Cotswold Archaeology

Land at Dunsty Hill Farm
Calvert Green
Buckinghamshire

Archaeological Topographic Survey

for
CgMs

on behalf of
Plan 9 Designs Limited

CA Project: MK0035
CA Report: MK0035_1

April 2019

Andover Cirencester Exeter Milton Keynes Suffolk

Land at Dunsty Hill Farm
Calvert Green
Buckinghamshire

Archaeological Topographic Survey

CA Project:MK0035
CA Report: Mk0035_1

Document Control Grid						
Revision	Date	Author	Checked by	Status	Reasons for revision	Approved by
A	24/04/2019	JSJ				

CONTENTS

LIST OF ILLUSTRATIONS

Summary

Project Name: Land at Dunsty Hill Farm
Location: Calvert Green, Buckinghamshire
NGR: 46838 22358
Type: Archaeological Topographic Survey
Date: 11 April 2019
Location of Archive: Buckinghamshire County Museum

An archaeological topographic survey was undertaken by Cotswold Archaeology in April 2019 at Dunsty Hill Farm, Calvert Green. The survey highlighted a system of ridge and furrow cultivation marks which pre-date the 19th century farmstead, and discreet features which were interpreted as watering holes and landscaping associated with the farmstead itself.

1. INTRODUCTION

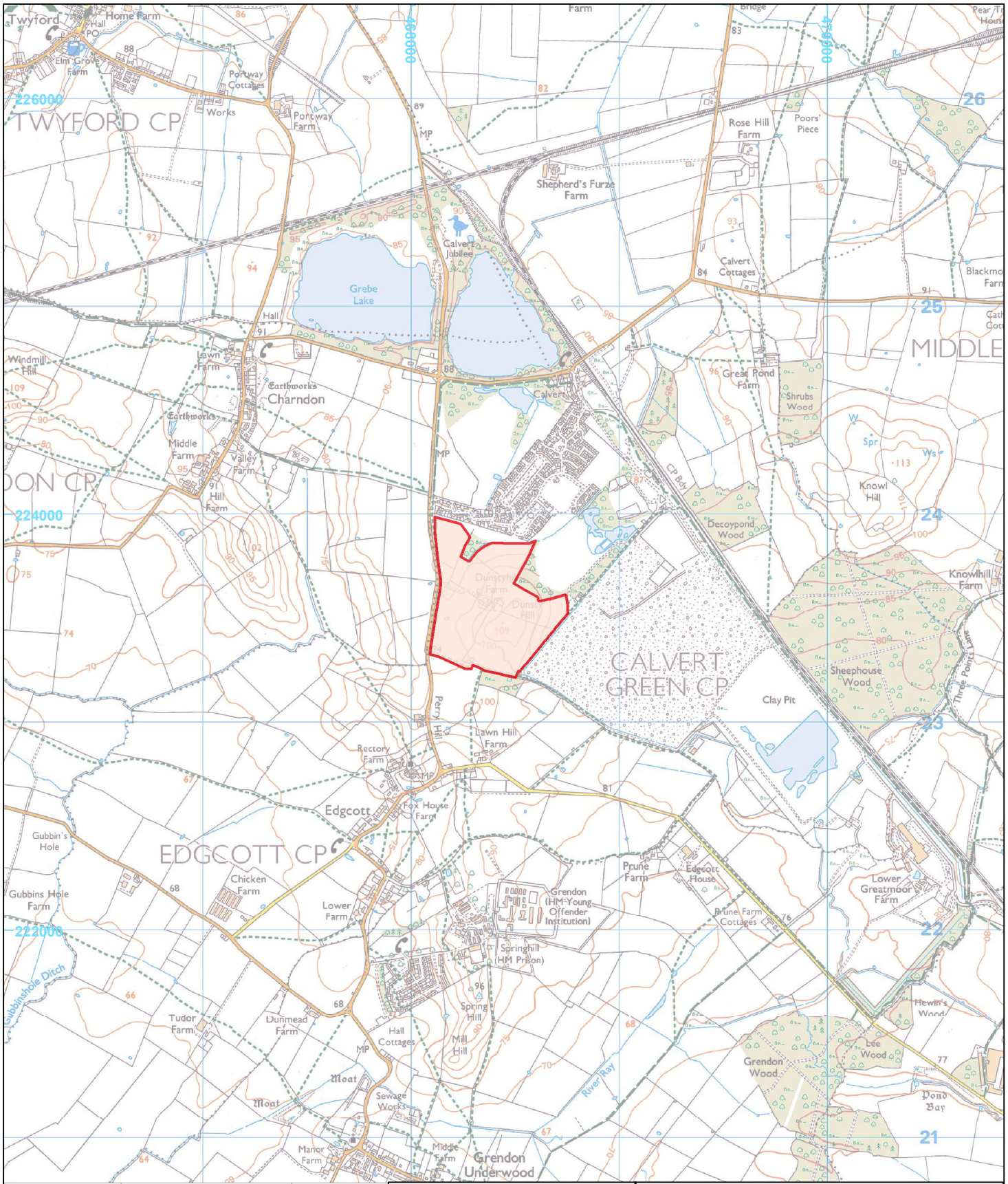
1.1 In April 2019 Cotswold Archaeology (CA) carried out an archaeological topographic survey for CgMs on behalf of Phase 9 Designs Limited at Dunsty Hill Farm (centred at NGR: 46838 22358; Fig. 1). The survey was undertaken to further refine understanding of the spatial arrangement of the cultivation earthworks and historic boundaries, and to record any apparent stratigraphic relationships between earthwork features within the Proposed Development Area (PDA).

1.2 The PDA consists of 31.27 hectares surrounding Dunsty Hill Farm, comprising pasture fields divided by hedgerows. A desk based assessment detailing the archaeological background of the PDA has been produced (CgMs 2018), and the relevant results have been summarised below. The proposed development consists of redevelopment of the PDA, including *primarily residential, educational facilities and sheltered accommodation, with associated areas of landscaping* (CgMs, 2018: 17). The scope of the works, which comprised *further review of ridge and furrow and historic boundaries and the recording of cultivation earthworks* across the entire PDA (31.27 ha) using drone-based photogrammetry Global Navigation Satellite System (GNSS) survey and field notes, was defined during discussions between CgMs and Buckinghamshire County Council's Archaeological Advisor (BCCAA). The discussion was informed by the desk-based assessment prepared by CgMs (2018).

The site

1.3 The PDA is situated to the west of Perry Hill and bounded to the east by quarry workings associated with Lower Greatmoor Farm, and to the north by the modern settlement of Calvert Green on the southern side of Calvert Green (fig 1).

1.4 The underlying bedrock geology of the area comprises deposits of mudstone, primarily the Stewartby Member with small outcrops of Weymouth Member in the immediate vicinity of the farm buildings. There are no recorded superficial deposits within the PDA (CgMs, 2018).



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PROJECT TITLE

Land at Dunsty Hill Farm, Calvert Green Buckinghamshire

FIGURE TITLE

Site location plan

DRAWN BY	JSJ	PROJECT NO.	MK0035	FIGURE NO.
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2. ARCHAEOLOGICAL BACKGROUND

2.1 The archaeological and historical background of the site has been detailed within the Archaeological Desk-Based Assessment (CgMs 2018); the following section is summarised from this source.

Prehistoric and Roman (Pre AD 410)

2.2 There is sparse evidence for prehistoric and Roman period activity within 2 km of the PDA boundary, mainly consisting of chance finds of flint, a Romano-British coin hoard at Chaloner's Wood other single Romano British coins and coin fragments, and a brooch dated to the 1st-2nd century AD). The available evidence would appear to suggest that the PDA is located away from Prehistoric and Roman settlement activity (CgMs, 2018).

Medieval and to Modern (AD 410 – present)

2.3 The village of Charndon and the manorial centre at Edgcott, both referenced in Domesday, are situated to the north-west and south-west of the current PDA respectively. Earthwork evidence suggests that Charndon originally occupied a larger area to the west of the PDA, but suffered a contraction in size during the late medieval period (CgMs 2018). Evidence pre-dating the establishment of the medieval settlements is sparse, consisting of a single Anglo-Saxon stirrup mount. The situation of the PDA relative to Charndon and Edgcott would appear to suggest that it lay within the agricultural landscape associated with those settlements. The preservation of ridge and furrow confirms that the land was under plough prior to being given over to pasture.

2.5 The farm at Dunsty Hill is recorded on Jeffrey's map of Buckinghamshire (1770) suggesting that the land within the PDA was enclosed prior to the mid-18th century. Additions to the farm buildings are evident from the map regression undertaken from the DBA, and show the evolution of the farm up to the present day (CgMs 2018).

3. AIMS AND OBJECTIVES

3.1 The objectives of the archaeological topographic survey are to:

- Further review the ridge and furrow and historic boundaries; and,
- The recording of the cultivation earthworks

3.2 The specific aims of the work are to:

- To define the spatial arrangement of the cultivation earthworks and historic boundaries; and,
- To record any apparent stratigraphic relationships between earthwork features

3.3 Throughout the course of the project, the results will be assessed against the relevant regional research objectives for the medieval period: in *Solent-Thames Research Framework for the Historic Environment: Resource Assessments and Research Agendas* (Munby 2014). Research objectives (references in parenthesis) may include:

- The chronology of development and character of field systems and their relationship to settlement across the region (16.4.1); and,
- Village shrinkage and abandonment; change from hamlets to farmsteads. (16.6.8).

3.4 The research objectives identified above will be revisited/ refined as part of the post-excavation and reporting process with particular regard to *Solent-Thames Research Framework for the Historic Environment: Resource Assessments and Research Agendas* (Munby 2014). Further suitable themes/ contributions will also be identified once the nature and date of any archaeological remains that are encountered have been ascertained.

4. METHODOLOGY

4.1 The fieldwork comprised a targeted photographic and GNSS survey of the extant earthworks, supplementing a topographic survey using drone photogrammetry. The archaeological topographic survey was undertaken throughout the area shown on the attached plan covering 32.27 ha and labelled 'Proposed Development Area (Fig. 2) and surveyed in accordance with *CA Technical Manual 4 Survey Manual*.

4.2 A photogrammetric survey was undertaken using aerial photography captured with an Unmanned Aerial Vehicle (UAV). All available areas of the PDA were recorded with a resolution sufficient to produce deliverables at a resolution of 10cm per pixel.

4.3 All survey was undertaken in line with *Cotswold Archaeology Technical Manual 4: Survey Manual*. A network of 10 control points was set up in a scheme which

provided appropriate coverage across the site. These were marked out with clearly identifiable targets and surveyed using CA's Real Time Kinematic Global Navigation Satellite System (RTK GNSS) survey equipment. The mean error for all control points was 0.019m and the largest error was 0.03m falling within the margins set out in the WSI quality control section (CA 2019). In order to supplement control points, two transects were recorded across the site using RTK GNSS, and used as a reference with which to calculate the accuracy of height values from the final deliverables. The height error in the DEM where it was intersected by these transects was 0.09m, with a maximum error of 0.23 m. The disparity between the GNSS survey and the drone deliverables is explained by the error margin from the GNSS equipment (up to 0.05m) and by the variable length of grass across the site, the impact of these factors on the final product is discussed below.

4.4 Drone photogrammetry survey was supplemented by RTK GNSS survey of the earthworks where necessary in order to highlight stratigraphic relationships and inform a site narrative. Photographs showing general site conditions were taken to inform interpretation, and were supplemented with specific shots showing earthwork features especially where stratigraphic relationships were visible.

5. RESULTS (FIGS 2-7)

5.2 The earliest activity on site was characterised by broad ridge and furrow to the south west of Dunsty Hill Farm (Figure 7). The plough ridges (2) measured on average five metres wide and were aligned roughly south east to north west. The south eastern ends of the ridges were truncated by a later plough headland (7.8), while later field boundary (3) truncated the north western ends of the ridges.

5.3 A later system of narrow ridge and furrow (6, 7, and 8) was recorded to the south and east of the farm buildings with two distinct alignments. These furrows were arranged between headland banks 12, 13 and 14 which were aligned roughly north south. These plough ridges measured approximately 2-3m in width. The eastern extent of ridges 7 and 8 and their associated headland appear to have truncated the earlier ridge system to the west (2), while the construction of the farm buildings removed a large portion from the western edge of area 6 and the southern end of plough headland 13, suggesting that these ploughlands had gone out of use by the mid-19th century.

Figure 2 - 19th Century farm building foundations

5.4 Two large shallow depressions (4 and 9) were recorded, cutting through the terminus of several furrows from areas 2 and 8. These features may have served several purposes, through the current use of the field as pasture would seem to suggest that they all functioned as watering holes for livestock, once the former plough-land was turned over to pasture. Several small pits, still visible as depressions on the local relief model (Fig 6, Fig 7) had been excavated through the plough ridge, and may be associated with waste disposal or similar activities.

5.5 Field boundary ditch 3 was recorded as an extant earthwork during the site visit, and relates to the pattern of 19th century field boundaries already recorded on the 1st Edition Ordnance Survey map of the site (CgMs, 2018).

5.6 A shallow depression (10) was recorded at the eastern edge of area 8, truncating the earlier ridge and furrow. This feature may represent the remains of a former watering hole, but was not visible on the ground.

5.7 A large mound (11) was recorded on the ground in the centre of area 7 obscuring the earlier plough ridges. A large oblong depression visible in the local relief model

was recorded in the centre of the feature. No traces of modern activity or landscaping were recorded in the immediate vicinity, however the stratigraphic relationship between the feature and the earlier plough ridges suggest that it post-dates the 19th century.

5.8 The brick and concrete foundations of a 19th century farm building (15) were recorded in the north eastern corner of the site. This structure is visible on 1st Edition Ordnance Survey mapping of the site (CgMs, 2018).

5.9 The northern edge of the site was characterised by gently sloping ground falling away to the north, and was the only area to contain the remains of modern ploughing (Fig 3), which has removed any pre-existing archaeological earthworks.

6. DISCUSSION

6.1 Three distinct phases of activity have were recorded at Dunsty Hill Farm. The earliest phase, pre-dating the enclosure of the land in the mid-18th century, consisted of broad ridge and furrow, aligned roughly south east to north west in the south western corner of the proposed development area. This field system was then superseded by narrower ridge and furrow aligned between two plough headlands running down the centre of the site. These appear to coincide with the enclosure of the western half of the site by ditch 3 (earlier than 1814 as it is not visible on the 1814 Ordnance Survey drawing, (CgMs, 2018)).

6.2 Finally, during the early 19th century, the land was given over to pasture and the plough lands abandoned. Several of the discreet features, especially the watering holes and mound 11 would appear to date to this period, and have been associated with the management of livestock.

7. CA PROJECT TEAM

Fieldwork was undertaken by Jake Streatfeild-James and Adam Stanford. The report was written by Jake Streatfeild-James. The archive has been compiled by Emily Evans, and prepared for deposition by Hazel O'Neill. The project was managed for CA by Oliver Good.

8. REFERENCES

BGS (British Geological Survey) 2019 *Geology of Britain Viewer* http://maps.bgs.ac.uk/geology_viewer_google/googleviewer.html Accessed 9 March 2019

English Hertage 1991 *Management of Archaeological Projects 2 (MAP2)*

English Hertiage 2017 *Photogrammetric Applications for Cultural Heritage*

English Heritage 2015 *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers Guide*

Cotswold Archaeology 2017 *Technical Manual 4: Survey Manual*

CgMs 2018 *Land at Dunsty Hill Farm, Calvert Green, Buckinghamshire: Desk Based Assessement*

Munby J. 2014 *The Later Medieval Period: Resource Assessment in Solent-Thames Research Framework for the Historic Environment: Resource Assessments and Research Agendas*

N

Legend

Proposed Development Area

0 120m

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PROJECT TITLE

Land at Dunsty Hill Farm, Calvert Green
Buckinghamshire

FIGURE TITLE

Site plan showing Orthophotograph

DRAWN BY	**JSJ**	*PROJECT NO*	**MK0035**	*FIGURE NO.*
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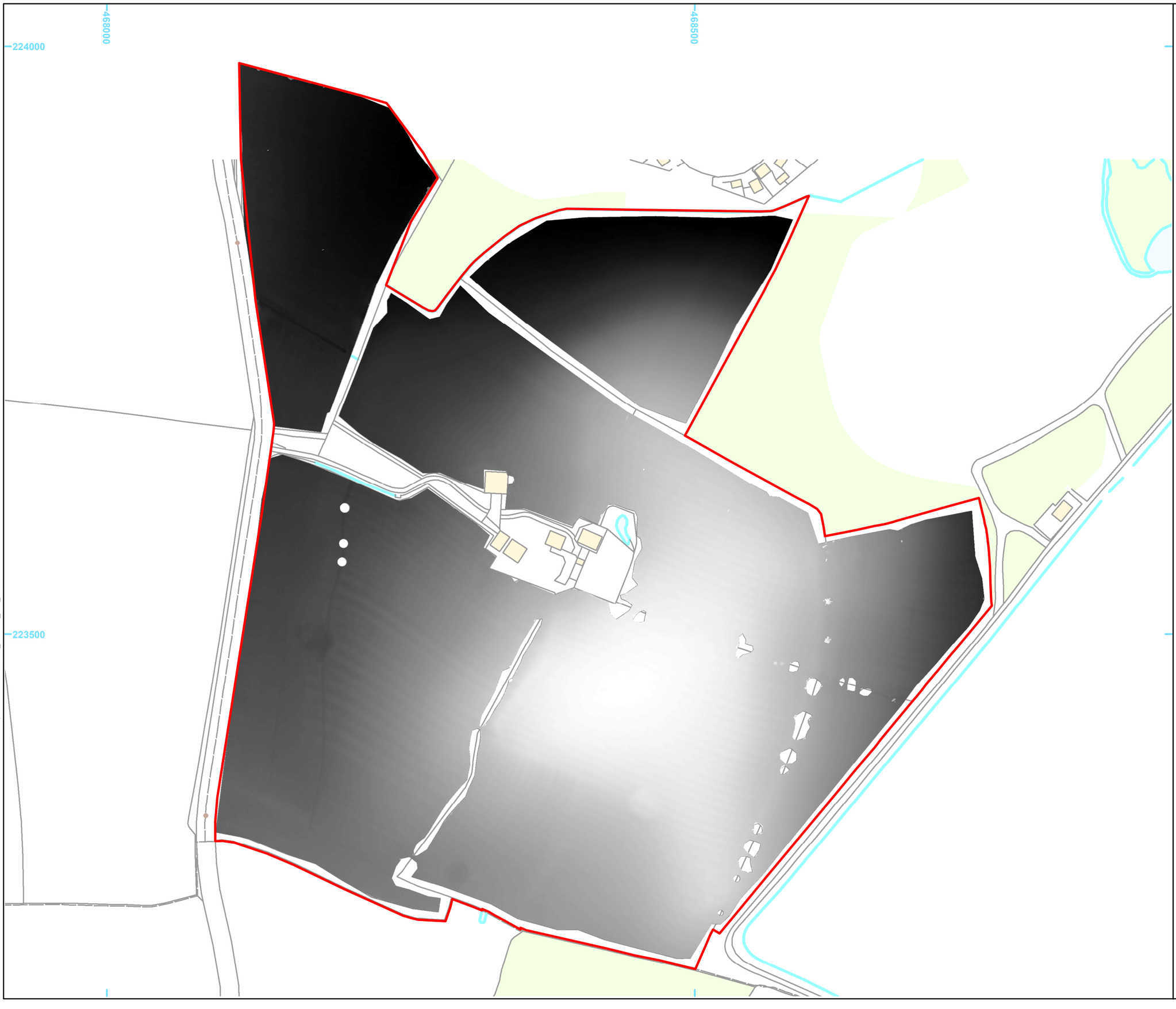

N

Legend

Proposed Development Area

Digital Elevation Model

Height AOD (m)

High : 119.309

Low : 87.3143

0 120m

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PROJECT TITLE

Land at Dunsty Hill Farm, Calvert Green
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FIGURE TITLE

Site plan showing
Digital Elevation Model

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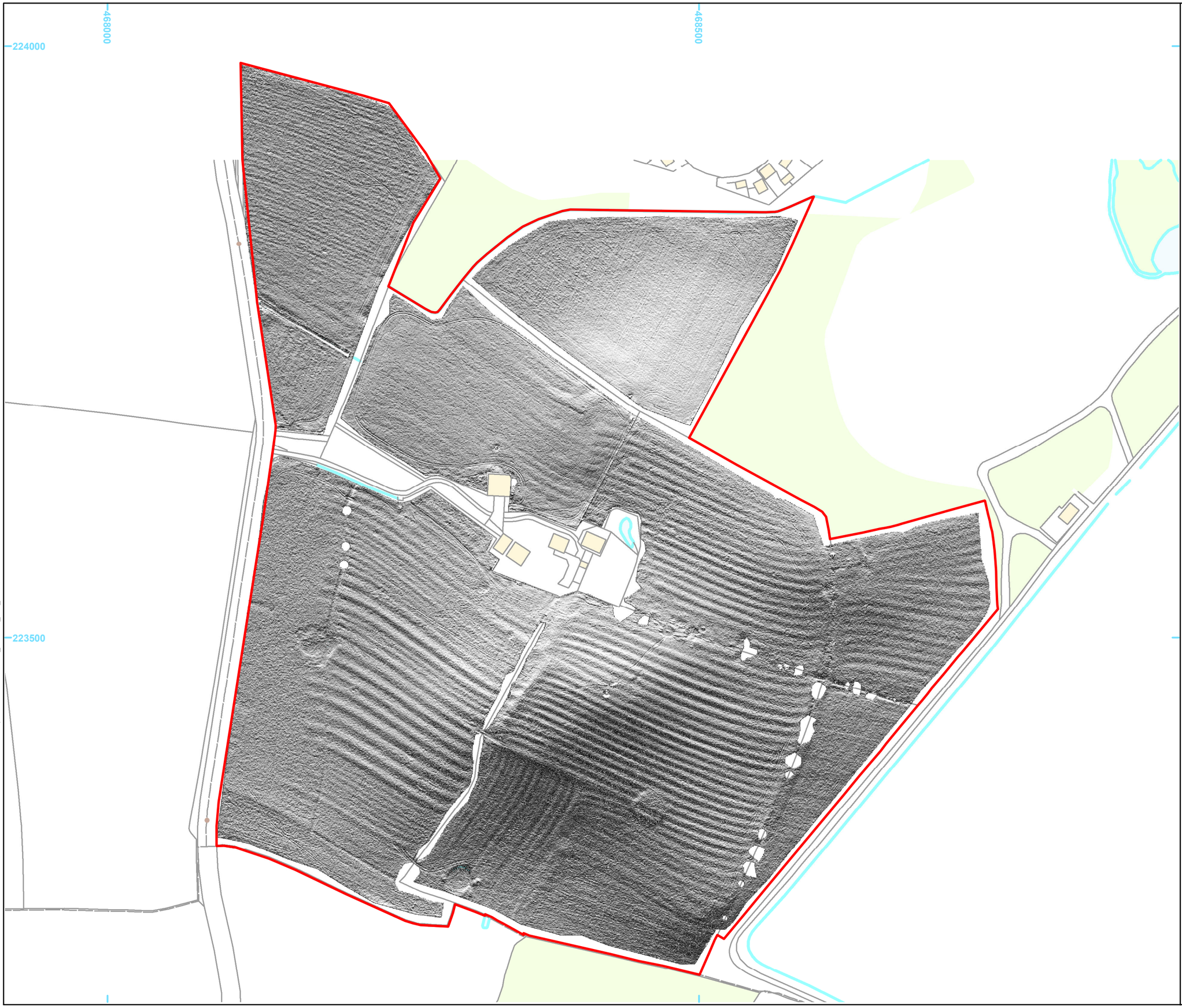

N

Legend

Proposed Development Area

0 120m

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FIGURE TITLE

Site plan showing
Multi-Direction Hillshade

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468000

468500

224000

223500

N

Legend

Proposed Development Area

0 120m

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PROJECT TITLE

Land at Dunsty Hill Farm, Calvert Green
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FIGURE TITLE

Site plan showing Simple Local Relief Model (SLRM)

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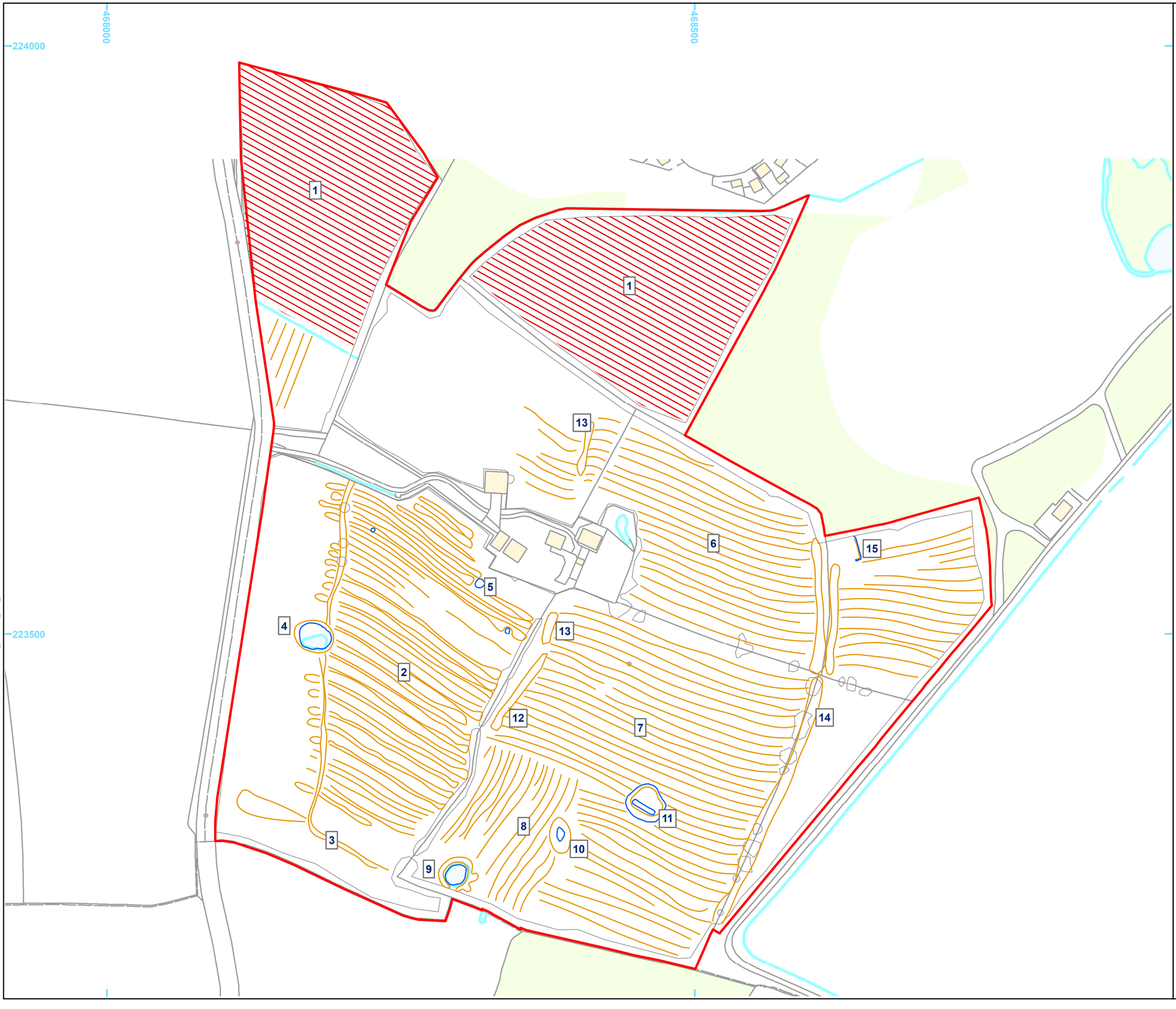

N

Legend

- Proposed Development Area
- Topo - bottom of slope
- Topo - top of slope
- Areas of modern ploughing

0 120m

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PROJECT TITLE

Land at Dunsty Hill Farm, Calvert Green
Buckinghamshire

FIGURE TITLE

Site plan showing interpretation

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APPENDIX A: AERIAL CAM PROCESSING REPORT

Calvert-rpt

Processing Report
18 April 2019

Survey Data

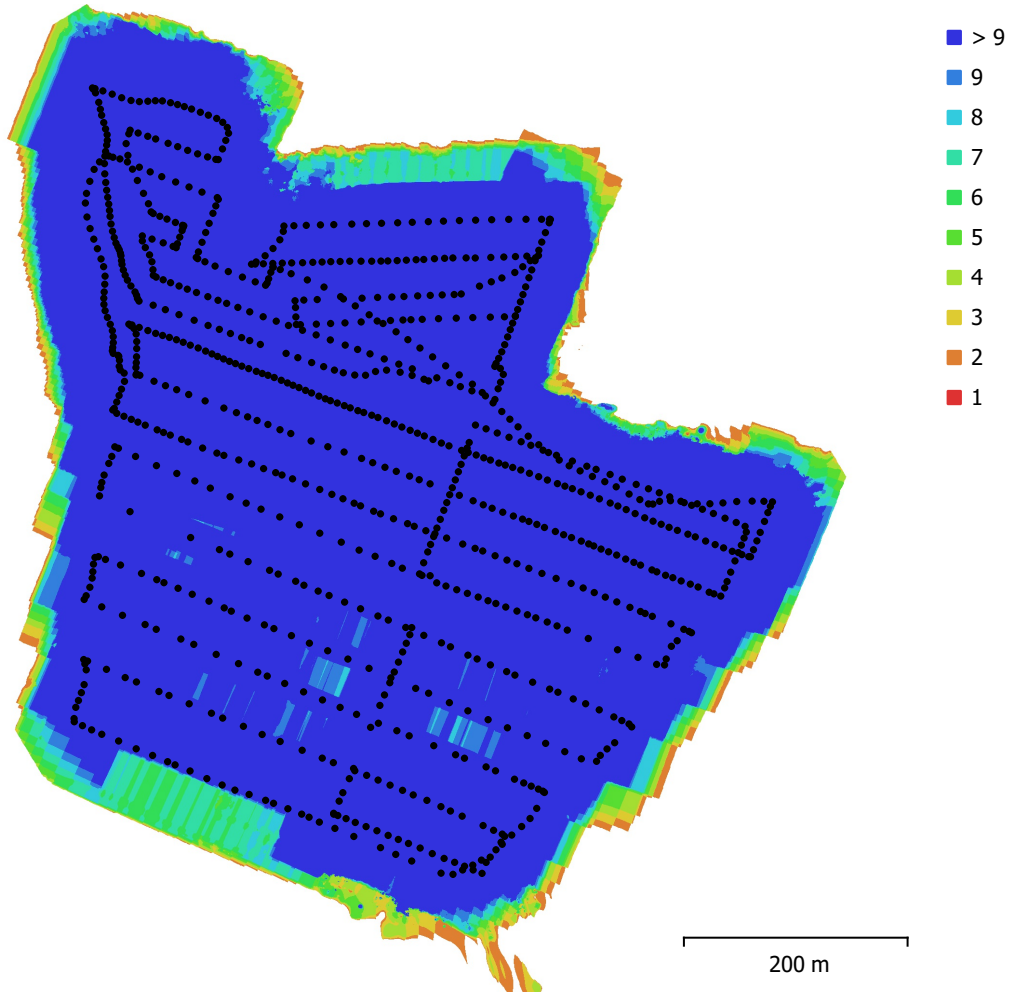

Fig. 1. Camera locations and image overlap.

Number of images:	900	Camera stations:	900
Flying altitude:	102 m	Tie points:	404,796
Ground resolution:	2.53 cm/pix	Projections:	3,038,773
Coverage area:	0.405 km²	Reprojection error:	1.14 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
FC6510 (8.8mm)	4856 x 3640	8.8 mm	2.61 x 2.61 µm	No

Table 1. Cameras.

Camera Calibration

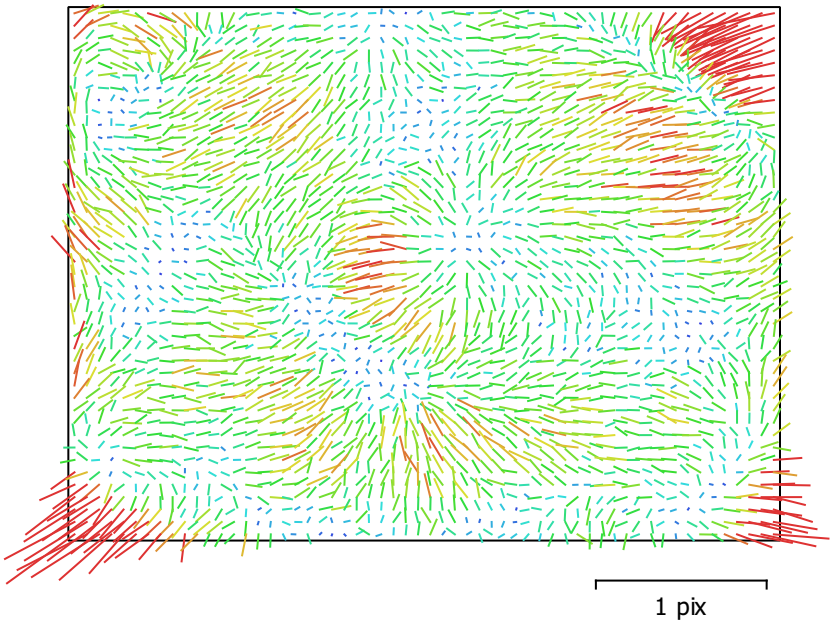

Fig. 2. Image residuals for FC6510 (8.8mm).

FC6510 (8.8mm)

900 images

Type	Resolution	Focal Length	Pixel Size
Frame	**4856 x 3640**	**8.8 mm**	**2.61 x 2.61 µm**

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	**3666.83**	0.61	1.00	-0.18	-0.47	-0.18	0.21	-0.21	-0.05	-0.26
Cx	**-10.0639**	0.082		1.00	0.11	0.03	-0.03	0.03	0.19	0.07
Cy	**-0.179175**	0.087			1.00	0.08	-0.10	0.10	0.05	0.29
K1	**-0.00586197**	2.2e-005				1.00	-0.97	0.92	-0.00	0.05
K2	**0.0195136**	7.4e-005					1.00	-0.98	0.00	-0.06
K3	**-0.0131356**	7.5e-005						1.00	-0.00	0.06
P1	**-0.000552633**	1.4e-006							1.00	0.01
P2	**-0.00197258**	1.2e-006								1.00

Table 2. Calibration coefficients and correlation matrix.

Ground Control Points

Fig. 3. GCP locations and error estimates.
Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.
Estimated GCP locations are marked with a dot or crossing.

Count	X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total (cm)
10	1.52031	1.271	0.41618	1.98161	2.02484

Table 3. Control points RMSE.
X - Easting, Y - Northing, Z - Altitude.

Label	X error (cm)	Y error (cm)	Z error (cm)	Total (cm)	Image (pix)
point 1	-1.25876	-0.422816	-0.911218	1.61045	0.018 (38)
point 2	-0.212584	-0.730882	0.0733589	0.764698	0.006 (26)
point 3	-1.71141	-1.55398	0.00927388	2.31168	0.010 (57)
point 4	0.112949	1.05631	0.209728	1.08284	0.007 (62)
point 5	0.205614	1.69461	-0.341209	1.74081	0.016 (17)
point 6	0.802966	1.26255	0.248602	1.51677	0.011 (27)
point 7	1.96787	-1.53536	-0.042483	2.49633	0.006 (24)
point 8	1.24447	-1.67197	0.773324	2.22311	0.015 (43)
point 9	1.83788	1.44104	-0.171523	2.34175	0.014 (23)
point 10	-3.0093	0.464412	0.211664	3.05227	0.017 (17)
Total	**1.52031**	**1.271**	**0.41618**	**2.02484**	**0.012**

Table 4. Control points.

X - Easting, Y - Northing, Z - Altitude.

Digital Elevation Model

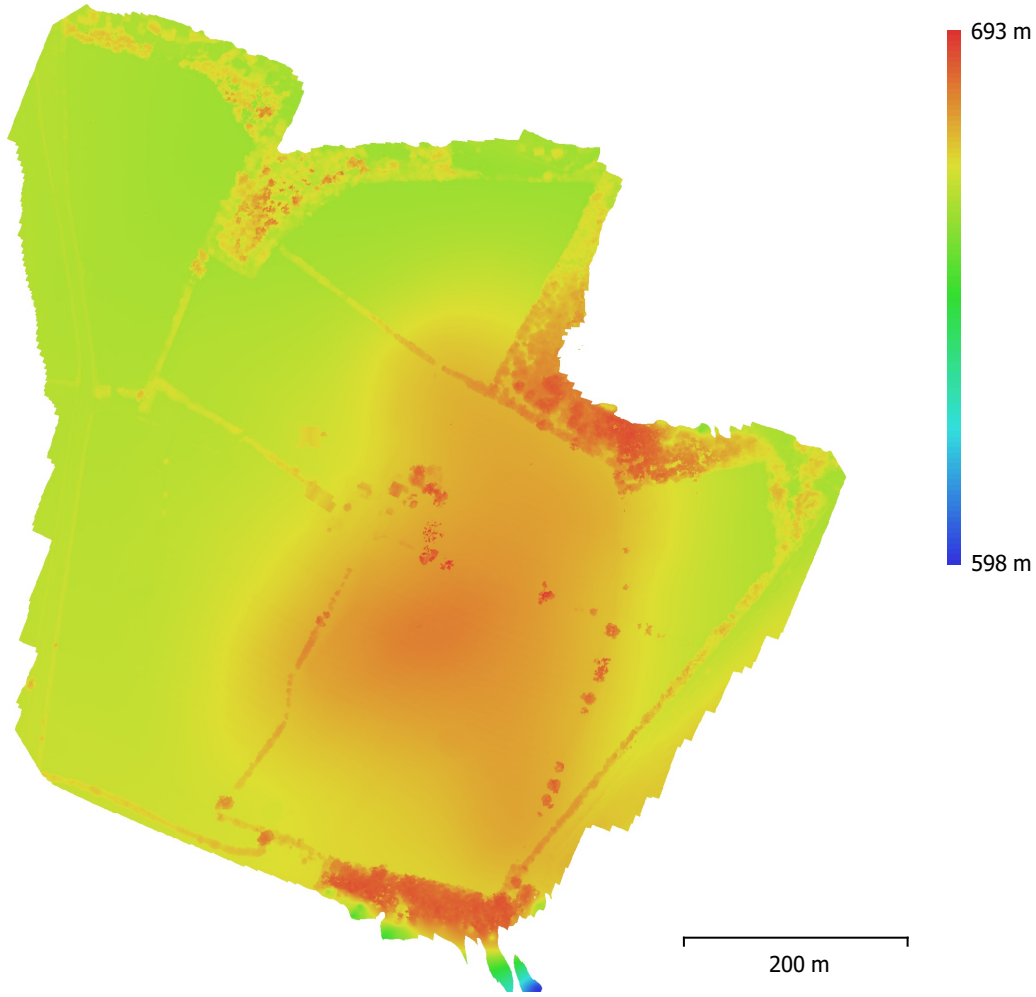

Fig. 4. Reconstructed digital elevation model.

Resolution:	10.1 cm/pix
Point density:	97.5 points/m²

Processing Parameters

General	
Cameras	900
Aligned cameras	900
Markers	10
Coordinate system	OSGB 1936 / British National Grid + ODN height (EPSG::7405)
Rotation angles	Yaw, Pitch, Roll
Point Cloud	
Points	404,796 of 450,654
RMS reprojection error	0.157548 (1.13669 pix)
Max reprojection error	0.57111 (57.3636 pix)
Mean key point size	6.45383 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	8.56452
Alignment parameters	
Accuracy	Medium
Generic preselection	Yes
Reference preselection	Yes
Key point limit	40,000
Tie point limit	4,000
Adaptive camera model fitting	No
Matching time	8 minutes 13 seconds
Alignment time	22 minutes 53 seconds
Optimization parameters	
Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Optimization time	45 seconds
Depth Maps	
Count	900
Reconstruction parameters	
Quality	Medium
Filtering mode	Mild
Processing time	2 hours 13 minutes
Dense Point Cloud	
Points	50,833,442
Point colors	3 bands, uint8
Reconstruction parameters	
Quality	Medium
Depth filtering	Mild
Depth maps generation time	2 hours 13 minutes
Dense cloud generation time	2 hours 24 minutes
Model	
Faces	4,999,999
Vertices	2,509,304
Vertex colors	3 bands, uint8
Reconstruction parameters	
Surface type	Arbitrary
Source data	Dense
Interpolation	Enabled
Quality	Medium

General

Depth filtering	Mild
Face count	5,000,000
Processing time	1 hours 0 minutes

DEM

Size	11,408 x 12,190
Coordinate system	OSGB 1936 / British National Grid + ODN height (EPSG::7405)

Reconstruction parameters

Source data	Dense cloud
Interpolation	Enabled
Processing time	4 minutes 2 seconds

Orthomosaic

Size	29,744 x 34,856
Coordinate system	OSGB 1936 / British National Grid + ODN height (EPSG::7405)
Colors	3 bands, uint8

Reconstruction parameters

Blending mode	Mosaic
Surface	Mesh
Enable hole filling	Yes
Processing time	36 minutes 38 seconds

Software

Version	1.5.1 build 7618
Platform	Windows 64

APPENDIX B: HEIGHT CHECK-POINT TABLE

Point Id	Easting	Northing	GNSS Ortho. Height	CQ 3D	DEM Height	Height Difference
GS0157	468115.453	223984.0789	89.984	0.0181	90.21822	-0.23422
GS0158	468125.88	223969.7057	89.7423	0.0163	89.96925	-0.22695
GS0145	468364.375	223632.6624	95.5947	0.0129	95.80927	-0.21457
GS0141	468417.815	223529.4068	103.9985	0.0202	104.20588	-0.20738
GS0147	468338.939	223662.565	93.7593	0.0152	93.96146	-0.20216
GS0161	468157.591	223918.294	89.1554	0.0147	89.35548	-0.20008
GS0124	468473.763	223378.8799	105.5238	0.0125	105.72083	-0.19703
GS0103	468238.646	223384.7245	95.669	0.0128	95.86491	-0.19591
GS0122	468485.338	223348.5416	104.678	0.0115	104.86788	-0.18988
GS0160	468144.853	223940.0331	89.3767	0.0146	89.56615	-0.18945
GS0146	468353.442	223645.5274	94.8472	0.0137	95.03625	-0.18905
GS0093	468365.66	223423.3992	105.777	0.0118	105.9518	-0.1748
GS0151	468295.273	223714.1102	91.0621	0.0146	91.23612	-0.17402
GS0120	468495.92	223316.7465	104.4481	0.0127	104.62108	-0.17298
GS0150	468306.726	223700.7868	91.6486	0.0161	91.82126	-0.17266
GS0144	468375.654	223619.6707	96.5263	0.0166	96.68959	-0.16329
GS0163	468174.36	223888.5317	88.9165	0.0157	89.07978	-0.16328
GS0143	468385.745	223606.1178	97.4009	0.017	97.56196	-0.16106
GS0162	468165.557	223903.5311	89.0241	0.015	89.18072	-0.15662
GS0127	468457.92	223424.4694	108.1839	0.032	108.33753	-0.15363
GS0119	468502.023	223302.1315	104.4111	0.0116	104.56063	-0.14953
GS0159	468135.306	223954.4509	89.5521	0.0195	89.70152	-0.14942
GS0121	468489.685	223332.7351	104.5801	0.0114	104.72939	-0.14929
GS0123	468479.812	223363.7942	105.0549	0.0147	105.20196	-0.14706
GS0118	468510.287	223285.0445	104.3735	0.0131	104.51725	-0.14375
GS0153	468276.443	223739.5716	90.2039	0.0179	90.34689	-0.14299
GS0074	468614.342	223510.8221	99.4049	0.0138	99.54478	-0.13988
GS0126	468462.314	223408.9305	107.0087	0.0139	107.14826	-0.13956
GS0091	468392.763	223432.2009	107.731	0.019	107.87044	-0.13944
GS0148	468327.87	223676.0278	92.8963	0.0169	93.03407	-0.13777

GS0087	468455.607	223456.7032	109.457	0.0167	109.59383	-0.13683
GS0088	468439.925	223448.8259	109.615	0.0151	109.74902	-0.13402
GS0090	468411.977	223438.4198	108.9917	0.0416	109.12524	-0.13354
GS0154	468266.708	223752.8805	89.7946	0.0162	89.92806	-0.13346
GS0111	468131.81	223345.2808	93.4541	0.0165	93.58574	-0.13164
GS0081	468548.392	223481.147	104.6409	0.0172	104.76785	-0.12695
GS0132	468435.739	223481.5237	108.2453	0.0144	108.3709	-0.1256
GS0164	468183.255	223873.4263	88.7575	0.0159	88.88206	-0.12456
GS0130	468442.363	223465.7384	109.5263	0.0134	109.64999	-0.12369
GS0149	468317.309	223688.1947	92.2921	0.0153	92.41536	-0.12326
GS0166	468200.546	223845.2513	88.5618	0.0124	88.68439	-0.12259
GS0089	468425.07	223442.4416	109.3036	0.0161	109.42477	-0.12117
GS0155	468257.045	223765.9647	89.3723	0.0187	89.49293	-0.12063
GS0165	468192.099	223859.6615	88.6088	0.0148	88.72896	-0.12016
GS0092	468377.302	223427.4703	106.5134	0.0158	106.63348	-0.12008
GS0072	468626.918	223517.1508	98.3183	0.0153	98.43829	-0.11999
GS0112	468115.569	223339.877	93.4925	0.0165	93.61034	-0.11784
GS0094	468353.994	223419.4079	105.2155	0.014	105.33203	-0.11653
GS0125	468467.323	223394.0013	106.1585	0.015	106.27419	-0.11569
GS0073	468619.011	223512.7865	99.1885	0.0121	99.30283	-0.11433
GS0128	468452.386	223440.0413	109.0706	0.014	109.1841	-0.1135
GS0104	468222.976	223379.9223	94.8349	0.0131	94.94206	-0.10716
GS0071	468641.451	223523.9873	97.3692	0.0128	97.46552	-0.09632
GS0099	468304.813	223403.6773	101.2074	0.0155	101.29726	-0.08986
GS0129	468447.521	223454.0715	109.6589	0.0187	109.74772	-0.08882
GS0095	468344.016	223416.2898	104.6282	0.0143	104.716	-0.0878
GS0131	468437.617	223477.2021	108.9399	0.013	109.02757	-0.08767
GS0136	468427.617	223502.9604	106.5095	0.0144	106.59548	-0.08598
GS0106	468190.188	223367.6923	93.5114	0.0145	93.59635	-0.08495
GS0168	468218.628	223814.2772	88.6182	0.0161	88.70187	-0.08367
GS0152	468286.067	223726.3837	90.6215	0.0152	90.70377	-0.08227
GS0078	468594.015	223502.9009	101.5846	0.0133	101.6667	-0.0821
GS0167	468209.136	223830.1174	88.5975	0.019	88.67937	-0.08187

GS0101	468273.496	223394.9787	98.5281	0.0147	98.60728	-0.07918
GS0080	468564.58	223488.0147	103.5335	0.0129	103.61156	-0.07806
GS0086	468472.003	223460.9635	109.1569	0.016	109.23454	-0.07764
GS0096	468333.232	223413.0156	104.0783	0.0131	104.15407	-0.07577
GS0075	468612.095	223509.8925	99.6277	0.0133	99.70186	-0.07416
GS0100	468288.981	223399.4537	99.8014	0.0142	99.87488	-0.07348
GS0156	468247.007	223778.2507	89.0048	0.0476	89.07615	-0.07135
GS0097	468323.056	223409.1403	102.8446	0.0179	102.91239	-0.06779
GS0110	468146.787	223351.5157	93.6721	0.0174	93.73952	-0.06742
GS0082	468532.645	223475.4891	105.897	0.0117	105.96126	-0.06426
GS0102	468255.18	223389.6738	96.8207	0.0129	96.88412	-0.06342
GS0105	468208.646	223375.022	94.1099	0.0143	94.16885	-0.05895
GS0113	468105.566	223335.8587	93.5315	0.0146	93.58971	-0.05821
GS0135	468430.233	223497.2162	107.1048	0.0136	107.16055	-0.05575
GS0077	468604.633	223506.9071	101.0071	0.0105	101.06123	-0.05413
GS0107	468181.518	223364.4207	93.3682	0.0139	93.41906	-0.05086
GS0137	468425.556	223507.4269	106.253	0.0163	106.29436	-0.04136
GS0114	468097.055	223332.5539	93.3727	0.0187	93.4127	-0.04
GS0140	468418.896	223525.6529	104.4539	0.0219	104.49332	-0.03942
GS0138	468423.317	223513.8302	105.5788	0.0146	105.61767	-0.03887
GS0085	468486.645	223463.9653	108.3918	0.0178	108.42829	-0.03649
GS0108	468176.437	223362.4896	93.4286	0.0157	93.46042	-0.03182
GS0117	468516.809	223269.7297	104.0454	0.0157	104.07582	-0.03042
GS0084	468498.692	223466.3704	107.5922	0.0155	107.61574	-0.02354
GS0109	468161.074	223357.9172	93.3645	0.0172	93.38551	-0.02101
GS0083	468517.124	223470.9348	106.8094	0.0179	106.8295	-0.0201
GS0068	468686.184	223546.1545	93.6533	0.0128	93.67089	-0.01759
GS0134	468432.102	223492.5345	107.3175	0.0164	107.33341	-0.01591
GS0079	468579.531	223495.5836	102.5773	0.0129	102.58746	-0.01016
GS0139	468421.029	223519.6875	105.1741	0.0131	105.17525	-0.00115
GS0133	468433.811	223486.9976	108.0948	0.0151	108.09184	0.00296
GS0070	468656.666	223530.7291	96.2245	0.0114	96.21818	0.00632
GS0067	468701.398	223554.9849	92.6921	0.011	92.67456	0.01754

GS0076	468609.307	223508.8066	100.2082	0.0141	100.19032	0.01788
GS0069	468671.912	223537.8137	94.8703	0.0133	94.81659	0.05371
GS0116	468522.545	223255.0731	102.7582	0.0259	102.69759	0.06061
GS0115	468522.555	223255.0584	102.766	0.0283	102.69759	0.06841
GS0065	468725.692	223569.5252	91.3145	0.0126	91.24414	0.07036
GS0066	468716.066	223563.5555	91.8573	0.0124	91.78192	0.07538
GS0116	468522.545	223255.0731	102.7582	0.0259	102.67848	0.07972
GS0115	468522.555	223255.0584	102.766	0.0283	102.67848	0.08752

Mean error (metres) -0.093558654

APPENDIX C: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Land at Dunsty Hill Farm, Calvert Green, Buckinghamshire	
Short description	An archaeological topographic survey was undertaken by Cotswold Archaeology in April 2019 at Dunsty Hill Farm, Calvert Green. The survey highlighted a system of ridge and furrow cultivation marks which pre-date the 19th century farmstead, and discreet features which were interpreted as watering holes and landscaping associated with the farmstead itself.	
Project dates	11th April 2019	
Project type	Archaeological Topographic Survey	
Previous work	Desk Based Assessment (CgMs, 2018)	
Future work	Unknown	
PROJECT LOCATION		
Site Location	Dunsty Hill Farm, Calvert Green, Buckinghamshire	
Study area (M^2/ha)		
Site co-ordinates	46838 22358	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator	Cotswold Archaeology	
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Oliver Good	
Project Supervisor	Jake Streatfeild-James	
MONUMENT TYPE	Cultivation Marks	
SIGNIFICANT FINDS	None	
PROJECT ARCHIVES	Intended final location of archive (museum/Accession no.)	Content (e.g. pottery, animal bone etc)
Physical		For example ceramics, animal bone etc
Paper		Context sheets, matrices etc
Digital		Database, digital photos etc
BIBLIOGRAPHY		
Add reference this report only, for example: CA (Cotswold Archaeology) 2019 *Dunsty Hill Farm, Calvert Green, Buckignhamshire: Archaeological Topographic Survey* CA typescript report **MK0035_1**		

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