

# LANDSCAPE SURVEY

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# NUNWICK ESTATES, WARK NORTHUMBERLAND

LANDSCAPE SURVEY

prepared for

Scottish Woodlands

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Client Scottish Woodlands

Location Nunwick Estate

District Northumberland

Grid Ref NY 8469 7484

# NUNWICK ESTATE, WARK, NORTHUMBERLAND LANDSCAPE SURVEY

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## **Summary**

Northern Archaeological Associates Ltd (NAA) was commissioned by Scottish Woodlands to undertake a rapid desk-based assessment and archaeological landscape survey of land at Nunwick Estate, Wark, Northumberland (NY 8469 7484). This survey is in support of a Woodland Creation Planning Grant for coniferous planting covering 75ha of moorland fields.

There is some evidence of prehistoric activity in the area; an Iron Age/Romano-British enclosure is located near the north-east corner of the survey area. The remaining heritage sites are all of post-medieval date, with several agricultural features such as ridge and furrow and boundary stones, but also many bell pits, indicative of a long mining history in the survey area.

The Iron Age/Romano-British settlement is of high-moderate significance as part of a wider prehistoric landscape. The bell pits and spoil heaps are of moderate-low significance as indicative of the industrial history of the area. The ridge and furrow is of moderate significance. To preserve the significance of the prehistoric enclosure in the case of any planting, a 10m buffer should be placed around all trackways, bell pits, field walls, spoil heaps, and hollow-ways. Further recording of the ridge and furrow is also recommended.

## 1.0 INTRODUCTION

- 1.1 Northern Archaeological Associates Ltd (NAA) was commissioned by Scottish Woodland to undertake a rapid desk-based heritage assessment and walkover survey of an area of land within Nunwick Estate, Wark, Northumberland (NGR: NY 8469 7484); Fig. 1). This assessment is in support of a Woodland Creation Planning Grant for planting covering 75ha. The proposed tree-planting area has the potential to disturb the archaeological remains within the survey area.
- 1.2 The survey area is located in the historic parish of Simonburn and has historically been used for agricultural purposes with ample evidence of contemporaneous mining activity. Most of the archaeological evidence demonstrative of this history dates from the post-medieval period with the notable exception of the Iron Age/Romano-British enclosure. There are 58 heritage assets located within the survey area. Of these only two were located on the Northumberland HER: Red Burn enclosure (HER 7865) and the spoil heap (HER 12696). The site lies within the Hadrian's Wall World Heritage Site.
- 1.3 The aim of the rapid desk-based assessment and walkover survey is to provide details of all known designated and undesignated historic and archaeological sites (heritage assets) within the study area that could potentially be affected by the proposed planting. It also assesses the potential for unrecorded heritage assets of archaeological interest within the site boundary and the wider landscape. The potential impact of the proposed planting on these heritage assets is also assessed, and mitigation of any adverse effects of impact recommended where appropriate.
- 1.4 All work was conducted in accordance with relevant standards and guidance as published by Historic England (2017), the Chartered Institute for Archaeologists (2014) and the *Yorkshire, the Humber and the North East: A Regional Statement of Good Practice for Archaeology in the Development Process* (City of York Council 2018). The methodology was executed according to a WSI (NAA 2019) which was approved in advance by Northumberland County Council.

#### 2.0 PLANNING CONTEXT

- 2.1 The historic environment legislation and policies relevant to this development are the:
  - National Planning Policy Framework (NPPF) (MHLCLG 2019);
  - Planning (Listed Buildings and Conservation Areas) Act 1990;

- Ancient Monuments and Archaeological Areas Act 1979; and
- Northumberland Local Plan.

# National Planning Policy Framework (NPPF) (MHCLG 2019)

- 2.2 The National Planning Policy Framework (NPPF; MHCLG 2019) establishes that where a site on which development is proposed has the potential to include heritage assets with archaeological interest, local authorities should require planning applicants to describe the significance of any heritage assets affected. The level of detail should be proportionate to the assets' importance and sufficient to understand the potential impact of the proposal on their significance (para. 199).
- 2.3 The assessment proposed by this WSI is intended to fully establish the archaeological potential of the site to inform a mitigation strategy that meets the requirements of Section 16 of the NPPF (MHCLG 2019).

## Planning (Listed Buildings and Conservation Areas) Act

- 2.4 Statutory protection for built heritage is principally provided by the Planning (Listed Buildings and Conservation Areas) Act 1990. Sections 16 and 66 of the Act require authorities to have special regard to the desirability of preserving the setting of any listed building that may be affected by the grant of planning permission.
- 2.5 Section 72 states that special attention shall be paid to the desirability of preserving or enhancing the character or appearance of Conservation Areas.

## Ancient Monuments and Archaeological Areas Act 1979

- 2.6 Statutory protection for Scheduled Monuments is provided by the Ancient Monuments and Archaeological Areas Act 1979 and applies to 'any building, structure or work, whether above or below the surface of the land, and any cave or excavation' s61 (7) afforded Scheduled status. The legislation is designed to prevent damage to, or destruction/loss of important historical or archaeological sites without weighted consideration by Historic England and the Secretary of State.
- 2.7 This Act does not require authorities to have special regard to the desirability of preserving the setting of any Scheduled Monument that may be affected by the grant of planning permission. However, this is a material consideration in the NPPF and local planning policy.

## The Northumberland Local Plan draft policies – Jan 2019

2.8 The Northumberland Local Plan is due for adoption in March 2020 but is available in draft form. There are three relevant policies relating to archaeology and designated heritage assets (Policy Env 1, Env 7 and Env 9). Policy Env 8 deals with the Frontiers of the Roman Empire – Hadrian's Wall World Heritage Site.

## Policy ENV 1

- 1. The character and significance of Northumberland's distinctive and valued natural, historic and built environments, will be conserved, protected and enhanced. by:
  - a. Giving appropriate weight to the statutory purposes and special qualities of the hierarchy of international, national and local designated and non-designated nature and historic conservation sites and their settings, as follows:
    - Greatest weight will be given to international and national designations, in accordance with the obligations set out in relevant legislation and advice;
    - ii. Following this, sites of regional and local importance;
  - b. In applying part (a) above, recognising that:
    - i. Assets with a lower designation or non-designated, can still be irreplaceable, may be nationally important and/or have qualitative attributes that warrant giving these the appropriate protection in-situ;
    - ii. Development and associated activity outwith designated sites can have indirect impacts on these assets.

## Policy ENV 7

- Development proposals will be assessed and decisions made that ensure the conservation and enhancement of the significance, quality and integrity of Northumberland's heritage assets and their settings.
- 2. Development proposals, which will affect a site of archaeological interest, or a site which has the potential to be of archaeological interest, will require an appropriate desk-based assessment and, where necessary, a field evaluation.

# Policy ENV 9

- 3. The Council supports measures to protect and enhance Hadrian's Wall in accordance with the Scheduled Monument designation of much of its length and associated assets. Development adversely affecting these assets and their setting will not be permitted unless the exceptional circumstances set out in Policy ENV 7(4) apply.
- 4. Development proposals throughout the extent of the Frontiers of the Roman Empire: Hadrian's Wall World Heritage Site (WHS), its buffer zone or wider setting:
  - a. Will not be permitted if they would compromise the Outstanding Universal Value (OUV) of the WHS, unless the exceptional circumstances set out in Policy ENV 7(4) apply.
  - b. Should, where possible, seek opportunities to sustain and better reveal the significance of its Outstanding Universal Value as set out in the adopted Statement of OUV and informed by World Heritage Site Management Plan, including seeking to protect and, where appropriate, enhance:
    - Evidence of the scale and complexity of the Wall and its associated frontier features;
    - ii. The group value of features, including features beyond the World Heritage Site;
    - iii. The landscape value and setting; and
    - iv. Communal values including educational and recreational.

## 3.0 METHODOLOGY

- 3.1 The study area comprised the proposed development and any sites in the vicinity of relevance to the survey area included within a 200m search area. The assessment included a review of published and readily available documentary, cartographic, and aerial photographic sources as well as LiDAR evidence and online sources.
- 3.2 This assessment has been prepared in accordance with the following guidance:
  - NPPF Planning Practice Guidance (2019): Conserving and Enhancing the Historic Environment

- Historic England (2015a) Historic Environment Good Practice Advice in Planning
   Note 2: Managing Significance in Decision-Taking in the Historic Environment;
- Historic England (2015b) Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets;
- English Heritage (2008) Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment;
- English Heritage (2011) Seeing the History in the View: A Method for Assessing Heritage Significance with Views;
- Chartered Institute for Archaeologists (2017) Standard and Guidance for Desk-Based Assessment;
- Design Manual for Roads and Bridges Volume 11, Section 3, Part 2, Annex 5 (2007)
   Cultural Heritage Sub-Topic Guidance: Archaeological Remains;
- Petts and Gerrard (2006) *Shared Visions: The North-East Regional Research Framework for the Historic Environment* (NERRF).

# Aims and objectives

- 3.3 The principal aim of the assessment is to provide the Local Planning Authority (LPA) with sufficient information to enable an informed decision on the effects of the development proposals on the historic environment.
- 3.4 The objectives of the assessment are:
  - to identify all recorded heritage assets that could be affected by the proposals;
  - to assess the potential for previously unrecorded archaeological assets to be located within the site boundary;
  - to understand the significance of any affected assets and the contribution of setting to significance;
  - to assess the potential impact of the proposed works on significance and setting of affected assets;
  - to identify any heritage assets that would constitute a significant constraint to the proposed works;
  - to identify any areas that would require field evaluation in order for the LPA to make an informed planning decision;
  - to identify opportunities to better reveal or enhance significance;

- to recommend primary mitigation measures that could be incorporated into development design to avoid or reduce adverse impacts or enable beneficial impacts;
- to recommend secondary mitigation measures to address any remaining adverse impacts in order to reduce these to an acceptable level in terms of planning policy;
- if harmful heritage impacts are identified, to assess whether these constitute substantial or less than substantial harm and whether they are justified in terms of the need for change, the wider public benefit of the proposals and the contribution to the achievement of the sustainable development objective as required by the NPPF; and
- to assess whether, taking into account mitigation and planning balance, there is any
  conflict with national and local planning policy as this relates to heritage.

#### Information sources

- 3.5 The following repositories and data sources were consulted:
  - Archaeology Data Service: An expansive list of local and national Historic Environment Records.
  - Northumberland HER: the Historic Environment Record (HER); previous archaeological assessments, evaluations and excavations;
  - Northumberland Archives: cartographic and documentary sources;
  - Historic England: National Record of the Historic Environment (NRHE) and the National Heritage List for England (NHLE); and
  - Online sources: Historic and modern maps, landscape assessment, Google Earth, historical and archaeological studies, Environment Agency LiDAR, and the Keys to the Past (Northumberland and Durham HER) website.
- 3.6 This report focuses on the survey area, a 200m buffer zone, and any heritage assets in the wider vicinity in so far as they are directly relevant in a holistic approach to assessing the site. A catalogue of heritage assets within the area discussed within the report can be found in Appendix A and individual assets are denoted by a number in brackets within the text below (e.g. **020**).

#### Additional sources

#### **LiDAR**

3.7 Available Environment Agency LiDAR coverage was examined in QGIS 3.4.4 at both 1m and 2m resolution. Several bell pits were visible along with field boundaries and ridge and furrow.

### Satellite Imagery

3.8 Bing satellite imagery (Microsoft 2019) was assessed within QGIS 3.4.4 to compliment the LiDAR imagery.

#### Site Walkover

- 3.9 A site inspection was carried out on 31 May 2019. The objectives were:
  - to confirm the presence and initial interpretation of features identified on mapping,
     LiDAR or aerial photography;
  - to understand the current context, character, land use and ground conditions of the proposed development site;
  - to understand its relationship to nearby previously recorded heritage assets;
  - to better understand the significance of any heritage asset that may be affected by the proposals;
  - to understand the setting of any designated assets and historic landscape character;
     and
  - to identify additional unrecorded heritage assets or the potential for these to survive within the survey area.

## Assumptions and limitations

- 3.10 This assessment comprises a desk-based review of information derived from the Northumberland Historic Environment Record, Historic England and other published and unpublished sources. Whilst assumed to be accurate, this information is not a complete record of the historic environment and does not preclude the potential for the presence of unrecorded heritage assets, including below ground remains of archaeological interest, within the application boundary.
- 3.11 There are no other apparent limitations, beyond the inherent uncertainty of the accuracy of archaeological records from antiquarian periods.

## 4.0 BACKGROUND INFORMATION

#### Location

4.1 The site is situated within the district of Wark, approximately 3.05km west from the village of Nunwick Estate and 2.55km south-west from the village of Wark and lies within the Northumberland National Park, and the World Heritage Site Buffer Zone for Hadrian's Wall.

# **Topography**

- 4.2 Covering approximately 75ha, the proposed development is centred at NY 8469 7484 and comprises an irregular-shaped parcel of enclosed agricultural fields and areas of ancient woodland. The development area lies to the south of Ward Lane.
- 4.3 The site is located across two hills trending east to west with a valley between, through which flows Coal Burn. The highest point of the survey area is in the northwest corner (222m above Ordnance Datum; aOD) at the top of a hill that slopes south toward a valley (196m aOD) along the centre of the survey area. Continuing south, the topography then rises along a second hill rising to 216m (aOD) before dipping back down toward Castle Burn (197m aOD).

## Geology

- 4.4 The solid geology beneath the site consists of Carboniferous limestone, sandstone, siltstone and mudstone of the Tyne Limestone Formation, interspersed with coal measures from what was once a marine coastal region. These rocks have been faulted and folded during subsequent orogen. They were later overlain by superficial deposits of Devensian Till, which consists of slowly permeable, and seasonally wet, acidic rich loamy and clayey soils. (BGS 2019).
- 4.5 The soils of the survey area are split between those of the Dunkeswick Association to the east and the Wilcocks 1 Association to the west, both derived from drift. Dunkeswick soils are stagnogley in greyish-brown drift. Wilcocks soils are also strongly gleyed but have peaty and humose soils (Jarvis et al. 1984).

## Designations

4.6 The survey area lies entirely within the buffer zone of Hadrian's Wall, part of the Frontiers of the Roman Empire World Heritage Site, a transnational property that

includes the two sections of Roman Limes in Germany, and the whole of Hadrian's Wall (UNESCO 2019).

4.7 There are no Scheduled Monuments or Listed Buildings within the survey area. The Northumberland National Park boundary cuts through the south-west corner of the survey area. There are two public footpaths that run through the survey, one along the National Park boundary and another across the middle of the survey area. There is a section of ancient woodland that cuts into the eastern edge of the survey area.

#### 5.0 ARCHAEOLOGICAL BACKGROUND

#### **Prehistoric**

- 5.1 Evidence of prehistoric activity in Northumberland dates to the Mesolithic, particularly with a burial at Howick, but there is no direct evidence of Mesolithic activity nearby the survey area. The Neolithic, however, has ampler evidence with numerous polished stone axes, including one nearby in Haydon (HER 7577) and standing stones being found across Northumberland National Park (Frodsham 2004, 13).
- During the Bronze Age, the survey area was certainly frequented. A 'four-poster' stone circle, called the Goatstones (NHLE 16849) is located 1.5km to the west of the survey boundary. Several other cup and ring marked stones lie near Ravensheugh Crag (ADS 2019), a prominent physical landmark that may have had a significance to Bronze Age people. Surrounding the Goatstones are numerous examples of cup and ring marked stones. Other examples of cup and ring marked stones are located 500m to the south of the survey area (HER 7861).
- 5.3 Several Bronze Age settlements also lie in the environs of the survey area. An unenclosed settlement and hut circle (HER 7701) lie 1.5km south-west of the survey area. A barrow (NHLE 16776) lies 3km to the south, just south of Hadrian's Wall, with another semi-circular structure (NHLE 16771) further east. This evidence of settlement is further complemented by the discovery of several Bronze Age axes across the area, notably a socketed axe near Simonburn (NHLE 16768) and another at Cornshields, near Wark (NHLE 16484), located at 2km and 1km respectively.
- 5.4 Later settlement in Iron Age, consisted of sub-rectangular enclosures, also in the vicinity of the survey area, some of which continued in use into the Roman period. Two enclosed settlements are located at Fold Hill (HER 7863; 2.6km from the survey area)

and at Green Hill (HER 7864; 2.8km from the survey area). Some of these settlements, such as The Carts (HER 7862) are accompanied by cord rig, demonstrative of Iron Age and Romano-British farming. Cord rig earthworks are visible along Hadrian's Wall, and are seen to underlie it, indicating that such farming techniques, and likely the settlements that accompanied them, predate the Roman military period.

5.5 There is one prehistoric site within the survey area, that of Pit Wood (alternatively called Red Burn; HER 7865). It is a multi-sided enclosed settlement with gaps in the east and west facing sides, one of which may have been used as an entrance.

## Roman Military period

In the later part of the 1st century, Roman military conquest stretched north into Scotland. However, by the end of the 1st century, the importance of the Tyne-Solway route across the north of Britain was recognised. A road and several forts were built at this time including Brown Moor temporary Roman Camp (NHLE 1010981) and Brown Dykes Roman temporary camp (NHLE 1010936), lying 3.4 and 3.6km south respectively (ADS 2019). By the early 2nd century, the Romans had largely withdrawn from the north and began construction of Hadrian's Wall in AD122 as a fortified border across the northern border of the Roman province of Britannia. The wall was connected by milecastles and mile forts, guarding the northern frontier, the nearest of which is Carrawburgh Roman fort (NHLE 1015914) 2.8km south (Historic England 2019).

## Early Medieval

- 5.7 Following the withdrawal of the Roman military in AD410, the north of England fractured into several kingdoms. Certainly north of the wall, the *Votadini* the Roman name for the local people would have continued living in their roundhouses much as before. The land around the survey area was soon absorbed into the emerging Kingdom of Brynaich, known more commonly by its latinised name 'Bernicia' (Frodsham 2004).
- In the 7th century Bernicia and its neighbour to the south, Deira, were unifed to later become the Kingdom of Northumbria. Christian missionaries, notably Saint Mungo are thought to have arrived in the area around Simonburn only a century after the Roman departure. The church at Simonburn, located 2km east of the site, is named after him and still retains fragments of a cross, implying the settlement was of some importance (Durham County Council 2019). The Abbey at Hexham later became the important local religious centre.

5.9 By the 11th century, the land north of the Tyne, and around the survey area belonged to Waltheof. He was executed by William the Conqueror in 1076, who then married Waltheof's daughter to Simon of Senlis (Davis 1972).

## Medieval

- 5.10 Under William the Conqueror, Simon of Senlis became the new Earl of Northumberland. His eldest son Simon, was a staunch supporter of King Stephen and built castles across Northumberland, including a pele tower at Simonburn (NHLE 1012414), named after him. The tower was originally called 'Simondeburn'; Simonde is the possessive of Simon and burn derives from burg meaning settlement. This fortress, and many others, were built in defence against King David of Scotland, who later invaded. The land around Simonburn was thereafter under Scottish rule for 150 years, until the lands were granted to the Bishop of Durham Anthony Bek by Edward I (Davis 1972).
- In the medieval period, the land in the survey area belonged to the parish of Simonburn. The parish was likely formed by Bishop Walcher of Durham and was the largest in England. It was known as "the Great Parish" and was important enough that King Edward himself appointed the rector of the parish in 1307 (Davis 1972). The great parish of Simonburn may have held importance for its strategic location and size so near to the Scottish border, but the population remained relatively dispersed. Many small farmsteads were dotted across the landscape, with slightly larger settlements at Simonburn and Wark. Ridge and furrow across the area are a testament to the low population density in this period. The survey area was part of the township of Simonburn, at the edge of Simonburn Common, a large stretch of communal land used by the villagers of Simonburn and Wark.

## Post medieval

Parliamentary enclosure of commons occurred throughout the 17th through 19th centuries with the division of Broadpool and Wark Common in 1769. Broadpool Common lay adjacent to Wark Common, and both were enclosed and partitioned among local landowners. The northern part of the survey area was granted to Sir Lancelot Allgood, Knight, in a parcel measuring 406 acres, 2 roods, and 11 perches (or 406.23 acres (164ha) (EP/54/21). To the south of Coal Burn, the dividing line between the commons, was Symondburn Grounds – the common land of Simonburn township. It is unknown when the enclosure of Simonburn Common occurred.

- 5.13 The survey area has historically always been used for agricultural purposes. The appearance of two stackstands (HER 12694 and 12695), used to stack and dry hay, immediately to the south of the survey area is a testament to the agricultural production of the area. Agricultural production continued into the 19th century, when the tithe map of 1841 (EP/54/22) indicated that the northern part of the survey area, above Coal Burn, was tenanted to Joseph Twedell. Though the lands are associated with Allgood Farm, Joseph Twedell was of Hebberlay Field. To the south of Coal Burn, the survey area land was associated with Mount Farm, yet Haswell Gibson and William Sains of Humsaugh Cottage and Garden tenanted the land.
- 5.14 In 1811, the Great Parish of Simonburn was divided into seven parishes, including Wark parish just to the north (Davis 1972). The common land between both parishes was divided and most of Broadpool Common given to Wark, with Simonburn Common remaining with the now significantly reduced parish. The boundary between both parishes runs just north-west of the survey area.
- 5.15 In the post-medieval period, the centre of the survey area saw an increase in coal mining activity along Cowden Seam. It is likely that this area was mined throughout the medieval period, and perhaps earlier, but evidence is restricted to its use in the postmedieval period. However, the name of Coal Burn, the stream flowing through the site, indicates the long-known presence of coal in the area. Goatstones colliery (HER 28923) likely began in the mid-18th century. A newspaper advertisement from 1778 to let Mount Farm discusses the colliery in the vicinity (Newcastle Chronicle 1778). However, the only records date from 1882 at which point we know that the coal was sold locally. The colliery employed between 4-6 workers, one of which would remain at the surface while the others went below (Durham Mining Museum, 2019). By 1869, however, the coal was only used for household use, likely by local farmsteads, including the Mount Farm, possibly still inhabited by then following an advertisement to let in 1869 (Newcastle Daily Chronicle 1869). It is uncertain when it was abandoned but it appears intact on the 1922 25-inch Ordnance Survey (OS) map. The remains of numerous bell pits (HER 12696) stand as reminder of the industrial heritage of the area.

## 6.0 RESULTS

6.1 There was a total of 58 heritage assets within the survey area. These are discussed in chronological order below. A map of all assets can be found in Figure 2. A full list and description of each heritage asset can be found in Appendix A.

# Iron Age/Romano-British

#### **Enclosure**

A likely Iron Age/Romano-British **044** enclosure lies on the northern slope of the survey area. It is faintly visible on satellite imagery as a subcircular earthwork measuring c.44m in diameter. LiDAR imagery shows a break in the earthwork on the west side, denoting a possible entrance. Cows and calves had settled on the enclosure on the day of survey, so no measurements or photographs could be taken, save at a distance (Plate 1).



Plate 1: cows in the vicinity of the Iron Age enclosure. This picture is taken from the east looking west toward where the enclosure was likely to be but was not observed.

#### Post-medieval

## **Farming**

## Ridge and Furrow

6.3 There is ample evidence of ridge and furrow in the survey area, consisting of nine distinct parcels. Most of these are oriented north to south, though there is some variety in alignment. A large section of ridge and furrow, **010** (Plate 2), extends up and over the southern hill along a north to south axis, spaced c.3m apart. The disappearance of the ridge and furrow approaching field boundary **019** may indicate that the otherwise prominent ridge and furrow may have been destroyed in the creation of the wall and track.



Plate 2: The ridge and furrow of block 010 is best observed looking to the south-west to the right of the ranging rods.

- A small parcel of ridge and furrow, **011** (Plate 3), lies south of Goatstones Colliery. The ridges are about 3m wide and oriented east to west. It is truncated by the extant field wall to the west, the spoil heap **043** to the east, and a drainage gully to the south, with the colliery to the north.
- Another block of ridge and furrow, **012** (Plate 4), lies adjacent to **010** but is oriented along a north-east to south-west axis. The ridge and furrow is constrained to the north and south by drainage gullies. The ridges are c.4m apart and are primarily evident on the southern slope of the hill.



Plate 3: ridge and furrow parcel 011 extending west toward the survey boundary.



Plate 4: ridge and furrow 012 extends down the far end of the hill toward the gully.

The ridge and furrow in block **013** is oriented east to west (Plate 5), unlike that shown on the satellite imagery. It is very faint on the ground but looks to be about 2m across. The ridge and furrow becomes too faint along its northern boundary to verify its relation to trackway **104**. Its date is therefore uncertain.

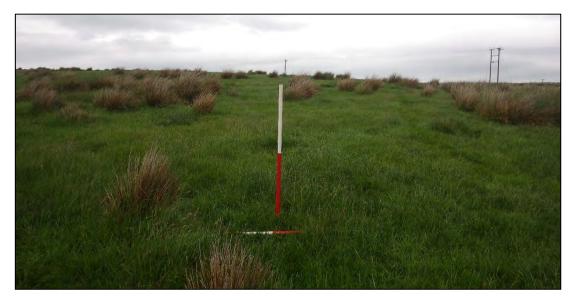


Plate 5: faint ridge and furrow 013 is discernible immediately behind the ranging rods, looking north.

6.7 A large block of ridge and furrow lies centrally in the survey area. Amidst the bell pits and trackways lies block **014** (Plate 6) of north to south oriented ridge and furrow, spaced c.4m apart. Dug into the ridge and furrow are numerous bell pits and trackways

(discussed below) which appear to be later features. However, trackways **022** and **004** appear to predate or be contemporaneous with the ridge and furrow.



Plate 6: clear ridge and furrow 014 is present to the right (east) of the ranging rods.

Another large parcel of ridge and furrow, **015**, lies on the slope of the north hill of the survey area. The ridges are spaced c.4m apart, oriented north to south down the slope (Plate 7). The ridge and furrow likely overlies the Iron Age enclosure, but no field observations were taken due to the presence of cows. The ridge and furrow largely fades before reaching boundary wall **002** so their relation is uncertain.



Plate 7: view from the south of the ridge and furrow of block 015. The cows are present at the approximate location of the Iron Age enclosure.

- Another block of ridge and furrow **016** lies directly north of and perpendicular to **015**. This ridge and furrow is clearly visible on satellite imagery but is not evident on ground. Estimations from satellite imagery provide an approximate width of 3m largely trending north to south. There is no obvious boundary wall between this block and that which lies to the south, but changes of orientation of ridge and furrow denote a clear boundary.
- 6.10 Another block of ridge and furrow is evident from satellite imagery but not clearly defined on the ground. Block **017** consists of north to south oriented ridge and furrow estimated to be 3m wide. These ridge and furrow appear to be truncated by boundary wall **045**, indicating they predate the field wall. The ridge and furrow are bounded to the west by a large gully.
- 6.11 The last block of ridge and furrow, **018**, is in the north-east corner of the survey area. It is not visible on the ground but is clearly visible of satellite imagery. The block is composed of two concurrent directions of ridge. To the north the ridge and furrow lies east to west, parallel to the road and spaced 2m apart. This ridge and furrow seems to impinge upon the plantation, implying the ridge and furrow was an earlier feature. On the eastern portion of the parcel are traces of ridge and furrow, of similar spacing oriented north to south, pointing downstream, and culminating in the gully that lines its southern border.

#### Walls

- 6.12 Various walls criss-cross the study area implying different methods of field management. A study of maps reveals that by the time of the tithe map of 1841, a single field boundary traversed the survey area along Coal Burn. On the First Edition, six-inch Ordnance Survey map (1862), there appear more field boundaries and plantations, with more appearing for the Second Edition 25-inch Ordnance Survey map (1898), as discussed below.
- A straight boundary wall **002** (Plate 8) descends the northern slope along a north to south axis along the edge of plantation **001** and ends near Coal Burn. The earthwork remains of the wall are c.2m across and 0.8m high. This boundary wall likely separated the ridge and furrow to the west (**015** and **016**) and to the east (**017** and **018**) and later provided a boundary for plantation **001**. Wall **002** intersects another wall, **110**, which runs east to west along the northern boundary of the survey area. Wall **110** is 1.5m across and 0.8m high.



Plate 8: boundary wall 002 stretching toward the south from its intersection with the plantation wall.

6.14 A boundary wall **019** extends prominently southward straight up the slope of the south hill (Plate 9). This wall marks the boundary of Northumberland National Park. The wall is c.2m across and is accompanied by a large ditch, possibly a track, which follows the boundary.



Plate 9: boundary wall **019** extends south (perpendicular) to the ranging rods toward the bottom of the hill and intersects with boundary wall **016** which runs perpendicular to it. The depression that runs alongside the wall is trackway **004**.

6.15 Cutting the ridge and furrow block **010** east to west is boundary wall **031** (Plate 10). It is c.1m wide and is located almost at the top of the southern hill. There is no evidence as to how it relates with the ridge and furrow of block **010** as the wall is located at a natural break in slope, and therefore at a location with a higher incidence of erosion potentially causing the disappearance of the ridge and furrow. To the south of the same ridge and furrow block **010** is another boundary wall **101** along the southern boundary of the survey area. This wall has a maximum height of 0.5m in places and spans c.1.5m across. Though the wall has mostly been reduced to an earthwork, it clearly retains some evidence of stone structure (Plate 11).



Plate 10: boundary wall 031 extends west along the hill from trackway 004.

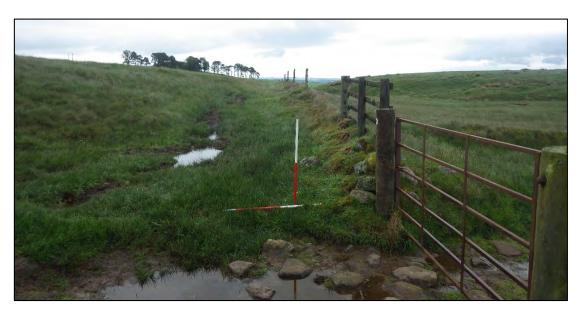


Plate 11: boundary wall 101 looking west. The stone foundation is clearly visible.

6.16 Boundary wall **45** (Plate 12Plates 12) is c.1m wide and extends east to west along the north hillside. It is marked by a row of trees growing immediately adjacent to the wall.

Satellite imagery indicates that the ridge and furrow block 18 underlies this boundary, though there was no immediate evidence in the field.



Plates 12-13: (left) boundary wall **045**, looking west, is marked by a few remaining trees; (right) a low earthwork (**111**) snakes to the right (west) from the ranging rods.

- A small rounded boundary wall 111 (Plate 13)Plates 12 forms a semi-circle above ridge and furrow block 016. It is 1.5m wide, generally trending east to west and creates a rounded bank along the north hill before a crest which then leads down to Coal Burn. This semi-enclosure may have served as an irrigation bank, used to pool water in order to drain the remainder of the field. However, there is no evidence of ridge and furrow in the area above the bank, so if this interpretation is correct, it would have been used following the disuse of ridge and furrow ploughing.
- 6.18 A prominent boundary wall **116** (Plate 14) is located south of the pits in the centre of the study area. It still retains much of its stone foundation to an approximate maximum height of 0.5m. The wall extends east to west along the foot of the southern slope, and

would have likely intersected wall **019** and extended until the woodland at the edge of the survey.



Plate 14: boundary wall (116) extending west along the southern hill to intersect with boundary 019.

6.19 The edge of the survey area to the south-east is marked by the presence of a boundary wall **103** (Plate 15) composed of a low linear mound oriented north to south with some exposed stonework. The remaining mound is 2m across and c.0.5m high. Hawthorn trees along the wall have fossilised the remains of the boundary.

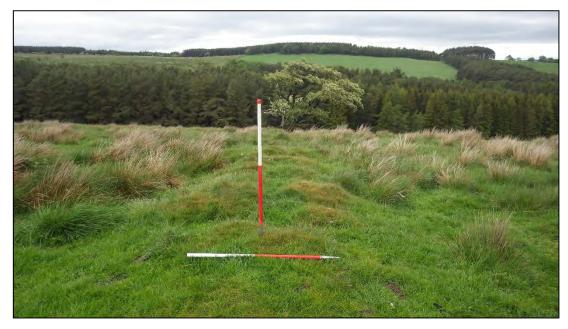


Plate 15: boundary wall 103 descending south down the hill.

6.20 The northern boundary of the survey area is delineated by a modern fence line with a historic boundary wall **110** immediately to the south (Plate 16). The wall now resembles an earthen mound c.3m across and 0.5m high with a deep ditch separating it from the fence line. The wall would have run along the historic plantation that covered the northeast corner of the survey area and therefore intersects with wall **002** which forms the other boundary of the plantation. The wall trends east to west, with a small bend at the northernmost point of the field.



Plate 16: boundary 110 lining the northern edge of the survey area.

## **Trackways**

6.21 There are several trackways that cut across the study area, some of which follow historic trackways, and others may have provided access for farming. Trackway **006** (Plate 17) follows a similar trajectory to that of a trackway visible on a plan of Broadpool Common from 1769 (QRD/3). This trackway provided access from Goatstones to the west and Low Moralee, further afield to the north-west, into Simonburn to the south-east. This trackway is very evident in places, and more subtle in others, but is generally 1.5m wide with clear ruts formed by the continual passage of vehicles.



Plate 17: trackway 006 is still evidently in use extending north-west across the survey area.

Another evident trackway, **004**, follows field boundary **019** over the southern hill toward Hadrian's Wall (Plate 18). It is now part of a public footpath. It is c.2m wide, forming a large overgrown ditch in places. This trackway is marked on the First Edition Ordnance Survey map, but is not marked on the 1840 Tithe map. However, the Tithe map does illustrate a trackway heading south further to the east, along gully **020**. The location of the route south from Goatstones must have shifted in the mid-18th century, perhaps in an effort to circumnavigate much of the mining operations occurring in the valley bottom along Coal Burn.



Plate 18: the end of trackway 004 looking north toward Goatstones Colliery.

# Other agricultural features

6.23 A series of earthworks (033) resembling lynchets are found running across the slope and down into the gully (Plates 19). It is uncertain what these earthworks are, and they appear on the satellite imagery as a series of linear features that follow the contours. In the field they appeared as





Plates 19-20: (left) lynchets 033 are visible running up the hill; (right) a drainage gully (005) runs east alongside what may be the remnants of a wall.

large rounded earthworks sloping north-west to south-east into the drainage gully **020** between ridge and furrow blocks **010** and **012**. These earthworks are c.8m wide and may have been formed from a network of trackways that may have once dissected the area between the many bell pits.

A historic drainage gully **005** extends east to west along the bottom of the south hill and along the north boundary of ridge and furrow block **010**. This gully (Plate 20) is c.1.5m wide and is visible in the field due to the presence of thicker, taller grass. It may have formed part of an irrigation system related to the ridge and furrow block, allowing drainage from the furrows.

#### **Plantation**

6.25 Along the northern boundary of the survey area was a tree plantation **001** depicted on the First Edition 6-inch Ordnance Survey map (1862). The boundaries of this plantation

are still evident forming an L shaped earthwork, the long end along the north boundary, the short end descending down slope along boundary wall **002**. The earthworks are shallow but stretch along the boundaries denoted by the Ordnance Survey map at a width of c.2m (Plate 1Plate 21).



Plate 21: boundary wall of plantation 001 extending east parallel to the boundary.

# Quarrying

6.26 There was clear evidence of two quarries within the survey boundary. In the south-west corner of the ridge and furrow block 010 is quarry 102 with clearly worked limestone outcrop faces cut into the ridge and furrow. The quarry consists of multiple depressions covering a total area of c.850m² with a maximum depth of 1m (Plate 22). The quarry includes an evident trackway (Plate 23), which appears to be leading into the site and was likely used to transport the quarried stone out of the area. The stone was probably used in the adjacent field boundary wall **101**.



Plate 22: trackway leading east as part of quarry 102.



Plate 23: one of the pits of quarry 102 looking south-west.

Another small quarry **109** is located south of the natural woodland that extends into the survey area along Coal Burn (Plate 24). The quarry consists of a small depression c.0.5m deep and 3.5m across. It is located near trackways **026** and **022** and may have been used to extract stone to build up both trackways.



Plate 24: Small quarry 019 looking north.

6.28 Near the junction of trackway **022** and **026** is a small oblong mound **108** (Plate 25) only about 3m long, 1.5m wide, and 0.5m high. It may have been created from spoil from the small quarry **109** or transported from the pits further down the track, but the proximity of the quarry makes it a likely explanation.

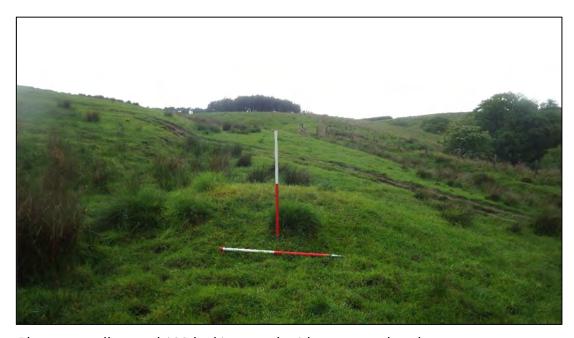


Plate 25: small mound 108 looking west beside quarry and trackways.

# Mining

## Bell pits

There are many examples of bell pits across the valley between the north and south hill. These would have formed as open coal pits with spoil heaped around the rim of the pit. To initially test the viability of the coal, trial pits would have been dug. What appears to be six possible test pits, and 117, are arranged in a line on the north face of the south slope (Plate 26). These appear as six circular scars on the grassland. Each pit is c.3m in diameter with darker grass in the centre and lighter grass forming a ring. The earthworks appear in an east to west trending line, each 1.5m apart. It is uncertain whether these test pits predate the bell pits or were the result of subsequent exploration in conjunction with or following the mining activity below. Mining activity is evident in nineteen pits spaced out along what appears to be three different seams.



Plate 26: circular test pits 117 stretching west along the hillside.

6.30 The first line of bell pits is just south of Coal Burn and consists of seven bell pits stretching along a north-west to east axis, from the Goatstones Colliery site, across the survey area, toward the natural woodland along Coal Burn. The pits include 112, 113, 114, 115, 036, 025, 024, and 023. Pit 112 is very small, only about 2.5m wide, and consists of a small depression surrounded by a low mound. Located on a north-facing slope, 112 (Plate 27), and even more so, 113, are faint depressions not evident on satellite imagery. 113 (Plate 28) is c.2m in diameter and only about 0.25m deep. Both 112 and 113 appear to have had entrances to the pits from the north-west.

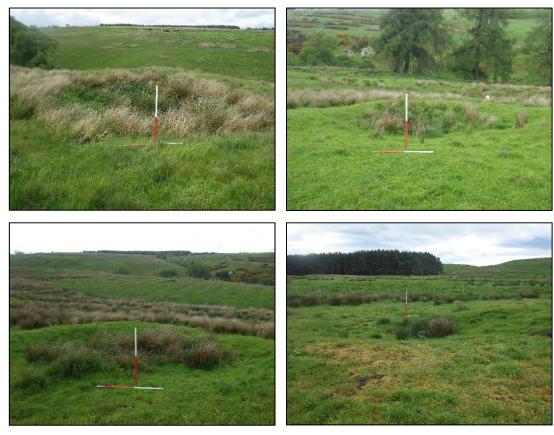


Plate 27: pit 112 looking north. The pit is subtle, consisting of the depression to the right of the ranging rods.



Plate 28: the small depression to the rear of the ranging rods is pit 113, looking west.

6.31 Pit **114** (Plate 29) is larger than the first two pits along the seam. It is about 4m in diameter, with a more prominent elevation differential between the bank and the pit, reaching a maximum of c.1m. On the south-west side, the earthwork dips down, about 2m wide, perhaps accommodating a road or entrance to the pit.



Plates 29-32: (upper left) pit 114 looking north. The ridge and furrow 015 is visible in the background; (upper right) pit 023 looking north; (lower left) pit 024 looking north; (lower right) pit 036 looking south-east.

Pits **023**, **024**, and **025**, and **036** are very similar in size and construction measuring 11m, 8m, 10m, and 10m respectively. Each pit is surrounded by an earthwork, formed from the spoil derived from the pit excavation. These earthworks range in size from 1m high (**023**; Plate 30), to 0.5m (**024**; Plate 31, **025**, and **036**; Plate 32). The routes into these pits varied in location, but were generally from the south, except for pit **025** (Plate 33) which had a depression toward the north.



Plate 33: pit 025 looking north

6.33 Pit 115 (Plates 34 and 35) is considerably larger than any of the other pits in the line and lies adjacent to a quarry. The pit is semi-circular, with a large bank on the west side, but open to the quarry on the east side. The bank is c.1m high, but dissolves into less consolidated quarry rubble indicating that this location was quarried subsequent to the closure of the bell pit.





Plates 34-35: Pit 115 looking east (left) and west (right). The quarry is visible truncating the eastern part of the pit.

Another line of pits trends north-west to south-east and includes pits **034**, **009**, and **008**, with pit **035**, slightly north of the line. The pits generally follow the trace of trackway **006**, which may have been used to service the pits. Pit **034** (Plate 36) is among the largest pits in the area and is no longer circular but rather has likely been quarried. The pit consists of a large bank c.2m deep and 15m wide on its south side, in a horseshoe shape with an access coming from the north-east.



Plate 36: pit 034 looking south from the pit entrance toward the earthworks.

6.35 Pit **009** also showed signs of subsequent quarrying and consisted of a small feature circa 5m across and 1m deep that lay directly east of a depression which had clearly resulted from quarrying due to the abundance of loose, naked stone. The quarried depression was c.10m wide and c.1m deep (Plate 37).



Plate 37: pit 009 looking west toward the part of the pit that has subsequently been quarried.

6.36 Pit **008** is a circular bell pit with a well-preserved mound around all sides. It stretches 8m in diameter, with a pit 3m across and the mound on the edge c.2.5m thick (Plate 38). The inner depression is c.1m deep. There is no evident access point into the pit.



Plate 38: pit 008 looking north-east. The spoil heap around the perimeter is well defined.

6.37 Pit **035** is very small and consists of a north-facing depression with a shallow bank along the south edge of the pit (Plate 39). The pit is c.3m across and 0.75m deep with access likely coming from the north deduced by the notable absence of an earthwork bank on the north side.



Plate 39: pit 035 looking south-west.

6.38 The third, and most southerly line of bell pits stretches from the south of the colliery at pit 119, and extends south-east along pits 041, 042, and 038, before turning east and including pit 007, 039, and 040. Pits 119 and 041 are both very small, with shallow depressions c.2m across and 0.5m deep. Pit 119 (Plate 40) consists largely of a west-facing depression with a bank on its west side, whereas 041 (Plate 41) is little more than a shallow pit with little visible access into the earthwork.





Plates 40-41: (left) pit 119 is a shallow earthwork with a bank on its north-west side; (right) pit 041 is little more than a depression with low banks, now covered by long grass. The trackway beneath the ranging rods is the end of trackway 118.

Along wall **116** is another pit, **042** which, similarly to **119** is little more than a depression adjacent to a bank, which in turn coalesces into the wall **116** (Plate 42). The depression is up to 3m wide and 1m deep, bearing in mind the combined height of spoil and wall increases the overall depth of the depression. The proximity of the pit to the wall indicates that the pit was dug when the wall was no longer in use, as mining so near to a wall would likely have caused its collapse.



Plate 42: pit 042 looking south. The bank of wall 116 extends to the west of the pit.

6.40 Pits **038** and **007** are two similar-sized pits with substantial earthworks carved out of a south-facing slope. Pit **038** is c.15m across and 1.5m deep with an evident mound (Plate 43), roughly 3m across, along the periphery of the mound. A clear break in the peripheral earthwork to the north-west indicates a clear access point. Pit **007** is comparable, c.15m wide, but slightly shallower, c.0.75m deep with a large distinct earthwork (c.2.5m) at its perimeter, also with access from the north-west (Plates 44-45).



Plate 43: pit 038 looking north-east.



Plate 44: pit 007 looking south. The entrance into the pit through the spoil is visible to the right (west) of the ranging rods.



Plate 45: pit 007 looking north onto the depression within the earthwork mound.

Pits **039** (Plate 46) Plates 46-47: pits **039** (left) and **040** (right) looking northand **040** (Plate 47) are also markedly similar. Both are nearly 15m across and c.1m deep at the bottom of the south hill. Trackway **104** runs along the hillside above them, yet access to both of these pits appears to be from the north (**040**) or north-west (**039**). Both pits have pronounced earthen banks around the perimeter, yet that of **040** is slightly more evident than **039**.





Plates 46-47: pits 039 (left) and 040 (right) looking north.

6.42 Three large spoil heaps, **043**, are located west of the bell pits and overly the ridge and furrow of block **011**. The heaps vary in size but are generally c.20m across and c.1m high (Plate 48), although the easternmost heap is nearly 30m across. Pit **119** lies adjacent to the largest spoil heap just to the east and was likely the source for some of the spoil. The presence of trackways **029** and **118**, which connect the spoil heaps with pits **034** and **009**, and **041** and **042**, respectively, indicates that the spoil likely came from these pits.



Plate 48: spoil heap **043** with ridge and furrow of block **011** visible in the foreground (south).

## **Trackways**

There are several trackways connecting the various bell pits across the Coal Burn valley. Unlike the trackways mentioned previously, these trackways seem to be specifically related to mining activity. Trackway 022 (Plate 49) runs east to west across the slope to the north of Coal Burn and does not appear on historic mapping. It emerges from the woodland to the east, just south of pits 023 and pits 024. The traces of the trackway fade near pit 025 but it is likely that the trackway ran all the way to at least pit 036 as it would have provided transport for material to and from the mines. This trackway is mostly reduced to an earthwork but is perceived as a visible flat break in slope, c.2m wide.



Plate 49: trackway 022 heading west toward pit 025.

Another track, **026**, intersects **022** trending south-west (Plate 50). This trackway is clearly still in use, as there are wheel ruts from vehicle use coming up from the woodland. The trackway is 1.5m across and fades into the ridge and furrow of block **014** soon after intersecting trackway **022** and just before reaching pit **024**, which likely was its original destination.



Plate 50: trackway **026** heading south-west and fades into the ridge and furrow of block **014**.

As mentioned above in paragraph 6.42, trackways **029** and **118** connect the spoil heap **043** with some of the bell pits. Trackway **029** is rather wide in places and has been used often enough for there to now be two adjacent trackways with four wheel ruts (Plates 51). The maximum width of the road is nearly 2.5m heading generally south-east to north-west. Trackway **118** shows evidence of use from vehicle wheel ruts (Plate 52). The trackway is 1.25m across and covers a much smaller distance from pit **041** north-west toward the ridge and furrow **011** just south of the spoil heap **043**.



Plates 51-52: trackway **029** looking east at the widest extent of the track; trackway **118** looking east.

6.46 A small trackway **106** leads away from pit **007**. Access into the depression of pit **007** is from the north, yet trackway **106** reaches the pit from the south (Plate 53) indicating that the material extracted from the pits was predominantly transported southward. The trackway forms a platform in the north-facing slope above pit **007** and is c.1.5m across heading south-west.

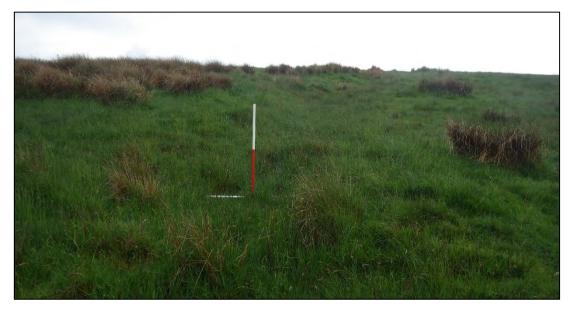


Plate 53: trackway 106 rising up the south slope toward the south-west.

6.47 Trackways **104** and **105** are parallel to each other, trending east to west on either side of pits **039** and **040**. Trackway **105** (Plate 54Plates 54) runs along the bottom of the slope along the fence line of the modern plantation. It is c.2m wide and still visibly in use. Trackway **104** is much fainter than **105** and is visible mostly as a 1.5m wide, grass-covered platform that straddles the hillslope above the two pits (Plate 55). It is possible that the trace of trackway **104** is lost further west and that trackway **104** and **106** are the same (Fig. 2).





Plates 54-55: (left) trackway 104 extending to the east; (right) trackway 105 extending to the west.

Intersecting and perpendicular to trackways **104** and **105** is trackway **030**. Running along a north to south axis, the trackway is a faint earthwork visible as a depression. The trackway is c.1.5m wide and runs directly up the hill (Plate 56).



Plate 56: trackway 030 extending north to intersect with trackway 104 and 105.

6.49 Cutting across the foot of the south hill from east to west is a linear feature 107 that may have been a former drainage gully or hollow-way (Plate 57). The hollow-way is formed by a depression c.0.5m deep and 1m across. On the south side, the depression is carved out of the hill forming a natural embankment, whereas on the north, a small embankment has been formed, about 0.75m across and 0.25m high. This hollow-way may have been used to bring water for the mining operations.



Plate 57: drainage gully 107 extending west.

## 7.0 DISCUSSION

- 7.1 A full walk-over survey has been conducted and all assets found were located, photographed and described. None of the heritage assets identified were nationally listed with only one site, the Iron Age/Romano-British settlement appearing on the Northumberland HER (Red Burn; 7865). This asset is the only one to date from the Iron Age, the rest of the assets being post-medieval.
- Archaeological evidence in the survey area dating from the post-medieval period begins with the ridge and furrow. It is unknown from when the ridge and furrow dates and may be as early as the medieval period. Despite the survey area being located on Broadpool and Simonburn Commons, this land would still have contained individual agricultural fields. The various ridge and furrow directions are indicative of these original divisions. During later enclosure, the northern part of the survey area was given to Allgood Farm and the southern to Mount Farm with the division lying along Coal Burn. At the time of enclosure, ridge and furrow ceased to be a common agricultural practice and the land was likely used as pasture. North of Coal Burn the land was divided into three fields, separated by wall **002** and **045**, with a plantation **001** located along the northern boundary. South of Coal Burn were three fields separated by **116** and **019** (OS 1866, EP/54/22). The visible portion of wall **116** is very short, but it likely stretched along what

is now the drainage gully **005** and has been destroyed through subsequent repairs to the gully.

Concurrent with the grazing for which the survey area was used, the land was mined and quarried. The coal along the so-named Coal Burn had likely been extracted for centuries, but large-scale extraction probably began in the post-medieval period. Extraction was mostly through the use of bell pits, large round holes around which was heaped the spoil, forming a sort of inverted bell shape. Where too much spoil was produced, separate spoil heaps were built, such as those at **043**. The pits were often connected by trackways used to transport material from the pits to the colliery just west of the survey area. Concurrent to these activities, quarries were used for local purposes, possibly to support structures related to mining. It is unclear which happened first, but at least some of the quarries, those attached to pits **009**, **102**, and **115**, are likely subsequent to the abandonment of the mines as they appear to truncate the pits. Other quarries, such as **102** and **109** are of uncertain date relative to other features.

### 8.0 SIGNIFICANCE

- 8.1 The Iron Age/Romano-British enclosure at Red Burn forms part of a wider prehistoric landscape coupled with the prehistoric sites in the surrounding area. This site has high evidential value and is therefore of high-moderate significance.
- 8.2 The bell pits and spoil heaps have moderate-low evidential and historic value for providing useful information as to local coal production in the post-medieval period. These industrial sites therefore have moderate significance.
- 8.3 The ridge and furrow has moderate significance as part of a historical land management system.
- 8.4 The remaining heritage assets the trackways, field boundaries, and hollow-ways all have low-moderate significance.

## 9.0 RECOMMENDATIONS

9.1 The Iron Age/Romano-British enclosure at Red Burn (7865) is part of a wider prehistoric landscape can be viewed alongside prehistoric sites nearby. As such, it is recommended that a 10m exclusion zone be established around the site so as not to destroy the prehistoric archaeology (Fig. 3). The enclosure and its buffer should be free from

plantation and any machinery driven around the site must not pass over or within the buffer zone.

- 9.2 A 10m exclusion zone should be given to all the bell pits, trackways, spoil heaps, field boundaries and hollow-ways to protect the historic environment. A map of all exclusion zones is included in Figure 3.
- 9.3 Further recording ridge and furrow is recommended. At a minimum, a wide area topographic survey by drone to produce a Digital Terrain Model should be performed. Such investigation would create a record of the orientation and spacing of the blocks of ridge and furrow across the area.

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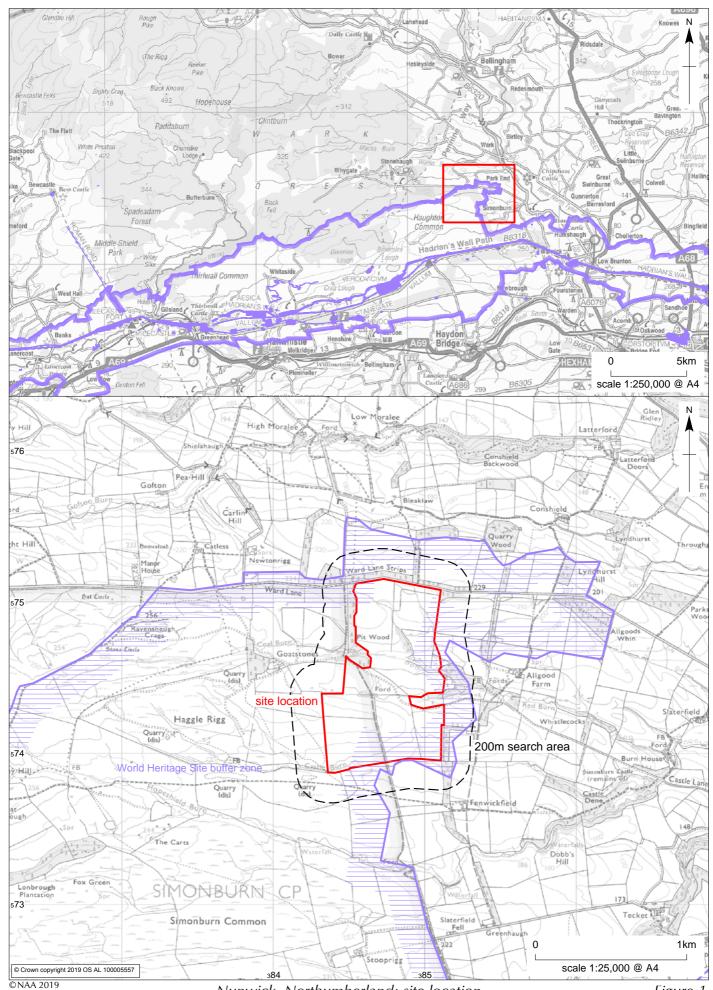
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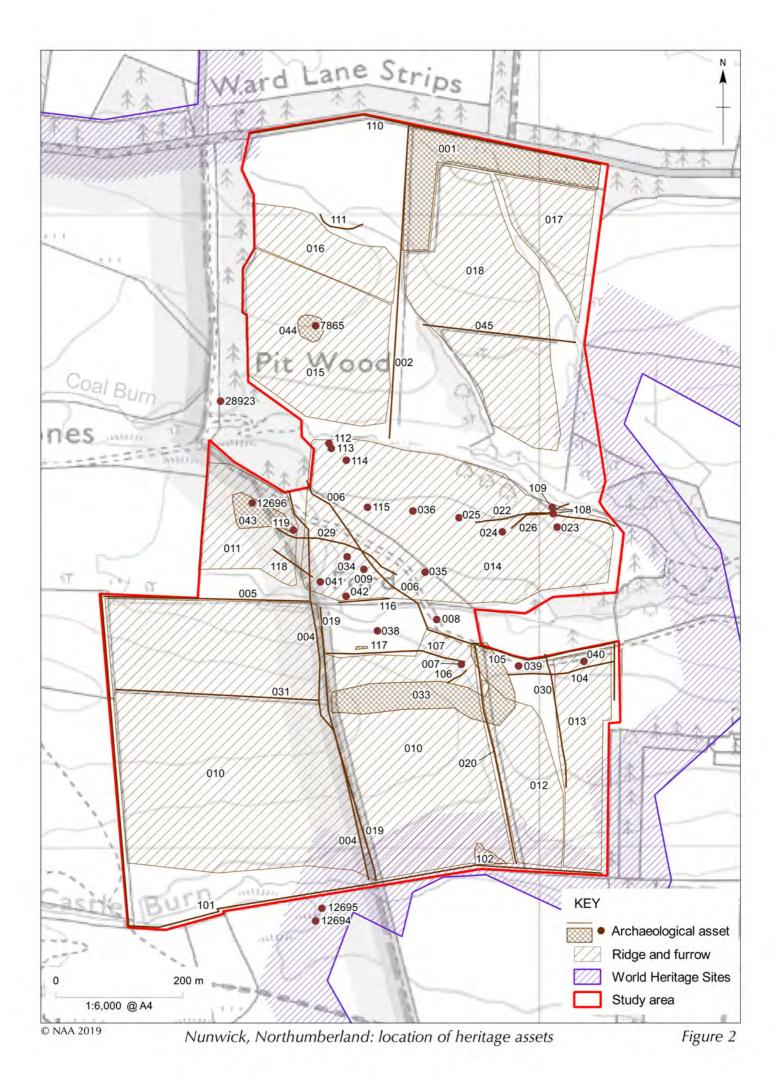
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Nunwick, Northumberland: site location





Nunwick, Northumberland: 10m exclusion area

Figure 3

# APPENDIX A

# Gazetteer

ID	NGR	Monument Type	Site Description	Period	Photo Ref
001	384719, 574282	Coppice	(GIS) Tree plantation depicted on OS mapping. (Survey) Boundary walls still visible and seems to incorporate the northern section of wall 2.	Post-Medieval	1516_1_1 - 3
002	384780, 574857	Boundary Wall	(GIS) North to south aligned boundary wall depicted on historic OS mapping. (Survey) Site is still visible as a linear mound. No obvious stonework visible.	Post-Medieval	1516_2_1 - 2
004	384610, 574546	Trackway	(GIS) South-east to north-west aligned trackway leading from Goatstones Colliery and heading south-east. (Survey) Survives as a linear bank.	Post-Medieval	1516_4_1 - 2
005	384646, 574381	Drainage Gully	(GIS) Trackway or drainage gully aligned east to west depicted on historic OS mapping. (Survey) Site is visible as a linear band of tall grass which probably represents a filled in drainage gully rather than a trackway or boundary wall.	Post-Medieval	1516_5_1 - 2
006	384828, 574337	Trackway	(GIS) South-east to north-west aligned trackway leading from Goatstones Colliery and heading south-east. Seems to join the colliery to a number of pits marked on the historic OS. (Survey) Some muddled sections and rutted by modern tyre trackways in places.	Post-Medieval	1516_6_1 - 2
007	384871, 574266	Pit	(GIS) "Old pit" depicted on historic OS mapping. Site may lie further north. (Survey) Circular mound with a central depression.	Post-Medieval	1516_7_1 - 2
800	384835, 574346	Pit	(GIS) "Old pit" depicted on historic OS mapping. Site may lie further northeast. (Survey) Circular mound with a central depression located close to trackway 006.	Post-Medieval	1516_8_1 - 2
009	384726, 574432	Pit	(GIS) "Old pit" depicted on historic OS mapping. Site may lie further south. (Survey) some quarrying inside of the bell pit.	Post-Medieval	1516_9_1 - 2
010	384664, 574115	Ridge and Furrow	(GIS) Large block of north-west to south-east aligned ridge and furrow cut by a series of modern drainage grips. (Survey) Many drainage grips to the south which feed into the beck. Ridge and furrow becomes fainter towards the south.	Post-Medieval	1516_10_1
011	384548, 574513	Ridge and Furrow	(GIS) Block of east to west aligned furrows. (Survey) Very clear block of east to west aligned ridge and furrow which has been cut by a modern trackway to the north and by a recent rubbish pit to the west. Furrows seem to extend southwards where they stop at the drainage gully. Ridge and furrow is earlier than spoil heaps (Site 043)	Uncertain	1516_11_1 - 2

ID	NGR	Monument Type	Site Description	Period	Photo Ref
012	384967, 574216	Ridge and Furrow	(GIS) Narrow block of north-east to south-west aligned ridge and furrow. (Survey) Ridge and furrow does not survive well and is barely visible.	Post-Medieval	1516_12_1
013	385062, 574209	Ridge and Furrow	(GIS) Narrow block of north to south aligned ridge and furrow. (Survey) Ridge and furrow does not survive well and is barely visible.	Post-Medieval	1516_13_1
014	384936, 574460	Ridge and Furrow	(GIS) Large block of north to south aligned ridge and furrow. Looks to be cut by mining activity. (Survey) Extensive area of ridge and furrow aligned broadly north to south. Seems to predate all of the mining activity in the area.	Post-Medieval	1516_14_1 - 4
015	384637, 574803	Ridge and Furrow	(GIS) Block of north to south aligned ridge and furrow separated by either a field boundary wall or drainage gullies. (Survey) Ridge and furrow difficult to make out but surviving sections seem to be spaced far apart.	Post-Medieval	1516_15_1 - 2
106	384682, 574922	Ridge and Furrow	(GIS) Block of north to south aligned ridge and furrow separated by either a field boundary wall or drainage gullies. (Survey) Site was not visible during survey but is clearly visible on aerial photography.	Post-Medieval	no photo
017	385024, 574981	Ridge and Furrow	(GIS) Block of north to south aligned ridge and furrow. (Survey) Ridge and furrow not visible on the ground but is clearly visible on aerial photography.	Post-Medieval	no photo
018	384902, 574999	Ridge and Furrow	(GIS) Block of north to south aligned ridge and furrow. (Survey) Ridge and furrow not visible on the ground but is clearly visible on aerial photography.	Post-Medieval	no photo
019	384658, 574371	Boundary Wall	(GIS) North-west to south-east aligned boundary wall. Seems to be aligned with trackway 004. (Survey) Site visible as a well-defined bank with a gully on its western side. No obvious exposed stonework was visible. Wall seems to have an entrance which leads onto site 033.	Post-Medieval	1516_19_1 - 2
020	384903, 574308	Drainage Gully	(GIS) North-west to south-east aligned boundary wall. Seems to separate sites 010 and 012. (Survey) Site visited and is a drainage gully marked on historic OS rather than a boundary wall.	Post-Medieval	no photo
022	385049, 574514	Trackway	(GIS) East to west aligned trackway visible as a clear earthwork on aerial photography. Seems to connect a series of pits. (Survey) Well-defined trackway which is crossed in numerous places by recent trackways.	Post-Medieval	1516_22_1 – 4
023	385031, 574499	Pit	(GIS) Possible bell pit visible as an earthwork with a central depression on aerial photography. (Survey) Circular mound with a central depression. Seems to be later than the surrounding ridge and furrow.	Post-Medieval	1516_23_1 - 3
024	384944, 574491	Pit	(GIS) Possible bell pit visible as an earthwork with a central depression on aerial photography. (Survey) Circular mound with a central depression. Seems to be later than the surrounding ridge and furrow.	Post-Medieval	1516_24_1 - 2

ID	NGR	Monument Type	Site Description	Period	Photo Ref
025	384877, 574515	Pit	(GIS) Possible bell pit visible as an earthwork with a central depression on	Post-Medieval	1516_25_1 - 2
			aerial photography. (Survey) Circular mound with a central depression. Seems		
			to be later than the surrounding ridge and furrow.		
026	385030, 574531	Trackway	(GIS) Trackway visible extending up from woodland. (Survey) evident	Post-Medieval	1516_26_1 - 2
			trackway that fades into the ridge and furrow.		
028	384993, 574532	Boundary Wall	(GIS) Field boundary wall. Could be modern. Seems to enclose area of bell	Post-Medieval	no photo
			pits.		
029	384677, 574477	Trackway	(GIS) Boundary wall or drainage ditch associated with a block of ridge and	Post-Medieval	1516_29_1 - 2
			furrow. (Survey) Network of braided trackways which have been crossed by		
000	205004 554505	T 1	recent trackways.	D	4546 20 4 4
030	385004, 574507	Trackway	(LIDAR) Possible north to south aligned trackway either side of ancient	Post-Medieval	1516_30_1 - 4
			woodland. (Survey) Site was only visible to the south of the block of existing woodland and consisted of a wide linear hollow which may be a hollow-way		
			bisecting the blocks of ridge and furrow to the south or may be entirely		
			natural. Does not appear on any historic OS mapping. Site may also relate to		
			the nearby bell pits to the east and west.		
031	384647, 574227	Boundary Wall	(LIDAR) Possible field boundary visible on lidar. (Survey) Site visible as a	Post-Medieval	1516_31_1 - 2
031	301017,371227	Boardary Train	well-defined linear bank with a slight gully on its northern side. No obvious	1 ost meatevar	1310_31_1 2
			exposed stonework was visible.		
033	384864, 574232	Trackway	(LIDAR) Network of braided trackways visible on lidar. (Survey) Many	Post-Medieval	1516_33_1 - 3
	,	,	intercutting trackways which seem to be aligned with a large field enclosure		
			to the west and curves northward towards the beck.		
034	384700, 574456	Pit	(LIDAR) Pit visible on lidar. (Survey) Circular mound with a central pit.	Post-Medieval	1516_34_1 - 4
035	384824, 574430	Pit	(LIDAR) Pit visible on lidar. (Survey) Circular mound with a central pit.	Post-Medieval	1516_35_1
036	384803, 574527	Pit	(LIDAR) Pit visible on lidar. (Survey) Circular mound with a central	Post-Medieval	1516_36_1 - 2
			depression. Seems to be later than the surrounding ridge and furrow.		
038	384747, 574338	Pit	(LIDAR) Pit visible on lidar. (Survey) Site consists of a circular mound with a	Post-Medieval	1516_38_1 - 2
			central depression and is located close to a number of other bell pits.		
039	384970, 574281	Pit	(LIDAR) Pit visible on lidar. (Survey) Circular mound with a central pit.	Post-Medieval	1516_39_1 - 2
040	385073, 574289	Pit	(LIDAR) Pit visible on lidar. (Survey) Circular mound with a central pit.	Post-Medieval	1516_40_1 - 3
041	384656, 574415	Pit	(LIDAR) Possible pit visible on lidar. (Survey) Circular mound with a central	Post-Medieval	1516_41_1 - 2
			pit.		
042	384697, 574393	Pit	(LIDAR) Possible pit visible on lidar. (Survey) Circular mound with a central	Post-Medieval	1516_42_1 - 2
			pit.		

ID	NGR	Monument Type	Site Description	Period	Photo Ref
043	384531, 574548	Spoil Heap	(LIDAR) Three spoil heaps visible on lidar. May be related to mining. (K2P)	Post-Medieval	1516_43_1 - 3;
			Keys To The Past PRN: N12696 recorded as bell pits. (Survey) Site consists of		1516_11_2
			three earthen mounds which look to be spoil heaps rather than bell pits.		
			There is no central depression to indicate a pit. Spoil heaps postdate the ridge		
			and furrow cultivation marks (Site 011).		
044	384642, 574818	Structure	(LIDAR) Circular ditch feature just visible on lidar. (K2P) This is a multi-sided	Iron	1516_44_2 - 3
			Iron Age or Roman enclosed settlement. There are gaps in the east- and west-	Age/Roman	
			facing sides, one of which could be an entrance. (Survey) Site was not		
0.45	204000 574004	D   1 14/ II	accessible due to cows with calves and a bull.		4546 45 4 0
045	384998, 574801	Boundary Wall	(LIDAR) Boundary wall visible on lidar. Lines up with field boundaries to the	Uncertain	1516_45_1 - 2
			east outside the survey area. (Survey) Visible as a linear mound with hawthorn		
101	204724 572040	D   1 14/	trees growing out of it. Some sections of exposed stonework are visible.	D ( ) 4   1   1	1516 101 1 0
101	384734, 573940	Boundary Wall	(Survey) Boundary wall which forms the site boundary. This feature appears	Post-Medieval	1516_101_1 - 2
			on historic OS mapping and dates to the post-medieval period. Some sections		
			of the wall are well-preserved, and others are fairly ruinous and grassed over.  Some sections have a modern wooden fence line built on top.		
102	384913, 573982	Ouarn/	(Survey) the remains of at least two small quarry faces with associated spoil	Post-Medieval	1516_102_1 - 7
102	304913, 373902	Quarry	heaps and trackways leading to the south. Quarries seem to post-date the	Post-Medievai	1316_102_1 - /
			ridge and furrow (Site 010).		
104	385077, 574281	Trackway	(Survey) East to west aligned trackway which seems to bypass bell pits 039	Post-Medieval	1516_104_1 - 2
104	3030/7, 3/4201	Trackway	and 040 and join into site 033.	1 Ost-Medievai	1310_104_1 - 2
105	385009, 574295	Trackway	(Survey) Possible trackway which seems to serve bell pits 039 and 040.	Post-Medieval	1516_105_1 - 2
		,	Mostly cut away by a modern track.		
106	384882, 574269	Trackway	(Survey) Section of well-defined trackway which is possibly part of trackway	Post-Medieval	1516_106_1 - 2
			104		
107	384817, 574306	Trackway	(Survey) Possible hollow-way. Maybe a drainage gully/grip.	Post-Medieval	1516_107_1 - 4
108	385024, 574522	Mound	(Survey) Small mound located close to site 109 and 023.	Post-Medieval	1516_108_1 - 2
109	385023, 574533	Quarry	(Survey) Small quarry located close to a number of boundary walls.	Post-Medieval	1516_109_1
110	384797, 575138	Boundary Wall	(Survey) linear earthwork running along the south side of the modern fence	Post-Medieval	1516_110_1-2
444	204502 554052	T 1	line.	D	4546 444 4 0
111	384702, 574972	Trackway	(Survey) Curving section of well-defined trackway visible for approximately	Post-Medieval	1516_111_1 - 2
			75m. Aligned broadly west north-west to east south-east. Probably related to		
116	204670 574624	D.	agricultural activity to the south.	D	4546 440 4 3
112	384670, 574634	Pit	(Survey) Bell pit with a circular mound and central depression. Seems to be	Post-Medieval	1516_112_1 - 2
			later than the surrounding ridge and furrow.		

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ID	NGR	Monument Type	Site Description	Period	Photo Ref
113	384675, 574626	Pit	(Survey) Bell pit with a circular mound and central depression. Seems to be	Post-Medieval	1516_113_1 - 2
			later than the surrounding ridge and furrow.		
114	384698, 574607	Pit	(Survey) Bell pit with a circular mound and central depression. Seems to be	Post-Medieval	1516_114_1 - 2
			later than the surrounding ridge and furrow.		
115	384732, 574533	Pit	(Survey) Bell pit with a circular mound and central depression. Seems to be	Post-Medieval	1516_115_1 - 3
			later than the surrounding ridge and furrow.		
116	384720, 574384	Boundary Wall	(Survey) Small section of boundary wall with exposed sections of stonework.	Post-Medieval	1516_116_1 - 2
117	384717, 574310	Trial Holes	(Survey) An alignment of circular holes which are now filled in. These may be	Post-Medieval	1516_117_1 - 4
			trial holes associated with the nearby coal mining.		
118	384622, 574439	Trackway	(Survey) Linear trackway aligned north-west to south-east. Visible as a linear	Post-Medieval	1516_118_1 - 2
			depression.		
119	384614, 574496	Pit	(Survey) Small bell pit consisting of a circular mound with a central	Post-Medieval	1516_119_1 - 2
			depression.		
103	385121, 574242	Boundary Wall	(Survey) Low linear mound with some exposed stonework. Partially fossilised	Post-Medieval	1516_103_1 - 2
			in an alignment of trees.		