

# Former Thorntons Factory Site, Derwent Street, Belper: An Archaeological Trial Trench Evaluation



**For Robertson (Yorkshire and East Midlands) on behalf of  
Derbyshire County Council**

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## Summary

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- Trent & Peak Archaeology was commissioned by Robertson (Yorkshire and East Midlands), on behalf of Derbyshire County Council, to carry out an archaeological trial trench evaluation at the Former Thorntons Factory Site, Derwent Street, Belper, Derbyshire (National Grid Reference SK 34579 47431). The work was undertaken in April 2018 in advance of redevelopment as part of Amber Valley Borough Council Planning Application (Ref. AVA/2017/0588).
- The town of Belper is situated eight miles north of Derby and is in the valley of the River Derwent. The development area lies further west within the town limits of Belper, and is bounded to the north by Derwent Street and to the east, south and west by commercial properties.
- The factory site is located within the Derwent Valley Mills World Heritage Site and the Belper and Milford Conservation area.
- An earlier desk-based assessment (hereafter DBA) produced by TPA (Davies 2014) quantified the potential for buried archaeological remains within the proposed development area. These broadly constitute probable buried archaeological remains of post-medieval or later date relating to earlier structures associated with the factory fronting Derwent Street and an area of post-medieval settlement along Bridge Street/Chapel Street, within the development area, which is visible in historic mapping from c.1767 onwards. In order to establish the presence and level of preservation of these suspected remains, a program of archaeological evaluation was devised following consultation with Amber Valley Borough Council planning authority and Steve Baker, County Archaeologist for Derbyshire County Council (DCC).
- Given the possibility of later truncation through continued development, the potential for 18<sup>th</sup>-19<sup>th</sup> century sub-surface archaeological features within the development area are considered low to moderate. The standing buildings adjacent to the site, particularly those fronting Bridge Street which form the structural setting of the earlier backplots, have been heavily added to, but may contain reasonably well preserved remains belonging to the later c.18<sup>th</sup>-20<sup>th</sup> century development.
- The program of archaeological mitigation comprised the excavation of five 1.8 x 10-15m trenches providing a 2% sample of the total 5839.3m<sup>2</sup> development area in accordance with the planning decision notice.
- The trenches were evenly distributed across the site and were designed to target the areas of probable post-medieval archaeological significance.
- This trial trench evaluation positively identified a number of post-medieval and early modern deposits relating to early eighteenth and nineteenth century expansion of the town and the development of the Derwent Valley Mills World Heritage Site. Archaeological features were present within 4 of the 5 trenches, with a concentration of features observed within trench 05.
- A rapid site assessment of all brickwork revealed that they conform to standardised British sizes dating from c.1840-1970, but are more likely to represent a later nineteenth century construction.
- Given the presence of c.19<sup>th</sup>-20<sup>th</sup> century archaeological remains positively identified during this trial trench evaluation, it is likely that further mitigation may be required in the area of trench 05 and the Trench 01 culvert.
- The potential for significant buried archaeological deposits within the PDA remain low.



## Contents

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Summary .....	4
Contents .....	5
Figures .....	5
Plates .....	5
Appendices .....	6
Acknowledgements .....	7
1 Introduction .....	8
2 Site Location and Background .....	8
3 Planning Background and Proposed Development .....	9
4 Topography and Geology .....	9
5 Historical and Archaeological Background .....	10
6 Relevant Legislation and Guidance .....	11
7 Regional Research Objectives .....	12
8 Site Specific Objectives and Methodology .....	13
8.1 Objectives .....	13
9 Results .....	14
10 Discussion and Conclusions .....	16
11 Bibliography .....	17

## Figures

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Figure 1:	Location Map
Figure 2:	Site Plan- Scale @ A4: 1:50
Figure 3:	Plan of Trench 01 @ 1:75
Figure 4:	Section Drawing 01
Figure 5:	Plan of Trench 02 @ 1:75
Figure 6:	Section Drawing 02
Figure 7:	Plan of Trench 03 @ 1:75
Figure 8:	Section Drawing 03
Figure 9:	Plan of Trench 04 @ 1:75
Figure 10:	Section Drawings 04-05
Figure 11:	Plan of Trench 05 @ 1:75

## Plates

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Plate 1:	Pre-ex overview of trench 1, looking north-east.
Plate 2:	Pre-ex overview of trench 1, looking west.
Plate 3:	Oblique view of culvert 0104 within 4, looking east.
Plate 4:	Pre-ex overview of trench 2, looking north.
Plate 5:	Pre-ex overview of trench 2, looking south.
Plate 6:	East facing section of manhole [0201] within trench 2, looking west.
Plate 7:	Pre-ex overview of trench 3, looking east.

Plate 8:	Pre-ex overview of trench 3, looking west
Plate 9:	North facing section of wall foundation 0302 within trench 3, looking south.
Plate 10:	North-west facing section of trench 4, looking south-east.
Plate 11:	North-west facing section of deposits beneath 0402 within trench 4, looking south-east.
Plate 12:	Plan view of brick path 0402 within trench 4, looking north-east.
Plate 13:	Pre-ex overview of trench 5 showing demolition spread (0501), looking east.
Plate 14:	Plan view of wall 0502 in the foreground and wall 0503 in the background, with wall 0505 running east to west between on the right within trench 5, looking east.
Plate 15:	Plan view of wall 0503 in the foreground and wall 0502 in the background, with wall 0505 running east to west between on the left within trench 5, looking east.
Plate 16:	Plan view of (0504) within trench 5, looking north.

## Appendices

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Appendix 1:	Trench logs
Appendix 2:	Archive Arrangements
Appendix 3:	OASIS data collection form

## Acknowledgements

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The project was managed for TPA by Tom Hooley and the fieldwork was undertaken by Project Officer Kath Bentley. The figures included in this report were produced by Norma Oldfield. Robertson (Yorkshire and East Midlands) is thanked for commissioning the work on behalf of Derbyshire County Council. The project was monitored by Steve Baker, County Archaeologist for Derbyshire County Council.

# 1 Introduction

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- 1.1 Trent & Peak Archaeology was commissioned by Robertson (Yorkshire and East Midlands), on behalf of Derbyshire County Council, to carry out an archaeological trial trench evaluation at the Former Thorntons Factory Site, Derwent Street, Belper, Derbyshire (National Grid Reference SK 34579 47431) (Figure 1). The work was undertaken in April 2018 in advance of redevelopment as part of Amber Valley Borough Council Planning Application (Ref. AVA/2017/0588).
- 1.2 Provisional permission was granted for the redevelopment upon the satisfactory completion of a program of archaeological mitigation. This constitutes pre-commencement condition 24, undertaken in accordance with policy EN31 of the adopted Amber Valley Borough Local Plan 2006 (Townsend 2017) (See Section 3).
- 1.3 An earlier desk-based assessment (hereafter DBA) produced by TPA (Davies 2014) quantified the potential for buried archaeological remains within the proposed development area. These broadly constitute probable buried archaeological remains of post-medieval or later date relating to earlier structures associated with the factory fronting Derwent Street and an area of post-medieval settlement along Bridge Street/Chapel Street, within the development area, which is visible in historic mapping from c.1767 onwards. In order to establish the presence and level of preservation of these suspected remains, a program of archaeological evaluation was devised following consultation with Amber Valley Borough Council planning authority and Steve Baker, County Archaeologist for Derbyshire County Council (DCC).
- 1.4 A Written Scheme of Investigation (WSI) was subsequently submitted by TPA and approved by the DCC. The WSI stated that the fieldwork be carried out in accordance with appropriate professional standards, as defined in the Chartered Institute for Archaeologists' (CIfA) *Standard & Guidance for archaeological field evaluation* (2014b).
- 1.5 The overall study has employed the methodology developed by TPA for use on similar projects in the region. This methodology conforms to the standard requirements of planning authorities where consent applications are made for development. These follow guidelines presented in the *National Planning Policy Framework* (DCLG 2012) which replaces conservation planning document *Planning Policy Statement 5: Planning for the Historic Environment* (PPS 5 2010).
- 1.6 The TPA site code is BDE2.

# 2 Site Location and Background

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- 2.1 The town of Belper is situated eight miles north of Derby and is in the valley of the River Derwent. The development area lies further west within the town limits of Belper, and is bounded to the north by Derwent Street and to the east, south and west by commercial properties.
- 2.3 The scheme of archaeological fieldwork comprised the excavation of five trenches across the total 5839.3m<sup>2</sup> redevelopment area, with the aim of targeting earlier c.18<sup>th</sup> century backplot divisions and the former factory frontage. The strategy for archaeological mitigation was devised under the guidance of the Amber Valley Borough Council planning decision.



### 3 Planning Background and Proposed Development

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- 3.1 A planning application was submitted to Amber Valley Borough Council (planning ref: AVA/2017/0588) for the construction of an integrated care centre, with associated landscaping and car parking.
- 3.2 The 2017 planning decision (ref: AVA/2017/0588) reflects the clients obligation to satisfactorily complete a program of archaeological mitigation set out in the planning decision notice (Townsend 2017), as recommended by the DBA (Davies 2014).
- 3.3 To facilitate development on land at the former Thornton's Factory site, which may contain *in-situ* archaeological deposits, the results of the earlier desk-based assessment (Davies 2014), alongside further consultation with the DCC, suggested that the best course of action was to undertake a trial trench evaluation. Planning permission was granted to the development area in 2017, which suggested that a planning condition be placed on the development area. This stated that:

*"No development shall take place until a Written Scheme of Investigation has been submitted and approved by the Local Planning Authority in writing, and until any pre-start element of the approved scheme has been completed to the written satisfaction of the Local Planning Authority. The scheme shall include an assessment of significance and research questions and;*

- *The program and methodology of site investigation and recording;*
- *The program for post investigation assessment ;*
- *Provision for site investigation analysis and recording;*
- *Provision for publication and dissemination of site archive and records;*
- *Provision for archive deposition;*

### 4 Topography and Geology

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- 4.1 Topographically, the landscape of the town of Belper is undulating with several large hills, peaking at a high of c.173m AOD at the northern end of town. The historic core of Belper developed on a hillside overlooking the Derwent Valley to the west and the Coppice Brook to the south. The development area lies at a height of c.65m AOD.
- 4.2 The underlying geology of the development area comprises a sedimentary bedrock of Ashover Grit formation, a sandstone bedrock formed between 320 and 322 million years ago in the Carboniferous Period. Superficial deposits of Allenton Terrace Sand and Gravel have also been recorded. These deposits formed up to 3 million years ago in the Quaternary Period (BGS Accessed 2018).
- 4.3 The overlying soils are characterised as freely draining slightly acid loamy soils ([www.landis.org.uk/soilscapes](http://www.landis.org.uk/soilscapes)).

## 5 Historical and Archaeological Background

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- 5.1 A comprehensive DBA of the development area (Davies 2014), in addition to a Historic Building Record of the now demolished factory buildings (Collins and Hurford 2017), have been produced by Trent & Peak Archaeology. The archaeological and historical background provided below is therefore a summary of both of these documents.
- 5.2 The factory site is located within the Derwent Valley Mills World Heritage Site and the Belper and Milford Conservation area.
- 5.3 The DBA identified no designated heritage assets within the development area. One non-designated heritage asset is located within the boundaries of the site towards the southern access route; a polygon defining the greatest extent of the curtilage of the Central Methodist Chapel which is depicted as a walled burial ground, as labelled by the c.1880 OS map.

### 5.4 Prehistoric

- 5.4.1 Prehistoric material is restricted to a single Bronze Age find, a battle-axe hammer (MDR4678), located >200km northeast of the site. No archaeological sites have been identified within a 1km study area. The western (unbuilt) part of the site may represent genuine limited activity.

### 5.2 Roman/Early Medieval

- 5.2.1 Possible Roman remains are restricted to a possible Roman kiln site identified during ploughing at the extreme west of the study area and beyond the River Derwent. No Early Medieval archaeology has been identified within a 1km study area. The Domesday record of c.1086 documents land around the current boundaries of Belper as bounded with Duffield under the lordship of Henry de Ferrers.

### 5.3 Medieval

- 5.3.1 The name Belper is a modern derivative of '*Beau-repaire*', which references the French 'Beautiful Retreat', belonging to a c.13<sup>th</sup> hunting lodge, then under the ownership of the 1<sup>st</sup> Earl of Lancaster (Turbutt 1999). Within the churchyard of St John the Baptist (MDR4681), the medieval focus of Belper, there are remains of a medieval cross (MDR4681) and to the west, on Green Lane, a findspot of Medieval pottery (MDR9685). Further pottery and carved stone heads of 15-17<sup>th</sup> century date were recovered from Ingle's channel (MDR7787). Little Belper Park (MDR4679) was formerly a deer park and still contains some evidence of ridge and furrow. These features indicate a medieval presence within the wider study area.

### 5.4 Post Medieval (c.1485-1750)

- 5.4.1 Post Medieval non-designated heritage assets are restricted to the Turnpike Roads running from Ashbourne to Openwoodgate (MDR11619) and Duffield to Wirksworth (MDR11703), a packhorse route from Farnah Green to Milford (MDR11938), a stone trough (MDR9888) and, in the western extent of the study area, a c.17<sup>th</sup>-18<sup>th</sup> cornmill (MDR8570). During the post medieval period, Belper was a small but thriving large village/small town that functioned as a nail making centre with several open quarries. It also possessed a main road (Bridge Foot/Street) with several Inns and a crossing point for the River Derwent which would surely have ensured a regular flow of travellers through the area.
- 5.4.2 The Belper Extensive Urban Survey (EUS) suggest that the eastern and north-eastern parts of the proposed redevelopment area may lie at the western extent of an area of post medieval settlement along Bridge Street perhaps originating in the 1600's. Indeed, the historic maps, from c.1767 onwards, do appear to indicate some level of settlement in the northeast part of the proposed redevelopment area. Furthermore, the northeast part of the proposed redevelopment area does retain something of its earlier character, including early back-plot proportions radiating west from Chapel Street.

## 5.5 Modern (c.1750-present)

- 5.5.1 During the late 18<sup>th</sup> and early 19<sup>th</sup> century, Belper experienced a rapid expansion from a small settlement rooted in agriculture, to a thriving town. Much of Belper's expansion was due to the Strutts, a family of manufacturers. The Strutt's fame and fortune originated with Jedediah Strutt (1726-1797), inventor of the Derby rib machine, who began building mills in 1773 at first with his partners Richard Arkwright and Samuel Need. By 1780, Strutt had built his own cotton-spinning mills at Belper. The construction of water-powered cotton mills in Belper in the late eighteenth-century, the first of which was only the second in the world at the time, proved to be the catalyst for rapid expansion of the town (north of the medieval core), changing the focus of the town from nail making to textile production. Transport infrastructure was dramatically improved across the period including the construction of the North Midland Mainline railway in 1840. Belper was the first town to be completely fitted with gas lighting in 1850, and it was furnished with telephone connections in 1895.
- 5.5.2 Belper's expansion continued into the 20<sup>th</sup> century with further residential properties constructed across many of the remaining green spaces within the town. Belper remained a centre for textile and hosiery production. The public River Gardens, with a new boathouse, tea house and bandstand, were also opened, reaffirming the Strutt family's commitment to welfare and municipal facilities for workers. The family also continued to fund philanthropic projects throughout the early 20<sup>th</sup> century; investments included a town swimming pool, school and memorial gardens for those killed in WWI.
- 5.5.3 The factory site was acquired by the Nottingham Manufacturing Company, a hosiery business, at the start of the 20<sup>th</sup> century. By 1914 it was called *Castle Blouse Factory*. The site underwent several phases of development and reconstruction during the 20<sup>th</sup> century, functioning as WWII aircraft engine storage, entertainment, and continued hosiery manufacture. In 1947 Thorntons acquired the factory, constructing a new boiler house in 1950. Thorntons continued to make additions to the site until the late 20<sup>th</sup> century, including the erection of large factory units to the south of the Derwent Street building. In 1999, Thorntons moved their operations to Alfreton and the site closed.

## 5.6 Archaeological Potential

- 5.6.1 Given the possibility of later truncation through continued development, the potential for 18<sup>th</sup>-19<sup>th</sup> century sub-surface archaeological features within the development area are considered low to moderate. The standing buildings adjacent to the site, particularly those fronting Bridge Street which form the structural setting of the earlier backplots, have been heavily added to, but may contain reasonably well preserved remains belonging to the later c.18<sup>th</sup>-20<sup>th</sup> century development.

# 6 Relevant Legislation and Guidance

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- 6.1 The relationship between developments of this nature and their impact upon the historic environment are dealt with by the *National Planning Policy Framework* (Department for Communities and Local Government 2012), and NPPF Planning Practice Guide *Conserving and Enhancing the Historic Environment* (Department for Communities and Local Government 2014).
- 6.2 In addition to national legislation and policy, Amber Valley Borough Council state in their Local Plan Framework (AVBC 2006/2016):

**"POLICY EN31**

*Planning permission will only be given for development proposals likely to affect a site containing archaeological remains of less than national importance where:*

- a) the application is supported by an assessment and if necessary an archaeological field evaluation, and*

- b) it is demonstrated that the archaeological remains can be preserved in situ and, if not justified, excavation and recording, and*  
*c) preservation in situ is to be carried out in accordance with an agreed scheme*

*The Borough Council will impose conditions on planning permissions or alternatively seek to enter into Section 106 Agreements with developers, to ensure appropriate archaeological investigation and recording, before and during development”.*

- 6.3 The fieldwork was governed by the content of these aforementioned documents, in addition to the Chartered Institute for Archaeologists relevant Standards and Guidance.

## 7 Regional Research Objectives

- 7.1 The programme of archaeological mitigation may reveal evidence that allows research priorities highlighted by regional research frameworks.
- 7.2 The *East Midlands Historic Environment Research Framework (EMHERF) Interactive Digital Resource* hosts a digitised version of *East Midlands Heritage and Updated Research Agenda and Strategy for the Historic Environment of the East Midlands*.
- 7.3 Any evidence uncovered by the investigations should be considered with the guidance provided by the framework in mind. If the evidence significantly contributes to a research question raised by the framework, this may, at the appropriate time, be used to feed this information back via the interactive commenting facility. This allows for the research framework to develop over time and remain relevant.
- 7.4 Research questions highlighted in the framework of particular note to this programme of archaeological mitigation include:

Modern (1750 to Present)
<i>9.1 Urban and Rural Settlements</i>
1. How have industrialisation and population growth impacted upon settlement patterns and the agricultural economy?
<i>9.7 The Growth of Industry</i>
1. What craft industries existed prior to 1850 and can we identify the remains of associated buildings and other structures?
5. How did the wool, cotton, hosiery and lace mills and their water management systems develop and interrelate, and how did the relationship between home and factory production vary?

**Table 1: Relevant Research Questions Highlighted in the Regional Framework**

- 7.5 The work could also contribute to further elucidation on the Derwent Valley Mills World Heritage Site under the following overarching research objective:
- To obtain a better understanding of the origins, development and character of the industrial period remains present within the southern part of the scheme, including, if possible, the recovery of structures and material culture that might illuminate the evolving practices of specific trades, crafts and industries.*



## 8 Site Specific Objectives and Methodology

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### 8.1 Objectives

8.1.1 The general objectives of the fieldwork can be summarised as:

- To identify the presence of any archaeological remains to be affected by any intrusive aspects of the development and to achieve an appropriate level of *preservation by record* in accordance with *NPPF paragraph 128*.
- To investigate the possibility of *in-situ* archaeological deposits relating to the presence of earlier post-medieval backplot land division or pre-industrial features, layers or deposits potentially associated with the Derwent Valley Mills World Heritage Site.

8.1.2 Where practical within the constraints of the archaeological mitigation and development, this will include an assessment of the overall extent, date and state of preservation of archaeological remains.

### 8.2 Methodology

8.2.1 The program of archaeological mitigation comprised the excavation of five 1.8 x 10-15m trenches providing a 2% sample of the total 5839.3m<sup>2</sup> development area in accordance with the planning decision notice.

8.2.2 The trenches were broadly evenly distributed across the site and were designed to target the areas of probable post-medieval archaeological significance.

8.2.3 All work was undertaken by suitably qualified and experienced archaeologists in accordance with accepted archaeological practice and the *Code of Conduct* produced by the Chartered Institute for Archaeologists (CIfA 2014a).

8.2.4 All trenches were excavated using a 360° tracked excavator fitted with a toothless ditching bucket under constant archaeological supervision.

8.2.5 Trenches were excavated to a level at which archaeological deposits/features were present, or in their absence, to a maximum depth of 1.2m to comply with safe working practice.

8.2.6 Topsoil and subsoil was excavated in spits no greater than 100mm and was stored at a safe distance from the trench edge. Spoil was checked for artefacts.

8.2.7 The trenches and any archaeological features were located by GPS, Leica CS15/GS15 RTK Differential GNSS.

8.2.8 Trenches were hand cleaned and a minimum of one long section of each trench was photographed and drawn at 1:50/1:20.

8.2.9 All exposed surfaces were inspected and any archaeological deposits were hand cleaned and recorded where appropriate. Features were characterised through excavation where necessary to obtain datable material and understand the levels of preservation. All contexts were given an individual context number. Plans and sections of all features were drawn on drafting film in pencil at a scale of 1:20, and showed at least context numbers, all colour and textural changes and principal slopes represented as hachures. Digital colour photographs of each context were taken using a DSLR at 7 megapixel minimum resolution. Written records were maintained as laid down in the TPA recording manual.

8.2.10 Where appropriate features were identified, soil samples were retrieved in order to undertake palaeo-environmental sampling. The sampling of features followed procedures set out within the English Heritage Centre of Archaeology Guidelines, Environmental Archaeology 2011. Samples

were processed within the TPA Environmental Lab, under the supervision of TPA Environmental Officer Alison Wilson.

- 8.2.11 All works were carried out in accordance with the approved Written Scheme of Investigation prepared by Trent & Peak Archaeology (Owen 2018) and the Chartered Institute for Archaeologists *Standards and Guidance for an Archaeological Field Evaluation* (ClfA 2014b).

## 9 Results

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### 9.1 Trench 01

- 9.1.1 Trench 01 was located towards the north-east corner of site and was orientated broadly east to west. It measured 14.2m in length, 1.60m in width and was excavated to a maximum depth of 1.08m.
- 9.1.2 Below the existing ground surface material (0100) and underlying hardcore (0101), a deposit of made ground (0107) was encountered. This deposit consisted of firmly compacted light orange brown silty clay, and partially overlaid levelling deposit (0108), comprised of firmly compact dark greenish brown clay loam with frequent inclusions of charcoal flecks. Subsoil (0109) was revealed below (0108), and consisted of friable mid orange brown sandy clay loam. The natural substratum (0110) was revealed at a maximum depth of 1.08m below the existing ground level.
- 9.1.3 A sub-rectangular pit [0102] was encountered towards the western extent of the trench. This feature truncated deposits (0107), (0108) and (0109), and was only visible in the north facing section. It measured 1.48m in width, 0.66m in depth and contained a single mixed fill (0103) of very compact mid reddish grey sand, gravel, brick fragments and cement. Due to its stratigraphic location and inclusions of modern building materials, it is likely that this feature is late 20<sup>th</sup> century in date.
- 9.1.4 At the eastern extent of Trench 01, culvert [0104] was partially uncovered. This feature was aligned north to south and was built of 9 x 4½ x 3 inch bricks arranged in stretcher bond with a cement mortar. It was not possible to view a cross section of the culvert within the constraints of the evaluation, but the arched top indicates that it is either of rounded or sub-rounded shape. The culvert [0104] had been directly overlaid with a thin deposit of light brownish clay (0106) before being subsequently backfilled with redeposited subsoil (0111).
- 9.1.5 Culvert [0104] is a substantial feature within the landscape, and as such its retaining walls likely formed part of the water management system not just for the former Thorntons Factory but the surrounding industrial premises as well. Considering this, it may be a significant structure within the historical industrial landscape of Belper. Rapid assessment of the brick work show that they conform to standard industrial brick sizes c.1840-1970, although they likely reflect a later c.19<sup>th</sup> – early 20<sup>th</sup> century construction date.

### 9.2 Trench 02

- 9.2.1 Oriented roughly north to south, this trench was located at the western extent of the project area. It measured 13.15m in length, 3.05m in width and was excavated to a maximum depth of 1.1m.
- 9.2.2 Below the existing ground surface material (0200) and concrete hardcore (0203), subsoil (0204) was revealed. This layer comprised friable mid orange brown sandy clay loam. The natural substratum (0205) was encountered below subsoil (0204) at a maximum depth of 1.1m below the existing ground level.

- 9.2.3 No archaeological features or deposits were present in this trench. However, modern disturbance was visible in the form of a manhole [0201] that had been recently backfilled with demolition rubble (0202), presumably as part of the recent redevelopment works.

### **9.3 Trench 03**

- 9.3.1 This trench was located towards the eastern boundary of the development area and was orientated east to west. It measured 13m in length, 3.1m in width and was excavated to a maximum depth of 1.28m.
- 9.3.2 Below the modern ground surface material (0300) and concrete underlay (0301), a deposit of made ground was encountered (0303). Below this was subsoil (0306), comprised of friable mid orange brown silty clay loam. The natural substratum was revealed at a maximum depth of 1.25m below the existing ground level.
- 9.3.3 A wall foundation trench [0302] that truncated made ground deposit (0307) was visible in the north and south facing sections, indicating that the wall would have originally been on this alignment. The trench had been partially infilled with by a deposit of firmly compacted very dark grey silty loam (0305) before the foundations were laid. The remains of sandstone built foundations for the no longer extant wall were visible, though highly degraded and truncated during machining. This feature can be dated to the nineteenth century through the recovery of imitation willow pattern pottery; through cartographic regression it is also possible to infer that it may have formed part of a post-medieval/modern backplot subdivision (Davies 2014).

### **9.4 Trench 04**

- 9.4.1 Orientated north-east to south-west, Trench 04 was located towards the south of the project area. It measured 13m in length, 3.1m in width and was excavated to a maximum depth of 1.16m.
- 9.4.2 Below the modern ground surface material (0400) and two concrete hardcores (0401) & (0406) a deposit of made ground was encountered (0403). Below this was subsoil (0404), comprised of friable mid orange brown sandy clay loam. The natural substratum was revealed at a maximum depth of 1.10 below the existing ground level.
- 9.4.3 Towards the southern end of trench 4, a brick path [0402] aligned east to west that truncated made ground (0403) was revealed. Arranged in an irregular course and unbonded it was laid on two levelling layers, angular sandstone pieces (0408) below broken and crushed brick fragments (0407), one sherd of imitation willow pattern pottery was recovered from context (0407) indicating a nineteenth century date. Cartographic regression identified a linear boundary appearing in the location of [0402] between c.1880-1900, with firm delineation visible in the 1990 OS map (Davies 2014). Path [0402] may represent footpath access from the backplot of the former housing fronting Bridge Street to a number of agricultural enclosures identified to the east.

### **9.5 Trench 05**

- 9.5.1 Trench 05 was located towards the northern extent of the project area and was aligned east to west. It measured 9.5m in length, 1.6m in width and was excavated to a maximum depth of 0.4m.
- 9.5.2 Below the modern ground surface material (0500) a demolition spread (0501) comprised of broken brick, tiles and roof slate mixed with crushed mortar. The removal of this spread, at the eastern half, revealed three surviving foundation walls. [0505] was aligned roughly east to west, [0502] & [0503] were both aligned roughly north to south abutting [0505] and running north. They were all made up of rounded square sandstone blocks measuring up to 300 mm x 300 mm, it was not possible to observe their depth.
- 9.5.3 In between [0502] and [0503] were the remains of a collapsed wall [0504], which was built of 9 x 4½ x 3 inch bricks, it was still possible to see some arranged in stretcher bond with a yellowish white sand and cement mortar. This is probably an internal wall that once stood

upon [0502]. No cultural material was recovered from foundation walls [0502-0505], however a rapid assessment of the brickwork show that they conform to standardised British sizes dating from c.1840-1970, but are more likely to represent an later c.19<sup>th</sup> construction.

- 9.5.4 These foundation walls [0502], [0503] and [0505], likely date to a later c.19<sup>th</sup> – early 20<sup>th</sup> century phase of residential development along Derwent street, which is visible in OS mapping from c.1880 onwards (Davies 2014), with features likely representing the surviving footprint of the latter half of the structures and associated demolition material. These buildings were demolished as part of recent developmental works and currently functions as the site office for continued development.

## 10 Discussion and Conclusions

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- 10.1.1 This trial trench evaluation positively identified a number of post-medieval and early modern deposits relating to early eighteenth and nineteenth century expansion of the town and the development of the Derwent Valley Mills World Heritage Site. Archaeological features were present within 4 of the 5 trenches, with a concentration of features observed within trench 05.
- 10.1.2 Trial trenching met the key objectives as set out in the WSI (Owen 2018), which sought to identify and characterise the archaeological potential of the site as recorded by the earlier DBA (Davies 2014). A virtual absence of cultural ceramic material is noteworthy, however it is likely that finds relating to early modern domestic waste lie within the footprint of the demolished buildings, of which we have only identified the outer limits. These features likely represent the demolition of former residential houses that once fronted Derwent Street, which were demolished as part of expansive c.20<sup>th</sup> factory redevelopment. The houses are visible in OS mapping as late as c.1971 (Davies 2014).
- 10.1.3 The identification of a brick c.19<sup>th</sup> culvert within trench 01 on a north by south alignment suggests that the prior factory may have utilised water management during the production process, which fits well within the known historic framework of the Derwent Valley Mills (Davies 2014). It is possible that the c.19<sup>th</sup> brick culvert carried water from the nearby coppice brook to the south, or provided waste water management from the associated former housing which front Bridge Street.
- 10.1.2 A probable wall foundation [0302] identified within trench 3 aligns well with property divisions identified on the early c.1820-1880 OS mapping, and probably relate to the well defined residential plots and ancillary garden or backplot structures depicted in historic mapping (Davies 2014). The features appear later subsumed by ancillary factory structures between 1951-1971, however it is possible that the feature belongs to land divisions associated with housing which front Bridge Street and Chapel Street.
- 10.1.3 Path [0402] was much harder to clarify. Its construction utilised large amounts of modern demolition rubble which was packed tightly along a narrow route. The features is well aligned with these similar early land divisions identified within the DBA as following the line of possible former backplots, which may have subsequently acted as access points to the later factory (Davies 2014). Willow pattern pottery located within the demolition rubble used to create the surface suggest that it may be more closely assigned to c.1880-1990 land use as private residence pathways which lead to agricultural enclosures to the west, however use as an access route to the later c.1920's 'Castle Blouse Factory' is not implausible.
- 10.1.4 Given the presence of c.19<sup>th</sup>-20<sup>th</sup> century archaeological remains positively identified during this trial trench evaluation, it is likely that further mitigation may be required in the area of trench 05 and the Trench 01 culvert. The potential for significant buried archaeological features within the PDA remain low.



## 11 Bibliography

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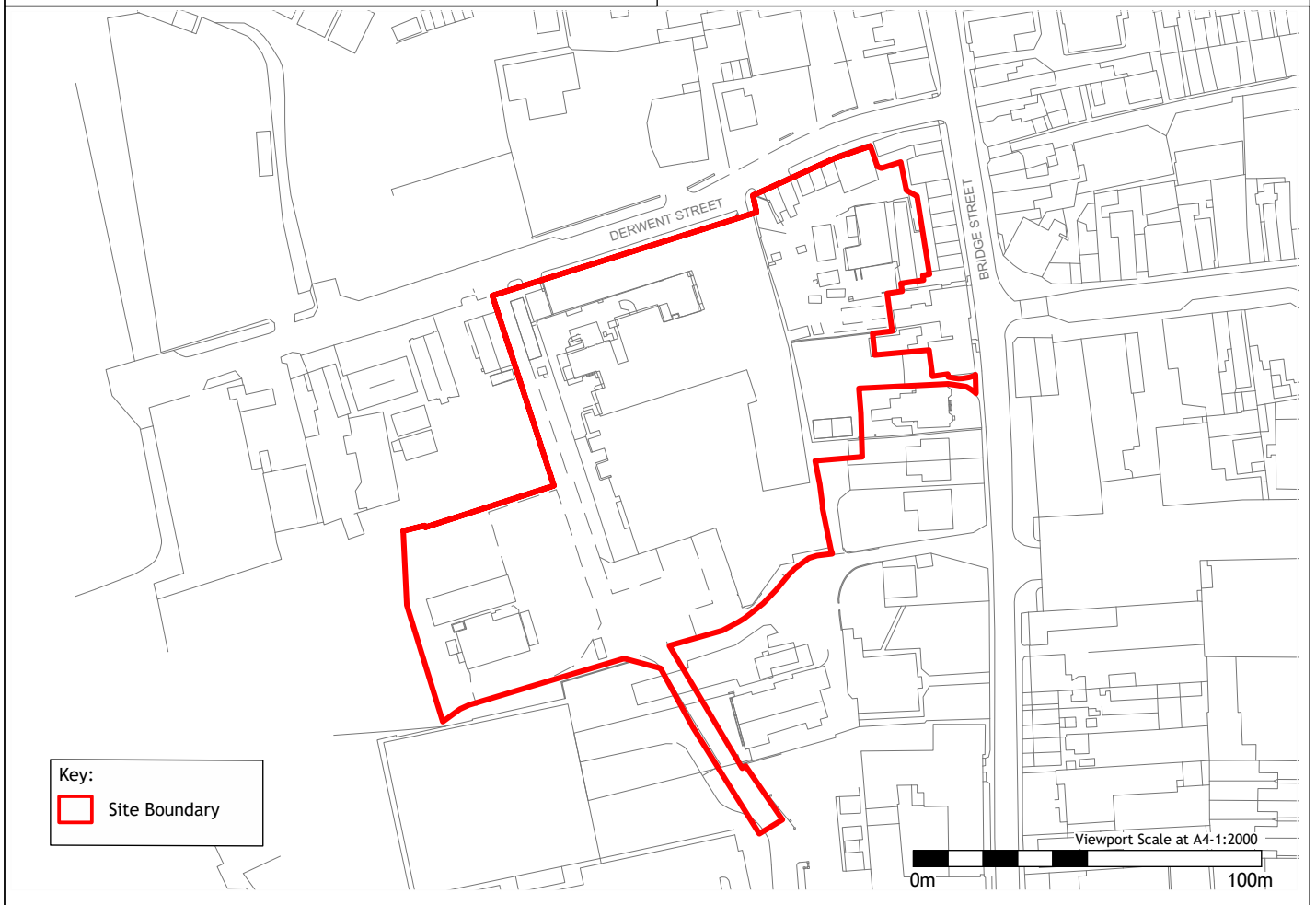
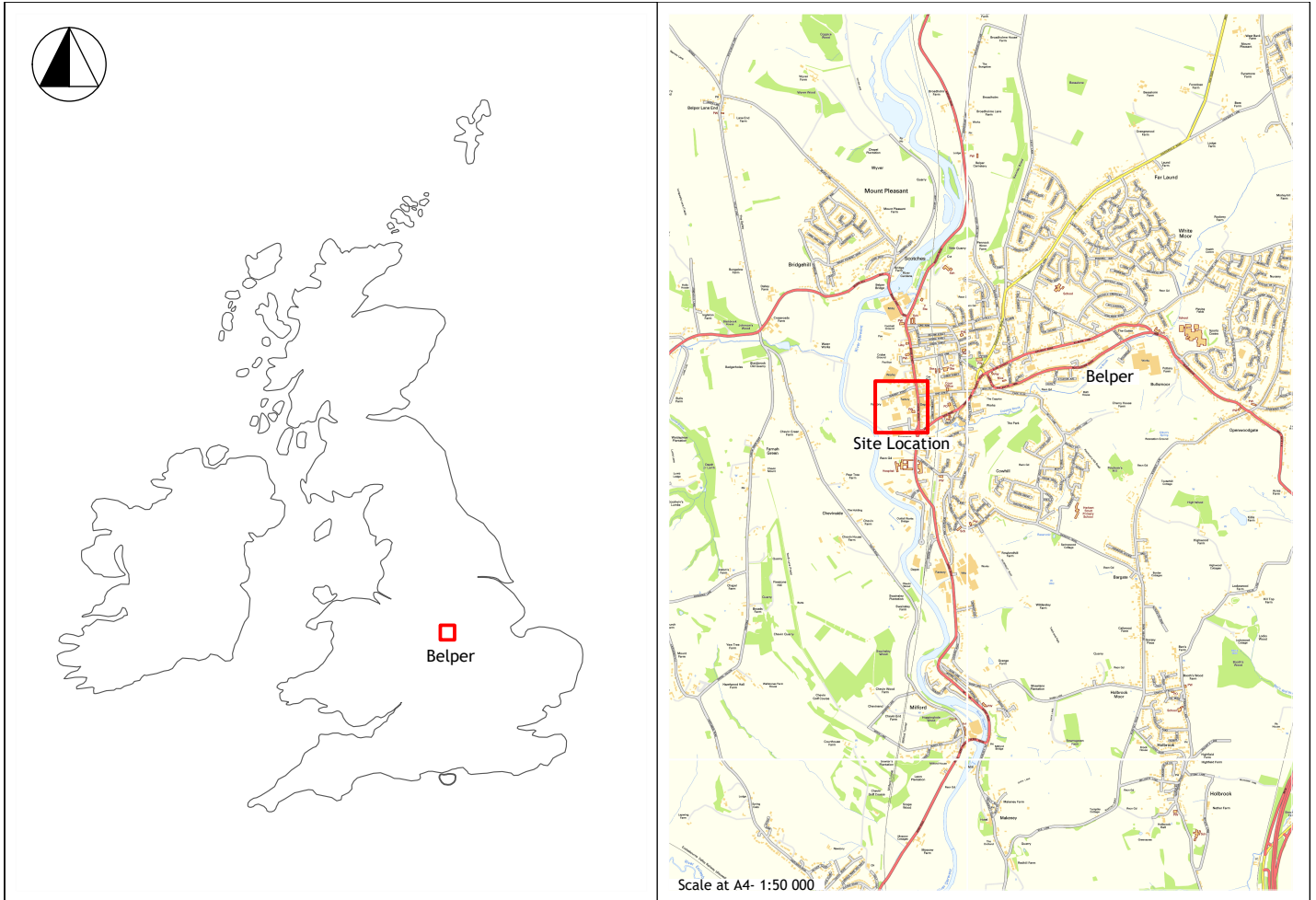
Stroud, G. 2004. Derbyshire Extensive Urban Survey Archaeological Assessment Report: Belper.

### Online Resources

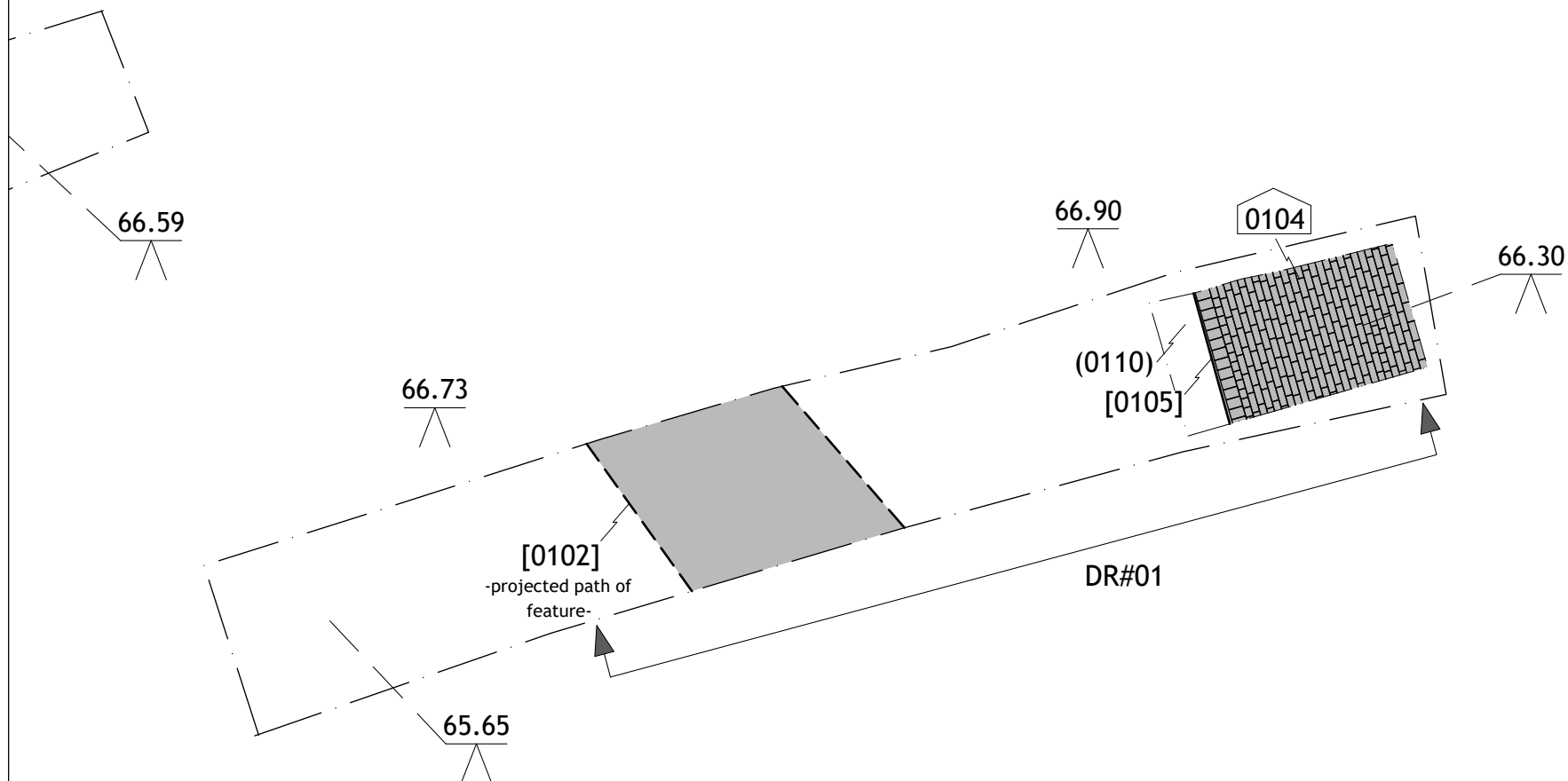
British Geological Survey Map Viewer; <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

Cranfield Soil and Agrifoods Institute. Soilscape Map Viewer; [www.landis.org.uk/soilscales](http://www.landis.org.uk/soilscales)

Townsend, J. 2017. *Amber Valley Borough Council: Planning Decision Notice (ref: AVA/2017/0588)*. Unpublished planning documents. [Accessed: <http://www.ambervalley.gov.uk/environment-and-planning/planning.aspx> 19/03/2018]



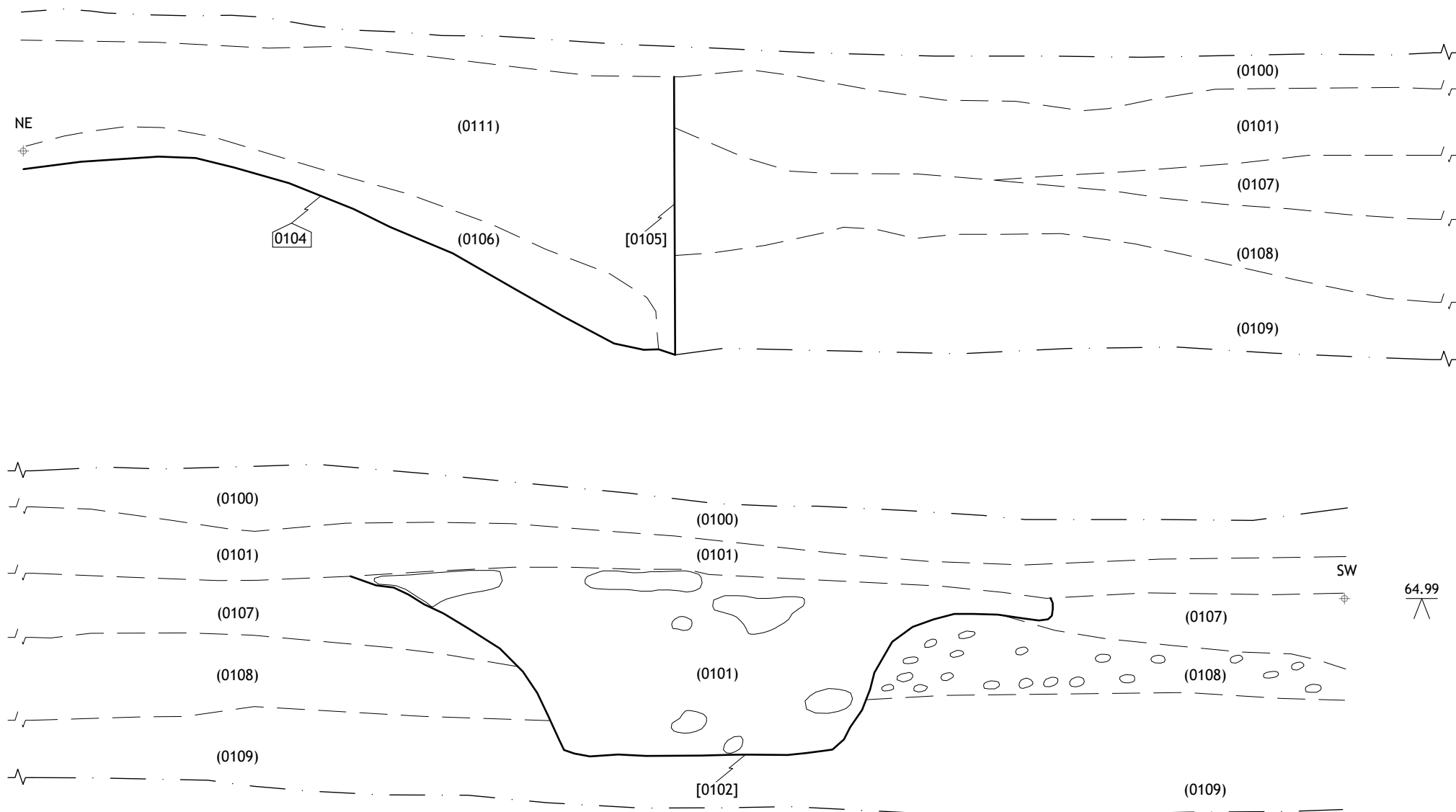


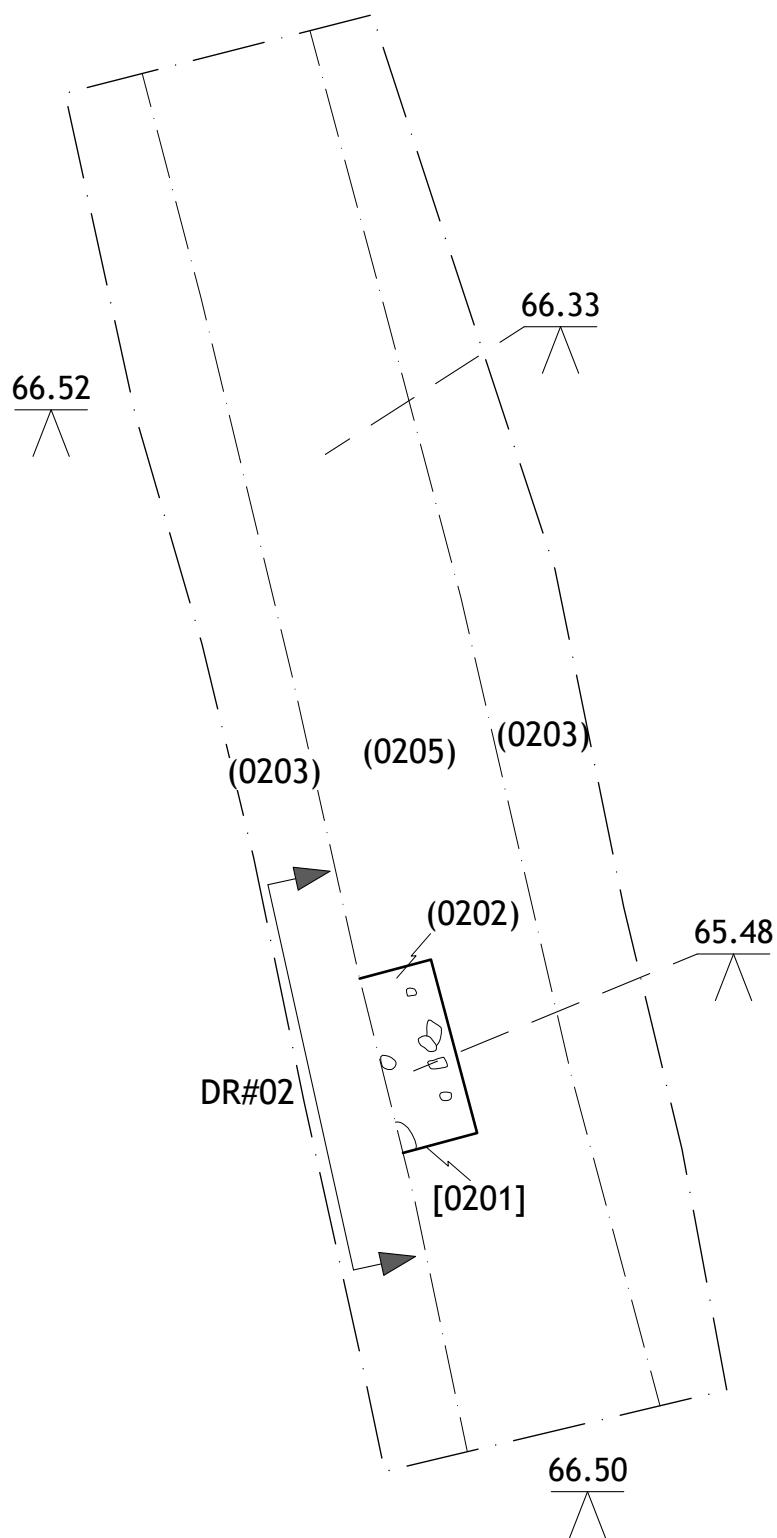




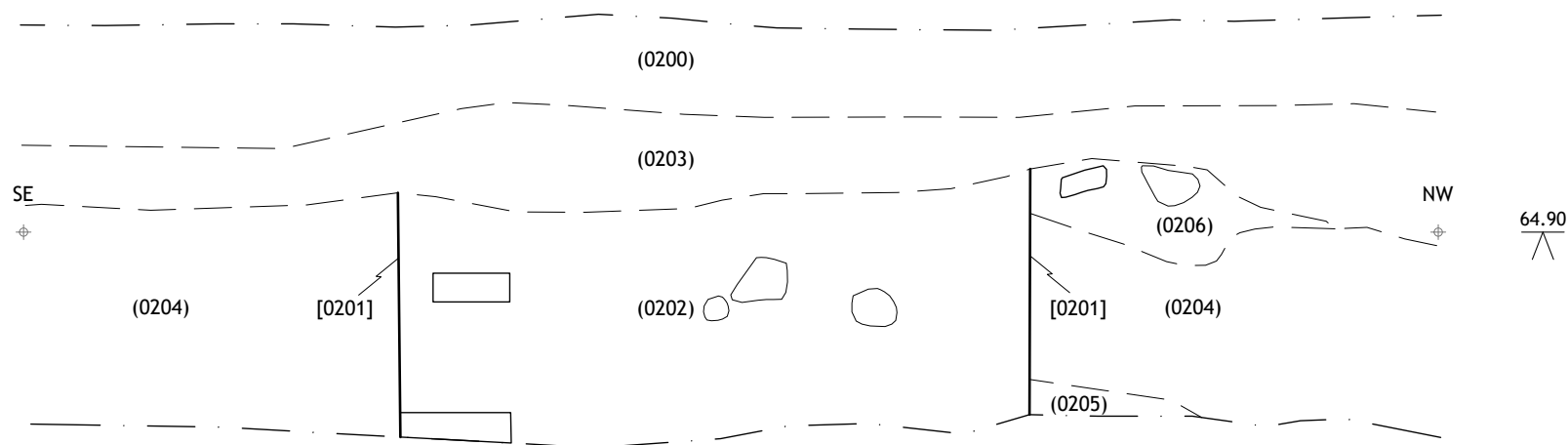
BDE2 DR#01

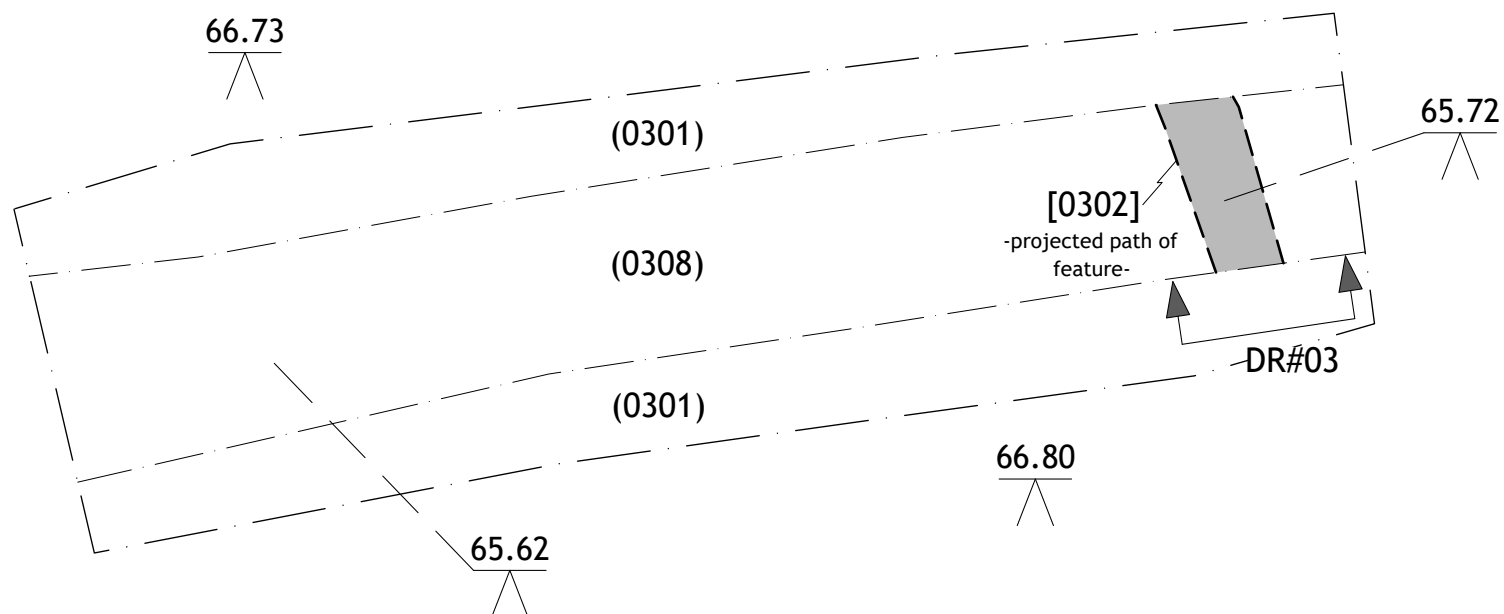
North West Facing Section Of Trench 01



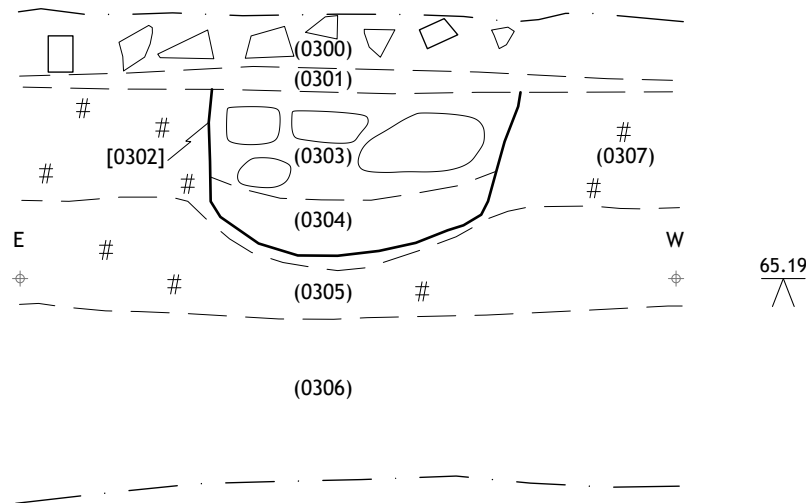


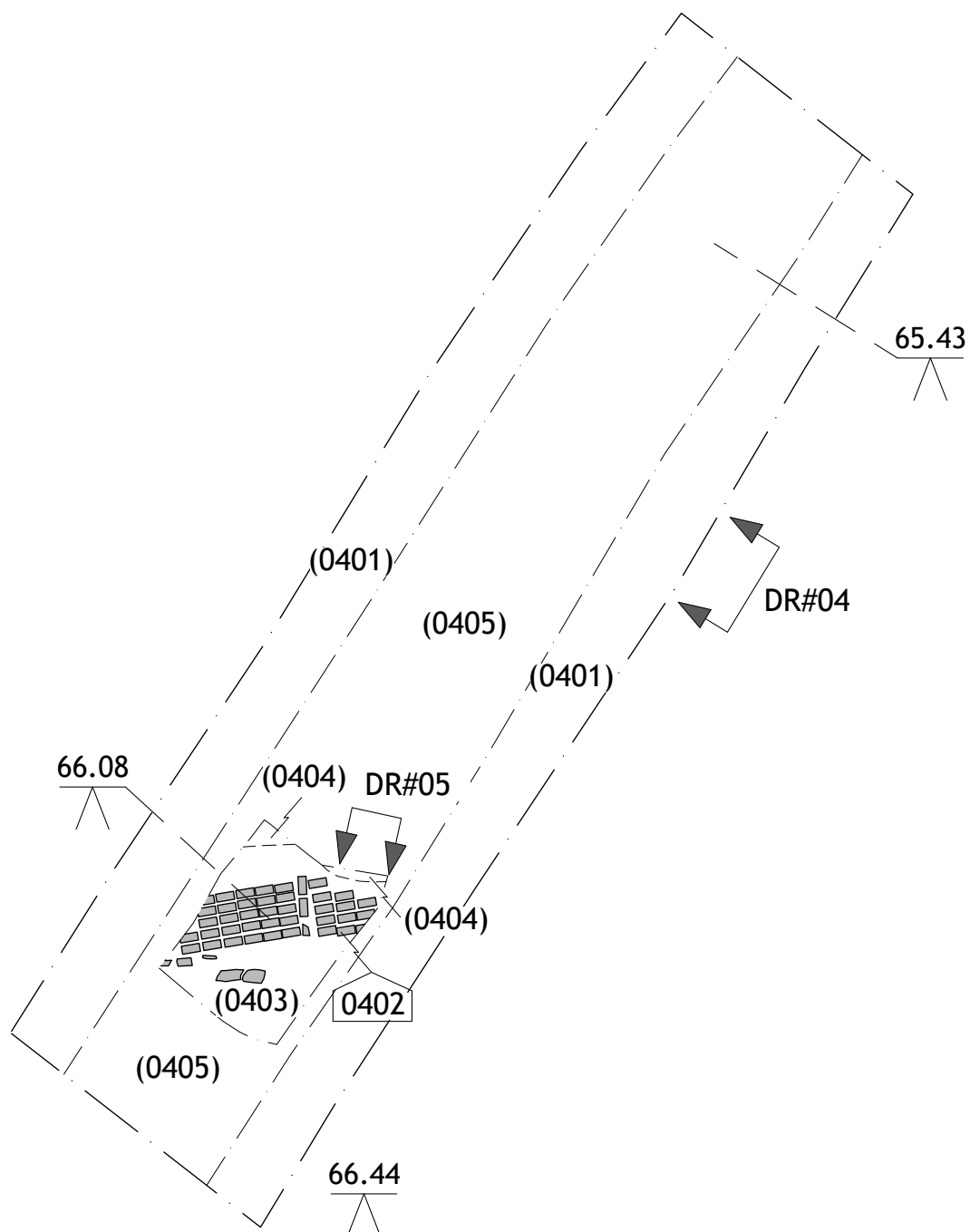
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North East Facing Section Of Trench 02





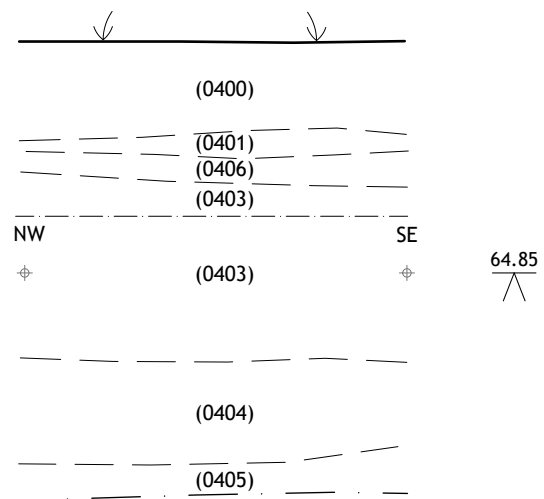
BDE2 DR#03  
North Facing Section Of [0302]



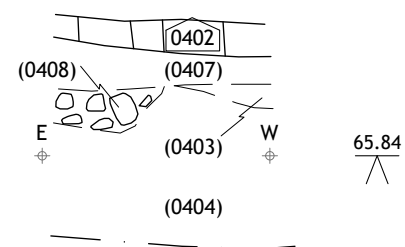


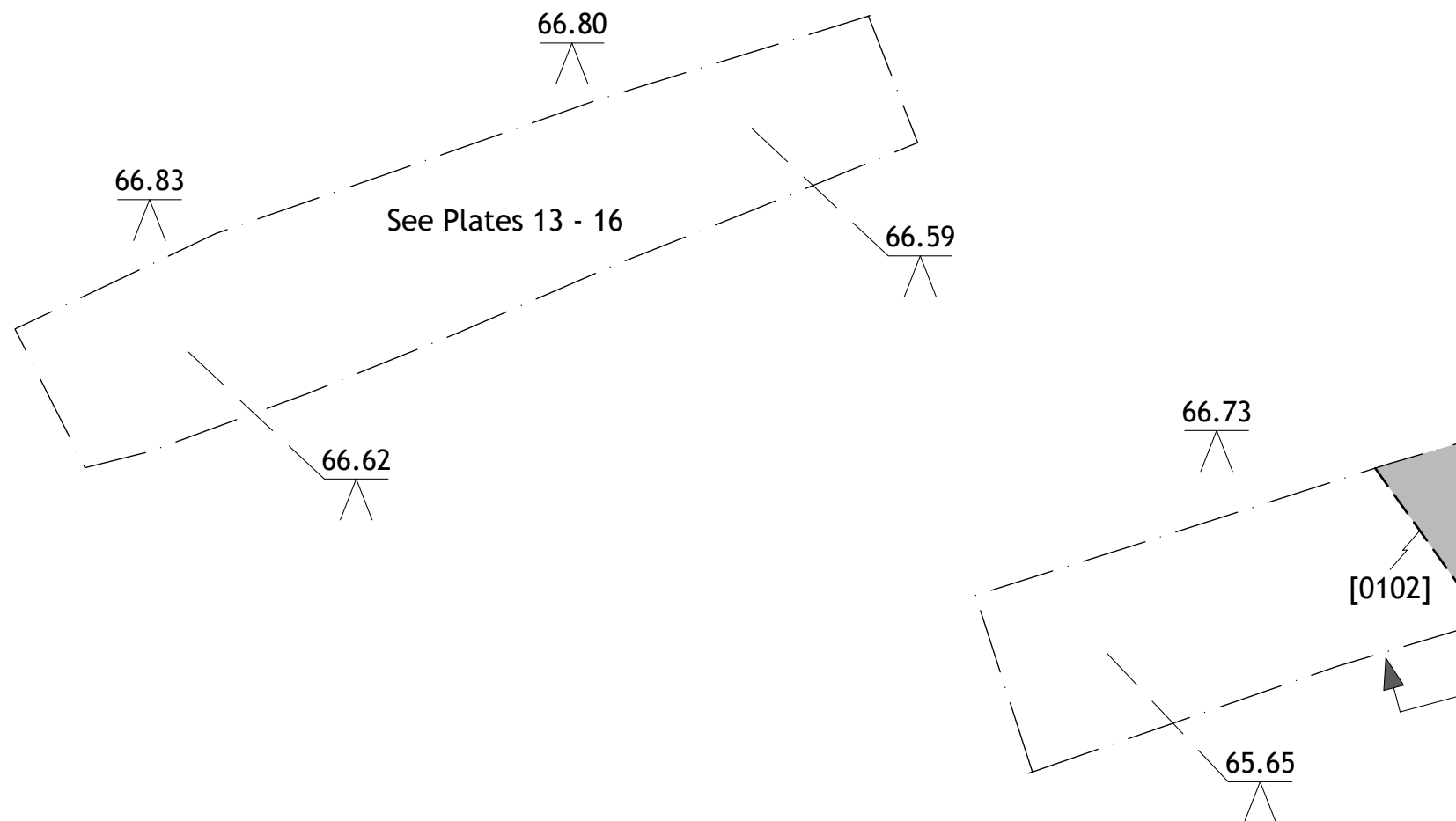


BDE2 DR#04  
North West Facing Section Of Trench 04



BDE2 DR#05  
North Facing Section Of Structure 0402





## Appendix 2: Plates

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Plate 1: Pre-ex overview of trench 1, looking north-east.  
Scale 1m x 1m x 1m





Plate 2: Pre-ex overview of trench 1, looking west.

Scale 1m x 1m x 1m





Plate 3: Oblique view of culvert 0104 within trench 4, looking east.

Scale 1m x 1m



Plate 4: Pre-ex overview of trench 2, looking north.

Scale 1m x 1m





Plate 5: Pre-ex overview of trench 2, looking south.

Scale 1m x 1m





Plate 6: East facing section of manhole [0201] within trench 2, looking west.

Scale 1m x 0.50m





Plate 7: Pre-ex overview of trench 3, looking east.

Scale 1m x 1m





Plate 8: Pre-ex overview of trench 3, looking west.

Scale 1m x 1m



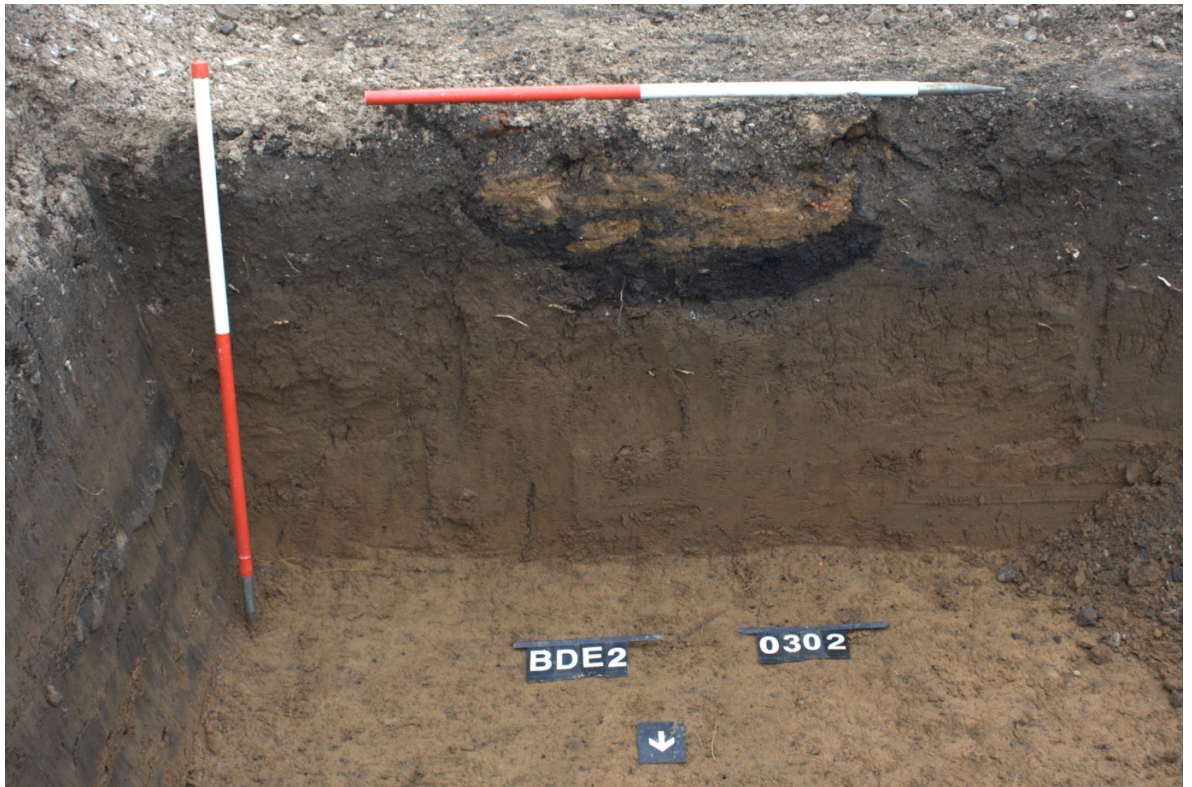


Plate9: North facing section of wall foundation 0302 within trench 3, looking south.

Scale 1m x 1m

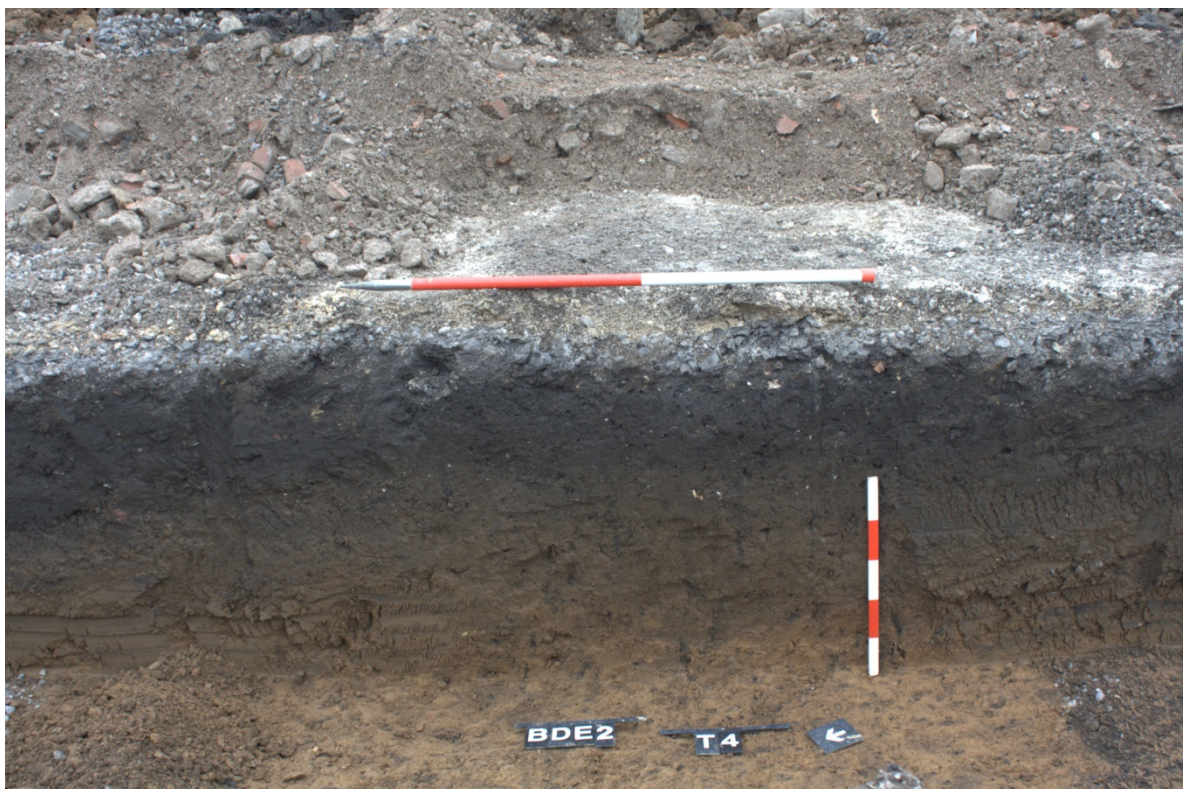


Plate 10: North-west facing section of trench 4, looking south-east.

Scale 1m x 0.50m





Plate 11: North-west facing section of deposits beneath 0402 within trench 4, looking south-east. Scale 1m x 0.50m



Plate 12: Plan view of brick path 0402 within trench 4, looking north-east.

Scale 1m x 0.50m





Plate 13: Pre-ex overview of trench 5 showing demolition spread (0501), looking east.

Scale 1m x 1m





Plate 14: Plan view of wall 0502 in the foreground and wall 0503 in the background, with wall 0505 running east to west between on the right within trench 5, looking east.

Scale 1m x 1m





Plate 15: Plan view of wall 0503 in the foreground and wall 0502 in the background, with wall 0505 running east to west between on the left within trench 5, looking west.

Scale 1m x 1m





Plate 16: Plan view of (0504) within trench 5, looking north.

Scale 1m x 1m

## Appendix 1: Trench logs

Trench 01					
Trench Dimensions (LxW)	14.20 x 1.60 m	Trench Alignment	E - W	Trench Depth	1.08 m
Context	Type	Description			Thickness
(0100)	Layer	Made ground – hard core Loose mid brownish grey gravel with pebbles			0.16m
(0101)	Layer	Tarmac			0.28m
[0102]	Cut	Cut of pit Sub rectangular with steep sides and flat base			N/A
(0103)	Fill	Fill of [0102] Compact reddish grey very coarse sand			N/A
0104	Structure	Culvert			N/A
[0105]	Cut	Construction cut for culvert 0104			N/A
(0106)	Fill	Fill of [0105] Firm light brownish yellow clay			N/A
(0107)	Layer	Made ground Firm light orangeish brown			0.22 m
(0108)	Layer	Made ground Firm dark greenish brown clay loam			0.20 m
(0109)	Layer	Subsoil Firm compact dark greenish brown clay loam			0.40 m
(0110)	Layer	Natural Firm light orangeish brown sand			-
(0111)	Fill	Fill of [0105] Firm orangeish brown sandy clay loam			N/A

Trench 02					
Trench Dimensions (LxW)	13.15 x 3.05 m	Trench Alignment	N – S	Trench Depth	1.10 m
Context	Type	Description			Thickness
(0200)	Layer	Made ground – hard core Loose mid brownish grey gravel with pebbles			0.34 m
[0201]	Cut	Cut of manhole Rectangular with vertical sides with unknown base			N/A
(0202)	Fill	Fill of [0201] Loose light greyish brown clay			N/A
(0203)	Layer	Made ground Loose brownish grey clay			0.34 m
(0204)	Layer	Subsoil Firm compact dark greenish brown clay loam			0.40 m

(0205)	Layer	Natural Firm light orangeish brown sand	-
(0206)	Layer	Demolition disruption Loose dark greyish black clayey loam	0.28 m

Trench 03					
<b>Trench Dimensions (LxW)</b>	13 x 3.10 m	<b>Trench Alignment</b>	E – W	<b>Trench Depth</b>	1.28 m
<b>Context</b>	<b>Type</b>	<b>Description</b>			<b>Thickness</b>
(0300)	Layer	Made ground – hard core Loose mid brownish grey gravel with pebbles			0.16 m
(0301)	Layer	Concrete Hard grey concrete			0.06 m
0302	Structure	Wall Foundation			N/A
(0303)	Fill	Primary fill of [0302] Degraded sandstone pieces			N/A
(0304)	Fill	Primary fill of [0302] Firm black silty clay			N/A
(0305)	Layer	Made ground Loose brownish grey clay			0.28 m
(0306)	Layer	Subsoil Firm compact dark greenish brown clay loam			0.38 m
(0307)	Layer	Made ground Loose grey silty clay			0.18 m
(0308)	Layer	Natural Firm light orangeish brown sand			-

Trench 04					
<b>Trench Dimensions (LxW)</b>	13 x 3.10 m	<b>Trench Alignment</b>	NE- SW	<b>Trench Depth</b>	1.16 m
<b>Context</b>	<b>Type</b>	<b>Description</b>			<b>Thickness</b>
(0400)	Layer	Made ground – hard core Loose mid brownish grey gravel with pebbles			0.16 m
(0401)	Layer	Concrete Hard creamish white concrete			0.06 m
0402	Structure	Brick Path Irregular bond with soil bonding material			N/A
(0403)	Layer	Made ground Loose black silty clay			0.50 m
(0404)	Layer	Subsoil Firm compact dark greenish brown clay loam			0.28 m
(0405)	Layer	Natural Firm light orangeish brown sand			0.08m
(0406)	Layer	Concrete Hard dark grey concrete			0.10 m
(0407)	Layer	Made ground – bedding for path 0402 Friable reddish brown silty clay			0.08 m

(0408)	Deposit	Made ground – bedding for path 0402 Loose grey brown silty clay	0.12 m
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Trench 05					
Trench Dimensions (LxW)	9.50 x 1.60 m	Trench Alignment	E – W	Trench Depth	0.40 m
Context	Type	Description			Thickness
(0500)	Layer	Made ground – hard core Loose mid brownish grey gravel with pebbles			0.20 m
(0501)	Layer	Demolition spread			0.20 m
0502	Structure	Wall foundation Western north to south foundation			N/A
0503	Structure	Wall foundation Eastern north to south foundation			N/A
0504	Structure	Collapsed Wall			N/A
0505	Structure	Wall foundation East to west foundation			N/A



## Appendix 2: Index of Archive and Arrangements for Deposition

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<b><i>Field Records</i></b>	<b><i>Description</i></b>	<b><i>Number</i></b>
Trench record sheets	Register of context numbers and descriptions	5
Context sheets	Record of features and deposits	46
Photo record sheet	Record of photographs taken	3
Digital photographs	All views	189
Site drawings	Plans and sections of site	12
<b><i>Documents</i></b>	<b><i>Description</i></b>	<b><i>Number</i></b>
Written scheme of investigation	Statement of the aims, objectives and methodology for the project.	1
Health & Safety	Safe working statement & risk assessment	1
Report to client	Report of findings of the watching brief.	1
<b><i>Find</i></b>	<b><i>Description</i></b>	<b><i>Number</i></b>
Artefact	Pottery	3
Ecofact	Environmental samples, bulk	0

The site archive is currently held at the offices of Trent & Peak Archaeology, Unit 1, Holly Lane, Chilwell, Nottingham, NG9 4AB. It will be deposited with Derbyshire Museum and Art Gallery within 6 months of the completion of the report.

## Appendix 3: OASIS Data Collection Form

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# 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: trentpea1-318078**

## Project details

Project name	FORMER THORNTON'S FACTORY SITE, BELPER
Short description of the project	Trent and Peak Archaeology was commissioned by Robertson (Yorkshire and East Midlands), on behalf of Derbyshire County Council, to carry out an archaeological trial trench evaluation at the Former Thorntons Factory Site, Derwent Street, Belper, Derbyshire (National Grid Reference SK 34579 47431). The factory site is located within the Derwent Valley Mills World Heritage Site and the Belper and Milford Conservation area. An earlier desk-based assessment produced by TPA (Davies 2014) quantified the potential for buried archaeological remains within the proposed development area. These broadly constitute probable buried archaeological remains of post-medieval or later date relating to earlier structures associated with the factory fronting Derwent Street and an area of post-medieval settlement along Bridge Street/Chapel Street, within the development area, which is visible in historic mapping from c.1767 onwards. The program of archaeological mitigation comprised the excavation of five 1.8 x 10-15m trenches providing a 2% sample of the total 5839.3m2 development area. The trenches were evenly distributed across the site and were designed to target the areas of probable post-medieval archaeological significance. This trial trench evaluation positively identified a number of post-medieval and early modern deposits relating to early eighteenth and nineteenth century expansion of the town and the development of the Derwent Valley Mills World Heritage Site. Archaeological features were present within 4 of the 5 trenches, with a concentration of features observed within trench 05. Given the presence of c.19th-20th century archaeological remains positively identified during this trial trench evaluation, it is likely that further mitigation may be required in the area of trench 05 and the Trench 01 culvert.
Project dates	Start: 09-04-2018 End: 13-04-2018
Previous/future work	Yes / Yes
Any associated project reference codes	BDE2 - Sitecode
Type of project	Field evaluation
Site status	Conservation Area
Site status	World Heritage Site
Current Land use	Industry and Commerce 1 - Industrial
Monument type	DERWENT VALLEY MILLS Modern
Significant Finds	POTTERY Modern
Significant Finds	NONE None
Methods & techniques	"Targeted Trenches"
Development type	Urban residential (e.g. flats, houses, etc.)
Prompt	Planning condition

**Project location**

Country	England
Site location	DERBYSHIRE AMBER VALLEY BELPER FORMER THORNTON'S FACTORY SITE
Postcode	DE56 1AY
Study area	5839.3 Square metres
Site coordinates	SK 434646 347473 52.908077683501 -1.35364734104 52 54 29 N 001 21 13 W Point
Lat/Long Datum	Unknown
Height OD / Depth	Min: 64.53m Max: 66.83m

**Project creators**

Name of Organisation	Trent and Peak Archaeology
Project brief originator	Trent and Peak Archaeology
Project design originator	Victoria Owen
Project director/manager	Tom Hooley
Project supervisor	Kath Bentley
Type of sponsor/funding body	Developer

**Project archives**

Physical Archive Exists?	No
Digital Archive recipient	Trent and Peak Archaeology
Digital Contents	"Ceramics"
Digital Media available	"Database","Images raster / digital photography","Survey","Text"
Paper Archive recipient	Trent and Peak Archaeology
Paper Contents	"Ceramics"
Paper Media available	"Context sheet","Correspondence","Map","Notebook - Excavation',' Research',' General Notes","Photograph","Plan","Report","Section","Drawing","Survey ","Unpublished Text"

**Project bibliography 1**

Publication type	Grey literature (unpublished document/manuscript)
Title	Former Thorntons Factory Site, Derwent Street, Belper: An Archaeological Trial Trench Evaluation
Author(s)/Editor(s)	Bentley, K., Collins, C., Owen, V.
Other bibliographic details	Report number: 070/2018
Date	2018
Issuer or publisher	Trent and Peak Archaeology

Place of issue or publication	Trent and Peak Archaeology
Description	Grey literature, PDF
Entered by	Owen, V. (vowen@yorkat.co.uk)
Entered on	25 May 2018

## OASIS:

Please e-mail [Historic England](#) for OASIS help and advice

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