An Archaeological Excavation at Church Field, Otford, Kent
Interim Report 2015-19

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CONTENTS

1.0 CHURCH FIELD, OTFORD: INTERIM REPORT 2015-19

In 2011, as part of a resistivity survey of Otford Palace, the landowner of Castle House gave access to West Kent Archaeological Society to survey Church Field, adjoining the house and garden. Consequently in 2012, a substantial Roman building was revealed. After test pitting in 2013, and a season of excavation in 2015, WKAS handed the site over to Discover Roman Otford Project in the summer of 2015, and open excavation has taken place on the site between March and October during the subsequent four years.

2.0 Topography & Geology

Church Field is an area of uncultivated grassland in Otford, Kent, adjacent to the Scheduled Ancient Monument known as Becket's Well, and just to the east of the scheduled remains of Otford Archbishop's Palace, built in the early 16th century. The field has been divided into two, each half under separate ownership. A public footpath runs along the north edge of the field from the station car park to the church. This footpath is asphalted, and separated from the field by a barbed wire fence and mixed deciduous hedge. The field is separated from Becket's Well scheduled area by a barbed wire fence, and a line of *leylandii* conifers about 10m tall.

Church Field, in the late 1940's. Becket's Well is in the centre. The area to the east of the field bisected by the diagonal footpath is now covered by housing.

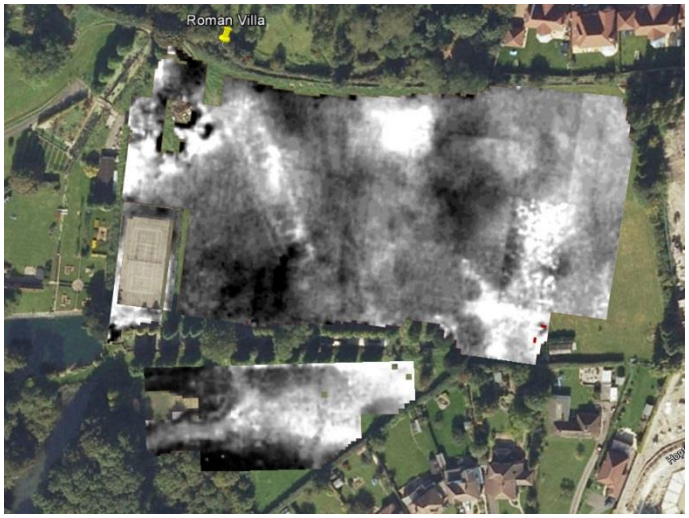
The geology of the main part of the field, adjacent to Becket's Well, is a mixture of fluvial silt from several local water courses – including the river Darent, about 1km to the west – gault clay, and chalk. The chalk is about 100m to the east of the site, beyond the housing estate, and is represented by ancient quarries to the east of the current railway line. A stream abuts the site to the west, where the garden of Castle House meets the field environment. This is fed by springs that rise in the grounds of Moat Cottage, across the footpath to the north. Becket's Well, to the south, consists of a pair of springs which then flow in a channel along the SE edge of the site, before emptying into a large pond at the SW corner of the west range. A grey silt overlays an area of clean white gault clay (proved through auger samples taken in 2012, and test pitting in 2013) at an uneven depth.

3.0 Archaeological Background

The field has long been thought of as the site of a Roman villa, due to a spread of Roman cbm, and painted wall plaster, noted when the field was a hop garden in the 19th and early 20th centuries. In 1934 two evaluation trenches, dug by F. Godwin, found putative wall

remains - but this discovery was glossed over in the very brief official report published in *Archaeologia Cantiana* (Arch. Cant XLVII. p 236). In a 1987 gazetteer of Roman Villas, Ernest Black noted: "Church Field, Otford. Flint walls. Flue-tiles, wall plaster, glass and pottery" (Black 1987, p 148).

A resistivity survey by the West Kent Archaeological Society (WKAS) in 2012 revealed the footprint of a substantial putative Roman winged corridor building (Appendix 1)



Overlay of initial geophysics results, from 2012, showing potential building foundations. Becket's Well is the unsurveyed area just below centre.

In July 2013, the landowner kindly gave permission to put in a series of 1m square test pits to corroborate the readings from the resistivity survey. Five pits were excavated in all – three over the potential building, and the other two over anomalies in the resistivity readings that indicated possible features.

These confirmed, through archaeological features, and artefactual finds, that there had been a substantial Roman building, probably a villa, in the field. Pottery roughly dated the site to 3rd-4th century AD. (Appendix 2)

4.0The Current Site

4.1 WKAS

In May 2015 WKAS was given permission to begin excavating the site. The brief of the project was as follows:

- Is the building truly symmetrical, with a central corridor and two long wings?
- Does the presumed west wing end at the tennis court?
- What is the state of preservation of the remains of the west wing?
- Can we confirm that the building was a Roman villa?
- Is there any dating evidence to suggest when the building may have been occupied?
- Is there any evidence to suggest why/when the building may have gone out of use?
- Can we obtain a clearer picture of the building layout – and any possible nearby structures - using different geophysical parameters?

The work was intended to adhere to the following methodology:

- Removal of turf by hand – for reinstatement at the end of the excavation
- Initial removal of topsoil by hand, using mattock and shovel
- Archaeological excavation by hand using trowel and hand shovel
- All features to be photographed and drawn to scale
- Finds to be recorded, cleaned, analysed, and eventually returned to the landowner
- The excavation to be backfilled by hand at the end of the designated time period

By the end of the week's excavation the design brief had been refined, thanks to the generosity of the landowner in inviting us to continue on-site, and to the forbearance of the farmer renting the field for sheep grazing, who allowed us to keep the trenches open for further investigation.

4.2 DROP

WKAS was unable to continue with the work, so Discover Roman Otford Project (DROP) was formed in the summer of 2015, and oversees the site to this day. The objectives for the site remained the same, but the methodology changed slightly. This was partly due to practicality (eg. The turf was very rough, and could not be preserved when opening large areas of ground). It was more time-efficient (and less back-breaking) to remove turf by mechanical means. We did not have to back fill the trenches, if we felt it appropriate for them to remain open – although once fully recorded they are backfilled for the protection of the archaeological features.

4.3 Site Recording

Initially, as the site appeared uncomplicated, an opportunity was taken to experiment with different recording media. Therefore, for a couple of years, most visual recording was mechanical/digital. In 2019, due to the level of site preservation, it became obvious that this was not a satisfactory method, and so latterly we have reverted to a drawn record where appropriate. High definition drone photography converted to digital imagery has so far been used where a site plan is required. From 2020 onwards we shall be adhering to a standard written/drawn site archive.

4.4 Contexts

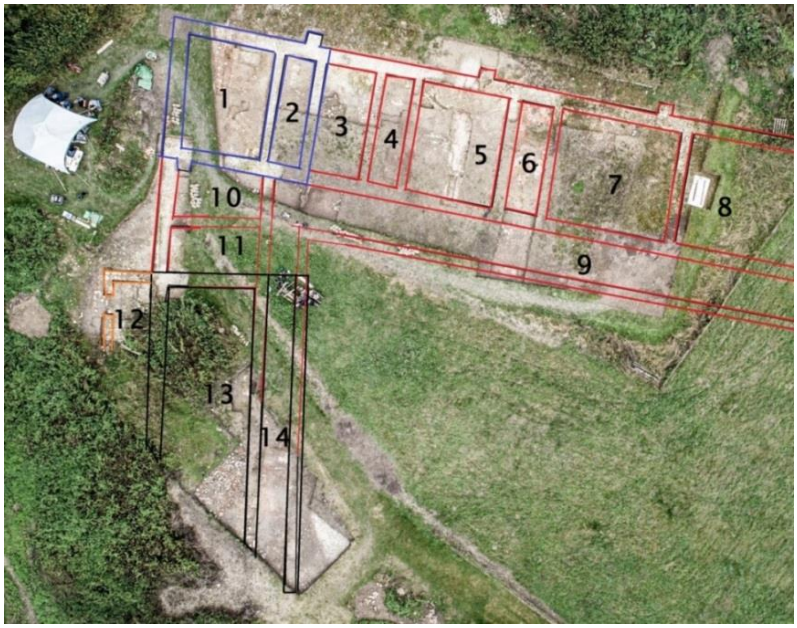
The site appears to represent a single controlled destruction event (see 'Discussion'). Consequently stratigraphy was limited. There are certain layers which uniformly cover the whole site, and have not been separated into individual contexts for each area. This has made recording much easier, but has now left us with the problem on such a large site of how to define where certain items came from: for example, context (1003) may relate to several different areas. Initially we identified areas by trench number (details following), but as the trenches expanded and merged, we required a more detailed system. We also renumbered a couple of the trenches after 2015, to give a more logical view of the site.

A temporary system was installed of identifying areas by designated room numbers, but from 2020 onwards we have refined this even more with a 5m coded grid, surveyed in by GNSS. Although the original main contexts still apply, the standard of archaeological preservation is such that many more specific context numbers will apply in the future. It is appropriate that this interim report comes at a time when the earlier systems are finishing.

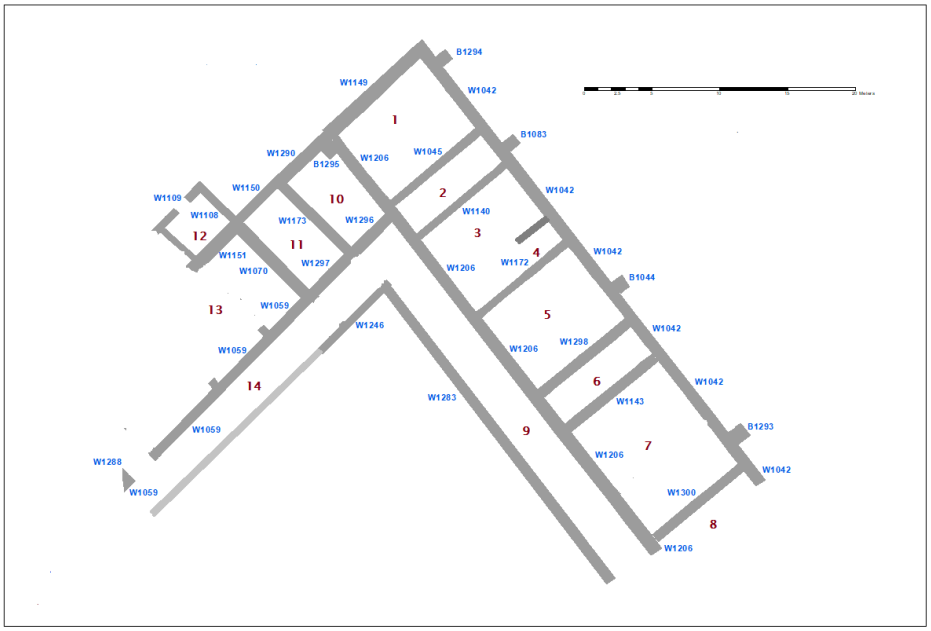
Site codes therefore can be confusing. For the purposes of this report I shall use the room numbering system, but the following may still apply:

Trench no: 1. Southern part of the east range (excavated in 2016-17) Originally trench 1 was a small 2m x 1m trench at the SW corner of the tennis court (2015)
2. Main range
3. Southernmost tip of the east range (excavated and backfilled in 2015; originally trench 2)
4. Trench over the front wall of the main range (backfilled at the end of 2019)
5. Southern part of the east range directly adjacent to trench 1
6. Northern part of the east range
7. A tiled area extending westwards from trench 5 (subsequently room 6)
8. Trench joining the main range with the east range

Room numbering, as of summer 2019:



*Room numbering and wall plan at end of 2019 season.**



**wall W1206 should read W1026*

Main contexts across the whole site:

1001	Topsoil
1002	Layer below topsoil, containing some archaeology
1003	First layer containing Roman archaeology; demolition material
1004	Natural layer (bedrock) under archaeology
1010	Material from spoil heap to Trench 1
1011	Material from spoil heap to Trench 2
1012	Material from spoil heap to Trench 3
1013	Material from spoil heap to Trench 4 (actually Trench 8)

5.0 Excavation

5.1 Context (1001)

(1001) is more or less an even depth of 300mm across the site. Most of the topsoil was removed by mechanical digger (with the exception of trench 3 in 2015, which was dug entirely by hand). As it was dumped on the spoil heap it was scanned by metal detectors, thus allowing for recovery of some coins, metalwork, and also pottery sherds. The rest of (1001) was removed by hand.

The soil is a dark greyish brown, containing many plant roots. There were occasional pieces of cbm, the odd coin, and the odd piece of pot. Also, at this level, there was a fair amount of 19^{th} – 20^{th} century domestic rubbish. Interestingly, considering the length of time the field was used as a hop garden, there is very little hop growing detritus. What also became clear was that pieces of the same broken item can appear anywhere on the site, for example a piece of china cup was found above room 1, and a joining piece was found about 40m away over room 7. We have found beads from (probably) the same Roman bracelet/necklace in both trench 1 and trench 2. In 2018 a late Iron Age copper alloy *fibula* was revealed by the digger, over room 4, but had no context other than topsoil.

The only difference between (1001) over the main range, and the same context over the east range is in the type of plant roots – the main range is more nettle based, while the east range is out in the field, and has more grasses and thistles.

Topsoil over trench 3

5.2 Context (1002)

This was dug entirely by hand, using spades, mattocks and shovels, but also trowelling as appropriate. Depending on the thickness of the lower context (1003), (1002) could be very thin, or up to tens of mm deep. It appears to be a levelling layer, covering the archaeology, and may represent the post-demolition ground level. Although some post-Roman material is present, the majority of finds are contemporary with the villa. It is from spoil in this layer that many of the coins have come. More Roman pottery is present, and fragments of cbm and mortar.

(1002) over rooms 7 & 9. Note how in room 9 we are already down onto (1003), but in room 7, and the wall trenches, there is still a substantial layer of (1002).

5.3 Context (1003)

A layer of demolition rubble that overlays the majority of the excavated site. In places it may be tens of mm thick, in others it may consist of a couple of pieces of CBM sitting on an archaeological feature such as an in-situ floor. What should be noted from the start is that from 2013-2019 not one single complete brick or tile has been found. All usable material – even down to clipped tile *tesserae* - has been systematically removed. There are *tesserae* strewn around the site (and in a couple of places in –situ), but all other useable material has been disposed of, leaving just hardcore. This in itself has been spread around the site – possibly as part of a levelling process, so the find site may not be where the item originated.

(1003) in main range.


(1003) with a very thin (1002) above it

5.4 Context (1004)
This refers to the gault clay natural. It is a distinctive whitish-grey colour, and underlies all the wall foundations, and occasionally some of the floors.


(1004) on left hand side of trench where person is standing

5.5 Unnumbered Context (Roman Topsoil)
In some places, especially under floors, there is a layer of clean grey undisturbed soil between the natural (1004) and any archaeology. This extends in places to the perceived Roman ground level outside the villa (although in places this has a separate context number).

6.0 The East Range

6.1 Walls

Most of the walls in the east range seem to have been of the same construction. Except in one part of W1042, by the *hypocaust* stoke hole to room 5, they have been robbed out down to a foundation that consists of crushed chalk laid on a levelled natural. Where levelling has been necessary, the natural has been cut into, as opposed to soil used to build it up. As there is a slight, but noticeable, slope on the ground, this means that the natural on the NE side of the range has been cut into slightly more deeply than on the SW side. The wall foundation of the main NE wall, W1042, appears continuous, except for a short gap outside room 5 (this will be covered when looking at room 5).

Based on the upstanding segment of external wall, the walls (at their lower levels at any rate) consisted of a stone and flint rubble, mixed with mortar. Judging by three dressed stones in situ on the wall between rooms 2 & 3, W1140, this mortared rubble core was faced with dressed Kentish ragstone. The chalk foundations are 0.9m wide on the external walls and of varying widths for the cross walls. That several of the cross walls have the same chalk foundation implies that they too were built from stone.

There appears to be one major exception to this construction method: the main corridor wall, W1283, is about 0.70m wide, but has no chalk foundation in it at all. In a couple of places loose flints – possibly in-situ – were noted.

W1042 also contains 3 buttresses, regularly spaced along the length of the wall: B1083 is 9m from the NE corner, then B1044 13m from that and B1293 13m from the second. The foundations are crushed chalk, exactly the same as the walls. Along the whole length of this wall and buttresses there is no clear indication that W1042 was not built in one event. There is also a similar buttress at the NW end of the east range, B1295. This will be enlarged upon when dealing with room 1. Each buttress is 0.9m square.

6.2 Room 1

By the end of 2019 this room had not been fully excavated, but the dimensions appear to be 8m x 6.4m. We have located the NE corner of the east range, which does not form a 90 degree angle, but equally does not appear to line up with the putative other end of the same wall, W1149. Further investigation in this area will be required.

Within the room itself, once (1003) had been removed we came down onto a heavily degraded *opus signinum (*henceforth *op.sig)* surface. That this was a sub-floor was proved by some floor tiles resting on it in-situ half way across the room. This layer of *op.sig* is 70mm deep, and has possibly been laid onto an earlier sub-floor of a similar construction. This, in turn, was laid onto the undisturbed layer above the natural. In places tile-lined channels 230mm wide and 180mm deep have been cut into the undisturbed layer, and these also contain compacted degraded *op.sig*, along with some pieces of building rubble. Two of these channels appear in the section of W1026 and W1045. Also visible halfway along the section of W1045 is a rubble filled semi-circular depression (as yet unexcavated), 0.5m wide x 150mm deep. It is suggested that this may be a linear feature, possibly dividing the room in two. At present there is no indication of this feature on the surface.

At a central point in this room the putative linear feature should cross a tile lined channel, again containing broken *op.sig*, and identified by large floor tiles – possibly specially made – that were level with the floor surface but have now broken and collapsed into the channel.

This is wider than the other two channels at 0.76m. The large channel leads to a gap in W1042, which contains no chalk foundation, and shows signs of intense heat. This has been interpreted as a main opening and stoke hole for a channelled *hypocaust* system that runs under the whole room.

Set into the floor, and lying slightly proud of it in places, are linear sections of terracotta water pipe, constructed from individual sections of *imbrex* tiles 400mm x 100mm. These seem to begin 1.2m to the N of the main channel, then cross the main channel and out to the south, where they stop, before appearing to continue towards W1045. Given the potential heating/water combination, this room (along with room 2) has been suggested as a separate bath house.

Rooms 1(left) & 2, October 2019

Chalk foundations to a probably solid wall, W1045, divide rooms 1-2, at 0.7m wide. Chalk foundations also divide room 1 from rooms 10/11. A buttress foundation in the NW corner, B1083, is now part of W1042, but indicates that the 'bath house' was almost certainly a separate building from the main range when it was first built.

Diagonally opposite B1083 is the base of another buttress, B1295, representing the original NW corner of the bath house. This is composed of a stone and mortar core, and is likely to have become redundant when W1290 was built at the back of room 10. The buttress may have been reduced and buried beneath a succeeding ground/floor surface.

6.3 Room 2

This is smaller than room 1, at 8m x 2.3m. Beneath the usual rubble (1003) there was a degraded *op.sig* floor surface, laid onto undisturbed soil. This was probably a base for tiles, as in room 1. At the NW end of the room is an area roughly 1.5m x 0.7m, which is composed of compressed natural. The chalky gault clay seems to have been much used on the site, especially when a waterproof layer was required. This patch has yet to be investigated, as does the SW area of the room, which still contains an overburden of (1002) and (1003). If the two room complex *was* a bath house, then this is likely to have been the *frigidarium*, with the redeposited natural possibly serving as the base to a cold plunge pool.

The SE wall of this room, W1140, has chalk foundations, but there are three large dressed stones of Kentish rag still in situ, indicating that this was probably an external wall at some point. The chalk foundations are only 350mm below the Roman ground level, indicating how shallow the topsoil was.

6.4 Room 3

Adjacent to W1140, (1003) was composed of substantial pieces of cbm, mixed with larger undressed ragstones, all churned up with topsoil. When this layer was removed it was discovered that everything was sitting on scoured natural. This was uneven, and contained a clean depression that has been interpreted as a space for a tree root. If you remove room 4 and take room 3 to butt up to room 5, then the root bole depression is exactly halfway across the space. This area may have been a garden, initially measuring 8m x 6.67m. A large amount of ragstone laying on this could indicate a fallen wall, which may have separated room 3 from room 4.

'Room' 3, with room 4 centre right. Tree root depression is green area in room 3.

6.5 Room 4

At 8m x 2.13m we have no indication yet what type of room no 4 was. The extant floor surface is heavily degraded *op.sig*, which seems to be a bedding layer, sitting on undisturbed soil. Three floor tiles appear to be in-situ, implying that the room was tiled (or partially tiled). If there was a wall between rooms 3 and 4 it was probably composed of large posts, with either wattle and daub infill, or stone infill. Some burnt daub has been found on site, but very little, and the stones lying over room 3 would suggest the latter form of wall – if there was one at all. Room 4 may have been a verandah onto the garden, with posts supporting a lean-to roof.

There are at least 3 post holes on the NW edge. One is a shallow depression in the natural, but the other two contain large flints as post packing. As the room has not been completely excavated to the west, it is unclear whether the posts run along the whole length of the putative wall. At the time of writing the post holes have not been sectioned. As the dimensions – indeed, the confirmed existence - of this potential wall are unclear, it has not yet been given a number.

Although room 4 may have been added over part of the garden space, it is likely that the undisturbed natural below the *op.sig* bedding layer was originally part of the topsoil in the garden, and had the *op.sig* added to it, while the rest of the topsoil was removed from the garden.

6.6 Room 5

W1172 has not been excavated enough to know if it has a chalk foundation. It is 0.52m wide. W1042, at this point, loses its chalk foundation layer just after passing the junction with the W1172. This is likely to have been removed as part of the process for demolishing the wall above it (a process that was not repeated on the SE part of W1042). 1.7m along from the wall junction there is an area of burning at the foundation level, which has been interpreted as a stoke hole from a furnace set outside W1042, and leading into a channelled *hypocaust* system under room 5.

Outside W1042 is a large depression, which is abutted to the SE by the remains of a buttress, B1044. This still contains part of its ragstone/mortar construction due to having been subjected to large amounts of heat (when the furnace was operating). The furnace area itself , a sub circular depression 1.7m x 1.78m, was quite clean, and has been scooped out of the natural. It showed no signs of burning, implying that most of the firing probably took place within the wall cavity itself, or that this area was regularly scoured clean. On the other side of the buttress there was a smaller, smooth depression, 0.8m x 0.9m, filled with pottery rubble, including large sherds of a *mortarium*. Again, the natural in this depression was clean and smooth. It may have been created by the action of water dripping/running for some considerable time.

On the main wall, W1042, directly abutting the stoke hole, was a large part of the ragstone/mortar wall construction 1m (NE/SW) x 0.93m (NW/SE). This, like the buttress, had been baked into a solid mass by repeated firing of the *hypocaust* furnace. Beyond it the chalk wall foundation continued SE, adjoining rooms 6 and 7, and disappearing under the SE-most section by W1300.

To the NW of this, part of the chalk foundation of W1042 was absent. This has been interpreted as the chalk being removed when this part of the wall was demolished.

The stoke hole led into a collapsed channel under the floor of room 5. This main channel was filled with rubble and degraded *op.sig* from the floor above. When part of this fill was removed, it could be seen that a very pink burnt layer of natural continued on through the stoke hole and into the channel, fading as it went further away from the actual burning material that would have fed the *hypocaust* system. The stoke hole was 0.57m wide x 330mm high, and the channel continued across the whole width of the room at this size.

A separate report on this *hypocaust* will be forthcoming at a later date, once the room has been fully excavated. The type of *hypocaust*, with a wide central channel, appears unusual within a European context, and requires further investigation.

Room 5, with stoke hole, extant wall and buttress top centre. Room 6 is on the right

6.7 Room 6

The wall between rooms 5-6, W1298, appeared to have a very degraded chalk foundation (if it had one at all) but this needs to be further investigated. The wall width is 0.8m, while the room is 8m x 2.4m. Beneath context (1002), the floor of this room was largely covered by a layer of ash. This appeared to have been deliberately spread, possibly from the nearby *hypocaust* furnace, and perhaps to level the ground. Beneath this 30mm thick layer, (1003) was absent, the ash laying directly on in-situ cbm floor tiles, covering about 60% of the floor.

In the SE corner, at the junction between W1042 and W1143, these tiles had been carefully cut to reveal a sub-circular void. The diameter at floor level was 0.6m, and at the base was 440mm, the base being 240mm from the floor surface. When sectioned it was full of ash and rubble. One pot sherd of greyware was sitting at the edge of this void, but did not appear to be in-situ. The implication is that something – possibly a storage jar – had been deliberately sunk into the floor at some point.

The floor tiles are absent at 1.7m from W1026, as is any bedding layer, but it is not clear whether this is through the demolition process, or not having been laid originally. 4m from W1042 two post holes were cut into the tiles, the neatness of the cuts implying that this was for use during the lifetime of the room. When sectioned these post holes contained the usual contexts (1002-3). This may have been a wall partition, or for some shelving/racking to be used as part of the function of the room.

As with a number of the tile sherds found on site, there is evidence of animal/human intervention pre-firing, in the shape of a paw print, and what may be a child's footprint in the surface of a couple of the tiles.

Paw print from a dog

The wall between rooms 6 and 7, W1143, appears to have a chalk foundation, implying that the main structure was stone.

6.8 Room 7

Room 7 is the largest room in the villa so far uncovered, measuring 8m x 9m. It demonstrated some of the complexities left by the demolition process. An *op.sig* base 50mm deep had been applied to undisturbed soil levelled off at time of construction. This conforms to the construction of the majority of rooms so far uncovered (in the east range). The *op.sig* was probably a bedding layer for floor tiles, although 18 coloured tesserae were found in this area (but not in a sealed context). The floor surface having been removed at the time of demolition, the room had been used as a dump for broken cbm from other areas. This material appears to have been thrown into the room from outside when part of the walls were still standing, as the rubble spread respected the wall lines. There was not a similar layer of rubble on the other side of the wall W1300.

To strengthen this interpretation, along the line of W1300 was a thin layer of redeposited natural, interpreted as the gault clay being used for a damp course in the stone wall. The wall would have been removed down to the damp course, which was discarded in a line beside it, and then the rest of the stone robbed out. It was these lines of damp course that allowed us to trace some of the robbed out wall trenches when we were excavating.

The view that the walls were carefully removed from top to bottom has been strengthened by the discovery of a series of post holes in the SW corner of this room. They were adjacent to W1026 and W1300, and are contemporary with – or predate – the demolition. A scaffolding frame would have supported the walls once the stabilising weight of the roof had been removed. Equally they could represent a similar frame used when the building was being constructed, although as the holes were in the *op.sig* the former is more likely.

The rubble layer in this room appears to diminish towards the centre of the room, and then build up again on the side abutting room 6. Why it does this will require further investigation, but it is currently thought that the rubble was being thrown in by hand from both the adjacent rooms, and therefore did not reach the middle quite so easily.

In the rubble layer (1003) abutting W1042 is a scooped hollow (5012-14), 470mm internal diameter, and around 130mm deep. The base of this was covered in ash. Current interpretation is that it was a cooking hearth created by the demolition team. The significance of its positioning may relate to one of the functions of room 6.


Cooking hearth (centre)


Stone and mortar dump over possible midden to the NE of W1042 and buttress B1293

W1300 between rooms 7 and 8 is 0.72m wide, and has a chalk foundation, implying a stone construction, which may bear relevance to the nearby buttress in the main wall.

6.9 North East 'Yard'

To the NE of wall W1042 several metres of the presumed Roman ground level was uncovered. This was identifiable by a rubble spread, similar to (1003), but without (1002) on top of it. At the same ground level as the yard outside room 12, this consisted of a line of rubble, both ragstone and cbm, laying on an undisturbed ground surface. A test pit, put through this area identified natural about 100mm below this. The lack of (1002) above it, and the ordered way in which this has built up, has led to the hypothesis that the demolition team

were sorting the building material, and discarding any unwanted pieces by throwing them outside the villa.


Roman ground surface to the NE of rooms 1-3. Note rubble layer by left hand ranging pole.

Just to the NE of B1293, so outside the villa walls, was a spread of ragstone fragments, that was originally interpreted as a possible fallen wall to an ancillary building. Our interpretation has changed to the continuation of the dumped material mentioned above. However, during the investigation of this area it was noted that there was a large concentration of animal bone. This may have been a midden, and possibly related to room 6.

Room 7 in 2018. The rectangular cut into the grass centre right is the tessellated floor of room 8. The now overgrown midden area is top centre.

6.10 Room 8

At the moment it is unclear whether this is a room or a corridor. An area of plain *tessellated* floor was uncovered. This has been slightly damaged by later agricultural activity. The *tesserae* extend 1.22m SE, and 2.3m NE/SW. Not enough of the adjacent area has been uncovered to give the extent of the space they originally occupied. They are bedded onto a layer of *op.sig*, which – outside the *tessellated* area – is very degraded. It is likely that they were not removed during demolition due to being covered with a thin layer (5-10mm) of redeposited natural that had been trodden down to create a hard crust.

The main SW wall, W1026, has, like all the others, been robbed out to its chalk foundations. At the SW end of room 5, where the *hypocaust* vent is situated, the mortar and rubble core has solidified into a solid lump that remains in-situ. In size the wall trench matches the one for W1042. There is no indication of entrances to rooms, as door thresholds would probably have been placed at least 300mm above the remaining surface.

6.11 Room 9

The corridor to the east range is 2.8m wide. It has not been fully investigated, but in the three areas where it *has* been excavated, a stratigraphic pattern has emerged. Below the topsoil and the pre-rubble layers was a layer very similar to (1003), so much so, that we initially started to remove it. It was very quickly noted that the rubble was more firm and level than on other areas of the site. Each area uncovered also contained patches of in-situ *tesselation*, which were interpreted as the original floor. These were set onto a bedding layer of *op.sig*. Also set into the same layer were various fragments of cbm, creating a rough pavement. That this had been their function was determined by the edges of some of the sherds, which had become worn, presumably through being walked on.

The robbed out wall trench separating the corridor from the courtyard, W1283, is 0.74m wide, but contains no chalk foundation, or indication of post pads. There is also no trace of a wooden sill beam. The construction and appearance of this wall has to remain speculative for the moment.

Corridor (Room 9) at SW end of room 7 with W1026. Note worn tiles on the left.

Corridor (Room 9) at SW end of room 6. W1026 is centre right, and W1283 is bottom right

Room 9 has so far provided us with the only datable find from a sealed context. A copper alloy coin, dated to 320 AD, was found adhering to the underside of a *tegula* sherd in the rubble layer. This implies that the villa was not demolished before that date.

At the putative junction between the main and the east ranges of the villa, the *tessellated* corridor floor was mainly intact. A layer of rubble (1003) consisting largely of building stone, covered the tesserae. At areas along the edge of the floor it was observed that a sandy mortar had been used as a bedding material, instead of the usual *op.sig*.

Tesselated area at the junction of the two building ranges. (Corridor room 9 on right, corridor room 14 on left) W1026 at top left (large scale 2m)

7.0 The Main Range

7.1 Rooms 10-11

At the time of writing these are assumed to be two separate rooms, bisected by a large stone wall, W1173. We have uncovered what looks like a wall foundation in-situ, something only seen elsewhere on the site around the *hypocaust* workings. This consists of stone rubble and mortar, and also appears to have been subject to high temperatures, as with the wall next to room 5. So far there is no trace of a *hypocaust* system, or activity that would generate the necessary heat. It is unclear whether this wall runs NE/SW or NW/SW, but the latter is presumed, thus creating rooms 10 and 11. From its dimensions (0.79m wide) this would seem to be the external NE wall of the main range of the villa. However the wall between rooms 11 and 13, W1070, is also 0.79m wide, with a deep foundation, implying that at one point this was the end wall.

It is unclear whether rooms 10-11 represent actual internal rooms, or were outside spaces, possibly similar to room 3.

7.2 Room 12

Although it respects the NW/SE wall line of rooms 11and 13, room 12 is – at the moment – a unique design compared to the rest of the building. The walls, W1108-10, are narrower (0.57m wide) and much shallower (around 200mm depth of foundation). They consist of a facing layer of roughly dressed ragstone blocks, containing a mortar and stone core, with a high chalk content. The dimensions are indicative of a single storey building, although

whether this was a lean-to, utilising W1151 as its fourth wall, or a separate building in its own right is not yet clear.

The floor is composed of a mixture of gault clay and crushed chalk. Unlike other parts of the villa, the floor is on the same level as the external Roman ground level. A preserved entrance (1.2m wide), with reused *tegulae* laid down as a threshold, leads into a presumed outside workspace.

There was not much rubble (1003) overlaying this floor, but at least 3 bucket loads of oyster shells were distributed across the surface, leading to the conclusion that this room had been a food preparation area.

Room 12 (bottom left) and yard (centre left)

7.3 Yard

The area outside room 12, and extending behind the NW wall, W1150, at this point, has been interpreted as a workspace for the household staff. It was overlaid by (1001-03), but came down onto the probable Roman ground level at a depth of around 350mm. This was very sparsely metalled with ragstone fragments and chippings, interpreted as constructional detritus from the dressing of the ragstones. On this surface were also the signs of day-to-day domestic life: broken pot and food waste (but not in sufficient quantities to be classed as a midden). Some of the pottery was quite fine, including several sherds from a single Nene Valley colour-coated slipware 'hunting cup', showing a hare being pursued by hounds. This is from around 150AD, an earlier date than so far projected for the building of the villa (c230AD).

7.4 Room 13

This is a single generic number for what will probably prove to be a suite of rooms. At present we have uncovered the NE corner of one room. The floor surface is still intact, and consists of a fine quality smoothed maroon coloured *op.sig*, laid onto the usual undisturbed Roman topsoil. A possible robbed out wall trench extends at right angles from W1059.

Further to the SW along the line of W1059, an area of degraded *op.sig* floor was uncovered. Where it joins the wall, an *op.sig* fillet 70mm x 70mm was present, appearing to continue

around the edge of the room. At the point where it met the front wall there was a section of in-situ painted wall plaster, standing 160mm high by 0.87m in length. This was in an unusually good state of preservation, as the actual wall behind it has been robbed out, and now consists of earth and rubble. It is conjectured that - as part of the demolition process - the wall was removed down to a certain level above the floor, then the remaining room space filled with rubble. Consequently, when the rest of the wall was removed, the plaster was held up by the rubble now filling the room.

The painted wall plaster was behind an area of untidily laid rough tiles set into mortar, which itself had been laid onto the *op.sig* floor. At the moment there is no interpretation for these, as they do not seem to be part of a later floor surface.

In-situ painted wall plaster, by rough tiled section of floor in room 13

7.5 Room 14

The front corridor of the main range is 2.5m wide, so slightly narrower than that of the east range. As far as we can tell at the moment, it consisted of a floor of smoothed *op.sig*, laid on a mortar base. The area excavated is very degraded, but it is unclear as to whether the damage occurred from general use, or is post demolition.

We have identified the front wall of the main range, W1059, and possibly the entrance to the villa building. This is represented by a large piece of dressed ragstone 2.7m SW of two in-situ bricks on the wall line. Otherwise the area is covered with a tile-heavy rubble layer (1003), which was beneath the two usual contexts of (1001-02).

In the area outside this corridor, which we are referring to as the ‘front courtyard/garden’ a layer of crushed chalk has been uncovered. This appears to overlay a mortar rich layer, which in turn covers undisturbed soil. This area will require further investigation.

Room 14: Front corridor/verandah (centre) with rubble over main range (left), and crushed chalk courtyard surface (bottom right). Large scale 2m

8.0 Other Trenches

8.1 Trench 3

This trench, the earliest part of the excavation in 2015, was not continued beyond that year. It is hoped, eventually, to join it to the main trench to give a complete picture of the east range.

The topsoil was very thin over this part of the site (300mm), and it was interesting that the archaeology appeared to have suffered no plough damage – indicative that the field's usage in the last 1600 years is likely to have been pastoral. (1001) contained the usual mixed assemblage of finds. There was plenty of 19/20th century material, along with a scattering of Roman debris, and one or two pieces of Kentish peg tile (presumed to have come from the nearby Tudor archbishop's palace). (1001) almost went straight down onto the archaeology; if there was a layer that could be called (1002) it was a thin horizon where mortar had mixed with the soil.

The features contained in the trench were wall foundations, composed of building rubble set onto a chalk bedding, much in the style of the rest of the east range. Between these walls were areas of clean, undisturbed, soil. The walls were so neat, that it looked like the chalk foundation had been laid, then gravel boards put down to contain the rubble, as it was pounded into place. There was no trace of boards having rotted in-situ, so they were probably removed as part of the demolition process.

Eight coins were found in this trench, five of them dating from 330-348 (see coin report, appendix 1). Two of these were found lying on the wall foundations. A much earlier coin, and two later ones were found in the spoil from this trench.

The rubble on the foundations was solid, but it is possible that, when originally deposited and abandoned, it was loose, and pressure from the ground above, combined with 1600 years of water and heat, has compacted it to become the wall that it now is. The corridor wall appeared to be of the same construction, although was slightly more ephemeral. The chalk

foundation of this contrasts with the lack of chalk found in the corridor wall trench further into the east range of the villa.

The SE end of the east range, showing the main wall (centre), part of a room (left) and the corridor (right). Note the clean floor areas. Large scale 2m

8.2 Trench 4

This uncovered part of the front wall to the main range, W0159. The first thing that became obvious was the size of the stones involved, and the depth of the foundations (although we were unable to measure them due to the water table). The stones were so large that it appeared as if the demolition team had given up removing them, so a number were still in-situ. They did not appear to be heavily mortared in.

Where a large stone *had* been removed, the void created was filled with rubbish, including much painted wall plaster, and some Roman pot sherds. The adjoining floor consisted of a bedding layer of *op. sig*. at a depth of 0.6m. Overlaying this was around 30mm of grey silt, implying that the area had been open for a while, possibly being flooded, before being buried under rubble (1002-03) then topsoil.

Op.sig sub-floor in trench 4. The robbed out main wall is bottom right. Large scale 2m

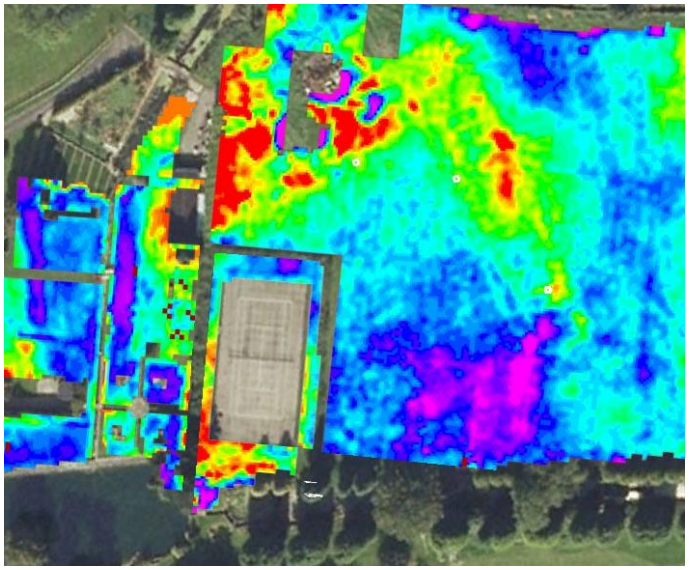
Set into the floor, in the NW corner of the trench, was a sub-rectangular piece of stone, 160mm wide, identified as a post pad. Around this were a series of small holes, creating a circle of 0.6m diameter. This has been interpreted as a pillar base – possibly with a central wooden post surrounded by a wooden framework, plastered and painted, possibly to look like stone. As the stake holes are below the surface of the original floor, another suggestion has

been put forward that they contained stakes to stabilise the post until the weight of whatever it was supporting held it in place. However, given the size of the post pad, this is unlikely.

Post pad and stake holes in op.sig bedding layer. Scale 0.5m

8.3 Tennis Court Trench

Originally trench 1, this measured 2m x 1m and was placed at the SW corner of the tennis court. At the time of excavation we did not have the above geophysics results, as the western part of the site was not surveyed until 2016. It was conjectured that the west wing would be of a similar size to the east wing. What is now apparent is that the west wing does not project out much beyond the main range of the villa. There then appears to be a gap, with a separate building under the tennis court.



Resistivity survey from summer of 2016. North is the top of the image.

When the trench was excavated, the first half metre consisted of soil piled up to level the ground when the tennis court was constructed in the late 1950's. This topsoil contained mainly 19th century material, with a few pieces of upbraided Roman cbm. The true modern ground level was represented by the roots of an adjacent yew tree.

Trench 1 at SW corner of tennis court

After further digging through a layer of soil containing a larger percentage of Roman cbm, at 1m a degraded possible wall foundation was reached. This consisted of clay and mortar with a large segment of a roman tile, sitting on it. This may have represented a post pad (leaving no post pipe, as the post was removed during the villa demolition). The remains were possibly at the end of a linear feature, and it was hoped that we could pursue it at least a metre further north, until forced to stop by the tennis court foundations. If the feature was linear, it seemed to be on a different alignment to the rest of the surveyed villa.

A sondage dug next to the putative wall end revealed the water table at 1.15m. The trench was around 5m away from a large pond/lake, probably constructed in the Tudor period, and fed by at least five springs via man-made streams and conduits. At the end of day two there was heavy rain, and the trench flooded to a depth of at least 0.9m. We were unable to stop any further ingress of water, so consequently it was backfilled.

Trench 1, showing possible wall foundation (No scale is available, as photography was planned for the following day, by which time the trench was full of water, but trench is 1m front to back).

9.0 Finds

As would be expected, there have been many finds from Church Field. (1001) predominantly yielded 19th-20th century material, reflecting both the hop gardens, and the fact that fairs were occasionally held in the field. There was the occasional Roman find – mainly cbm, painted plaster or pot – in this layer. (1002) contained less modern material, and more Roman items, while (1003) was almost exclusively Roman, but small later items would sometimes be found in this layer, due to biturbation.

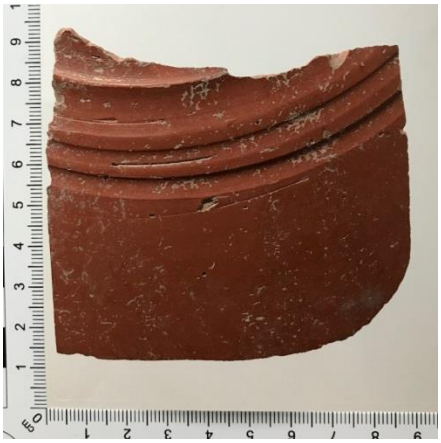
There will hopefully be separate finds reports forthcoming, covering ceramics, worked flint, bone, glass and metalwork . The coin report up to 2019 is an appendix to this interim report. We do have, however, some special finds worth mentioning at this stage.

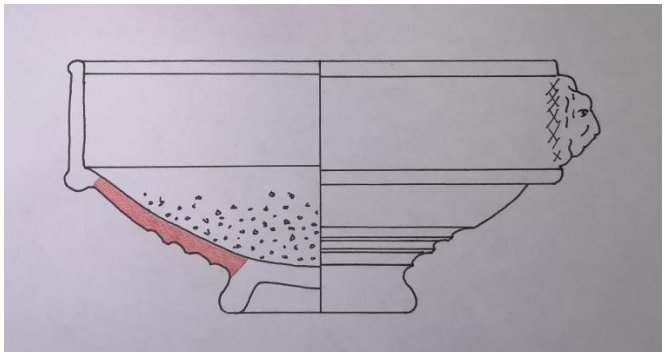
9.1 Pottery

As mentioned in the main body of text, we have some sherds of fine colour coated ware. These stem from several origins, the commonest probably being Nene Valley. In particular we have several sherds from a 'hunting cup', decorated in relief with a hare being chased by hounds.
This is datable to the late 2nd century, which is earlier than the majority of material we have from the site, and predates the earliest coin by about 60 years.

Nene Valley hunting cup

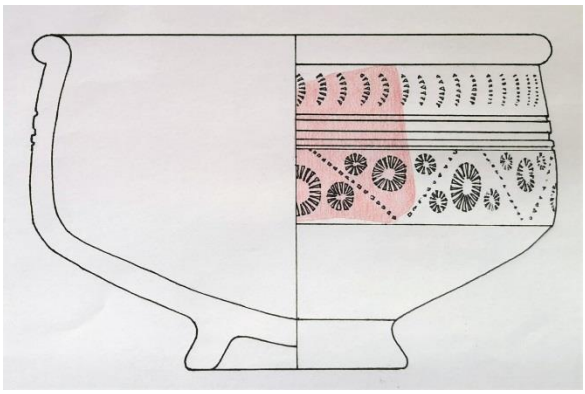
We have several examples of Samian ware, some of which, again, predate the proposed foundation dates of the villa.





Samian mortarium: Drag 45 (drawing by C Blair-Myers)

What has been more common over the site is Oxfordshire ware, a red slipware imitating Samian, but not having the same highly fired fabric, and also a slip that will rub off when wet. This is still, however, for its time a relatively high class table ware.



Oxfordshire ware (drawing by C Blair-Myers)

There have been a number of *mortaria* sherds, of different manufacture and fabric. These include Samian ware, and also include several sherds (making up around 40% of a vessel) from the depression at the base of buttress B1044.

Otherwise the pottery has been as expected from this type of site. We have examples of Patchgrove ware (1st – early 3rd centuries AD) which would have been in use when the villa was first built, also black burnished ware, and many sherds of Alice Holt greyware.

One piece of greyware contains some graffiti scratched into it, but not enough survives to be able to identify the word, which may be a person's name.

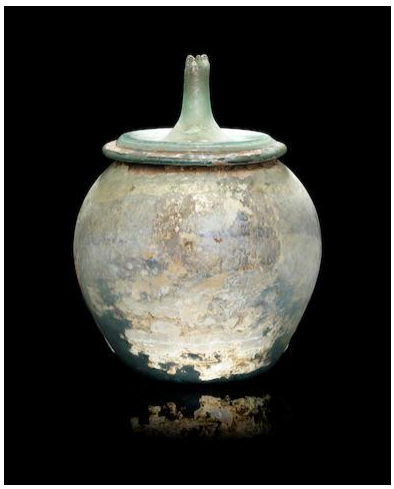
Graffitied pot sherd

This is all indicative of a working villa, with high class table ware, using cooking and storage vessels.

9.2 Glass

There are a number of glass items, mainly consisting of fragments of window glass. This has a turquoise tinge to it, and displays the classic characteristic of being rough on the side that would have laid on the sand in the tray, and smooth on the upper side. Edge shards have rolled edges.

Aside from some pieces of vessel glass, we have the rim of a *cinerary* urn, which came from (1002) above room 12. No other trace of this vessel was found.



Cinerary urn rim, possibly from a vessel such as on the right

Three blue glass beads have been found. They appear to be from the same item of personal jewellery – possibly a bracelet or earrings – but were scattered across the site, an indication of the problems of site provenance following the kind of demolition seen at Church Field.

Glass bead, found in trench 3, 2015

9.3 Animal Bone

Animal bone has been found across the site. There have been some concentrations of it, but as these seem to coincide with concentrations of rubble, it is difficult to determine whence they originated.

A wide range of bone indicates a working villa complex, with animals used for food: pig, cattle, sheep, poultry, and also working animals: horses, possibly donkeys, dogs, cats etc.

These sit alongside the inevitable vermin: rats, mice. From the front of the villa courtyard we even have a possible example of a human tooth.

Possible worn human molar from near front wall

The diet appears to have been supplemented by shellfish; aside from the occasional whelk and mussel shell, there was a large concentration of oyster over room 12. What has not been found, however, are edible snail shells – certainly not the kind that the Romans bred for food, even though these can be found at nearby Lullingstone villa.

We have examples of worked bone implements: decorations from the possible lid of a box, a possible comb, and several hair pins; also some antler, that may have been intended for knife handles.

Decorated bone, possibly from a box lid

9.4 Worked flint/stone

A number of examples of worked flint tools have come from the site, usually in layers (1001-02). They have been tentatively dated to the Neolithic, or Bronze Age, and include a *tranchet axe* head from near Becket's Well.

A spindle whorl – possibly shale, but also possibly wood – was recovered.

9.5 Metalwork

Aside from the large coin archive, much other metalwork has been found on the site. Most of this was in the form of nails, or offcuts of metal, but some personal items of jewellery and domestic life were recovered. These were spread across the site, and included an early 1st century copper alloy *fibula*.

Late Iron Age Fibula

Other identifiable metal items include a steel weight and a pair of shears, probably used for male personal grooming.

Iron shears

Several broken items of jewellery have been found, and one complete finger ring.

Part of 'snake head' bracelet

Copper alloy bracelet


Copper alloy finger ring

9.6 Painted Plaster

This has been distributed across the site, often in small dumps, implying it was shovelled into a container and tipped out away from its place of origin. There has been a selection of colours and shade, but predominantly off-white, and maroon, and sometimes (by way of a change) off-white with maroon striped across it. This presumably represents some kind of decoration. So far we have several fragments containing blue, pink, two shades of green, and yellow.


Painted plaster recovered from east range.

9.7 Ceramic Building Materials

Among the many sherds of *tegulae* and *imbrices* across the site, there were many flue tile sherds from the hypocaust systems. These were often heat and smoke stained, and displayed a variety of combing patterns on the surface, applied to be able to key in plaster once they were in place within the walls.


Flue tile from main range

10.00 Discussion

10.1 The Villa

Church Field villa, from the resistivity plan, represents a large winged corridor Roman period villa. The east wing is much extended, whereas the west wing appears to have remained fore-shortened. There is an apparent gap of several metres, then a separate building extending southeast-wards as far from the main range as the east wing, thus creating a large courtyard, or garden, in front of the main range. The room layout under the main range is unclear, from geophysics alone, but the wall lines on the east range indicate that rooms ran the whole width of the building.

A note on the demolition of the building is required at the start. Current evidence points at the building being dismantled in a single event. This may have taken over a year to complete, but everywhere so far excavated has resulted in the same findings: everything usable has been taken away, leaving only hardcore. We have so far not found a single complete piece of cbm. Although there are many sherds of *tegulae* and *imbrices*, it has been estimated that a building of this size would require around 100,000 of the former, and 36,000 of the latter. If you were to form all the remaining sherds into complete tiles, they would amount to a very small percentage of the whole. The walls have been robbed of building stone down to the chalk foundations; even the clipped tile *tesserae* have been removed in many places. The implication is that the whole building was dismantled from the roof down, and then shipped off to be used elsewhere.

As all the walls have been robbed down to their foundation linings (with one or two exceptions) there is no trace left of any door thresholds in the east range, so it has to be conjectured that the rooms were entered from the corridor that ran down the side of the courtyard.

On the northeast side of the east range, beyond the main wall, W1042, there appears to have been little or no occupation. Limited excavation so far has shown us a furnace outside room 5, and a possible midden outside room 7. The hypocaust to room 5 seems to have been heavily used. One interpretation for the smoothed area next to buttress B1044 is that the internal corner with the wall W1042 served as a latrine for the slaves working the furnace. It is likely that there will also be a furnace outside room 1, but this has not been investigated yet. The east side of this range was probably an area only used by slaves carrying out the day to day business of the villa.

Despite the limited area so far excavated, it is possible to give the complex some kind of phasing. Precise dating has proved a problem, as although we now have a large range of datable coins, only one of these has been found within a secure context. But there is a rough pattern to the coin distribution, and this, when matched with datable pottery, has helped to give an idea as to the order of construction.

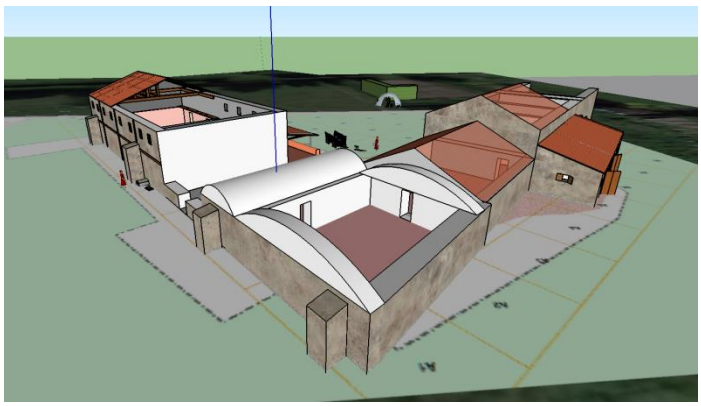
The earlier coins are from the main range, and the sequence of dating seems to roughly move round with the latest coins concentrated in the area of room 7. The coin from a secure context under room 9, adjacent to room 6, is dated 320AD. Across the east range we also have a scattering of late 4th century coins, some even crossing over just into the 5th century. However, at the moment they cannot be relied upon as proof that the villa was still standing at this time.

Some of the pottery from the main range, particularly from the yard area adjacent to room 12, can be dated to the 2nd century. The fact that this was found in a working area of the villa implies that it was lost during the day to day life of the household, and was not part of the demolition process. Otherwise, the pottery requires a more detailed study, but on the whole conforms to the coin dating.

The main range of the villa seems (from the geophysics) to be a similar size and shape to Lullingstone, the well-known complex which is Otford's neighbour down-river. The most we can say about this part of the building at the moment is that it was probably built in the mid 3rd century, as a corridored building with a small wing - perhaps no more than a room – at each end of the corridor. The thickness of the walls indicate that it could have stood as high as two storeys, but there is, as yet, no indication of a first floor. If there *is* a connection with Lullingstone (and we know that the *tegulae* carry the same manufacturer's mark) the similarity dates to the late 3rd century phase of that villa.

Lullingstone villa in the 4th century

Around the turn of the 3rd to 4th centuries a separate building was constructed a few metres to the northeast of the main range. This consisted of at least two rooms, the largest of which was heated by a channelled *hypocaust*. There may have been a partition wall dividing the heated room in two. This would be consistent with a *caldarium* and *tepidarium* of a bath house, and it would make sense to separate this building from the main villa to cut down the risk of fire. In the smaller room of the putative bath house is a large patch of redeposited natural, which would have been suitable for lining a cold plunge bath – thus the smaller room could be identified as a *frigidarium*, with a possible changing area at one end.



Reconstruction of bath house, viewed from north east with main range of villa to the right, east range to the left (reconstruction by J English)

This building had a buttress on at least two of its corners, and we know that the southeast wall, W1140, was an external wall by the standard of finishing on three facing stones that are still in-situ. However, at the time it was built, the NE wall, W1042, may have extended 9m to the southeast. This is likely to have formed a boundary wall, at least 2m in height, and the back wall to a 'garden' space, thus maintaining privacy to anything that may have been going on outside the villa footprint. The thickness of the wall may be to compensate for its height. Although there are buttresses along this wall, they may have been deemed necessary once there was a roof, or only at the end of a length of wall. A less substantial wall may have enclosed the space to the SE, where W1172 now is.

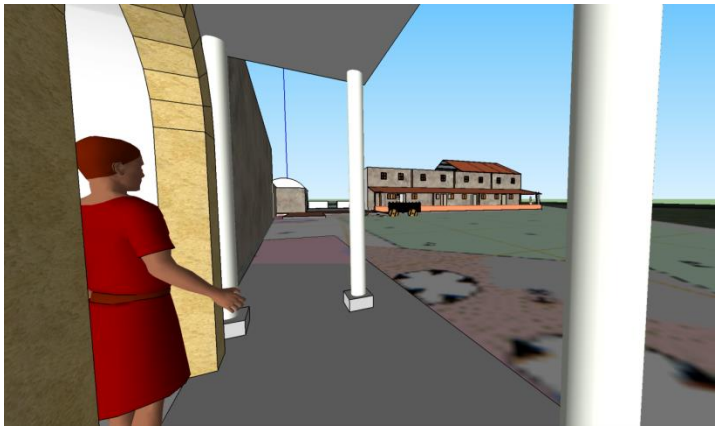
Probably within a relatively short time the NW end wall of the bath house, W1149, was extended to join with the main rear wall of the main range, W1151. This would have enclosed the area between the two buildings, and made the whole villa more private and secure. At this point the buttress on the east side of the bath house, B1295, would have become redundant. It may have remained as an internal buttress, but is just as likely to have been reduced to ground level and covered up by later activity. What occurred in the space between the two buildings is not yet clear. Further investigation may tell us if it remained an open area, or was roofed over (see above reconstruction for roofed suggestion).

This building is perfectly positioned for the villa's putative water supply: across the public footpath to the north are two springs. Tentative dowsing implies that – at some point – they headed in the direction of the bath house. From the Tudor period they have flowed west for about 50m before turning south to empty into the lake beside Castle House.

When the bath house was built, the now walled area to the SE would have become a sun trap, and is likely to have been used as a garden. A root hole halfway along the length of the back wall indicated that a tree or shrub was planted there, possibly trained to grow along the wall. This may have been some kind of vine. At some point, possibly while the tree was still standing, the symmetry of this area was interrupted by the construction of a 'room', now room 4, with an *op.sig* floor. This was built onto the original topsoil layer, and was either open to the garden, or had a wall consisting of posts, infilled with stones, then possibly rendered. It is possible that the area was connected to the garden and formed a summer house, or even a potting shed (although the standard of flooring implies at least the former).

There is the possibility that room 4 was constructed at a point when the use of the garden area changed, and actually formed the NW end of the next phase of building. Either way, at some point the tree was removed, along with much of the topsoil, down to the clean natural. If this coincided with the building of the east range, the height of the new building would have turned the garden from a sun trap to a cool shady area. This may have been then re-landscaped, and perhaps (partially, at least) flooded to create a pool. This could have been filled by rainwater, or also been supplied by the springs to the north.

The east range proper appears to begin with room 5. As with the main range, the width of the outside walls, and the potential use of stone to construct the cross walls implies a building of up to two storeys. If this is the case, then room 4 has been suggested as a possible staircase to an upper floor. The posts that are considered as part of a wall between rooms 3 and 4 may be supports for stairs.



View of east range from the possible villa entrance on the main range, Note the gap suggested by a garden between the bath house and the rest of the range (reconstruction by J English)

Room 5 contains a channelled *hypocaust*. As with a number of things relating to Church Field, the pattern of this heating system does not seem tally with any known examples, consisting of a large central channel running the whole width of the room, with smaller channels extending out, much in the manner of a scorpion. The construction seems to be in two phases, but it is unclear as to whether this is because the SW side of the room originally formed an unheated ante-chamber from the courtyard corridor (where the entrance to the room is assumed to have been).

It is assumed that room 6 was a kitchen. In one corner a large storage vessel was possibly set into the floor. As this is in SE corner of the room it might be assumed that there was a door out onto the east side of the villa, but there is nothing at the perceived Roman ground level to indicate this. However, just to the NE of buttress B1293 a large amount of animal bone was found in the topsoil, implying that this area was a midden. This would have been accessible to workers in room 6.

If we take room 6 as being a kitchen, then room 5 is almost certainly a *triclinium*, or more precisely a winter dining room. Judging by the baked masonry, and the red colour of the natural where the heat passed through the wall, this seems to have had a lot of use; but without experimentation we are uncertain whether this effect would be produced over one winter, or twenty.

Leaving that aside, we could perhaps, then, identify room 7 as a summer *triclinium*. It is significantly larger than room 5, but could afford to be, as it was not heated. As the largest room in the villa uncovered so far, it may also have served as an audience chamber, much in the same way that the mosaic room at Lullingstone may have done. The area is more or less central within the east range, which calls into question the phasing and use of the two ranges – something that is likely to only be decided with further excavation.

The 30% of Room 7 so far uncovered shows no sign of a mosaic floor, but the subfloor of the excavated area is very degraded. Red functional *tesserae* were found at floor level, but not in-situ (and these have been found all over the site in all major contexts). It is interesting that the miniscule number of decorative *tesserae* were found in this area, but essentially, the only way to tell if there was a mosaic would be to uncover the rest of the room in the hopes that some of the original floor survived the demolition. This is very unlikely.

The corridor of the east range presents us with several possibilities as regards use and structure. There are patches of in-situ *tesserae*, but also a lot of cbm rubble that appears to have served as a floor surface – for some time, if wear patterns are anything to go by. If the villa was demolished in a single episode, that episode may have taken up to two years to complete, during which time the site would have had to remain usable, even if only as some kind of a builder's merchant (depending on what happened to the fabric materials). Laying down a rough floor surface would help, and stave off the problem of too many muddy boots.

We can say little about the main range of the villa at this stage. Some of the floors seem to be surfaced with *op.sig* – perhaps they had rugs to help keep out the Kentish chill. There were certainly painted plaster walls. Some of these appear to have had a maroon field bordering onto cream, but there are also examples of other colours: blue, green, yellow and pink. The majority of painted plaster seems to come from this area, and it is unlikely that this rubble would have been dumped too far away from its origin.

This does beg the question as to why the east range has been more thoroughly dismantled than the main range, when the main range probably represents the older part of the building. Admittedly all the walls in both ranges (other than those hard baked by hypocausts) appear to have been removed down to their foundation level. This has allowed tentative phasing by building method.

Another strong possibility is to do with the floor construction. If the floors of the main range are – as is implied by the little that has so far been uncovered – finished in *op.sig*, that would be no use to someone wanting to sell materials, but the tiles, and (dare I say) *tessellated* floors of the east range would have a retail value, and be worth removing.

Everything in the east range, starting with the bath house, has shallow foundations on a layer of broken chalk. The main range – which we are presuming to be older, based on coin and pottery finds – has deeper foundations going into the clay natural, and in some cases a layer of large flints bedded into the clay. This change in building method is clearly seen in the wall trench W1150/W1290/W1149. W1150 is part of the main range, with deep foundations, while W1149 (the back wall of the putative bath house) has the chalk foundation. W1290, presumed to be a later joining wall is built using the chalk method, and stops where it meets the original wall end at the junction with W1173.

At the back of the main range, room 12 presents another dating conundrum. The shallow footings, and its position against the back wall W1150 suggest a single storey building, constructed as a lean-to behind the main range. The clay floor, and numbers of oyster shells strongly suggest a food preparation area, leading out to a 'back yard'. There is a feeling of this room being a later addition – interestingly there is a similar sized room in a similar position at Lullingstone, there labelled as a kitchen. If the two were of a similar date, then Otford's kitchen was added at the end of the 3rd century. However, there is pottery evidence from the yard area that the space was being used from the earliest existence of the villa. Some of the fine wares – the Samian, and hare cup, for example – suggest a date even earlier than our posited one for the building of the main range.

If you piece all of the above together, at the end of 2019 we have the following suggested construction sequence for Church Field Roman villa: The main range was built c220-30 AD; at some point in the late 3rd/early 4th century a separate bath house was built, next to a small

garden, that would have served as a sun trap. Later in the 4th century the use of the garden changed, and the bath house became a connecting suite of rooms between the main range and the east range. Next to the garden, now a shady area, a winter *triclinium*, with channelled *hypocaust* was built, with a tiled kitchen next to that. On the other side of the kitchen was a large room that may have served as an audience chamber, and/or summer *triclinium*. Immediately beyond that was another room, at least partly *tessellated*. Then the final phase, started perhaps in the 340's, was never completed, but seems to have been intended to remain in the same style as the rest of the east wing, with a continuation of the corridor on the courtyard side.
In some respects the constructional phasing is the easy part. From the start of our investigation three major questions have presented themselves:

1. When was the building demolished
2. Why was the building demolished
3. How was the building demolished

Questions 1 and 3 should be answerable through the archaeology, but question 2 is key, as it probably determines the reason for the other questions.

Question 3 is probably the easiest to answer with confidence. Both the east range and the main range appear to have been demolished in a single event. The word 'dismantled' may be more appropriate, as the building seems to have been carefully taken apart. Everything usable has been taken away from the site, leaving only hardcore. It appears that the roof was removed, then the walls slowly taken down to ground level, before removing all building material down to the chalk foundation base. In one case, W1300, there seems to have been an attempt to remove the chalk as well. Any voids were filled with rubble in an attempt to level the site, as what has been interpreted as the Roman ground surface. Our experiences from backfilling in the field indicate that most traces of the villa would have disappeared within the space of two years.

Not one single item of cbm was found whole. All floor surfaces in the east range, at least, were removed…. with one exception. The tiled surface of room 6 remained in place. This gives us another clue as to how the building met its end. There is a possibility that room 6 was the last area to be demolished, and was used during the dismantling process as a site office. Although the demolition is likely to have been a single event, the process may have lasted for more than a year. Even if there was an immediate market for the materials, they would have to have been removed efficiently, and with some care, a process that would have taken time. Room 6, being based halfway along the east range, would have been ideally placed, having solid stone walls on at least three sides. If necessary a temporary roof could have been placed there. Perhaps this explains the proximity of the temporary hearth close by, in the rubble of room 7.

If we take it that the villa was systematically razed to the ground, then we have to ask ourselves *why*, and when. As stated earlier, for a long time our assumption was that it disappeared in the mid 4th century. For this to be likely, I would suggest that the AD320 coin was lost during a refurbishing phase of the villa, not the final demolition (unless it was an out of date coin deposited as a termination offering because it had no monetary value at the time). But then we were finding coins of a later date, which imply some presence on the site as late as the turn of the 4th to 5th centuries.

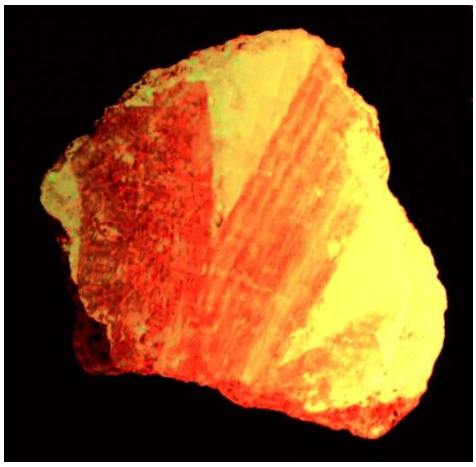
If the villa was demolished that late, there immediately arises the problem of what happened to the materials. There would have been no market for the potentially 100k roof tiles, or the

clipped tile tesserae that were removed (possibly along with some actual decorative mosaics), whereas in the middle of the 4th century villa building in the south of Britain was still taking place. None of the later coins were found in a secure context, but there are too many of them to dismiss as chance depositions. Also only 5 of the later coins were found over the main range, compared to 29 from the east range. Was there something still going on in the east range, after the main range had gone out of use?

10.2 The Chi Ro

A brief mention should be made at this point about the Otford 'Chi Ro'. This brings us back to another possible connection with Lullingstone, where a wall painting of the early Greek symbol for Christ was discovered, along with paintings of saints. This has given Lullingstone the reputation of having the earliest Christian house church in Britain, dating to around the 350's AD.

In 1974, while excavations were being carried out in advance of building work at Bubblestone road, just to the south of Church Field, an amount of Roman rubble was discovered in a Tudor drain. This was presumed to have come from Church Field, and included some painted plaster. One piece of this was tentatively identified as a piece of a Chi Ro motif, and was consequently identified by the British Museum as such.



The Otford Chi Ro

There are a number of pieces of painted plaster with an off-white background and maroon brush strokes that have definitely come from the Church Field site, so it would be interesting to make a comparison of style, materials and fabric. While not denying the claims, I would ask two questions: (a) Did the plaster originate from Church Field? There are other Roman sites in the area, and so far we have found no evidence for medieval robbing of hardcore from the site. (b) Can we be sure that the fragment is from a Chi Ro? If someone were to take it to the British Museum, merely saying that it had come from a Roman site at Otford, would the immediate conclusion be the same as that in 1974?

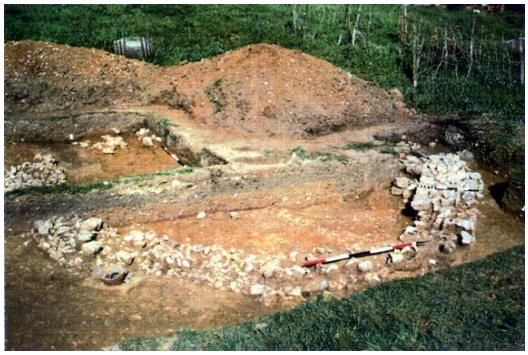
The Villa in the Wider Landscape

When attempting to piece together a coherent story/sequence for Church Field, we have to continually remind ourselves that up to the end of 2019 only around a quarter of the site has been excavated. This has been enough to give us a tentative idea as to phasing of particular areas, but it should also be noted that we have no firm dating evidence, particularly when it comes to the villa's demise, other than one coin, dated 320AD from a sealed context. Two mid 4th century coins were found sitting on the foundations of the unfinished extension, but

what muddies the water are the 18 or so late 4th/early 5th century coins found mainly over the east range. How should we account for those?

One solution would be to look at the wider landscape around the villa, but, as yet, we have not studied this in any great detail, other than with two geophysical surveys (see appendix 1 for resistivity survey report). Two potential ditches were found crossing the field from north to south, but neither of these indicated any features away from the villa itself.

What did not come to light in either survey were any features relating to possible housing for estate workers. It has been suggested that somewhere such as the Darent Valley would have been divided up into the relevant villa estates, each containing non-villa sites for the settlements of tenants and estate workers (Booth 2017) This may have been the origins of the settlement at the western side of Otford at Wickham Field. Incidentally, this adjoins an extensive Romano-British cemetery, dated to the 2nd-3rd centuries AD. What is interesting from the Church Field point of view is that a later (3rd or 4th century) mausoleum was superimposed on the site, breaking into some of the earlier graves. This mausoleum would be contemporary with the Church Field villa, and at a suitable distance from the villa to comply with burial practices at the time. It would also give the villa's occupants a 'presence' close to the settlement at Wickham Field – just to remind the workers who their employer was (without that employer having to live too close by).



Frog Farm Mausoleum

Half a kilometre from Church Field is Progress Villa (so named from the bungalow in whose grounds it was discovered). Partially excavated in the late 1920's, this complex was in use, in some form, from the late 1st to the mid 4th centuries. It is too close to Church Field for the two buildings to have been conventionally operating as separate villas during the proposed life span of Church Field.

Progress villa under excavation in 1927

Oblique view of villa position within Otford. Becket's Well is bottom centre. Progress villa is outside picture at bottom right (reconstruction by J English)

Until the latter half of the 20th century a footpath crossed the field diagonally from the SE, passing Becket's Well to what is now recognised as the NE corner of the villa. The 1871 6" OS map shows a path continuing through to Kemsing (the village to the east of Otford), where it becomes a road that can be potentially traced back to Wrotham (10km from Otford). Running vaguely parallel to this, but 0.5km to the north, is the Pilgrim's Way, an ancient trackway, far older than the medieval epithet implies. It would have been there in Roman times. The current Pilgrim's Way is situated halfway up the escarpment of the North Downs, a logical route that in winter avoids the marshy bottom of the valley, and the possibly exposed escarpment. At the bottom of Otford Mount, where the river has cut a notch through the Downs, the Pilgrim's Way turns 90 degrees left, and runs through the village to cross the river.

Path across Church Field

The problem with this road is that it is very narrow, and is likely to have always been so. With a sharp incline uphill on one side, and a steep climb downhill on the other, there is not much room for expansion. A route along the valley floor would be wider, and usable during the summer months. It would be ideal for wheeled vehicles and as a drove road, and would be more direct. There are water sources from springs all the way along. A large villa placed on this route would be a statement for the land owner, and would also be in a good position to control business, where one of the main routes into Otford would be heading for the river, and perhaps shipping goods and cattle down river to the Thames.

An isolated bath house at Kemsing was also situated on this putative route. With no villa indicated nearby, this would seem similar to the bath house at Barcombe in East Sussex.

There the bath house sits next to a major road, but about 0.5km from the villa. In that instance it is thought that the baths were used by employees on the villa estate, and nearby industrial estate. Kemsing bath house is about 1km from Progress and Church Field villas, and may have fulfilled the same function.

If Church Field villa is also situated on the main road, it would have been in the interests of whoever was demolishing it to get the job done as quickly and as cleanly as possible; hence the levelling of the site. It would also provide a convenient route to carry the materials away from the site. If the road remained in use, there is no reason why coins and property were not lost from time to time, and ended up in the topsoil above the now disappeared villa. So the villa may have gone in the mid 4th century, but later dating evidence will still show up on the site.

One problem to this theory could be the lack of coin/dating evidence from the rest of Church Field, along the route of the supposed road. Metal detecting surveys have been carried out on this part of the field but have yielded nothing. However, when Church Field was first surveyed in 2012, it was metal detected, and produced only one artefact. Although the villa remains are relatively shallow, the removal of even 150mm of the turf layer was enough to allow the detector to pick many more objects and coins. The potential route of the road has yielded material that predates the villa. In 2018 a fine copper alloy *fibula* was found over the east range, dated to the early 1st century. Also an Iron Age coin has come from along the same line. We also have a couple of medieval strap ends, found over the villa, but again along the potential road route.

It is hoped, at a later stage, to carry out another resistivity survey of Church Field to see if we can pick up any sign of a road, and then to dig some trial trenches, both to find the road, and to allow for a metal detector to possible pick up signals from items that are just a little too deep ate the moment. If we can find similar coins to the later ones found over the east range, then at the very least it will not disprove the road theory.

Church Field villa is the second largest villa in the Darent Valley, after South Darenth. It is situated at what was probably the furthest navigable point of the river. This happens to coincide with the meeting of three major road routes: the Pilgrim's Way (from both east and west), and the road from Sevenoaks. Ivan Margary, the great researcher of Roman roads, acknowledges the Pilgrim's Way route, but has the Sevenoaks road coming nearer to Kemsing.

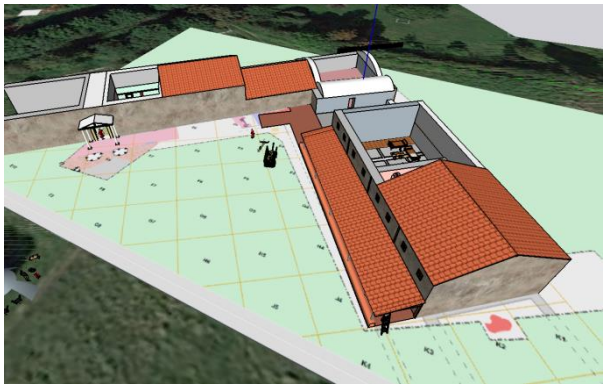
This meeting of routes would allow goods – and travellers – on the road to access the river, and then take to the water to travel downstream to the Thames. From there one could either travel to London, or seawards. Church Field would provide the perfect hub for a junction of such important routes. South Darenth is halfway along the river route, and Dartford villa is near to the Thames junction. It is acknowledged that a major road route also met the river at Darenth.

Church Field's size, position and tentative dating would seem to connect it to Progress villa, as mentioned above, 500m away to the SE. This partially excavated complex sits on the current Pilgrim's Way (suggested as a winter route by the author). It is smaller than the size Church Field eventually reached, and (somewhat unreliable) dating has it going out of use at the time Church Field may have been built. Coin records from the site indicate, however, that

it remained operative until at least 355AD, assuming that any later coins found there were not hillwash from the adjoining road.

Progress may have become a satellite estate office for Church Field, thus allowing the estate to have control of both the summer, and the winter routes. This is obviously conjecture at this stage, but it was noted in 2015 that the foundations of the east range extension in Church Field consisted of hardcore rubble. This may have come from work elsewhere on the Church Field villa, but it may well have come from Progress. This either means that Progress still existed in a ruinous state, and was useful for supplying such materials, or that work was going on at Progress (partial demolition, perhaps) which made the rubble available.

The last dated coin from Progress is 355AD. Is that the date on which the whole estate was dismantled, so any later coins in Church Field relate to something else, probably the road? Excavation would seem to be the only method of finding a solution, in the hope of achieving secure dating evidence for the decline of this large building, which would have dominated the Otford skyline in the third and fourth centuries.



View of Church Field villa looking NW (Reconstruction by J English)

11.0 Glossary

Alice Holt ware Alice Holt (also called Farnham grey ware**)** is known from sites across south and south eastern Britain. It is a coarse grey sandy ware, and dates across the whole of the Roman occupation. No Alice Holt ware has been recorded at sites further north than Norfolk.

Hypocaust Under floor hot air heating system

Imbrex (imbrices) A curved half-pipe roof tile that covers the raised edges of adjoining roof tiles (Tegulae).

Nene Valley An area in modern Cambridgeshire known for its fine colour-coated pottery

Opus Signinum A waterproof cement made of crushed tiles, mixed with mortar, and then beaten down with a rammer. The crushed tiles give it a distinct pink colouring

Patchgrove ware Named after a find site by Oldbury hillfort, near Ightham. Many sherds were found at the Frog Farm site in Otford

Post pad A piece of (usually) stone on which rested a supporting post

Samian ware (Terra Sigillata) A red, highly fired, slipware. One of the most commonly used high quality table wares in Roman Britain. Samian pottery found in Britain was mainly made in the southern, central and eastern areas of Gaul (France). Dating from the 1st to mid 3rd centuries.

Samian bowl (from Oxford)

Tegula (tegulae) A large flat roof tile with raised edges (that sit under imbrices). They stayed on the roof due to their own weight.

Tesselated An area covered by tesserae

Tessera (tesserae) Pieces of clipped tile or stone, usually cuboid and inserted into cement to create a hard wearing floor surface or (occasionally) a decorative mosaic

12.0 Selective Bibliography

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Appendix 1

West Kent Archaeological Society

Geophysical Report

"Church Field" Otford Kent

17th November 2012 – 2nd December 2012

Andrew Putman

Survey Purpose

An investigation into reports of a Roman building in 1934 by F. Godwin in a field known as 'Church Field' adjacent to a feature known as Beckett's Well. Finds from a trial excavation by Godwin uncovered Roman pottery sherds, glass, flue tile, oyster shell and wall plaster; no walls were found and no report exists. The exact location of Godwin's excavation is unknown.

Project Documentation	
Spatial Coverage	TQ530592 - TQ531593
Administrative Area	Sevenoaks District Council
Country	England
Geology	Gault Clay and Chalk
Duration	17/11/2012 – 02/12/2012
Weather	Overcast, light showers Light frost, clear sky
Soil Condition	Damp, patches of waterlogged ground
Land Use	Pasture/Garden
Monument Type	Building
Monument period	Roman
Scheduled Ancient Monument Number	Not scheduled
Surveyor	Andrew Putman and Kevin Fromings
Client	West Kent Archaeological Society
Related Archives	
Copyright	West Kent Archaeological Society

Geophysical Survey	
Survey Type	Earth Resistance
Instrumentation	Geoscan RM15
Area Surveyed	33 Grids
Method of Coverage	Regular Grid
Traverse Separation	1 metre
Reading Interval	1 metre
Sampling Position	.5 metre in both directions
Grid Size	20 metre x 20 metre
Accuracy – Spatial	Grid layout may contains positioning error of 1 metre due to vegetation obstructing tapes during grid positoning
Accuracy - Readings	Automatic trigger, positioning by taped guide lines

Introduction

Church Field is situated in the village of Otford, Kent (NGR TQ530592) and lies at the southern end of the Darent Valley, 3.5 miles south of Lullingstone Roman villa. Previous excavations in Otford have located a Roman Cemetery at Frog Farm, Roman Farmstead at the Charne and Progress Roman Villa to the East of Otford, aswell as …….

http://www.kent.gov.uk/ExploringKentsPast/SingleResult.aspx?uid=MKE304

Method

The earth resistance survey was conducted over the land indicated in Figure 1 using a Geoscan RM15 resistivity meter with a twin probe array spaced at .5 metre. Readings were taken at 1metre x 1 metre intervals.
20 x 20 metre grids were laid out by tape using canes as grid markers. Without access to precise GPS 3 canes were left permanently to aid grid positioning, all other canes were removed after the survey.
The initial survey in November consisted of 18 grids, the second survey of 15 grids. In total 33 grids were surveyed.

Survey data was processed using Snuffler freeware software.
Processing consisted of Edge Correction and horizontal and vertical Interpolation.

Results

The survey shows 4 high resistance areas of interest labelled on Figure 2 Greyscale image and Figure 3 Relief image.
A – Clearly defined wall lines
B – Irregular high resistance anomaly
C – Faint, but defined square area on same alignment of wall lines marked A
D – High resistance anomaly, similar alignment to A

The surveyed area can be seen in Figure 4 overlaid on Google earth to show survey in context.

Conclusion

Anomaly A shows clear wall lines comparable to a Winged Corridor plan Villa. The Eastern Wing is approximately 65 metres in length and 13 metres in width. The Northern range is of similar width and of unknown length. The survey shows clear individual rooms and a probable ambulatory facing the courtyard.

Anomaly B is an area known to have top soil recently removed for landscaping, on this knowledge the anomaly was augured to determine whether the result was geological. The augur revealed that only 2cm of topsoil existed; beneath was gault clay. The clay continued to a depth of 120 cm which was the maximum depth of the augur. The clay contained no inclusions.

Anomaly C shows a faint outline of a possible square building approximately 20 metres by 20 metres on a similar alignment to the walls in anomaly A.

A high resistance area is appearing at area D. The anomaly could be geological or archaeological, the survey would need to be extended to determine this. If a structure is present if may be associated with the Roman building or possible associated with the feature of Medieval origin known as Beckett's Well.

Further Investigation

The survey area to the East should be completed to cover the whole field, this will allow anomaly D to be investigated further.

The survey has reached the boundary of Scheduled Ancient Monument 1005197 (Figure 5) to south. Although a small area of pasture beyond the SAM could be surveyed if required.

The extent of the survey to the West was restricted by a tennis court and gardening debris. Plans to remove the debris will allow further investigation into the north range of the building.

The survey is further restricted by the boundary of the same SAM 1005197 to the West, a section 42 licence would be required to further the survey and locate a possible West wing. Ground penetrating radar would be required to survey the tennis court and formal pathways. Formal gardens and landscaping as well as Medieval fish ponds will restrict the survey area.

Figure 1.


St Thomas a Becket's Well
Otford Station
Car Park
HOPFIELD CLOSE
EVELYN ROAD
WELL ROAD
STATION ROAD
STATION APPROACH
BECKETS PLACE
Elm Tree
Moat Cottage
Pond
Ponds
Friars Pool
COLETS ORCHARD
Orchard Cott
El Sub Sta
Pondside
The Castle House
Path (um)
St Bartholomew's Church
Vicarage
Castle House Cottage
Castle Cottages
Bishop's Palace
(remains of)
Palace Field
The Chantry
Chantry Cottage
Colet's Well
War Meml
Pond House
Holmesdale
Bubblestone Farm
Bubblestone House
BUBBLESTONE ROAD
Sluice
Bank
PO
Clyderhowe
The Woodman (PH)
The Crown (PH)
The Corner House
Hilltop Farm
Clandon
Pilgrims Oast
Pilgrims' Way Trackway
Hall
Path
Track
A 225

Figure 2.

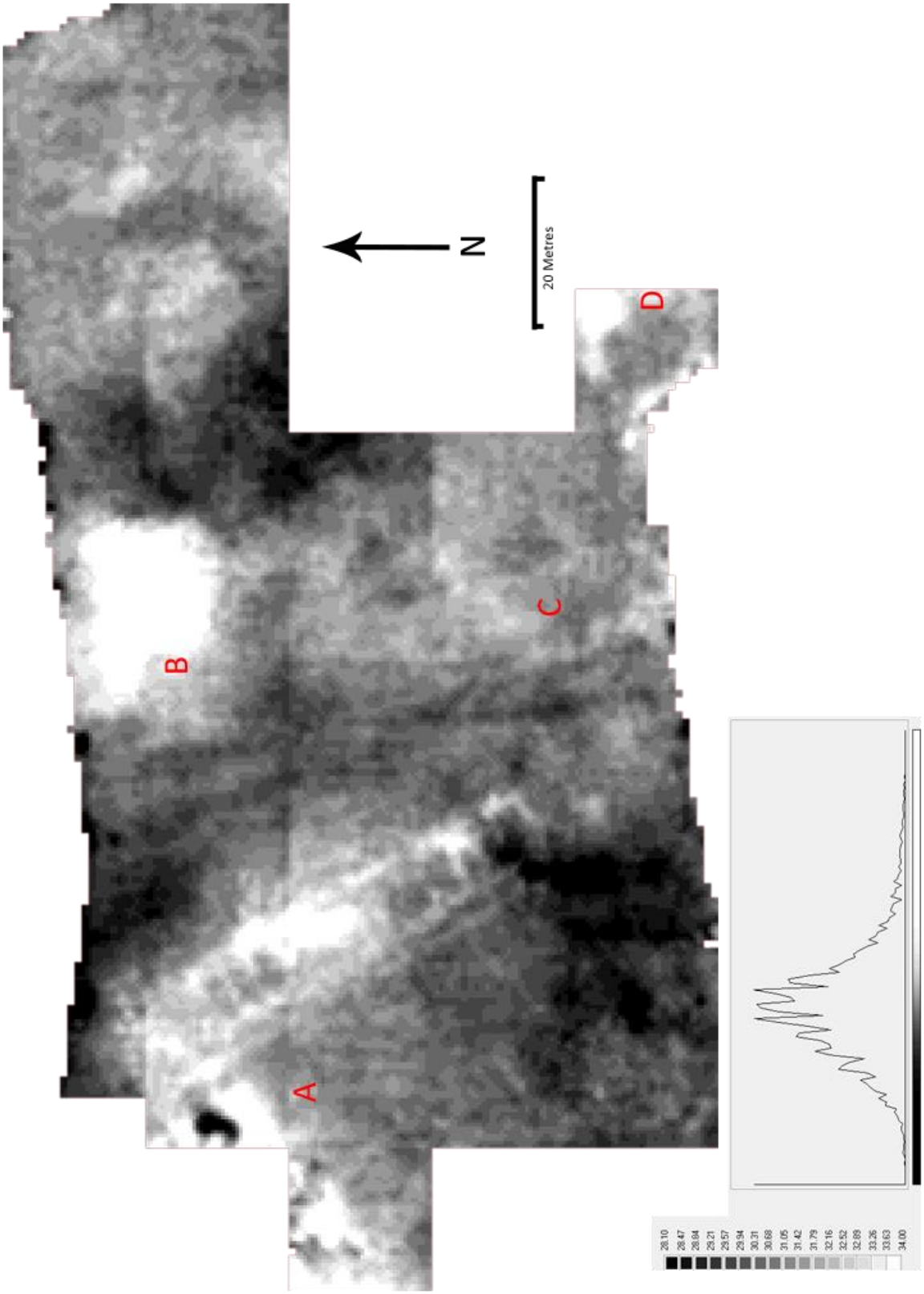
N
20 Metres
A
B
C
D
28.10
28.47
28.84
29.21
29.57
29.94
30.31
30.68
31.05
31.42
31.79
32.16
32.52
32.89
33.26
33.63
34.00

Figure 3.

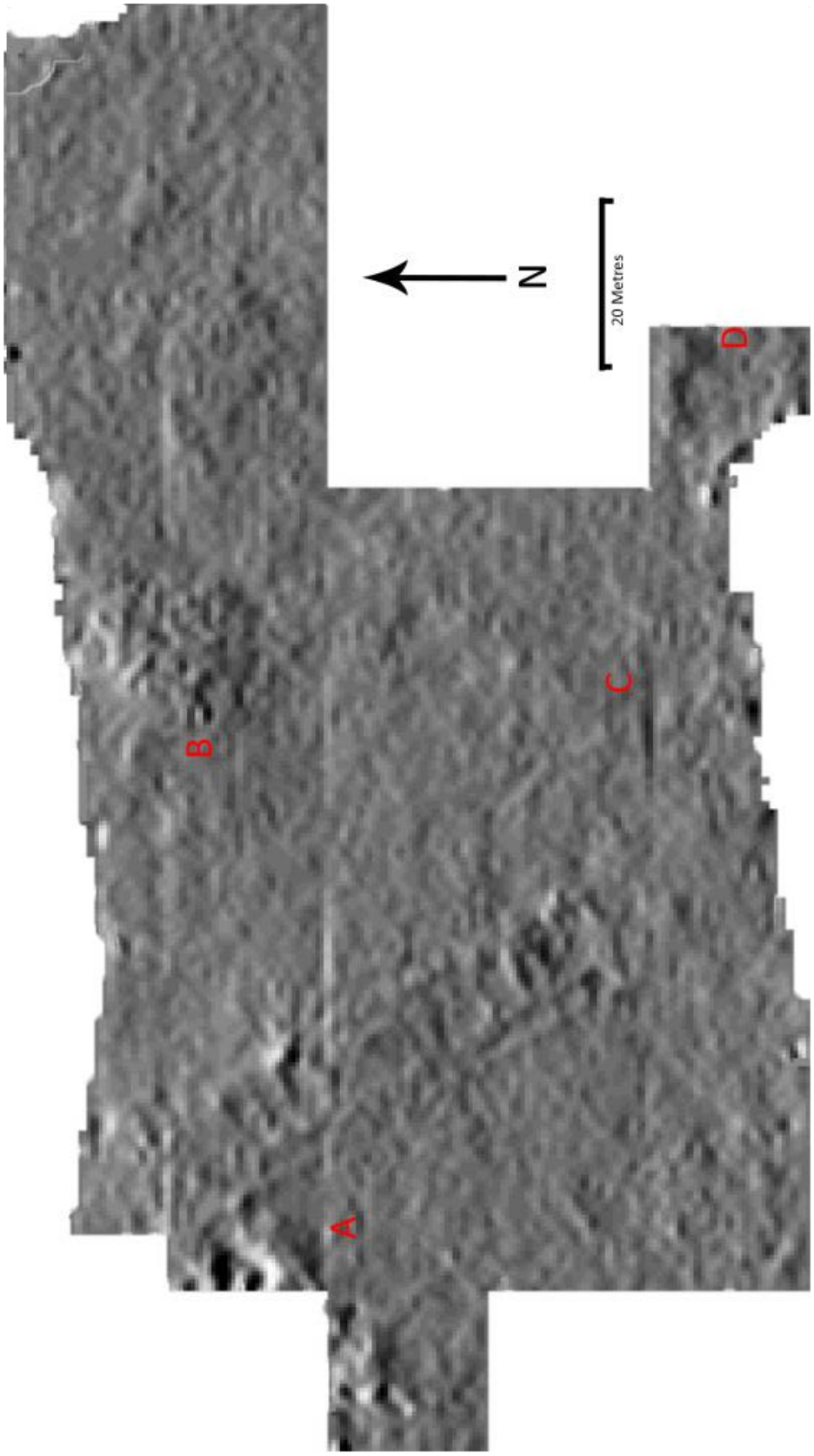

Figure 4.

Name: Otford Palace

Heritage Category: Scheduling

List Entry No : 1005197

County: Kent

District: Sevenoaks

Parish: Otford

Each official record of a scheduled monument contains a map. New entries on the schedule from 1988 onwards include a digitally created map which forms part of the official record. For entries created in the years up to and including 1987 a hand-drawn map forms part of the official record. The map here has been translated from the official map and that process may have introduced inaccuracies. Copies of maps that form part of the official record can be obtained from English Heritage.

This map was delivered electronically and when printed may not be to scale and may be subject to distortions. All maps and grid references are for identification purposes only and must be read in conjunction with other information in the record.

List Entry NGR: TQ 53051 59376

Map Scale: 1:2500

Print Date: 17 March 2012

ENGLISH HERITAGE

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Appendix 2

Otford Church Field Interim Coin Report

Gary Bennett, 07/03/2020

1.1 Summary

This report is based on the 164 ancient coins recovered during excavations up to the end of 2019. The majority of were found using Metal Detectors, mostly in the spoil heaps associated with specific contexts, but with a significant number directly within context layers, allowing GPS coordinates to be recorded using hand-held devices.

A summary and full version of the catalogue to date can be found in Appendix A. Of the 164 ancient coins, 160 are of Roman date, with one Iron Age Potin fragment[1], one fragment of early Medieval silver penny[2], and two Charles I Rose Farthings[3]. Many 19th and 20th Century copper coins were also found but are not included in this report and are mostly surface or topsoil finds. Of the Roman coins, a total of 141 can be attributed to specific Reece Periods, and a further 2 to broad dynastic periods, with 17 too worn to identify other than being classified as broadly md-late Roman.

All bar two of the Roman coins are dated between 260 and 402 AD and are either base metal radiates (pre-296) or nummi (post-296). The Reece period distribution suggests that the site remained active between these dates, bar a possible break in the early 350s. The most active period of occupation, with peak coin loss over-indexing on the expected profile, is from the late 260s through to 296. This period alone accounts for over one-third of all coins. Most notable is the much larger than expected proportion of barbarous radiates, dating peak coin loss between 275 and 285 AD[4].

There is support from the coin evidence for possible phasing of the site as these late 3rd Century coins tend to be more concentrated in specific parts of the building, especially the north east room adjoining main and east range of the villa and the large room in the east range. Also notable is the concentrated distribution of coins of the British Empire (Carausius and Allectus) covering the period from 287-296. The 3 coins of this period were all located adjacent to the food preparation area at the back of the east end of the main range.

Coin loss continues into the early part of the 4th century approximately tracking expected distributions. As expected, 4th century coin loss peaks in the Mid-Constantine period (330-348 AD), a period associated with peak villa building in Britain. Around a quarter of coins belong to this period. Although these coins are found throughout the site there is a greater concentration in the partially built East Wing Extension.

[1] Potin is Kent Flat Linear Angular Bull Type (86-50 BC), we have included this coin in our analysis of Roman coins even though it is pre-conquest.
[2] Stephen Penny (1135-1154)
[3] Charles I Rose Farthings date from 1636-44)
[4] Classification of barbarous radiates into the period 275-285 follows the convention established by the Portable Antiquity Schemes (PAS) database

Compared with the local baselines of the Progress and Lullingstone Villa coin profiles, there is a lower-than-expected coin loss in the period 348-364. Coin loss breaks completely in the period 350-355. Notably, the Church Field profile completely lacks any coinage of the usurper emperor Magnentius (AD 350 – 353). Coins of Magnentius are very prominent in the profile of Progress Villa and feature in the profile of Lullingstone Villas. The reign of Magnentius marks the end of coin loss (and most likely occupation) at Progress. Coin loss at Church Field picks up again in the period 355-361 though this mostly consists of small module contemporary copies of late coins of Constantius II.

Relative coin loss in the Valentinian dynasty (364-378) approximately matches that of Lullingstone. Following the expected distribution, it drops to just one coin in 378-388. However, the profile has a late flourish with a big, statistically significant, over-index on expected coin loss in Reece Period 21 (388-402). This may provide evidence that the site became more active again towards the very end of Roman occupation, though may be explained by the misclassification of these small, often worn coins in the benchmark data[5] or the lower rate of detection in the past without the use of metal detectors. At a minimum, we can say that the site remained active up until at least the last decade of the 4th century.

The two outlying earlier coins were both located in the main range. A debased silver denarius from the Severan Dynasty (AD 218-222) and a (possibly plated) copy of silver radiate from the Gordian dynasty (241-243). These may come from an earlier, pre-260, phase of the main range, but may have been lost during the latter half of the 3rd century.

1.2 Comparative Analysis by Reece Period

An analysis by Reece Period for the 141 dateable Roman coins found at Otford Church Field (OCF) is shown in table 1.

Table – Church Field coin loss: Reece Profile vs Benchmarks

The profiles shown as percents						+ or - percentage points		
Reece period	**Dates**	**Progress Villa** *(base: 34)*	**South of Fosse Way** *(base: 28891)*	**Lullingstone Villa** *(base: 328)*	**OCF (1219)** *(base:141)*	**OCF (1219) vs Lullingstone**	**OCF (1219) vs South of Fosse Way**	**OCF (1219) vs Progress**
1	**Pre-AD 41**	2.9	1.0	0.9	0.7	-0.2	-0.3	-2.2
2	**41-54**	2.9	0.4	0.3	0.0	-0.3	-0.4	-2.9
3	**54-68**	0.0	0.3	0.0	0.0	0.0	-0.3	0.0
4	**69-96**	2.9	1.6	0.3	0.0	-0.3	-1.6	-2.9
5	**96-117**	0.0	1.1	0.9	0.0	-0.9	-1.1	0.0
6	**117-138**	0.0	1.2	1.2	0.0	-1.2	-1.2	0.0
7	**138-161**	2.9	2.5	0.9	0.0	-0.9	-2.5	-2.9
8	**161-180**	0.0	0.6	0.3	0.0	-0.3	-0.6	0.0
9	**180-193**	0.0	0.5	0.0	0.0	0.0	-0.5	0.0
10	**193-222**	0.0	1.7	0.9	0.7	-0.2	-0.9	0.7
11	**222-238**	2.9	0.6	0.0	0.0	0.0	-0.6	-2.9
12	**238-260**	0.0	1.8	0.9	0.7	-0.2	-1.1	0.7
13	**260-275**	23.5	12.3	4.6	10.6	6.1	-1.7	-12.9
14	**275-296**	8.8	9.7	5.8	34.0	28.2	24.4	25.2
15	**296-317**	2.9	3.6	0.6	0.7	0.1	-2.9	-2.2
16	**317-330**	5.9	7.0	11.6	2.8	-8.7	-4.1	-3.0
17	**330-348**	11.8	29.2	33.2	24.8	-8.4	-4.3	13.1
18	**348-364**	32.4	8.5	19.8	5.0	-14.9	-3.6	-27.4
19	**364-378**	0.0	14.6	11.0	8.5	-2.5	-6.1	8.5
20	**378-388**	0.0	0.6	1.2	0.7	-0.5	0.1	0.7
21	**388-402**	0.0	1.5	5.5	10.6	5.2	9.1	10.6

[5] Misclassification rates for these coins are likely to be higher pre-the PAS database

A comparison has been drawn with the British Museum's coin profile for South of Fosse Way[6], and the coin profiles for Lullingstone[7] and Progress Roman Villas[8].

The contrasts to the right show the difference in profile (± percentage points) for Church Field (OCF) vs the reference profiles. Most notable is the over-index of Church Field for Reece Period 14 (275-296)[9], mostly a result of the high proportion of barbarous base metal radiates dating broadly from 275-285. This is a huge over-index of around 25 points on all reference profiles. This peak coincides with the British agricultural boom in the 270s and 280s and most likely reflects the large number of debased and barbarous coins needed to pay labourers and estate workers, prior to the coinage reforms of Diocletian in 294-296. The often small size, low value, and high volume of these barbarous coins explains the peak of loss in this period.

Given the absence of metal detecting at Lullingstone and Progress Villas, it is possible that fewer of the smallest barbarous radiates would have been recovered. It is also possible that fewer would have been correctly classified as copies at Lullingstone and Progress as coins of this period were poorly catalogued and understood prior to the publication of the Cunetio and Normanby Hoards[10]. This may have resulted in some of these coins being placed into the same period as their prototypes, Reece Period 13 (260-275), rather than in Reece Period 14 (275-285). To allow for this possibility, we have amalgamated Reece Periods 13 and 14 to cover the entire period 260-296. Across this longer period, the Church Field profile still significantly over-indexes that of Lullingstone and South of Fosse Way by 20 percentage points plus. However, the over-index on Progress Villa becomes statistically insignificant, largely due to the low base of coins from Progress. This more cautious approach of looking across combined Reece Periods 13 and 14 suggests that the significant contrast is between Church Filed / Progress, which over-index these periods vs other Southern sites of coin-loss, including Lullingstone Roman Villa, suggesting a late third century peak in occupation of these villas.

The much higher-than-expected numbers of these coins lost, and their concentration in certain areas/rooms of the site, paints the picture of a thriving agricultural estate in the 270s and 280s. It is possible the building served the dual purpose of being a private residence and an estate office for the remuneration of workers.

The coin loss in the early half of the 4th century is more in-line with expectations. Although it slightly under-indexes the baseline profiles across the early, mid and late Constantine dynasty up to 348, the difference is not significant statistically[11]. The large number of nummi lost in Reece Period 17 (330-348) is typical in Southern Britain and coincides with a second period of rapid growth in which villa building and upgrading reached its peak. Due to inflationary pressures and debasement, the coins in this period once again became smaller, with more units needed to meet demand, leading to more frequent accidental loss.

[6] South of Fosse Way profile compiled by British Museum using data on 28891 Reece Period dateable Iron Age and Roman coins
[7] Lullingstone Profile created using the 328 dateable Iron Age and Roman coins catalogued in the Lullingstone Report
[8] Progress Profile created using the 34 dateable Iron Age and Roman coins catalogued in the Progress Report
[9] The over-index in 260-296 is highly significant statistically ($p < 0.01$)
[10] The Cunetio hoard was first published in 1983 And the Normanby hoard to 1988
[11] The slight under-index to 348 needs to be interpreted relative to the peak of 260-296

The next statistically significant break from trend is in Reece Period 18 (348-364) in which the profile of Church Field under-indexes both Lullingstone and Progress[12]. Coin loss stops entirely in the period 350-355 and in fact coinage of Magnentius is completely absent. Based on the Lullingstone and Progress distributions we would expect to find, at a minimum, 3-5 coins of this usurper emperor at Church Field. It is well known that the following the fall of Magnentius in 353, Paulus Catena, the notary of Constantius II incarcerated or executed the owners of many southern British farming estates suspected of disloyalty to Constantius, often on spurious charges. Many of the private villas and estates of these persecuted individuals were destroyed or seized on behalf of the emperor. The destruction and forced annexation of estates in this period is widely thought to have precipitated a crash in the British rural economy, which never fully recovered its peak and spiralled into decline in the late 4th Century. The coin loss at neighbouring Progress Villa terminates at Magnentius, suggesting it was at least abandoned (and possibly demolished) at this time. Although Progress has only 34 dateable Roman coins compared with 141 recovered so far at Church Field, 4 were of Magnentius! The coin evidence at Church Field suggests a break in activity in the early-mid 350s which picks up again in the late 350s to early 360s. Coins in late Period 18 are almost entirely small module copies of FEL TEMP REPARATIO Fallen Horseman coins of Constantius II.

Coins of the Valentinian Period (Reece Period 19: 364-378) track that of Lullingstone, though under-indexes the South of Fosse Way profile[13] . Bronze coinage in Reece period 20 (378-388) is scarce in the general background profile and so the lone coin from this period recovered at Church Field is exactly what we would expect.

The Church Field profile significantly over-indexes in the final Reece Period of Roman Bronze coinage in Britain (Reece Period 21: 388-402) covering the second part of the Theodosian dynasty. This period alone accounts for 10% of dateable coins in the catalogue. The relative loss is five times that of Lullingstone and twice that of South of Fosse Way. Late Roman coins of this date have small flans and smaller, cruder looking busts than earlier 4th century coins. Although they are often very worn, as are most of the Church Field examples, their reverses in Britain mostly belong to one of only two types, each with distinct features which can aid identification. They have in the past been misclassified as Constantinian contemporary copies. It is only in recent years that the British Museum has raised their profile among numismatists, PAS volunteers and metal detectorists, ensuring that they are now more likely to be correctly classified. It is quite possible that the reduced rate of misclassification for these coins in the last decade, as well as the use of metal detecting on site at Church Field, is responsible for the high over-index for Reece Period 21 in the Church Field profile, particularly compared with Lullingstone, where all coin finds were “eyes only”.

What we can say with certainty is that the villa at Church Field remained active up in some form up to the last decade of the 4th century and possibly into the first decade of the 5th century. Coin loss may exceed expectations, depending on the allowance you make for the difficulties in recovering and correctly classifying these late Roman bronze coins prior to the 21st Century and the existence of the PAS.

[12] The under-index vs Lullingstone in 348-364 is statistically significant ($p < 0.01$)
[13] Under-index of between 364 and 378 vs South of Fosse Way is statistically significant ($p < 0.05$)

1.3 Comparative analysis by context

The coins profile has also been broadly compared by context at the Church Field. To enable a meaningful analysis, we have collapsed and combined both the dates and contexts into broad categories.

Table – Church Field coin profile: Broad date profile by broad context

Coin Dates by broad area (freq) - December 2019
(based on dateable coins)

	TOTAL	Main Range	Range Intersection (Trench 8) room and NE wall	East Range (First Section - Trench 0,5,6,7,10)	East Range (Trench 1)	East Range (Far end - Trench 3)
Pre-260	3	2	0	0	1	0
260-296	63	7	7	21	27	1
296-330	5	0	1	3	1	0
330-348	35	2	3	14	11	5
348-364	7	1	0	1	4	1
364-378	12	2	0	9	0	1
378+	16	2	1	12	1	0
TOTAL	141	16	12	60	45	8

Coin Dates by broad area (percent)

	TOTAL	Main Range	Range Intersection (Trench 8) room and NE wall	East Range (First Section - Trench 0,5,6,7,10)	East Range (Trench 1)	East Range (Far end - Trench 3)
Pre-260	2.1	12.5	0.0	0.0	2.2	0.0
260-296	44.7	43.8	58.3	35.0	60.0	12.5
296-330	3.5	0.0	8.3	5.0	2.2	0.0
330-348	24.8	12.5	25.0	23.3	24.4	62.5
348-364	5.0	6.3	0.0	1.7	8.9	12.5
364-378	8.5	12.5	0.0	15.0	0.0	12.5
378+	11.3	12.5	8.3	20.0	2.2	0.0

Difference from Total (percentage points)

	TOTAL	Main Range	Range Intersection (Trench 8) room and NE wall	East Range (First Section - Trench 0,5,6,7,10)	East Range (Trench 1)	East Range (Far end - Trench 3)
Pre-260	2.1	10	-2	-2	0	-2
260-296	44.7	-1	14	-10	15	-32
296-330	3.5	-4	5	1	-1	-4
330-348	24.8	-12	0	-1	0	38
348-364	5.0	1	-5	-3	4	8
364-378	8.5	4	-9	6	-9	4
378+	11.3	1	-3	9	-9	-11

Although there are only two coins dating prior to AD 260, both are from the main range, which even despite its small base is statistically significant[14]. This is consistent with the hypothesis that main range was developed prior to the East range and may have been occupied in some earlier phase prior to the development of the main villa. It is possible these were lost during the latter 3rd Century and we need further coin evidence to definitively identify a pre-260 phase.

Turning to the 260-296 period, at which our coin profile peaks, the north east intersection of the main and east range and the large room in the east range (Trench 1) both over-index on this period, though only the latter is statistically significant[15]. The over-index of these late 3rd century coins in the large room is out of step with the rest of the East range and may suggest that this room predates the rest of the range or was incorporated into the newer East Range during a later phase. Perhaps this room was built on the rubble of a building from an earlier phase.

Despite its low base (only 8 coins), the high proportion of late Constantinian (330-348) coins found in Trench 3, the trench over the incomplete extension of the east range of the villa, is statistically significant[16]. This possibly dates the extension to the boom period of peak villa building in this period.

Finally, the rest of the east range covering the possible batch house area through to but not including the large room over-indexes in the post-378 period, covering the Theodosian dynasty[17]. This area accounts for the highest concentration of coin loss overall, also containing many late third century coins, although in lower proportions compared with other parts of the site. The high-concentration of late coins post-378 hints at a possible change of use. Perhaps the site was repurposed from being predominantly the office or HQ of an agricultural estate in the late 3rd and early 4th century to being a bath house, and/or barracks house in the latter part of the 4th century. The proximity to a fresh water supply and the River Darent would have made Church Field an attractive site for a bath house, and recent publications suggest that sites with higher-than-anticipated coin loss for AD 388+ tend also to have military connections.

[14] $P < 0.01$ for Pre-AD 260 coins vs the total
[15] $P < 0.05$ for coins of 260-296 for the large room in the East range (Trench 1) vs the total
[16] $P < 0.05$ for coins of 330-348 for the east range incomplete extension (Trench 3)
[17] $P < 0.01$ for coins of 378+ for the East range from the bath house through to, but not including the large room at Trench 1