



The High Speed Rail (London – West Midlands) (Greatmoor Railway Sidings Etc.) Order

Environmental Statement – technical appendices

Volume 4.7:

Cultural heritage remote sensing survey summary

August 2016

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Department for Transport

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1 Introduction

1.1 Structure of the cultural heritage appendices

1.1.1 The cultural heritage appendices for the Proposed Scheme comprise:

- Volume 4.04: Environmental Statement Technical Appendix: Cultural heritage baseline report;
- Volume 4.05: Environmental Statement Technical Appendix: Gazetteer of heritage assets;
- Volume 4.06: Environmental Statement Technical Appendix: Cultural Heritage Impact assessment; and
- Volume 4.07: Environmental Statement Technical Appendix: Remote Sensing Survey Summary Report (this appendix).

1.1.2 Maps referred to throughout the cultural heritage appendices are shown on Map ES-11 to Map ES-14, in Volume 3 of this ES.

1.1.3 The unique identification numbers 'GRS001' refer to the heritage asset numbers given for the Proposed Scheme. Details on these assets can be found in Volume 4.05: Environmental Statement Technical Appendix: Gazetteer of heritage assets. The Aerial Survey ID refers to the unique ID given to heritage assets identified by the remote sensing reports detailed in the HS2 Phase One ES.

1.2 Surveys undertaken

1.2.1 This appendix contains the results of a fully-integrated remote sensing survey incorporating light detection and ranging (LiDAR), hyperspectral imagery and aerial photographic undertaken 350m either side of the centre line for the HS2 Phase One ES, which are located within 500m of the Proposed Scheme.

1.2.2 The survey results for the study area that fall within the Proposed Scheme study area can be found within survey reports for Community Forum Area 12; Waddesdon and Quainton¹ and Community Forum Area 13; Calvert, Steeple Claydon, Twyford and Chetwode². This report provides summary of the survey results for the proposed survey development study area.

¹ http://webarchive.nationalarchives.gov.uk/20140806173413/http://assets.dft.gov.uk/hs2-environmental-statement/volume-5/cultural-heritage/Vol5_CFA12_Cultural_heritage_Survey_reports_CH-004-012.pdf

² http://webarchive.nationalarchives.gov.uk/20140806173413/http://assets.dft.gov.uk/hs2-environmental-statement/volume-5/cultural-heritage/Vol5_CFA13_Cultural_heritage_Survey_reports_CH-004-013.pdf

2 Methodology

- 2.1.1 Details on the methodology, sources of data, survey limitations and assumptions are detailed in the appendices of the HS2 Phase One ES³, ⁴.

³ http://webarchive.nationalarchives.gov.uk/20140806173413/http://assets.dft.gov.uk/hs2-environmental-statement/volume-5/cultural-heritage/Vol5_CFA12_Cultural_heritage_Survey_reports_CH-004-012.pdf
⁴ http://webarchive.nationalarchives.gov.uk/20140806173413/http://assets.dft.gov.uk/hs2-environmental-statement/volume-5/cultural-heritage/Vol5_CFA13_Cultural_heritage_Survey_reports_CH-004-013.pdf

3 Survey Results

Table 1: Exported GIS attribute data for each transcribed feature, detailing the interpretation applied

Aerial Survey ID	National record of the historic environment	HER reference	Period	Type	Evidence	Source	Description
L11 (GRS022)	n/a	n/a	Medieval, unknown	Drainage ditch/moat/natural feature	Earthwork	HS2 LiDAR 2012	A substantial curvilinear ditched feature of uncertain origin. Considerable width suggests it may be a moat, but it may also be agrarian in origin.
L31 (GSR040)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	HS2 Vertical Photography SP7121 2012	Levelled ridge and furrow is faintly visible in this field as cropmarks on vertical aerial photographs of 2012.
					Earthwork	HS2 LiDAR 2012	Ridge and furrow is very faintly visible as subtle earthworks within this field. Originally one large rectangular field, which was later bisected south-east/north-west by the railway line.
					Cropmark	HS2 Vertical Photography SP7121 2012	Ridge and furrow is visible on vertical aerial photographs of 2012 as cropmarks.
L32 (GRS041)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	NMR RAF-541-479 4240 07-APR-1950	Cropmarks of levelled ridge and furrow are visible on vertical aerial photographs of 1950. They have the characteristic wavy appearance indicative of ridge and furrow earthworks in the process of being ploughed-out.
					Cropmark	NMR OS-76043 238 29-APR-1976 / NMR CAP-ZKNHN 099 14-JAN-1999	Levelled ridge and furrow is very faintly visible as cropmarks on vertical aerial photographs of 1976 and 1999.

Aerial Survey ID	National record of the historic environment	HER reference	Period	Type	Evidence	Source	Description
					Cropmark	NMR CAP-ZKNHN 099 14-JAN-1999	Levelled ridge and furrow is very faintly visible as cropmarks on vertical aerial photographs of 1999.
					Cropmark	NMR RAF-541-479 4277 07-APR-1950	Levelled ridge and furrow is visible on vertical aerial photographs of 1950 as cropmarks.
					Cropmark / destroyed monument	Cambridge University Collection of Aerial Photography RC8HH164 06-MAR-1985 / HS2 LiDAR 2012	Ridge and furrow cropmarks visible on vertical aerial photographs of 1985 as cropmarks; now destroyed by creation of a lake.
L33 (GSR042)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	Cambridge University Collection of Aerial Photography RC8HH212 06-MAR-1985	Levelled ridge and furrow is very faintly visible as cropmarks on vertical aerial photographs of 1985.
					Earthwork / levelled earthwork	NMR RAF-541-479 4240 07-APR-1950 / HS2 LiDAR 2012	Ridge and furrow is visible on vertical aerial photographs of 1950 as earthworks. Apparently levelled by the time of the 2012 LiDAR.

Aerial Survey ID	National record of the historic environment	HER reference	Period	Type	Evidence	Source	Description
					Earthwork / levelled earthwork	NMR RAF-541-479 4240 07-APR-1950	Ridge and furrow is visible on vertical aerial photographs of 1950 as earthworks. Apparently levelled by the time of the 2012 LiDAR.
L34 (GSR043)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	NMR RAF-541-340 4103 26-JUL-1949	Levelled ridge and furrow is visible on vertical aerial photographs of 1949 as cropmarks.
					Earthwork / levelled earthwork	NMR RAF-58-4627 0369 16-AUG-1961 / HS2 LiDAR 2012	Ridge and furrow earthworks visible on vertical aerial photographs of 1961; apparently levelled by the 2012 LiDAR.
L35 (GSR044)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	NMR RAF-541-479 4279 07-APR-1950	Levelled ridge and furrow is visible on vertical aerial photographs of 1950 as cropmarks.
					Earthwork / levelled earthwork	Cambridge University Collection of Aerial Photography RC8HH210 06-MAR-1985 / HS2 LiDAR 2012	Ridge and furrow earthworks visible across this field on vertical aerial photographs of 1985; apparently levelled by the time of the 2012 LiDAR.

Aerial Survey ID	National record of the historic environment	HER reference	Period	Type	Evidence	Source	Description
L36 (GSR045)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Earthwork / levelled earthwork	Cambridge University Collection of Aerial Photography RC8HH210 06- MAR-1985 / HS2 LiDAR 2012	Ridge and furrow earthworks visible across this field on vertical aerial photographs of 1985; apparently levelled by the time of the 2012 LiDAR.
L37 (GSR046)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	NMR RAF-541- 479 4240 07- APR-1950 / HS2 LiDAR 2012	Ridge and furrow is visible on vertical aerial photographs of 1950 as cropmarks. Apparently truncated by a footpath.
					Cropmark	NMR RAF-541- 479 4240 07- APR-1950	Ridge and furrow is visible on vertical aerial photographs of 1950 as cropmarks. Apparently truncated by a footpath.
					Earthwork/ destroyed monument	NMR OS-75312 057 05-JUL-1975 / HS2 LiDAR 2012	Ridge and furrow earthworks visible on vertical aerial photographs of 1975; destroyed by a clay pit by the time of the 2012 LiDAR.
					Earthwork/ destroyed monument	Cambridge University Collection of Aerial Photography RC8HH210 06- MAR-1985 / HS2 LiDAR 2012	Ridge and furrow earthworks visible on vertical aerial photographs of 1985; destroyed by a clay pit by the time of the 2012 LiDAR.

Aerial Survey ID	National record of the historic environment	HER reference	Period	Type	Evidence	Source	Description
L38 (GSR047)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	NMR RAF-541-340 4103 26-JUL-1949	Levelled ridge and furrow is visible on vertical aerial photographs of 1949 as cropmarks.
L39 (GSR048)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	NMR OS-76043 240 29-APR-1976	Levelled ridge and furrow is visible on vertical aerial photographs of 1976 as cropmarks.
L40 (GSR049)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	NMR RAF-541-340 3101 26-JUL-1949	Levelled ridge and furrow is visible on vertical aerial photographs of 1949 as cropmarks.
L41 (GSR050)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Cropmark	NMR RAF-541-340 3101 26-JUL-1949	Levelled ridge and furrow is visible on vertical aerial photographs of 1949 as cropmarks.
						Cambridge University Collection of Aerial Photography RC8HH164 06-MAR-1985	Ridge and furrow is visible on vertical aerial photographs of 1985 as cropmarks. Truncated by railway line.
L42 (GSR051)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Earthwork / levelled earthwork	Cambridge University Collection of Aerial Photography RC8HH164 06-MAR-1985 / HS2 LiDAR 2012	A small patch of the ridge and furrow earthworks within this field was visible on vertical aerial photographs of 1985 but levelled by the time of the 2012 LiDAR. The earthworks in the remainder of the field remain extant.

Aerial Survey ID	National record of the historic environment	HER reference	Period	Type	Evidence	Source	Description
					Earthwork / cropmark	HS2 LiDAR 2012 / HS2 Vertical Photography SP7121 2012	Ridge and furrow is only just visible as faint earthworks across a series of paddocks on the south-east side of Woodlands Farm. Quite clearly visible on the 2012 vertical aerial photographs.
					Earthwork	Pan-Government Agreement SP7121 16-JUN-2003 / HS2 LiDAR 2012	Ridge and furrow is visible as faintly extant earthworks on aerial photography of 2003 and LiDAR of 2012.
L43 (GSR052)	n/a	n/a	Medieval, post medieval	Ridge and furrow	Earthwork / levelled earthwork	Cambridge University Collection of Aerial Photography RC8HH164 06-MAR-1985 / HS2 LiDAR 2012	A small area of ridge and furrow was visible on vertical aerial photographs of 1985 as extant earthworks; apparently levelled by the time of the 2012 LiDAR.
					Earthwork	HS2 LiDAR 2012	Ridge and furrow is very faintly visible as subtle earthworks within this field. Originally one large rectangular field, now bisected south-east/north-west by railway line.