.5–3.0m deep trench situated along the west shore of the 'Backwater' and for Lamberti/Mariae Zone fossils noted from the 'margin of the Lake' by Woodward (1895, 16). Neither author precisely stated the source for these fossils and Arkell's (1947, 33) twice repeated phrase 'at this point' when describing their position is ambiguous but perhaps implies 'in the vicinity of the pit'. Moreover, Woodward (1895, 16) reported '*Ammonites cordatus*' and '*A. perarmatus*' from the blue and mottled clays of the Pottery Works that he assigned to the 'Zone of *Ammonites Cordatus*', which Arkell (1947, 33) interpreted as a record for *Cardioceras cordatum* (J. Sowerby) from the pit. But the author is less assured that 19th-century palaeontologists competently differentiated between ammonite taxa (see Woodward 1895, 14) for Woodward (1895, 16–17) reprinted records

from Damon (1884) which indicate confusion in discriminating between Kellaways and Upper Oxford Clay faunas.

Even if the ammonite identifications of these Victorian palaeontologists are suspect those surviving fossils collected by them from the 'Westham works' (Young 1972, 240) afford an invaluable record. One specimen amongst the Blake collection housed at the British Museum is a highly distinctive ammonite fragment from the 'Lamberti Bed', Weymouth Pottery that was illustrated by Page (1991, pl. 23, figs 6, 7) as *Reineckeia (Collotia) oxyptychoides* Spath of Lamberti Subzone age (Page 1991, 18). But fragmentary body chambers of this size are infrequently encountered nearer the top of the subzone on Tidmoor Point (locs D-E in Chapman 1998, 117–18, 119, fig. 1) whereas similarly large specimens in a siltstone preservation are regularly collected from the *henrici* Biozone. Since the same biozone was proved at Pottery Lane there is a possibility that the age of the reineckeid is slightly older than stated. However this argument assumes absence of faulting at the locality and since the angle of dip of the bedding is uncertain in this part of the southern limb of the Weymouth Anticline, the ages of worked faces that were cut due east and to the north-east are impossible to determine. The previously noted Mariae Zone fauna (Arkell 1947, 33) lying below the level of the pit floor near the margin with Radipole Lake might indicate a high probability for faulting in these easterly workings.

If the author is correct in assigning the topmost beds in the west of the defunct pit to the lower Lamberti Zone then the loss of the exposure during the first quarter of the 20th century is most unfortunate. With the depth of the western pit face likely to have exceeded 5m, beds of the Athleta/Lamberti Zone boundary would already appear above the pit floor and deeper quarrying might have revealed the Athleta Zone, Spinosum Subzone: exposures of this age are poorly known in the local succession (Chapman 2000, 78). The intriguing disparity highlighted between fossils reported in this area during the approximate period 1870–1940 and those of the present day would indicate the desirability for further investigation of Oxford Clay cropping out in the southern limb of the Weymouth Anticline between Chafey's Lake and the Nothe area.

Acknowledgements

Richard Samways is thanked for supplying detailed information concerning the fate of Oxford Clay transported from temporary localities in the Weymouth area. Michael House is acknowledged for providing information and a copy of the twenty five inch to the mile Ordnance Survey map for the locality, dated 1902 (Dorset Sheet LIII.10).

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DORSET RAINFALL 2000

John Oliver

The general rainfall over Dorset in 2000 amounted to 1187.7mm (Table 1). This is 34% above the 1961–90 average of 883mm and the highest annual total since 1960.

Buckland Newton (Beaulieu Wood) was the wettest station with a total of 1608.1mm.

Portland Bill (Old Higher Lighthouse) was the driest station collecting just 631.9mm, its *lowest* annual total for four years.

DRY SPELLS

It was the driest January over Dorset as a whole since 1992. Most stations reported little or no rain from the 13th to the 21st and in many places the dry theme continued until the 27th.

Table 1: Monthly rainfall and thunder

Month	Raindays* >0.2mm	Rainfall* (mm)	1961–90 av. (mm)	% of average	Days with thunder
January	12	37.0	99	37	0
February	21	98.7	73	135	2
March	12	35.8	75	48	2
April	21	165.5	54	306	1
May	19	81.5	60	136	9
June	9	22.3	53	42	4
July	11	42.8	47	91	2
August	11	61.1	63	97	9
September	18	106.8	75	142	4
October	25	174.3	89	196	5
November	24	169.1	93	182	5
December	23	192.8	102	189	8
Year	**206**	**1187.7**	**883**	**134**	**51**

* Rainfall and Rainday averages have been calculated from the 35 stations that record rainfall to an accuracy of 0.1mm.

RAINFALL IN DORSET 2000

Stations marked * record to an accuracy of 0.1mm and are used to compile county averages

STATION		OBSERVER OR AUTHORITY	GREATEST FALL IN 24 HOURS		Days with 0.2mm or more	Days with 25mm or more	DEPTH OF RAINFALL IN MILLIMETRES												TOTAL FOR YEAR
			Depth	Date			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
STOUR BASIN																			
Belchalwell Street	*	Mr D.R. Prestwich	50.5	5/11	200	10	40.3	87.1	34.4	189.7	79.8	20.8	47.5	52.2	102.5	180.8	182.8	254.4	1272.4
Blandford St Mary	*	Mr A. Fleet	48.0	31/12	219	9	42.4	105.8	37.6	165.4	85.2	23.9	52.4	36.5	124.3	189.6	189.7	210.0	1262.8
Buckland Newton (Beaulieu Wood)	*	Mr B. Newman	62.9	29/10	193	15	56.1	134.5	42.6	224.8	105.6	32.7	58.4	61.7	131.8	264.3	219.6	276.0	1608.1
Child Okeford	*	Mr I.R. Moore	42.0	29/10,5/11	187	7	39.9	89.7	40.0	197.0	91.5	25.8	47.0	53.5	99.5	178.0	175.5	224.7	1262.1
Compton Abbas (Apple Lynchet)	*	Mr H.J. Stirling	39.4	29/10	234	4	34.0	100.6	48.0	174.2	91.2	27.7	40.1	61.0	83.1	161.5	144.0	137.7	1103.1
Cranborne (Pound Farm)		Mr G. Blatchford	48.0	5/11	190	8	38.0	91.0	35.0	203.0	114.0	29.0	44.0	58.0	108.0	197.0	191.0	216.0	1324.0
East Orchard (Kumbi Lodge)		Mr R.I. Jesse	36.5	5/11	207	4	34.0	91.0	34.0	163.0	98.0	19.5	41.5	62.5	86.5	140.0	136.0	174.0	1080.0
East Stour	*	Mr R. Brown	33.0	29/10	213	4	33.6	96.5	34.8	160.5	84.5	19.7	44.5	120.	75.1	149.2	131.7	136.0	1086.9
Fifehead Magdalen	*	Mr A.P. Custard	35.7	29/10	214	3	35.9	103.8	35.0	148.1	98.1	21.1	43.0	114.8	73.7	152.8	147.6	145.4	1119.3
Fontmell Magna	*	Mrs J. Westgate	60.1	5/11	213	6	34.8	93.1	34.7	186.4	92.9	20.2	40.2	50.7	92.5	167.8	173.5	195.0	1181.8
Hazelbury Bryan		Mrs B. Russell-Attwood	53.0	5/11	185	8	34.0	101.0	37.5	176.5	89.5	28.0	47.5	70.0	106.5	199.0	181.0	243.0	1313.5
Holwell (Vale View Farm)	*	Mr P. Henshaw	43.5	29/10	210	4	36.2	89.0	31.0	140.5	69.0	20.0	37.5	56.3	80.3	151.5	142.7	162.2	1016.2
Iwerne Minster		Mr R. Benfield	43.0	29/10,5/11	187	9	38.3	97.5	41.8	205.0	105.8	26.0	47.5	50.3	107.5	174.5	169.4	198.3	1261.9
Marnhull (Old Mill Lane)	*	Mr A. Bradbury	35.1	5/11	204	2	36.1	93.2	38.6	161.0	77.0	19.6	40.4	83.8	70.1	138.7	131.3	136.7	1026.5
Marnhull (Enderby)	*	Mr R.L. Baillie	40.0	5/11	200	5	32.4	99.3	35.5	154.6	81.8	18.6	49.7	79.6	76.8	154.9	141.0	148.5	1072.7
Motcombe (The Chase)		Mr M. Rawlins	43.0	29/10	209	4	44.0	117.0	47.0	195.0	106.0	19.0	44.0	104.0	98.0	181.0	155.0	154.0	1264.0
Shaftesbury (Higher Blandford Rd)		Mr P. Dewe	40.0	5/11	176	6	42.0	111.0	36.0	174.0	83.0	22.0	42.0	67.0	83.0	170.0	186.0	216.0	1232.0
Shaftesbury (Hilltop)	*	Mr M.G.F. Yorke	43.5	5/11	216	6	34.3	105.5	41.9	198.5	101.6	22.6	44.5	79.4	91.4	179.6	146.2	184.0	1229.5
Sturminster Newton (Rosecroft)	*	Mr H.L. Dawes	43.4	5/11	198	5	35.4	93.6	29.7	157.5	89.8	22.7	42.4	75.8	77.3	148.3	145.3	180.2	1098.0
Sturminster Newton (Broad Oak)		Mr E.G. Clarke	53.0	5/11	190	12	42.8	116.7	32.3	197.5	118.2	25.5	52.8	71.2	91.0	188.5	177.0	242.5	1356.0
Tarrant Monkton (Monksmead)	*	Mr B.G. Hart	48.4	29/10	213	8	40.9	102.4	31.2	179.7	73.8	22.0	46.2	40.9	115.0	187.4	175.6	213.5	1228.6
Turnworth (Home Farm)		Mr A. Yeatman	66.0	29/10	191	10	56.0	124.5	40.5	226.5	91.5	26.5	73.5	70.5	157.0	238.0	207.0	266.0	1577.5
West Woodyates (Manor Farm)		Mr J. Peach	41.0	5/11	187	11	34.0	102.0	36.0	216.0	90.0	45.0	54.0	57.0	111.0	206.0	197.0	218.0	1366.0
Winterborne Zelston		Miss B.E. Hooper	43.0	29/10	139	9	49.0	100.5	39.0	170.0	78.0	25.0	44.5	30.5	134.5	191.5	190.5	190.0	1243.0
Witchhampton		Mr A. Mitchell	42.0	29/10	176	5	38.4	94.0	25.3	162.1	64.2	22.7	51.0	26.2	112.5	166.4	171.4	200.3	1134.5

STATION	OBSERVER OR AUTHORITY	GREATEST FALL IN 24 HOURS		Days with 0.2mm or more	Days with 25mm or more	DEPTH OF RAINFALL IN MILLIMETRES												TOTAL FOR YEAR
		Depth	Date			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
FROME BASIN																		
Ansty (Ivy Cottage) *	Mrs A. Stevens	51.5	31/12	211	8	36.3	100.2	38.1	182.5	98.9	25.1	58.3	65.5	119.7	180.9	173.9	239.1	1318.5
Bradford Peverell (Frome View) *	Mr D. Oliver	49.2	31/12	215	10	48.9	121.8	44.2	177.8	76.2	27.8	38.2	41.7	136.9	195.5	186.0	212.8	1307.8
Cerne Abbas *	Mrs M. Boxwell	48.5	31/12	222	9	54.2	127.6	42.6	193.7	84.9	20.6	51.4	53.7	137.8	198.7	195.4	245.7	1406.3
Charminster *	Mrs Eveleigh	48.6	5/11	202	8	44.5	115.7	41.1	175.5	73.8	26.5	34.1	41.4	127.8	185.2	191.4	214.9	1271.9
Dewlish (Parsonage Farm)	Mrs M. Britton	47.0	31/12	173	10	39.0	101.0	39.0	175.0	78.0	33.0	41.0	78.0	119.0	202.0	170.0	225.0	1300.0
Dorchester (Wetherbury Way) *	Mr J.R. Oliver	46.6	5/11	208	9	44.3	109.5	38.4	160.8	83.6	19.0	28.2	49.6	117.6	194.1	204.1	199.3	1248.5
East Stoke (River Laboratory)	Mr J. Morgan	–	–	–	–	11.7	89.8	30.6	163.7	76.3	24.5	36.4	27.5	96.6	184.5	204.1	196.6	1142.3
Frome St Quintin *	Mr D. Pearman	51.1	29/10	218	12	51.8	141.0	48.5	214.1	95.8	29.5	55.6	80.8	164.8	244.1	211.3	257.8	1595.1
Milborne St Andrew (Coles Farm) *	Mr A.S. Maitland	62.3	31/12	209	9	40.6	109.0	33.3	175.3	75.6	24.0	44.7	61.9	129.1	211.0	204.8	243.1	1352.4
Milborne St Andrew (Wetherby Close) *	Mr R.E. Baylis	48.5	31/12	202	9	42.5	100.9	36.1	177.7	82.9	21.5	35.8	50.7	112.8	196.2	200.4	223.6	1281.1
Milton Abbas	Mr K. Battrick	55.0	31/12	195	8	49.0	126.0	42.0	183.0	83.0	24.5	53.0	77.5	133.0	213.5	209.5	249.0	1443.0
Puddletown (Bardolf Manor) *	Mr H.G. Wood-Homer	54.1	31/12	203	10	33.9	91.2	36.6	170.1	73.4	18.8	44.5	57.1	127.6	195.0	192.6	223.4	1264.2
Rampisham (Broom Hill) *	Mrs C.A. Parry	50.5	31/12	223	12	45.3	131.0	44.2	190.5	80.6	23.1	46.6	75.9	151.9	215.1	183.9	242.3	1430.4
Wareham (Trigon)	Mr G.P. Sturdy	34.0	5/11	181	4	34.0	68.3	27.1	116.8	63.6	25.4	35.6	24.0	85.3	151.2	168.2	144.8	944.3
Winfrith (Technology Centre)	Mr L.A. Chance	37.0	31/12	191	7	49.0	107.8	49.5	171.3	77.6	29.5	36.8	40.5	108.5	196.8	218.7	177.0	1263.0
Winfrith Newburgh	Mr M. Ching	40.0	5/11	152	8	29.5	76.5	28.0	169.0	68.5	12.0	27.0	34.5	81.7	156.0	193.0	161.5	1037.2
PARRETT BASIN																		
Chetnole Farm	Mr P. Horsey	55.0	31/12	176	16	51.5	130.0	38.0	200.5	71.5	33.5	70.5	78.0	164.5	214.5	149.5	293.5	1495.5
Halstock	Mr B Yarwood	53.5	29/10	183	12	39.5	112.0	40.5	170.5	72.0	22.5	58.5	74.3	168.5	211.5	186.0	258.0	1413.8
Melbury Sampford (Melbury House) *	Mr Gardiner	54.4	29/10	205	15	45.2	126.4	40.5	193.3	85.8	23.8	82.6	78.2	185.2	226.8	189.1	269.4	1546.3
Milborne Port, Somerset *	Mr E.B. Evans	31.8	29/10	213	3	41.7	100.1	40.9	167.1	96.5	20.1	58.4	89.7	86.1	150.9	131.2	146.6	1129.3
Purse Caundle (Frith Farm)	Mr K. Dunn	33.5	9/10	177	4	37.1	115.0	35.7	166.2	87.4	14.2	53.7	63.8	101.7	157.3	163.0	185.8	1180.9
Thornford *	Mrs M. Paul	49.0	29/10	202	6	33.4	98.1	27.2	162.7	75.5	25.0	45.9	65.6	117.2	167.7	147.2	185.7	1151.2
AXE BASIN																		
Forde Abbey *	Mr M. Roper	56.9	31/12	200	10	30.1	96.6	40.1	204.1	70.3	20.0	71.9	107.3	116.8	186.9	166.8	243.7	1354.6
COASTAL STREAMS																		
Bradpole	Mr G.R. Smith	49.4	5/11	154	7	25.9	87.7	43.4	161.0	94.4	22.2	33.6	78.3	128.3	156.5	165.3	197.8	1194.4
Lyme Regis (Pinhay, Devon) *	Mrs K.D. Allhusen	52.7	18/8	193	9	35.0	68.6	34.9	157.5	76.1	20.8	40.3	103.3	127.7	161.2	144.3	196.5	1166.2
Osmington Mills *	Mr J. Hadwin	38.1	5/11	185	7	30.5	93.2	29.2	149.2	75.0	20.1	17.5	24.9	94.7	145.6	177.5	164.2	1021.6
Portland Bill *	Mr F. Lockyer	21.8	1/11	180	0	6.4	34.4	15.6	56.6	61.4	15.9	20.1	20.6	60.1	79.6	146.4	114.8	631.9
Swanage *	Mr K. Moore	40.8	5/11	196	7	25.6	75.3	26.5	121.0	81.3	25.9	33.7	39.0	90.8	169.4	198.7	151.7	1038.9
Weymouth *	Mr R. Poots	29.3	9/10	187	2	17.2	68.2	28.5	117.2	67.2	16.9	9.7	12.4	71.9	128.9	114.3	123.4	775.8
Wyke Regis *	Met. Office	30.4	5/11	184	3	21.5	73.4	30.5	123.4	61.6	15.9	15.4	21.6	74.5	115.0	149.3	133.7	835.8
COUNTY AVERAGES				206		37.0	98.7	35.8	165.5	81.5	22.3	42.8	61.1	106.8	174.3	169.1	192.8	1187.7

Table 2: Monthly rainfall extremes

Month	Station	Wettest (mm)	Driest (mm)	Station
January	Buckland Newton	56.1	6.4	Portland Bill
February	Frome St Quinton	141.0	34.4	Portland Bill
March	Frome St Quinton	48.5	15.6	Portland Bill
April	Turnworth	226.5	56.6	Portland Bill
May	Sturminster Newton (B'oak)	118.2	61.4	Portland Bill
June	West Woodyates	45.0	12.0	Winfrith Newburgh
July	Melbury Sampford	82.6	9.7	Weymouth
August	East Stour	120.8	12.4	Weymouth
September	Melbury Sampford	185.2	60.1	Portland Bill
October	Buckland Newton	264.3	79.6	Portland Bill
November	Buckland Newton	219.6	114.3	Weymouth
December	Chetnole	293.5	114.8	Portland Bill

March was the driest county-wide for ten years. Many places were dry from the 3rd to the 20th, with the exception of the 13th when there was some patchy light rain.

The third and final dry period was from July 13th until the 28th when thunderstorms broke out. Some stations missed these (mainly in the north and east) and remained dry until August 1st.

WET SPELLS

February was the wettest since 1997 with the general rainfall 35% above the 30 year mean. Most places had just seven to nine dry days, but at Compton Abbas there were only three.

April was the wettest in Dorset since before records began in 1856. More than three times the average rainfall was recorded and eight stations reported in excess of 200mm. There were 24 raindays at Buckland Newton.

All of Dorset was affected by about 34 hours of continuous rain that started late afternoon on the 2nd and persisted until the early hours of the 4th. This rain was heavy at times and the two day aggregate exceeded 40mm widely. At Shaftesbury (Hilltop) the total amounted to 59.0mm.

September 17th saw the start, of what was to be one long wet spell, right up to the end of the year and beyond. On average, there were only 22 dry days during this 106 day period. At Compton Abbas the total was just 11 days.

THE WETTEST DAYS

18 August

This was the wettest day of the year for Lyme Regis with 52.7 mm. On this day 18mm fell in 90 minutes at Dorchester and 17.6mm in 55 minutes at Uplyme.

9 October

On this day 49 stations recorded over 25mm, with the majority reporting 30 to 35mm. Most of this fell within a six hour period. At Sturminster Newton the fall amounted to 41.5mm. At Dorchester 28mm fell in the four hours commencing 0930hrs GMT.

29 October

Widespread heavy rain approximately 1600hrs (29th) to 0600hrs (30th). Over 25mm was reported by 45 observers and for 17 of them it was their wettest day of the year. At Turnworth 66.0mm was measured (the highest daily total for 2000) and 62.9mm at Buckland Newton.

5 November

The wettest day of the year for 23 stations, with a total of 50 reporting more than 25mm. Most of these received over 30mm, with the exception of a small area around Sherborne and Milborne Port in the north and Portland in the south. Wettest station was Fontmell Magna with 60.1mm. In Dorchester, this was the wettest November day for 31 years with 46.6mm, of which 38mm fell in five hours.

31 December

Most of the county experienced about 12 hours of heavy rain with totals of 35 to 55mm. Only the area around East Stour, Shaftesbury and parts of the coastal strip received less than 25mm of rain. For 13 stations it was the wettest day of the year. Milborne St Andrew (Coles Farm) recorded 62.3mm. In some places it was the wettest December day for 21 years.

There were 29 days during the year with at least 25mm of rain reported.

SNOWFALL

It was another year with little in the way of snow to report. At Shaftesbury (Hilltop) there were 13 days with snow falling and eight days with snow lying. More generally across north Dorset, snow lay for five or six days, but in the south of the county it was only two or three days.

Parts of the coastal fringe did not record any snow lying throughout the year.

There were four snowfall events (albeit very brief) to affect Dorset in 2000.

15–16 February

Fairly frequent snow showers across the north of the county gave temporary coverings. Further south, precipitation took the form of sleet or rain.

3–4 April

The 3rd was a day of continuous rain with a low pressure centre over western France and associated front over south-west England. As the front tracked south-eastwards during the evening, it introduced a very cold north-easterly wind. Across north Dorset the rain quickly turned to snow, and by 2300hrs GMT a depth of 9cm was noted at Shaftesbury with a similar fall at Chetnole. Much of south Dorset escaped the snow, but with an air temperature of just 1.3°C at Dorchester, there was sleet and frozen rain. On the 4th there was light sleet and wet snow at times.

Main Thunder days

Date/No. of Stations	Station/Notes	
May 6th (24)	Shaftesbury (Hilltop)	21.0mm of rain and large hail fell in 25 minutes.
May 7th (29)	Sturminster Newton (Broadoak)	43.0mm of rain, 37mm fell in 30 minutes.
	Iwerne Minster	27.0mm of rain and hail in a two hour period.
May 9th (18)	Witchampton	5.0mm of rain
July 28th (16)	Melbury Sampford	36.8mm of rain
	Chetnole	26.0mm of rain
	East Stour	80 minutes of continuous thunder AND continuous sunshine as storm kept just to the south.
August 25th (22)		High level storms with mainly cloud to cloud lightning discharges. A hot and windy day.
	East Stour	Temperature 28°C.
	Dorchester	Unusually hot wind gusted to 35mph.
	Cranborne	6.0mm of rain.
August 26th (15)	Forde Abbey	9.6mm of rain.

15 April

A small wave depression ran east across northern France during the early morning, pushing rain north into Dorset. As it moved away, precipitation turned to snow for a while in the north of the county, but it remained as rain or sleet in the south. Accumulations of snow were in the order of 2–5cm.

28–29 December

On the 27th, Dorset was covered by a cold northerly airstream of Arctic origin, with a front heading south across England. A narrow band of snow associated with this front reached the extreme north of the county soon after midnight. Despite air temperatures falling to as low as −6°C under clear and calm conditions just ahead of the front, precipitation yet again fell as sleet over an approximate 10–12 mile wide area running parallel with the coast. The depth of snow further north was generally 3–7cm. During the early hours of the 29th, snow showers affected many parts of the county, giving a light dusting right down to the coast in places. With very low temperatures, both night and day (maxima −1.5°C at Shaftesbury on 29th), some snow survived until it was washed away by heavy rain on the 31st.

THUNDERSTORMS

Thunder was reported on 51 days in Dorset in 2000, compared with 52 days the previous year. The monthly distribution of thunder days is given in Table 1.

Thirty-one of our observers gave details of thunderstorms in their area, and the most wide-spread storm days with thunder heard at more than fifteen locations is given above.

DORSET BOTANY 2000

David Pearman

The new Dorset Flora was published just before Christmas 2000, containing a complete survey, with many distribution maps of the county's vascular plants together with 10km² lists of the bryophytes, lichens, fungi and algae. For all of these groups this account is the most comprehensive so far, at least in terms of distribution.

The section on vascular plants contain many historical records and a huge amount of detail on alien and planted taxa. The maps purport to give, as black discs, records made since 1984, but in fact quite a few of those so denoted are earlier. Nonetheless they do give a representation of distribution that has not been available before now.

Nothing remotely comprehensive has ever been written on the county's bryophytes. The section on lichens considerably advances what was known before, and those on fungi and algae are, by and large, completely new. So all in all, a major milestone in the presentation of our knowledge of the natural history of the county, yet one, I hope, that will enable others to fill out parts in more detail.

The records that follow are much briefer than normal, not only in the light of the above, but reflecting the fact that many of the intensive surveys over the last decade have now been completed.

On a more intimate scale, Charles Flynn has published 'The grasses, sedges and rushes of Studland Heath NNR', and Ted Pratt 'The flora of tetrad SZ0280', covering the north of Swanage with an extraordinary total of 630 species, and the RSPB 'Arable Plant Audit of Dorset', a compilation (rather than a new survey) of the known sites for these fast-diminishing plants.

The names of the recorders are attached to the records. Abbreviations are as follows:

HJMB	Dr Humphry Bowen
DCL	David Leadbetter
EAP	Ted Pratt
BE	Bryan Edwards
MG	Mark Galliott

Adiantum capillus-veneris **Maiden Hair Fern**

6974 Portland Naval Base P. Selby

Anthemis arvensis **Corn Camomile**

0279 Swanage Sewage Works DCL

Rare record for this once more frequent Dorset plant.

Apium inundatum **Lesser Marshwort**

9583 New Mills Heath MG

Briza minor **Lesser Quaking Grass**

0079, 0080 New Barn, Swanage EAP

Carex viridula* subsp. *Brachyrhyncha

0082 Godlingston Golf Course EAP

A fifth site for this fen plant, which is now rare in the south of England.

Euphorbia paralias **Sea Spurge**
0487 Sandbanks HJMB
Sandy foredunes in front of a garden. Only the second extant site in Dorset.

Fumaria densiflora **Dense-flowered Fumitory**
0417 Pentridge Down MG

Gastridium ventricosum **Nit-grass**
6478 Tidmoor Point MG
A strong colony by the coast path.

Hammarbya paludosa **Bog Orchid**
9083 Holme Heath BE
Six plants.

Hypochaeris glabra **Smooth Cat's Ear**
0288 Brownsea DCL
By the sea wall.
9786 Middlebere BE
Growing in abandoned arable with the increasingly uncommon *Scleranthus annuus*.

***Limonium binervosum* agg.** **Rock Sea-lavender**
8779 Gad Cliff BE
A newly discovered colony 50ft down a completely sheer cliff. We hope the Army might practise their climbing skills to enable us to identify the subspecies.

Lycopodiella inundata **March Clubmoss**
9894 Upton Heath BE

Parapholis incurva **Curved Hard-grass**
6874 Chesil, by the oil tanks BE
5684 Abbotsbury Beach BE
0285 Redhorn Quay BE
Dorset, and Portland in particular, has very good populations of this relatively rare coastal grass. It thrives on visitor pressure!

Polycarpon tetraphyllum **Four-leaved Allseed**
Bournemouth Natural Sciences Society Building F. Woodhead

Polypogon monspeliensis **Annual Beard-grass**
6974 Portland Port P. Selby
30 plants in a paved area.
8689 Stoke Heath, Wareham P. Sterling
Hundreds of plants on a landfill site.

Rhynchospora fusca **Brown Beak-sedge**
8086 Winfrith DP, BE *et al.*
Four or five new patches discovered in a more thorough survey.
8189 Bovington Heath HJMB
One hundred or so plants in a shallow bog at the edge of its Dorset Range.

Sarcocornia perennis **Perennial Glasswort**
9786 Middlebere BE
0285 Brand's Bay BE
0385 Bramble Bush Bay BE

Scandix pecten-veneris **Shepherd's Needle**
6771 Blacknor DP
300 plants in bare cliff-top grassland. This species persists in a small quantity south of God Nore but has not been seen around the Bird Observatory since cultivation ceased in the surrounding fields.

Silene gallica **Small-flowered Catchfly**
4690 West Bay JHMB
9893 Upton Bypass R. Gibbons

Trifolium glomeratum **Clustered Clover**
6279 East Fleet MG
Certainly the only West Dorset site for 30 years. It was growing with *T. striatum*, which also has not been seen recently west of Winfrith.

Trifolium squamosum **Sea Clover**
6769 Southwell BE
Lawn of the old MOD site

Valerianella eriocarpa **Hairy-fruited Cornsalad**
6771 Blacknor HJMB
The only recent record from the west of Portland.

Vicia bithynica **Bithynician Vetch**
6971 Broadcroft Quarries J. Mansfield
A few plants have been seen each year for the last few years.

Vicia lutea **Yellow Vetch**
6971 Broadcroft Quarries J. Mansfield
A few plants have been seen each year for the last few years.

BUTTERFLY REPORT 2000

Bill Shreeves

The South Central Region Action Plan for butterflies and moths in Dorset, Hampshire and Wiltshire by Dr Andy Barker, Mike Fuller and Bill Shreeves was published in August. The plan is part of a whole strategy developed by Butterfly Conservation to fit in with the Government's aim to promote biodiversity, which gathered momentum after the Rio convention in 1992. The whole package, including 25 species action plans for the most endangered butterflies and regional plans for all the main areas of Britain, was officially launched at the House of Commons by Michael Meacher, Minister for the Environment and Sir David Attenborough, the President of Butterfly Conservation. Copies of the Species Action Plans are available at £3 for each species, and the Regional Action Plan at £15 from Butterfly Conservation, Manor Yard, East Lulworth, Wareham, BH20 5QP. Telephone 01929 400209.

There are three key parts to the South Central Region Action Plan:

1. Lists of the 15 high priority butterflies and 37 moths, 6 medium priority butterflies and 96 moths and an appendix with a provisional list of micro moths. The butterflies have been selected on the grounds that they are rare in the region, declining rapidly or the region contains a large proportion of the surviving colonies in Britain (see Table 1).
2. Detailed explanations of the present status and future action plans for the high and medium priority butterflies and the high priority moths. The action plans include improving surveying, monitoring and habitat management and developing strategies for linking isolated colonies via Agri-environment schemes.
3. A map (see Figure 1) and descriptions of the key areas where concentrations of the priority species can be found.

In Dorset we are planning to implement a large part of the plan by dividing the country into natural regions

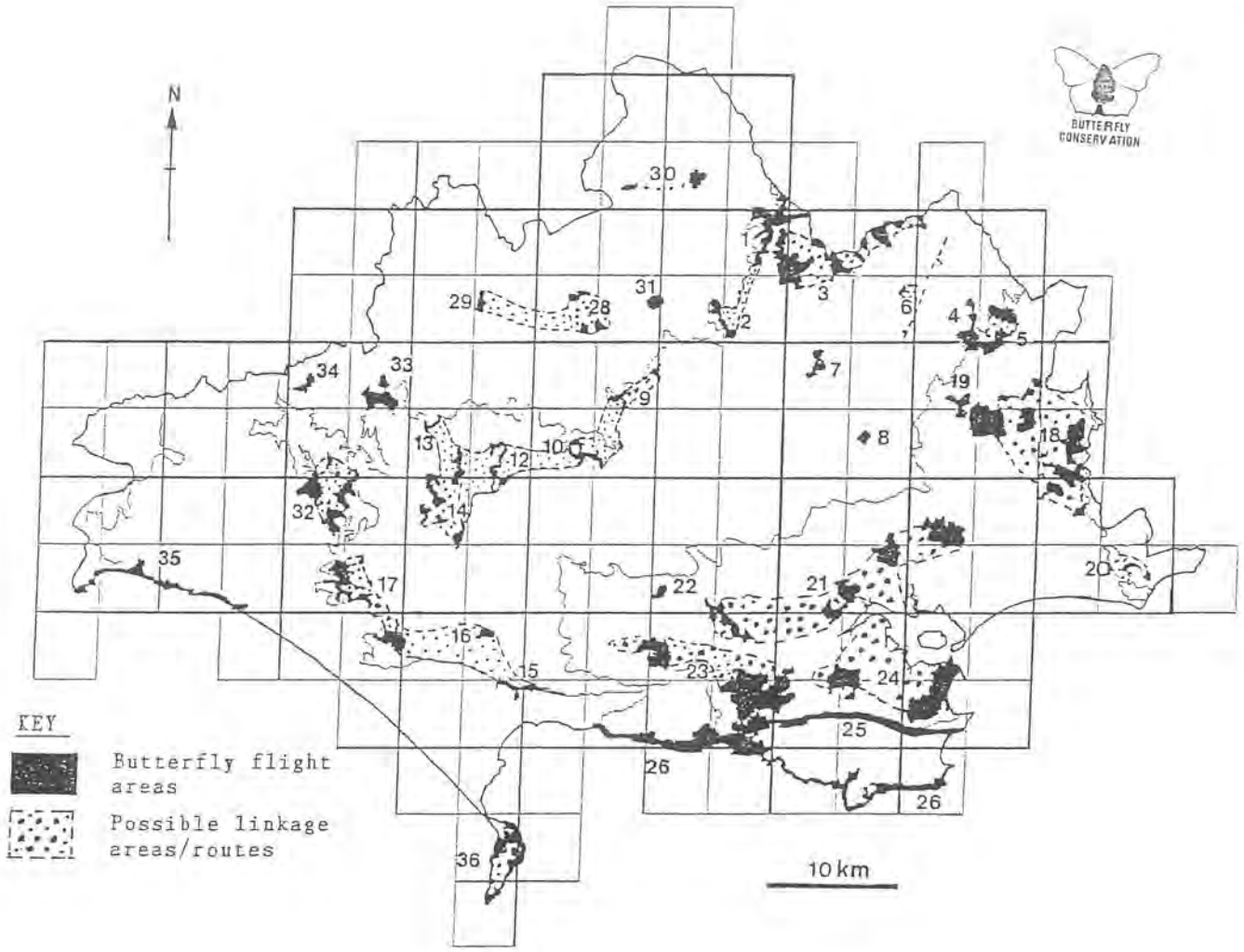

Figure 1: Locations of key areas for Lepidoptera within Dorset. Boundaries between natural areas of Chalk, Heathland and Wessex Vales are shown

Key Areas Figure 1

DORSET

Natural Area: Dorset Downs and Cranborne Chase (134)

1–2 Northern Chalk
(1) North Dorset Downs
(2) Hambledon and Hod Hills
3 Cranborne Chase Woods
4 Shaftesbury Estate Woods
5 Edmondsham Estate and neighbouring woods
6 Gussage Down, Ackling Dyke and Sovell Down
7 Blandford Camp
8 Badbury Rings
9–14 Central Chalk
(9) Bulbarrow
(10) Lyscombe and Highdon and Hog Hill
(12) Cerne Abbas Downs
13) Batcombe Hill
(14) Sydling Valley, Hogcliffe and Grimstone Downs
15–17 West Chalk
(15) South-East Dorset Downs
(16) Maiden Castle
(17) South-West Dorset Downs

Natural Area: Dorset Heaths (135)

18 Heaths north of River Stour
19 Holt Forest
20 Avon and Mude valleys
21 Heaths between R. Stour and R. Frome
22 Oaker's Wood
23 Heaths south of River Frome
24 Purbeck Heathlands

Natural Area: South Purbeck (136)

25 Purbeck Ridge(Lulworth Cove to Ballard Down)
26 Purbeck Coast (White Nothe to Peverill Point)

Natural Area: Blackmoor Vale (133)

28–29 South Blackmoor Vale
(28) Lydlinch, Rooksmoor, Deadmoor
(29) Longburton Common and Rywater Farm
30 Duncliffe and Fifehead Woods
31 Piddleswood and Girdler's Coppice

Natural Area: Marshwood and Powerstock Vales (139)

32 Powerstock, Kingcombe and Hooke Park
33 Melbury Park
34 Brackett's Coppice
35 West Dorset Coast

Natural Area: Isle of Portland (137)

36 Portland Coast and Quarries

Table 1: Key butterfly species in south central England

The list of species below has been developed from Butterfly Conservation's national priority list

High Priority butterflies (n = 15)	**Dorset = 12**	
Silver-spotted Skipper	*Hesperia comma*	D
Lulworth Skipper	*Thymelicus acteon*	D
Grizzled Skipper	*Pyrgus malvae*	D
Wood White	*Leptidea sinapis*	D
Brown Hairstreak	*Thecla betulae*	D
Small Blue	*Cupido minimus*	D
Silver-studded Blue	*Plebejus argus*	D
Adonis Blue	*Lysandra bellargus*	D
Duke of Burgundy	*Hamearis lucina*	D
Purple Emperor	*Apatura iris*	D?
Small Pearl-bordered Fritillary	*Boloria selene*	D
Pearl-bordered Fritillary	*Boloria euphrosyne*	D
High Brown Fritillary	*Argynnis adippe*	
Marsh Fritillary	*Eurodryas aurinia*	D
Glanville Fritillary	*Melitaea cinxia*	
Medium Priority Butterflies (n = 6)	**DORSET = 6**	
Dingy Skipper	*Erynnis tages*	D
White-letter Hairstreak	*Satyrium w-album*	D
Chalkhill Blue	*Lysandra coridon*	D
White Admiral	*Ladoga camilla*	D
Wall	*Lasiommata megera*	D
Grayling	*Hipparchia semele*	D

(Figure 2) each with co-ordinators helped by local surveyors (see Table 2). The teams will concentrate on monitoring known sites for priority species not already covered by transect walks and surveying their regions for new sites. Any readers who would like to help with this work should contact the appropriate co-ordinator listed in Table 2.

We must apologise for an error on p.173 of the 1999 Butterfly Report, in which a report on the Holly Blue masquerades under the heading of Adonis Blue. As far as I know nobody earned 'brownie points' by pointing out this serious mistake! In the report which follows the term 'New Record' means that the butterfly was not recorded in that km square in the recent 1995–99 Dorset Atlas.

Migrants

Colias croceus (**CLOUDED YELLOW**): the first records came on 23.4 from Portland and 3 from the Sopley Heath transect walk. The combined transect walk figures show an early peak of 27 counted in the week 24–30 June followed by a decline and then a climax of 207 between 9–15 September (M. Cade). The season finished with a freshly emerged butterfly on Southbourne undercliff on 20.11 accompanied by around 80 caterpillars (Insect Line). The total transect walk count for Dorset was 1,035 compared to 164 in 1998 and 734 in 1996. Figures from Portland and from the four transect walks which were running back in 1983 suggest, however, that 2,000 did not quite equal the great year of 1983.

Colias hyale/alfacariensis (**PALE/BERGER'S CLOUDED YELLOW**): the difficulty of distinguishing these two similar species from the pale *helice* form of the Clouded Yellow makes most records suspect. Possibles come from the transect walks at West Moors and Higher Hyde and from Chickerell and Wyke Regis (J. Tallent).

Cynthia cardui (**PAINTED LADY**): an early record on 15.2 from Wareham (J. Beard). The transect walks show a build up from the first record on Duncliffe Hill on 5.5 to a peak of 17 in the week 24–30 June; a fall then leads to the build up of another peak of 153 in the week 2-8 September. Between 4–5.9 over 100 were seen at Portland Bill (M. Cade). The last record was 22.10 on Portland (M. Cade). The total count on all transect walks of 798 suggests this was the best year since 18,311 in 1996.

Nymphalis polychloros (**LARGE TORTOISESHELL**): one from Throop Heath, 11.3 (Insect Line).

Vanessa atalanta (**RED ADMIRAL**): an early record from Golden Cap, 13.2 (M. Newland). At least one was counted on each week of the transect walk season with a climax of 314 between 9–15.9. The total count of 1,562 on all walks made it the best year since 6,691 in 1996. Last record Portland, 13.11 (M. Cade).

Danaus plexippus (**MONARCH**): four singles seen: 1.10 at Seacombe (P. Williams), 2.10 at Durlston (Dolphin Watchers), 7.10 at East Weare and 8.10 at the Bill (M. Cade).

Natives

After a promising March with above average temperatures and sunshine and below average rainfall, recorded at the Fontmell Magna weather station, things deteriorated with the wettest April and a May which was not much better. Although June and July were dry they were also cool. While August and September were relatively warm and dry their hours of sunshine left much to be desired. As a result the 2000 butterfly season for natives was a poor one. The transect walk data, expanded by new walks at Lorton Meadows near Weymouth and Hethfelton Woods between Wool and Wareham, showed only the Essex Skipper with significant gains. Unusually for a butterfly which has shown few major fluctuations over the years the Brimstone did well on a majority of walks with many achieving record high counts. Other species which actually improved on 1999 on a majority of walks included the Adonis Blue, Marsh Fritillary, White Admiral, Comma and Green Hairstreak. Species entering or continuing slumps comprised Chalkhill Blue, Dark Green Fritillary, Holly Blue, Wall, Silver Spotted Skipper, Silver Studded Blue, Small Tortoiseshell and Small Heath. Although the Small Copper showed some signs of rallying from its two-year low, this was mainly confined to east Dorset.

Thymelicus lineola (**ESSEX SKIPPER**): is this species in the process of colonising Dorset or is it that our recorders are belatedly catching up with squatters who have been there for some time? New km square records are: Blackmore Vale — 11 (W. Shreeves, I. Hounsell), Chalk Downs north of the Stour — 3 (W. Shreeves, M. Brice), Cranborne Chase — 1 (W. Shreeves), Heaths north of Piddle — 12 (M. Skelton) West Dorset Coast, Wyke — 1 (J. Tallents).

Erynnis tages (**DINGY SKIPPER**): six new km square records in the Chalk Down region between the Stour and Frome at Seldon, Bazon and Eastfield Hills, Fisher's and Lankham Bottoms (J. Harris) and Batcombe Down (L. de Whalley). One new km square in the Chalk Down region south of the Frome at Long Bottom (J. Harris).

Pyrgus malvae (**GRIZZLED SKIPPER**): three new records from the Chalk Down region between the Stour and Frome at Bazon and Eastfield Hills and Fisher's Bottom

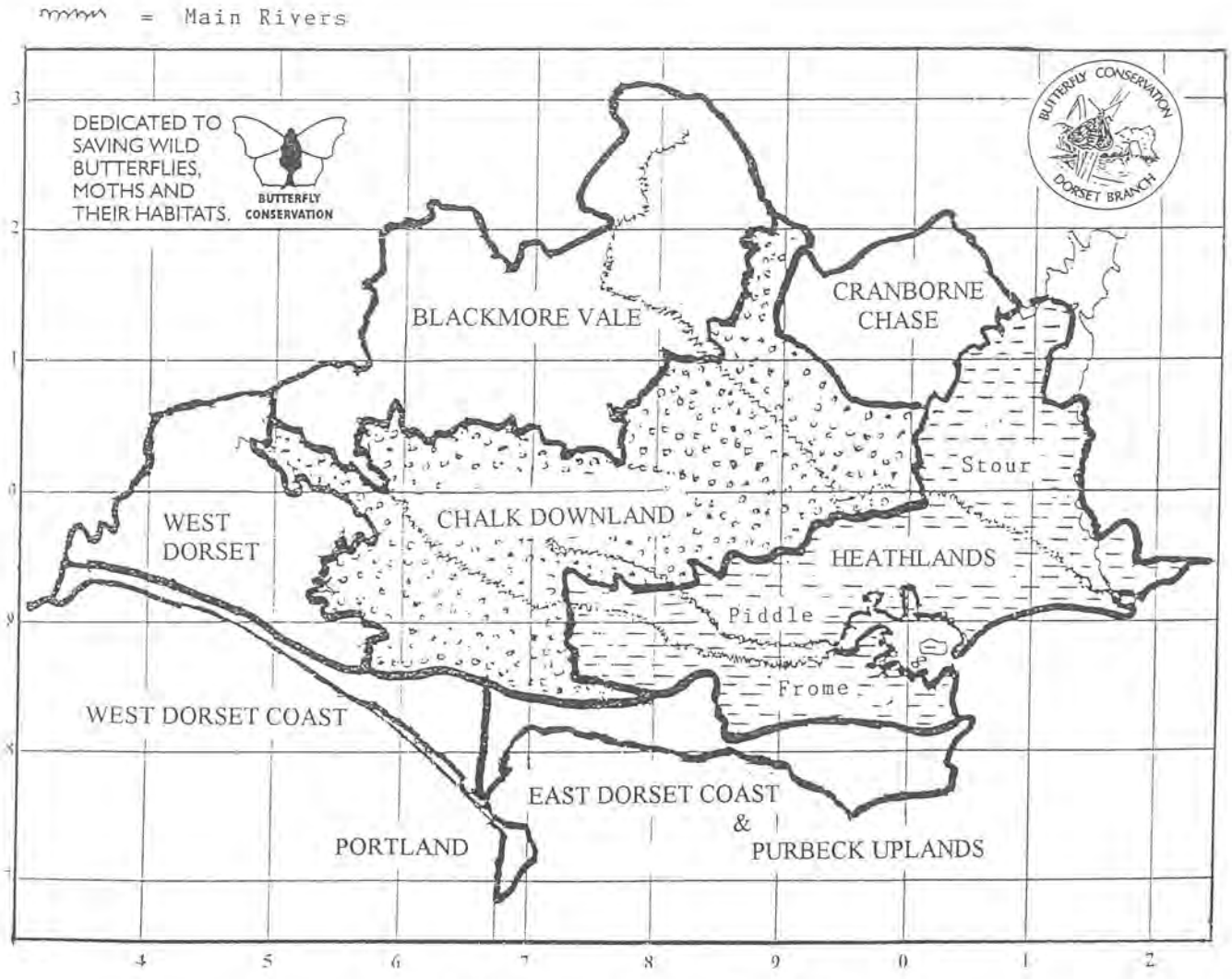

Figure 2: Natural regions for the Dorset Action Plan

(J. Harris). Two new ones from the Chalk Downs south of the Frome at Baglake Down and Long Bottom (J. Harris), Chase Woods, Cranborne Chase Region (D. Taylor), and near Stapehill (M. Lichfield) and Holton Heath (I. Rabjohns) in the Heathland region where this species is becoming scarce.

Strymonidia w-album (**WHITE-LETTER HAIRSTREAK**): the first ever record for this species on a transect walk, Ballard Down, Purbeck Region (M. Skelton). Two new colonies in the Bournemouth area at the Stour Valley Reserve (S. Clark, J. Reeves and M. Skelton) and Tuckton (M. Skelton). The colony at Fleet in the West Dorset Region though not recorded on the 1995–99 map has proved to be alive and well (P. Green).

Cupido minimus (**SMALL BLUE**): older colonies not recorded in 1995–99 in Purbeck, Old Nick's Ground and Ballard Cliff (M. Skelton) and the Chalk Down region south of the river Frome, Haydon Down (J. Harris), have been 'rediscovered'.

Plebejus argus (**SILVER-STUDDED BLUE**): a survey carried out by Julie Walker for the RSPB on their Arne and Stoborough reserves in 1999 has added another 8 km squares to the map. The transect walks show that all the Dorset sites, both on the heathlands and Portland, are in a slump which began in 1997–8 and is still deepening. Many sites have recorded their lowest totals since walks began.

Lysandra coridon (**CHALKHILL BLUE**): new sites for Chalk Downs north of Stour at Brookham Valley (D. Sazer); Chalk Downs between Stour and Frome at Sherrin's Hill, Weam Bottom and Buckland Down (J. Harris) and Lankham Bottom (L. de Whalley), and Fisher's Bottom (J. Harris).

Lysandra bellargus (**ADONIS BLUE**): new records from the Chalk Downland Region between the Stour and Frome at Henney, Eastfield, Green, Sherrins, Folly and Weam Common Hills and Fisher's Bottom (J. Harris) and Lankham Bottom (L. de Whalley). A further survey on the status of this species by Butterfly Conservation, published in November, found that in Purbeck the number of colonies had increased from 23 in 1978 to 43, and in the rest of Dorset from 15 to 30.

Hamearis lucina (**DUKE OF BURGUNDY**): one new record from the Chalk Downs region between the Stour and Frome at Seldon Hill (J. Harris).

Ladoga camilla (**WHITE ADMIRAL**): new records came from Seven Ash Common in the Blackmore Vale region (J. Hinton), Pimperne Wood in Cranborne Chase (W. Shreeves), Park Copse in the Heaths north of the river Stour (C. Elford) and from a garden in the region of Heaths between the Stour and Piddle near Broadstone (J. Boys).

Boloria selene (**SMALL PEARL-BORDERED FRITILLARY**): a record from a slightly different km square near Povington Wood in the Heath Region south of River Frome

Table 2: Dorset plan for carrying out the south central Regional Action Plan

Natural Regions	Co-ordinators and tel. no		Map	Key areas and sites
Chalk Downs North of the Stour	Bill Shreeves	01747 852587	1–2	North Dorset Downs: inc. Zigzag, Melbury, Clubmen's Compton & Fontmell Downs, Hambledon and Hod Hills.
Chalk Downs between the Frome & Stour	Lawrie de Whalley	01258 880524	9–14	Central Downs: inc. Bulbarrow, Ibberton, Rawlsbury Camp, Lyscombe, Highdon, Hog Hill, Wetherbury, Cerne, Black Hills, Batcombe, Sydling, Hog Cliff, Grimstone
Chalk Downs South of the Frome	Lawrie de Whalley (provisional) Ken Rawles	 01305 268471	15–17	Maiden Castle, Haydon, Askerswell, West Compton, Litton Cheny, Long Bredy
Cranborne Chase	Doug Taylor	01202 887192	3–8	Cranborne Chase Woods, Shaftesbury and Edmondsham Rstates, Gussage and Sovell Downs, Blandford Camp, Badbury Rings
Purbeck Uplands and E. Dorset Coast	Phil Grey, Tony Dicks, & Colin Nunn	01929 427812 01929 423099 01929 439211	25–27	Purbeck Ridge and Coast, The Wilderness, Bincombe, Chalbury, White Horse
Portland	Paul Green	01305 826147	36	
West Dorset Coast	John Messer John Spencer	01308 862164 01308 488661	35	Undercliffs: Lyme Regis to Charmouth, Stonebarrow, Burton Bradstock
West Dorset	Robert Smith	01308 862764	32–34	Brackett's Coppice, Kingcombe, Powerstock, Melbury, Hooke
Blackmore Vale	Brian Dicker Roger Smith	01963 32453 01935 816728	28–31	Lydlinch, Rooksmoor and Deadmoor Commons, Piddles, Duncliffe and Fifehead Woods, Longburton Common and Ryewater
Heaths, North of the Stour	Anna & David Barwick John Jenking	01202 259952 01202 519644	18–20	Avon, Holt, Sopley, West Moors, Holt Forest, Avon and Mude Valleys
Between the Stour and the Piddle	Michael Skelton	07855 698848	21 (part)	Canford , Hollton, and Upton, Heaths
Heaths, South of the Piddle	Bernard Franklin	01305 786201	21 (part) 22, 23	Oaker's Wood, Higher Hyde, Winfrith, Coombe, Tadnol, Povington and Purbeck Heaths

Note: There are 18 butterfly and 94 moth high or medium priority species resident in Dorset.

Special advisors

Regional Action Plan Co-ordinator	Bill Shreeves
Environmentally Sensitive Areas (ESA) Adviser	Richard Belding
DWT Liaison	Tony Bates
Moths	Phil Sterling, Peter Davey and Steve Barrett

(P. Davey). On the transect walks the situation looks close to catastrophe with only 2 recording a total of 8 between them.

Boloria euphrosyne (**PEARL-BORDERED FRITILLARY**): only one was seen in the whole of Dorset and it seems probable that this species is following the High Brown Fritillary into extinction in our county.

Eurodryas aurinia (**MARSH FRITILLARY**): a new record from Magiston Down in the region of Chalk Downs between the Stour and Frome (J. Harris). Generally there was a revival of numbers on the 7 transect walks recording this species.

Future recording

Publication of the *Millennium Atlas of Butterflies in Britain and Ireland* by Oxford University Press was expected in March 2001, with 464 pages and 382 colour illustrations. In Dorset, recording is continuing with the Dorset Environmental Record Centre and Dorset Butterfly Conservation working in partnership. Recorders are requested to keep butterfly records coming in for all species whether in their gardens, the km squares around their homes or anywhere in Dorset where they happen to see butterflies. Please send all records to DERC, Library Headquarters, Colliton Park, Dorchester, Dorset, DT1 1XJ. All records are entered on to the computers by volunteers so to help avoid end of season bottle necks don't feel you have to hang on to them until the end of the year!

MICROLEPIDOPTERA REPORT 2000

Phil Sterling

Records of nationally rare and nationally scarce species (mostly provisional statuses only) have been included, together with records of other interesting species such as immigrants and those not recently recorded in the county. Nomenclature is taken from Bradley, J.D. (2000) *Checklist of Lepidoptera recorded from the British Isles*. Second edition (Revised).

Records were gratefully received from:

NB – Nigel Bourn
JHB – Jeremy Burge
MC – Martin Cade
SPC – Sean Clancy
RC – Rees Cox
PD – Peter Davey
RE – Roy Eden
MF –Mark Forster
DG – David Gibbs
DH – Derek Hallett
PH – Paul Harris
MJ – Mike Jeffes
PK – Peter Knight
CM – Chris Manley
MSP – Mark Parsons
DP – David Pearman
TP – Ted Pratt
KR – K. Redshaw
PS – Peter Sharpe
MJS – Michael Skelton
PHS – Phil Sterling
HWH – Hugo Wood Homer

Other abbreviations:

NR – Nature Reserve
gen. det. – genitalia determined
conf. – confirmed by

Micropterix aureatella Sopley Common (VC11), 1 swept on 12.5 at night (PHS); Holt Forest, 2 swept from bilberry on 22.5 (PD)
Lampronia morosa Tidmoor Range, Chickerell, several larvae in rose buds on 19.3 (PHS); Cogden Fields, 1 larva in rose bud on 17.3 (PHS); Little Francis, Wyke Regis, few larvae in rose buds on 2.4 (PHS); Weymouth, 1 on 19.5 by day (PHS); Pamphill, 1 on 12.5 by day (PD); Badbury Rings, 1 on each of 25.5 and 3.6 by day (PD)
Adela cuprella Holt Heath, 14 on 21.3 by day (PD)
Adela croesella Shapwick, 1 on 19.5 by day (PD); Badbury Rings, 5 on 3.6 and 1 on 9.6, all day (PD); Fontmell Down, 16 on 4.6 by day (PD); Lyscombe, 2 on 11.6 by day (PD
Diploderma herminata Arne Clay Pit, several cases on oak trunk on 13.6 (PHS); Parley Common, 2 cases on birch trunk on 17.5 (PD); Badbury Rings, 1 case on beech trunk on 9.6 (PD)
Pachythelia villosella Stokeford Heaths, 3 cases on 10.7 (PHS); Trigon, 1 old case on 10.5 (PD); Morden Bog, 1 case on 15.5, 4 cases on 31.5 (PD); Wareham Forest, 4 cases on 23.6 (PD)
Ischnoscia borreonella Southwell, Portland, 3 on 5.8 at dusk (PHS, MSP)
Nemapogon wolffiella Shapwick, 1 on 17.6 at light (PD)
Nemapogon clematella Shapwick, 1 on 29.6 at MV (PD)
Phyllonorycter leucographella Bournemouth University, several mines on *Pyracantha* sp. On 10.3 (PHS); Weymouth, 1 mine on *Pyracantha* sp. On 19.3 (PHS)
Phyllonorycter platanoidella Radipole, Wyemouth, many mines on *Acer platanoides* on 19.10 (PHS)
Glyphipterix schoenicolella Upton Heath, 1 on 15.7 at MV (CM, PD)
Yponomeuta sedella Trigon, 1 on 22.7 at MV (CM, PD)
Acrolepiopsis assectella Weymouth, on 9.5 at MV (PHS); West Bexington, on 13.3 at MV (RE)
Coleophora fuscicornis Eype's Mouth, 1 on 28.6 by day (DG, conf. J.R. Langmaid)
Elachista regificella Monkton Wyld Wood, many mines in *Luzula sylvatica* on 31.3 (PHS, DP)
Tachystola acroxantha Weymouth, 1 on 24.8 at UV (PHS)
Aplota palpella Melbury Park, 1 on 19.8 at UV (PHS, DH)
Amphisbatis incongruella Morden Heath, 1 on 8.4 by day (PHS)
Dasystoma salicella Studland, 1 on 16.3 by day (PD)
Luquetia lobella Puddletown, 1 on 15.6 at MV (HWH); Shapwick, 4 on 17.6 at MV (PD)
Agonopterix purpurea Portland Bird Observatory, 1 on each of 25.8 and 27.8 at MV (MC)
Ethmia dodecea Shapwick, 1 on 20.6 at MV (PD); West Bexington, on 15.7 at MV (RE)
Bryotropha basaltinella Frome St Quintin, 10 larvae in moss, *Tortula ruralis*, on 30.12 (PHS, DP)
Bryotropha umbrosella Stokeford Heaths, 1 on 10.7 by day (PHS)
Caryocolum blandella Yellowham Wood, 1 on 29.8 at UV (DH)
Platyedra subcinerea Southwell, Portland, on 5.8 at dusk (PHS, MSP); West Bexington on 6.5 at MV (RE)
Oegoconia caradjai Southwell, Portland, on 5.8 at dusk (PHS, MSP)
Batrachedra pinicolella Morden Heath, few on 8.7 by day and 4 on 12.7 at MV (PHS)
Cosmopterix lienigiella Hengistbury Head NR (VC11), few mines in *Phragmites australis* on 10.9 (PHS)
Scythris grandipennis Golden Cap, on 28.6 by day (DG)
Scythris empetrella Sopley Common (VC11), many larvae on 13.5 (PHS); Stokeford Heaths, few larval workings on 10.6 (PHS)
Phalonidia manniana Holton Heath Marsh, 4 on 2.6 by day (PD); West Bexington , on 14.6 at MV (RE)
Cochylis molliculana Hamm Beach, Chesil, 2 on 17.6 at MV (PHS); Chickerell Downs, on 1.7 at UV (PHS, DH); West Bexington, regularly between June and Sept. at MV (RE); Walditch, on 9.8 and 10.9 at MV (MSP)
Acleris logiana Hurn (VC11), 1 on 1.8 at MV (MJ, gen. det. PHS)
Archips oporana Trigon, 1 on 21.7 at MV (CM, PD); Morden, 6 on 6.7 at MV (PD; Hurn (VC11), 1 on 30.7 at MV (MSP)
Celypha rivulana Melbury Down, few on 14.7 by day (PHS, MSP, NB); West Bexington, 1 on 26.7 at MV (RE)
Epinotia subsequana Avon Heath Country Park (VC11), few larvae on *Abies grandis* on 13.7 (PHS)
Crocidosema plebejana Weymouth, 3 on 26.8 at MV (PHS); West Bexington, regularly between May. and Nov., none in July, at MV (RE); Walditch, on 14.9 at MV (MSP)
Pelochrista caecimculana Cheyne Weare, Portland, on 29.6 at UV (PHS, PH, MF)
Clavigesta sylvestrana Weymouth, 1 on 26.8 at MV (PHS)
Pammene albuginana Yellowham Wood, 1 on 21.6 at UV (DH); Hurn (VC11), 1 on 8.6 at MV (MJ)
Grapholita lobarzewskii Weymouth, 1 on 3.7 at MV (PHS)
Cydia micrograminana Cheyne Weare, Portland, on 19.6 at UV (PHS, PH, MF)
Cydia amplana Weymouth, 2 on 26.8 at MV (PHS); Walditch, 1 on 26.8 at MV (MSP); Portland Bird Observatory, 5 on 26.8 at MV (MC)
Cydia coniferana Morden Heath, 1 on 12.7 at MV (PHS)
Phaulernis dentella Fontmell Down, several recently vacated larval workings on *Chaerophyllum temulentum* on 19.8 (PHS)
Calamotropha paludella Weymouth, 1 on 23.7 at UV (PHS); Shapwick, 1 on 30.6 at MV (PD; Morden, 2 on 31.7 at MV (PD)
Crambus uliginosellus Stokeford Heaths, several on 10.7 by day (PHS); Wareham Forest, 25 on 23.6 by day (PD); Morden, 2 on 31.7 at MV (PD)
Crambus hamella Shapwick, 1 on 22.8 at MV (PD)
Pediasia contaminella Hurn (VC11), between 26.7 and 30.7 at MV (MJ)
Pediasia aridella Hengistbury Head (VC11), 1 on 16.7 at MV (MJ)
Eudonia pallida Studland Dunes, on 19.8 at MV (CM); Portland Bird Observatory, 1 on each of 19.6, 26.8, 30.8 and 5.9, all at MV (MC)
Eudonia delunella Yellowham Wood, 3 between 20.7 and 5.8 at UV (DH)
Eudonia lineola West Bexington, 5 between 11.6 and 5.8 at MV (RE)
Evergestis extimalis Portland Bird Observatory, 1 on 25.8 at MV (MC)
Cynaeda dentalis Cheyne Weare, Portland, on 29.6 at UV (PHS, PH, MF) and on 5.9 at MV (MSP)
Loxostege sticticalis Puddletown, 1 on 8.9 at MV (HWH)
Sitochroa palealis Southwell, Portland, on 5.8 at dusk (PHS, MSP); Portland Bird Observatory, 1 on each of 30.6

and 9.8 at MV (MC); West Bexington, on 9.8 at MV (RE); Eype's Mouth, on 18.7 at MV (MSP)
Ostrinia nubilalis Puddletown, 1 on 21.6 at MV (HWH); Shapwick, 1 on each of 19.6 and 6.7 at MV (PD); West Bexington, 1 on 7.7 at MV (RE); Portland Bird Observatory, 1 on each of 19.6 and 7.8 at MV (MC); Hurn (VC11), between 26.7 and 31.7 at MV (MJ)
Phlyctaenia perlucidalis Keysworth, 1 on 9.7 at UV (HWH)
Anania verbascalis Morden Heath, 2 on 12.7 at UV (PHS); Trigon, 1 on 14.7 at MV (CM) and 1 on 21.7 at MV (CM, PD); Canford Heath, 1 on 20.7 at MV (PD)
Udea fulvalis Boscombe (VC11), several to house lights on 20.7 (MJS); Swanage, 1 on each of 15.7 and 30.79 (RC) and 7 between 4.8 and 20.8 at MV (TP)
Mecyna asinalis West Bexington, on 8.8 at MV (RE)
Dolicarthria punctalis Cheyne Weare, Portland, on 29.6 at UV PPHS, PH, MF) and on 5.9 at MV (MSP)
Antigastra catalaunalis Portland Bird Observatory, 1 on 26.9 at MV (MC)
Duponchelia fovealis Milton-on-Stour, 1 on 17.5 at MV (JHB, conf. PHS)
Palpita unionalis Puddletown, 1 on each of 18.10 and 19.10 at MV (HWH); West Bexington, 1 on each of 6.7, 3.10 and 6.10, all at MV (RE); Portland Bird Observatory, 1 on each of 30.8 and 20.9 at MV (MC)
Synaphe punctalis Cheyne Weare, Portland, on 29.6 at UV (PHS, PH, MF); Grove, Portland, on 24.7 by day (MSP); Preston, Weymouth, on 29.6 at MV (PK); West Hill, on 23.7 at MV (CM); Parley Common, 2 on 19.7 at MV (PD); West Bexington, 1 on each of 24.7, 2.9 and 5.9, all at MV (RE); Hengistbury Head (VC11), between 19.7 & 31.7 at MV (MJ); Hurn (VC11), between 26.7 and 31.7 at MV (MJ)
Aglossa pinguinalis Weymouth, 1 on 10.6 by day (PHS)
Oncocera semirubella Cheyne Weare, Portland, on 29.6 at UV (PHS, PH, MF) and on 5.9 at MV (MSP); Southwell, Portland, on 5.8 at dusk (PHS, MSP); Seacombe Quarry, 7 on 13.8 at MV (CM)
Pempelia genistella Winfrith Heath, 1 on 4.8 at MV (SPC, KR); West Hill, on 23.7 at MV (CM); Parley Common, 1 on 19.7 at MV (PD); Canford Heath, 1 on 20.7 at MV (PD); Hengistbury Head (VC11), between 18.7 and 5.8 at MV (MJ)
Epischnia bankesiella Cheyne Weare, Portland, on 29.6 at UV (PHS, PH, MF)
Apomyelois bistriatella Puddletown, 1 on 24.7 at MV (HWH); Studland, 1 on 19.5 at MV (SPC, KR); Handfast Point, 1 on 16.5 at MV (CM); Portland Bird Observatory, 1 on 19.6 at MV (MC)
Assara terebrella Morden Heath, 1 on 6.7 at MV (PD) and 1 on 12.7 at MV (PHS); Canford Heath, 1 on 22.7 at MV (PS)
Nephopterix angustella Shapwick, 1 on each of 28.6 and 30.6 at MV (PD); Portland Bird Observatory, 1 on each of 4.7, 21.7 and 27.8, all at MV (MC)
Agdistis meridionalis Sheat Quarries, Portland, larvae on 24.7 (MSP)
Amblyptilia punctidctyla West Bexington, 1 on 5.7 at MV (RE); Walditch, 1 on 26.8 at MV (MSP)
Pterophorus galactodactyla Ackling Dyke, 14 larvae on 14.5 (PD); Chetterwood, 13 larvae on 22.5 (PD)
Euleioptilus carphodactyla Ballard Down, on 30.5 at MV (CM); Shapwick, 1 on 8.8 at MV (PD)

MACROLEPIDOPTERA REPORT 2000

Peter Davey

Records of nationally rare and nationally scarce species have been included, together with records of other interesting species such as immigrants and those not recently recorded in the county.

Records were gratefully received from:

CM – Chris Manley
DH – Derek Hallett
DAH – Don Humphrey
DT – Doug Taylor
GH – Gordon Hopkins
HW – Hugo Woodhomer
JB – Jeremy Burge
JHa – John Hammick
LW – Lawrie de Whalley
MB – Margaret Brooks
MC – Martin Cade
MF – Mark Foster
MJ – Mike Jeffes
MP – Mick Parker
MSP – Mark Parsons
PB – Paul Benham
PD – Peter Davey
PH – Paul Harris
PK – Peter Knight
PS – Phil Serling
RC – Rees Cox
RE – Roy Eden
RRC – Ray Cook
TP – Ted Pratt
WS – Bill Shreeves

Hepialus hecta **GOLD SWIFT** Morden, 12.7 (PS, PD, Peter Korbutt)
Adscita geryon **CISTUS FORESTER** Lyscombe, 11 in flight or at rest 11.6 (PD)
Adscita statices **FORESTER** Lyscombe, 18 in flight or at rest 11.6 (PD); North Dorset, numerous moths in flight 17.6 (PD); Portland, larvae 24.7 (MSP)
Zygaena trifolii **FIVE-SPOT BURNET ssp. decreta** Pamphill, 10 larvae on vetches 12.5, 22 in flight 27.6 (PD); Rooksmoor, in flight 21.6 (PD); Wareham Forest, in flight 23.6 (PD)
21.6 (PD); Wareham Forest, in flight 23.6 (PD)
Zygaena trifolii **FIVE-SPOT BURNET ssp. palustrella** North Dorset, hundreds of moths in flight 17.6 (PD); Zig-Zag Hill, numerous moths in flight 18.6 (PD)
Apoda limacodes **FESTOON** Trigon, 28.6, 1.8 (CM); Holt Heath, 29.6 (MB); Morden, 2 on 6.7 (PD); Shapwick, 2 on 6.7 (PD); Sares Wood, 6.7 (MF); Upton Heath, 15.7 (PD); Wareham Forest, 2 on 18.7 (PD); Parley Common, 22 on 19.7 (PD, Neil Armour-Shalou); Upwey, 20.7 (PH); Puddletown, 22.7 (HW); Yellowham, 29.7 (DH)
Sesia bembeciformis **LUNAR HORNET** Studland, 11 exit holes in sallow stumps 5.3 (PD); Lydlinch, 4 exit holes in sallow stumps 17.3 (PD)
Synanthedon vespiformis **YELLOW-LEGGED CLEARWING** Boys Wood, 26 larvae found in cambium of large oak stumps (PD)
Synanthedon flaviventris **SALLOW CLEARWING** Whitesheet, 16 galls 27.2 (PD); Studland, 3 galls in outer sallow stems 5.3, 12 galls in sallow stems 16.3 (PD); Stoborough Heath, several galls 8.3 (PS); Holton Heath Marsh, 5 galls in outer sallow stems 15.3 (PD); Gore Heath, 3 galls in outer sallow stems 22.3 (PD); Hurn Forest, Merritown Heath, Gallows Hill, Corfe Mullen, adults bred from sallow galls (RRC)
Synanthedon formicaeformis **RED-TIPPED CLEARWING** Studland, 7 galls in large sallow branches 5.3, 3 galls in large sallow branches 16.3 (PD); Gallows Hill, bred out in July from sallow stem (RRC)
Bembecia scopigera **SIX-BELTED CLEARWING** West Bexington, 16.7, Cogden, 16.7 (MP)
Eriogaster lanestris **SMALL EGGAR** West Bexington, 25 between 8.3 and 25.4 (RE); Puddletown, 11.4 (HW); Upwey, 30.4 (PH); Badbury Rings, 14 larvae in web 9.6 (PD)
Lasiocampa trifolii **GRASS EGGAR** Studland, 5 on 19.8 (CM)
Pavonia pavonia **EMPEROR** Hengistbury Head, 7.4, 5.5, 9.5 (MJ); Hurn, 6.5, 8.5 (MJ); Sopley Common, by day 13.5 (PS); Sopley, 7.7 (MJ)
Cymatophorima diluta **OAK LUTESTRING** Yellowham, 3 on 29.8, 4 on 31.8, 2 on 4.9 (DH)
Achlya flavicornis **YELLOW HORNED** Hurn, 16 nights between 29.2 and 22.3 (MJ); Trigon, 6.3, 10 on 9.3, 13.3 (CM); Puddletown, 8.3, 9.3, 10.3 (HW); Hengistbury Head, 10.3 (MJ)

Polyploca ridens **FROSTED GREEN** Woolland, 2 on 27.4 (PB); Hurn, 5.5 (MJ)
Archiearis parthenias **ORANGE UNDERWING** Studland, 2 in flight on 5.3, 3 in flight on 16.3 (PD); Sares Wood, in flight on 8.3 (PD); Throop Heath, 2 by day on 11.3, 2 by day on 12.3 (MF); Holton Heath Marsh, 6 in flight on 15.3 (PD)
Jodis lactearia **LITTLE EMERALD** Holt Heath, 5 on 29.6 (MB); Morden, 6.7 (PD); Puddletown, 8.7 (HW)
Comibaena bajularia **BLOTCHED EMERALD** Hurn, 8.6, 13.6, 19.6, 21.6, 22.6, 23.6 (MJ); Holt Heath, 4 on 24.6.1998, 4 on 16.6.1999, 4 on 29.6 (MB); Woolland, 3 on 28.6, 30.6 (PB); Milton-on-Stour, 30.6 (JB); Shapwick, 30.6 (PD)
Chlorissa viridata **SMALL GRASS EMERALD** Tadnoll, 4 disturbed from bog grasses on 7.6 (PD); Winfrith, 2 by day on 9.6 (MF); Studland Heath, disturbed from boggy track on 16.6 (PD); Wareham Forest, disturbed from edge of bog 16.6 (PD); Morden, 12.7 (PS, PD, Peter Korbutt)
Cyclophora pendularia **DINGY MOCHA** Holt Heath, larva from sallow 5.6 (PD); Parley Common, 2 larvae from sallow 8.6 (PD, RRC); Tadnoll, 2 larvae from sallow 13.6 (PD); Hurn, 27.7 (MJ); Winfrith, 4 on 4.8 (Shaun Clancy); Arne, 8.8 (Peter Brash); Parley Common, 3 larvae from sallow on 28.8 (RRC); Winfrith Heath, 6 larvae from sallow 5.9 (Graham Collins, MSP); Throop Heath, 6 larvae from sallow 6.9 (Graham Collins); Rooksmoor, 5 larvae from sallow 11.9 (MSP); Alners Gorse, 5 larvae from sallow 11.9 (MSP); Sandford, larva from sallow 13.9 (MSP, Estella Roberts); Holton Heath Marsh, 2 larvae from sallow 16.9 (PD)
Cyclophora annulata **MOCHA** Melbury Park 19.8 (PS, DH)
Cyclophora albipunctata **BIRCH MOCHA** Studland, 1.5 (CM); Hurn, 6.5, 8.5, 10.5, 14.5, 15.5, 18.5, 28.5, 30.5, 17.9 (MJ); Holton Heath Marsh, 2 on 7.5; Trigon, 9.5, 1.8 (CM); Parley Common, at rest on birch trunk 17.5 (PD); Holt Heath, 29.6 (MB); Morden, 12.7 (PS, PD, Peter Korbutt); Winfrith, 4.8 (Shaun Clancy); Swanage, 7.8 (TP)
Scopula immutata **LESSER CREAM WAVE** Sopley, 3.6 (MJ); Hengistbury Head, 5.7 (MJ); Trigon, 21.7 (CM, PD)
Scopula floslactata **CREAM WAVE** Pamphill, disturbed by day 12.5 (PD); Chetterwood, 6 disturbed by day 22.5 (PD); Holt Heath, at rest on pine trunk 30.5 (PD); Puddletown, 7.6 (HW); Preston, 24.6, 20.7 (PK); West Hill, 22.7 (CM)
Scopula marginepunctata **MULLEIN WAVE** Hengistbury Head, 15.5, 4.6, 14.6 (MJ); West Bexington, 3.6, 12 nights between 20.7 and 12.9 (RE); Puddletown, 25.6 (HW); Portland 29.6 (PS, PH, MF)
Idaea muricata **PURPLE-BORDERED GOLD** Wareham Forest, 2 in flight on 23.6 (PD); Highwood Heath, 2 disturbed on 25.6 (PD); Lulworth Heath, disturbed on 25.6 (PD); Simpson's Pond, disturbed on 25.6 (PD); Morden, in flight on 26.6 (PD), in flight on 3.7 (PD), 12.7 (PS, PD, Peter Korbutt); Canford Heath, 2 in flight on 5.7 (PD); Upton Heath, 6 in flight on 6.7 (PD); Dorset heath, 20.7
Idaea sylvestraria **DOTTED BORDER WAVE** Hengistbury Head, 29.6, 2.7 (MJ); Morden, 2 on 6.7 (PD), 6 on 12.7 (PS, PD, Peter Korbutt), 8 on 31.7 (PD); Arne, 7 on 5 nights between 14.7 and 31.7 (Peter Brash); Upton Heath, 15.7 (PD); Wareham Forest, 2 on 18.7 (PD); Winfrith, 6 at dusk on 18.7 (MF); Parley Common, 2 on 19.7 (PD, Neil Armour-Shalou); Dorset heath, 20.7; Canford Heath, 2 on 25.7 (PD); Swanage, 10.8 (TP)
Idaea fuscovenosa **DWARF CREAM WAVE** Hengistbury Head, 29.6, 8.7, 19.7, 21.7, 24.7, 1.8 (MJ); Shapwick, 29.6 (PD); Trigon, at lighted window on 6.7, 1.8 (CM); Upton Heath, 15.7 (PD); Canford Heath, 2 on 20.7; Seacombe, 12.8 (CM)
Idaea seriata **SMALL DUSTY WAVE** Swanage, 7.6, 18.6, 23.6, 25.6, 29.6, 3.7, 6.7, 16.7, 17.7, 7.8 (TP); Weymouth, 6 between 15.6 and 24.8 (MF); Upwey, 8 between 17.6 and 12.9 (PH); Swanage, 25.6 (RC); Preston, 1.7 (PK); West Bexington, 8.9 (RE); Merley, 24.9, 25.9 (JHa)
Idaea trigeminata **TREBLE BROWN-SPOT** Swanage, 7.6, 18.6 (TP); Weymouth, 7 between 10.6 and 3.7 (MF); Preston, 16.6, 18.6, 26.6 (PK); Puddletown, 11 nights between 16.6 and 6.7 (HW); Swanage, 24.6 (RC); Hengistbury Head, 29.6, 4.7 (MJ); Holt Heath, 3 on 29.6 (MB); Upton Heath, 15.7 (PD)
Idaea emarginata **SMALL SCALLOP** Hurn, 24.7 (MJ)
Idaea degeneraria **PORTLAND RIBBON WAVE** Portland, 29.6 (PS, PH, MF)
Idaea straminata **PLAIN WAVE** Holt Heath, 24.6.1998, 2 on 29.6 (MB); Morden Heath, 4 on 12.7 (PS, PD, Peter Korbutt), 31.7 (PD); Parley Common, 2 on 19.7 (PD, Neil Armour-Shalou); Bere Regis, 20.7 (JHa); Hurn, 26.7 (MJ); Trigon, 28.7, 1.8 (CM); Trigon, 21.7 (PD); Winfrith, 4.8 (Shaun Clancy)
Scotopteryx bipunctaria **CHALK CARPET** Charmouth, 8.7 (MSP); Durdle Dor, 15.7 (MSP); Eypes Mouth, 18.7 (MSP); Hod Hill, disturbed by day 19.7 (PD, John Tubb); Portland, 3 on 24.7, 9.8 (MSP), several flushed up by day 29.7 (RRC); Ballard Point, 4.8 (CM); Portland, 10 on 5.8 (PS, MSP); Seacombe, 20 on 12.8 (CM); Portland, 5.9 (MSP)
Catarhoe rubidata **RUDDY CARPET** Portland, 29.6 (PS, PH, MF); West Bexington, 7.7 (RE); Shapwick, 23.7 (PD)
Catarhoe cuculata **ROYAL MANTLE** West Bexington, 13.7, 27.7 (RE); Portland Bird Observatory, 16.7 (MC)
Epirrhoe rivata **WOOD CARPET** Puddletown, 13.6, 2 on 17.6, 2 on 19.6, 26.6, 28.6, 29.6, 1.7, 2.7, 6 on 13.7, 14.7, 21.7, 1.8 (HW); Upwey, 17.6, 8.8 (PH); Kingcombe, 23.7 (PS, PH, MF); Woolland, 2 on 30.7 (PB)
Epirrhoe galiata **GALIUM CARPET** St. Alban's Head, 14.5 (CM); Purbeck, 29.5, 2.6, 5 on 17.6 (CM); North Dorset, at rest 17.6 (PD); West Bexington, 12.7, 14.7, 15.7, 8.8 (RE); Portland, 29.6 (PS, PH, MF); Seacombe, 9 on 12.8 (CM); Puddletown, 17.8, 9.9 (HW)
Costaconvexa polygrammata **MANY-LINED** West Bexington, 5.8.1993 (RE); Portland Bird Observatory, 19.6 (MC)
Larentia clavaria **MALLOW** Hengistbury Head, 19.9, 4.10, 5.10, 6.10, 16.10, 18.10 (MJ); West Bexington, 10 nights between 23.9 and 27.10 (RE); Hurn, 7.10, 15.10, 16.10 (MJ)
Lampropteryx otregiata **DEVON CARPET** Shaftesbury, 8.8 (WS); Powerstock Common, by day 8.8 (MSP); Melbury Park, 19.8 (PS, DH)
Pelurga comitata **DARK SPINACH** Ferndown, 31.7 (RRC)
Eulithis prunata **PHOENIX** Preston, 19.6, 5.7, 28.7, 30.7, 8.8, 14.8 (PK); Swanage, 26.6, 28.6 (RC); Puddletown, 27.6, 28.6, 2.7, 4.7, 5.7, 2 on 7.7, 3 on 15.7, 23.7, 2.8 (HW); Swanage, 1.7, 6.7 (TP); Weymouth, 3.7, 4.7 (MF); West Bexington, 6.7, 13.7 (RE); Kingcombe, 23.7 (PS, DH); Hurn, 26.7 (MJ); Milton-on-Stour, 28.7 (JB)
Eulithis mellinata **SPINACH** Shapwick, 18.6 (PD)
Chloroclysta citrata **DARK MARBLED CARPET** Melbury Park, 19.8 (PS, DH)
Thera cupressata **CYPRESS CARPET** West Bexington, 14.5, 15.5, 10.7, 2 on 13.7, 14.7, 20.10, 7.11 (RE); Upwey, 17.6, 1.7, 3.7, 6.7 (PH); Swanage, 30.6 (RC)
Colostygia multistrigaria **MOTTLED GREY** West Bexington, 11.3 (RE); Shapwick, 22.3 (PD)
Hydriomena ruberata **RUDDY HIGHFLYER** Weymouth, 9.6 (PS)
Melanthia procellata **PRETTY CHALK CARPET** Puddletown, 27 nights between 13.5 and 11.9 (HW); Shapwick, 2.6, 2 on 22.8 (PD); Purbeck, 2.6 (CM); Portland, 29.6 (PS, PH, MF)
Rheumaptera cervinalis **SCARCE TISSUE** Walditch, 9.8 (MSP)

Philereme transversata **DARK UMBER** West Bexington, 20.7, 24.7 (RE); Puddletown, 23.7 (HW); Kingcombe, 23.7 (PS, PH, MF); Upwey, 24.7 (PH); Shapwick, 31.7 (PD)
Euphyia biangulata **CLOAKED CARPET** Trigon, 28.6 (CM); Puddletown, 7.7 (HW); Keysworth, 2 on 18.7 (HW); Parley Common, 19.7 (RRC, DAH); Yellowham, 20.7 (DH); West Bexington, 24.7 (RE); Arne, 29.7 (Peter Brash); Hurn, 1.8 (MJ)
Euphyia unangulata **SHARP-ANGLED CARPET** Hengistbury Head, 22.6, 29.6 (MJ); Pamphill, beaten from scrub 27.6 (PD); Affpuddle, at dusk on 7.7 (MF); Trigon, 21.7 (CM, PD); Trigon, 28.7 (CM); Kingcombe, 23.7 (PS, PH, MF); Weymouth, 7.8 (MF)
Perizoma bifaciata **BARRED RIVULET** Preston, 30.7 (PK); Shapwick, 2 on 31.7, 2 on 4.8 (PD); West Bexington, 13.8 (RE)
Perizoma didymata **TWIN-SPOT CARPET** Yellowham, 21.6, 28.6 (DH); Powerstock Common, 21.7 (RRC, DAH, Andy Page)
Eupithecia tenuiata **SLENDER PUG** West Bexington, 19.7, 24.7, 28.7, 14.8 (RE); Puddletown, 21.7, 4 on 28.7, 2 on 31.7, 3.8 (HW); Walditch, 27.7 (MSP); Woolland, 27.7, 30.7, 5.8 (PB); Ferndown, 31.7 (RRC)
Eupithecia inturbata **MAPLE PUG** Woolland, 20.7, 27.7, 2 on 30.7, 5.8, 6.8 (PB); Shapwick, 2 on 31.7, 4.8 (PD); Milton-on-Stour, 31.7 (JB); Puddletown, 2 on 31.7 (HW); Walditch, 8.8 (MSP)
Eupithecia satyrata **SATYR PUG** Fontmell Down, 2 swept from sheltered grassland on 4.6 (PD)
Eupithecia linariata **TOADFLAX PUG** Upwey, 22.7, 8.8 (PH); West Bexington, 1.8, 8.9, 12.9 (RE); Preston, 8.8 (PK)
Eupithecia insigniata **PINION-SPOTTED PUG** Shapwick, 8.5, 9.5 (PD)
Eupithecia assimilata **CURRANT PUG** Weymouth, 9.5 (PS, PH, MF); Upwey, 12.5, 3.6, 13.8, 2 on 15.8, 2 on 17.8, 21.8 (PH); Wimborne, 15.5.1998 (MB); Weymouth, 29.5, 30.6 (MF); Woolland, 2 on 3.6 (PB); Swanage, 6.8, 18.8 (TP); West Bexington, 19.8 (RE)
Eupithecia tripunctaria **WHITE-SPOTTED PUG** Puddletown, 6.5, 2 on 16.6, 19.6, 29.6, 30.7 (HW); Shapwick, 8.5, 15.5, 7.8 (PD); Trigon, 16.5 (CM); Upwey, 4.6, 8.8 (PH)
Eupithecia succenturiata **BORDERED PUG** Puddletown, 18.6, 2.7, 5.7, 13.6, 16.7 (HW); Shapwick, 30.6 (PD); Walditch, 27.7 (MSP)
Eupithecia subumbrata **SHADED PUG** Shillingstone, disturbed on 28.5 (PD); Badbury Rings, beaten from blackthorn on 3.6 (PD); Fontmell Down, beaten from hawthorn scrub on 4.6 (PD); Shapwick, 18.6 (PD); Upwey, 18.6 (PH); Portland, 29.6 (PS, PH, MF); Weymouth, 30.6 (MF); Hengistbury Head, 6.7, 21.7 (MJ)
Eupithecia simpliciata **PLAIN PUG** West Bexington, 17.7, 20.7, 26.7, 3.8 (RE); Woolland, 27.7 (PB); Upwey, 4.8 (PH)
Eupithecia distinctaria **THYME PUG** Ballard Down, 18.6 (CM); Portland, 29.6 (PS, PH, MF)
Chloroclystis chloerata **SLOE PUG** West Bexington, 18.6, 6.7 (RE); Puddletown, 28.6 (HW)
Anticollix sparsata **DENTATED PUG** Hurn, 5.7 (MJ); Trigon, 7.7 (CM); Merritown Heath, larvae numerous on yellow loosestrife 5.8 (Mike Skelton)
Odezia atrata **CHIMNEY SWEEPER** Povington Wood, 4 disturbed or in flight 10.6 (PD); Whiteway Fen, 17 disturbed or in flight 10.6 (PD)
Euchoeca nebulata **DINGY SHELL** Puddletown, 15.5, 16.5 (HW); Hurn, 30.6, 27.7, 30.7 (MJ); Shapwick, 6.7 (PD); Woolland, 20.7 (PB); Trigon, 1.8 (CM); Walditch, 8.8 (MSP)
Mythimna turca **DRAB LOOPER** Chetterwood, 21 in flight on 22.5 (PD); Chase Wood, 18.7 (DT)
Lobophora halterata **SERAPHIM** Ferndown, 9.5 (RRC); Milton-on-Stour, 10.5, 13.5, 30.5 (JB); Preston, 14.5 (PK); Hurn, 23.5 (MJ)
Trichopteryx polycommata **BARRED TOOTH-STRIPED** North Dorset, at torch light 22.3 (PD)
Semiothisa clathrata **LATTICED HEATH** Portland Bird Observatory, 26.8, 25.9 (MC)
Cepphis advenaria **LITTLE THORN** Pallington Heath, by day 14.5 (MF); Sares Wood, by day 3.6, 4.6 (MF)
Ennomos quercinaria **AUGUST THORN** Puddletown, 28.7 (HW); Yellowham, 2 on 1.8 (DH); Shapwick, 4.8 (PD)
Selenia lunularia **LUNAR THORN** Woolland, 29.5, 10.6 (PB)
Apocheima hispidaria **SMALL BRINDLED BEAUTY** Hurn, 5.3, 9.3, 11.3 (MJ); Woolland, 6.3 (PB)
Deileptenia ribeata **SATIN BEAUTY** Yellowham, 28.6, 7.7 (DH); Powerstock Common, 21.7 (RRC, DAH, Andy Page); Melbury Park, 19.8 (PS, DH)
Selidosema brunnearia **BORDERED GREY** Wareham Meadows, 11.8 (Peter Brash); Parley Common, 11.8 (RRC)
Serraca punctinalis **PALE OAK BEAUTY** Old Harry, 9.5 (CM); Sopley Common, 12.5 (PS); Hurn, 15.5, 22.5 (MJ)
Cleora cinctaria **RINGED CARPET** Shapwick, 7.5 (PD); Ferndown, 9.5 (RRC); Trigon, 3 on 9.5 (CM); Parley Common, at rest on pine trunk 17.5 (PD)
Ectropis crepuscularia **SMALL ENGRAILED** Puddletown, 24.4, 30.4, 9.6 (HW); Trigon, 9.5 (CM); Preston, 12.5 (PK); Hurn, 21.5 (MJ); Holt Heath, larva beaten from sallow on 5.6 (PD); Stoborough Heath, 2 larvae beaten from sallow on 7.6 (PD); Parley Common, larva beaten from sallow on 8.6 (PD)
Aethalura punctulata **GREY BIRCH** Studland, 1.5, 9.5 (CM); Hurn, 9.5, 10.5, 25.5 (MJ)
Lomographa bimaculata **WHITE PINION-SPOTTED** Puddletown, 6.5, 16.5 (HW); Gillingham, 13.5 (GH)
Gnophos obscurata **ANNULET** Morden, 31.7 (PD); Portland, 5.8 (PS, MSP)
Aspitates ochrearia **YELLOW BELLE** Durlston, disturbed from grassland on 29.4 (PD); Hurn, 14.5 (MJ); West Bexington, 10 between 14.5 and 5.6, 29 between 17.8 and 8.9 (RE); Hengistbury Head, 20.5, 21.5, 1.6, 3.6, 6.6, 7.6, 10.6, 8.9, 9.9, 11.9 (MJ); Seacombe, 8.6 (CM); Chesil, 17.6 (PS, MJ, M Holloway); Weymouth, 26.8 (MF)
Dyscia fagaria **GREY SCALLOPED BAR** Shapwick, 2.6 (PD)
Perconia strigillaria **GRASS WAVE** Stoborough Heath, disturbed from heather on 7.6 (PD); St Leonard's Peats, disturbed on 15.6 (PD); Studland Heath, 3 disturbed on 16.6 (PD); Holt Heath, 16.6.1999 (MB)
Hemaris tityus **NARROW-BORDERED BEE HAWK** North Dorset, 9 in flight or at rest on 17.6 (PD); North Dorset, 4 larvae on small scabious 14.7 (PS, MSP, N Bourn)
Hemaris fuciformis **BROAD-BORDERED BEE HAWK** Hurn, 9.5 (MJ); Stoborough Heath, 2 in flight by day on 7.6 (PD)
Hyles lineata livornica **STRIPED HAWK** Puddletown, 21.6 (HW)
Furcula bifida **POPLAR KITTEN** Milton-on-Stour, 1.6 (JB); Woolland, 10.6 (PB)
Odontosia carmelita **SCARCE PROMINENT** Trigon Ford, 3 on 29.4 (CM); Hurn, 2.5, 3.5, 4.5 (MJ)
Leucoma salicis **WHITE SATIN** Hurn, 13.7, 17.7, 21.7, 24.7, 26.7, 27.7, 30.7 (MJ); Milton-on-Stour, 21.7 (JB)
Dicallomera fascelina **DARK TUSSOCK** Stoborough Heath, larva on heather 7.6 (PD); Arne, 13 on 6 nights between 8.7 and 29.7 (Peter Brash); Upton Heath, 15.7 (PD); Dorset heath, 20.7
Nudaria mundana **MUSLIN FOOTMAN** Portland, 7 larvae on underside of flat rock lying on quarry floor 13.3 (PD); Portland, 29.6 (PS, PH, MF); West Bexington, 5.7, 7.7, 16.7, 21.7, 24.7, 28.7 (RE)
Atolmis rubricollis **RED-NECKED FOOTMAN** Puddletown, 19.6 (HW); Sares Wood, 5 on 6.7 (MF)
Eilema sororcula **ORANGE FOOTMAN** Shapwick, 2 on 7.5, 8.5, 9.5, 12.5, 15.5, 7.6, 2 on 17.6 (PD); Puddletown,

10.5, 13.5, 2.6, 16.6 (HW); Hurn, 12.5, 22.5 (MJ); Trigon, 14.5 (CM); Ackling Dyke, 31.5 (PD); Weymouth, 15.6 (MF)

Lithosia quadra **FOUR-SPOTTED FOOTMAN** Walditch, 29.7, 8.8, 9.8 (MSP)

Coscinia cribraria **SPECKLED FOOTMAN** Dorset heath, 3 on 20.7; Dorset heath, 9 on 22.7

Parasemia plantaginis **WOOD TIGER** North Dorset, at rest on ground 17.6 (PD)

Arctia villica **CREAM-SPOT TIGER** Hengistbury Head, 14 nights between 22.5 and 24.6 (MJ); West Bexington, 33 between 30.5 and 24.6 (RE); Shapwick, 2.6 (PD); Purbeck, 4 on 2.6 (CM); Trigon, 7.6 (CM); Preston, 2 on 7.6, 16.6 (PK); Seacombe, 10 on 8.6 (CM); Chesil, 2 on 17.6 (PS)

Euplagia quadripunctaria **JERSEY TIGER** West Bexington, 54 between 18.7 and 26.7 (RE); Walditch, 41 between 20.7 and 29.8 (MSP); Abbotsbury, 4.8, 5.8, 2 on 6.8 (Cliff Rogers); Portland Bird Observatory, 22.8, Southwell, 26.8 (MC)

Meganola albula **KENT BLACK ARCHES** West Bexington, 28 nights between 6.7 and 12.8 (RE); Preston, 27.6, 3 on 6.7, 2 on 24.7, 31.7 (PK); Chickerell, 1.7 (PS, DH); Trigon, 6.7, 28.7, 31.7, 1.8 (CM); Hengistbury Head, 21.7 (MJ); Trigon, 21.7 (CM, PD); Milton-on-Stour, 21.7 (JB); West Hill, 6 on 22.7 (CM); Weymouth, 23.7 (PS); Puddletown, 28.7 (HW); Arne, 29.7, 31.7 (Peter Brash); Upwey, 30.6, 23.7 (PH); Weymouth, 31.7, 8.8, 9.8 (MF)

Agrotis cinerea **LIGHT FEATHERED RUSTIC** Woolland, 22.5, 2.6 (PB); Purbeck, 29.5, 2 on 2.6 (CM); Seacombe, 8 on 8.6 (CM)

Agrotis trux **CRESCENT DART** Walditch, 5.7, 24.7, 31.7 (MSP); West Bexington, 18 between 5.7 and 13.8 (RE); Weymouth, 23.7 (PS); Weymouth, 29.7 (MF); Ballard Point, 4 on 4.8 (CM); Portland, 5.8 (PS, MP); Seacombe, 12.8 (CM)

Agrotis vestigialis **ARCHER'S DART** Studland, 15 on 19.8 (CM)

Agrotis ripae **SAND DART** Portland Bird Observatory, 20.6 (MC); Hengistbury Head, 23.6, 1.7 (MJ)

Ochropleura leucogaster **RADFORD'S FLAME SHOULDER** Walditch, 29.11 (MSP)

Standfussiana lucernea **NORTHERN RUSTIC** Ballard Point, 4.8 (CM)

Paradiarsia glareosa **AUTUMNAL RUSTIC** Hurn, 6.9, 22.9 (MJ); Hengistbury Head, 10 nights between 9.9 and 7.10 (MJ); Winterbourne, 12.9 (LW); Woolland, 16.9 (PB); West Bexington, 24.9 (RE); Puddletown, 30.9 (HW)

Xestia agathina **HEATH RUSTIC** Hurn, 2.9, 5.9, 6.9, 10.9, 14.9, 21.9 (MJ); Hengistbury Head, 2.9, 9.9, 10.9, 17.9 (MJ); Upwey, 9.9 (PH); Studland, 9.9 (CM); Hengistbury Head, 2 on 9.9 (PS, MJ); Portland Bird Observatory, 13.9 (MC); Merley, 2 on 25.9 (JHa)

Naenia typica **GOTHIC** Upwey, 15.7 (PH); Merley, 15.7 (JHa); Hurn, 17.7, 31.7 (MJ); Puddletown, 17.7 (HW); Preston, 19.7, 20.7 (PK); Gillingham, 13.5 (GH); Woolland, 27.7 (PB); Corfe Common, 7.8 (CM); Ferndown 16.8 (RRC)

Lacanobia contigua **BEAUTIFUL BROCADE** Sopley, 12.5 (PS); Holt Heath, 24.6.1998, 2 on 16.7.1999 (MB); Hurn, 21.6, 23.6 (MJ); Trigon, 28.6, 7.7 (CM); Wareham Forest, 28.6, 2 on 18.7(PD); Morden, 2 on 6.7 (PD), 12.7 (PS, PD, Peter Korbutt); Canford Heath, 3 on 13.7 (PD); Dorset heath, 3 on 20.7

Lacanobia suasa **DOG'S TOOTH** Hengistbury Head, 37 nights between 30.4 and 6.8 (MJ); Weymouth, 10 between 29.5 and 12.8 (MF); Upwey, 2.6, 24.7, 26.8, 28.8 (PH)

Hadena perplexa **TAWNY SHEARS** Swanage, 30.5 (TP)

Hadena compta **VARIED CORONET** Gillingham, 6.7 (GH); West Bexington, 14.7 (RE)

Hadena albimacula **WHITE SPOT** Preston, 6.5 (PK); Purbeck, 2 on 29.5, 4 on 2.6, 14 on 17.6 (CM)

Orthosia miniosa **BLOSSOM UNDERWING** Hurn, 4.5 (MJ)

Orthosia populeti **LEAD-COLOURED DRAB** Hurn, 27 nights between 2.3 and 6.4 (MJ)

Orthosia opima **NORTHERN DRAB** West Bexington, 2.5 (RE); Puddletown, 6.5 (HW)

Mythimna litoralis **SHORE WAINSCOT** Studland, 2.7, 100 on 19.8 (CM); Hengistbury Head, 26.7, 30.7, 6.8 (MJ), 9.9 (PS, MJ)

Mythimna obsoleta **OBSCURE WAINSCOT** Hengistbury Head, 16.6, 28.6 (MJ)

Mythimna loreyi **COSMOPOLITAN** West Bexington, 19.6 (RE); Shapwick, 20.6, 19.10 (PD); Portland Bird Observatory, 2 on 20.6, 30.9, 11.10 (MC); Upwey, 25.6 (PH); Puddletown, 23.9 (HW); Old Harry, 2 on 1.10 (CM); Weymouth, 6.10 (MF); Merley, 22.10 (JHa)

Cucullia chamomillae **CHAMOMILE SHARK** Puddletown, 9.3, 3.5 (HW); West Bexington, 24.3 (RE); Hengistbury Head, 9.5 (MJ)

Dasypolia templi **BRINDLED OCHRE** Arish Mell, 6.5 (PD); Weymouth, 7.10 (MF); West Bexington, 15.10 (RE)

Aporophyla australis **FEATHERED BRINDLE** Walditch, 21.9, 23.9 (MSP)

Scopula emutaria **RED SWORD-GRASS** Hurn, 6.10 (MJ)

Lithophane semibrunnea **TAWNY PINION** Puddletown, 14.3, 8.5, 19.10 (HW); Woolland, 17.3, 7.11 (PB); Shapwick, 30.4, 5.5, 7.5 (PD); Trigon, 18.10 (CM)

Polymixis flavicincta **LARGE RANUNCULUS** Upwey, 14.9 (PH); West Bexington, 16.9, 21.9, 2.10 (RE); Walditch, (MSP)

Eumichichtis lichenea **FEATHERED RANUNCULUS** Hurn, 11.9 (MJ)

Conistra rubiginea **DOTTED CHESTNUT** Shapwick, 3.2 (PD); Hengistbury Head, 23.2, 25.10 (MJ); Trigon, 2 on 9.3, 9.5 (CM); Arne, 10.3, 22.3, 8.4 (Peter Brash); Puddletown, 11.3, 7.5 (HW); Hurn, 12.3 (MJ); Woolland, 17.3 (PB); Preston, 17.3 (PK); Portland Bird Observatory, 21.6 (MC)

Agrochola helvola **FLOUNCED CHESTNUT** Hengistbury Head, 5.10 (MJ); Hurn, 26.9 (MJ)

Agrochola haematidea **SOUTHERN CHESTNUT** Sopley Common, 5 larvae swept 12.5 (MJ)

Xanthia citrago **ORANGE SALLOW** Puddletown, 9.9, 20.10 (HW)

Parastichtis suspecta **SUSPECTED** Walditch, 5.7 (MSP); Parley Common, 19.7 (PD, Neil Armour-Shalou); Hengistbury Head, 21.7 (MJ); Hurn, 26.7 (MJ)

Mormo maura **OLD LADY** Woolland, 20.7 (PB); Merley, 15.7 (JHa); Higher Halstock Leigh, 25.8 (MP)

Ipimorpha retusa **DOUBLE KIDNEY** Corfe Common, 7.8 (CM); Parley Heath, 11.8 (RRC)

Ipimorpha subtusa **OLIVE** Hurn, 21.7, 24.7, 27.7, 30.7, 31.7 (MJ); Puddletown, 22.7 (HW); Preston, 2 on 28.7, 30.7, 8.8 (PK); Trigon, 1.8 (CM); West Bexington, 3.8, 6.8, 9.8 (RE); Ballard Point, 4.8 (CM); Milton-on-Stour, 4.8, 6.8, 13.8, 18.8 (JB); Walditch, 5.8 (MSP)

Enargia ypsillon **DINGY SHEARS** Milton-on-Stour, 4.7 (JB); Shapwick, 7.8 (PD)

Apamea sublustris **REDDISH LIGHT ARCHES** Shapwick, 1.7 (PD); Woolland, 6.7 (PB); Puddletown, 16.7 (HW)

Apamea anceps **LARGE NUTMEG** Hurn, 22.6 (MJ)

Apamea unanimis **SMALL CLOUDED BRINDLE** West Bexington, 2 on 2.6, 14.6 (RE); Puddletown, 2 on 3.6 (HW); Hengistbury Head, 4.6, 5.6 (MJ); Upwey, 6 nights between 4.6 and 27.6 (PH); Puddletown, 2 on 5.6, 6.6 (HW); Milton-on-Stour, 15.6 (JB); Weymouth, 20.6 (MF)

Apamea scolopacina **SLENDER BRINDLE** West Bexington, 19.6, 25.6, 22.7, 24.7, 4.8, 9.8 (RE); Hurn, 12.7, 17.7, 26.7, 30.7, 1.8 (MJ); Parley Heath, 2 on 19.7 (RRC, DAH); Puddletown, 23.7 (HW); Kingcombe, 2 on 23.7 (PS, DH); Grove, 25.7 (DW); Woolland, 27.7 (PB); Portland Bird Observatory, 6.8 (MC); Upwey, 7.8 (PH); Melbury Park, 19.8 (PS, DH)

Apamea ophiogramma **DOUBLE LOBED** Puddletown, 21.6, 10.7, 22.7, 3.8 (HW); Milton-on-Stour, 21.7, 24.7, 1.8 (JB); Trigon, 31.7 (CM)
Photedes morrisii **MORRIS'S WAINSCOT** Charmouth, 6 on 8.7 (MSP, John Chainey, Jenny Spence)
Photedes fluxa **MERE WAINSCOT** Powerstock Common, 21.7 (RRC, DAH, Andy Page); Melbury Park, 19.8 (PS, DH)
Amphipoea fucosa **SALTERN EAR** Upwey, 11 nights between 13.7 and 28.8 (PH); Weymouth, 25 between 7.8 and 8.9 (MF); West Bexington, 7.8, 8.8, 10.8, 13.8 (RE)
Celaena leucostigma **CRESCENT** Weymouth, 2.7, 5.7, 31.7 (MF); Portland Bird Observatory, 1.8, 13.8 (MC); Grove, 11.8 (DW)
Archanara geminipuncta **TWIN-SPOTTED WAINSCOT** West Bexington, 9 nights between 30.7 and 12.8 (RE); Weymouth, 8.8 (MF); Walditch, 11.8 (MSP); Portland Bird Observatory, 11.8 (MC); Upwey, 14.8 (PH)
Archanara dissoluta **BROWN-VEINED WAINSCOT** West Bexington, 4.8, 8.8 (RE); Upway, 8.8 (PH)
Sedina buettneri **BLAIR'S WAINSCOT** Central Dorset, 30 seen at dusk 26.9 (RRC), 30 seen at dusk 28.9 (MSP)
Chilodes maritimus **SILKY WAINSCOT** Radipole, 5 on 13.6, 3 on 15.6 (Peter Brash); Weymouth, 2.7 (MF); West Bexington, 18.7 (RE)
Arenostola phragmitidis **FEN WAINSCOT** Hengistbury Head, 24.7, 28.7, 29.7, 30.7, 5.8 (MJ); Puddletown, 30.7, 2 on 31.7, 2.8 (HW); Weymouth, 31.7, 9.8 (MF); Portland Bird Observatory, 7.8 (MC)
Stilbia anomala **ANOMALOUS** Hengistbury Head, 6.9 (MJ)
Pyrrhia umbra **BORDERED SALLOW** Preston, 6.5, 7.5, 8.5, 18.6, 19.6, 27.6 (PK); Puddletown, 15.5 (HW); Purbeck, 29.5, 6 on 2.6, 4 on 17.6 (CM); Upwey, 18.6, 30.6, 2.7 (PH); West Bexington, 25.6, 22.7 (RE); Weymouth, 28.6, 21.7 (MF); Portland, 29.6 (PS, PH, MF); West Hill, 22.7 (CM); Ballard Point, 4.8 (CM)
Eublemma ostrina **PURPLE MARBLED** Upwey, 19.6 (PH)
Eustrotia uncula **SILVER HOOK** West Holme Heath, disturbed from bog on 25.6 (PD); Parley Common, 2 on 19.7 (PD, Neil Armour-Shalou); Trigon, 28.7 (CM); Studland, 19.8 (CM)
Earias clorana **CREAM-BORDERED GREEN PEA** Puddletown, 3.6 (HW); Botany Wood, beaten from sallow 10.6 (PD); Hengistbury Head, 17 nights between 4.6 and 30.7 (MJ); Winfrith Heath, beaten from sallow 13.6 (PD); Portland Bird Observatory, 18.6 (MC); Shapwick, 19.6 (PD); West Bexington, 19.6, 20.6, 23.6, 30.6, 7.7, 20.7, 21.7 (RE); Ferndown, 30.6 (RRC); Studland, 2.7 (CM); Upwey, 4.7 (PH); Preston, 2 on 6.7 (PK)
Bena prasinana **SCARCE SILVER LINES** Yellowham, 17.6 (DH); Sares Wood, 6.7 (MF); Merley, 15.7 (JHa); Dorset heath, 20.7; Preston, 20.7 (PK); Trigon, 31.7 (CM)
Calistege mi **MOTHER SHIPTON** Badbury Rings, disturbed on 9.6 (PD); Povington Wood, 13 disturbed on 10.6 (PD); Whiteway Fen, disturbed on 10.6 (PD); Lyscombe, 4 disturbed on 11.6 (PD); North Dorset, 32 disturbed or in flight on 17.6 (PD)
Trichoplusia ni **NI** West Bexington, 19.6 (RE); Portland Bird Observatory, 20.6 (MC)
Macdunnoughia confusa **DEWICK'S PLUSIA** Winterbourne, 12.9 (LW)
Plusia festucae **GOLD SPOT** Studland, 19.8 (CM); Walditch, 24.8 (MSP)
Polychrysia moneta **GOLDEN PLUSIA** Preston, 27.6 (PK)
Abrostola trigemina **DARK SPECTACLE** Shapwick, 15.5, 17.6 (PD); Puddletown, 15.5, 3.7, 21.8 (HW); Upwey, 21.7, 22.7, 8.9 (PH); Walditch, 25.7 (MSP); Portland Bird Observatory, 20.9, 16.10 (MC)
Tyta luctuosa **FOUR-SPOTTED** Portland, by day, 3.8, 9.8 (MSP)
Parascotia Fuliginaria **WAVED BLACK** Dorset Heath, 4 on 22.7
Hypenodes humidialis **MARSH OBLIQUE-BARRED** Wareham Forest, 28.6 (PD); Morden, 3.7 (PD), 3 on 6.7 (PD), 12.7 (PS, PD, Peter Korbutt); Upton Heath, 6 on 15.7 (PD); Parley Common, 19.7 (PD, Neil Armour-Shalou); Trigon, 21.7 (CM, PD)
Hypena crassalis **BEAUTIFUL SNOUT** Puddletown, 5.7 (HW); Sares Wood, 6.7 (MF); West Bexington, 21.7 (RE)
Hypena obsitalis **BLOXWORTH SNOUT** Portland, 5.8 (PS, MP)
Hypena rostralis **BUTTONED SNOUT** Shapwick, adult in coal shed 3.4, inside house 13.5 (PD); Hurn, larva on hop 5.7 (MJ); Christchurch, larvae on 22.7, larvae on hop 25.7, larvae on hop 29.7 (Mike Skelton); Wimborne, 9.10.1998 (MB); Merley, 27.10 (JHa)

2000 MOTH IMMIGRATIONS TO DORSET AND POTENTIAL SOURCES OF ORIGIN

Peter Davey

2000 continued the run of rather unremarkable years for immigrant species of butterflies and moths. Much of the year was characterised by westerly airstreams with very brief spells when winds blew from Europe. At these times immigrations occurred, and several of these produced some very rare immigrant species. The year was notable for the number of Clouded Yellow butterflies, although totals did not quite reach the levels recorded in 1983. This species is overwintering in the Bournemouth area, and possible as yet undetected colonies along the Purbeck coast plus immigrants recorded in April and May could have been responsible for the relatively high numbers seen during the summer months. Three-hundred Clouded Yellows were observed in and around Portland Bird Observatory on 4 September together with a hundred Painted Lady's. Mean temperatures for the year were roughly one degree centigrade above the long term average which made it a very warm year once more.

Unlike 1998 and 1999, the first quarter of 2000 did not yield any sizeable immigrations. A single *Nomophila noctuella* was trapped at Shapwick on 3 February as mild south-westerlies blew in from the Canary Islands. Single Red Admiral and Painted Lady butterflies were spotted in mid February in the Wareham area and again during the first week of March. Between 8 and 12 March, as warm south-westerly winds blew from Spain via the Azores, further Red Admirals were seen, a Dark Sword-grass was trapped at Shapwick and a Large Tortoiseshell was spotted at Throop Heath on 11 March.

The wettest April for 250 years provided no opportunities for immigration apart from a coupe of brief southerlies on the first few days and in the third week. Portland observers saw the first Silver Y, Clouded Yellow and Hummingbird Hawk of the year in the first week of April. A further very brief southerly on 22 April yielded a second Clouded Yellow at Portland Bird Observatory and three more on Sopley Common. Nothing else was reported during the month.

Dry north-easterly winds in the first five days of May were very gradually replaced by humid warm east to south-easterly winds from the central Mediterranean. These perfect migrant bearing conditions lasted until 15 May, when

unsettled westerlies lasted until the end of the month. A few White-point moths were caught in locations across the southern half of the county. Single Dark Spectacle moths were trapped at Puddletown and Shapwick on 15 May. Given the potential for immigration, the first half of May yielded surprisingly few migrants.

The first half of June produced three instances of southerlies from Iberia, on 3rd, 8th and 13th. The commoner Iberian immigrant species turned up, and included Hummingbird Hawk, Gem, White-point, *Plutella xylostella*, Painted Lady, Gem, Bordered Straw and Small Mottled Willow. An early White-speck also appeared. The Azores high moved into the Bay of Biscay by 14 June, before drifting north then north-east across England and into Germany by 17 June. Very warm air moved in from the region of northern Spain, the Pyrénnées and southern France on 18 June, and southerly winds persisted until 21 June with temperatures approaching 30°C. This weather pattern was similar to that of mid-August 1996. Then, as in June, immigrant species appeared from central and southern Europe on surface winds and Iberian species on upper winds. The first British record of the Many-lined moth for approximately 150 years was trapped on Portland on 18 June (a second Many-lined was trapped a few hundred yards from the north Dorset border subsequently). Other interesting species included:

- A new species for Portland Bird Observatory was the pyrale *Apomyelois bistriatella* on 18 June
- A Sand Dart on Portland on 19 June
- A Vestal on Portland on 19 June
- 127 Small Mottled Willow on Portland on 19 June
- A Ni at West Bexington on 19 June and on Portland on 20 June
- A Cosmopolitan on Portland and at West Bexington on 19 June and at Shapwick on 21 June
- A Purple Marbled at Upwey on the 19 June
- A Striped Hawk at Puddletown on 21 June
- A Large Nutmeg at Hurn on 22 June, a presumed immigrant.

Winds gradually veered through west, north-west and round to north-east by month-end. Many residual immigrant moths species, primarily Small Mottled Willow, Humming-bird Hawk, Bordered Straw, White-point, Dark Spectacle and Vestal moths continued to be trapped during the last week of June and the first week of July, the latter period characterised by light and variable winds. Unsettled, cool and windy west to north-westerlies occurred between 8 and 16 July and immigrant activity consequently slumped. As high pressure moved across the country by 20 July, winds once more veered through north to north-east until 25 July before becoming light and variable up to month end. Immigrant species recorded towards the end of June were again in evidence in the last ten days of July.

The first three weeks of August were changeable with mainly light westerly then south-westerly winds, and little scope for immigration from abroad. A Bloxworth Snout on Portland on 5 August may point to a small colony on the island, the species having been seen five times in the previous two years there. A remarkable migration of UK borne species, apparent from many unusual records between 6 and 9 August. A warm front moved east across the county on the morning of 6 August and introduced very warm humid west winds that lasted until the morning of 10 August. These ideal conditions may have triggered unusually high activity in the resident moth populations on the 6 and 7 July across the UK. The records given below are noteworthy.

The continued run of westerly winds came to a halt on 22 August as high pressure moved east across the UK and into Scandinavia by 26 August. Some unusual immigrants appeared on 24 and 25 August as hot south-easterly winds moved across the county from southern France. The pyrale *Evergestis extimalis* was trapped on 24th, and the following night a Latticed Heath plus five *Cydia amplana* were seen, all at Portland. A sixth *Cydia amplana* was trapped at Walditch on 25th. Many Vestals were trapped at this time. Westerly winds swept the warm air away eastwards on 26 and 27 August, but high pressure moved east across the UK

Portland Bird Observatory	Maiden's Blush	1	07-Aug	
Swanage	Birch Mocha	1	07-Aug	
Weymouth	Sharp-angled Carpet	1	07-Aug	
Portland Bird Observatory	Pine Carpet	1	07-Aug	
Walditch	Scarce Tissue	1	09-Aug	No Recent Dorset record
Portland Bird Observatory	Lilac Beauty	1	07-Aug	6th Portland record
Portland Bird Observatory	Purple Thorn	1	07-Aug	2nd Portland record
Portland Bird Observatory	Swallow Prominent	1	07-Aug	
Portland Bird Observatory	Vapourer	1	07-Aug	4th Portland record
Portland Bird Observatory	Black Arches	1	07-Aug	3rd Portland record
Portland Bird Observatory	Rosy Footman	1	07-Aug	6th Portland record
Portland Bird Observatory	Buff Footman	1	07-Aug	New Portland record
Corfe Common	Buff Footman	10	07-Aug	
Walditch	Four-spotted Footman	1	08-Aug	
Walditch	Four-spotted Footman	1	09-Aug	
Portland Bird Observatory	Slender Brindle	1	06-Aug	
Upwey	Slender Brindle	1	07-Aug	
Portland Bird Observatory	Small Rufous	1	06-Aug	New Portland record
Portland Bird Observatory	Fen Wainscot	1	06-Aug	
Portland Bird Observatory	Nut-tree Tussock	1	07-Aug	7th Portland record

again allowing south-easterly winds to blow in from France once more. *Udea ferrugalis*, Silver Y and Vestal moths were recorded in large numbers at this time. Portland recorded 106 *Udea ferrugalis*, 380 Silver Y, 36 Vestals and a *Palpita unionalis* on 29 August. 23 Vestals were trapped at Puddletown on the same night.

The rapidly alternating weather types that characterised much of the summer continued into September. Changeable westerlies pushed the warm continental flow of air to the east during the first week. By 8 September pressure rose across the UK in the same way as it had done twice before in August, and a hot south-easterly flow became established between 9 and 12 September. Single Heath Rustics were trapped on Portland on 9 September and at Upwey on 11 September. Eleven Convolvulous Hawks were trapped at Cheyne Weare on 11 September and a Dewick's Plusia was trapped at Winterbourne Stickland on 12th. Cooler westerly then south-westerly winds swept through on 13 September and lasted until the end of the month. A very brief south-easterly occurred between 22 and 24 September. The airmass had moved in from the western Mediterranean via central France. Once more, immigrant activity peaked with Gem, Vestal, Convolvulous Hawk, Hummingbird Hawk, Delicate, White-speck, White-point, Bordered Straw and Cosmopolitan moths trapped across the county. Unusual species included a Latticed Heath at Portland on 24 September, and the pyrale *Antigastra catalaunalis* the following night.

Monarch butterflies were seen at Seacombe and Durlston on 1 and 2 October respectively, and at Portland on 6 and 7 October. These individuals probably flew across the Atlantic assisted by a deep low pressure system that moved out of the Newfoundland area on 25 September to be centred over Ireland by 29 September. This weather pattern was very similar to those that facilitated the 1999 Monarch and 1998 Green Darner dragonfly September immigrations. It was the wettest October for almost one hundred years, and the often strong south-west winds did not present many too many opportunities for immigration, although the commoner Iberian species that had been recorded throughout the summer months continued to be caught through the month, namely Convolvulous Hawk, Cosmopolitan, Dark Spectacle, Delicate, Gem, Scarce Bordered Straw, Small Mottled Willow, and Vestal moths. White-specks were especially prolific.

November and December continued the very wet theme with a high frequency of Atlantic storms. There was consequently little scope for immigration from abroad. A brief warm southerly flow of air from Iberia and north-west Africa increased immigrant activity briefly in the last week of November, and a Radford's Flame Shoulder was trapped at Walditch on the penultimate day of that month.

DORSET HOVERFLY REPORT 2000

E.T. and D.A. Levy

The year started well, with the publication in March of the Dipterists's Forum Report covering their field meeting in Dorset between late June and early July 1998.

The 31 members (organiser Mick Parker), who attended those seven days, visited 101 localities (many of them nature reserves or SSSIs) recorded 1,209 Diptera species, which included 116 hoverflies. Of these, three were Red Data and seventeen nationally scarce species. One of the highlights of the week was the finding of the rare and elusive *Neoascia geniculata* (Warmwell Heath), a new species to the County List, bringing the total to 218. Other rare or scarce species included *Pelecocera tricincta* (10 sites), *Pandasyopthalmus tibialis* (10 sites), *Lejogaster tarsata*, *Parhelophilus consimilis*, *Pipizella virens*, *Callicera aurata*, *Sphegina verecunda*, *Eupeodes nitens*, *Eupeodes latilunulatus*, *Sphaerophoria virgata*, *Platycheirus immarginatus*, *Chrysogaster macquarti*, *Cheilosia cynocephala* and *Xanthandrus comtus*. The Dipterist's Forum is to be congratulated on their excellent work and comprehensive report, which added impressively to our county distribution maps.

Quite a successful year, especially during the spring period. 135 species were recorded and 70 localities visited. Undoubtedly the best find of the year was the rare wasp-mimic *Doros profuges*, recorded at a chalkland locality in the north of the county on June 24th. This is the third record for Dorset and the first in the County since June 1950. Also worthy of mention is the record of *Psilota anthracina* at Oakers Wood on May 29th. The third county record for this rare ancient woodland species.

Records 2000

The following list reflects the more scarce or unusual hoverflies recorded during the year 2000. Our thanks once again to Mick Parker for his support and list of records.

Chrysotoxum elegans	Stone-Hill Down 18.6.00.
Chrysotoxum vernale	Spyway 6.5.00; Turnerspuddle Heath 18.6.00.
Epistrophe diaphana	Minchington Cross 24.6.00.
Eupeodes nielseni	Harley Down 5.8.00.
Megasyrphus erraticus	Spyway 1.5.00.
Pandasyopthalmus tibialis	Great Ovens Hill 15.7.00.
Parasyrphus malinellus	Spyway 30.4.00.
Xanthandrus comtus	Spyway 18.6.00.
Xanthogramma festiva	Prime Coppice 14.5.00.
Brachyopa insensilis	Oakers Wood 29.4.00.
Brachyopa pilosa	Oakers Wood 1.5.00.
Brachypalpus laphriformis	Turnerspuddle Heath 13.5.00.
Cheilosia cynocephala	Harley Down 5.8.00.
Cheilosia griseiventris	Bere Heath Wood 26.7.00.
Cheilosia honesta	Spyway 24.4.00; Oakers Wood 20.5.00.
Cheilosia longula	Powerstock Common 26.8.00.
Criorhina floccosa	Tattan Wood 6.5.00.
Criorhina ranunculi	Spyway 1.5.00; Oakers Wood 23.4.00.
Eoseristalis abusiva	Hod Hill 11.6.00; Cogden Beach 16.7.00.
Eumerus ornatus	Cranborne Chase 8.7.00.
Microdon mutabilis	Oakers Wood 18.6.00.
Orthonevra geniculata	Spyway 1.5.00; Turnerspuddle Heath 13.5.00/27.5.00.
Sphegina verecunda	Oakers Wood 7.5.00.
Volucella zonaria	Weymouth 17.9.00.
Xylota abiens	Oakers Wood 18.6.00.

E.T. and D.A. Levy (recorders — S.W. Region)

Obituary

JOHN CHRISTOPHER WAGNER MD FRCPath, 1923–2000

John Christopher Wagner retired to Dorset in 1985 with his wife Margaret, after a long career as a research pathologist. Chris was an outstanding international authority on asbestos-related cancer, a field of research in which he had been engaged since 1956 in South Africa, and from 1962 at the Pneumoconiosis Research Unit at Penarth, south Wales. After a lifetime of research and many accolades, he received in the year of his retirement to Dorset the Charles S. Mott prize of the General Motors Cancer Research Foundation for 'the most outstanding recent contribution related to the causes and ultimate prevention of cancer'. This eminent career is more fully described his obituary written by Kathryn McConnochie in *The Guardian*, July 1st 2000 and entitled, 'Chris Wagner — His groundbreaking research linked asbestos with cancer and changed the world of work for millions'.

As soon as they were able both Chris and his wife, Dr Margaret Wagner, who had also worked with him in the field of pathology for over 30 years, joined the Dorset Natural History and Archaeological Society, with Chris simply noting down his interest, Archaeology Bronze Age. Exploring from his home at Preston he could both see and visit those many ancient *tumuli* of this period in the near vicinity. It was in this sense of exploration that we first met on the first field meeting that I organised for the reformed Archaeology Group of the Society in June 1995 above the Bride Valley. It was at this and subsequent meetings that Chris quietly contributed with his logical mind to debates which were often speculative in content, with many theoretical ideas flown and metaphors invoked by way of understanding the monuments we visited in the landscape. Chris and Margaret both provided much other support to these meetings, particularly after the visit to Chalbury near their home when the Archaeology Group 'incurred the wrath of the gods' (*DNHAS Newsletter* 53).

Dr John Christopher Wagner

As his interest grew in old monuments, he developed his interest in picking up and identifying old stones, worked flints and lithics. In March 1996, with his friend and fellow member Harry Grenville, he came to the museum to learn more, and together they embarked on the exploration of the lithics in the Charles Bean Archive (*Proceedings of the Dorset Natural History and Archaeological Society* **105**, 183). In a continuous process of their developing expertise, we structured a project to catalogue and record all the material that Charles Bean had collected from fieldwalking in the hinterland of Maiden Castle between 1931 and 1936. Thousands of lithics were catalogued and described and, with the annotated maps, diaries, and notebooks of Charles Bean, patterns of distribution between Maiden Castle and the South Dorset Ridgeway were plotted, and compared with those patterns collected and published in more recent years (Woodward 1991; Woodward and Bellamy 1991). Alas the preparation of a paper with figures and synthesis for the *Proceedings* of the Society was not achieved, and remains with his colleagues to submit.

Chris also engaged with David Ashford in searching the magazine *Treasure Hunting* to find useful articles on metalwork identification; this has helped in our response to those many enquiries at the museum.

Although small beer in comparison with his seminal contributions in research pathology, Chris's contributions to the archaeological work of the Society are fundamental and important. His use with colleagues of just one small fraction of the collections has given life to those mute stones and dusty boxes, and this work will provide continuing access to new layers of knowledge and understanding. His support and contributions with others to archaeological meetings and debate have been essential to the wealth of the Society and its museum. As an old stone he is to be thanked for gathering moss in Dorset County Museum.

P.J. Woodward

Woodward, P.J., 1991 *The South Dorset Ridgeway, Survey and Excavations 1977–1984*, Dorset Natur. Hist. Archaeol. Soc. Monog. 8.

Woodward, P.J. and Bellamy, P.S., 1991 'Artefact distribution', in N.M. Sharples, *Maiden Castle, Excavations and Field Survey 1985–1986*, Hist. Build. Monum. Comm. England Archaeol. Rep. 9.

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Editorial Policy and Style Guide

Editor: Dr Peter Lock
School of Historical and Geographical Studies, College of Ripon & York St John,
York YO31 7EX
Tel: 01904 716756 or 426829; Fax: 01904 716816; E-mail: P.Lock@ucrysj.ac.uk

General

The *Proceedings of the Dorset Natural History and Archaeological Society* is an annual journal issued in June each year which publishes papers on the geology, natural history, archaeology, history, fine art and cognate subjects relating to Dorset.

Material submitted for publication should have a particular relevance to Dorset.

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Acceptance may be conditional on revision. Rejection may be outright or with the possibility of reconsideration upon revision, which will involve a further evaluation.

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Articles should be either typed or (for preference) prepared from a computer or word-processor, on A4 paper, single side with double spacing and generous margins (at least one inch/25mm on each side).

TWO copies of the typescript, together with a copy of the disk (with software and hardware specified), should be submitted. For preference, save files as Rich Text Format (.rtf). Separate guidance notes are available on request for the preparation of electronic typescript.

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Contributors are urged to contact the Editor in advance if anything unusual or lengthy is contemplated for submission, or if they have not written for publication before.

Articles **must** be submitted by the end of November and shorter contributions by the end of January for publication in June.

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