

Archaeological Evaluation Trenching at Hope Limestone Quarry, Castleton, Derbyshire



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Executive Summary

Project Name: *Archaeological Evaluation Trenching at Hope Limestone Quarry, Castleton, Derbyshire*

Site Code: *HLQ18*

Planning Authority: *Peak District National Park Authority*

Location: *Hope Limestone Quarry, S33 6RP*

Geology: *Limestone of the Monsal Dale Limestone Formation (BGS 2018).*

NGR: *SK 14921 81161*

Date of fieldwork: *22-31st May 2018*

Date of report: *June 2018*

In May 2018 Archaeological Research Services Ltd was commissioned by Breedon Cement Ltd to undertake archaeological evaluation trenching in an area of proposed quarry expansion immediately to the south-east of the existing Hope Limestone Quarry, Castleton, Derbyshire.

Fourteen trenches were excavated (13 measuring 50x2m and one measuring 30x2m) which revealed varied depths of topsoil and subsoil over the limestone bedrock in Areas 2 and 3 of the proposed development.

A single feature was identified as a naturally occurring sinkhole/solution hollow in Trench 10. Sample excavation revealed three naturally accumulated fills within a bowl-shaped depression that continued beyond the limit of excavation.

No material culture was observed or recovered during the evaluation.

1 Introduction

1.1 Project and Planning Background

1.1.1 In May 2018 Archaeological Research Services Ltd was commissioned by Breedon Cement Ltd to undertake archaeological evaluation trenching on land above Hope Limestone Quarry, Castleton, Derbyshire (NGR SK 14921 81161) to fulfil conditions 38 and 39 of the planning permission granted for a quarry extension (Application Ref: NP/HPK/0403/037). Full details of conditions 38 and 39 are outlined in the approved Written Scheme of Investigation (WSI) for the works (Burpoe and Holgate 2018) (see Appendix III). The site of the proposed quarry extraction area is outlined in red on Figure 1 (Appendix II).

1.1.2 The proposed development area (hereafter PDA) was split into three areas, with a watching brief designated to take place in Area 1, and evaluation trenching in Areas 2 and 3 (Figure 2, Appendix II).

1.2 Site Description

1.2.1 The proposed quarry extension is situated on a D-shaped area of land on the south-western edge of the existing limestone quarry, bound to the west and south by a curving road known as Siggate. The PDA generally slopes from the south-west to the north-east and exists as a domed area of land that drops away to the north-west, becoming more level to the south-east. The area contains occasional sub-circular depressions, c.2-6m in diameter, with exposed bare rock visible through the vegetation on the crest of the domed area and to the south-east.

1.3 Geology

1.3.1 The underlying solid geology of the PDA comprises limestone of the Monsal Dale Limestone Formation; formed approximately 329 to 331 million years ago in the Carboniferous Period when the local environment was previously dominated by shallow carbonate seas. No superficial deposits are recorded by the British Geological Survey (BGS 2018).

1.3.2 The soils of the PDA are classified as belonging to the MALHAM 2 Soil Association (541p), which are typical brown earths (SSEW 1983, 4). These soils form over Aeolian silty drift over Carboniferous limestone and Triassic limestone breccia, and are characterised as *'well drained often stoneless silty soils over limestone, shallow in places especially on crests and steep slopes. Bare rock locally'* (SSEW 1983, 9).

2 Archaeological and Historical Background

2.1 A detailed archaeological and historical background is presented in a Desk Based Assessment for the wider area (Brown 2016). A brief overview is presented below.

2.2 A late mesolithic-neolithic flint scatter has been recorded to the east of the quarry and two Bronze Age round barrows are situated within 1km of the quarry to the north. Two enclosures of possible Iron Age to Romano-British date are known to the north-east and the north-west of the quarry.

2.3 Roman occupation of Derbyshire began after the Claudian invasion in the 50s AD. Navio fort was established at Brough c.3km to the west of the quarry extension area and was initially occupied from AD75-120. It was then re-occupied and re-built c.AD154-158, subsequently seeing continued occupation until the mid-4th century AD (Hart 1981, 86-7). Navio had a strategic military role in suppressing the Brigantes and guarding the east-west routeway across the Hope Valley. It was also strategically placed to help protect the important lead industry.

2.4 It is likely that the upland landscape surrounding the quarry would have formed the wastes and common land used for upland grazing throughout the medieval period. Maps of the wastes and commons of Castleton and Bradwell dating to 1639 and 1675 confirm that the whole of the study area was common land at this time. Nevertheless, lead mining that is likely to date back to Roman times would have resulted in the industrialisation of elements of the landscape. The earliest mines would have been opencast, but an early reference to a mine at 'Rotherlowe' near Bradwell being closed due to flooding in 1247 attests to possible shallow underground working (Rieuwurts 2007, 7). Dirtlow Rake, c.200m to the north-west of the Quarry extension area, is first documented as *Dyrtlo Rake hed* in 1538 and, as the name derives from the Old English and Old Norse *drit* meaning dirt, this suggests that this landscape feature had long been associated with mining activity. It is likely that evidence for the removal of rich ribs of ore during the medieval period or earlier in open cuts will have been removed by later larger scale activities.

2.5 A map of the wastes and commons of Castleton dating to 1691 clearly depicts Dirtlow Rake, along with smaller rakes branching off it. This map also provides a snapshot of the enclosure of Castleton Common, and illustrates how the block of land abutting the northern side of the Castleton/Bradwell parish boundary was subdivided as a result of enclosure by private agreement of the local landowners.

3 Aims and Objectives

3.1 As mentioned in the approved WSI (Burpoe and Holgate 2018), the archaeological works had the potential to inform on various research themes outlined within the regional research framework (Knight *et al.* 2012). These include:

- Research Objective 5H: investigate the landscape context of rural settlements and their varied relationships with one another and to towns and military sites (Knight *et al.* 2012, 79).
- Research Objective 8F: research the development of East Midlands industry and its impact upon the landscape and settlement morphology (Knight *et al.* 2012, 116).
- Research Objective 9H: characterising the rural environment by enhancing records of mines and surface features associated with extractive industry and their relationship to markets, settlements and transport (Knight *et al.* 2012, 131).

3.2 In addition to the regional research objectives the main aim of the archaeological trial trenching was to gather sufficient evidence to establish, supplement, improve and make available information about the archaeological resource existing within the area of

investigation, and to provide an appropriate post-excavation assessment, analysis, reporting, archiving and dissemination.

4 Methodology

4.1 The approved WSI (Burpoe and Holgate 2018) sets out the methodology employed during the evaluation (see Appendix III). A general overview is provided below.

4.2 Fourteen trenches were excavated (13 measuring 50x2m, one measuring 30x2m) in positions agreed between Archaeological Research Services Ltd (ARS) and the Peak District National Park Authority (PDNPA) Senior Conservation Archaeologist prior to any site works being undertaken. Trenches were mechanically excavated using a 360° tracked excavator with a toothless ditching bucket.

4.3 Topsoil was removed in level spits down to the upper horizon of an orange/brown silty clay subsoil which, if visibly clear of archaeological features or deposits, was removed to expose the natural substratum. The geological natural substratum consisted of limestone bedrock or limestone brash.

4.4 Turf, topsoil and subsoils were stored separately until each trench had been recorded and permission was received to backfill and reinstate the ground. A photographic record was kept during the excavation of the trenches. The backfilling of trenches took place following the signing off of the site by the PDNPA Senior Conservation Archaeologist.

4.3 All aspects of the archaeological fieldwork followed the Chartered Institute for Archaeologists' *Code of Conduct* (CIfA 2014a); *Standard and Guidance for an Archaeological Field Evaluation* (CIfA 2014b) and *Standard and Guidance for an Archaeological Excavation* (CIfA 2014c).

4.4 A risk assessment was undertaken before commencement of the work and all site operations were undertaken in accordance with the ARS Health and Safety Policy, current Health and Safety Legislation and a site specific induction provided by Breedon Cement on the first day of the works.

4.5 All aspects of the project were managed on behalf of ARS Ltd by Tony Brennan, Operations Manager at ARS Ltd, or by Reuben Thorpe, Senior Projects Manager at ARS Ltd. The evaluation trenching was undertaken between the 22nd May and the 31st May 2018 by: Ben Dyson (Project Officer) and Simon Cosedge (Archaeological Officer).

5 Results

5.1 Trenches were excavated sequentially from 1-14, working from the north-west to the south-east across the PDA (Figure 3, Appendix II). A summary table of all encountered contexts is provided in Appendix I.

5.2 In each trench topsoil was removed in level spits to expose an orange/brown silty clay subsoil that was visually scanned for archaeological features or deposits. Where no features or deposits were identified the subsoil was then removed in level spits to expose the upper horizon of the natural limestone substrate that was cleaned

with hand tools and visually scanned. Due to the underlying morphology of the limestone, subsoil often filled the various depressions and voids within the surface, or at times the limestone rose up right through the subsoil and was visible after removal of the topsoil. This accounts for the variance in the soil and trench depths recorded across the site (Table 1).

Trench	Thickness of soils (m)		Overall Depth of Trench (m)	
	Turf and topsoil	Subsoil		
1	Min.	0.29m	0.29m	0.58m
	Max.	0.39m	0.59m	1.02m
2	Min.	0.23m	0.28m	0.5m
	Max.	0.39m	0.49m	0.88m
3	Min.	0.23m	0.36m	0.5m
	Max.	0.33m	0.63m	0.88m
4	Min.	0.26m	0.21m	0.47m
	Max.	0.4m	0.78m	1.05m
5	Min.	0.23m	0m	0.27m
	Max.	0.48m	0.68m	0.96m
6	Min.	0.15m	0.19m	0.48m
	Max.	0.37m	0.9m	1.21m
7	Min.	0.22m	0.16m	0.38m
	Max.	0.34m	0.65m	0.93m
8	Min.	0.18m	0.27m	0.41m
	Max.	0.35m	0.7m	1.05m
9	Min.	0.2m	0.23m	0.43m
	Max.	0.28m	0.64m	0.97m
10	Min.	0.21m	0.24m	0.38m
	Max.	0.36m	0.49m	0.81m
11	Min.	0.14m	0.1m	0.28m
	Max.	0.33m	0.62m	0.91m
12	Min.	0.18m	0.14m	0.18m
	Max.	0.29m	0.54m	0.83m
13	Min.	0.22m	0.12m	0.35m
	Max.	0.29m	0.61m	0.87m
14	Min.	0.2m	0.25m	0.49m
	Max.	0.29m	0.48m	0.75m
Average soil depths across PDA	Min.	0.21m	0.2m	0.4m
	Max.	0.34m	0.62m	0.94m

Table 1. Varied depths of soil units encountered on site.

5.3 In general the deepest trenches were located on the crest of the domed landscape (Trenches 4, 5, 6, 7 and 8), whilst the trenches further downslope to the north-west (1-3) and on the gentler sloping land to the south-east (9-14) were shallower. The variance in the depth of the limestone below contemporary ground level meant that even within single trenches the overall depth of soils was inconsistent. For example, Trench 6 displayed the deepest depth (1.21m) roughly half way along its length, whilst close to its south-west end the limestone rose up sharply leaving the trench with a total depth of just 0.48m. Drastic variance in the geological morphology was also noted in Trench 5 where the trench followed a limestone ridge along the south-western edge that dropped away by up to 0.6m on the north-eastern side of the trench leaving a split-level base.

5.4 No archaeological features or deposits were encountered during the evaluation, though a photographic record was kept in order to show the morphology of the trenches in plan and to highlight the general site stratigraphy in section (Figure 4, Appendix II).

5.5 Trench 10 was excavated across one half of a sub-circular depression, one of the frequent hollows that were visible within the PDA. During excavation of the trench, turf and topsoil within the depression continued down below the level of the subsoil and into the limestone brash that formed the natural substrate of the trench. Excavation of the feature revealed three distinct fills. The upper fill (1004) was formed of 0.31m of dark brown, sandy, silty topsoil that overlay a shallower (0.11m) lens of dark orange/brown silty material (1005) that resembled the subsoil but with a mixed component of topsoil. The lower fill was formed of sterile, inclusion free, clay marl, derived of naturally deposited sediment formed as a result of erosion which settled out within standing water (Figure 5, Appendix II). The lower fill was excavated to a depth of 0.31m where limestone fragments were visible in the base of the hollow. It is likely that the fill continued down into the limestone following various narrower faults. The feature was interpreted as a sinkhole or solution hollow, common features of limestone landscapes.

6 Discussion

6.1 The desk based assessment (Brown 2016) stated that in the absence of investigation the varied nature of depressions in the 'pock-marked' landscape around the existing quarry can mean that it is difficult to characterise them from the surface. Whilst some of the larger elongated depressions beyond the investigation area might represent run-in shafts or short-lived quarrying pits related to medieval mining activity, the sinkhole in Trench 10 was clearly natural in origin, producing no material culture and displaying no anthropogenic characteristics upon excavation. Similarly-sized depressions within the PDA are likely to also be natural in origin, with none of the examples close to the excavated trenches displaying characteristics of human alteration.

6.2 Given that no material culture of any kind was observed or recovered from any of the contexts encountered on site, this suggests that the PDA has existed as undeveloped and open pasture for a long time. Even the lack of waste products from quarrying or mining activities lends weight to the interpretation of the various hollows as features of the natural landscape.

7 Archiving Statement

7.1 The site has produced no artefacts and the archive consists only of paper and digital records which, for the moment, are stored at the offices of ARS Ltd.

7.2 In lieu of deposition of a full archive, a hard copy and digital version of this report in PDF/A format will be deposited with the Peak District Historic Buildings, Sites and Monuments record and with the Derbyshire HER.

8 Publicity, Confidentiality and Copyright

Any publicity will be handled by the client. Archaeological Research Services Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

9 Statement of Indemnity

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.

10 Acknowledgements

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Appendix I. Context Summary Table.

Archaeological Evaluation Trenching at Hope Limestone Quarry, Castleton, Derbyshire

Trench	Context	Type	Description/Processual Interpretation	Max. excavated dimensions (m) (W)width; (L)length; (D)depth; (Diam.)diameter	Heights at trench surface in m (aOD)	Heights at trench base in m (aOD)	Findings
1	(101)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.39m (D)	NW end	NW end	-
	(102)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.59m (D)	400.05m	399.44m	-
	(103)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SE end 399.79m	SE end 399.5m	-
2	(201)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.39m (D)	NE end	NE end	-
	(202)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.49m (D)	393.41m	392.98m	-
	(203)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SW end 398.27m	SW end 397.4m	-
3	(301)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.33m (D)	NE end	NE end	-
	(302)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.63m (D)	397.12m	396.52m	-
	(303)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SW end 400.95m	SW end 400.23m	-
4	(401)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.4m (D)	NW end	NW end	-
	(402)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.78m (D)	395.84m	395.06m	-
	(403)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SE end 396.59m	SE end 395.81	-
5	(501)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.48m (D)	NW end	NW end	-
	(502)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.68m (D)	400.07m	399.1m	-
	(503)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SE end 399.82m	SE end 399.32m	-
6	(601)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.37m (D)	NE end	NE end	-
	(602)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.9m (D)	394.7m	393.9m	-
	(603)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SW end 398.48m	SW end 397.94m	-
7	(701)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.34m (D)	NE end	NE end	-
	(702)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.65m (D)	397.94m	397.39m	-
	(703)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SW end	SW end	-

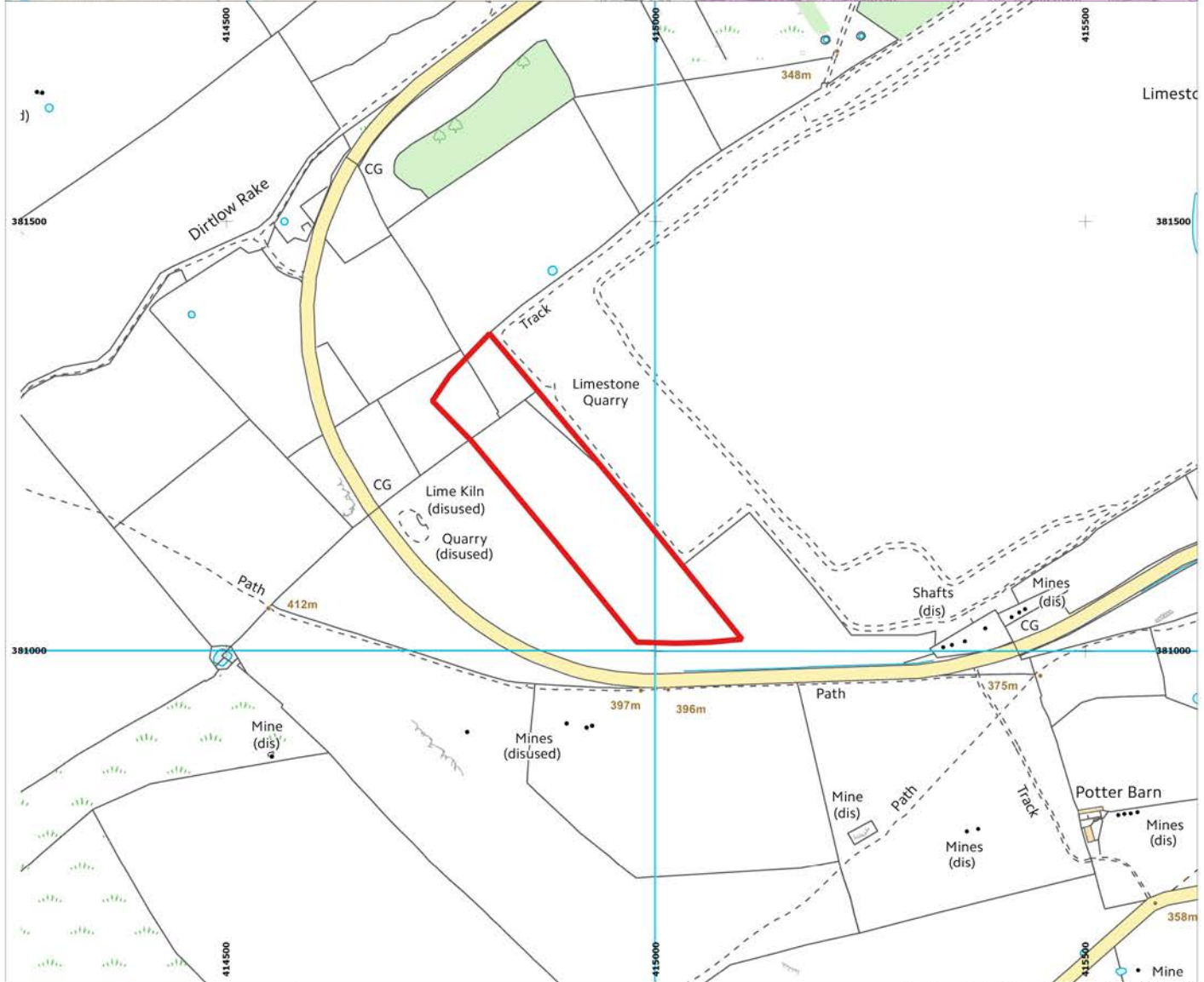
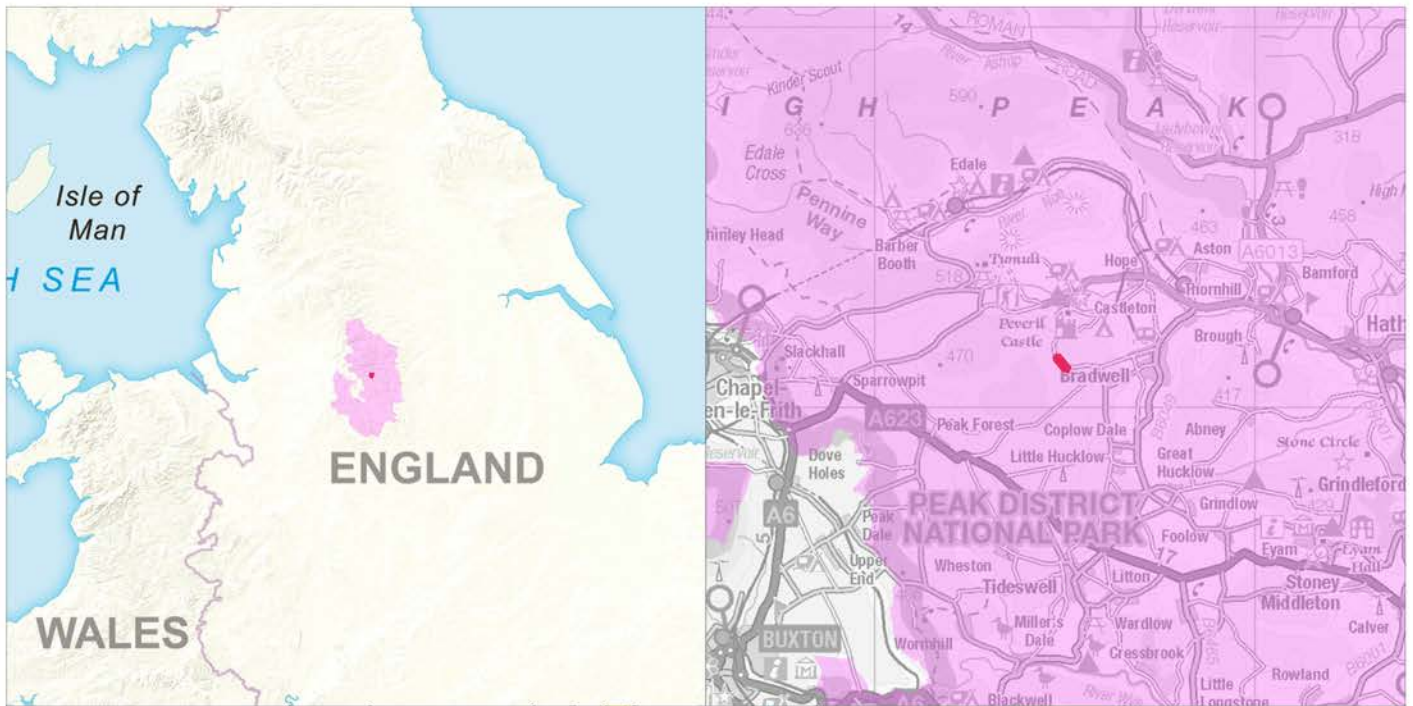
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	(704)	Fill	Topsoil deposit filling a void between limestone rocks that came to the surface. Darker and clay-like in base where standing water has collected in a limestone hollow.	0.67m (L) x 0.64m (W) x 0.22m (D). Height at base: 399.23m aOD	400.35m	399.58m	-
8	(801)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.35m (D)	NW end	NW end	-
	(802)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.7m (D)	396.09m	395.47m	-
	(803)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SE end 397.29m	SE end 396.82m	-
9	(901)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.28m (D)	NW end	NW end	-
	(902)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.64m (D)	399.96m	399.52m	-
	(903)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SE end 398.92m	SE end 398.38m	-
10	(1001)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.36m (D)	NE end	NE end	-
	(1002)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.49m (D)	396.77m	396.36m	-
	(1003)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SW end	SW end	-
	(1004)	Fill	Dark brown silty sand, upper fill of [1007], same as overlying topsoil.	1.75m (Diam.) x 0.31m (D)	398.83m	398.41m	-
	(1005)	Fill	Orange brown silty lens, secondary fill of [1007], likely a slumping deposit derived of subsoil.	1.04m (Diam.) x 0.11m (D)			-
	(1006)	Fill	Dark grey/brown silty clay marl, sterile primary fill of [1007].	0.94m (Diam.) x 0.31m (D)			-
	(1007)	Cut	Edge of solution hollow, comes right to the surface of the trench. Irregular in plan and section.	1.75m (Diam.) x 1.22m (D). Height at base: 396.43m			-
11	(1101)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.33m (D)	NE end	NE end	-
	(1102)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.62m (D)	396.99m	396.48m	-
	(1103)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SW end 398.5m	SW end 397.94m	-
12	(1201)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.29m (D)	NW end	NW end	-
	(1202)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.54m (D)	397.11m	396.57m	-
	(1203)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SE end 395.85m	SE end 395.32m	-
13	(1301)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.29m (D)	NE end	NE end	-
	(1302)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.61m (D)	394.89m	394.61m	-
	(1303)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	SW end 396.42m	SW end 395.81m	-

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14	(1401)	Topsoil	Dark brown sandy silt topsoil with occasional limestone fragments.	50m (L) x 2m (W) x 0.29m (D)	W end	W end	-
	(1402)	Subsoil	Orange/brown silty clay subsoil, occasional limestone fragments. Fills undulations in bedrock surface.	50m (L) x 2m (W) x 0.48m (D)	394.85m	394.2m	-
	(1403)	Bedrock	Limestone bedrock formed of large boulders and small angular spreads of gravel-sized limestone chips.	50m (L) x 2m (W) x (depth unknown)	E end 393.55m	E end 393.03m	-

Appendix II. Figures.



Site name: Hope Limestone Quarry, Castleton
 Date: May 2018
 Drawn by: MB/AB
 Scale: Varies

Figure 1:
Site location



Archaeological Research Services Ltd

Angel House
 Portland Square
 Bakewell
 Derbyshire
 DE45 1HB

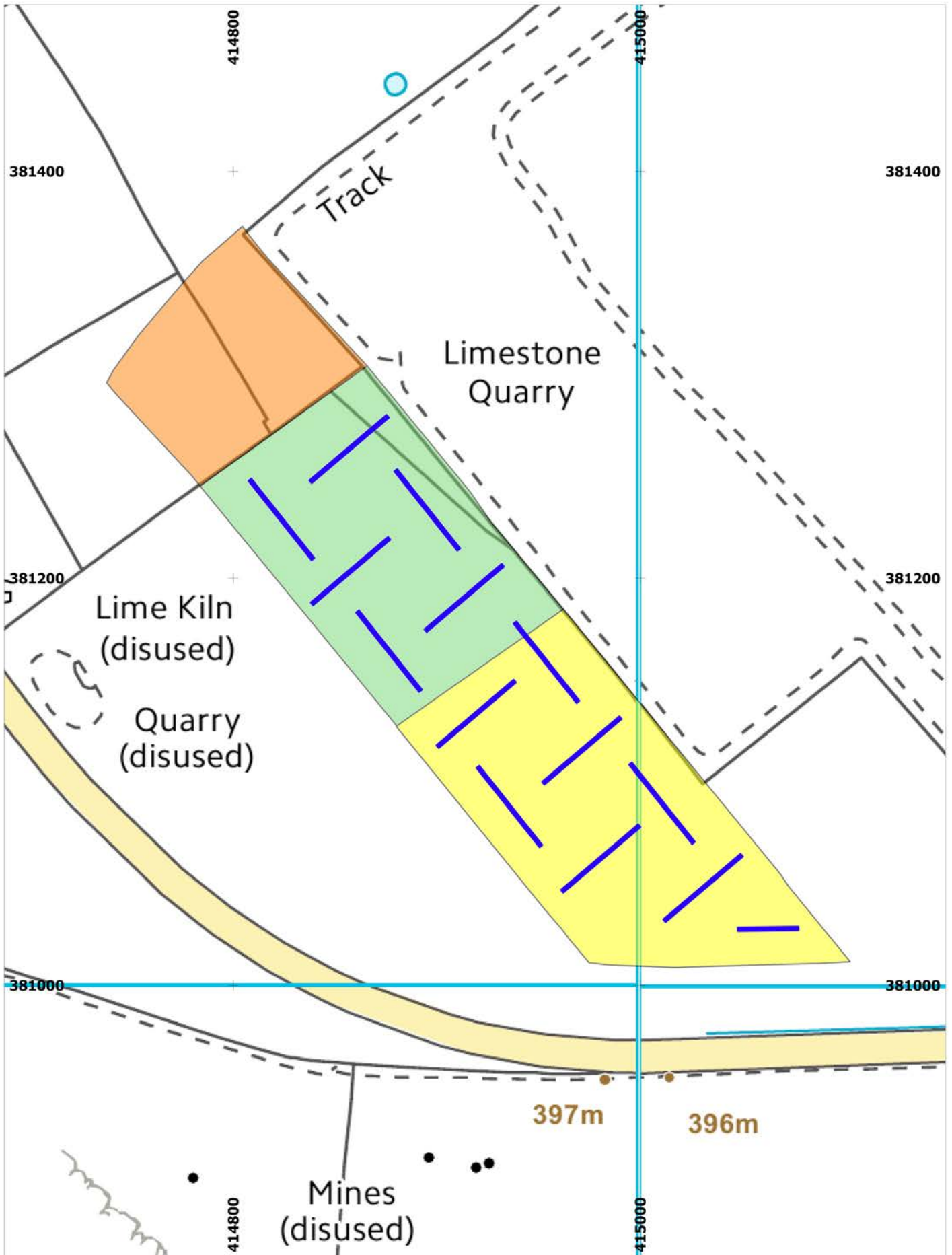


Tel: 01629 814540

www.archaeologicalresearchservices.com

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 Peak District National Park
 Area to be stripped



Site name: Hope Limestone Quarry,
Castleton
Date: May 2018
Drawn by: AB
Scale: 1:2500 @ A4

- Area 1 (Watching Brief)
- Area 2
- Area 3
- Proposed trenches



Archaeological Research Services Ltd
Angel House
Portland Square
Bakewell
Derbyshire
DE45 1HB



Tel: 01629 814540
www.archaeologicalresearchservices.com

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Figure 2:
Strip areas and proposed trench locations

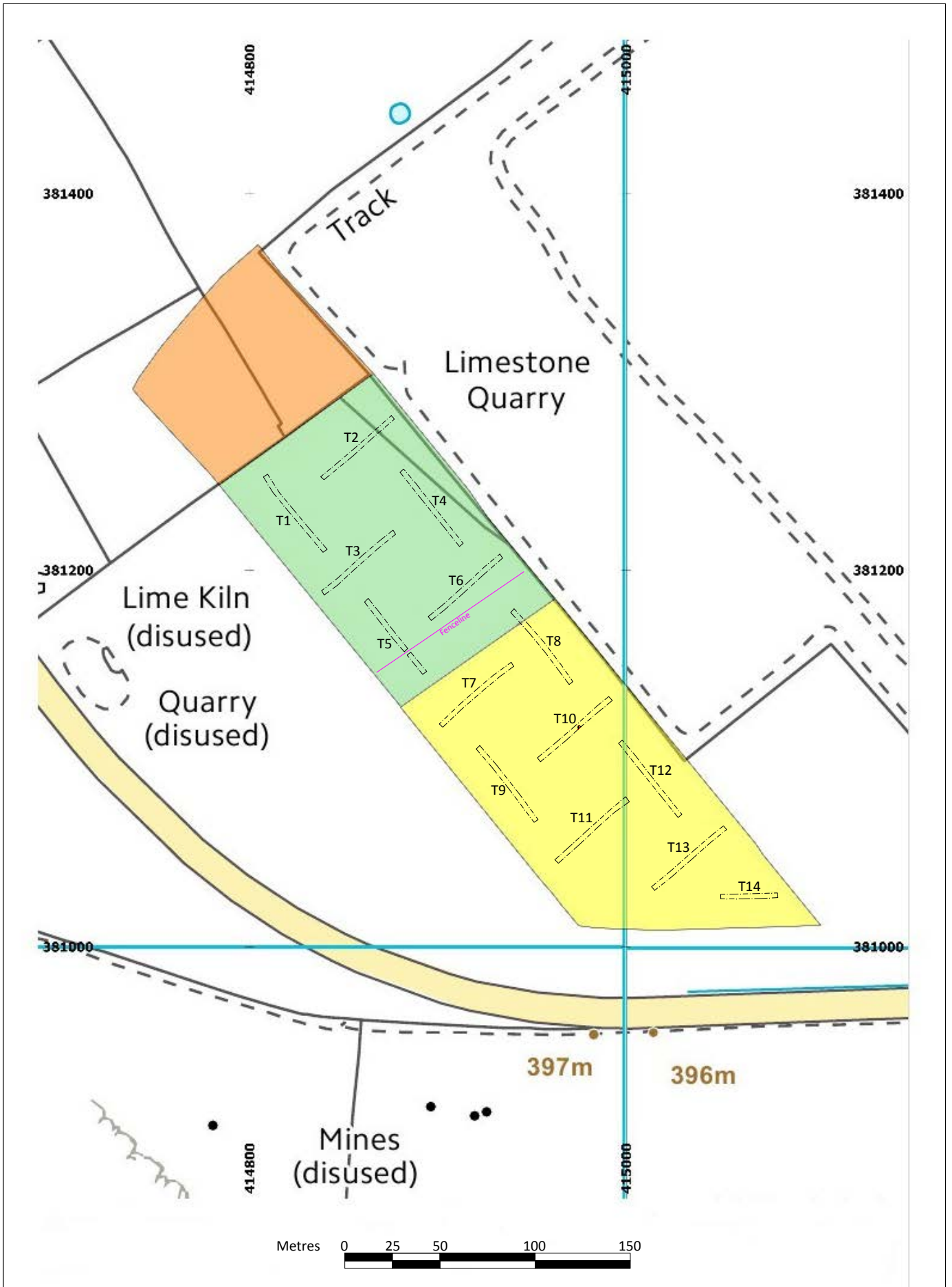


Figure 3.
Locations of excavated trenches.
Scale: As shown.

Key:
Fenceline on site



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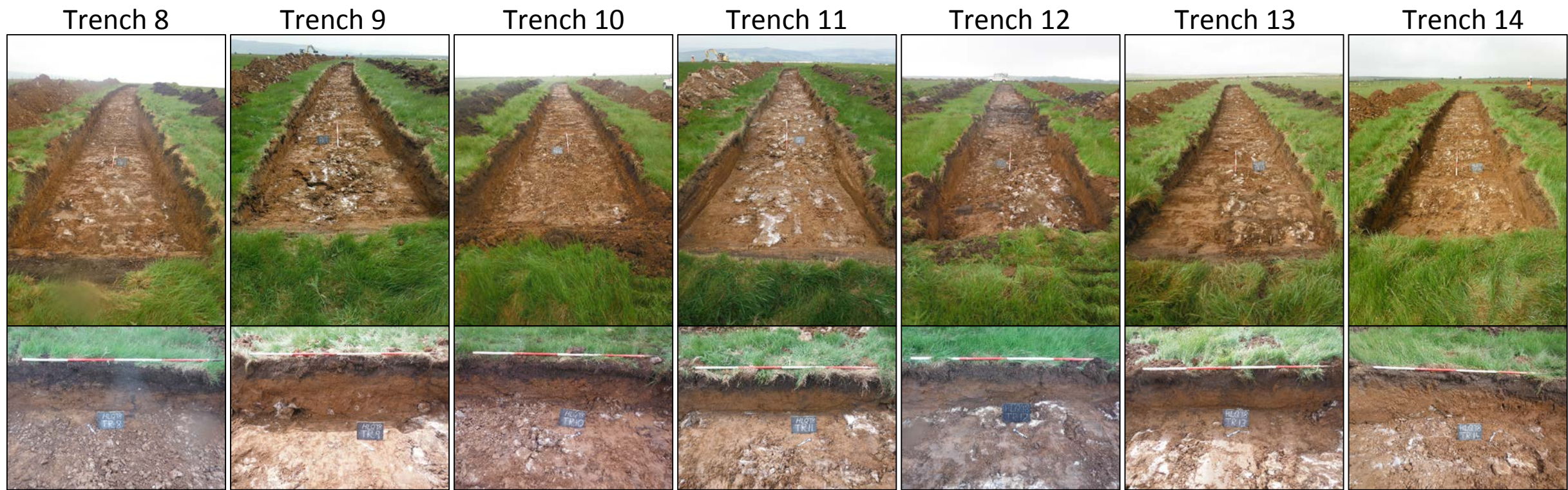
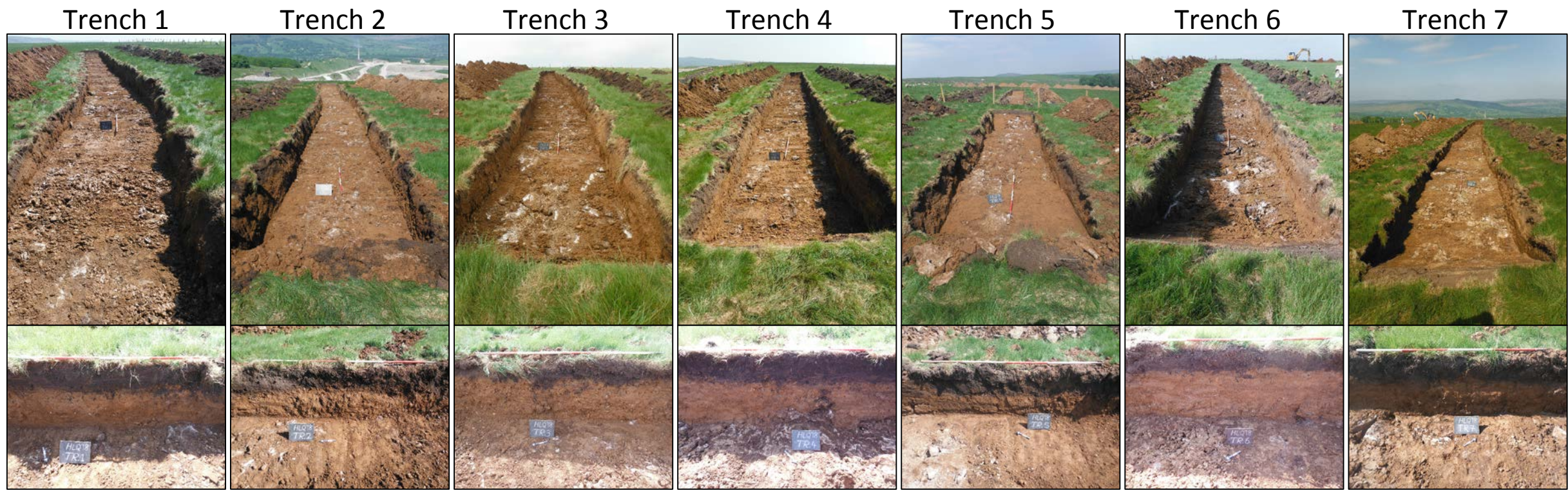
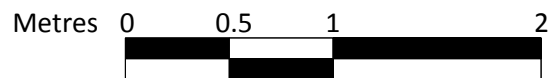
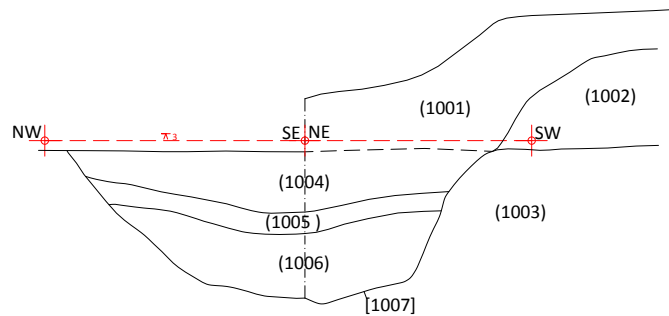
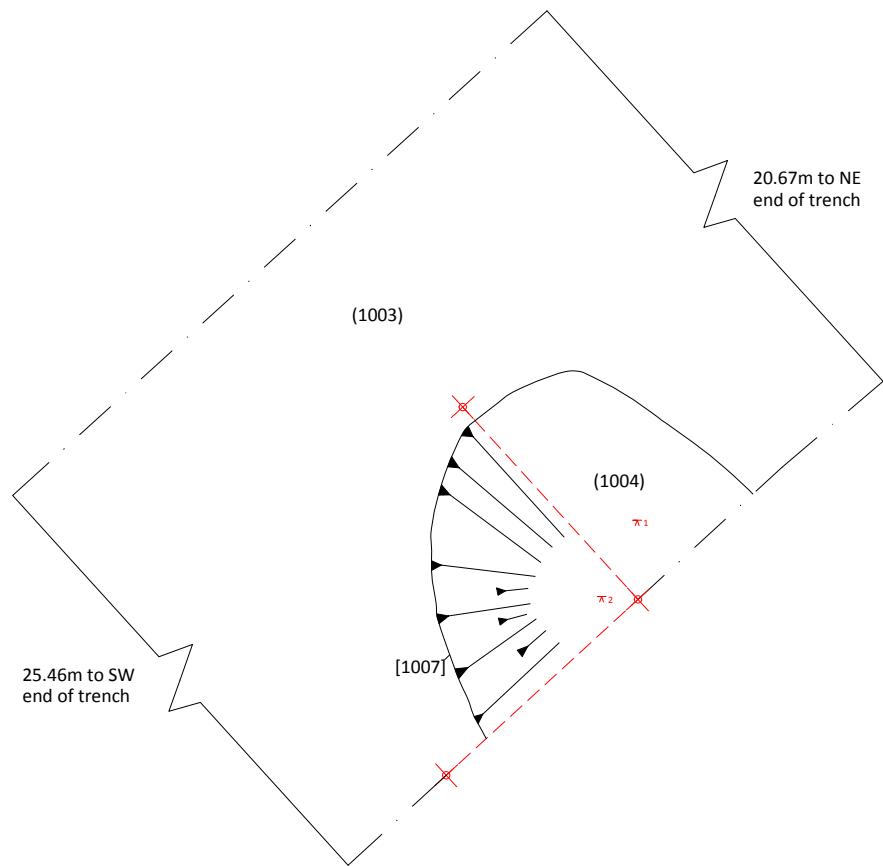


Figure 4.
Trench photographs and representative sections.
Scales: 0.5m graduations.

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South-west facing section of solution hollow F1007, looking north-east. Scale: 1m.



North-west facing section of solution hollow F1007, looking south-east. Scale: 2m.

Figure 5.
Plans, sections and photographs of solution hollow F1007, Trench 10.
Scale: As shown.

Spot heights in m aOD:

π 1: 397.14m

π 2: 396.43m

π 3: 397.18m



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Appendix III. Written Scheme of Investigation.

Hope Limestone Quarry, Castleton, Derbyshire

Written Scheme of Investigation for Archaeological Works

May 2018



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Angel House, Portland Square, Bakewell, Derbyshire, DE45 1HB

www.archaeologicalresearchservices.com

Prepared on behalf of: Breedon Cement

Date of compilation: May 2018

Compiled by: Michelle Burpoe and Robin Holgate MCIfA

Planning Reference: NP/HPK/0403/037

Local Authority: Peak District National Park Authority

Site central NGR: SK 14921 81161

1 INTRODUCTION

1.1 Project and Planning Background

1.1.1 This Written Scheme of Investigation (WSI) has been prepared by Archaeological Research Services Ltd (ARS Ltd) on behalf of Breedon Cement (the client). It details a scheme of archaeological works at Hope Limestone Quarry, Castleton, Derbyshire (Figure 1).

1.1.2 Planning permission for the quarry extension (Application Reference: NP/HPK/0403/037) has been granted. Condition numbers 38 and 39 of the planning permission require the following.

'38. No development shall take place within the areas identified for future mineral working in application number NP/HPK/0403/037 until the site operator has secured the implementation of a programme of archaeological assessment and recording in accordance with a written scheme of investigation and this programme has been completed to the satisfaction of the MPA.

39. At least 14 days notice of commencement of a soil stripping programme shall be given to the MPA and the developer shall afford access at all reasonable times to archaeologist nominated by the MPA who shall be allowed to observe the excavations and shall be given sufficient time to make an appropriate record.'

1.3 This document comprises a Written Scheme of Investigation (WSI) confirming the nature of the archaeological works to be undertaken by ARS Ltd at Hope Limestone Quarry, Castleton, Derbyshire in accordance with guidance provided by the Peak District National Park Authority (PDNPA)'s Senior Conservation Archaeologist.

1.1.4 The aim of the programme of archaeological work is, in line with the National Planning Policy Framework (NPPF) paragraph 141 (DCLG 2012), *'to record and enhance understanding of the significance of any heritage assets to be list during the proposed development in a manner proportionate to their importance, and to make this evidence (and any archive generated) publically accessible.'*

1.2 Site Description

1.2.1 Hope Limestone Quarry is located less than 1km south of Castleton and less than 1km west of Bradwell in the Hope Valley. The proposed quarry extraction area is situated on the south-western edge of the existing Hope Limestone Quarry and comprises a D-shaped area of land bounded ultimately to the west and south by a road known as Siggate, centred at NGR SK 14921 81161. The site of the proposed quarry extraction area is outlined in red on Figure 1.

1.3 Geology

1.3.1 The underlying solid geology of the PDA comprises limestone of the Monsal Dale Limestone Formation; formed approximately 329 to 331 million years ago in the Carboniferous Period when the local environment was previously dominated by shallow



carbonate seas. No superficial deposits are recorded by the British Geological Survey (BGS 2018).

1.3.3 The soils of the PDA are classified as belonging to the MALHAM 2 Soil Association (541p), which are typical brown earths (SSEW 1983b, 4). These soils form over Aeolian silty drift over Carboniferous limestone and Triassic limestone breccia, and are characterised as *'well drained often stoneless silty soils over limestone, shallow in places especially on crests and steep slopes. Bare rock locally'* (SSEW 1983b, 9).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 A late mesolithic-neolithic flint scatter has been recorded to the east of the Quarry and two Bronze Age round barrows are situated within 1km to the north of the Quarry. Two enclosures of possible Iron Age to Romano-British date are known to the north-east and the north-west of the Quarry.

2.2 The Roman occupation of Derbyshire began after the Claudian invasion in the 50s AD. Navio fort was established at Brough c.3km to the west of the Quarry extension area and was occupied from AD75-120, and then re-occupied and re-built c.AD154-158, subsequently seeing continued occupation until the mid-4th century AD (Hart 1981, 86-7). Navio had a strategic military role in suppressing the Brigantes and guarding the east-west routeway across the Hope Valley, and was also strategically placed to help protect the important lead industry.

2.3 It is likely that the upland landscape surrounding the Quarry would have formed the wastes and common land used as upland grazing throughout the medieval period, and maps of the wastes and commons of Castleton and Bradwell dating to 1639 and 1675 confirm that the whole of the study area was common land at this time. Nevertheless, lead mining that is likely to date back to Roman times would have resulted in the industrialisation of elements of the landscape. The earliest mines would have been opencast, but an early reference to a mine at 'Rotherlowe' near Bradwell being closed due to flooding in 1247 attests to possible shallow underground working (Rieuwurts 2007, 7). Dirtlow Rake, c.200m to the north-west of the Quarry extension area, is first documented as *Dyrtlo Rake hed* in 1538 and, as the name derives from the Old English and Old Norse *drit* meaning dirt, this suggests that this landscape feature had long been associated with mining activity, and it is likely that evidence for the removal of rich ribs of ore during the medieval period or earlier in open cuts will have been removed by later larger scale activities.

2.4 A map of the wastes and commons of Castleton dating to 1691 clearly depicts Dirtlow Rake, along with smaller rakes branching off it. This map also provides a snapshot of the enclosure of Castleton Common, and illustrates how the block of land abutting the northern side of the Castleton/Bradwell parish boundary was subdivided as a result of enclosure by private agreement of the local landowners.

3 AIMS AND OBJECTIVES

3.1 Regional Research Aims and Objectives

3.1.1 The proposed archaeological works have the potential to identify the presence of evidence pertinent to research objectives and overarching research themes identified in



East Midlands Heritage: An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands (Knight *et al.* 2012) for the Romano-British (AD43-c.410), Post-Medieval (1485-1750) and Modern (1750 to present) periods include the following:

- ◆ Research Objective 5H: investigate the landscape context of rural settlements and their varied relationships with one another and to towns and military sites (Knight *et al.* 2012, 79).
- ◆ Research Objective 8F: research the development of East Midlands industry and its impact upon the landscape and settlement morphology (Knight *et al.* 2012, 116).
- ◆ Research Objective 9H: characterising the rural environment by enhancing records of mines and surface features associated with extractive industry and their relationship to markets, settlements and transport (Knight *et al.* 2012, 131).

3.2 Archaeological Trial Trenching Aims and Objectives

3.3.1 The aim of the archaeological trial trenching is to identify and record the presence/absence, location, nature, extent, survival, quality, significance and date of post-medieval archaeological deposits that may exist on the proposed development site.

3.3.2 The objective of the archaeological trial trenching is to gather sufficient evidence to establish, supplement, improve and make available information about the archaeological resource existing within the area of investigation, and to provide an appropriate post-excavation assessment, analysis, reporting, archiving and dissemination.

3.3 Archaeological Watching Brief Aims and Objectives

3.3.1 The aim of the archaeological watching brief is to recover and record any potential archaeological remains of post-medieval and earlier date.

3.3.2 The objectives of the archaeological works are as follows.

- ◆ To identify the presence/absence of archaeological features and deposits within the site.
- ◆ To record all archaeological features and deposits encountered.
- ◆ To sample sufficient of the archaeological features and deposits to establish relative sequence, likely dating and quality of preservation.
- ◆ To gather sufficient information to establish the character, extent, form, function and likely status of any surviving archaeological deposits with a view to evaluating their significance and potential to inform the research aims and objectives outlined in section 3.1.1 above.

4 ARCHAEOLOGICAL TRIAL TRENCHING

4.1 Coverage

4.1.1 A total of 14 trial trenches (13 measuring 50m by 2m and one measuring 30m by 2m) covering c.4% of Areas 2 and 3 will be excavated (Figure 2).



4.1.2 All site operations will be carried out in a safe manner in accordance with ARS Ltd's Health and Safety Policy. Deep sections, such as those across ditches or pits, will be shored as necessary. A risk assessment will be prepared before commencement on site and health and safety regulations will be adhered to at all times.

4.2 Methodology

4.2.1 The archaeological trenching will be carried out in accordance to the guidance laid out in Chartered Institute for Archaeologists' Code of Conduct (2014a) and *Standards and Guidance for Archaeological Excavation* (2014b).

4.2.2 The trial trenches will be opened mechanically by a machine using a wide toothless ditching bucket to the first significant archaeological horizon.

4.2.3 The trial trenches will be excavated and cleaned appropriately to expose the full nature and extent of archaeological features and deposits.

4.2.4 All spoil removed during groundworks will be scanned visually to recover small finds. Any finds so recovered will be recorded and their location noted on a site plan at a relevant scale. The finds will be retained and recorded.

4.2.5 All archaeological features will be planned and sectioned as a minimum objective.

4.2.6 Isolated, discrete features such as pits and postholes not belonging to structure or industrial activities will be 50% sampled, although if they produce artefacts then provision is made for full excavation.

4.2.7 Sampling of linear features such as ditches or gullies will be sufficient to determine the character, stratigraphy and relationship to other features and attempts made to obtain dating evidence.

4.2.8 Any deposits relating to funerary/ritual activities, such as burials and cremation deposits will be 100% excavated. Domestic/industrial activity (such as walls, postholes, floors, hearths) will be sufficiently excavated to understand their form and function and to recover potential dating evidence and artefact and ecofact assemblages.

4.2.9 Area deposits, such as buried soils, or middens, will be hand excavated at a minimum 10%. Subsequent excavation by machine will be considered. Large intrusions, such as reservoirs, will be sufficiently excavated by machine, within safe limits, to provide information on their character.

4.2.10 Limited representative samples of bricks from brick-built structures, and selective products of the brick working proves will be retained for specialist analysis where appropriate.

4.2.11 Any human remains discovered will initially be left *in-situ* and, if removal is deemed necessary, this will be undertaken in accordance with the relevant Ministry of Justice regulations and in discussion with the PDNPA's Senior Conservation Archaeologist.

4.2.12 Finds of "treasure" will be reported to the Coroner in accordance with the Treasure Act (DCMS 2008). The PDNPA's Senior Conservation Archaeologist and the Portable Antiquities Finds Liaison Officer will also be notified.



HM Coroner:
Dr Robert Hunter
St Katherine's House,
St. Mary's Wharf
Mansfield Road
Derby
Derbyshire
DE1 3TQ
Tel: 01332 613014

Finds Liaison Officer:
Alastair Willis
Museum and Art Gallery
The Strand
Derby
Derbyshire
DE1 1BS
Tel: 01332 641 903

4.2.13 A site meeting may need to be arranged with the PDNPA's Senior Conservation Archaeologist and the Portable Antiquities Liaison Officer to determine if further investigation in the vicinity of the findspot is required.

4.2.14 For deposits that have potential for providing environmental or dating evidence, a minimum of 40 litres of sample will be taken, or 100% if the sample is smaller. This material will be floated and passed through graduated sieves, the smallest being a 500µ mesh. Should other types of environmental deposits be encountered, appropriate specialist advice will be sought and an appropriate sampling strategy devised. Samples will be assessed by a suitable specialist with provision for further analysis as required. Advice from the Historic England Science Advisor will be taken as appropriate.

4.2.15 All staff employed on the project will be suitably qualified and experienced for their respective project roles and have practical experience of archaeological excavation and recording. All staff will be made aware of the archaeological importance of the area surrounding the site and will be fully briefed on the work required by this specification. Each member of staff will be fully conversant with the aims and methodologies of the trenching and will be given a copy of this WSI to read.

4.3 Recording

4.3.1 The site will be accurately tied into the National Grid and located on a 1:2500 or 1:1250 map of the area. The site will be recorded using a single context planning system in accordance with the ARS Ltd field recording manual.

4.3.2 A full and proper record (written, graphic and photographic as appropriate) will be made for all work, using pro-forma record sheets and text descriptions appropriate to the work. Accurate scale plans and section drawings will be drawn where required at 1:50, 1:20 and 1:10 scales, as appropriate. In addition to relevant illustrations, provision for rectified photographic recording shall be made, if deemed necessary.

4.3.3 The stratigraphy of the site will be recorded even where no archaeological deposits have been identified.

4.3.4 All archaeological deposits and features will be recorded with above ordnance datum (AOD) levels.

4.3.5 A photographic record of all contexts will be taken using a digital camera (10 megapixel or greater), and will include a clearly visible, graduated metric scale. A register of



all photographs will be kept. A selection of working shots will be taken to demonstrate how the site was investigated and what the prevailing conditions were like during excavation.

4.3.6 Where stratified deposits are encountered, a 'Harris' matrix will be compiled.

4.4 Finds Processing and Storage

4.4.1 All finds processing, conservation work and storage of finds will be carried out in accordance with the Chartered Institute for Archaeologists' (2014d) *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials*, the UKIC (1990) *Guidelines for the Preparation of Archives for Long-Term Storage and Procedures for the Deposition of Archaeological Archives from Derbyshire at Buxton Museum and Art Gallery* (Museums of Derbyshire 2016).

4.4.2 Artefact collection and discard policies will be appropriate for the defined purpose.

4.4.3 Bulk finds which are not discarded will be washed and, with the exception of animal bone, marked. Marking and labelling will be indelible and irremovable by abrasion. Bulk finds will be appropriately bagged, boxed and recorded. This process will be carried out no later than two months after the end of the excavation.

4.4.4 All small finds will be recorded as individual items and appropriately packaged (e.g. lithics in self-sealing plastic bags and ceramic in acid-free tissue paper). Vulnerable objects will be specially packaged and textile, painted glass and coins stored in appropriate specialist systems. This process will be carried out within two days of the small find being excavated.

4.4.5 During and after the excavation all objects will be stored in appropriate materials and storage conditions to ensure minimal deterioration and loss of information (including controlled storage, correct packaging, and regular monitoring, immediate selection for conservation of vulnerable material). All storage will have appropriate security provision.

4.4.6 The deposition and disposal of artefacts will be agreed with the legal owner and the recipient museum prior to the work taking place. All finds except treasure trove are the property of the landowner.

4.4.7 All retained artefacts and ecofacts will be cleaned and packaged in accordance with the requirements of the recipient museum, i.e. Buxton Museum & Art Gallery.

4.5 Report

4.5.1 A report shall be produced to include background information, a summary of the works carried out and a description and interpretation of the findings. The report will also include the following.

- ◆ A non-technical summary
- ◆ Introduction
- ◆ Geological and topographical setting
- ◆ Methodology
- ◆ Discussion of archaeological and historical background



- ◆ Discussion on the results of the evaluation
- ◆ Specialist descriptions of artefacts or ecofacts
- ◆ An indication of potential archaeological deposits not disturbed by the present development
- ◆ Conclusions and recommendations
- ◆ Sources
- ◆ Copy of the WSI and OASIS form.
- ◆ A location plan showing all excavated areas with respect to nearby fixed structures and roads
- ◆ Illustrations of all archaeological features with appropriately scaled hachured plans and sections

4.5.2 One bound copy of the final report with a digital copy of the report in PDF/A format on disk will be deposited with the Derbyshire HER and PDNPA HBSMR. A copy of the report will be uploaded as part of the OASIS record (see below) for online access via the Archaeological Data Service.

5 ARCHAEOLOGICAL WATCHING BRIEF

5.1 Coverage

5.1.1 An archaeological watching brief during topsoil stripping should be undertaken in Area 1 and, depending on the outcome of the trenching in Areas 2 and 3, potentially in these areas as well. Should significant archaeological remains be identified within the stripped areas, the works will be scaled up to a strip, map and record excavation.

5.2 General Statement of Practice

5.2.1. All elements of the archaeological watching brief will be carried out in accordance with the Chartered Institute for Archaeologist (CIfA) *Code of Conduct* (2014a) and will follow the CIfA's *Standards and Guidance for Archaeological Watching Briefs* (2014b).

5.2.2. All staff employed on the project will be suitably qualified for their respective roles and have substantial experience of archaeological excavation and recording. All staff will be made aware of the archaeological importance of the area surrounding the site and will be fully briefed on the work required by this specification.

5.2.3 All ground works covered under this specification will be undertaken by a suitable mechanical excavator fitted with a toothless ditching bucket. If significant archaeological features are identified, the PDNPA's Senior Conservation Archaeologist will be notified and a decision taken as soon as is practicable as to the best method of proceeding.

5.2.4 ARS Ltd will ensure that heavy plant or machinery will not be operated in the immediate vicinity of any archaeological remains until they have been recorded.

5.2.5 Contractors and plant operators will be notified that any observations of archaeological remains must be reported to the archaeologist on site. Regular contact will



be ensured between ARS Ltd and the site project manager to ensure that ARS Ltd is kept up to date with site works and given the change to respond appropriately and in line with the PDNPA's Senior Conservation Archaeologists requirements.

5.2.6 All site operations will be carried out in a safe manner in accordance with ARS Ltd's health and safety policy. A risk assessment will be prepared before commencement on site.

5.2.7 The on-site archaeologist will be fully apprised of the archaeological potential of the site and will be given, at his/her request, the opportunity to stop site work to investigate potential archaeological features. Adequate time will be negotiated and allowed for recording any such features.

5.3 Excavation and Sampling

5.3.1 The site will be recorded in accordance with the ARS Ltd field recording manual and single context recording system, and will include at a minimum context record sheets, an accurate site plan and record photography where no archaeological features are present.

5.3.2 Topsoil will be removed by a tracked or wheeled excavator using a toothless ditching bucket under continuous archaeological supervision. The topsoil and subsoil will be removed down to the first significant archaeological horizon in successive level spits.

5.3.3 Where archaeological features and/or deposits are identified during the archaeological works, then a sufficient quantity of the said features will be investigated by hand to allow their date, nature and degree of survival to be ascribed.

5.3.4 All excavated spoil will be scanned visually to recover small finds. Finds so recovered will be recorded with their location of origin ascribed. Finds will be retained and recorded.

5.3.5 Isolated, discrete features, such as non-structural pits or features representing industrial activities, will be 50% sampled. If they produce artefacts then provision is made for full excavation.

5.3.6 For sealed and stratigraphically secure deposits that have the potential to provide environmental evidence relating to diet and economy, dating evidence or land-use regime, a minimum sample of 40 litres will be taken, or 100% of the sample if smaller.

5.3.7 In the case of waterlogged or anaerobic deposits, a minimum sample size of 20 litres will be taken.

5.3.8 Should a sequence of superimposed deposits of note be present, column sampling may be considered.

5.3.9 Samples will be floated and passed through graduated sieves, the smallest being a 500 μ mesh. In all instances, sampling strategies will be in accordance with guidelines issued by Historic England's *Environmental Archaeology: A Guide to the Theory and Practice Methods, from sampling and recovery to post excavation* (Campbell *et al.* 2011). Advice from the Historic England Regional Science Adviser will be taken as appropriate.

5.3.10 Any human remains will initially be left *in situ* and, if removal is deemed necessary, this will be undertaken once a Coroners licence has been obtained and in accordance with the relevant Ministry of Justice regulations and in discussion with the PDNPA's Senior Conservation Archaeologist.



5.3.11 Finds of "treasure" will be reported to the Coroner in accordance with the Treasure Act (DCMS 2008). The Portable Antiquities Liaison Officer will also be notified.

HM Coroner
5-6 Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL
Tel: 01246 201391

Finds Liaison Officer
Derby Museum and Art Gallery
The Strand
Derby
Derbyshire
DE1 1BS
Tel 01332 641 903

5.3.12 The PDNPA's Senior Conservation Archaeologist will also be notified and, if necessary, a site meeting arranged to determine if further investigation in the vicinity of the find spot is required.

5.4 Recording

5.4.1 The site will be accurately tied into the National Grid and located on a 1:2500 or 1:1250 scale map of the area. The site will be recorded in accordance with the ClfA guidance and the ARS Ltd field recording manual.

5.4.2 A full and proper record (written, drawing and photographic as appropriate) will be made for all work, using pro-forma record sheets and text descriptions appropriate to the work. A plan of the excavated areas will be maintained, features noted and section lines recorded. All drawings will be carried out at an appropriate scale and all contexts will be recorded using a single context recording system. Sample representative levels will be taken to record the maximum depth of excavation and/or natural should no archaeological features be uncovered.

5.4.3 The heights above UK mean sea level will be recorded for all deposits and features in metres above Ordnance Datum (aOD).

5.4.4 Site photography will be in high resolution (10 megapixel or greater) colour DSLR photography. Photographic images will comprise general site working shots, images of the excavation area and separately images of individual features and groups of features. Photographs will include a suitable photographic scale (where appropriate) and will be recorded on a photographic register.

5.4.5 A stratigraphy of the site will be recorded even where no archaeological deposits have been identified.

5.4.6 Where stratified deposits are encountered, a 'Harris' matrix will be compiled.

5.5 Finds Processing and Storage

5.5.1 All finds processing, conservation work and storage of finds will be carried out in accordance with the Chartered Institute for Archaeologists' (2014d) *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials*, the UKIC (1990) *Guidelines for the Preparation of Archives for Long-Term Storage and Procedures for the Deposition of Archaeological Archives from Derbyshire at Buxton Museum and Art Gallery* (Museums of Derbyshire 2016).



5.5.2 Artefact collection and discard policies will be appropriate for the defined purpose. Artefacts from all stratified archaeological entities or suspected archaeological entities will be collected.

5.5.3 Bulk finds which are not discarded will be washed and marked. Marking and labelling will be indelible and irremovable by abrasion. Bulk finds will be appropriately bagged, boxed and recorded. This process will be carried out no later than two months after the end of the excavation.

5.5.4 All small finds will be recorded as individual items and appropriately packaged (e.g. lithics in self-sealing plastic bags and ceramic in acid-free tissue paper). Vulnerable objects will be specially packaged and textile, painted glass and coins stored in appropriate specialist systems. This process will be carried out within two days of the small find being excavated.

5.5.5 During and after the archaeological works all objects will be stored in appropriate materials and storage conditions to ensure minimal deterioration and loss of information (including controlled storage, correct packaging, and regular monitoring, immediate selection for conservation of vulnerable material). All storage will have appropriate security provision.

5.5.6 The deposition and disposal of artefacts will be agreed with the legal owner and Buxton Museum and Art Gallery, prior to the work taking place. All finds, except treasure trove, are the property of the landowner.

5.5.7 All retained artefacts and ecofacts will be cleaned and packaged in accordance with the requirements of Buxton Museum and Art Gallery.

5.6 Report

5.6.1 Following completion of the fieldwork, ARS Ltd will produce a report which will include the following.

- ◆ Non-technical executive summary
- ◆ Introductory statement
- ◆ Aims and purpose of the project
- ◆ Methodology
- ◆ A location plan showing all excavated areas and any archaeological features with respect to nearby fixed structures and roads
- ◆ Illustrations of all archaeological features with appropriately scaled hachured plans and sections
- ◆ An objective summary statement of results
- ◆ Conclusions
- ◆ Supporting data – tabulated or in appendices to include
 - ◆ Specialists Reports
 - ◆ Structural and Stratigraphic details



- ◆ Index to archive and details of archive location
- ◆ References
- ◆ Statement of intent regarding publication
- ◆ Confirmation of archive transfer arrangements
- ◆ A copy of this WSI and OASIS form

5.6.2 One bound copy of the final report with a digital copy of the report in PDF/A format on disk will be deposited with the Derbyshire HER and PDNPA HBSMR. A copy of the report will be uploaded as part of the OASIS record (see below) for online access via the Archaeological Data Service.

6 MONITORING ARRANGEMENTS

6.1 Ideally, two weeks' notice of prior commencement of the archaeological works will be given to the PDNPA's Senior Conservation Archaeologist in order that arrangements for monitoring the ground works may be made.

Natalie Ward
Senior Conservation Archaeologist
Peak District National Park Authority
Aldern House
Baslow Road
Bakewell
Derbyshire
DE45 1AE
Tel: 01629 816243.

6.2 The client will afford reasonable access to the PDNPA's Senior Conservation Archaeologist or their representative, for the purposes of monitoring the archaeological works. ARS Ltd will liaise with the client and the PDNPA's Senior Conservation Archaeologist at regular intervals throughout the course of the work.

7 TIMETABLE, STAFFING AND RESOURCES

6.1 The outline timetable for the works is as follows. This will be updated by email as the project progresses.

Proposed Commencement Date	Task
Mid- May 2018 onwards	Archaeological watching brief of Area 1
Mid-May 2018 onwards	Archaeological trial trenching in Areas 2 and 3
Late May-Early June 2018 onwards	Archaeological watching brief of Area 1 report and archive
Late May-Early June 2018 onwards	Archaeological trial trenching in Areas 2 and 3 report and archive



7.2 The Project Manager for the archaeological works will be Reuben Thorpe MCIfA, Senior Projects Manager at ARS Ltd. The archaeological watching brief and supervision of the trial trenching will be carried out by Tom Parker PCIfA, Project Officer with ARS Ltd, or Caitlin Halton, Assistant Project Officer with ARS Ltd. Additional ARS Ltd Archaeological Officers may be allotted to the project as necessary and required.

7.3 Specialist analyses will be carried out by appropriately qualified specialist as detailed subject to availability.

- | | |
|---|---|
| ◆ Flint and prehistoric pottery: | Dr Robin Holgate MCIfA |
| ◆ Romano-British pottery: | Dr Phil Mills MCIfA |
| ◆ <i>Terra Sigillata</i> : | Dr Gwladys Monteil |
| ◆ Romano-British small finds: | Alex Croom |
| ◆ Medieval and post-medieval pottery: | Dr Chris Cumberpatch/Dr Robin Holgate MCIfA |
| ◆ Medieval and post-medieval clay pipes, glass and metalwork: | Mike Wood MCIfA |
| ◆ Archaeometallurgy and Industrial residues: | Dr Rod MacKenzie |
| ◆ Plant macrofossils and charcoals: | Luke Parker |
| ◆ Human and animal bone: | Milena Grzybowska |
| ◆ Radiocarbon dating: | Prof Gordon Cook (SUERC) |
| ◆ Finds conservation: | Vicky Garlick (Durham University) |

8 ARCHIVE DEPOSITION

8.1 Should the project produce no archaeologically significant finds, then it is not necessary to deposit an archive with the repository museum, which in this case is the Buxton Museum & Art Gallery. This is in line with the Museums of Derbyshire (2016) *Procedures for the Transfer of Archaeological Archives*.

8.2 If the project produces archaeologically significant finds, then the PDNPA's Senior Conservation Archaeologist and Museum Curator will be notified at the earliest opportunity, and an accession number will be produced for the site. In addition, a paper and artefactual archive and any appropriate digital archive will be prepared by ARS Ltd, consisting of all primary written documents, plans, sections, photographs and electronic data (in a format to be agreed by the Buxton Museum & Art Gallery). High resolution digital photographs would, in discussion with the PDNPA's Senior Conservation Archaeologist, be submitted to the Archaeological Data Service (ADS) digital archive repository with the associated photographic registers and metadata. The digital archive will be prepared in line with current best practice outlined in *Archaeology Data Service/Digital Antiquity Guides to Good Practice* (ADS/Digital Antiquity 2011). The archive will be deposited in line with the ClfA



(2014e) *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*, Society of Museum Archaeologists (1993) *Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland* and Museums of Derbyshire (2016) *Procedures for the Transfer of Archaeological Archives* and will be deposited within two months of the completion of the report. The PDNPA's Senior Conservation Archaeologist and Museum Curator will be notified in writing on completion of the fieldwork with projected dates for the completion of the report and deposition of the archive. The date for deposition of the archive will be confirmed in the report and the PDNPA's Senior Conservation Archaeologist informed in writing on final deposition of the archive.

8.3 All artefacts and associated material will be cleaned, recorded, properly stored and deposited in the archive (see section 5.4 above).

8.4 A full set of annotated, illustrative pictures of the site, excavation, features, layers and selected artefacts will be deposited with the archive as digital images on a CD ROM.

8.5 At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> will be initiated and key fields completed on Details, Location and Creators forms. All parts of the OASIS online form will be completed for submission to the HER. This will include an uploaded .pdf version of the entire report (a paper copy will also be included within the archive).

8.6 Written confirmation of the archive transfer arrangements, including a date (confirmed or projected) for the transfer, will be included as part of the final report.

8.7 The PDNPA's Senior Conservation Archaeologist will be notified of the final deposition of the archive.

9 GENERAL ITEMS

9.1 Health and Safety

9.1.1 All work will be carried out in accordance with The Health and Safety at Work Act 1974. Specific health and safety policies exist for all our workplaces and all staff employed will be made aware of the policy and any relevant issues. The particular risks involved with this project will be assessed, recorded and relevant mitigation measures put in place as part of a full risk assessment, which will be compiled in advance of fieldwork and will be read and signed by all on-site operatives. ARS Ltd retains Citation as its expert health and safety consultants and the appointed Health and Safety Officer for the company is Tony Brennan.

9.2 Insurance Cover

9.2.1 ARS Ltd has full insurance cover for employee liability (£10 million), public liability (£5 million), professional indemnity (£5 million) and all-risks cover.

9.3 Community Engagement and Outreach

9.3.1 Any opportunities for engaging the local community in any archaeological findings should be sought, for example a guided site tour and/or dissemination of information via ARS Ltd's website and local media.



9.4 Publication and dissemination

9.4.1 If significant archaeological remains are recorded, a summary of the project with, if appropriate, selected drawings, illustrations and photographs will be submitted within 2 years of the completion of the project to Derbyshire Archaeological Journal for publication and, potentially, other appropriate publications (e.g. Archaeology Conservation in Derbyshire).

9.5 Changes to the Written Scheme of Investigation

9.5.1 Changes to the approved methodology or programme of works will only be made with prior written approval of the PDNPA's Senior Conservation Archaeologist.

9.6 Publicity and Copyright

9.6.1 Any publicity will be handled by the client. ARS Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

10 REFERENCES

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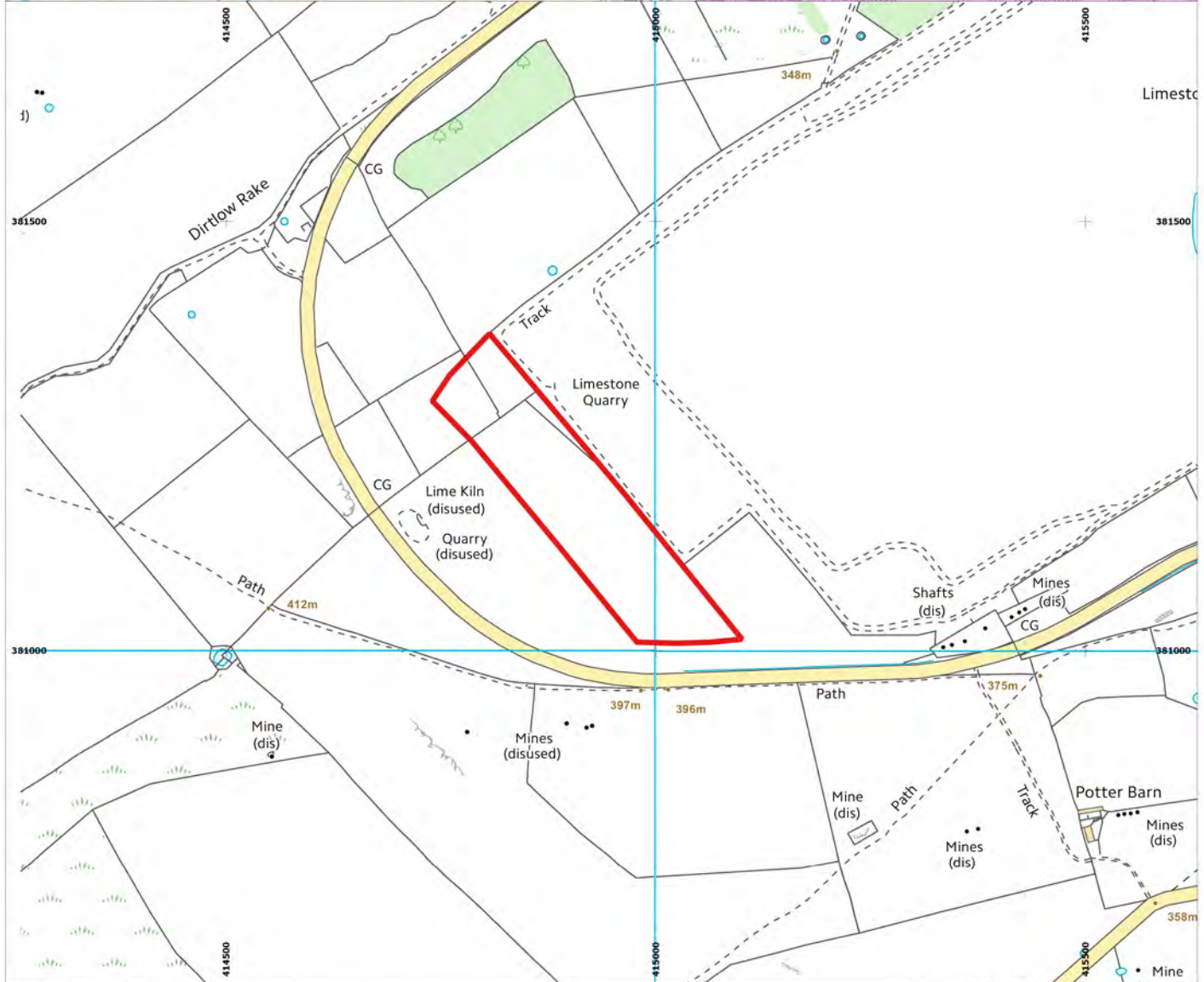
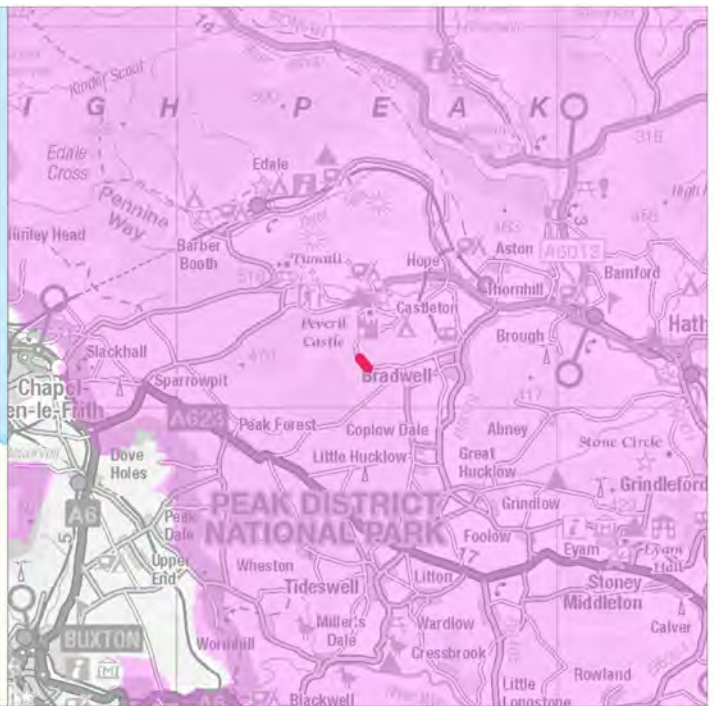
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FIGURES





Site name: Hope Limestone Quarry,
Castleton
Date: May 2018
Drawn by: MB/AB
Scale: Varies

**Figure 1:
Site location**

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Ordnance Survey © Crown Copyright 2015. All rights reserved. Licence number 100022432

Peak District National Park
Area to be stripped

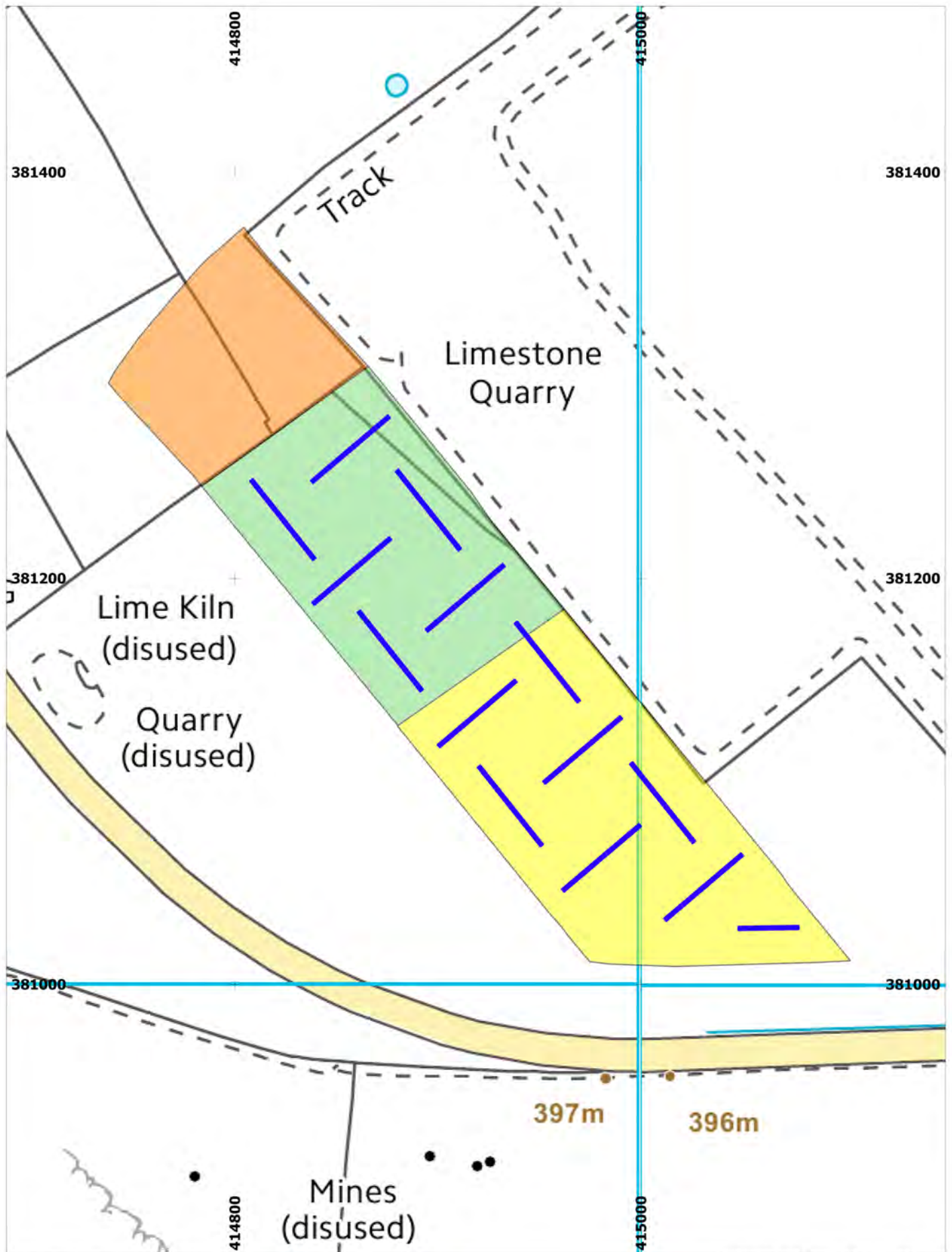


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www.archaeologicalresearchservices.com



Site name: Hope Limestone Quarry, Castleton
 Date: May 2018
 Drawn by: AB
 Scale: 1:2500 @ A4

- Area 1 (Watching Brief)
- Area 2
- Area 3
- Proposed trenches



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Figure 2:
Strip areas and proposed trench locations

Appendix IV. OASIS Form.

OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

[Printable version](#)

OASIS ID: [archaeol5-318879](#)

Project details

Project name	Archaeological Evaluation Trenching at Hope Limestone Quarry, Castleton, Derbyshire
Short description of the project	In May 2018 Archaeological Research Services Ltd was commissioned by Breedon Cement Ltd to undertake archaeological evaluation trenching in an area of proposed expansion immediately to the south-east of the existing Hope Limestone Quarry, Castleton, Derbyshire. Fourteen untargeted trenches were excavated (thirteen measuring 50x2m and one measuring 30x2m) revealing varied depths of topsoil and subsoil overburden over the top of limestone bedrock in Areas 2 and 3 of the proposed development. A single feature was identified as a naturally occurring sinkhole/solution hollow in Trench 10 of the evaluation. Sample excavation of the feature revealed three naturally accumulated fills within a bowl-shaped depression that continued beyond the limit of excavation. No material culture was observed or recovered during the evaluation.
Project dates	Start: 22-05-2018 End: 31-05-2018
Previous/future work	Yes / Not known
Type of project	Field evaluation
Monument type	N/A None
Significant Finds	N/A None
Methods & techniques	"Targeted Trenches"
Development type	Mineral extraction (e.g. sand, gravel, stone, coal, ore, etc.)
Prompt	Planning condition
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	DERBYSHIRE HIGH PEAK HOPE Hope Limestone Quarry
Study area	1360 Square metres
Site coordinates	SK 14921 81161 53.326886642527 -1.775947304814 53 19 36 N 001 46 33 W Point

Project creators

Name of Organisation	Archaeological Research Services Ltd
Project brief originator	Archaeological Research Services Ltd
Project design originator	Archaeological Research Services Ltd

Project director/manager Tony Brennan
Project supervisor Ben Dyson

Project archives

Physical Archive Exists? No
Digital Archive recipient Peak District National Park Authority
Digital Contents "none"
Digital Media available "Images raster / digital photography", "Survey"
Paper Archive recipient Peak District National Park Authority
Paper Contents "none"
Paper Media available "Context sheet", "Drawing", "Report"

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)
Title Archaeological Evaluation Trenching at Hope Limestone Quarry, Castleton, Derbyshire
Author(s)/Editor(s) Dyson, B.
Date 2018
Issuer or publisher Archaeological Research Services Ltd
Place of issue or publication Sale, Greater Manchester

Entered by Ben Dyson (ben.dyson@archaeologicalresearchservices.com)
Entered on 5 June 2018

OASIS:

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