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**NORTHUMBERLAND ESTATES**

**HAZELDENE QUARRY, ALNWICK  
NORTHUMBERLAND**

**ARCHAEOLOGICAL DESK BASED ASSESSMENT**

**JULY 2017**

*your earth our world*



**Wardell Armstrong**

Sir Henry Doulton House, Forge Lane, Etruria, Stoke-on-Trent, ST1 5BD, United Kingdom  
Telephone: +44 (0)845 111 7777 Facsimile: +44 (0)845 111 8888 www.wardell-armstrong.com



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**NORTHUMBERLAND ESTATES**

**HAZELDENE QUARRY, ALNWICK, NORTHUMBERLAND**

**ARCHAEOLOGICAL AND BUILT HERITAGE DESK BASED ASSESSMENT**

**PREPARED BY:**

Callum Allsop Archaeological Supervisor

**CHECKED BY:**

Dave Hodgkinson Technical Director

**APPROVED BY:**

Dave Hodgkinson Technical Director

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## CONTENTS

1	INTRODUCTION .....	1
2	BASELINE INFORMATION.....	4
3	IDENTIFICATION AND ASSESSMENT OF IMPACTS .....	9
4	MITIGATION.....	11
5	CONCLUSIONS.....	12

## APPENDICES

- Appendix 1 Heritage Assets
- Appendix 2 Plates
- Appendix 3 Impact Assessment Methodology

## FIGURES

- Figure 1: Locations of HER sites
- Figure 2: South Charlton 1<sup>st</sup> Edition Tithe (1842)
- Figure 3: 2<sup>nd</sup> Edition OS 6" (1899)
- Figure 4: OS 1:2500 (1954)
- Figure 5: Proposed Extension Area and Amendments to Working Method
- Figure 6: Location of Mounds A-F

## 1 INTRODUCTION

1.1 This report sets out the archaeological and historical background of a Site at Hazeldene Quarry, Alnwick, Northumberland. Proposals entail an extension and other amendments to the existing quarry, comprising lateral extensions to the east and north of the current planning boundary (Figure 5).

1.2 This report provides an assessment of the significance of any known or potential heritage assets within the Site. Potential impacts through proposed development to identified and potential heritage assets are established and their significance assessed. Appropriate mitigation measures for reducing/ offsetting these potential impacts are proposed where relevant.

1.3 The assessment has been undertaken in respect to potential direct impacts to heritage assets and was undertaken following the Standards and Guidance of the Chartered Institute for Archaeologists (CIfA 2014) and in accordance with terminology expressed within the National Planning Policy Framework. This assessment does not assess any potential indirect impacts to the setting of heritage assets.

1.4 In order to inform this assessment baseline data was obtained from the following:

- Northumberland Historic Environment Record (HER) consulted in 22/06/2017
- Northumberland Record Office;
- GIS datasets (Historic England 2016):
  - Scheduled Monuments
  - Listed Buildings
  - Registered Parks and Gardens
  - Registered Battlefields
- The National Heritage List for England (Historic England website).

1.5 In addition, a walkover survey of the Site was undertaken in 26/06/2017.

### Definitions of Terms

1.6 A heritage asset is defined in the National Planning Policy Framework (NPPF) as '*a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions because of its heritage interest*' (NPPF page:52).

1.7 The significance of a heritage asset is defined within the National Planning Policy Framework (NPPF) as '*the value of a heritage asset to this and future generations*

*because of its heritage interest. This interest may be archaeological, architectural, artistic or historic' (DCLG 2012:56).*

- 1.8 Where heritage assets are to be affected by development, *'local authorities should require the applicant to describe the significance of the assets affected, including the contribution made to the significance of the asset by its setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance'* (NPPF para: 128).

### **National Heritage Legislation**

- 1.9 Designated heritage assets protected by statutory legislation comprise Scheduled Monuments, Protected Wrecks, Listed Buildings and Conservation Areas; nationally significant archaeological sites, monuments and structures are protected under the Ancient Monuments and Archaeological Areas Act (1979).
- 1.10 Listed buildings and Conservation Areas are protected under the Planning (Listed Building and Conservation Areas) Act (1990). In relation to development proposals, the act states that *'in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the secretary of state shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses'* (section 66).
- 1.11 Non-statutory designated heritage assets, comprising Registered Parks and Gardens and Registered Battlefields, are protected under national and local planning policy only. This is also the case for the remainder of the archaeological resource; entries onto a historic environment record or sites and monument record as well as previously unknown features which may be recorded during the course of data collection in respect to a given development proposal.
- 1.12 In determining applications, NPPF stipulates that *'great weight'* should be given to the assets conservation and that *'substantial harm to or loss of a grade II Listed Building, Park or Garden should be exceptional'* whilst *'substantial harm to or loss of assets of highest significance, notably Scheduled Monuments, protected wreck sites, battlefields, Grade I and II\* listed Buildings and Grade I and II\* Parks and Gardens, and World Heritage Sites, should be wholly exceptional'* (NPPF para:132).

1.13 Developments where substantial harm to or total loss of significance of a heritage asset should be assessed against specific tests and should deliver substantial public benefits which outweigh any loss or harm (NPPF para:133). Less than substantial harm to a designated asset would require public benefits including the securement of an optimum viable use (NPPF para:134). Impacts to the significance of non-designated assets will require a balanced judgement based on the level of significance and the scale of harm (NPPF para:135), although non-designated assets which are of equivalent significance to designated assets will be considered as such (NPPF para:139).

#### **Local Policy**

1.14 Northumberland County Council has produced an online consolidated planning policy framework that includes a number of planning policy documents put in place by the former County Council and District/ Borough Councils. This site resides within the Alnwick District Local Development Framework (ADLDF 2007) whose policy on protecting the built and historic environment (Policy S15) states that:

*“The district council will conserve and enhance a strong sense of place by conserving the district’s built and historic environment, in particular its listed buildings, scheduled ancient monuments, conservation areas and the distinctive characters of Alnwick, Amble, Rothbury and the villages.*

*All development involving built and historic assets or their settings will be required to preserve, and where appropriate, enhance the asset for the future.”*

## 2 BASELINE INFORMATION

### Geology and Topography of Site

- 2.1 The site slopes from west to east at a height of 138m OD and rises sharply to the summit of the hill at 158m OD. The site is located 400m to the northeast of Washing Pool Burn and 400m to the southeast of Red Burn. Local geology comprises a sedimentary bedrock designated as Fell Sandstone Formation that was formed 335 to 352 million years ago in the Carboniferous Period with no recorded superficial deposit (BGS 2017).

### Archaeological Background

- 2.2 The Northumberland Historic Environment Record was consulted for entries within the search area (taken as a 200m area from the Site boundary, Figure 1). Besides identifying heritage assets that may be directly or indirectly affected by the proposed development this search boundary was expected to provide sufficient data to represent the archaeological character of the area. Information on designated heritage assets was complimented by GIS information downloaded from Historic England (Historic England 2016).

### Designated Heritage Assets

- 2.3 All designated heritage assets within a 200m search area are shown on Figure 1 and detailed within Appendix 1.
- 2.4 There are no designated heritage assets located within the boundary of the Site

### Known Non-Designated Heritage Assets

#### *Non-Designated HER Entries*

- 2.5 All non-designated heritage assets within a 200m search area are shown on Figure 1 and detailed within Appendix 1.
- 2.6 The Northumberland HER records a total of two non-designated heritage assets within the site boundary. These comprise a Bronze Age cairn and cist located 140m due south of site (HER ID: 5038), and an enclosure of unknown provenance situated 50m to the south east of the development area (HER ID: 5039).

### Previous Archaeological Work

- 2.7 No archaeological investigations have been conducted within the site area. The cairn and cist (HER: 5038) 140m to the southeast of the site area has been subject to an

archaeological excavation in 1916 that recorded a primary cist burial with no burial goods and nine secondary burials that comprised two cists, seven food vessels, one urn, two incense cups and two cremation burials.

## **General Historical Background**

### *Prehistoric*

- 2.8 The HER does not record any sites dating prior to the Bronze Age period (2,500 to 800 BC) both within the development area and in the 200m study area. However, the nearby location of Red Burn would have potentially provided a routeway for migratory peoples in the Mesolithic and early Neolithic periods (10,000 to 3,500 BC). The evidence for Bronze Age activity in the study area derives from burials located 140m to the south of the development (HER ID: 5038). The proximity of these burials may also be an indicator for Bronze Age occupation within the immediate area. There are no sites dating to the Iron Age period (800 BC to 43 AD) recorded within development area and in the 200m study area.

### *Romano-British (c.43 to 410 AD)*

- 2.9 The HER does not record any sites dating to this period both within the development area and in the 200m study area.

### *Early Medieval (c.410 to 1066AD)*

- 2.10 The HER does not record any sites dating to this period both within the development area and in the 200m study area.

### *Medieval (c.1066 to 1540AD)*

- 2.11 The HER does not record any sites dating to this period both within the development area and in the 200m study area.

### *Post Medieval (c.1540AD to present)*

- 2.12 The HER records the site of an earthwork enclosure, or shieling, and associated currick with no provisional date 50m to the southeast of the development area (HER ID: 5039). While there is no date given, the location of the enclosure matches the alignment of a new field boundary depicted on the 2<sup>nd</sup> edition OS map (Figure 3). It is therefore possible to give this feature a provisional 19<sup>th</sup> century date relating to the field enclosure system implemented within the surrounding landscape.



## Hedgerows

- 2.13 In assigning a hedgerow as historic, paragraph 5 (a) of the Hedgerow Regulations 1997 reads “The hedgerow is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure Acts”. The ‘relevant date’ is 1997 (the date of the Regulations). The earliest Inclosure Act mentioned in the Short Titles Act 1896 was made in 1845. Therefore the phrase ‘pre-dating the Inclosure Acts’ should be taken to mean before 1845 (Defra 2002).
- 2.14 The tithe map for South Charlton dates to 1842 (Figure 2) depict boundaries which, if extant today, would be classified as historic. The presence/absence of historic hedgerows is assessed below in the site visit section.

## Cartographic Evidence

- 2.15 The Tithe map for South Charlton of 1842 (Figure 2) depicts the development area as an open agricultural area with no discernible features within the landscape. This continued agricultural use is also depicted on the Ordnance Survey 2<sup>nd</sup> Edition published in 1899 (Figure 3) with the addition of several field enclosures dividing the landscape around the development area. It also includes the elevation of Crag Hill where the development area is situated. The later 1:25,000 Ordnance Survey map dated to 1954 shows changes to the field boundaries, with some previously enclosed fields becoming open again, and the establishment of the current stone quarry at Crag Hill. No known designated or non-designated heritage assets are noted on the cartographic record.

## Site Visit

- 2.16 A walkover survey of the Site was undertaken on 26/06/2017.
- 2.17 The Site was inspected to:
- establish the presence of above ground archaeology, whether previously recorded or not;
  - assess and validate data collected as part of the desk-based assessment; and to
  - assess the topography of the Site.
- 2.18 Within the current boundary of the quarry, six spoil mounds were inspected (Mounds A-F) to identify the presence any worked stone (Figure 6). Descriptions of the mounds are as follows:

- Mound A – A large platform of small rubble (averaging 30/40cm x 20cm x 20cm) with no visible worked stone (Plate 1);
- Mound B – A discrete mound comprising small weathered rubble, 4-5m in height, with no visible worked stone (Plate 2);
- Mound C – A platform of small quarried upcast weathered rubble that extends around the north run of downslope and bound with heather and grass. No worked stone was visible (Plate 3);
- Mound D – Located on the north side of quarry, this comprises poorly sorted, massive, angular, weathered boulders measuring on average 1m<sup>3</sup> (Plate 4). These were also notable for the presence of square-shaped peck holes in faces of stones (Plate 5);
- Mound E – A discrete mound on the quarry edge that comprises stone similar to Mound C and underlies Mound D. No worked stone was visible (Plate 6);
- Mound F – A discrete mound of large boulders in a variety of sizes. These were notable for the presence of square-shaped peck holes in faces of stones (Plate 7).

2.19 The area surrounding the existing stone quarry is currently in use for pasture agriculture comprising a post-and-wire field boundary system. Remnants of prior earthwork field boundaries and associated rigg and furrow agricultural system (Plate 8) are extant across the landscape running east to west, and reflect the layout of the field system illustrated on the 2<sup>nd</sup> Edition Ordnance Survey map (Figure 3). A modern stone and concrete rectangular Machine Base with protruding iron rebars, measuring 3m long, 2.5m wide and 0.75m high, was identified 200m to the southeast of the development area (Plate 9), and most likely relates to quarrying activity during the 20<sup>th</sup> century. An outcrop of bedrock due north of the current quarry boundary was inspected but did not show any archaeologically significant features. The quarry is also in sight of the Middlemoor Wind Farm situated due north.

2.20 Inspection of HER non-designated sites in the area (HER ID: 5308 and HER ID:5309) confirmed their locations outwith the proposed development area. The Cairn and Cist (HER: 5038), approximately 140m due south of the existing quarry boundary, is as described in the HER entry with the coverstone still visible (Plate 10) and is evidence for Bronze Age activity within the landscape. The Enclosure and associated Currick

(HER: 5039), approximately 50m due southeast of the existing quarry boundary, is as described in the HER entry with a modern cart track cutting through it (Plate 11).

2.21 No additional features, earthworks or finds were observed.

### 3 IDENTIFICATION AND ASSESSMENT OF IMPACTS

3.1 Proposed development within the boundary of the Site has the potential to cause direct impacts to heritage assets. Direct impacts would be caused by ground disturbance.

3.2 The heritage interests of potential receptors are described below. Interests are described in accordance with NPPF terminology; archaeological, architectural, historic or artistic. The importance of given interests will also be cited in accordance with the methodology presented in Appendix 4. Appendix 4 also describes the methodology for assessing the magnitude of impact and the overall significance of impact.

#### Construction Impacts

3.3 Ground disturbance would have the potential to disturb known and potential heritage assets within the boundary of the Site. The significance of this impact is presented below.

**Table 1: Potential Construction Impacts**

Physical impact to heritage assets			
Receptor	Interest and Significance of Interest	Magnitude of Impact	Significance of Impact
<b>Cairn and Cist</b> (HER ID: 5038)	Medium interest – Low significance	Minor	Slight
<b>Enclosure</b> (HER ID: 5039)	Low interest – Low significance	Minor	Slight
<b>Earthwork Boundaries and Rigg and Furrow</b>	Low interest – Low significance	Moderate	Slight
<b>Mounds A -F</b>	Negligible interest – No significance	Moderate	Neutral
<b>Machine Base</b>	Negligible interest – No significance	Minor	Neutral

#### Summary of Impacts

3.4 No known cultural heritage sites are located within the proposed development area. Mounds A-F, and the identified peck holes in the stone at Mound F, are associated with modern quarrying activity. Phasing of this activity is visible in the varying sizes of quarried upcast, which is indicative of different quarrying methodologies (i.e. a change from pecking to blasting). As these features constitute negligible archaeological

interest and the proposed development will have a moderate impact upon Mounds C, D, E and F, the significance of the impact upon these mounds is neutral.

- 3.5 While the modern cart track that cuts through the Enclosure (HER ID: 5039) will be destroyed by the quarry extension, the site of the Enclosure and associated Curriek will not be directly affected by the proposed development. As this site is of low archaeological interest then the proposed development will constitute a slight impact.
- 3.6 Part of the 19<sup>th</sup> century agricultural field system due east of the quarry will be directly affected by the quarry extension. The age and ubiquitous nature of this feature makes it of low archaeological significance, and its partial destruction by the proposed development is of moderate impact. Therefore, the impact from the development is slight.
- 3.7 The potential for unknown sub-surface archaeology within the proposed development site is deemed to be low due to the character and intensity of known archaeology in the surrounding area. If any subsurface archaeological remains were present these are likely to have been impacted by previous ground disturbance during earlier quarrying activity.

#### **4 MITIGATION**

- 4.1 Mounds C, D, E and F will be directly impacted by the development; therefore, no mitigation will be necessary for these as the significance of impact is neutral.
- 4.2 Mitigation is required at the southern and eastern areas of the extension of the quarry due to the proposed development's proximity of the Enclosure (HER ID: 5039) and the destruction of part of the earthwork boundaries and associated rigg and furrow field system. This will take the form of a watching brief to monitor for any sub-surface archaeology that may relate to these non-designated assets.

## 5 CONCLUSIONS

- 5.1 Baseline information was gathered from the Northumberland Historic Environment Record, Historic England data sets, Northumberland record office and a Site walkover survey. Two known non-designated heritage assets within the study area, and no cultural heritage assets located within the proposed development site, were identified from this investigation. The two non-designated sites comprise Bronze Age burial practices and Post-medieval agricultural systems. Evidence of stone quarrying activity throughout the 20<sup>th</sup> century is evident from the presence of several spoil mounds (Mounds A-F) within the development area and a machine base outwith the development.
- 5.2 Several of the existing Mounds (Mounds C-F) will be directly affected by the development but are identified to be of negligible archaeological interest. There is no direct impact on the Cairn (HER ID: 5038) and the Enclosure (HER ID: 5039) from the proposed development. Due to the proximity of the additional extraction to the Enclosure and the partial loss of existing 19<sup>th</sup> century earthwork boundaries and associated field system, further mitigation in the form of a survey and watching brief at the southern end of the development will be required.

## BIBLIOGRAPHY

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- British Geology Service (2017) *Geology of Britain viewer*: Available <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
- CIfA (2014) *Standards and Guidance for Historic Environment Desk-Based Assessment*, Reading: Chartered Institute for Archaeologists
- DCLG. (2012) *National planning policy framework*
- DCLG. (2014) *Planning Practice Guidance*
- Defra. (2002) *Amendment to the Hedgerow Regulations 1997: A guide to the law and good practice – amendment 2002*
- Highways Agency (2007) *Design Manual for Roads and Bridges, Volume 11, Section 3, Part 2*
- Historic England. (2016) *National Heritage List for England downloadable GIS data*

### *Cartographic Sources*

- South Charlton Tithe 1st Edition (1842), Plot 38
- Ordnance Survey 2<sup>nd</sup> Edition (1899), Northumberland XXVI.SE
- Ordnance Survey 1:25000 (1954), Sheet NU12



## APPENDICES

**APPENDIX 1**  
**Heritage Assets**

## Heritage Assets

**Table 1: Non- Designated Heritage Assets**

Reference	Description	Distance from Site
HER: 5038	<b>Earthwork (Cairn)</b> - Cairn diameter 35ft at north side of sand pit in township of South Charlton; two urns were found in 1908 and 1916 in the north face of the sand pit. The cairn was excavated in August and September when the primary cist burial with no grave goods and nine secondary burials were found. The secondary's consisted of two cists, seven food vessels, one urn, two incense cups and two cremation burials (this list includes the two urns found in 1908 and 1916). – Bronze Age	140m
HER: 5039	<b>Earthwork (Enclosure)</b> - The fragmentary remains of a small enclosure situated on the summit of Crag Hill found during field investigation. It is near circular 23m in diameter with the walling of the enclosure 1.5m wide and 0.3m high. There is no trace of internal dwellings. A heap of stones on the west side is the remains of a currick. The enclosure wall is made of stones and earth and is cut in two by a modern cart track. – Possibly Post-Medieval	50m

## **APPENDIX 2**

### **Plates**



**Plate 1 - Mound A, looking northwest**



**Plate 2 - Mound B, looking east**





**Plate 3 - Mound C, looking south**



**Plate 4 - Mound D, looking south**



**Plate 5 - Mound D showing peck-holes, looking north**





**Plate 6 - Mound E, looking east**



**Plate 7 - Mound F showing peck-holes, looking southwest**





**Plate 8 - Remains of Earthwork Boundary and associated Rigg and Furrow, looking east**



**Plate 9 - Remains of modern Machine Base, looking southeast**



**Plate 10 - Remains of Cist, looking south**



**Plate 11 - Remains of Enclosure and Currick, looking east**

**APPENDIX 3**  
**Impact Assessment Methodology**

In ascribing levels of **importance** to heritage assets, the Design Manual for Roads and Bridges, Volume II, Section 3, Part 2 (Highways Agency 2007) has been used, see Table 1 below.

The **magnitude of impact** is measured from the condition that would prevail in a 'do nothing' scenario and it is assessed without regard to the importance of the receptor (Highways Agency 2007).

Heritage assets are susceptible to numerous forms of development during the construction process and as a consequence of the operational life of the proposed development. These can be either direct (physical) impacts or indirect (non-physical) impacts.

The worst magnitude of impact would be complete physical removal of the heritage asset. In some instances it is possible to discuss percentage loss when establishing the magnitude of impact. However complex receptors will require a much more sophisticated approach (Highways Agency 2007).

In ascribing the magnitude of impact, guidance presented in the Design Manual for Roads and Bridges, Volume II, Section 3, Part 2 (Highways Agency 2007) has been used, see Table 2 below.

The **significance of impact** is devised by cross referencing the importance of the receptor with the magnitude of the impact, see Table 3. The impacts which are in grey are considered significant impacts which would constitute substantial harm.

#### *References*

- Department for Communities and Local Government. (2012) *National planning policy framework*
- Department for Communities and Local Government. (2014) *Planning Practice Guidance*
- English Heritage. (2012 revision) *PP55 Planning for the Historic Environment: historic environment practice guide*
- Highways Agency. (2007) *Design Manual for Roads and Bridges, Volume 11, Section 3, Part 2*



Table 1: Establishing the importance of a heritage asset

Importance	Heritage Asset		
	Archaeological Remains (Archaeological Interest)	Historic Buildings (Architectural/Artistic Interest and/or Historic Interest)	Historic Landscapes (Historic Interest)
<b>Very High</b>	<ul style="list-style-type: none"> <li>WHS</li> <li>Other Sites of acknowledged international importance</li> <li>Sites that can contribute significantly to acknowledged international research objectives</li> </ul>	<ul style="list-style-type: none"> <li>WHS</li> <li>Other buildings of recognized international importance</li> </ul>	<ul style="list-style-type: none"> <li>WHS</li> <li>Historic landscapes of international value, whether designated or not</li> <li>Extremely well preserved historic landscapes with exceptional coherence, time depth, or other critical factor(s)</li> </ul>
<b>High</b>	<ul style="list-style-type: none"> <li>Scheduled Ancient Monuments</li> <li>Undesignated Sites of schedulable quality and importance</li> <li>Sites that can contribute significantly to acknowledged national research objectives</li> </ul>	<ul style="list-style-type: none"> <li>Scheduled Ancient Monuments with standing remains</li> <li>All Grade I and all Grade II* Listed Buildings (Scotland Category A)</li> <li>Conservation Areas containing very important buildings</li> <li>Undesignated structures of clear national importance</li> <li>Other listed buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in their listing grade</li> </ul>	<ul style="list-style-type: none"> <li>Designated historic landscapes of outstanding interest</li> <li>Undesignated landscapes of outstanding interest</li> <li>Undesignated landscapes of high quality and importance, and of demonstrable national value</li> <li>Well preserved historic landscapes, exhibiting considerable coherence, time depth or other critical factor(s)</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>Undesignated assets that contribute to regional research objectives</li> </ul>	<ul style="list-style-type: none"> <li>Grade II Listed Buildings (Scotland Category B)</li> <li>Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations</li> <li>Other listed buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in their listing grade</li> <li>Conservation Areas containing buildings that contribute significantly to its historic character</li> <li>Historic townscape or built up areas with important historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</li> </ul>	<ul style="list-style-type: none"> <li>Designated special historic landscapes</li> <li>Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional value</li> <li>Averagely well preserved historic landscapes with reasonable coherence, time depth or other critical factor(s)</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>undesignated assets of local importance</li> <li>Assets compromised by poor preservation and/or poor survival of contextual associations</li> <li>Assets of limited value, but with potential to contribute to local research objectives</li> </ul>	<ul style="list-style-type: none"> <li>Locally listed buildings (Scotland Category C)</li> <li>Historic (unlisted) buildings of modest quality in their fabric or historical association</li> <li>Historic townscape or built up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures)</li> </ul>	<ul style="list-style-type: none"> <li>Robust undesignated historic landscapes</li> <li>Historic landscapes with importance to local interest groups</li> <li>Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations</li> </ul>
<b>Negligible</b>	<ul style="list-style-type: none"> <li>Assets with very little or no surviving archaeological interest</li> </ul>	<ul style="list-style-type: none"> <li>Buildings of no architectural or historical note</li> </ul>	<ul style="list-style-type: none"> <li>Landscapes with little or no significant historic interest</li> </ul>

Table 2: Establishing the magnitude of impact

Magnitude of Impact	Heritage Asset		
	Archaeological Remains (Archaeological Interest)	Historic Buildings (Architectural/Artistic Interest and/or Historic Interest)	Historic Landscapes (Historic Interest)
Major	<ul style="list-style-type: none"> <li>Change to most or all key archaeological materials, such that the resource is totally altered</li> <li>Comprehensive changes to setting</li> </ul>	<ul style="list-style-type: none"> <li>Change to key historic building elements, such that the resource is totally altered</li> <li>Comprehensive changes to setting</li> </ul>	Major change to historic landscape character resulting from: <ul style="list-style-type: none"> <li>Changes to most key historic landscape elements, parcels or components</li> <li>Extreme visual effects</li> <li>Major change to noise or change to sound quality</li> <li>Major changes to use or access</li> </ul>
	OR* <ul style="list-style-type: none"> <li>Loss of resource and/or quality and integrity of source; severe damage to key characteristics, features or elements (adverse)</li> <li>Large scale of major improvement of resource quality; extensive restoration or enhancement of attribute quality (beneficial)</li> </ul>		
Moderate	<ul style="list-style-type: none"> <li>Changes to many key archaeological materials, such that the resource is clearly modified</li> <li>Considerable changes to setting that affect the character of the asset</li> </ul>	<ul style="list-style-type: none"> <li>Changes to many key historic building elements, such that the resource is significantly modified</li> <li>Changes to setting of an historic building such that it is significantly modified</li> </ul>	Moderate change to historic landscape character resulting from: <ul style="list-style-type: none"> <li>Changes to many key historic landscape elements, parcels or components</li> <li>Visual change to many key aspects of the historic landscape</li> <li>Noticeable differences in noise or sound quality</li> <li>Considerable changes to use or access</li> </ul>
	OR* <ul style="list-style-type: none"> <li>Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (adverse)</li> <li>Benefit to, or addition of, key characteristics, features or elements; improvement or attribute quality (beneficial)</li> </ul>		
Minor	<ul style="list-style-type: none"> <li>Changes to key archaeological materials, such that the asset is slightly altered</li> <li>Slight changes to setting</li> </ul>	<ul style="list-style-type: none"> <li>Change to key historic building elements, such that the asset is slightly different</li> <li>Changes to setting of an historic building such that it is noticeably changed</li> </ul>	Limited change to historic landscape character resulting from: <ul style="list-style-type: none"> <li>Changes to few key historic landscape elements, parcels or components</li> <li>Slight visual changes to few key aspects of the historic landscape</li> <li>Limited changes to noise levels or sound quality</li> <li>Slight changes to use or access</li> </ul>
	OR* <ul style="list-style-type: none"> <li>Some measurable change in attributes, qualities or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (adverse)</li> <li>Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (beneficial)</li> </ul>		
Negligible	<ul style="list-style-type: none"> <li>Very minor changes to archaeological materials</li> </ul>	<ul style="list-style-type: none"> <li>Slight changes to historic buildings elements or setting that hardly affect it</li> </ul>	Very small change to historic landscape character resulting from: <ul style="list-style-type: none"> <li>Very minor changes to key historic landscape elements, parcels or components</li> <li>Virtually unchanged visual effects</li> <li>Very slight changes to noise levels or sound quality</li> <li>Very slight changes to use or access</li> </ul>
	OR* <ul style="list-style-type: none"> <li>Very minor loss or detrimental alteration to one or more characteristics, features or elements (adverse)</li> <li>Very minor benefit or positive addition to one or more characteristics, features or elements (beneficial)</li> </ul>		
No change	No change		

*Design Manual for Roads and Bridges, Volume 11, Section 3, Part 2 (Highways Agency 2007) and \* Volume 11, Section 2, Part 5 (Highways England 2008)*

Table 3: Establishing the significance of impact

<b>IMPORTANCE</b>	<b>Very High</b>	Neutral	Slight	Moderate/large	Large or very large	Very large
	<b>High</b>	Neutral	Slight	Moderate/slight	Moderate/large	Large/very large
	<b>Medium</b>	Neutral	Neutral/slight	Slight	Moderate	Moderate/large
	<b>Low</b>	Neutral	Neutral/slight	Neutral/slight	Slight	Slight/moderate
	<b>Negligible</b>	Neutral	Neutral	Neutral/slight	Neutral/slight	Slight
		<b>No change</b>	<b>Negligible</b>	Minor	Moderate	Major
<b>MAGNITUDE OF IMPACT</b>						

*Design Manual for Roads and Bridges, Volume II, Section 3, Part 2 (Highways Agency 2007)*

In some cases the significance of impact is shown as being one of two alternatives. In these cases a single description should be decided upon with reasoned judgement for that level of significance chosen.

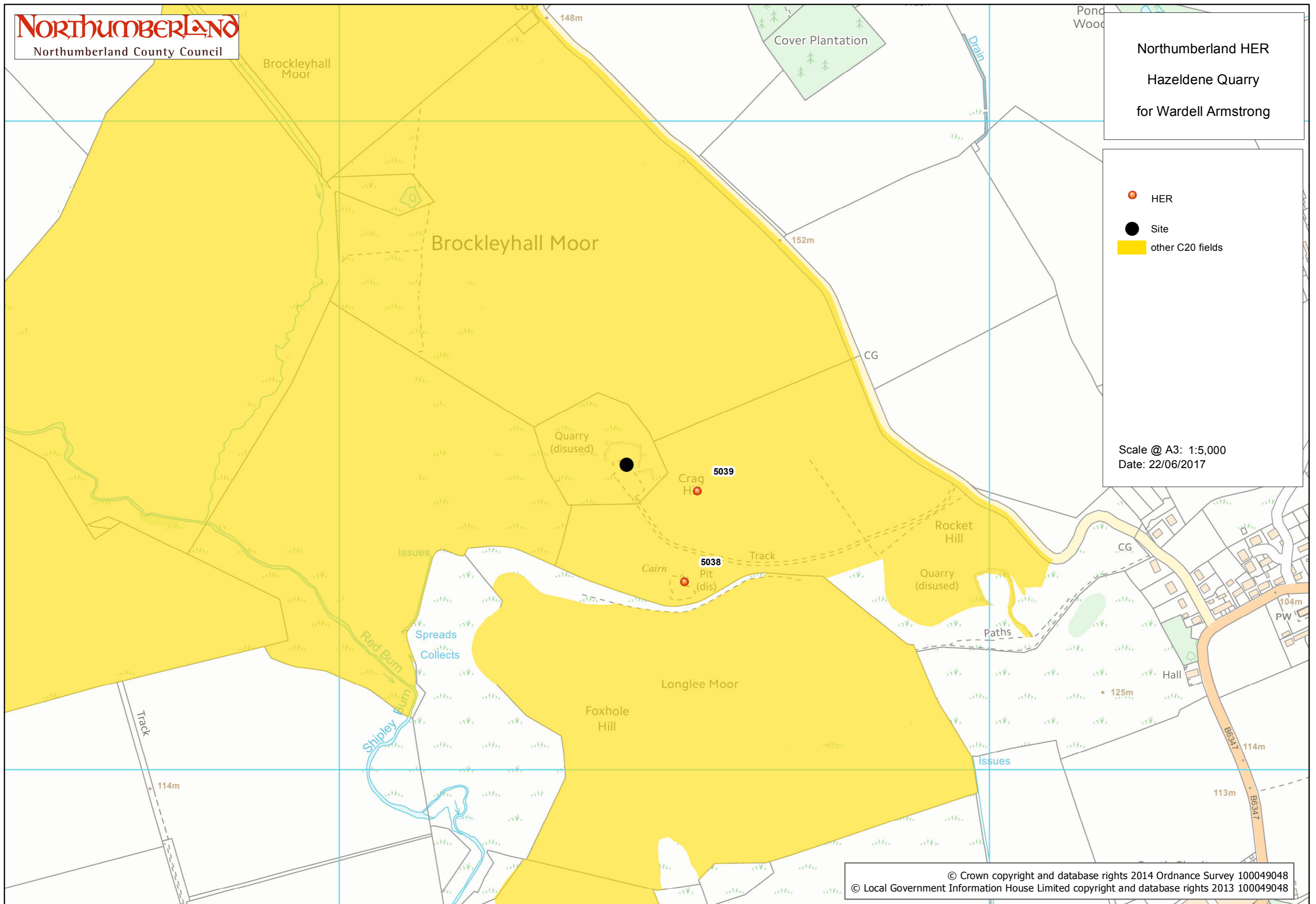
## FIGURES



Northumberland HER  
Hazeldene Quarry  
for Wardell Armstrong

- HER
- Site
- other C20 fields

Scale @ A3: 1:5,000  
Date: 22/06/2017



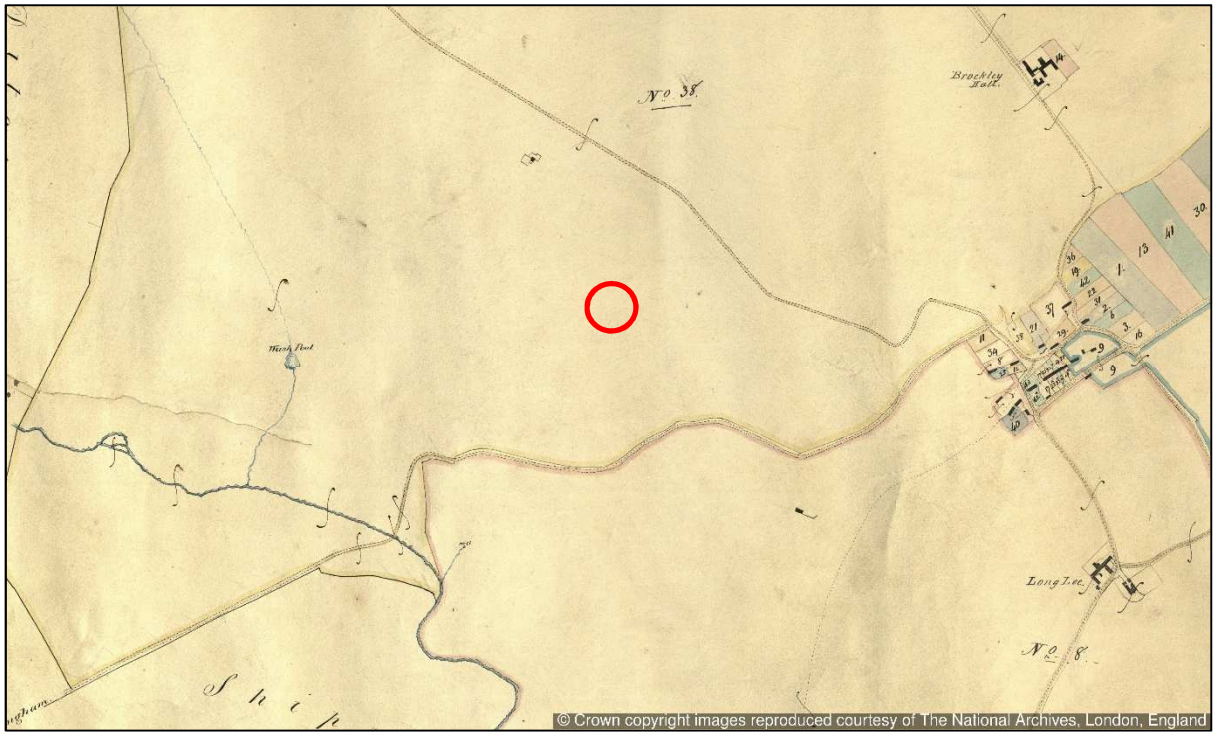


Figure 2: South Charlton 1<sup>st</sup> Edition Tithe (1842)



Figure 3: 2<sup>nd</sup> Edition OS 6" (1899)

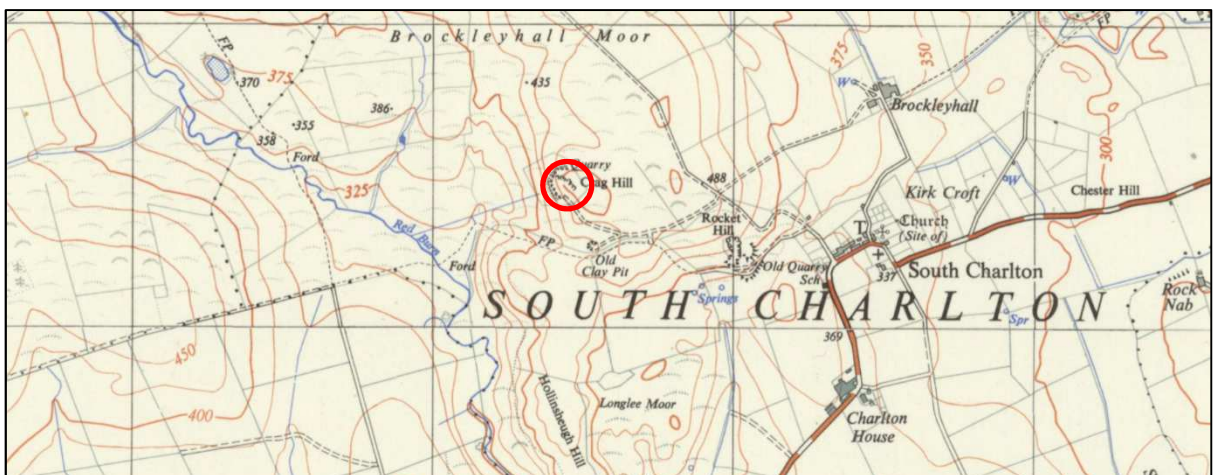


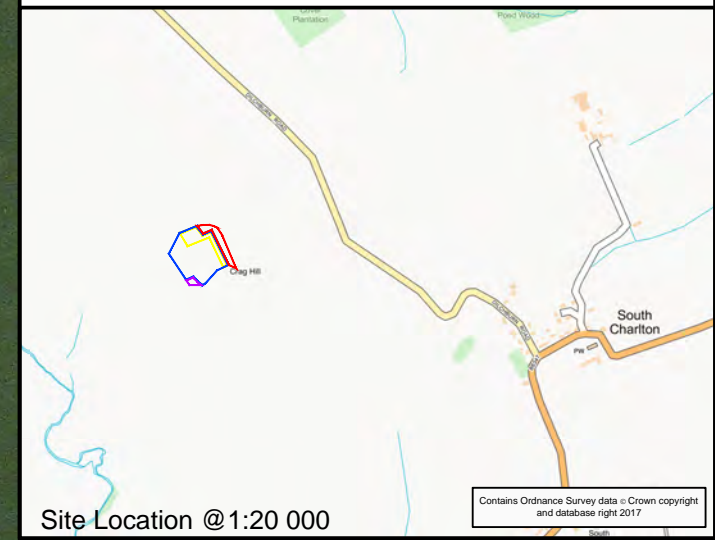
Figure 4: OS 1:2500 (1954)





**KEY**

	Existing permission boundary
	Proposed extension area
	Proposed area of additional extraction
	Proposed additional overburden storage area



REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D

CLIENT

**The Northumberland Estates**

PROJECT

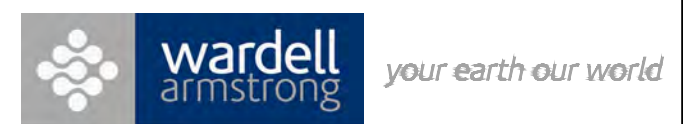
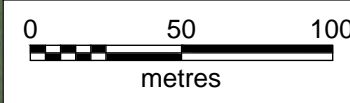
**Hazeldene Quarry**

DRAWING TITLE

**Proposed Extension Area and Amendments to Working Method**

DRG No NT12854/001	SCALE 1:2500 @A3	DATE May 2017
DRAWN BY LG	CHECKED BY ST	APPROVED BY ST

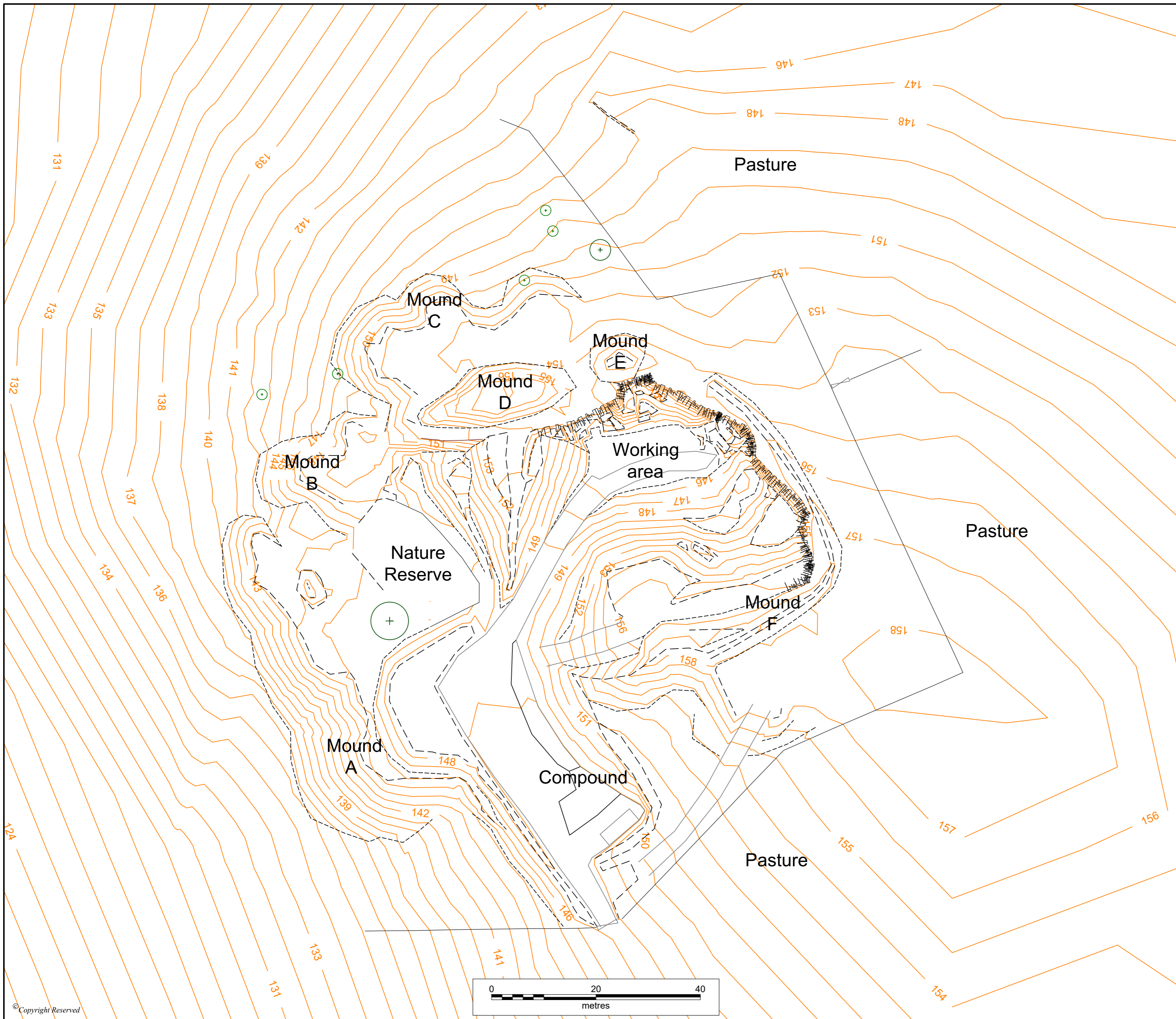
<input type="checkbox"/> STOKE-ON-TRENT (HEAD OFFICE) TEL 0178 227 6700	<input type="checkbox"/> CARDIFF TEL 029 2072 9191
<input checked="" type="checkbox"/> NEWCASTLE UPON TYNE TEL 0191 232 0943	<input type="checkbox"/> LONDON TEL 0207 287 2872
<input type="checkbox"/> WEST BROMWICH TEL 0121 580 0909	<input type="checkbox"/> SHEFFIELD TEL 0114 245 6244
<input type="checkbox"/> GREATER MANCHESTER TEL 0194 226 0101	<input type="checkbox"/> EDINBURGH TEL 0131 555 3311



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DO NOT SCALE FROM THIS DRAWING

Notes

- 1 All levels in metres and relate to Ordnance Datum.
- 2 Contour interval 1 metre.
- 3 Grid is related to Ordnance Survey National Grid.
- 4 Coordinate system and levels have been established using a Network RTK GNSS system.
- 5 Please note that the same accuracies implied by the plotting scale are equally applicable to digital data supplied for CAD.
- 6 Every effort is made to identify all visible above ground features, however it should be noted that there may be items obscured at the time of survey.
- 7 Background contours are provided by Ordnance Survey terrain 50m data.

REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D
CLIENT Northumberland Estates					
PROJECT Hazeldene Planning Application					
DRAWING TITLE Mound Locations					
DRG No. NT12854/006		REV			
DRG SIZE A2	SCALE 1:500	DATE June 2017			
DRAWN BY CA	CHECKED BY DH	APPROVED BY DH			
<input type="checkbox"/> CARDIFF    TEL 029 2072 9191    WEB: WWW.WARDELL-ARMSTRONG.COM <input type="checkbox"/> BIRMINGHAM <input type="checkbox"/> CARLISLE <input type="checkbox"/> CROYDON <input type="checkbox"/> EDINBURGH <input type="checkbox"/> GLASGOW <input type="checkbox"/> LEIGH <input type="checkbox"/> LONDON <input type="checkbox"/> MANCHESTER <input type="checkbox"/> NEWCASTLE UPON TYNE <input type="checkbox"/> SHEFFIELD <input type="checkbox"/> STOKE-ON-TRENT <input type="checkbox"/> TAUNTON					



wardell-armstrong.com

STOKE-ON-TRENT  
Sir Henry Doulton House  
Forge Lane  
Etruria  
Stoke-on-Trent  
ST1 5BD  
Tel: +44 (0)178 227 6700

BIRMINGHAM  
Two Devon Way  
Longbridge Technology Park  
Longbridge  
Birmingham  
B31 2TS  
Tel: +44 (0)121 580 0909

CARDIFF  
22 Windsor Place  
Cardiff  
CF10 3BY  
Tel: +44 (0)292 072 9191

CUMBRIA  
Marconi Road  
Burgh Road Industrial Estate  
Carlisle  
Cumbria  
CA2 7NA  
Tel: +44 (0)122 856 4820

EDINBURGH  
Great Michael House  
14 Links Place  
Edinburgh  
EH6 7EZ  
Tel: +44 (0)131 555 3311

GLASGOW  
2 West Regent Street  
Glasgow  
G2 1RW  
Tel: +44 (0)141 433 7210

LONDON  
46 Chancery Lane  
London  
WC2A 1JE  
Tel: +44 (0)207 242 3243

MANCHESTER (City Centre)  
76 King Street  
Manchester  
M2 4NH  
Tel: +44 (0)161 817 5038

MANCHESTER (Greater)  
2 The Avenue  
Leigh  
Greater Manchester  
WN7 1ES  
Tel: +44 (0)194 226 0101

NEWCASTLE UPON TYNE  
City Quadrant  
11 Waterloo Square  
Newcastle Upon Tyne  
NE1 4DP  
Tel: +44 (0)191 232 0943

SHEFFIELD  
Unit 5  
Newton Business Centre  
Newton Chambers Road  
Thornccliffe Park  
Chapelton  
Sheffield  
S35 2PH  
Tel: +44 (0)114 245 6244

TRURO  
Baldhu House  
Wheal Jane Earth Science Park  
Baldhu  
Truro  
TR3 6EH  
Tel: +44 (0)187 256 0738

International offices:  
ALMATY  
29/6 Satpaev Avenue  
Regency Hotel Office Tower  
Almaty Kazakhstan  
050040  
Tel: +7(727) 334 1310

MOSCOW  
21/5 Kuznetskiy Most St.  
Moscow  
Russia  
Tel: +7(495) 626 07 67

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