LAND TO THE WEST OF SCHOOLS CLOSE	
CHAWLEIGH	
MID DEVON	
DEVON	

Results of a Geophysical Survey



South West Archaeology Ltd. report no. 191209



LAND TO THE WEST OF SCHOOLS CLOSE, CHAWLEIGH, MID DEVON, DEVON RESULTS OF A GEOPHYSICAL SURVEY

By P. Bonvoisin Report Version: Final Issued: 9th December 2019 Finalised: 18th December 2019

Work undertaken by SWARCH for Chawleigh Community Trust (The client)

SUMMARY

This report presents the results of a geophysical survey carried out by South West Archaeology Ltd. (SWARCH) on land to the west of School Close, Chawleigh, Mid Devon, Devon. The site is located to the north-west of Chawleigh, immediately west of School Close, with the centre of the site being c.450m west-north-west of the 15th century, Grade I Listed, St James's Church. The site is set on the edge of Chawleigh and sits within a larger pastoral and agricultural landscape. The site is immediately north of the B3096, with access to the site directly off the road.

The geophysical survey identified five groups of anomalies; two were associated with possible discrete ovoid anomalies indicative of cut features such as pits or treethrows, another as a possible background or geological response, with the most clear anomaly groups likely representing recent plough scars or markings, which correspond to clear modern ploughing visible during the site inspection.

The proposed development would have no impact on the majority of nearby designated heritage assets; and a neutral to negligible impact on the Grade I Listed Church of St James and Scheduled Ancient Monument Castle at Stone Barton.



December 2019

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ACKNOWLEDGEMENTS

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1.0 INTRODUCTION

LOCATION:	LAND WEST OF SCHOOL CLOSE
PARISH:	Chawleigh
DISTRICT:	MID DEVON
COUNTY:	DEVON
NGR:	SS 70785 12768
OASIS NO.	southwes1-377205
SWARCH REF.	CCT19

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by Chawleigh Community Trust (The Client) to undertake a geophysical survey on proposed land to the west of School Close, Chawleigh, Devon, as part of the site investigation works in advance of a proposed housing development. This work was undertaken in accordance with best practice and ClfA guidelines.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site is located in the south-east corner of a field on the north side of the village of Chawleigh, to the north of the B3042 and to the west of School Close and *c*.425m north-west of the village church (St. James's Church). The site is located on a relative plateau on a ridge top that eventually falls away to the north into a coombe, which forms a tributary of the Little Dart River, north of the site. The site was at a height of *c*.165m AOD (Figure 1).

The soils on the site are the well-drained fine loamy soils often over rock of the Neath Association (SSEW 1983), which overlie the sandstone with occasional mudstone and siltstone dykes of the Bude Formation (BGS 2018).

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

The place-name 'Chawleigh' is derived from the Old English, *cealf* and *leah* meaning 'calf pasture' (Watts 2004). At Domesday Chawleigh (*Caluelie/Calvelie*) was recorded as a large manor worth £12 with approximately 51 households. It was held by Siward prior to the conquest and by Baldwin in 1086 (Morris 1992). Chawleigh is located in the hundred of North Tawton and the deanery of Chulmleigh. It passed to the Chichester Family from the Courtenays and then on to the Hon. Newton Fellows, owner of Eggesford, who held the manor in 1822 (Lysons 1822) and still was the principle land owner at the time of the 1848 tithe apportionment.

The development site lies to the north west of the Chawleigh Conservation Area, which contains a number of listed buildings including the Grade I listed 15th century Church of St James (List Entry No.1325813) and the Grade II Listed 17th century or earlier Chawleigh Barton (1106614; MDV40958). The 18th century Grade II Listed Hollow Tree Farmhouse (1106608; MDV94042) is located *c*.0.4km west of the site. There are no scheduled monuments within 1km of the site; the nearest being a medieval castle (1016217; MDV19517) at Stone Barton *c*.1.3km to the north-north-east. The Devon Historic Environment Record (HER) indicates a reputed burial mound (MDV25397) located somewhere in the locality of the development site although no precise location is known. Within 1km of the site the HER also records flint scatters and scatters of post-medieval finds scatters to the west and south-east that include possible Mesolithic and bronze Age tools (MDV25394; MDV25463; MDV80468 and MDV537171).

Historic mapping shows the site as part of a large enclosed field from the early 19th century onward. The Devon Historic Landscape Characterisation (HLC) describes the fields containing the site as Barton Fields; likely to have been enclosed between the 15th and 18th centuries. The HLC describes parts of the immediate surrounding field-scape as modern or post-medieval enclosures. The 1848 Tithe Map and Apportionment records the field in which the development site sits (plot 1545) as part of part of Chawleigh Barton, owned by the Hon. Newton Fellows, occupied by William Saunders, under arable cultivation and named 'East Broad Close'. The majority of the fields around the site defined by the tithe records were owned by the Hon Newton Fellows and had prosaic names, many of which implied wet or poor ground conditions (e.g. 'Higher Thistle Close', 'Rushy Meadow') and they were under a mixture of arable and pastoral cultivation. Subsequent historic mapping shows that the residential developments to the south of the site occurred through the latter part of the 20th century.

1.4 METHODOLOGY

This work was undertaken in accordance with a Project Design, best practice and CIfA guidance. Any desk-based assessment aspect of this report follows the guidance as outlined in: *Standard and Guidance for Archaeological Desk-Based Assessment* (CIfA 2014a) and *Understanding Place: historic area assessments in a planning and development context* (English Heritage 2012). The geophysical (gradiometer) survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008) and *Standard and Guidance for Archaeological Survey* (CIFA 2014b).

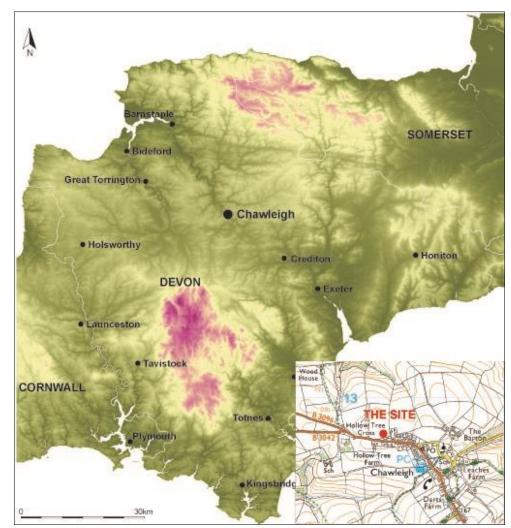


FIGURE 1: SITE LOCATION (THE SITE IS INDICATED).

2.0 GEOPHYSICAL SURVEY

2.1 INTRODUCTION

An area of *c*.1.0ha was the subject of a magnetometry (gradiometer) survey. The purpose of this survey was to identify and record magnetic anomalies within the proposed site. While identified anomalies may relate to archaeological deposits and structures the dimensions of recorded anomalies may not correspond directly with any associated features. The following discussion attempts to clarify and characterise the identified anomalies. The survey was undertaken on the 28th of November 2019 by P. Bonvoisin; the survey data was processed by P. Bonvoisin.

2.2 SITE INSPECTION

The survey area comprised the southern portion of a large field immediately west of School Close, Chawleigh. The ground was roughly flat, with small plough ridges still evident from the previous crop, a small ridge and drain were present along a portion of the eastern boundary of the site. At the time of the site visit the ground was partially bare, covered by a mixture of grass, weeds and remaining vegetation from the previous crop. The clayey topsoil meant that there was a small amount of standing water on the surface, especially to the east of the survey area; the topsoil also contained angular fragments of sandstone as a result of previous ploughing. The west, east and southern boundaries of the site mostly comprised of low hedgebanks with metallic fences; the western extend of the southern bank was topped by mature trees, with the eastern extent comprised of domestic banks and fencing associated with residential properties to the south-east of the site. A rough drainage ditch was present along the eastern boundary of the field. Supporting photographs for the site inspection can be seen in Appendix 3.

2.3 METHODOLOGY

The gradiometer survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008) and *Standard and Guidance for Archaeological Geophysical Survey* (CIFA 2014b).

The survey was carried out using a twin-sensor fluxgate gradiometer (Bartington Grad601). These machines are sensitive to depths of up to 1.50m. The survey parameters were: sample intervals of 0.25m, traverse intervals of 1m, a zigzag traverse pattern, traverse orientation was circumstantial, grid squares of 30×30m. The gradiometer was adjusted ('zeroed') every 0.5-1ha. The survey grid was tied into the Ordnance Survey National Grid. The data was downloaded onto *Grad601 Version 3.16* and processed using *TerraSurveyor Version 3.0.25.0*. The primary data plots and analytical tools used in this analysis were *Shade* and *Metadata*. The details of the data processing are as follows:

Processes: Clip +/- 3SD; DeStripe all traverses, median; DeStagger all traverses out- and inbound by -2 intervals.

Details: 0.9454ha surveyed; Max. 110.20nT, Min. -186.38nT; Standard Deviation 7.72nT, mean 0.08nT, median 0.00nT.

2.4 RESULTS

Table 1 with the accompanying Figures 2 and 3 show the analyses and interpretation of the geophysical survey data. Additional graphic images of the survey data and numbered grid locations can be found in Appendix 1.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
1	Strong positive, probable	Ovoid	Pit or cut feature	Indicative of a discrete cut feature, such as a pit or a treethrow. Responses of <i>c</i> .+12.07nT to +22.59nT.
2	Strong positive, probable	Ovoid	Pit or cut feature	Indicative of a discrete cut feature such as a pit or a treethrows. Responses of $c.+8.06nT$ to $+20.76nT$.
3	Weak positive, possible	Amorphous areas	Possible geological response	An ephemeral background response over a small area, may indicate near surface geology, with response truncated by plough scars or similar disturbance. Responses of <i>c</i> .+0.31nT to +4.78nT.
4	Moderate negative probable	Parallel linears	Plough scars	Indicative of plough scars correlated to visible ploughing lines within the field. Areas of stronger responses may indicate areas of deeper ploughing. Responses of <i>c</i> 10.55nT to -0.70nT.
5	Moderate positive, probable/possible	Linear and fragmented linears	Plough scars	Indicative of plough scars, responses often show as paired positive and negative linear responses, positive response is more visible on this alignment. Likely truncated by north-south aligned ploughing. Responses of $c.+1.47$ nT to $+7.11$ nT.

TABLE 1: INTERPRETATION OF GRADIOMETER SURVEY DATA.

2.5 DISCUSSION

The survey identified four groups of anomalies across the site; including: probable plough scars, possible pits or treethrows with some disturbed or weaker background responses. During the survey angular and semi-angular sandstone fragments were visible within the topsoil, indicating near surface geology with some fragments brought up by ploughing. Additional processed survey data and cartographic sources can be seen in Appendices 1 and 2.

Anomaly groups 1 (+12.1nT to +22.6nT) and 2 (+8.1nT to +20.1nT) are strong ovoid responses, indicative of a discrete cut features such as a pits or treethrows. Similar responses are present in the previous survey to the east. These anomalies may be geological or natural in nature.

Anomaly group 3 (+0.3nT to +4.8nT) are weak amorphous responses, their form displays as uneven wide curving linears with no clearly defined edge. The strength and form of the response is indicative of near surface geology or a similar background response, rather than a clear feature.

Anomaly group 4 (-10.6nT to -0.7nT) are moderate to weak negative linears covering much of the site; indicative of plough scars or agricultural features on a north to south axis. They correspond to plough ruts that were clearly visible during the site visit and can be likely attributed to modern agricultural workings within the survey area. Parallel positive responses echo the north-south orientated linears but are less clear.

Anomaly group 5 (+1.5nT to +7.1nT) are moderate to weak positive linears, on a rough north-west to south-east alignment. This anomaly group is similar to anomaly group 4 and indicative of plough scars or similar agricultural activity but appears more broken and fragments. Shallow negative responses do run parallel to the positive linears but are less visible. Since the response appears more fragmented and distorted by the linears from anomaly group 4 it is likely that this represents an earlier phase of agricultural activity.

Magnetic disturbance and Di-Polar anomalies are present across the site, with the Di-Polar anomalies are not displayed in any particular pattern and probably represent standard metallic debris across the site. The Magnetic disturbance corresponds to agricultural metallic fencing that borders the site.



FIGURE 2: SHADE PLOT OF GRADIOMETER SURVEY DATA; MINIMAL PROCESSING (BOUNDED IN RED). RESULTS OF THE ADJACENT 2018 SURVEY ARE ALSO SHOWN.

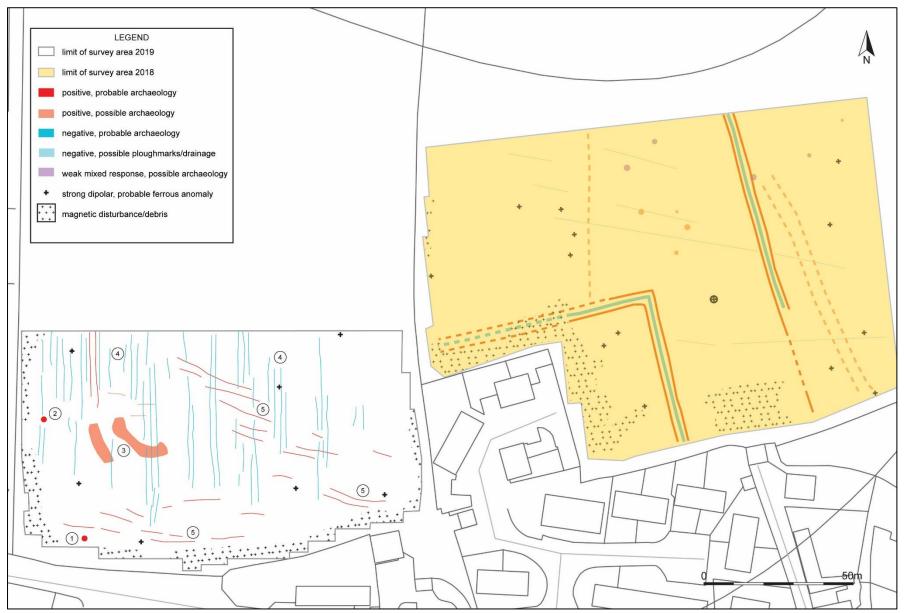


FIGURE 3: INTERPRETATION OF GRADIOMETER SURVEY DATA.

3.0 COMMENT ON POTENTIAL ARCHAEOLOGICAL IMPACT

3.1 ARCHAEOLOGICAL POTENTIAL

Potential archaeological assets within the boundary of the site may be subject to direct impacts by a development.

The site is adjacent to a 20th century residential developments, which may have had some impact on the periphery of the site. It also has overhead cables with telegraph poles. The installation of which may have impacted upon the buried potential archaeological resource.

The relatively shallow nature of the topsoil and lack of substantial subsoil, as alluded to by the stony content of the topsoil and drainage ditch cut along the western edge of the field/site suggest that truncation by ploughing will have occurred over recent centuries impacting upon any buried potential archaeological resource.

The relatively poor drainage across the site may be extrapolated to be a consistent attribute of the land through history, as implied by field-names in the vicinity on the 1848 tithe apportionment record. This may reduce the probability of it having been a likely location for occupation.

The geophysical survey indicates that boundaries and possible drainage associated with the *Barton Fields*, as described by the HLC, probably represent the buried archaeological resource. The presence of pits, and or tree-throws and water-logged hollows may allude to archaeological activity on the site. Prehistoric activity in the area has been identified through flint scatters within 1km of the site.

A potential mound located on the HER near to the site (exact location unknown) may be an ostensibly natural undulation visible on the site. Alternatively the site of the mound is located outside of the limits of the site.

3.2 SIGNIFICANT LOCAL HERITAGE ASSETS – DESIGNATED

There are two noteworthy designated assets within the vicinity of the site;

- Church of St James (List Entry No: 1325813)
 A Grade I Listed 15th century church with later alterations at the heart of the Chawleigh Conservation Area.
- Castle at Stone Barton (SAM List Entry No: 1016217)
 Approximately 1.3km north (north-north-east) of the site. This castle is comprised of earthworks, known as ringworks, with a bailey dated to the late Anglo-Saxon period to the 12th century. Such ringwork monuments are nationally rare with 200 recorded examples, only 60 of which have identified baileys.

Below is a brief account of the potential impact of development at the site on these assets. These potential impacts are considered indirect: the development has no direct impacts on these assets as it is outside of their designated areas. The methodology utilised regarding impact on setting and the historic landscape has been determined from the established literature (English Heritage 2008b; English Heritage 2011; Historic England 2015; Historic Scotland 2010; Hull, R.B. & Bishop, I.D. 1988; ICOMOS 2005; ICOMOS 2011; Landscape Institute 2013; UNESCO 2015; University of Newcastle 2002; DMRB 2016; WEBTAG 2016)

The setting of the church is associated with the village and its actual location within its own enclosed churchyard. Any views associated with the church, either to it, from it or with the church included within the vista would be no more impacted upon by the proposed scale of the development than by existing residential developments on the south side of the site; which do not impede ones experience of the church. The retention of a green space, the field/fields, between the site and the church (and Chawleigh Barton) would retain the churches current state of relative isolation, being set within its own grounds and on the edge of the village. Although visible from the site, the church tower is shielded by trees and is not a particular landmark feature from any direction which would include or be detracted from by the proposed development.

The distance of the Castle at Stone Barton from the site and its general landscape presence (earthworks across a slope, shielded within an enclosed field with hedge banks) give it a negligible or neutral level of impact from the proposed development. The Castle's setting and value come from the views that it affords across the landscape and the condition of its standing remains. The proposed development would not infringe on the valley landscape any more than the current modern residential development south of the site. Retention of a predominantly agricultural landscape with scattered sites of occupation ought not to impinge on the experience of and setting of this asset. The lack of surviving landscape presence for this asset mean that it is not part of views of the landscape itself due to being almost if not totally imperceptible or shielded.

3.3 SUMMARY

Given the presence in the wider landscape of prehistoric flint scatters, geophysical anomalies associated with medieval and post-medieval field boundaries and undated pits or natural features and potential truncation of any buried archaeological resource by ploughing; the buried archaeological potential for the site is ostensibly **low-moderate**. Any impact by a proposed development on the site on the potential buried archaeological resource would be permanent and irreversible.

In terms of indirect impacts, most of the designated heritage assets in the wider area would not be impacted upon by any proposed development. Two assets which lie in the vicinity of the site were considered in more detail in this assessment, neither of which would be affected by the proposed development (**neutral** to **negligible**), with minor impacts to the Historic Landscape.

With this in mind, the overall impact of the proposed development can be assessed as **neutral** to **negligible**. The impact of the development on any buried archaeological resource may be **permanent** and **irreversible**.

5.0 CONCLUSION

The site is located to the north-west of Chawleigh, immediately west of School Close, with the centre of the site being c.450m west-north-west of the 15^{th} century, Grade I Listed, St James's Church. The site is set on the edge of Chawleigh and sits within a larger pastoral and agricultural landscape. The site is immediately north of the B3096, with access to the site directly off the road.

The geophysical survey identified five groups of anomalies; two were associated with possible discrete ovoid anomalies indicative of cut features such as pits or treethrows, another as a possible background or geological response, with the most clear anomaly groups likely representing recent plough scars or markings, which correspond to clear modern ploughing visible during the site inspection.

The proposed development would have no impact on the majority of nearby designated heritage assets; and a neutral to negligible impact on the Grade I Listed Church of St James and Scheduled Ancient Monument Castle at Stone Barton.

6.0 **BIBLIOGRAPHY & REFERENCES**

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Devon Heritage Centre (DHC)

Chawleigh Tithe Apportionment, 1848 Chawleigh Tithe Map, 1848

National Library of Scotland (NLS)

Ordnance Survey 1st edition, 25 inch map, Sheet: Devon XLIII.5, surveyed 1888, published 1889 Ordnance Survey 2nd edition, 25 inch map, Sheet: Devon XLIII.5, surveyed 1904, published 1905

British Library (BL) Surveyor's Draft Map of the South Molton area, 1804

APPENDIX 1: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY



FIGURE 4: GEOPHYSICAL SURVEY GRID LOCATION AND NUMBERING.

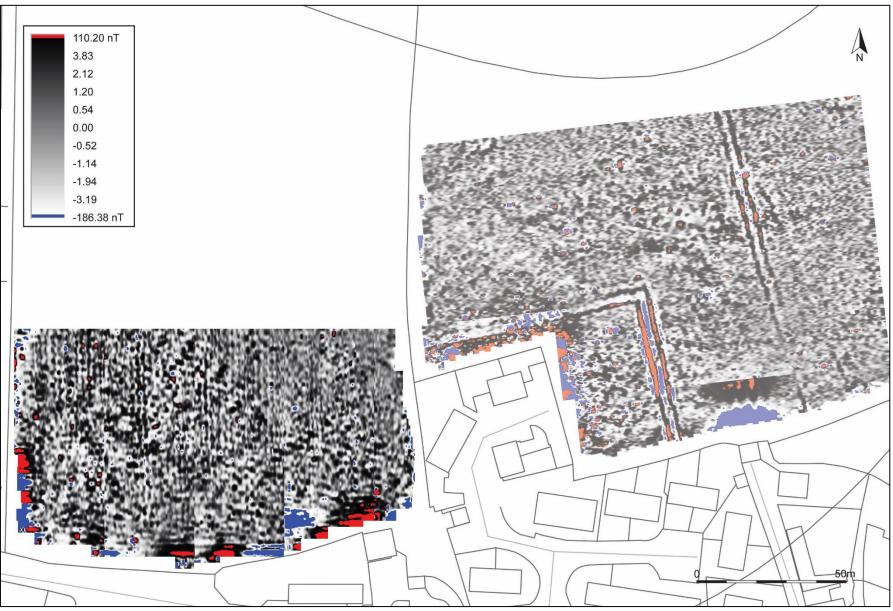


FIGURE 5: RED-GREY-BLUE SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.

LAND TO THE WEST OF SCHOOL CLOSE, CHAWLEIGH, MID DEVON, DEVON

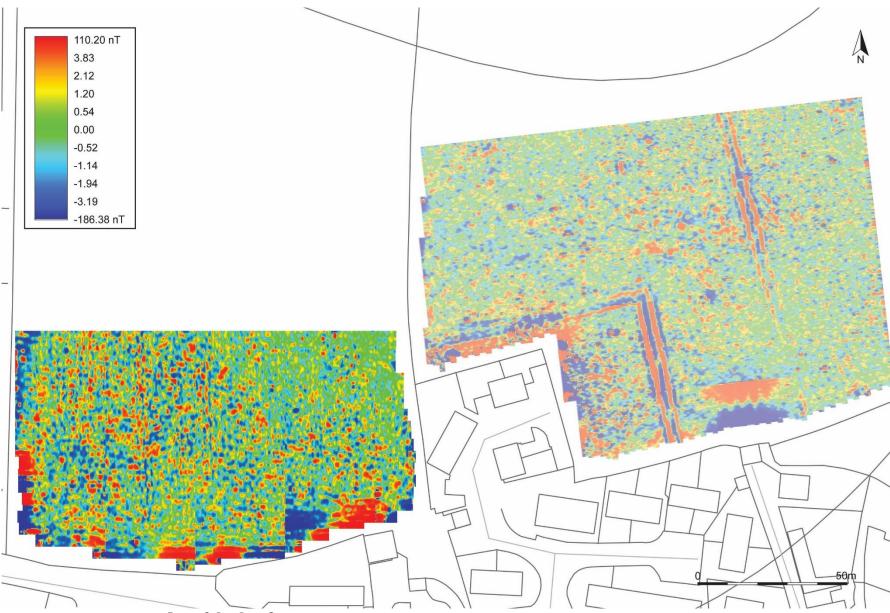


FIGURE 6: RED-BLUE-GREEN SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.

APPENDIX 2: SUPPORTING SOURCES



FIGURE 7: EXTRACT FROM THE 1804 SURVEYOR'S DRAFT MAP OF THE SOUTH MOLTON AREA, C.1804 (BL).

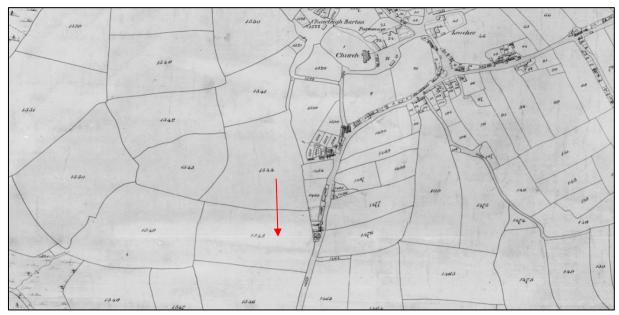


FIGURE 8: EXTRACT FROM THE CHAWLEIGH TITHE MAP, 1848; THE APPROXIMATE LOCATION OF THE SITE IS INDICATED (DHC).

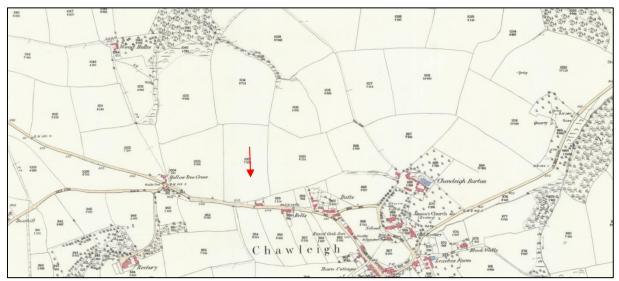


FIGURE 9: EXTRACT FROM THE ORDNANCE SURVEY 1ST EDITION, 25 INCH SERIES, PUBLISHED 1889; THE SITE IS INDICATED (NLS).

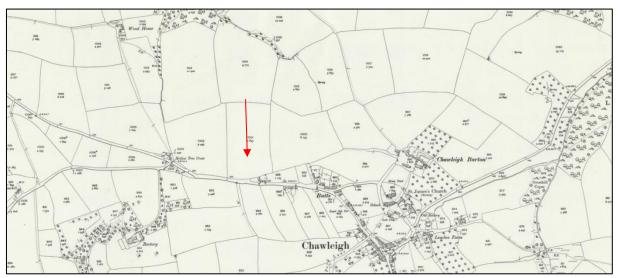


FIGURE 10: EXTRACT FROM THE ORDNANCE SURVEY 2ND EDITION, 25 INCH SERIES, PUBLISHED 1905; THE SITE IS INDICATED (NLS).

APPENDIX 3: SUPPORTING PHOTOGRAPHS



1. VIEW ALONG THE SOUTHERN BOUNDARY OF THE SITE, TOWARDS SCHOOL CLOSE; VIEWED FROM THE WEST (NO SCALE).



2. VIEW ACROSS SITE; VIEWED FROM THE SOUTH-WEST (NO SCALE).



3. VIEW ACROSS THE WESTERN PORTION OF THE SITE; VIEWED FROM THE SOUTH (NO SCALE).



4. VIEW ALONG THE WESTERN BOUNDARY OF THE SITE; VIEWED FROM THE SOUTH (NO SCALE).



5. VIEW ACROSS THE SITE TOWARDS SCHOOL CLOSE; VIEWED FROM THE WEST (NO SCALE).



6. VIEW ACROSS THE SITE TOWARDS SCHOOL CLOSE; VIEWED FROM THE NORTH-WEST (NO SCALE).



7. VIEW TOWARDS THE ENTRANCE OF THE SITE; VIEWED FROM THE NORTH (NO SCALE).



8. VIEW OF ST JAMES'S CHURCH; VIEWED FROM THE SOUTH-SOUTH-EAST (NO SCALE).



9. VIEW OF ST JAMES'S CHURCH; VIEWED FROM THE SOUTH-EAST (NO SCALE).



10. VIEW OF THE NORTH-WEST ENTRANCE OF THE CHURCHYARD; VIEWED FROM THE NORTH-WEST (NO SCALE).



11. EARTHWORKS DETAIL AT THE CASTLE AT STONE BARTON; VIEWED FROM THE SOUTH-EAST (NO SCALE).



12. EARTHWORK DETAIL OF STONE BARTON CASTLE, LOOKING TOWARDS THE SITE; VIEWED FROM THE SOUTH (NO SCALE).



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