



# **Proposed Lay-by, Cowdale Quarry and Limeworks, King Sterndale, Derbyshire**

## **Impact Assessment**



**Oxford Archaeology North**

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## SUMMARY

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Express Park Buxton Ltd is devising proposals to develop a new bottling plant at Cowdale Quarry and Limeworks, a Scheduled Monument in King Sterndale, Derbyshire. The development proposals are likely to necessitate the decommissioning of a current lay-by on the Bakewell Road (A6), which forms the northern boundary of the Scheduled Monument. Following consultation with Derbyshire County Council, it has been recommended that a replacement lay-by will need to be constructed as part of the proposed redevelopment of the quarry.

The construction of a new lay-by will inevitably necessitate the rock-face of the gorge to be cut back along the north-eastern boundary of the Scheduled Monument, which could potentially have a direct impact on the designated heritage asset. In order to better understand the archaeological significance of this impact, Express Park Buxton Ltd commissioned Oxford Archaeology North to undertake a walk-over survey in order to provide an understanding of the likely impact of the proposed development on the heritage asset and its setting.

The walk-over survey was carried out in July 2014, and enabled two previously unrecorded structural elements of the quarry and limeworks to be identified. These comprised a section of a culvert or drain, and the demolished remains of a brick- and stone-built structure of indeterminate function. The construction of the proposed lay-by, however, is unlikely to cause damage or the destruction of these heritage assets. Pending final design proposals, and specifically the extent to which the rock-face will need to be cut back, there is some potential for substantial direct impact on a former railway line within the limeworks complex, and also on the crushing plant and loading gantry. Any direct impact on these designated structures would clearly constitute substantial harm that would be very difficult to justify in the context of creating a new lay-by.

The proposed construction of the new lay-by will also have an impact on the setting of the Scheduled Monument via the clearance of vegetation and denudation of the rock-face overlooking the A6. However, the vegetation in this area only regenerated after the quarry closed in the mid-1950s, and its denudation would thus be compatible with the original setting of the historic industrial structures. In this respect, coupled with the clearer views that would be also obtained of the lime kiln bank and crushing plant, it can be concluded that the heritage asset's significance would be enhanced as the relationship between the asset and its setting is rendered more readily apparent, and thus the magnitude of impact could be perceived as moderate and beneficial.

## ACKNOWLEDGEMENTS

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The field assessment was undertaken by Andy Phelps, who also compiled the report, and the illustrations were produced by Mark Tidmarsh. The report was edited by Ian Miller, who was also responsible for project management.

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## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 Express Park Buxton Ltd is devising proposals to develop a new bottling plant at Cowdale Quarry and Limeworks, a Scheduled Monument in King Sterndale, Derbyshire. The development proposals are likely to necessitate the decommissioning of a current lay-by on the Bakewell Road (A6), which forms the northern boundary of the Scheduled Monument. Following consultation with Derbyshire County Council, it has been recommended that a replacement lay-by will need to be constructed as part of the proposed redevelopment of the quarry.

1.1.2 The study area offers very limited options that would be conducive for a new lay-by, reflecting the narrow and steep-sided gorge through which the A6 runs. The construction of a new lay-by, moreover, will inevitably necessitate the rock-face of the gorge to be cut back within the boundary of the Scheduled Monument, which will have a direct impact on the designated heritage asset. In order to better understand the archaeological significance of this impact, Express Park Buxton Ltd commissioned Oxford Archaeology North (OA North) to undertake a site inspection and impact assessment.

### 1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

1.2.1 Cowdale Quarry is a disused industrial site with late nineteenth-/early twentieth-century origins that lies in the civil parish of King Sterndale, within High Peak District, 2.5km south-east of the Buxton in Derbyshire. The site covers approximately 20 hectares, and is located on the south side of the River Wye above the narrow but artificially-widened Ashwood Dale gorge (centred on NGR 408030 372315).

1.2.2 The limeworks complex is bounded by the river and adjacent A6 to the north, and the quarry to the south (Plate 1); the main components of the limeworks were built into or against a vertical quarried face *c* 20m high, with the top of the kiln battery and crushing plant level with the quarry floor, and the base of both components at the bottom of the rock face on a narrow linear platform. The quarry extends *c* 750m east/west, by a maximum of 340m north/south, whilst the limeworks complex extends *c* 550m east/west.

1.2.3 The entire quarry and limeworks form an historic industrial complex of considerable archaeological importance, which is reflected in the statutory designation of the core elements as a Scheduled Monument (Monument No 1546192). Cowdale is also listed as site numbers 2894 and 2895 on the Derbyshire County Historic Environment Record (HER).

- 1.2.4 The site has been closed and disused commercially since the mid-1950s, and most of the plant was removed for salvage after closure, but it has retained an impressive number and range of buildings and structures of archaeological, historical and technological interest. Notable amongst these are the stone-built and concrete-buttressed lime kiln battery, and the concrete-built loading hoppers and gantries for the crushing plant. The kilns are of especial importance, as they are potentially the last traditional vertical stone-built lime kilns to be used in Derbyshire.



*Plate 1: Recent aerial view across Cowdale Quarry*

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## 2. METHODOLOGY

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### 2.1 INTRODUCTION

2.1.1 The site inspection and impact assessment was carried out in accordance with the relevant Institute for Archaeologists and English Heritage guidelines (IfA 2011, *Standard and Guidance for Archaeological Desk-based Assessments*; IfA 2010 *Code of Conduct*; English Heritage 2006, *Management of Research Projects in the Historic Environment* (MoRPHE)) and generally-accepted best practice.

### 2.2 SITE INSPECTION

2.2.1 The site inspection comprised a walk-over survey of the area proposed as a possible location for the replacement lay-bys. This area is located upon steep banks covered in low ground vegetation and a mixture of young and mature trees, with a busy arterial road (A6) at the base of the slope. Inspection was therefore limited to remote visual inspection from the roadside, and from the track above the bank. A digital photographic record was made of all identified heritage assets and their settings. Where appropriate, accurate measurements were taken of those heritage assets not previously recorded, but visual estimates were made where no physical access was possible safely.

### 2.3 BASELINE DATA

2.3.1 The assessment made use of the baseline historical data presented in the Cowdale Quarry Conservation Management Plan, prepared by David Johnson in December 2013, and for detailed description of Sites **04-09** the reader is referred to this document (OA North 2013b). Additionally, use was made of the Derbyshire Historic Environment Record, and the sequence of available historical mapping of the area. The study area was confined to the area within a radius of 100m, extending from the centre of the proposed development area, in order to provide an understanding of the potential impact of the proposed works on any identified surrounding heritage assets. All heritage assets identified within the study area have been included in the Gazetteer of Sites (*Section 5*) and plotted onto the corresponding Figure 2. The results were analysed using the set of criteria used to assess the national importance of an ancient monument (DCMS 2010). Sources consulted include:

- **Derbyshire Historic Environment Record (DHER):** the DHER was consulted to establish the sites of archaeological interest already known within the study area. The DHER is a database of all known sites of archaeological interest in Derbyshire;
- **Oxford Archaeology North:** OA North has an extensive archive of secondary sources, as well as numerous unpublished client reports on work carried out both as OA North and under its former guise of Lancaster University Archaeological Unit (LUAU). These were consulted where relevant.

## **2.4 WALK-OVER SURVEY**

- 2.4.1 A walk-over survey was conducted of the proposed development area in July 2014. The main aim of this survey was to identify the location and extent of any previously unrecorded sites of archaeological interest, as well as to gain an understanding of the state of preservation and extent of any known sites that might be affected by the proposed works. The results of the survey were compiled using photographic and written records.
- 2.4.2 The walk-over survey was focused along the A6 corridor in the vicinity of the existing lay-by. This area lies along the boundary of the Scheduled Monument, and extended between the bank of lime kilns at the western end, past the crushing plant and beyond the eastern edge of the Scheduled Monument (Fig 2). Whilst the most viable option lies opposite the former Devonshire Arms, the area to the east was also considered for the purposes of this assessment.

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## 3. BACKGROUND

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### 3.1 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 3.1.1 **Introduction:** the historical and archaeological background has been discussed extensively within a recent Statement of Significance and a draft Conservation Management Plan (OA North 2013a; OA North 2013b) and will not be repeated here in any detail. The following provides a brief overview of the history of the site relating to its use as a lime quarry.
- 3.1.2 **Development of Cowdale Quarry:** the Cowdale lime works and quarry was opened by the New Buxton Lime Company in 1898 (Jackson 1950). The site chosen lay to the south-east of Buxton, and immediately to the south of the Ashwood Dale limestone quarry, which had been commercially active since c 1820. One of the main advantages of this location was access to the Midland Railway line to Manchester, which was opened through Ashwood Dale in 1864, providing a transport artery for several quarries in the area (Boden 1960).
- 3.1.3 Cowdale Quarry became part of the Buxton Lime Firms (BFL) in 1908, which was established in the 1890s as an amalgamation of 17 lime quarries. It seems that this firm implemented some improvements to the limeworks, expanded production, and added new buildings. These included a new power house, gatehouse/office, and the lower cabin, which were all constructed in precast concrete, and incorporated some unusual architectural embellishment.
- 3.1.4 By 1918, the leading chemical-manufacturing firm of Brunner Mond was so heavily dependent on the limestone from BLF that they bought a controlling interest in the business. This was converted to total ownership in 1926, and all their businesses were merged with Imperial Chemical Industries (ICI) Ltd. The lime works continued in operation until its closure in the mid-twentieth century, although the quarry itself ceased active working in 1948, and was used subsequently for the storage of stone until the site's closure in 1955.
- 3.1.5 The site has been left abandoned since its closure. The large quarry basin is currently an area of open pasture, and large areas of quarry spoil are present across the northern and eastern extent of the site. In 1997, English Heritage conducted an assessment of Cowdale quarry and limeworks as part of the Monument Protection Programme (MPP) Step 1. The assessment concluded that the site contained 'very impressive remains of early twentieth-century limestone quarry and limeworks, with traditional kilns' and recommended scheduling the whole site. The Step 4 MMP report, produced in 2001, supported the original recommendation for scheduling, and highlighted the potential benefits of creating an education/visitor attraction, presenting the history of the lime quarrying and working tradition/technology, or the recording in advance of further deterioration of the site.

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## 4. WALK-OVER SURVEY

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### 4.1 INTRODUCTION

4.1.1 The walk-over survey was undertaken on 15th July 2014. It aimed to identify any previously unrecorded heritage assets within the areas proposed as a potential site for the new lay-by, and assess the impact of the proposed development upon the setting of the Scheduled Monument. The locations of the potential lay-by sites on a steep bank overlooking a busy arterial road meant inspection had to be carried out from above and below the bank. The areas examined were covered in vegetation and leaf cover, which may have obscured some features. The weather was clear and dry.

### 4.2 SUMMARY OF RESULTS

4.2.1 In addition to the known heritage assets above the bank (the Bridge Abutments **(04)**, Railway Sleepers **(05)**, and Crushing Plant **(06)**, Kiln Bank **(07)**, Drum House **(08)** and Rock Cut Shelter **(09)**), a further four heritage assets were identified within or in close proximity to the proposed sites for the replacement lay-by. These included: a possible culvert/drain **(01)** associated with the quarry workings; the remains of a brick and stone-built structure **(02)**; the former Devonshire Arms **(03)**; and the Midland Railway **(10)**. Details of these heritage assets are presented in *Section 5*, below.

4.2.2 Of these heritage assets, the culvert/drain **(01)** and the brick and stone structure **(02)** lie within the boundary of the Scheduled Monument. Conversely, the former Devonshire Arms **(03)** is situated on the opposite side of the A6, and the former Midland Railway **(10)** lies to the north of the road beyond the River Wye.



*Plate 2: The kiln bank (Site 07), looking west along the track*



*Plate 3: Looking east towards the loading gantry at the base of the crushing plant (Site 06)*



*Plate 4: Looking north from the kiln bank, with the A6 visible at the base of the slope*



*Plate 5: The in-situ railway sleepers (Site 05), just visible as overgrown linear tufts. 1m scale*



*Plate 6: The possible drainage gully from the top of the culvert exit (Site 01), looking north towards the road. 1m scale*



Plate 7: The brick and stone structure (Site 02) on the lower bank, looking south, viewed from the road



Plate 8: The disused Devonshire Arms (Site 03), looking west along the A6



*Plate 9: The lower bridge abutment (Site 04), looking south-west across the A6*

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## 5. GAZETTEER OF SITES

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<b>Site number</b>	<b>01</b>
<b>Site name</b>	Drain/ Culvert
<b>NGR</b>	407958 372478
<b>Site type</b>	Drain
<b>Period</b>	Industrial
<b>SMR No</b>	-
<b>Statutory Design</b>	Scheduled Monument
<b>Sources</b>	-
<b>Description</b>	A linear depression running from south to north down the slope of the bank was identified approximately 44.6m to the east of the kiln battery. It had a depth of up to 1.2m at the top of the slope, becoming increasingly shallow towards the base of the slope where it became harder to identify. At the top of the bank the depression was 5m wide, again narrowing quickly to the north, and there may have been a culvert exit, identified via a sharp change in angle. The position of the feature on the steep slope overlooking the A6 prevented further examination.
<b>Assessment</b>	The site lies beyond the proposed development area and is unlikely to sustain any direct impact, but its setting is likely to be affected.

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<b>Site number</b>	<b>02</b>
<b>Site name</b>	Brick and stone structure
<b>NGR</b>	408014 372476
<b>Site type</b>	Structure
<b>Period</b>	Industrial
<b>SMR No</b>	-
<b>Statutory Design</b>	Scheduled Monument
<b>Sources</b>	-
<b>Description</b>	Two sections of parallel wall, one of red brick the other of stone, were identified towards the base of the slope, approximately 2m south of the road. The brick wall was E-W aligned, about 0.5m high and 2.5m long. The stone wall was approximately 1m high, 2m long and 2m to the south of the brick wall. An iron pipe ran E-W between the two and the structure was heavily obscured by vegetation. A second pipe of similar dimension is visible at the top of the slope protruding northwards from the bank.
<b>Assessment</b>	The site lies beyond the proposed development area and is unlikely to sustain any direct impact, but its setting is likely to be affected.

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<b>Site number</b>	<b>03</b>
<b>Site name</b>	Devonshire Arms Pub
<b>NGR</b>	408142 372486
<b>Site type</b>	Mill
<b>Period</b>	Industrial (pre 1880)
<b>HSMR No</b>	-
<b>Statutory Design</b>	-
<b>Sources</b>	1879-1880 OS map
<b>Description</b>	A two-storey narrow gabled rectangular, stone built building on the northern side of the road. The building is aligned to the river upon its northern side and appears to be disused. A building of similar dimension is depicted on the 1879-80 OS map.
<b>Assessment</b>	The site lies beyond the proposed development area and is unlikely to sustain any direct impact.

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<b>Site number</b>	<b>04</b>
<b>Site name</b>	Bridge Abutments
<b>NGR</b>	408148 372468
<b>Site type</b>	Structure
<b>Period</b>	Industrial
<b>SMR No</b>	-
<b>Statutory Design</b>	-
<b>Sources</b>	Cowdale Quarry and Limeworks, Kings Sterndale: Conservation Management Plan (Johnson, 2013)
<b>Description</b>	The remains of two stone-built bridge abutments, formerly designed to carry what was probably an iron railway bridge across the road. Each abutment measured approximately 3m square and was finished in coursed rusticated stone.
<b>Assessment</b>	The site lies within the proposed development area and is likely to be affected by the works.

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<b>Site number</b>	<b>05</b>
<b>Site name</b>	Railway Sleepers
<b>NGR</b>	408232 372460
<b>Site type</b>	Railway
<b>Period</b>	Industrial
<b>SMR No</b>	-
<b>Statutory Design</b>	-
<b>Sources</b>	Cowdale Quarry and Limeworks, Kings Sterndale: Conservation Management Plan (Johnson, 2013)
<b>Description</b>	The sleepers of at least two separate lines were identified on the terrace above the slope. Both lines were heavily overgrown and appeared to have lost their tracks. The northernmost line lay within 2m of the edge of the present slope.
<b>Assessment</b>	The site lies close to the proposed development area and may potentially be affected by the works.

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<b>Site number</b>	<b>06</b>
<b>Site name</b>	Crushing Plant
<b>NGR</b>	408030 372444
<b>Site type</b>	Quarry Structure
<b>Period</b>	industrial
<b>HSMR No</b>	-
<b>Statutory Design</b>	Scheduled
<b>Sources</b>	Cowdale Quarry and Limeworks, Kings Sterndale: Conservation Management Plan (Johnson, 2013)
<b>Description</b>	A massive rectangular concrete structure constructed over three tiers and designed to crush, sort and load the limestone. It was filled from the upper tier with the crushed stone and carried away via the loading gantry, which projects northwards on concrete piers onto the track above the lower slope.
<b>Assessment</b>	The site lies beyond the proposed development area and is unlikely to sustain any direct impact, but its setting is likely to be affected.

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<b>Site number</b>	<b>07</b>
<b>Site name</b>	Lime Kiln Bank
<b>NGR</b>	407894 372475
<b>Site type</b>	Lime Kilns
<b>Period</b>	Industrial
<b>SMR No</b>	-
<b>Statutory Design</b>	Scheduled
<b>Sources</b>	Cowdale Quarry and Limeworks, Kings Sterndale: Conservation Management Plan (Johnson, 2013)
<b>Description</b>	A bank of four substantial concrete built lime-kilns located on the terrace above the lower slope. The kilns were filled from the upper tier with a loading platform on the tier below to carry away the calcinated lime on railway tracks.
<b>Assessment</b>	The site lies beyond the proposed development area and is unlikely to sustain any direct impact, but its setting is likely to be affected.

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<b>Site number</b>	<b>08</b>
<b>Site name</b>	Drum House for Lower Inclined Plane
<b>NGR</b>	407892 372464
<b>Site type</b>	Structure
<b>Period</b>	Industrial
<b>SMR No</b>	-
<b>Statutory Design</b>	Scheduled
<b>Sources</b>	Cowdale Quarry and Limeworks, Kings Sterndale: Conservation Management Plan (Johnson, 2013)
<b>Description</b>	A concrete structure 5.6m by 5.1m and with an extant height of 2.45m. It was used to haul loaded carts up hill and letting down empty ones (Johnson, 2013).
<b>Assessment</b>	The site lies beyond the proposed development area and is unlikely to sustain any direct impact, but its setting is likely to be affected.

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<b>Site number</b>	<b>09</b>
<b>Site name</b>	Rock Cut Shelter
<b>NGR</b>	408196 372450
<b>Site type</b>	Shelter
<b>Period</b>	Industrial
<b>HSMR No</b>	-
<b>Statutory Design</b>	-
<b>Sources</b>	Cowdale Quarry and Limeworks, Kings Sterndale: Conservation Management Plan (Johnson, 2013)
<b>Description</b>	A rock cut shelter 95m to the east of the Loading Gantry, 4.75m long, 600mm to 1.7m wide and 1.8m high.
<b>Assessment</b>	The site lies beyond the proposed development area and is unlikely to sustain any direct impact, but its setting might be affected.

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<b>Site number</b>	<b>10</b>
<b>Site name</b>	Midland Railway Line
<b>NGR</b>	Centred on 407971 372542
<b>Site type</b>	Railway
<b>Period</b>	Industrial
<b>SMR No</b>	-
<b>Statutory Design</b>	-
<b>Sources</b>	Cowdale Quarry and Limeworks, Kings Sterndale: Conservation Management Plan (Johnson, 2013)
<b>Description</b>	Railway line to Manchester, opened in 1864 and a contributing factor to the decision to open the quarry at the end of the 19th century.
<b>Assessment</b>	The site lies beyond the proposed development area and is unlikely to be affected.

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## 6. ASSESSMENT OF THE SIGNIFICANCE OF THE REMAINS

### 6.1 INTRODUCTION

6.1.1 Ten heritage assets have been identified within the study area, and all were identified on the ground as surviving features. One of the heritage assets (Site **04**) is located within the proposed development area, although this falls beyond the boundary of the Scheduled Monument. Of the remaining nine sites, five lie within the Scheduled Monument. Although falling within the wider study area, Sites **03**, **09** and **10** can be considered peripheral to the proposed development location, with limited potential for impacts upon their settings; these sites are non-designated heritage assets.

6.1.2 In National Planning Policy Framework (NPPF), the Department of Communities and Local Government (DCLG) states that for proposed developments meriting assessment the ‘significance of any heritage assets affected, including any contribution made by their setting’ should be understood in order to assess the potential impact (*Section 12.128*, NPPF, DCLG 2012). Therefore, the following section will determine the nature and level of the significance of this archaeological resource, as detailed in *Sections 3 to 5*. This is an iterative process, beginning with the guideline criteria outlined in Table 1. In general terms, the recording of a heritage asset, *eg* SMR, SM or listed building, and any subsequent grading thereafter, by its nature, determines its importance. However, this is further quantified by factors such as the existence of surviving remains or otherwise, its rarity, or whether it forms part of a group. There are a number of different methodologies used to assess the archaeological significance of heritage assets, but that employed here (*Section 6.2*) is the ‘Secretary of State’s criteria for scheduling ancient monuments’ (Annex 1; DCMS 2010).

Importance	Examples of Heritage Asset
National	Scheduled Monuments (SMs), Grade I, II* and II Listed Buildings
Regional/County	Conservation Areas, Registered Parks and Gardens (Designated Heritage Assets) Sites and Monuments Record/Historic Environment Record
Local/Borough	Assets with a local or borough value or interest for cultural appreciation Assets that are so badly damaged that too little remains to justify inclusion into a higher grade
Low Local	Assets with a low local value or interest for cultural appreciation Assets that are so badly damaged that too little remains to justify inclusion into a higher grade
Negligible	Assets or features with no significant value or interest

Table 1: Guideline criteria used to determine Importance of Heritage Assets

## 6.2 QUANTIFICATION OF IMPORTANCE

- 6.2.1 The heritage assets in the study area were each considered using the criteria for scheduling ancient monuments (DCMS 2010), with the results below. This information will contribute to the overall assessment of the importance of each heritage asset.
- 6.2.2 **Period:** all of the sites directly associated with the quarry can be dated to between the late nineteenth century and 1954, when the Cowdale Quarry was closed. There is some debate as to the date of construction of the Lime Kiln Bank (Site **07**), which maybe as early as 1870, but a date nearer the end of the century appears more likely (Johnson, 2013). The Midlands Railway (Site **10**) to the north of the River Wye opened in 1864, while the Devonshire Arms (Site **03**) appears on the 1879 OS map of the area, and maybe the oldest surviving structure within the study area.
- 6.2.3 **Rarity:** sites **06-09** have been recognised as rare survivals both as individual building types (1546192) and as part of the wider quarry site. In particular the Lime Kiln Bank (Site **07**) is probably the last traditional surviving vertical stone built lime kilns to be used in Derbyshire (OA North 2013a, 6).
- 6.2.4 **Documentation:** a reasonable level of historic documentary evidence survives for the quarry in general, and the larger structures such as the Lime Kiln Bank, Crushing and Loading Plant are well served by cartographic sources. Conversely, the Culvert/Drain (Site **01**) and the brick/stone structure (Site **02**) are not shown on any of the available historical maps, and are less likely to be recorded elsewhere. The building to the north of the road appears to be shown as the Devonshire Arms as early as 1879-80, and further documentary sources may exist. This map also notes a flour mill on the same site.
- 6.2.5 **Group Value:** the Culvert/Drain Culvert (Site **01**) may form part of the quarries water management system, and therefore contributes slightly to an overall understanding of the operation of the Scheduled Monument. Cowdale Quarry was scheduled in part for the ‘completeness and diversity of surviving features’ (Scheduled Monument Description, 1546192) emphasising the importance of the building as a group.
- 6.2.6 **Survival/Condition:** the condition of the possible Drain/Culvert (Site **01**) is presently unknown, and the level of vegetation may have protected or damaged any structural remains. The remaining structures relating to the quarry are generally in poor condition and in need of conservation, but none appear to be in imminent danger of collapse. Several structures have been subjected to vandalism. Even in their current condition, however, the survival of the quarrying complex is exceptional.
- 6.2.7 **Fragility/Vulnerability:** the buildings of the quarry in particular are subject to vandalism, as well as potential damage caused by vegetation and neglect. As a disused and unoccupied building the former Devonshire Arms must also be judged as vulnerable to vandalism and decay.
- 6.2.8 **Potential:** the extent and quantity of vegetation across the site means there is some potential for surviving physical evidence of further structures related to the operation of the quarry.

### 6.3 STATEMENT OF IMPORTANCE

- 6.3.1 Using the guideline criteria outlined in Table 1, together with further quantification (*Section 6.2*), and informed professional judgement, each of the sites listed in the gazetteer has been assessed for importance as a heritage asset of archaeological interest (Table 2). This assessment, however, needs to take into account the boundary of the Scheduled Monument, and any heritage assets within that boundary are considered to be of *national importance*, irrespective of other criteria. As such, the Drain/Culvert (Site **01**), the Brick and Stone Structure (Site **02**), Railway Sleepers (Site **05**), Crushing Plant (Site **06**), Lime Kiln Bank (Site **07**), and the Drum House (Site **08**) are all of *national importance* due to being within the boundary of the Scheduled Monument. In addition, the Rock Cut Shelter (Site **09**) is also considered to be of *national importance* due to its rarity value and its close association with the Scheduled Monument. However, notwithstanding their associated with the Scheduled Monument, the Drain/Culvert (Site **01**) and the remains of the Brick and Stone Structure (Site **02**) can be seen to be minor components of the quarry and limeworks complex, and have a lower level of inherent significance than the Crushing Plant (Site **06**) and Lime Kiln Bank (Site **07**). Similarly, the former bridge abutments (Site **04**) are considered to have a lower level of inherent significance, as they lie outside the boundary of the Scheduled Monument, and do not have a high value against any of the criteria outlined in Section 6.2. As such, they are considered to be of *Local/Borough* significance.
- 6.3.2 The former Devonshire Arms (Site **03**) and Midland Railway (Site **10**) have been judged to be of *Local/Borough* significance.

Site No	Site name	Importance
<b>01</b>	Culvert/Drain	Potentially National
<b>02</b>	Brick/stone structure	Potentially National
<b>03</b>	Former Devonshire Arms	Local/Borough
<b>04</b>	Bridge Abutments	Local/Borough
<b>05</b>	Railway sleepers	National
<b>06</b>	Crushing Plant and Loading Gantry	National
<b>07</b>	Lime Kiln Bank	National
<b>08</b>	Drum House	National
<b>09</b>	Rock Cut Shelter	National
<b>10</b>	Midland Railway	Local/Borough

Table 2: Importance of each gazetteer site

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## 7. ASSESSMENT OF THE SETTING

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### 7.1 ASSESSING THE SIGNIFICANCE OF SETTING TO HERITAGE ASSETS

- 7.1.1 The definition of setting used here is taken from the NPPF (2012): ‘setting is surroundings in which an asset is experienced. Its extent is not fixed and may change as the asset and its surrounding evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.’ Furthermore, the English Heritage document *Conservation Principles, Policies and Guidance* (2008) states that setting also relates to the asset’s ‘local context, embracing present and past relationships to the adjacent landscape.’ More recently, English Heritage (2011) considers that the significance of a heritage asset ‘derives not only from its physical presence and historic fabric, but also from its setting – the surrounding within which it is experienced.’
- 7.1.2 English Heritage in their guidance document, *The Setting of Heritage Assets* (2011), has provided a stepped approach to the assessment of significance of setting to heritage assets. Following the initial identification of the heritage asset(s) and associated setting the following steps comprise:
- assessing whether, how and to what degree the settings make a contribution to the significance of the heritage assets;
  - assessing the effect of the proposed development on the setting, and the resulting implications for the significance of the heritage asset(s);
  - maximising enhancement and minimising harm (mitigation).
- 7.1.3 In assessing whether, how and to what degree the settings make a contribution to the significance of the heritage assets, a number of potential attributes of a setting may help in determining its significance. These are presented in Table 3 below.
- 7.1.4 Having assessed the contribution of the setting to the significance of the asset, the effect of the proposed development on the setting can be determined by consideration of the potential attributes of the development affecting setting. These are outlined in Table 4 below.
- 7.1.5 Once the contribution of the setting has been determined, and the potential attributes of the proposed development upon it have been identified, the contribution needs to be evaluated in order to determine the magnitude of the potential impact. This is undertaken using the definitions presented in Table 5, below.

<b>Contribution of Setting: Potential attributes / factors to consider</b>
<p>The asset's physical surroundings:</p> <p>Topography;</p> <p>Other heritage assets (archaeological remains, buildings, structures, landscapes, areas or archaeological remains);</p> <p>Definition, scale and 'grain' of surrounding streetscape, landscape and spaces;</p> <p>Historic materials and surfaces;</p> <p>Land use;</p> <p>Openness, enclosure and boundaries; functional relationships and communications;</p> <p>Green spaces, trees and vegetation;</p> <p>History and degree of change over time;</p> <p>Integrity;</p> <p>Issues, such as soil chemistry and hydrology</p>
<p>Experience of the asset:</p> <p>Surrounding landscape and town character;</p> <p>Views from, towards, through and across, including the asset;</p> <p>Visual dominance, prominence or role as focal point;</p> <p>Intentional intervisibility with other historic and natural features;</p> <p>Noise, vibration and other pollutants and nuisances;</p> <p>Tranquillity, remoteness, 'wildness';</p> <p>Sense of enclosure, seclusion, intimacy or privacy;</p> <p>Dynamism and activity;</p> <p>Accessibility, permeability and patterns of movement;</p> <p>Degree of interpretation or promotion to the public;</p> <p>The rarity of comparable survivals of setting</p>
<p>The asset's associative attributes:</p> <p>Associative relationships between heritage assets;</p> <p>Cultural associations;</p> <p>Celebrated artistic representations;</p> <p>Traditions</p>

*Table 3: Determining the contribution of setting to the significance of the heritage asset(s)*

<b>Attribute</b>	<b>Factors to consider</b>
Location and siting of the development	Proximity to asset; Extent; Position in relation to landform; Degree to which location will physically or visually isolate asset; Position in relation to key views
The form and appearance of the development	Prominence, dominance, or conspicuousness; Competition with or distraction from the asset; Dimensions, scale and massing; Proportions; Visual permeability; Materials (texture, colour, reflectiveness, etc); Architectural style or design; Introduction of movement or activity; Diurnal or seasonal change
Other effects of the development	Change to built surroundings and spaces; Change to skyline; Noise, odour, vibration, dust, etc; Lighting effects and 'light spill'; Change to general character (e.g. suburbanising or industrialising); Change to public access, use or amenity; Change to land use, land cover, tree cover; Changes to archaeological context, soil chemistry or hydrology; Changes to communications/accessibility/permeability
Permanence of the development	Anticipated lifetime/temporariness; Recurrence; Reversibility
Longer term or consequential effects of the development	Changes to ownership arrangements; Economic and social viability; Communal and social viability

Table 4: Potential attributes of the proposed development

<b>Sensitivity</b>	<b>Contribution to significance of the asset</b>	<b>Examples for settings</b>
Very high	Very substantial	A defined setting that is contemporary with and historically and functionally linked with the heritage asset, may contain other heritage assets of international or national importance, has a very high degree of intervisibility with the asset and makes a very substantial contribution to both the significance of the heritage asset and to the understanding and appreciation of the significance of the asset.
High	Substantial	Contemporary with and historically and functionally linked with the heritage asset, with minor alterations (in extent and/or character), has a high degree of intervisibility with the asset and which makes a substantial contribution to both the significance of the heritage asset and to the understanding and appreciation of the significance of the asset.
Medium	Moderate	Contemporary with and/or historically and/or functionally linked with the heritage asset but with alterations which may detract from the understanding of the heritage asset, and/or with a moderate degree of intervisibility with the asset and/or which makes a moderate contribution to the significance of the heritage asset and/or a moderate contribution to the understanding and appreciation of the significance of the asset.
Low	Minor	Largely altered so that there is very little evidence of contemporaneous and/or historic and/or functional links with the heritage asset, and/or with a low degree of intervisibility with the asset and/or which makes a minor contribution to both the significance of the heritage asset and to the understanding and appreciation of the significance of the asset.

*Table 5: Definitions of Sensitivity for the Settings of Heritage Assets*

- 7.1.6 Changes may occur in the surroundings of an asset that neither affects their contribution to the significance of the asset, nor the extent to which its significance can be experienced. In such instances, it will be considered that there is no impact upon setting.
- 7.1.7 The criteria for assessing the magnitude of indirect impacts on setting are presented below (Table 6). The sensitivity of a heritage asset to changes in its setting can be evaluated in the first instance by reference to any relevant designation, whereby those designated as nationally important will generally be considered the most sensitive. At the other end of the scale assets that are imperceptible or very difficult to perceive on the ground will generally be less sensitive than those that are more readily appreciable as they are to some extent already divorced from their setting.

Magnitude	Guideline Criteria
Major beneficial	The contribution of setting to the cultural heritage asset's significance is considerably enhanced as a result of the development; a lost relationship between the asset and its setting is restored, or the legibility of the relationship is greatly enhanced. Elements of the surroundings that detract from the asset's cultural heritage significance or the appreciation of that significance are removed.
Moderate beneficial	The contribution of setting to the cultural heritage asset's significance is enhanced to a clearly appreciable extent as a result of the development; as a result the relationship between the asset and its setting is rendered more readily apparent. The negative effect of elements of the surroundings that detract from the asset's cultural heritage significance or the appreciation of that significance is appreciably reduced.
Minor beneficial	The setting of the cultural heritage asset is slightly improved as a result of the development, slightly improving the degree to which the setting's relationship with the asset can be appreciated.
Negligible	The setting of the cultural heritage asset is changed by the development in ways that do not alter the contribution of setting to the asset's significance.
Minor adverse	The contribution of the setting of the cultural heritage asset to its significance is slightly degraded as a result of the development, but without adversely affecting the interpretability of the asset and its setting; characteristics of historic value can still be appreciated, the changes do not strongly conflict with the character of the site, and could be easily reversed to approximate the pre-development conditions.
Moderate adverse	The contribution of the setting of the cultural heritage asset to its significance is reduced appreciably as a result of the development. Relevant setting characteristics can still be appreciated but less readily.
Major adverse	The contribution of the setting of the cultural heritage asset to its significance is effectively lost or substantially reduced as a result of the development, the relationship between the asset and its setting is no longer readily appreciable.

*Table 6: Criteria for Assessment of Magnitude of an Impact on the Setting of a Cultural Heritage Asset*

7.1.8 The interaction of the sensitivity of the setting (Table 5) and the impact on the setting (Table 6) produce the impact significance. This may be calculated by using the matrix shown in Table 7, which is included to allow an objective assessment to be presented.

SENSITIVITY		No Change	Negligible harm	Minor adverse	Moderate adverse	Major adverse
	Very High	Neutral	Slight	Moderate/ large	Large /very large	Very large
	High	Neutral	Slight	Moderate /slight	Moderate /large	Large /very large
	Medium	Neutral	Neutral /slight	Slight	Moderate	Moderate /large
	Low	Neutral	Neutral /slight	Neutral /slight	Slight	Slight /moderate
	Negligible	Neutral	Neutral /slight	Neutral /slight	Neutral /slight	Slight
		Significance of the Impact				

Table 7: Impact Significance Matrix for adverse impact on setting

## 7.2 THE QUARRY SETTING

- 7.2.1 The majority of the identified heritage assets share a common setting, dominated by woodland enclosed to the south by the edge of the gorge with the A6 to the north partially visible through the tree cover. Despite its immediate woodland setting, this part of the quarry is not tranquil and the sounds of the busy road at the bottom of the slope are accompanied by the noise of the active quarry on the opposing side of the road. Sites **01**, **02**, **03** and **04** are all located to the south of the access track, which becomes increasingly less defined eastwards, but is still clearly utilised. The quarry buildings and other associated features reveal themselves gradually along this track, giving a sense of anticipation as to what other decaying structures might be hiding.
- 7.2.2 Views towards the heritage assets from the roadside are heavily obscured by the tree cover (Plates 10 and 11), and it is likely that the majority of people passing by are unaware that the quarry and associated structures exist. The roadside is not pedestrian friendly, with the speed of the traffic, blind corners and occasional sections of narrow pavement producing an intimidating and dangerous environment for walkers and cyclists alike.
- 7.2.3 The present setting is considerably different from the setting of the quarry during its working life. An aerial photograph of 1927 shows the Cowdale Lime Works as an active quarry, which would have been a noisy environment with heavy vehicle movements. At this time the woodland, which dominates the sides of the gorge to the east and west, is absent from the slope in front of the quarry, and the works was clearly visible from the road.



*Plate 10: View along the A6, looking west across the proposed location of the lay-by*



*Plate 11: View along the A6, looking east to the south of the proposed location of the lay-by*

## 8. IMPACT ASSESSMENT

### 8.1 SIGNIFICANCE OF IMPACT ON HERITAGE ASSETS

- 8.1.1 Following consultation with Derbyshire County Council, the most viable location for the replacement lay-by straddles the north-eastern boundary of the Scheduled Monument, a short distance to the north-east of the Crushing Plant (Fig 2). The preferred option for the lay-by allows for a length of 37m, with 30m long splays at each end.
- 8.1.2 Following on from the above considerations, the significance of effects has been determined based on an assumption that the construction of the proposed lay-by will necessitate considerable works to the rock-face alongside the A6. The results are summarised in Table 8, below, in the absence of mitigation. Table 8 indicates that there is some potential for Sites **04**, **05** and **06** to be affected by the proposed development and, pending final design detail, the significance of this predicted impact on some of the heritage assets is assessed to be substantial. The direct impact on the other identified heritage assets is likely to be negligible.
- 8.1.3 Any substantial direct impact on the former railway line (Site **05**) within the limeworks complex, and also on the crushing plant and loading gantry (Site **06**), would clearly constitute substantial harm that would be very difficult to justify in the context of creating a new lay-by. However, the preferred location for the proposed lay-by is unlikely to have a direct impact on these designated heritage assets, providing careful consideration is afforded to the extent that the existing rock face is cut back into the Scheduled Monument.
- 8.1.4 Additionally, there is potential for the presence of previously unidentified remains of archaeological interest in the proposed location. The existence of such sites is currently uncertain.

Site No.	Site name	Nature of Impact	Scale of Impact	Impact Significance
<b>01</b>	Culvert/Drain	Whilst the nature and extent of this site is not fully understood, it may be assumed that any regarding of the rock-cut face of the gorge in this area will result in damage or destruction of the surviving remains.	Negligible	Neutral
<b>02</b>	Brick/stone structure	Potential destruction of remaining above-ground elements and damage to sub-surface remains	Negligible	Neutral
<b>03</b>	Devonshire Arms	None	Negligible	Neutral
<b>04</b>	Bridge abutments	None	Substantial	Major

Site No.	Site name	Nature of Impact	Scale of Impact	Impact Significance
05	Railway sleepers	Potential destruction of surviving elements	Substantial	Major
06	Crushing Plant and Loading Gantry	Substantial alteration to the setting of the building and potentially damaging to the structure depending upon the proximity of the cutting of the bank	Substantial	Major
07	Lime Kiln Bank	Substantial alteration to the setting of the building and potentially damaging to the structure depending upon the proximity of the cutting of the bank	Negligible	Neutral
08	Drum House	None	Negligible	Neutral
09	Rock Cut Shelter	None	Negligible	Neutral
10	Midland Railway	None	Negligible	Neutral

Table 8: Assessment of the impact significance on each site during development of the lay-by

## 8.2 SIGNIFICANCE OF IMPACT ON SETTING

- 8.2.1 The earthworks that would inevitably be required to construct the replacement lay-by would have a significant impact upon the present setting of several of the identified heritage assets. In particular the excavation of the present bank would require the removal of a good deal of tree cover, denuding a section of the gorge of vegetation. However, the vegetation currently obscures views of the Scheduled Monument, and whilst its removal would alter the semi-woodland setting of the lower terrace structures (particularly the crushing plant and the bank of lime kilns), this impact must be weighed against the benefits of opening up clearer views of the structures.
- 8.2.2 The vegetation in this area only regenerated after the quarry closed in the mid-1950s. The denudation of the rock face in this area to create a new lay-by would thus be compatible with the original setting of the industrial structures. In this respect, coupled with the clearer views that would be obtained of the lime kiln bank and crushing plant, it can be concluded these heritage asset's significance would be enhanced as the relationship between the asset and its setting is rendered more readily apparent, and thus the magnitude of impact could be perceived as moderate beneficial.

8.2.3 The construction of the proposed lay-by is likely to cause damage to the former bridge abutments (Site 04), although this could perhaps be mitigated by further archaeological investigation. Pending final design proposals, and specifically the extent to which the rock-face will need to be cut back, there is some potential for substantial direct impact on a former railway line within the limeworks complex, and also on the crushing plant and loading gantry. Any direct impact on these designated structures would clearly constitute substantial harm that would be very difficult to justify in the context of creating a new lay-by.

### 8.3 PROPOSED LAY-BY LOCATIONS

8.3.1 The proposed location of the new lay-by lies astride the north-eastern boundary of the Scheduled Monument, and will require significant alteration to the bank and setting of Site 06. The presumption in favour of preservation *in-situ* on sites of this nature does not favour this location for the new lay-by, although minimising the length of the proposed lay-by alongside appropriate construction details to limit the required batter might offer a more acceptable compromise.

8.3.2 A second location to the east of the Scheduled Monument boundary was also considered for the purposes of this assessment. This would perhaps be a more appropriate location for the new lay-by from a heritage perspective. The principal issue would be the potential loss of the *in-situ* railway sleepers that lies across the path above the lower slope. Again appropriate construction details to limit the required batter might prevent damage or loss to these heritage assets. However, other considerations have ruled this location as a possibility for the new lay-by.

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## BIBLIOGRAPHY

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### PRIMARY AND CARTOGRAPHIC SOURCES

Ordnance Survey 1879-80

Ordnance Survey 1898

Ordnance Survey 1921-22

Ordnance Survey 1955

Ordnance Survey 1973

### SECONDARY SOURCES

Boden, PK, 1960 The Limestone Quarrying Industry of North Derbyshire, *Geographical Journal*, **129** (1), 53-63

Department for Culture, Media, and Sport (DCMS), 2010 *Policy Statement on Scheduled Monuments*, London

Department of Communities and Local Government (DCLG), 2012 *NPPF: National Planning Policy Framework*

English Heritage, 2006 *Management of Research Projects in the Historic Environment* (MoRPHE), Swindon

English Heritage, 2008 *Conservation Principles Policies and Guidance*, London

English Heritage. 2011 Advice Report 05 September 2011. Cowdale Quarry limestone extraction and processing site 540m north east of Staden Manor. Case no. 462592, unpubl rep

Institute for Archaeologists, 2010 *Code of Conduct*, London

Institute for Archaeologists, 2011 *Standard and guidance for Historic Environment Desk-based Assessment*, London

Jackson, L, 1950 The Buxton Lime Trade *Cement, Lime and Gravel*, **25** (5), 186-94

Johnson, DS, 2010 *Limestone Industries of the Yorkshire Dales*, Stroud

OA North, 2013a *Cowdale Quarry and Limeworks, King Sterndale, Derbyshire: Statement of Significance*, unpubl rep

OA North, 2013b *Cowdale Quarry and Limeworks, King Sterndale, Derbyshire: Conservation Management Plan (Draft)*, unpub rep

## ILLUSTRATIONS

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### FIGURES

Figure 1: Site location

Figure 2: Plan showing the locations of the gazetteer sites, and the preferred location for the replacement lay-by

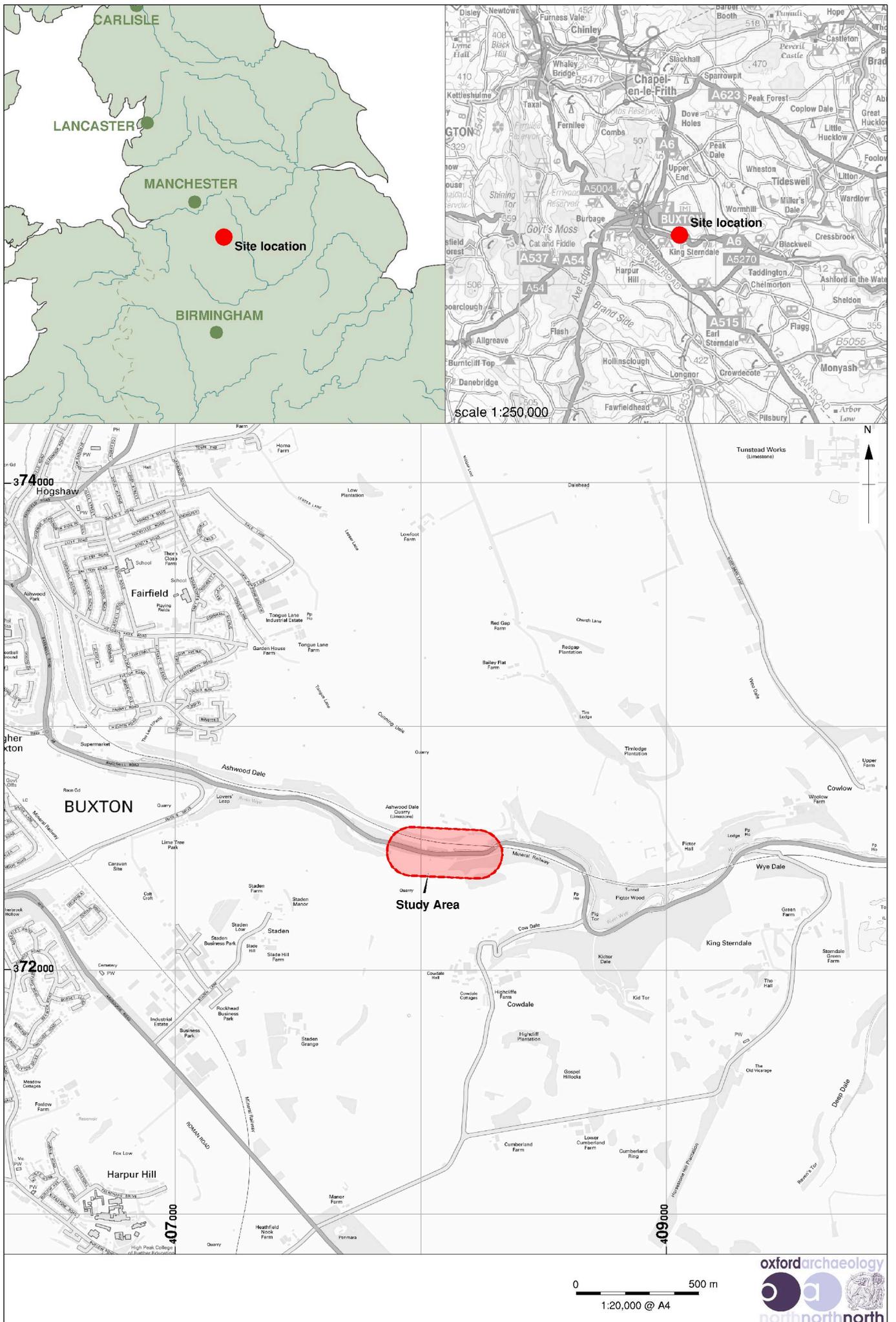


Figure 1: Site location

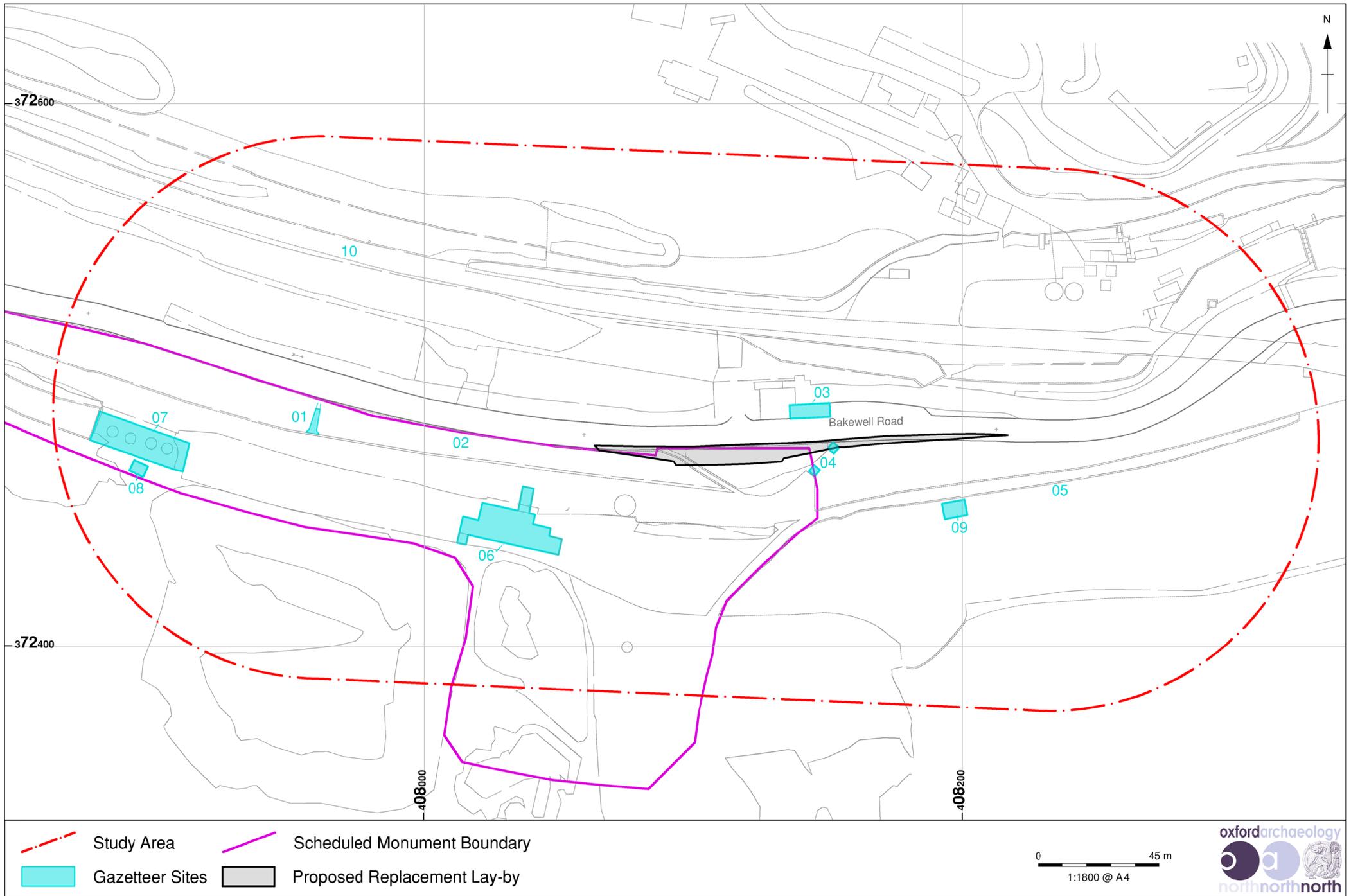


Figure 2: Plan showing the locations of the gazetteer sites, and the preferred location for the replacement lay-by