
***BILSMOOR DRAINAGE SCHEME,
COQUETDALE
NORTHUMBERLAND***

~ ARCHAEOLOGICAL RECORDING ~



DECEMBER 2021

**The Archaeological
Practice Ltd.**



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COQUETDALE
NORTHUMBERLAND

~ ARCHAEOLOGICAL RECORDING ~

Prepared by:
The Archaeological Practice Ltd.



Frontispiece:

View across the west part of the site towards Laingshill from close to its southern boundary.

Grid reference:	<i>NY 93927 96416 (approx. centre)</i>
Date of fieldwork:	<i>December 2021</i>
Report completion:	<i>14/01/2022</i>
Client:	<i>GROUNDWORK NE & YORKSHIRE</i>
Project code:	<i>AP 21/41</i>
Stage:	<i>Final</i>
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OASIS ID:	<i>thearcha2-516408</i>

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SUMMARY

This document reports on a process of archaeological recording carried out in December, 2021, to mitigate the impact of groundworks associated with a moorland drainage enhancement scheme in the west part of an enclosed area of moorland at Bilsmoor, Coquetdale in Northumberland.

The groundworks carried out impacted and slightly remodelled existing modern open drains, or grips which had themselves already impacted upon the existing pattern of rig & furrow within the moorland. However, the underlying rig & furrow was visible only from the air and on Lidar survey, being too shallow to be apparent at ground level in the rough vegetation currently covering the moor, so the visual impact of the groundworks at ground level upon those features is considered minimal. When viewed from the air the impact is greater, although it seems unlikely that any additional damage has been caused to the rig & furrow than that resulting from earlier grip creation.

Other features in the landscape, including embankments, the remains of a sheep wash and narrow rig & furrow surviving on the north bank of Jock's Cleugh, were photographed for contextual interest and future reference, although none were directly impacted by the groundworks carried out in December 2021. Much better examples of rig & furrow earthworks, potentially meriting protection, survive immediately west of the site.

While it is clear that installation of the existing open drains has had some negative impact on the rig & furrow, the impact of the recent works has not significantly worsened that impact. Should such works be carried out on better-surviving rig & furrow earthworks elsewhere, however, its impact would likely be much greater.

The apparent absence of features or finds of archaeological significance or interest from the areas of groundworks indicates that the remaining archaeological potential associated with this site is low, and no further archaeological works are recommended in association with the current scheme of works. In view of the archaeological potential of the wider area, however, any future work on this site or in its wider vicinity should be considered on its own merits with regard to the need for archaeological intervention.

1. PURPOSE OF RECORDING

1.1 Groundwork (North East & Yorkshire) is working with the Environment Agency on measures to improve watercourse quality in the Upper Coquet valley. As part of this wider work, a scheme at Bilsmoor close to the Coquetdale-Redesdale interfluve has been devised to infill active grips on Bilsmoor Field (as shown on the attached plan). The purpose of this is to promote the restoration of field hydrology as well as reducing soil inputs into the burn. Grips are ditches cut to drain wet areas of moorland, including blanket bog. Blocking grips can help to restore natural drainage patterns, encourage re-vegetation, reduce erosion and minimise the knock-on effect of hydrological change downstream.

1.2 Although not identified on the county HER, the Northumberland National Park Historic Environment Officer identified that Bilsmoor field has evidence of Rigg & Furrow cultivation features, but in view of the scale of those features and nature of the works proposed, advised that the work was unlikely to have an adverse impact on the historic cultivation remains. Accordingly, since the field system has already been impacted by later drainage and therefore this isn't the best example of a field system of medieval/post medieval origin, his recommendation was that the ridge and furrow should be photographically recorded prior to the reprofiling works commencing. In Addition, a number of questions were posed in advance of the works, the answers to which could only be approached through fieldwork:

- How significant is the field system? Are there better examples elsewhere which can be protected?
- What impact have the drains had on the ridge and furrow?
- Does reprofiling to restore a more natural hydrology adversely impact on the ridge and furrow?
- Can we read the changes of land use once the works have been completed?

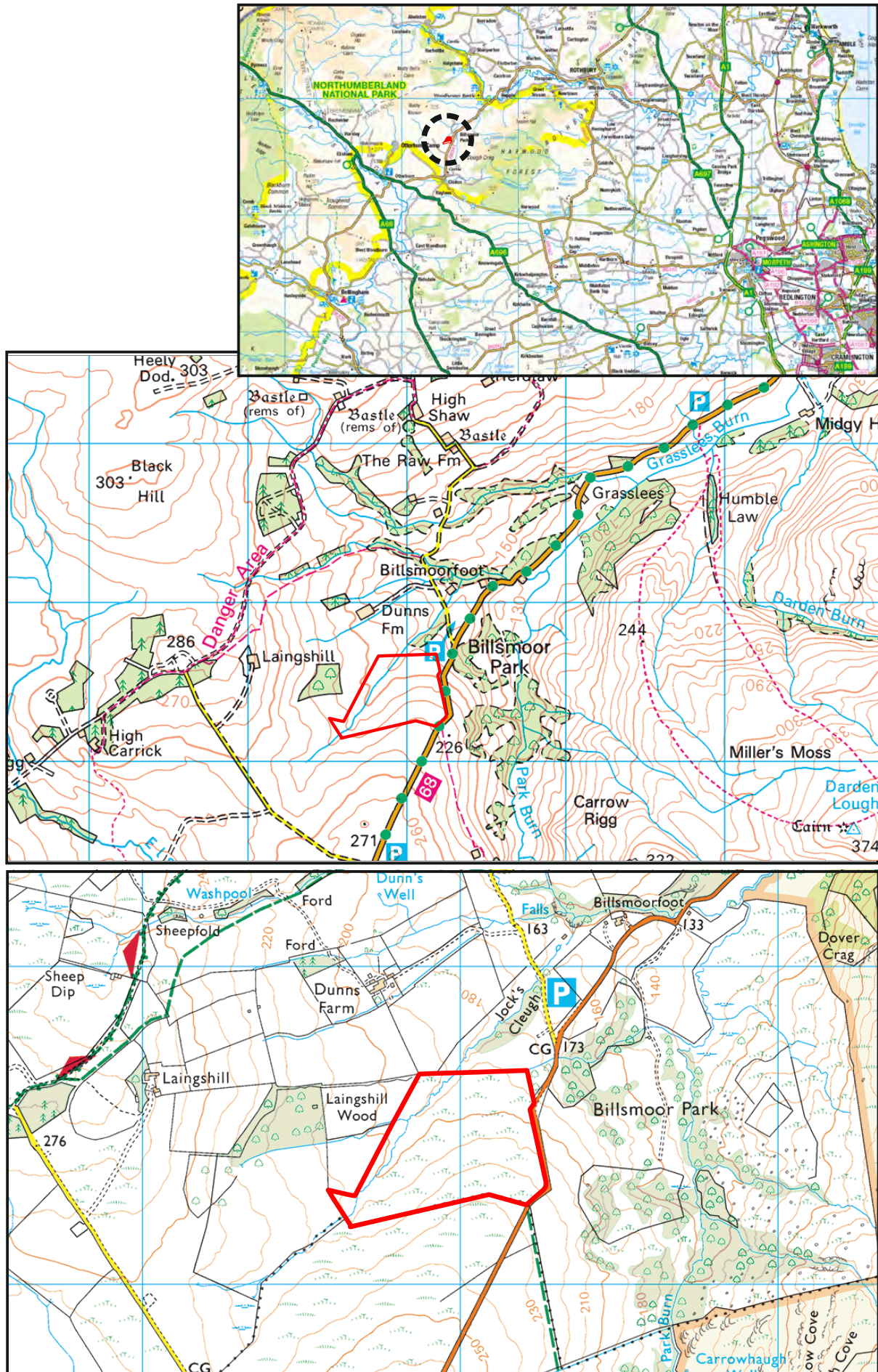
1.3 Accordingly, this document, prepared by the Archaeological Practice Ltd., has been commissioned by Groundwork NE & Yorkshire to report on a process of archaeological recording carried out in December 2021 to mitigate the impact of groundworks for drainage improvements on land at Billsmoor (centred on NGR NY) some 3 km east of Elsdon in central Northumberland (see *Illus. 01 & 02*, below).

1.4 The development involved using a mechanical excavator to provide intermittent blocks to the open drains, or grips, running with the slope and often following the orientation of rig & furrow features, thereby slowing the water flow and creating shallow pond features.

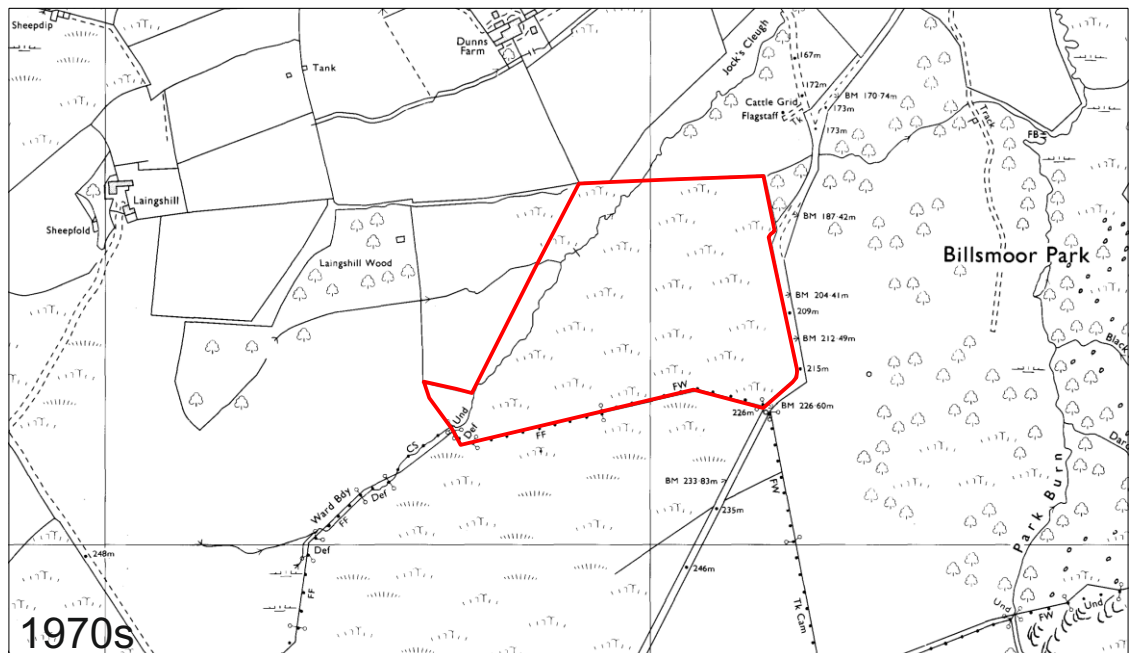
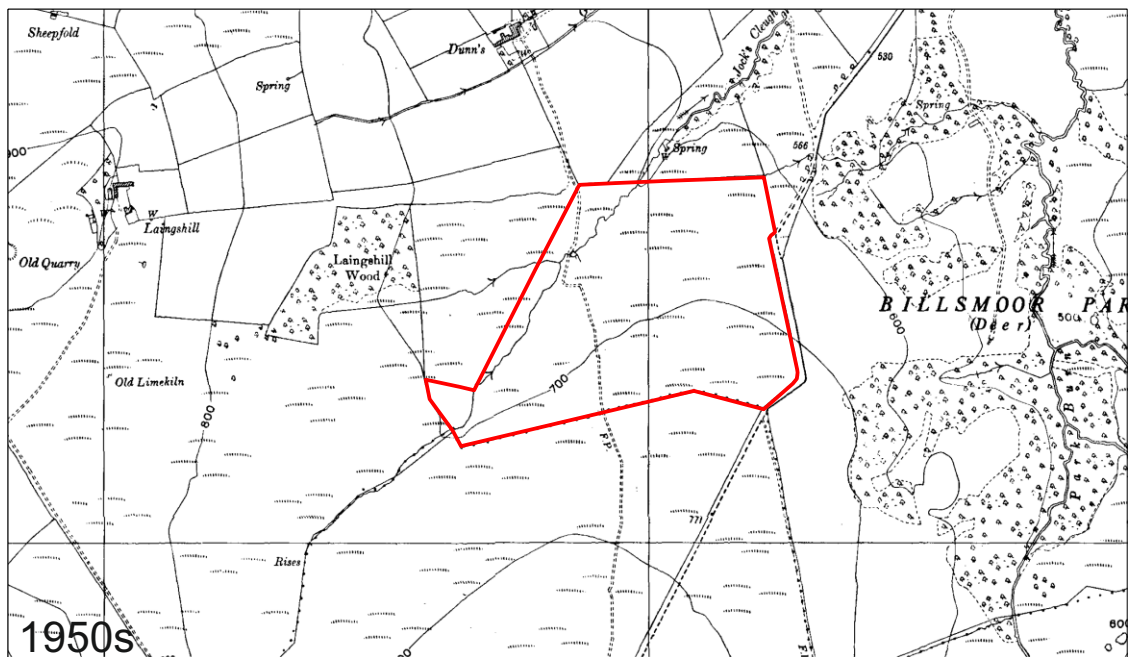
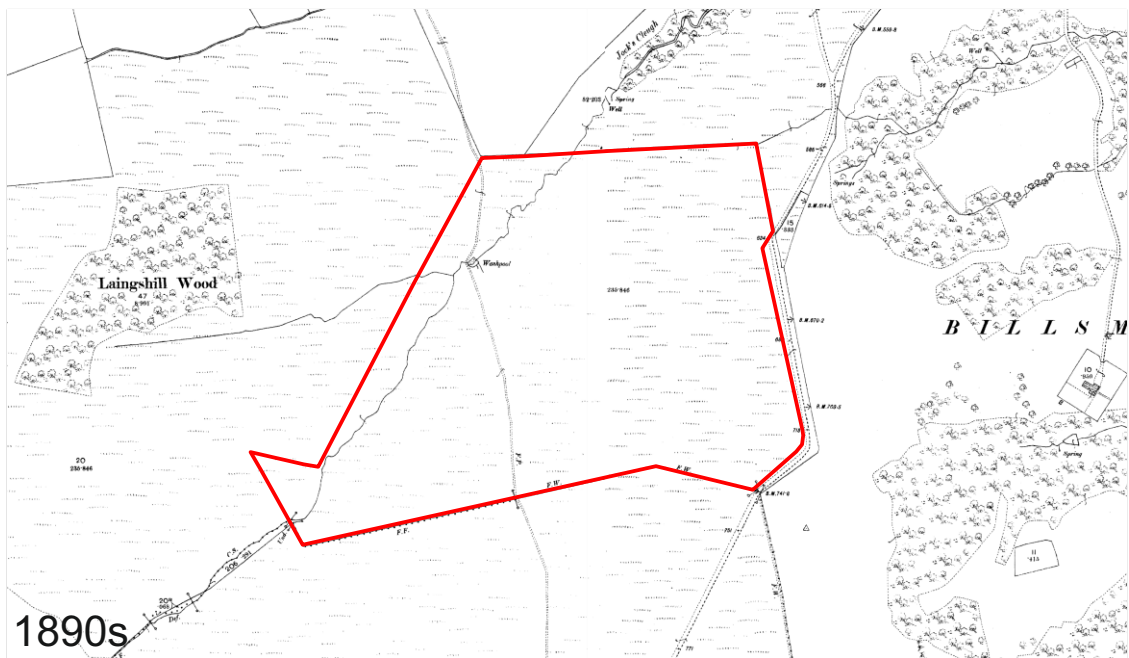
Although the work had commenced by the time The Archaeological Practice was called to site, the majority of the site remained undeveloped sufficient to determine the level of impact to historical features across its entire area.

1.5 Cultural Heritage Background

1.5.1 Consultation of historic maps (*Illus. 03-09*), aerial photographic data, Lidar survey data and the County Heritage Environment Record indicates that, while the site lies within a wider area of intensive prehistoric, medieval and later activity on an important through route between the Coquet and Rede Valleys, no sites of known importance are recorded within the Bilsmoor site itself or in the immediate vicinity. Early and later prehistoric activity is exemplified by Harehaugh hillfort and associated prehistoric burial monuments some 4 km to the north-east,



Illus. 01-03: Site Location maps.



Illus. 04-06:
The site (red outline) highlighted on historic editions of the Ordnance Survey Series

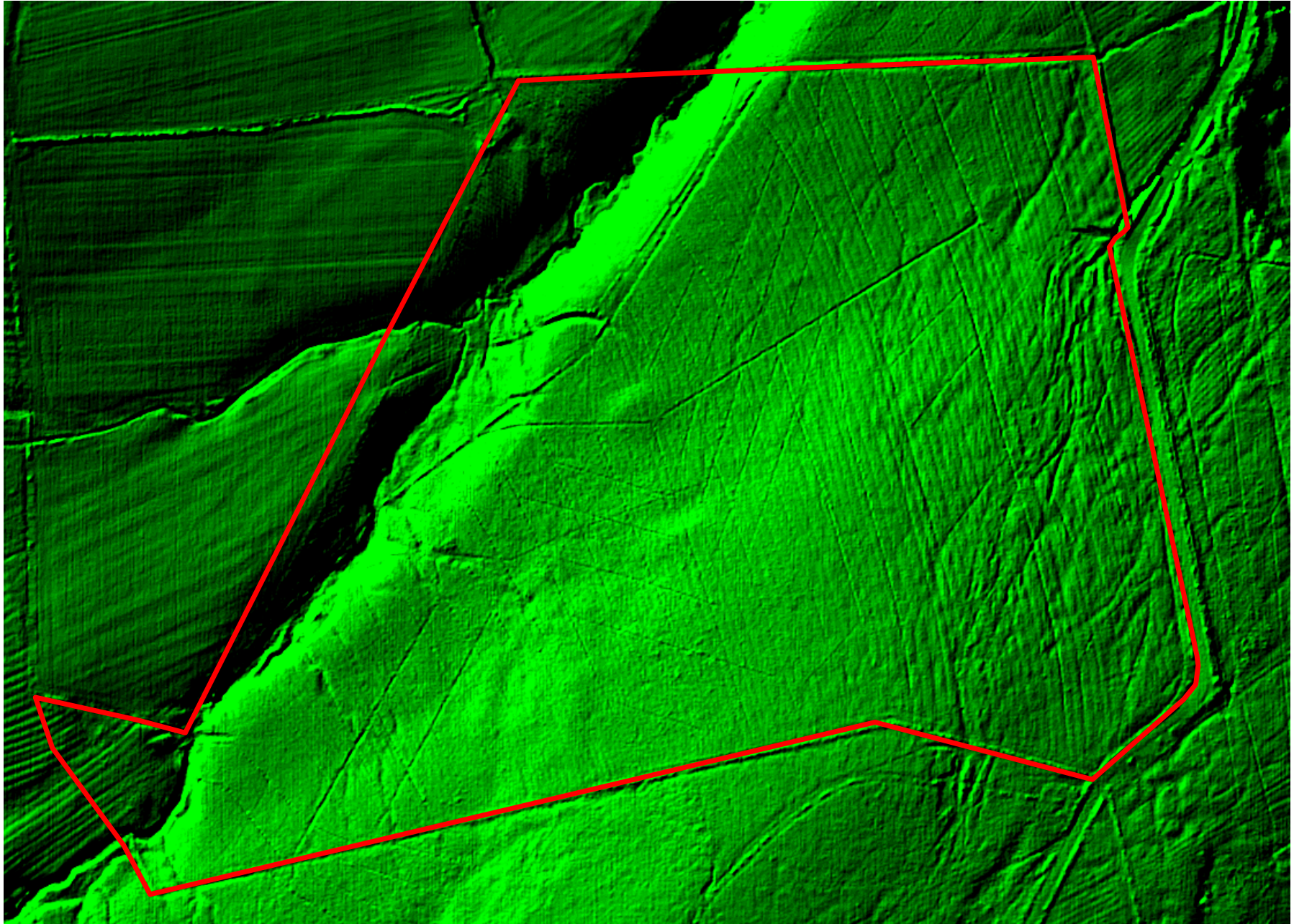
while medieval and later settlement is attested by Elsdon church, tower and castle sites 3 km to the south and Grasslees mill 2 km to the north-east, and by early post-medieval bastle sites including The Raw and Woodhouses Bastle next to Holystone Grange.

1.5.2 The Bilsmoor Site

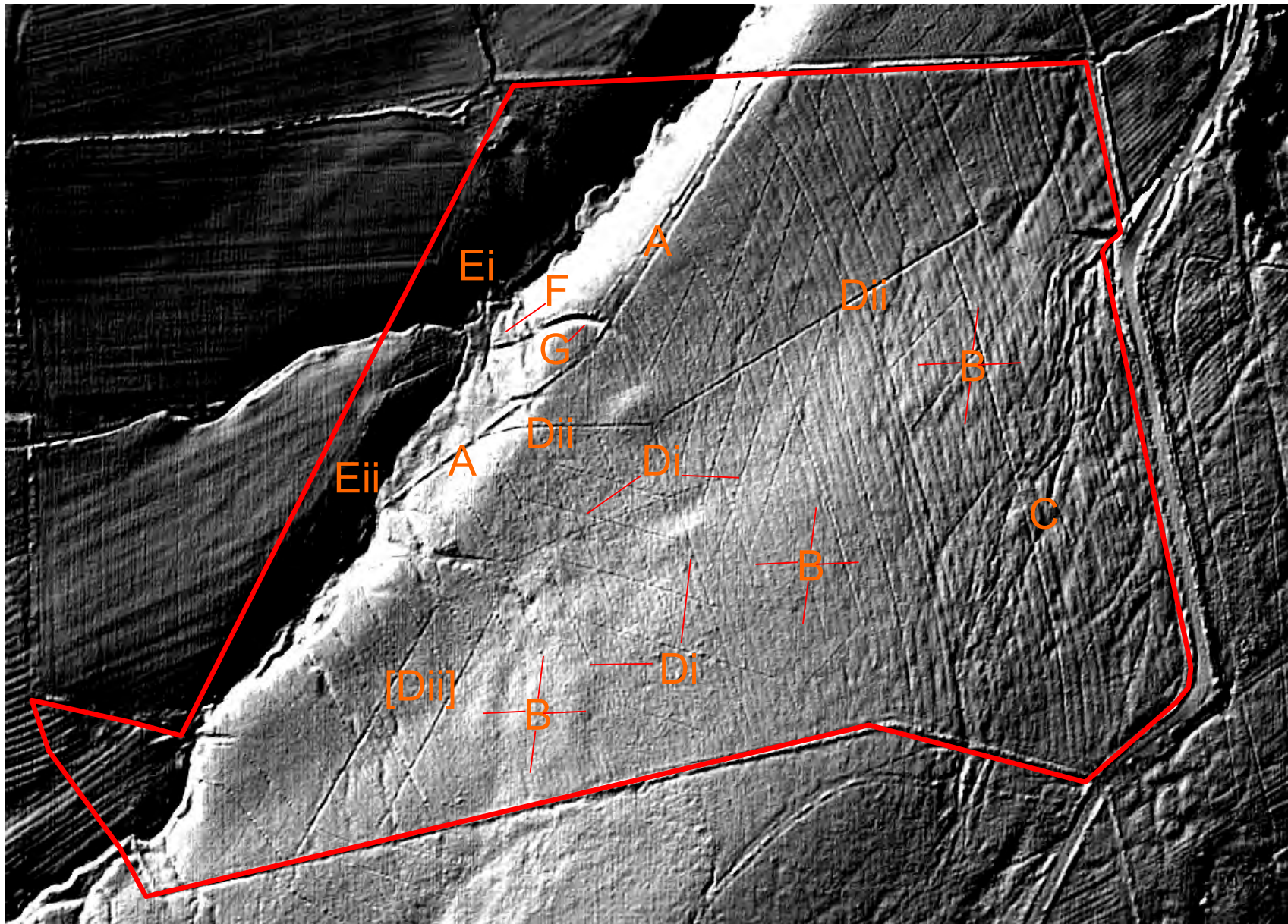
The site of works is a large area of enclosed moorland comprising about 20 hectares bordered on its east side by the Elsdon to Hepple B6341 minor road and to the north, south and north-west by field boundaries in the form of drystone walls, embankments and hedgelines. The north-east boundary may originally have been formed by a stream known as Jock's Cleugh, a tributary of the Grasslees burn, or by a straight (in places double-) earthwork 'A' parallel with the stream, but is now formed by an embanked hedge-line beyond the stream. The entire northern section of 'A'; is a double earthwork, but it becomes a single earthwork when turning slightly to the west and running towards the south-west corner of the moor. This large field bank 'A', running across and enclosing c 2.7 ha in the north-west part of the site, is its most prominent historic landscape feature, the rest of the site being almost-entirely covered by the remains of ridge and furrow, or 'rig & furrow' earthworks 'B', a pattern of ridges and troughs created by a system of ploughing used in open field systems. The Bilsmoor rig & furrow is oriented NW-SE, some of it curving slightly to the west at its north end, and ranges between 4.5-7.5 metres (generally c 5-6 m) wide between furrows. The long, straight-sided earthwork boundary feature 'A' enclosing the north-west part of the moor, south-east of the stream, appears to be of 18th century Inclosure Period and cuts through the rig & furrow in places, suggesting that the latter is pre-18th century in origin, thus potentially medieval. Other features cutting through it include apparent holloways 'C', or domestic animal tracks, running NNE-SSW close to and approximately parallel with (then, at the north end running into) the B6341 road, as well as a series of open drains or grips, irregularly spaced 35-65 m apart ('D') and mostly orientated with the rig & furrow, although there are others running SW-NE and NW-SE - notably a chevron-pattern over a large part of the central area of the site. A later earthwork ('Dii') runs through earlier 'Di' grips east from a junction with 'A' and turns after c 200 m to the north-east across the chevron pattern and may be contemporary with two more SW-NE grips in the south-west corner of the site.

On the south-east facing slopes (i.e. north-west side) of the stream running north-east in the north-west part of the site are remnants of rig & furrow features ('E') which are different from 'B', being some 3 m wide between furrows, that in the corner of the site ('Ei') being oriented WNW-ESE and, further south, beyond a small tributary stream flowing in from the west, another narrow patch ('Eii') orientated almost east-west. The only other feature of note observed within the wider site exists immediately east of and adjacent to the intersection between 'Ei' & 'Eii', being a small enclosure('F') formed by an earthwork bank splaying westwards to the stream from the end of the double embankment 'A' and another north-south embanked drystone wall feature which runs across the stream. Historic Ordnance Survey plans show this feature as a sheep wash until the 1950s, after which it is not marked as such, although the stone wall feature across the stream was still shown until recently. A trackway ('G') runs parallel with the splayed embankment feature, turning northwards towards Dunn's Farm, crossing Jock's Cleugh just below the confluence of two tributaries, and southwards towards the centre of the southern boundary of the site (although this is no longer visible as an earthwork feature). This trackway links with other ephemeral routeways running to the south-west corner of the site, and, less prominently, to the east.

Outside the boundaries of the site lie extensive tracts of much better-preserved rig & furrow and associated boundaries than are to be found within the site itself (see *Photo. 04*).



Illus. 07 - Coloured Lidar survey plan of the site (red outline).



Illus. 08 - Monochrome Lidar survey plan of the site (red outline) showing features keyed to Section 1.5.2.



Photo. 01: View from an isolated patch of closely cropped grassland close to the southern boundary of the site across the south-west part of the site Towards Laingshill.



*Photo. 02:
Oblique aerial view across the east part of the site towards Bilsmoor Park and Dover Crag.*



Photo. 03: Aerial view of modern grips within the site.



Photo. 04: Aerial view westwards from the western boundary of the site, showing well-preserved tracts of rig & furrow earthworks outwith the site boundary.

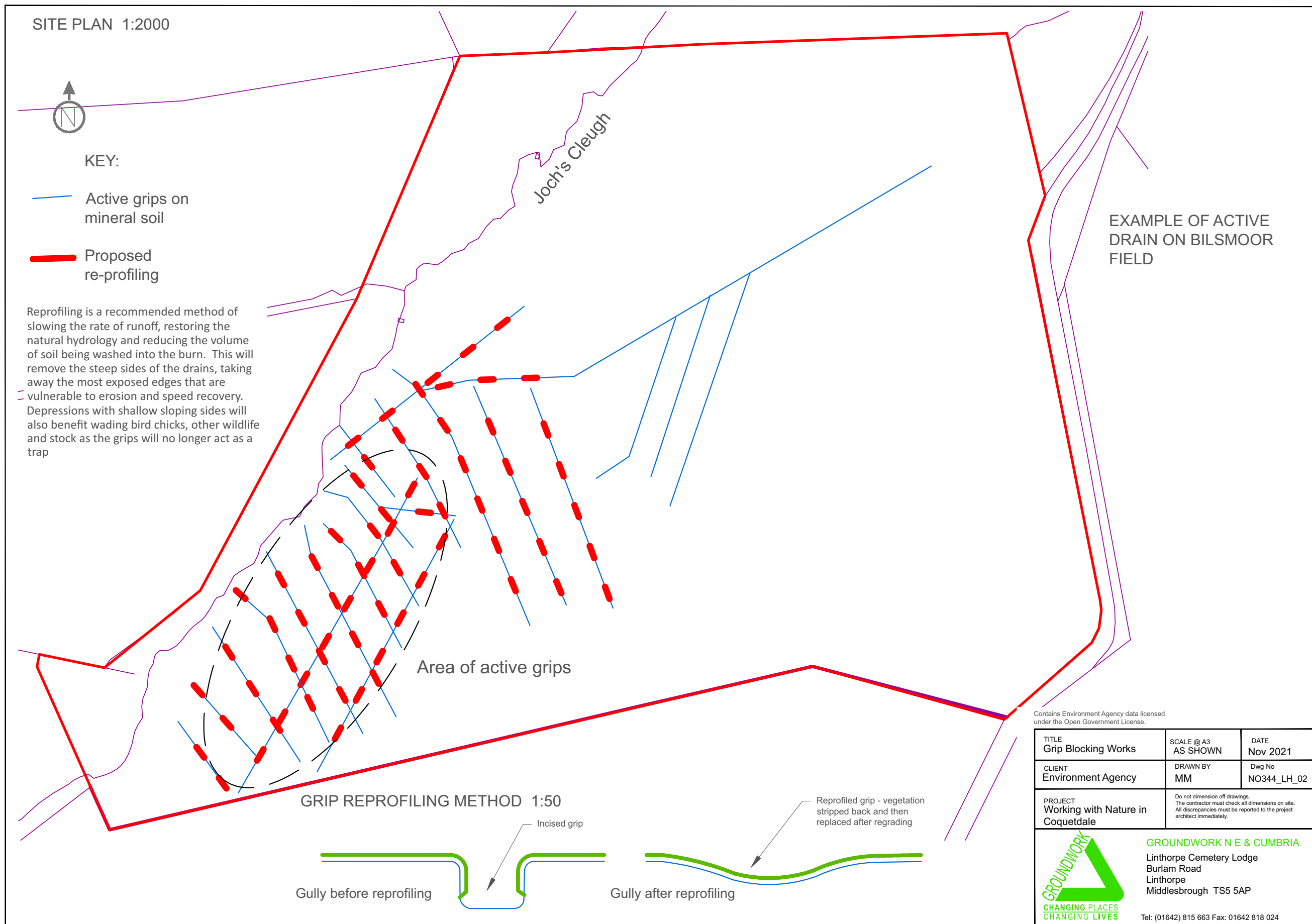
2. ARCHAEOLOGICAL RECORDING

2.1 The site visit which took place in December, 2021 involved monitoring the machine blocking of open drains, or grips and creation of shallow ponds within an area of rig & furrow earthworks (see *Illus. 09*).

2.2 The aims of the exercise were to identify and photographically record rig & furrow earthworks and any other observed features in areas impacted by groundworks and assess the level of damage caused to them, in doing so attempting to address the questions posed above:

- How significant is the field system? Are there better examples elsewhere which can be protected?
- What impact have the drains had on the ridge and furrow?
- Does reprofiling to restore a more natural hydrology adversely impact on the ridge and furrow?
- Can we read the changes of land use once the works have been completed?

2.3 Accordingly, the area was examined for presence of visible archaeological features and the groundworks were monitored by a suitably trained and experienced archaeologist from The Archaeological Practice Ltd.



Illus. 09 - Plan [supplied by Groundworks NE & Cumbria] of works carried out in the west part of the Bilsmoor site (red outline).

3. RESULTS

3.1 Regrading excavations

The groundworks carried out at the Bilsmoor site were monitored on 12th December, 2021 (see *site photographs, below*). The excavations were principally carried out along the course of existing, modern open drain or 'grip' features, their purpose being to create small dams for the build-up of standing water in small ponds. The modern grip features were altered by the groundworks, but it did not appear that any other visible features were significantly impacted because the rig & furrow on aerial views and Lidar was not apparent at ground level had already been impacted by installation of the grip features.



Photo. 05: Oblique aerial view northwards with groundworks in progress on N-S grips.



Photo. 06: Aerial view of groundworks in progress on and obliquely to N-S grips in the west part of the site, with rig & furrow just visible as background to the later grip features.



Photo. 07: Close-up aerial view of groundworks in progress on a N-S grip (centre right) and SW-NE (left) grips, with N-S rig & furrow just visible in places.



Photo. 08: Aerial view of groundworks in progress on N-S grips in the west part of the site, with rig & furrow visible as background to the later grip features, particularly to right of view where enhanced by machine tracking.



Photo. 09: View of machine work in progress in the west part of the site.



Photo. 10: Ground-level view of groundworks on N-S grips to create dams and small ponds across a grip in the west part of the site.



Photo. 11: Close-up view of grip-blocking/pond creation in the west part of the site.



Photo. 12: View looking west of the blocking of a N-S grip in the west part of the site.



*Photo. 13:
View south-westwards of the SW extension of bank 'A' (see Section 1.2.2 & Illus. 08)*



*Photo. 14: View north-eastwards
of the double-bank representing
the NE part 'A' (see Section 1.2.2 &
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Photo. 15: View from the south of wall forming the east side of enclosure 'F' (see Section 1.2.2 & Illus. 08) with r&f 'Ei' visible beyond.



*Photo. 16:
View southwards towards enclosure 'F' from r&f 'Ei' (see Section 1.2.2 & Illus. 08)*



*Photo. 17:
View northwards over enclosure 'F' towards r&f 'Ei' (see Section 1.2.2 & Illus. 08).*



Photo. 18: View northwards over the east wall of enclosure 'F' towards r&f 'Ei' (see Section 1.2.2 & Illus. 08).



Photo. 19: View north-westwards obliquely across the earthwork remains of rig & furrow site 'Ei' (see Section 1.2.2 & Illus. 08) on the south-facing northern slope of a tributary of Jock's Cleugh.

3.2 Summary discussion

The groundworks carried out in the west part of the site in December, 2021 impacted and slightly remodelled existing modern open drains, or grips which had themselves already impacted upon the existing pattern of rig & furrow within the moorland. However, the underlying rig & furrow was visible only from the air and on Lidar survey, being too shallow to be apparent at ground level in the rough vegetation currently covering the moor, so the visual impact of the groundworks at ground level upon those features is considered minimal. When viewed from the air the impact is greater, although it seems unlikely that any additional damage has been caused to the rig & furrow than that resulting from earlier grip creation. Other features in the landscape, including embankments, the remains of a sheep wash and narrow rig & furrow surviving on the north bank of Jock's Cleugh, were photographed for contextual interest and future reference, although none were directly impacted by the groundworks carried out in December 2021.

With regard to the questions posed in Sections 1 & 2 it is surmised that the field system within the site is of low significance except in the north-west quadrant bordering, and within Jock's Cleugh, where a series of relatively modern features are of interest (see A, E, F & G in Section 1.5.2 & Illus. 08).

Much better examples of rig & furrow earthworks, potentially meriting protection, survive immediately west of the site, however.

The existing drains have had some impact on the rig & furrow, but the impact of the recent works has not significantly worsened that impact. Should such works be carried out on better-surviving rig & furrow earthworks elsewhere, however, its impact would likely be much greater.

4. CONCLUSIONS & RECOMMENDATIONS

4.1 The groundworks carried out impacted and slightly remodelled existing modern open drains, or grips which had themselves already impacted upon the existing pattern of rig & furrow within the moorland. It is not considered, therefore, that the impact of the current works upon features of cultural heritage significance was significant.

4.2 Should such works be carried out on better-surviving rig & furrow earthworks elsewhere, however, its impact would likely be much greater.

4.3 Other features in the landscape outwith the area of direct physical impact, including embankments, the remains of a sheep wash and narrow rig & furrow surviving on the north bank of Jock's Cleugh, were photographed for contextual interest and future reference.

4.4 Much better examples of rig & furrow earthworks, potentially meriting protection, survive immediately west of the site.

4.5 The apparent absence of features or finds of archaeological significance or interest from the areas of groundworks indicates that the remaining archaeological potential associated with this site is low, and no further archaeological works are recommended in association with the current scheme of works.

4.6 In view of the archaeological potential of the wider area, however, any future work on this site or in its wider vicinity should be considered on its own merits with regard to the need for archaeological intervention.

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