

Archaeological Investigations
at Ball Mill Quarry
(Church Farm South),
Grimley, Worcestershire:
Operational Phase 1

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with a contribution by Robin Jackson and Dennis Williams

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Report 1871
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Part 1 Project summary

A programme of archaeological investigation was undertaken at Church Farm South, Ball Mill Quarry, Grimley, Worcestershire (NGR SO 38309 26056) by Worcestershire Archaeology, part of Worcestershire Archive and Archaeology Service (WAAS) on behalf of Tarmac Limited in advance of mineral extraction of both sand and gravel. This report covers Phase 1 of the programme of archaeological investigation which was undertaken intermittently between the 12th of September and 10th October 2011.

No significant archaeological remains were found during an initial trial trenching stage, though these indicated that the area had been heavily truncated by ploughing throughout and by quarrying in the south-west corner. Subsequent work was limited to maintenance of a watching brief which recovered evidence for a small number of pits along the ridgeline, one of which was of Bronze Age date. A north to south orientated ditch was also revealed running across the south-west corner of the area of investigation. This feature, although heavily truncated and devoid of finds within the current excavation, had been investigated in 1991 in this vicinity during the construction of a conveyor belt crossing this area and is known to be a field boundary of Romano-British date.

It was also noted that the south-west and east of the site had been severely truncated by quarrying undertaken in the 1970s.

Part 2 Detailed report

1. **Planning background**

A staged programme of archaeological investigation was undertaken at Church Farm South, Ball Mill Quarry, Grimley, Worcestershire (NGR SO 38309 26056; Fig 1).

This comprised a preliminary stage of evaluation trenching which enabled scoping for a second stage to comprising maintenance of a watching brief and potentially (if warranted) the sample excavation of any areas of significant deposits identified. No prior desk-based assessment was required due to extensive prior investigations within the surrounding area. These have widely investigated archaeological deposits across a considerable extent of the surrounding landscape and thus provided an appropriate level of background information to inform this latest programme of investigation.

The work was carried out by the Worcestershire Archaeology, part of Worcestershire Archive and Archaeology Service (WAAS) on behalf of Tarmac Limited in advance of mineral extraction of both sand and gravel and is fulfilling condition 27 of the planning permission (reference number APP/E1855/A/09/2105051).

This report covers the results of Phase 1 of the programme of archaeological investigation which was completed intermittently between the 12th September and 10th October 2011.

The project conforms to the *Standard and guidance for archaeological field evaluation* (IfA 2008a), *Standard and guidance for archaeological excavation* (IfA 2008b), *Standard and guidance for an archaeological watching brief* (IfA 2008c) and the *Standards and guidelines for archaeological projects in Worcestershire* (HEAS 2010).

The project also conforms to a brief prepared by the service (HEAS 2006) and for which a project proposal (including detailed specification) was produced (HEAS 2011).

2. **Aims**

The aims of the programme of archaeological investigation being undertaken at Church Farm South are:

- To identify all archaeological remains present within the site and secure an accurate survey of them thus recording the scale and extent of archaeological remains present.
- To undertake carefully targeted investigation and recording of any landscape features (field boundaries, fence lines, etc) revealed to recover evidence for dating in order to support understanding of their chronological sequence and development.
- To undertake a sufficient level of investigation and recording of any occupation or funerary deposits revealed to establish their dating and character.

More specifically the initial stage of evaluation work was completed in order to inform the scope of the subsequent mitigation work (watching brief and if required sample excavation) which was determined by agreement following site meetings held with Mike Glyde (Historic Environment Planning Advisor, Worcestershire County Council).

3. **Methods**

3.1 **Fieldwork methodology**

3.1.1 **Fieldwork strategy**

The evaluation phase was undertaken intermittently between 12th September and 26th September 2011; this was followed by the watching brief that was conducted intermittently between 20th September and 10th October 2011. The site reference number is WSM 46039.

During the evaluation, a total of 18 trenches were excavated covering an area of *c.* 1200m² over the 5.7ha area. This represents a *c.* 4% of the development area. No cropmarks or other forms of evidence for the likely location of archaeological deposits have been identified within this area so trenches were located on a systematic grid array so as to investigate all topographic areas (Fig 2).

Deposits considered not to be significant were removed using a 360° tracked excavator, employing a toothless bucket and under archaeological supervision. Subsequent excavation was undertaken by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Service practice (CAS 1995). On completion of excavation, trenches were reinstated by replacing the excavated material.

Due to the presence of crop across much of the southern half of the site, the evaluation was undertaken in two stages (roughly separated by the line of an overhead power cable). At completion of the first stage of the evaluation (north of the powerline) and following a site meeting with Mike Glyde (Historic Environment Planning Advisor, Worcestershire County Council; 14th September 2011), the scope of the subsequent mitigation work was agreed enabling this to commence in this area. Due to the very limited scale and extent of archaeological remains identified during the evaluation, only a watching brief was required and no areas of formal sample excavation were identified.

The watching brief comprised stripping of topsoil and subsoil under archaeological supervision with subsequent excavation undertaken by hand. The topsoil/subsoil strip was undertaken using two 360° tracked excavators employing a toothless bucket with spoil removed by four 30 tonne dumpers working in succession. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Service practice (CAS 1995).

After removal of the crop, the second stage of evaluation was undertaken (south of the powerline) and once again due to the very limited scale and extent of archaeological remains identified, only a watching brief was required. Methods employed for the evaluation and subsequent watching brief in this second area were as described above.

Communication and good working relationship between the archaeological team, staff of Tarmac and the machine operator were crucial to the success of this fieldwork.

3.1.2 **Structural analysis**

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural, artefactual and ecofactual evidence, allied to the information derived from other sources.

3.2 **Artefact methodology**

3.2.1 **Artefact recovery policy**

The artefact recovery policy conformed to standard Service practice (CAS 1995; appendix 2).

3.2.2 **Method of analysis**

All hand retrieved finds were examined and a primary record was made on a project database (Microsoft Access 2000).

Finds were identified, quantified and dated to period. A *terminus post quem* date was produced for each stratified context. The date was used for determining the broad date of phases defined for the site. All information was recorded on *pro forma* sheets.

The pottery and ceramic building was examined under x20 magnification and recorded by fabric type and form according to the fabric reference series maintained by the service (Hurst and Rees 1992; Hurst 1994; and www.worcestershireceramics.org).

Pottery fabrics are referenced to the fabric reference series maintained by the Service (Hurst 1994).

3.3 **Environmental archaeology methodology**

3.3.1 **Sampling policy**

The environmental sampling strategy conformed to standard Service practice (CAS 1995 as amended). Despite investigating all features and layers revealed during the work undertaken, no significant deposits were revealed and as a result no environmental samples were taken.

3.4 **Statement of confidence in the methods and results**

The methods adopted allow a high degree of confidence that the aims of the project have been achieved.

4. **Topographical and archaeological context**

The investigation area covered a single land parcel measuring 5.7ha, bounded to the west by the A443, to the south-west and south by St David's Drive and to the east by the quarry conveyor belt (Fig 1).

The area lies at c 20-30m AOD (Above Ordnance Datum), on the western river terrace of the Severn, on a small plateau to the immediate west of the village of Grimley.

The soils are typical brown earths of the Hall and Wick series (Beard *et al* 1986). Brown earths of this subgroup (541) are permeable, well drained, non-calcareous loams or clays. The underlying geology consists of Pleistocene and recent drift deposits of glacial origin forming the third terrace of the River Severn, overlying Upper/Middle Triassic Mercia Mudstone (formerly Keuper Marl; BGS 1976 and 1990).

The study area lies within a larger archaeological landscape that contains an extensive series of cropmarks, first observed in the 1950s; initially mapped between 1969 and 1970 (Bond 1973) and most recently assessed in 2003 (Cox 2003). Although no cropmarks are known to enter the current excavation area, they are present to the immediate south and east (Fig 2; WSM 04503; Cox 2003, site G) and are understood to represent a Bronze Age burial mound

(ring-ditch) along with fragmented evidence for settlement and stock enclosures set within a field system of probable Iron Age and/or Romano-British date.

Previous work undertaken during the construction of the conveyor belt that bounds the eastern limit of the current works revealed a number of pits, postholes and ditches that dated from the Bronze Age through to the medieval period (Jackson 1991; Fig 2), whilst other work in the area has revealed extensive evidence for early prehistoric, Iron Age, Romano-British and early medieval settlement areas and associated enclosure systems (Fagan 1992; Hurst 1995; Webster forthcoming).

Extensive quarrying in the area has previously removed a number of the cropmark sites in the immediate area (WSM 01182, WSM 04501 and WSM 04502) whilst studies on the damage caused by ploughing resulted in permission being granted for the excavation in advance of quarrying of a badly truncated scheduled site to the north (SAM WT 209; Webster forthcoming).

5. Results

5.1 Evaluation (Figures 2, 3 and 4)

Across the extent the area covered by the evaluation trenching, apart from in Trench 15, topsoil was observed at a varying depth of 0.10m to 0.28m with subsoil below at a varying depth of 0.06m to 0.25m. Natural substrate was observed at varying depths from ground surface of 0.30-0.46m. This natural substrate comprised of compact mid red sands and gravels across the entire site except for the area covered by Trenches 2, 5 and 14. These were located on the slope towards the lower part of the site to the east where the natural substrate comprised compact, light yellow, sandy silt with frequent rounded stones.

The only trenches where this sequence was not observed were Trenches 15 and 16, located to the south-west end of the site within an area which is visibly scarped. This area is marked on the OS map of 1954-1963 as a gravel pit. The area shown relates closely to the area still visible on site; though on the 1904 OS map there is a much smaller area marked as a gravel pit to the north and east of Trench 10. This may have some bearing on features observed within Trenches 6 and 11 and discussed below. Trench 15 had gravels as natural substrate as well as clay marl at its' east end. The visibility of this clay marl almost certainly reflects removal of sand and gravel deposits through quarrying (as mapped). A modern pipe trench was also observed in this trench heading towards a derelict brick structure to the north. Trench 16 revealed that the quarrying seen within Trench 15 continued to the north and east; the majority of the trench being filled with modern demolition and deliberately dumped material used to raise the ground level back to that of a pre-quarrying date. This backfill included modern waste including glass, ceramics, metals and plastics along with a large number of plastic wrapped hay bales. Due to the relatively loose nature of this backfill the depth of former quarrying could not be established for health and safety considerations; although it is logical to think that the depth would be comparable to the depth of truncation seen in Trench 15 and thus that any archaeological deposits which might have been present had been entirely removed.

Within Trench 11 a small pit (1.05m by 0.80m in plan and 0.20m deep) was observed at the south end but unfortunately no dating was recovered. At present due to morphological and stratigraphic relationships this is believed to be related to modern quarrying as observed in Trench 15 and on the OS map of 1904.

Trench 6 contained a feature that was observed across the extent of the trench and to a width of 7.10m. It was excavated to a depth of 0.19m and contained modern brick and tile. As with the features described above this is thought to relate to quarrying undertaken in the last 100 years.

In every trench except Trenches 12, 15 and 18, heavy plough scarring was observed and this, strengthened by the increased quantity of colluvial material towards the base of the slope, is indicative of heavy plough truncation and erosion across the area. These factors might in part account for the lack of archaeological features and deposits at the site which lies in an area which has been widely shown to include extensive and significant archaeological remains extending across much of the river terrace areas. A similar scenario has been observed to the north at Church Farm West where an extensive cropmark enclosure complex identified through aerial photography in the 1950s has been demonstrated through evaluation and excavation to have been heavily truncated by ploughing, leaving only the deeper boundary ditches and larger cut features intact (Bretherton 2004; Webster forthcoming).

5.2 **Watching Brief (Figures 3 and 4)**

During the course of the watching brief it became quickly apparent that the depth and impact of the plough damage had indeed been severe (as the evaluation had indicated) and that any smaller discrete features which may have been present had probably been wholly truncated ploughing. Only two areas of interest had survived.

The first was a scatter of eight small 'pits' revealed running along the crest of the ridge that ran north-west to south-east across the stripped area. These pits averaged 0.40m in diameter by 0.30m in depth and were filled with large hand-sized rounded cobbles; dating was only recovered from a single pit [2004] and indicated a Bronze Age date. A modern metal water pipe was noted north of these pits running in an east to west direction near the limit of the stripped area.

The second area of interest was in the south-east corner of the Phase 1 strip where a single ditch [2020] was recorded orientated roughly north to south and varying in width from a maximum of 0.89m to 0.38m. It was roughly U-shaped in profile but only existed to a maximum depth of 0.08m due to modern truncation. Although the fill was devoid of finds it is thought that this feature is Romano-British in date and a continuation of a field boundary ditch seen during previous work associated with the construction of the quarry conveyor belt nearby (Jackson 1991, context 236).

Both the south-west and eastern parts of the site lying south of the overhead powerlines had been severely truncated by previous quarrying activities which are thought to date from the 1970s.

5.3 **Artefact analysis, by Robin Jackson and Dennis Williams**

The artefactual assemblage is summarised in Table 1.

The only notable items in this very limited assemblage were two conjoining body sherds of prehistoric pottery recovered from a pit (2004). The fabric is hand made and well-fired with an orange buff exterior surface and black core and interior surface. Mica, quartz sand and grog/clay pellet inclusions are visible through a hand lens.

Overall the sherds are strongly indicative of a Bronze Age rather than Neolithic or iron Age date but cannot be readily matched with any specific fabric in the county series and thus are assigned to fabric 122: indeterminate prehistoric (Hurst and Rees 1992; Hurst 1994; and www.worcestershireceramics.org). Small quantities of comparable material were recovered when the conveyor belt was constructed to the immediate south-east (Jackson 1991).

The remaining finds were either late post-medieval or modern. They comprised three fragments of 3 inch thick brick, a ploughshare, and a clear, two-piece moulded glass bottle bearing the legend 'CARTERS FOR QUALITY PRODUCTS'.

Period	Material class	Material subtype	Object specific type	Count	Weight (g)
modern	glass	-	bottle	1	132
post-med/modern	ceramic	-	brick	3	1300
post-med/modern	metal	iron	ploughshare	1	2930
prehistoric	ceramic	earthenware	pot	2	10
Totals:				7	4372

Table 1: Quantification of the assemblage

6. Synthesis

Prehistoric activity identified during the project to date (Operational Phase 1) is restricted to eight pits revealed running along a roughly north-west to south-east aligned ridge towards the northern side of the investigated area. Only one of these features contained datable evidence and this is indicative of a Bronze Age date; however, although the remaining seven features identified during the recent work all had sterile fills and are potentially of geological origin, it seems likely on balance that they are also of Bronze Age date, and that they reflect a thin scatter of prehistoric activity sited along the crest line of the plateau. Support for this suggestion comes from the work undertaken in advance of construction of the conveyor belt to the south-east. Here, a probable Bronze Age ditch or gully along with a scatter of other potentially Bronze Age features and residual Bronze Age artefacts (both pottery and single flint) were identified (Jackson 1991). Although the date and character of both groups of features is poorly determined, it seems likely that together they represent activity associated with the communities responsible for the construction of a number of probable Bronze Age funerary monuments known from cropmark evidence (ring-ditches) further to the south-east.

The roughly north to south orientated ditch running across the south-east corner of the site is interpreted as a continuation of a field boundary recorded during the construction of the conveyor belt to the south-east (Jackson 1991). Although undated during the recent work, the conveyor belt excavations demonstrated this to be Romano-British in date. Since the orientation of this feature matches that of the majority of the ditches known from cropmarks within the vicinity (Cox 2003, site G), it seems apparent that these formed part of an established field system of at least Romano-British and potentially earlier origin.

As a final point, the paucity of features revealed during these investigations is of note given the location of the area on a well-drained plateau within in a spread of cropmarks extending to both the north and south and including complexes of enclosures, field systems, occupational sites and burial features. In part this absence may be explained by the depth and density of plough scars which are indicative of heavy truncation of much of the investigated area, while some areas of previous quarrying may further account for the paucity of earlier activity recorded. However, it seems unlikely that these factors could entirely account for the very low levels of activity identified in comparison to those present in other investigated areas which have also suffered severe plough damage yet still included considerable extents (of the albeit truncated remains) of both prehistoric and Roman activity (Webster forthcoming). Along with the lack of cropmarks identified across the area investigated to date, it therefore seems likely that the very sparse remains present may provide a relatively accurate reflection of the level activity in this part of the former landscape, leaving the as yet unanswered question of why this area was seemingly so sparsely utilised.

7. **Publication summary**

The Service has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, the Service intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

A programme of archaeological investigation was undertaken at Church Farm South, Ball Mill Quarry, Grimley, Worcestershire (NGR SO 38309 26056) by Worcestershire Archaeology, part of Worcestershire Archive and Archaeology Service (WAAS) on behalf of Tarmac Limited in advance of mineral extraction of both sand and gravel. This report covers Phase 1 of the programme of archaeological investigation which was undertaken intermittently between the 12th of September and 10th October 2011.

No significant archaeological remains were found during an initial trial trenching stage, though these indicated that the area had been heavily truncated by ploughing throughout and by quarrying in the south-west corner. Subsequent work was limited to maintenance of a watching brief which recovered evidence for a small number of pits along a ridgeline, one of which could be dated through pottery to the Bronze Age. Together with a sparse scatter of Bronze Age features and artefacts identified during previous work in the vicinity and nearby ring-ditch cropmarks these are indicative of dispersed prehistoric activity in this part of a river terrace landscape which is characterised by extensive cropmark complexes of both prehistoric and Roman date.

A north to south orientated ditch was also revealed running across the south-west corner of the area of investigation. This feature, although heavily truncated and devoid of finds within the current excavation, had been investigated in 1991 in this vicinity during the construction of a conveyor belt crossing this area and is known to be a field boundary of Romano-British date.

8. **Acknowledgements**

The Service would like to thank the following for their kind assistance in the successful conclusion of this project:

From Top Barn Farm, the landowners; David and John Harper.

From Tarmac Limited; Nick Atkins, Adrian Preece and Colin Stratford.

From Worcestershire County Council; Mike Glyde (WCC Historic Environment Planning Advisor).

9. **Personnel**

The fieldwork was led by Jonathan Webster and report preparation was led by Timothy Cornah. The project manager responsible for the quality of the project was Robin Jackson. Fieldwork was undertaken by Jonathan Webster, Timothy Cornah and Christopher Gibbs.

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Plates



Plate 1; Trench 1 showing plough scars, looking west



Plate 2; Trench 5 looking west



Plate 3; Trench 7 looking south



Plate 4; Area during excavation strip. Looking west

Appendix 1 Evaluation trench descriptions

Trench 1

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.32m

Orientation: East-west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
100	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.22m
101	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.23-0.31m
102	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.32m+

Trench 2

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.35m

Orientation: East-west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
200	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.27m
201	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.28-0.34m
202	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.35m+

Trench 3

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.31m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
300	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.22m
301	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.23-0.30m
302	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.31m+

Trench 4

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.34m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
400	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.22m
401	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.23-0.33m
402	Natural	Mid orange red compact red clay with infrequent rounded to sub-rounded cobbles with patches of light yellowish brown silty clays, very compact with occasional rounded to sub-rounded cobbles throughout	0.34m+

Trench 5

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.46m

Orientation: East-west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
500	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.27m
501	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.28-0.45m
502	Natural	Mid brownish red coarse sand and silt mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action. Thought to be same as 1202 and 1403	0.32m+
503	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.32m+

Trench 6

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.32m

Orientation: East-west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
600	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.23m
601	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.24-0.31m
602	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.32m+
603	Fill of [604]	Light greyish brown mixed silty sand and gravels, moderate in compaction and containing modern machine made brick inclusions	1.90m width 7.10m length 0.19m depth
[604]	Cut of feature	Probable linear with vertical sides and flat base, heavily truncated by modern ploughing and is thought to have been excavated by machine given nature of feature. No interpretation can be provided at present although a modern provisional date has been attributed	1.90m width 7.10m length 0.19m depth

Trench 7

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.30m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
700	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.23m
701	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.24-0.29m
702	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.30m+

Trench 8

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.31m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
800	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.23m
801	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.24-0.30m
802	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.31m+

Trench 9

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.27m

Orientation: Northeast-southwest

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
900	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.20m
901	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.21-0.26m
902	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.27m+

Trench 10

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.50m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1000	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.10m
1001	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.11-0.34m
1002	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.35m+

Trench 11

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.38m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1100	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.26m
1101	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.27-0.37m
1102	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.38m+
1103	Fill of [1104]	Light yellowish grey silty sand with very loose compaction, contains occasional rounded to sub-rounded gravels to cobbles throughout	Width 0.80m Length 1.05m Depth 0.20m
[1104]	Cut of pit	Sub-square pit with concave base and shallow U-shaped profile. No dating evidence recovered and thus undated	Width 0.80m Length 1.05m Depth 0.20m

Trench 12

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.36m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1200	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.23m
1201	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.23-0.35m
1202	Natural	Mid brownish red sandy silt, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.32m+

Trench 13

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.32m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1300	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.22m
1301	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.23-0.31m
1302	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.32m+

Trench 14

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.30m

Orientation: East-west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1400	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.22m
1401	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.23-0.29m
1402	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.32m+

Trench 15

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.79m

Orientation: East-west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1501	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.10m
1502	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.11-0.35m
1503	Natural	Mid brownish red and light blue-grey mixed laminated clays becoming partly weather worn brash to the west.	0.36m+
[1504]	Cut for service	Vertical sides and flat based linear orientated roughly north-east to south-west linking an existing brick structure to unknown route of drain.	Width 0.30m Length >1.80m Depth 0.041m

Trench 16

Maximum dimensions: Length: 50m Width: 1.80m Depth: 1.10m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1601	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.20m
1602	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0..21-0.30m
1602	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.31m+
[1603]	Cut of large Pit	Modern machine cut feature of unknown size, if circular then it would measure 7m in diameter, however there is no indication to suggest shape of feature. Sides are vertical and descend to 1.10m BPGL (Below present ground level)	0.31-1.10m
1604	Fill of 1603	Mid brownish grey sandy silts with extremely modern finds including degraded hay bales in black plastic, glass, metal, plastic and wood. Believed to be the deliberate infilling of the former quarry area	0.31-1.10m

Trench 17

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.35m

Orientation: North-south

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1700	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.35m
1701	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.35m+

Trench 18

Maximum dimensions: Length: 50m Width: 1.80m Depth: 0.32m

Orientation: East-west

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1800	Topsoil	Mid greyish brown loose silty sand containing very frequent small rounded to sub-rounded gravels to pebbles. Frequent disturbance from root action and ploughing	0.00-0.17m
1801	Subsoil	Mid to light yellowish grey moderately compact silty sands containing frequent small rounded to sub-rounded gravels to cobbles. Frequent disturbance from plant rooting and plough action	0.18-0.31m
1802	Natural	Mid brownish red coarse sand and gravel mix, some rounded to sub-rounded cobbles throughout. Upper surface of deposit subjected to frequent disturbance from plough action	0.32m+
1803	Natural	Mid pinkish red gravels, rounded to sub-rounded. Upper surface of deposit subjected to frequent disturbance from plough action (Seen in eastern part of the trench only)	0.32m+

Appendix 2 Technical information

The archive (site code: WSM 46039)

The archive consists of:

13	Field progress reports AS2	
1	Photographic records AS3	
64	Digital photographs	
1	Drawing number catalogues AS4	
2	Scale drawings	
18	Trench record sheets AS41	
1	Copy of this report	(bound hard copy)

The project archive is intended to be placed at:

Worcestershire County Museum
Museums Worcestershire
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ
Tel Hartlebury (01299) 250416

