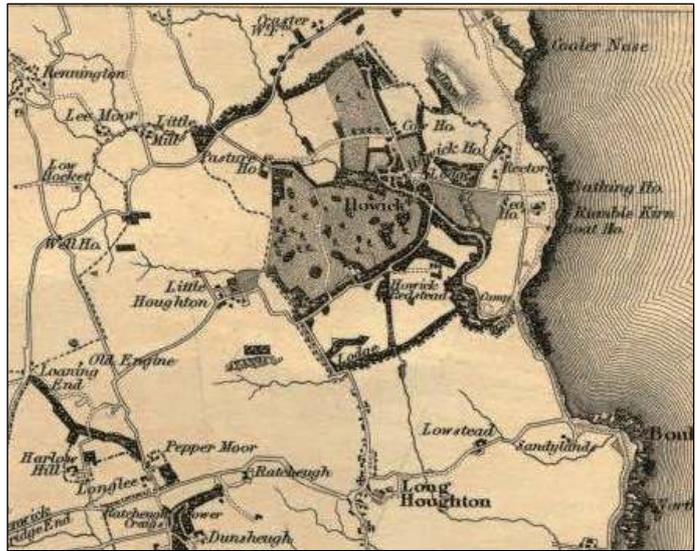


**Desk Based Assessment of
Howick Quarry, Northumberland**



Greenwood's 1828 map of Northumberland

ARS Ltd Report 2007/45

June 2007

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A Desk Based Assessment of Howick Quarry, Northumberland

ARS Ltd Report 2007 /45

June 2007

Archaeological Research Services Ltd

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EXECUTIVE SUMMARY

In July 2007 Archaeological Research Services Ltd were commissioned by Tarmac Northern Ltd to undertake a desk based assessment in advance of a proposed extension to Howick Quarry, Northumberland.

Documentary, cartographic and aerial photographic sources relating to the development area and its surrounding landscape context were consulted and a site visit was made.

The assessment has shown that very limited evidence for features of archaeological significance exist within the proposed development area. No documentary or cartographic sources revealed any evidence for features, however an aerial photograph, held by Northumberland County Council Conservation Team, may show what was initially thought to have a vague crop mark in one of the fields to be effected but on further consideration by Northumberland County Council Conservation Team this 'cropmark' was dismissed. The assessment has shown that the site of Howick Quarry and its environs do contain archaeological sites of local, regional, national and international importance ranging from a Mesolithic house, excavated less than 2km away on the coast, together with a Mesolithic midden deposit, Bronze Age burials and Anglo-Saxon burials in a previously quarried area of the quarry. The site also lies adjacent to the Grade II listed Howick Hall and its gardens, which lie within an Area of Outstanding Natural Beauty, although the quarry lies outside its boundary.

The possibility exists that remains of archaeological significance may exist within the area of the proposed extension to Howick Quarry.

1. INTRODUCTION

1.1. Location and scope of work

1.1.1. In July 2007 Archaeological Research Services Ltd were commissioned by Tarmac Northern Ltd to undertake a desk based assessment for the site of Howick Quarry, Northumberland (Fig. 1). The site is centred at NU238172 on land approximately 6km north-east of Alnwick and 1.9km from the east coast (Fig. 2).

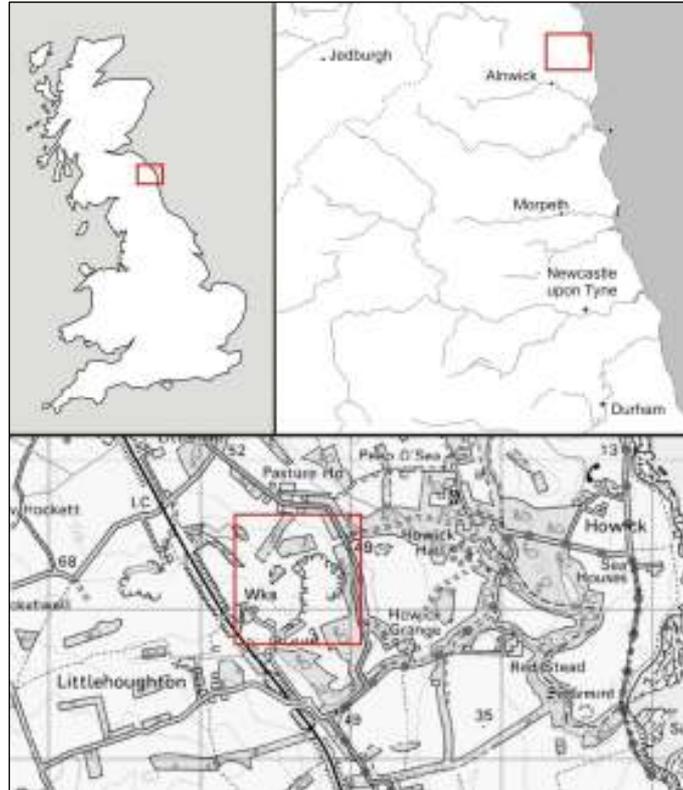
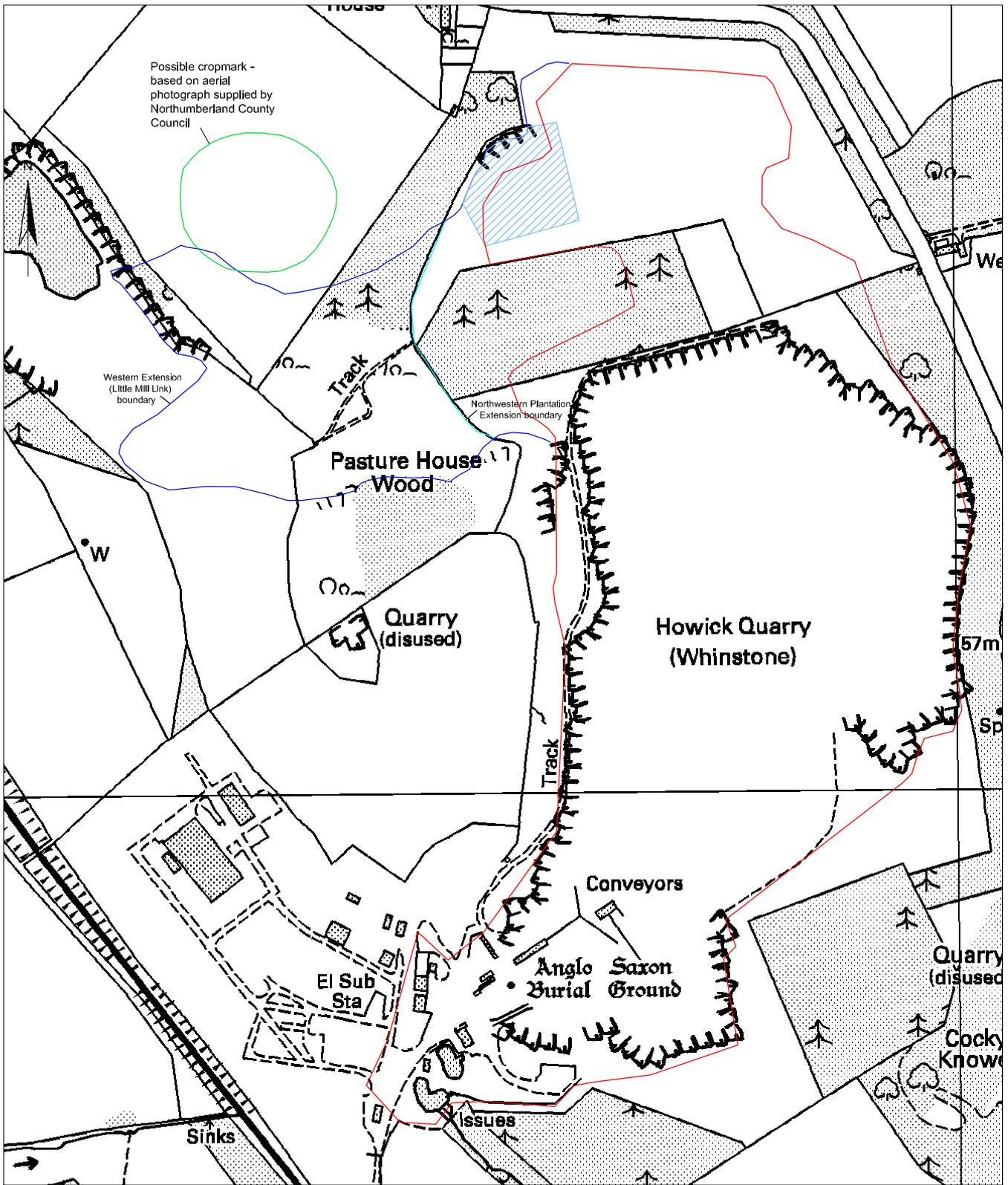


Fig. 1 Site location

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1.2. Geology and topography

1.2.1 The site is located at *c.* 60m aOD on a ridge of Whinsill dolerite overlain by thinly bedded Carboniferous Limestone, which outcrops at the surface and is covered by a thin deposit of till. The summit of the ridge curves from west to north-east through the site and encompasses a relatively flat central area with moderate slopes to the south and north at its western end, which become increasingly steep through the eastern extent of the ridge. The summit affords wide-ranging views in all directions, but particularly to the east, where the land falls away to the rocky coastline between Embleton and Alnmouth. To the west, views over the undulating landscape north of Alnwick extend to the Fell Sandstone escarpment which lies over 6km away and rises to *c.* 170m aOD.



<p>Archaeological Research Services Ltd Baltic Business Centre Saltmeadows Road Gateshead NE8 3DA</p>	<p>Figure 2: Site plan</p>	<p>Key:</p> <ul style="list-style-type: none">  Existing quarry  Proposed Western Extension (Little Mill Link)  Proposed North-western Plantation Extension  Possible cropmark  Area of previous watching brief 	<p>Copyright/Licensing: This drawing © A.R.S. Ltd</p> <p>Ordnance Survey data if applicable © Crown Copyright, all rights reserved reproduced with permission, Licence No. 100045420</p>
<p>Site Code: HOW07 Drawing Ref: DBA Fig. 2 Date: 17 May 2007 Drawn: CC Scale: 1:5000 at A4</p>	<p>Notes:</p>		

2. METHODOLOGY

2.1 In order to gather documentary, pictorial and cartographic information relating to the site a number of sources were consulted. They are as follows.

2.2. Northumberland County Council Sites and Monuments Record (SMR)

The Sites and Monuments Record from Northumberland County Council was consulted in order to obtain information on areas of historic interest within the investigation area.

2.3. Investigation of historic maps

Relevant historic mapping has been consulted and incorporated into a map regression exercise in order to better understand the historical development of the site and its immediate surrounds. The following maps were included in the regression exercise:

- Ordnance Survey revised edition of 2004
- Ordnance Survey revised edition of 1980
- Ordnance Survey revised edition of 1953
- Fourth edition Ordnance Survey of 1937
- Third edition Ordnance Survey Map of 1926
- Second edition Ordnance Survey Map of 1899
- First edition Ordnance Survey Map of 1867

2.3.1. Other maps at scales too small or too large to be helpful in the map regression exercise were also consulted. These were as follows:

- Speed's 1610 map of Northumberland
- Armstrong's 1769 map of Northumberland
- Fryer's 1820 map of Northumberland
- Greenwood's 1828 map of Northumberland

2.4. Aerial photographs

The aerial photographic collections held at English Heritage's National Monuments Record, Swindon and at the Museum of Antiquities, Newcastle University were consulted.

2.5. Multi-Agency Geographic Information for the Countryside (MAGIC)

The Multi-Agency Geographic Information for the Countryside online database was consulted to gather geographic information from their website, <http://www.magic.gov.uk/>. This was undertaken in order to assess any specially designated areas located in or near the development site, such as Areas of Outstanding Natural Beauty or Sites of Special Scientific Interest.

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1. Prehistoric Period

- 3.1.1 An internationally important Mesolithic settlement at NU 2585 1657 was excavated at Howick during 2000 and 2002 (Waddington *et al.* 2003), and which has since been completely excavated and subsequently ‘reconstructed’ as part of a small heritage trail from Craster. Included in the finds were over 13,000 flints, with microliths, scrapers, awls, burins, retouched flakes and blades, as well as burnt food remains including hundreds of thousands of charred hazel nut shells. No archaeological remains of this feature are left as they were fully excavated and removed as the site was collapsing down the cliff edge.
- 3.1.2 Flint scatters of predominantly Mesolithic flints were recovered from seven fields that were fieldwalked on Seahouses Farm to the east of Howick Hall (Waddington in press). This included 244 pieces suggesting extensive Mesolithic occupation across the area. Neither the area, nor its setting, will be affected by the proposed quarry extension which lies for the most part 2km distant.
- 3.1.3 The earliest remains found that are directly associated with Howick Quarry were a number of ‘heaps’ of shell midden and a nearby assemblage of faunal remains that included 5 red deer, 1 auroch, 3 horses, 17 oxen, 6 sheep, 5 pigs and two birds (Jobey and Newman 1975). Although this material was not dated using scientific techniques it is thought to be Mesolithic.
- 3.1.4 A Neolithic stone axe head was found at the farm at Boulmer (Bateson 1895, 334) and another near Longhoughton (Bosanquet 1934).
- 3.1.5 During the 19th century, Bronze Age burial sites dating between 2500BC to 800BC were discovered in the fields surrounding Howick Quarry. A barrow, containing a crouched inhumation, was found at a disused quarry site at a field boundary in the nearby village of Littlehoughton. Several stone cists were discovered on land now know as Low Stead Farm, Howick. One of the cists contained a pot which is now housed at Alnwick Castle Museum.
- 3.1.6 In 1972 a cremation cemetery was discovered at Howick Heugh Quarry prior to quarrying by George Jobey. The monument comprised a low mound 8m in diameter by 1m high, centrally placed within a low circular bank with shallow external groove measuring 0.75m wide by 0.4m high. The central mound was formed by a stone ring and contained evidence of possibly four cremations and one inhumation (SMR 5644). In one of the burial pots were the remains of one woman and a baby, and in another a shale pendant was found with the cremation remains (Jobey and Newman 1975).
- 3.1.7 An Early Bronze Age cist cemetery with 5 cists was discovered and completely excavated at the same location as the Mesolithic hut (Waddington *et al.* in press). These remains were fully excavated although other cists could survive in this area of the field.
- 3.1.8 An Iron Age hillfort, which sits above a bend in the Howick Burn, lies approximately 0.8km to the south east of Howick Quarry. This hillfort was surveyed in 2002 (Johnson and Waddington 2002), and dates to between 800BC

and 43AD. The site is visible today as low earthworks but can be seen most clearly using aerial photography. The settlement is circular in shape and is partially surrounded by a stone and earth rampart. Roman coins and fragments of iron sword blades were found at the settlement in the 19th century (Jobey 1965).

- 3.1.9 Crop marks of a rectilinear triple-ditched enclosure ('Cushatt Wood Enclosure') belonging to the Late Iron Age-Roman period that had an evaluation trench cut over it in 2000 (Young 2000) are known on Seahouses Farm east of Howick Hall.

3.2. Romano-British Period

- 3.2.1 Discoveries dating to the Roman-British period have been discovered in previously quarried areas at the Howick Heugh Quarry (Jobey and Newman 1975). Bosanquet, an earlier President of the Society of Antiquaries of Newcastle, recorded archaeological remains at the quarry during the late 1920's. He found part of a Roman fibula (a trumpet brooch) dating from the 2nd century AD and a large base sherd of native hand-made pottery of a type previously referred to as 'Votadinian Ware' (Richmond 1942).

3.3 Early Medieval Period

- 3.3.1. Evidence of early 1st millennium AD activity was discovered on the Whinstone ridge. A substantial pagan Anglo-Saxon cemetery that contained at least 15 inhumations and 1 cremation, many of which were accompanied by grave goods (Keeney 1939), were removed by quarrying during the late 1920's and early 1930's.

3.4 Medieval Period

- 3.4.1 Evidence of a deserted Medieval village survives near the village of Littlehoughton which lies approximately 1 kilometre south-west of the study area. Former houses lie as earthworks centred around NU 232164. Broad and narrow ridge-and-furrow earthworks with a possible hollow way (SMR 5656) can be found behind Littlehoughton Hall which is Grade II listed. The Hall was built as a defensive tower house in the Later Medieval period, and the main section of the house was added in 1686. The house's adjoining wings were added in the 17th and 18th century. Documentary evidence suggests that a medieval tower on this site was demolished in 1818 (Dodds 1999).

3.5 Post-Medieval Period

- 3.5.1. Howick is an old parish, with its first priest recorded in 1158, but the original church is thought to predate him. The church was replaced by a curious Ionic temple in the mid-eighteenth century after a fire, and this in turn, after another fire, was converted into the present building in the 1840's (<http://www.howickhallgardens.org.uk/> 2007).
- 3.5.2. The location for the chapel and its subsequent redevelopments are within the grounds of Howick Hall (Fig. 3) which has been owned by the Grey family since 1319. The Hall which survives today was built in 1782 by William Newton on the site of Howick Tower, a defensive tower house built before 1415, when it was

the property of Emeric Hering. There are no visible remains of this tower (Salter 1997). Newton also built a stable complex and courtyard at the east end of the hall.



Fig. 3 Artist impression of Howick Hall,
from Morris's 'County Seats' 1880

- 3.5.3. In the late 18th Century two additions were made to the Howick Hall estate, the head gardener's house and an ice house which lies near the main entrance to the hall. The icehouse was altered in the 20th century to convert it into an air raid shelter, which lies almost entirely underground. In 1809 Grey arranged for the moving of the front drive and house entrance to the north side of the Hall, which enabled the construction of a terrace by James Wyatt. The west wing, which was part of the original build by Newton in 1782, was originally used as the kitchen and service wing, but was converted into a house in the twentieth century. Howick Grange is a country villa built in the late 18th or early 19th century, which was enlarged in the early 20th century and is Grade II Listed (NCCCT SMR, Pevsner and Richmond 2002).
- 3.5.4. Little is known about the origin of the gardens at Howick but it is thought that the original plans were laid down in the eighteenth century. During the early 1800's the majority of old hardwood trees within Howick Gardens were planted by the then Prime Minister, Charles Grey, 2nd Earl Grey. This was during the Napoleonic War, when it was considered patriotic for landowners to plant timber to supplement the navy. The beech trees around the house and along the walk, as well as the oaks along the back drive date from this era (NCCCT SMR).
- 3.5.5. The walled section of the garden, to the north side of the Hall, contained many flower borders, vegetable plots, and an orchard. Some of these plants were trained against the north wall as it contained hot air ducts, fed by fires lit in the early spring, enabling the plants to survive harsh frost. The planting in this section was destroyed during the Second World War and the land used for crops

to aid food production. The present gardens (SMR 5654) are primarily the work of Charles, 5th Earl Grey, his wife Mabel, and their daughter Lady Mary Howick from 1920. They established and maintained an informal and natural style of gardening first advocated by William Robinson in the late nineteenth century, which completely replaced the more formal Victorian planting of their ancestors (<http://www.howickhallgardens.org.uk/> 2007).

- 3.5.6. The post-war years saw a decline in the upkeep and maintenance of the gardens as taxation varied from 83% to 98%, meaning that the scale of the gardens had to be reduced as did the number of people who maintained them. In 1979, the gardens were gifted to a charitable trust, Howick Trustees Ltd, which reversed the process of decline and many of the former areas of garden have been restored.
- 3.5.7. Howick Hall and its surrounding gardens lie within an Area of Outstanding Natural Beauty which ensures their safety as important national resources (www.magic.gov.uk). The gardens are Grade II Registered.
- 3.5.8. Within the area of Howick Quarry itself, the limestone outcrops were the focus for Post-Medieval quarrying and may have provided either limited, poor-quality building stone, or lime for mortar.

4. RESULTS

4.1. Present site condition

- 4.1.1. The proposed development site is predominantly comprised of woodland (approximately 9ha) with a small area of pasture land to the south and a small area of arable land to the north. The area of development also covers a small area of the former Littlemill Quarry site. The former quarry site is still visible with a layer of water at its base. The woodland has a relatively clear floor but the areas separating the woodland from the pasture is densely overgrown. To the north, the boundaries of the study area intersect the grounds of a derelict house which lies just outside the area of development. These grounds are heavily overgrown.



Fig. 4 Disused Littlemill Quarry sit at the north west of the site

4.2. Sites and Monuments Record (SMR)

SMR No.	NGR	Description	Date	Status
5634	NU 2364 1688	Pagan Anglian cemetery	Anglo-Saxon	Destroyed
5644	NU 237 171	Enclosed cremation cemetery	Early Bronze Age	Destroyed
5644	NU 238 168	Bronze Age barrow	Early Bronze Age	Destroyed
5654	NU 248 171	Gardens and wooded pleasure grounds of Howick Hall	Late Georgian	AONB Listed Building Grade II Registered Garden Grade II
5656	NU 232 164	Little Houghton deserted medieval village.	Medieval	Earthworks
14261	NU 2435 1676	A late 18th or early 19th century villa,	18 th -19 th C.	Listed Building Grade II

Table 1. Sites and Monuments Record

4.3. Investigation of historic mapping

- 4.3.1. The specification for the work presented here stipulated that relevant historic mapping should be consulted and incorporated into a map regression exercise in order to better understand the historical development of the site and its immediate surrounds.
- 4.3.2. There is good coverage of the study area, as many of the earliest maps cover Northumberland, however many are at too large a scale to show individual details. These maps are discussed below and those at a scale suitable for the map regression exercise are discussed in section 4.4.
- 4.3.3. The earliest map to show the study area is Speed's map of 1610 which shows Howick represented by a large building (Fig. 5).
- 4.3.4. Armstrong's map of 1769 is also at a scale too large to show detail of the study area. It does however show individual buildings such as Howick Hall and its Gardens, as well as the site of the future Howick Heugh Quarry which is labelled 'Heugh' (Fig. 6).
- 4.3.5. Fryer's map of 1820 shows the area in more detail than previous maps (Fig. 7). Howick Hall and the associated grounds are clearly marked out and individual buildings can be seen in the surrounding areas. A building located to the north-west of the Howick estate labelled 'Field House' still exists as ruins today immediately outside the northern boundary for the proposed extension. The study area at the time of this map is illustrated as open fields immediately to the west of the Gardens and the area of the existing quarry is shown as a large hill.
- 4.3.6. Greenwood's map of 1828 shows the study area as part of the Howick Hall estate (Fig. 8). The area occupied by 'Field House' on Fryer's map of 1820 has seen major development and 'Pasture House', which still stands today as a residential

dwelling, has been constructed to the west. A trackway appears to skirt the south-western boundary of today's existing quarry.

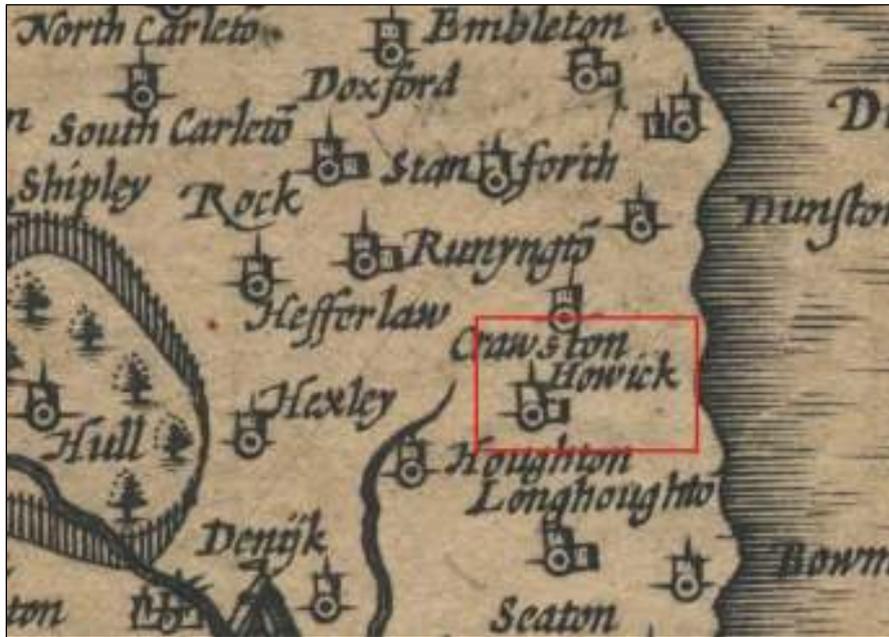


Fig. 5 Speeds map of 1610 showing Howick outlined in red

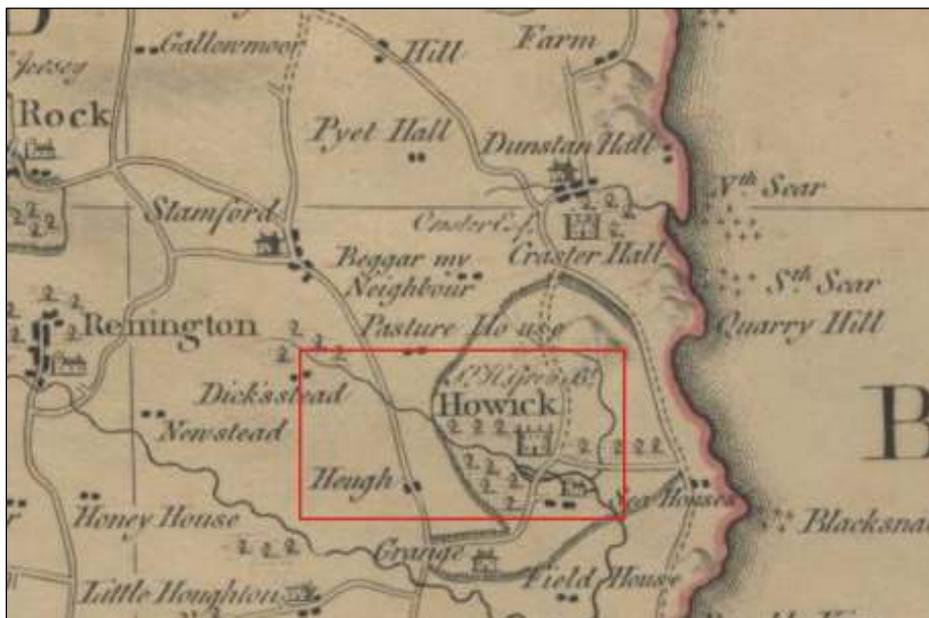


Fig. 6 Armstrong's map of 1769 showing Howick Hall and Heugh to the west

4.4. Map regression

- 4.4.1. The Ordnance Survey Maps are the earliest to show the study area in enough detail to be included in the map regression exercise. The first edition through to the most recent have been studied in order to show changes to the study area over time (Figures 9 to 11).
- 4.2.2 The first edition Ordnance Survey Map of 1867 (Fig. 9) shows that the study area now lies separate from Howick Hall estate. A strip of land runs from the Hall to the west where a gate lodge, which still stands today, is located on the eastern limit of today's quarry. The field boundaries in the surrounding area are much the same as they exist today. Pasture House Wood, which covers the area examined during the walkover survey, has been planted along with the 'Stonewall Plantation' to the east. The Stonewall plantation existed in the area of today's quarry. The Cocky Knowe plantation can also be seen to the south-east of the study area. A quarry named 'Littlemill Quarries' can be seen to the west of the study area and the small trackway shown on Greenwood's map of 1828 is now a larger rail track running through Little Mill Station to the north. The amount of land held by Howick Hall estate has dramatically decreased and the Hall lies between 'Damses Wood' to the west and 'Greenses Wood' to the east which appear to be part of the estate. St Michael's Church lies to the south of the Hall, on the south bank of Howick Burn which runs through the estate and a large fish pond exists to the east of the estate.
- 4.2.3. The second edition Ordnance Survey Map of 1899 (Fig. 10) shows the first evidence of quarrying in the area. The north area of Cocky Knowe plantation is labelled as an 'old quarry' although there was no mention of this quarry on the first edition map of 1867. A small quarry is shown at the south end of the Pasture House Wood and appears to be active but a small 'old quarry' is shown to the north of the study area. This quarry is also absent from the first edition map of 1867. To the south-west of today's quarry, at Heugh Hill, a reservoir has been put in place and the Littlemill Quarries have expanded in size since the previous survey of 1867. There appear to have been no changes to Howick Hall apart from the construction of a cricket ground to the north-east of the estate.
- 4.2.4. The third edition Ordnance Survey Map of 1926 (Fig. 11) shows that the small quarry located at Heugh Hill to the south of the study area is now named 'Howick Quarry'. Littlemill Quarries to the west of the study area have expanded in size and the small quarry to the south of Pasture House Wood still appears to be in use.
- 4.2.5 The fourth edition Ordnance Survey Map of 1937 was unavailable as a hard copy but digital copies can be viewed at the Durham Miner website (<http://gis.durham.gov.uk>). The third edition of 1926 is identical to the fourth edition and it is likely that the same survey was used due to the interruption of World War Two.
- 4.2.6 The revised edition Ordnance Survey Map of 1953 (Durham Miner 2007) shows that the Littlemill Quarries are no longer in use. Howick Quarry has expanded and the site of the Anglo-Saxon burials is marked as being discovered between 1928 and 1930. There appear to have been no changes to Howick Hall.

- 4.2.7. There are no significant changes to the study area until the revised edition Ordnance Survey Map of 1980 (Durham Miner 2007). By this date Howick Quarry has grown considerably, to stretch to the east of Pasture House Wood. The layout of the works buildings can be seen and the small quarry to the south of Pasture House Wood is no longer in use.
- 4.2.8. The revised edition Ordnance Survey of 2004 shows the study area as it exists today (Fig. 2).

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Title:
 Figure 9: First edition
 Ordnance Survey
 Map of 1867

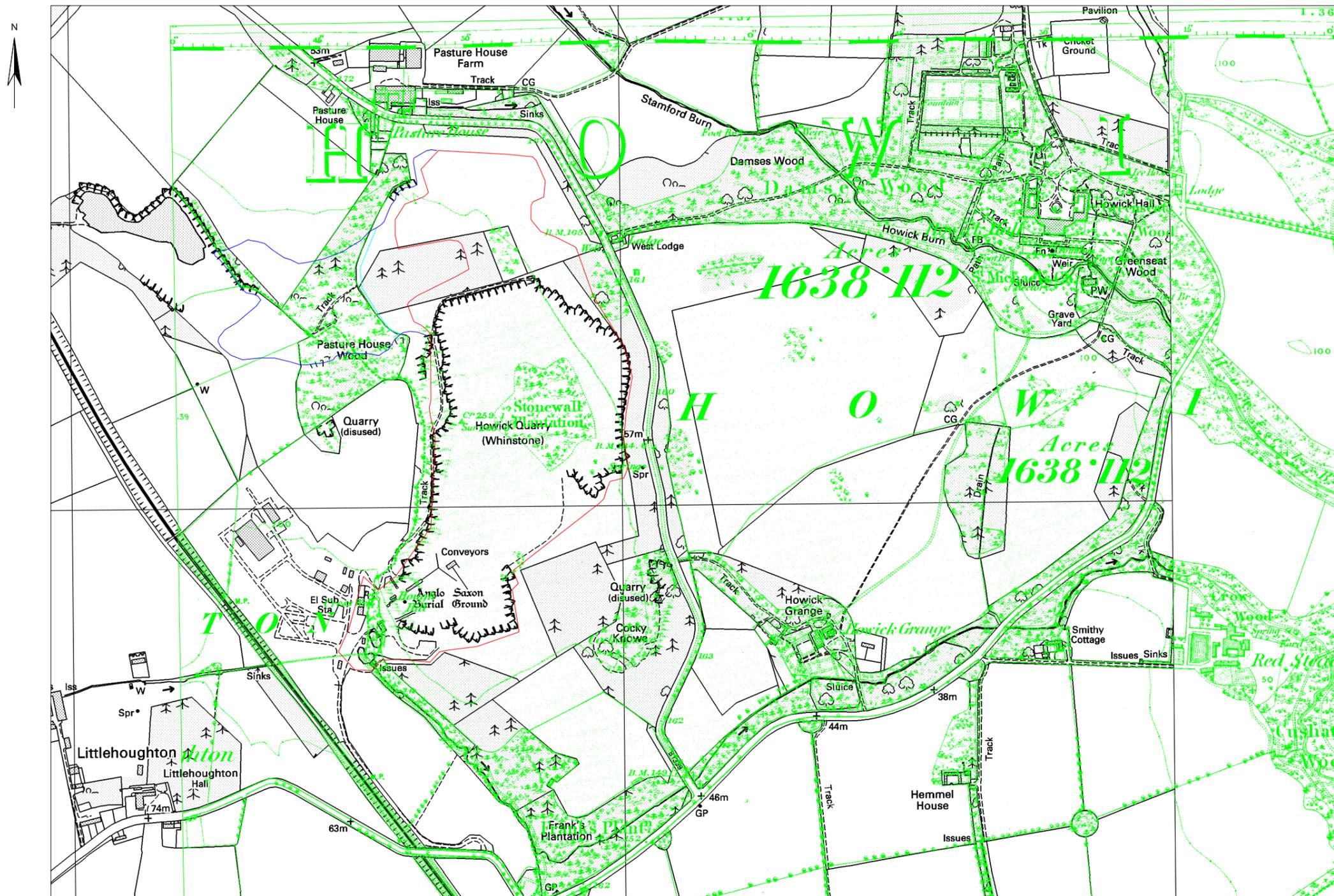
Key:

-  Modern OS Map (2004)
-  1st edition OS Map 1867
-  Present Quarry
-  Proposed Northwestern Plantation Extension boundary
-  Proposed Western Extension (Little Mill Link) boundary

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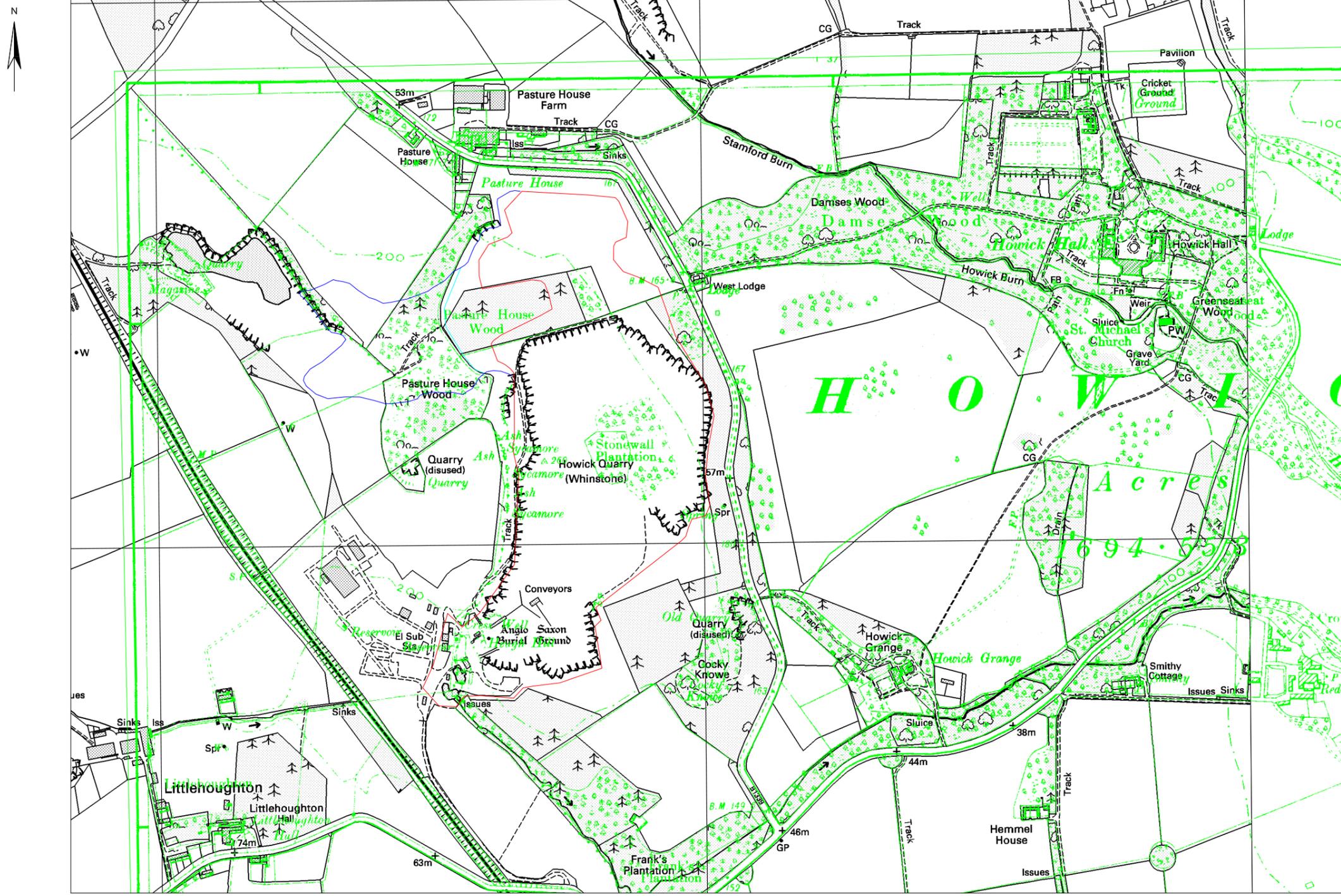
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Title:
 Figure 10: Second edition
 Ordnance Survey
 Map of 1899

- Key:
-  Modern OS Map (2004)
 -  2nd edition OS Map 1899
 -  Present Quarry
 -  Proposed Northwestern Plantation Extension boundary
 -  Proposed Western Extension (Little Mill Link) boundary

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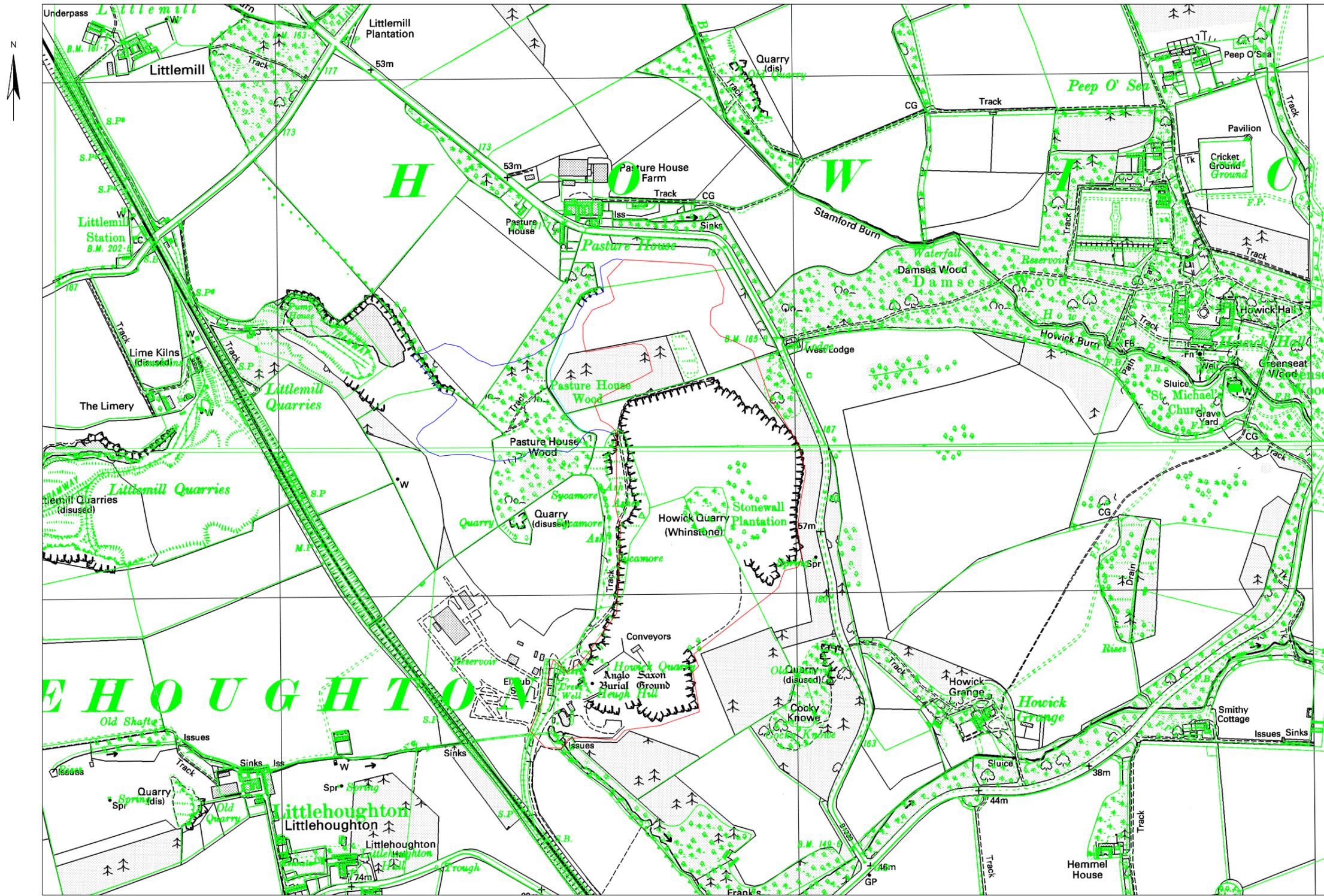
Title:
 Figure 11: Third edition
 Ordnance Survey
 Map of 1926

Key:

-  Modern OS Map (2004)
-  3rd edition OS Map 1926
-  Present Quarry
-  Proposed Northwestern Plantation Extension boundary
-  Proposed Western Extension (Little Mill Link) boundary

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4.5. Investigation of aerial photography

- 4.5.1. No aerial photographs showing the area of investigation were held by the NMR
- 4.5.2. No aerial photographs showing the area of investigation were held by the Museum of Antiquities, Newcastle University.
- 4.5.3. A possible faint crop mark appears to abut the proposed western extension at NU 234176. This potential crop-mark appears on a recent photograph purchased by Northumberland County Council (Fig. 12) and could potentially suggest some kind of curvilinear feature. However, upon further review neither the Northumberland County Council Conservation Team nor ARS Ltd archaeologists were convinced this possible crop mark required further investigation.



Fig. 12 Field where possible cropmark exists (NU 234176).
Northumberland Map Service. Licence No. LA 07 67 75

5. CONCLUSION

- 5.1. The assessment has shown no evidence for archaeological features surviving in the area of the proposed quarry extension. No documentary, pictorial or cartographic sources revealed any evidence for archaeological features, although important remains have been discovered on other areas of the site excavated in advance of previous quarrying. These previous finds include sites of local, regional, national and international importance ranging from a Mesolithic house, excavated less than 2km away on the coast, and Mesolithic 'midden' deposits within the quarry, through to Bronze Age burials within the quarry and the

surrounding landscape, to Anglo-Saxon burials at the south end of the presently quarried area. The site also lies adjacent to the Grade II listed Howick Hall and its gardens, which lie within an Area of Outstanding Natural Beauty. The possibility therefore exists that remains of archaeological significance may exist within the area of the proposed extension to Howick Quarry.

- 5.2. Although the desk-based assessment did not reveal specific evidence for archaeological remains in the area of the quarry extension, the wealth of archaeological remains previously found in other parts of the quarry and the surrounding area suggests there is still potential to encounter archaeological remains within the area of the quarry extension. As the underlying geology comprises volcanic rock (dolerite) the prospects for magnetometry to provide instructive results is limited, due to the magnetic properties of volcanic rock. Consequently, the most appropriate evaluation strategy would be to undertake systematic evaluation trenching in those areas that lie outside the plantation. On the basis of what has been found elsewhere on the site the kind of archaeology that could be anticipated could include burial monuments ranging from the Neolithic to the Anglo-Saxon periods, midden deposits, evidence for early quarries and possibly prehistoric settlement. Given the base rich nature of the soil cover which is derived from the underlying parent material (dolerite) the pervading chemical properties of the soil and sub-stratum are such that any organic archaeological material, such as bone, leather or wood, is likely to survive.
- 5.3. On the basis of the assessment it is suggested that trench locations as shown in Figure 13 are utilised to ascertain whether any archaeological remains survive within the proposed development area.

6. PUBLICITY, CONFIDENTIALITY AND COPYRIGHT

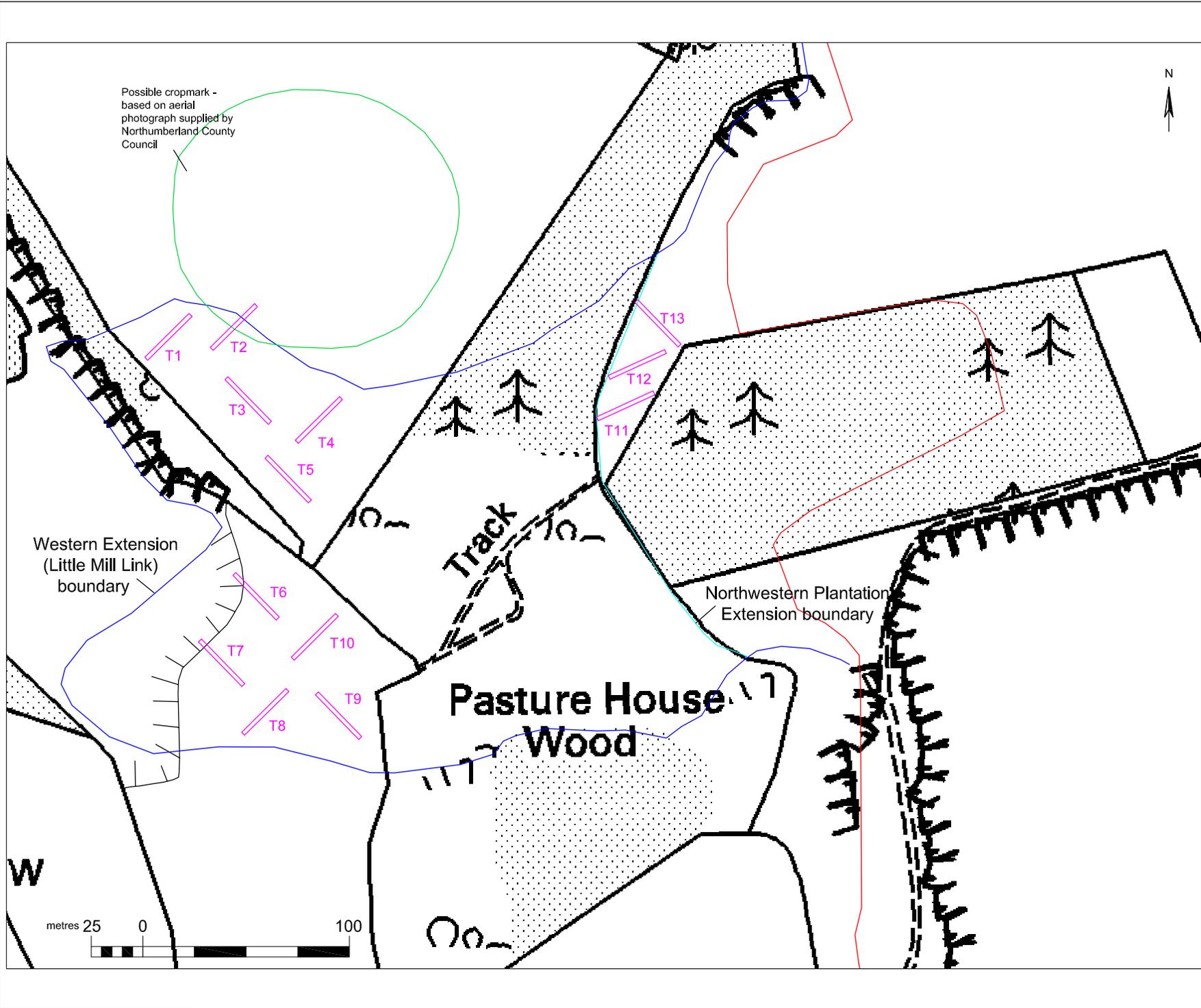
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7. STATEMENT OF INDEMNITY

- 7.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

8. ACKNOWLEDGEMENTS

- 11.1. Archaeological Research Services Ltd would like to thank all those involved in this project, in particular Tarmac Northern Ltd and Karen Derham at Northumberland County Council.



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Figure 13: Trench Locations

Title:

Key:

-  Proposed Northwestern Plantation Extension boundary
-  Proposed Western Extension (Little Mill Link) boundary
-  Existing quarry
-  Trench Location

Notes:

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