

Plate 4: 2007 satellite image of Saxon cemetery

- 5.36 The most notable instance of nearby medieval archaeological remains comprises the site of a Saxon cemetery approximately 170m north of the site (HER ref. MKE39769). Approximately 50 graves, mostly aligned on a NE-SW axis can be seen on a satellite image of the area from 2007 (Plate 4). A smaller ring ditch contained within the larger, (presumably Bronze Age) ring ditch may also be associated with the later, Saxon activity.
- 5.37 A number of early medieval and medieval findspots are also recorded in this location, although these locations are approximate rather than their true find location. These finds comprise:

- A sherd of early medieval pottery (HER ref. MKE7394);
- An early medieval glass jar found in 1970 (HER ref. MKE7395);
- A bronze key dating to the 14th century (HER ref. MKE7396); and
- An Anglo-Saxon silver penny from the late 8th century (HER ref. MKE76459);
- 5.38 A second instance of Anglo-Saxon burial practice is recorded between 140m and 180m east of the site during various quarrying works and archaeological excavations throughout the 20th century (HER ref. MKE7353, MKE7369). A total of 76 inhumation burials were recorded which contained a wealth of grave goods which demonstrated Scandinavian and Continental influences. Remains and grave goods in this location were dated to the 6th century and demonstrate the wealth and influence of the area during this period.
- 5.39 A third instance of early medieval burial was recorded approximately 280m north of the site during the construction of a soakaway in 1933 (HER ref. MKE7321). One inhumation burial was determined to be a single Jutish (modern Denmark/Germany) male buried with an iron spear and knife. A second inhumation of a female included grave goods of a 6th-century silver gilt brooch, a bead necklace, an iron buckle and belt fitting. A third skeleton of an older male was also recorded with no mention of grave goods.

- 5.40 An isolated early medieval inhumation of a male was found in 1939 c.350m northeast of the site during the construction of an air raid shelter (HER ref. MKE7322). No associated grave goods were found although, based on proximity to other burials, this burial was dated to the early medieval period.
- 5.41 The remaining early medieval and medieval dispersed throughout the 500m study area are largely composed of chance spotfinds or found through metal detecting. A full list of early medieval and medieval finds can be found in *Appendix 1* of this report.
- 5.42 Again, no anomalies suggestive of Early Medieval or Medieval activity were detected by the geophysical survey of 2017 (see Appendix 3) which covered the site.

Post-medieval (1540 - 1900) and Modern (1901 - present)

Site

5.43 No post-medieval or modern archaeological remains have been identified within the proposed development site from HER datasets. Geophysical survey within the site carried out in 2017 showed historic ploughing trends, likely modern in origin, within the Site's southern extent (see Appendix 3). Ploughing trends in the northern extent of the Site represent two differing alignments which do not respect any known historic boundaries.

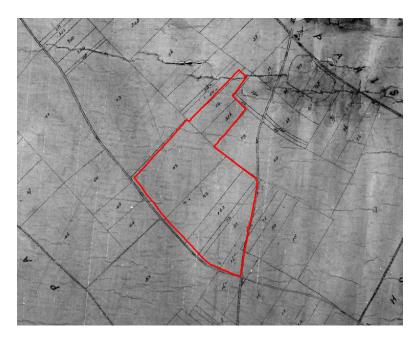


Plate 5: Great Mongeham Tithe Map of 1839

5.44 The site is depicted on the Great Mongeham Tithe Map of 1839 (Plate 5). At this time, the site comprised eight parcels of land all of which are recorded under different owners and tenants in the tithe map's accompanying apportionment. The apportionment also details the site's use during this time, which was entirely arable during the earlier 19th century.

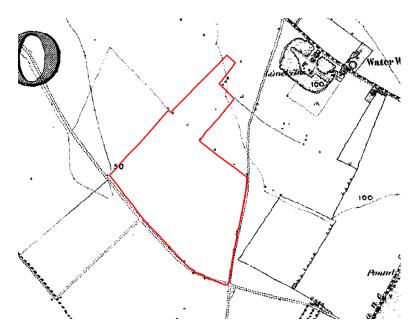


Plate 6: 1877 Ordnance Survey Map

5.45 The Ordnance Survey map of 1877 shows the widespread removal of field boundaries within the site and the surrounding area (Plate 6). The surrounds of the site remained largely undeveloped beyond an area of quarrying and water works to the northeast.

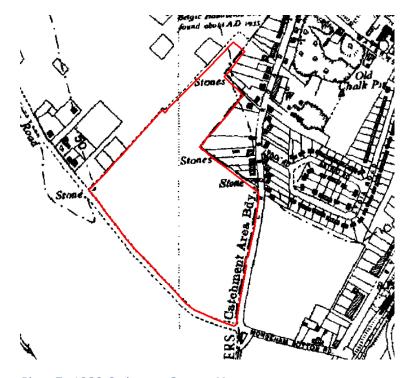


Plate 7: 1938 Ordnance Survey Map

5.46 The 1938 Ordnance Survey map shows the establishment of the site's external boundaries, which were largely formed by development off Cross Road and Ellens Road (Plate 7). Little change is recorded within the site during the latter half of the 20th century (Plate 8 and Plate 9). The western extent of the site appears to have been separated from the site and allowed to become overgrown from the early 21st century.



Plate 8: 1960 aerial photograph of the site

Study Area

5.47 The nearest instance of post-medieval and modern activity to the Site comprises the site of an outfarm immediately south of the site on the opposite side of Ellens Road (HER ref. MKE87039). A barn without any associated yard, related to Church Farm, is recorded in this location in the early 19th century. The outfarm must have been demolished during the first half of the 19th century as it does not appear on the Great Mongeham Tithe map of 1839.



Plate 9: 2003 satellite image of the site

- 5.48 The proposed development site abuts the southern extent of Mill Hill Miners village (HER ref. MKE97810). The village was purpose built in 1929 to house miners working at the Snowdown and Betteshanger mines. A total of 950 houses, as well as social and sports facilities, were constructed to house the mine workers.
- 5.49 The site of a brickworks identified from historic mapping and operating during the early 20th century is recorded approximately 280m south of the Site (HER ref. MKE16224).
- 5.50 The route of the Buckland junction and Deal Railway, as well as Walmer Station have been identified by the Historic

- Environment Record. These features are located approximately 250m east of the site and constructed in 1881. The railway line connects Dover and Deal.
- 5.51 The site of a World War II fougasse (a form of flame trap), was located c.490m east of the proposed development site. Fougasse were constructed in Britain in response to increasing threat of invasion during Operation Sea Lion. Only one of the two walls which formed part of the trap is still extant.
- 5.52 Other features recorded within the 500m study area are largely related to the agricultural use of the area during the post-medieval and modern period, prior to wide scale development around Mill Hill. These comprise:
 - Two instances of lime kilns: one c.140m east of the Site (HER ref. MKE16833) and one approximately 230m north of the Site (HER ref. MKE16206);
 - The site of a windmill constructed in 1855 and demolished in 1929 c.210 northeast of the Site (HER ref. ME114296);
 - A post-medieval boundary ditch recorded c.300m east of the site (HER ref. MKE44075); and
 - The site of coldblow farm a post-medieval farm approximately 400m south of the site (HER erf. MKE88039).
- 5.53 The remaining post-medieval and modern features identified in HER datasets comprise chance findspots and finds recorded through metal-detecting which are primarily recorded to the

south of the Site. A full list of these can be found within *Appendix* 1.

Statement of Archaeological Potential and Significance

- 5.54 The proposed development site is set within a landscape of dense archaeological activity, although this appears to be focussed to the north, northeast and east.
- 5.55 A geophysical survey carried out within the site did not identify any anomalies within the proposed development site that were indicative of any activity beyond modern agricultural activity.
- 5.56 Limited amounts of pre-Bronze Age activity have been recorded in the site's vicinity compared to later periods however occasional finds of generally low heritage value have been recorded. The potential for significant remains dating to this period within the site is therefore low.
- 5.57 Settlement and monumental mortuary structures dating to the Bronze Age have been recorded in the site's general vicinity although none are apparent within the Site itself including within the results of the geophysical survey. The potential Bronze Age features or artefacts within the site is low to moderate, with the potential for significant remains considered to be low due to the absence of features suggestive of such remains in the geophysical survey.
- 5.58 Mill Hill, to the site's east also appears to have been a focus for activity during the Iron Age and Romano-British period. Evidence for settlement activity and mortuary practice during

both of these periods has been recorded a short distance from the site. Again, there is an absence of anomalies indicative of such remains within the site on the geophysical survey. As such, the potential for significant remains of these dates within the site is therefore low.

- 5.59 Several inhumation cemeteries dating to the early medieval period have been recorded within the Site's study area although no evidence currently indicates that such remains are extant within the Site, including the absence of anomalies suggestive of such remains on the geophysical survey. The potential for significant remains of this date is considered to be low.
- 5.60 There is a limited amount of evidence to suggest that the site

was any focus for activity during the medieval, post-medieval or modern periods and it is considered likely that the site was in agricultural use for much of this time. The potential for significant unrecorded remains dating to these periods within the site is low.

Designated Heritage Assets

- 5.61 No designated heritage assets are contained within the site or within the site's 500m study area.
- 5.62 Designated heritage assets in the wider vicinity of the site are considered in further detail in the Setting Assessment Section below.

6. Setting Assessment

- 6.1 Step 1 of the methodology recommended by the Historic England guidance GPA 3 see Methodology above) is to identify which heritage assets might be affected by a proposed development.
- 6.2 Development proposals may adversely impact heritage assets where they remove a feature that contributes to the significance of a heritage asset or where they interfere with an element of a heritage asset's setting that contributes to its significance, such as interrupting a key relationship or a designed view.
- 6.3 Consideration was made as to whether any of the heritage assets present within or beyond the 0.5km study area include the site as part of their setting, and therefore may potentially be affected by the proposed development.

Step 1

- 6.4 Initial consideration was made of assets in four locations in the wider vicinity of the site:
 - Assets at Upper Walmer, to the east;
 - Ripple Windmill to the south;
 - Assets at Ripple, to the south-west; and
 - Assets at Great Mongeham to the north-west.
- 6.5 With regards to Upper Walmer, no intervisibility with any assets

- was seen during the site visit, with the assets screened by topography and intervening development. As such, assets at Upper Walmer were not taken forward for detailed assessment, as no harm is anticipated.
- 6.6 With regards to Ripple Windmill, this was distantly visible from the site (Plate 10), which lies over 1.2km form the asset but, if visible form the asset, the site is anticipated to be a very small part of extensive views, and would be visible in conjunction with existing modern development. No harm is anticipated from the proposed development and this asset has not been taken forward for detailed assessment.



Plate 10: Looking south along the eastern edge of the site to Ripple Windmill

6.7 With regards to assets at Ripple, only very distant and very largely screened views was possible form the site, which were not key views (Plate 11). Any reciprocal views to the site would be distant and seen against a backdrop of existing development. No harm is anticipated and no assets at Ripple have been taken forward for detailed assessment.



Plate 11: Looking west towards Ripple form within the site

6.8 Likewise, distant and largely screened views were possible from within the site to Great Mongeham, including to the upper stages of the church tower (Plate 12). These are not key views.



Plate 12: Looking north-west to Great Mongeham from within the north-western area of the site

6.9 Great Mongeham was visited, and no clear views back to the site could be obtained. No harm is anticipated to assets at Great Mongeham from the proposed development, and they have not been taken forward for detailed assessment.

7. Conclusions

Archaeological Resource

- 7.1 There is limited evidence for any remains dating to the pre-Bronze Age, medieval, post-medieval and modern periods within the proposed development site.
- 7.2 There are high concentrations of recorded settlement and mortuary activity from the Bronze Age, Iron Age, Romano-British period, and early medieval period in the site's vicinity. These archaeological remains have been recorded to the north, northeast and east of the proposed development site.
- 7.3 No evidence currently indicates that any archaeological remains such as those identified above are extant within the Site, including the absence of anomalies suggestive of such remains on a geophysical survey carried out on the site in 2017. The potential for significant archaeological remains of any period to be contained within the site is therefore low.

Setting Assessment

7.4 No harm to any designated heritage assets in the wider vicinity of the site is anticipated through changes in their settings.

Sources

Legislation and Policy Guidance

English Heritage, Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment (London, April 2008).

Historic England, Managing Significance in Decision-Taking in the Historic Environment: Historic Environment Good Practice Advice in Planning: 2 (2nd edition, Swindon, July 2015).

Historic England, The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (2nd edition, Swindon, December 2017).

Historic England, Statements of Heritage Significance: Analysing Significance in Heritage Assets, Historic England Advice Note 12 (Swindon, October 2019).

Ministry of Housing, Communities and Local Government (MHCLG), National Planning Policy Framework (NPPF) (London, February 2019).

Ministry of Housing Communities and Local Government (MHCLG), Planning Practice Guidance: Historic Environment (PPG) (revised edition, 23rd July 2019), https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment.

UK Public General Acts, Ancient Monuments and Archaeological Areas Act 1979.

UK Public General Acts, Planning (Listed Buildings and Conservation Areas) Act 1990.

UK Public General Acts, Planning and Compulsory Purchase Act 2004.

Court and Appeal Decisions

Catesby Estates Ltd. V. Steer [2018] EWCA Civ 1697.

Bedford Borough Council v Secretary of State for Communities and Local Government [2013] EWHC 2847 (Admin).

R (Forge Field Society) v Sevenoaks District Council [2014] EWHC 1895 (Admin).

Palmer v Herefordshire Council & Anor [2016] EWCA Civ 1061.

Barnwell Manor Wind Energy Ltd v (1) East Northamptonshire DC & Others [2014] EWCA Civ 137.

Jones v Mordue [2015] EWCA Civ 1243.

Cartographic Sources

1939	Great Mongeham Tithe Map
1877	Ordnance Survey Map 1:10,560
1938	Ordnance Survey Map 1:10,560

Appendix 1: Gazetteer of Heritage Data

Heritage Data

HER Event Data

Ev UID	Name	Event Type
EKE10083	Negative Watching Brief at 223 St Richards Road, Deal, Kent	WATCHING BRIEF
EKE13277	Desk based assessment of land at Station Road, Walmer	DESK BASED ASSESSMENT
EKE14810	Evaluation Trenching on Land Adjacent to No. 41 Cross Road, Deal	TRIAL TRENCH
EKE14811	Archaeological Evaluation: Rear of 30 Cross Road, Mill Hill, Deal, Kent	TRIAL TRENCH
EKE4197	DOSSETT COURT,UPPER DEAL	
EKE4198	ST RICHARD'S ROAD, MILL HILL	EXCAVATION
EKE4970	1923 excavation off Cross Road, Deal	EXCAVATION
EKE4973	Ripple Gas Pipe Line 1992	WATCHING BRIEF
EKE5206	Evaluation of land to the rear of 14-26 Cross Road, Walmer	EVALUATION
EKE5388	Watching Brief at 47 Thornbridge Road	WATCHING BRIEF
EKE5515	Negative watching brief: Deal, Dover	WATCHING BRIEF
EKE5531	Watching brief at 42 Quern Road, Deal	WATCHING BRIEF
EKE5532	215 St. Richard's Road, Deal	WATCHING BRIEF
EKE5591	Evaluation off Hillcrest Gardens, Mill Hill 2001	EVALUATION

Ev UID	Name	Event Type
EKE6019	1934 Excavation, Mill Hill, Deal	EXCAVATION
EKE9021	Watching brief at Rear of 26 Sydney Road, Walmer	WATCHING BRIEF
EKE9591	Geotechnical survey at The Chalk Pit, Mill Hill Scrapyard, Deal	GEOTECHNICAL SURVEY
EKE5037	Watching Brief for new Deal reservoir; Phase 3, the Pipe-Lines	WATCHING BRIEF
EKE10081	Evaluation of the former Southern Water site, St Richard's Road, Deal	EVALUATION
EKE10082	Excavation at the Nathan Lawrance site adjacent to the Waterworks, St Richards Road, Deal	EXCAVATION
EKE10511	Negative Watching Brief: 26 Sydney Road, Walmer, Deal	WATCHING BRIEF
EKE10541	Evaluation trenching off Lydia Road, Walmer, Deal	EVALUATION
EKE10546	Watching brief off Lydia Road, Walmer, Deal	WATCHING BRIEF
EKE10600	Negative watching brief on land adjacent to 24 Hillcrest Gardens, Mill Hill, Dea	WATCHING BRIEF
EKE10854	Watching brief on 17a Cross Road	WATCHING BRIEF
EKE12344	Evaluation of land off St. Richard's Road, Deal	EVALUATION
EKE12345	Strip, map and sample excavation of land off St. Richard's Road, Deal	STRIP MAP AND SAMPLE
EKE13276	Geophysical survey at Station Road, Walmer, Deal	MAGNETOMETRY SURVEY
EKE16353	Land off Cross Road, Deal, Archaeological appraisal	DESK BASED ASSESSMENT
EKE16354	Land off Cross Road, Deal, geophysical survey	MAGNETOMETRY SURVEY
EKE16355	Land of Cross Road, Deal, Built Heritage Statement	HISTORIC AREA ASSESSMENT
EKE4751	Excavation in St Richard's Road, Mill Hill	EXCAVATION

Ev UID	Name	Event Type
EKE4887	Excavation of land at Walmer Way, St Richard's Road, Deal	EXCAVATION
EKE4953	Excavation at No 17 Cross Road, Deal	
EKE5508	Lydia Road, Deal	EVALUATION
EKE5746	Watching Brief off Hillcrest Gardens, Mill Hill, Deal	WATCHING BRIEF
EKE8829	Watching Brief at St. Mary's Primary School, Deal	WATCHING BRIEF
EKE8830	Evaluation trenching at St. Mary's Primary School, St. Richard's Road, Deal	EVALUATION

HER Monument Data

Mon UID	Pref Ref	Name	Mon Type	Period
MKE15359	TR 35 SE 364	Neolithic pit, 17a Cross Road, Deal	PIT	Late Neolithic
MKE15550	TR 35 SE 365	Medieval pits, Deal	PIT	Medieval
MKE16206	TR 35 SE 378	Site of Post-Med Lime Kiln, St. Richard's Road, Deal	LIME KILN	Post Medieval
MKE16224	TR 35 SE 369	Brickworks, Coldblow	BRICKWORKS	Post Medieval
MKE16833	TR 35 SE 390	Limekiln (site) St richards rd deal	LIME KILN	Post Medieval

Mon UID	Pref Ref	Name	Mon Type	Period
MKE17326	TR 35 SE 394	Walmer Way, Deal, 2000	GULLY; POST HOLE	Unknown
MKE17357	TR 35 SE 396	Site at Cross Road, Mill Hill, Deal		Unknown
MKE17724	TR 35 SE 409	Possible Iron Age pit, 42 Quern Road, Deal	PIT	Iron Age
MKE17744	TR 35 SE 410	Prehistoric or Late Iron Age/Roman feautres off Hillcrest Gardens, Mill Hill, Deal	PIT; GULLY	Early Neolithic to Roman
MKE20492	TR 35 SE 428	Prehistoric flint findspot at St. Mary's RC Primary School, Deal	FINDSPOT	Later Prehistoric
MKE39769	TR 35 SE 429	Cropmarks of a barrow and Saxon cemetery, west of Marlborough Road, Deal	BARROW; CEMETERY; RING DITCH	Early Neolithic to Early Medieval or Anglo-Saxon
MKE42036	TR 35 SE 701	Walmer, St Richards Road Fougasse	MILITARY INSTALLATION	Modern
MKE43005	TR 35 SE 176	Early Iron Age settlement, St Richard's Road, Deal	PIT; POST BUILT STRUCTURE; POST HOLE; POST HOLE	Early Iron Age
MKE43006	TR 35 SE 177	Roman field system, St Richards Road, Deal	FIELD SYSTEM; DITCH; GULLY	Roman
MKE44075	TR 35 SE 834	Possible prehistoric post holes and a tree throw containing a medieval sherd, Lydia Road, Deal	POST HOLE; DITCH	Lower Palaeolithic to Post Medieval
MKE54761	TR 35 SE 836	Roman pits at 17a Cross Road	PIT	Roman
MKE56551	TR 35 SE 837	Walmer Station	RAILWAY STATION	Post Medieval to Modern

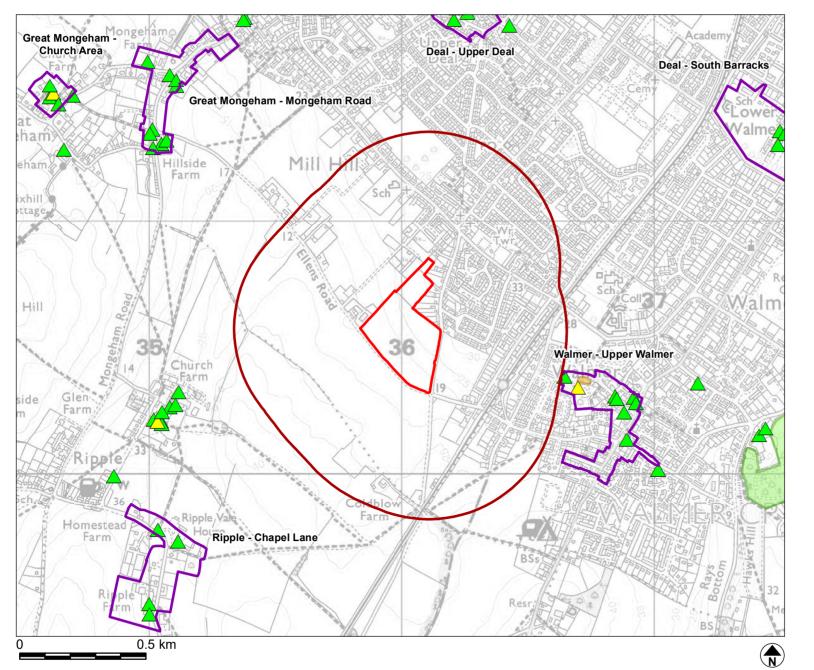
Mon UID	Pref Ref	Name	Mon Type	Period
MKE63471	MKE63471	Medieval silver coin	FINDSPOT	Medieval
MKE64380	MKE64380	Medieval copper alloy key (locking)	FINDSPOT	Medieval
MKE64382	MKE64382	Medieval copper alloy strap end	FINDSPOT	Medieval to Post Medieval
MKE64386	MKE64386	Medieval silver coin	FINDSPOT	Medieval
MKE64840	MKE64840	Medieval copper alloy seal matrix	FINDSPOT	Medieval
MKE65104	MKE65104	Iron Age copper alloy coin	FINDSPOT	Late Iron Age
MKE65847	MKE65847	Iron Age copper alloy coin	FINDSPOT	Iron Age
MKE65968	MKE65968	Iron Age copper alloy coin	FINDSPOT	Iron Age
MKE6653	TR 34 NE 22	Neolithic Finds	FINDSPOT	Neolithic
MKE7313	TR 35 SE 11	Late Bronze Age Settlement on Mill Hill	HEARTH; ENCLOSED HUT CIRCLE SETTLEMENT; PIT	Late Bronze Age
MKE7321	TR 35 SE 19	Early Medieval burials	BURIAL	Early Medieval or Anglo- Saxon
MKE7322	TR 35 SE 20	Early Medieval Inhumation	BURIAL	Early Medieval or Anglo- Saxon
MKE7324	TR 35 SE 22	1st century Roman pottery	CREMATION	Roman
MKE7330	TR 35 SE 28	Roman coin hoard	FINDSPOT	Roman
MKE7352	TR 35 SE 50	Roman head of statuette of Hercules	STATUE	Roman
MKE7353	TR 35 SE 51	Iron Age, Roman and Anglo-Saxon burials, Mill Hill, Deal	BURIAL; BURIAL; BURIAL	Early Iron Age to Early Medieval or Anglo-Saxon

Mon UID	Pref Ref	Name	Mon Type	Period
MKE7354	TR 35 SE 52	Roman rubbish trench (site of)	DITCH	Roman
MKE7355	TR 35 SE 53	Belgic habitation site	SETTLEMENT	Iron Age
MKE7356	TR 35 SE 54	Pre-Roman graves and pottery, Mill Hill, Deal	BURIAL	Unknown
MKE7357	TR 35 SE 55	Early Iron Age earthwork (?) (site of); possible Early Bronze Age barow circle (site of)	ROUND BARROW	Bronze Age
MKE7358	TR 35 SE 56	Possible Neolithic working floor, flakes, potboilers etc	LITHIC WORKING SITE	Neolithic
MKE7359	TR 35 SE 57	Roman burials found	BURIAL	Roman
MKE7360	TR 35 SE 58	Neolithic finds	FINDSPOT	Neolithic
MKE7361	TR 35 SE 59	Iron Age pottery	FINDSPOT	Iron Age
MKE7369	TR 35 SE 67	Anglo-Saxon Cemetery at Mill Hill, Deal	CEMETERY	Early Medieval or Anglo- Saxon
MKE7373	TR 35 SE 71	Chalk figurine, Neolithic and Roman features Mill Hill, Deal	PIT; CEMETERY; DITCH; RITUAL SHAFT	Early Neolithic to Roman
MKE7374	TR 35 SE 72	Romano-British and Iron Age finds	FINDSPOT; FINDSPOT	Early Iron Age to Roman
MKE7375	TR 35 SE 73	Iron Age features and pottery	SETTLEMENT	Iron Age
MKE7384	TR 35 SE 82	Bronze Age burial	BURIAL	Bronze Age
MKE7390	TR 35 SE 88	Iron Age Brooch	FINDSPOT	Iron Age
MKE7394	TR 35 SE 92	Sherd of early medieval pottery	FINDSPOT	Early Medieval or Anglo- Saxon
MKE7395	TR 35 SE 93	Early-medieval jar	FINDSPOT	Early Medieval or Anglo- Saxon

Mon UID	Pref Ref	Name	Mon Type	Period
MKE7396	TR 35 SE 94	Medieval bronze key	FINDSPOT	Medieval
MKE7401	TR 35 SE 99	Iron Age pit, Mill Hill, Deal	PIT	Iron Age
MKE7405	TR 35 SE 104	Quern Built into Wall of 1 Quern Road, Mill Hill	SITE	Late Bronze Age to Early Iron Age
MKE76459	TR 35 SE 859	Anglo-Saxon silver penny, Upper Deal	FINDSPOT	Early Medieval or Anglo- Saxon
MKE80551	TR 35 SE 856	Possible medieval marl pits, St. Richard's Road, Deal	MARL PIT?	Medieval
MKE80552	TR 35 SE 857	Mesolithic/Neolithic worked flints, St. Richard's Road, Deal	FINDSPOT	Early Mesolithic to Late Neolithic
MKE87039	MKE87039	Outfarm north east of Church Farm	FARMSTEAD	Post Medieval
MKE87103	MKE87103	Walmer Court	FARMSTEAD	Post Medieval
MKE88039	MKE88039	Coldblow Farm	FARMSTEAD	Post Medieval
MKE90880	TR 35 SE 871	Neolithic and Bronze Age worked flints, St Richard's Road, Deal	FINDSPOT	Early Neolithic to Late Bronze Age
MKE91510	TR 34 NE 338	Deal, Walmer, surface find of prehistoric flint coretool in field close to Mayers Rd	FINDSPOT	Prehistoric
MKE91781	TR 35 SE 891	Plaque on 20 St Richard's Road, Deal, kent		Unknown
MKE95358	MKE95358	Post Medieval Silver coin	FINDSPOT	Post Medieval
MKE101570	MKE101570	POST MEDIEVAL Silver SEAL MATRIX	FINDSPOT	Post Medieval
MKE101756	MKE101756	ROMAN Base Silver COIN	FINDSPOT	Roman

Mon UID	Pref Ref	Name	Mon Type	Period
MKE101843	MKE101843	ROMAN Copper alloy COIN	FINDSPOT	Roman
MKE101879	MKE101879	POST MEDIEVAL Lead Alloy TOKEN	FINDSPOT	Medieval to Post Medieval
MKE101880	MKE101880	EARLY MEDIEVAL Copper alloy UNIDENTIFIED OBJECT	FINDSPOT	Early Medieval or Anglo- Saxon to Medieval
MKE101907	MKE101907	UNKNOWN UNIDENTIFIED OBJECT	FINDSPOT	Unknown
MKE101909	MKE101909	MEDIEVAL Copper alloy BUCKLE	FINDSPOT	Medieval
MKE101912	MKE101912	POST MEDIEVAL Gold FINGER RING	FINDSPOT	Post Medieval
MKE101922	MKE101922	MEDIEVAL Copper alloy VESSEL	FINDSPOT	Medieval
MKE101923	MKE101923	UNKNOWN Lead Alloy WEIGHT	FINDSPOT	Unknown
MKE108629	MKE108629	Medieval lead weight	FINDSPOT	Medieval to Post Medieval
MKE113180	MKE113180	ceramic vessel	FINDSPOT	Unknown
MKE113232	MKE113232	hoard	FINDSPOT	Unknown
MKE114296	TR 35 SE 929	Upper Deal Mill	WINDMILL	Post Medieval to Modern
MKE114296	TR 35 SE 929	Upper Deal Mill	WINDMILL	Post Medieval to Modern
MKE97810	TR 35 SE 896	Mill Hill Miners village.	WORKERS VILLAGE	Modern
MKE56553	TR 34 NW 301	Buckland Junction & Deal Railway	RAILWAY	Post Medieval to Modern

Appendix 2: Figures



KEY Site 500m Study Area **Scheduled Monuments** Registered Park & Garden **Conservation Areas Listed Buildings** Grade

Revisions: First Issue- 14/07/2021 RGO

Figure 1: Designated **Heritage Assets**

Land West of Cross Road, Deal

Client: Gladman Developments Ltd

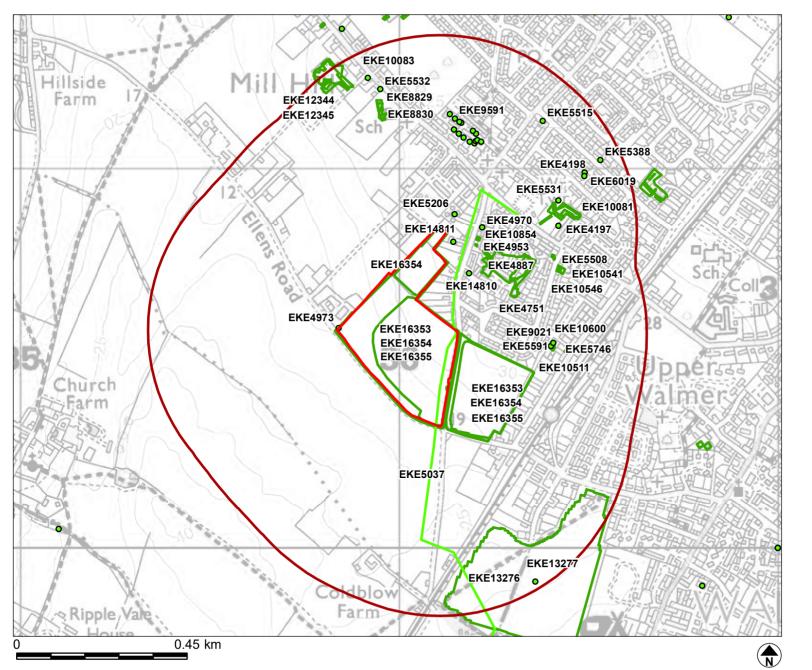
DRWG No: P19-1184 Sheet No: - REV: -

Drawn by: RGO

Approved by: GS

Date: 14/07/2021







Revisions: First Issue- 14/07/2021 RGO

Figure 2: HER 'Events'

Land West of Cross Road, Deal

Client: Gladman Developments Ltd

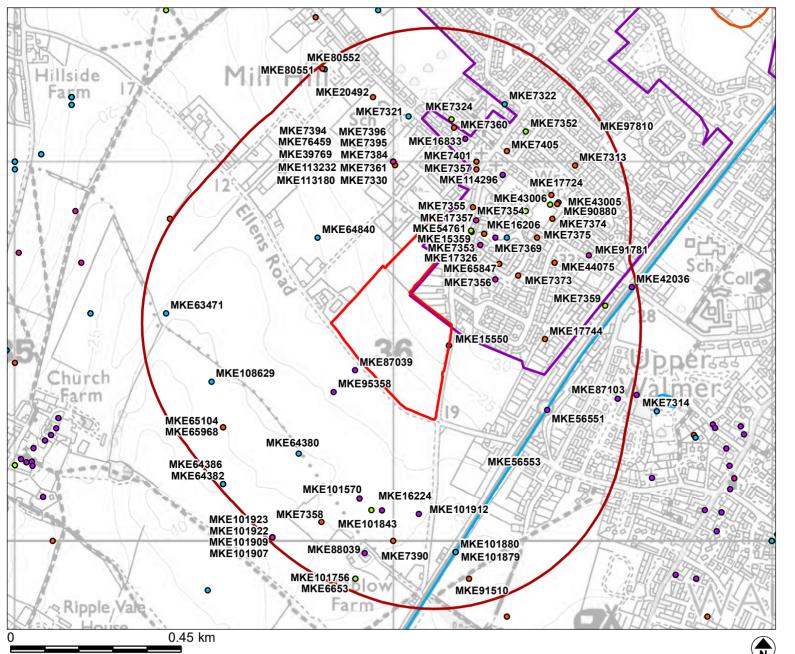
DRWG No: P19-1184 Sheet No: - REV: -

Drawn by: RGO

Approved by: GS

Date: 14/07/2021







Revisions:

First Issue- 14/07/2021 RGO

Figure 3: HER 'Monuments'

Land West of Cross Road, Deal

Client: Gladman Developments Ltd

DRWG No: P19-1184 Sheet No: - REV: -

Drawn by: RGO Approved by: GS

Date: 14/07/2021



Appendix 3: Geophysical Survey Report





Geophysical Survey Reportof

Land at Cross Road

Deal, Kent

For WYG

On Behalf Of Gladman Developments

Magnitude Surveys Ref: MSTR121

April 2017



Unit 17, Commerce Court

Challenge Way

Bradford

BD4 8NW

01274 926020

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06 April 2017

Abstract

Magnitude Surveys was commissioned to assess the subsurface archaeological potential of a c. 11.9ha area of land at Cross Road, Deal, Kent. A fluxgate gradiometer survey was successfully completed and no anomalies of probable or possible archaeological origin have been identified. The geophysical results primarily reflect agricultural activity and natural variations in the soil and geology. Modern activity is reflected in the form of ferrous responses and magnetic disturbance, most prominently visible around the perimeter of the survey areas on the boundaries with roads and modern housing.

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1. Introduction

- 1.1. Magnitude Surveys Ltd (MS) was commissioned by WYG on behalf of Gladman Developments to undertake a geophysical survey on a *c*.11.9ha area of land off Cross Road, Deal, Kent (TR 3602 5055).
- 1.2. The geophysical survey comprised hand pulled, cart-mounted fluxgate gradiometer survey.
- 1.3. The survey was conducted in line with the current best practice guidelines produced by Historic England (David *et al.*, 2008), the Chartered Institute for Archaeologists (CIfA, 2014) and the European Archaeological Council (Schmidt *et al.*, 2015).
- **1.4.** The survey was conducted in accordance with the method statement made available to WYG before survey commencement.
- 1.5. The survey commenced on 28th March and took 2 days to complete.

2. Quality Assurance

- 2.1. Project management, survey work, data processing and report production have been carried out by qualified and professional geophysicists to standards exceeding the current best practice (CIfA, 2014; David *et al.*, 2008, Schmidt *et al.*, 2015).
- 2.2. Magnitude Surveys is a corporate member of ISAP (International Society of Archaeological Prospection).
- 2.3. Director Graeme Attwood is a Member of the Chartered Institute for Archaeologists (CIfA), the chartered UK body for archaeologists, as well as the Secretary of GeoSIG, the CIfA Geophysics Special Interest Group. Director Finnegan Pope-Carter is a Fellow of the London Geological Society, the chartered UK body for geophysicists and geologists, as well as a member of GeoSIG, the CIfA Geophysics Special Interest Group. Director Chrys Harris has a PhD in archaeological geophysics from the University of Bradford.
- 2.4. All MS managers have postgraduate qualifications in archaeological geophysics. All MS field staff have relevant archaeology or geophysics degrees and supervisors have at least three years' field experience.

3. Objectives

3.1. The geophysical survey aimed to assess the subsurface archaeological potential of the survey area.

4. Geographic Background

- 4.1. The site is located on the southwestern fringe of Deal, northwest of Walmer railway station and is bisected by Cross Road, which runs north-south through the site (Figure 1). Survey was undertaken across three agricultural fields (Figure 2). An area of mature trees and vegetation on the western area of the site could not be surveyed. The site is bounded to the northeast and southeast by residential properties of Cross Road, Lydia Road and Sydney Road. Arable land continues beyond the site boundary to the southwest.
- 4.2. The underlying geology comprises Margate and Seaford Formation chalk. No superficial deposits are recorded (British Geological Survey, 2017).
- **4.3.** The soils in the western part of site consist of freely draining lime-rich loamy soils; those in the east consist of freely draining lime-rich loamy soils (Soilscapes, 2017).

4.4. Survey considerations:

Survey	Ground Conditions	Further notes:	
Area			
1	Under ankle-high winter wheat crop at time of survey. This area sloped down towards the south.	Bounded on three sides by banks with dense vegetation and on the northeastern side by wood and wire fencing. A footpath runs approximately parallel to the northeastern edge of the survey area.	
2	Under ankle-high winter wheat crop at time of survey. This area sloped down towards the southwest.	Bounded on the west by an area of trees/vegetation. Wood and wire fencing runs along the northeastern edge. Two manholes are located on the southeastern edge of the field, close to the southern corner. A footpath runs around the perimeter. A line of telegraph poles run along Cross Road i.e. along the southeastern edge of the area.	
3	This area is flat and under grass of varying length.	Divided in half on a northeast-southwest axis by wire fencing.	

5. Archaeological Background

- 5.1. The following section summarises the archaeological background of the site and its surrounding landscape, based on an archaeological appraisal by WYG (Skinner, 2017) and a correlating map regression. Within the close vicinity of the survey areas, later Medieval pottery has been recovered in chalk pits off Cross Road (MKE15550). At the southwest edge of the site, a watching brief reported struck flints (EKE4973).
- 5.2. An early Prehistoric flint assemblage (MKE80552) was recovered during archaeological recording work on St Richard's Road to the north of the site; early Neolithic pits (MKE7373) were also identified in the same area. Later Neolithic activity is represented by pits containing various finds (MKE15359) on Cross Road (north of the survey area). Evidence of Bronze Age occupation is also known from the area adjacent to the northeastern extent of the site. Late Prehistoric occupation evidence in the Mill Hill and St Richard's Road areas includes a large number of pits, ditches, postholes and gullies (e.g. MKE7375; MKE43005; MKE17724), a multiperiod complex of such features (MKE7374), and residual finds of pottery (e.g. MKE7361; MKE17744). A chalk shaft (MKE7373) has been excavated to the northeast of site on St Richard's Road and contained a chalk figurine, the 'Deal Man'. Earlier occupation immediately northeast and east of the site appears to continue into the Romano-British period, with evidence for similar cut features and pottery finds (MKE54761; MKE17744) as well as part of a field system (MKE43006). Cremations from this period have been found in the Mill Hill area and close to the abovementioned chalk shaft (MKE7353; MKE7373).
- 5.3. Mill Hill appears to have served as a focus for mortuary activity rather than occupation during the Early Medieval period, with a large number of known burials recorded (e.g. MKE7369; MKE7395). Evidence for Later Medieval occupation in the area is scant, with a small number of findspots distributed in the vicinity of the site (e.g. MKE7396; MKE20492), in addition to the pottery find mentioned in Section 5.1. Walmer Court Manor House is located to the east of site and archaeological investigation revealed the presence of marl pits (MKE80551) to the north.
- 5.4. In the Post-Medieval period, a number of courtyard farms and lime kilns are recorded in the area surrounding the site. The Deal Railway was built to the south of site in 1881. The 1841 Tithe map shows a number of land divisions running across the site, dividing strips of land on a northeast-southwest axis. Cross Road is also marked, as is Allen's Road, which defines the southwestern extent of the site. By the time of the 1872 Ordnance Survey County Series map, most of these strips have been consolidated into larger fields, with a large rectangular enclosure retained in Survey Area 1. This map also depicts a chalk pit and associated lime kiln to the northeast of the site. The chalk pit complex increases in size until the early 20th century, when the survey area became surrounded by housing on the northwest, northeast and southeastern sides. An aerial photograph from 1940 indicates that the site was cultivated, with Area 2 being subdivided into two approximately equal areas on a northwest-southeast alignment and Cross Road running through a second field incorporating Area 1 and the southeasterly part of Area 2. By 1960 these subdivisions have disappeared; however, a small rectangular enclosure is located in the far western corner of Area 2 and a northwest-southeast division runs through Area 1 (Google Earth, 2017).

6. Methodology

6.1. Data Collection

- 6.1.1. Geophysical prospection comprised the magnetic method as described in the following table.
- 6.1.2. Table of survey strategies:

Method	Instrument	Traverse Interval	Sample Interval
Magnetic	Bartington Instruments Grad-13 Digital Three-Axis Gradiometer	1 m	200 Hz reprojected to 0.125 m

- 6.1.3. The magnetic data were collected using MS' bespoke hand-pulled cart system.
 - 6.1.3.1. MS' cart system was comprised of Bartington Instruments Grad 13 Digital Three-Axis Gradiometers. Positional referencing was through a Hemisphere S321 GNSS Smart Antenna RTK GPS outputting in NMEA mode to ensure high positional accuracy of collected measurements. The Hemisphere S321 GNSS Smart Antenna is accurate to 0.008 m + 1 ppm in the horizontal and 0.015 m + 1 ppm in the vertical.
 - 6.1.3.2. Magnetic and GPS data were stored on an SD card within MS' bespoke datalogger. The datalogger was continuously synced, via an in-field Wi-Fi unit, to servers within MS' offices. This allowed for data collection, processing and visualisation to be monitored in real-time as fieldwork was ongoing.
 - 6.1.3.3. Rows of temporary sight markers were established in each survey area to guide the surveyor and ensure full coverage with the cart. Data were collected by traversing the survey area along the longest possible lines, efficient collection and processing.

6.2. Data Processing

6.2.1. Magnetic data were processed in bespoke in-house software produced by MS. Processing steps conform to Historic England's standards for "raw or minimally processed data" (see sect 4.2 in David et al., 2008: 11).

<u>Sensor Calibration</u> – The sensors were calibrated using a bespoke in-house algorithm, which conforms to Olsen et al. (2003).

<u>Zero Median Traverse</u> – The median of each sensor traverse is calculated within a specified range and subtracted from the collected data. This removes striping effects caused by small variations in sensor electronics.

<u>Projection to a Regular Grid</u> – Data collected using RTK GPS positioning requires a uniform grid projection to visualise data. Data are rotated to best fit an orthogonal grid projection and are resampled onto the grid using an inverse distance-weighting algorithm.

<u>Interpolation to Square Pixels</u> — Data are interpolated using a bicubic algorithm to increase the pixel density between sensor traverses. This produces images with square pixels for ease of visualisation.

6.3.Data Visualisation and Interpretation

- 6.3.1. This report presents the gradient of the sensors' total field data as greyscale images. Multiple greyscales images at different plotting ranges have been used for data interpretation. Greyscale images should be viewed alongside the XY trace plot (Figure 7). XY trace plots visualise the magnitude and form of the geophysical response, aiding in anomaly interpretation.
- **6.3.2.** Geophysical results have been interpreted using greyscale images and XY traces in a layered environment, overlaid against open street mapping, satellite imagery, historic mapping and soil and geology mapping. Google Earth (2017) was consulted as well, to compare the results with recent land usages.



7. Results

7.1.Qualification

7.1.1. Geophysical results are not a map of the ground and are instead a direct measurement of subsurface properties. Detecting and mapping features requires that said features have properties that can be measured by the chosen technique(s) and that these properties have sufficient contrast with the background to be identifiable. The interpretation of any identified anomalies is inherently subjective. While the scrutiny of the results is undertaken by qualified, experienced individuals and rigorously checked for quality and consistency, it is often not possible to classify all anomaly sources. Where possible an anomaly source will be identified along with the certainty of the interpretation. The only way to improve the interpretation of results is through a process of comparing excavated results with the geophysical reports. MS actively seek feedback on their reports as well as reports of further work in order to constantly improve our knowledge and service.

7.2.Discussion

- 7.2.1. The geophysical results are presented in consideration with satellite imagery (Figure 5) and historic mapping (Figure 6).
- 7.2.2. The fluxgate gradiometer survey has responded well to the survey area's environment, detecting a range of weak and strong responses from a number of different origins. Agricultural activity is evident across the site in the form of ploughing regimes. Modern activity is represented by strong ferrous responses, both broad dipolar responses and areas of disturbance around the perimeter of survey areas and smaller discrete anomalies scattered across the site. The survey has detected a number of anomalies natural in origin; although, in light of historic mapping evidence for chalk pits/lime burning in the site's wider landscape, some of the large irregularly shaped areas may be the result of similar activities.

7.3. Interpretation

7.3.1. General Statements

- 7.3.1.1. Geophysical anomalies will be discussed broadly as classification types across the survey area. Only anomalies that are distinctive or unusual will be discussed individually.
- 7.3.1.2. **Undetermined** Anomalies are classified as Undetermined when the anomaly origin is ambiguous through the geophysical results and there is no supporting or correlative evidence to warrant a more certain classification. These anomalies are likely to be the result of geological, pedological or agricultural processes--although an archaeological origin cannot be entirely ruled out. Undetermined anomalies are generally not ferrous in nature.
- 7.3.1.1. **Ferrous (Discrete/Spread)** Discrete ferrous-like, dipolar anomalies are likely to be the result of modern metallic disturbance on or near the ground surface. A ferrous spread refers to a concentrated scattering of these discrete, dipolar anomalies. Broad dipolar ferrous responses from modern metallic features, such

as fences, gates, neighbouring buildings and services, may mask any weaker underlying archaeological anomalies should they be present.

7.3.2. Magnetic Results - Specific Anomalies

- 7.3.2.1. Agricultural Parallel, linear anomalies have been detected across all survey areas that are consistent with agricultural activity. Those in Area 1 are aligned on a sub north-south alignment, those in Area 2 on a predominantly northeast-southwest alignment, and those in Area 3 are identifiable on two distinct alignments. The nature and dimensions of these ephemeral responses suggest they reflect relatively modern agricultural events. Indeed, evidence of cultivation on these alignments in Areas 1 and 2 are visible on recent satellite imagery (Figure 5; Google Earth, 2017), but none are visible for Area 3. The trends in Area 3 are unique in comparison to Areas 1 and 2, as they do not conform to alignments parallel with any modern or historic field divisions. Ploughing trends have been indicatively interpreted in Areas 1 and 2 for clarity of interpretation.
- 7.3.2.2. Natural and Undetermined Four large, strongly magnetic amorphous anomalies [1a & 2a], each approximately 35-40m in length, have been detected in Areas 1 and 2 and have been categorised as "Natural" in origin. Faint crop marks are visible coinciding with these anomalies on recent satellite imagery (Google Earth, 2017). [1a & 2a] are likely to represent natural variations within the underlying chalk or soil. An anthropogenic intrusion is considered possible given the presence of 'chalk pits' and lime kilns recorded in the vicinity on historic mapping (Figure 6). These responses could therefore represent the effect of further chalk excavation, but former pits and quarries are typically identifiable as an area of "Ferrous (Spread)/Magnetic Disturbance" due to the deliberate refill of mixed material. A series of enhanced linear and curvilinear responses [1b] extending northwards from [1a] occur in-line with agricultural activity and may reflect the extension of enhanced material along the line of ploughing.

Numerous small, discrete anomalies have been detected across the site and are characteristic of superficial natural variations. These responses have been indicatively classified as "Natural (Strong)" with concentrated areas classified as "Natural (Spread)". It is conceivable some of these responses have an anthropogenic origin; however, these would appear indistinguishable in the magnetic results from those responses produced by natural geology. The small, discrete responses classified as "Undetermined (Strong)" are considered more likely to reflect modern or agricultural processes.

- 7.3.2.3. **Undetermined** Several curvilinear anomalies and linear trends have been detected across the site. They are considered more likely to reflect agricultural and/or modern practices, or natural variations in the soil and geology. However, an archaeological origin cannot be entirely ruled out given the presence of archaeological activity in the wider landscape.
- 7.3.2.4. **Ferrous/Magnetic Disturbance** Broad dipolar ferrous anomalies and strong magnetic disturbances were concentrated around the perimeter of the survey

areas, along the boundaries with modern housing and roads (Figure 5). Many of these responses can be attributed to features noted in Section 4.4, including wire fencing, telegraph poles, and manholes. Area 3 is bisected by a strong ferrous response [3a] that corresponds with the location of a wire fence. In Area 2, a large, discrete area of disturbance in the south-eastern end of site is indicative of the dumping of mixed refuse material. An even distribution of small, discrete ferrous anomalies has been detected across the site, which most likely reflect scattered metallic debris on or near the ground surface.

8. Conclusions

- 8.1. A fluxgate gradiometer survey has been successfully undertaken across the site. The results primarily reflect agricultural activity and natural variations within the soil and geology. Modern activity has been detected as well, but is primarily limited to the edges of the survey areas. No anomalies have been classified as having a probable or possible archaeological origin. However, the detection of a range of different types of anthropogenic and natural responses, weak and strong in magnitude, demonstrate the method has been effective across the site.
- **8.2.** Agricultural activity is demonstrated by ploughing regimes detected on various alignments across the site. The nature of the anomalies suggests these to reflect relatively recent activities.
- 8.3. Variations in the soil and geology have been detected across the site. Four large, distinct responses are more clearly defined and stronger in magnitude than the surrounding material and could be the result of undocumented chalk pits; although the likelihood is that they reflect natural variations within the soil and underlying chalk.
- 8.4. Modern activity is represented by broad ferrous responses, mainly limited to the perimeter of the survey areas. Many of these responses correspond with the presence of items noted during survey, such as wire fencing, telegraph poles and manholes.
- 8.5. A number of curvilinear anomalies and trends of various magnitude have been detected that could not be ascribed a specific origin. These responses are considered to be resultant from a combination of agricultural, modern, or natural processes; although an archaeological origin cannot be entirely ruled out.

9. Archiving

- 9.1. MS maintains an in-house digital archive, which is based on Schmidt and Ernenwein (2013). This stores the collected measurements, minimally processed data, georeferenced and ungeoreferenced images, XY traces and a copy of the final report.
- 9.2. MS contributes all reports to the ADS Grey Literature Library subject to any time embargo dictated by the client.
- 9.3. Whenever possible, MS has a policy of making data available to view in easy to use forms on its website. This can benefit the client by making all of their reports available in a single repository, while also being a useful resource for research. Should a client wish to impose a time embargo on the availability of data, this can be achieved in discussion with MS.

10. Copyright

10.1. Copyright and the intellectual property pertaining to all reports, figures, and datasets produced by Magnitude Services Ltd. is retained by MS. The client is given full licence to use such material for their own purposes. Permission must be sought by any third party wishing to use or reproduce any IP owned by MS.

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