

High Speed Rail (Crewe – Manchester)

Background information and data

Historic environment

BID HE-005-0MA06

MA06: Hulseheath to Manchester Airport

Historic environment remote sensing report

High Speed Rail (Crewe – Manchester)

Background information and data

Historic environment

BID HE-005-0MA06

MA06: Hulseheath to Manchester Airport

Historic environment remote sensing report



Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

High Speed Two (HS2) Limited
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.hs2.org.uk

A report prepared for High Speed Two (HS2) Limited:

ARUP+ ERM | FOSTER + PARTNERS | JACOBS
RAMBOLL | TYPESA | COSTAIN

MWJV

Mott MacDonald | WSP

High Speed Two (HS2) Limited has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the HS2 website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard please contact High Speed Two (HS2) Limited.

© High Speed Two (HS2) Limited, 2022, except where otherwise stated.

Copyright in the typographical arrangement rests with High Speed Two (HS2) Limited.

This information is licensed under the Open Government Licence v3.0. To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/version/3 **OGL** or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: psi@nationalarchives.gsi.gov.uk. Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.



Printed in Great Britain on paper containing 100% recycled fibre.

Contents

| | | |
|----------|--|-----------|
| 1 | Introduction | 2 |
| 2 | Remote sensing | 4 |
| 2.1 | Introduction | 4 |
| 2.2 | Survey objectives | 4 |
| 2.3 | Survey methodology | 5 |
| 3 | Remote sensing survey results | 8 |
| 3.1 | Survey location | 8 |
| 3.2 | Archaeological background | 8 |
| 3.3 | Survey results | 9 |
| 3.4 | Remote sensing survey conclusions | 11 |
| 4 | Gazetteer of identified remote sensing features in MA06 | 13 |
| 5 | List of acronyms | 50 |
| 6 | References | 51 |

Tables

| | |
|---|----|
| Table 1: Gazetteer of identified features in MA06 | 13 |
| Table 2: List of acronyms | 50 |

Figures

| | |
|--|----|
| Figure 1: Remote sensing survey index map (HE-005_MA06) | 52 |
| Figure 2: Remote sensing survey interpretation (HE-005_MA06) | 53 |
| Figure 3: Remote sensing survey interpretation (HE-005_MA06) | 54 |
| Figure 4: Remote sensing survey interpretation (HE-005_MA06) | 55 |
| Figure 5: Remote sensing survey interpretation (HE-005_MA06) | 56 |
| Figure 6: Remote sensing survey interpretation (HE-005_MA06) | 57 |
| Figure 7: Remote sensing survey interpretation (HE-005_MA06) | 58 |
| Figure 8: Remote sensing survey interpretation (HE-005_MA06) | 59 |

1 Introduction

- 1.1.1 This report presents the results of analysis of remote sensing data relating to the historic environment.
- 1.1.2 Baseline data have been collected for the Proposed Scheme in relation to the Hulseheath to Manchester Airport area (MA06).
- 1.1.3 All identified heritage assets discussed in this report are shown in the Volume 5, Historic environment Map Book, Map Series HE-01, HE-02, HE-03¹.
- 1.1.4 The historic environment detailed gazetteer is set out in Appendix A of the Historic environment baseline report (see Background Information Data: BID HE-001-0MA06). It sets out Unique gazetteer identifier (UID) codes for the heritage assets considered in the baseline data; these are used for reference across all the historic environment reports and maps in the Environmental Statement (ES)² and BID reports.
- 1.1.5 The approach to assessing the archaeological potential of the landscape is outlined in the Historic environment summary gazetteer, impact assessment table and archaeological character areas report (HE-002-0MA06³). This breaks the study area down into areas of archaeological character; initially into broad Archaeological Character Areas (ACA), and then more narrowly defined Archaeological Sub-zones (ASZ).
- 1.1.6 The approach used for assessing historic landscape character (HLC) is described in the Historic landscape character areas report (HE-003-0MA06⁴). The approach is used to determine Historic Landscape Character Areas (HLCA). HLCA are areas of coherent or distinctive historic landscape characteristics.
- 1.1.7 Within the historic environment reporting, various reference numbers have been used to provide a unique identifier to the heritage assets, HLCA, ACA/ASZ, geophysical survey anomalies and remote sensing features identified. These unique identifiers are referenced throughout the ES, BID reports and Map Books, and in summary are as follows:

¹ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Volume 5 Historic environment Map Book*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

² High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

³ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Hulseheath to Manchester Airport, Summary gazetteer, impact assessment table and archaeological character areas, Volume 5: Appendix HE-002-0MA06*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

⁴ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Hulseheath to Manchester Airport, Historic landscape character areas, Volume 5: Appendix HE-003-0MA06*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

Background Information and Data

Historic Environment

BID HE-005-0MA06

MA06: Hulseheath to Manchester Airport

Historic environment remote sensing report

- heritage assets have been given a Unique gazetteer identifier (UID), for example MA06_0001. These have been allocated to all heritage assets within the gazetteer of heritage assets, provided in Volume 5: Appendix HE-002-0MA06 (summary gazetteer) and BID HE-001-0MA06 (detailed gazetteer);
- historic landscape character areas have been given a unique identifier, for example MA06_HLCA02. These have been allocated to all HLCA within the historic landscape character assessment, provided in Volume 5: Appendix HE-003-0MA06;
- archaeological character areas and archaeological sub-zones have been given a unique identifier, for example: archaeological character area MA06_AC01; and archaeological sub zone MA06_AC01.002. These have been allocated to all of the assessed archaeological character areas and archaeological sub-zones, provided in Volume 5: Appendix HE-002-0MA06;
- geophysical survey areas and features identified through the geophysical survey have been allocated a unique identifier, for example: geophysical survey area MA06_GP001, and geophysical survey feature MA06_GP001.001. These have been allocated to all of the identified geophysical survey areas and features, provided in BID HE-004-0MA06; and
- features identified through remote sensing have been allocated a unique identified, for example MA06_RS001. These have been allocated to all of the identified remote sensing features, provided in BID HE-005-0MA06.

2 Remote sensing

2.1 Introduction

- 2.1.1 This report sets out the results of a review, and the systematic mapping, recording, analysis and interpretation of potential archaeological sites from aerial photographs and LiDAR⁵ data within the Hulseheath to Manchester Airport area.
- 2.1.2 The remote sensing was undertaken in accordance with the guidance and standards set out in:
- the Historic England standards for aerial investigation and mapping (formerly known as the National Mapping Programme, NMP)⁶; and
 - the Forum on Information Standards in Heritage (FISH) vocabularies⁷.

2.2 Survey objectives

Aims of the survey

- 2.2.1 The aim was to accurately map and record the form and extent of archaeological features visible as cropmarks, soil marks, earthworks or structures in order to inform the assessment of baseline conditions for the historic environment.

Objectives of the survey

- 2.2.2 The results of the survey have been combined with data from other archaeological assessments carried out as part of the project, such as desk-top studies and geophysical surveys, in order to help analyse the archaeological potential of the Proposed Scheme.

⁵ LiDAR (meaning 'light detection and ranging') is a surveying method that measures distance to a target by illuminating the target with pulsed laser light and measuring the reflected pulses with a sensor; this can be used to identify archaeological earthwork evidence.

⁶ Winton, H. (2018), *Standards for Aerial Investigation and Mapping projects*, Historic England internal document.

⁷ FISH (2020), *Heritage Data; Linked Data Vocabularies for Cultural Heritage*. Available online at: <https://www.heritagedata.org/blog/vocabularies-provided/>.

2.3 Survey methodology

2.3.1 This section provides an overview of the survey methods. The aims and general method for the remote sensing assessment are set out in the Generic Written Scheme of Investigation (HE-006-00000⁸).

Data collection

2.3.2 The data collection phase of the survey took place between April 2017 and December 2018. The following sources were consulted:

- historic aerial photographs;
- online aerial and satellite-derived images;
- HS2 vertical aerial photographs;
- Environment Agency vertical aerial photographs;
- HS2 (BLOM Aerofilms) LiDAR data;
- Environment Agency LiDAR data;
- Historic environment record (HER) data;
- National Record of the Historic Environment (NRHE) data;
- National Heritage List for England (NHLE) data; and
- historic cartographic sources.

Data processing

2.3.3 The following processing steps have been carried out on the data used in this survey:

- all spatial data was collated and generated in GIS (Geographic Information System) ArcMap 10.5 using the British National Grid (EPSG: 2770) map projection;
- both the HS2 Ltd and Environment Agency LiDAR datasets were processed using the software Relief Visualisation Toolkit (RVT 1.3) to create eight different advanced visualisation models, prior to their import into GIS ArcMap 10.5;
- the HS2 Ltd and Environment Agency vertical aerial photographic cover was already georeferenced and required no further processing; and
- selected archive aerial photographs were orthorectified (processed to accurately fit the map and terrain) using the software Aerial 5.33 prior to their import into GIS.

⁸ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Generic written scheme of investigation for non-intrusive archaeological survey, Volume 5: Appendix HE-006-000000*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

Data presentation

- 2.3.4 A general location plan showing the survey area is shown on Figure 1 at a scale of 1:75,000. Details of sites or features transcribed during this project are presented at a scale of 1:5,000 on Figures 2 to 8 inclusive.
- 2.3.5 When interpreting the results, several factors are taken into consideration, including the nature of archaeological features being investigated, the local conditions at the site (geology, topography etc.). The identified features are categorised by their potential origin and divided into categories that are used in the graphical interpretation of the remote survey data:
- bank;
 - ditch;
 - levelled ridge and furrow;
 - extant ridge and furrow;
 - extent of area;
 - services;
 - structure; and
 - large cut feature.
- 2.3.6 The identified categories are subsequently discussed by the period in which they most likely originated.

Assumptions and limitations

- 2.3.7 The results and subsequent interpretation of data from remote sensing surveys should not be treated as an absolute representation of the underlying archaeological and non-archaeological remains. Confirmation of the presence or absence of archaeological remains can only be achieved by intrusive archaeological investigation of sub-surface deposits.
- 2.3.8 In some areas, the HS2 Ltd purpose-flown LiDAR and aerial orthophotography did not cover the full extent of the Proposed Scheme. Coverage was only absent for a small area of 9ha at the northern end of the study area, to the north-west of junction 5 of the M56 in Altrincham. This is not anticipated to present a significant limitation as the area was covered by alternative sources of orthophotography, while 1m resolution Environment Agency LiDAR data covered all but 1Ha of the missing coverage.
- 2.3.9 The HS2 purpose-flown LiDAR survey took place during the summer, when leaf canopies, foliage and crop growth created unfavourable conditions for the collection of bare earth points. As a result, the quality of the Digital Terrain Model (DTM) generated from this LiDAR data is of low quality for areas beneath tree cover and may not represent a true ground surface model in areas of crops or dense foliage. Where available, the use of Environment Agency LiDAR data of a lower resolution has partially mitigated this issue.

Background Information and Data

Historic Environment

BID HE-005-0MA06

MA06: Hulseheath to Manchester Airport

Historic environment remote sensing report

- 2.3.10 HER, NRHE and NHLE data was obtained in 2018. Any information added to these databases after that time will not have been available as a reference during the course of this survey.
- 2.3.11 The Cambridge University Collection of Aerial Photographs (CUCAP) archive of historic aerial photographs was closed for consultation at the time of this remote sensing survey. Although a small proportion of the collection was available online, the limited nature and low resolution of the images was inadequate for aerial analysis.
- 2.3.12 Local collections of aerial photography, potentially held by the HERs, were not consulted for this remote sensing survey.

3 Remote sensing survey results

3.1 Survey location

- 3.1.1 The study area for this remote sensing survey covers the entire length of the Hulseheath to Manchester Airport area, which falls within the Cheshire East, Cheshire West, Chester and Trafford in Greater Manchester.
- 3.1.2 The study area generally comprised a 700m-wide strip centred on the route of the Proposed Scheme (350m either side). This provided a buffer sufficient to offer contextual information for all recorded sites. In total, the archaeological remote sensing survey for the Hulseheath to Manchester Airport area covered an area of 10.4km².

3.2 Archaeological background

- 3.2.1 At the end of the last glaciation the retreat of the ice sheet resulted in the deposition of tills, sands and gravels. These were eroded by river systems including the River Bollin and meres and mosses⁹ formed in low lying areas where peat accumulated. The earliest evidence for occupation within the study area dates from the Mesolithic, including a camp identified in Tatton Park (MA06_002) and a Neolithic settlement of post-built structures at Oversley Farm, Styal (MA06_0081). These early people are likely to have used Tatton and Rostherne Meres for fishing and game hunting. These small communities occupied sites centred on gravel ridges of topographically higher ground on free-draining geology close to natural resources. Evidence of people is rare in the Bronze Age, but includes funerary monuments known as burial mounds south-east of Rostherne (MA06_0212). Within the study area, an intensification of agriculture, accompanied by a population increase, is observed from evidence dating to the Iron Age. Evidence of Iron Age settlement occurs towards the start of the Roman period at Oversley Farm, Styal (MA06_0081). Otherwise, this is a marginal area of little rural settlement, a pattern which continued in the Roman period. The Romans introduced a road system running from Chester to Manchester (MA06_0145). However, no evidence of roadside settlement has been identified within the study area.
- 3.2.2 There is currently little archaeological or documentary evidence for the early medieval period in this study area. The first small settlements of hamlets and farmsteads emerged at this time, such as the settlements of Millington, Rostherne, Tatton, and Ashley that were recorded in the Domesday Survey of 1086. The pattern of settlement in the landscape was relatively sparse at the time of the Norman conquest, possibly due to the climate and generally poor soils in much of the area. The arrival of the Normans brought a change to the political organisation of the landscape with the introduction of feudalism. The land became distributed into manors under the control of an elite of Norman lords. These lords lived in

⁹ Mosses or mosslands are areas of wetland formed from peat.

Background Information and Data
Historic Environment
BID HE-005-0MA06
MA06: Hulseheath to Manchester Airport
Historic environment remote sensing report

halls or manor houses, many of which were moated. Family seats were a physical expression of wealth and power which arose from this manorialism within the Cheshire region. For the greatest landowners, magnificent houses were almost never in villages but in the countryside. The most significant houses stood in their own parks, such as Tatton Hall (MA06_0293). These parks were mainly used for deer-keeping and hunting. The cultivated area expanded in the lowlands of Cheshire as new farms and hamlets with their own field systems were established. The nature of agriculture within the county was influenced by soil and climate. The glacial till was seen as difficult to cultivate and more adapted to grass, while sand with lighter free-draining soils was easy to plough and more suited to cultivation, resulting in a mixed arable economy during the medieval period. Pockets of Ancient Woodland survive and there is evidence for the earliest fields visible as ancient fields along the River Bollin valley (MA06_HLCA02³) and around Rostherne Mere (see HE-003, MA06_HLCA07). The majority of the land around Rostherne and Ashley (see HE-003, MA06_HLCA05 and MA06_HLCA07), was enclosed probably from heath and woodland and was utilised for cattle rearing and dairy farming from the 14th century.

- 3.2.3 The post-medieval period witnessed the transformation of north-west England from a relatively impoverished and sparsely populated area to a key region in the industrialisation of Britain. Within this area, this change largely related to the industrialisation of agricultural practice, evidenced in field patterns and farm buildings. Enclosure of agricultural land was largely complete by the early 19th century and much of the agricultural land in the study area was owned by the large estates of Tatton and Dunham Massey. The towns within the study area grew into commuter suburbs of Manchester as a result of the associated population increase and the improvements to transport infrastructure; canals, railways and roads. During the modern period, the study area has retained its predominantly agricultural character but has been influenced by the construction of the M56 and Manchester Airport (see HE-003, MA06_HLCA01).

3.3 Survey results

- 3.3.1 The results of this survey are summarised below, by period. Since the data from the visualised LiDAR and the aerial photographs are mutually supporting, the results have not been separated by source.
- 3.3.2 The remote sensing survey mapped 120 individual features, labelled from MA06_RS001 to MA06_RS141. These areas indicate the extent of sites, landscapes or parts of landscapes recorded. They are summarised in the gazetteer of identified features in Section 4 (Table 1).
- 3.3.3 Numerous depressions were visible across the study area, most of which are shown in historic mapping as bodies of water, but which may have originally been quarry pits or other features. Earthworks identified as quarry pits or ponds on available historic mapping have not been recorded unless the investigation has identified additional evidence to enhance interpretation.

Prehistoric, Roman and early medieval (1,000,000 BC – AD 1066)

3.3.4 No features of prehistoric, Roman, or early medieval date were recorded during the remote sensing survey of this area.

Medieval (1066 – 1540)

3.3.5 The survey recorded 66 areas of extant and levelled ridge and furrow dating from the medieval or post-medieval periods. In some cases, the remnants of boundary banks and ditches appear to have been preserved, although it is not always apparent from aerial investigation whether boundary features are contemporary with the ridge and furrow or the result of later field divisions or activity such as drainage channels.

3.3.6 At least 23 of the ridge and furrow features were of a 'narrow' type, defined as being less than 5m width, which suggests a probable post-medieval date. However, without clearly defined edges it is not always possible to precisely determine the width of earthworks from aerial survey evidence alone. It should also be noted that modern agricultural marks visible on aerial photographs and LiDAR can give the appearance of ridge and furrow, resulting in misleading results. Fields of ridge and furrow were concentrated in four general areas:

- the northern end of Rostherne Mere, where 19 ridge and furrow features were recorded (MA06_RS001-MA06_RS002, MA06_RS009-MA06_RS014, MA06_RS016, MA06_RS062, MA06_RS093, MA06_RS105, MA06_RS109, MA06_RS113, MA06_RS116-MA06_RS117, MA06_RS123-MA06_RS124, MA06_RS132);
- Ashley, where 21 ridge and furrow features were recorded (MA06_RS018-MA06_RS027, MA06_RS031, MA06_RS065, MA06_RS081-MA06_RS082, MA06_RS087, MA06_RS101-MA06_RS103, MA06_RS118, MA06_RS136-MA06_RS137);
- Thornsgreen, where 12 ridge and furrow features were recorded (MA06_RS030, MA06_RS032-MA06_RS039, MA06_RS042, MA06_RS095, MA06_RS126); and
- Davenport Green, where 12 ridge and furrow features were recorded (MA06_RS043-MA06_RS047, MA06_RS066, MA06_RS097-MA06_RS099, MA06_RS112, MA06_RS131, MA06_RS138).

Post-medieval (1540 – 1901)

3.3.7 Two features were identified that might represent extractive activity relating to a post-medieval brickyard recorded to the north-east of Rostherne Mere (MA06_RS119/MA06_RS120). These features may represent possible areas of quarrying or ground disturbance adjacent to the brickyard (MA06_RS122/MA06_0120), as well as a possible puddling pit to the west (MA06_RS060/MA06_0327). The interpretation of the latter is uncertain.

- 3.3.8 It is possible that two irregular linear cropmarks in the fields north-west of Ecclesfield Wood could indicate the remains of water meadow features (MA06_RS104). The features appeared in only one aerial photographic sortie from 1986 and it is difficult to definitively interpret such features from a single source of evidence. However, the proximity of numerous brooks within the area and the alignments which predate the present field boundaries suggest water management. It is also possible that the features are geological or the result of modern tracks through the field.
- 3.3.9 As discussed above (see 3.3.5), some of the ridge and furrow recorded during the survey may be post-medieval in origin.

Modern (1901 – present)

- 3.3.10 A series of irregular enclosures are visible as cropmarks near junction 7 of the M56 and are recorded in the HER. Linear cropmarks in this location were noted in the course of this survey, but the arrangement of the features has been interpreted as more likely indicating part of a network of 20th century land drains and has not been transcribed.
- 3.3.11 Many drainage ditches and channels were visible across the region, although most are of probable 20th century or later origin. Only ditches or channels considered to be of potential archaeological significance were transcribed.

3.4 Remote sensing survey conclusions

- 3.4.1 A total of 117 individual or grouped possible archaeological features were identified by the survey, 114 of which were not previously recorded by the HER, NRHE or NHLE. These include:
- the possible remains of a water meadow system, although this interpretation is tentative;
 - a possible clay puddling pit that might be associated with a post-medieval brickyard to the east of Cherrytree Farm; and
 - sixty-six areas of extant or levelled ridge and furrow, at least 23 of which are of probable post-medieval date.
- 3.4.2 Other features identified relate to spoil heaps, extraction sites, boundary banks and ditches, drainage ditches and trackways, of mostly post-medieval and modern date.
- 3.4.3 The possible water management features (MA06_RS104) are similar to an extensive system found to the north (MA06_0116). Their alignment running north-west to south-east correlates to a nearby stream. The area is crossed by numerous tributaries of Birkin and Mobberley Brooks and the features certainly pre-date the present arrangement of field boundaries. Parallel narrow ridges were used for water management features and these features seem to follow this form.

Background Information and Data

Historic Environment

BID HE-005-0MA06

MA06: Hulseheath to Manchester Airport

Historic environment remote sensing report

- 3.4.4 The concentrations of ridge and furrow recorded during the survey are consistent with the rural landscape characters associated with Rostherne Mere (MA06_HLCA07), Ashley (MA06_HLCA05) Thornsgreen and Davenport Green (MA06_HLCA03). Their survival represents a continuity of rural settlement and agricultural land use within these landscapes from the medieval period to the present day.
- 3.4.5 The brickyard and puddling pools support the information already noted on the HER of a post-medieval brickyard (MA06_0120). The use of brick is prevalent from the 18th century throughout Cheshire and the majority of surviving post-medieval buildings in the study area are brick built (see BID HE-001-0MA06).
- 3.4.6 A curious feature (MA06_RS088) was observed from LiDAR data in agricultural land to the southwest of the M56 junction 8. The feature had the appearance of interconnecting curvilinear ditches. Although at first glance having the appearance of enclosures, the examination of historic aerial imagery shows that the location has in recent years been used for the mounding of agricultural material and feeding of livestock. It is considered likely that the LiDAR feature is not archaeological, but probably the result of modern activity making subtle changes to the surface topography due to accumulations of surface material and erosion/compression by vehicle movement.

4 Gazetteer of identified remote sensing features in MA06

4.1.1 Table 1 gazetteer provides a summary of the identified features as described above.

Table 1: Gazetteer of identified features in MA06

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|--|----------|---------------|
| MA06_RS001 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow, visible on aerial photographs and as undulations on LiDAR elevation data. Furrows are oriented north-east to south-west and spaced approximately 5-6m apart, with some variation. | Figure 2 | 373408 384649 |
| MA06_RS002 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived digital terrain model (DTM). Furrows are oriented north-east to south-west and spaced approximately 14m apart. | Figure 3 | 373357 384944 |
| MA06_RS006 | | Large cut feature | Extractive pit | Post-medieval | Two large, irregular depressions occurring within close proximity to each other. The depth of the pits ranges from approximately 1m to 2m and are probably pits resulting from extractive processes. The pits appear to interrupt the continuity of ridge and furrow in the field (MA06_RS002), suggesting a post-medieval date. | Figure 3 | 373332 384907 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|---|----------|---------------|
| MA06_RS009 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented east-west and spaced approximately 4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 3 | 373922 384750 |
| MA06_RS010 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 3 | 373936 384685 |
| MA06_RS011 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are slightly curved, oriented north-east to south-west and spaced approximately 3.5m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 3 | 373919 384828 |
| MA06_RS012 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Orientation of the furrows transitions gradually; from north-north-east to south-south-west on the western side of the field, to north-east to south-west at the eastern end. Furrow spacing also | Figure 3 | 374150 384861 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|--|----------|---------------|
| | | | | | decreases from west to east, with spacing of approximately 4m apart at the western end gradually decreasing to 2.8m at the eastern end of the field. The narrowness of the ridge and furrow suggests a post-medieval date. | | |
| MA06_RS013 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow faintly visible as minor undulations on LiDAR-derived DTM. Furrows are slightly curved, oriented north-east to south-west and spaced approximately 3.5m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 3 | 374156 384820 |
| MA06_RS014 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-north-east to south-south-west and spaced approximately 6.5-7.2m apart. | Figure 3 | 374290 384807 |
| MA06_RS016 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-west to south-east and spaced approximately 5.5m apart. Ridges become less well-defined from north-east to south-west, eventually tapering off to become indistinguishable. Eastern part of | Figure 4 | 374804 384775 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|--|----------|---------------|
| | | | | | ridge and furrow is separated by a modern fence line. | | |
| MA06_RS017 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 6.6m apart. The ridge and furrow may continue further north, but this is beyond the limits of the available data. | Figure 4 | 375460 384973 |
| MA06_RS018 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Furrows are oriented north-west to south-east and spaced approximately 3.5m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 5 | 376718 384011 |
| MA06_RS019 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 5 | 376713 383956 |
| MA06_RS020 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-north-east to south-south-west | Figure 5 | 377072 383972 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|---|----------|---------------|
| | | | | | and spaced approximately 3.8-4.6m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | | |
| MA06_RS021 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. Appears to overlap two other areas of ridge and furrow (MA06_RS022 and MA06_RS024). It is not possible to determine the chronological relationship of these features from aerial survey alone, but the comparative narrowness suggests this to be later than the overlapping ridge and furrow earthworks MA06_RS022. | Figure 5 | 377070 384114 |
| MA06_RS022 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-north-east to south-south-west and spaced approximately 7m apart. The pattern appears to be a continuation of the ridge and furrow to the north (MA06_RS025), separated by a field boundary. The features appear to overlap | Figure 5 | 377133 384097 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|---|----------|---------------|
| | | | | | another area of ridge and furrow (MA06_RS021). Although it is not possible to accurately determine the chronological relationship of these features from aerial survey alone, the greater width of the ridges suggests this feature might be earlier than the narrower overlapping ridge and furrow. | | |
| MA06_RS023 | | Extant Ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM and aerial photographs. Furrows are oriented north-east to south-west and spaced approximately 4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 5 | 377133 384038 |
| MA06_RS024 | | Extant ridge and furrow | Ridge and furrow | Post-medieval | Possible ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Furrows are oriented north to south and spaced approximately 3m apart. The narrowness of the ridge and furrow suggests a post-medieval date. The features appear to overlap with another area of ridge and furrow (MA06_RS021), but it is not possible to determine the chronological relationship of these features from aerial survey alone. | Figure 5 | 377053 384114 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|---|----------|---------------|
| MA06_RS025 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-north-east to south-south-west and spaced approximately 7m apart. The central area is eroded by cricket pitch, but continuation of the ridge and furrow still faintly visible. | Figure 5 | 377125 384173 |
| MA06_RS026 | | Extant ridge and furrow | Ridge and furrow | Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 3-4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 5 | 377402 383796 |
| MA06_RS027 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM and aerial photographs. Furrows are oriented approximately north to south and spaced approximately 5.5m apart. Low banks border the northern and southern edges (MA06_RS028 and MA06_RS029), although these may not be contemporary with the ridge and furrow. | Figure 6 | 378567 383750 |
| MA06_RS028 | | Bank | Field boundary | Medieval Post-medieval | Low, linear bank visible as earthwork on LiDAR-derived DTM and aerial photographs. Appears | Figure 6 | 378568 383802 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|--|----------|---------------|
| | | | | | to form the northern border of a possible field of ridge and furrow (MA06_RS027) but may not be contemporary with the ridge and furrow. | | |
| MA06_RS029 | | Bank | Field boundary | Medieval Post-medieval | Low, linear bank visible as earthwork on LiDAR-derived DTM and aerial photographs. Appears to form the southern border of a possible field of ridge and furrow (MA06_RS027) rather than a township boundary, but it may not be contemporary with the ridge and furrow. | Figure 6 | 378570 383695 |
| MA06_RS030 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM and aerial photographs. Furrows are oriented approximately north-north-east to south-south-west and spaced approximately 8m apart. | Figure 6 | 379267 383721 |
| MA06_RS031 | | Extant ridge and furrow | Ridge and furrow | Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Ridges are oriented north-east to south-west and spaced approximately 3m apart. The narrowness is indicative of a later post-medieval date, possibly indicating steam-ploughed rig. | Figure 5 | 377254 383956 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|--|----------|---------------|
| MA06_RS032 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Poorly defined ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Ridges are oriented east to west and spaced approximately 6m apart. The full extent probably extends further south, but this was beyond the available data. | Figure 6 | 379361 383695 |
| MA06_RS033 | | Extant ridge and furrow | Ridge and furrow | Post-medieval Medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented east to west and spaced approximately 7m apart. Ridge and furrow probably a continuation of fields recorded to the south (MA06_RS032). | Figure 6 | 379375 383804 |
| MA06_RS034 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented approximately north-north-east to south-south-west and spaced approximately 4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 7 | 379688 383952 |
| MA06_RS035 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented approximately west-north-west to east-south-east and spaced approximately 3.5m apart. The | Figure 7 | 379704 384007 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|---|----------|---------------|
| | | | | | narrowness of the ridge and furrow suggests a post-medieval date. | | |
| MA06_RS036 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Narrow patch of ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 4.5m apart. The narrowness of the ridge and furrow suggests a post-medieval date. Furrows appear to align with those of adjacent field of ridge and furrow to the north-east (MA06_RS037), suggesting this strip as originally part of the same field. | Figure 7 | 379606 383952 |
| MA06_RS037 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented approximately north-north-east to south-south-west and spaced approximately 4.5m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 7 | 379621 384015 |
| MA06_RS038 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations beneath Sunbank Wood tree cover on LiDAR-derived DTM. Ridges are oriented north-west to south-east and spaced approximately 6.5m apart. The full | Figure 7 | 379908 384151 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|---|----------|---------------|
| | | | | | extent probably extends further to the south-east, but this was beyond the limits of the available data. | | |
| MA06_RS039 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations beneath Sunbank Wood tree cover on LiDAR-derived DTM. Ridges are oriented north-east to south-west and spaced approximately 6-8m apart. The full extent probably extends further to the south-east, but this was beyond the limits of the available data. | Figure 7 | 379900 384089 |
| MA06_RS040 | | Bank | Field boundary | Medieval Post-medieval | Low, linear bank visible as a minor earthwork on LiDAR-derived DTM. The feature is probably a field boundary between two areas of ridge and furrow (MA06_RS034, MA06_RS035). Given the different orientation of the furrows in each field, the bank was probably contemporary with the ridge and furrow. The 1st edition Ordnance Survey map Cheshire XVIII (1882) ¹⁰ shows two trees in an alignment that would correspond with the boundary. | Figure 7 | 379701 383980 |

¹⁰ Ordnance Survey (1882), *Cheshire County Series, Map Sheet XVIII*, 1st edition, Scale 1:10,560.

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|--|----------|---------------|
| MA06_RS041 | | Large cut feature | Extractive pit | Post-medieval | A large, sub-round depression visible on LiDAR elevation data. The form of the feature suggests that it is probably a quarry pit. | Figure 6 | 379233 384235 |
| MA06_RS042 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 5m apart. | Figure 7 | 379571 384477 |
| MA06_RS043 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north to south and spaced approximately 4.5m to 6m apart. | Figure 8 | 380381 386232 |
| MA06_RS044 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Small section of ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented east-north-east to west-south-west and spaced approximately 6.5m apart. | Figure 8 | 380426 386362 |
| MA06_RS045 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 4.5m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 8 | 380461 386292 |
| MA06_RS046 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow faintly visible as undulations on LiDAR-derived | Figure 8 | 380532 386383 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|---------------------------|--|----------|---------------|
| | | | | | DTM. Furrows are oriented north-west to south-east and spaced approximately 6.5m apart. Various linear features that were noted as cutting across the furrows are probably due to foot traffic or a drainage system. | | |
| MA06_RS047 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Furrows are oriented north-east to south-west and spaced approximately 6m apart. | Figure 8 | 380641 386353 |
| MA06_RS048 | | Extant ridge and furrow | Ridge and furrow | Post-medieval | Ridge and furrow, faintly visible as undulations on LiDAR elevation data. Furrows are oriented north-east to south-west and spaced approximately 2.5 to 3.2m apart. A central portion of the field was covered in low-lying, dense vegetation that may have obscured further surviving ridge and furrow. The narrow ridges suggest a post-medieval date and are possibly the result of steam-ploughed rig. | Figure 2 | 372117 384710 |
| MA06_RS049 | | Large cut feature | Extractive pit | Post-medieval | Large, irregular depression visible on LiDAR-derived DTM within Rushy-Pits Covert. The feature is probably the result of quarrying, along with MA06_RS050, and may | Figure 2 | 373013 385009 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------|------------------------------------|---------------|---|----------|---------------|
| | | | | | be a feature from which the name Rushy-Pits is derived. | | |
| MA06_RS050 | | Large cut feature | Extractive pit | Post-medieval | Large, irregular depression visible on LiDAR-derived DTM within Rushy-Pits Covert. The feature is probably the result of quarrying, along with MA06_RS049, and may be a feature from which the name Rushy-Pits is derived. | Figure 2 | 373078 385083 |
| MA06_RS051 | | Bank | Spoil heap | Post-medieval | Irregular, roughly linear mounds that are probably spoil from extractive activity at the adjacent extractive pits MA06_RS049 and MA06_RS050. | Figure 2 | 373057 385006 |
| MA06_RS052 | MA06_0137 | Bank | Mill dam Watermill Corn mill | Medieval | Curvilinear bank visible as earthworks on LiDAR and aerial imagery. The site is recorded in the Cheshire Archaeology Planning Advisory Service (CAPAS) HER as a probable mill dam related to a medieval mill and the probable location of the former mill building. | Figure 2 | 372558 384670 |
| MA06_RS053 | | Large cut feature | Extractive pit | Post-medieval | Sub-rectangular depression visible on LiDAR and aerial imagery. The feature corresponds with an unlabelled rectilinear earthwork feature shown in Ordnance Survey | Figure 2 | 372294 384058 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------|----------------|---|---|----------|---------------|
| | | | | | mapping from 1882 ¹¹ , but is not shown on subsequent historic maps. The feature is likely to be a quarry pit of probably post-medieval origin. | | |
| MA06_RS054 | | Large cut feature | Extractive pit | Post-medieval | Sub-rectangular depression visible on LiDAR and aerial imagery. No corresponding features are shown on Ordnance Survey historic mapping, but other earthworks shown immediately to the west may represent remains of a quarry pit (MA06_RS053). Similarly, this feature probably also represents the remains of post-medieval quarrying. | Figure 2 | 372364 384047 |
| MA06_RS055 | MA06_0326 | Large cut feature | Extractive pit | Roman Medieval Post-medieval Unknown | Large irregular feature visible as a depression on LiDAR-derived DTM. The irregular form possibly suggests an extractive pit, but it could be a natural feature formed by processes related to an adjacent paleochannel. The feature is located 115m north-east and parallel to the Chester to Manchester Roman road (MA06_0145). If the feature is related to extraction, this spatial | Figure 3 | 373612 384764 |

¹¹ Ordnance Survey, (1882), *Cheshire County Series, Map Sheet XVII*, Scale 1:10,560.

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------|----------------|---|---|----------|---------------|
| | | | | | association could potentially date it to at least the Roman period. | | |
| MA06_RS056 | MA06_0326 | Large cut feature | Extractive pit | Roman Medieval Post-medieval Unknown | Sub-circular feature visible as a shallow depression on LiDAR-derived DTM/DSM (digital surface model). Feature is adjacent to a larger, deeper depression that has been identified as an extractive pit or natural feature (MA06_RS055). This feature was also probably formed from extractive or natural processes. The feature is located 115m north-east and parallel to the Chester to Manchester Roman road (MA06_0145). If the feature is related to extraction, this spatial association could potentially date it to at least the Roman period. | Figure 3 | 373580 384779 |
| MA06_RS057 | | Bank | Field boundary | Post-medieval | Linear feature visible as a minor bank on LiDAR-derived DTM. The feature's linear alignment with existing field boundary to the north strongly suggests a post-medieval field boundary. No corresponding field division is shown on the earliest available Ordnance Survey mapping of 1882 ¹¹ or on subsequent mapping, so the feature may mark the remnants of an unrecorded field boundary or one that | Figure 2 | 373286 385000 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------|-------------------|---------------------------|---|----------|---------------|
| | | | | | predates the Ordnance Survey mapping. Two extant trees in line with the feature, and shown on the 1882 Ordnance Survey mapping, might be remnants of the original boundary. | | |
| MA06_RS059 | | Ditch | Drainage ditch | Medieval Post-medieval | Drainage ditch visible on LiDAR-derived DTM and aerial photographs. Forms the boundary around a field of ridge and furrow (MA06_RS012). The upper end of the eastern branch connects to a square feature that has been interpreted as a possible clay puddling pit (MA06_RS060). | Figure 3 | 374144 384861 |
| MA06_RS060 | MA06_0327 | Large cut feature | Clay puddling pit | Medieval Post-medieval | Square depression with sloped sides, visible on LiDAR-derived DTM and aerial photographs. The feature measures approximately 19x19m, with an approximate depth of 2.5m. The south-eastern corner has an apparent 'overflow', elevated 0.5m above the base of the feature, which connects to a narrow channel (MA06_RS059) that runs downslope towards Rostherne Mere. The Ordnance Survey mapping of 1876 ¹² shows a | Figure 3 | 374212 384895 |

¹² Ordnance Survey (1876), *Cheshire County Series, Map Sheet XXVI*, Scale 1:10,560.

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|------------------|---------------------------|--|----------|---------------|
| | | | | | corresponding square feature at this location, although the symbology is indistinct with no annotation. The purpose of the depression is not clear, but the form and location might suggest an industrial function related to a post-medieval brick yard recorded to the north-east (MA06_0120). The feature could be a clay puddling pit. | | |
| MA06_RS061 | | Ditch | Boundary ditch | Medieval Post-medieval | Shallow linear ditch visible as earthworks on LiDAR-derived DTM. The ditch is approximately 3m wide with a depth of approximately 0.2m. The ditch follows the western edge of ridge and furrow (MA06_RS043) and probably represents a boundary ditch of the field. | Figure 8 | 380326 386205 |
| MA06_RS062 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow faintly visible as striations on aerial photographs from 1945. No visible remains of the feature are apparent in 2018 LiDAR data, so the feature is presumed levelled. Furrows are oriented east to west and spaced approximately 7.5m apart. | Figure 3 | 373847 384689 |
| MA06_RS063 | | Large cut feature | Extractive pit | Post-medieval | Large sub-oval depression visible on LiDAR-derived DTM and aerial | Figure 5 | 377429 383725 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|------------------|---------------------------|--|----------|---------------|
| | | | | | photographs. The feature appears to cut through ridge and furrow, so is probably of post-medieval date. The feature is shown as a small pond on the 1899 Ordnance Survey map ¹³ . The size and form of the feature suggest the original purpose was probably as an extractive pit. A low bank around the base of the feature possibly represents the remains of spoil material. | | |
| MA06_RS065 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible on aerial photographs from 1951, but no longer visible on any available subsequent aerial imagery. Ridges were oriented north-east to south-west and spaced approximately 6m apart. Linear striations visible on LiDAR-derived DTM may be surviving remnants of the ridge and furrow that has been obscured and levelled by later 20th century agricultural activity. The earthworks would originally have formed a continuous expanse of ridge and furrow incorporating additional areas | Figure 5 | 377344 383885 |

¹³ Ordnance Survey (1899), *Cheshire County series, Map Sheet XVIII*, Scale 1:10,560.

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------------------------|---------------------------|---|----------|---------------|
| | | | | | immediately to the north-west (MA06_RS031) and south-east (MA06_RS026). | | |
| MA06_RS066 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Furrows are oriented north-west to south-east and spaced approximately 8.5m apart. | Figure 8 | 380490 386529 |
| MA06_RS067 | | Large cut feature | Extractive pit | Post-medieval | Sub-oval depression visible on LiDAR-derived DTM and aerial photographs. The depression could be natural in origin but may be remains of an extractive pit. | Figure 2 | 372861 385036 |
| MA06_RS068 | | Ditch | Extractive pit Geological marks | Post-medieval | Group of shallow depressions visible on LiDAR-derived DTM and as cropmarks on aerial photographs. The transcription comprises a large irregular feature with smaller lozenge shaped features immediately to the north and north-east. The size and form is suggestive of extractive pits or possibly of a natural, geological origin. | Figure 4 | 375895 384489 |
| MA06_RS069 | | Large cut feature | Extractive pit | Post-medieval | Large, shallow, sub-oval depression visible on LiDAR-derived DTM. Possible remains of extractive pit or natural in origin. | Figure 4 | 375836 384407 |
| MA06_RS070 | | Ditch | Drainage ditch Trackway | Post-medieval | Series of three linear features faintly visible as depressions on | Figure 6 | 378432 383857 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------|-----------------------------------|---------------|---|----------|---------------|
| | | | | | LiDAR-derived DTM and cropmarks on aerial photographs. The features appear to form a continuous linear feature diagonally crossing field, broken in two places by large, irregular depressions (MA06_RS073 and MA06_RS074) which are on the same alignment and may be related. Feature possibly the remains of a drainage ditch but could be the result of foot traffic. Appears to respect the established field boundaries, so probably of post-enclosure date. | | |
| MA06_RS073 | | Large cut feature | Extractive pit Geological mark | Post-medieval | Large irregular depression visible on LiDAR-derived DTM and aerial photographs. Possibly the result of quarrying but could be natural in origin. In line with, and possibly related to, linear features identified as drainage or trackways (MA06_RS070). | Figure 6 | 378379 383800 |
| MA06_RS074 | | Large cut feature | Extractive pit Geological mark | Post-medieval | Large irregular depression visible on LiDAR-derived DTM and aerial photographs. Possibly the result of quarrying but could be natural in origin. In line with, and possibly related to, linear features identified as drainage or trackways (MA06_RS070). | Figure 6 | 378471 383898 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|----------------------------------|---------------------------|---|----------|---------------|
| MA06_RS080 | | Large cut feature | Extractive pit | Post-medieval | Large sub-round depression visible on aerial photographs and LiDAR elevation data. Size and form suggest possible natural origin or the remains of quarrying. | Figure 2 | 372329 384217 |
| MA06_RS081 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Probable ridge and furrow, faintly visible as cropmarks on aerial photographs but not showing any earthworks on LiDAR. Ridges oriented approximately north-north-east to south-south-west and spaced approximately 6m apart. Striations might be related to 20th century agricultural activity. Occupies area formerly enclosed by field boundaries shown on the 1882 Ordnance Survey mapping ¹¹ . | Figure 6 | 378111 383898 |
| MA06_RS082 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Probable ridge and furrow, faintly visible as cropmarks on aerial photographs but not showing any earthworks on LiDAR. Ridges oriented approximately north to south and spaced approximately 6m apart. Occupies area formerly enclosed by field boundaries shown on the 1882 Ordnance Survey mapping ¹⁰ . | Figure 6 | 378002 383971 |
| MA06_RS085 | | Ditch | Boundary ditch Drainage ditch | Medieval Post-medieval | Linear ditch visible in LiDAR-derived DTM. Forms a boundary between fields containing ridge | Figure 8 | 380431 386349 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|----------------------------------|---------------------------|--|----------|---------------|
| | | | | | and furrow (MA06_RS044 and MA06_RS045) and may be a contemporary boundary ditch. | | |
| MA06_RS086 | | Ditch | Boundary ditch Drainage ditch | Medieval Post-medieval | Linear ditch visible on LiDAR-derived DTM. Forms a boundary between fields containing ridge and furrow (MA06_RS045 and MA06_RS046) and may be a contemporary boundary ditch. | Figure 8 | 380504 386315 |
| MA06_RS087 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Ridges oriented west-north-west to east-south-east and spaced approximately 8m apart. | Figure 6 | 378638 384155 |
| MA06_RS088 | | Ditch | Artificial mound | Post-medieval Modern | Interconnecting shallow rectilinear and curvilinear depressions faintly visible on LiDAR-derived DTM. Possibly indicative of enclosures. However, aerial imagery from 2010-2013 shows the location has been used for mounding of agricultural material, so it is possible that the feature is the result of material and vehicle movements associated with the mounding or that the activity is masking the true nature of the evidence. No corresponding cropmarks are visible on available archive or modern aerial imagery. | Figure 3 | 373664 384972 |

Background Information and Data
Historic Environment
BID HE-005-0MA06
MA06: Hulseheath to Manchester Airport
Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|------------------|---------------------------|--|----------|---------------|
| MA06_RS093 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1963, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented north-west to south-east and spaced approximately 6-6.5m apart. The north-eastern corner has been destroyed by road construction. | Figure 4 | 375000 384712 |
| MA06_RS094 | | Large cut feature | Extractive pit | Post-medieval | Rectilinear depression visible on LiDAR-derived DTM and aerial photographs. Possibly natural in origin, but regular shape suggests quarrying. | Figure 7 | 379577 384480 |
| MA06_RS095 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Ridges oriented north-west to south-east and spaced approximately 4.5m apart. | Figure 6 | 379240 384341 |
| MA06_RS096 | | Large cut feature | Extractive pit | Post-medieval | Circular depression approximately 6.2m diameter visible on LiDAR-derived DTM and aerial photographs. Depression to the east appears well formed and may be an intentional gap or entrance. Slight banks to north and south. Appears to interrupt ridge and furrow, so probably of later post-medieval or 20th century date. Exact purpose is difficult to determine from available | Figure 6 | 379227 384339 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|-------------------------|---------------------------|---|----------|---------------|
| | | | | | evidence, most likely of agricultural function or the result of quarrying. | | |
| MA06_RS097 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Ridges oriented north-west to south-east and spaced approximately 6.5m apart. | Figure 8 | 380600 386798 |
| MA06_RS098 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible as undulations on LiDAR-derived DTM. Ridges oriented north-west to south-east and spaced approximately 9.5m apart. | Figure 8 | 380583 386696 |
| MA06_RS099 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible as undulations on LiDAR-derived DTM beneath Flaxhigh Covert. Furrows oriented north-east to south-west and spaced approximately 7m apart. | Figure 8 | 380127 385684 |
| MA06_RS100 | | Large cut feature | Extractive pit Pond | Post-medieval | Large, sub-rectangular depression visible on LiDAR-derived DTM beneath Flaxhigh Covert. Possibly the remains of quarrying but could be an artificial pond. | Figure 7 | 380122 385637 |
| MA06_RS101 | | Ridge and furrow | Extant ridge and furrow | Medieval Post-medieval | Probable ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Furrows oriented north-north-west to south-south-east and spaced approximately 5.8m apart. It is possible that the | Figure 5 | 376706 384264 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------|------------------------------------|---|----------|---------------|
| | | | | | striations are related to modern agricultural activity rather than ridge and furrow. | | |
| MA06_RS102 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Probable ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Furrows oriented north-north-west to south-south-east and spaced approximately 6m apart. It is possible that the striations are related to modern agricultural activity rather than ridge and furrow. Extent of survival may continue further to the north, but this is beyond extent of available LiDAR coverage. | Figure 5 | 376835 384398 |
| MA06_RS103 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Probable ridge and furrow faintly visible as undulations on LiDAR-derived DTM. Furrows oriented north-west to south-east and spaced approximately 6.5m apart. It is possible that the striations are related to modern agricultural activity rather than ridge and furrow. | Figure 5 | 376294 384066 |
| MA06_RS104 | | Ditch | Geological mark | Post-medieval Modern Unknown | Irregular linear features visible as cropmarks on aerial photographs. The origin is difficult to determine from aerial photographs alone. Possible remains of a field system, but more likely to be the result of | Figure 6 | 377942 383784 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|----------------------------------|---------------------------|--|----------|---------------|
| | | | | | a 20th century footpath, or geological in origin. Other linear features visible in the vicinity relate to water meadows such as MA06_0116 given the close proximity of numerous brooks. | | |
| MA06_RS105 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible on aerial photographs from 1994, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented north-west to south-east and spaced approximately 6.5m apart. Small section of this ridge and furrow survive to the north (MA06_RS016). | Figure 4 | 374760 384704 |
| MA06_RS106 | | Ditch | Boundary ditch Drainage ditch | Medieval Post-medieval | Intersecting linear ditches visible on aerial photographs. Forms northern and western bounds of a ridge and furrow field (MA06_RS109) and may be contemporary boundary ditches. | Figure 3 | 373530 384720 |
| MA06_RS107 | | Ditch | Boundary ditch Drainage ditch | Medieval Post-medieval | Linear ditch running north to south visible on aerial photographs. Bounds western edge of a ridge and furrow field (MA06_RS109) and probably represents a continuation of the boundary ditch to the north (MA06_RS106). | Figure 3 | 373501 384502 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|------------------|---------------------------|---|----------|---------------|
| MA06_RS108 | | Ditch | Boundary ditch | Medieval Post-medieval | Linear ditch running north to south visible on aerial photographs. Bounds eastern edge of a ridge and furrow field (MA06_RS109) and may be a contemporary boundary ditch. | Figure 3 | 373628 384668 |
| MA06_RS109 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow faintly visible on aerial photographs from 1994, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented north to south and spaced approximately 8m apart. | Figure 3 | 373571 384608 |
| MA06_RS111 | | Ditch | Field boundary | Post-medieval | Linear feature visible as cropmark on aerial photographs. The straight line and clarity suggest a post-medieval field boundary, but no corresponding boundary is shown on available Ordnance Survey mapping from 1882 onward. However, the 1882 Ordnance Survey mapping ¹¹ shows a line of trees that approximately aligns with the feature, suggesting the remains of an earlier field boundary. Feature destroyed by construction of M56 junction. | Figure 8 | 380947 386310 |
| MA06_RS112 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible on aerial photographs from 1946, but no longer apparent on recent aerial | Figure 8 | 380818 385790 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|------------------|---------------------------|---|----------|---------------|
| | | | | | photographs or LiDAR. Furrows oriented north-west to south-east and spaced approximately 4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | | |
| MA06_RS113 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1963, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented east-north-east to west-south-west and spaced approximately 11m apart. Northern section destroyed by road construction. | Figure 3 | 373508 385246 |
| MA06_RS114 | | Large cut feature | Extractive pit | Post-medieval | Dark sub-rectangular cropmark visible on aerial photographs from 1963. Dimensions approximately 30m by 19m. The exact nature of the feature is difficult to determine from photographs alone, but might represent the remains of a quarry pit. | Figure 3 | 373930 385217 |
| MA06_RS115 | | Ditch | Trackway | Post-medieval Modern | Numerous linear features visible on aerial photographs. Nature difficult to determine. They do not appear to form enclosures, and are probably the remains of agricultural activity, tracks or footpaths. | Figure 3 | 373889 385173 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|-----------------------------------|---------------------------|---|----------|---------------|
| MA06_RS116 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1963, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented west-north-west to east-south-east and spaced approximately 7m apart. | Figure 3 | 373870 385188 |
| MA06_RS117 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1963, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented north-west to south-east and spaced approximately 8m apart. | Figure 3 | 374563 384828 |
| MA06_RS118 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1963, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented west-north-west to east-south-east and spaced approximately 3.4m apart. The narrowness of the ridge and furrow suggests a post-medieval date. | Figure 5 | 376831 383912 |
| MA06_RS119 | | Large cut feature | Extractive pit Geological mark | Post-medieval | Large sub-oval depression visible on LiDAR-derived DTM. Possibly the result of quarrying but could be natural in origin. | Figure 5 | 376551 384438 |
| MA06_RS120 | | Large cut feature | Extractive pit Geological mark | Post-medieval | Large irregular depression visible on LiDAR-derived DTM. Possibly | Figure 5 | 376608 384438 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|------------------|--------------------------------------|--|----------|---------------|
| | | | | | the result of quarrying but could be natural in origin. | | |
| MA06_RS121 | | Ditch | Boundary ditch | Medieval Post-medieval Unknown | Intersecting ditches visible on LiDAR-derived DTM. The ditches follow the line of established field boundaries shown on historic Ordnance Survey mapping ¹¹ but might be remnants of boundaries that predate enclosure. | Figure 5 | 376979 384276 |
| MA06_RS122 | MA06_0120 | Large cut feature | Extractive pit | Post-medieval | Large area of irregular undulations on LiDAR-derived elevation data. Has appearance of earth movement and mounding that suggests pits and spoil heaps relating to extractive activity. Appears to be within the field boundary, implying post-enclosure activity. Possibly related to adjacent post-medieval brickyard recorded immediately to the east (MA06_0120). | Figure 3 | 374353 385015 |
| MA06_RS123 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1963, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented north-east to south-west and spaced approximately 8m apart. Probably a continuation of adjacent extant ridge and furrow (MA06_RS002). | Figure 2 | 373360 384862 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|-----------------------------------|---------------------------|--|----------|---------------|
| MA06_RS124 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1963, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented north-west to south-east and spaced approximately 8m apart. | Figure 3 | 373691 385175 |
| MA06_RS126 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1971 but no longer visible on LiDAR data or recent aerial photographs. Furrows oriented approximately north-north-east to south-south-west and spaced approximately 3.6m apart. Difficult to fully determine from photographs whether these represent ridge and furrow or agricultural marks. If ridge and furrow, the narrowness would suggest a post-medieval date. | Figure 6 | 379362 384177 |
| MA06_RS127 | | Large cut feature | Extractive pit Geological mark | Post-medieval Unknown | Large irregular depression visible on LiDAR-derived DTM. Probably resulting from quarrying or extractive processes but could be natural in origin. | Figure 4 | 374903 384515 |
| MA06_RS128 | | Large cut feature | Extractive pit | Post-medieval | Large sub-rectangular depression visible on LiDAR-derived DTM. Probably the result of quarrying. Appears to respect established | Figure 4 | 374899 384609 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------|----------------|------------------------------------|---|----------|---------------|
| | | | | | field boundary so likely post-enclosure in origin. | | |
| MA06_RS129 | MA06_0328 | Large cut feature | Pond Structure | Post-medieval Modern Unknown | Well defined rectangular depression visible on LiDAR-derived DTM and aerial photographs. A gap cut through the bank to the north provides an opening to the depression. Appears to correspond with location of a rectangular pond recorded on Ordnance Survey 1:2500 mapping from 1969-1970 ¹⁴ . However, the feature is visible on the earliest available aerial photographs from 1953 and does not have appearance of a pond at this date. Possible that it is the hollow remaining from another structure, now removed, such as an agricultural structure or Second World War installation. Exact original purpose of construction not possible to determine on available evidence and could be a purpose-built pond. | Figure 5 | 376636 383822 |
| MA06_RS130 | MA06_0328 | Large cut feature | Extractive pit | Post-medieval | Sub-rectangular depression visible on LiDAR-derived DTM and aerial | Figure 5 | 376823 383793 |

¹⁴ Ordnance Survey (1970), *Cheshire County Series, Map Sheet XVIII*, scale 1:2,500.

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|---------------------------|------------------|---------------------------|--|----------|---------------|
| | | | | | photographs. Opening in centre of the southern edge leads to a channel running downslope. Feature has sloped sides with an irregular base showing some roughly squared edges and corners on the northern and southern edges. Purpose difficult to determine from available evidence. Possibly the result of quarrying activity. | | |
| MA06_RS131 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow visible on aerial photographs from 1946 but no longer visible on LiDAR data or recent aerial photographs. Furrows oriented approximately north-east to south-west and spaced approximately 3.8m apart. Difficult to fully determine from photographs whether these are ridge and furrow or agricultural marks. If ridge and furrow, the narrowness would suggest a post-medieval date. | Figure 8 | 380519 386740 |
| MA06_RS132 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Small section of ridge and furrow visible as undulations on LiDAR-derived DTM. Probably vestigial remnant of a larger field. Furrows oriented east to west, with a spacing of approximately 4.5m. | Figure 3 | 374176 384897 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|------------------------------|------------------------------|-------------------------------|--|----------|---------------|
| MA06_RS134 | | Large cut feature | Extractive pit | Post-medieval 20th century | Rectangular and oval depressions visible beneath tree cover on LiDAR-derived DTM. Exact purpose not possible to determine from available evidence, but probably the result of quarrying. | Figure 4 | 375625 384743 |
| MA06_RS135 | | Large cut feature Bank | Extractive pit Spoil heap | Post-medieval Modern | Irregular depression and ditch visible beneath tree cover on LiDAR-derived DTM. Exact purpose not possible to determine from available evidence, but possibly the result of quarrying. To the east of the feature, several mounds may represent spoil from the extraction. | Figure 4 | 375709 384711 |
| MA06_RS136 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible on aerial photographs from 1954, but no longer apparent on recent aerial photographs or LiDAR. Furrows oriented north to south and spaced approximately 5m apart. Occupies area formerly enclosed by field boundaries shown on 1882 Ordnance Survey mapping ¹⁰ (Cheshire XVIII). | Figure 6 | 377899 383977 |
| MA06_RS137 | | Levelled ridge and furrow | Ridge and furrow | Medieval Post-medieval | Ridge and furrow visible on aerial photographs from 1954, but no longer apparent on recent aerial photographs or LiDAR. Furrows | Figure 5 | 377780 383955 |

Background Information and Data
 Historic Environment
 BID HE-005-0MA06
 MA06: Hulseheath to Manchester Airport
 Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|------------|-----------|-------------------------|------------------------|---------------------------|---|----------|---------------|
| | | | | | oriented north-west to south-east and spaced approximately 5m apart. | | |
| MA06_RS138 | | Extant ridge and furrow | Ridge and furrow | Medieval Post-medieval | Possible ridge and furrow faintly visible on LiDAR-derived DTM. Furrows oriented east to west and spaced approximately 4m apart. If ridge and furrow, the narrowness would suggest a post-medieval date. | Figure 8 | 380321 386011 |
| MA06_RS139 | | Ditch | Boundary ditch | Medieval Post-medieval | Linear ditch visible on LiDAR-derived DTM. Oriented north-east to south-west and borders the south-eastern edge of a field of ridge and furrow (MA06_RS046), suggesting an associated boundary ditch. | Figure 8 | 380622 386388 |
| MA06_RS140 | | Large cut feature | Extractive pit Pond | Post-medieval | Well defined rectangular depression visible on LiDAR-derived DTM beneath tree cover of Davenportgreen Wood. North-eastern corner of this feature extends into a short ditch connecting to a stream. Exact nature and purpose difficult to determine from available evidence, but possibly a pond or the remains of quarrying. | Figure 8 | 380521 385999 |
| MA06_RS141 | | Large cut feature | Extractive pit Pond | Post-medieval | Sub-rectangular depression visible on LiDAR-derived DTM beneath | Figure 8 | 380336 386120 |

Background Information and Data
Historic Environment
BID HE-005-0MA06
MA06: Hulseheath to Manchester Airport
Historic environment remote sensing report

| Reference | Asset UID | Feature category | Feature type | Period | Comment | Figure | NGR |
|-----------|-----------|------------------|--------------|--------|--|--------|-----|
| | | | | | tree cover of Davenportgreen Wood. Exact nature and purpose difficult to determine from available evidence, but possibly a pond or the remains of quarrying. | | |

5 List of acronyms

5.1.1 The following acronyms have been used in this report.

Table 2: List of acronyms

| Acronym | Meaning |
|----------|---|
| ACA | Archaeological Character Area |
| ASZ | Archaeological Sub-zone |
| BID | Background Information and Data |
| CAPAS | Cheshire Archaeology Planning Advisory Service |
| CUCAP | Cambridge University Collection of Aerial Photographs |
| DSM | Digital Surface Model |
| DTM | Digital Terrain Model |
| GIS | Geographical Information System |
| HER | historic environment record |
| HLC/HLCA | historic landscape character/ Historic Landscape Character Area |
| LiDAR | Light Detection and Ranging |
| MWJV | Mott MacDonald WSP Joint Venture |
| NGR | National Grid Reference |
| NHLE | National Heritage List for England |
| NMP | National Mapping Programme |
| NRHE | National Record of the Historic Environment |
| RVT | Relief Visualisation Toolkit |
| UID | Unique gazetteer identifier |

6 References

FISH (2020), *Heritage Data; Linked Data Vocabularies for Cultural Heritage*. Available online at: <https://www.heritagedata.org/blog/vocabularies-provided/>.

High Speed Two Ltd (2022), *High Speed Rail (Crewe – Manchester), Environmental Statement*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

Ordnance Survey (1882), *Cheshire County Series, Map Sheet XVII*, Scale 1:10,560.

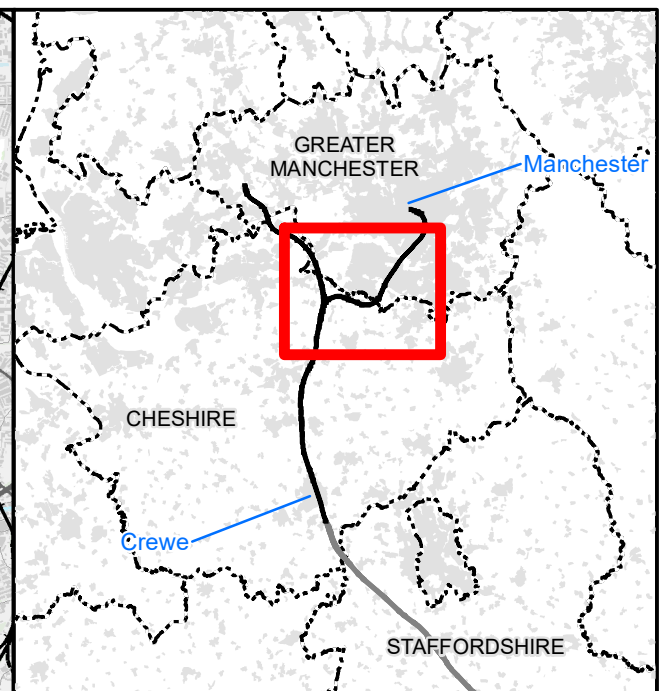
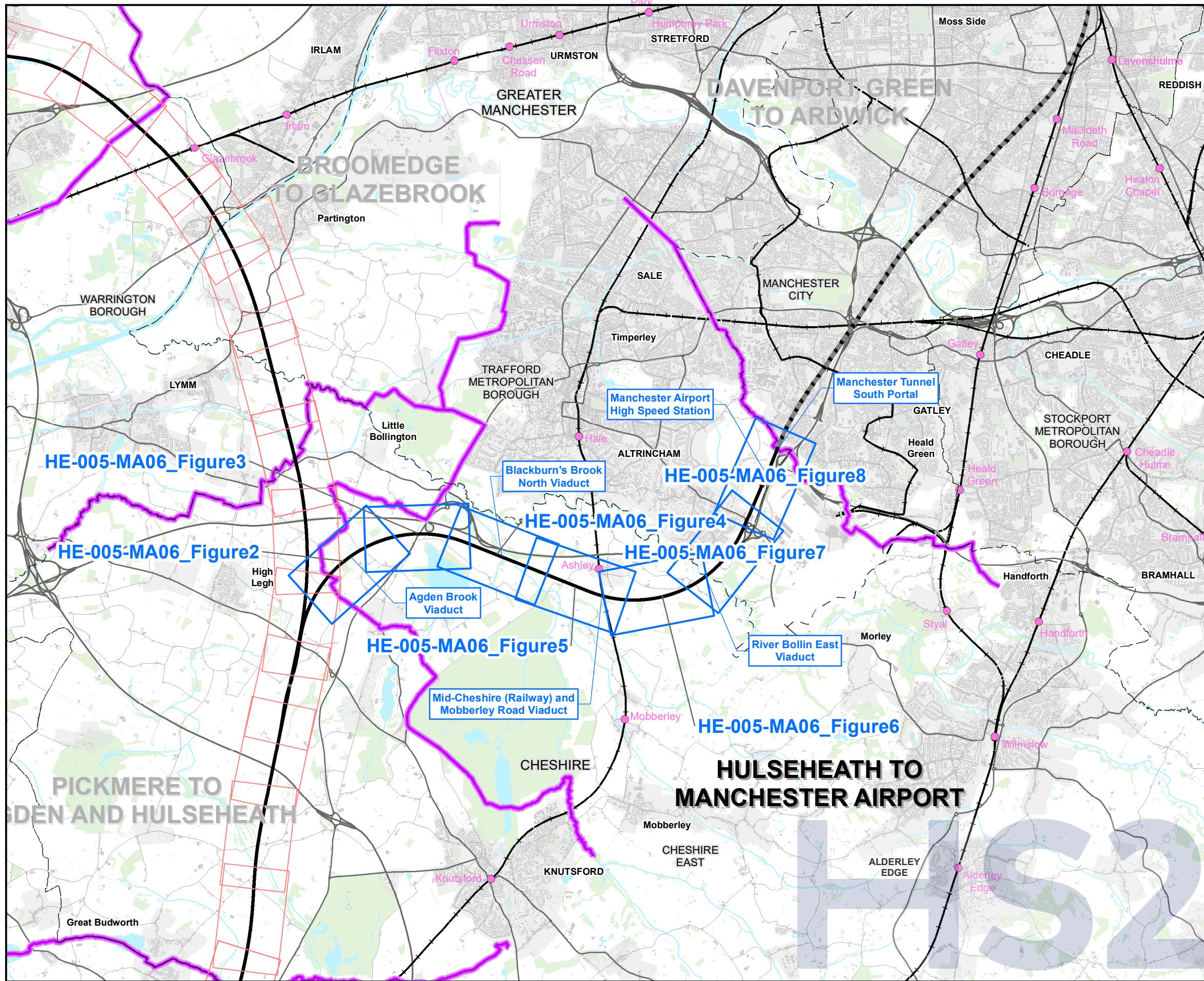
Ordnance Survey (1882), *Cheshire County Series, Map Sheet XVIII*, Scale 1:10,560.

Ordnance Survey (1876), *Cheshire County Series, Map Sheet XXVI*, Scale 1:10,560.

Ordnance Survey (1899), *Cheshire County series, Map Sheet XVIII*, Scale 1:10,560.

Ordnance Survey (1970), *Cheshire County Series, Map Sheet XVIII*, Scale 1:2,500.

Winton, H. (2018), *Standards for Aerial Investigation and Mapping projects*, Historic England internal document.



Map Series Information:

These maps show the results of the remote sensing surveys in relation to the land required for the construction of the Proposed Scheme.

Main Map Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Community area boundary
- Existing railway station
- County boundary
- District/Borough boundary
- Map sheets included in this community area
- Map sheets not included in this community area

Map Number HE-005_MA06_Figure1

Map Name
**Remote Sensing Survey
Index map**

Community Area MA06:
Hulseheath to Manchester Airport

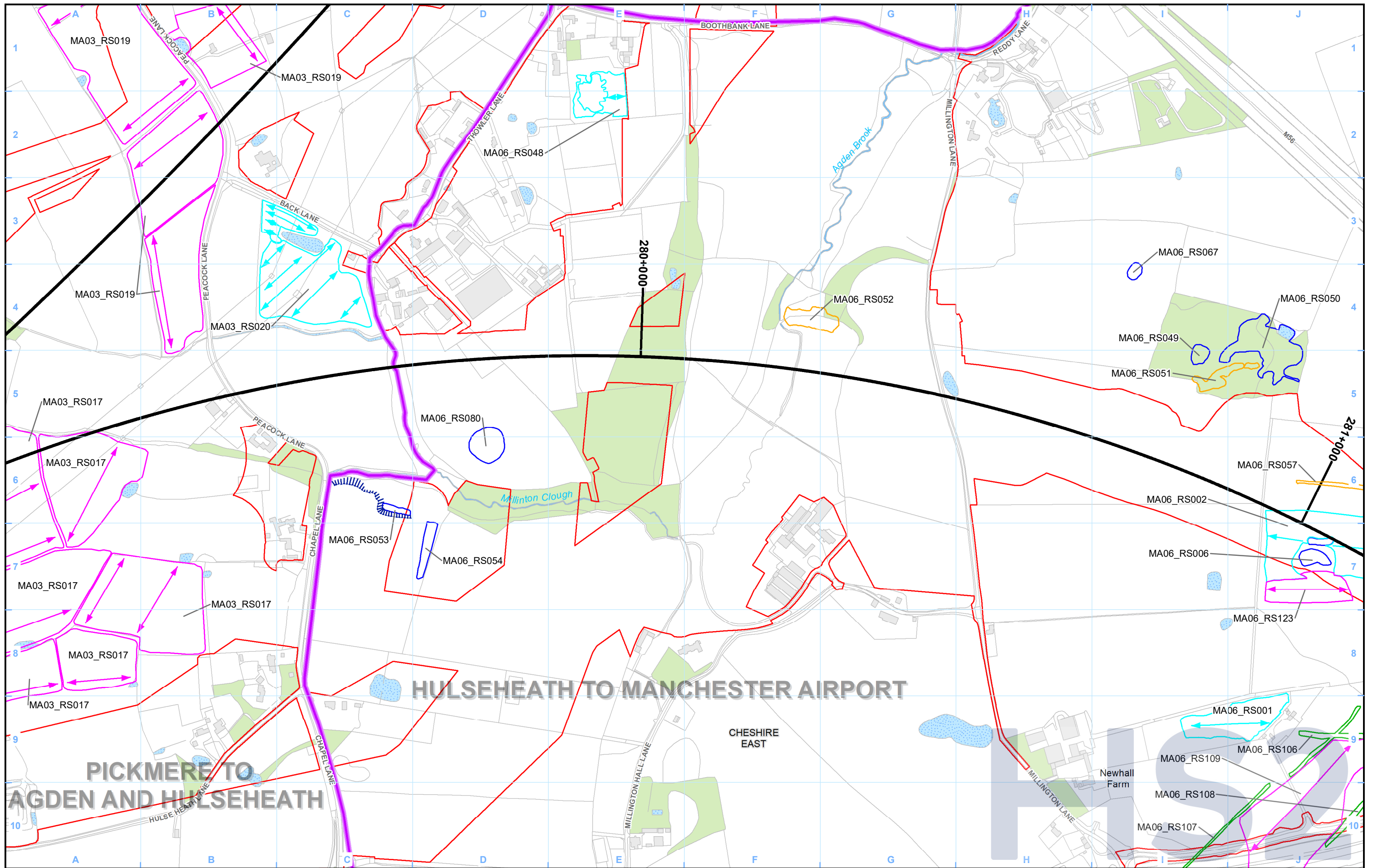
HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6QA.

Scale at A3: 1:75,000

© Crown copyright and database rights 2020
OS 100049190

Doc Number: 2DE01-MWJ-EV-MAP-M000-002559-P01
Date: 24/09/21



Legend

| | | |
|---|-------------------------------------|-----------------------------------|
| Route in tunnel | Watercourse | Extant ridge and furrow area |
| Route on surface | Water body | Extant ridge and furrow direction |
| Depot, station, headhouse or portal building | Remote sensing feature type | Extent of area |
| Land potentially required during construction | Bank | Large cut feature |
| Community area boundary | Ditch | Services |
| County boundary | Levelled ridge and furrow area | Structure |
| District/Borough boundary | Levelled ridge and furrow direction | T-hachure |

Map Number HE-005_MA06_Figure2

Map Name Remote Sensing Survey Interpretation

Community Area MA06:
Hulseheath to Manchester Airport

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.

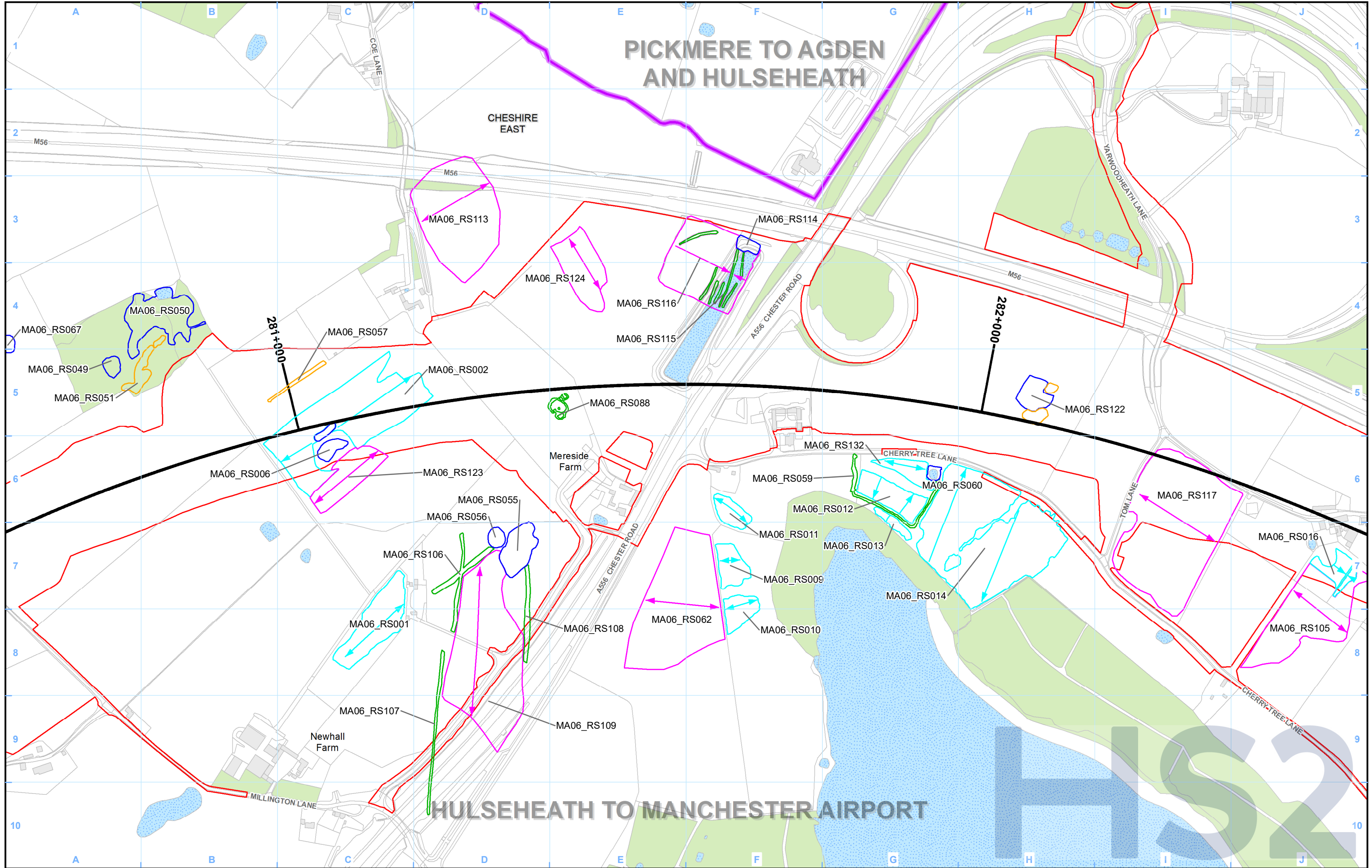
© Crown copyright and database rights 2020
OS 100049190

Scale at A3: 1:5,000

0 50 100 150 200
Metres

Doc Number: 2DE01-MWJ-EV-MAP-M000-002560-P01 Date: 24/09/21

PICKMERE TO AGDEN AND HULSEHEATH



HULSEHEATH TO MANCHESTER AIRPORT

| Legend | |
|--------|---|
| | Route in tunnel |
| | Route on surface |
| | Depot, station, headhouse or portal building |
| | Land potentially required during construction |
| | Community area boundary |
| | County boundary |
| | District/Borough boundary |
| | Watercourse |
| | Water body |
| | Remote sensing feature type |
| | Bank |
| | Ditch |
| | Levelled ridge and furrow area |
| | Levelled ridge and furrow direction |
| | Extant ridge and furrow area |
| | Extant ridge and furrow direction |
| | Extent of area |
| | Large cut feature |
| | Services |
| | Structure |
| | T-hachure |

Map Number: HE-005_MA06_Figure3

Map Name: Remote Sensing Survey Interpretation

Community Area MA06: Hulseheath to Manchester Airport

HS2

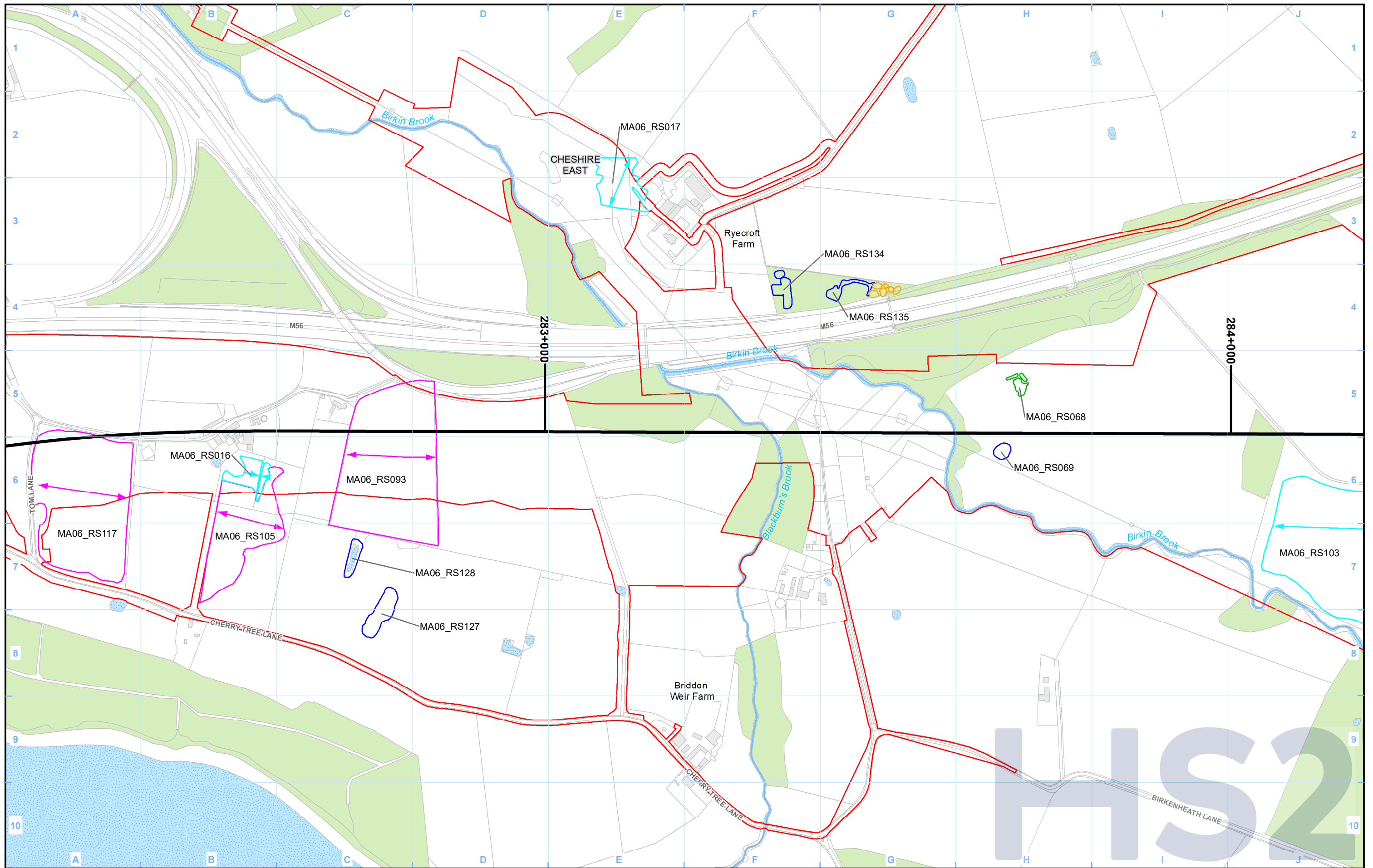
Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

© Crown copyright and database rights 2020
OS 100049190

Scale at A3: 1:5,000

Doc Number: 2DE01-MWJ-EV-MAP-M000-002561-P01

Date: 24/09/21



| Legend | | |
|--------|------------------------------------|--|
| | | |
| | | |
| | Remote sensing feature type | |
| | | |
| | | |
| | | |
| | | |

Map Number HE-005_MA06_Figure4

Map Name Remote Sensing Survey Interpretation

Community Area MA06:
Hulseheath to Manchester Airport

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

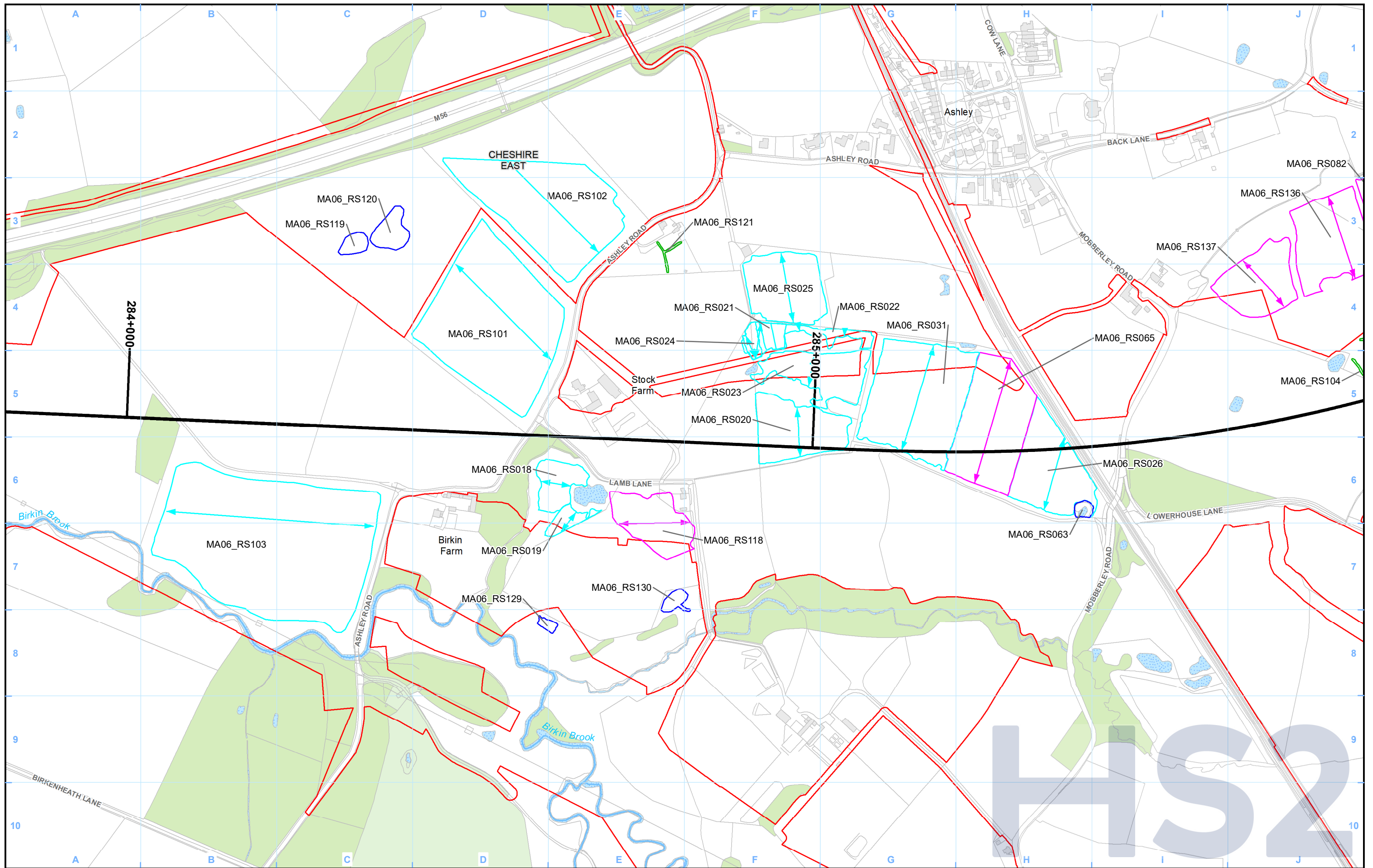
© Crown copyright and database rights 2020
OS 100049190

Doc Number: 2DE01-MWJ-EV-MAP-M000-002562-P01

Date: 24/09/21

Scale at A3: 1:5,000

0 50 100 150 200 Metres



| Legend | | |
|--------|------------------------------------|--|
| | | |
| | | |
| | Remote sensing feature type | |
| | | |
| | | |
| | | |
| | | |

Map Number HE-005_MA06_Figure5

Map Name Remote Sensing Survey Interpretation

Community Area MA06:
Hulseheath to Manchester Airport

HS2

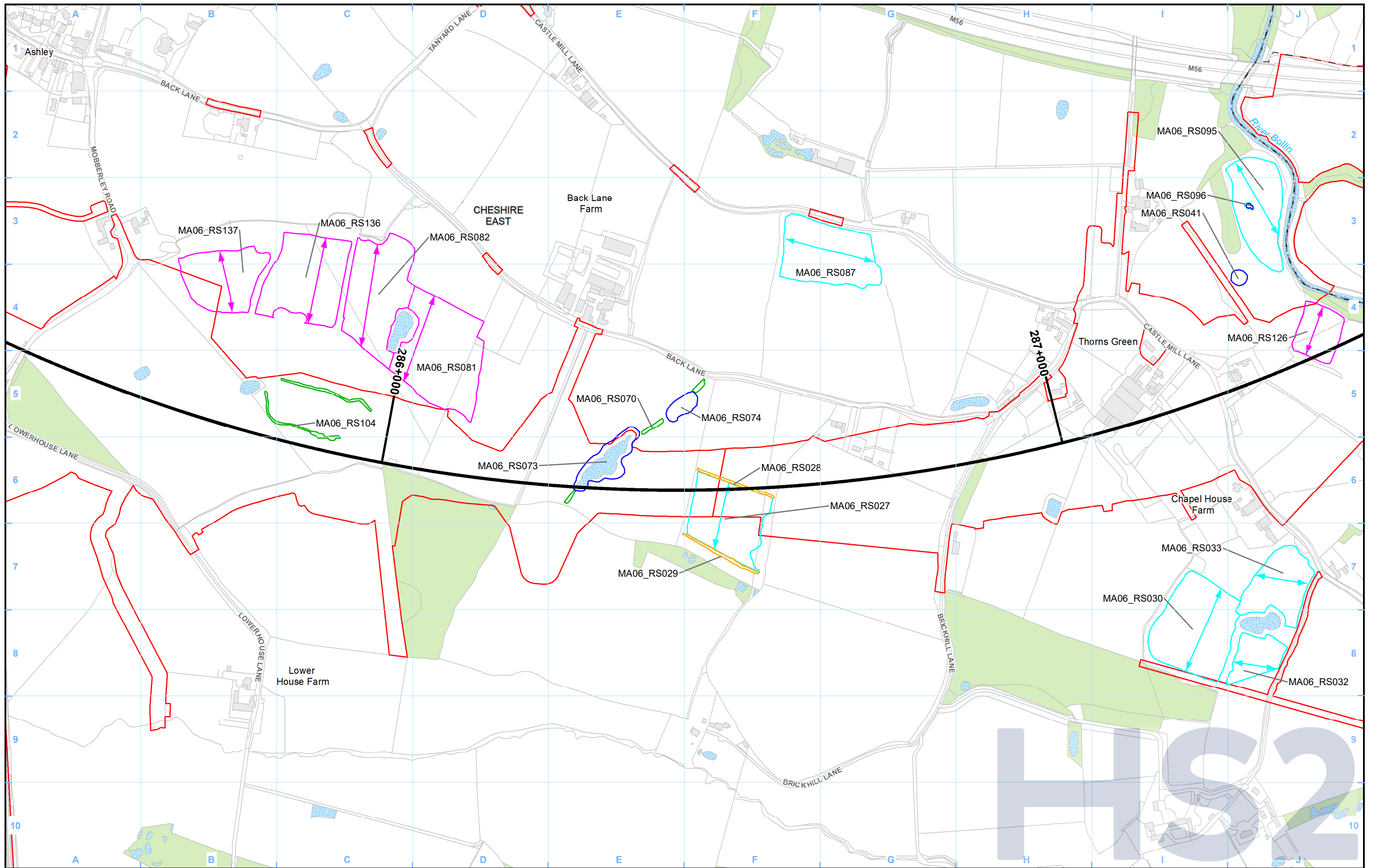
Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6QA.

© Crown copyright and database rights 2020
OS 100049190

Scale at A3: 1:5,000

Doc Number: 2DE01-MWJ-EV-MAP-M000-002563-P01

Date: 24/09/21



| Legend | | |
|--------|------------------------------------|--|
| | | |
| | | |
| | Remote sensing feature type | |
| | | |
| | | |
| | | |
| | | |

Map Number HE-005_MA06_Figure6

Map Name Remote Sensing Survey Interpretation

Community Area MA06:
Hulseheath to Manchester Airport

HS2

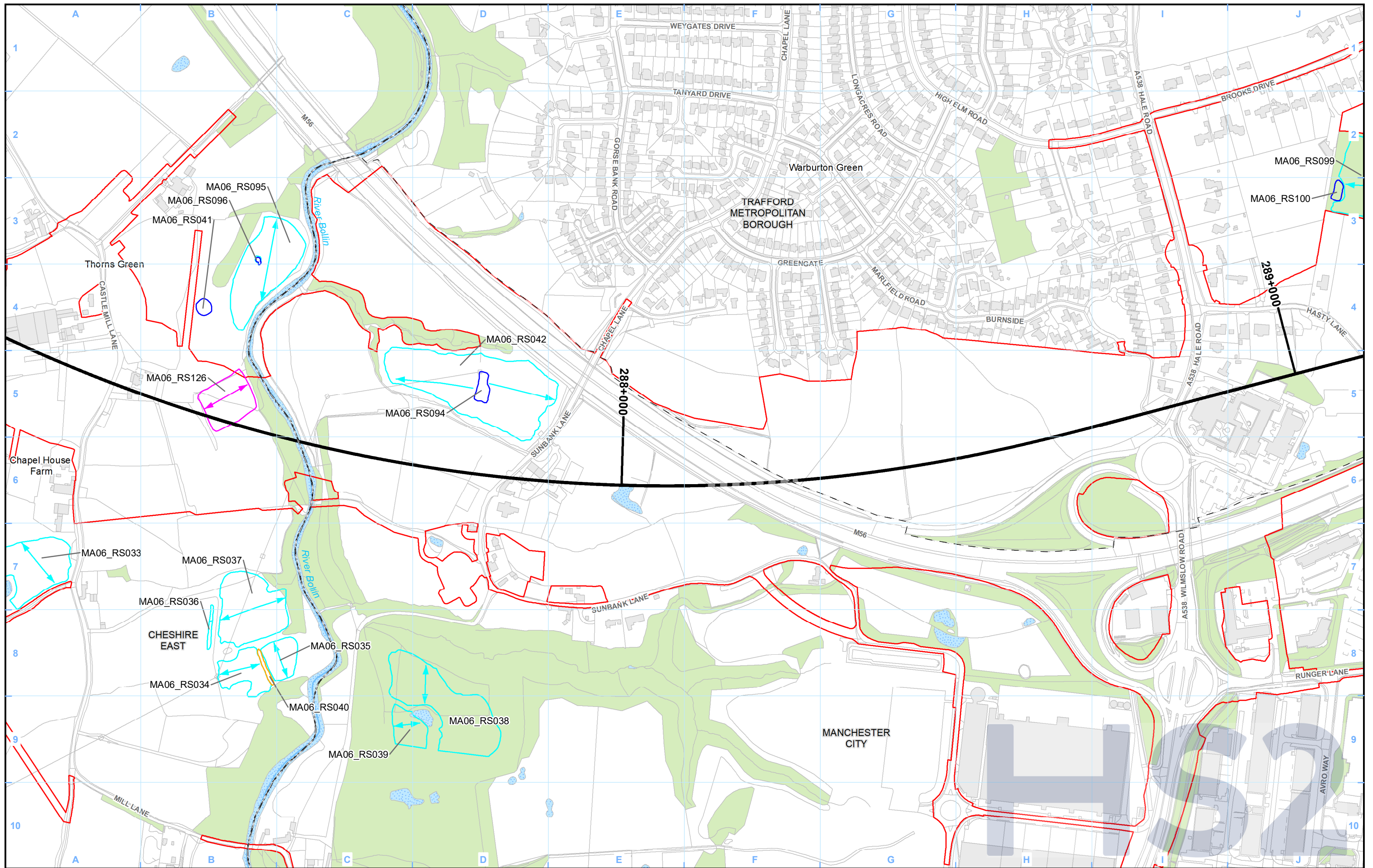
Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.

© Crown copyright and database rights 2020
OS 100049190

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: 2DE01-MWJ-EV-MAP-M000-002564-P01 Date: 24/09/21



| Legend | |
|--------|---|
| | Route in tunnel |
| | Route on surface |
| | Depot, station, headhouse or portal building |
| | Land potentially required during construction |
| | Community area boundary |
| | County boundary |
| | District/Borough boundary |
| | Watercourse |
| | Water body |
| | Remote sensing feature type |
| | Bank |
| | Ditch |
| | Levelled ridge and furrow area |
| | Levelled ridge and furrow direction |
| | Extant ridge and furrow area |
| | Extant ridge and furrow direction |
| | Extent of area |
| | Large cut feature |
| | Services |
| | Structure |
| | T-hachure |

Map Number: HE-005_MA06_Figure7

Map Name: Remote Sensing Survey Interpretation

Community Area MA06: Hulseheath to Manchester Airport

HS2

Registered in England. Registration number 06791686. Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

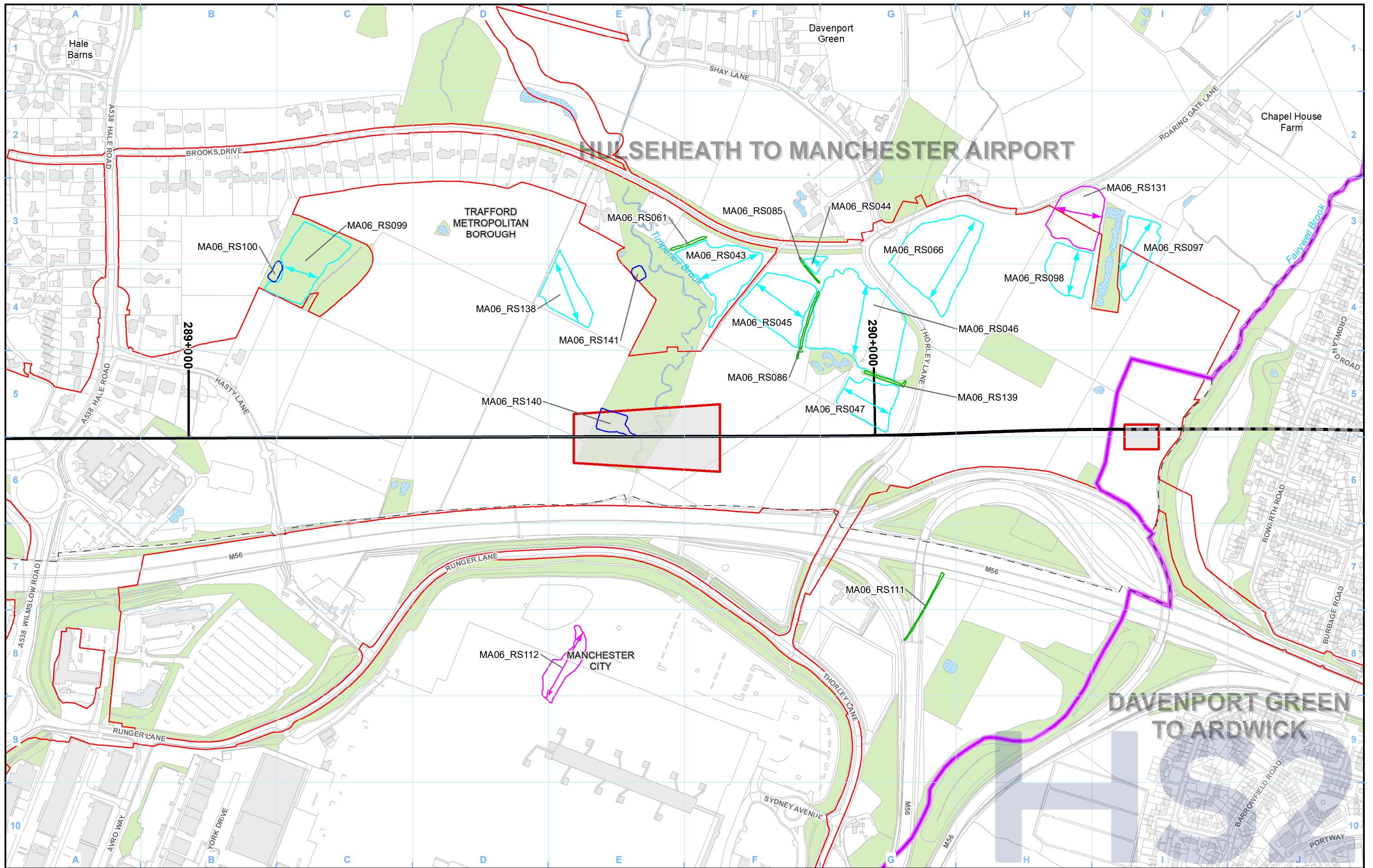
© Crown copyright and database rights 2020 OS 100049190

Doc Number: 2DE01-MWJ-EV-MAP-M000-002565-P01

Date: 24/09/21

Scale at A3: 1:5,000

0 50 100 150 200 Metres



Legend

| | | |
|---|-------------------------------------|-----------------------------------|
| Route in tunnel | Watercourse | Extant ridge and furrow area |
| Route on surface | Water body | Extant ridge and furrow direction |
| Depot, station, headhouse or portal building | Remote sensing feature type | Extent of area |
| Land potentially required during construction | Bank | Large cut feature |
| Community area boundary | Ditch | Services |
| County boundary | Levelled ridge and furrow area | Structure |
| District/Borough boundary | Levelled ridge and furrow direction | T-hachure |

Map Number HE-005_MA06_Figure8

Map Name Remote Sensing Survey Interpretation

Community Area MA06: Hulseheath to Manchester Airport

HS2

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway, Birmingham B4 6GA.

© Crown copyright and database rights 2020
OS 100049190

Scale at A3: 1:5,000

Doc Number: 2DE01-MWJ-EV-MAP-M000-002566-P01

Date: 24/09/21

