

HOUSTON SOLAR PHOTOVOLTAIC (PV) AND ENERGY STORAGE FACILITY

Heritage Assessment

28591
Heritage Assessment
1
June 2023

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
1	For Client & RPS Review	RJC	MF	MF	24/02/23
2	Final	RJC	PM	PM	15/05/23

Approval for issue

Myk Flitcroft



24 February 2023

The report has been prepared for the exclusive use and benefit of our client and solely for the purpose for which it is provided. Unless otherwise agreed in writing by RPS Group Plc, any of its subsidiaries, or a related entity (collectively 'RPS') no part of this report should be reproduced, distributed or communicated to any third party. RPS does not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report. The report does not account for any changes relating to the subject matter of the report, or any legislative or regulatory changes that have occurred since the report was produced and that may affect the report.

The report has been prepared using the information provided to RPS by its client, or others on behalf of its client. To the fullest extent permitted by law, RPS shall not be liable for any loss or damage suffered by the client arising from fraud, misrepresentation, withholding of information material relevant to the report or required by RPS, or other default relating to such information, whether on the client's part or that of the other information sources, unless such fraud, misrepresentation, withholding or such other default is evident to RPS without further enquiry. It is expressly stated that no independent verification of any documents or information supplied by the client or others on behalf of the client has been made. The report shall be used for general information only.

Prepared by:

RPS

Richard Conolly MA(Hons) MCIfA FSA Scot
Associate Director - Archaeology & Heritage

Atholl Exchange
1st Floor, 6 Canning Street
Edinburgh, EH3 8EG

T +44 1315 555 011
E richard.conolly@rpsgroup.com

Prepared for:

Elgin Energy Ltd

Mr Gareth Gardener
Development Manager

6th Floor, Dashwood House
69 Old Broad Street
London EC2M 1QS

EXECUTIVE SUMMARY

This assessment draws together the available archaeological, historic, topographic and land-use information in order to clarify the heritage significance and archaeological potential of approximately 129 hectares of land proposed for a solar PV and BESS development near Houston, Renfrewshire.

The assessment has been prepared in accordance with relevant policy and guidance and provides a description of the relevant cultural heritage baseline, identifies heritage assets that may be affected by the Proposed Development, assesses archaeological potential and identifies the likely impacts of the Proposed Development upon heritage assets as a result of both its construction and operation.

There is one designated heritage assets in the Site, the Category B-listed Fulwood Bridge. This lies within a potential cable corridor. In the event that the cable crosses the bridge, the historic fabric of the bridge will be safeguarded and retained. This will be secured through the Listed Building Consent process.

Site visits and consideration of the contribution of setting to cultural significance have demonstrated that there is no potential for the proposed development to adversely affect the setting and, thereby, cultural significance of the bridge or other designated heritage assets in the surrounding area.

There are no known heritage assets within the Site. It is considered that there is low potential for hitherto unrecorded archaeology to be present across most of the Site owing to its having been historically poorly draining and unattractive for agriculture. An area of higher ground has been identified as having moderate potential for Early Medieval and earlier archaeology. Any unrecorded archaeology present is unlikely to be of greater than regional importance.

In the event that archaeology is present, it is likely to be subject to localised disturbance during construction. The likelihood of this occurring is considered very low given the archaeological potential of the Site and nature of ground disturbance associated with construction. It is proposed that an archaeological programme of works targeting the that part of the area of moderate archaeological potential proposed for development, is implemented to address this potential by allowing for the appropriate excavation and recording of archaeological assets should they be present. The first phase of this programme of works will be trial trenching to establish the presence/absence of such remains in this area and, should they be present determine their character and extent. This work may be secured by an appropriately worded condition attached to any emerging ECU consent should it be granted. No work is proposed in relation to the rest of the Site owing to the low archaeological potential and the nature of the ground disturbance associated with the Proposed Development.

Contents

EXECUTIVE SUMMARY	I
1 INTRODUCTION AND SCOPE OF STUDY	2
2 PLANNING BACKGROUND AND DEVELOPMENT PLAN FRAMEWORK	3
Legislation	3
National Planning Policy	3
Local Planning Policy	4
Guidance	5
3 GEOLOGY AND TOPOGRAPHY	6
Geology	6
Topography	6
4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND WITH ASSESSMENT OF SIGNIFICANCE	7
Timescales used in this report.....	7
Introduction	7
Designated Heritage Assets	7
Non-Designated Heritage Assets	9
Previous Archaeological Work	9
Prehistoric.....	9
Early Medieval.....	9
Medieval and Post-Medieval	10
Modern	10
Assessment of Significance (Designated Assets).....	11
Assessment of Significance (Non-Designated Assets)	12
5 SITE CONDITIONS, THE PROPOSED DEVELOPMENT & REVIEW OF POTENTIAL DEVELOPMENT IMPACTS ON ARCHAEOLOGICAL ASSETS	13
Site Conditions	13
Proposed Development.....	13
Review of Potential Development Impacts on Designated Archaeological Assets.....	14
Review of Potential Development Impacts on Non-Designated Assets.....	14
6 SUMMARY AND CONCLUSIONS	15

Figures

Figure 1: Site Location.....	18
Figure 2: Designated Heritage Assets.....	19
Figure 3: HER Entries.....	20
Figure 4: Ordnance Survey (1863)	21
Figure 5: Ordnance Survey (1852)	22
Figure 6: Lidar Imagery.....	23
Figure 7: Satellite Imagery (2022)	24
Figure 8: Satellite Imagery (Detail)	25

Appendices

Appendix 1 Gazetteer

1 INTRODUCTION AND SCOPE OF STUDY

- 1.1 This below ground archaeological desk-based assessment has been prepared by Richard Conolly of RPS on behalf of Elgin Energy Ltd (the 'Client'). It has been prepared to support an application for consent made to the Energy Consents Unit (ECU) for a proposed solar farm and battery energy storage system (BESS) facility (the Proposed Development) on land near Houston, Renfrewshire.
- 1.2 The subject of this assessment falls into three parcels, referred to collectively as the Site. The largest parcel, Houston North, is located approximately 0.5km northeast of Houston village (centred NGR 242400 667400) It is situated to the north of the B790 Houston Road and is bisected by Turningshaw Road. It takes in approximately 90.5ha of improved pasture and arable. The other two land parcels, Houston South, are located to the south of the B790 Houston Road, situated to the east and west of Moss Road (centred NGR 244000 666450). At their nearest point, the lands are approximately 1km east of Houston village. They take in approximately 21.5ha of marshy grassland. These parcels of land are linked by two possible cable route corridors, Option 1, which runs alongside the B790 before crossing agricultural land on either side of the River Gryfe and Option 2, which runs alongside the B790 and Moss Road. The total area of the Site, including cable corridors is approximately 129ha.
- 1.3 This assessment has been prepared in accordance with relevant policy and guidance and considers the potential effects of the Project upon heritage assets, both during the construction and operation of the Project. It draws upon the following data sources:
- Historic Environment Scotland (HES) designations downloads;
 - West of Scotland Archaeology Service (WoSAS) Historic Environment Record (HER);
 - Maps held by the National Library of Scotland;
 - LiDAR data from Scottish Government;
 - Satellite imagery; and
 - Readily available published sources.
- 1.4 The desk-based work was augmented and verified through a site visit.
- 1.5 The study provides an assessment of the archaeological potential of the Project site and the significance of heritage assets within and around it, and considers the potential impacts of the Project upon these. The consideration of potential impacts upon designated heritage assets (see Figure 2) in the surrounding area has been undertaken in accordance with the guidance provided in *Managing Change in the Historic Environment: Setting* (HES 2020), which advocates the use of a three-stage process:
- Stage 1: Identify the historic assets that may be affected by the proposed development.
 - Stage 2: define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced.
 - Stage 3: evaluate the potential impact of the proposed changes on the setting, and the extent to which any negative impacts can be mitigated
- 1.6 Stage 1 has been informed by the use of a Zone of Theoretical Visibility (ZTV, Figure 2) and site visits. The ZTV takes account of the screening effect of the built form as well as areas of woodland. It does not take into account the screening effect of small groups of trees or hedgerows and similar. The ZTV therefore represents maximum visibility rather than actual visibility. The ZTV was prepared by RPS' Landscape team; full details of the methods used to produce the ZTV are presented in the Landscape and Visual Impact Assessment (RPS 2022).

2 PLANNING BACKGROUND AND DEVELOPMENT PLAN FRAMEWORK

Legislation

- 2.1 The Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Conservation Areas) (Scotland) Act 1997 provide the legislative basis for the protection of the historic environment. These were amended by the Historic Environment (Amendment) (Scotland) Act 2011.

National Planning Policy

- 2.2 Policy 7 of NPF4 deals with historic assets and places in the planning system. It is intended 'to protect and enhance historic environment assets and places, and to enable positive change as a catalyst for the regeneration of places.' It specifies that 'development proposals with a potentially significant impact on historic assets will be accompanied by an assessment of the impact based on their cultural significance.' In summary, development proposals will only be supported where they preserve the character, special architectural or historic interest of Listed Buildings, the character and appearance of Conservation Areas, and avoid direct impacts on scheduled monuments and significant adverse impacts upon the integrity of their setting or where exceptional circumstances have been demonstrated to justify such impacts and where these have been minimised. Development proposals affecting nationally important Gardens and Designed Landscapes and Historic Battlefields will be supported where they protect their cultural significance. Those affecting a World Heritage Site will only be supported where they protect and preserve its Outstanding Universal Value. Non-designated heritage assets should be protected and preserved in situ wherever feasible. Where impacts are unavoidable, they should be assessed and minimised.
- 2.3 In July 2011, the government published the Planning Advice Note PAN 2/2011: Planning and Archaeology. It provides advice and technical information alongside Historic Environment Policy Statement (HES 2019) and the Managing Change in the Historic Environment Guidance Notes, which together set out the Scottish Ministers' policies and guidance for planning and the historic environment.
- 2.4 Sections 4-9 of the PAN, entitled Archaeology and Planning provides guidance for planning authorities, property owners, developers and others on the policy of the Scottish Government relating to archaeological sites and monuments. Overall, the guidance can be summarised:
- Policy is to protect and preserve sites and monuments and their settings in situ where feasible. Where this is not possible planning authorities should consider applying conditions to consents to ensure that an appropriate level of excavation, recording, analysis, publication and archiving is carried out before and/or during development.
 - In consideration of applications, planning authorities should take into account the relative importance of archaeological sites. Not all sites and monuments are of equal importance. In determining planning applications that may impact on archaeological features or their setting, planning authorities may balance the benefits of development against the importance of archaeological features.
- 2.5 Section 12 of the PAN notes that when determining an application the desirability of preserving a monument (whether scheduled or not) and its setting is a material consideration. It reiterates that preservation in situ should be the objective but where not possible an alternative approach is recording and/or excavation followed by analysis and publication of the results.

- 2.6 Sections 13 and 14 note that prospective developers should undertake assessment to determine whether a property or area contains, or is likely to contain, archaeological remains as part of their pre-planning application research into development potential. Where it is known, or there is good reason to believe, that significant remains exist developers should be open to modifying their plans in order to preserve remains.
- 2.7 Section 17 notes that in many cases a desk-based assessment (this document) may be sufficient to allow authorities to make a planning decision. Where the judgement of the authority's archaeological advisor indicates that significant remains may exist, it is reasonable for the planning authority to request an archaeological evaluation before the application is determined. Planning authorities should require only the information necessary for them to make an informed decision on the proposal, and this should be proportionate to the importance of the potential resource. Section 19 notes that developers should supply the results of desk-based assessments and evaluations as part of their planning applications.

Local Planning Policy

- 2.8 Renfrewshire Council adopted the Local Development Plan 2 in 2021. It contains the following policy relating to the historic environment:

Policy ENV 3 Built and Cultural Heritage

Renfrewshire's built and cultural heritage, which includes listed buildings, conservation areas, scheduled monuments, sites of known archaeological interest, unscheduled archaeological sites and the inventory of gardens and designed landscapes, will be safeguarded, conserved and enhanced.

Development in a conservation area (and outwith which impacts on its appearance, character or setting) should preserve or enhance the character and appearance of the conservation area.

Development proposals, within or in the vicinity of scheduled ancient monuments will be required to demonstrate that there is no adverse impact on the site or its setting.

The protection of unscheduled archaeological sites and other un-designated historic environment assets should also be given consideration.

The sympathetic restoration of listed buildings, including enabling development, will be supported when it allows a building to remain in active use. The layout, design, materials, scale, and siting of any development which will affect a listed building, or its setting should be sensitive to the building's character, appearance and setting.

There is a presumption against the demolition or other works that adversely affect the special interest of a listed building or its setting. No listed building should be demolished unless it can be justified.

Gardens and Designed Landscapes are to be protected and where possible enhanced.

The New Development Supplementary Guidance provides more detailed guidance on the above policy principles.

- 2.9 In line with relevant planning policy and guidance, this assessment seeks to clarify the site's archaeological potential and the likely significance of that potential and the need or otherwise for additional mitigation measures.

Guidance

- 2.10 Guidance on Cultural Heritage Impact Assessment in the context of EIA is provided in Appendix 1 of the *Environmental Impact Assessment Handbook* (SNH & HES 2018). The document as a whole underlines the need for assessment to be proportionate and to focus on the potentially significant effects of a proposal, in line with the EIA Regulations, whilst Appendix 1 establishes that the basis for cultural heritage impact assessment is an appropriate understanding of assets' cultural significance. It is worth noting the RPS position that this does not constitute an EIA project. This document however has informed the RPS approach and the reference is included for robustness.
- 2.11 *Managing Change in the Historic Environment: Setting* (HES 2020) defines setting as 'the way the surroundings of a historic asset or place contribute to how it is understood, appreciated and experienced.'

3 GEOLOGY AND TOPOGRAPHY

Geology

- 3.1 The Site is underlain primarily by limestone coal formations of the Clackmannan Group. In Houston North this is primarily overlain by raised tidal flat deposits of gravel, sand and silt with pockets of river terrace deposits of gravel, sand and silt at the south-western corner and peat in the north-eastern corner. In Houston South superficial deposits are primarily peat with raised tidal flat deposits of gravel, sand and silt in the north-western part (www.bgs.ac.uk).

Topography

- 3.2 The Site lies on the alluvial plain of the River Gryfe. Houston North is approximately 300m to the north of the river and Houston South is approximately 30m to its south.
- 3.3 Houston North is almost flat and its greater part lies at 8-10m AOD. A knoll rising to approximately 20m AOD lies in its northern part adjacent to Turningshaw Farm and the ground begins to rise at the western fringes. The canalised Barochan Burn runs north-west/south-east through the middle of Houston North. It is a tributary of the River Gryfe.
- 3.4 Houston South is flat and lies between 8 and 10m AOD.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND WITH ASSESSMENT OF SIGNIFICANCE

Timescales used in this report

Prehistoric

Palaeolithic	450,000 -	10,000 BC
Mesolithic	10,000 -	4,000 BC
Neolithic	4,000 -	1,800 BC
Bronze Age	1,800 -	600 BC
Iron Age and Roman Iron Age	600 -	AD 410

Historic

Early Medieval	AD 410 -	1100
Medieval	AD 1100 -	1560
Post Medieval	AD 1560 -	1745
Modern	AD 1745 -	Present

Introduction

- 4.1 This section of the Report reviews the available archaeological evidence for the study site and the archaeological/historical background of the general area, and, in accordance with NPPF, considers the potential for any as yet to be discovered archaeological evidence on the study site.
- 4.2 What follows comprises a review of designated heritage assets within 2km of the proposed development (Figure 2) and entries in the West of Scotland Archaeology Service (WoSAS) Historic Environment Record (HER) for a study area extending 1km radius of the study site (Figure 3), together with a historic map regression exercise charting the development of the study area from the 18th century onwards until the present day. A 1km radius search area is the standard study area for rural areas, as it is sufficiently wide to provide a representative picture of recorded archaeology in the area without including large numbers of records of no relevance to the archaeology of the Site. Given the height of the proposed development and the surrounding topography and areas of woodland, a 2km search area is considered appropriate for identifying potential impacts upon setting in this landscape, provided that it is applied with some flexibility.
- 4.3 Section 5 subsequently considers the site conditions and whether the proposed development will impact the theoretical archaeological potential identified below.

Designated Heritage Assets

- 4.4 There is one designated heritage asset within the Site. This is Fulwood Bridge (LB12689) which is a Category B Listed Building. This is located within the Option 2 cable corridor, There are four Scheduled Monuments in the 2km study area:
- Houston South Mound, cairn 155m W of Gryffe High School (SM12853);
 - Back O' Hill Farm, cup marked stone 235m WNW of (SM12808);
 - Houston North Mound, 300m WSW of Greenhill Farm (SM3913); and

- Barochan Hill, Roman fort 440m NNW of Barochan House (SM3318).

- 4.5 Houston South mound is located approximately 1.7km to the south-west of the Site. It comprises the upstanding remains of a burial cairn constructed in the late Neolithic or Bronze Age. It is situated in a small area of woodland at the western edge of Houston. It lies outwith the ZTV (Figure 2); views in the direction of the Site are curtailed by the built form. There is no potential for the mound to be seen in combination with the Proposed Development and it is considered that there is no potential for its setting to be affected. It is not considered further.
- 4.6 Back o'Hill cup-marked stone is located approximately 1.5km to the south-west of the Site. It is a Neolithic or Bronze Age cup-marked stone that has been re-used as a gatepost in an 18th/19th century field wall. It lies outwith the ZTV (Figure 2); views in the direction of the Site are curtailed by topography. There is no potential for the stone to be seen in combination with the Proposed Development and it is considered that there is no potential for its setting to be affected. It is not considered further.
- 4.7 Houston North mound is located approximately 1.3km to the west of the Site. It comprises the upstanding remains of a burial cairn constructed in the late Neolithic or Bronze Age. It is situated in a small area of woodland surrounded by fields to the west of Houston. It lies within the ZTV (Figure 2); however, it was evident from the site visit that the extensive woodland associated with Houston House completely blocks any views between the mound and the Site. There is no potential for the mound to be seen in combination with the Proposed Development and it is considered that there is no potential for its setting to be affected. It is not considered further.
- 4.8 Barrochan Hill Roman fort is located approximately 1.3km to the north of the Site. It comprises the primarily subsurface remains of a Roman fort occupying the summit of Barochan Hill at approximately 70m AOD. Houston North will be visible from the fort and as such the Proposed Development will result in change in its setting. The cultural significance of the fort and the contribution of setting is discussed further below.
- 4.9 There are 23 Listed Buildings in the 2km study area. These comprise one Category A, 18 Category B and four Category C. Of these all but two lie outwith the ZTV (Figure 2). The ZTV shows that there is no potential for views of them that may contribute to their cultural significance to be affected. It is concluded that there is no potential for the Proposed Development to adversely affect their setting and thereby their cultural significance and they are not considered further.
- 4.10 The two Listed Buildings within the ZTV comprise:
- Ardgyfe House (LB12690, Category B);
 - Ardgyfe House Lodge (LB12691, Category C); and
 - Fulwood Bridge (LB12689, Category B).
- 4.11 Ardgyfe House and lodge are located approximately 530m to the south of Houston North and 1km west of Houston South. Whilst the ZTV indicates that the Proposed Development could be visible from them, the house is situated in a formal garden that is surrounded by a high wall and hedges that limit outward views in the direction of both Houston North and Houston South. Immediately north of the garden is South Mains, the buildings of which completely screen views in the direction of Houston North. Views in the direction of Houston South are curtailed by numerous trees. It is concluded that there is no potential for the Proposed Development to affect their setting and thereby their significance. They are not considered further.
- 4.12 There is one Conservation Area in the 2km study area: Houston. This lies outwith the ZTV (Figure 2) and it is considered that there is no potential for the proposed development to affect its setting.

Non-Designated Heritage Assets

- 4.13 WoSAS HER holds two entries for the Site. These relate to a light anti-aircraft battery (WoSAS 69756) and a searchlight battery (WoSAS 69757), both dating to the Second World War and located in the eastern part of Houston North. These are discussed further below.
- 4.14 WoSAS HER holds 52 entries for the 1km study area. Almost all of these relate to 18th century or later buildings and structures that are of no relevance in the current context. Only those entries that relevant to the assessment are discussed below.

Previous Archaeological Work

- 4.15 No intrusive works have been undertaken within the Site.
- 4.16 Little archaeological work has been undertaken in the surrounding area. The work has concentrated around Houston and has little bearing upon the archaeological potential of the Site.

Prehistoric

- 4.17 The HER holds no entries for the Prehistoric period relating to the Site. Entries for this period in the study area are restricted to a chance find of a bronze spearhead found on Linwood Moss in 1880, approximately 600m to the south of the Site (WoSAS 7661).
- 4.18 The paucity of Prehistoric date will in part be the result of the limited amount of archaeological fieldwork undertaken in the area. However, it is likely that it reflects relatively low levels of activity in the study area during this period. Historically, there were extensive mosses in this area that will have rendered the area unsuitable for agriculture and settlement and restricted the areas use to low intensity activities such as hunting, fishing and seasonal grazing. The spearhead may also indicate that these wetlands saw some ritual activity. In such an environment, areas of slightly higher ground may act as foci for activity.
- 4.19 It is concluded that the potential for hitherto unrecorded archaeology of Prehistoric date to be present in the Site is low owing to the low-lying nature of the land and the wetland conditions across most of the Site during this period. However, the potential on the knoll in Houston North adjacent to Turningshaws Farm is considered to be moderate (Figure 6). This higher ground located at an ecotone may have been an attractive location for settlement during the Prehistoric period.

Early Medieval

- 4.20 The HER holds no records relating to the Early Medieval period for the Site or 1km study area.
- 4.21 As with the Prehistoric period, this is likely in part to reflect the low levels of fieldwork but is again likely to reflect relatively low levels of activity in the study area owing to unfavourable conditions for agriculture and settlement.
- 4.22 It is concluded that the potential for hitherto unrecorded archaeology of Early Medieval date to be present in the Site is low owing to the low-lying nature of the land and the wetland conditions across most of the Site during this period. However, the potential on the knoll in Houston North adjacent to Turningshaws Farm is considered to be moderate. This higher ground located at an ecotone may have been an attractive location for settlement during the Early Medieval period.

Medieval and Post-Medieval

- 4.23 The HER holds no records relating to the Medieval or Post-Medieval period for the Site. It holds three entries for the 1km study area potentially relating to the Medieval period:
- St Peter's Well holy well (WoSAS 7680) located approximately 900m to the west of Houston North.
 - Chapel Farm (WoSAS 7679) supposed site of a Medieval chapel, approximately 720m to the north-west of Houston North. No reliable evidence has been recorded.
 - Houston House bowling green (WoSAS 7668) – it has been speculated that the bowling green makes use of an earlier feature, possibly a motte. There is no evidence to support this.
- 4.24 17th century maps by Pont¹ (c.1583-96) and Blaeu² (1662) show little detail, but Turningshaw and North Mains and other farmsteads and houses are depicted indicating these farmsteads had been established by the early Post-Medieval period and potentially slightly earlier. All the settlements depicted in the vicinity of the Site can be positively identified with settlements depicted on later mapping and demonstrably outwith the Site.
- 4.25 Roy's map (1752-55) shows greater detail³. Turningshaw (annotated 'Burningshaw') is shown as two buildings in a strip of cultivated land on the western fringe of a moss, named on later maps as Barochan Moss. At the southern of this strip is 'Landhead', which may confidently be identified with Loanhead (WoSAS 87028), which lies outside Houston North's southern boundary. The western limit of the cultivated land is straight and corresponds with the canalised line of the Barochan Burn. The land to the west of the Barochan Burn is shown as rough ground divided into four roughly rectangular enclosures; the north/south boundary is marked by parallel lines, presumably indicating a track. North Mains is not shown, but its location coincides with the join between four sheets. The area of Houston South is depicted as occupied by a moss, later mapped as Linwood Moss, except for a narrow strip of cultivated land along the Gryfe River. A farmstead annotated The Nose is depicted here and can be identified with Knowes farmstead which is located immediately to the north of Houston South. The farmstead of Birkenhead which lies to the north-east of Houston South is also shown.
- 4.26 It is concluded that the potential for Medieval and Post-Medieval archaeology, aside from cultivation features such as drainage ditches to be present is low.

Modern

- 4.27 Ainslie's map⁴ which dates to 1800, shows no change aside from depicting the road from Turnyshaw to Loanhead through Houston North. Maps produced during the first half of the 19th century show little detail and no major changes are shown, with the exception of the construction of the Fulwood Bridge (LB12689) c. 1821 and the road across Linwood Moss, which passes through Houston South.
- 4.28 The Ordnance Survey map (1863, Figure 4) shows the Site broadly in its current configuration the principal changes being the sub-division of a large field in the east of Houston North and the removal of field boundaries in Houston South. The drains and trackway in Houston South survive as do all but one of the field boundaries. The trackway is no longer used and is visible as a slight

¹ <https://maps.nls.uk/view/00002330#zoom=6&lat=2757&lon=2939&layers=BT>

² <https://maps.nls.uk/view/108520473#zoom=6&lat=4495&lon=4707&layers=BT>

³³ <https://maps.nls.uk/geo/explore/#zoom=14.2&lat=55.87597&lon=-4.51868&layers=4&b=1>

⁴ <https://maps.nls.uk/view/74400319#zoom=6&lat=11125&lon=2747&layers=BT>

bank (Plate 10). The 1863 map shows the Fulwood Tileworks and tileworks to the north of Houston South. There is no indication that these ever extended into the Site.

- 4.29 No significant changes are shown on subsequent maps within the Site. However, the area was highly sensitive during the Second World War owing to the ROF Bishopton ordnance factory located approximately 500m to the east of Houston North. Consequently, extensive anti-aircraft defences were deployed. These included a light anti-aircraft battery and a searchlight battery within Houston North. A single ruined building remains on the site of the anti-aircraft battery (Plate 3). Only the concrete base of this building relates to the battery, the upstanding brick walls are in modern perforated brickwork and the nearby roof is constructed using nail plates and other late 20th century/early 21st century hardware (Plates 4 & 5). Satellite imagery demonstrates that the building was not roofed in 2002 and that a new superstructure was constructed between 2002 and 2006 (Figure 8). No visible trace remains of the searchlight battery (Plate 7).
- 4.30 The 1952 Ordnance Survey map (Figure 5) shows a 'Direction Finding Station (Civil Aviation Authority)', to the north of North Mains. This comprised a building and four masts served by a track to the west. The masts have been removed and the site of the building is occupied by dumped material, some of which may relate to the building, but is mostly clearly imported from elsewhere (Plate 9). The track has been removed, but cropmarks indicated that some subsurface traces of it remain (Figure 7).
- 4.31 It is assumed that the bases of the building associated with the light anti-aircraft battery and the foundations of the direction finding station survive. There is potential for sub-surface traces of features associated with these and the searchlight battery to be present. These would have very limited potential to inform understanding of these installations owing to their fragmentary survival. They are not considered to have any remaining archaeological interest and are not considered to represent heritage interest. It is considered that the potential for hitherto unrecorded archaeological assets of the Modern period is negligible.

Assessment of Significance (Designated Assets)

Barochan Hill Roman Fort (SM3318)

- 4.32 Much of Barochan Hill Roman fort lies in improved pasture, but part of it is occupied by forestry. The fort's elevated location affords extensive views southwards over low lying farmland (Plate 13), west over rolling farmland with areas of woodland (Plate 14) and eastward towards Erskine and Glasgow (Plate 16). Contrary to the scheduling description, the fort does not command good views over the River Clyde to the north as a ridge approximately 250m to the north blocks the valley from view (Plate 15). This ridge is in part composed of spoil from quarrying operations; it may be that the spoil heap has obscured the river from view. The Kilpatrick Hills to the north of the River Clyde are, however, visible above the ridge, as is the upper part of the Erskine Bridge. Views in all directions include modern features, such as settlement and pylons.
- 4.33 The fort is thought to have been built c. AD 79-80 and been occupied for around a decade. It is therefore likely to be associated with Agricola's campaigns and will have formed part of the network of forts between the Forth and Clyde that controlled movement in central Scotland.
- 4.34 The fort's cultural significance resides primarily in its archaeological interest and hence its fabric. However, its elevated position and the views over the surrounding area are important to an appreciation of its intended function. In particular, the apparent absence of views to the north is intriguing as this suggests that the fort was not built to control the area to the north, but was perhaps intended to overlook and or be seen from the lower ground or hills to the south. The Houston North element of the Proposed Development will be visible from the western part of the fort, but as it will not curtail views or otherwise affect the appreciation of the fort's elevated and commanding position and thereby its functional relationship with the surrounded landscape it is

considered that there is no potential for the Proposed Development to adversely affect its setting and therefore cultural significance. It is not considered further.

Fulwood Bridge (LB12689)

- 4.35 Fulwood Bridge is a plain three-span stone bridge built c. 1821 to replace the ferry over the River Gryfe. It has very little presence in the landscape (Plate 17). As a Category B Listed Building it is considered to be of regional importance. Its cultural significance resides in its historic interest as an example of a 19th century bridge illustrating investment in infrastructure in the area at this time.
- 4.36 The bridge has no visual relationships with other buildings or features in the surrounding landscape that contribute to its cultural significance. The northern edge of the Houston South element of the Proposed Development will be visible from the bridge (Plate 18). This view does not contribute to its cultural significance or the experience or appreciation of it. Consequently, this has no potential to affect the appreciation of the bridge’s architectural and historic interest or otherwise affect its cultural significance. Setting effects are not considered further.

Assessment of Significance (Non-Designated Assets)

- 4.37 As identified by desk-based work, archaeological potential by period and the likely significance of any archaeological remains which may be present is summarised in table form below.

Period:	Identified Archaeological Potential	Identified Archaeological Significance
Prehistoric	Low for most of Site – moderate on higher ground.	If present potentially of regional importance if well preserved
Early Medieval	Low for most of Site – moderate on higher ground.	If present potentially of regional importance given rarity
Medieval	Low	If present most probably of local importance
Post Medieval	Low	If present most probably of local importance
Modern	Negligible	If present most probably of local importance

5 SITE CONDITIONS, THE PROPOSED DEVELOPMENT & REVIEW OF POTENTIAL DEVELOPMENT IMPACTS ON ARCHAEOLOGICAL ASSETS

Site Conditions

- 5.1 The Site was visited on 22nd November 2022 in excellent conditions (Plates 1-18).
- 5.2 At the time of the Site visit Houston North was under improved pasture and arable and Houston South was under marshy grassland.

Proposed Development

- 5.3 The Proposed Development comprises:
- Photovoltaic (PV) Solar Panels erected on steel frames in south-facing arrays;
 - A primary substation, comprising electrical infrastructure and associated buildings –including control building - to enable the proposed solar facility to be controlled, monitored, metered and connected to the network. These elements will be located within a compound typically measuring c.20m x c.20m;
 - It is proposed to connect the on-site primary substation at Houston South to Houston North via a small connecting substation, through an underground cable connection;
 - 26 No. Inverter Substation Containers on concrete plinths, typically measuring 12.2m (l) x 2.5m (w) x 3m (h) to be located across the site;
 - A number of strategically located CCTV security cameras (3m high);
 - Perimeter post and wire “deer” fencing (c.2.45m high);
 - Associated Battery Energy Storage System (BESS) facility comprising 12 No. storage units typically measuring 12.2m (l) x 2.5m (w) x 3.4m (h) set side by side generally 3 metres apart. Each pair of storage units will have an associated Power Conversion System (PCS) unit (6 in total) again typically measuring 12.2m (l) x 2.5m (w) x 3m (h). The battery storage units and PCS units will sit atop plinths/upstands typically measuring 300mm high but within a range of 100mm to 500mm. Concrete will be limited to the extent of the upstands and will not be placed across the entirety of the Battery Storage Area. The storage units and proposed substation will be placed atop a permeable surface;
 - Access to Houston North is via existing field entrances on either side of both N Mains Road and Turningshaw Road; and access to Houston South is via entrances on either side of Moss Road and an entrance on Auchans Road;
 - Two No. temporary construction compounds to be located (one each) at Houston North and Houston South; and
 - Associated internal service tracks.
- 5.4 When operational the site will support a dual renewable/farming use and the overwhelming land area will remain agricultural. Sheep grazing will take place across the entire area and will not be impeded by the proposed infrastructure.

Review of Potential Development Impacts on Designated Heritage Assets

- 5.5 There is one designated heritage asset in the Site: Fulwood Bridge (LB12689), a Category B Listed Building. This lies within the Option 2 cable corridor. If Option 2 is selected, the cable will cross the bridge, being either buried below the road surface or affixed to the bridge. Such works will be the subject of an application for Listed Building Consent and the application will be supported by a detailed method statement that will allow for the preservation of the bridge's historic fabric and hence cultural significance.
- 5.6 Consideration of designated heritage assets in the 2km study area, informed by a ZTV and site visits, has established that there is no potential for the Proposed Development to adversely affect the setting of any designated heritage assets.

Review of Potential Development Impacts on Non-Designated Assets

- 5.7 No features considered to represent heritage assets have been identified within the Site.
- 5.8 The construction of the proposed development will result in ground disturbance across a substantial part of the Site. However, the disturbance will for the most part relate to driven piles for the mounting of solar panels. Consequently, disturbance will be widespread but low intensity; typically an area equating to 1% of the area covered by panels will be disturbed. If archaeology is present in these areas, it is most likely to be unaffected or subject to slight disturbance. The excavation of cable trenches and the stripping of areas for compounds and sub-stations also have the potential to disturb archaeology. If archaeology is present in these areas, it is likely to be removed. The likelihood of this occurring is considered to be very low given the size of the disturbed areas and the low archaeological potential of the greater part of the Site. The potential for this to occur is greater on the slight knoll adjacent to Turningshaw Farm, where the archaeological potential is considered to be moderate. However, the greater part of the knoll has been excluded from the area proposed for development (Figure 9), reducing the likelihood of hitherto unrecorded archaeology being affected.

6 SUMMARY AND CONCLUSIONS

- 6.1 This assessment draws together the available archaeological, historic, topographic and land-use information in order to clarify the heritage significance and archaeological potential of approximately 129ha of land proposed for a solar PV and BESS development near Houston, Renfrewshire.
- 6.2 The assessment has been prepared in accordance with relevant policy and guidance and provides a description of the relevant cultural heritage baseline, identifies heritage assets that may be affected by the Proposed Development, assesses archaeological potential and identifies the likely impacts of the Proposed Development upon heritage assets as a result of both its construction and operation.
- 6.3 There is one designated heritage asset in the Site, the Category B-listed Fulwood Bridge. This lies within a potential cable corridor. In the event that the cable crosses the bridge, the historic fabric of the bridge will be safeguarded and retained. This will be secured through the Listed Building Consent process.
- 6.4 Site visits and consideration of the contribution of setting to cultural significance have demonstrated that there is no potential for the proposed development to adversely affect the setting and, thereby, cultural significance of the bridge or other designated heritage assets in the surrounding area.
- 6.5 There are no known heritage assets within the Site. It is considered that there is low potential for hitherto unrecorded archaeology to be present across most of the Site owing to its having been historically poorly draining and unattractive for agriculture. An area of higher ground has been identified as having moderate potential for Early Medieval and earlier archaeology. Any unrecorded archaeology present is unlikely to be of greater than regional importance.
- 6.6 In the event that archaeology is present, it is likely to be subject to localised disturbance during construction. The likelihood of this occurring is considered very low given the archaeological potential of the Site and nature of ground disturbance associated with construction. It is proposed that an archaeological programme of works targeting that part of the area of moderate archaeological potential proposed for development, is implemented to address this potential by allowing for the appropriate excavation and recording of archaeological assets should they be present. The first phase of this programme of works will be trial trenching to establish the presence/absence of such remains and, should they be present determine their character and extent. This work may secured by an appropriately worded condition attached to any emerging ECU consent. No work is proposed in relation to the rest of the Site owing to the low archaeological potential and the nature of the ground disturbance associated with the Proposed Development.

Sources Consulted

General

National Library of Scotland

WoSAS Historic Environment Record

Internet

British Geological Survey – <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>

Bibliographic

Chartered Institute for Archaeologists Standard & Guidance for historic environment desk-based assessment 2014, updated 2020.

HES 2016 Managing Change in the Historic Environment: Setting

HES 2018 EIA Handbook

Cartographic

Pont, T c. 1583-1601 Renfrewshire

Blaeu, J 1654 Renfroana

Roy, W Military Survey 1752-55

Ainslie, J 1796 Map of the County of Renfrewshire

Thomson, J 1832 Renfrewshire.

Ordnance Survey 1863, 1903, 1923 1952



FIGURES



 Site

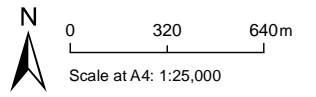
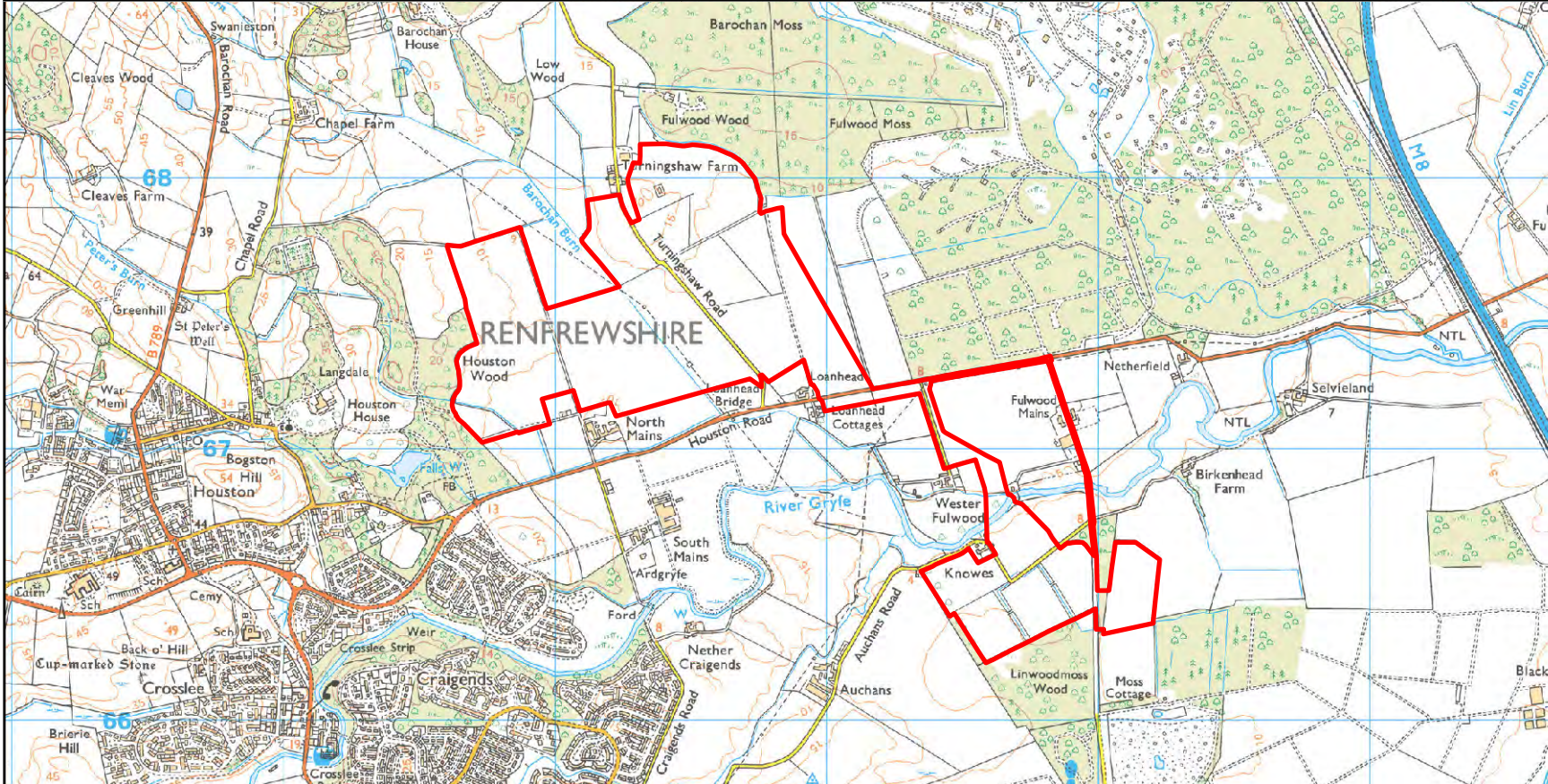
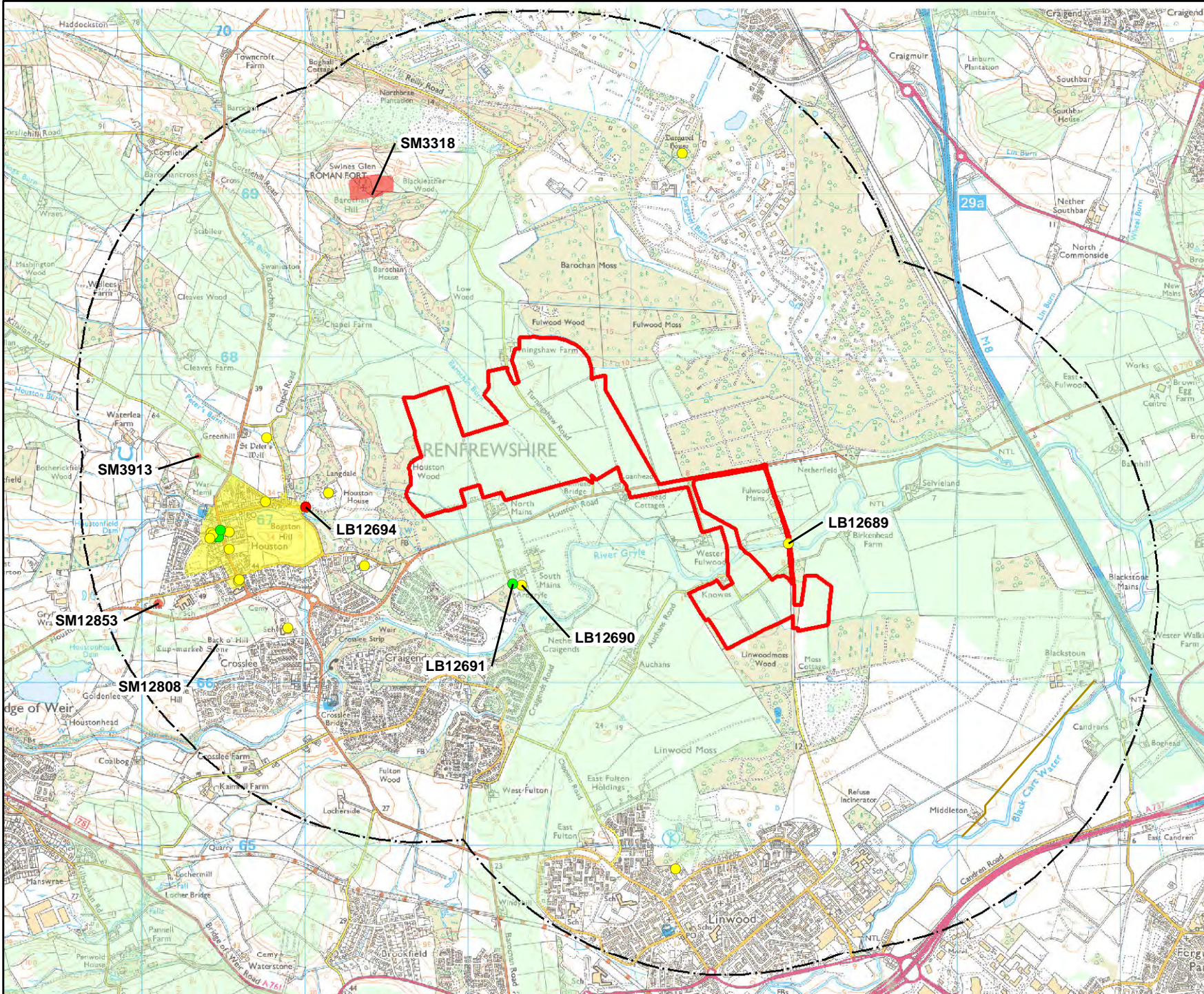


Figure 1
Site Location

Project Ref: V:\Jobs Directory\28000-28999\28591_Houston\Graphics\28591 Houston Fig 1 Loc.mxd

Project Ref: V:\Jobs Directory\28000-28999\28591_Houston\Graphics\28591 Houston Fig 2 DES.mxd



- Site
- 2km Study Area
- Scheduled Monument
- Listed Buildings**
- Category A
- Category B
- Category C
- Elderslie Conservation Area

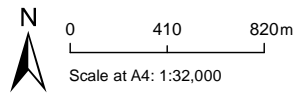
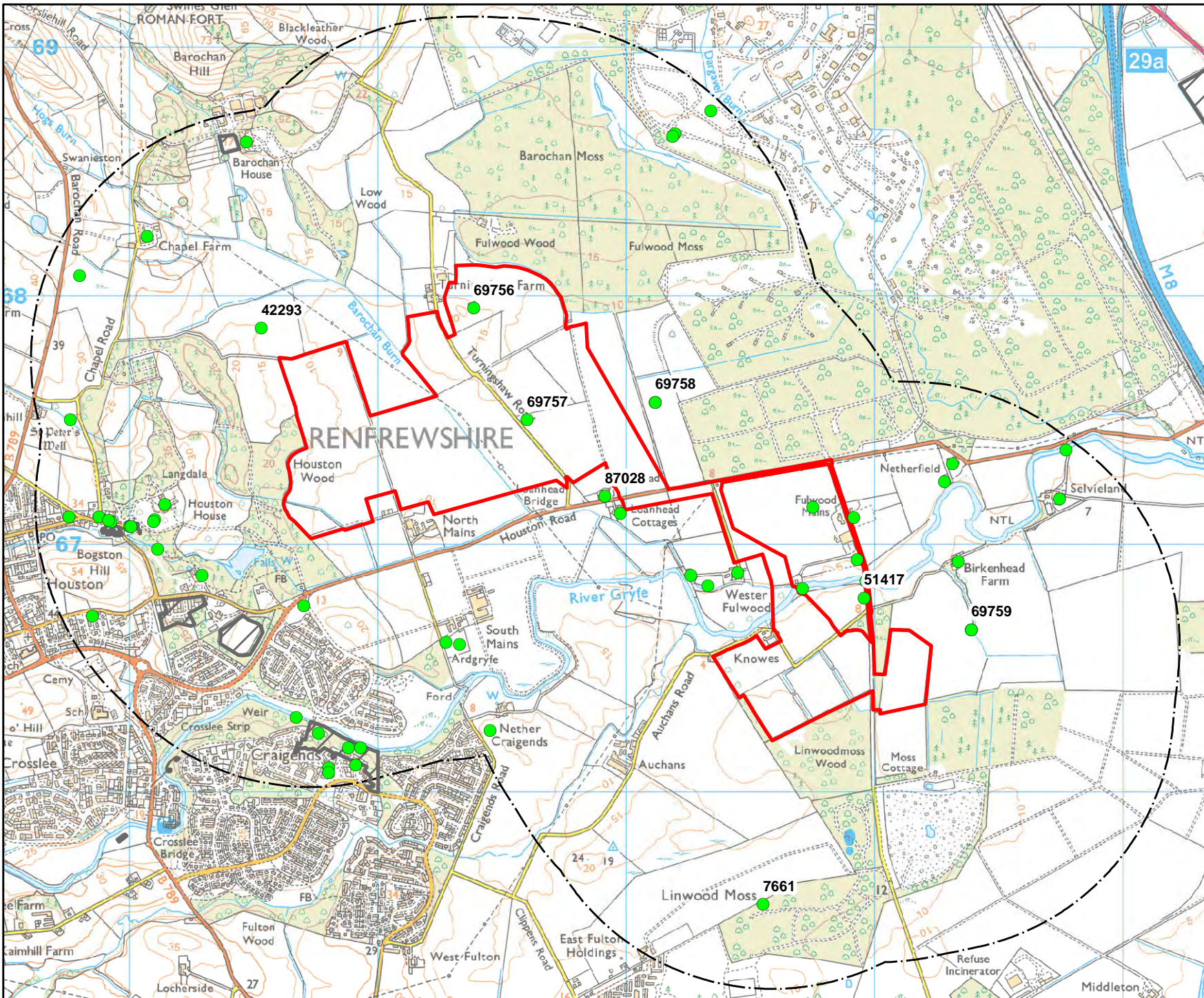


Figure 2
Designated Heritage Assets

Project Ref: V:\Jobs Directory\28000-28999\28591_Houston\Graphics\28591_Houston_Fig 3 HER.mxd



- Site
- 1km Study Area
- HER Point
- Archaeological Fieldwork

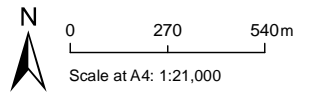
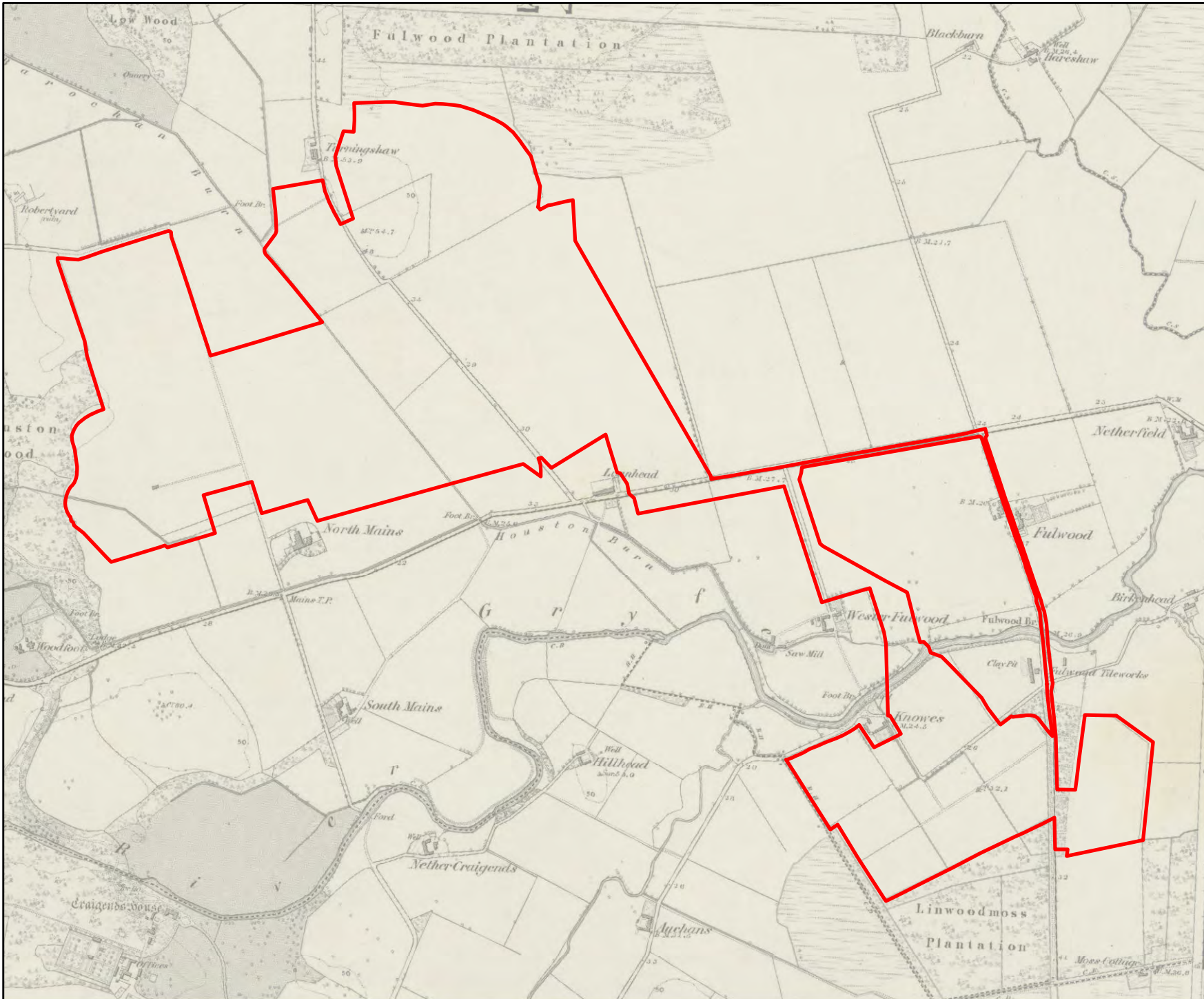


Figure 3
HER Data



 Site

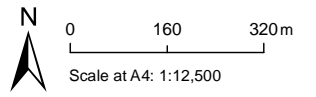
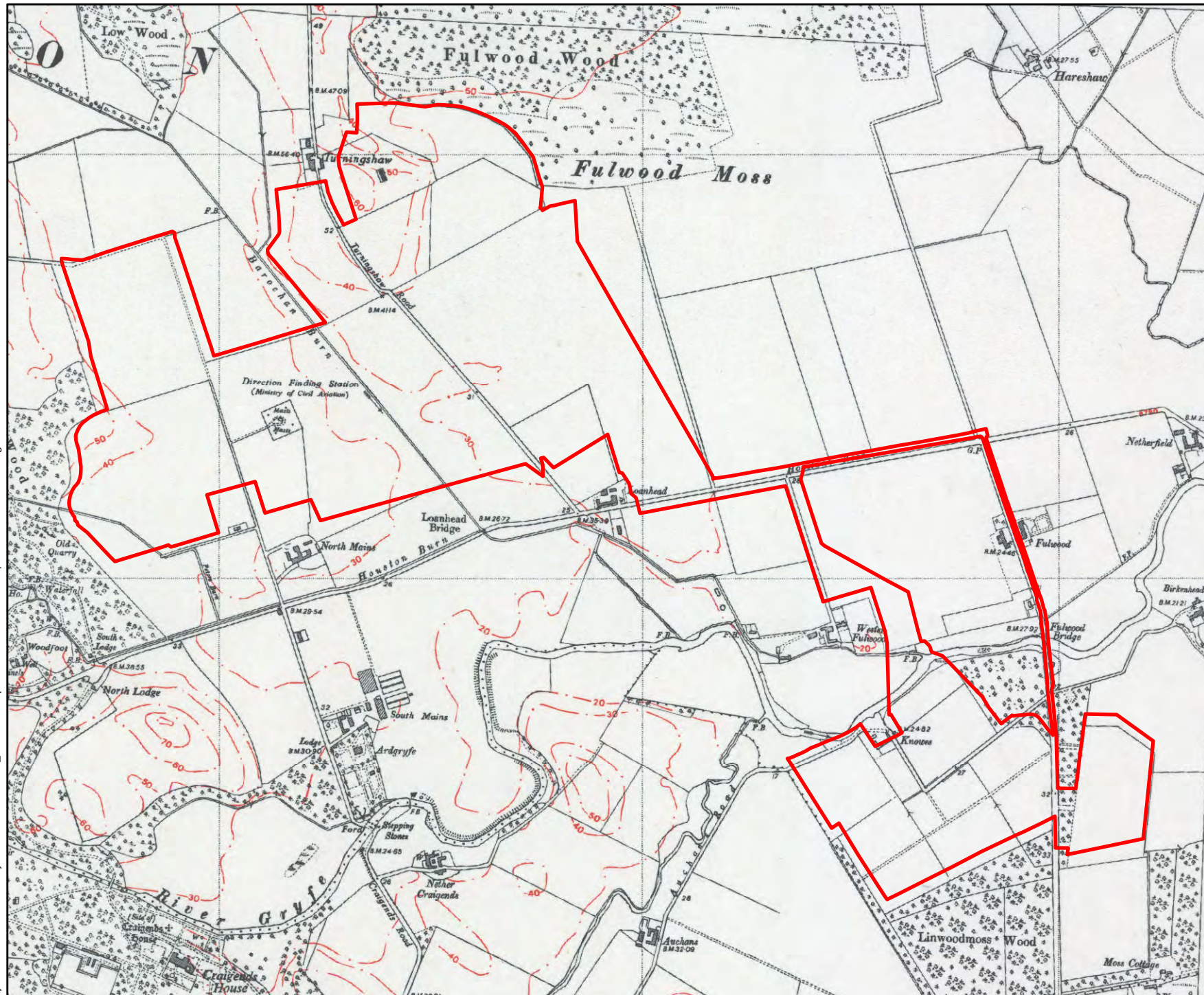


Figure 4
Ordnance Survey (1863)

Project Ref: V:\Jobs Directory\28000-28999\28591_Houston\Graphics\28591 Houston Fig 5 OS 1952.mxd



Site

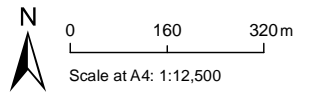
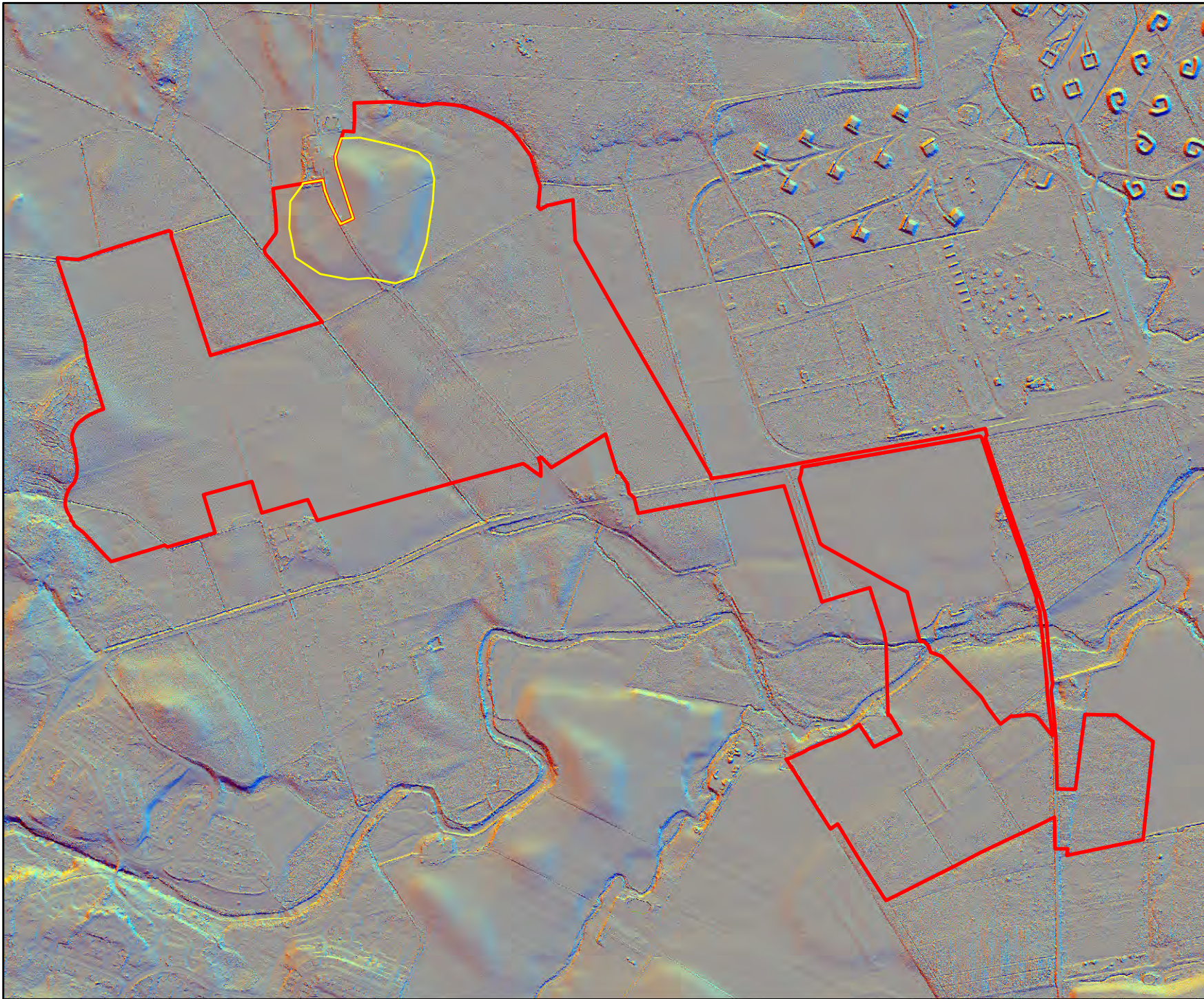


Figure 5
Ordnance Survey (1952)

Project Ref: V:\Jobs Directory\28000-28999\28591_Houston\Graphics\28591_Houston\Fig 6 lidar.mxd



- Site
- Area of Moderate Potential

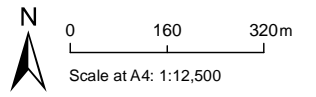
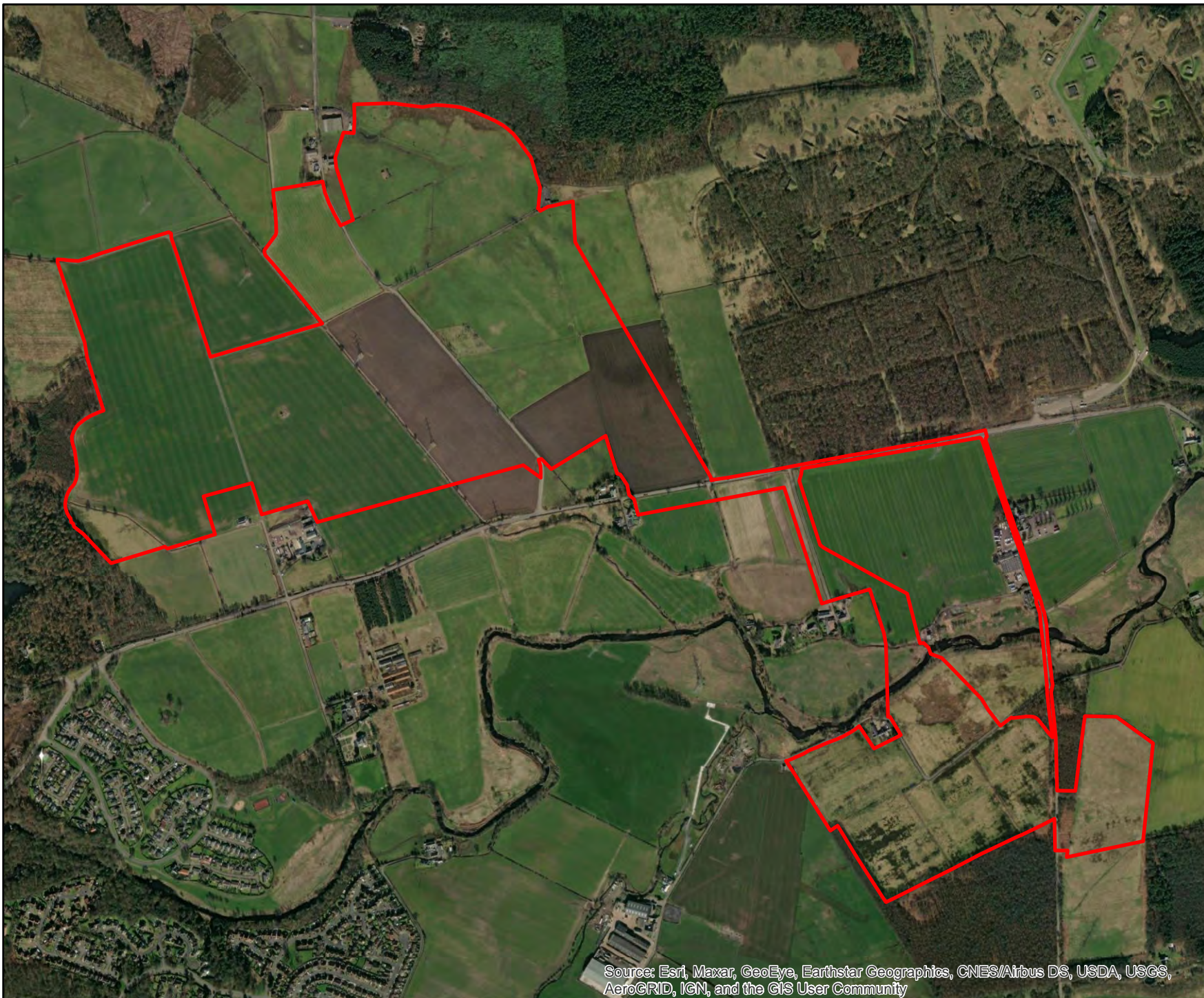


Figure 6
Lidar Data
(DTM Multi-Directional
Hillshade)

Project Ref: V:\Jobs Directory\28000-28999\28591_Houston\Graphics\28591 Houston Fig 7 satellite.mxd



Site

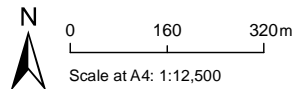


Figure 7
Satellite Imagery (2022)

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



2002
The building is partially roofed.
Some walls are missing.
No enclosure.



2006
The building is unroofed.
Walls stand to full height on all sides. Floor is bright, indicating it is new.
Enclosure as 2022.



2010
The building is roofed.
Enclosure as 2022.



2022
The building is unroofed.
Walls have partially collapsed.

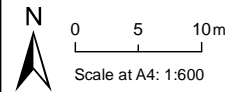
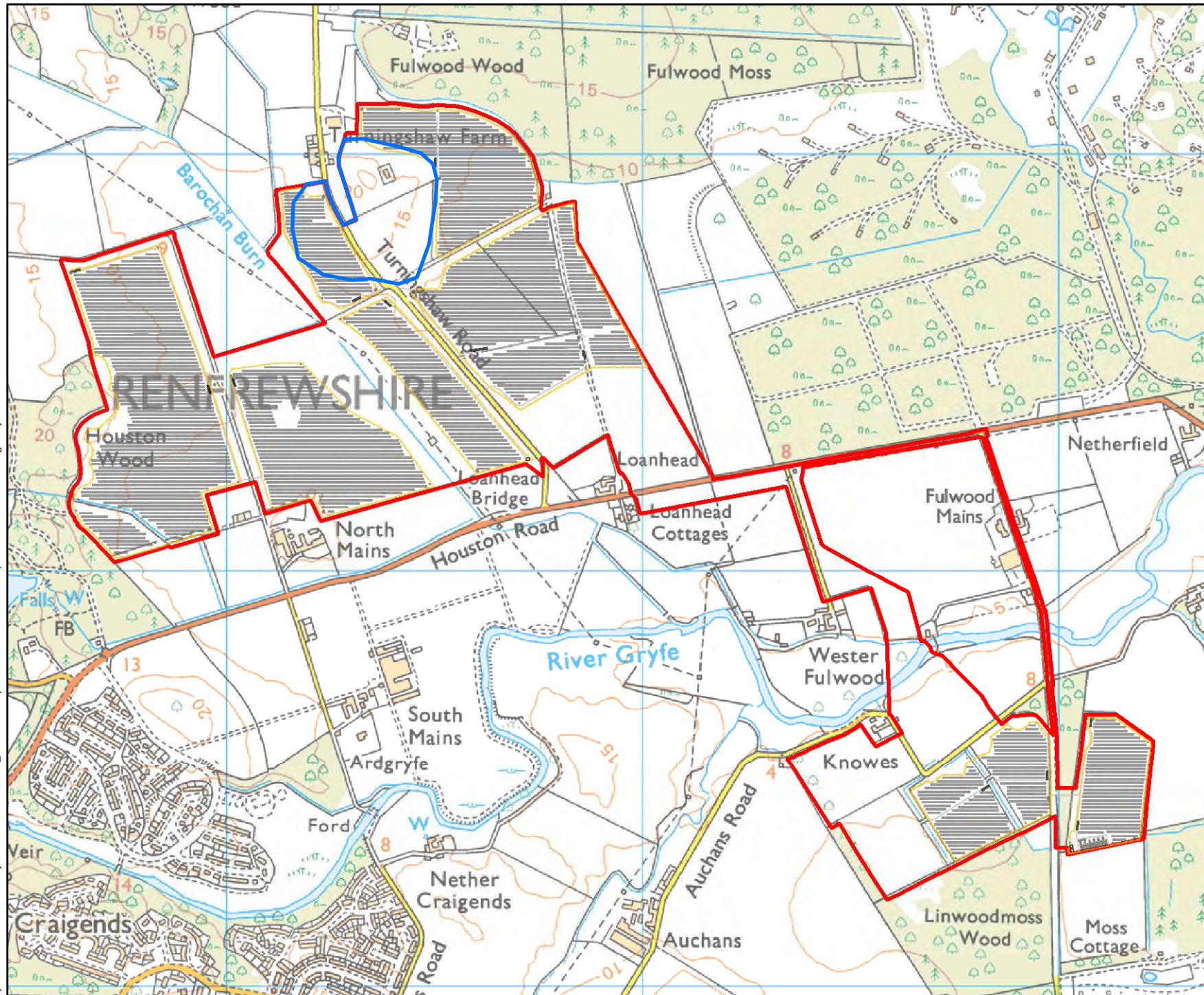


Figure 8
Satellite Imagery (Detail)
Site of Light Anti Aircraft Battery



- Site
- Area of Moderate Potential

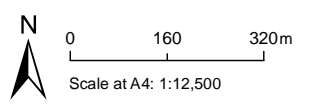


Figure 9
Development Layout and Area of Moderate Archaeological Potential

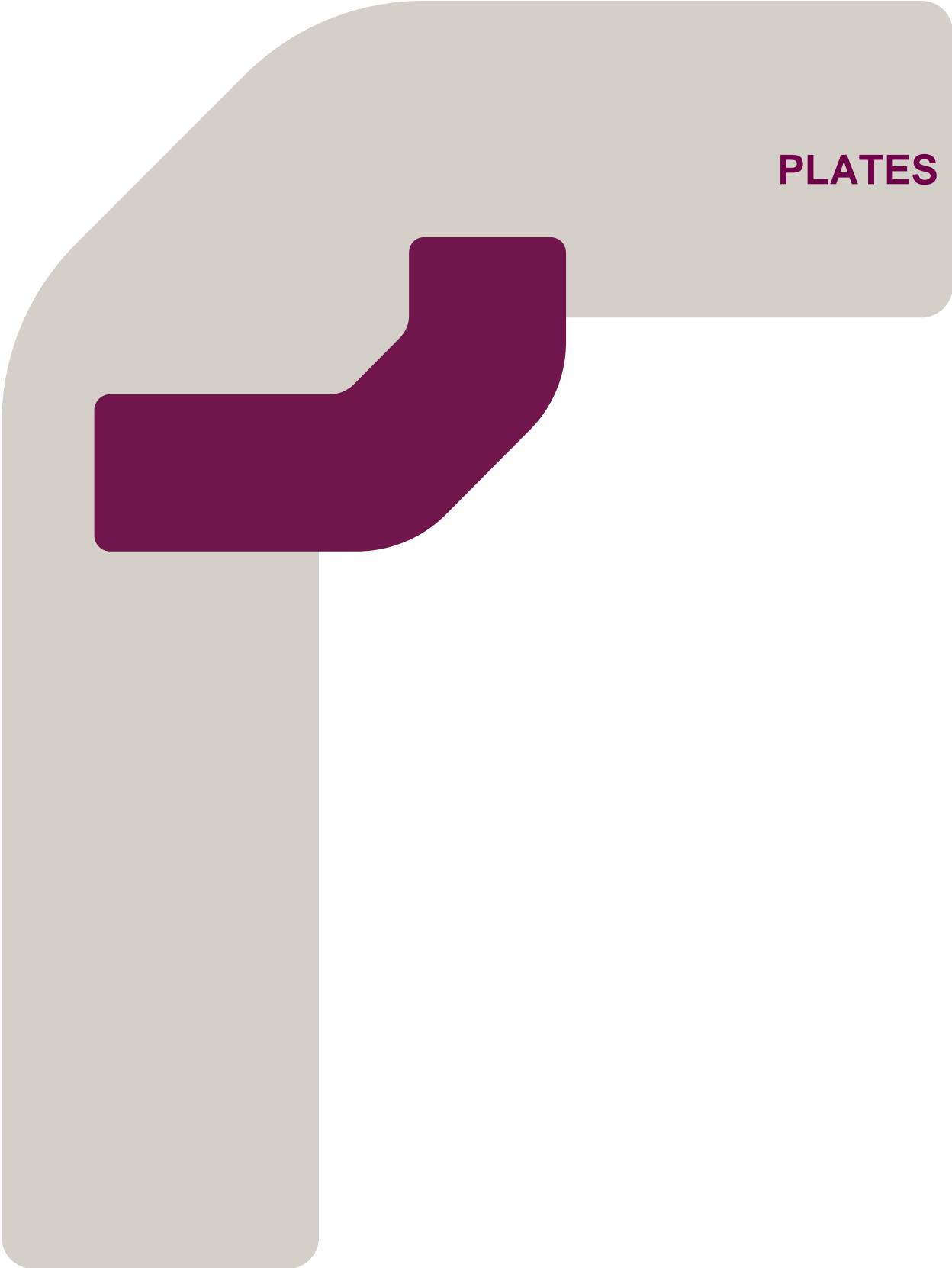




Plate 1: General view north-west across Houston North



Plate 2: General view north-east across Houston North



Plate 3: Building on site of Light Anti Aircraft Battery



Plate 4: Detail of building showing 21st-century brickwork



Plate 5: Detail of roof showing fasteners



Plate 6: General view north across eastern part of Houston North



Plate 7: Site of Searchlight Battery



Plate 8: General view north-east across western part of Houston North



Plate 9: Dumped material on site of direction finding station



Plate 10: Raised track in western part of Houston South



Plate 11: General view north-west of Houston South



Plate 12: General view across eastern part of Houston South



Plate 13: Looking south from Barochan Hill Roman Fort; Houston North visible in middle distance



Plate 14: Looking west from Barochan Hill Roman Fort



Plate 15: Looking north from Barochan Hill Roman Fort



Plate 16: Looking east from Barochan Hill Roman Fort



Plate 17: Fulwood Bridge seen from the north



Plate 18: Houston South seen from Fulwood Bridge



APPENDICES

Appendix 1

Gazetteer

HOUSTON SOLAR FARM AND BESS

Reference	Name	Designation
LB12695	Two Monuments Within Houston And Kilellan Church	A
LB10908	Dargavel House, Royal Ordnance Factory, Bishopton.	B
LB12680	"Lamorna", South Street, Houston Village	B
LB12681	Fox & Hounds Inn, South Street & Redholm Main Street, Houston Village	B
LB12682	St. Fillan's R.C. Church And Attached Presbytery And Former School, Fourwindings, Houston	B
LB12682	St. Fillan's R.C. Church And Attached Presbytery And Former School, Fourwindings, Houston	B
LB12687	"Barrfield" Main Street	B
LB12689	Fullwood Bridge, River Gryfe, Linwood Road.	B
LB12690	Ardgryfe House, Off Houston Road	B
LB12692	"Woodend", Houston Road	B
LB12693	Houston House Houston	B
LB12694	Houston Village Houston & Kilellan Parish Church, Kirk Road, Houston Village	B
LB12696	St. Peter's Well, By Greenhill Farm Houston	B
LB12697	Houston Village, South Street, Mercat Cross	B
LB12698	Cotswold And Kersland, South Street	B
LB12698	Cotswold And Kersland, South Street	B
LB12699	"Kilmory" South St.	B
LB12833	Clippens House, Clippens Road, By Linwood	B
LB13836	Houston Cottage And Ancillary Buildings North Street	B
LB9867	Main Street, Houston Primary School	B
LB12685	"Rowantree" South Street	C
LB12686	"Shoreston" South Street	C
LB12691	Ardgryfe House Lodge Off Houston Road	C
LB13837	Cochrane's Place Nw Corner Of South Street And Main Street, Houston Village.	C
SM12808	Back O' Hill Farm, Cup Marked Stone 235m WNW Of	Scheduled Monument
SM12853	Houston South Mound, Cairn 155m W Of Gryffe High School	Scheduled Monument
SM3318	Barochan Hill, Roman Fort 440m NNW Of Barochan House	Scheduled Monument
SM3913	Houston North Mound, 300m WSW Of Greenhill Farm	Scheduled Monument

WOSASPIN	SITE NAME	SITE TYPE
19063	Selvieland Farm, Access Bridge	Road Bridge
21002	Houston House, Garden	Garden; Sundial; Walled Garden
41866	Houston, Old Craigends House / Craigends House; Yewtree Gardens, Houston	Quarry
41867	Houston, Old Craigends House / Craigends House; Yewtree Gardens, Houston	Architectural Fragment
41868	Houston, Old Craigends House / Craigends House; Yewtree Gardens, Houston	Ice-house
41869	Houston, Old Craigends House / Yewtree Gardens, Houston	Policies
41870	Houston, Craigends House / Yewtree Gardens, Houston	Country House; Policies
42106	Houston, Ardgryfe House, Lodge	Lodge

HOUSTON SOLAR FARM AND BESS

42293	Houston Wood / Robertyard	Farmstead
42303	Houston / Bogston	Building; Enclosure
51417	Fulwood Tileworks	Industrial; Tileworks
68219	Butts Mill	Cotton Mill; Mill Dam; Lade; Weir
68219	Butts Mill	Cotton Mill; Mill Dam; Lade; Weir
69043	South Crooks	Farmstead
69756	Turningshaw Farm / Ops No 1940, Bishopton 7	Anti Aircraft Battery (20th Century)
69757	Loanhead / Ops No 1940 C532 (Pko23a)	Searchlight Battery (Second World War)
69758	Loanhead / Ops1940, Bishopton 6	Anti Aircraft Battery (Second World War)
69759	Birkenhead Farm / Ops No 1940, Bishopton 5a	Anti Aircraft Battery (Second World War)
75404	Houston, Chapel Road, Rock Cottage North And South	Cottage(s) (Period Unassigned)
75421	Houston, North Street, Houston Cottage	Cottage (Period Unassigned)
75425	Fulwood Bridge	Road Bridge (Period Unassigned)
75438	Houston, Ardgyfe House	House (Period Unassigned)
76011	Houston, Craigends House, North Lodge	Gate Lodge (Period Unassigned)
7654	Houston, Old Craigends House	House
7657	Houston House	House
7658	Houston Parish Church	Church; Graveyard
7659	Houston Parish Church	Tomb
7661	Linwood Moss	Bronze Spearhead
7664	Houston / Houstone	Settlement, burgh
7665	Barochan House	Tower; Country House
7667	Fulwood	House
7668	Houston House	Bowling Green; 'Motte'
7674	Craigends	Pottery; Bottles
7679	Chapel Farm	Chapel (possible); Human Remains
7680	Houston, St Peter's Well / Greenhill	Holy Well
86735	Houston, Laurel Bank	House (Period Unassigned)
86978	Selvieland Farm	Farmhouse (Period Unassigned), Farmstead (Period Unassigned)
86979	Birkenhead Farm	Farmhouse (Period Unassigned), Farmstead (Period Unassigned)
86980	Netherfield House	Farmhouse (Period Unassigned), Farmstead (Period Unassigned)
87022	Netherfield Cottages	Cottage(s) (Period Unassigned)

HOUSTON SOLAR FARM AND BESS

87023	Fulwood	Farmhouse (Period Unassigned), Farmstead (Period Unassigned)
87024	Fulwood Mains Cottages	Cottage(s) (Period Unassigned)
87025	Wester Fulwood	Farmhouse (Period Unassigned), Farmstead (Period Unassigned)
87026	Wester Fulwood, The Old Barn	Barn (Period Unassigned)
87027	Wester Fulwood Cottages	Cottage(s) (Period Unassigned)
87028	Loanhead	Farmhouse (Period Unassigned), Farmstead (Period Unassigned)
87029	Loanhead Cottages	Cottage(s) (Period Unassigned)
88974	Bishopton, Bishopton Royal Ordnance Factory,	Pumping Station (20th Century)
89679	South Crooks	Farmstead (Period Unassigned)
89788	Bishopton, Bishopton Royal Ordnance Factory, Factory 2 Rocket Propellant Production	Building(s) (20th Century), Explosives Factory (20th Century)
92961	Houston, Barochan Hill, Knowes	Bomb Crater(s) (Second World War)
94776	Loanhead	Anti Aircraft Battery (Second World War)
95328	Houston, Craigends House	Pump House (19th Century)
96021	Birkenhead Farm	Anti Aircraft Battery (Second World War)



rpsgroup.com