

ENCLOSURE COMPLEX,
SOUTH-EAST OF LANE HEAD FARM,
LIVERTON MOOR, NORTH YORKSHIRE

ARCHAEOLOGICAL SURVEY



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On behalf of

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EXECUTIVE SUMMARY

In late December 2021, Ed Dennison Archaeological Services (EDAS) Ltd were commissioned by Mr Miles Johnson, Head of Historic Environment at the North York Moors National Park Authority (NYMNP), to produce a detailed measured earthwork survey of an enclosure complex on Liverton Moor, some 250m south-east of Lane Head Farm, in North Yorkshire (NGR NZ 7174 1319 centred).

The site was initially identified from a 2018 Light Detection and Ranging (LiDAR) survey, which revealed a number of sub-rectangular ditched enclosures conjoined by banks and ditches, and which were interpreted as a prehistoric settlement. The presence of earthworks within dense bracken vegetation was confirmed by a 2019 ground-truthing survey.

The earthwork survey was able to record two definite enclosures, together with other sections of ditches and drains. Some of the fainter features seen on the LiDAR coverage were very difficult to discern in the field due to the nature of the ground and the dense vegetation cover. Also recorded was a post-medieval quarry, which is noted on late 19th century Ordnance Survey maps and described as an 'Old Sand Pit' in 1915.

The survey work found no evidence to contradict the previous suggestion that the earthworks are most likely to represent a denuded or partially disturbed Iron Age or Romano-British enclosure complex. In addition to the two main enclosures, the earthworks partially visible in the field and on the LiDAR imagery suggest a number of other attached enclosures, although it is not possible to say on the basis of current evidence whether they represent different or contemporary phases of activity.

It is also difficult to reach any firm conclusions as to the function of the site. No evidence for any occupation was noted inside the enclosures (although it may lie beneath the dense vegetation), but they are of a size that might be expected for a settlement, rather than being part of a field system. The site is unlikely to have existed in isolation, and it has been noted elsewhere that the LiDAR coverage shows a similar enclosure complex on the west side of Smeathorns Road, c.4.5km to the south-west of the Liverton Moor site, with the remains of a potential co-axial field system covering a larger area on Smeathorns itself. It seems likely therefore that both sites represent parts of the same wider late prehistoric landscape evident in this part of the northern North York Moors.

1 INTRODUCTION

Circumstances of the Project

- 1.1 In late December 2021, Ed Dennison Archaeological Services (EDAS) Ltd were commissioned by Mr Miles Johnson, Head of Historic Environment at the North York Moors National Park Authority (NYMNPA), to produce a detailed measured earthwork survey of an enclosure complex on Liverton Moor, located some 250m south-east of Lane Head Farm, and c.2.6km south of the village of Liverton, in North Yorkshire (NGR NZ 7173 1320 centred) (see figure 1).
- 1.2 The extent and methodology for the earthwork survey was defined by an EDAS methods statement (see Appendix 1), and the work was required to complement and augment the identification of the sites through a previous LiDAR ground-truthing survey.

2 BACKGROUND INFORMATION

Site Location

- 2.1 The survey area measured c.160m north-south by 115m east-west, and was set at an elevation of c.196m AOD, some 250m south-east of Lane Head Farm and 200m to the west of the B1366 Liverton Road (see figures 1 and 2). This part of Liverton Moor occupies a locally elevated position, with views to the North Sea coast as far as Sunderland, some 52km to the north-west, and beyond.
- 2.2 The area comprised unenclosed moorland and rough grass, often waterlogged, with patches of gorse on the fringes. Within the survey area, the ground surface generally sloped gently downwards from south to north. The survey area was crossed by two overhead electricity lines set at approximate right angles to one another. A public footpath runs across the northern part of the survey area, but it appears very little used.

Archaeological and Historical Background

- 2.3 The earthworks on Liverton Moor were initially identified from a Light Detection and Ranging (LiDAR) survey, undertaken in 2018, and were included on the North York Moors Historic Environment Record, as an enclosure complex south of Lane Head Farm (site 22603). The HER entry notes that the site comprises a group of sub-rectangular ditched enclosures conjoined by banks and ditches, and interpreted as a possible prehistoric settlement. Just to the south lie the earthworks of various conjoined hollows representing a former sand pit (site 22604).
- 2.4 The remains on Liverton Moor were described as part of a LiDAR Ground Truthing survey which was carried out across a much wider area (Brightman 2019, 15-16). The description reads:

“A limited group of remains was surveyed on Liverton Moor, all but one of which appear in form to be most likely Iron Age or Romano-British in origin, potentially contemporary with the Smeathorns features. It should be noted that the vegetation cover across almost all of the Liverton Moor survey area was exceptionally dense and formed from deep tussocky grass which masked all but the more obvious earthwork features. The most visually obvious feature identified, despite deep bracken growth in the area, is a ditched rectilinear enclosure (016) measuring 32m x 20m in plan with a greater level of survival to the east end. Set to the south of

the feature are a series of slight ditches which appear to be later drainage, potentially associated with the sand extraction pit nearby, though the vegetation cover makes definitive interpretation difficult. A series of very slight banks to the west and north-west (015) of the rectilinear enclosure could be identified, though only in areas where the plant cover is lower. These generally have very little surface expression but appear to share a broad alignment with the enclosure to the east, and the most likely interpretation is that they are related features, possibly representing annexes or 'fields' serving the larger enclosure".

- 2.5 It was recommended that the earthworks were subject to a detailed metrically accurate earthwork survey (Brightman 2019, 63-65).
- 2.6 The 1856 Ordnance Survey 6" to 1 mile map (sheet 18) does not show the sand pit or any other features in this area, although the southern part of the moor is crossed by a 'Bridle Road' running east-west (sheet 30) and also several north-south aligned trackways - the latter survive intermittently as earthworks. By 1894, an un-named sub-oval hollow is shown within the survey area, and in 1915 the same hollow is named as an 'Old Sand Pit' (sheet 18/15); it is unnamed on subsequent editions (see figure 3).
- 2.7 The 2018 and more recent LiDAR images show the sand pit clearly, although it is somewhat less regular than as depicted by the Ordnance Survey) as well as a sub-rectangular enclosure to the immediate south-east and another a short distance to the north (see figure 4). These enclosures appear to have other rectilinear boundaries/enclosures associated with them, although these are less pronounced on the LiDAR coverage. The features are not depicted on Historic England's aerial archaeology mapping explorer (<https://historicengland.maps.arcgis.com/>).

Fieldwork Methodology

- 2.8 The topographical survey concentrated on the area of Liverton Moor including the two sites recorded on the NYMNP HER as sites 22603 (prehistoric/Roman enclosure complex south of Lane Head Farm) and 22604 (19th century sand pit).
- 2.9 The survey work was undertaken at a scale of 1:200 using EDM total station equipment. Sufficient information was gathered to allow the survey area to be readily located through the use of surviving structures, fences, walls, water courses, trackways and other topographical features. The survey recorded the position at ground level of all earthworks, structures, wall remnants and revetments, and any other features considered to be of archaeological or historic interest.
- 2.10 Due to the isolated location of the site, the survey was unable to be integrated into the Ordnance Survey national grid by resection to points of known co-ordinates, and it could not be tied into any existing Ordnance Survey bench marks. However, a separate plan at 1:2000 scale was produced to show the survey area in relation to the nearby Liverton Road (see figure 2), and the site can be located on the LiDAR imagery. Survey points were taken from fixed survey stations on a closed traverse around and through the survey area; the locations, descriptions and values of the control points are stated in the final survey data. On completion of the total station survey, the field data was plotted and re-checked in the field in a separate operation, and any amendments or additions were surveyed by hand measurement. The resulting site survey was produced at a scale of 1:200 and presented as an interpretative hachure plan using conventions analogous to those used by Historic England. The work equated to a Level 3 archaeological survey as defined by Historic England (2017, 23-24).

- 2.11 General colour photographic recording of the survey area, together with close-up photography of significant details, was undertaken using an SLR digital camera with 12 mega-pixel resolution. Given the vegetation cover, only a limited number of photographs were taken, as the earthworks are poorly visible on photographs taken at ground level. The guidelines produced by Historic England (2015) were followed and each photograph was provided with a scale where appropriate.
- 2.12 All photographs were clearly numbered and labelled with the subject, orientation, date taken and photographer's name, and cross referenced to a photographic register. Digital copies of the photographs were provided in high resolution jpeg format.
- 2.13 Sufficient notes were taken on site in order for a detailed description of the survey area to be prepared, in combination with the drawn and photographic records.

Reporting and Archiving

- 2.14 An EDAS archive archaeological survey report was produced, based on the results of the fieldwork. This assembles and summarises the available evidence for the survey area in an ordered form, synthesises the data, comments on the quality and reliability of the evidence, and how it might need to be supplemented by further field work or desk-based research. The report is illustrated by reduced versions of the field survey, historic maps, plans and other material, and a selection of photographic plates. The report also contains various appendices, including photographic registers and catalogues. One hard copy and a pdf version of the final report were supplied to the NYMNPA HER. Another hard copy was included within the site archive and pdf copies were distributed to other interested parties as required.
- 2.15 An appropriate entry was submitted to the Archaeology Data Service's OASIS (On-line Access to the Index of Archaeological Investigations) project, as well as a digital copy of the report, on completion of the project. A fully indexed and ordered field archive was prepared, following the guidelines produced by the Chartered Institute for Archaeologists (CIfA 2020). The archive comprises primary written documents, plans, sections and photographs, and an index to the archive, and it was deposited with the NYMNPA.

3 DESCRIPTION OF THE SURVEY AREA

Introduction

- 3.1 The survey area is described below, in a logical order, and the recorded earthworks are shown on figure 5. In the following description, the digital photographs are referenced in bold type and square brackets, the numbers before the stroke representing the date on which the photograph was taken and the number after indicating the shot, e.g. [1/32].

The Sand Pits

- 3.2 The most prominent surviving features within the survey area are the sand pits, dug at some point in the second half of the 19th century and apparently abandoned by 1915 [1/443]. They cover an irregularly-shaped area measuring a maximum of c.45m north-south by 28m east-west.

- 3.3 The largest and most prominent of the depressions forming the pits lies at the south end, and has steeply scarped sides up to 1.10m in depth [1/435, 1/436] (see plate 1) ('a' on figure 5). A drain, 0.70m deep, leaves the west end of the depression and can be traced north-west for at least 57m [1/442], to drain into an unnamed watercourse which eventually runs into Mill Beck and Kilton Beck to the north-west. The uniformity and depth of this drain suggests it is a fairly recent excavation, designed to drain water from the main depression, although it is now covered with dense bracken. There is another prominent sub-oval depression at the northern end of the pits, up to 1m deep and water-filled [1/437] ('b') (see plate 2), as well as three smaller depressions.
- 3.4 Approximately 18m to the east of the northern end of the sand pits, there is a spread linear mound, aligned north-east/south-west ('c'), clearly visible on the LiDAR coverage. This mound is c.10m long, 3m wide and stands up to 0.60m in height. A shallow depression runs parallel to the east side of the mound, and at its north and south ends it may return to the north-west and south-east respectively, although this is difficult to confirm. The LiDAR may suggest that the mound forms the east end of a small rectangular enclosure, aligned north-west/south-east, but any north-west or south-east continuation of the earthworks is not clear in the dense vegetation. A low-lying area to the east and north-east of this feature is very waterlogged and appears to result from past disturbance. The LiDAR coverage shows a similar, smaller feature to the mound within this general area, on the same alignment, but this is not easily discernable in the field.

Enclosure Complex

Enclosure 'd'

- 3.5 Approximately 12m to the north of the sand pits, there is a sub-rectangular enclosure, aligned broadly east-west, measuring a maximum of 30m by 18m internally, and very prominent on the LiDAR coverage ('d' on figure 5). It is defined on all four sides by ditches, between 2.50m to 4.00m wide and up to 0.80m deep [1/439] (see plate 3). The ditches to the east [1/441] (see plate 4) and south [1/440] sides are the most prominent and well-defined, with the north side being much more spread; the east and south ditches also have spread banks running parallel to their outer sides, presumably representing up-cast material. The area enclosed by the ditches is relatively level; a semi-circular raised area at the south-east corner has been caused by rabbit burrowing. There appears to be some disturbance to the north-east corner of the enclosure, perhaps caused by a former stay or anchor for the electricity pole positioned just to the immediate north.
- 3.6 A very spread and faint linear depression runs north-east from the north-west corner of the enclosure. On the LiDAR coverage, this can be followed northwards until it meets an east-west linear depression, although this part is not visible in the field due to the vegetation. Given the different alignment to the enclosure, it is possible that this is a later track, and its possible continuation to the south can be traced to the east of the sand pits and through another enclosure (see below). Another more definite curvilinear ditch runs west from the south-west corner of the enclosure for c.10m, before apparently turning to the north and fading out. The LiDAR coverage suggests that it may once have been continuous with a very faint scarp recorded some 28m to the north, which is on a similar alignment. This scarp returns to the west and can be followed for a short distance westwards before fading out; the LiDAR coverage suggests that these features form part of a large sub-rectangular enclosure.

- 3.7 The enhanced LiDAR image appears to show one or more other possible enclosures of larger dimensions to the west and north of enclosure 'd', those to the west lying on the level ground overlooking the natural watercourse. However, they could not be identified at the time of the survey due to the presence of dense bracken here.

Enclosure 'e'

- 3.8 To the immediate south-east of the sand pits, there is a second enclosure ('e'). This is not as well defined as the first, but is sub-rectangular in plan, aligned broadly east-west, and measuring a maximum of 44m by 34m; it is again visible on the LiDAR coverage. Only the north and west sides are clearly visible for their full length in the field. The north side is formed by a north-west facing scarp, standing up to 0.60m high, with a faint 1.50m wide ditch running parallel to it [1/432] (see plate 5). There may be a spread bank to the north of the ditch. It is also possible that there are faint, parallel linear features to the north of the ditch, aligned north-south and set at c.7m centres, although it is possible that these could be the remnants of the spread bank that had been dragged out, perhaps by drainage works. The LiDAR coverage suggests that one of these faint, parallel features might form one side of a sub-rectangular enclosure, aligned north-west and south-east and possibly overlain by the larger enclosure, but this is not certain. There appears to be a second very spread bank to the south of the ditch, running along the interior of the enclosure. The west side of the enclosure is formed by a steep, south-west facing scarp, standing up to 0.80m high [1/429, 1/433, 1/434] (see plate 6). It too has a shallow ditch running parallel to it, and a spread bank along the top to the interior of the enclosure. This curves around to the east at either end, becoming more bulbous.
- 3.9 The east and south sides of the enclosure are only faintly visible on the ground, although they can be seen on the LiDAR images; the interior of the enclosure rises gently to the south, so it may be that the east and south sides were never cut into the ground to the same degree as the other two sides. A west-facing scarp to the western part of the enclosure's interior has been created by the erection of the stay or anchor for the adjacent electricity pole. There is a much fainter west-facing section of a north-south scarp to the east of this, which appears to form part of the track noted above, although it is always possible that it represents a sub-division of the enclosure; it is visible on the LiDAR coverage.
- 3.10 A low north-east facing scarp runs south-east from the north-east corner of the enclosure, whilst the ditch to the west side can also be followed for a short distance further to the south. It is possible that a scarp and low bank once left the north-west corner of the enclosure to run to the west, but were subsequently disturbed by part of the 19th century sand pit excavation.
- 3.11 The enhanced LiDAR image (see figure 4 bottom) appears to show another possible enclosure to the south of 'e', with similar dimensions, although this cannot be seen in the field due to the vegetation cover.

4 DISCUSSION AND CONCLUSIONS

- 4.1 The detailed measured earthwork survey work undertaken on Liverton Moor has confirmed the presence of the features noted previously on the LiDAR coverage. However, while the major earthworks were recorded, some of the fainter features seen on the LiDAR coverage were very difficult to discern in the field due to the nature of the ground and the dense vegetation cover.

- 4.2 The survey work found no evidence to contradict the previous suggestion that the features are most likely to be Iron Age or Romano-British in origin, and to represent a denuded or partially disturbed enclosure complex. However, the moorland landscape here is likely to have developed in a number of different phases, and the earthwork survey possibly recorded some evidence for this. For example, it is possible that the linear mound ('c') recorded between the two main enclosures ('d' and 'e'), and the faint, parallel features noted on the north side of the south enclosure ('e'), might themselves form part of additional sub-rectangular enclosures on a similar north-west/south-east alignment. Similarly, the LiDAR imagery also suggested further enclosures to the north and west of those recorded by the earthwork survey, although these could not be seen in the dense vegetation. Whether they represent different or contemporary phases of activity to the main and much larger enclosures on the moor is impossible to say at present.
- 4.3 Of the two main enclosures recorded by the earthwork survey, the northern example ('d') was ditched on all sides, with banks (assumed to represent upcast from the ditches) also present along the east and south sides. This enclosure is probably ditched on all four sides because it occupies slightly lower-lying ground here and there was a greater need for drainage. The southern enclosure ('e') was ditched to the north and west sides only, because the ground it occupies rises gently to the south. In contrast to the northern enclosure, the upcast from the ditch appears to have been thrown into the enclosure to create spread banks along the interior sides. It is unclear, on the basis of current evidence, whether the enclosures represent part of a settlement or a field system, but no evidence for any occupation was visible inside the recorded enclosures although it may lie beneath the dense vegetation. However, the enclosures appear rather small to be part of a field system.
- 4.4 Given that the earthwork survey only recorded part of the wider complex which is visible on the LiDAR coverage, it is difficult to reach any firm conclusions as to its date and function, apart from the general statement that it appears to represent an Iron Age or Romano-British rectilinear enclosure complex. It is unlikely to have existed in isolation, and may well be associated with either an adjacent field system and/or a small settlement. As previously noted by Brightman, the LiDAR coverage shows a similar enclosure complex on the west side of Smeathorns Road, c.4.5km to the south-west of the recorded site, with the remains of a potential co-axial field system covering a larger area on Smeathorns itself (Brightman 2019, 13-15). It seems likely therefore that both sites represent parts of the same wider late prehistoric landscape evident in this part of the northern North York Moors.

5 REFERENCES

Primary Sources

- 1856 Ordnance Survey 6" to 1 mile map Yorkshire sheet 18 (surveyed 1853)
- 1856 Ordnance Survey 6" to 1 mile map Yorkshire sheet 30 (surveyed 1853)
- 1894 Ordnance Survey 25" to 1 mile map Yorkshire sheet 18/15 (surveyed 1893)
- 1915 Ordnance Survey 25" to 1 mile map Yorkshire sheet 18/15 (revised 1913)

Secondary Sources

Brightman, J 2019 *North York Moors National Park LiDAR Ground Truthing: Archaeological Landscape Survey* (unpublished Solstice Heritage LLP archive report (project SOL1819-118) for the NYMNPA)

ClfA (Chartered Institute for Archaeologists) 2020 *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*

Historic England 2017 *Understanding the Archaeology of Landscapes: a Guide to Good Recording Practice*

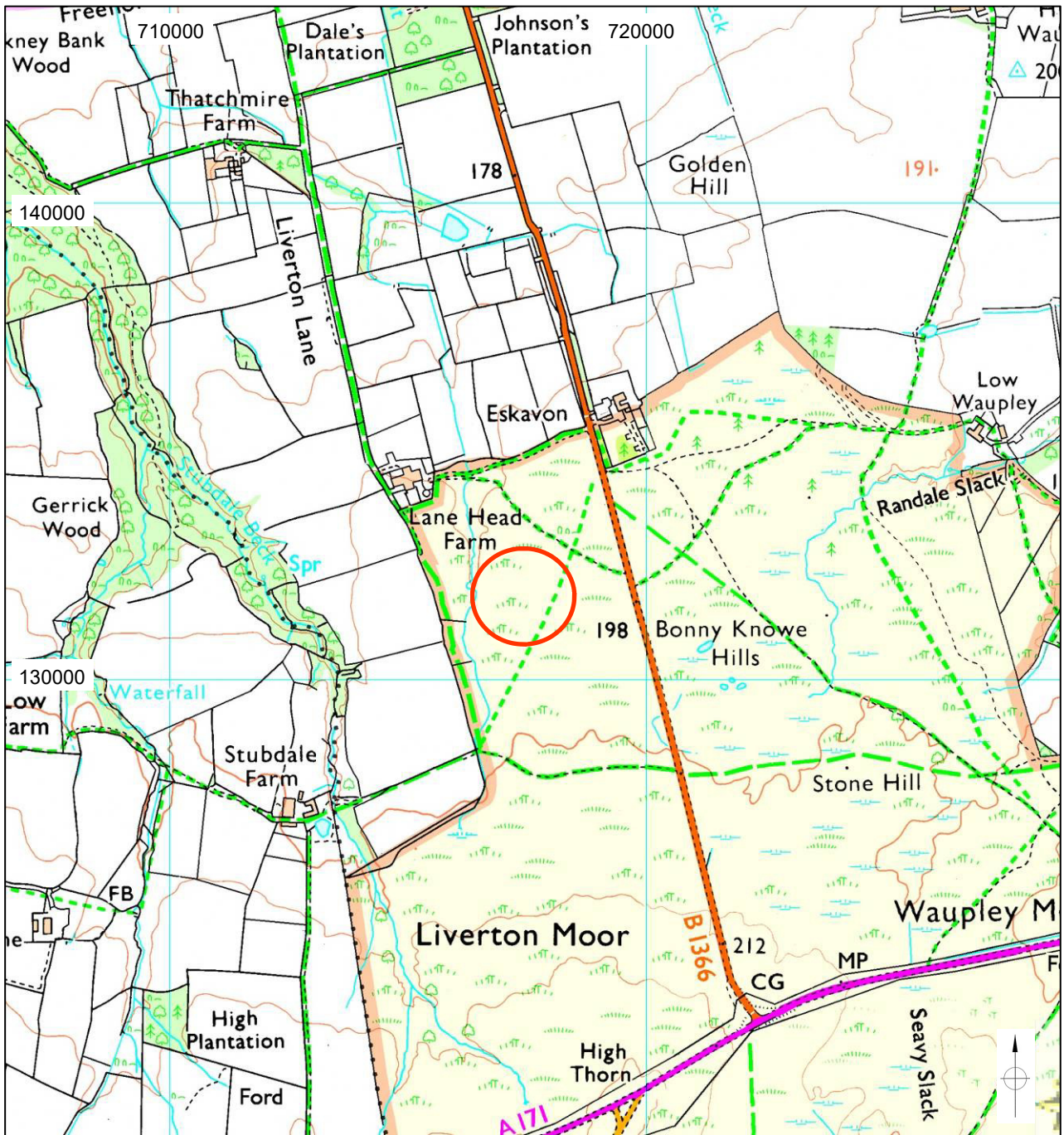
Historic England 2015 *Digital Image Capture and File Storage: Guidelines for Best Practice*

Electronic Sources

<https://historicengland.maps.arcgis.com/> = Historic England Aerial Archaeology Mapping Explorer

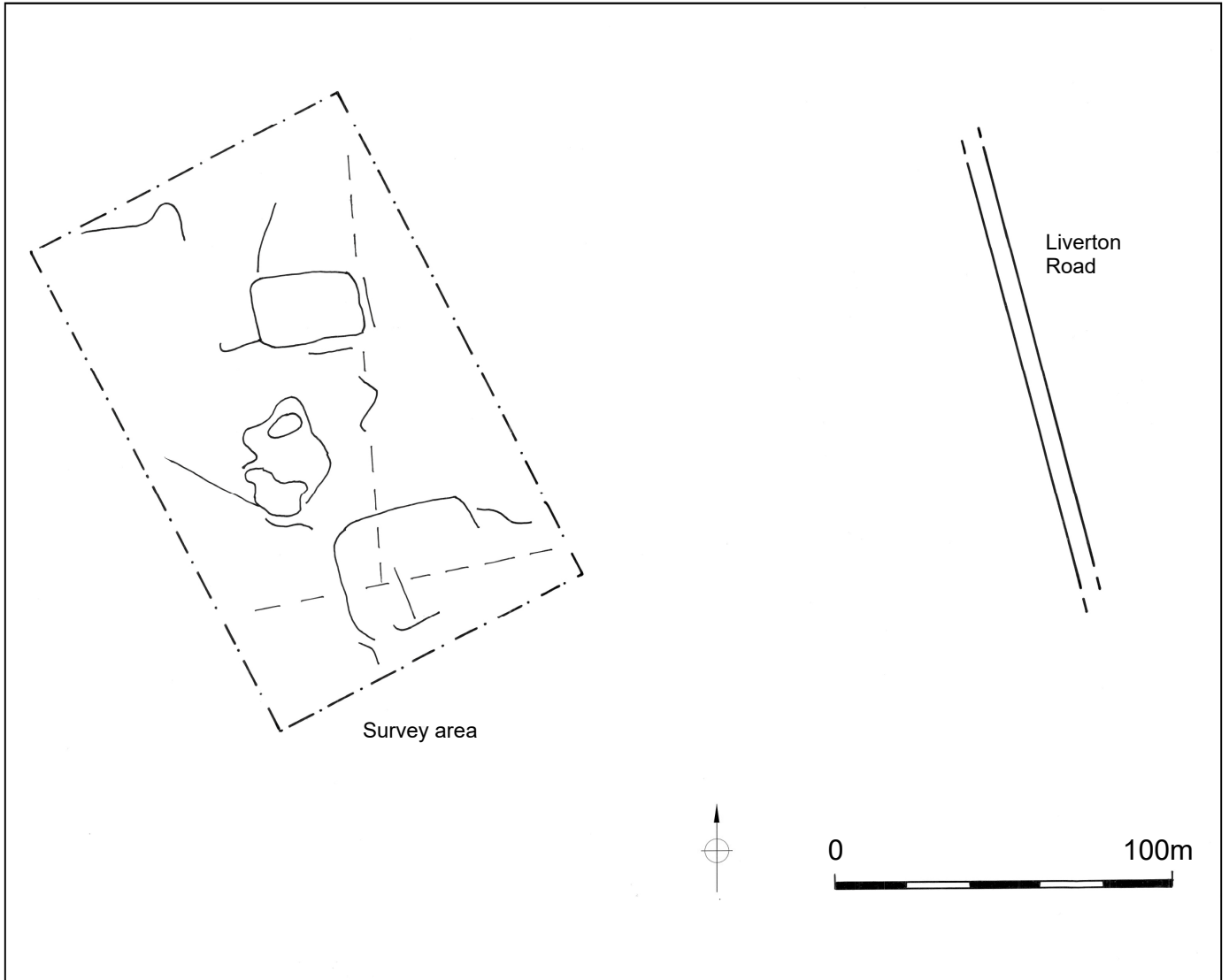
6 ACKNOWLEDGEMENTS

- 6.1 The archaeological recording was undertaken by Shaun Richardson (EDAS) and Dave Kempley of Benchmark Surveys, with funding provided by the NYMNPA. EDAS would like to thank Mr Miles Johnson, Head of Historic Environment at the NYMNPA for his help during the project. Shaun Richardson took the site photographs and produced the field drawings, while the final report was produced by Ed Dennison, who retains responsibility for any errors or inconsistencies.

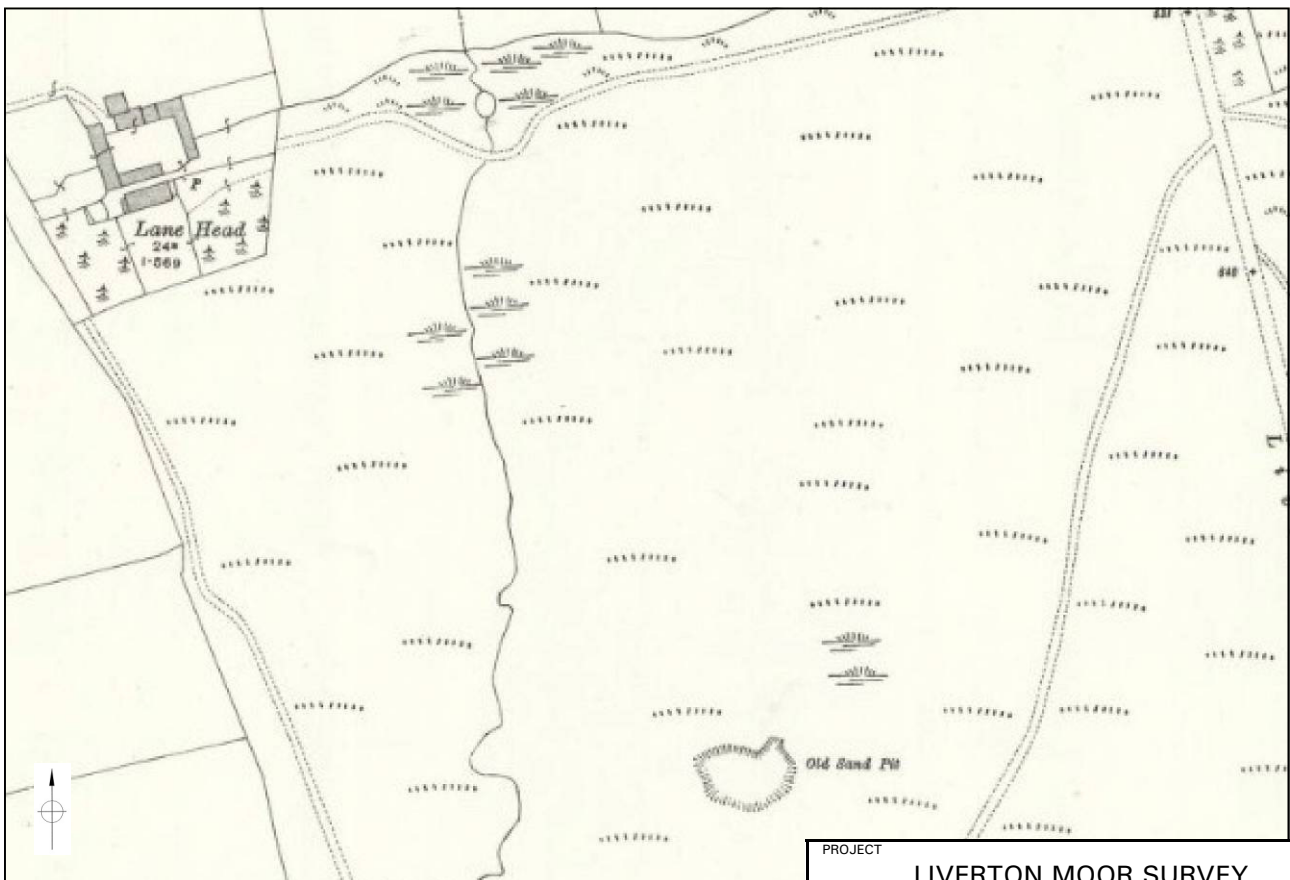
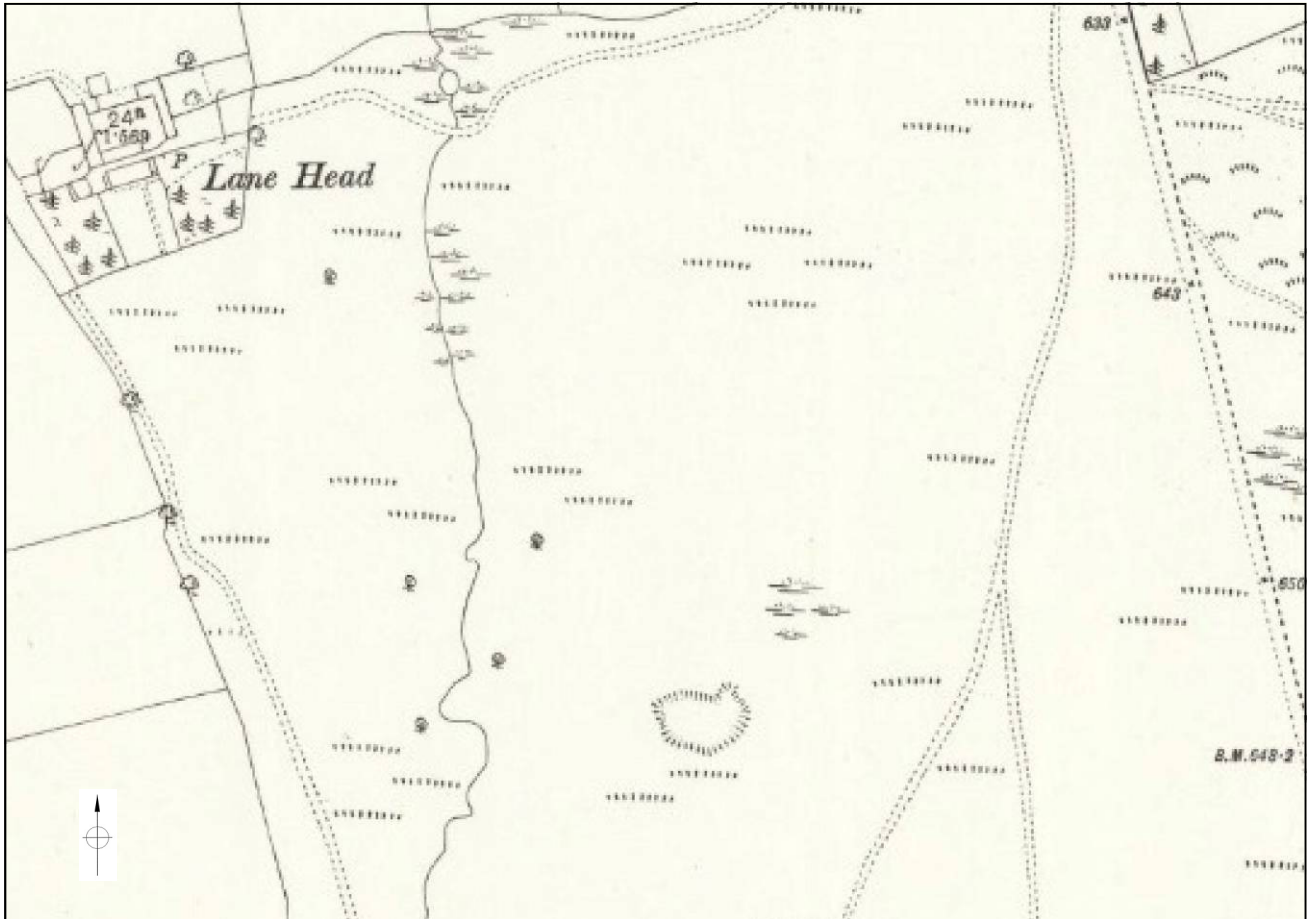


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PROJECT		LIVERTON MOOR SURVEY	
TITLE		GENERAL SITE LOCATION	
SCALE	AS SHOWN	DATE	MAR 2022
EDAS		FIGURE	1



PROJECT		LIVERTON MOOR SURVEY	
TITLE		DETAILED SITE LOCATION	
SCALE	AS SHOWN	DATE	MAR 2022
	EDAS	FIGURE	2



Top: 1894 Ordnance Survey 25" to 1 mile map Yorkshire sheet 18/15 (surveyed 1893).
 Bottom: 1915 Ordnance Survey 25" to 1 mile map Yorkshire sheet 18/15 (revised 1913).

PROJECT		LIVERTON MOOR SURVEY	
TITLE			
SCALE		DATE	
NTS		MAR 2022	
EDAS		FIGURE	
		3	



Top: 2018 LIDAR image, supplied by NYMNP.
 Bottom: LiDAR composite 1m DTM 2020 hillshade (<https://www.arcgis.com>).

PROJECT		LIVERTON MOOR SURVEY	
TITLE			
		LIDAR IMAGES	
SCALE	DATE		
NTS	MAR 2022		
EDAS		FIGURE	4

PROJECT		LIVERTON MOOR SURVEY	
TITLE		EARTHWORK SURVEY	
SCALE	AS SHOWN	DATE	MAR 2022
EDAS		FIGURE	5

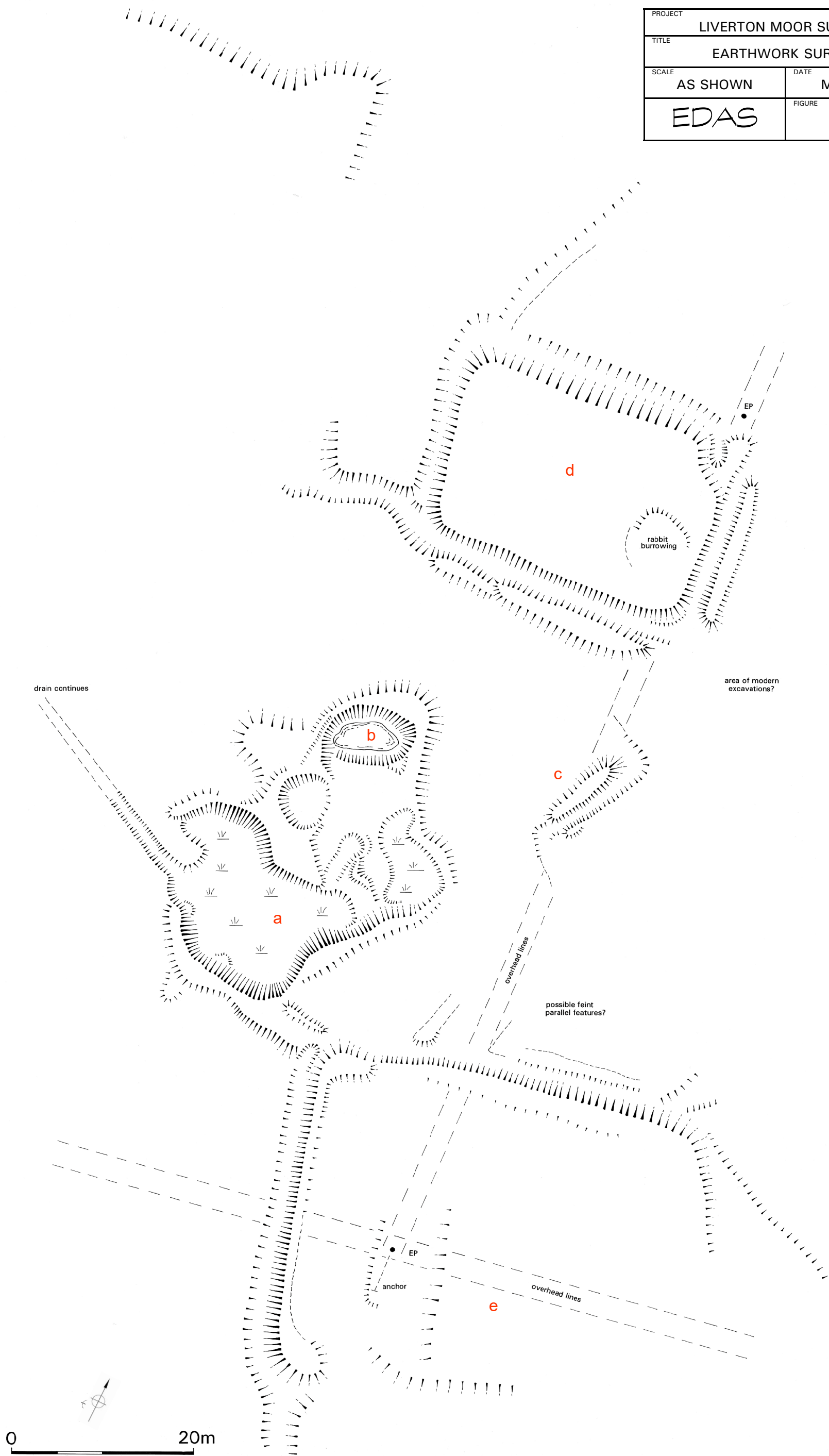




Plate 1: Main sand pit depression ('a'), looking N (photo 1/435).



Plate 2: Smaller sand pit depression ('b'), looking NE (photo 1/437).



Plate 3: Enclosure 'd', W side, looking N (photo 1/439).



Plate 4: Enclosure 'd', E side, looking N (photo 1/441).



Plate 5: Enclosure 'e', N side, looking E (photo 1/432).



Plate 6: Enclosure 'e', W side, looking S (photo 1/429).

APPENDIX 1
EDAS SURVEY PROPOSALS

POTENTIAL IRON AGE/ROMANO-BRITISH ENCLOSURES, SOUTH-EAST OF LANE HEAD FARM, LIVERTON MOOR, NORTH-WEST OF WHITBY, NORTH YORKSHIRE

EDAS ARCHAEOLOGICAL SURVEY PROPOSAL

Introduction

This proposal sets out a programme of detailed measured earthwork survey to be carried out within an area of landscape on Liverton Moor, c.300m to the south-east of Lane Head Farm and some 18.5 km north-west of Whitby in North Yorkshire (NGR NZ 71741319 centred) at an elevation of c.196m AOD. The site is not subject to any statutory protection, but lies within the North York Moors National Park. This survey proposal has been produced by Ed Dennison Archaeological Services Ltd (EDAS), at the request of Mr Miles Johnson, Head of Historic Environment at the North York Moors National Park Authority (NYMNPA).

Discussions with NYMNPA have determined that the programme of detailed measured earthwork survey will comprise a single phase of works, designed to complement and augment the site, which was previously identified from a LiDAR image and subsequent ground-truthing report (Brightman 2019). On completion of the site survey work, a short archive report and archive collating all elements of the project will be produced.

A site visit was made to Liverton Moor by Ed Dennison and Shaun Richardson of EDAS on 10th December 2021, with permission from the Resident Agent of the Skelton and Gilling Estates.

Background Information

The earthworks on Liverton Moor were identified as part of a LiDAR Ground Truthing survey carried out across a much wider area (Brightman 2019). The remains on Liverton Moor were described as follows:

“A limited group of remains was surveyed on Liverton Moor, all but one of which appear in form to be most likely Iron Age or Romano-British in origin, potentially contemporary with the Smeathorns features. It should be noted that the vegetation cover across almost all of the Liverton Moor survey area was exceptionally dense and formed from deep tussocky grass which masked all but the more obvious earthwork features. The most visually obvious feature identified, despite deep bracken growth in the area, is a ditched rectilinear enclosure (016) measuring 32m x 20m in plan with a greater level of survival to the east end. Set to the south of the feature are a series of slight ditches which appear to be later drainage, potentially associated with the sand extraction pit (014) nearby, though the vegetation cover makes definitive interpretation difficult. A series of very slight banks to the west and north-west (015) of the rectilinear enclosure could be identified, though only in areas where the plant cover is lower. These generally have very little surface expression but appear to share a broad alignment with the enclosure to the east, and the most likely interpretation is that they are related features, possibly representing annexes or ‘fields’ serving the larger enclosure” (Brightman 2019, 15-16).

It was recommended that the earthworks of the identified features (sites 014, 015 and 016) were subject to detailed metrically accurate earthwork survey (Brightman 2019, 63-65).

The earthworks are recorded on the NYMNPA HER as sites 22603 (Prehistoric/Roman enclosure complex south of Lane Head Farm) and 22604 (19th century sand pit). The 1856 Ordnance Survey 6" to 1 mile map does not show the sand pit or any other features in this area, although the moor is crossed by a 'Bridle Road' running east-west and also several north-south trackways; the latter survive intermittently as earthworks and are also visible on

the LiDAR images. By 1894, an un-named sub-oval hollow is shown within the survey area, and in 1915 the same hollow is named as 'Old Sand Pit'. The LiDAR images show the sand pit clearly (although it is somewhat less regular than as depicted by the Ordnance Survey) as well as a sub-rectangular enclosure to the immediate south-east and another a short distance to the north. These enclosures appear to have other rectilinear boundaries and/or enclosures associated with them, although these are less pronounced on the LiDAR coverage (Brightman 2019, 14). The site inspection undertaken by EDAS in December 2021 confirmed the statement made in 2019 that the area is covered by deep, dense tussocky grass and also some bracken. The former sand pit, together with the sub-rectangular enclosures to the south-east and north are visible as earthworks within the vegetation, but it is difficult to discern any of the elements of the associated rectilinear boundaries shown on the LiDAR survey.

Proposed Works

EDAS have extensive experience of undertaking detailed measured earthwork survey of multi-period sites and landscapes, including those within the North York Moors National Park. The proposed survey work at Liverton Moor will essentially comprise a total station EDM survey, subsequently enhanced by hand, and the production of an illustrated archive report.

Collation of Existing Documentary Material

No original documentary research will be carried out as part of the project. However, EDAS will collect and collate existing material relating to the history and development of the site (including the LiDAR images) to inform the subsequent recording work.

Topographical Survey

The topographical survey will concentrate on the area of Liverton Moor including the two sites recorded on the NYMNPAs HER as sites 22603 (Prehistoric/Roman enclosure complex south of Lane Head Farm) and 22604 (19th century sand pit). The core survey area measures approximately 150m north-south by 100m east-west, but adjacent earthworks outside of this area may be recorded if they can be positively identified. It is proposed to access the survey area by parking in a lay-by on B1366 Liverton Road some 440m to the south-east, and then using an existing public footpath to enter the moor.

The survey work will be undertaken at a scale of 1:200 using EDM total station equipment. Sufficient information will be gathered to allow the survey area to be readily located through the use of surviving structures, fences, walls, water courses, trackways and other topographical features. The survey will record the position at ground level of all structures, wall remnants and revetments, earthworks, water courses, leats, paths, stone and rubble scatters, ironwork, fences, walls and other boundary features, and any other features considered to be of archaeological or historic interest. The survey will also record any differences in the exposed surface detritus, such as sorted stone and/or rubble scatters, as well as differences in coarse vegetation, which may aid the functional differentiation and interpretation of the site. The detailed site survey will pay particular attention to any structural remains, and also record areas of erosion (both natural, animal and man-made) or other damage.

The site survey will be integrated into the Ordnance Survey national grid by resection to points of known co-ordinates, using the LiDAR survey information (provided by NYMNPAs) and a hand-held GPS. The site survey will not be tied into any existing Ordnance Survey bench marks, but one of the survey stations will be given a nominal height (obtained from the GPS and LiDAR data) and then heights plotted across the survey area in relation to this.

Survey points will be taken from fixed survey stations on a closed traverse around and through the site. The locations, descriptions and values of the control points will be stated in the final survey data.

On completion of the total station survey, the field data will be plotted and re-checked on site in a separate operation. Any amendments or additions will be surveyed by hand measurement. The resulting site survey will be produced at a scale of 1:200 and presented as an interpretative hachure plan(s) using conventions analogous to those used by Historic England. The survey work will equate to a Level 3 archaeological survey as defined by Historic England (English Heritage 2007, 23-24).

Photographic Survey

General photographic recording of the survey area, together with close-up photography of significant details, will be undertaken using an SLR digital camera with 12 mega-pixel resolution. Given the vegetation cover, it is envisaged that only a limited number of photographs will be taken, as the earthworks are unlikely to be anything more than poorly visible on photographs taken at ground level. The photographic guidelines produced by Historic England (2015) will be followed and each photograph will normally be provided with a scale where appropriate.

All photographs will be in colour, and clearly numbered and labelled with the subject, orientation, date taken and photographer's name, and cross referenced to film and frame numbers. A photographic register detailing (as a minimum) the location and direction of each shot will be completed. Digital copies of the photographs will be provided in high resolution jpeg format.

Written Accounts

Sufficient notes will be taken on site in order for a detailed description of the survey area to be prepared, in combination with the drawn and photographic records.

Reporting and Archiving

An EDAS archive archaeological survey report will be produced, based on the results of the documentary collation and the information obtained during the fieldwork. This report will assemble and summarise the available evidence for the survey area in an ordered form, synthesise the data, comment on the quality and reliability of the evidence, and how it might need to be supplemented by further field work or desk-based research. The report will also be illustrated by reduced versions of the field plots, historic maps and plans, and a selection of photographic plates. The report will also contain various appendices, including photographic registers and catalogues. One hard copy and a pdf version of the final report will be supplied, for distribution to the NYMNPA Historic Environment Record. Another copy will also be included within the site archive. Other pdf copies will be distributed to other interested parties, as directed by the NYMNPA.

An appropriate entry will be submitted to the OASIS (On-line Access to the Index of Archaeological Investigations) project, including the deposition of a digital copy of the report with the Archaeology Data Service, via the OASIS form, upon completion of the project.

A fully indexed and ordered field archive will be prepared, following the guidelines produced by the Chartered Institute for Archaeologists (CIfA 2020). The archive will comprise primary written documents, plans, sections and photographs, and an index to the archive. Subject to the agreement of the landowner, the site archive will be deposited with the NYMNPA.

REFERENCES

Primary Sources

1856 Ordnance Survey 6" to 1 mile map sheet 18 (surveyed 1853)

1894 Ordnance Survey 25" to 1 mile map sheet 18/15 (surveyed 1893)

1915 Ordnance Survey 25" to 1 mile map sheet 18/15 (revised 1913)

Secondary Sources

Brightman, J 2019 *North York Moors National Park LiDAR Ground Truthing: Archaeological Landscape Survey* (unpublished Solstice Heritage LLP archive report (project SOL1819-118) for the NYMNPA)

ClfA (Chartered Institute for Archaeologists) 2020 *Standard and guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*

English Heritage 2007 *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice*

Historic England 2015 *Digital Image Capture and File Storage: Guidelines for Best Practice*

Ed Dennison, EDAS
13th December 2021

APPENDIX 2
EDAS PHOTOGRAPHIC CATALOGUE

LIVERTON MOOR: PHOTOGRAPHIC CATALOGUE

Film 1: Colour digital photographs taken 27th February 2022

<i>Film</i>	<i>Frame</i>	<i>Subject</i>	<i>Scale</i>
1	429	Enclosure 'e', W side, looking S	2 x 1m
1	432	Enclosure 'e', N side, looking E	2 x 1m
1	433	Enclosure 'e', N side, looking SE	2 x 1m
1	434	Enclosure 'e', W side, looking S	2 x 1m
1	435	Main sand pit depression ('a'), looking N	1m
1	436	Main sand pit depression ('a'), looking N	1m
1	437	Smaller sand pit depression ('b'), looking NE	1m
1	439	Enclosure 'd', W side, looking N	2 x 1m
1	440	Enclosure 'd', S side, looking E	2 x 1m
1	441	Enclosure 'd', E side, looking N	1m
1	442	Drain running NW from main sand pit depression ('a'), looking NW	1m
1	443	General view over sand pits and survey area, looking N	-